

# Turning/Drehen








ZCC Cutting Tools Europe GmbH
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## WELCOME TO ZCC CUTTING TOOLS EUROPE

ZCC-CT, one of the World's leading carbide tooling manufacturers, welcomes you to its products. We are able to offer you a wide product range of high performance cutting tools at economic prices and a good supply service to support the production and productivity at your manufacturing facilities. You will find the main tool types in the various sections of the catalogue, Turning is in section A, Milling in section B and Drilling in section C of the catalogue.

We are looking forward to working with you and developing good cooperation together. Our team at ZCC Cutting Tools Europe is ready to support you in all of your requirements.

**Member of Minmetals Group**

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## *HERZLICH WILLKOMMEN BEI ZCC CUTTING TOOLS EUROPE*

*ZCC-CT, einer der weltweit führenden Hartmetall-Werkzeughersteller, begrüßt Sie recht herzlich. Mit unserer umfangreichen Produktpalette an Hochleistungs-Zerspanungswerkzeugen und entsprechenden Serviceleistungen möchten wir gerne bei Ihnen die Bearbeitungssicherheit und die Wirtschaftlichkeit erhöhen. In Teil A des Katalogs finden Sie die Werkzeuge zum Drehen, in Teil B zum Fräsen und in Teil C zum Bohren.*

*Wir freuen uns auf eine gute Zusammenarbeit.*
*Ihr Team von ZCC Cutting Tools Europe steht Ihnen als Partner zur Seite!*

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*WSP = Wendeschneidplatte  VHM = Vollhartmetall*



# A Turning · Drehen


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A

General Turning
Allgemeine Drehbearbeitung

Double Sided Negative Inserts
Doppelseitige Negative Platten

## Carbide and Cermet Inserts - Hartmetall- und Cermet-WSP

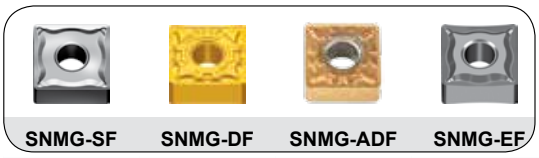
### Finishing · Schlichten



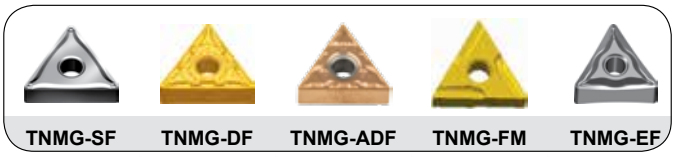
| CNMG-SF | CNMG-DF | CNMG-ADF | CNMG-EF | CNEG-NF | |
|---|---|---|---|---|---|
| 09,12 | 09,12 | 12 | 09,12 | 12 | Edge length · Kantenlänge |
| A66 | A66 | A66 | A66 | A67 | Page · Seite |



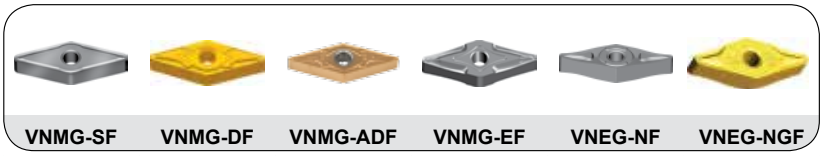
| DNMG-SF | DNMG-DF | DNMG-ADF | DNMG-FM | DNMG-EF | DNEG-NF | DNEG-NGF | |
|---|---|---|---|---|---|---|---|
| 11,15 | 11,15 | 15 | 15 | 11,15 | 15 | 15 | Edge length · Kantenlänge |
| A73 | A73 | A73 | A74 | A74 | A74 | A74 | Page · Seite |



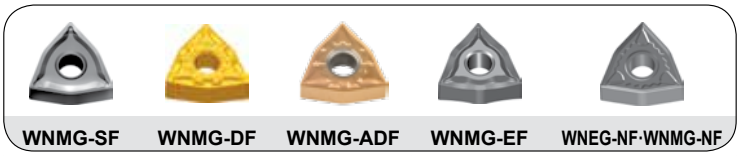
| SNMG-SF | SNMG-DF | SNMG-ADF | SNMG-EF | |
|---|---|---|---|---|
| 09,12 | 12 | 12 | 09,12,15 | Edge length · Kantenlänge |
| A79 | A79 | A79 | A80 | Page · Seite |



| TNMG-SF | TNMG-DF | TNMG-ADF | TNMG-FM | TNMG-EF | |
|---|---|---|---|---|---|
| 11,16,22 | 16,22 | 16 | 16 | 11,16,22 | Edge length · Kantenlänge |
| A88 | A88 | A88 | A89 | A89 | Page · Seite |



| VNMG-SF | VNMG-DF | VNMG-ADF | VNMG-EF | VNEG-NF | VNEG-NGF | |
|---|---|---|---|---|---|---|
| 16 | 16 | 16 | 16 | 16 | 16 | Edge length · Kantenlänge |
| A95 | A95 | A95 | A95 | A95 | A95 | Page · Seite |



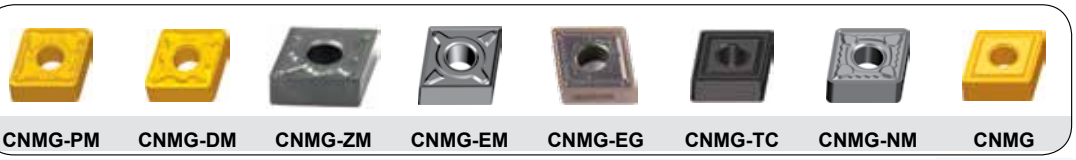
| WNMG-SF | WNMG-DF | WNMG-ADF | WNMG-EF | WNEG-NF·WNMG-NF | |
|---|---|---|---|---|---|
| 06,08 | 06,08 | 08 | 06,08 | 06,08 | Edge length · Kantenlänge |
| A97 | A97 | A97 | A98 | A98 | Page · Seite |

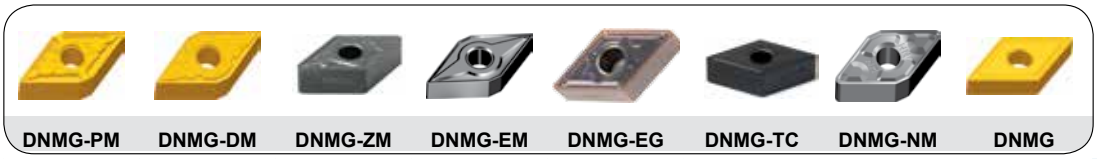
### Wiper

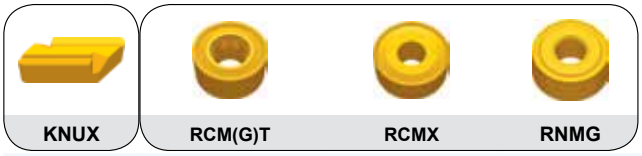


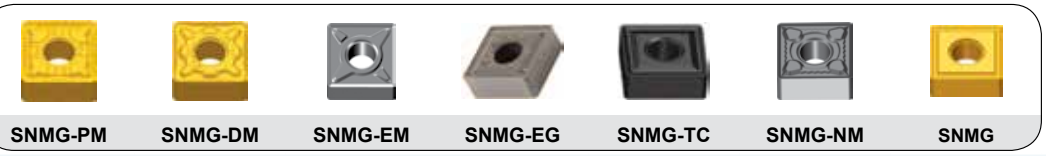
| CNMG-WG | DNMX-WG | TNMX-WG | WNMG-WG | |
|---|---|---|---|---|
| 12 | 11,15 | 16 | 08 | Edge length · Kantenlänge |
| A66 | A73 | A88 | A98 | Page · Seite |

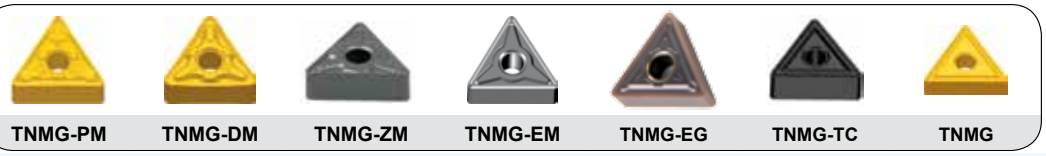
## Medium Cutting · Mittlere Bearbeitung

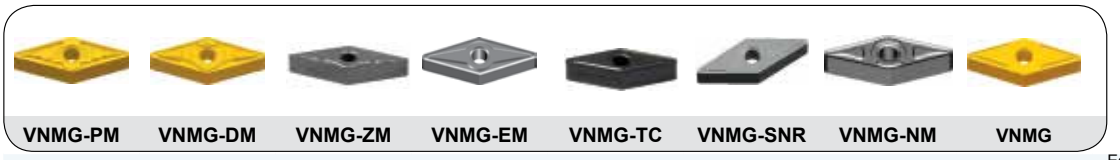
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
|  | **CNMG-PM** | **CNMG-DM** | **CNMG-ZM** | **CNMG-EM** | **CNMG-EG** | **CNMG-TC** | **CNMG-NM** | **CNMG** |
| Edge length · Kantenlänge | 09,12,16,19 | 09,12,16,19 | 12 | 12,16 | 12 | 12,16 | 12 | 12,16,19 |
| Page · Seite | A67 | A68 | A68 | A68 | A68 | A69 | A69 | A72 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
|  | **DNMG-PM** | **DNMG-DM** | **DNMG-ZM** | **DNMG-EM** | **DNMG-EG** | **DNMG-TC** | **DNMG-NM** | **DNMG** |
| Edge length · Kantenlänge | 11,15 | 11,15 | 15 | 11,15 | 15 | 15 | 15 | 15,19 |
| Page · Seite | A75 | A75 | A75 | A76 | A76 | A76 | A76 | A78 |

| | | | | |
|---|---|---|---|---|
|  | **KNUX** | **RCM(G)T** | **RCMX** | **RNMG** |
| Edge length · Kantenlänge | 16 | 08,10,12,16,1920,25 | 08,10,12,16,20,25,32 | 12 |
| Page · Seite | A102 | A114 | A115 | A101 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | **SNMG-PM** | **SNMG-DM** | **SNMG-EM** | **SNMG-EG** | **SNMG-TC** | **SNMG-NM** | **SNMG** |
| Edge length · Kantenlänge | 09,12,15,19 | 09,12,15,19 | 12,15 | 12 | 12,15 | 12 | 09,12,15,19,25 |
| Page · Seite | A80 | A81 | A81 | A81 | A81 | A82 | A85 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | **TNMG-PM** | **TNMG-DM** | **TNMG-ZM** | **TNMG-EM** | **TNMG-EG** | **TNMG-TC** | **TNMG** |
| Edge length · Kantenlänge | 11,16,22 | 11,16,22 | 16 | 16,22 | 16 | 16,22 | 11,16,22,27,33 |
| Page · Seite | A90 | A90 | A90 | A91 | A91 | A91 | A93 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
|  | **VNMG-PM** | **VNMG-DM** | **VNMG-ZM** | **VNMG-EM** | **VNMG-TC** | **VNMG-SNR** | **VNMG-NM** | **VNMG** |
| Edge length · Kantenlänge | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Page · Seite | A96 | A96 | A96 | A96 | A96 | A96 | A96 | A96 |

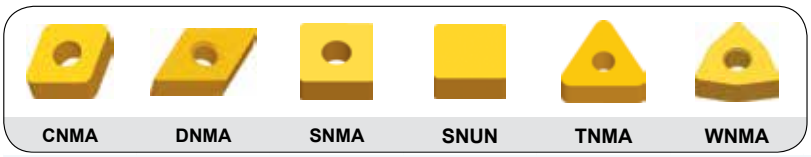
| | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | **WNMG-PM** | **WNMG-DM** | **WNMG-ZM** | **WNMG-EM** | **WNMG-EG** | **WNMG-TC** | **WNMG-NM** |
| Edge length · Kantenlänge | 06,08 | 06,08 | 08 | 06,08 | 08 | 08 | 08 |
| Page · Seite | A99 | A99 | A99 | A99 | A99 | A99 | A100 |

A

General Turning
Allgemeine Drehbearbeitung

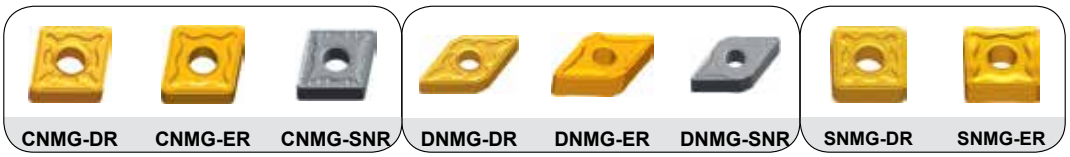
## Double Sided Negative Inserts
## Doppelseitige Negative Patten

### Medium to Rough Cutting · Mittlere bis Schruppbearbeitung



| CNMA | DNMA | SNMA | SNUN | TNMA | WNMA | |
|---|---|---|---|---|---|---|
| 12,16,19 | 15 | 12,15,19 | 09,12,19,25 | 16,22,27 | 06,08 | Edge length · Kantenlänge |
| A72 | A77 | A86 | A87 | A94 | A100 | Page · Seite |

### Roughing · Schruppen



| CNMG-DR | CNMG-ER | CNMG-SNR | DNMG-DR | DNMG-ER | DNMG-SNR | SNMG-DR | SNMG-ER | |
|---|---|---|---|---|---|---|---|---|
| 12,16,19,25 | 12,16,19 | 12,16,19 | 15 | 15 | 15 | 12,15,19,25 | 12,15,19 | |
| A69 | A70 | A69 | A76 | A77 | A76 | A82 | A82 | |



| TNMG-DR | TNMG-ER | WNMG-DR | |
|---|---|---|---|
| 16,22,27 | 16,22 | 06,08 | Edge length · Kantenlänge |
| A91 | A92 | A100 | Page · Seite |

## Single Sided Negative Inserts
## Einseitige Negative Platten

### Roughing · Schruppen



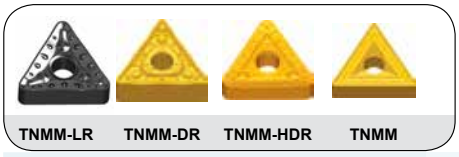
| CNMM-LR | CNMM-DR | CNMM-ER | CNMM-HDR | CNMM-HPR | CNMM | |
|---|---|---|---|---|---|---|
| 12,16,19,25 | 12,16,19,25 | 12,16,19,25 | 12,16,19,25 | 19,25 | 12,19 | Edge length · Kantenlänge |
| A70 | A70 | A70 | A71 | A71 | A71 | Page · Seite |



| DNMM-LR | DNMM-DR | DNMM-ER | DNMM-HDR | |
|---|---|---|---|---|
| 15 | 15 | 15 | 15 | Edge length · Kantelänge |
| A78 | A78 | A78 | A78 | Page · Seite |



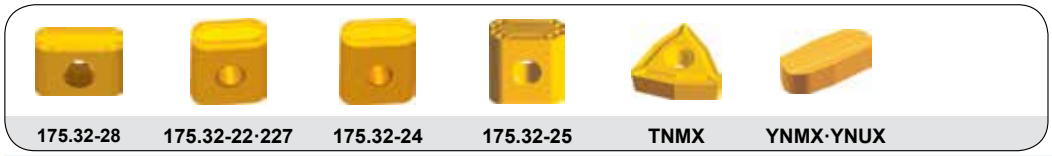
| SNMM-LR | SNMM-DR | SNMM-ER | SNMM-HDR | SNMM-HPR | SNMM | |
|---|---|---|---|---|---|---|
| 12,15,19,25 | 15,19,25 | 25 | 12,15,19,25 | 19,25 | 12 | Edge length · Kantelänge |
| A83 | A83 | A84 | A84 | A84 | A85 | Page · Seite |



| TNMM-LR | TNMM-DR | TNMM-HDR | TNMM | |
|---|---|---|---|---|
| 16 | 16,22,27 | 22,27 | 16,22,27 | Edge length · Kantelänge |
| A92 | A92 | A93 | A94 | Page · Seite |

Special Inserts
Spezielle Drehplatten

## Roughing · Schruppen



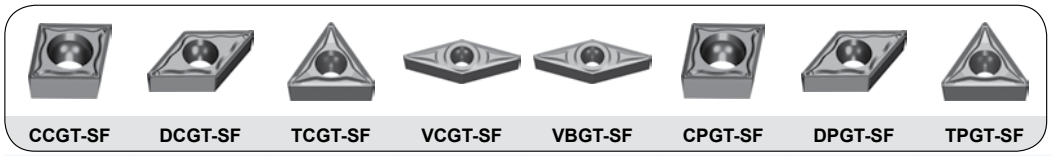
| 175.32-28 | 175.32-22·227 | 175.32-24 | 175.32-25 | TNMX | YNMX·YNUX | |
|---|---|---|---|---|---|---|
| 19,30 | 19 | 19,30 | 19 | 11,15 | 18,25 | Edge length · Kantelänge |
| A103 | A103 | A103 | A103 | A104 | A104 | Page · Seite |

Positive Inserts
Positive Wendeschneidplatten

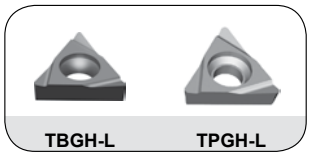
## Fine Finishing · Feinstbearbeitung



| CCGT-USF | DCGT-USF | TCGT-USF | VCGT-USF | DPGT-USF | VPGT-USF | |
|---|---|---|---|---|---|---|
| 09 | 07,11 | 11 | 08,11 | 07,11 | 08,11 | Edge length · Kantelänge |
| A105 | A110 | A119 | A125 | A113 | A129 | Page · Seite |



| CCGT-SF | DCGT-SF | TCGT-SF | VCGT-SF | VBGT-SF | CPGT-SF | DPGT-SF | TPGT-SF | |
|---|---|---|---|---|---|---|---|---|
| 06,09 | 07,11 | 06,09,11 | 11,16 | 11 | 06,09 | 07,11 | 09,11 | Edge length · Kantelänge |
| A105 | A110 | A119 | A125 | A127 | A109 | A113 | A124 | Page · Seite |

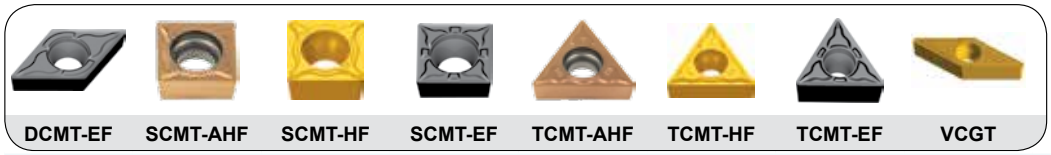


| TBGH-L | TPGH-L | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 06 | 09,11 | | | | | | | Edge length · Kantelänge |
| A118 | A124 | | | | | | | Page · Seite |

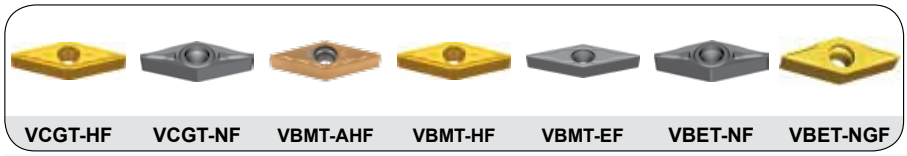
## Finishing · Schlichten



| CCMT-AHF | CCMT-HF | CCMT-EF | CPGT | CPMT-HF | CPMT-HM | DCMT-AHF | DCMT-HF | |
|---|---|---|---|---|---|---|---|---|
| 06,09,12 | 06,09,12 | 06,09,12 | 05 | 06 | 09 | 07,11 | 07,11 | Edge length · Kantelänge |
| A106 | A106 | A107 | A106 | A109 | A109 | A110 | A111 | Page · Seite |



| DCMT-EF | SCMT-AHF | SCMT-HF | SCMT-EF | TCMT-AHF | TCMT-HF | TCMT-EF | VCGT | |
|---|---|---|---|---|---|---|---|---|
| 07,11 | A09 | 09 | 09 | 11,16 | 09,11,16 | 09,11,16 | 13 | Edge length · Kantelänge |
| A111 | A116 | A116 | A116 | A120 | A120 | A121 | A125 | Page · Seite |



| VCGT-HF | VCGT-NF | VBMT-AHF | VBMT-HF | VBMT-EF | VBET-NF | VBET-NGF | |
|---|---|---|---|---|---|---|---|
| 11 | 16 | 16 | 11 | 11,16 | 16 | 16 | Edge length · Kantelänge |
| A125 | A125 | A127 | A127 | A127 | A127 | A128 | Page · Seite |

A

General Turning
Allgemeine Drehbearbeitung

Positive Inserts
Positive Wendeschneidplatten

## Medium Cutting · Mittlere Bearbeitung



| CCMT-HM | CCMT-EM | CCMW | CPGW | DCMT-HM | DCMT-EM | DCMW | DPMW | |
|---|---|---|---|---|---|---|---|---|
| 06,09,12 | 06,09,12 | 06,09,12 | 06 | 07,11 | 07, 11 | 07,11 | 11 | Edge length · Kantenlänge |
| A107 | A107 | A108 | A109 | A111 | A111 | A112 | A113 | Page · Seite |

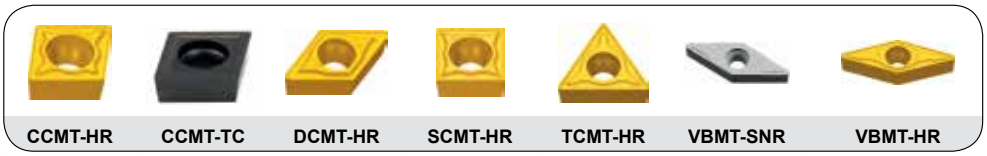


| RCMT·RCGT | SCMT-HM | SCMT-EM | SCMT | SCMW | SPMW | TCMT-EM | TCMT-HM | |
|---|---|---|---|---|---|---|---|---|
| 08,10,12,16,19,20,25 | 09,12 | 09,12 | 09,12 | 06,09,12 | 09,12 | 09,11,16 | 09,11,16 | Edge length · Kantenlänge |
| A114 | A116 | A116 | A117 | A117 | A118 | A121 | A122 | Page · Seite |



| TCMT | TCMW | VCMT-EM/EF | VBMT-HM | VBMT-EM | VBMW | WCMX-53 | |
|---|---|---|---|---|---|---|---|
| 22 | 11,16,22 | 16 | 16 | 11,16 | 16 | 04,06,08 | Edge length · Kantenlänge |
| A122 | A122 | A129 | A128 | A128 | A128 | A130 | Page · Seite |

## Roughing · Schruppen

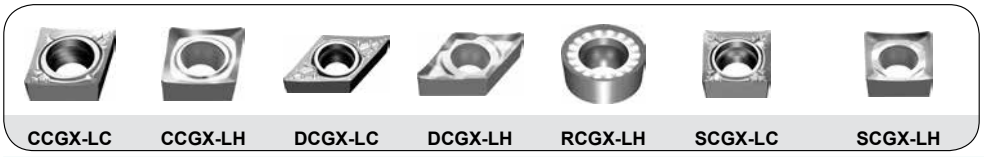


| CCMT-HR | CCMT-TC | DCMT-HR | SCMT-HR | TCMT-HR | VBMT-SNR | VBMT-HR | |
|---|---|---|---|---|---|---|---|
| 06,09,12 | 06,09,12 | 11 | 09,12 | 09,11,16,22 | 16 | 16 | Edge length · Kantenlänge |
| A108 | A108 | A112 | A117 | A122 | A128 | A128 | Page · Seite |



| RCMX | | |
|---|---|---|
| 08,10,12,16,20,25,32 | | Edge length · Kantenlänge |
| A115 | | Page · Seite |

## Aluminium machining · Aluminiumbearbeitung



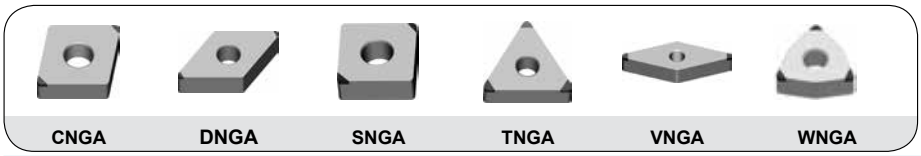
| CCGX-LC | CCGX-LH | DCGX-LC | DCGX-LH | RCGX-LH | SCGX-LC | SCGX-LH | |
|---|---|---|---|---|---|---|---|
| 06,09,12 | 06,09,12 | 07,11 | 07,11 | 08,12 | 09,12 | 09,12 | Edge length · Kantenlänge |
| A108 | A108 | A112 | A112 | A114 | A117 | A117 | Page · Seite |



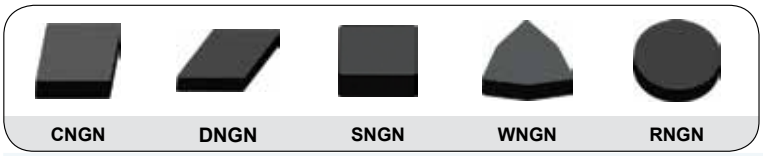
| TCGX-LC | TCGX-LH | VCGX-LC | VCGX-LH | | | | |
|---|---|---|---|---|---|---|---|
| 09,11,16 | 09,11,16 | 11,16,22 | 11,16,22 | | | | Edge length · Kantenlänge |
| A123 | A123 | A126 | A126 | | | | Page · Seite |

Negative Inserts
Negative WSP

## PCBN & PCD

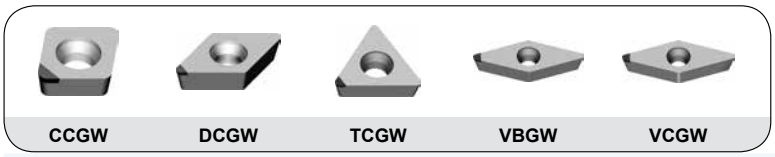


| CNGA | DNGA | SNGA | TNGA | VNGA | WNGA | |
|---|---|---|---|---|---|---|
| 12 | 15 | 12 | 16 | 16 | 08,06 | Edge length · Kantelänge |
| A137 | A138 | A139 | A140 | A141 | A141 | Page · Seite |



| CNGN | DNGN | SNGN | WNGN | RNGN | |
|---|---|---|---|---|---|
| 09,12 | 11 | 09,12 15 | 06 08 | 09 12 15 | Edge length · Kantelänge |
| A146 | A146 | A147 | A147 | A148 | Page · Seite |

Positive Inserts
Positive WSP



| CCGW | DCGW | TCGW | VBGW | VCGW | |
|---|---|---|---|---|---|
| 06,09,12 | 07,11 | 11,16 | 16 | 16 | Edge length · Kantelänge |
| A142 | A143 | A144 | A145 | A145 | Page · Seite |



| CCGT | CCGW | DCGT | DCGW | TCGT | |
|---|---|---|---|---|---|
| 06,09,12 | 06,09,12 | 07,11 | 07,11 | 11,16 | Edge length · Kantelänge |
| A149 | A150 | A151 | A152 | A153 | Page · Seite |



| TCGW | VBGT | VBGW | VCGT | VCGW | |
|---|---|---|---|---|---|
| 11,16 | 16 | 16 | 16 | 16 | Edge length · Kantelänge |
| A154 | A155 | A155 | A156 | A156 | Page · Seite |

Negative Inserts
Negative WSP

## Ceramic Inserts · Keramik Wendeschneidplatten



| CNGA | CNGN | CNGX | DNGA | DNGN | DNGX | SNGA | SNGX | |
|---|---|---|---|---|---|---|---|---|
| 12,16 | 12,16 | 12 | 15 | 15 | 15 | 12 | 12 | Edge length · Kantelänge |
| A160 | A161 | A162 | A162 | A163 | A163 | A164 | A164 | Page · Seite |



| SNGN | TNGA | TNGN | WNGA | RNGN | |
|---|---|---|---|---|---|
| 09,12,15,19,25 | 16,22 | 16,22 | 08 | 09,12,15,19,25 | Edge length · Kantelänge |
| A165 | A166 | A167 | A168 | A168 | Page · Seite |

A



## Parting and Grooving · Ab- und Einstechen

| | | |
|---|---|---|
|  |  | |
| **QC**R/L** | **QC**R/L***R** | |
| 0.5~4.8 | 2.0~4.0 | Width · Breite |
| A300 | A304 | Page · Seite |

| | | | | | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| **ZP*D-MG** | **ZP*D-MG-R/L** | **ZP*S-MG** | **ZT*D-MG** | **ZT*D-MM** | **ZT*S-MG** | |
| 2.5,3,4,5,6 | 2.5,3 | 2.5,3,4,5,6 | 2.5,3,4,5,6 | 2,3,4,5,6,8 | 5,6 | Width · Breite |
| A292 | A293 | A292 | A294 | A291 | A294 | Page · Seite |

| | | | | | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| **ZT*D-EG** | **ZT*D-EG** | **ZIMF-NM** | **ZR*D-MG** | **ZR*D-EG** | **ZIGQ-NM** | **ZR*D-LH** |
| 1-2.4 | 2.4-6.5 | 3,4,5,6 | 2.5,3,4,5,6 | 3,4,5,6 | 3,4,5,6 | 6,8 | Width · Breite |
| A295 | A295 | A297 | A296 | A296 | A297 | A298 | Page · Seite |

| | |
|---|---|
|  | |
| **ZILD-LC** | |
| 8 | Width · Breite |
| A298 | Page · Seite |

## Threading Insert · Gewindeplatten

| ISO metric<br>ISO metrisch | | Partcial-Profile 60°·55°<br>Teil-Profil 60°·55° | | Whitworth<br>Rohrgewinde | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External thread<br>Außengewinde | Internal thread<br>Innengewinde | External thread<br>Außengewinde | Internal thread<br>Innengewinde | External thread<br>Außengewinde | Internal thread<br>Innengewinde | |
| 1~6 | 1~6 | 0.5~5 | 0.5~5 | 8~16 | 8~16 | Pitch· Steigung |
| A335 | A336 | A337 | A337 | A338 | A338 | Page· Seite |

| UN Unified Conventional Thread<br>Gewindeform UN 60°amerikanisch | | BSPT Britain Standard<br>Taper Pipe Thread<br>Rohrgewinde für Dampf-, Gas-, &<br>Wasserleitungen | | NPT American Standard<br>Amerikanisches<br>kegeliges Rohrgewinde | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | |
| 8~20 | 8~20 | 11~28 | 11~28 | 8~27 | 8~27 | Pitch· Steigung |
| A339 | A339 | A340 | A340 | A341 | A341 | Page· Seite |

| NPTF60° | | Round screw 30°<br>Round screw 30° | | MJ (Metric)<br>MJ (Spitzgewinde) | UNJ (American)<br>UNJ (American) | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | External Threads<br>Außengewinde | |
| 8~27 | 8~27 | 6~10 | 6~10 | 1.5~2.0 | 8~32 | Pitch· Steigung |
| A342 | A342 | A343 | A343 | A344 | A344 | Page· Seite |

| Tr (ISO trapezoid thread 30°)<br>Tr (ISO trapez 30° Gewinde) | | ACME | | STUB-ACME | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | |
| 1.5~3.0 | 1.5~3.0 | 8~16 | 8~16 | 8~16 | 8~16 | Pitch· Steigung |
| A345 | A345 | A346 | A346 | A347 | A347 | Page· Seite |

| API (60°) | | API (round)<br>API (Round) | | API (inclined trapezoid screw)<br>API (Amerikanisches Sägegewinde) | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | |
| 4~5 | 4~5 | 8~10 | 8~10 | 5 | 5 | Pitch· Steigung |
| A348 | A348 | A349 | A349 | A350 | A350 | Page· Seite |

*Illustration shows the right hand type· Die Illustration zeigt die Rechtsausführung.*

A



## Threading Insert (thin type) · Gewindeplatten (dünner Typ)

| ISO metric (full profile)<br>ISO metrisch (voll Profil) | | Partcial-Profile 60°·55°<br>Teil-Profil 60°·55° | | Whitworth<br>Rohrgewinde | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | |
| 0.5~3.0 | 0.5~3.0 | 0.5~5.0(5~48) | 0.5~5.0(5~48) | 0.5~5.0(5~48) | 0.5~5.0(5~48) | Pitch· Steigung |
| A351 | A351 | A352 | A352 | A353 | A353 | Page· Seite |

| UN Unified Conventional Thread<br>Gewindeform UN 60°amerikanisch | | BSPT Britain Standard<br>Taper Pipe Thread<br>Rohrgewinde für Dampf-, Gas-, &<br>Wasserleitungen | | NPT American Standard<br>Amerikanisches<br>kegeliges Rohrgewinde | | |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  | |
| External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | External Threads<br>Außengewinde | Internal Threads<br>Innengewinde | |
| 8~20 | 8~20 | 11~28 | 11~28 | 8~27 | 8~27 | Pitch· Steigung |
| A354 | A354 | A355 | A355 | A356 | A356 | Page· Seite |

## External Turning Holder · Halter zur Außenbearbeitung

### D-type Clamping (lever) · D-Halter (Doppelpratze)

| DCLNR/L | DDJNR/L | DSBNR/L | DTGNR/L | DVVNN | DVJNR/L | DWLNR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **95°** | **93°** | **75°** | **91°** | **72°30'** | **93°** | **95°** |
| Page· Seite A181 | A182 | A183 | A184 | A185 | A186 | A187 |

### P-type Clamping (lever) · P-Halter (Kniehebel)

| PCBNR/L | PCLNR/L | PDJNR/L | PDNNR/L | PSBNR/L | PSDNN | PSKNR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **75°** | **95°** | **93°** | **63°** | **75°** | **45°** | **75°** |
| Page· Seite A188 | A189 | A190 | A191 | A192 | A193 | A194 |

| PSSNR/L | PTFNR/L | PTTNR/L | PTGNR/L | PWLNR/L |
|---|---|---|---|---|
|  |  |  |  |  |
| Angle· Winkel **45°** | **91°** | **60°** | **90°** | **95°** |
| Page· Seite A195 | A196 | A197 | A198 | A199 |

### M-type Clamping (clamping finger) · M-Halter (Pratze)

| MCBNR/L | MCLNR/L | MDJNR/L | MDPNN | MSBNR/L | MSRNR/L | MSKNR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **75°** | **95°** | **93°** | **62°30'** | **75°** | **75°** | **75°** |
| Page· Seite A200 | A201 | A202 | A203 | A204 | A205 | A206 |

| MSDNN | MTGNR/L | MTJNR/L | MTJNR/L-Z | MTFNR/L | MVVNN | MVJNR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **45°** | **90°** | **93°** | **93°** | **91°** | **72°30'** | **93°** |
| Page· Seite A207 | A208 | A209 | A210 | A211 | A212 | A213 |

| MWLNR/L | MRGNR/L | MRDNN |
|---|---|---|
|  |  |  |
| Angle· Winkel **95°** | | |
| Page· Seite A214 | A215 | A215 |

### S-type Clamping (screw) · S-Halter (Schraube)

| SCACR/L | SCLCR/L | SDACR/L | SDJCR/L | SDNCN | SVJBR/L | SVABR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **90°** | **95°** | **90°** | **93°** | **62°30'** | **93°** | **90°** |
| Page· Seite A216 | A217 | A218 | A219 | A220 | A221 | A222 |

## S-type Clamping (screw) · S-Halter (Schraube)

| SVVBN | SVVCN | SVJCR/L | SSBCR/L | SSDCN | SSKCR/L | SSSCR/L |
|---|---|---|---|---|---|---|
| Angle· Winkel **72°30'** | **72°30'** | **93°** | **75°** | **45°** | **75°** | **45°** |
| Page· Seite 223 | A224 | A225 | A226 | A226 | A227 | A227 |

| STACR/L | STFCR/L | STGCR/L | STTCR/L | SWACR/L | SRDCN | SRGCR/L |
|---|---|---|---|---|---|---|
| Angle· Winkel **90°** | **91°** | **91°** | **60°** | **90°** | | |
| Page· Seite A228 | A228 | A229 | A230 | A231 | A232 | A233 |

## C-type Clamping (clamping finger) · C-Halter (Pratze)

| CKJNR/L | CKNNR/L |
|---|---|
| Angle· Winkel **93°** | **63°** |
| Page· Seite A234 | A234 |

## Tool holder for ceramic inserts and solid CBN inserts · Halter für Keramikplatten und Voll-CBN-Platten

| CCLNR/L | CTJNR/L | CTUNR/L | CDJNR/L | CSRNR/L | CSKNR/L | CSDNN |
|---|---|---|---|---|---|---|
| Angle· Winkel **95°** | **93°** | **93°** | **93°** | **75°** | **75°** | **45°** |
| Page· Seite A235 | A235 | A236 | A236 | A237 | A237 | A238 |

| CRDNN | JCLNR/L | JDJNR/L | JSDNN |
|---|---|---|---|
| Angle· Winkel **45°** | **95°** | **93°** | **45°** |
| Page· Seite A238 | A239 | A239 | A240 |



## Tool holder for Internal Machining · Halter zur Innenbearbeitung

### P-type Clamping (lever) · P-Halter (Kniehebel)

| PCLNR/L | PDSNR/L | PDUNR/L | PSKNR/L | PTFNR/L | PWLNR/L |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Angle· Winkel **95°** | **62°30'** | **93°** | **75°** | **90°** | **95°** |
| Page· Seite A246 | A248 | A249 | A251 | A252 | A253 |

### S-type Clamping (screw) · S-Halter (Schraube)

| SCLCR/L | SDQCR/L | SDUCR/L | SDZCR/L | SSKCR/L | STFCR/L | SVQCR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **95°** | **107°30'** | **93°** | **85°** | **75°** | **90°** | **107°30** |
| Page· Seite A254 | A256 | A257 | A258 | A259 | A260 | A261 |

| SVUCR/L | SVQBR/L | SVUBR/L | SCLPR/L | SDQPR/L | SDUPR/L | STUPR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **93°** | **107°30'** | **93°** | **95°** | **107°30'** | **93°** | **93°** |
| Page· Seite A262 | A263 | A264 | A265 | A266 | A267 | A268 |

| SCFCR | SCLCR |
|---|---|
|  |  |
| Angle· Winkel **90°** | **95°** |
| Page· Seite A269 | A270 |

### Carbide boring bars · Hartmetallbohrstangen

| SCLPR/L | SDQPR/L | SDUPR/L | STUPR/L | STFCR/L STFPR/L | SVQCR/L | SVUCR/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Angle· Winkel **95°** | **107°30'** | **93°** | **93°** | **95°** | **107°30'** | **93°** |
| Page· Seite A272 | A273 | A274 | A275 | A276 | A277 | A278 |

A



## Tool Holder for Parting off & Grooving · Halter zum Ab- und Einstechen

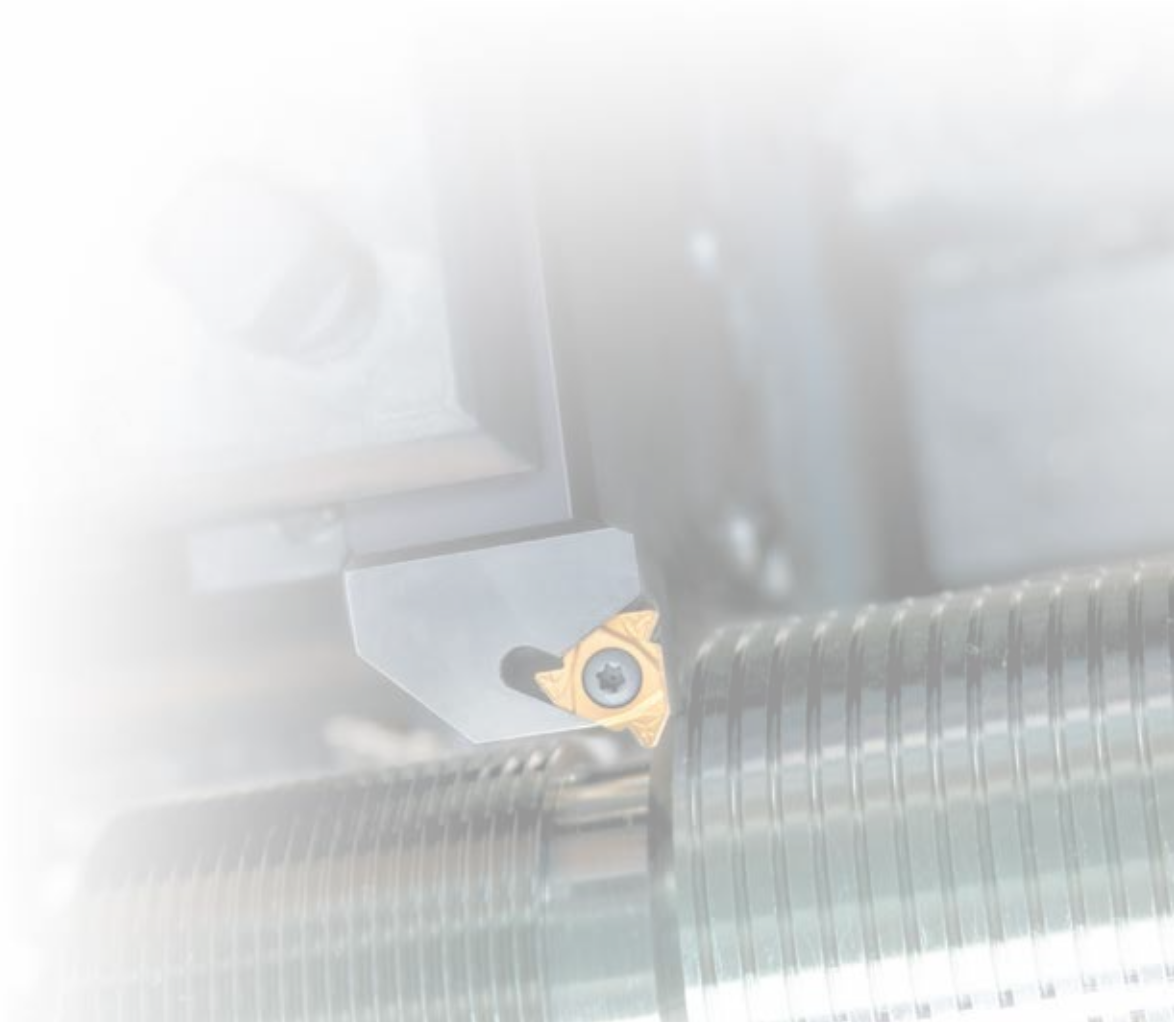
| QE**R/L | QEBDR/L | QECDR/L | QX*DR/L | QE*SR/L | QE*S**N | QZS* |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Page· Seite A309 | A308 | A310 | A310 | A311 | A312 | A312 |

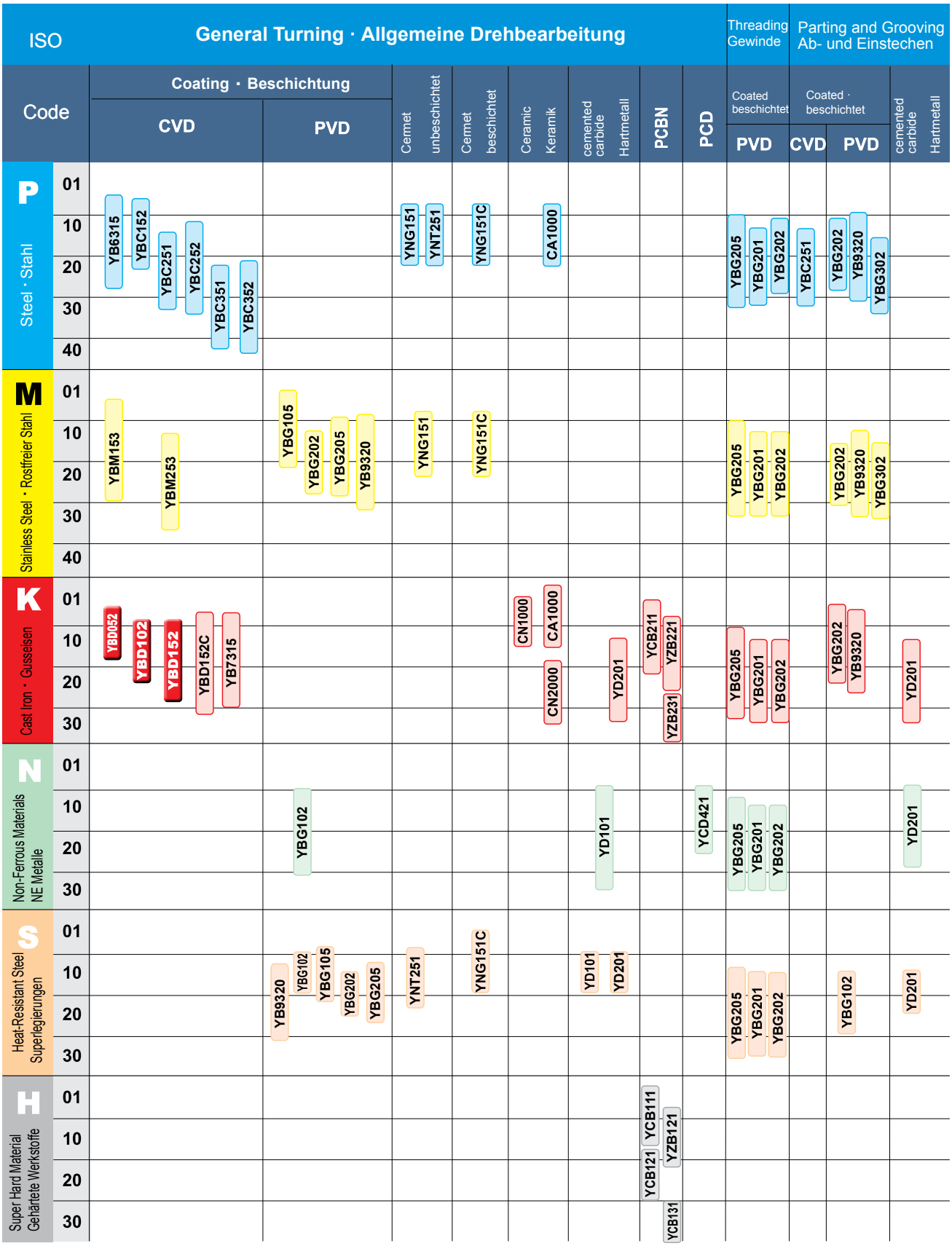
| QF**R/L | QF**R/L RR/LL | QF*DR/L | C***-Q*DR/L | C16M-QBDR/L | C40X-Q*DR/L | GQC**R/L |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| Page· Seite A313-314 | A315-318 | A319-320 | A321 | A308 | A321 | A323 |

| S*K-QC**R/L |
|---|
|  |
| Page· Seite A323 |

## Tool Holder for Threading · Halter für Gewindebearbeitung

| SWR/L | SNR/L | SWR | SNR |
|---|---|---|---|
|  |  |  |  |
| Page· Seite A358 | A359 | A360 | A360 |




ISO
General Turning · Allgemeine Drehbearbeitung
Code
Coating · Beschichtung
CVD
PVD
Cermet unbeschichtet
Cermet beschichtet
Ceramic Keramik
cemented carbide Hartmetall
PCBN
PCD
Threading Gewinde
Coated beschichtet
PVD
Parting and Grooving Ab- und Einstechen
Coated · beschichtet
CVD
PVD
cemented carbide Hartmetall
P Steel · Stahl
M Stainless Steel · Rostfreier Stahl
K Cast Iron · Gusseisen
N Non-Ferrous Materials NE Metalle
S Heat-Resistant Steel Superlegierungen
H Super Hard Material Gehärtete Werkstoffe
01
10
20
30
40
YB6315
YBC152
YBC251
YBC252
YBC351
YBC352
YNG151
YNT251
YNG151C
CA1000
YBG205
YBG201
YBG202
YBC251
YBG202
YB9320
YBG302
YBM153
YBM253
YBG105
YBG202
YBG205
YB9320
YNG151
YNG151C
YBG205
YBG201
YBG202
YBG202
YB9320
YBG302
YBD052
YBD102
YBD152
YBD152C
YB7315
CN1000
CA1000
CN2000
YD201
YCB211
YZB221
YZB231
YBG205
YBG201
YBG202
YBG202
YB9320
YD201
YBG102
YD101
YCD421
YBG205
YBG201
YBG202
YD201
YB9320
YBG102
YBG105
YBG202
YBG205
YNT251
YNG151C
YD101
YD201
YBG205
YBG201
YBG202
YBG102
YD201
YCB111
YZB121
YCB121
YCB131
P Steel / Stahl
M Stainless steel / Rostfreier Stahl
K Cast iron / Gusseisen
N Non ferrous materials · Ne Metalle
S Heat-resistant steel · Warmfester Stahl
H Hardened material · Gehärtete Werkstoffe

New

# Roughing
# Schruppen




## - HPR

## - LR

# -LC

***Chip breaker for machining of aluminum***

***Spanbrecher für die Bearbeitung von Aluminium***



*For super finishing*
*Zum Feinstschlichten*

# -USF



# General Turning Inserts · Allgemeine Drehplatten


| | |
|---|---|
| **A22 - A32** | ISO Turning Inserts Chip Breaker Description<br>ISO WSP Spanbrecherbeschreibung |
| **A33-A43** | ISO Turning Chip Breaker Application Guide<br>ISO Spanbrecher nach Anwendungsbereichen |
| **A44-A59** | ISO Turning Grades Application Guide<br>ISO Sorten nach Anwendungsbereichen |
| **A62-A168** | **ISO Turning Inserts**<br>**ISO Wendeschneidplatten** |
| **A62-A63** | ISO Indexable Inserts Code Key<br>ISO Kennzeichnung für Schneidplatten |
| **A64-A65** | Metric and Britain System Comparison<br>Vergleich Metrisch-Britisch WSP Code |
| **A66-A130** | **Carbide, Cermet Inserts**<br>**Hartmetall, Cermet WSP** |
| **A66-A104** | Negative Inserts Carbide and Ceramic<br>Negative Wendeschneidplatten Hartmetall und Keramik |
| **A105-A130** | Positive Inserts Carbide and Ceramic<br>Positive Wendeschneidplatten Hartmetall und Keramik |
| **A131-A157** | **PCBN & PCD Insert Identification Table**<br>**PCBN & PKD Schneidplattenbezeichnung** |
| **A132-A133** | PCBN & PCD ISO Inserts Code Key<br>PCBN & PKD ISO Kennzeichnung für Schneidplatten |
| **A134-A136** | PCBN & PCD Insert Specificaiton List<br>PCBN & PKD Zuordnungsübersicht |
| **A137-A156** | Negative and Positive Inserts PCBN & PCD<br>Negative und Positive Wendeschneidplatten PCBN & PKD |
| **A157** | PCBN Grade Trouble Shooting<br>PCBN Sorten Problembehebung |
| **A158-A159** | **Ceramic ISO Inserts Code Key**<br>**Keramik ISO Kennzeichnung für Schneidplatten** |
| **A160-A168** | Ceramic Inserts<br>Keramik Wendeschneidplatten |

A

General Turning
Allgemeine Drehbearbeitung

Finishing
Schlichten

## Chip Breaker Overview · Spanbrecher Übersicht

Negative Inserts
Negative Wendeschneidplatten

### SF



P M K
ap·d.o.c. =0.05~1,5(mm)
f=0.05~0.35(mm/r)



Special chip breaker in combination with cermets grades. Sharp cutting edge with excellent chip control at small depth of cut and small feed rate. Enable high surface finishing.

Spezieller Spanbrecher in Kombination mit Cermetsorten. Mit scharfer Schneide für exzellenten Spanbruch bei kleinen Schnitttiefen und Vorschüben und sehr guter Oberflächengüte.

### DF



P M
ap·d.o.c. =0.3~2,5 (mm)
f=0.05~0.35(mm/r)



Chip breaker for finishing and semi-finishing of steel and stainless steel.

Spanbrecher für die Schlicht- bis mittlere Bearbeitung von Stahl und rostfreiem Stahl.

NEU

NEW

### ADF



P M
ap·d.o.c. =1~3 (mm)
f=0.1~0.4 (mm/r)



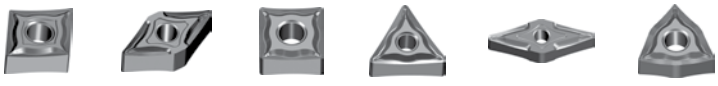
Optimized geometry for finishing and semi-finishing of steel and stainless steel.

Optimierte Geometrie zum Schlichten bis zum mittlerer Bearbeitung von Stahl und rostfreien Stählen.

### EF



M S
ap·d.o.c. =0.05~2,5(mm)
f=0.05~0.3 (mm/r)



Sharp and positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel, low carbon steel and heat resistant super alloy. Suitable for continuous to light interrupted cut.

Sehr scharfe und positive Schneidkante für die Schlicht- bis mittlere Bearbeitung von austenitschem, rostfreiem Stahl, weichem Baustahl und Stahl mit niedrigem Kohlenstoffgehalt und warmfesten Superlegierungen.

# Chip breaker Overview · Spanbrecher Übersicht



## Finishing Schlichten

Negative Inserts
Negative Wendeschneidplatten

S M
ap· d.o.c. =0.1~1,5(mm)
f=0.05~0.3(mm/r)



### NF



Grounded insert with sharp and positive cutting edge. NF is a good solution for the finishing operation.

Geschliffene Wendeschneidplatte mit einer scharfen, positiven Schneidkante. NF ist eine gute Lösung für Schlichtbearbeitungen.

NEU

S M
ap· d.o.c. =3~8(mm)
f=0.2~0.4(mm/r)



NEW

### NGF



General finishing processing, extensive ground, with high repeatability, the sharp cutting edge has also good strength. This chip breaker is suitable for general finishing of S materials.

Spanbrecher für die allgemeine Schlichtbearbeitung. Die umfangsgeschliffenen Schneidkanten besitzen eine scharfe Schneidkante mit hoher Stabilität.

## Wiper

P M K
ap· d.o.c. =0.3~2(mm)
f= 0.1~0.4(mm/r)



### WG



Good surface finishing and high feed rate due to wiper technology. For finishing and semi-finishing of steel, stainless steel or cast iron.

Gute Oberflächengüte und hohe Vorschübe durch Wipertechnologie. Geeignet zum Schlichten bis mittlere Bearbeitung von Stahl, rostfreiem Stahl und Guss.

## Medium Cutting Mittlere Bearbeitung

P M
ap· d.o.c. =1.5~6(mm)
f= 0.15~0.5(mm/r)



### DM



Main chip breaker for medium machining with continuous or interrupted cut of steel and stainless steel.

Hauptspanbrecher für die mittlere Bearbeitung mit und ohne Schnittunterbrechung von Stahl und rostfreiem Stahl.

A

General Turning
Allgemeine Drehbearbeitung

Medium Cutting
Mittlere Bearbeitung

# Chip breaker Overview · Spanbrecher Übersicht

Negative Inserts
Negative Wendeschneidplatten

P K
ap· d.o.c. =0,8-4(mm)
f= 0,1-0,35(mm/r)



ZM chip breaker provides an excellent combination of sharpness and stability of cutting edge. Special for the machining of steel with high carbon content.




Der ZM-Spanbrecher bietet eine hervorragende Kombination aus Schneidkantenschärfe sowie Schneidkantenstabilität. Besonders geeignet für die Bearbeitung von Stählen mit hohem Kohlenstoffgehalt.

P K
ap· d.o.c. =1.5~5(mm)
f= 0.15~0.5(mm/r)






Universal chip breaker with stable cutting edge. Suitable for medium machining also with interrupted cut especially for cast iron and steel.

Universelle Spanbrecherform mit stabiler Schneidkante. Besonders geeignet für die mittlere Bearbeitung von Guss und Stahl auch mit Schnittunterbrechung.

K P
ap· d.o.c. = 1.5~6(mm)
f= 0.15~0.5(mm/r)



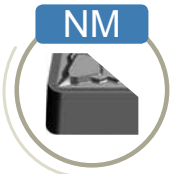
Stable cutting edge and middle field for High Performance cutting of cast iron and alloy steel. Optimised rake angle and T-Land reduce cutting force and strengthen the wear resistance.




Die umlaufende Spanbrechergeometrie zeichnet sich durch höchste Stabilität aus und ermöglicht die Hight-Performance-Bearbeitung von Guss und Stahl mit geringer Schnittkraft.

S M
ap· d.o.c. = 1.5~5(mm)
f= 0.15~0.5(mm/r)






Sharp cutting edge with positive multi-rakeangle. Special for the semifinishing of heat resistant super alloys.

Scharfe Schneidkante mit positivem Multi-Spanwinkel. Besonders geeignet für die Bearbeitung von warmfesten Superlegierungen.

# Chip breaker Overview · Spanbrecher Übersicht

## Medium Cutting · Mittlere Bearbeitung

Negative Inserts
Negative Wendeschneidplatten

**M P S**
ap· d.o.c. =1.0~5.0(mm)
f=0.1~0.5(mm/r)



### EM

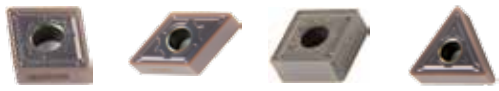


Sharp and stable cutting edge for semifinishing of sticky material and austenitic stainless steel. Suitable also for interrupted cut.

Spanbrecher mit scharfer, stabiler Schneidkante für die mittlere Bearbeitung von adhäsiven Materialien und austenitischem rostfreien Stahl. Auch für Schnittunterbrechungen geeignet.

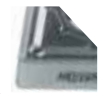
NEU

**M S**
ap· d.o.c. = 3~8(mm)
f= 0.2~0.4(mm/r)



NEW

### EG



Universal chip breaker with deep rounded chip groove and sharp cutting edge. Finishing to medium cutting with very good chip control over a wide range of applications.

Universalspanbrecher mit umlaufender Spanleitstufe sowie scharfer Schneidkantenausbildung. Vom Schlichten bis hin zur mittleren Bearbeitung hat er eine hervorragende Spankontrolle mit breitem Anwendungsfeld.

**P K**
ap· d.o.c. = 1.5~5(mm)
f= 0.2~0.5(mm/r)



### Basic



Stable flat cutting egde with standard chip breaker for semifinishing of steel and cast iron.

Stabile gerade Schneidkante mit umlaufender Spanleitstufe für die mittlere Bearbeitung von Stahl und Gusswerkstoffen.

## Roughing · Schruppen

**P K**
double sided — ap· d.o.c. = 2.0~6.5(mm), f= 0.2~0.5(mm/r)
single sided — ap· d.o.c. =3~15(mm), f= 0.4~1.0 (mm/r)



### DR



**Double sided type Doppelseitige Ausführung**

Positive chip breaker with strong cutting edge for light to medium rough machining of steel and cast iron.

Positiver Spanbrecher mit stabiler Schneidkantenausführung für die leichte bis mittlere Schruppbearbeitung von Stahl und Gusswerkstoffen.

### DR



**Single sided type Einseitige Ausführung**



Positive chip breaker with strong cutting edge for light to medium rough machining of steel and cast iron.

Positiver Spanbrecher mit stabiler Schneidkantenausführung für die leichte bis mittlere Schruppbearbeitung von Stahl und Gusswerkstoffen.

A

General Turning
Allgemeine Drehbearbeitung

Roughing
Schruppen

# Chip breaker Overview · Spanbrecher Übersicht

Negative Inserts
Negative Wendeschneidplatten

P M K

ap· d.o.c. =3~15(mm)
f= 0.4~1.2(mm/r)



LR



Chip breaker with optimized pumpy chip breaker geometry and waved cutting edge. Less friction and cutting pressure for less wear and excellent chip performance for light roughing operation in steel, stainless steel and cast iron.

Spanbrecher mit optimierter Noppengeometrie und geschwungener Schneidkante. Weniger Reibung und Schnittdruck für besseres Verschleißverhalten und ausgezeichneter Spankontrolle für die leichte Schruppbearbeitung von Stahl, rostfreiem Stahl und Guss.

M P

double sided ap· d.o.c.=2.5~8(mm)
f=0.2~0.6(mm/r)
single sided ap· d.o.c. =2.5~20(mm)
f= 0.4~1.2(mm/r)



ER

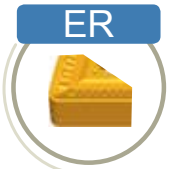


**Double sided type Doppelseitige Ausführung**

Chip breaker with positive geometry for low cutting force. Suitable for roughing operation of stainless steel and steel.

Positiver Spanbrecher für niedrige Schnittkräfte. Besonders geeignet für die Schruppbearbeitung von rostfreiem Stahl und Stahl.

ER



**Single side type · Einseitige Ausführung**

Chip breaker with positive geometry for low cutting force. Suitable for roughing operation of stainless steel and steel.

Positiver Spanbrecher für niedrige Schnittkräfte. Besonders geeignet für die Schruppbearbeitung von rostfreiem Stahl und Stahl.

P M

ap· d.o.c.= 5~15(mm)
f= 1.0~1.2(mm/r)



HDR



Chip breaker with strong cutting edge and resistent to plastic deformation for single sided inserts. Suitable for rough machining with high metal cutting rate for steel and stainless steel application.

Spanbrecher mit stabiler Schneidkantenausführung mit hoher Deformationsbeständigkeit für einseitige Wendeschneidplatten. Anwendung für die Schruppbearbeitung von Stahl und rostfreiem Stahl.

# Chip breaker Overview · Spanbrecher Übersicht

## Roughing Schruppen

Negative Inserts
Negative Wendeschneidplatten

P K

ap· d.o.c. =3~17(mm)
f= 1.0~1.4(mm/r)



### HPR



HPR chip breaker for bigger single size inserts. Wide chip pocket and stable edge design for heavy roughing operation in steel and cast iron.

Spanbrecher für große, einseitige Wendeschneidplatten. Große Spankammer und eine stabile Schneidkante für die schwere Schruppbearbeitung von Stahl und Guss.

K

ap· d.o.c.= 0.3~12(mm)
f= 0.1~0.6(mm/r)



### Flat



Flat insert without chip breaker. Stable insert with high edge strength for roughing operation in cast iron materials.

Glatte Platte ohne Spanbrecher. Mit einer stabilen Schneidkante für die Schruppbearbeitung von Gusswerkstoffen.

NEU

S

ap· d.o.c.= 3~8(mm)
f= 0.2~0.4(mm/r)



NEW

### SNR



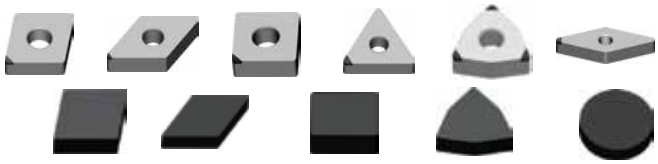
Sharp cutting edge with large & variable rake angles and optimum chip breaker design. SNR is a good solution for the roughing operation.

Scharfe Schneidkante mit variablem großen Spanwinkel. SNR ist der optimale Spanbrecher für Schruppbearbeitungen.

## CBN & PCD

PCBN H 74 | PCD N

ap· d.o.c.=0.05~0.5(mm)
f=0.05~0.3(mm/r)



### Flat



Special grades: For machining of hardened materials and cast iron (CBN). For machining of non-ferrous metals (e.g. Aluminium) and non-metal materials (PCD)

Spezielle Sorten: Für die Bearbeitung von gehärteten Stählen, Gusswerkstoffen (CBN). Für die Beabeitung von NE-Metallen (z.B. Aluminium) und nicht-metallischen Werkstoffen (PCD)

## Ceramic Insert Ceramic WSP

K H P

ap· d.o.c.= 0.1~3(mm)
f= 0.05~0.4(mm/r)



### Flat



Ceramic inserts for machining of hardened steel, cast iron and steel.

Keramikwendeschneidplatten für die Bearbeitung von gehärtetem Stahl, Gusswerkstoffen und Stahl.

A

General Turning
Allgemeine Drehbearbeitung

## Chip breaker Overview · Spanbrecher Übersicht

Fine-Finishing
Feinstbearbeitung

Positive Inserts
Positive Wendeschneidplatten

P M
ap· d.o.c. =0.02~1.5(mm)
f= 0.01~0.08(mm/r)



### USF



For super finishing: Insert in G tolerance with sharp cutting edge. Suitable for super finishing of small components.

Zum Feinschlichten: Wendeschneidplatten in G-Toleranz mit scharfer Schneide. Geeignet zum Feinstschlichten von kleinen Bauteilen.

P M
ap· d.o.c. =0.05~2.5(mm)
f= 0.03~0.25(mm/r)



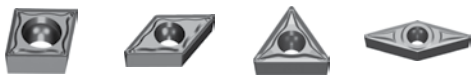
### R/L



Special grinded chip breaker groove for precision machining and high surface quality. This G-class inserts with a sharp cutting edge and small corner radius for fine finishing operation without vibration.

Exakt geschliffene einseitige Spanleitstufe für die Hochpräzisionsbearbeitung mit hoher Oberflächengüte. Diese G-Toleranz Platten besitzen scharfe Schneiden und kleine Eckenradien. Für die Feinstbearbeitung ohne Vibrationen.

P M K
ap· d.o.c. =0.05~1(mm)
f=0.05 ~0.3(mm/r)



### SF



Special chip breaker in combination with cermets grades. Sharp cutting edge with excellent chip control. For high surface finishing and precision machining.

Spezieller Spanbrecher in Kombination mit Cermetsorten. Mit scharfer Schneide für die Präzisionsbearbeitung mit hervorragendem Spanbruch und sehr guter Oberflächengüte.

Finishing
Schlichten

P M K
ap· d.o.c. =0.1~2(mm)
f=0.05~0.3 (mm/r)



### HF



Chip breaker for finishing and semi-finishing of steel and cast iron. Especially for internal machining.

Spanbrecher für die Schlicht- bis mittlere Bearbeitung von Stahl und Gusswerkstoffen. Besonders geeignet auch für die Innenbearbeitung.

NEU

P M
ap· d.o.c. =0.5~2.5 (mm)
f=0.08~0.3 (mm/r)



NEW

### AHF



Optimized geometry series for finishing and semi-finishing of steel and stainless steel.
Optimale Geometrie besonders für Stahl und die Schlicht- bis mittlere Bearbeitung von rostfreien Stählen.

# Chip breaker Overview · Spanbrecher Übersicht



Finishing
Schlichten

Positive Inserts
Positive Wendeschneidplatten

**M** **S**
**ap· d.o.c. = 0.1~2(mm)**
**f= 0.05~0.3 (mm/r)**



EF



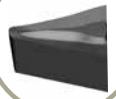
Sharp, positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel and low carbon steel.

Sehr scharfe und positive Schneidkante für die Schlicht- bis mittlere Bearbeitung von austenitischem, rostfreiem Stahl, weichem Baustahl und Stahl mit niedrigem Kohlenstoffgehalt.

**S** **M**
**ap· d.o.c.= 0.05~1(mm)**
**f=0.05~0.2 (mm/r)**



NF



Chip breaker with sharp and positive cutting edge. NF combined with Grade YBG102/YBG105 is best solution for finishing of heat resistance super alloys (Ni-based, Fe-based and Co based material).

Geschliffene Wendeschneidplatte mit einer scharfen, positiven Schneidkante. In Kombination mit der Sorte YBG102/YBG105 ist dieser Spanbrecher besonders für die Schlichtbearbeitung von warmfesten Materialien geeignet (z.B. Ni- basiert, Fe-basiert und Co-basiert).

NEU

**S** **M**
**ap· d.o.c.= 3~8(mm)**
**f=0.2~0.4 (mm/r)**



NEW

NGF



General finishing processing, double-sided E class execution, extensive ground, with high repeatability, the sharp cutting edge has also good strength. This chip breaker is suitable for general finishing of S materials.

Spanbrecher für die allgemeine Schlichtbearbeitung. Die umfangsgeschliffenen Schneidkanten besitzen eine scharfe Schneidkante mit hoher Stabilität.

A

General Turning
Allgemeine Drehbearbeitung

## Chip breaker Overview · Spanbrecher Übersicht

Medium Cutting
Mittlere Bearbeitung

Positive Insert
Positive Wendeschneidplatten

P K

ap·d.o.c. =1~4(mm)
f=0.2~0.5(mm/r)



TC



Stable cutting edge and middle field for High Performance cutting of cast iron and alloy steel. Optimised rake angle and T-Land reduce cutting force and strengthen the wear resistance.

Die umlaufende Spanbrechergeometrie zeichnet sich durch höchste Stabilität aus und ermöglicht die Hight-Performance-Bearbeitung von Guss und Stahl mit geringer Schnittkraft.

P K

ap·d.o.c. =1~4(mm)
f=0.2~0.5(mm/r)



HM



Chip breaker for medium machining of steel or cast iron. Suitable for internal and external turning.

Spanbrecher für die mittlere Bearbeitung von Stahl und Gusswerkstoffen. Einsetzbar bei der Innen- und Außenbearbeitung.

M S

ap· d.o.c. = 1~4(mm)
f= 0.2~0.5(mm/r)



EM



Sharp and strong cutting edge for semifinishing of sticky steel and austentic stainless steel.

Scharfe und stabile Schneidkante für die mittlere Bearbeitung von rostfreien adhäsiven Stählen und austenitischen Werkstoffen.

P K

ap· d.o.c.= 1~8(mm)
f= 0.2~0.6(mm/r)



Basic



Chip breaker for round inserts. Suitable for semi precision machining and profile modelling machining of steel and cast iron.

Umlaufende Spanleitstufe für runde WSP. Für die mittlere Bearbeitung und Profildrehen von Stahl- und Gusswerkstoffen.

# Chip breaker Overview · Spanbrecher Übersicht



Roughing
Schruppen

Positive Inserts
Positive Wendeschneidplatten

K

ap· d.o.c.= 0.05~1(mm)
f =0.05~0.2 (mm/r)



## Flat



Flat insert without chip breaker. Stable insert with high edge strength for roughing operation in cast iron materials.

Glatte Platte ohne Spanbrecher. Mit einer stabilen Schneidkante für die Schruppbearbeitung von Gusswerkstoffen.

P K

ap· d.o.c. =2~5(mm)
f=0.2~0.4(mm/r)



## HR



Chip breaker with strong cutting edge for light to medium rough machining of steel stainless steel and cast iron. Suitable for internal and external machining.

Spanbrecher mit stabiler Schneidkantenausführung für die leichte bis mittlere Schruppbearbeitung von Stahl und Gusswerkstoffen. Einsetzbar bei der Innen- und Außenbearbeitung.

NEU

S

ap· d.o.c. =3~8(mm)
f=0.2~0.4(mm/r)



NEW

## SNR



Sharp cutting edge with large & variable rake angles and optimum chip breaker design. SNR is a good solution for the roughing operation.

Scharfe Schneidkante mit variablem großen Spanwinkel. SNR ist der optimale Spanbrecher für Schruppbearbeitungen.

P

ap· d.o.c. =3~10(mm)
f=0.3~1.2(mm/r)



## Basic



Recommended chip breaker for rough machining with strong cutting edge. First choice for profile machining of steel under unfavorable conditions.

Spezieller Spanbrecher mit einer verstärkten Schneidkantenausführung für die Schruppbearbeitung. Besonders geeignet für die Konturbearbeitung bei höherer Produktionssicherheit von Stahlwerkstoffen unter ungünstigen Bedingungen.

## Chip breaker Overview · Spanbrecher Übersicht

Aluminium machining
Aluminium Bearbeitung

Positive Inserts
Positive Wendeschneidplatten

N

**ap· d.o.c.=0.02~4.8(mm)**
**f=0.05~0.5(mm/r)**



LC



Unique chip breaker design, with sharp cutting edge and positive rake angle. Special edge preparation and surface treatment for better chip control, less friction, less vibration and good surface quality. G-Tolerance inserts for better repeatability.

Einzigartiges Spanbrecherdesign, mit scharfer Schneide und positivem Spanwinkel. Spezielle Schneidkantenpräparation und Oberflächenbehandlung für besseren Spanbruch, weniger Reibung, weniger Vibrationen und bessere Oberflächengüte. G-Toleranz Platten mit hoher Wiederholgenauigkeit.

N

**ap· d.o.c.=0.1~5(mm)**
**f=0.05~0.4(mm/r)**



LH



Chip breaker for aluminum alloy and non ferrous metal machining
G tolerance insert with large rake angle, surface polishing treatment, effectively preventing build up edge and getting high quality machining surface and long tool life.

Spanbrecher für die Bearbeitung von Aluminium, Aluminiumlegierungen (NE-Metallen). G-Toleranz Platte mit großem Spanwinkel und polierter Oberfläche zur Vermeidung von Aufbauschneiden. Hervorragender Spanabfluss, gute Oberflächengüte und lange Standzeiten.

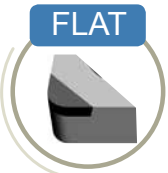
CBN & PKD

PCBN H PCD N

**ap· d.o.c.=0.05~0.5(mm)**
**f=0.05~0.3(mm/r)**



FLAT

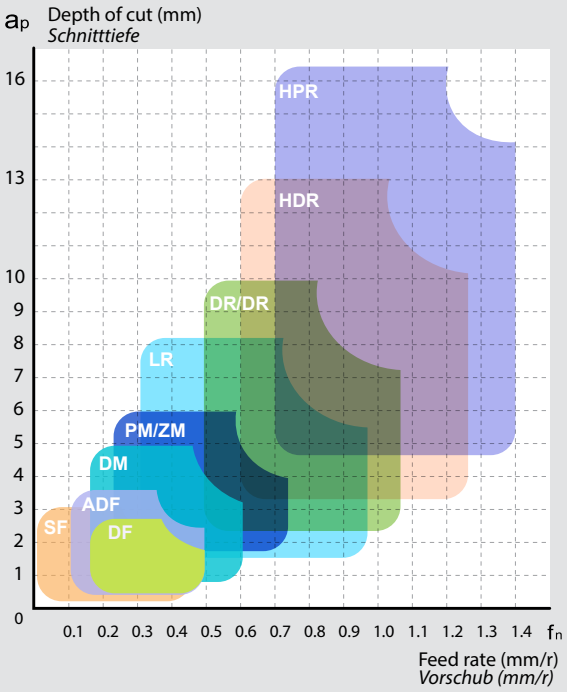


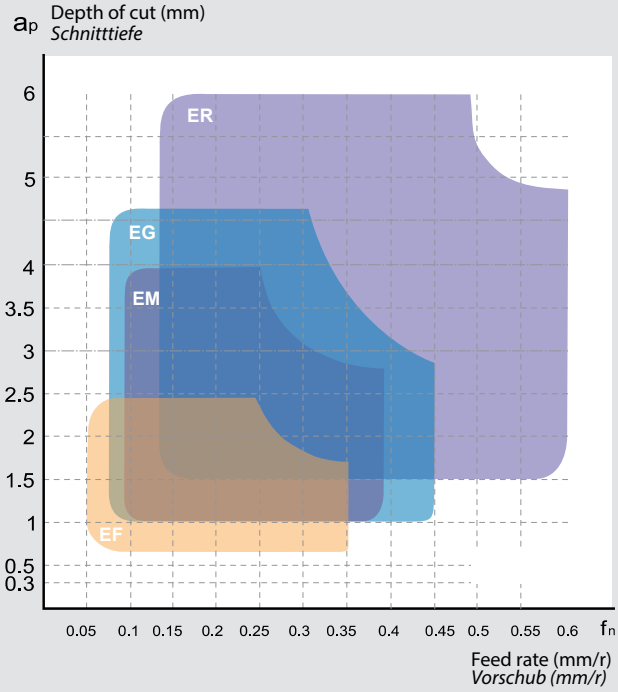
Special inserts G tolerance with brazed CBN or PCD Tip. CBN suitable for finishing of hardened component and cast iron. PCD suitable for finishing of non ferrous metal and non-metal materials.

Spezielle G Toleranz Platte mit gelöteter CBN oder PKD Schneidecke. CBN ist besonders für die Schlichtbearbeitung von gehärtetem Stahl oder Grauguss geeignet, PKD für die Schlichtbearbeitung von NE-Metallen und nicht metallischen Werkstoffen.

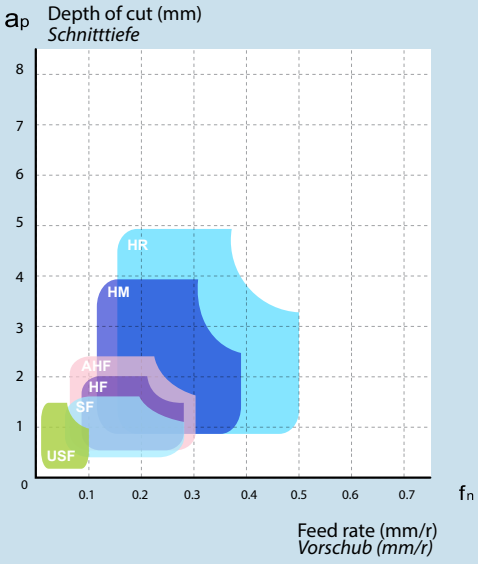
## Main Chip breaker for general turning · Hauptspanbrecher für allgemeine Drehbearbeitung

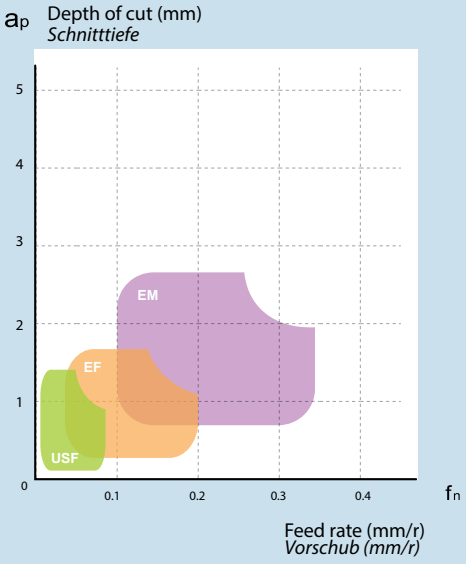
### Negative Inserts · Negative Wendeschneidplatten




### Positive Inserts · Positive Wendeschneidplatten



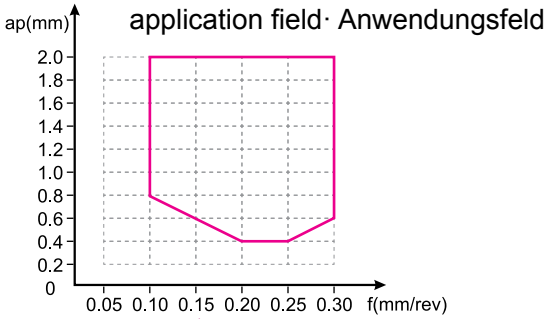



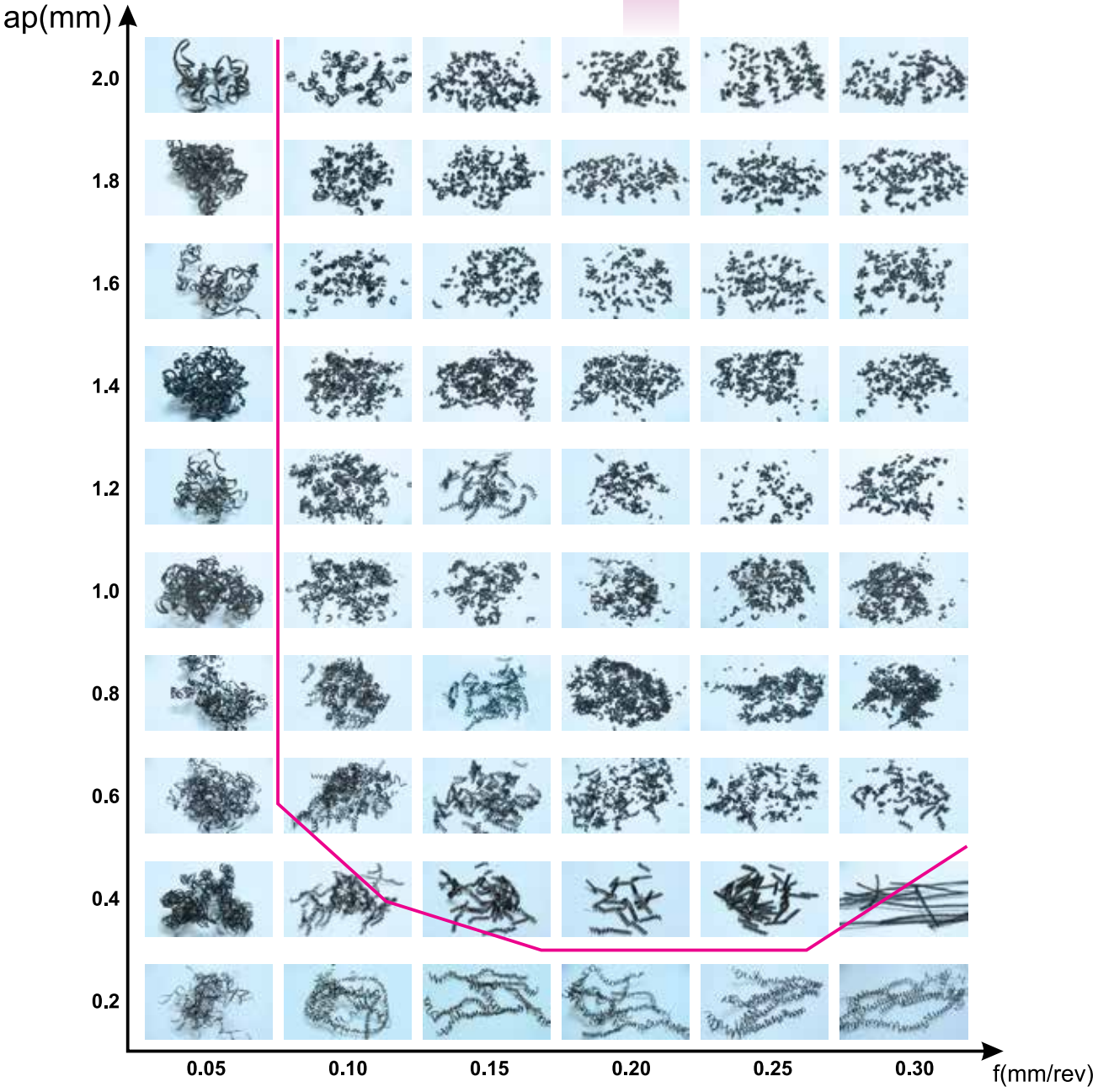
A



## Chip breaker application field
## Spanbrecher Anwendungsfeld

**Example· Beispiel:**
Insert· WSP: CNMG120408-DF
Cutter· Halter: PCLNL2525M12
Material: C 45 steel /Stahl
$V_c$: 200(m/min)

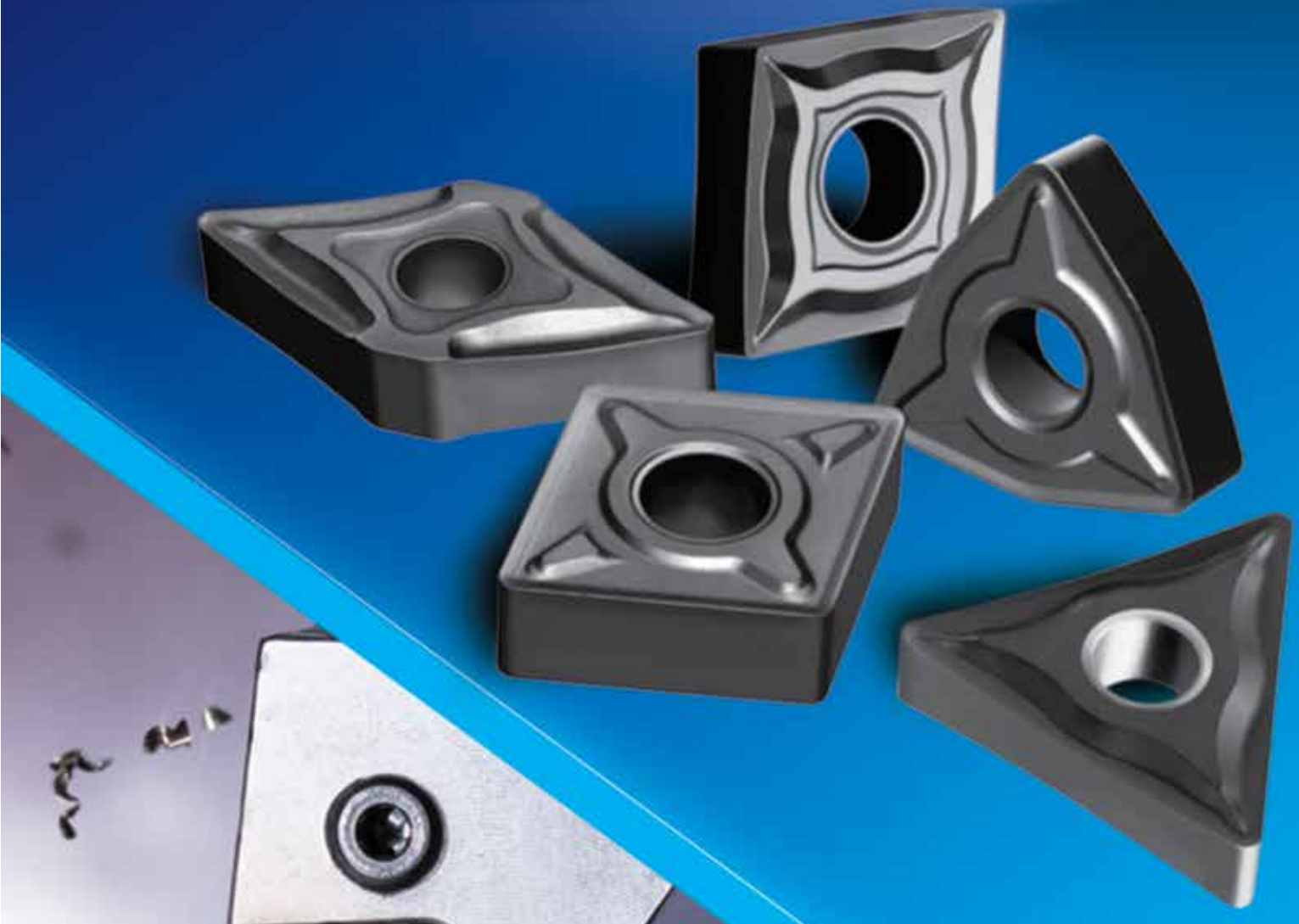


New

# YBM153
# YBM253

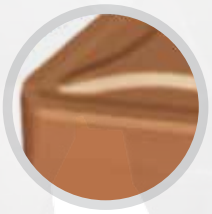
## Grade for stainless steel
## Sorte für rostfreien Stahl





# ADF·AHF NEW

**Optimised geometry series for stainless steel.**
***Optimale Geometrie besonders für die Zerspanung von rostfreien Stählen.***



## -ADF

Negative inserts
*Negative WSP*
e.g. **CNMG ...**

Optimised geometry for negative inserts giving perfect chip control at a wide range of cutting data. Mainly applied for finishing and semi-finishing machining of steels and stainless steel materials. The precision grinding techniques gives high dimension accuracy and high indexing repeatability. Specially designed rake face structure ensures insert strength while greatly reducing the cutting forces. Advanced edge preparation and new coating for excellent surface finish.

*Neu entwickelter Spanbrecher für negative Wendeschneidplatten mit verbessertem Spanbruchverhalten für ein größeres Anwendungsspektrum. Zum Schlichten- bis mittlere Zerspanung von Stahl, rostfreiem Stahl. Umfangsgeschliffene Platte für hohe Qualität und Wiederholgenauigkeit. Optimiertes 3-D Spanbrecherdesign für besseres Verschleißverhalten und höhere Plattenstabilität. Verbesserte Kantenpräparation und neue Beschichtungstechnologie für bessere Oberflächengüte.*



## -AHF

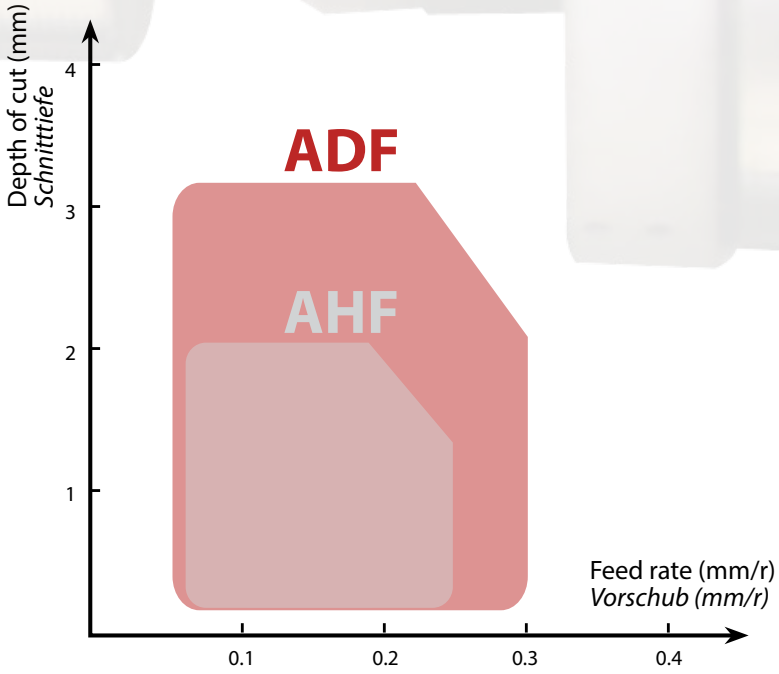
Positive inserts
*Positive WSP*
e.g. **CCMT ...**

New chip breaker for positive inserts giving good surface quality and precision. With rigid design and sharpe edge to reduce vibration especially on long slender parts. Excellent chip control in a wide range of application. For finishing and semi-finishing machining of steel and stainless steel materials. Improved edge geometry for high productivity and stability.

*Neu entwickelter Spanbrecher für positive Wendeschneidplatten für hohe Oberflächengüte und Genauigkeit durch weniger Vibrationen. Perfekte Spankontrolle in großem Anwendungsspektrum. Für Schlicht- bis mittlere Bearbeitung von P und M Materialien. Positive Platten mit verbesserter Kantenausbildung. Hohe Produktivität und Stabilität.*

Range of chip breaker
*Anwendungsbereich Spanbrecher*

**-ADF**
**-AHF**

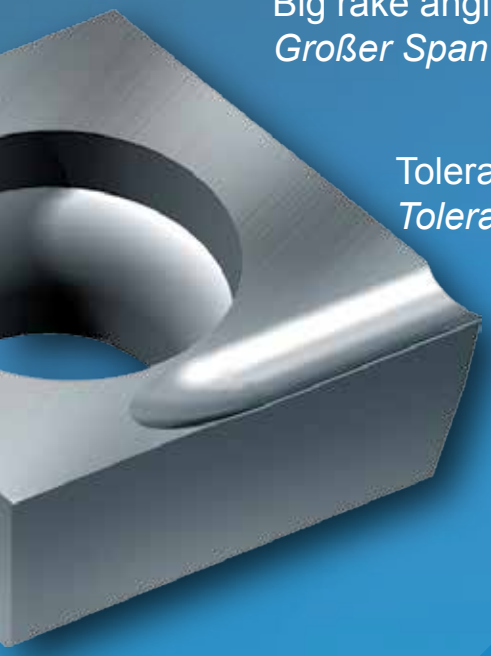


# -USF

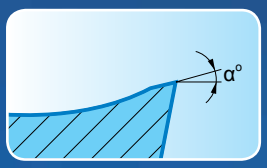


Special chip breaker design for best chip flow
*Spezielles Spanbrecherdesign für optimalen Spanabfluß*

Big rake angle and sharp cutting edge for smooth machining
*Großer Spanwinkel und eine scharfe Schneide für einen weichen Schnitt*

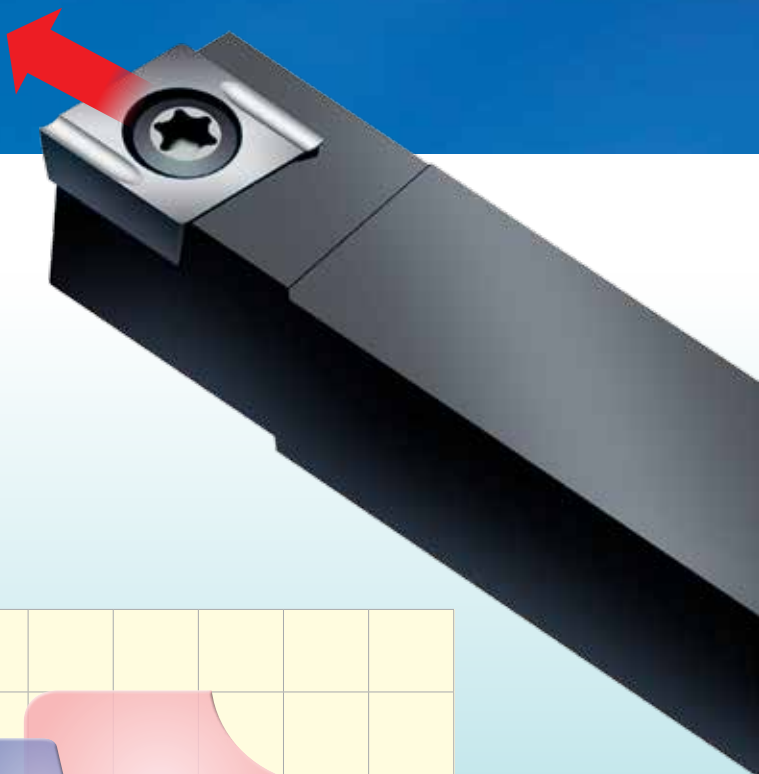


Tolerance of cutting edge radius ≤ 0.02mm
*Toleranz des Schneidkantenradius ≤ 0.02mm*

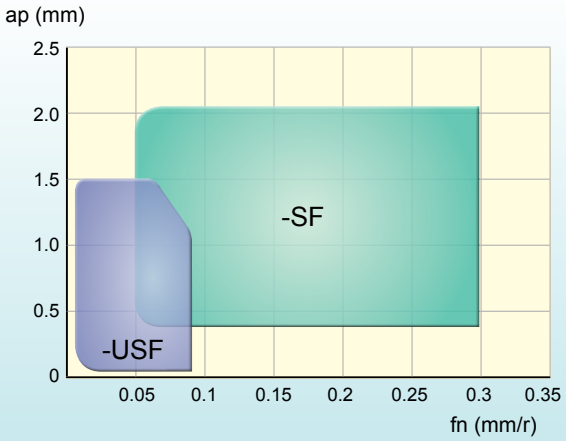



G-Tolerance inserts for high surface quality
*G-Toleranz Platten für hohe Oberflächengüte*

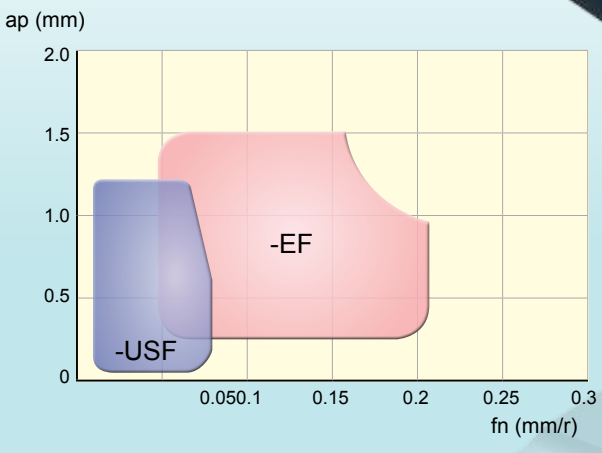
High precise clamping with strong screw
*Hochpräzise Schraubenspannung*



■ Application field of USF chipbreaker /
*Anwendungsbereich des -USF Spanbrecher*




Material: 42CrMo




Material: X10CrNiTi189

# -LC Chip Breaker *Spanbrecher*

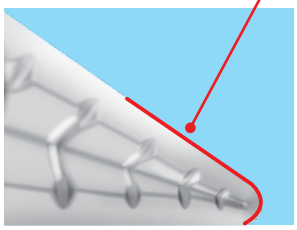
1. Unique chip breaker design, with sharp cutting edge and positive rake angle.
   *Einzigartiges Spanbrecherdesign mit scharfer Schneide und positivem Spanwinkel.*

2. Special edge preparation and surface treatment for better chip control, less friction, less vibration and good surface quality.
   *Spezielle Schneidkantenpräparation und Oberflächenbehandlung für besseren Spanbruch, weniger Reibung, weniger Vibrationen und bessere Oberflächengüten.*

3. G-Tolerance inserts for better repeatability.
   *G-Toleranz Platten mit hoher Wiederholgenauigkeit.*

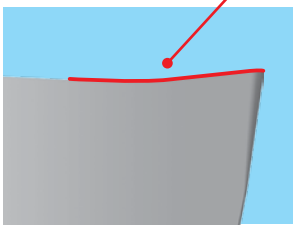
Optimised radius and edge geometry for better surface quality. Optimised chip breaker position.

*Optimierter Radius, Noppenposition und Schneidkantengeometrie für sehr gute Oberflächengüten.*

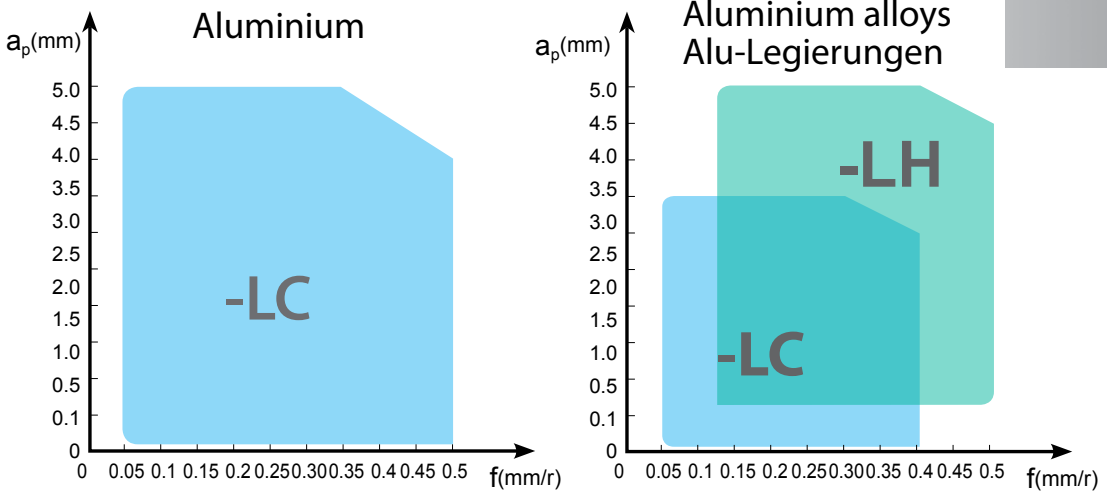


Special rake angle and edge preparation for better chip control.

*Spanwinkel und Schneidkante für optimalen Spanfluss.*



**Comparison of chip breaker**
***Vergleich der Spanbrecher***




| Aluminium | | |
|---|---|---|
| Cutting data<br>Schnittdaten | $v_c$=350m/min $a_p$=0.2mm f=0.2mm/r | |
| Surface quality<br>Oberflächengüte |  |  |
| | -LC | Competitor / Wettbewerb |

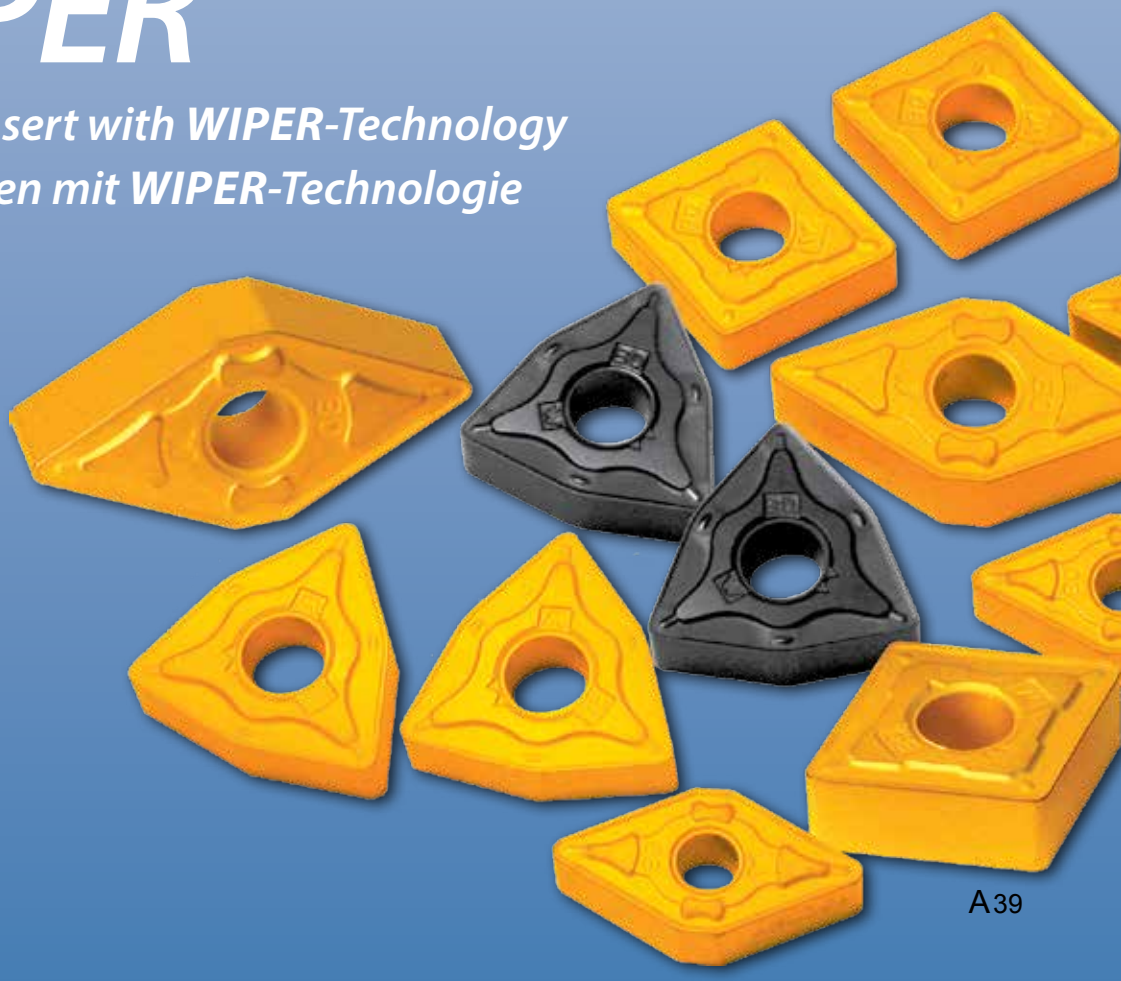


# WG

## Chip breaker series
## Spanbrecher Serie

# WIPER

***Turning Insert with WIPER-Technology***
***Drehplatten mit WIPER-Technologie***



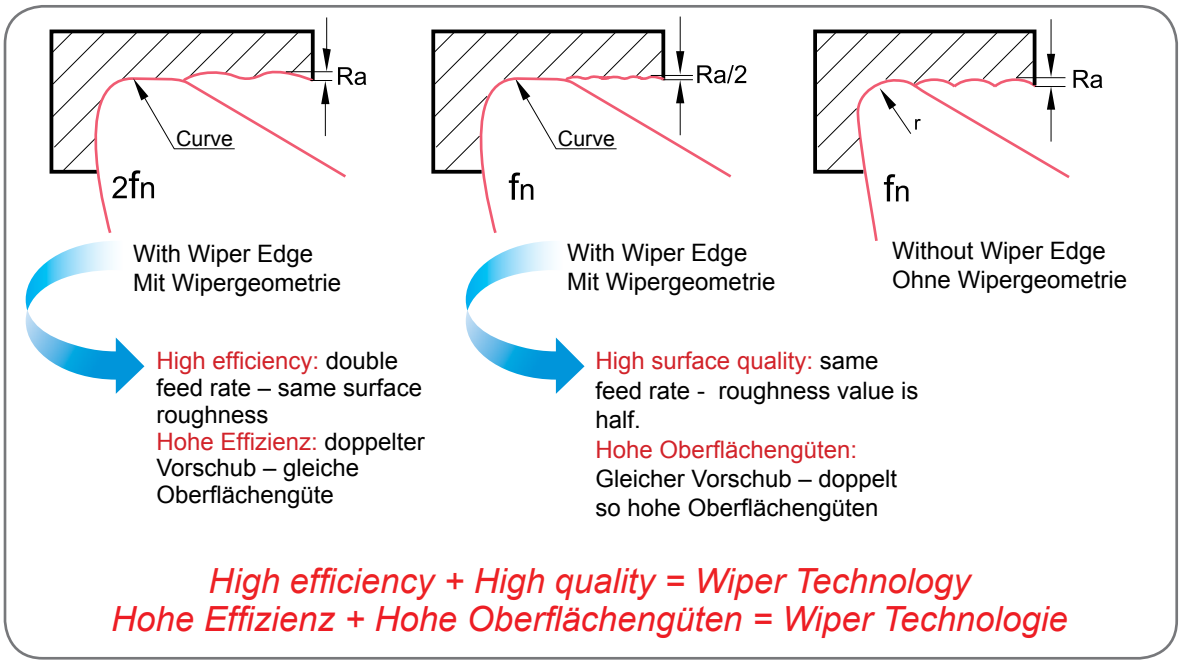


Machining a good surface finish on turned components has become a demand for semi-finishing and finishing operations. The Wiper technology has provided turning with a new means to achieve improved production performance where the key is to being able to raise the feed rate.

*Bei der Schlicht- bis mittleren Bearbeitung von Drehteilen nimmt die Realisierung von hohen Oberflächengüten an Bedeutung zu. Dank der Wiper-Technologie kann diese Anforderung auch bei höheren Vorschüben realisiert werden. Ein weiterer Vorteil ist die Steigerung der Produktivität.*

A Wiper insert has a special design of nose configuration. It has been developed to provide a high capability of generating a better surface finish. On the other hand, it is capable of machining the same finish at a much higher feed.

*Eine Wiperplatte zeichnet sich durch eine spezielle Modifikation des Eckenradius aus. Dadurch ist bei gleichem Vorschub, verglichen mit einer herkömmlichen Drehplatte, eine deutliche Verbesserung der Oberflächengüte zu erzielen. Eine weitere Möglichkeit ist die Verdoppelung des Vorschubes für eine höhere Produktivität, wobei die Oberflächengüten gleich bleiben.*




## Feature· Merkmale:

By using a Wiper inserts you can get excellent surface quality and eliminate many grinding operations. You also get better component quality and roundness compared to grinding.

Durch die Verwendung von Wendeschneidplatten mit Wipertechnologie lassen sich hohe Oberflächengüten erzielen und somit viele Schleifoperationen ersetzen. Die Werkstückqualitäten z.B. in Bezug auf Rundheit können im Vergleich zum Schleifen ebenfalls gesteigert werden.



# EF EM EG ER

Special chip breaker series for soft steel, stainless steel and heat resistance superalloy
Spezielle Spanbrecherserien, besonders für die Zerspanung von weichem Stahl, rostfreien Stählen und warmfesten Superlegierungen.



## -EF

Sharp positive cutting edge for finishing and semifinishing application. Suitable for continuous to light interrupted cut.

Scharfer, positiver Spanbrecher für die Schlichtbearbeitung. Für glatte bis leicht unterbrochene Schnitte.



## -EM

Sharp cutting edge with stronger edge line for medium cut even in interrupted cut.

Scharfe, stabile Schneidkante für die mittlere Bearbeitung von Werkstoffen auch im unterbrochenen Schnitt.



## -EG

Universal chip breaker with deep rounded chip groove and sharp cutting edge. Finishing to medium cutting with very good chip control over a wide range of applications.

Universalspanbrecher mit umlaufender Spanleitstufe sowie scharfer Schneidkantenausbildung. Vom Schlichten bis hin zur mittleren Bearbeitung hat er eine hervorragende Spankontrolle mit breitem Anwendungsfeld.



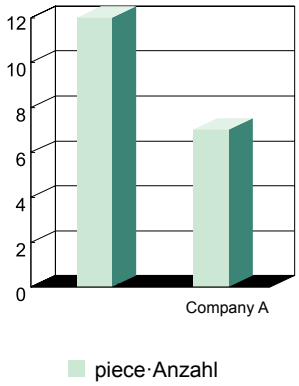
## -ER

Special edge design with exellent balance between egde strength and sharpness. Suitable for roughing operation.

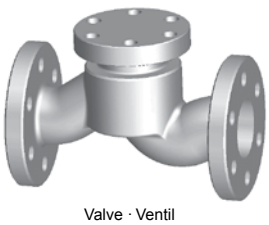
Speziell entwickelter Spanbrecher mit exzellenter Kantenstabilität bei gleichzeitiger Schneidenschärfe, für die Schruppbearbeitung.

Example· Beispiel:

CNMG120408-**EM**
YBM253



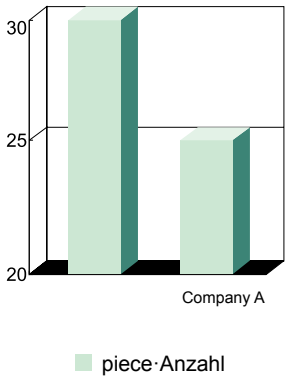

| Parameter | |
|---|---|
| D | 135mm |
| $V_c$ | 200 m/min |
| f | 0.25mm/rev |
| ap | 2.5 mm |



Valve · Ventil

Example· Beispiel:

CNMG120408-**EF**
YBG205

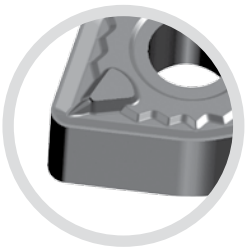



| Parameter | |
|---|---|
| D | 89 mm |
| $V_c$ | 180 m/min |
| f | 0.15mm/rev |
| ap | 1.0 mm |

# NF NGF NM SNR



**Special chip breaker series for machining heat resistance and super alloy material.**
**Neue Spanbrecherserie für die Bearbeitung von hochlegierten, warmfesten Materialien.**



## -NF

Grounded insert with sharp and positive cutting edge. NF is a good solution for the finishing operation.

Geschliffene Wendeschneidplatte mit einer scharfen, positiven Schneidkante. NF ist eine gute Lösung für Schlichtbearbeitungen.



## -NGF

General finishing processing, extensive ground, with high repeatability, the sharp cutting edge has also good strength. This chip breaker is suitable for general finishing of S materials.

Spanbrecher für die allgemeine Schlichtbearbeitung. Die umfangsgeschliffenen Schneidkanten besitzen eine scharfe Schneidkante mit hoher Stabilität.



## -NM

Sharp cutting edge with positive multi-rakes. Special for the semi-finishing of heat resistant super alloys.

Scharfe Schneidkante mit positivem Multi-Spanwinkel. Besonders geeignet für die Bearbeitung von warmfesten Superlegierungen.

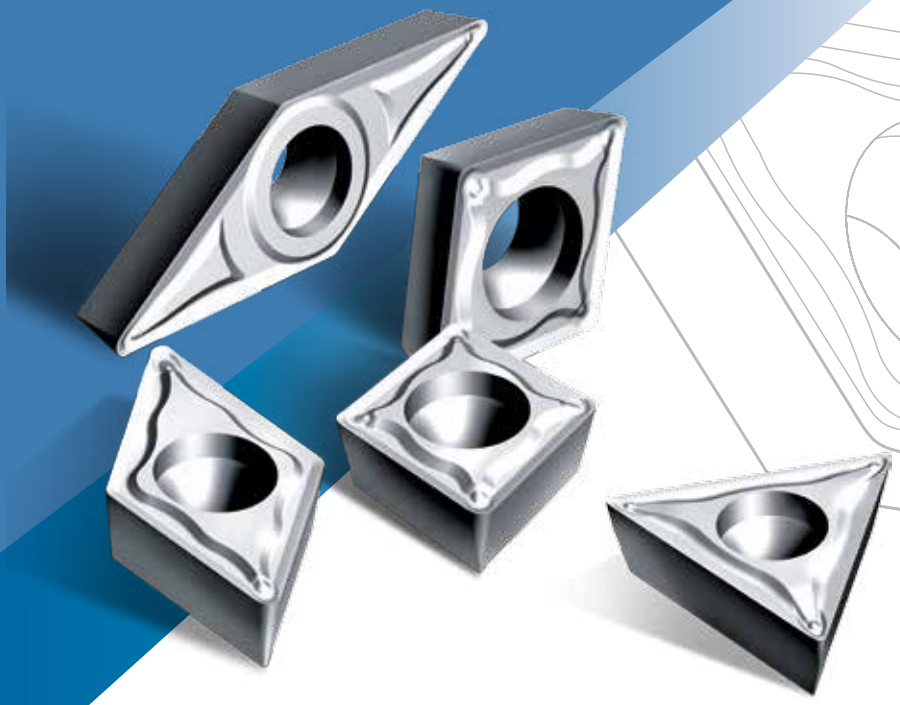


## -SNR

Sharp cutting edge with large & variable rake angles and optimum chip breaker design. SNR is a good solution for the roughing operation.

Scharfe Schneidkante mit variablem großen Spanwinkel. SNR ist der optimale Spanbrecher für  Schruppbearbeitungen.





# SF

Chip breaker for high precision machining
Spanbrecher für die Hochpräzisionsbearbeitung

**C**hip breaker geometry for fine-finishing of steel, stainless steel and cast iron. In combination with our cermet grades a good solution for high precision production.

**S**panbrecher für die Feinstbearbeitung von Stahl, rostfreiem Stahl und Gusswerkstoffen. In Kombination mit unseren Cermetsorten die beste Wahl für die Hochpräzisionsbearbeitung.

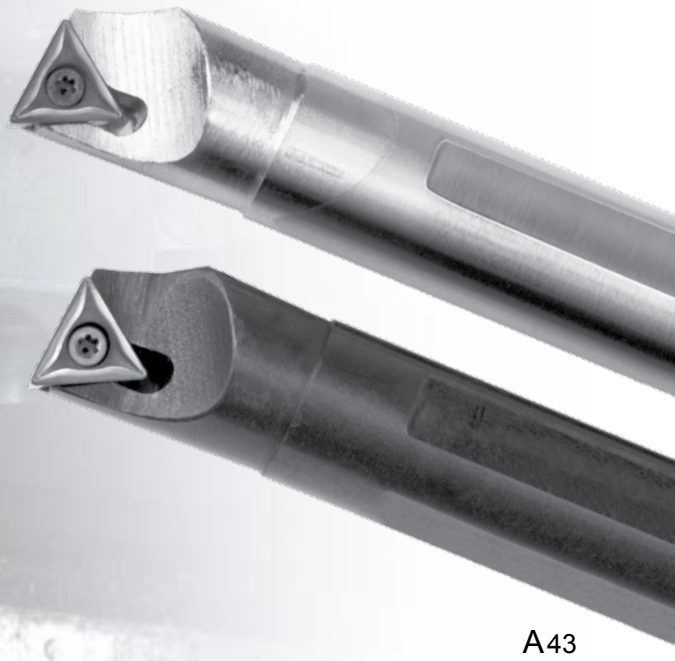
1. High precision
   Hohe Genauigkeit

2. Sharp cutting edge to reduce cutting force and vibration
   Scharfe Schneidkante zur Reduktion von Schnittkraft und Vibrationen.

3. Excellent chip control
   Ausgezeichnete Spankontrolle

4. Excellent surface quality
   Ausgezeichnete Oberflächengüte

Best result in combination with our carbide anti-vibration boring bars.
Beste Ergebnisse in Kombination mit unseren Antivibrations Hartmetallbohrstangen.



New

# YB6315

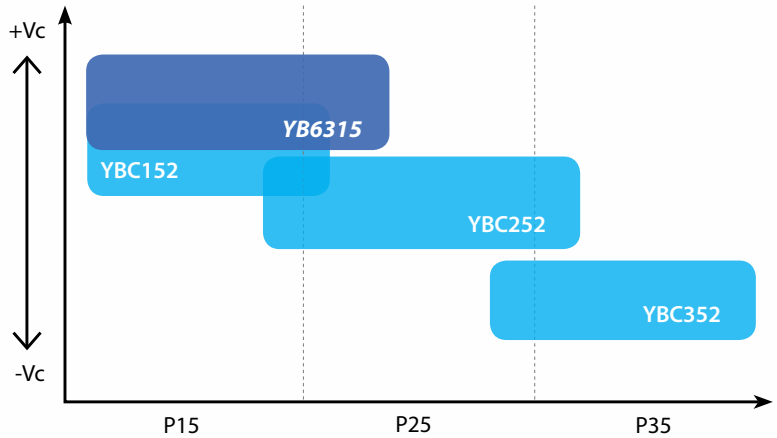
## -Silver diamond-

### For high efficient steel machining
### *Für hochleistungs Stahlbearbeitung*

- Grade for turning of P15-materials
- New CVD coating technology for improved wear resistance with high cutting speed

- *Sorte für P15-Materialien*
- *Neue CVD Beschichtungstechnologie für eine verbesserte Verschleißfestigkeit bei höheren Schnittgeschwindigkeiten*





## Grade in second generation for machining of steel and casting steel
## Oprimierte Sortengeneration für die Bearbeitung von Stahl und Stahlguss

# YBC152

### Higher cutting speed, longer tool life
### Hohe Schnittgeschwindigkeit, lange Standzeit

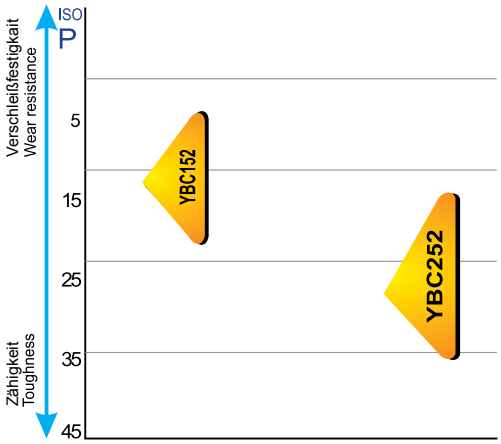
CVD coated carbide grade (P10-P20) for finishing to medium roughing of steel and casting steel in turning operation. Outstanding performance under high cutting speed and temperature with excellent wear resistance.

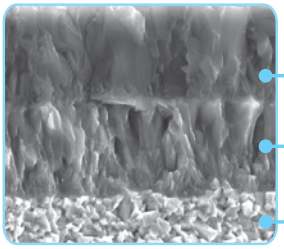
*CVD-beschichte Hartmetalsorte (P10-P20) zum Schlichten bis mittlere Bearbeitung von Stahl und Stahlguss bei Drehoperationen. Hervorragende Eigenschaft bei hoher Schnittgeschwindigkeit und Temperatur mit exzellenter Verschleißfestigkeit.*

# YBC252

CVD coated carbide grade (P20-P35) for medium operation to roughing of steel and casting steel in turning operation. Optimal performance of wear resistance and toughness for a wide application field.

*CVD-beschichtete Hartmetallsorte (P20-P35) für mittlere Bearbeitung bis Schruppen von Stahl und Stahlguss bei Drehoperationen. Optimierte Verschleiß-festigkeit und Zähigkeit für einen breiten Anwendungs-bereich.*

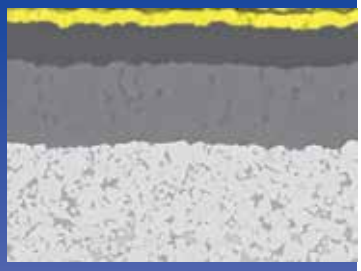


Thick $Al_2O_3$, Fine grain / *Dicke $Al_2O_3$, Feinkorn*

MT-TiCN / *MT-TiCN*

Gradient Carbide Substrat / *Gradiertes Hartmetall-Substrat*



YBC251 coating
YBC251 beschichtet

# Application field CVD-turning grade of steel
# Anwendungsbereich CVD-Drehsorten für Stahl

## YBC251

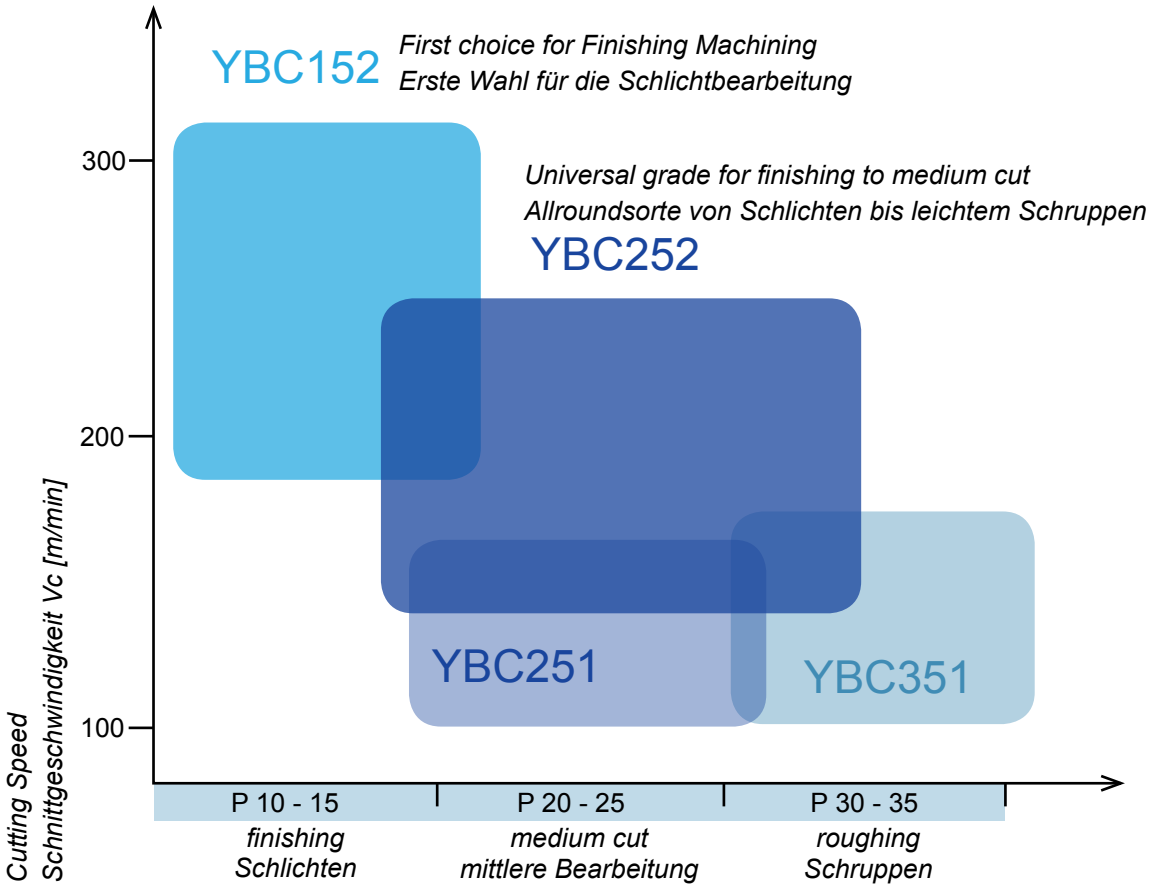
CVD universal grade with excellent combination of toughness and wear resistance. In combination with MT-Ti(CN),layer AL2O3, TiN coating this grade is first choice for medium to light interrupted cutting of steel in lower cutting speed.

*CVD-beschichtete Allroundsorte mit guter Schneidkantensicherheit und Verschleißfestigkeit. In Verbindung mit der MT-TiCN und einer AL2O3 TiN Beschichtung eignet sich diese Sorte für die mittlere Bearbeitung bis zu leichtem Schruppen von Stahl bei niedrigeren Schnittgeschwindigkeiten.*

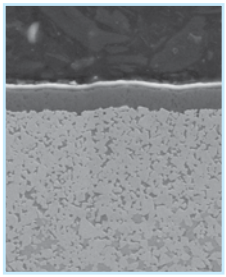
## YBC351

CVD coated grade with high toughness and wear resistance. In combination with MT-Ti(CN), thick layer AL2O3, TiN coating this grade is suitable for rough machining of steel under unstable condition.

*CVD-beschichtete Sorte mit hoher Zähigkeit und Verschleißfestigkeit. Die Kombination von MT-TiCN und einer dicken AL2O3 TiN Auflage eignet sich besonders für die leichte bis schwere Schruppbearbeitung von Stahl,auch bei ungünstigen Bedingungen.*



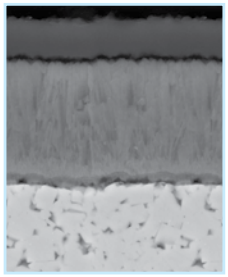
# Application field CVD turning grade of stainless steel
## *Anwendungsbereich CVD Drehsorten für rostfreien Stahl*



## YBM153

**For finishing and continious cut of stainless steel with:**
***Geeignet für die Schlichtbearbeitung von rostfreien Stählen mit:***

- good surface quality / *hohen Oberflächengüten*
- higher cutting performance / *höheren Schnittleistungen*
- stable cutting condition / *stabilen Schnittbedingungen (glatter Schnitt)*



## YBM253

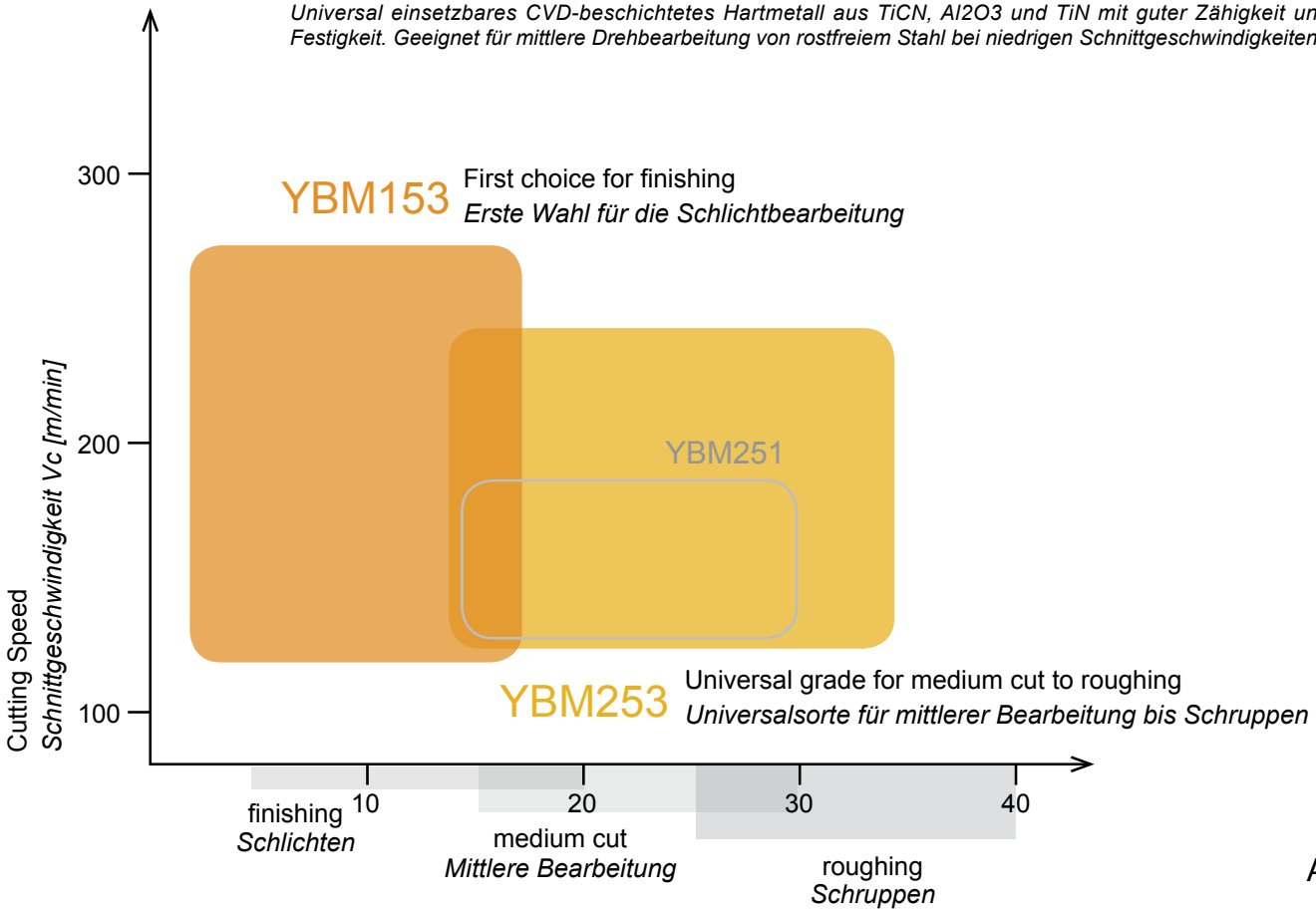
***For medium application in stainless steel with:***
**Geeignet für die mittlere bis Schruppbearbeitung von rostfreien Stählen mit:**

- reliable tool life / *stabilen Standzeiten*
- excellent toughness and wear resistance / *exzellenter Zähigkeit bei guter Verschleißfestigkeit*
- continious cut to interrupted cut / *Glattschnitt bis Schnittunterbrechung*

## YBM 251

Substrate with good toughness and strength, in combination with Ti(CN), thin layer $AL_2O_3$, TiN coating. It is suitable for semi-finishing to light roughing of stainless steel at continuous and intermittent machining conditions.

*Universal einsetzbares CVD-beschichtetes Hartmetall aus TiCN, Al2O3 und TiN mit guter Zähigkeit und Festigkeit. Geeignet für mittlere Drehbearbeitung von rostfreiem Stahl bei niedrigen Schnittgeschwindigkeiten.*



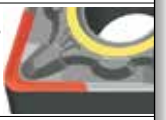
simply coloured

The revolution in wear identification
*Die Revolution in der Einsatzerkennung*

# YBC / YBM F SERIES / SERIE

***Easy choice on the basis of the table without any further knowledge and without looking at the insert box.***

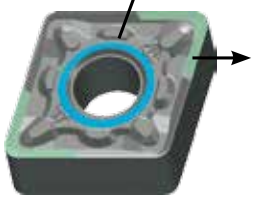
*Einfache Auswahl anhand der Tabelle ohne große Kenntnisse über die Sorten und ohne Verpackung möglich.*

| | P | M |
|---|---|---|
| 05 | | |
| 15 | YBC152F  | YBM153F  |
| 25 | YBC252F  | YBM253F  |
| 35 | | |

Recommended for wet condition / *Für Nassbearbeitung empfohlen*

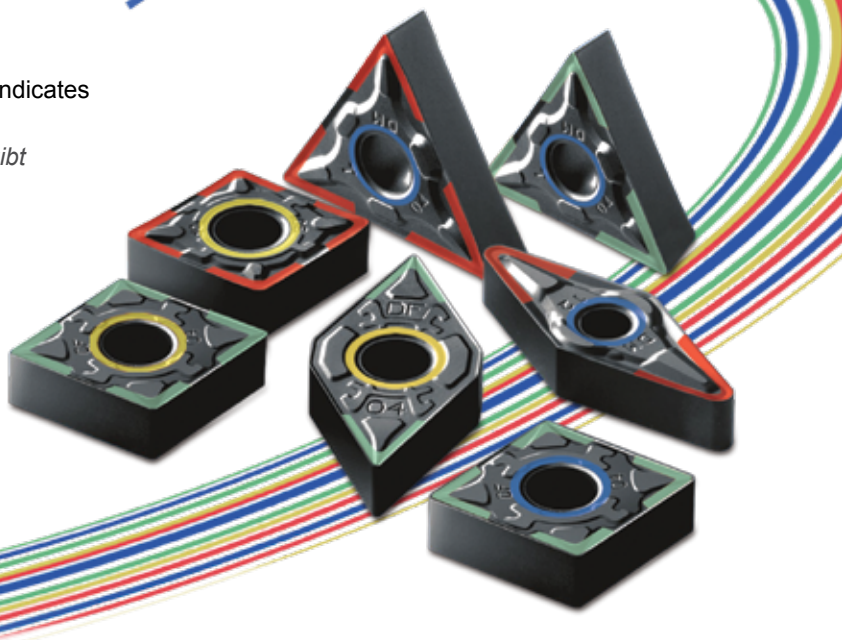
The colour of the inner ring indicates the application range.(P/M)

*Die Farbe des Mittelrings gibt den Anwendungsbereich der Sorte (P/M) an.*



The colour of the cutting edge indicates the grade, such as P15.

*Die Farbe der Schneidkanten gibt den Sortenbereich z.B. P15 an.*



# New YB7315

- A new turning grade for the machining of K-materials (Cast Irons) with latest third generation coating technology.

  *Neue Drehsorte für die Bearbeitung von K-Materialien mit neuester Beschichtungstechnologie der dritten Generation.*

- The new sintering technology gives an improved toughness in combination with high wear resistance.

  *Substrat mit neuer Sintertechnologie für eine verbesserte Zähigkeit in Kombination mit höherer Verschleißfestigkeit.*

- The new coating technology enables a homogenised layer structure and improved coating adhesion. Even with the increased layer thickness the smooth surface texture gives efficient machining of K materials with very high process reliability.

  *Die neue Beschichtungstechnologie ermöglicht einen homogenisierten Schichtaufbau, verbesserte Schichthaftung, auch bei größeren Schichtdicken eine glattere Oberflächenstruktur für eine effiziente Bearbeitung von K-Materialien mit höherer Prozesssicherheit.*





Application field CVD turning grade of Cast Iron

Anwendungsbereich CVD Drehsorten für Guss

# YBD052



CVD coated grade with excellent wear resistance in combination with MT-Ti(CN), thick layer AL2O3. Best grade for machining of grey cast iron (GG) under high speed and dry machining.

*CVD-beschichtete Premiumsorte mit ausgezeichneter Verschleißfestigkeit. Die Kombination von MT-TiCN und einer dicken AL2O3 Auflage eignet sich besonders zum Bearbeiten von Grauguss (GG) bei hohen Schnittgeschwindigkeiten und Trockenbearbeitung.*

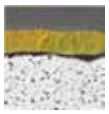
# YBD102



Modified CVD coating the hard fine grain carbide substrate. It is optimised for machining of cast iron, special nodular cast iron and hard steel at high speeds.

*Modifizierte CVD Beschichtung auf einem harten feinkörnigen Hartmetall.Optimal für die Bearbeitung von Guss, besonders Kugelgraphitguss und hoch vergütetem Stahl bei hohen Geschwindigkeiten.*

# YBD152



Hard medium fine corn substrate in combination of TiCN, thick $AL_2O_3$ coating. It is suitable for machining of grey cast iron and nodular cast iron under normal cutting conditions from low to medium cutting speeds.

*Hartes mittel-feinkörniges Substrat mit TiCN, dicker $AL_2O_3$ Auflagen. Es ist geeignet für die Bearbeitung von Grauguss und Kugelgraphitguss mit niedrigen bis mittleren Schnittgeschwindigkeiten.*

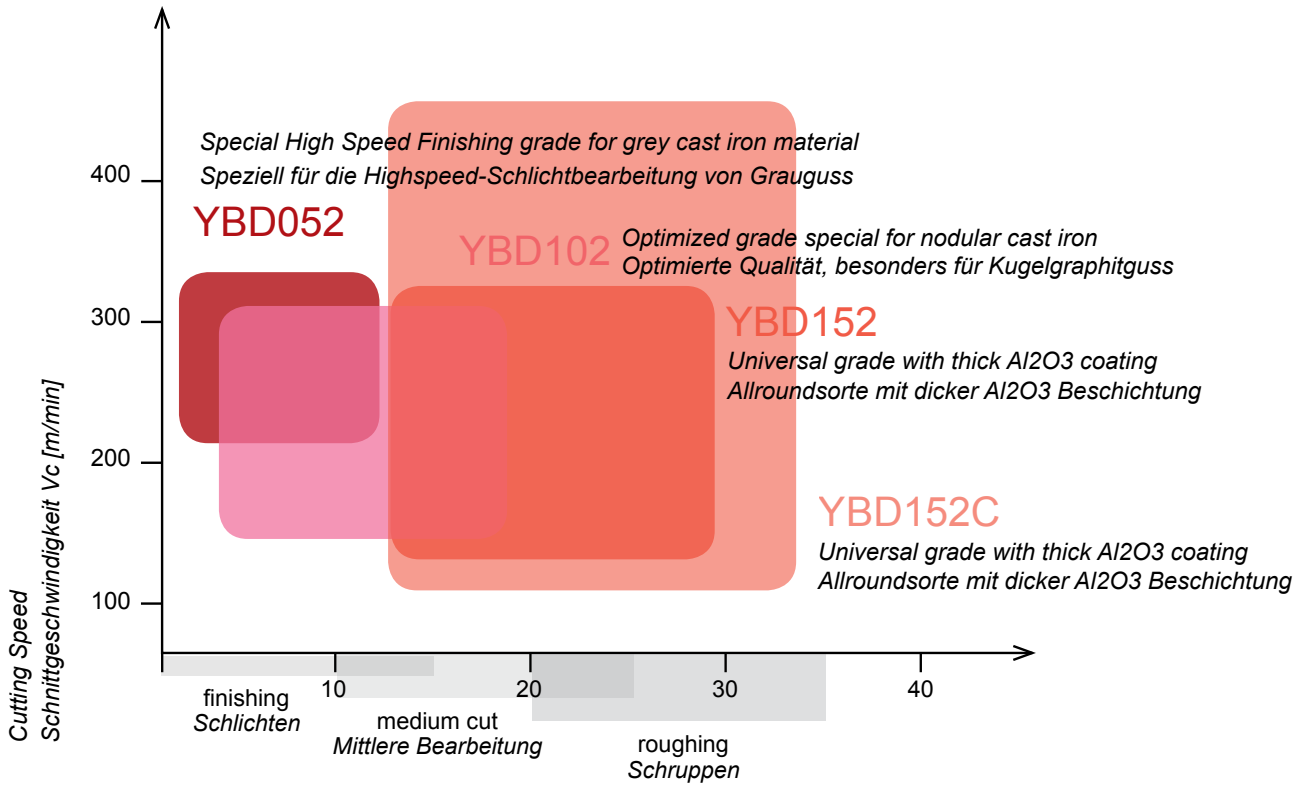
New

# YBD152C



Improved grade with thicker $Al_2O_3$ coating in combination with the TC chip breaker for more stable performance, higher tool life and wear resistance under higher cutting condition up to Vc=450 m/min.

*Verbesserte Sorte mit dickerer $Al_2O_3$ Beschichtung in Kombination mit dem TC-Spanbrecher. Für höhere Schnittleistung, mehr Standzeit und Verschleißfestigkeit bei hohen Schnittgeschwindigkeiten bis Vc=450 m/min.*



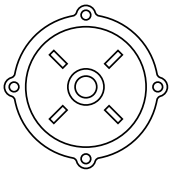
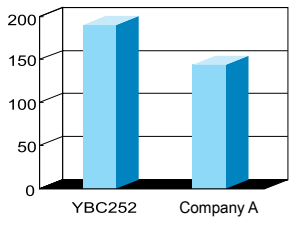
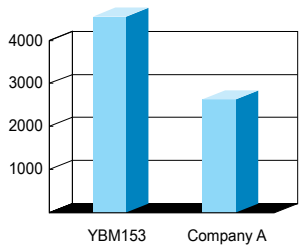
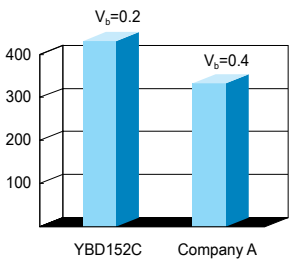
■ Recommended combination of grades, chip breaker and cutting data.
Empfohlene Kombination von Sorten, Spanbrechern und Schnittdaten.

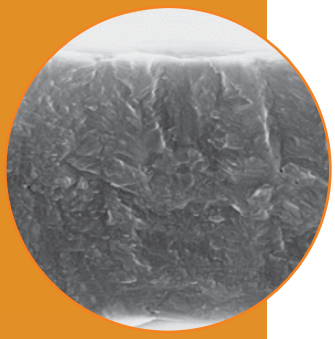
| P | | M | | K | |
|---|---|---|---|---|---|
| grade Sorte | chip breaker Spanbrecher | grade Sorte | chip breaker Spanbrecher | grade Sorte | chip breaker Spanbrecher |
| YBC152 | DF DM | YBM153 | EF EM | YBD052 | PM |
| YBC252 | DM PM | YBM251 | EM ER | YBD102 | PM, DR |
| YBC252 | DR (doppelseitig) | YBM253 | EF EM ER | YBD152 | Flat, DR |
| YBC351 | DR | | | YBD152C | TC |
| YBC252 | LR | | | | |
| YBC351 | HDR | | | | |
| YBC252 | HPR | | | | |

■ Recommended cutting condition· Empfohlene Schnittdaten

| Workpiece Material Werkstück Material | | Application · Anwendung | Grade · Sorte | Recommended Cutting Speed m/min Schnittgeschwindigkeit m/min |
|---|---|---|---|---|
| P | Steel Stahl | Finishing Schlichten | YBC152 | 120-400 |
| | | Semi-finishing Mittlere Bearbeitung | YBC251 | 80-160 |
| | | | YBC252 | 100-350 |
| | | Roughing Schruppen | YBC351 | 80-140 |
| M | Stainless Steel Rostfreier Stahl | Semi-finishing Mittlere Bearbeitung | YBM153 | 120-300 |
| | | | YBM251 | 70-150 |
| | | | YBM253 | 100-250 |
| K | Cast Iron Gusseisen | Finishing Schruppen | YBD052 | 200-500 |
| | | | YBD102 | 180-450 |
| | | Semi-finishing Mittlere Bearbeitung | YBD152 | 190-400 |
| | | | YBD152C | 200-550 |
| | | Roughing Schruppen | YBD152C | 150-450 |

Machining example · Bearbeitungsbeispiele

| Application Anwendung | Typ | WNMG060408 PM | CNMG120408-EM | CNMG120408-TC |
|---|---|---|---|---|
| | Sorte | YBC252 | YBM153 | YBD152C |
| Workpiece Werkstück | |  |  |  |
| Workpiece Material & Hardness Material & Härte | | C45 steel HB220 | Stainless Steel 1.4713 rostfr. Stahl | Grey cast iron GG25 Grauguss |
| Cutting Condition Schnitt-bedingungen | Parameters Schnittdaten | V=220m/min ap=1.5~2mm f=0.25mm/r | Vc=350m/min ap=2mm f=0.25mm/r | Vc=310m/min ap=3mm f=0.35mm/r |
| | Cutting Liquid Kühlmittel | dry trocken | wet nass | dry trocken |
| Machining result Ergebnis<br>Workpiece per edge Werkstücke pro Schneide | |  |  |  |



PVD

NEW

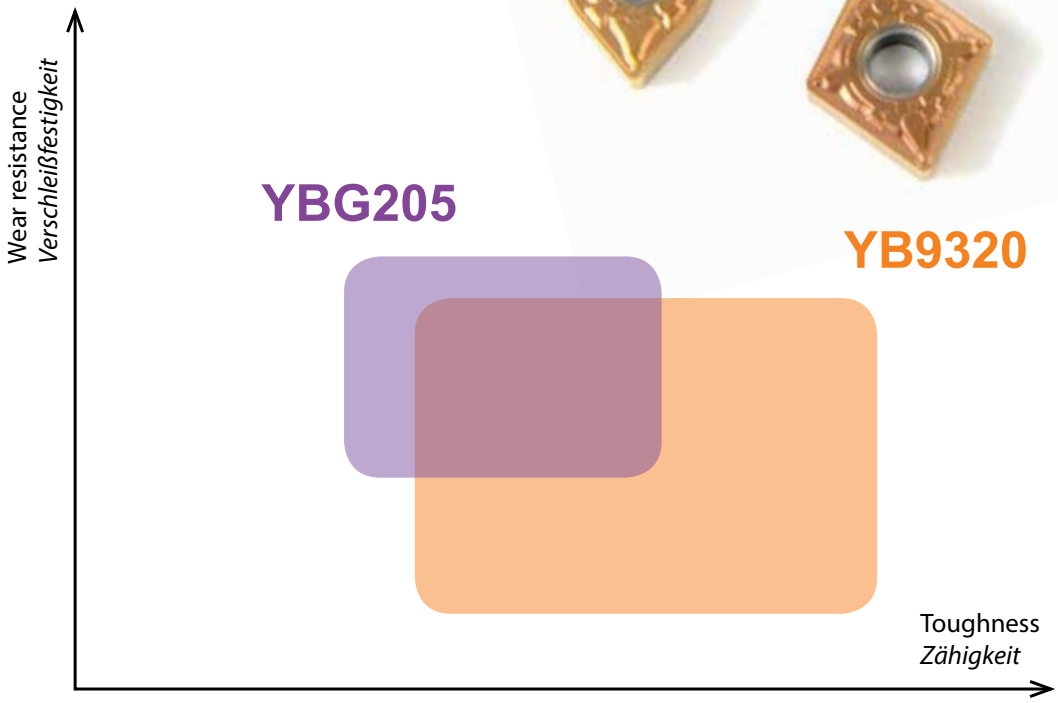
PVD Coated Cemented Carbide
PVD beschichtetes Hartmetall

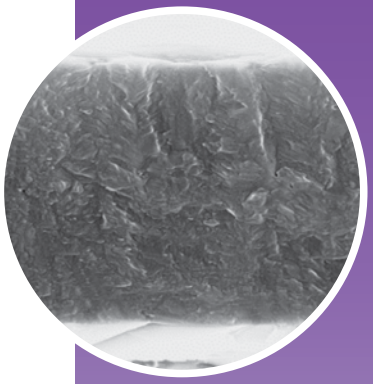
# New YB9320

New coating technology with increased adhesion between coating and substrate and an excellent combination of toughness and hardness. The new grade also has a high temperature resistance. Suitable for a wide application range in stainless steel and also heat resistance material.

*Neue Beschichtungstechnologie mit optimaler Schichthaftung und einer guten Kombination aus Zähigkeit und Härte. Die neue Sorte hat auch eine hohe Temperaturbeständigkeit. Für ein breites Anwendungsspektrum in rostfreien und warmfesten Materialien.*







PVD

Coated Cemented Carbide
Beschichtetes Hartmetall

**Solution for materials which are hard to machine...**

***Die Lösung für die Bearbeitung von schwer zu zerspanenden Materialien...***

# YBG102

**N10** (N01-N10)
**S10** (S01-S20)

PVD nano-TiAlN coated fine grain carbide grade. It is suitable for finishing and semi-finishing turning of high-temperature alloys, nonferrous metal (Aluminium with Si>=12%) and finishing of stainless steel in low cutting speed.

*Nano-TiAlN PVD-beschichtete, fein körnige Hartmetallsorte. Gut geeignet zum Drehen von warmfesten Superlegierungen, NE-Metallen (Aluminium mit Si>=12%) und zum Schlichten von rostfreiem Stahl mit niedriger Schnittgeschwindigkeit.*

# YBG105

**N10** (N01-N10)
**S10** (S01-S20)

Fine grain grade with improved coating for higher wear resistance and tool life finishing and semi-finishing turning of high alloy material and stainless steel.

*Feinkornsorte mit verbesserter Beschichtung für höhere Verschleißfestigkeit und Standzeit bei der Schlicht- und mittleren Drehbearbeitung von hochlegierten, warmfesten Stählen und rostfreien Werkstoffen.*

# YBG202

**P20** (P10-P25)
**M20** (M10-M25)

PVD nano-TiAlN (2~4um) coated fine grain carbide grade. Good performance in combination of toughness and wear resistance, suitable for turning, parting, grooving of steel, stainless steel and high-temperature alloys in finishing and semi-finishing machining.

*Nano-TiAlN (2~4um) PVD beschichtete, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit. Zum Drehen, Ab- und Einstechen von Stahl, rostfreiem Stahl und warmfesten Superlegierungen bei leichter und mittlerer Bearbeitung.*

# YBG205

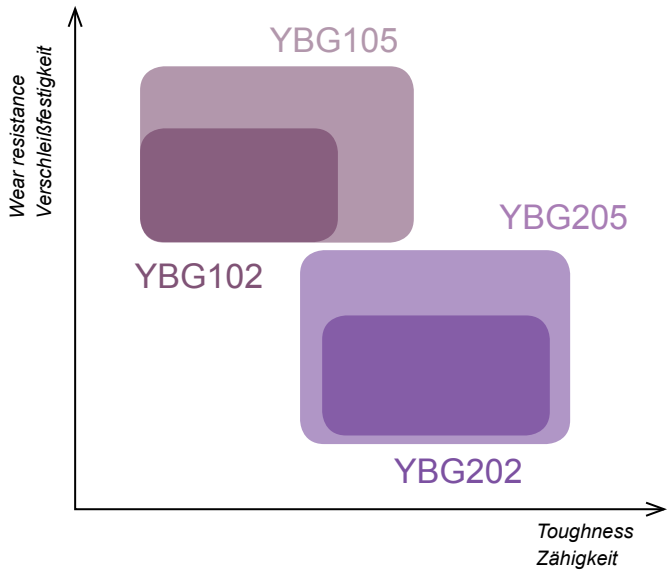
**M20** (M10-M30)
**S20** (S10-S30)

PVD multilay coated special nano-TiAlN fine grain hard carbide grade. Good performance in combination of toughness and wear resistance.

*PVD mehrlagig beschichtete spezille Nano-TiAlN, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit.*

*Special Coating process for smooth insert surface*
*Reduce friction - best chip evacuation*
*Combination of wear resistance and toughness*
*Best thermal and chemical stability*

*Spezieller Beschichtungsprozess mit sehr glatter Oberflächenstruktur*
*Reduzierte Reibung - exzellenter Spanfluss*
*Kombination aus Verschleißfestigkeit und Zähigkeit.*
*Beste thermische und chemische Stabilität.*



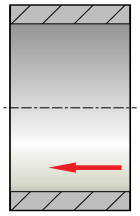
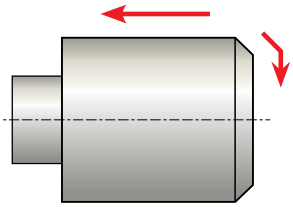
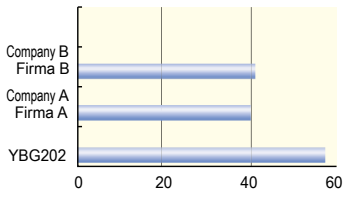
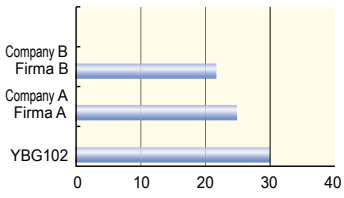
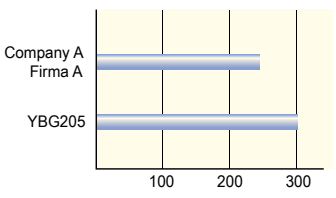
■ Recommended combination of grades, chip breaker and cutting data.
Empfohlene Kombination von Sorten, Spanbrechern und Schnittdaten.

| M | | S | |
|---|---|---|---|
| grade Sorte | chip breaker Spanbrecher | grade Sorte | chip breaker Spanbrecher |
| YBG202 YBG205 | EF | YBG102 YBG105 | NF |
| YBG202 | EM | YBG102 YBG105 | NM |
| YBG205 | EM | | |

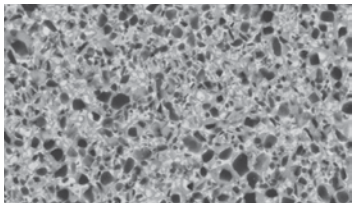
■ Recommended cutting condition · Empfohlene Schnittdaten

| Workpiece Material Werkstück Material | | Application Anwendung | Grade Sorte | Recommended Cutting Speed m/min Schnittgeschwindigkeit m/min |
|---|---|---|---|---|
| M | Stainless Steel Rostfreier Stahl | Finishing· Semi-Finishing Schlichten· Mittlere Bearbeitung | YBG202 YBG205 | 170-300 |
| S | Heat-Resistant Steel Warmfester Stahl | Finishing Schlichten | YBG102 YBG105 | 30-90 |
| | | Semi-finishing Mittlere Bearbeitung | YBG202 YBG205 | 40-80 |

Machining example · Bearbeitungsbeispiele

| Application Anwendung | Typ / Grade Sorte | CNMG120404-EF<br>YBG 202 | DNEG150404-NF<br>YBG102 | WNMG08048-EM<br>YBG205 |
|---|---|---|---|---|
| Workpiece Werkstück | |  |  |  |
| Workpiece Material & Hardness Material & Härte | | 1.4308 G-XGCrNi189 HB240 | Inconel 718 HRC≥39 | stainless steel 1.4501 rostfr. Stahl |
| Cutting Condition Schnitt-bedingungen | Parameters Schnittdaten | V=200m/min ap=1mm f=0.15mm/r | Vc=80m/min ap=0.3mm f=0.15mm/r | V=160m/min ap=2-4mm f=0.25mm/r |
| | Cutting Liquid Kühlmittel | wet nass | wet nass | wet nass |
| Machining Effect Ergebnis<br>Workpiece per edge Werkstücke pro Schneide | |  |  |  |

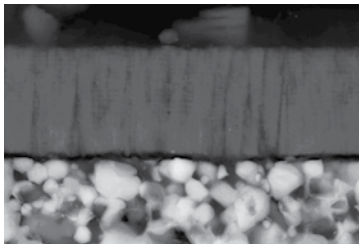
## Cermet
## Cermet



The cermet has higher hardness and oxygen-resistant under high temperature. The further advantage of cermets is to get the excellent surface quality and tolerance under higher speed.

Die Vorteile von Cermets zeigen sich in großer Härte, Oxidationsbeständigkeit und Hochtemperaturbeständigkeit. Die weiteren Vorteile von Cermet sind exzellente Oberflächen bei hohen Schnittgeschwindigkeiten und konstanter Maßhaltigkeit.

## Coated-Cermet
## Beschichtetes Cermet



YNG151 TiCN based cermet, with the combination of hardness, excellent toughness, and resistance against plastic deformation. It is suitable for super-finishing and finishing of steel, stainless steel and cast iron.

YNG151C TiCN based cermet, through special pretreatment, plus PVD Nano-TiAlN coating. Optimal combination of high wear resistance and good edge toughness, suitable for the superfinishing and finishing of steel, stainless steel and cast iron for high surface finishing.

YNG151 auf der Basis von Ti(CN)Cermet verbunden mit Härte, Zähigkeit und Widerstandsfähigheit gegen plastische Verformung. Geeignet zum Schlichten und Feinschlichten von Stahl, rostfreiem Stahl und Guss mit höheren Oberflächengüten.

YNG151C Ti(CN) Cermet. Plus PVD NaNO-TiAlN Beschichtung: Optimale Kombination von sehr hoher Verschleißfestigkeit und Schneidkantenzähigkeit. Zum Feinschlichten und Schlichten von Stahl, rostfreiem Stahl und Guss mit hohen Oberflächengüten.

### ■ Recommended Cutting Conditions · Empfohlene Schnittdaten

| Workpiece Material Werkstückstoff | | Application · Anwendung | Grade · Sorte | Recommended Cutting Speed m/min Schnittgeschwindigkeit m/min |
|---|---|---|---|---|
| P | Steel/Stahl | Finishing machining Schlichten | YNG151 | 260-550 |
| | | | YNG151C | 260-580 |
| M | Stainless Steel/ Rostfreier Stahl | | YNG151 | 170-330 |
| | | | YNG151C | 160-350 |
| K | Cast Iron/ Gusseisen | | YNG151 | 250-400 |
| | | | YNG151C | 270-420 |

Machining example · Bearbeitungsbeispiele



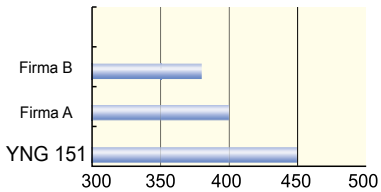
Application/ Anwendung: YNG151·CNMG120404-SF

Workpiece material and hardness: Material & Werkstückhärte: 20CrMnTi HB180-223

Machining parameters: v=220m/min

ap=0.5~1.0mm

f=0.14mm/r




*good chip control and surface · gute Spankontrolle und Oberfläche*



# Turning Grades for Aluminium
# Drehsorten für Aluminium

## YBG101

The new gold-polished PVD coating was specially developed for the machining of aluminium and AL-alloys. Together with a highly wear-resistant carbide grade it gives an extra-smooth surface which controls the development of built-up edges.

*Die neue gold-glänzende PVD Beschichtung wurde speziell für die Bearbeitung von Aluminium und Aluminiumlegierungen entwickelt. Auf der hochverschleißfesten Hartmetallsorte führt sie zu einer extrem glatten Oberfläche, die gegen die Entwicklung von Aufbauschneiden wirkt.*

## YBG102

PVD grade for the machining of Aluminium and AL-alloys (Si≥12%).

*PVD Sorte für die Bearbeitung von Aluminium und Aluminiumlegierungen (*Si≥12%).

## YD101

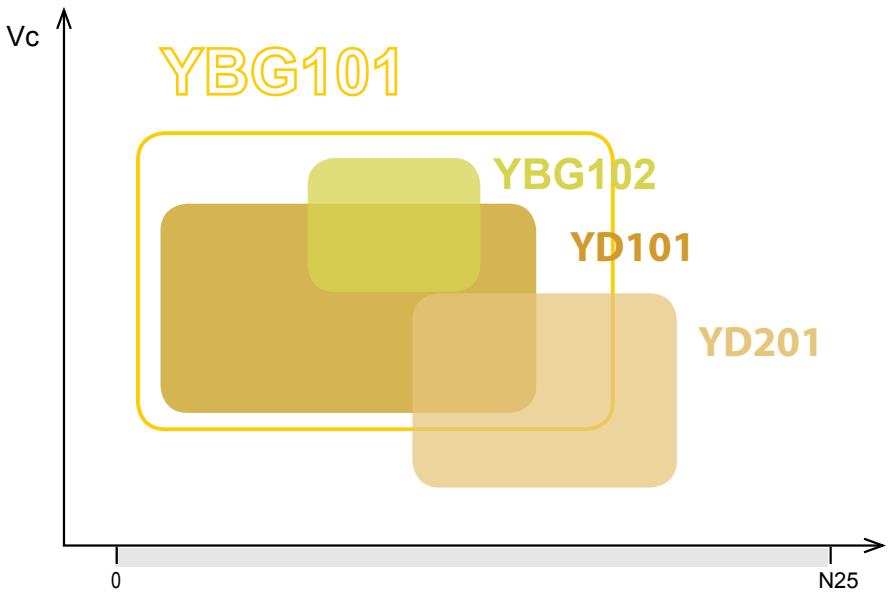
Substrate of YD101 - the combination of cemented WC carbide phase of fine grain and Co bonding phase.

*YD101 ist ein unbeschichtetes Hartmetall aus Wolframcarbid mit feiner Körnung und einer Bindefase aus Cobalt.*

## YD201

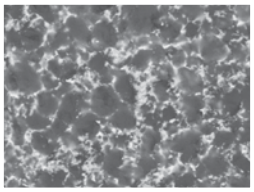
Substrate of YD201 - the combination of cemented WC carbide phase of medium grain and Co bonding phase.

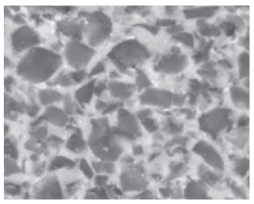
*YD201 ist ein unbeschichtetes Hartmetall mit mittlerer Korngröße, aus Wolframcarbid und einer speziell entwickelten Hartphase, die zusammen mit Kobald, welches die Bindephase erzeugt, das Hartmetallgefüge bildet.*



# PCBN / PCD

## Super-hard Cutting Material
## Superharter Schneidstoff





## PCBN
PCBN cubic boron nitride
PCBN kubische Bornitrid

PCBN with high hardness and good heat resistance for cutting of hardend steel (1300°C), carbon steel, ball bearing steel, mould steel and high speed steel, grey cast iron, nodular graphite cast iron, chilled cast iron and Ni-based, Co-based, Cr-based and Fe-based high temperature alloy.

PCBN mit hoher Härte und Warmfestigkeit für die Bearbeitung mit hohen Temperaturen (1300°C), bei der Bearbeitung von gehärtetem Stahl mit HRC von 55-63. Zur Bearbeitung von Stahl, Kugellagerstahl, Gussstahl, HSS, Grauguss, Kugelgraphitguss, Hartguss, Ni-, Fe-, Co-,Cr2- basis Superlegierungen.

| Type · Typ | Grade *Sorten* | Application *Anwendung* | Characteristic *Merkmale* |
|---|---|---|---|
| Uncoted CBN Unbeschichtetes CBN | YCB111 | High speed continuous cutting *Vollschnitt bei hoher Schnittgeschwindigkeit* | Best wear resistance grade and suitable for high speed continuous cutting *Verschleißfeste Sorte besonders geeignet für die Hochgeschwindigkeitsbearbeitung im Vollschnitt* |
| | **YCB121** | Continuous and interrupted cutting (Light-Medium) *Voll und leicht unterbrochener Schnitt* | Most suited for continuous and light interrupted high speed finishing due to heat resistant substrate. *Durch sein bruchfestes Substrat die Universalsorte von niedriger bis hoher Schnittgeschwindigkeit mit exzellenter Standzeit.* |
| | YCB131 | Interrupted cutting (Heavy) *Stark unterbrochener Schnitt* | CBN with higher fracture toughness, for interrupted cutting *CBN mit exzellenter Bruchzähigkeit im stark unterbrochenen Schnitt.* |
| | YCB211 | Cast iron machining, sintered materials *Gussbearbeitung,Sinterwerkstoffe* | High CBN content grade for high toughness, but also high hardness and thermal stability. *Hoch CBN-haltige Sorte mit guter Zähigkeit bei ebenso guter Härte und Wärmeleitfähigkeit.* |
| PCD | **YCD421** | High speed finishing of aluminum and non-ferrous material *Highspeed Schlichten von Aluminium und NE-Material* | Sintered ultra fine grain grade with higher wear resistance and hardness. *Gesintertes Feinkorn PKD mit hoher Verschleißfestigkeit und Härte.* |

## PCD
PCD polycrystalline diamond
PCD polykristalliner Diamand

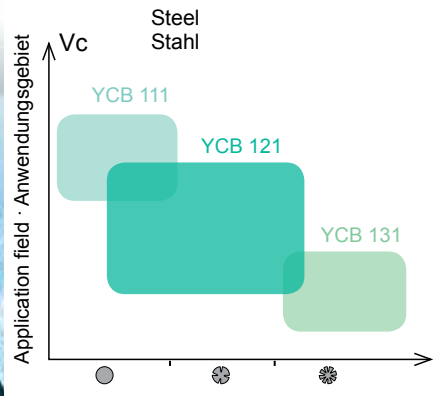
PCD grade with high hardness, good wear resistance, low friction coefficient and good heat conductivity, which is appropriate for cutting of non-ferrous metal (such as Cu, Al, Mg and Ti high silicon alloy etc.) and non-metal materials (such as glass fiber, cermet and enforced plastic etc.)

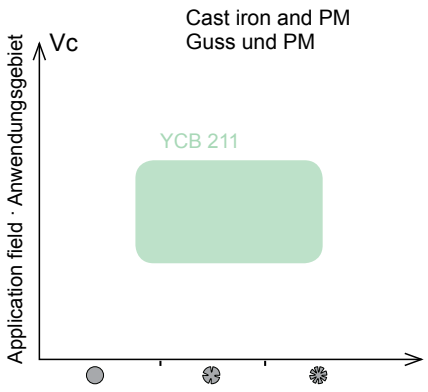
PCD Sorte mit hoher Härte guter Verschleißfähigkeit, und geringer Neigung zur Aufbauschneide.Sie ist besonders geeignet für die Bearbeitung von NE-Metallen (z.B. Cu, Al, Mg und Ti hochsilicium legierte Werkstoffen) und Material wie Fiberglas, Cermets und verstärktes Plastik etc.

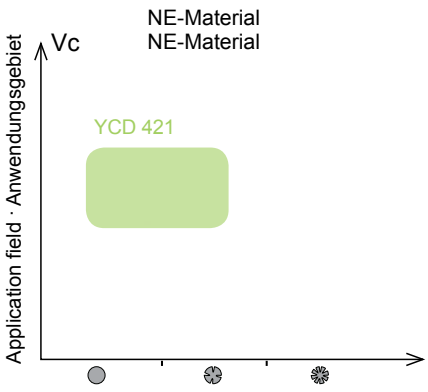
○ Continuous cutting
Vollschnitt

◔ Continuous and interrupted cutting
Voll und leicht unterbrochener Schnitt

✺ Interrupted cutting
Stark unterbrochener Schnitt

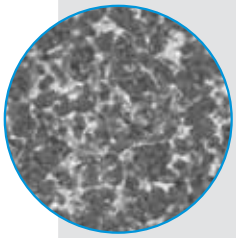


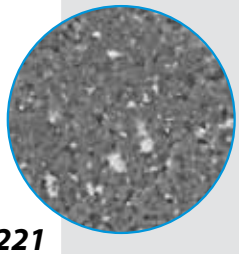



# Solid CBN
# Voll CBN

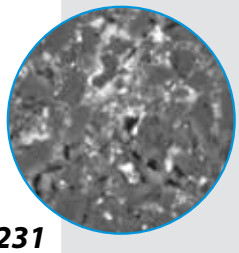




YZB121



YZB221



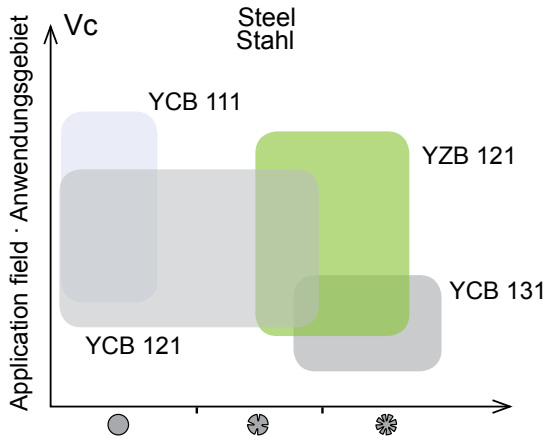
YZB231

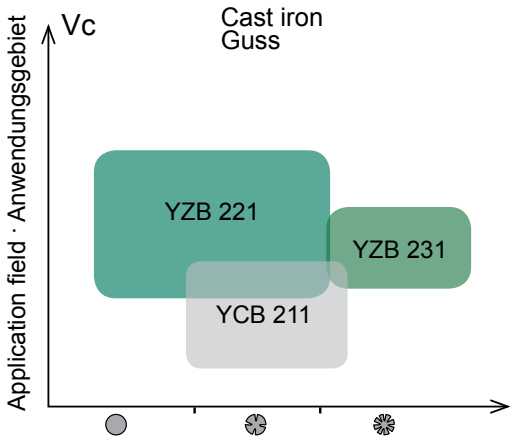
| Workpiece material Werkstückstoff | | Grade Sorte | Application Anwendung |
|---|---|---|---|
| H | Hardened steel Gehärteter Stahl | YZB121 | With good wear resistance and also toughness. Suitable for hardened steel, bearing steel, mould steel, high speed steel with low speed and interrupted cut.<br>Mit guter Verschleißfestigkeit aber auch Zähigkeit. Für die Bearbeitung von gehärtetem Stahl, Kugellagerstahl, Gesenkstahl, HSS Stahl mit niedriger Schnittgeschwindigkeit und unterbrochenen Schnitt. |
| K | Cast iron Guss | YZB221 | With high wear resistance and thermal conductivity. Suitable for grey cast iron, alloy and nodular cast iron, Ni- and Cr basic superalloy in high speed and interrupted cut.<br>Mit guter Verschleißfestigkeit und Temperaturbeständigkeit. Für die Bearbeitung von Grauguss, legiertem Guss und Kugelgraphitguss, sowie Ni- und Cr basierten Werkstoffen, für Hochgeschwindigkeitsbearbeitung und unterbrochenen Schnitt. |
| K | Cast iron Guss | YZB231 | With excellent wear resistance and good edge toughness. Suitable for grey cast iron, alloy and nodular cast iron in lower cutting speed and heavy duty machining.<br>Mit hoher Verschleißfestigkeit und Kantenstabilität. Für die Bearbeitung von Grauguss, legiertem Guss und Kugelgraphitguss mit niedrigeren Schnittgeschwindigkeiten und Schwerzerspanung. |

○ Continuous cutting
Vollschnitt

Continuous and interrupted cutting
Voll- und leicht unterbrochener Schnitt

Interrupted cutting
Stark unterbrochener Schnitt



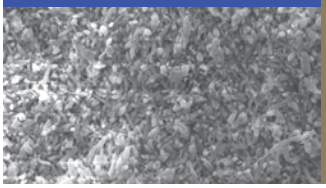

**Recommended cutting date · Empfohlene Schnittdaten**

| Grade Sorte | Workpiece material Werkstückstoff | Hardness Härte | Cutting speed Schnittgeschwindigkeit(m/min) | Feed rate Vorschub(mm/r) | Cutting depth Schnitttiefe |
|---|---|---|---|---|---|
| YZB121 | Hardened steel ·Gehärteter Stahl | HRC45-65 | 50~400 | 0.1~0.5 | <3 |
| | Ball bearing steel·Kugellagerstahl | HRC55-65 | 50~300 | 0.1~0.5 | <3 |
| YZB221 | Grey cast iron·Grauguss | HRC170-300 | 100~1200 | 0.3~1.0 | <5 |
| | Nodular cast iron· GGG | HRC200-300 | 60~1000 | 0.3~1.0 | <5 |
| | Alloy cast iron·Legierter Grauguss | HRC240-300 | 20~600 | 0.2~3.0 | <5 |
| YZB231 | Grey cast iron·Grauguss | HRC170-300 | 100~800 | 0.3~1.0 | <3 |
| | Nodular cast iron· GGG | HRC200-300 | 60~500 | 0.3~1.0 | <5 |
| | Alloy cast iron·Legierter Grauguss | HRC240-300 | 20~300 | 0.2~3.0 | <5 |

# Ceramics / Keramik



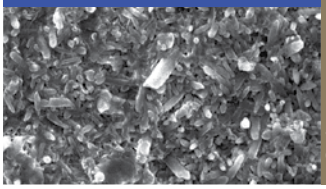
## CN1000



**CN1000** is Si3N4 ceramics grade. Optimal performance against cracking of cutting edge and thermal shocking. Suitable for finishing and semi-finishing of grey cast iron.

**CN1000** ist eine Keramik von Si3N4. Optimale Eigenschaften gegen Schneidkantenbruch und dynamische Wärmebelastung. Geeignet zum Schlichten und mittleren Bearbeitung von Grauguss.

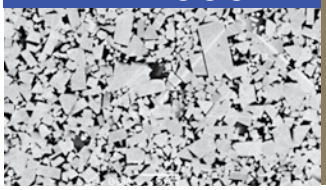
## CN2000



**CN2000** is Si3N4 ceramics grade with good wear-resistance and excellent toughness. Suitable for intermittent and continuous machining of grey cast iron, and Ni-based alloys.

**CN2000** is Si3N4 Keramiksorte mit hoher Verschleißfestigkeit und ausgezeichneter Zähigkeit. Geeignet für die Bearbeitung von Grauguss mit und ohne Schnittunterbrechungen, sowie Ni-Superlegierungen.

## CA1000



**CA1000** is the mixed ceramics of Al203+TiCN. Good performance of wear resistance and safety cutting edge. Suitable for continuous machining of hardened steel and nodular cast iron.

**CA1000** ist die Mischkeramik von Al203+TiCN. Gute Verschleißfestigkeit und Bearbeitungssicherheit oder Zähigkeit. Geeignet zur Bearbeitung von gehärtetem Stahl und Kugelgraphitguss.

### ■ Psysical properties · Physikalische Daten

| Grade<br>Sorte | Density·Dichte<br>($g/cm^3$) | Hardness · Härte<br>Hv(GPa) | Bending strength/<br>Biegebruchfestigkeit<br>(MPa) | Fracture toughness<br>Bruchzähigkeit<br>($MPa \cdot m^{1/2}$) |
|---|---|---|---|---|
| CA1000（$Al_2O_3$+TiCN） | 4.2 | 19 | ⩾700 | 4.5 |
| CN1000（$Si_3N_4$） | 3.25 | 16 | ⩾900 | 7.5 |
| CN2000（$Si_3N_4$） | 3.25 | 16 | ⩾900 | 8 |

### ■ Recommended cutting condition · Empfohlene Schnittdaten

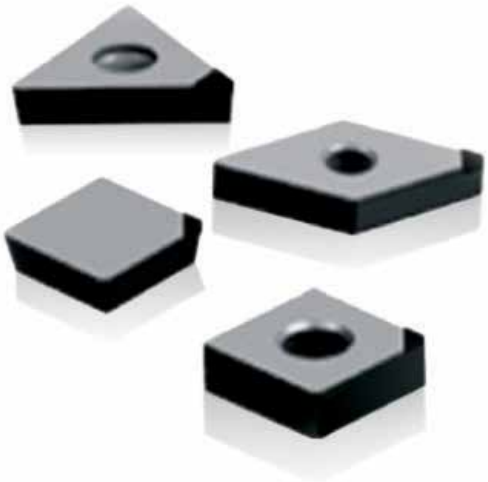
| | Workpiece material<br>Werkstückstoff | Application<br>Anwendung | Cutting Speed<br>Schnittgeschw.<br>(m/min) | Feed rate<br>Vorschub<br>(mm/r) | Cutting depth<br>Schnitttiefe<br>(mm) |
|---|---|---|---|---|---|
| **CA1000** | Grey cast iron<br>Malleable cast iron<br>Grauguss | Roughing<br>Schruppen | 150-800 | 0.2-0.5 | 3.0-6.0 |
| | | Finishing<br>Schlichten | 200-1200 | 0.3-0.5 | 0.1-0.5 |
| | Chilled cast iron<br>Kokillenhartguss | Roughing<br>Schruppen | 30-100 | 0.1-0.2 | 0.5-1.5 |
| | | Finishing<br>Schlichten | 50-200 | 0.05-0.15 | 0.1-0.5 |
| | Carbon steel, Alloy steel<br>Ball bearing steel<br>unlegierter Stahl, legierter Stahl,<br>Kugellagerstahl | Roughing<br>Schruppen | 150-400 | 0.2-0.5 | 2.0-5.0 |
| | | Finishing<br>Schlichten | 200-800 | 0.05-0.20 | 0.1-0.5 |
| | Hardened Steel<br>Gehärteter Stahl | Roughing<br>Schruppen | 20-100 | 0.1-0.2 | 0.5-1.5 |
| | | Semi-finishing<br>Mittlere Bearbeitung | 40-200 | 0.05-0.50 | 0.1-0.5 |
| | | Finishing<br>Schlichten | 300-1200 | 0.05-0.30 | 0.1-0.5 |
| **CN1000** | Grey cast iron<br>Grauguss | Finishing<br>Schlichten | 150-1100 | 0.3-0.8 | <5 |
| | | Finishing<br>Schlichten | 250-1200 | 0.15-0.4 | <1 |
| | Chilled cast iron<br>Kokillenhartguss | Finishing<br>Schlichten | 20-250 | 0.2-0.8 | <5 |
| | | Finishing<br>Schlichten | 60-450 | 0.1-0.6 | <1 |
| **CN2000** | Ni-based alloys,<br>Ni-Superlegierungen | Finishing<br>Schlichten | 150-250 | 0.2-0.4 | <5 |
| | | Finishing<br>Schlichten | 150-450 | 0.1-0.2 | <1 |

**NOTES / NOTIZEN:**





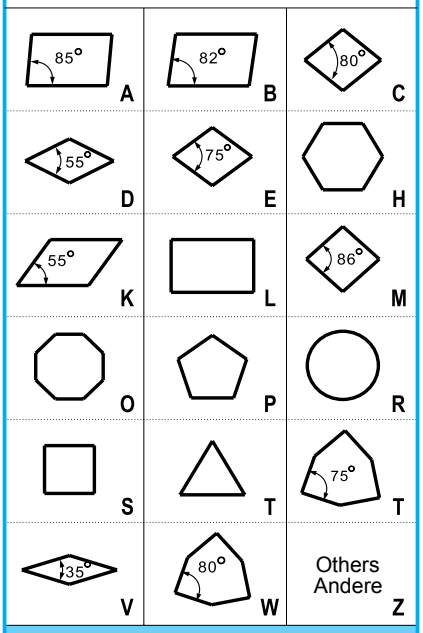




# Turning inserts

## *Schneidplatten zum Drehen*

## Insert Shape / *Schneidplattenform*




Insert Shape / *Schneidplattenform*

## Insert Type / *Plattentyp*

Metric / *Metrisch*

| Code | Hole / *Bohrung* | Insert Section / *Spanleitstufe* | Insert Section / *Plattenform* | Code | Hole / *Bohrung* | Insert Section / *Spanleitstufe* | Insert Section / *Plattenform* |
|---|---|---|---|---|---|---|---|
| B | ✔ | ---- | > 65° | N | ---- | ---- | |
| H | ✔ | Single side / *einseitig* | > 65° | R | ---- | Single side / *einseitig* | |
| C | ✔ | ---- | > 65° | F | ---- | Double side / *doppelseitig* | |
| J | ✔ | Double side / *doppelseitig* | > 65° | A | ✔ | ---- | |
| W | ✔ | ---- | ≤65° | M | ✔ | Single side / *einseitig* | |
| T | ✔ | Single side / *einseitig* | ≤65° | G | ✔ | Double side / *doppelseitig* | |
| Q | ✔ | ---- | ≤65° | X | ---- | ---- | Special |
| U | ✔ | Double side / *doppelseitig* | ≤65° | | | ---- | |

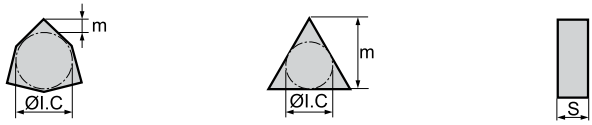
Insert Type / *Plattentyp*

**T N M G**

## Clearance angle of main cutting edge / *Freiwinkel der Hauptschneide*

| Code | angle / *Winkel* | Code | angle / *Winkel* |
|---|---|---|---|
| A | 3° | B | 5° |
| C | 7° | D | 15° |
| E | 20° | F | 25° |
| G | 30° | N | 0° |
| P | 11° | O | Others |

## Tolerances / *Toleranzklasse*




| Code | Tolerance Toleranz | ØI.C | S |
|---|---|---|---|
| A | ±0.005 | ±0.025 | ±0.025 |
| F | ±0.005 | ±0.013 | ±0.025 |
| C | ±0.013 | ±0.025 | ±0.025 |
| H | ±0.013 | ±0.013 | ±0.025 |
| E | ±0.025 | ±0.025 | ±0.025 |
| G | ±0.025 | ±0.025 | ±0.13 |
| J | ±0.005 | ±0.05-±0.13 | ±0.025 |
| K | ±0.013 | ±0.05-±0.13 | ±0.025 |
| L | ±0.025 | ±0.05-±0.13 | ±0.025 |
| M | ±0.08-±0.18 | ±0.05-±0.13 | ±0.13 |
| N | ±0.08-±0.18 | ±0.05-±0.13 | ±0.025 |
| U | ±0.13-±0.38 | ±0.08-±0.25 | ±0.13 |

(Reference) M class precision (according to shape and size) (mm)
*(Bezug) M-Toleranz (entsprechend Form und Größe)*

| Incircle | regular triangle | square | 80° rhomboid | 55° rhomboid | 35° rhomboid | round *runde* |
|---|---|---|---|---|---|---|
| 6.35 | ±0.08 | ±0.08 | ±0.08 | ±0.11 | ±0.16 | --- |
| 9.525 | ±0.08 | ±0.08 | ±0.08 | ±0.11 | ±0.16 | --- |
| 12.7 | ±0.13 | ±0.13 | ±0.13 | ±0.15 | --- | --- |
| 15.875 | ±0.15 | ±0.15 | ±0.15 | ±0.18 | --- | --- |
| 19.05 | ±0.15 | ±0.15 | ±0.15 | ±0.18 | --- | --- |
| 25.4 | --- | ±0.18 | --- | --- | --- | --- |

ØI.C (mm) Incircle tolerance
*Eingeschriebener Kreis Toleranz*

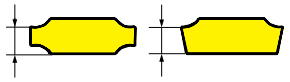
| Incircle | regular triangle | square | 80° rhomboid | 55° rhomboid | 35° rhomboid | round *runde* |
|---|---|---|---|---|---|---|
| 6.35 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | --- |
| 9.525 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 | ±0.05 |
| 12.7 | ±0.08 | ±0.08 | ±0.08 | ±0.08 | --- | ±0.08 |
| 15.875 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | --- | ±0.10 |
| 19.05 | ±0.10 | ±0.10 | ±0.10 | ±0.10 | --- | ±0.10 |
| 25.4 | --- | ±0.13 | --- | --- | --- | ±0.13 |

## Cutting edge length / *Schneidenlänge* (mm)

| Ø of IC (mm) | Insert Shape / *Plattenform* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | C | D | R | S | T | V | W | K |
| 3.97 | | | | | 06 | | | |
| 5.0 | | | 05 | | | | | |
| 5.56 | | | | | 09 | | | |
| 6.0 | | | 06 | | | | | |
| 6.35 | 06 | 07 | | | 11 | 11 | | |
| 8.0 | | | 08 | | | | | |
| 9.525 | 09 | 11 | 09 | 09 | 16 | 16 | 06 | 16 |
| 10.0 | | | 10 | | | | | |
| 12.0 | | | 12 | | | | | |
| 12.7 | 12 | 15 | 12 | 12 | 22 | 22 | 08 | |
| 15.875 | 16 | | 15 | 15 | 27 | | | |
| 16.0 | | 19 | 16 | | | | | |
| 19.05 | 19 | | 19 | 19 | 33 | | | |
| 20.0 | | | 20 | | | | | |
| 25.0 | 25 | 25 | 25 | | | | | |
| 25.4 | | | 25 | 25 | | | | |
| 31.75 | | | 31 | | | | | |
| 32 | | | 32 | | | | | |

## Insert Thickness / *Plattendicke* (mm)

Thichness / *Dicke*



| Code | Plattendicke (mm) |
|---|---|
| **00** | 0.79 |
| **T0** | 0.99 |
| **01** | 1.59 |
| **T1** | 1.98 |
| **02** | 2.38 |
| **T2** | 2.58 |
| **03** | 3.18 |
| **T3** | 3.97 |
| **04** | 4.76 |
| **T4** | 4.96 |
| **05** | **5.56** |
| **T5** | 5.95 |
| **06** | 6.35 |
| **T6** | 6.75 |
| **07** | 7.94 |
| **09** | 9.52 |
| **T9** | 9.72 |
| **11** | 11.11 |
| **12** | 12.70 |

# 22 04 08 - DM (ISO)

# 4 3 2 (inch)

### Incircle *Innenkreis*

| Code | Diameter (mm) |
|---|---|
| **2** | 6.35 |
| **3** | 9.525 |
| **4** | 12.7 |
| **5** | 15.875 |
| **6** | 19.05 |
| **8** | 25.4 |

### Thickness *Dicke*

| Code | Thichness (mm) |
|---|---|
| **2** | 3.18 |
| **3** | 4.76 |
| **4** | 6.35 |
| **5** | 7.94 |
| **6** | 9.52 |

### Nose radius *Eckenradius*

| Code | Nose radius (mm) |
|---|---|
| **0** | 0.2 |
| **1** | 0.4 |
| **2** | 0.8 |
| **3** | 1.2 |
| **4** | 1.6 |
| **5** | 2.0 |
| **6** | 2.4 |

### Nose radius *Eckenradius*

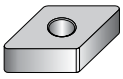
| Code | Radius (mm) |
|---|---|
| **00** | No Radius |
| **02** | 0.2 |
| **04** | 0.4 |
| **08** | 0.8 |
| **12** | 1.2 |
| **16** | 1.6 |
| **20** | 2.0 |
| **24** | 2.4 |
| **32** | 3.2 |
| **X** | Others |
| MO | Round Inserts *Andere Runde Platten* |

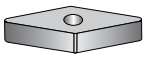
### Code Chipbreakers *Spanleitstufen*

| | | |
|---|---|---|
| **DF** | **DM** | **DR / HDR** |
|  |  |  |
| **HF** | **HM** | **HR** |
|  |  |  |
| **LR** | **HPR** | **FM** |
|  |  |  |
| **EF** | **EM** | **ER** |
|  |  |  |
| **NF** | **NM** | **SF** |
|  |  |  |
| **PM** | **TC** | **WG** |
|  |  |  |

## Metric and Imperial system comparison list of general turning insert/ Vergleichstabelle für allgemeine Drehwendeschneidplatten (Metrisch / Imperial System)

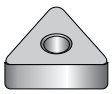
| C Type Negative angle/ WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 090304 | 321 | -ADF -DF -WG -SF -EF -NF -PM -DM -EG -EM **-TC** -NM -SNR -LR -DR -ER -HDR -HPR |
| | 090308 | 322 | |
| | 120404 | 431 | |
| | 120408 | 432 | |
| | 120412 | 433 | |
| | 120416 | 434 | |
| | 160608 | 542 | |
| | 160612 | 543 | |
| | 160616 | 544 | |
| | 190608 | 642 | |
| | 190612 | 643 | |
| | 190616 | 644 | |
| | 190624 | 646 | |
| | 250724 | 856 | |
| | 250732 | 858 | |
| | 250924 | 866 | |
| | 250932 | 868 | |

| D Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 110404 | 331 | -ADF -DF -WG -SF -NF -FM -PM -DM -EM -EG -NM -NGM -SNR -LR -DR -ER -HDR |
| | 110408 | 332 | |
| | 110412 | 333 | |
| | 150404 | 431 | |
| | 150408 | 432 | |
| | 150412 | 433 | |
| | 150604 | 441 | |
| | 150608 | 442 | |
| | 150612 | 443 | |
| | 150616 | 444 | |
| | 190608 | 542 | |
| | 190612 | 543 | |

| V Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Insert shape Plattenform  | 160404 | 331 | -ADF -DF -EF -SF -NF -NGF -PM -DM -EM -NM -SNR |
| | 160408 | 332 | |
| | 160412 | 333 | |
| | | | |

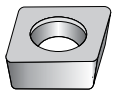
| R Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Insert shape Plattenform  | 0903MO | 32 | |
| | 1204MO | 43 | |
| | | | |
| | | | |

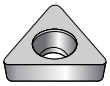
| W Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 06T304 | 3(2.5)1 | -ADF -DF -WG -SF -EF -NF -PM -DM -EM -EG **-TC** -NM -DR |
| | 06T308 | 3(2.5)2 | |
| | 06T312 | 3(2.5)3 | |
| | 060404 | 331 | |
| | 060408 | 332 | |
| | 060412 | 333 | |
| | 080404 | 431 | |
| | 080408 | 432 | |
| | 080412 | 433 | |
| | | | |
| | | | |

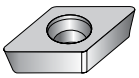
| T Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 113304 | 221 | -ADF -DF -WG -SF -EF -FM -PM -DM -EM -EG **-TC** -LR -DR -ER -HDR |
| | 110308 | 222 | |
| | 160404 | 331 | |
| | 160408 | 332 | |
| | 160412 | 333 | |
| | 220404 | 431 | |
| | 220408 | 432 | |
| | 220412 | 433 | |
| | 220416 | 434 | |
| | 270608 | 542 | |
| | 270612 | 543 | |
| | 270616 | 544 | |

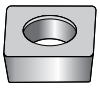
| S Type Negative angle/WSP Negativer Winkel | (ISO) | (Inch) | Chipbreaker/ Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 090304 | 321 | -ADF -DF -SF -EF -PM -DM -EM -EG **-TC** -NM -LR -DR -ER -HDR -HPR |
| | 090308 | 322 | |
| | 090312 | 323 | |
| | 120404 | 431 | |
| | 120408 | 432 | |
| | 120412 | 433 | |
| | 120416 | 434 | |
| | 150608 | 542 | |
| | 150612 | 543 | |
| | 150616 | 544 | |
| | 190412 | 633 | |
| | 190424 | 636 | |
| | 190612 | 643 | |
| | 190616 | 644 | |
| | 250724 | 856 | |
| | 250732 | 858 | |
| | 250924 | 866 | |
| | 250932 | 868 | |

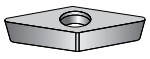
## Metric and Imperial system comparison list of general turning insert/ Vergleichstabelle für allgemeine Drehwendeschneidplatten (Metrisch / Imperial System)

| C Type Positive angle/WSP Positiver Winkel | (ISO) | (Inch) | Chipbreaker Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 060202 | 2(1.5)0 | -USF |
| | 060204 | 2(1.5)1 | -SF |
| | 060208 | 2(1.5)2 | -AHF |
| | 09T302 | 3(2.5)0 | -HF |
| | 09T304 | 3(2.5)1 | -EF |
| | 09T308 | 3(2.5)2 | -HM |
| | 120404 | 431 | -EM |
| | 120408 | 432 | -HR |
| | 120412 | 433 | -LH |
| | | | -LC |

| T Type Positive angle/WSP Positiver Winkel | (ISO) | (Inch) | Chipbreaker Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 06T102 | 1.2(1.2)0 | |
| | 06T104 | 1.2(1.2)1 | |
| | 06T108 | 1.2(1.2)2 | |
| | 090202 | 1.8(1.5)0 | |
| | 090204 | 1.8(1.5)1 | |
| | 090208 | 1.8(1.5)2 | |
| | 110202 | 2(1.5)0 | |
| | 110204 | 2(1.5)1 | -USF |
| | 110208 | 2(1.5)2 | -SF |
| | 110302 | 220 | -AHF |
| | 110304 | 221 | -HF |
| | 110308 | 222 | -EF |
| | 16T302 | 30 | -HM |
| | 16T304 | 31 | -EM |
| | 16T308 | 32 | -HR |
| | 16T312 | 33 | -LH |
| | 160400 | 330 | -LC |
| | 220408 | 432 | |
| | 220412 | 433 | |
| | 220416 | 434 | |
| | 270408 | 532 | |
| | 270412 | 533 | |
| | 330612 | 643 | |
| | 330616 | 644 | |

| D Type Positive angle/ WSP Positiver Winkel | (ISO) | (Inch) | Chipbreaker Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 070202 | 2(1.5)0 | -USF |
| | 070204 | 2(1.5)1 | -SF |
| | 070208 | 2(1.5)2 | -AHF |
| | 11T302 | 3(2.5)0 | -HF |
| | 11T304 | 3(2.5)1 | -EF |
| | 11T308 | 3(2.5)2 | -HM |
| | 11T312 | 3(2.5)3 | -EM |
| | | | -HR |
| | | | -LH |
| | | | -LC |

| S Type Positive angle/WSP Positiver Winkel | (ISO) | (Inch) | Chipbreaker Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 060204 | 2(1.5)1 | |
| | 09T302 | 3(2.5)0 | |
| | 09T304 | 3(2.5)1 | |
| | 09T308 | 3(2.5) 2 | -AHF |
| | 120404 | 431 | --HF |
| | 120408 | 432 | -EF |
| | 120412 | 433 | -HM |
| | 150404 | 531 | -EM |
| | 150408 | 532 | -HR |
| | 150412 | 533 | -LH |
| | 190408 | 632 | -LC |
| | 190412 | 633 | |
| | 190416 | 634 | |

| V Type Positive angle/WSP Positiver Winkel | (ISO) | (Inch) | Chipbreaker Spanleitstufe |
|---|---|---|---|
| Plattenform Insert shape  | 110202 | 2(1.5)0 | -USF |
| | 110204 | 2(1.5)1 | -SF |
| | 110208 | 2(1.5)2 | -HF |
| | 110302 | 220 | -EF |
| | 110304 | 221 | -AHF |
| | 110308 | 222 | -NF |
| | 160402 | 330 | -NGF |
| | 160404 | 331 | -HM |
| | 160408 | 332 | -EM |
| | 160412 | 333 | -SNR |
| | | | -HR |
| | | | -LH |
| | | | -LC |

A

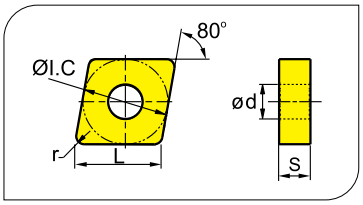
General Turning
Allgemeine Drehbearbeitung

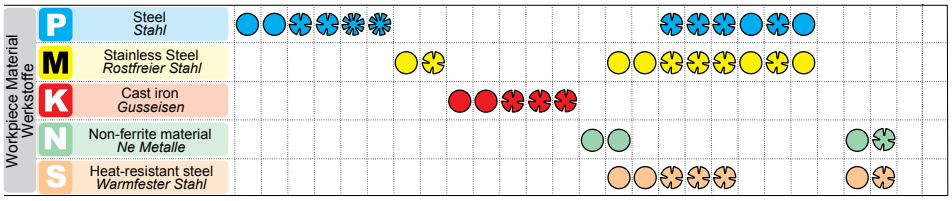
## CN** Negative Insert · Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF**  Finishing Schlichten | **CNMG090304-SF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **CNMG090308-SF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **CNMG120404-SF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **CNMG120408-SF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| **DF**  Finishing Schlichten | **CNMG090304-DF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.4 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **CNMG090308-DF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.8 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **CNMG120404-DF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | ○ | | | | | |
| | **CNMG120408-DF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **CNMG120412-DF** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| **ADF**  Finishing Schlichten | **CNMG120404-ADF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | ● | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| | **CNMG120408-ADF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | | | | | | | ● | ○ | | ● | | | |
| | **CNMG120412-ADF** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | | ● | | | ● | | | |
| **WG**  Wiper Schlichten | **CNMG120404-WG** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **CNMG120408-WG** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | | | | | | ○ | | ○ | | | | | | | | | | | | |
| | **CNMG120412-WG** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | | | | | | | | | | | | | | | | | | | | | |
| **EF**  Finishing Schlichten | **CNMG090304-EF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | **CNMG090308-EF** | 9.7 | 9.525 | 3.18 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | **CNMG120404-EF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | ○ | | | ● | | | | | | | | ○ | | ● | ○ | | | | | |
| | **CNMG120408-EF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | ○ | | | ● | | | | | | | | ○ | | ● | ○ | | | | | |
| | **CNMG120412-EF** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ○ | | | | | | | | | | | ○ | ○ | | | | |

### Tool holder / Klemmhalter


**DCLNR/L** Kr:95°


**PCBNR/L** Kr:75°


**PCLNR/L** Kr:95°


**MCBNR/L** Kr:75°


**MCLNR/L** Kr:95°


**PCLNR/L** Kr:95°

| Page Seite | A181 | A188 | A189 | A200 | A201 | A246 |
|---|---|---|---|---|---|---|

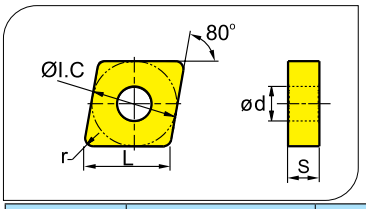
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

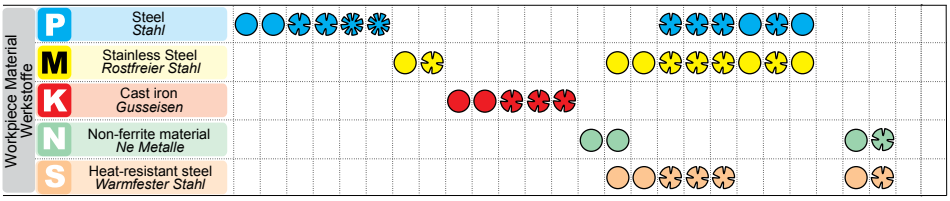
## CN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneidplattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **NF** | **CNEG120404-NF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | ○ | ● | | | | | | | ○ | |
|  | **CNEG120408-NF** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | ○ | ● | | | | | | | ○ | |
| | **CNEG120412-NF** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ○ | | | | | | | ○ | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PM** | **CNMG090304-PM** | 9.7 | 9.525 | 3.18 | 3.81 | 0.4 | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **CNMG090308-PM** | 9.7 | 9.525 | 3.18 | 3.81 | 0.8 | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **CNMG120404-PM** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG120408-PM** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | **CNMG120412-PM** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ● | ● | ○ | | ○ | | | ● | ● | | ● | | | | | | | | | | | |
|  | **CNMG120416-PM** | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | ● | ○ | | | | | ● | ● | | ● | | | | | | | | | | | |
| | **CNMG160608-PM** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | ● | ● | ● | | ● | | | ○ | ○ | | ○ | | | | | | | | | | | |
| | **CNMG160612-PM** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ● | | ● | | | ○ | ● | | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **CNMG160616-PM** | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | | ● | ● | | | | | | ● | | ○ | | | | | | | | | | | |
| | **CNMG190608-PM** | 19.3 | 19.05 | 6.35 | 7.94 | 0.8 | | | ○ | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **CNMG190612-PM** | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | | ● | ● | | ○ | | | | ○ | | ● | | | | | | | | | | | |
| | **CNMG190616-PM** | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | ○ | ● | | | | | | ○ | | | | | | | | | | | | | |

### Tool holder / Klemmhalter



















| Page Seite | A181 | A188 | A189 | A200 | A201 | A246 |
|---|---|---|---|---|---|---|

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

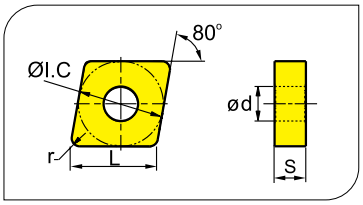
General Turning
Allgemeine Drehbearbeitung

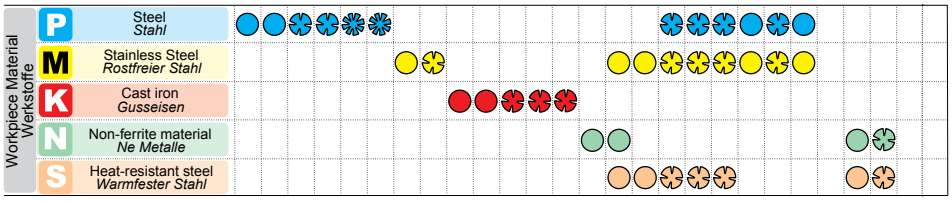
## CN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| DM<br>Medium Cut/ Mittl. Bearb. | CNMG090304-DM | 9.7 | 9.525 | 3.18 | 3.81 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | CNMG090308-DM | 9.7 | 9.525 | 3.18 | 3.81 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | CNMG090312-DM | 9.7 | 9.525 | 3.18 | 3.81 | 1.2 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMG120404-DM | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | ○ | | | | | |
| | CNMG120408-DM | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ○ | ● | ● | | | | | | | | | | ○ | | | | | |
| | CNMG120412-DM | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ● | | ○ | ● | ○ | | | | | | | | | | | | | | | |
| | CNMG120416-DM | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | CNMG160608-DM | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | ● | ● | ○ | | ○ | | | | | | | | | | | | | | | | | |
| | CNMG160612-DM | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMG160616-DM | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | ● | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| | CNMG190608-DM | 19.3 | 19.05 | 6.35 | 7.94 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | CNMG190612-DM | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMG190616-DM | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | ○ | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| ZM<br>Medium Cut/ Mittl. Bearb. | CNMG120404-ZM | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | ● | | | | | | | | | | | | | | | | | | | | | | |
| | CNMG120408-ZM | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | | | | | | | | | | | | | |
| EM<br>Medium Cut/ Mittl. Bearb. | CNMG120404-EM | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | ● | | | | | | | | | ● | ○ | | | | | |
| | CNMG120408-EM | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ○ | | | | | |
| | CNMG120412-EM | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | | | | | | |
| | CNMG160608-EM | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | | | | | | |
| | CNMG160612-EM | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | ○ | | | | | |
| EG<br>Medium Cut/ Mittl. Bearb. | CNMG120404-EG | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | ○ | | | | | | | | | ● | ○ | | | | | |
| | CNMG120408-EG | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | |
| | CNMG120412-EG | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ○ | ● | | | | | | | | | ● | ○ | | | | | |

### Tool holder / Klemmhalter


**DCLNR/L** Kr:95°


**PCBNR/L** Kr:75°


**PCLNR/L** Kr:95°


**MCBNR/L** Kr:75°


**MCLNR/L** Kr:95°


**PCLNR/L** Kr:95°

| Page Seite | A181 | A188 | A189 | A200 | A201 | A246 |
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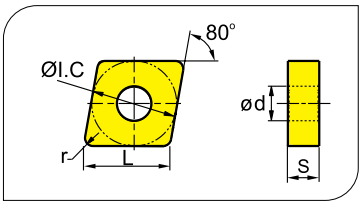
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

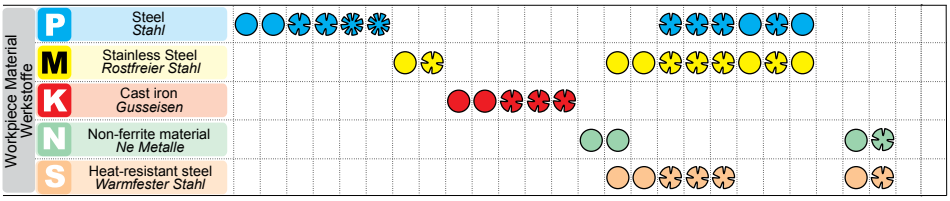
## CN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **TC** | **CNMG120404-TC** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG120408-TC** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG120412-TC** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG120416-TC** | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG160608-TC** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **CNMG160612-TC** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **CNMG160616-TC** | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| **NM** | **CNMG120404-NM** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | **CNMG120408-NM** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | ○ | ● | | ○ | | | | | ○ | |
| | **CNMG120412-NM** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SNR** | **CNMG120408-SNR** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CNMG120412-SNR** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CNMG160608-SNR** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| Roughing / Schruppen | **CNMG190616-SNR** | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | | | | | | | | | | ○ | | | | | | | | ○ | |
| **DR** | **CNMG120408-DR** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | | | | | | | | | | | |
| | **CNMG120412-DR** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ○ | ● | ○ | | | ○ | ● | | ● | | | | | | | | | | | | |
| | **CNMG120416-DR** | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ● | ● | | ● | | | | ● | | ● | | | | | | | | | | | | |
| | **CNMG160608-DR** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | ● | ○ | ● | ● | | ○ | | | | ● | | ○ | | | | | | | | | | | | |
| | **CNMG160612-DR** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | ● | ● | ● | ● | ● | ○ | | | | ● | | ● | | | | | | | | | | | | |
| | **CNMG160616-DR** | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | ● | ● | ● | ● | ● | ○ | | | | ○ | | ○ | | | | | | | | | | | | |
| | **CNMG190608-DR** | 19.3 | 15.875 | 6.35 | 7.94 | 0.8 | | ● | ● | ○ | | | | | | ● | | ● | | | | | | | | | | | | |
| Roughing / Schruppen | **CNMG190612-DR** | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | ● | ● | ● | ● | ● | ● | | | | ○ | | ● | | | | | | | | | | | | |
| | **CNMG190616-DR** | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | ● | ● | ● | ● | ● | ○ | | | | ○ | | ● | | | | | | | | | | | | |
| | **CNMG190624-DR** | 19.3 | 19.05 | 6.35 | 7.94 | 2.4 | ● | | ● | ● | | ○ | | | | | | ○ | | | | | | | | | | | | |
| | **CNMG250924-DR** | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | | ○ | | | ○ | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DCLNR/L** Kr:95°


**PCBNR/L** Kr:75°


**PCLNR/L** Kr:95°


**MCBNR/L** Kr:75°


**MCLNR/L** Kr:95°


**PCLNR/L** Kr:95°

| Page Seite | A181 | A188 | A189 | A200 | A201 | A246 |
|---|---|---|---|---|---|---|

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

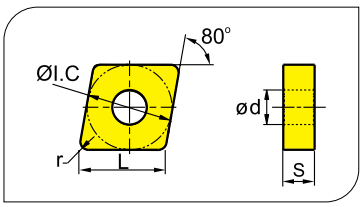
General Turning
Allgemeine Drehbearbeitung

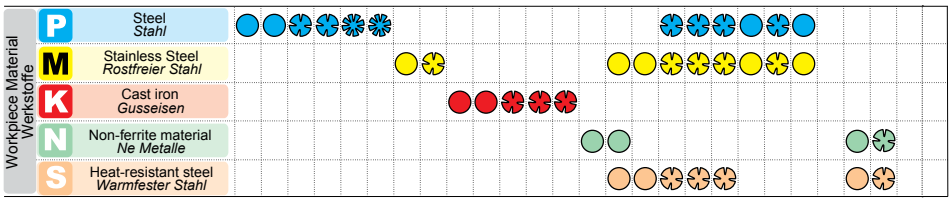
## CN** Negative Insert · Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| LR | CNMM120408-LR | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | CNMM120412-LR | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | CNMM120416-LR | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM160608-LR | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | ● | ● | | | | | ○ | | | | | | | | | | | | | | | |
| | CNMM160612-LR | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | ● | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | CNMM160616-LR | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM160624-LR | 16.1 | 15.875 | 6.35 | 6.35 | 2.4 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| | CNMM190612-LR | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| Roughing Schruppen | CNMM190616-LR | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | CNMM190624-LR | 19.3 | 19.05 | 6.35 | 7.94 | 2.4 | | ● | ● | | ○ | | | | | | | | | | | | | | | | | | |
| | CNMM250924-LR | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| DR | CNMM120412-DR | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ○ | ● | | ○ | ○ | | | | | | | | | | | | | | | |
| | CNMM160612-DR | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | CNMM160616-DR | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | ● | ● | ● | | ○ | ● | | | | | | | | | | | | | | | | | |
| | CNMM190612-DR | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | ● | ● | ● | | ● | | | | | | | | | | | | | | | |
| | CNMM190616-DR | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | ● | ● | ● | ● | ○ | | | | | | | | | | | | | | | | | |
| Roughing / Schruppen | CNMM190624-DR | 19.3 | 19.05 | 6.35 | 7.94 | 2.4 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMM250924-DR | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | ○ | ● | ● | ○ | ○ | | | | | | | | | | | | | | | | | |
| ER | CNMG120408-ER | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | ● | | | | | | | | | | | | | | | |
| | CNMG120412-ER | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | ● | | | | | | | | | | | | | | | |
| | CNMG160612-ER | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | | ● | | | | | | | | | | | | | | | |
| | CNMG160616-ER | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | | | ● | | | | | | | | | | | | | | | |
| | CNMG190612-ER | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | | ○ | | | | | ● | | | | | | | | | | ● | | | | | |
| Roughing / Schruppen | CNMG190616-ER | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | | | ● | | | | | | | | | | | | | | | |
| ER | CNMM250724-ER | 25.79 | 25.4 | 7.94 | 9.12 | 2.4 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM250732-ER | 25.79 | 25.4 | 7.94 | 9.12 | 3.2 | | | ○ | | | | | ○ | | | | | | | | | | | | | | | |
| | CNMM250924-ER | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | | | | | ● | | | | | | | | | | | | | | | |
| Roughing Schruppen | CNMM250932-ER | 25.79 | 25.4 | 9.525 | 9.12 | 3.2 | | | ● | | | | | ○ | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DCLNR/L**
**Kr:95°**


**PCBNR/L**
**Kr:75°**


**PCLNR/L**
**Kr:95°**


**MCBNR/L**
**Kr:75°**


**MCLNR/L**
**Kr:95°**


**PCLNR/L**
**Kr:95°**

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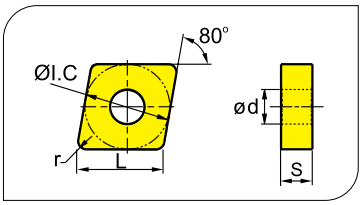
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

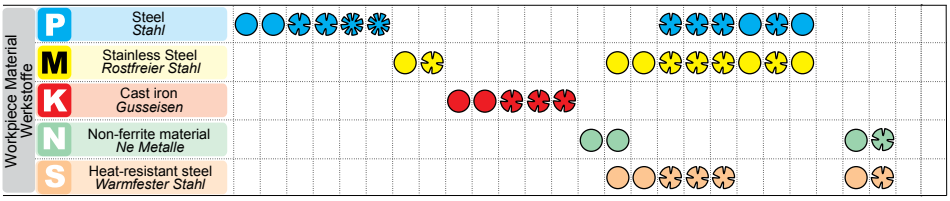
## CN** Negative Insert· Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| HDR<br>Roughing<br>Schruppen | CNMM120408-HDR | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMM120412-HDR | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMM120416-HDR | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM160612-HDR | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMM160616-HDR | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | CNMM160624-HDR | 16.1 | 15.875 | 6.35 | 6.35 | 2.4 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM190608-HDR | 19.3 | 19.05 | 6.35 | 7.94 | 0.8 | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | CNMM190612-HDR | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | ○ | | ● | | | | | | | | | | | | | | | | | |
| | CNMM190616-HDR | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | ○ | ● | ● | ● | ○ | | | | | | ○ | | | | | | | | | | | |
| | CNMM190624-HDR | 19.3 | 19.05 | 6.35 | 7.94 | 2.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | CNMM250924-HDR | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| HPR<br>Roughing<br>Schruppen | CNMM190616-HPR | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | CNMM190624-HPR | 19.3 | 19.05 | 6.35 | 7.94 | 2.4 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | CNMM250924-HPR | 25.79 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | | ● | | | | | | | | | | | | | | | | | | |
| Basic | CNMM120404 | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | ○ | | | | | | | | | | | | | | | | | | | |
| | CNMM120408 | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | ○ | | | | | | | | | | | | | | | | | | | |
| | CNMM190612 | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | | | ● | | | | | | | | | | | | | | | | | | | |
| | CNMM190616 | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | | ○ | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter



















| Page Seite | A181 | A188 | A189 | A200 | A201 | A246 |
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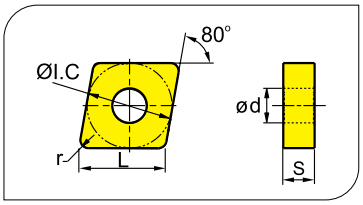
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Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

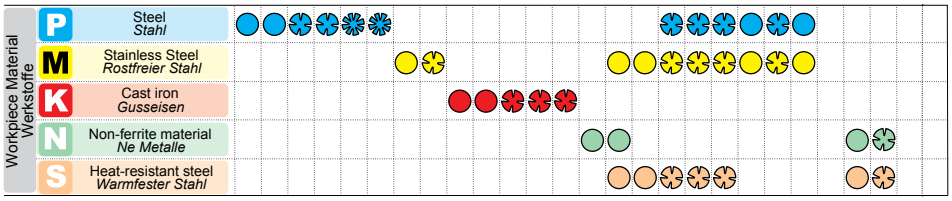
A

General Turning
Allgemeine Drehbearbeitung

## CN** Negative Insert· Negative WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **Flat Glatt** | **CNMA120404** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | ● | ○ | | | | | | | | | | | | | | |
| | **CNMA120408** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | ● | ● | | ● | ● | | | | | | | | | | | |
| | **CNMA120412** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | ● | ● | | ● | ● | | | | | | | | | | ○ | |
| | **CNMA120416** | 12.9 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | ○ | ● | | ● | | | | | | | | | | | | |
| | **CNMA160608** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | | | | ○ | | ● | | | | | | | | | | | | |
| | **CNMA160612** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | | | | ● | | ● | | | | | | | | | | | | |
| | **CNMA160616** | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | | | | ● | ● | | ● | | | | | | | | | | | | |
| | **CNMA160620** | 16.1 | 15.875 | 6.35 | 6.35 | 2.0 | | | | | | | | | | | | ○ | | | | | | | | | | | | |
| | **CNMA160630** | 16.1 | 15.875 | 6.35 | 6.35 | 3.0 | | | | | | | | | | | | | ○ | | | | | | | | | | | |
| | **CNMA190612** | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | | | | | | | | | ● | | ● | | | | | | | | | | | | |
| | **CNMA190616** | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | | | | ○ | ● | | ● | | | | | | | | | | | | |
| **Basic** | **CNMG120404** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | | ● | ○ | | | | | | | | | | | | | | | | | | | | |
| | **CNMG120408** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ● | ● | | | | | | | | ● | | | | | | | | | | | ○ | |
| | **CNMG120412** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ○ | ● | | | | | | | | | | | | | | | | | | | ○ | |
| | **CNMG160608** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **CNMG160612** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **CNMG190608** | 19.3 | 19.05 | 6.35 | 7.94 | 0.8 | | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **CNMG190612** | 19.3 | 19.05 | 6.35 | 7.94 | 1.2 | | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **CNMG190616** | 19.3 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | ○ | | | | | | | | | | | | | | | | | ○ | |

### Tool holder / Klemmhalter


**DCLNR/L** Kr:95°


**PCBNR/L** Kr:75°


**PCLNR/L** Kr:95°


**MCBNR/L** Kr:75°


**MCLNR/L** Kr:95°


**PCLNR/L** Kr:95°

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● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

A

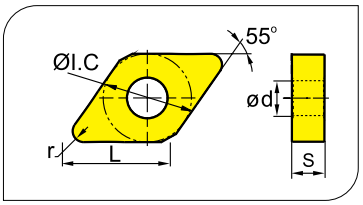
General Turning
Allgemeine Drehbearbeitung

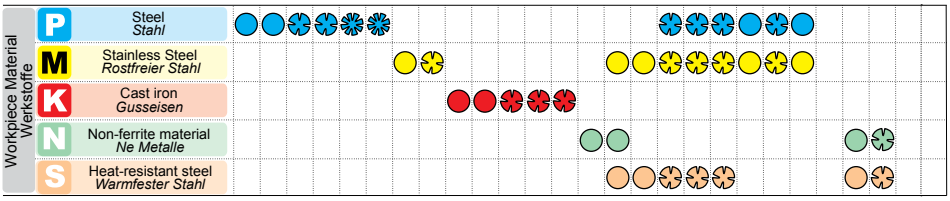
## DN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneidplattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF**  Finishing Schlichten | **DNMG110404-SF** | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **DNMG150404-SF** | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **DNMG150408-SF** | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **DNMG150604-SF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **DNMG150608-SF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| **DF**  Finishing Schlichten | **DNMG110404-DF** | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMG110408-DF** | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | **DNMG110412-DF** | 11.6 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150404-DF** | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMG150408-DF** | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ○ | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMG150412-DF** | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150604-DF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMG150608-DF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMG150612-DF** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | ● | ○ | | | | | | | | | | | | | | | | | | | | |
| **ADF**  Finishing Schlichten | **DNMG150604-ADF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | ● | | | | | | | | | | | | | | | | ● | | | ○ | | | |
| | **DNMG150608-ADF** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | ● | ● | | | | | | | | | | | | | | | ● | ● | | ○ | | | |
| | **DNMG150612-ADF** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | | ● | | | | | | |
| **WG**  Wiper | **DNMX110404-WG** | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **DNMX110408-WG** | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMX150408-WG** | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **DNMX150608-WG** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMX150612-WG** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | ○ | | ○ | | | | | | ○ | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DDJNR/L** Kr:93°


**PDJNR/L** Kr:93°


**PDNNR/L** Kr:63°


**MDJNR/L** Kr:93°


**MDPNN** Kr:62°30'


**PDSNR/L** Kr:62°30'


**PDUNR/L** Kr:93°

| Page/Seite | A182 | A190 | A191 | A202 | A203 | A248 | A249 |
|---|---|---|---|---|---|---|---|

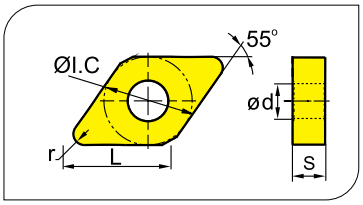
Insert code key ISO Code A62-A63
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Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

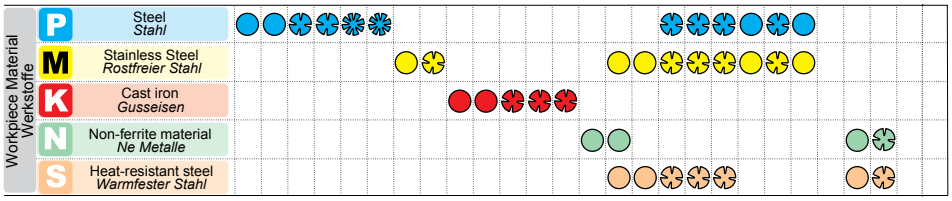
A

General Turning
Allgemeine Drehbearbeitung

## DN** Negative Insert·Negative WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| EF  Finishing Schlichten | DNMG110404-EF | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | |
| | DNMG110408-EF | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DNMG150404-EF | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | ● | | | | | | |
| | DNMG150408-EF | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | ● | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DNMG150604-EF | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | ○ | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | DNMG150608-EF | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | ○ | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | DNMG150612-EF | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | ● | | | | | | |
| NF  finishing Schlichten | DNEG150404-NF | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | ○ | | | | | | | | |
| | DNEG150408-NF | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | ○ | | | | | | | | |
| | DNEG150604-NF | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | | | | | | | | | | | ○ | ○ | | | | | | | ○ | |
| | DNEG150608-NF | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | | | | | | | ● | ○ | | | | | | | ○ | |
| NGF  finishing Schlichten | DNEG150408-NGF | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | DNEG150412-NGF | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | DNEG150608-NGF | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | DNEG150612-NGF | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| FM  finishing Schlichten | DNMG150604R-FM | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | ● | ● | | | | | | | | | | | | | | ● | | | | | | |
| | DNMG150608R-FM | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ● | | | | | | | | | | | | | | ● | | | | | | |
| | DNMG150604L-FM | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | ● | ● | | | | | | | | | | | | | | ● | | | | | | |
| | DNMG150608L-FM | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ● | | | | | | | | | | | | | | ● | | | | | | |

## Tool holder / Klemmhalter


**DDJNR/L** Kr:93°


**PDJNR/L** Kr:93°


**PDNNR/L** Kr:63°


**MDJNR/L** Kr:93°


**MDPNN** Kr:62°30'


**PDSNR/L** Kr:62°30'

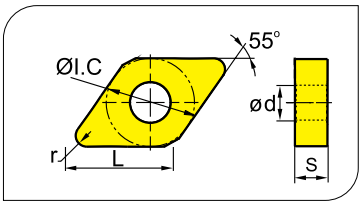

**PDUNR/L** Kr:93°

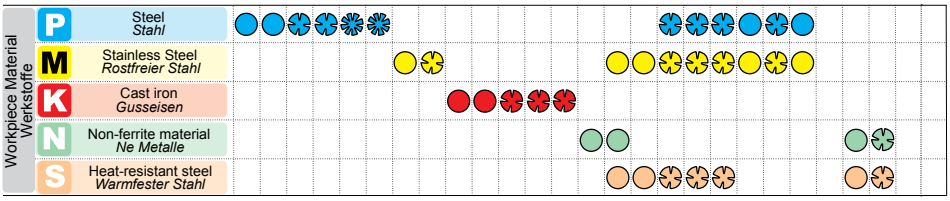

Page/Seite A182 A190 A191 A202 A203 A248 A249


● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

## DN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneidplattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| PM | DNMG110404-PM | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | ● | ● | | | | | | ○ | | | | | | | | | | | | | |
| | DNMG110408-PM | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ○ | ○ | ● | | | | | | ● | | | | | | | | | | | | | |
| | DNMG110412-PM | 11.6 | 9.525 | 4.76 | 3.81 | 1.2 | | | ○ | | | | | | | ● | | | | | | | | | | | | | |
| | DNMG150404-PM | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | ○ | | ○ | | | | | | | | | | | | | | | | | | | |
| | DNMG150408-PM | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | | | | | ○ | ● | | ● | | | | | | | | | | | |
| | DNMG150412-PM | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | | ● | ○ | | | | | | ○ | | ○ | | | | | | | | | | | |
| | DNMG150416-PM | 15.5 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | DNMG150604-PM | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | ○ | ● | ● | ● | | | | | ● | ● | | ○ | | | | | | | | | | | |
| | DNMG150608-PM | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | | | | | | | | | | |
| | DNMG150612-PM | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ○ | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | DNMG150616-PM | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | | ● | ● | | | | | ○ | | | | | | | | | | | | | | |
| DM | DNMG110404-DM | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | DNMG110408-DM | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | DNMG110412-DM | 11.6 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | DNMG150404-DM | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | DNMG150408-DM | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | DNMG150412-DM | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | DNMG150604-DM | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | DNMG150608-DM | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | ● | ● | ● | ● | | ○ | | ● | | | | | | | | | | | | | | | |
| | DNMG150612-DM | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | DNMG150616-DM | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| ZM | DNMG150612-ZM | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | | | | | | | | |

Medium Cut/ Mittl. Bearb.

Medium Cut/ Mittl. Bearb.

Medium Cut/ Mittl. Bearb.

### Tool holder / Klemmhalter




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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

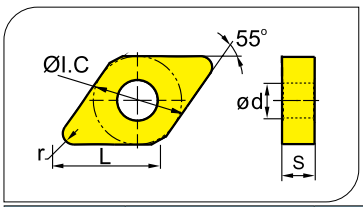
General Turning
Allgemeine Drehbearbeitung

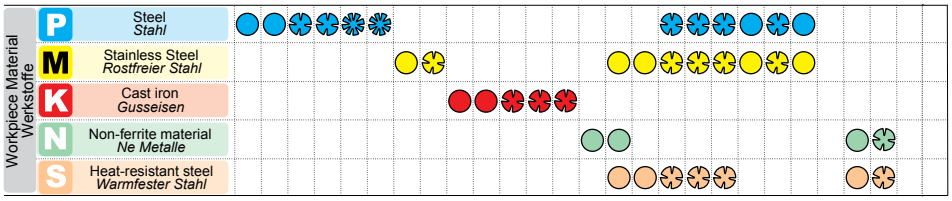
## DN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **EM** | **DNMG110404-EM** | 11.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | **DNMG110408-EM** | 11.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | | | | | | |
| | **DNMG110412-EM** | 11.6 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150404-EM** | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ○ | | | | | | | | | | | ○ | | | | | | |
| | **DNMG150408-EM** | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ○ | | | | | | | | | | | ● | | | | | | |
| | **DNMG150412-EM** | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150604-EM** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| Medium Cut/ Mittl. Bearb. | **DNMG150608-EM** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | **DNMG150612-EM** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | | |
| **EG** | **DNMG150604-EG** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | | | | ● | | | | | | | | | | ● | | | | | | | |
| | **DNMG150608-EG** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | | |
| Medium Cut/ Mittl. Bearb. | **DNMG150612-EG** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | | |
| **TC** | **DNMG150608-TC** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **DNMG150612-TC** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | ● | | ○ | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **NM** | **DNMG150608-NM** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | | |
| | **DNMG150412-NM** | 15.5 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | ○ | | | | | | | | | |
| | **DNMG150612-NM** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SNR** | **DNMG150608-SNR** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | | | | | | | | | ● | | | | | | | | ● |
| | **DNMG150612-SNR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | | | ● | | | | | | | | ● |
| Roughing/ Schruppen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DR** | **DNMG150608-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | | |
| | **DNMG150612-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | | |
| Roughing/ Schruppen | **DNMG150616-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | ● | | ○ | | ○ | | | | ● | | ○ | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DDJNR/L** Kr:93°


**PDJNR/L** Kr:93°


**PDNNR/L** Kr:63°


**MDJNR/L** Kr:93°


**MDPNN** Kr:62°30'


**PDSNR/L** Kr:62°30'


**PDUNR/L** Kr:93°


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● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

A

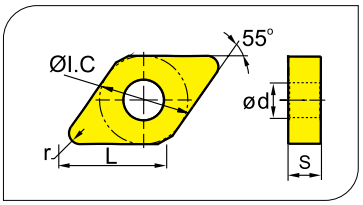
General Turning
Allgemeine Drehbearbeitung

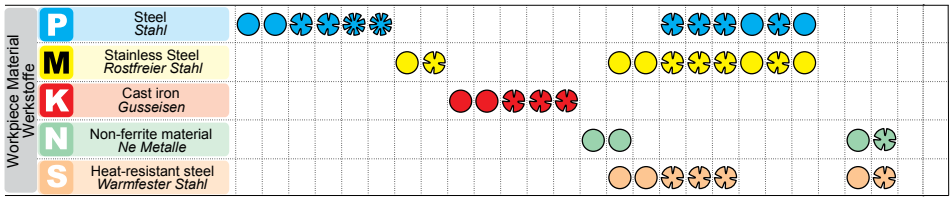
## DN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| ER | DNMG150608-ER | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | ● | | | | | | | | | | | | | | | |
|  | DNMG150612-ER | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | ● | | | | | | | | | | | | | | | |
| Roughing Schruppen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flat Glatt | DNMA150404 | 15.5 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | ○ | | | | | | | | | | | |
|  | DNMA150408 | 15.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | ○ | | | | | | | | | | | | | | |
| | DNMA150604 | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | | | | | | ● | ● | | ○ | | | | | | | | | | | | |
| | DNMA150608 | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | | ● | ● | | ● | | | | | | | | | | | | |
| | DNMA150612 | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | ● | | ● | ○ | | | | | | | | | | | |
| | DNMA150616 | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | | | | | | | ○ | ○ | | ○ | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DDJNR/L** Kr:93°


**PDJNR/L** Kr:93°


**PDNNR/L** Kr:63°


**MDJNR/L** Kr:93°


**MDPNN** Kr:62°30'


**PDSNR/L** Kr:62°30'


**PDUNR/L** Kr:93°

| Page/Seite | A182 | A190 | A191 | A202 | A203 | A248 | A249 |
|---|---|---|---|---|---|---|---|

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

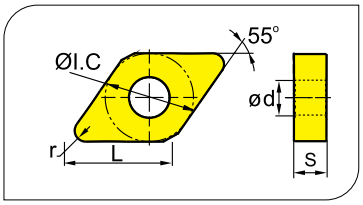
General Turning
Allgemeine Drehbearbeitung

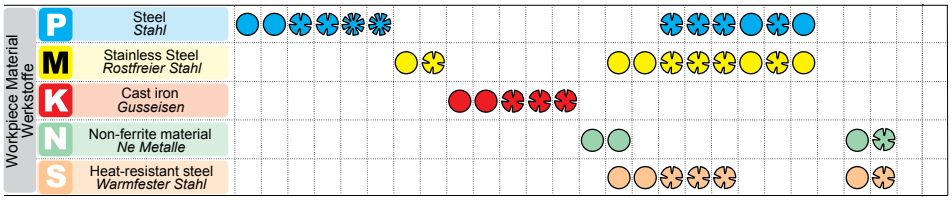
## DN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LR** Roughing Schruppen | **DNMM150608-LR** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | **DNMM150612-LR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | **DNMM150616-LR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | ● | ● | | | | | ○ | | | | | | | | | | | | | | | |
| **DR** Roughing Schruppen | **DNMM150608-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **DNMM150612-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | ● | ● | ○ | ● | | | | | | | | | | | | | | | | | | |
| | **DNMM150616-DR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | ● | ● | ● | | | | | | | | | | | | | | | | | | | | |
| **ER** Roughing Schruppen | **DNMM150608-ER** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | | | | | ● | | | | | | | | | | | | | | | | |
| | **DNMM150612-ER** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | ● | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **HDR** Roughing Schruppen | **DNMM150608-HDR** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | ○ | ○ | | ○ | | | | | | | | | | | | | | | | | |
| | **DNMM150612-HDR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | ○ | | | | | | | | | | | | | | | | | |
| | **DNMM150616-HDR** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | ○ | | ○ | | ○ | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Basic** | **DNMG150604** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150608** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150612** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | | | | | | | |
| | **DNMG150616** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | | | | | | | | | | | | | | | | | | | | | | |
| | **DNMG190608** | 19.3 | 15.875 | 6.35 | 7.94 | 0.8 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **DNMG190612** | 19.3 | 15.875 | 6.35 | 7.94 | 1.2 | | | ○ | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DDJNR/L** Kr:93°


**PDJNR/L** Kr:93°


**PDNNR/L** Kr:63°


**MDJNR/L** Kr:93°


**MDPNN** Kr:62°30'


**PDSNR/L** Kr:62°30'


**PDUNR/L** Kr:93°

Page/Seite A182 A190 A191 A202 A203 A248 A249

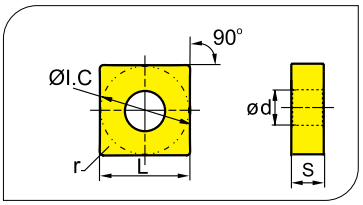
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

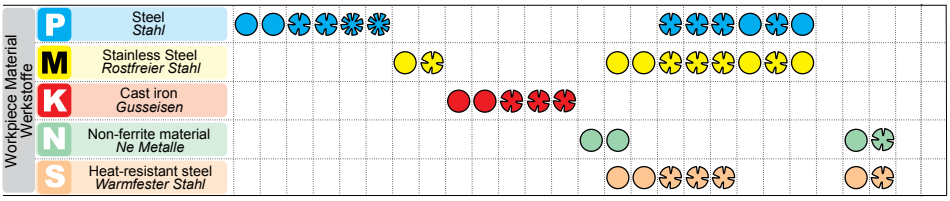
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF**  Finishing Schlichten | **SNMG090304-SF** | 9.525 | 9.525 | 3.18 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **SNMG090308-SF** | 9.525 | 9.525 | 3.18 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **SNMG120404-SF** | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **SNMG120408-SF** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| **DF**  Finishing Schlichten | **SNMG120408-DF** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **SNMG120412-DF** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| **ADF**  Finishing Schlichten | **SNMG120404-ADF** | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **SNMG120408-ADF** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **SNMG120412-ADF** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | ● | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°
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**PSBNR/L** Kr:75°
A192


**PSDNN** Kr:45°
A185


**PSKNR/L** Kr:75°
A194


**PSSNR/L** Kr:45°
A195


**MSBNR/L** Kr:75°
A204


**MSRNR/L** Kr:75°
A205


**MSKNR/L** Kr:75°
Page/Seite A206


**MSDNN** Kr:45°
A207


**PSKNR/L** Kr:75°
A251

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

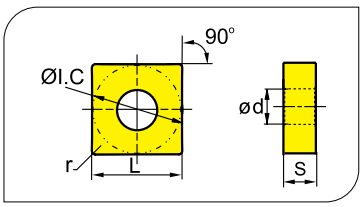
General Turning
Allgemeine Drehbearbeitung

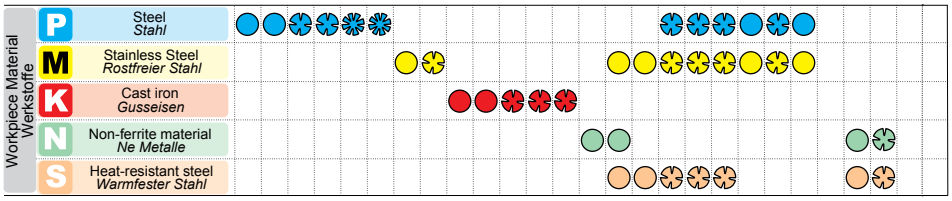
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| EF | SNMG090304-EF | 9.525 | 9.525 | 3.18 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | SNMG090308-EF | 9.525 | 9.525 | 3.18 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | | | | | | |
| | SNMG090312-EF | 9.525 | 9.525 | 3.18 | 3.81 | 1.2 | | | | | | | ○ | | | | | | | | | | | | | | | | | |
| | SNMG120404-EF | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | SNMG120408-EF | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | SNMG120412-EF | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ○ | | | | | | | | | | | ● | ○ | | | | | |
| | SNMG150608-EF | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | ● | | | | | | | | | | | | ○ | | | | | |
| | SNMG150612-EF | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | ○ | | | | | | | | | | | | | | | | | |
| PM | SNMG090304-PM | 9.525 | 9.525 | 3.18 | 3.81 | 0.4 | | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | SNMG090308-PM | 9.525 | 9.525 | 3.18 | 3.81 | 0.8 | | | ○ | ● | | | | | ○ | ● | | ● | | | | | | | | | | | | |
| | SNMG090312-PM | 9.525 | 9.525 | 3.18 | 3.81 | 1.2 | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | SNMG120404-PM | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ○ | ● | | | | | | ○ | | ○ | | | | | | | | | | | | |
| | SNMG120408-PM | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | | |
| | SNMG120412-PM | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ● | | ● | | | | ○ | | ● | | | | | | | | | | | | |
| | SNMG120416-PM | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ○ | ○ | | | | | | ○ | | ○ | | | | | | | | | | | | |
| | SNMG150608-PM | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | | |
| | SNMG150612-PM | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | ○ | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | | |
| | SNMG190612-PM | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | ○ | ● | ● | | ● | | | ○ | ● | | ● | | | | | | | | | | | | |
| | SNMG190616-PM | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | | ○ | | | | | | | | | | | | | | | | | | | | |

EF



Finishing
Schlichten

PM



Medium Cut/
Mittl. Bearb.

### Tool holder / Klemmhalter



**DSBNR/L** Kr:75°

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**PSBNR/L** Kr:75°

A192



**PSDNN** Kr:45°

A185



**PSKNR/L** Kr:75°

A194



**PSSNR/L** Kr:45°

A195



**MSBNR/L** Kr:75°

A204



**MSRNR/L** Kr:75°

A205



**MSKNR/L** Kr:75°

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**MSDNN** Kr:45°

A207



**PSKNR/L** Kr:75°

A251

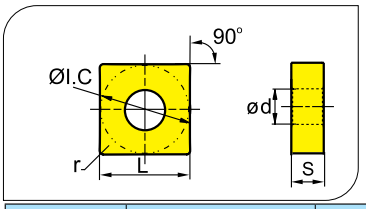
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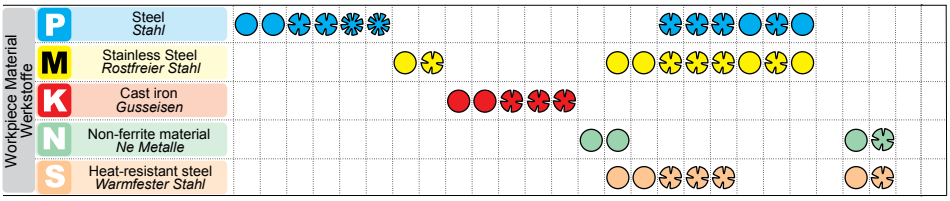
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| DM | SNMG090304-DM | 9.525 | 9.525 | 3.18 | 3.81 | 0.4 | | ● | ● | | | | | | | | | | | | | | | | | | | |
| | SNMG090308-DM | 9.525 | 9.525 | 3.18 | 3.81 | 0.8 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | |
| | SNMG120404-DM | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | SNMG120408-DM | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | |
| | SNMG120412-DM | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | |
| | SNMG120416-DM | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ● | ○ | | ○ | | | | | | | | | | | | | | | | |
| | SNMG150608-DM | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | SNMG150612-DM | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | SNMG190612-DM | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | ○ | | ○ | | | | | | | | | | | | | | | | |
| | SNMG190616-DM | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | ● | ● | ● | | ● | | | | | | | | | | | | | | | | |
| EM | SNMG120404-EM | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | ○ | | | | | | | | | ● | | | | | |
| | SNMG120408-EM | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ○ | | | | |
| | SNMG120412-EM | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | ○ | | | | |
| | SNMG120416-EM | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | ○ | | | | | | | | | | | | | | |
| | SNMG150612-EM | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | ○ | ● | | | | | | | | | ● | | | | | |
| | SNMG150616-EM | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | | | ● | | | | | | | | | ● | | | | | |
| EG | SNMG120404-EG | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | ○ | | | | | | |
| | SNMG120408-EG | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | ● | | | | | | | | ○ | ● | | | | | |
| | SNMG120412-EG | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | ● | | | | | | | | ● | | | | | | |
| TC | SNMG120404-TC | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | ● | | | | | | | | | | | |
| | SNMG120408-TC | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | ● | | ● | | | | | | | | | |
| | SNMG120412-TC | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | ● | | ● | | | | | | | | | |
| | SNMG150616-TC | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | | | | | | ○ | | | | | | | | | | | |

Medium Cut/ Mittl. Bearb.

## Tool holder / Klemmhalter




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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

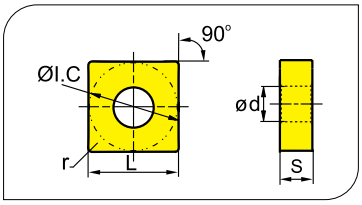
General Turning
Allgemeine Drehbearbeitung

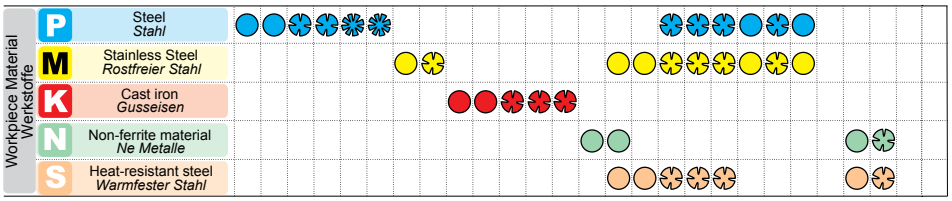
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **NM**  Medium Cut Mittl. Bearb. | **SNMG120408-NM** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | ● | ● | | | | | | | | | |
| | **SNMG120412-NM** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | ○ | | | | | | | | | |
| **DR**  Roughing Schruppen | **SNMG120408-DR** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **SNMG120412-DR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ● | ● | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **SNMG120416-DR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | ● | ○ | ● | ● | | | | | | ● | | ● | | | | | | | | | | | |
| | **SNMG150612-DR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ○ | | ● | | | | ● | | ● | | | | | | | | | | | |
| | **SNMG150616-DR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | | ● | ● | ● | | | | | | ○ | | ○ | | | | | | | | | | | |
| | **SNMG190612-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | ● | ● | ● | | | | | | ● | | | | | | | | | | | |
| | **SNMG190616-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | ● | ● | ● | ● | ● | | | | ○ | | ● | | | | | | | | | | | |
| | **SNMG190624-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 2.4 | | ○ | ● | ● | ● | ○ | | | | | | | | | | | | | | | | | |
| | **SNMG250924-DR** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | | ○ | ○ | | | | | | | | | | | | | | | | | |
| **ER**  Roughing Schruppen | **SNMG120408-ER** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ○ | ○ | | | | | | | | | | | | | | | |
| | **SNMG120412-ER** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ○ | ● | | | | | | | | | | | | | | | |
| | **SNMG150608-ER** | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | ○ | ○ | | | | | | | | | | | | | | | |
| | **SNMG150612-ER** | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | ○ | ● | | | | | | | | | | | | | | | |
| | **SNMG190612-ER** | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | | | | | | ○ | ● | | | | | | | | | | | | | | | |
| | **SNMG190616-ER** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | | ○ | ● | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°


**PSBNR/L** Kr:75°


**PSDNN** Kr:45°


**PSKNR/L** Kr:75°


**PSSNR/L** Kr:45°


**MSBNR/L** Kr:75°


**MSRNR/L** Kr:75°

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**MSKNR/L** Kr:75°


**MSDNN** Kr:45°


**PSKNR/L** Kr:75°

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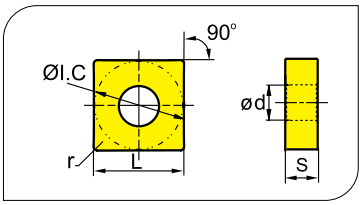
● Ex Stock / ab Lager ○ On demand / auf Anfrage

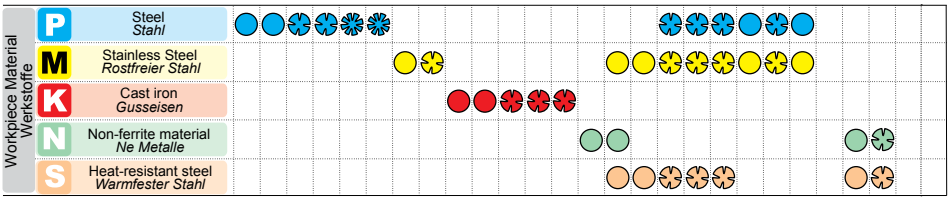
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LR**  Roughing Schruppen | **SNMM120408-LR** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM120412-LR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM120416-LR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| | **SNMM150612-LR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM150616-LR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM190612-LR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM190616-LR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM190624-LR** | 19.05 | 19.05 | 6.35 | 7.94 | 2.4 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM250924-LR** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | ● | ● | | ● | | | | | | | | | | | | | | | | | | |
| **DR**  Roughing Schruppen | **SNMM150612-DR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM150616-DR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | ● | ● | ● | ○ | ● | | | | | | | | | | | | | | | | | | |
| | **SNMM190608-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 0.8 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **SNMM190612-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | ● | ● | ● | ○ | ● | ● | | | | | | | | | | | | | | | | | |
| | **SNMM190616-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | |
| | **SNMM190624-DR** | 19.05 | 19.05 | 6.35 | 7.94 | 2.4 | ○ | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SNMM250716-DR** | 25.4 | 25.4 | 7.94 | 9.12 | 1.6 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM250724-DR** | 25.4 | 25.4 | 7.94 | 9.12 | 2.4 | ○ | ○ | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| | **SNMM250924-DR** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | | ● | ● | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°
Page/Seite A183


**PSBNR/L** Kr:75°
A192


**PSDNN** Kr:45°
A185


**PSKNR/L** Kr:75°
A194


**PSSNR/L** Kr:45°
A195


**MSBNR/L** Kr:75°
A204


**MSRNR/L** Kr:75°
A205


**MSKNR/L** Kr:75°
Page/Seite A206


**MSDNN** Kr:45°
A207


**PSKNR/L** Kr:75°
A251

Insert code key
ISO Code A62-A63

Grade selection reference
Sortenauswahl A17/A44-A59

Chip breaker selection reference
Spanbrecherauswahl A33-A43

Recommended cutting parameters
Empfohlene Schnittparameter A279-A281

A

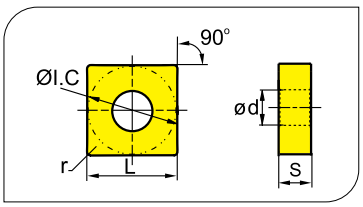
General Turning
Allgemeine Drehbearbeitung

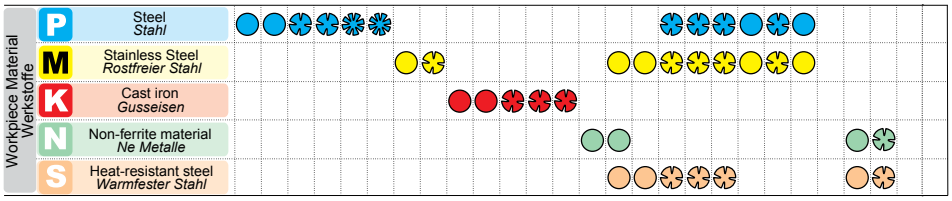
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **ER** | **SNMM250724-ER** | 25.4 | 25.4 | 7.94 | 9.12 | 2.4 | | | ● | | | | ○ | ● | | | | | | | | | | | | | | | |
| | **SNMM250732-ER** | 25.4 | 25.4 | 7.94 | 9.12 | 3.2 | | | ● | | | | | ○ | | | | | | | | | | | | | | | |
| | **SNMM250924-ER** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | | ○ | | | ● | | | | | | | | | | | | | | | |
| Roughing Schruppen | **SNMM250932-ER** | 25.4 | 25.4 | 9.525 | 9.12 | 3.2 | | | ● | | | | | ○ | | | | | | | | | | | | | | | |
| **HDR** | **SNMM120408-HDR** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SNMM120412-HDR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SNMM120416-HDR** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **SNMM150608-HDR** | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM150612-HDR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SNMM150616-HDR** | 15.875 | 15.875 | 6.35 | 6.35 | 1.6 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SNMM150624-HDR** | 15.875 | 15.875 | 6.35 | 6.35 | 2.4 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| Roughing Schruppen | **SNMM190612-HDR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **SNMM190616-HDR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | ● | ● | ● | | | | ● | | | | | | | | | | | | | | | |
| | **SNMM190624-HDR** | 19.05 | 19.05 | 6.35 | 7.94 | 2.4 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM250724-HDR** | 25.4 | 25.4 | 7.94 | 9.12 | 2.4 | | | ● | ○ | | ● | | | | | | | | | | | | | | | | | |
| | **SNMM250924-HDR** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | ● | ● | | ● | | | | | | | | | | | | | | | | | | |
| **HPR** | **SNMM190616-HPR** | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM190624-HPR** | 19.05 | 19.05 | 6.35 | 7.94 | 2.4 | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **SNMM250924-HPR** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | ● | ● | | ● | | | | | | | | | | | | | | | | | | |
| Roughing Schruppen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°


**PSBNR/L** Kr:75°


**PSDNN** Kr:45°


**PSKNR/L** Kr:75°


**PSSNR/L** Kr:45°


**MSBNR/L** Kr:75°


**MSRNR/L** Kr:75°

Page/Seite A183 A192 A185 A194 A195 A204 A205


**MSKNR/L** Kr:75°


**MSDNN** Kr:45°

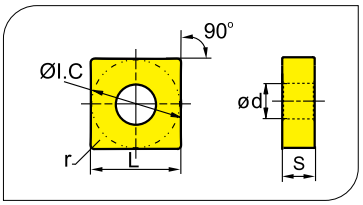

**PSKNR/L** Kr:75°

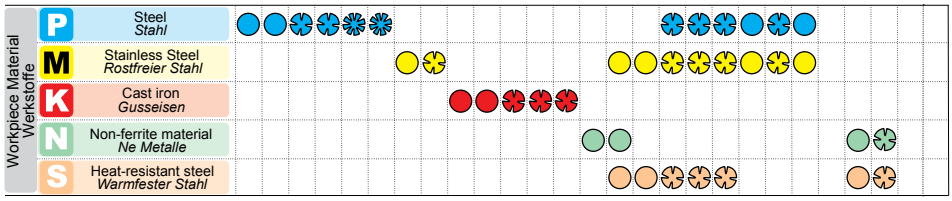
Page/Seite A206 A207 A251

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| Basic | **SNMG090308** | 9.525 | 9.525 | 3.18 | 3.81 | 0.8 | | | | ● | | | | | | | | | | | | | | | | | | |
| | **SNMG120408** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | **SNMG120412** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | |
| | **SNMG120416** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | ● | | | ○ | | | | | | | | | | | | | | | | | | |
| | **SNMG120408** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | **SNMG120412** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | |
| | **SNMG120416** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | ● | | | ○ | | | | | | | | | | | | | | | | | | |
| | **SNMG250724** | 25.4 | 25.4 | 7.94 | 9.12 | 2.4 | | | | | | ● | | | | | | | | | | | | | | | | |
| | **SNMG250924** | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | | | | | ● | | | | | | | | | | | | | | | | |
| Basic | **SNMM120408** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | ● | | | | | | | | | | | | | | | | | | |
| | **SNMM120412** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | ○ | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°
Page/Seite A183


**PSBNR/L** Kr:75°
Page/Seite A192


**PSDNN** Kr:45°
Page/Seite A185


**PSKNR/L** Kr:75°
Page/Seite A194


**PSSNR/L** Kr:45°
Page/Seite A195


**MSBNR/L** Kr:75°
Page/Seite A204


**MSRNR/L** Kr:75°
Page/Seite A205


**MSKNR/L** Kr:75°
Page/Seite A206


**MSDNN** Kr:45°
Page/Seite A207


**PSKNR/L** Kr:75°
Page/Seite A251

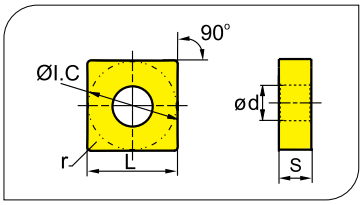
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

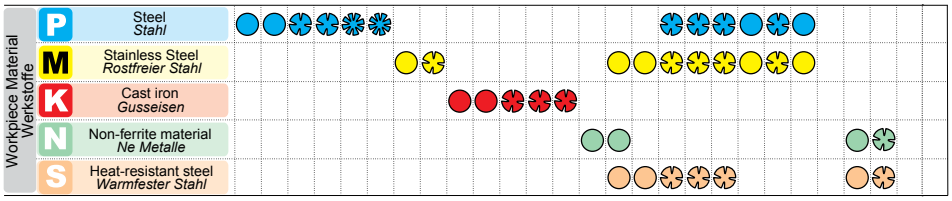
A

General Turning
Allgemeine Drehbearbeitung

## SN** Negative Insert·Negative WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| Basic | SNMM190608 | 19.05 | 19.05 | 6.35 | 7.94 | 0.8 | | | | ● | | | | | | | | | | | | | | | | | | | |
| | SNMM190612 | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | SNMM190616 | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | SNMM250724-1 | 25.4 | 25.4 | 7.94 | 9.12 | 2.4 | | | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | SNMM250924 | 25.4 | 25.4 | 9.525 | 9.12 | 2.4 | | | ● | ○ | | ● | | | | | | | | | | | | | | | | | |
| Flat Glatt | SNMA120408 | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | ● | ● | | ● | | | | | | | | | | | |
| | SNMA120412 | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | ● | ○ | | ● | ○ | | | | | | | | | | |
| | SNMA120416 | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | ○ | ○ | | ○ | | | | | | | | | | | |
| | SNMA150608 | 15.875 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | | | | | | | ○ | | | | | | | | | | | |
| | SNMA150612 | 15.875 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | | | | | | | ● | | | | | | | | | | | |
| | SNMA190612 | 19.05 | 19.05 | 6.35 | 7.94 | 1.2 | | | | | | | | | ○ | ● | | ● | | | | | | | | | | | |
| | SNMA190616 | 19.05 | 19.05 | 6.35 | 7.94 | 1.6 | | | | | | | | | | ○ | | ● | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DSBNR/L** Kr:75°
Page/Seite A183


**PSBNR/L** Kr:75°
Page/Seite A192


**PSDNN** Kr:45°
Page/Seite A185


**PSKNR/L** Kr:75°
Page/Seite A194


**PSSNR/L** Kr:45°
Page/Seite A195


**MSBNR/L** Kr:75°
Page/Seite A204


**MSRNR/L** Kr:75°
Page/Seite A205


**MSKNR/L** Kr:75°
Page/Seite A206


**MSDNN** Kr:45°
Page/Seite A207


**PSKNR/L** Kr:75°
Page/Seite A251

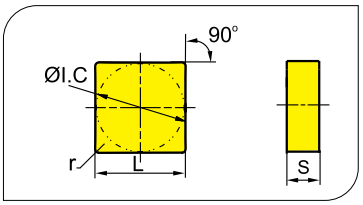
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

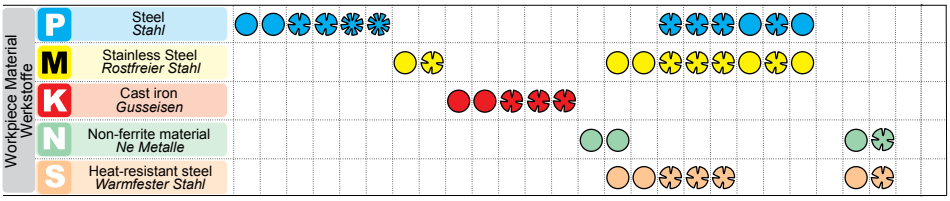
## SN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| Flat Glatt | SNUN090304 | 9.525 | 9.525 | 3.18 | - | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | SNUN090308 | 9.525 | 9.525 | 3.18 | - | 0.8 | | | | | | | | | | | | | | | | | | | | | | ○ | |
| | SNUN120408 | 12.7 | 12.7 | 4.76 | - | 0.8 | | | | | | | | | | | | ● | | | | | | | | | | | |
| | SNUN120412 | 12.7 | 12.7 | 4.76 | - | 1.2 | | | | ● | | | | | | | | ○ | | | | | | | | | | ○ | ○ |
| | SNUN190412 | 19.05 | 19.05 | 4.76 | - | 1.2 | | | | | | | | | | | | | | | | | | | | | | ○ | |
| | SNUN190416 | 19.05 | 19.05 | 4.76 | - | 1.6 | | | | | | | | | | | | | | | | | | | | | | | |
| | SNUN250724 | 25.4 | 25.4 | 7.94 | - | 2.4 | | | | | | ○ | | | | | | | | | | | | | | | | | |
| | SNUN250924 | 25.4 | 25.4 | 9.525 | - | 2.4 | | | | | | | | | | | | | | | | | | | | | | | |

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

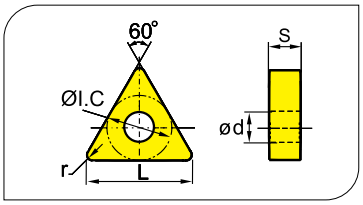
General Turning
Allgemeine Drehbearbeitung

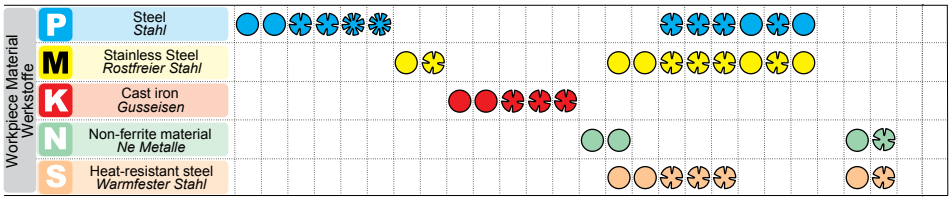
## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| SF<br>Finishing<br>Schlichten | TNMG110304-SF | 11 | 6.35 | 3.18 | 2.26 | 0.4 | | | | | | | | | | | | | | | | | | | | | ○ | | |
| | TNMG160404-SF | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | ○ | | ● | | |
| | TNMG160408-SF | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | TNMG220408-SF | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ○ | | |
| | TNMG220412-SF | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | | | | | ○ | | |
| DF<br>Finishing<br>Schlichten | TNMG160404-DF | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | TNMG160408-DF | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | ○ | | | | |
| | TNMG160412-DF | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | TNMG220408-DF | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | TNMG220412-DF | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ○ | ● | | | | | | | | | | | | | | | | | | | |
| ADF<br>Finishing<br>Schlichten | TNMG160404-ADF | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | ● | | | | | | | | | | | | | | | | ● | | | ● | | | |
| | TNMG160408-ADF | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | | | | | | | | | | ● | ○ | | ○ | | | |
| | TNMG160412-ADF | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | ● | | | | | | | | | | | | | | | | ● | | | | | | |
| WG<br>Wiper | TNMX160408-WG | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | | | | | | | | | | | | | | | | | | | | | |
| | TNMX160412-WG | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ○ | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L** Kr:91°


**PTFNR/L** Kr:90°


**PTTNR/L** Kr:60°


**PTGNR/L** Kr:90°


**MTGNR/L** Kr:90°


**MTJNR/L** Kr:93°


**MTJNR/L-Z** Kr:93°

Page/Seite A184 A196 A197 A198 A208 A209 A210


**MTFNR/L** Kr:90°

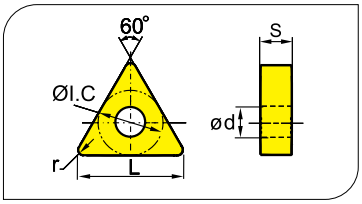

**PTFNR/L** Kr:90°

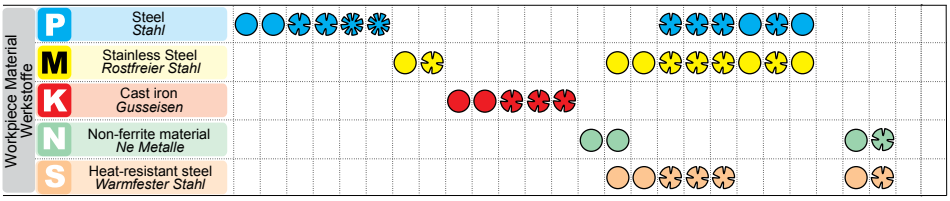
Page/Seite A211 A252

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| EF  Finishing Schlichten | TNMG110304-EF | 11 | 6.35 | 3.18 | 2.26 | 0.4 | | | | | | | | | | | | | | | | | ● | | | | | | |
| | TNMG110308-EF | 11 | 6.35 | 3.18 | 2.26 | 0.8 | | | | | | | | | | | | | | | | | ● | | | | | | |
| | TNMG160404-EF | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | TNMG160408-EF | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | TNMG160412-EF | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | ○ | | | | | | | | | | ● | ● | | | | | |
| | TNMG220404-EF | 22 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ○ | | | | | | | | | | ● | | | | | | |
| | TNMG220408-EF | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | |
| | TNMG220412-EF | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| FM  Finishing Schlichten | TNMG160404R-FM | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | ○ | ● | | | | | | | | | | | | | | ● | | | | | | |
| | TNMG160408R-FM | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | | | | | | | | | | | | | | ● | | | ○ | | | |
| | TNMG160404L-FM | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | ● | | | | | | | | | | | | | | ● | | | | | | |
| | TNMG160408L-FM | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ○ | ● | | | | | | | | | | | | | | ● | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L** Kr:91°
Page/Seite A184


**PTFNR/L** Kr:90°
A196


**PTTNR/L** Kr:60°
A197


**PTGNR/L** Kr:90°
A198


**MTGNR/L** Kr:90°
A208


**MTJNR/L** Kr:93°
A209


**MTJNR/L-Z** Kr:93°
A210


**MTFNR/L** Kr:90°
Page/Seite A211


**PTFNR/L** Kr:90°
A252

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

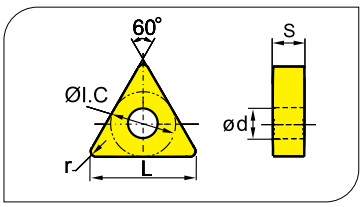
General Turning
Allgemeine Drehbearbeitung

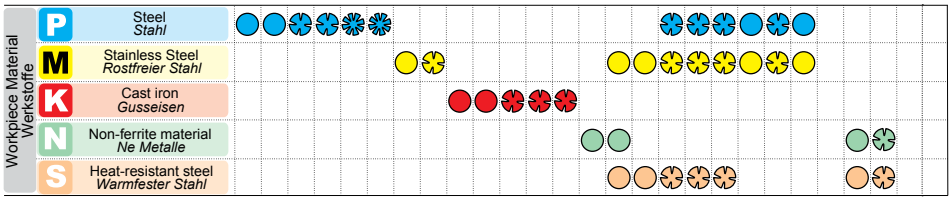
## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **PM** | **TNMG110304-PM** | 11 | 6.35 | 3.18 | 2.26 | 0.4 | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **TNMG110308-PM** | 11 | 6.35 | 3.18 | 2.26 | 0.8 | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **TNMG160404-PM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMG160408-PM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMG160412-PM** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMG220408-PM** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **TNMG220412-PM** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMG220416-PM** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | ● | | ○ | | | ○ | ○ | | ○ | | | | | | | | | | | |
| **DM** | **TNMG110308-DM** | 11 | 6.35 | 3.18 | 2.26 | 0.8 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | **TNMG160404-DM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | ○ | | ○ | | | | | | | | | | | ○ | | | | |
| | **TNMG160408-DM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | ● | ● | ● | ● | | ● | | ○ | | | | | | | | | | | ○ | | | | |
| | **TNMG160412-DM** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ○ | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMG220404-DM** | 22 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMG220408-DM** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| | **TNMG220412-DM** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| | **TNMG220416-DM** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| **ZM** | **TNMG160404-ZM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | ● | | | | | | | | | | | | | | | | | | | | | | |
| | **TNMG160408-ZM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | | | | | | | | | | | | | | | | |
| | **TNMG160412-ZM** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | ● | | | | | | | | | | | | | | | | | | | | | | |

Medium Cut/
Mittl. Bearb.

Medium Cut/
Mittl. Bearb

Medium Cut/
Mittl. Bearb

### Tool holder / Klemmhalter


**DTGNR/L**
Kr:91°


**PTFNR/L**
Kr:90°


**PTTNR/L**
Kr:60°


**PTGNR/L**
Kr:90°


**MTGNR/L**
Kr:90°


**MTJNR/L**
Kr:93°


**MTJNR/L-Z**
Kr:93°

Page/Seite A184 A196 A197 A198 A208 A209 A210


**MTFNR/L**
Kr:90°


**PTFNR/L**
Kr:90°

Page/Seite A211 A252

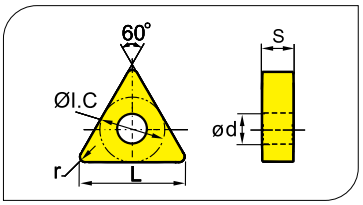
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

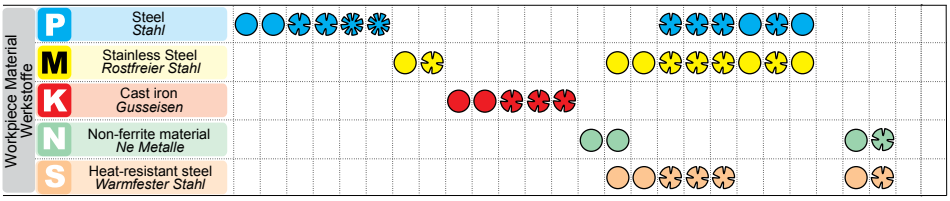
## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **EM** | **TNMG160404-EM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | ○ | | | | | | | | | | ● | ○ | | | | | |
| | **TNMG160408-EM** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | **TNMG160412-EM** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | **TNMG220408-EM** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | **TNMG220412-EM** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ○ | ● | | | | | | | | | | ● | ○ | | | | | |
| Medium Cut/ Mittl. Bearb. | **TNMG220416-EM** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| **EG** | **TNMG160404-EG** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | ● | | | | | | | |
| | **TNMG160408-EG** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | | |
| | **TNMG160412-EG** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | | |
| Medium Cut/ Mittl. Bearb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TC** | **TNMG160404-TC** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | ○ | | ● | | | | | | | | | | | |
| | **TNMG160408-TC** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **TNMG160412-TC** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **TNMG220412-TC** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb | **TNMG220416-TC** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | | | ○ | | | | | | | | | | | | | |
| **DR** | **TNMG160408-DR** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | | | | | ● | | ● | | | | | | | | | | | | |
| | **TNMG160412-DR** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | ○ | | | | ○ | | ● | | | | | | | | | | | | |
| | **TNMG220408-DR** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | ● | ● | | ○ | | | | | | ○ | | | | | | | | | | | | |
| | **TNMG220412-DR** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ○ | ● | ● | ● | ● | | | | ○ | | ● | | | | | | | | | | | | |
| | **TNMG220416-DR** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ● | ● | | ● | | | | ○ | | ● | | | | | | | | | | | | |
| Roughing/ Schruppen | **TNMG270608-DR** | 27.5 | 15.875 | 6.35 | 6.35 | 0.8 | | | | | | ○ | | | | | | | | | | | | | | | | | | |
| | **TNMG270612-DR** | 27.5 | 15.875 | 6.35 | 6.35 | 1.2 | | | | | | ● | | | | | | | | | | | | | | | | | | |
| | **TNMG270616-DR** | 27.5 | 15.875 | 6.35 | 6.35 | 1.6 | | | | | | ○ | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L**
Kr:91°
Page/Seite A184


**PTFNR/L**
Kr:90°
A196


**PTTNR/L**
Kr:60°
A197


**PTGNR/L**
Kr:90°
A198


**MTGNR/L**
Kr:90°
A208


**MTJNR/L**
Kr:93°
A209


**MTJNR/L-Z**
Kr:93°
A210


**MTFNR/L**
Kr:90°
Page/Seite A211


**PTFNR/L**
Kr:90°
A252

Insert code key
ISO Code
A62-A63

Grade selection reference
Sortenauswahl
A17/A44-A59

Chip breaker selection reference
Spanbrecherauswahl
A33-A43

Recommended cutting parameters
Empfohlene Schnittparameter
A279-A281

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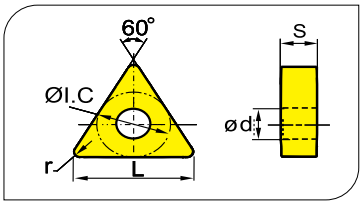
General Turning
Allgemeine Drehbearbeitung

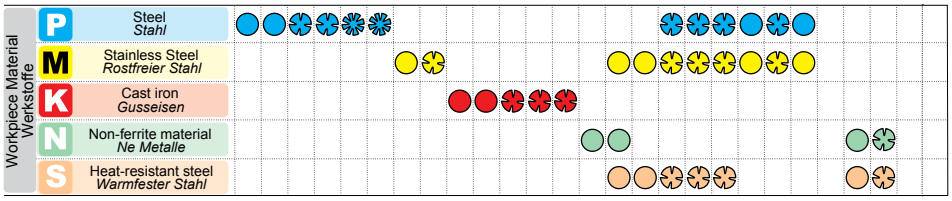
## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Verm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LR**  Roughing Schruppen | **TNMM160408-LR** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| | **TNMM160412-LR** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | | | | | ● | | | | | | | | | | | | | | | |
| **DR**  Roughing Schruppen | **TNMM160408-DR** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM160412-DR** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ○ | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **TNMM220408-DR** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ○ | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM220412-DR** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM220416-DR** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | ○ | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM270612-DR** | 27.5 | 15.875 | 4.76 | 5.16 | 1.2 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **TNMM270616-DR** | 27.5 | 15.875 | 4.76 | 5.16 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| **ER**  Roughing Schruppen | **TNMG160408-ER** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | ○ | | | | | | | | | | | | | | | |
| | **TNMG160412-ER** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | ○ | | | | | | | | | | | | | | | |
| | **TNMG220408-ER** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | ○ | | | | | | | | | | | | | | | |
| | **TNMG220412-ER** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | ○ | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L** Kr:91°
Page/Seite A184


**PTFNR/L** Kr:90°
A196


**PTTNR/L** Kr:60°
A197


**PTGNR/L** Kr:90°
A198


**MTGNR/L** Kr:90°
A208


**MTJNR/L** Kr:93°
A209


**MTJNR/L-Z** Kr:93°
A210

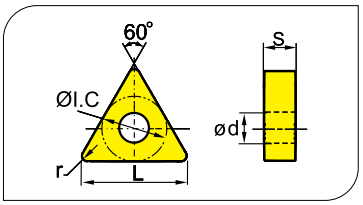

**MTFNR/L** Kr:90°
Page/Seite A211

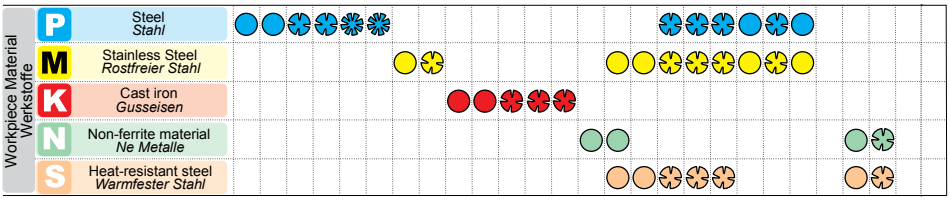

**PTFNR/L** Kr:90°
A252

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

## TN** Negative Insert·Negative WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneidplattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | CVD Coating CVD Beschicht. YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | PVD Coating PVD Beschicht. YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | Cermet unbeschichtet YNG151 | YNT251 | Cermet Coated beschicht. Cerm. YNG151C | Uncoated Carbide unbeschicht. Hartmetall YD101 | YD201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HDR**  Heavy Turning Schwer zerspanung | **TNMM220412-HDR** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | | | | | | | | | | | | | | | | | | | | | | |
| | **TNMM220416-HDR** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **TNMM270616-HDR** | 27.5 | 15.875 | 6.35 | 6.35 | 1.6 | | | ● | | | | | | | | | | | | | | | | | | | | | |
| | **TNMM270624-HDR** | 27.5 | 15.875 | 6.35 | 6.35 | 2.4 | | | ● | | | | | | | | | | | | | | | | | | | | | |
| **Basic**  | **TNMG110308** | 11 | 6.35 | 3.18 | 2.26 | 0.8 | | | | | | | | | | | | | | | | | | | | | | | | |
| | **TNMG160404** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **TNMG160408** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | | |
| | **TNMG160412** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | | |
| | **TNMG220404** | 22 | 12.7 | 4.76 | 5.16 | 0.4 | | | ○ | ○ | | | | | | | | | | | | | | | | | | | | |
| | **TNMG220408** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | ○ | ● | | | | | | | | | | | | | | | | | | | | |
| | **TNMG220412** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **TNMG220416** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **TNMG270612** | 27.5 | 15.875 | 6.35 | 6.35 | 1.2 | | | ○ | | | ● | | | | | | | | | | | | | | | | | | |
| | **TNMG270616** | 27.5 | 15.875 | 6.35 | 6.35 | 1.6 | | | ○ | | | ● | | | | | | | | | | | | | | | | | | |
| | **TNMG330916** | 33 | 19.05 | 9.525 | 7.94 | 1.6 | | | ○ | | | ○ | | | | | | | | | | | | | | | | | | |
| | **TNMG330924** | 33 | 19.05 | 9.525 | 7.94 | 2.4 | | | ○ | | | ○ | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L** Kr:91°


**PTFNR/L** Kr:90°


**PTTNR/L** Kr:60°


**PTGNR/L** Kr:90°


**MTGNR/L** Kr:90°


**MTJNR/L** Kr:93°


**MTJNR/L-Z** Kr:93°

Page/Seite A184 A196 A197 A198 A208 A209 A210


**MTFNR/L** Kr:90°


**PTFNR/L** Kr:90°

Page/Seite A211 A252

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

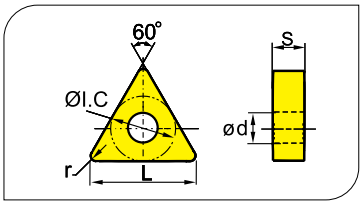
General Turning
Allgemeine Drehbearbeitung

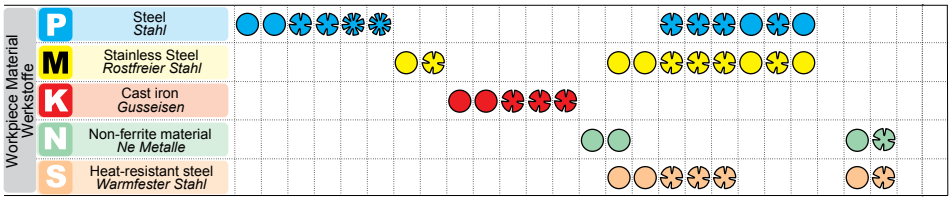
## TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| Basic | **TNMM160404** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **TNMM160408** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | ○ | ○ | | | | | | | | | | | | | | | | | | | |
| | **TNMM160412** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **TNMM220408** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | ○ | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM220412** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | ○ | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM220416** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | ○ | | | ○ | | | | | | | | | | | | | | | | | |
| | **TNMM270616** | 27.5 | 15.875 | 6.35 | 6.35 | 1.6 | | | ○ | ○ | | ● | | | | | | | | | | | | | | | | | |
| Flat Glatt | **TNMA160404** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | ○ | ○ | | ● | | | | | | | | | | | |
| | **TNMA160408** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | ● | ● | | ● | | | | | | | | | | | |
| | **TNMA160412** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMA160416** | 16.5 | 9.525 | 4.76 | 3.81 | 1.6 | | | | | | | | | ○ | ● | | ○ | | | | | | | | | | | |
| | **TNMA220404** | 22 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | ○ | ○ | | ● | | | | | | | | | | | |
| | **TNMA220408** | 22 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | ○ | ● | | ● | | | | | | | | | | | |
| | **TNMA220412** | 22 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | ○ | | | ● | ● | | | | | | | | | | |
| | **TNMA220416** | 22 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | ○ | | | | ○ | | | | | | | | | | |

### Tool holder / Klemmhalter


**DTGNR/L**
Kr:91°
Page/Seite A184


**PTFNR/L**
Kr:90°
A196


**PTTNR/L**
Kr:60°
A197


**PTGNR/L**
Kr:90°
A198


**MTGNR/L**
Kr:90°
A208


**MTJNR/L**
Kr:93°
A209


**MTJNR/L-Z**
Kr:93°
A210

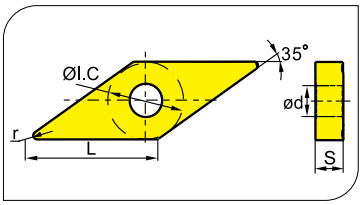

**MTFNR/L**
Kr:90°
Page/Seite A211

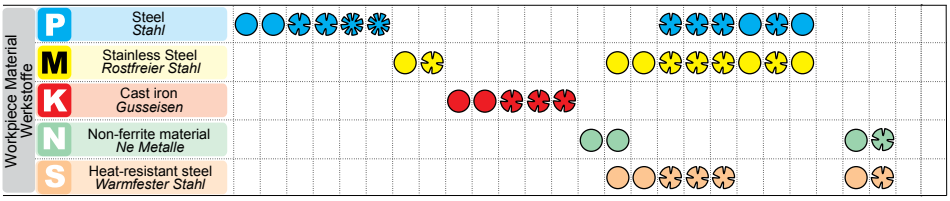

**PTFNR/L**
Kr:90°
A252

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

## VN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF** | **VNMG160404-SF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **VNMG160408-SF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ○ | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DF** | **VNMG160404-DF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **VNMG160408-DF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **ADF** | **VNMG160404-ADF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **VNMG160408-ADF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **EF** | **VNMG160404-EF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| | **VNMG160408-EF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| Finishing Schlichten | **VNMG160412-EF** | 16.6 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | ○ | | | | | | | | | | | | | | | | |
| **NF** | **VNEG160404-NF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | ● | ● | | | | | | ○ | |
| | **VNEG160408-NF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | | | | | ○ | ● | | | | | | ○ | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **NGF** | **VNEG160408-NGF** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | | | | | ○ | ● | | | | | | | |
| | **VNEG160412-NGF** | 16.6 | 9.525 | 4.76 | 4.76 | 1.2 | | | | | | | | | | | | | | | ○ | ● | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter













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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

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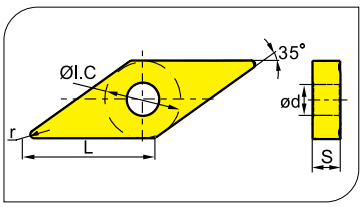
General Turning
Allgemeine Drehbearbeitung

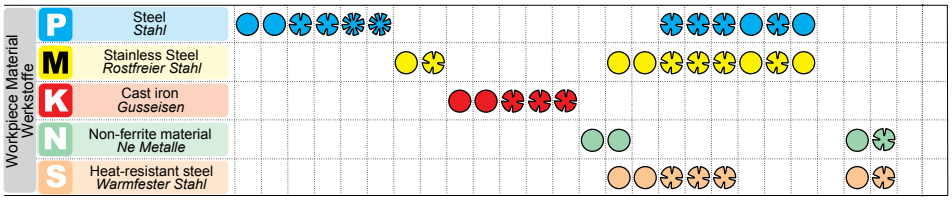
## VN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **PM** | **VNMG160404-PM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | | | | | ● | | ○ | | | | | | | | | | | |
| | **VNMG160408-PM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ○ | | | ● | ● | | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **VNMG160412-PM** | 16.6 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | | | | ○ | ● | | | | | | | | | | | | | |
| **DM** | **VNMG160408-DM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ● | | | | | | | | | | | | | | | | | |
| | **VNMG160412-DM** | 16.6 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **ZM** | **VNMG160404-ZM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | ● | | | | | | | | | | | | | | | | | | | | | | |
| | **VNMG160408-ZM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | ● | | | | | | | | | | | | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **EM** | **VNMG160404-EM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | |
| | **VNMG160408-EM** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TC** | **VNMG160404-TC** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | ● | ○ | | | | | | | | | | | |
| | **VNMG160408-TC** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb | **VNMG160412-TC** | 16.6 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| **NM** | **VNMG160412-NM** | 16.6 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | | | | | | | ● | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SNR** | **VNMG160408-SNR** | 16.6 | 9.525 | 4.76 | 4.76 | 0.8 | | | | | | | | | | | | | | | ○ | | | | | | | ○ | |
| | **VNMG160412-SNR** | 16.6 | 9.525 | 4.76 | 4.76 | 1.2 | | | | | | | | | | | | | | | ○ | | | | | | | ○ | |
| Roughing / Schruppen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Basic** | **VNMG160404** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **VNMG160408** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | | ○ | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter













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● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

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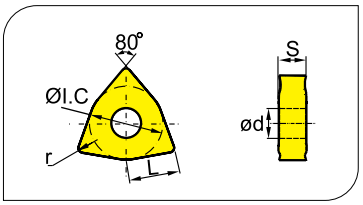


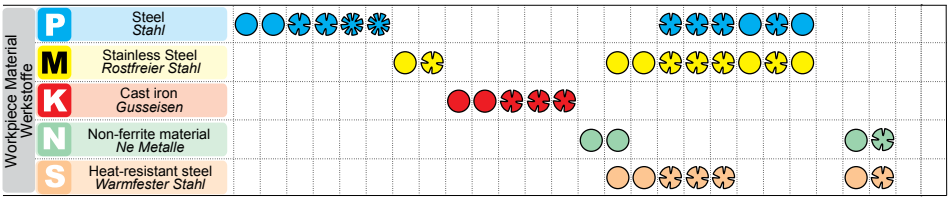
## WN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF** | **WNMG06T304-SF** | 6.5 | 9.525 | 3.97 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **WNMG06T308-SF** | 6.5 | 9.525 | 3.97 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **WNMG060404-SF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **WNMG060408-SF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **WNMG080404-SF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **WNMG080408-SF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| Finishing Schlichten | **WNMG080412-SF** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | | | | | | | | ○ | | |
| **DF** | **WNMG060404-DF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **WNMG060408-DF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **WNMG060412-DF** | 6.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | | | | | | | | | | | | | | | | | | | | | |
| | **WNMG080404-DF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **WNMG080408-DF** | 8.7 | 12.7 | 4.76t | 5.16 | 0.8 | | ● | ○ | ● | | | | | | | | | | | | | | | | | | | |
| Finishing Schlichten | **WNMG080412-DF** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| **ADF** | **WNMG080404-ADF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | ● | | | | | | | | | | | | | | | | ● | | | ● | | | |
| | **WNMG080408-ADF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | | | | | | | ● | ○ | | ● | | | |
| | **WNMG080412-ADF** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | | ● | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter













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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

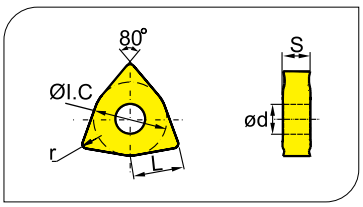
General Turning
Allgemeine Drehbearbeitung

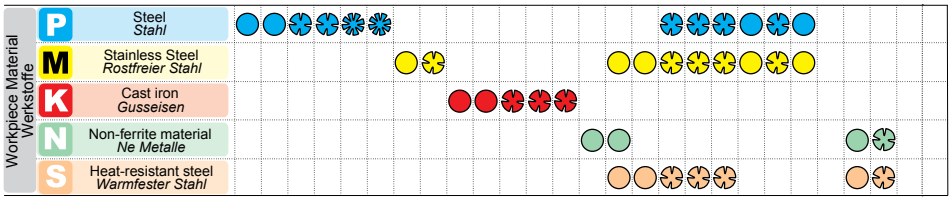
## WN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | CVD Coating CVD Beschicht. YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | PVD Coating PVD Beschicht. YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | Cermet unbeschichtet YNG151 | YNT251 | Cermet Coated beschicht. Cerm. YNG151C | Uncoated Carbide unbeschicht. Hartmetall YD101 | YD201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WG**  Wiper | **WNMG080408-WG** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | | | | | | | | | | | | | | | | | | | | | |
| | **WNMG080412-WG** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ○ | | | | | | | | | | | | | | | | | | | | | |
| **EF**  Finishing Schlichten | **WNMG06T308-EF** | 6.5 | 9.525 | 3.97 | 3.81 | 0.8 | | | | | | | | | | | | | | | | | ● | | | | | | | |
| | **WNMG06T312-EF** | 6.5 | 9.525 | 3.97 | 3.81 | 1.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | **WNMG060404-EF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | | |
| | **WNMG060408-EF** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | | |
| | **WNMG080404-EF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | ○ | | | ● | | | | | | | | | | ● | ○ | | | | | | |
| | **WNMG080408-EF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | ○ | | | ○ | | | | | | | | ○ | | | ● | ○ | | | | | |
| **NF**  Finishing Schlichten | **WNMG060408-NF** | 6.5 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | **WNEG080404-NF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| | **WNEG080408-NF** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | | | ○ | | | | | | | | |

### Tool holder / Klemmhalter


**DWLNR/L**
Kr:95°


**PWLNR/L**
Kr:95°


**MWLNR/L**
Kr:95°


**PWLNR/L**
Kr:95°

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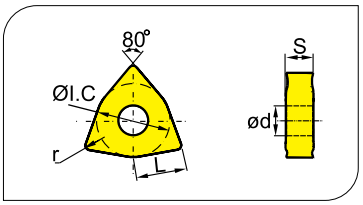
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

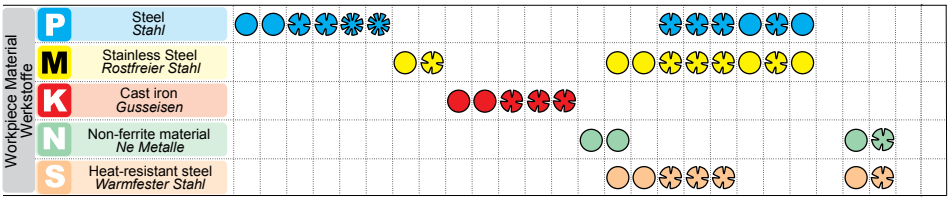
## WN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **PM** | **WNMG060408-PM** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ● | | | ○ | ● | | ● | | | | | | | | | | | |
| | **WNMG060412-PM** | 6.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ○ | ● | | ○ | | | | ○ | | ○ | | | | | | | | | | | |
| | **WNMG080404-PM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | |
| | **WNMG080408-PM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **WNMG080412-PM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ● | | ● | | | ○ | ● | | ● | | | | | | | | | | | |
| | **WNMG080416-PM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.6 | | | ● | | | ○ | | | | ● | | ● | | | | | | | | | | | |
| **DM** | **WNMG06T308-DM** | 6.5 | 9.525 | 3.97 | 3.81 | 0.8 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **WNMG060408-DM** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **WNMG060412-DM** | 6.5 | 9.525 | 4.76 | 3.81 | 1.2 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **WNMG080404-DM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **WNMG080408-DM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ○ | | ● | | | | | | | | | | | ○ | | | | |
| Medium Cut/ Mittl. Bearb. | **WNMG080412-DM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | |
| | **WNMG080416-DM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| **ZM** | **WNMG080408-ZM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | | | | | | | | | | | | | | | | | | | | | | |
| | **WNMG080412-ZM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | ● | | | | | | | | | | | | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **EM** | **WNMG06T304-EM** | 6.5 | 9.525 | 3.97 | 3.81 | 0.4 | | | | | | | ● | | | | | | | | | | | | | | | | |
| | **WNMG06T308-EM** | 6.5 | 9.525 | 3.97 | 3.81 | 0.8 | | | | | | | ● | | | | | | | | | | | | | | | | |
| | **WNMG06T312-EM** | 6.5 | 9.525 | 3.97 | 3.81 | 1.2 | | | | | | | ○ | | | | | | | | | | | ○ | | | | | |
| | **WNMG060404-EM** | 6.5 | 9.525 | 4.76 | 3.81 | 0.4 | | | | | | | ○ | ● | | | | | | | | | | ● | ○ | | | | |
| | **WNMG060408-EM** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |
| Medium Cut/ Mittl. Bearb. | **WNMG080404-EM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |
| | **WNMG080408-EM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |
| | **WNMG080412-EM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | |
| **EG** | **WNMG080408-EG** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | |
| | **WNMG080412-EG** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | ● | ● | | | | | | | | | ● | ● | | | | | |
| Medium Cut/ Mittl. Bearb. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TC** | **WNMG080404-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | ● | ○ | | | | | | | | | | | |
| | **WNMG080408-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **WNMG080412-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | ● | ● | | | | | | | | | | | |

### Tool holder / Klemmhalter


**DWLNR/L** Kr:95°


**PWLNR/L** Kr:95°


**MWLNR/L** Kr:95°


**PWLNR/L** Kr:95°

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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

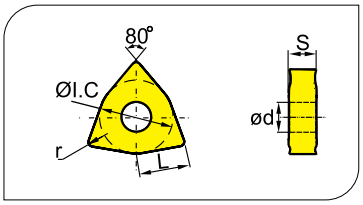
General Turning
Allgemeine Drehbearbeitung

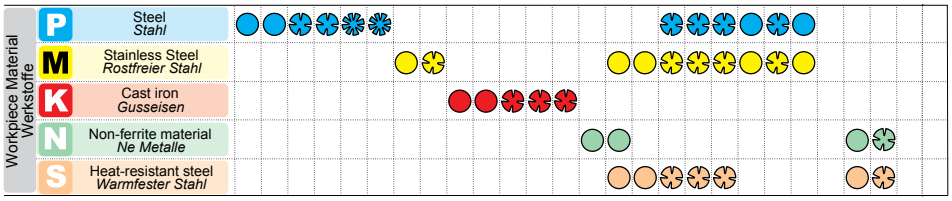
## WN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **TC**  | **WNMG080404-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | ● | | ○ | | | | | | | | | | | |
| | **WNMG080408-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| | **WNMG080412-TC** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | ● | | ● | | | | | | | | | | | |
| **NM**  Medium Cut/ Mittl. Bearb. | **WNMG080404-NM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | | | | | | ● | | | | | | | | |
| | **WNMG080408-NM** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | | | | | | ● | ● | | ○ | | | | | | |
| | **WNMG080412-NM** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | | | | | | ● | ● | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DR**  Roughing/ Schruppen | **WNMG060408-DR** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **WNMG060412-DR** | 6.5 | 9.525 | 4.76 | 3.81 | 1.2 | | ● | ● | ● | | ○ | | | | ○ | | ○ | | | | | | | | | | | |
| | **WNMG080408-DR** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | ● | ● | ● | ● | | | | ● | | ● | | | | | | | | | | | |
| | **WNMG080412-DR** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | ● | ● | ● | ● | | | | ● | | ● | | | | | | | | | | | |
| | **WNMG080416-DR** | 8.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | ● | ● | | | | | | ● | | ○ | | | | | | | | | | | |
| **Flat Glatt**  | **WNMA06T308** | 6.5 | 9.525 | 3.97 | 3.81 | 0.8 | | | | | | | | | ○ | | | | | | | | | | | | | | |
| | **WNMA060408** | 6.5 | 9.525 | 4.76 | 3.81 | 0.8 | | | | | | | | | ● | ● | | ● | | | | | | | | | | | |
| | **WNMA060412** | 6.5 | 9.525 | 4.76 | 3.81 | 1.2 | | | | | | | | | | | | ● | | | | | | | | | | | |
| | **WNMA080404** | 8.7 | 12.7 | 4.76 | 5.16 | 0.4 | | | | | | | | | | ○ | | ● | ○ | | | | | | | | | | |
| | **WNMA080408** | 8.7 | 12.7 | 4.76 | 5.16 | 0.8 | | | | | | | | | ● | ● | | ● | ● | | | | | | | | | | |
| | **WNMA080412** | 8.7 | 12.7 | 4.76 | 5.16 | 1.2 | | | | | | | | | ● | ● | | ● | ● | | | | | | | | | | |
| | **WNMA080416** | 8.7 | 12.7 | 4.76 | 5.16 | 1.6 | | | | | | | | | ○ | ○ | | | ○ | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | ○ | | | | | | | | | | |

### Tool holder / Klemmhalter













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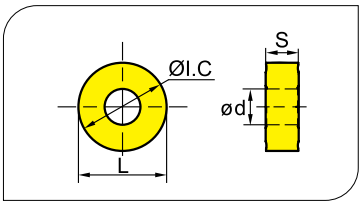
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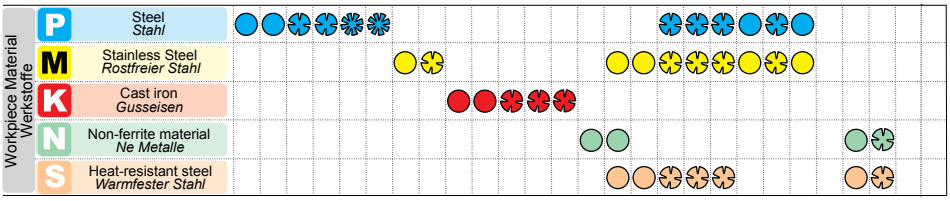
## RN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **Basic** | **RNMG120400** | 12.7 | 12.7 | 4.76 | 5.16 | | | | | ● | | | | | | | ○ | ○ | | | | | | | | | | |



### Tool holder / Klemmhalter

**MRGNR/L**



**MRDNN**



Page/Seite A215 A215

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

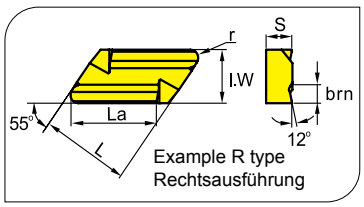
General Turning
Allgemeine Drehbearbeitung

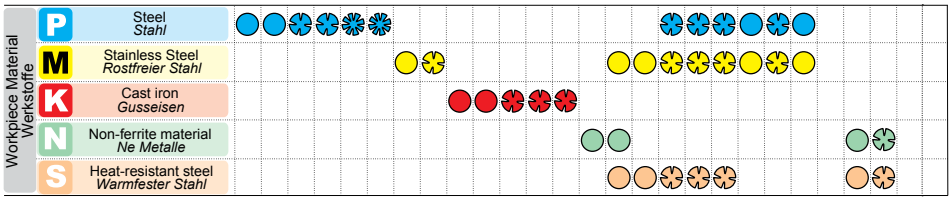
## KN** Negative insert·Negative Inserts

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | La | L | l.W | S | brn | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| KNUX  Finishing/ Schlichten | KNUX160405L11 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 0.5 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | ○ | |
| | KNUX160410L11 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 1.0 | | | | ● | | | | | | | | | | | | | | | | | | | | |
| | KNUX160405L12 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 0.5 | | | | ● | | | | | | | | | | | | | | | | | | | | |
| | KNUX160410L12 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 1.0 | | ○ | | ● | | | | | | | | | | | | | | | | | | | | |
| | KNUX160405R11 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 0.5 | | | ● | ● | | ○ | | | | | | | | | | | | | | | | | ○ | |
| | KNUX160410R11 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 1.0 | | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| | KNUX160405R12 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 0.5 | | | | ● | | | | | | | | | | | | | | | | | | | | |
| | KNUX160410R12 | 16 | 16.15 | 9.525 | 4.76 | 2.2 | 0.5 | | ○ | | ● | | | | | | | | | | | | | | | | | | | | |

Chipbreaker / Spanbrecher

| | |
|---|---|
| **11** | Finishing - Medium<br>Schlichten - Mittlere Bearbeitung |
| **12** | Medium - Roughing<br>Mittlere Bearbeitung - Schruppen |

Tool holder / Klemmhalter







Page/Seite A234 A234

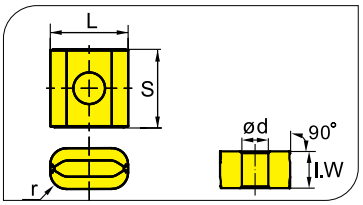
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

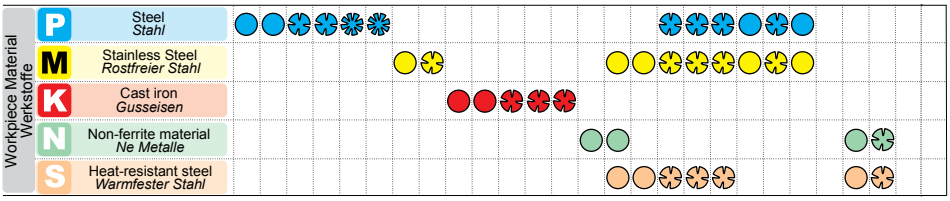
## Railway Wheel Machining/ Radsatz Bearbeitung

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | l.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
|  Railway Wheel Machining/ Radsatz Bearb. | **175.32-191940-22** | 19.05 | 10 | 19.05 | 6.35 | 4.0 | | | | ● | | | | | | | | | | | | | | | | | | | |
| | **175.32-191940-227** | 19.05 | 10 | 19.05 | 7.2 | 4.0 | | | | ○ | | | | | | | | | | | | | | | | | | | |
|  Railway Wheel Machining/ Radsatz Bearb. | **175.32-191940-24** | 19.05 | 10 | 19.05 | 6.35 | 4.0 | | | | ● | | | | | | | | | | | | | | | | | | | |
| | **175.32-301940-24** | 30 | 10 | 19.05 | 6.35 | 4.0 | | ○ | | ● | | | | | | | | | | | | | | | | | | | |
|  Railway Wheel Machining/ Radsatz Bearb. | **175.32-191940-25** | 19.05 | 10 | 19.05 | 6.35 | 4.0 | | | | ○ | | | | | | | | | | | | | | | | | | | |
|  Railway Wheel Machining/ Radsatz Bearb. | **175.32-191940-28** | 19.05 | 10 | 19.05 | 6.35 | 4.0 | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **175.32-301940-31** | 30 | 10 | 19.05 | 6.35 | 4.0 | | | ○ | | | | | | | | | | | | | | | | | | | | |

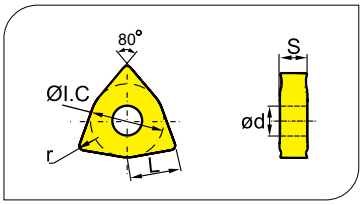
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

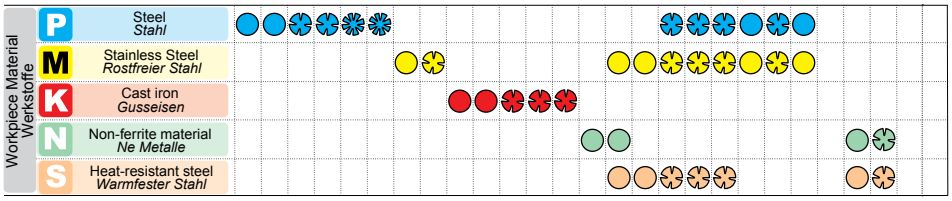
A

General Turning
Allgemeine Drehbearbeitung

## TN** Negative Insert/ Negative WSP

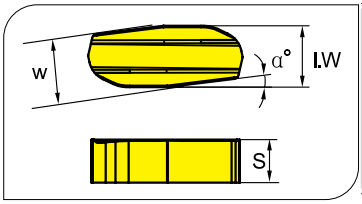
Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

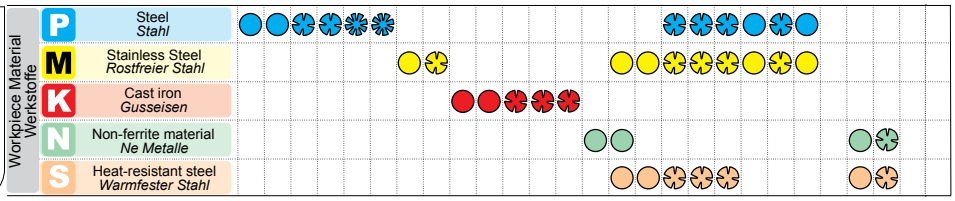



| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | CVD Coating CVD Beschicht. YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | PVD Coating PVD Beschicht. YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | Cermet unbeschichtet YNG151 | YNT251 | Cermet Coated beschicht. Cerm. YNG151C | Uncoated Carbide unbeschicht. Hartmetall YD101 | YD201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Basic**  | **TNMX1106-2** | 11.3 | 15.875 | 6.35 | 6.35 | 1.6 | | | | ○ | | | | | | | | | | | | | | | | | | | | |
| | **TNMX1509-2** | 15.9 | 22.225 | 9.52 | 7.94 | 1.6 | | | | ○ | | | | ○ | | | | | | | | | | | | | | | | |

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | CVD Coating CVD Beschicht. YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | PVD Coating PVD Beschicht. YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | Cermet unbeschichtet YNG151 | YNT251 | Cermet Coated beschicht. Cerm. YNG151C | Uncoated Carbide unbeschicht. Hartmetall YD101 | YD201 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | **YNMX1812L** | 18 | 22 | 12 | 20° | | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **YNMX2518173L** | 25 | 25 | 18 | 7° | | | | ○ | | | | | | | | | | | | | | | | | | | | | |
| | **YNUX1812150L** | 18 | 18 | 12 | 15° | | | | | | | | | ○ | | | | | | | | | | | | | | | | |

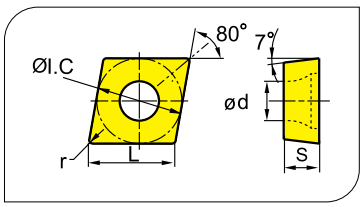
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

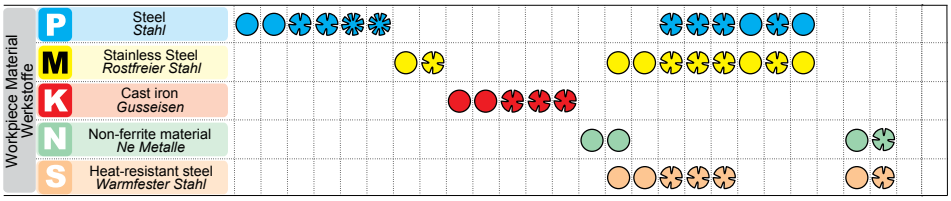
## CC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF** | **CCGT09T301R-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
|  | **CCGT09T302R-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | **CCGT09T304R-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | ● | | | | | | |
| **USF** | **CCGT09T301L-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
|  | **CCGT09T302L-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | ○ | ● | | | | | |
| Finishing Schlichten | **CCGT09T304L-USF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| **SF** | **CCGT060202-SF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | | | ● | | |
|  | **CCGT060204-SF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | ● | ● | ● | | |
| Finishing Schlichten | **CCGT09T304-SF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | ● | ○ | ● | | |

### Tool holder / Klemmhalter
















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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

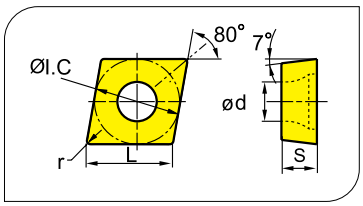
General Turning
Allgemeine Drehbearbeitung

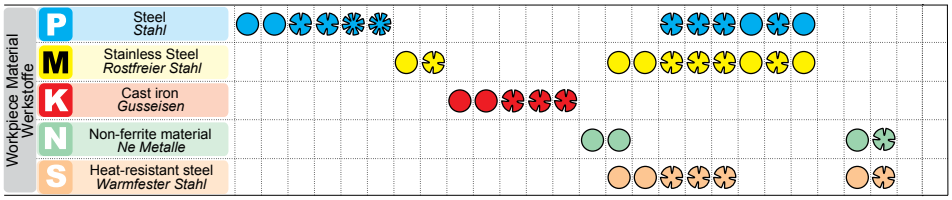
## CC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **AHF**  Finishing Schlichten | **CCMT060204-AHF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | ● | | | | | | | | | | | | | | | ● | ○ | | | ● | | | |
| | **CCMT060208-AHF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **CCMT09T304-AHF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | ● | | | | | | | | | | | | | | | ● | ○ | | | ● | | | |
| | **CCMT09T308-AHF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ● | | | | | | | | | | | | | | | ● | ○ | | | ● | | | |
| | **CCMT120404-AHF** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | ● | | | | | | | | | | | | | | | ● | ○ | | | | | | |
| | **CCMT120408-AHF** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| **HF**  Finishing Schlichten | **CCMT060202-HF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | ● | ● | ● | | | | | | | | | | | | | | ○ | ○ | | ● | | ○ |
| | **CCMT060204-HF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | ● | ● | | ○ | | | | | | ○ | | | | | | ● | ○ | | | | |
| | **CCMT060208-HF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | ○ | ● | ● | | | | | | | | | | | | | | ○ | ○ | | ● | | |
| | **CCMT09T302-HF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | ○ | ● | ● | | | | | | | | | | | | | | ● | ○ | | ○ | | |
| | **CCMT09T304-HF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | ● | ● | ● | | ○ | | | | ○ | | ● | | | | | | ● | ○ | | ○ | | |
| | **CCMT09T308-HF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | ● | ● | | ○ | | | | ○ | | ● | | | | | | ● | | | | | |
| | **CCMT120404-HF** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | ● | ● | ○ | | | | | | | | | | | | | | | | | | | |
| | **CCMT120408-HF** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | ● | ○ | | | | | | | | | | | | | | | | | | | | |
|  | **CPGT050204** | 5.6 | 5.56 | 2.38 | 2.8 | 0.4 | | | | ○ | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**SCACR/L** Kr:90°


**SCLCR/L** Kr:95°


**SCLCR/L** Kr:95°


**SCFCR** Kr:90°


**SCLCR** Kr:95°

Page/Seite A216 A217 A254 A269 A270

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

A

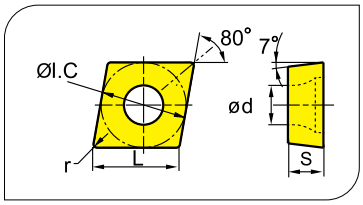
General Turning
Allgemeine Drehbearbeitung

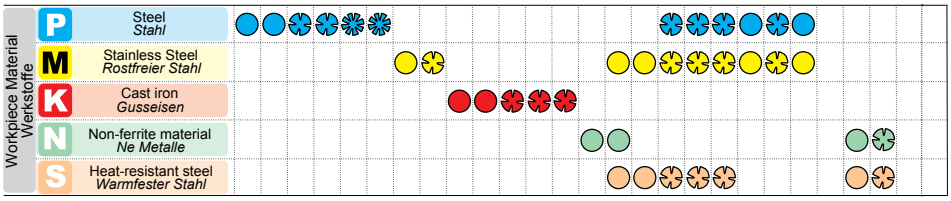
## CC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| EF | CCMT060202-EF | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | ○ | | | | | | | | | | | ○ | ● | | | | | |
| | CCMT060204-EF | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | CCMT09T302-EF | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | ○ | | | | | | | | | | | ● | ○ | | | | | |
| | CCMT09T304-EF | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | | | | | | | | | ○ | | ● | ○ | | | | | |
| | CCMT09T308-EF | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | | | | | | | | | ○ | | ● | | | | | | |
| | CCMT120404-EF | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| | CCMT120408-EF | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | ○ | | | | | |
| HM | CCMT060204-HM | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | ● | ● | ● | ● | | ○ | | ● | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT060208-HM | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT09T304-HM | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | ● | ● | ● | ● | | ● | | ● | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT09T308-HM | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ● | ● | ● | | ● | | ● | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT120404-HM | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | ● | ● | ● | ● | | ● | | | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT120408-HM | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | ● | ● | ● | ● | | ● | | | | ● | | ● | | | | | | | ● | | | | | |
| | CCMT120412-HM | 12.9 | 12.7 | 4.76 | 5.56 | 1.2 | | ● | ○ | ● | | ● | | | | ○ | | | | | | | | | | | | | | |
| EM | CCMT060204-EM | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | CCMT060208-EM | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | ● | ○ | | | | | | | | | | ● | ○ | | | | | |
| | CCMT09T304-EM | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | CCMT09T308-EM | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | CCMT120404-EM | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | | |
| | CCMT120408-EM | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | | |
| | CCMT120412-EM | 12.9 | 12.7 | 4.76 | 5.56 | 1.2 | | | | | | | | ○ | | | | | | | | | | | | | | | | |

Finishing
Schlichten

Medium Cut/
Mittl. Bearb.

Medium Cut/
Mittl. Bearb.

### Tool holder / Klemmhalter

| SCACR/L Kr:90° | SCLCR/L Kr:95° | SCLCR/L Kr:95° | SCFCR Kr:90° | SCLCR Kr:95° |
|---|---|---|---|---|
| Page/Seite A216 | A217 | A254 | A269 | A270 |

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

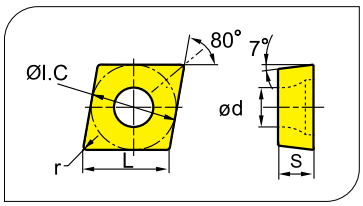
General Turning
Allgemeine Drehbearbeitung

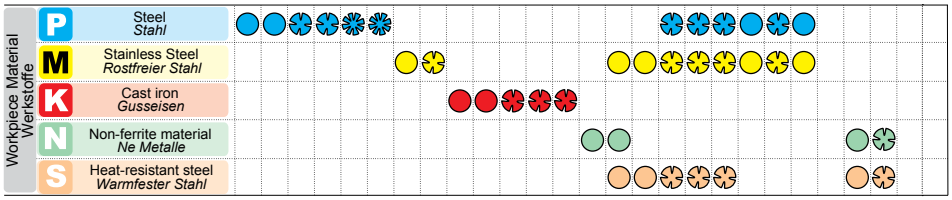
## CC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **HR** | **CCMT060204-HR** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | ● | ● | ○ | | | | | | | | | | | | | | | | | ○ | |
| | **CCMT060208-HR** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ○ | ● | | | | | | | | ● | | | | | | | | | | | |
| | **CCMT09T304-HR** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | ● | ● | ● | ○ | | | | | | | ● | | | | | | | | | | | |
| | **CCMT09T308-HR** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ● | ● | ● | | ● | | | ● | ● | | ● | | | | | | | | | | | ○ |
| Roughing/ Schruppen | **CCMT120408-HR** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | ● | ● | ● | ○ | | | | ○ | ● | | ● | | | | | | | | | | | |
| | **CCMT120412-HR** | 12.9 | 12.7 | 4.76 | 5.56 | 1.2 | | ● | ● | ● | | | | | | ○ | | ○ | | | | | | | | | | | |
| **TC** | **CCMT060204-TC** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | ● | | | | | | | | | | | | |
| | **CCMT09T304-TC** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | ● | | | | | | | | | | | | |
| | **CCMT09T308-TC** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | ● | | | | | | | | | | | | |
| Medium Cut/ Mittl. Bearb. | **CCMT120404-TC** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | | | | | ● | | | | | | | | | | | | |
| | **CCMT120408-TC** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | ● | | | | | | | | | | | | |
| **LC** | **CCGX060202-LC** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CCGX060204-LC** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CCGX09T302-LC** | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CCGX09T304-LC** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CCGX09T308-LC** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| Aluminium Machining/ Aluminium bearbeitung | **CCGX120404-LC** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **CCGX120408-LC** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| **LH** | **CCGX060202-LH** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| | **CCGX060204-LH** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| | **CCGX060208-LH** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **CCGX09T302-LH** | 9.7 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| | **CCGX09T304-LH** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| | **CCGX09T308-LH** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| Aluminium Machining/ Aluminium bearbeitung | **CCGX120402-LH** | 12.9 | 12.7 | 4.76 | 5.56 | 0.2 | | | | | | | | | | | | | | | ○ | | | | | | | ○ | |
| | **CCGX120404-LH** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| | **CCGX120408-LH** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | | | | | ● | | | | ○ | | | ● | |
| | **CCGX120412-LH** | 12.9 | 12.7 | 4.76 | 5.56 | 1.2 | | | | | | | | | | | | | | | ○ | | | | | | | ● | |
| **Basic** | **CCMW060204** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ○ | |
| | **CCMW09T304** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | ○ |
| | **CCMW09T308** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | | | ○ |
| | **CCMW120404** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **CCMW120408** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | | ○ | | | | | | | | | | | ○ |

### Tool holder / Klemmhalter


**SCACR/L**
Kr:90°


**SCLCR/L**
Kr:95°


**SCLCR/L**
Kr:95°


**SCFCR**
Kr:90°


**SCLCR**
Kr:95°


Page/Seite A216 A217 A254 A269 A270

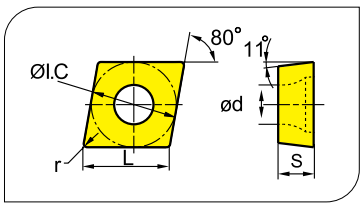

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

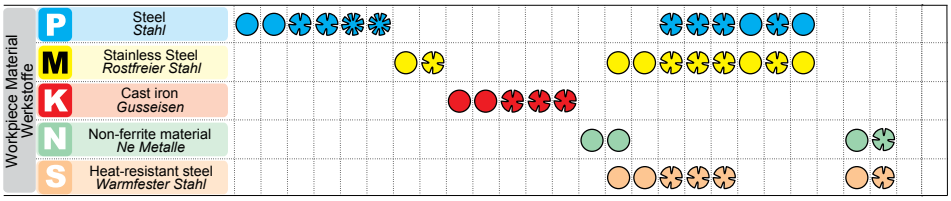
## CP** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF** Finishing Schlichten | **CPGT060202-SF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | ○ | | ● | | |
| | **CPGT060204-SF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | ● | | ● | | |
| | **CPGT09T304-SF** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | ● | | ● | | |
| **Flat Glatt** | **CPGW060204** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ● | |
| **HF** Finishing Schlichten | **CPMT060204-HF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | | | | | | | | | | ○ | | | | ○ | | ○ | | | | | |
| | **CPMT060208-HF** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | ○ | | | | | | ● | | | | | |
| **HM** Medium Cut Mittl. Bearb. | **CPMT09T304-HM** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | | | ○ | | | | | | | ● | | | | | | ○ | | ● | | | | | |
| | **CPMT09T308-HM** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | | | ○ | ● | | | | | | ● | | | | | | | | ● | | | | | |

### Tool holder / Klemmhalter




Page/Seite A265

Insert code key
ISO Code
A62-A63

Grade selection reference
Sortenauswahl
A17/A44-A59

chip breaker selection reference
Spanbrecherauswahl
A33-A43

Recommended cutting parameters
Empfohlene Schnittparameter
A279-A281

A

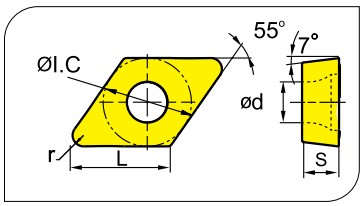
General Turning
Allgemeine Drehbearbeitung

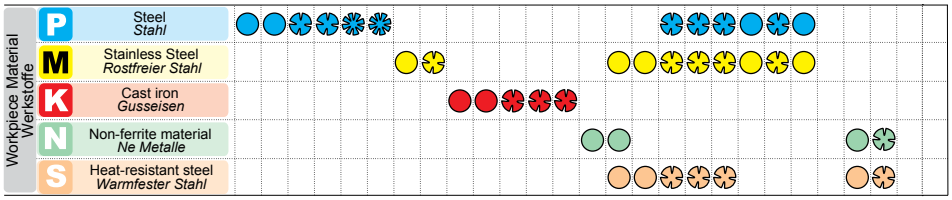
## DC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | l.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF** | **DCGT0702005R-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.05 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **DCGT070201R-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **DCGT070202R-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | **DCGT11T301R-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DCGT11T302R-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| **USF** | **DCGT0702005L-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.05 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DCGT070201L-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **DCGT070202L-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | **DCGT11T301L-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DCGT11T302L-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| **SF** | **DCGT070202-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | ● | ○ | ○ | | |
| | **DCGT070204-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | ○ | | ● | | |
| | **DCGT070208-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| Finishing Schlichten | **DCGT11T302-SF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | ○ | | | | ○ | ● | ● | | |
| | **DCGT11T304-SF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | ● | ○ | ● | | |
| | **DCGT11T308-SF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | ● | | ● | | |
| **AHF** | **DCMT070204-AHF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | ● | | | | | | | | | | | | | | | | ● | ○ | | | ● | | |
| | **DCMT11T302-AHF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | ● | | | | | | | | | | | | | | | | ● | ○ | | | ● | | |
| | **DCMT11T304-AHF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | ● | | | | | | | | | | | | | | | | ● | ○ | | | ● | | |
| Finishing Schlichten | **DCMT11T308-AHF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | ● | | | | | | | | | | | | | | | | ● | | | | | | |

### Tool holder / Klemmhalter


**SDACR/L**
Kr:90°


**SDJCR/L**
Kr:93°


**SDNCN**
Kr:45°


**SDQCR/L**
Kr:107°30'


**SDUCR/L**
Kr:93°


**SDZCR/L**
Kr:85°

Page/Seit A218 A219 A220 A256 A257 A258

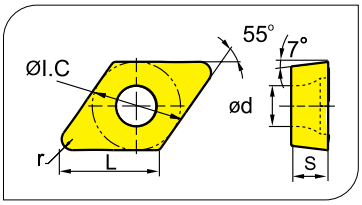
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

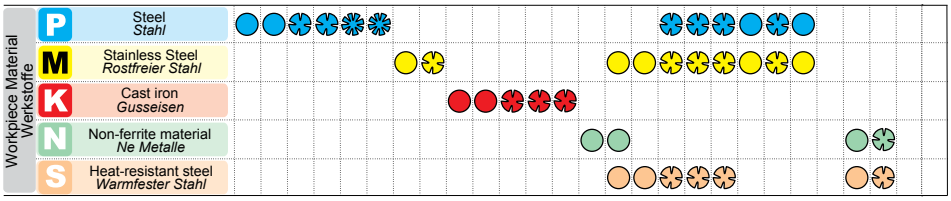
## DC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| HF | DCMT070202-HF | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | ○ | ● | ● | | | | | | | | | | | | | | ● | ○ | | ○ | | |
| | DCMT070204-HF | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | ● | ● | | ○ | | |
| | DCMT070208-HF | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | DCMT11T302-HF | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | ○ | ● | ● | | | | | | | | | | | | | ○ | ● | ● | | ○ | | |
| Finishing Schlichten | DCMT11T304-HF | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | ● | ● | ● | | ○ | | | | ○ | | ● | | | | | | ● | ● | | ● | | |
| | DCMT11T308-HF | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | ● | ● | | | | | | | | | | | | | | ● | ○ | | ○ | | |
| EF | DCMT070202-EF | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | ○ | | | | | | | | | | ○ | ● | | | | | |
| | DCMT070204-EF | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | DCMT11T302-EF | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | |
| Finishing Schlichten | DCMT11T304-EF | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | | | | | | | | | | ● | ● | | | | | |
| | DCMT11T308-EF | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| HM | DCMT070204-HM | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | ● | ● | | | | |
| | DCMT070208-HM | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | ● | | | | | |
| | DCMT11T304-HM | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | ● | | | | | |
| Medium Cut/ Mittl. Bearb. | DCMT11T308-HM | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | ● | | | | | |
| | DCMT11T312-HM | 11.6 | 9.525 | 3.97 | 4.4 | 1.2 | | ○ | ○ | ● | | ○ | | | | ○ | | ○ | | | | | | | | | | | |
| EM | DCMT070204-EM | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |
| | DCMT070208-EM | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | ● | ○ | | | | | | | | | | ● | | | | | |
| | DCMT11T304-EM | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |
| Medium Cut/ Mittl. Bearb. | DCMT11T308-EM | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | ○ | | | | |

### Tool holder / Klemmhalter


**SDACR/L**
Kr:90°
Page/Seite A218


**SDJCR/L**
Kr:93°
Page/Seite A219


**SDNCN**
Kr:45°
Page/Seite A220


**SDQCR/L**
Kr:107°30'
Page/Seite A256


**SDUCR/L**
Kr:93°
Page/Seite A257


**SDZCR/L**
Kr:85°
Page/Seite A258

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

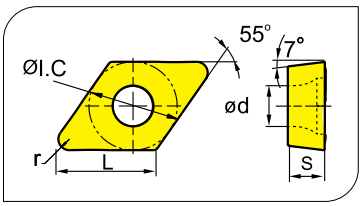
General Turning
Allgemeine Drehbearbeitung

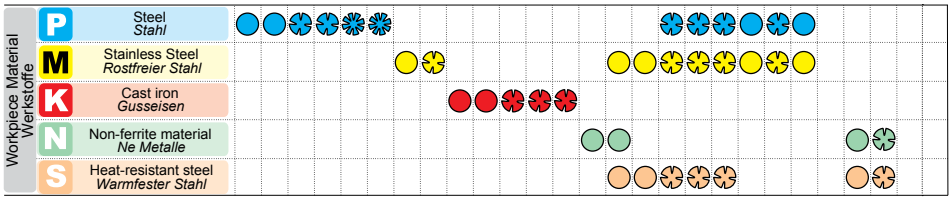
## DC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **HR** | **DCMT11T304-HR** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | ○ | ● | ○ | | ○ | | | | ● | | ● | | | | | | | | | | | ○ |
| | **DCMT11T308-HR** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | ● | ● | | ○ | | | ○ | ● | | ● | | | | | | | | | | | ○ |
| | **DCMT11T312-HR** | 11.6 | 9.525 | 3.97 | 4.4 | 1.2 | | ○ | ● | ○ | | | | | | ○ | | | | | | | | | | | | | |
| Roughing/ Schruppen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **LC** | **DCGX070201-LC** | 7.8 | 6.35 | 2.38 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **DCGX070202-LC** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **DCGX070204-LC** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **DCGX11T302-LC** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **DCGX11T304-LC** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **DCGX11T308-LC** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| Aluminium Machining/ Aluminium bearbeitung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **LH** | **DCGX070202-LH** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | ● | | | | ○ | | | | ● | |
| | **DCGX070204-LH** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | ● | | | | ○ | | | | ● | |
| | **DCGX070208-LH** | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | **DCGX11T302-LH** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | ● | | | | ● | | | | ● | |
| | **DCGX11T304-LH** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | ● | | | | ● | | | | ● | |
| | **DCGX11T308-LH** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | ● | | | | ○ | | | | ● | |
| Aluminium Machining/ Aluminium bearbeitung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Flat Glatt** | **DCMW070204** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **DCMW11T304** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | ○ | | | | | | | | | | | | | |
| | **DCMW11T308** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | ○ | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**SDACR/L**
Kr:90°


**SDJCR/L**
Kr:93°


**SDNCN**
Kr:45°


**SDQCR/L**
Kr:107°30'


**SDUCR/L**
Kr:93°


**SDZCR/L**
Kr:85°

Page/Seite A218 A219 A220 A256 A257 A258

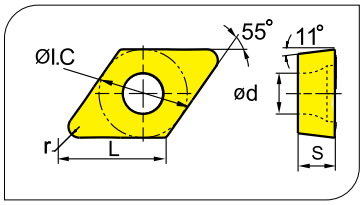
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

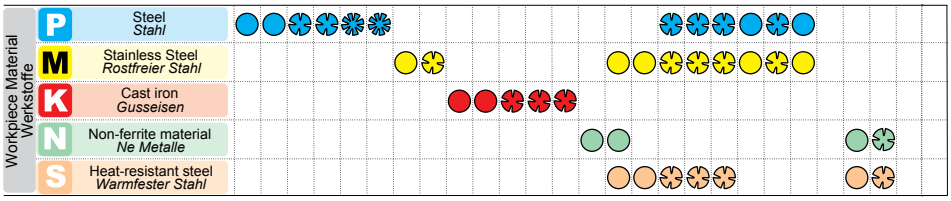
## DP** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| insert shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF** Finishing Schlichten | **DPGT0702005R-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.05 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DPGT070201R-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DPGT11T0301R-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| **USF** Finishing Schlichten | **DPGT0702005L-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.05 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DPGT070201L-USF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **DPGT11T301L-USF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| **SF** Finishing Schlichten | **DPGT070202-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | ○ | ● | | | |
| | **DPGT070204-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | ● | ● | | | |
| | **DPGT070208-SF** | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | ○ | ● | | | |
| | **DPGT11T304-SF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | ○ | ○ | | | |
| | **DPGT11T308-SF** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | ○ | ○ | | | |
| **Basic** | **DPMW11T304** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **DPMW11T308** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | ○ | | |

### Tool holder / Klemmhalter

**SDQPR/L**
Kr:107°30'



**SDUPR/L**
Kr:93°



Page/Seite A273 A274

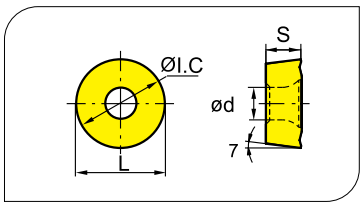
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

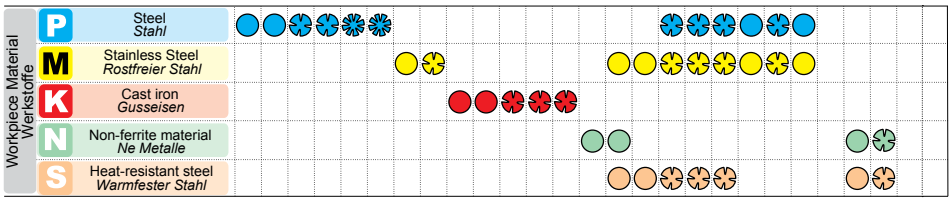
A

General Turning
Allgemeine Drehbearbeitung

## RC** Positive Insert/ Positive WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen



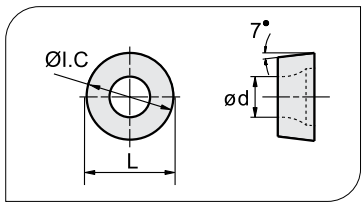



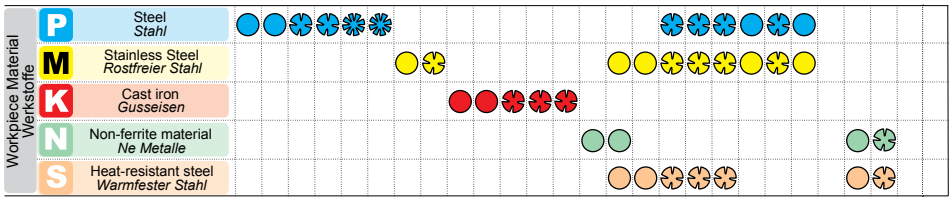

| Insert Shape/ Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **Basic** | **RCGT1204MO** | 12 | 12 | 4.76 | 4.4 | \ | | | | ● | | | | | | | | | | | | | | | | | | | |
| | **RCGT190600-2** | 19.05 | 19.05 | 6.35 | 6.55 | \ | | | | | | | ● | | | | | | | | | | | | | | | | |
| | **RCMT0803MO** | 8.0 | 8.0 | 3.18 | 3.36 | \ | | | ● | | | | | | | ● | | | | | | | | | | | | | |
| | **RCMT10T3MO** | 10 | 10 | 3.97 | 3.6 | \ | | | ○ | ● | | | | | | ● | | | | | | | | ○ | | | | | |
| | **RCMT1204MO** | 12 | 12 | 4.76 | 4.4 | \ | | ● | ● | ● | | | | | | ● | | ● | | | | | | ○ | | | | | |
| | **RCMT1606MO** | 16 | 16 | 6.35 | 5.5 | \ | | ● | ● | ● | | ○ | | ○ | ○ | ● | | | | | | | | | | | | | |
| | **RCMT2006MO** | 20 | 20 | 6.35 | 6.5 | \ | | ● | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **RCMT2507MO** | 25 | 25 | 7.94 | 7.7 | \ | | ○ | ● | ● | | | | | | | | | | | | | | | | | | | |

Medium cut.
Mittl. Bearb.

## RC** positive insert

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LH** | **RCGX0803MO-LH** | 8.0 | 8.0 | 3.18 | 3.36 | \ | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **RCGX1204MO-LH** | 12.0 | 12.0 | 4.76 | 4.4 | \ | | | | | | | | | | | | | | | | | | | | | | ● | |

Aluminium Machining/ Aluminium bearbeitung

### Tool holder / Klemmhalter







Page/Seite A232 A233

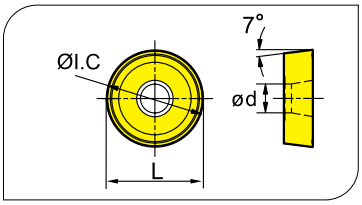
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

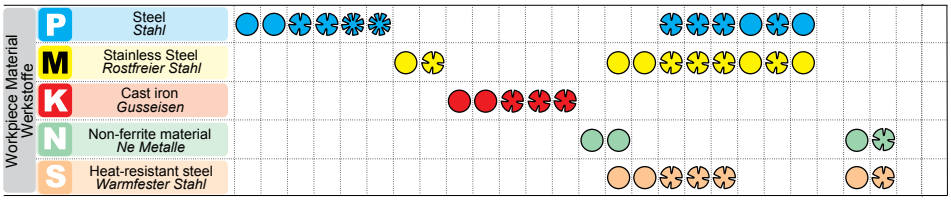
## RC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **Basic**  Light roughing Leicht Schruppen | **RCMX0803MO** | 8.0 | 8.0 | 3.18 | 3.36 | \ | | | ● | ● | | | | | | | | | | | | | ○ | | | | | |
| | **RCMX1003MO** | 10 | 10 | 3.18 | 3.6 | \ | | | ○ | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **RCMX1204MO** | 12 | 12 | 4.76 | 4.4 | \ | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **RCMX1606MO** | 16 | 16 | 6.35 | 5.5 | \ | | ○ | ● | ● | | ○ | | ○ | | | | | | | | | | ○ | | | | | |
| | **RCMX2006MO** | 20 | 20 | 6.35 | 6.5 | \ | | ● | ● | ● | | ○ | | | | | | ● | | | | | | | | | | ○ | |
| | **RCMX2507MO** | 25 | 25 | 7.94 | 7.2 | \ | | ○ | ● | | | ○ | | | | | | | | | | | | | | | | | |
| | **RCMX2507MO-1** | 25 | 25 | 7.94 | 7.2 | \ | | ○ | | ○ | | | | | | | | | | | | | | | | | | | |
| | **RCMX3209MO** | 32 | 32 | 9.52 | 10.2 | \ | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **RCMX3209MO-PV** | 32 | 32 | 9.52 | 10.0 | \ | | ○ | ● | ● | | | | | | | | | | | | | | | | | | | |
| | **RCMX3209MO-A** | 32 | 32 | 9.52 | 10.2 | \ | ○ | ○ | ○ | | | | | | | | | | | | | | | | | | | | |

Insert code key
ISO Code
A62-A63

Grade selection reference
Sortenauswahl
A17/A44-A59

chip breaker selection reference
Spanbrecherauswahl
A33-A43

Recommended cutting parameters
Empfohlene Schnittparameter
A279-A281

A

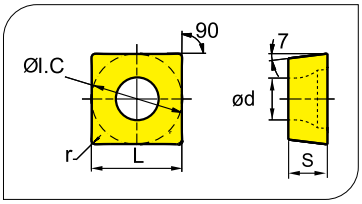
General Turning
Allgemeine Drehbearbeitung

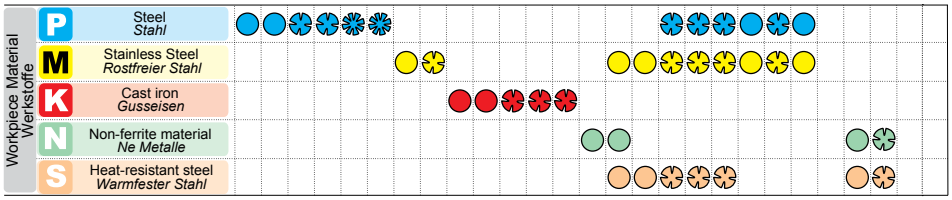
## SC** Positive Insert/Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Verm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **AHF** | **SCMT09T304-AHF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **SCMT09T308-AHF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **HF** | **SCMT09T302-HF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.2 | | | | ● | | | | | | | | | | | | | | | | | | | |
| | **SCMT09T304-HF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | ● | ● | | | | | | | | | | | | | | ● | | | | | |
| | **SCMT09T308-HF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | ● | ○ | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **EF** | **SCMT09T302-EF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | ○ | ● | | | | | |
| | **SCMT09T304-EF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | ● | | | | | | |
| | **SCMT09T308-EF** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | ● | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **HM** | **SCMT09T304-HM** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | ● | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | | | | | | |
| | **SCMT09T308-HM** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ● | ● | ● | | ● | | | | ● | | ● | | | | | | ● | | | | | ○ |
| | **SCMT120404-HM** | 12.7 | 12.7 | 4.76 | 5.56 | 0.4 | | ● | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **SCMT120408-HM** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | ○ | ● | ● | | ● | | | | ● | | ● | | | | | | ○ | | | | | |
| Medium Cut/ Mittl. Bearb. | **SCMT120412-HM** | 12.7 | 12.7 | 4.76 | 5.56 | 1.2 | | | ● | ● | | | | | | | | | | | | | | | | | | | |
| **EM** | **SCMT09T304-EM** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | |
| | **SCMT09T308-EM** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | |
| | **SCMT120404-EM** | 12.7 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | ○ | ○ | | | | | | | | | | ● | | | | | |
| | **SCMT120408-EM** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | ● | ● | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | **SCMT120412-EM** | 12.7 | 12.7 | 4.76 | 5.56 | 1.2 | | | | | | | | ○ | | | | | | | | | | ● | | | | | |

### Tool holder / Klemmhalter


**SSBCR/L**
Kr:75°
Page/Seite A226


**SSDCN**
Kr:45°
A226


**SSKCR/L**
Kr:75°
A227


**SSSCR/L**
Kr:45°
A227


**SSKCR/L**
Kr:75°
A259

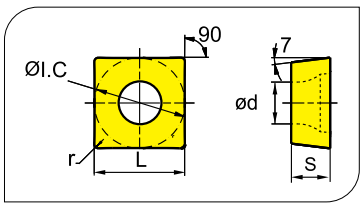
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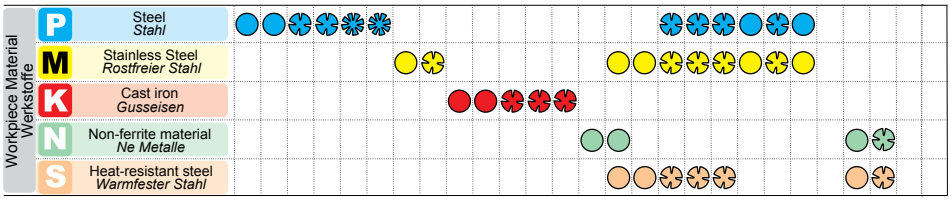
## SC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| insert shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LC**  Aluminium Machining/ Aluminium bearbeitung | **SCGX09T304-LC** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **SCGX09T308-LC** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **SCGX120408-LC** | 12.7 | 12.7 | 4.76 | 5.5 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| **LH**  Aluminium Machining/ Aluminium bearbeitung | **SCGX09T302-LH** | 9.525 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | **SCGX09T304-LH** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | **SCGX09T308-LH** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **SCGX120404-LH** | 12.7 | 12.7 | 4.76 | 5.56 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ○ | |
| | **SCGX120408-LH** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| **HR**  Roughing/ Schruppen | **SCMT09T304-HR** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | ○ | ● | ● | | ○ | | | | | | ○ | | | | | | ○ | | | | | |
| | **SCMT09T308-HR** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | ● | ● | | ● | | | | ● | | ● | | | | | | | | | | | |
| | **SCMT09T312-HR** | 9.525 | 9.525 | 3.97 | 4.4 | 1.2 | | | ● | | | | | | | | | | | | | | | | | | | | |
| | **SCMT120404-HR** | 12.7 | 12.7 | 4.76 | 5.56 | 0.4 | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **SCMT120408-HR** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | ● | ● | ● | | ● | | | | ○ | ● | ● | | | | | | | | | | | |
| | **SCMT120412-HR** | 12.7 | 12.7 | 4.76 | 5.56 | 1.2 | | ● | ● | ● | | | | | | ○ | ● | ○ | | | | | | | | | | | |
| **Basic**  | **SCMT09T304** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | ○ | | | | | | | | | | | | | | | | | | | |
| | **SCMT120404** | 12.7 | 12.7 | 4.76 | 5.56 | 0.4 | | | | ○ | | | | | | | | | | | | | | | | | | | |
| | **SCMT120408** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | | | ○ | | | | | | | | ○ | | | | | | | | | | | |
| **Flat Glatt**  | **SCMW060204** | 6.35 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **SCMW09T304** | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **SCMW09T308** | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | | | |
| | **SCMW120408** | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**SSBCR/L**
Kr:75°
Page/Seite A226


**SSDCN**
Kr:45°
Page/Seite A226


**SSKCR/L**
Kr:75°
Page/Seite A227


**SSSCR/L**
Kr:45°
Page/Seite A227


**SSKCR/L**
Kr:75°
Page/Seite A259

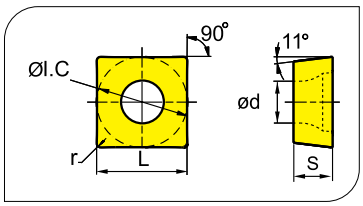
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

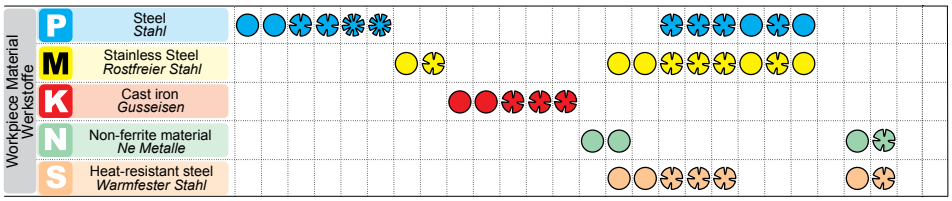
A

General Turning
Allgemeine Drehbearbeitung

## SP** Positive Insert/ Positive WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

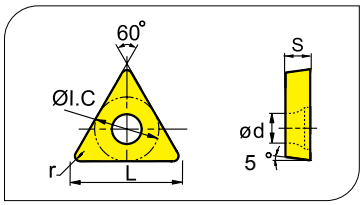


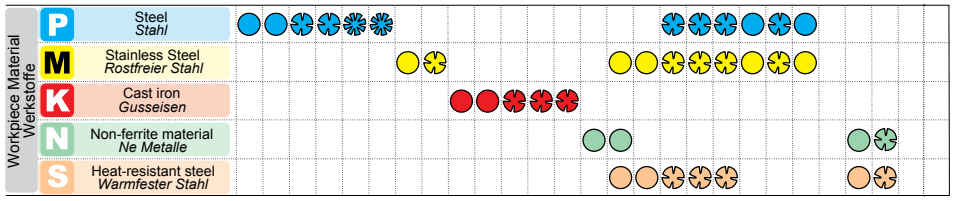




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| Flat Glatt | SPMW09T304 | 9.525 | 9.525 | 3.97 | 4.4 | 0.4 | | | | ○ | | | | | | | ○ | | | | | | | | | | | |
| | SPMW09T308 | 9.525 | 9.525 | 3.97 | 4.4 | 0.8 | | | | ○ | | | | | | | ○ | | | | | | | | | | | |
| | SPMW120408 | 12.7 | 12.7 | 4.76 | 5.56 | 0.8 | | | | | | | | | | | ○ | | | | | | | | | | | |

## TB** Positive Insert/ Positive WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| | TBGH060102L | 6.4 | 3.97 | 1.59 | 2.2 | 0.2 | | | | | | | | | | | | | | ● | | | | | ● | | | |
| | TBGH060104L | 6.4 | 3.97 | 1.59 | 2.2 | 0.4 | | | | | | | | | | | | | | ○ | | | | | ● | | | |

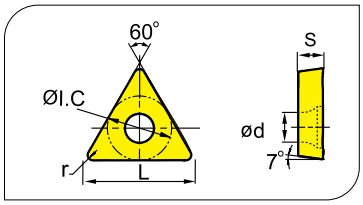
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

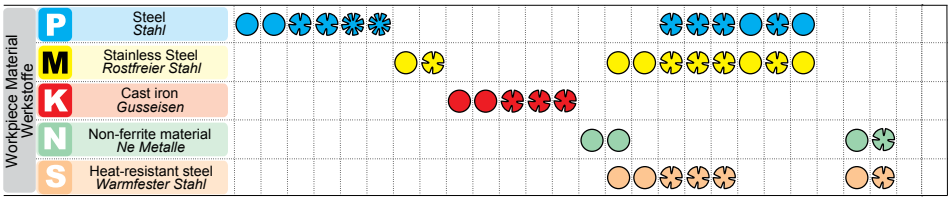
## TC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF** | **TCGT110301R-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
|  | **TCGT110302R-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **USF** | **TCGT110301L-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
|  | **TCGT110302L-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **SF** | **TCGT06T102-SF** | 6.4 | 3.97 | 1.98 | 2.2 | 0.2 | | | | | | | | | | | | | | | | | | | ○ | | ○ | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **TCGT090202-SF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | | | | | | | ○ | | ○ | | |
|  | **TCGT090204-SF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | | | | | | | ● | | ● | | |
| | **TCGT090208-SF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | **TCGT110302-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | | | ● | | |
| Finishing Schlichten | **TCGT110304-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | ● | | ● | | |
| | **TCGT110308-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | | | ● | | |

### Tool holder / Klemmhalter

| **STACR/L** Kr:90° | **STFCR/L** Kr:90° | **STGCR/L** Kr:90° | **STTCR/L** Kr:60° | **STFCR/L** Kr:90° |
|---|---|---|---|---|
|  |  |  |  |  |
| Page/Seite A228 | A228 | A229 | A230 | A260 |

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

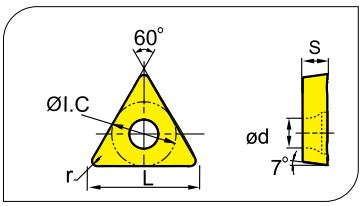
General Turning
Allgemeine Drehbearbeitung

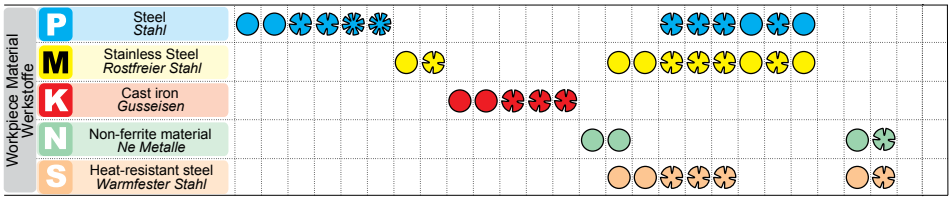
## TC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **AHF**  Finishing Schlichten | **TCMT110204-AHF** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | | | | | | | | | | | | | | | ● | | | | | | | |
| | **TCMT110208-AHF** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | | | | | | | | | | | | | | | ● | | | | | | | |
| | **TCMT16T304-AHF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **TCMT16T308-AHF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| **HF**  Finishing Schlichten | **TCMT090202-HF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | ○ | ● | ● | | | | | | | | | | | | | | | ● | | | | |
| | **TCMT090204-HF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | ○ | ● | | | | | | | | | | | | | | | | ○ | | | | |
| | **TCMT090208-HF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | | ○ | ○ | ● | | | | | | | | | | | | | | | ○ | | | | |
| | **TCMT110202-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | | | ○ | ● | | | | | | | | | | | | | | ● | | | | | |
| | **TCMT110204-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | ● | ● | | | | | | | | ● | | | | | | | ○ | | ○ | | |
| | **TCMT110208-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ● | ○ | | | | | | ● | | | | | | | | | | | | | |
| | **TCMT16T304-HF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | ● | ● | ● | | | | | | | | | | | | | | ○ | | | | | |
| | **TCMT16T308-HF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | ● | | ● | | | | | | | | | | | | | | | ○ | | | | |

### Tool holder / Klemmhalter

| **STACR/L** Kr:90° | **STFCR/L** Kr:90° | **STGCR/L** Kr:90° | **STTCR/L** Kr:60° | **STFCR/L** Kr:90° |
|---|---|---|---|---|
| Page/Seite A228 | A228 | A229 | A230 | A260 |

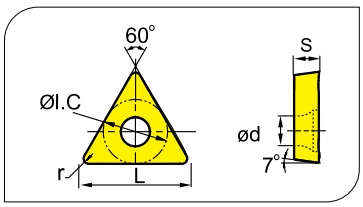
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

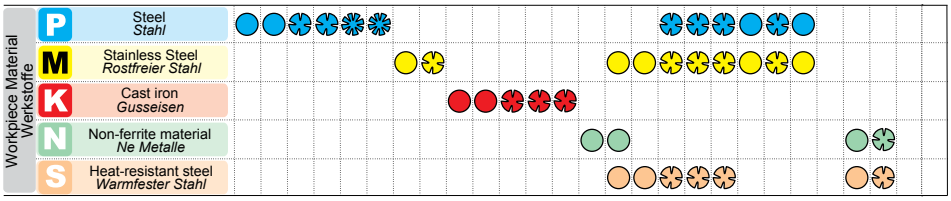
## TC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneidplattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| EF | **TCMT090202-EF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **TCMT090204-EF** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| | **TCMT110202-EF** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | ○ | ○ | | | | | |
| | **TCMT110204-EF** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| | **TCMT110208-EF** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| Finishing Schlichten | **TCMT16T304-EF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| | **TCMT16T308-EF** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| EM | **TCMT090204-EM** | 9.6 | 5.56 | 2.38 | 2.8 | 0.4 | | | | | | | ● | | | | | | | | | | ○ | ○ | | | | | |
| | **TCMT090208-EM** | 9.6 | 5.56 | 2.38 | 2.8 | 0.8 | | | | | | | ● | | | | | | | | | | | | | | | | |
| | **TCMT110204-EM** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | ○ | | | | | | | | | | ● | ○ | | | | | |
| | **TCMT110208-EM** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | ● | | | | | | | | | | ○ | ○ | | | | | |
| | **TCMT110212-EM** | 11 | 6.35 | 2.38 | 2.8 | 1.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| Medium Cut/ Mittl. Bearb. | **TCMT16T304-EM** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| | **TCMT16T308-EM** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | ● | ● | | | | | | | | | ● | | | | | | |
| | **TCMT16T312-EM** | 16.5 | 9.525 | 3.97 | 4.4 | 1.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |

### Tool holder / Klemmhalter


**STACR/L** Kr:90°


**STFCR/L** Kr:90°


**STGCR/L** Kr:90°


**STTCR/L** Kr:60°


**STFCR/L** Kr:90°

| Page/Seite | A228 | A228 | A229 | A230 | A260 |
|---|---|---|---|---|---|

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

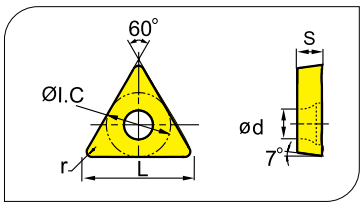
General Turning
Allgemeine Drehbearbeitung

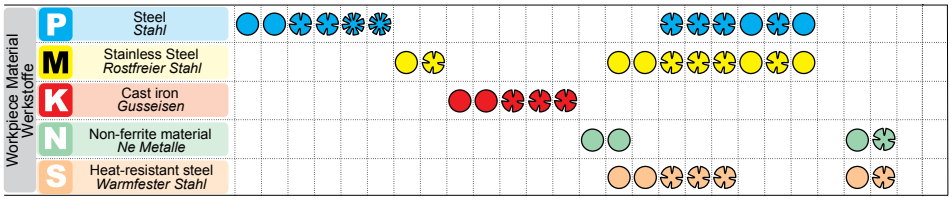
## TC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **HM** | **TCMT090204-HM** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | ● | ● | ● | | | | | | ● | | ● | | | | | | | | | | | ○ |
| | **TCMT090208-HM** | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | | ○ | ○ | ● | | | | | | | | ○ | | | | | | | | | | | |
| | **TCMT110204-HM** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | ● | ● | ● | | ○ | | | | ● | | ● | | | | | | ● | | | | | |
| | **TCMT110208-HM** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | ● | ○ | ● | | | | | | | | ● | | | | | | | | | | | |
| | **TCMT16T304-HM** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | ● | ● | ● | ● | | ● | | | | ● | | ● | | | | | | ● | | | | | |
| Medium Cut/ Mittl. Bearb. | **TCMT16T308-HM** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ● | ● | ● | | ● | | | | ● | | ● | | | | | | ● | | | | | |
| | **TCMT16T312-HM** | 16.5 | 9.525 | 3.97 | 4.4 | 1.2 | | ○ | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| **HR** | **TCMT090204-HR** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **TCMT090208-HR** | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | | | ○ | ○ | | | | | | | | ● | | | | | | | | | | | |
| | **TCMT110204-HR** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **TCMT110208-HR** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | ○ | ● | | | | | | | | | | | | | | | | | | | |
| | **TCMT16T304-HR** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | ○ | ● | ● | | | | | | ● | | | | | | | | | | | | | |
| Roughing/ Schruppen | **TCMT16T308-HR** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | ● | ● | ● | ● | | | | ● | | ● | | | | | | | | | | | |
| | **TCMT16T312-HR** | 16.5 | 9.525 | 3.97 | 4.4 | 1.2 | | ○ | | ● | | | | | ○ | ○ | | ● | | | | | | | | | | | |
| | **TCMT220408-HR** | 22 | 12.7 | 4.76 | 5.5 | 0.8 | | ● | ● | ● | | ● | | | | | | ● | | | | | | | | | | | |
| **Basic** | **TCMT220408** | 22 | 12.7 | 4.76 | 5.5 | 0.8 | | | | ● | | | | | | ○ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Flat Glatt** | **TCMW110204** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **TCMW16T304** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **TCMW16T308** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | ○ | | | | | | | ○ | | | | |
| | **TCMW16T312** | 16.5 | 9.525 | 3.97 | 4.4 | 1.2 | | | | | | | | | | | | | | | | | | | | | | | |
| | **TCMW220408** | 22 | 12.7 | 4.76 | 5.5 | 0.8 | | | | | | | | | | | | ○ | | | | | | | | | | | |

### Tool holder / Klemmhalter


**STACR/L** Kr:90°


**STFCR/L** Kr:90°


**STGCR/L** Kr:90°


**STTCR/L** Kr:60°


**STFCR/L** Kr:90°

| Page/Seite | A228 | A228 | A229 | A230 | A260 |
|---|---|---|---|---|---|

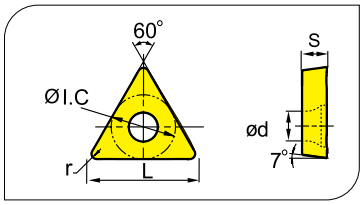
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

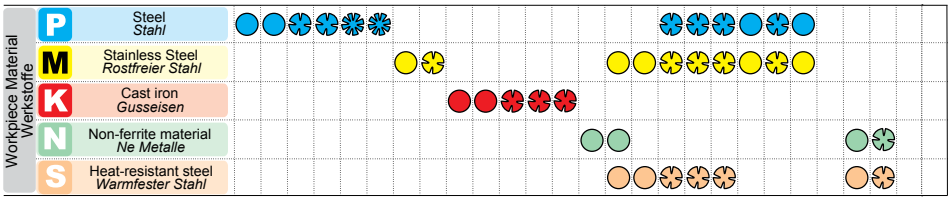
## TC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **LC** | **TCGX090202-LC** | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX090204-LC** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX110202-LC** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX110204-LC** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX110208-LC** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX16T304-LC** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | **TCGX16T308-LC** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| **LH** | **TCGX090202-LH** | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | **TCGX090204-LH** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **TCGX110202-LH** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **TCGX110204-LH** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | **TCGX110208-LH** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **TCGX16T302-LH** | 16.5 | 9.525 | 3.97 | 4.4 | 0.2 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | **TCGX16T304-LH** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | **TCGX16T308-LH** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |



Aluminium Machining/ Aluminium bearbeitung



Aluminium Machining/ Aluminium bearbeitung

### Tool holder / Klemmhalter


**STACR/L** Kr:90°


**STFCR/L** Kr:90°


**STGCR/L** Kr:90°


**STTCR/L** Kr:60°


**STFCR/L** Kr:90°

| Page/Seite | A228 | A228 | A229 | A230 | A260 |
|---|---|---|---|---|---|

Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

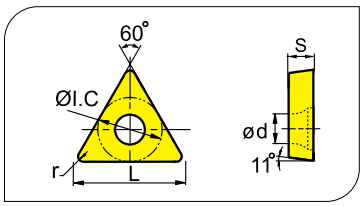
General Turning
Allgemeine Drehbearbeitung

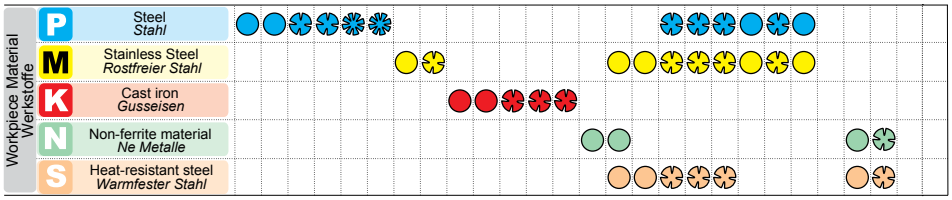
## TP** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| SF | TPGT090202-SF | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | | | | | | | | | ● | | |
| | TPGT090204-SF | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | | | ○ | | | | | ● | ● | | |
| | TPGT090208-SF | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | | | | | | | | | | | | | | | | | | | | ● | ○ | | |
| | TPGT110302-SF | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | | ● | ● | | |
| Finishing Schlichten | TPGT110304-SF | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | ○ | ● | | |
| | TPGT110308-SF | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | | | | | | | | | | | | | | | | | | | ○ | ● | | |
| | TPGH090202L | 9.6 | 5.56 | 2.38 | 2.5 | 0.2 | | | | | | | | | | | | | | | ● | | | | | ● | ● | | |
| | TPGH090204L | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | | | | | | | | | | | | | | | ● | | | | | ● | ● | | |
| | TPGH110302L | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | ● | | | | | ● | ● | | |
| Super Finishing Feist bearbeitung | TPGH110304L | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | | ● | | | | | ● | ● | | |

### Tool holder / Klemmhalter

**STUPR/L**
Kr:93°



Page/Seite A268

● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

A

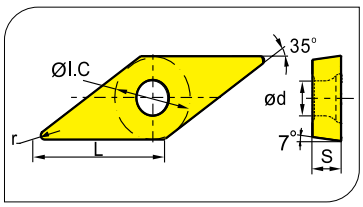


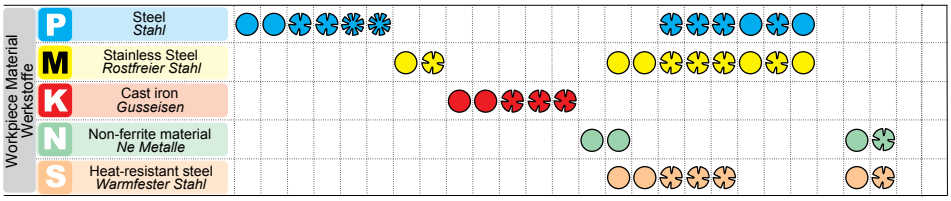
## VC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF** Finishing Schlichten | **VCGT080201R-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VCGT080202R-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VCGT110301R-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **VCGT110302R-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| **USF** Finishing Schlichten | **VCGT080201L-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VCGT080202L-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VCGT110301L-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **VCGT110302L-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | ● | | | | | |
| **SF** Finishing Schlichten | **VCGT110302-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | ● | ● | ● | | |
| | **VCGT110304-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | | ○ | | ● | | ● | ○ | ● | | |
| | **VCGT160404-SF** | 16.5 | 9.525 | 4.8 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| **HF** Finishing Schlichten | **VCGT110304-HF** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | ● | | | | | | | | | | | | | | ○ | | | | | |
| | **VCGT130304** | 13.8 | 7.94 | 3.3 | 3.4 | 0.4 | | | | ● | | | | | | | | | | | | | | | | | | | |
| **NF** Finishing Schlichten | **VCGT160408-NF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | | | ○ | ● | | | | | | | |

### Tool holder / Klemmhalter













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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

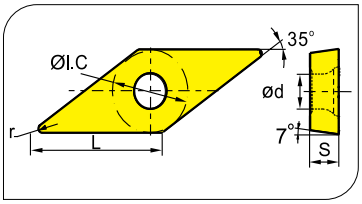
General Turning
Allgemeine Drehbearbeitung

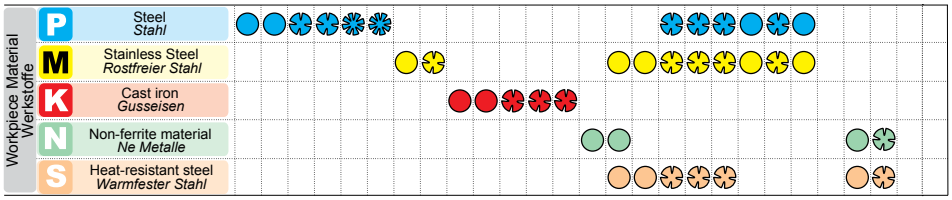
## VC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| LC | VCGX110301-LC | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | ● | | | | ● | | | | | ● | |
| | VCGX110302-LC | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | ● | | | | ○ | ○ | | | | ● | |
| | VCGX110304-LC | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | VCGX110308-LC | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | VCGX160404-LC | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | VCGX160408-LC | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | ● | | | | | | | | | ● | |
| | VCGX160412-LC | 16.6 | 9.525 | 4.76 | 4.4 | 1.2 | | | | | | | | | | | | | ○ | | | | | | | | | ● | |
| | VCGX220530-LC | 22 | 12.7 | 5.56 | 5.5 | 3.0 | | | | | | | | | | | | | ● | | | | | | | | | ● | ● |
| LH | VCGX110204-LH | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | | ● | |
| | VCGX110301-LH | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | ● | ● |
| | VCGX110302-LH | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | ● | | | | ● | | | | ● | ● |
| | VCGX110304-LH | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | ● | | | | ○ | | | | ● | ● |
| | VCGX110308-LH | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | VCGX160402-LH | 16.6 | 9.525 | 4.76 | 4.4 | 0.2 | | | | | | | | | | | | | | ● | | | | ● | | | | ● | |
| | VCGX160404-LH | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | | | | | | | | ● | | | | ● | | | | ● | |
| | VCGX160408-LH | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | | ● | | | | | | | | ● | |
| | VCGX160412-LH | 16.6 | 9.525 | 4.76 | 4.4 | 1.2 | | | | | | | | | | | | | | ○ | | | | | | | | ● | |
| | VCGX220530-LH | 22 | 12.7 | 5.56 | 5.5 | 3.0 | | | | | | | | | | | | | | ○ | | | | | | | | ● | ○ |

LC



Aluminium Machining/ Aluminium bearbeitung

LH



Aluminium bearbeitung

### Tool holder / Klemmhalter













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● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

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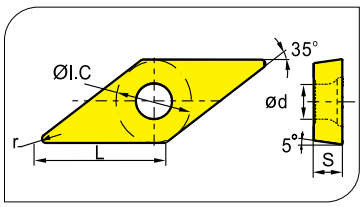
General Turning
Allgemeine Drehbearbeitung

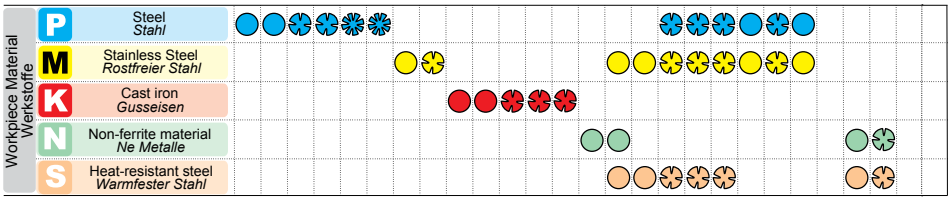
## VB** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **SF** | **VBGT110302-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | | | | ● | ● | | |
| | **VBGT110304-SF** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | | | | | | | | | | | | | | | ● | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **EF** | **VBMT110302-EF** | 11 | 6.35 | 3.18 | 2.8 | 0.2 | | | | | | | | | | | | | | | | | ● | ○ | | | | | |
| | **VBMT110304-EF** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | ● | | | | | | | | | | ● | ○ | | | | | |
| | **VBMT110308-EF** | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | | | | | | ● | | | | | | | | | | ○ | ● | | | | | |
| | **VBMT160404-EF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| Finishing Schlichten | **VBMT160408-EF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | ● | | | | | | | | | | ● | | | | | | |
| **AHF** | **VBMT160404-AHF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| | **VBMT160408-AHF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | ● | | | | | | | | | | | | | | | ● | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **HF** | **VBMT110202-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | | | | ● | | | | | | | | | | | | | | ● | | | | | |
| | **VBMT110204-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | | | | ● | | | | | | | | | | | | | | ● | ● | | ● | | |
| Finishing Schlichten | **VBMT110208-HF** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | | | | ● | | | | | | | | | | | | | | ● | | | | | |
| **NF** | **VBET160404-NF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | | | | | | | | | ○ | ● | | | | | | | |
| | **VBET160408-NF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | | | ○ | ● | | | | | | | |
| Finishing Schlichten | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°


**SVVBN**
Kr:72°30'


**SVQBR/L**
Kr:107°30'


**SVUBR/L**
Kr:93°

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Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

# Turning · Drehen

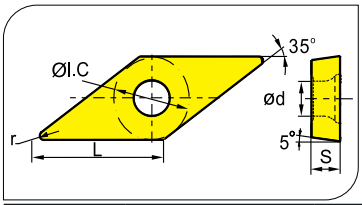
## Cemented carbide and cermet Inserts · Hartmetall und Cermet WSP

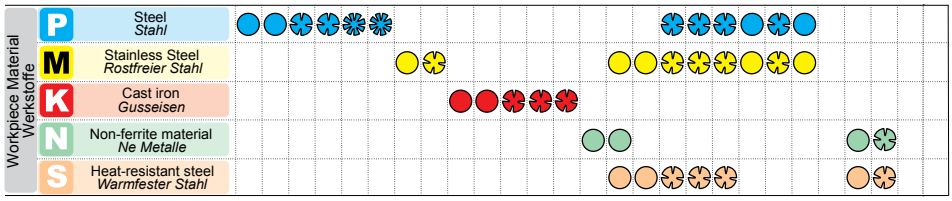
### VB** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Verm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | l.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **NGF** | **VBET160408-NGF** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| Finishing Schlichten | **VBET160412-NGF** | 16.5 | 9.525 | 4.76 | 4.4 | 1.2 | | | | | | | | | | | | | | ○ | ● | | | | | | | | |
| **EM** | **VBMT110304-EM** | 11 | 6.35 | 3.18 | 2.8 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | | | | | |
| Medium Cut/ Mittl. Bearb. | **VBMT110308-EM** | 11 | 6.35 | 3.18 | 2.8 | 0.8 | | ○ | | | | | ● | | | | | | | | | | | ● | | | | | |
| | **VBMT160404-EM** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | ● | | | | | | | | | | | ● | | | | | |
| | **VBMT160408-EM** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | ● | | | | | | | | | | | ● | | | | | |
| **SNR** | **VBMT160408-SNR** | 16.5 | 9.525 | 4.76 | 4.76 | 0.8 | | | | | | | | | | | | | | | ○ | | | | | | | | ○ |
| Roughing / Schruppen | **VBMT160412-SNR** | 16.5 | 9.525 | 4.76 | 4.76 | 1.2 | | | | | | | | | | | | | | | ○ | | | | | | | | ○ |
| **HM** | **VBMT160404-HM** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | ● | ● | ● | ● | | ● | ● | | | ● | | | | | | | | | ● | | | | |
| Medium Cut/ Mittl. Bearb. | **VBMT160408-HM** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | ● | ● | ● | ● | | ○ | ● | ● | | ● | | ● | | | | | | | ● | | | | ○ |
| | **VBMT160412-HM** | 16.5 | 9.525 | 4.76 | 4.4 | 1.2 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| **HR** | **VBMT160404-HR** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | | ● | ● | | | | | | | | | | | | | | | | | | | | |
| Roughing / Schruppen | **VBMT160408-HR** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | ● | ● | ● | | ○ | | | | | | | | | | | | | | | | | |
| | **VBMT160412-HR** | 16.5 | 9.525 | 4.76 | 4.4 | 1.2 | | | ● | | | | | | ○ | | | | | | | | | | | | | | |
| | **VBGT160408-HR** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | ○ | | | | | | | | | | | | | | | | | | | |
| **Flat Glatt** | **VBMW160404** | 16.5 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | |
| | **VBMW160408** | 16.5 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | | | | | | | | | | | | | | | | | |

### Tool holder / Klemmhalter


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°


**SVVBN**
Kr:72°30'

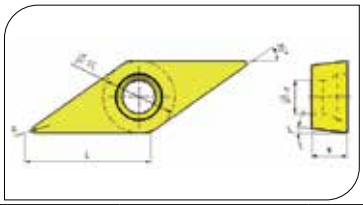

**SVQBR/L**
Kr:107°30'

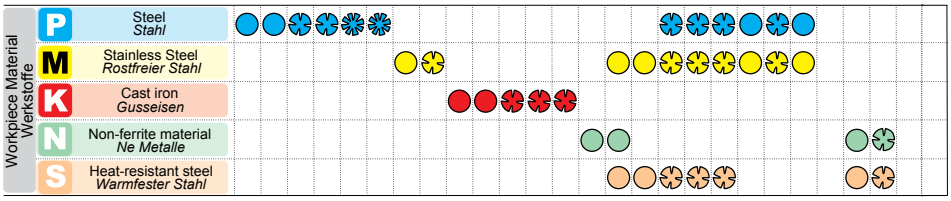

**SVUBR/L**
Kr:93°

Page/Seite A221 A222 A223 A263 A264

## VC** Positive Insert/ Positive WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

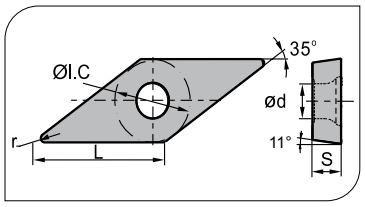


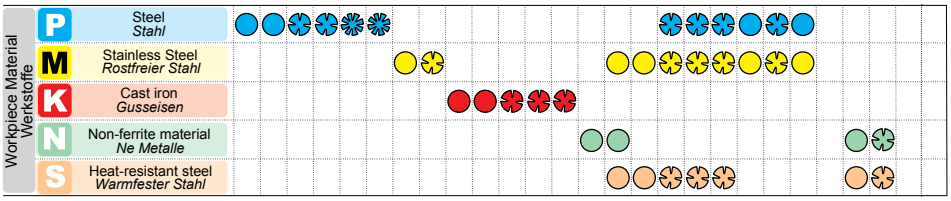



| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **EF** | **VCMT160404-EF** | 16 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | | | | | | | | | | | ● | | | | | | |
| **EM** | **VCMT160404-EM** | 16 | 9.525 | 4.76 | 4.4 | 0.4 | | | | | | | ○ | | | | | | | | | | ● | | | | | | |
|  | **VCMT160408-EM** | 16 | 9.525 | 4.76 | 4.4 | 0.8 | | | | | | | ○ | | | | | | | | | | ● | | | | | | |

## VC** Positive Insert/ Positive WSP

Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **USF**  Finishing Schlichten | **VPGT080201R-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VPGT080202R-USF** | 8 | 4.76 | 2.38 | 2.3 | 0.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VPGT110301R-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| | **VPGT110301FR-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ● | | | | | |
| **USF**  Finishing Schlichten | **VPGT080201L-USF** | 8 | 4.76 | 2.43 | 2.3 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VPGT080202L-USF** | 8 | 4.76 | 2.43 | 2.3 | 0.2 | | | | | | | | | | | | | | | | | | ○ | | | | | |
| | **VPGT110301L-USF** | 11 | 6.35 | 3.18 | 2.8 | 0.1 | | | | | | | | | | | | | | | | | | ○ | | | | | |

### Tool holder /


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°


**SVVBN**
Kr:72°30'


**SVQBR/L**
Kr:107°30'


**SVUBR/L**
Kr:93°

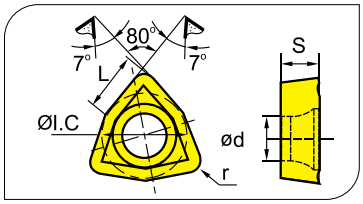
Page/ A221 A222 A223 A263 A264

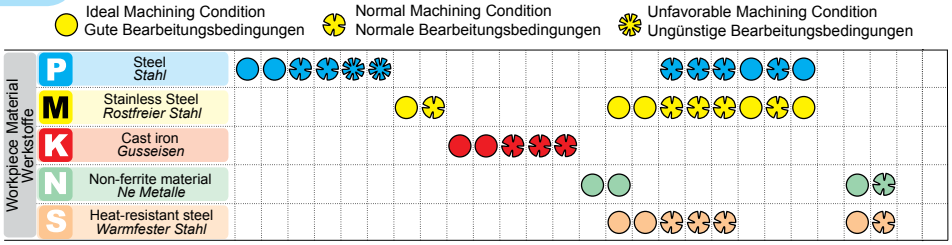
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

General Turning
Allgemeine Drehbearbeitung

## WC** Positive Insert/Positive WSP



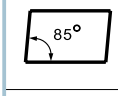
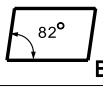
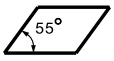




| insert shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CVD Coating CVD Beschicht. | | | | | | | | | | PVD Coating PVD Beschicht. | | | | | | Cermet unbeschichtet | | Cermet Coated beschicht. Cerm. | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YB6315 | YBC152 | YBC252 | YBC251 | YBC352 | YBC351 | YBM153 | YBM253 | YBD052 | YBD102 | YB7315 | YBD152 | YBD152C | YBG101 | YBG102 | YBG105 | YB9320 | YBG205 | YBG202 | YNG151 | YNT251 | YNG151C | YD101 | YD201 |
| **Basic** | **WCMX040208R-53** | 4.3 | 6.35 | 2.38 | 3.1 | 0.8 | | | | | | | | | | | | | | | | | | ● | | | | | ○ |
| | **WCMX06T308R-53** | 6.5 | 9.525 | 3.97 | 3.7 | 0.8 | | | | | | | | | | | | | | | | | | ● | | | | | ● |
| | **WCMX080412R-53** | 8.7 | 12.7 | 4.76 | 4.3 | 1.2 | | | | | | | | | | | | | | | | | | ● | | | | | ○ |

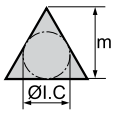
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

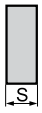


## Insert shape
*Schneidplattenform*

| | | |
|---|---|---|
|  A |  B |  C |
|  D |  E |  H |
|  K |  L |  M |
|  P |  S |  T |
|  V |  W | Others *Andere* Z |

## Tolerance
*Toleranzklasse*

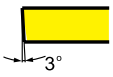
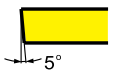
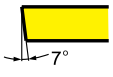
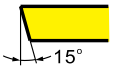
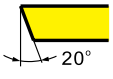
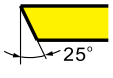
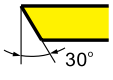
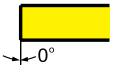


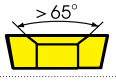
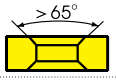
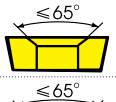
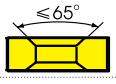

| Code | Tolerance *Toleranzklasse* | Tolerance *Toleranzklasse* ØI.C | Thickness S *Dicke* | Code | Tolerance *Toleranzklasse* | Tolerance *Toleranzklasse* ØI.C | Thickness S *Dicke* |
|---|---|---|---|---|---|---|---|
| A | ±0.005 | ±0.025 | ±0.025 | J | ±0.005 | ±0.05-±0.13 | ±0.025 |
| F | ±0.005 | ±0.013 | ±0.025 | K | ±0.013 | ±0.05-±0.13 | ±0.025 |
| C | ±0.013 | ±0.025 | ±0.025 | L | ±0.025 | ±0.05-±0.13 | ±0.025 |
| H | ±0.013 | ±0.013 | ±0.025 | M | ±0.08-±0.18 | ±0.05-±0.13 | ±0.13 |
| E | ±0.025 | ±0.025 | ±0.025 | N | ±0.08-±0.18 | ±0.05-±0.13 | ±0.025 |
| G | ±0.025 | ±0.025 | ±0.13 | U | ±0.13-±0.38 | ±0.08-±0.25 | ±0.13 |

**C N G A**

## Clearance angle of main cutting edge
*Freiwinkel der Hauptschneide*

| Code | Angle *Winkel* | Code | Angle *Winkel* |
|---|---|---|---|
| A |  3° | B |  5° |
| C |  7° | D |  15° |
| E |  20° | F |  25° |
| G |  30° | N |  0° |
| P |  11° | O | Others *Andere* |

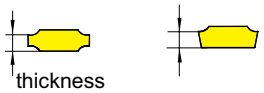
## Insert type
*Plattentyp*

| Code | Hole *Loch* | Insert Section *Ausführung* |
|---|---|---|
| N | ---- |  |
| B | ✔ |  |
| C | ✔ |  |
| A | ✔ |  |
| W | ✔ |  |
| Q | ✔ |  |
| X | ---- | Special *Spezial* |

## Cutting edge length
*Schneidenlänge (mm)*

| Diameter of incircle *Eingeschriebener Kreis* (mm) | Insert Shape *Plattenform* C | D | S | T | V | W |
|---|---|---|---|---|---|---|
| 3.97 | | | | 06 | | |
| 5.0 | | | | | | |
| 5.56 | | | | 09 | | |
| 6.0 | | | | | | |
| 6.35 | 06 | 07 | | 11 | 11 | |
| 8.0 | | | | | | |
| 9.525 | 09 | 11 | 09 | 16 | 16 | 06 |
| 10.0 | | | | | | |
| 12.0 | | | | | | |
| 12.7 | 12 | 15 | 12 | 22 | 22 | 08 |
| 15.875 | 16 | | 15 | 27 | | |
| 16.0 | | 19 | | | | |
| 19.05 | 19 | | 19 | 33 | | |
| 20.0 | | | | | | |
| 25.0 | 25 | 25 | | | | |
| 25.4 | | | 25 | | | |
| 31.75 | | | | | | |
| 32 | | | | | | |

## Insert thickness
*Dicke (mm)*




| Code | Insert Thickness *Dicke(mm)* | Code | Insert Thickness *Dicke(mm)* |
|---|---|---|---|
| 02 | 2.38 | 06 | 6.35 |
| T2 | 2.58 | T6 | 6.75 |
| 03 | 3.18 | 07 | 7.94 |
| T3 | 3.97 | 09 | 9.52 |
| 04 | 4.76 | T9 | 9.72 |
| T4 | 4.96 | 11 | 11.11 |
| 05 | 5.56 | 12 | 12.70 |
| T5 | 5.95 | | |

## Nose radius
*Eckenradius (mm)*

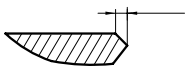
| Code | Radius (mm) |
|---|---|
| 00 | – |
| 02 | 0.2 |
| 04 | 0.4 |
| 08 | 0.8 |
| 12 | 1.2 |
| 16 | 1.6 |
| 20 | 2.0 |
| 24 | 2.4 |
| 32 | 3.2 |
| X | Others *Andere* |
| Mo | Round Insert *Runde Platten* |

**12 04 08 T 020 20 -2 W**

## Profile of cutting edges
*Schneidkantenausführung*

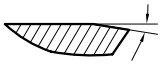
| Code | Cutting Edge *Schneidkante* | Shape Form *Plattenform* |
|---|---|---|
| F | Sharp edge *Scharfe Kante* | |
| E | Honing *Verrundung* | |
| T | Chamfering *Fase* | |
| S | Chamfering *Fase* + Honing *Verrundung* | |

## Width of chamfer
*Breite der Fase*



| | | | |
|---|---|---|---|
| 010 | 0.10 | 040 | 0.40 |
| 015 | 0.15 | 045 | 0.45 |
| 020 | 0.20 | 050 | 0.50 |
| 025 | 0.25 | 100 | 1.00 |
| 030 | 0.30 | 200 | 2.00 |
| 035 | 0.35 | | |

## Angle of chamfer
*Winkel der Fase*



| | |
|---|---|
| 05 | 5° |
| 10 | 10° |
| 15 | 15° |
| 20 | 20° |
| 25 | 25° |
| 30 | 30° |

## Number of cutting edges
*Anzahl der Schneidkanten*

| Code | Number of edges *Anzahl der Schneidkanten* | |
|---|---|---|
| 1 | 1 | |
| 2 | 2 | |
| 3 | 3 | |
| 4 | 4 | |

## Wiper edge
*Wiperfase*

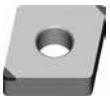
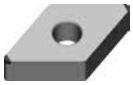
W

**Standard edge preparation**
**Standard Fasenausführung**

| | CBN | | | | Solid CBN Voll CBN | | | PCD PKD |
|---|---|---|---|---|---|---|---|---|
| | YCB111 | YCB121 | YCB131 | YCB211 | YZB121 | YZB221 | YZB231 | YCD421 |
| **Radius = 0.4** | S01020 | S01020 | S01020 | S01020 | S01020 | T02020 | T02025 | F |
| **Radius ≥ 0.8** | S02020 | S02020 | S02020 | S02020 | S01020 | T02020 | T02025 | F |

* other edge preparation on demand
*andere Fasenausführung auf Anfrage*

## PCBN

| | Insert Shape *Schneidplattenform* | Type *Typ* | Grade *Sorte* | | | |
|---|---|---|---|---|---|---|
| | | | YCB111 | YCB121 | YCB131 | YCB211 |
| Negative Inserts WSP |  A137 | CNGA120404-2 | ○ | ○ | ○ | ○ |
| | | CNGA120408-2 | ○ | ○ | ○ | ○ |
| | | CNGA120412-2 | ○ | ○ | ○ | ○ |
| | | CNGA120408-2W | ○ | ○ | | |
| | | CNGA120412-2W | ○ | ○ | | |
| |  A138 | DNGA150604-2 | ○ | ○ | ○ | ○ |
| | | DNGA150608-2 | ○ | ○ | ● | ○ |
| | | DNGA150612-2 | ○ | ● | ○ | |
| |  A139 | SNGA120408-2 | ○ | ○ | ○ | ○ |
| | | SNGA120412-2 | ○ | ○ | ○ | ○ |
| | | | | | | |
| | | | | | | |
| |  A140 | TNGA160404-3 | ○ | ○ | | |
| | | TNGA160408-3 | ○ | ○ | ○ | ○ |
| | | TNGA160412-3 | ○ | ○ | ○ | ○ |
| |  A141 | VNGA160404-2 | ○ | ● | | |
| | | VNGA160408-2 | ○ | ○ | | |
| |  A141 | WNGA080404-3 | ○ | ○ | ○ | |
| | | WNGA080408-3 | ○ | ○ | ○ | |
| | | WNGA080412-3 | ○ | ○ | ○ | ○ |
| | | | | | | |
| Positive Inserts WSP |  A142 | CCGW060204-1 | ○ | ○ | | |
| | | CCGW060208-1 | | ○ | | |
| | | CCGW09T304-2 | ○ | ○ | ○ | ○ |
| | | CCGW09T308-2 | ○ | ○ | ○ | ○ |
| | | CCGW120404-2 | ○ | ○ | ○ | |
| | | CCGW120408-2 | ○ | ○ | ○ | |
| |  A143 | DCGW070202-1 | ○ | ● | | |
| | | DCGW070204-1 | ○ | ● | | |
| | | DCGW070208-1 | ○ | ● | | |
| | | DCGW11T304-2 | ○ | ○ | ○ | ○ |
| | | DCGW11T308-2 | ○ | ● | ○ | ○ |
| |  A144 | TCGW110204-1 | ○ | ○ | ○ | ○ |
| | | TCGW110208-1 | ○ | ○ | ○ | |
| | | TCGW16T304-3 | ○ | ○ | ○ | ○ |
| | | TCGW16T308-3 | ○ | ○ | ○ | ○ |
| |  A145 | VBGW160404-2 | ○ | ○ | | ○ |
| | | VBGW160408-2 | ○ | ○ | | ○ |
| |  A145 | VCGW160404-2 | ○ | ○ | | ○ |
| | | VCGW160408-2 | ○ | ○ | | ○ |

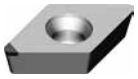
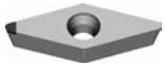
## PCBN

| | Insert Shape *Schneidplattenform* | Type *Typ* | Grade *Sorte* | | |
|---|---|---|---|---|---|
| | | | YZB121 | YZB221 | YZB231 |
| | | | S01020 * | T02020 * | T02025 * |
| Negative Inserts WSP |  A146 | CNGN090308 | ○ | ○ | ○ |
| | | CNGN090312 | ○ | ○ | ○ |
| | | CNGN120404 | ○ | ○ | ○ |
| | | CNGN120408 | ● | ● | ● |
| | | CNGN120412 | ○ | ● | ● |
| | | CNGN120416 | ○ | ● | ○ |
| | | CNGN12T608 | ○ | ○ | ○ |
| | | CNGN120712 | ○ | ○ | ○ |
| |  A146 | DNGN110404 | ○ | ○ | ○ |
| | | DNGN110408 | ○ | ○ | ○ |
| |  A147 | SNGN090308 | ○ | ○ | ○ |
| | | SNGN090312 | ○ | ○ | ○ |
| | | SNGN090316 | ○ | ○ | ○ |
| | | SNGN120404 | ○ | ○ | ○ |
| | | SNGN120408 | ● | ● | ○ |
| | | SNGN120412 | ○ | ● | ● |
| | | SNGN120416 | ○ | ● | ○ |
| | | SNGN12T612 | ○ | ○ | ○ |
| | | SNGN150716 | ○ | ○ | ○ |
| | | SNGN150720 | | ○ | ○ |
| |  A147 | WNGN060304 | ○ | ○ | ○ |
| | | WNGN080408 | ○ | ○ | ○ |
| | | WNGN080412 | ○ | ○ | ○ |
| |  A148 | RNGN090300 | ● | ● | ○ |
| | | RNGN120300 | ○ | ○ | ○ |
| | | RNGN120400 | ● | ● | ● |
| | | RNGN120700 | ○ | ○ | ○ |
| | | RNGN150700 | ○ | ○ | ○ |

* Standard edge preparation
Standard Fasenausführung

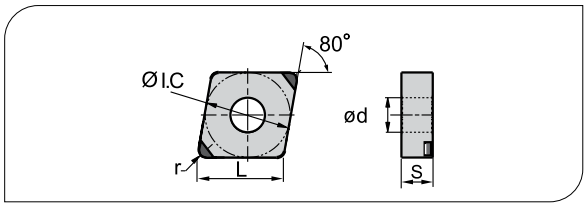
* other edge preparation on demand
andere Fasenausführung auf Anfrage

## PCD/PKD

| Insert Shape<br>*Schneidplattenform* | Type<br>*Typ* | Grade<br>*Sorte* |
|---|---|---|
| | | **YCD421** |
|  A149 | **CCGT060202**** | ● |
| | **CCGT060204**** | ● |
| | **CCGT09T304**** | ● |
| | **CCGT09T308**** | ○ |
| | **CCGT120404**** | ● |
| | **CCGT120408**** | ○ |
|  A150 | **CCGW060202**** | ● |
| | **CCGW060204**** | ● |
| | **CCGW09T304**** | ● |
| | **CCGW09T308**** | ● |
| | **CCGW120404**** | ● |
| | **CCGW120408**** | ● |
|  A151 | **DCGT070202**** | ● |
| | **DCGT070204**** | ● |
| | **DCGT11T302**** | ● |
| | **DCGT11T304**** | ● |
| | **DCGT11T308**** | ● |
|  A152 | **DCGW070202**** | ● |
| | **DCGW070204**** | ● |
| | **DCGW070208**** | ● |
| | **DCGW11T302**** | ● |
| | **DCGW11T304**** | ● |
| | **DCGW11T308**** | ● |
|  A153 | **TCGT110202**** | ○ |
| | **TCGT110204**** | ○ |
| | **TCGT110208**** | ○ |
| | **TCGT16T304**** | ○ |
| | **TCGT16T308**** | ○ |
|  A154 | **TCGW110208**** | ○ |
| | **TCGW16T302**** | ○ |
| | **TCGW16T304**** | ○ |
| | **TCGW16T308**** | ○ |
|  A155 | **VBGT160402**** | ○ |
| | **VBGT160404**** | ○ |
| | **VBGT160408**** | ○ |
|  A156 | **VBGW160404**** | ● |
| | **VBGW160408**** | ● |
|  A156 | **VCGT160402**** | ○ |
| | **VCGT160404**** | ● |
| | **VCGT160408**** | ● |
|  A156 | **VCGW160404**** | ● |
| | **VCGW160408**** | ● |

F= Standart edge preparation (sharp edge) F= Standart Fasen Ausführung (Scharfkantig)

## CN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **CNGA120404-2** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ○ | ○ | ○ |
| | **CNGA120408-2** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ○ | ○ | ○ |
| | **CNGA120412-2** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ○ | ○ | ○ |
| | **CNGA120408-2W** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ○ | | |
| | **CNGA120412-2W** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ○ | | |

### Tool Holder · Klemmhalter

**DCLNR/L**
Kr:95°

Page · Seite A181

**PCLNR/L**
Kr:95°

A189

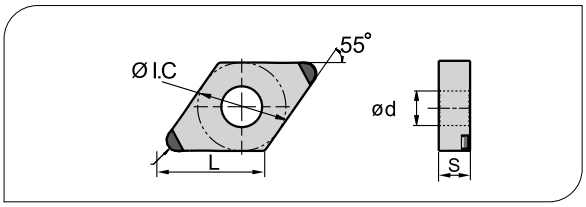
**PCLNR/L**
Kr:95°

A246

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## DN**

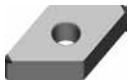



Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid-plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **DNGA150604-2** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | ○ | ○ | ○ | ○ |
| | **DNGA150608-2** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | ○ | ○ | ● | ○ |
| | **DNGA150612-2** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | ○ | ● | ○ | ○ |

### Tool Holder · Klemmhalter


**DDJNR/L**
Kr:93°


**PDJNR/L**
Kr:93°


**PDNNR/L**
Kr:63°


**PDSNR/L**
Kr:62°30'

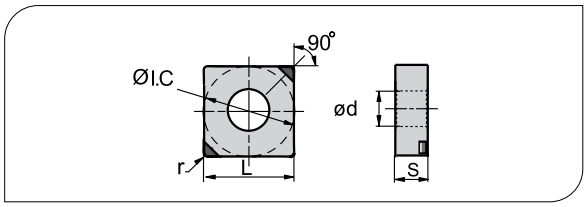

**PDUNR/L**
Kr:93°

Page · Seite A182 A190 A191 A248 A249

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## SN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **SNGA120408-2** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ○ | ○ | ○ |
| | **SNGA120412-2** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ○ | ○ | ○ |

### Tool Holder · Klemmhalter


**DSBNR/L**
Kr:75°
Page ·Seite A183


**PSBNR/L**
Kr:75°
A192


**PSDNN**
Kr:45°
A193


**PSKNR/L**
Kr:75°
A194


**PSSNR/L**
Kr:45°
A195


**PSKNR/L**
Kr:75°
A251

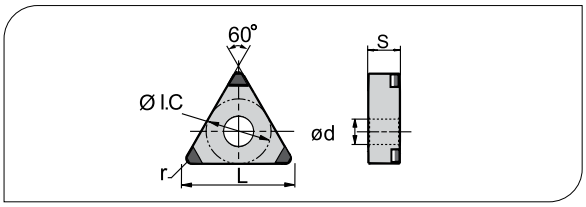
Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## TN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 | | |
|  | **TNGA160404-3** | 16.5 | 9.525 | 4.76 | 3.81 | 0.4 | ○ | ○ | | | | |
| | **TNGA160408-3** | 16.5 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ○ | ○ | ○ | | |
| | **TNGA160412-3** | 16.5 | 9.525 | 4.76 | 3.81 | 1.2 | ○ | ○ | ○ | ○ | | |

Tool Holder · Klemmhalter


**DTGNR/L**
Kr:91°


**PTFNR/L**
Kr:90°


**PTTNR/L**
Kr:60°


**PTGNR/L**
Kr:90°

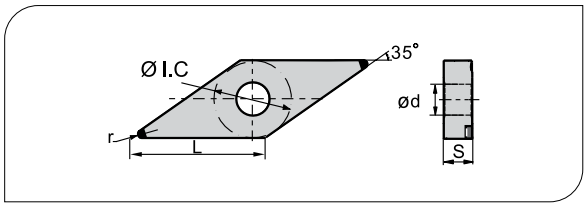

**PTFNR/L**
Kr:90°

Page · Seite A184 A196 A197 A198 A252

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## VN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **VNGA160404-2** | 16.6 | 9.525 | 4.76 | 3.81 | 0.4 | ○ | ● | | |
| | **VNGA160408-2** | 16.6 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ○ | | |

### Tool Holder · Klemmhalter


**DVVNN**
Kr:72°30'

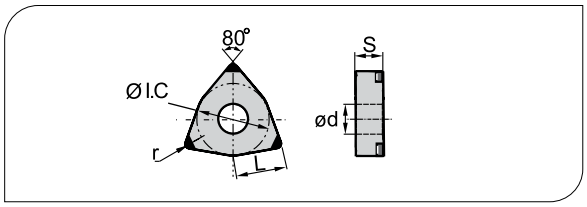

**DVJNR/L**
Kr:93°


**MVVNN**
Kr:72°30'


**MVJNR/L**
Kr:93°

Page · Seite A185 A186 A212 A213

## WN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **WNGA080408-3** | 8.69 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | ○ | |
| | **WNGA060408-3** | 8.69 | 12.7 | 4.76 | 5.16 | 04 | | | ○ | |
| | **WNGA080804-3** | 8.69 | 12.7 | 4.76 | 5.16 | 0.8 | | | ○ | |

### Tool Holder · Klemmhalter


**DWLNR/L**
Kr:95°


**PWLNR/L**
Kr:95°

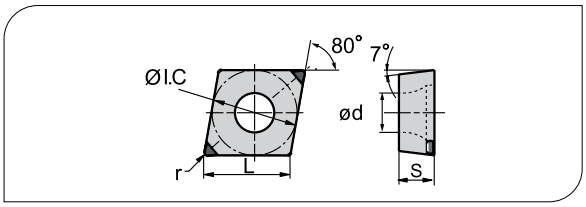

**PWLNR/L**
Kr:95°

Page · Seite A187 A199 A253

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## CC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 | | |
|  | **CCGW060204-1** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | ○ | ○ | | | | |
| | **CCGW060208-1** | 6.4 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | ○ | | | | |
| | **CCGW09T304-2** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | ○ | ○ | ○ | ○ | | |
| | **CCGW09T308-2** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ○ | ○ | ○ | ○ | | |
| | **CCGW120404-2** | 12.9 | 12.7 | 4.76 | 5.5 | 0.4 | ○ | ○ | ○ | ○ | | |
| | **CCGW120408-2** | 12.9 | 12.7 | 4.76 | 5.5 | 0.8 | ○ | ○ | ○ | ○ | | |

### Tool Holder · Klemmhalter


**SCACR/L**
Kr:90°
Page · Seite A216


**SCLCR/L**
Kr:95°
A217


**SCLCR/L**
Kr:95°
A254

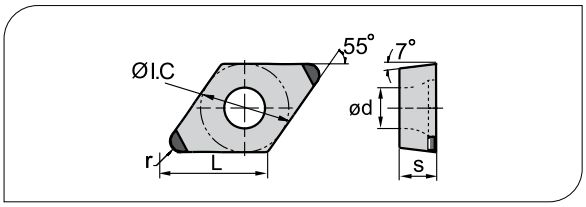

**SCFCR**
Kr:90°
A269


**SCLCR**
Kr:95°
A270

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## DC**

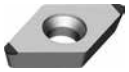



Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **DCGW070204-1** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | ○ | ● | | |
| | **DCGW070208-1** | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | ● | | |
| | **DCGW11T304-2** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | ○ | ○ | ○ | ○ |
| | **DCGW11T308-2** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | ○ | ● | ○ | ○ |

### Tool Holder · Klemmhalter


**SDACR/L**
Kr:90°
Page · Seite A218


**SDJCR/L**
Kr:93°
A219


**SDNCN**
Kr:62°30°
A220


**SDQCR/L**
Kr:107°30'
A256


**SDUCR/L**
Kr:93°
A257


**SDZCR/L**
Kr:85°
A258

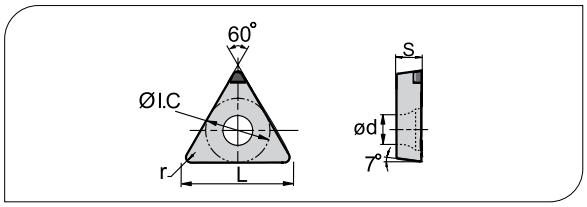
Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## TC**



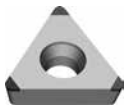

Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 | | |
|  | **TCGW110204-1** | 9.6 | 5.56 | 2.38 | 2.5 | 0.4 | ○ | ○ | ○ | ○ | | |
| | **TCGW110208-1** | 9.6 | 5.56 | 2.38 | 2.5 | 0.8 | ○ | ○ | ○ | | | |
|  | **TCGW16T304-3** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | ○ | ○ | ○ | ○ | | |
| | **TCGW16T308-3** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | ○ | ○ | ○ | ○ | | |

### Tool Holder · Klemmhalter


**STACR/L**
Kr:90°
Page · Seite A228


**STFCR/L**
Kr:91°
A228


**STGCR/L**
Kr:91°
A229

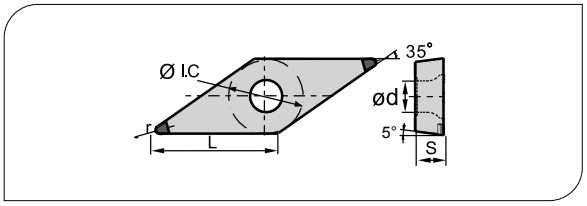

**STTCR/L**
Kr:60°
A230


**STFCR/L**
Kr:90°
A260

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## VB**



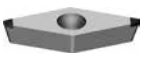

Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **VBGW160404-2** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ○ | ○ | | ○ |
| | **VBGW160408-2** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ○ | ○ | | ○ |

### Tool Holder · Klemmhalter


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°

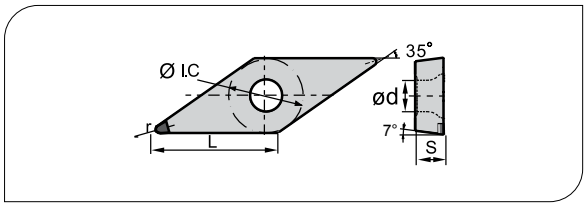

**SVVBN**
Kr:72°30'


**SVQBR/L**
Kr:107°30'


**SVUBR/L**
Kr:93°

Page · Seite A221 A222 A223 A263 A264

## VC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ● | ◔ | ✱ |
| K | Cast iron *Gusseisen* | | | ● |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCB111 | YCB121 | YCB131 | YCB211 |
|  | **VCGW160404-2** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ○ | ○ | | ○ |
| | **VCGW160408-2** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ○ | ○ | | ○ |
| | | | | | | | | | | |

### Tool Holder · Klemmhalter


**SVVCN**
Kr:72°30'


**SVJCR/L**
Kr:93°


**SVQCR/L**
Kr:107°30'

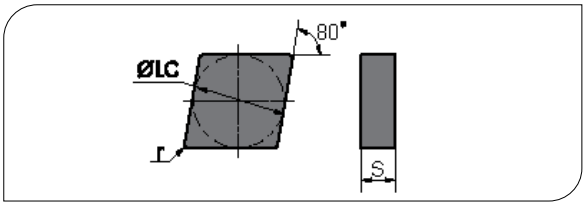

**SVUCR/L**
Kr:93°

Page · Seite A224 A225 A261 A262

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## CN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

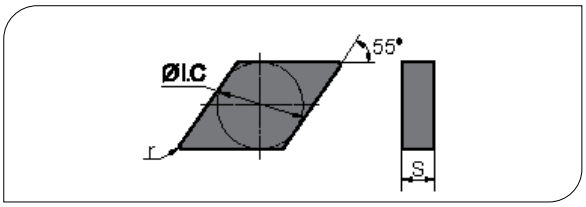
Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ◔ | | |
| K | Cast iron *Gusseisen* | | ◉ | ◉ |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YZB121 | YZB221 | YZB231 |
|  | **CNGN090308** | 9,7 | 9,525 | 3,18 | - | 0.8 | ○ | ○ | ○ |
| | **CNGN090312** | 9,7 | 9,525 | 3,18 | - | 1,2 | ○ | ○ | ○ |
| | **CNGN120404** | 12.9 | 12.7 | 4.76 | - | 0.4 | ○ | ○ | ○ |
| | **CNGN120408** | 12.9 | 12.7 | 4.76 | - | 0,8 | ● | ● | ● |
| | **CNGN120412** | 12.9 | 12.7 | 4.76 | - | 1,2 | ○ | ● | ● |
| | **CNGN120416** | 12.9 | 12.7 | 4.76 | - | 1,6 | ○ | ● | ○ |
| | **CNGN12T608** | 12.9 | 12.7 | 6.75 | - | 0.8 | ○ | ○ | ○ |
| | **CNGN120712** | 12.9 | 12.7 | 7.94 | - | 0.8 | ○ | ○ | ○ |

## DN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

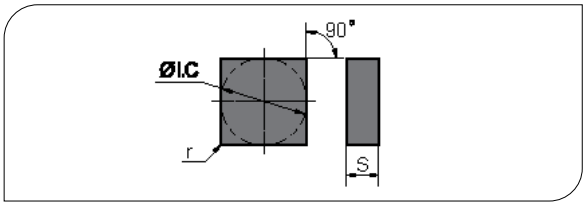
| | | | | |
|---|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ◔ | | |
| K | Cast iron *Gusseisen* | | ◉ | ◉ |
| N | Non-ferrite material *Ne Metalle* | | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YZB121 | YZB221 | YZB231 |
|  | **DNGN110404** | 15.5 | 9.525 | 4.76 | - | 0.4 | ○ | ○ | ○ |
| | **DNGN110408** | 15.5 | 9.525 | 4.76 | - | 0.8 | ○ | ○ | ○ |
| | | | | | | | | | |

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## SN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

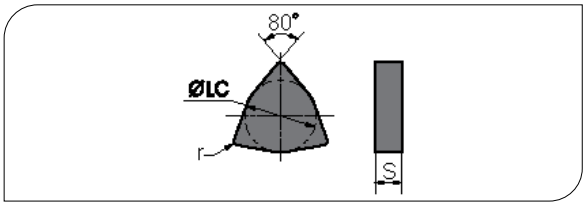
Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | ◔ |
| K | Cast iron<br>*Gusseisen* | ◕ ◕ |
| N | Non-ferrite material<br>*Ne Metalle* | |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | CBN | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YZB121 | YZB221 | YZB231 |
|  | **SNGN090308** | 9,525 | 9,525 | 3,18 | - | 0,8 | ○ | ○ | ○ |
| | **SNGN090312** | 9,525 | 9,525 | 3,18 | - | 1,2 | ○ | ○ | ○ |
| | **SNGN090316** | 9,525 | 9,525 | 3,18 | - | 1,6 | ○ | ○ | ○ |
| | **SNGN120404** | 12.7 | 12.7 | 4.76 | - | 0.4 | ○ | ○ | ○ |
| | **SNGN120408** | 12.7 | 12.7 | 4.76 | - | 0.8 | ● | ● | ○ |
| | **SNGN120412** | 12.7 | 12.7 | 4.76 | - | 1,2 | ○ | ● | ● |
| | **SNGN120416** | 12.7 | 12.7 | 4.76 | - | 1,6 | ○ | ● | ○ |
| | **SNGN12T612** | 12.7 | 12.7 | 6.75 | - | 1.2 | ○ | ○ | ○ |
| | **SNGN150716** | 15.875 | 15.875 | 7.94 | - | 1.6 | ○ | ○ | ○ |
| | **SNGN150720** | 15.875 | 15.875 | 7.94 | - | 2.0 | ○ | ○ | ○ |

## WN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

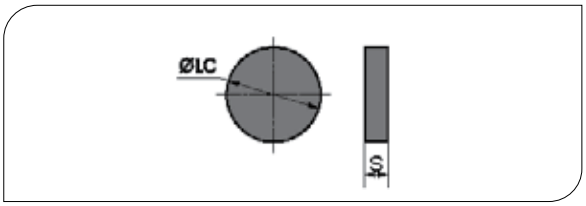
| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | ◔ |
| K | Cast iron<br>*Gusseisen* | ◕ ◕ |
| N | Non-ferrite material<br>*Ne Metalle* | |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | CBN | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YZB121 | YZB221 | YZB231 |
|  | **WNGN060304** | 6.5 | 9.525 | 3.18 | - | 0.4 | ○ | ○ | ○ |
| | **WNGN080408** | 8.69 | 12.7 | 4.76 | - | 0.8 | ○ | ○ | ○ |
| | **WNGN080412** | 8.69 | 12.7 | 4.76 | - | 1.2 | ○ | ○ | ○ |

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## RN**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

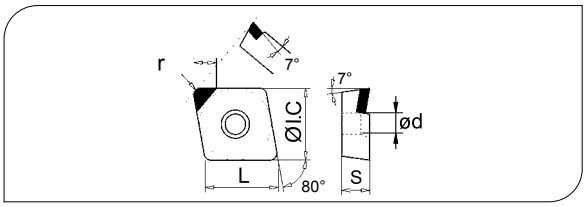
| | | | |
|---|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | ◔ | |
| K | Cast iron *Gusseisen* | | ◕ ◕ |
| N | Non-ferrite material *Ne Metalle* | | |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | CBN | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YZB121 | YZB221 | YZB231 |
|  | **RNGN090300** | 9.525 | 9.525 | 3.18 | - | - | ● | ● | ○ |
| | **RNGN120300** | 12.7 | 12.7 | 3.18 | - | - | ○ | ○ | ○ |
| | **RNGN120400** | 12.7 | 12.7 | 4.76 | - | - | ● | ● | ● |
| | **RNGN120700** | 12.7 | 12.7 | 7.94 | - | - | ○ | ○ | ○ |
| | **RNGN150700** | 15.875 | 15.875 | 7.94 | - | - | ○ | ○ | ○ |

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## CC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | |
|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* |
| K | Cast iron<br>*Gusseisen* |
| N | Non-ferrite material<br>*Ne Metalle* |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **CCGT060202**** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | ● |
| | **CCGT060204**** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | ● |
| | **CCGT09T304**** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | ● |
| | **CCGT09T308**** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ○ |
| | **CCGT120404**** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | ● |
| | **CCGT120408**** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | ○ |

### Tool Holder · Klemmhalter


**SCACR/L**
Kr:90°


**SCLCR/L**
Kr:95°


**SCLCR/L**
Kr:95°


**SCFCR**
Kr:90°

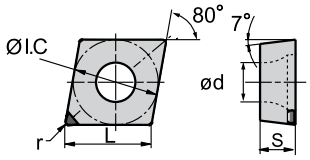

**SCLCR**
Kr:95°

Page · Seite A216 A217 A254 A269 A270

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## CC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | |
| K | Cast iron *Gusseisen* | |
| N | Non-ferrite material *Ne Metalle* | ● |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **CCGW060202**** | 6.4 | 6.35 | 2.38 | 2.8 | 0.2 | ● |
| | **CCGW060204**** | 6.4 | 6.35 | 2.38 | 2.8 | 0.4 | ● |
| | **CCGW09T304**** | 9.7 | 9.525 | 3.97 | 4.4 | 0.4 | ● |
| | **CCGW09T308**** | 9.7 | 9.525 | 3.97 | 4.4 | 0.8 | ● |
| | **CCGW120404**** | 12.9 | 12.7 | 4.76 | 5.56 | 0.4 | ● |
| | **CCGW120408**** | 12.9 | 12.7 | 4.76 | 5.56 | 0.8 | ● |

Tool Holder · Klemmhalter


**SCACR/L**
Kr:90°


**SCLCR/L**
Kr:95°


**SCLCR/L**
Kr:95°


**SCFCR**
Kr:90°

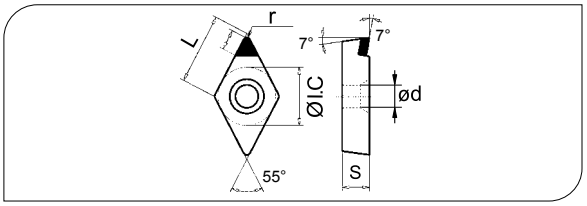

**SCLCR**
Kr:95°

Page · Seite AA216 A217 A254 A269 A270

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## DC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | |
|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* |
| K | Cast iron<br>*Gusseisen* |
| N | Non-ferrite material<br>*Ne Metalle* |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **DCGT070202**** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | ● |
| | **DCGT070204**** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | ● |
| | **DCGT11T302**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | ● |
| | **DCGT11T304**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | ● |
| | **DCGT11T308**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | ● |

### Tool Holder · Klemmhalter


**SDACR/L**
Kr:90°
Page · Seite A218


**SDJCR/L**
Kr:93°
A219


**SDNCN**
Kr:62°30'
A220


**SDQCR/L**
Kr:107°30'
A256

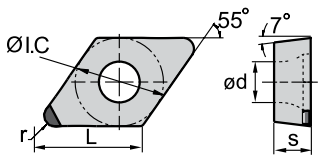

**SDUCR/L**
Kr:93°
A257


**SDZCR/L**
Kr:85°
A258

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## DC**



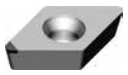

Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | |
| K | Cast iron *Gusseisen* | |
| N | Non-ferrite material *Ne Metalle* | ● |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **DCGW070202**** | 7.8 | 6.35 | 2.38 | 2.8 | 0.2 | ● |
| | **DCGW070204**** | 7.8 | 6.35 | 2.38 | 2.8 | 0.4 | ● |
| | **DCGW070208**** | 7.8 | 6.35 | 2.38 | 2.8 | 0.8 | ● |
| | **DCGW11T302**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.2 | ● |
| | **DCGW11T304**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.4 | ● |
| | **DCGW11T308**** | 11.6 | 9.525 | 3.97 | 4.4 | 0.8 | ● |

### Tool Holder · Klemmhalter


**SDACR/L**
Kr:90°


**SDJCR/L**
Kr:93°


**SDNCN**
Kr:62°30'


**SDQCR/L**
Kr:107°30'


**SDUCR/L**
Kr:93°

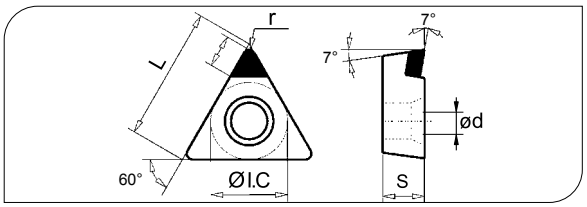

**SDZCR/L**
Kr:85°

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Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## TC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | |
| K | Cast iron<br>*Gusseisen* | |
| N | Non-ferrite material<br>*Ne Metalle* | ○ |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **TCGT110202**** | 11 | 6.35 | 2.38 | 2.8 | 0.2 | ○ |
| | **TCGT110204**** | 11 | 6.35 | 2.38 | 2.8 | 0.4 | ○ |
| | **TCGT110208**** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | ○ |
| | **TCGT16T304**** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | ○ |
| | **TCGT16T308**** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | ○ |

### Tool Holder · Klemmhalter

| **STACR/L**<br>Kr:90° | **STFCR/L**<br>Kr:91° | **STGCR/L**<br>Kr:91° | **STTCR/L**<br>Kr:60° | **STFCR/L**<br>Kr:90° |
|---|---|---|---|---|
|  |  |  |  |  |
| Page · Seite A228 | A228 | A229 | A230 | A260 |

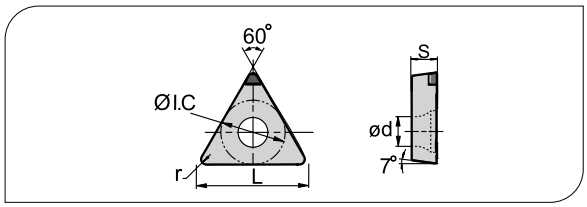
Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

# TC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | |
| K | Cast iron<br>*Gusseisen* | |
| N | Non-ferrite material<br>*Ne Metalle* | ● |

| Insert Shape<br>Schneid<br>plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **TCGW110208**** | 11 | 6.35 | 2.38 | 2.8 | 0.8 | ○ |
| | **TCGW16T302**** | 16.5 | 9.525 | 3.97 | 4.4 | 0.2 | ○ |
| | **TCGW16T304**** | 16.5 | 9.525 | 3.97 | 4.4 | 0.4 | ○ |
| | **TCGW16T308**** | 16.5 | 9.525 | 3.97 | 4.4 | 0.8 | ○ |

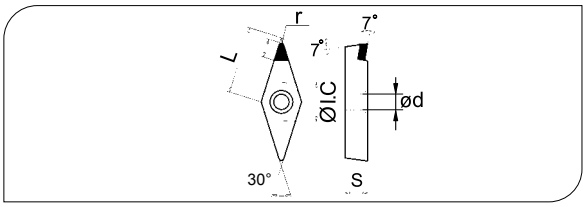
Tool Holder · Klemmhalter

| **STACR/L**<br>Kr:90° | **STFCR/L**<br>Kr:91° | **STGCR/L**<br>Kr:91° | **STTCR/L**<br>Kr:60° | **STFCR/L**<br>Kr:90° |
|---|---|---|---|---|
|  |  |  |  |  |
| Page · Seite A228 | A228 | A229 | A230 | A260 |

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

## VB**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | |
| K | Cast iron<br>*Gusseisen* | |
| N | Non-ferrite material<br>*Ne Metalle* | ● |

| Insert Shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **VBGT160402**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.2 | ○ |
| | **VBGT160404**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ○ |
| | **VBGT160408**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ○ |

### Tool Holder · Klemmhalter


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°

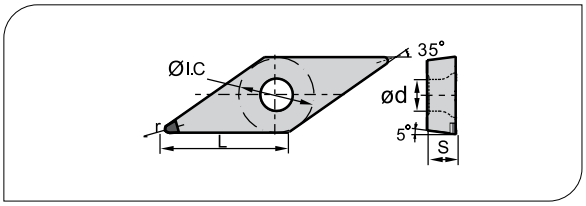

**SVVBN**
Kr:72°30'


**SVQBR/L**
Kr:107°30'


**SVUBR/L**
Kr:93°

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## VB**



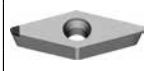

Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material<br>*Gehärteter Werkstoff* | |
| K | Cast iron<br>*Gusseisen* | |
| N | Non-ferrite material<br>*Ne Metalle* | ● |

| Insert shape<br>Schneid plattenform | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **VBGW160404**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ● |
| | **VBGW160408**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ● |

### Tool Holder · Klemmhalter


**SVJBR/L**
Kr:93°


**SVABR/L**
Kr:90°


**SVVBN**
Kr:72°30'


**SVQBR/L**
Kr:107°30'


**SVUBR/L**
Kr:93°

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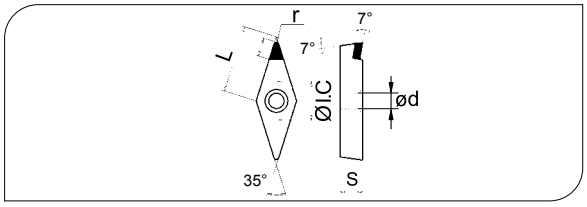
Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Aufrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## VC**




Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
| H | Hardened material *Gehärteter Werkstoff* | |
| K | Cast iron *Gusseisen* | |
| N | Non-ferrite material *Ne Metalle* | ● |

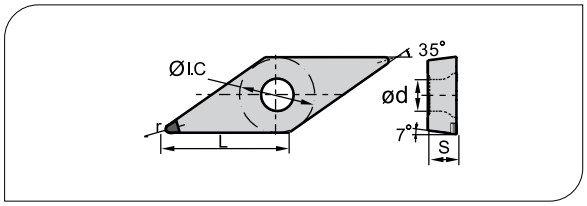
| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **VCGT160402**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.2 | ○ |
| | **VCGT160404**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ● |
| | **VCGT160408**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ● |

Tool Holder · Klemmhalter

| | | | | |
|---|---|---|---|---|
| **SVJBR/L** Kr:93°  | **SVABR/L** Kr:90°  | **SVVBN** Kr:72°30'  | **SVQBR/L** Kr:107°30'  | **SVUBR/L** Kr:93°  |

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## VC**



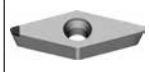

Continuous cutting
*Vollschnitt*

Continuous and light interrupted cutting
*Voll und leicht unterbrochener Schnitt*

Interrupted cutting
*Stark unterbrochener Schnitt*

Workpiece Material
*Werkstoffe*

| | | |
|---|---|---|
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| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | PCD |
|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | YCD421 |
|  | **VCGW160404**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.4 | ● |
| | **VCGW160408**** | 16.6 | 9.525 | 4.76 | 4.4 | 0.8 | ● |

Tool Holder · Klemmhalter

| | | | | |
|---|---|---|---|---|
| **SVJBR/L** Kr:93°  | **SVABR/L** Kr:90°  | **SVVBN** Kr:72°30'  | **SVQBR/L** Kr:107°30'  | **SVUBR/L** Kr:93°  |

Page · Seite A221 A222 A223 A263 A264

Further insert size, edge preperation, special inserts and grade on demand possible.
*Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.*

● Ex Stock / ab Lager ○ On demand / auf Anfrage

# Troubleshooting - PCBN Cutting Materials
# Problembehandlung - PCBN Schneidstoffe

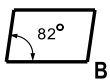
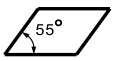
For investigation please send us used inserts. If breakage is problem please use inserts only 80-90% of expected tool life because broken inserts almost have no information.

Für eine genaue Untersuchung schicken Sie uns bitte die gebrauchten WSP zu. Sollte Bruch das Problem sein, setzen Sie die Platte nur 80-90% der eigentlichen Standzeit ein, denn eine gebrochene Platte enthält keine Informationen mehr.

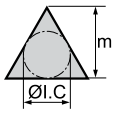
| Wear phenomenon | Solution | |
|---|---|---|
| | Geometry | Cutting condition |
| Flank wear | Sharp cutting edge to reduce cutting force<br>- smaller negative lend<br>- change to positive inserts | Reduce cutting speed<br>- increase feed rate to minimise contact time |
| Notch wear | Bigger nose radius | Use method of altering feed rate |
| Crater wear/ Breakage due to crater wear | Crater wear · due to crater wear | Reduce cutting spped<br>- increase feed rate to minimise contact time and increase distance between cutting edge and crater |
| Chipping due to rough condition or vibration | Bigger negative lend; angle and ·or honing | Increase feed rate to reduce number of hits |
| Flaking | Sharp cutting edge to reduce cutting force<br>- smaller negative lend<br>- change to positive inserts | Increase feed rate to reduce cutting time |
| Thermal crack | Sharp cutting edge to reduce cutting force<br>- smaller negative lend<br>- change to positive inserts | Reduce cutting speed, feed rate and depth of cut. Use dry machining. |
| Chipping | Bigger negative lend | Increase cutting speed to reduce cutting force |

| Verschleißbild | Gegenmaßnahmen | |
|---|---|---|
| | Geometrie | Schnittbedingungen |
| Freiflächenverschleiß | Schärfere Schneidkante<br>für weniger Schnittkraft<br>- kleinere Negativfase<br>- positive Platten verwenden | Schnittgeschwindigkeit reduzieren<br>- Vorschub erhöhen, um Eingriffszeit zu reduzieren |
| Kerbverschleiß | Größerer Radius | “Methode des varierenden Vorschubs” verwenden |
| Kolkverschließ/ Kolkbruch | | - Schnittgeschwindigkeit reduzieren<br>- Vorschub erhöhen, um Kontaktzeit zu verringern und den Abstand zwischen Schneidkante und Kolktasche zu vergrößern. |
| Ausbrüche durch Schlagwirkung oder Vibrationen | Größere Negativfase Winkel und · oder gehonte Fase | - Vorschub erhöhen, um die Anzahl der Schläge zu reduzieren |
| Schalenförmige Ausplatzungen | Schärfere Schneidkante für weniger Schnittkraft<br>- kleinere Negativfase<br>- positive Platten verwenden | - Vorschub erhöhen, um Eingriffszeit zu reduzieren |
| Thermische Risse · Bruch | Schärfere Schneidkante für weniger Schnittkraft<br>- kleinere Negativfase<br>- positive Platten verwenden | Schnittgeschwindigkeit, Vorschub und Schnittiefe reduzieren. Trockenbearbeitung |
| Ausbrüche | Größere Negativfase | Schnittgeschwindigkeit erhöhen, um Schnittkraft zu reduzieren |

## Insert Shape
*Schneidplattenform*

| | | |
|---|---|---|
|  A |  B |  C |
|  D |  E |  H |
|  K |  L |  M |
|  P |  S |  T |
|  V |  W | Others *Andere* Z |

## Tolerance
*Toleranzklasse*



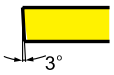
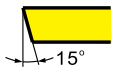
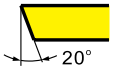
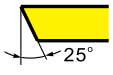
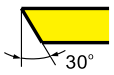
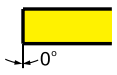
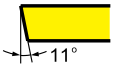




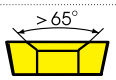
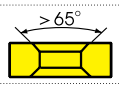
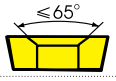
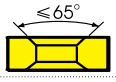
| Code | Tolerance *Toleranzklasse* | Tolerence *Toleranzklasse* ØI.C | Thickness S *Dicke* | Code | Tolerence *Toleranzklasse* | Tolerence *Toleranzklasse* ØI.C | Thickness S *Dicke* |
|---|---|---|---|---|---|---|---|
| A | ±0.005 | ±0.025 | ±0.025 | J | ±0.005 | ±0.05-±0.13 | ±0.025 |
| F | ±0.005 | ±0.013 | ±0.025 | K | ±0.013 | ±0.05-±0.13 | ±0.025 |
| C | ±0.013 | ±0.025 | ±0.025 | L | ±0.025 | ±0.05-±0.13 | ±0.025 |
| H | ±0.013 | ±0.013 | ±0.025 | M | ±0.08-±0.18 | ±0.05-±0.13 | ±0.13 |
| E | ±0.025 | ±0.025 | ±0.025 | N | ±0.08-±0.18 | ±0.05-±0.13 | ±0.025 |
| G | ±0.025 | ±0.025 | ±0.13 | U | ±0.13-±0.38 | ±0.08-±0.25 | ±0.13 |

**T N G A**

## Clearance angle of main cutting edge
*Freiwinkel der Hauptschneide*

| code | Angle *Winkel* | code | Angle *Winkel* |
|---|---|---|---|
| A |  | B |  |
| C |  | D |  |
| E |  | F |  |
| G |  | N |  |
| P |  | O | Others *Andere* |

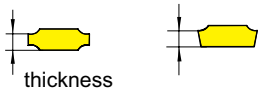
## Insert type
*Plattentyp*

| Code | Hole *Loch* | Insert Section *Ausführung* |
|---|---|---|
| N | No |  |
| B | Yes |  |
| C | Yes |  |
| A | Yes |  |
| W | Yes |  |
| Q | Yes |  |
| X | ---- | Special *Spezial* |

## Cutting edge length
*Schneidenlänge (mm)*

| Diameter of incircle *Eingeschriebener Kreis* (mm) | insert shape *Plattenform* C | D | S | T | V | W |
|---|---|---|---|---|---|---|
| 3.97 | | | | 06 | | |
| 5.0 | | | | | | |
| 5.56 | | | | 09 | | |
| 6.0 | | | | | | |
| 6.35 | 06 | 07 | | 11 | 11 | |
| 8.0 | | | | | | |
| 9.525 | 09 | 11 | 09 | 16 | 16 | 06 |
| 10.0 | | | | | | |
| 12.0 | | | | | | |
| 12.7 | 12 | 15 | 12 | 22 | 22 | 08 |
| 15.875 | 16 | | 15 | 27 | | |
| 16.0 | | 19 | | | | |
| 19.05 | 19 | | 19 | 33 | | |
| 20.0 | | | | | | |
| 25.0 | 25 | 25 | | | | |
| 25.4 | | | 25 | | | |
| 31.75 | | | | | | |
| 32 | | | | | | |

## Insert thickness
*Dicke (mm)*




| code | Insert thickness *Dicke(mm)* | code | Insert thickness *Dicke(mm)* |
|---|---|---|---|
| **02** | 2.38 | **06** | 6.35 |
| **T2** | 2.58 | **T6** | 6.75 |
| **03** | 3.18 | **07** | 7.94 |
| **T3** | 3.97 | **09** | 9.52 |
| **04** | 4.76 | **T9** | 9.72 |
| **T4** | 4.96 | **11** | 11.11 |
| **05** | 5.56 | **12** | 12.70 |
| **T5** | 5.95 | | |

## Nose radius
*Eckenradius*

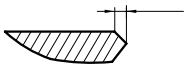
| code | Radius (mm) |
|---|---|
| **00** | no Radius |
| **02** | 0.2 |
| **04** | 0.4 |
| **08** | 0.8 |
| **12** | 1.2 |
| **16** | 1.6 |
| **20** | 2.0 |
| **24** | 2.4 |
| **32** | 3.2 |
| **X** | Others *Andere* |
| Insert diameter *WSP Durchmesser* Mo (metric) | Runde insert *Runde Platten* |

**12 04 08 T 020 20**

## Profile of cutting edges
*Scheidekantenausführung*

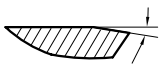
| code | Cutting Edge *Schneidkante* | Shape Form *Plattenform* |
|---|---|---|
| **E** | Honing *Verrundung* | |
| **T** | Chamfering *Fase* | |
| **S** | Chamfering *Fase* + Honing *Verrundung* | |
| **F** | Sharp edges *Scharfe Kante* | |

## Width of chamfer
*Breite der Fase*

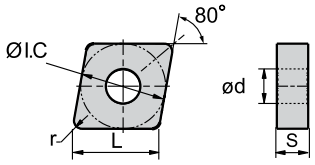


| | | | |
|---|---|---|---|
| **010** | 0.10 | **040** | 0.40 |
| **015** | 0.15 | **045** | 0.45 |
| **020** | 0.20 | **050** | 0.50 |
| **025** | 0.25 | **100** | 1.00 |
| **030** | 0.30 | **200** | 2.00 |
| **035** | 0.35 | | |

## Angle of chamfer
*Winkel der Fase*



| | |
|---|---|
| **05** | 5° |
| **10** | 10° |
| **15** | 15° |
| **20** | 20° |
| **25** | 25° |
| **30** | 30° |




Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*

Workpiece Material
*Werkstoffe*

| | | | |
|---|---|---|---|
| P Steel *Stahl* | ● | | |
| K Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **CNGA120404T02020** | 12.9 | 12.7 | 4.76 | 5.16 | 0.4 | | ● | |
| | **CNGA120408T02020** | 12.9 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ● | |
| | **CNGA120412T02020** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | |
| | **CNGA120412T03020** | 12.9 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | |
| | **CNGA160608T02020** | 16.1 | 15.875 | 6.35 | 6.35 | 0.8 | | ○ | |
| | **CNGA160612T02020** | 16.1 | 15.875 | 6.35 | 6.35 | 1.2 | | ● | |
| | **CNGA160616T02020** | 16.1 | 15.875 | 6.35 | 6.35 | 1.6 | | ● | |

Tool Holder · Klemmhalter







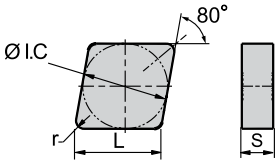






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● Ex Stock / ab Lager ○ On demand / auf Anfrage




Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **CNGN120404T02020** | 12.9 | 12.7 | 4.76 | - | 0.4 | ○ | ○ | ○ |
| | **CNGN120408T02020** | 12.9 | 12.7 | 4.76 | - | 0.8 | ● | ● | ● |
| | **CNGN120412T02020** | 12.9 | 12.7 | 4.76 | - | 1.2 | ● | ○ | ● |
| | **CNGN120708T02020** | 12.9 | 12.7 | 7.94 | - | 0.8 | ○ | ○ | ● |
| | **CNGN120712T02020** | 12.9 | 12.7 | 7.94 | - | 1.2 | ● | ○ | ○ |
| | **CNGN120716T02020** | 12.9 | 12.7 | 7.94 | - | 1.6 | ○ | ○ | ○ |
| | **CNGN160408T02020** | 16.1 | 15.875 | 4.76 | - | 0.8 | ○ | | |
| | **CNGN160412T02020** | 16.1 | 15.875 | 4.76 | - | 1.2 | ○ | ○ | ○ |
| | **CNGN160416T02020** | 16.1 | 15.875 | 4.76 | - | 1.6 | ○ | ○ | ○ |
| | **CNGN160612T02020** | 16.1 | 15.875 | 6.35 | - | 1.2 | ○ | ○ | |
| | **CNGN160616T02020** | 16.1 | 15.875 | 6.35 | - | 1.6 | ○ | ○ | ○ |

## Tool Holder · Klemmhalter

**CCLNR/L**
Kr:95°



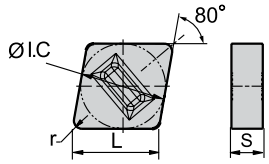
Page · Seite A235

● Ex Stock / ab Lager ○ On demand / auf Anfrage

Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | Grade Sorte CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|---|---|---|---|---|
|  | **CNGX120712T02020** | 12.9 | 12.7 | 7.94 | - | 1.2 | | ● | |
| | **CNGX120716T02020** | 12.9 | 12.7 | 7.94 | - | 1.6 | | ● | |

Tool Holder · Klemmhalter

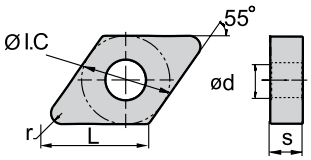
**JCLNR/L**
Kr:95°


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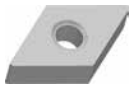
Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | Grade Sorte CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|---|---|---|---|---|
|  | **DNGA150604T02020** | 15.5 | 12.7 | 6.35 | 5.16 | 0.4 | | ● | |
| | **DNGA150608T02020** | 15.5 | 12.7 | 6.35 | 5.16 | 0.8 | | ● | |
| | **DNGA150612T02020** | 15.5 | 12.7 | 6.35 | 5.16 | 1.2 | | ○ | |
| | **DNGA150616T02020** | 15.5 | 12.7 | 6.35 | 5.16 | 1.6 | | ○ | |

Tool Holder · Klemmhalter

**DDJNR/L**
Kr:93°


**PDJNR/L**
Kr:93°


**PDNNR/L**
Kr:63°


**PDSNR/L**
Kr:62°30'


**PDUNR/L**
Kr:93°

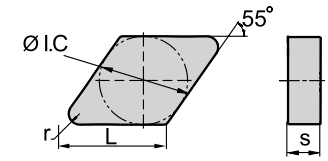

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● Ex Stock / ab Lager ○ On demand / auf Anfrage

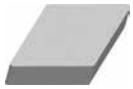
Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **DNGN150408T02020** | 15.5 | 12.7 | 4.76 | - | 0.8 | ○ | | |
| | **DNGN150412T02020** | 15.5 | 12.7 | 4.76 | - | 1.2 | ○ | | |
| | **DNGN150704T02020** | 15.5 | 12.7 | 7.94 | - | 0.4 | ○ | ○ | ○ |
| | **DNGN150708T02020** | 15.5 | 12.7 | 7.94 | - | 0.8 | ● | ○ | ○ |
| | **DNGN150712T02020** | 15.5 | 12.7 | 7.94 | - | 1.2 | ○ | ○ | ○ |
| | **DNGN150716T02020** | 15.5 | 12.7 | 7.94 | - | 1.6 | ○ | | |

Tool Holder · Klemmhalter

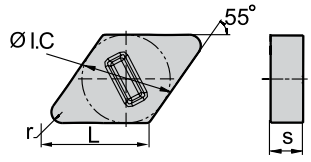



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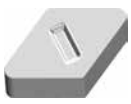
Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **DNGX150712T02020** | 15.5 | 12.7 | 7.94 | - | 1.2 | | ○ | |
| | **DNGX150716T02020** | 15.5 | 12.7 | 7.94 | - | 1.6 | | ● | |
| | | | | | | | | | |

Tool Holder · Klemmhalter



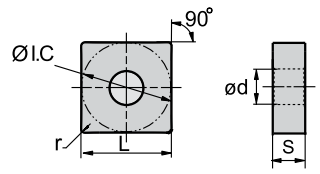

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● Ex Stock / ab Lager ○ On demand / auf Anfrage

● Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

● Normal Machining Condition
*Normale Bearbeitungsbedingungen*

● Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ● | ● |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **SNGA120404T02020** | 12.7 | 12.7 | 4.76 | 5.16 | 0.4 | | ○ | |
| | **SNGA120408T02020** | 12.7 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | |
| | **SNGA120412T02020** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | |
| | **SNGA120412T03020** | 12.7 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | |
| | **SNGA120416T02020** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | |
| | **SNGA120416T03020** | 12.7 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | |

Tool Holder · Klemmhalter


**DSBNR/L**
Kr:75°


**PSBNR/L**
Kr:75°


**PSDNN**
Kr:45°


**PSKNR/L**
Kr:75°


**PSSNR/L**
Kr:45°

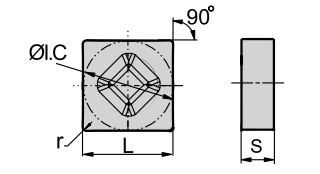

**PSKNR/L**
Kr:75°

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● Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

● Normal Machining Condition
*Normale Bearbeitungsbedingungen*

● Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ● | ● |

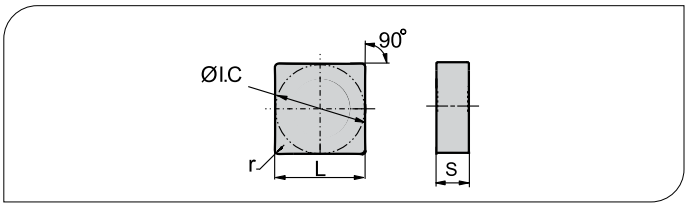
| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **SNGX120708T02020** | 12.7 | 12.7 | 7.94 | - | 0.8 | | ○ | |
| | **SNGX120712T02020** | 12.7 | 12.7 | 7.94 | - | 1.2 | | ● | |
| | **SNGX120716T02020** | 12.7 | 12.7 | 7.94 | - | 1.6 | | ● | |

Tool Holder · Klemmhalter


**JSDNN**
Kr:45°

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● Ex Stock / ab Lager ○ On demand / auf Anfrage




Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **SNGN090308T01020** | 9.525 | 9.525 | 3.18 | - | 0.8 | ○ | | |
| | **SNGN090312T01020** | 9.525 | 9.525 | 3.18 | - | 1.2 | ○ | | |
| | **SNGN120404T02020** | 12.7 | 12.7 | 4.76 | - | 0.4 | ○ | | |
| | **SNGN120408T02020** | 12.7 | 12.7 | 4.76 | - | 0.8 | ● | ● | ○ |
| | **SNGN120412T02020** | 12.7 | 12.7 | 4.76 | - | 1.2 | ● | ● | ● |
| | **SNGN120412T03020** | 12.7 | 12.7 | 4.76 | - | 1.2 | | ○ | |
| | **SNGN120416T02020** | 12.7 | 12.7 | 4.76 | - | 1.6 | ○ | ○ | ○ |
| | **SNGN120704T02020** | 12.7 | 12.7 | 7.94 | - | 0.4 | ● | | |
| | **SNGN120708T02020** | 12.7 | 12.7 | 7.94 | - | 0.8 | ● | ○ | ○ |
| | **SNGN120712T02020** | 12.7 | 12.7 | 7.94 | - | 1.2 | ● | ● | ○ |
| | **SNGN120716T02020** | 12.7 | 12.7 | 7.94 | - | 1.6 | ● | | ● |
| | **SNGN150708T02020** | 15.875 | 15.875 | 7.94 | - | 0.8 | ○ | | |
| | **SNGN150712T02020** | 15.875 | 15.875 | 7.94 | - | 1.2 | ● | ○ | ○ |
| | **SNGN150716T02020** | 15.875 | 15.875 | 7.94 | - | 1.6 | ● | ○ | ○ |
| | **SNGN190708T03020** | 19.05 | 19.05 | 7.94 | - | 0.8 | ○ | | |
| | **SNGN190712T03020** | 19.05 | 19.05 | 7.94 | - | 1.2 | ○ | | |
| | **SNGN190716T03020** | 19.05 | 19.05 | 7.94 | - | 1.6 | ○ | | |
| | **SNGN190724T03020** | 19.05 | 19.05 | 7.94 | - | 2.4 | ○ | | |
| | **SNGN191024T04020** | 19.05 | 19.05 | 10.05 | - | 2.4 | ○ | | |
| | **SNGN251024T10015** | 25.4 | 25.4 | 10.05 | - | 2.4 | ○ | | |

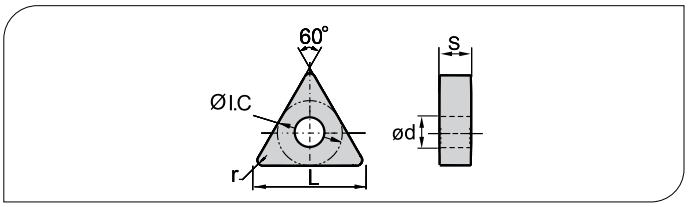
## Tool Holder · Klemmhalter

**CSRNR/L**
Kr:75°



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● Ex Stock / ab Lager ○ On demand / auf Anfrage




Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **TNGA160404T01020** | 16.50 | 9.525 | 4.76 | 3.86 | 0.4 | | ● | |
| | **TNGA160408T02020** | 16.50 | 9.525 | 4.76 | 3.86 | 0.8 | | ● | |
| | **TNGA160412T02020** | 16.50 | 9.525 | 4.76 | 3.86 | 1.2 | | ● | |
| | **TNGA220408T02020** | 22.00 | 12.7 | 4.76 | 5.16 | 0.8 | | ○ | |
| | **TNGA220412T02020** | 22.00 | 12.7 | 4.76 | 5.16 | 1.2 | | ○ | |
| | **TNGA220416T02020** | 22.00 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | |
| | **TNGA220416T03020** | 22.00 | 12.7 | 4.76 | 5.16 | 1.6 | | ○ | |

## Tool Holder · Klemmhalter


**DTGNR/L**
Kr:91°


**PTFNR/L**
Kr:90°

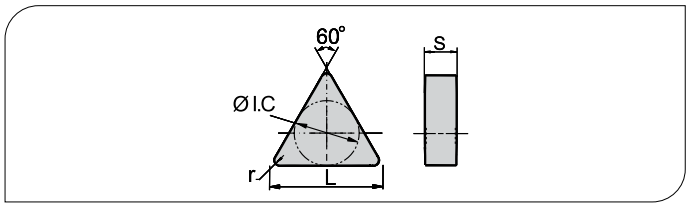

**PTTNR/L**
Kr:60°


**PTGNR/L**
Kr:90°


**PTFNR/L**
Kr:90°

Page · Seite A184 A196 A197 A198 A252

● Ex Stock / ab Lager ○ On demand / auf Anfrage




Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*

| Workpiece Material *Werkstoffe* | | | | |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✱ | ✱ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | | |
|---|---|---|---|---|---|---|---|---|---|
| | | L | I.C | S | d | r | CA1000 | CN1000 | CN2000 |
|  | **TNGN160404T02020** | 16.50 | 9.525 | 4.76 | - | 0.4 | ● | ○ | ○ |
| | **TNGN160408T02020** | 16.50 | 9.525 | 4.76 | - | 0.8 | ● | ○ | ○ |
| | **TNGN160412T02020** | 16.50 | 9.525 | 4.76 | - | 1.2 | ● | ● | ● |
| | **TNGN160708T02020** | 16.50 | 9.525 | 7.94 | - | 0.8 | ○ | ● | ● |
| | **TNGN160712T02020** | 16.50 | 9.525 | 7.94 | - | 1.2 | ○ | ○ | ○ |
| | **TNGN160716T02020** | 16.50 | 9.525 | 7.94 | - | 1.6 | ○ | | |
| | **TNGN220408T02020** | 22.00 | 12.7 | 4.76 | - | 0.8 | ○ | ○ | ○ |
| | **TNGN220412T02020** | 22.00 | 12.7 | 4.76 | - | 1.2 | ○ | ○ | ○ |
| | **TNGN220416T02020** | 22.00 | 12.7 | 4.76 | - | 1.6 | ○ | ○ | ○ |
| | **TNGN220712T02020** | 22.00 | 12.7 | 7.94 | - | 1.2 | ○ | | |
| | **TNGN220716T02020** | 22.00 | 12.7 | 7.94 | - | 1.6 | ○ | | |

Tool Holder · Klemmhalter

**CTJNR/L**
Kr:93°



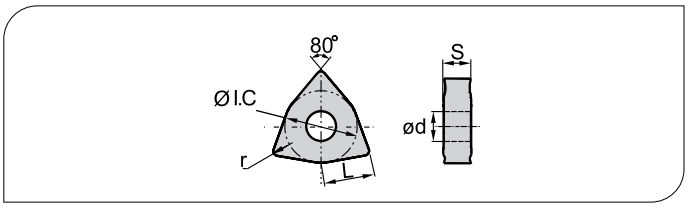
Page · Seite A235

● Ex Stock / ab Lager ○ On demand / auf Anfrage

Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✺ | ✺ |

| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | Grade Sorte CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|---|---|---|---|---|
|  | **WNGA080408T02020** | 8.69 | 12.7 | 4.76 | 5.16 | 0.8 | | ● | |
| | **WNGA080412T02020** | 8.69 | 12.7 | 4.76 | 5.16 | 1.2 | | ● | |
| | **WNGA080416T02020** | 8.69 | 12.7 | 4.76 | 5.16 | 1.6 | | ● | |

Tool Holder · Klemmhalter







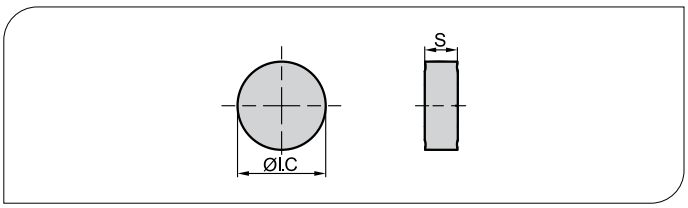



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Ideal Machining Condition
*Gute Bearbeitungsbedingungen*

Normal Machining Condition
*Normale Bearbeitungsbedingungen*

Unfavorable Machining Condition
*Ungünstige Bearbeitungsbedingungen*




| Workpiece Material *Werkstoffe* | | CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|
| P | Steel *Stahl* | ● | | |
| K | Cast iron *Gusseisen* | ● | ● ✺ | ✺ |

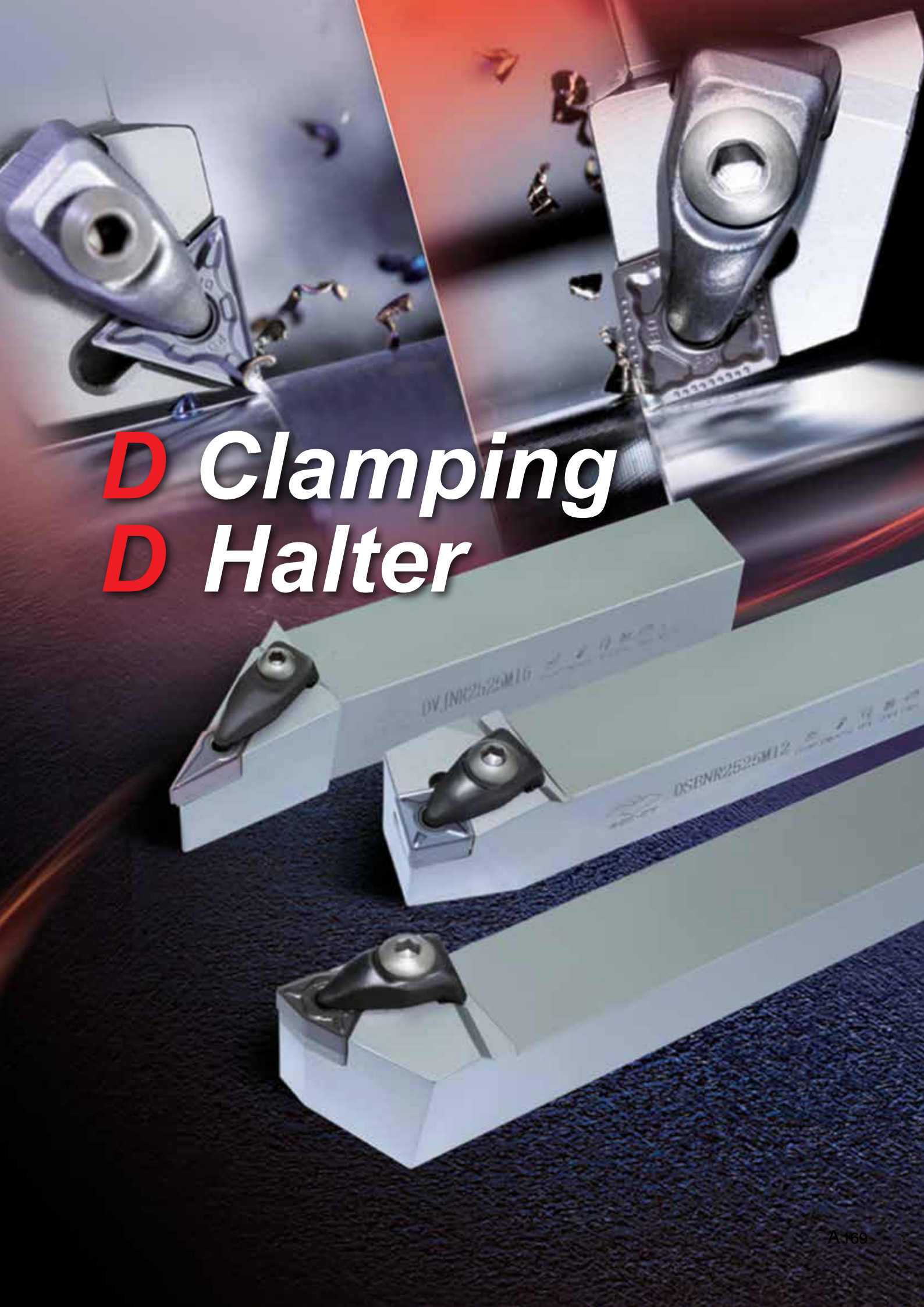
| Insert Shape Schneid plattenform | Type Typ | Dimension (mm) Abmessung L | I.C | S | d | r | Grade Sorte CA1000 | CN1000 | CN2000 |
|---|---|---|---|---|---|---|---|---|---|
|  | **RNGN090400T02020** | --- | 9.53 | 4.76 | --- | --- | ○ | | |
| | **RNGN120400T02020** | --- | 12.7 | 4.76 | --- | --- | ○ | ○ | ● |
| | **RNGN120700T02020** | --- | 12.7 | 7.94 | --- | --- | ● | ● | ● |
| | **RNGN150700T02020** | --- | 15.875 | 7.94 | --- | --- | ● | ○ | ○ |
| | **RNGN190700T03020** | --- | 19.05 | 7.94 | --- | --- | ○ | ○ | ● |
| | **RNGN251000T05020** | --- | 25.40 | 10.05 | --- | --- | ○ | ○ | |

Tool Holder Klemmhalter




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● Ex Stock / ab Lager ○ On demand / auf Anfrage

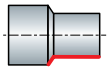


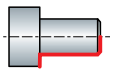
# D Clamping
# D Halter

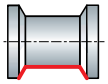
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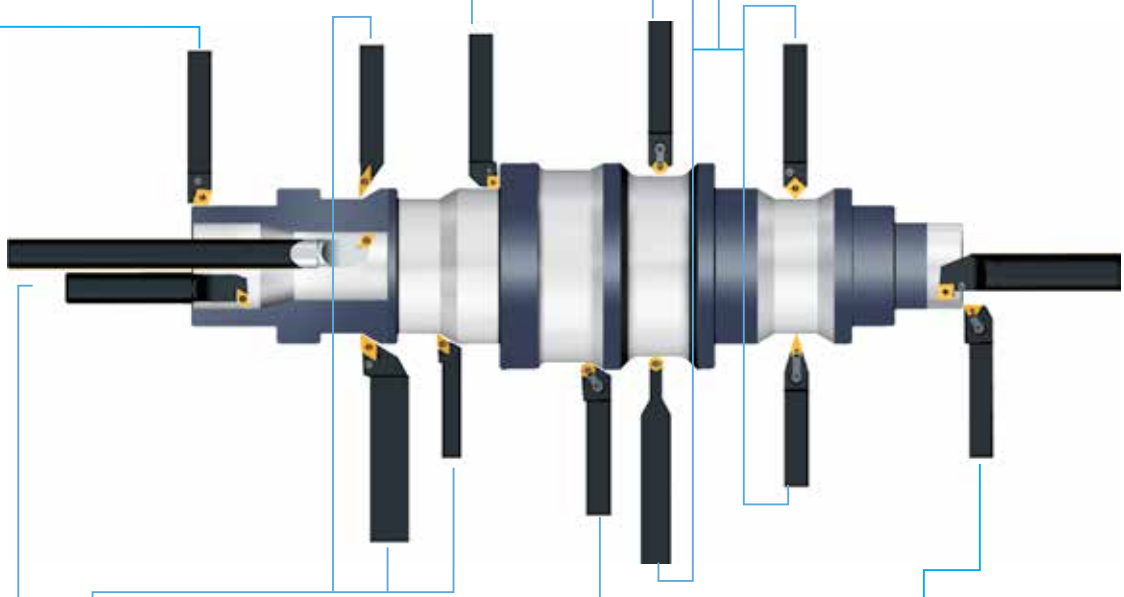
General Turning
Allgemeine Drehbearbeitung

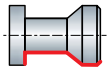
## External and internal turning · Außen- und Innenbearbeitung

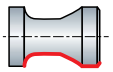
| External Turning · Außenbearbeitung | Type · Typ | | | | | |
|---|---|---|---|---|---|---|
|  | PCBNR/ L** | PSBNR/ L** | PSSN * | PTGNR/ L** | PTTNR/ L** | MCBNR/ L** |
| | MSBNR/ L** | MSRNR/ L** | MTGNR/ L** | MTJNR/ L** | MTJNR/ L-Z | SCACR/ L** |
| | SSBCR/ L** | SSSCR/ L** | STACR/ L** | STGCR/ L** | STTCR/ L** | SWACR/ L** |
| | DTJNR/L** | DSBNR/L** | | | | |

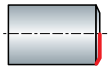
| External facing & turning · Außen- & Planbearbeitung | Type · Typ | |
|---|---|---|
|  | PCLNR/ L** | PWLNR/ L** |
| | MCLNR/ L** | MWLNR/ L** |
| | SCLCR/ L** | DCLNR/ L** |
| | DWLNR/ L** | |

| Profiling · Profilbearbeitung | Type · Typ | | | |
|---|---|---|---|---|
|  | PDNNR/ L** | PSDNN** | MDPNN** | MSDNN** |
| | MVVNN** | MRDNN** | SDNCN** | SVVBN** |
| | SVVCN** | SSDCN** | SRDCN** | CKNNR/ L** |
| | DVVNN** | | | |



| Profiling · Profilbearbeit. | Type · Typ | | |
|---|---|---|---|
|  | PDJNR/ L** | MDJNR/ L** | MVJNR/ L** |
| | SDACR/ L** | SDJCR/ L** | SVABR/ L** |
| | SVJBR/ L** | SVJCR/ L** | CKJNR/ L** |
| | DDJNR/ L** | DVJCR/ L** | |

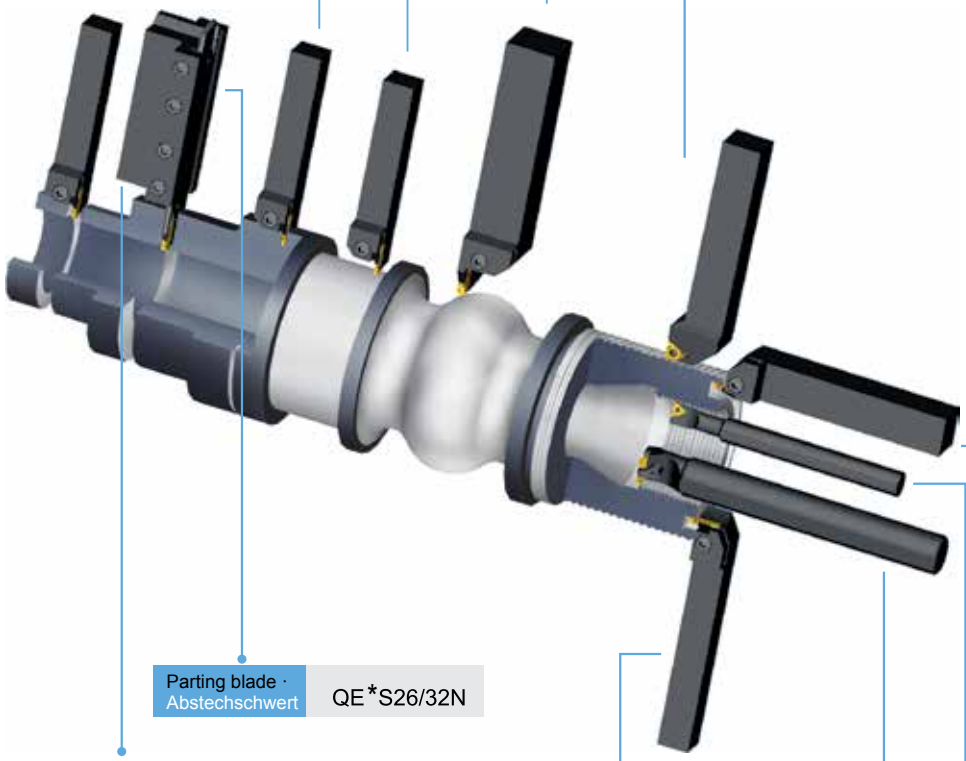
| Profiling · Profilbearbeit. | Type · Typ |
|---|---|
|  | MRGNR/ L** |
| | SRGCR/ L** |

| Facing · Planbearbeitung | Type · Typ | |
|---|---|---|
|  | PSKNR/ L** | PTFNR/ L** |
| | MSKNR/ L** | MTFNR/ L** |
| | SSKCR/ L** | STFCR/ L** |

| Toolholders for internal turning (Steel toolholder) Klemmhalter Innenbearbeitung (Stahlausführung) |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| | S*-PSKNR/ L* | S*-PCLNR/ L* | S*-PDSNR/ L* | S*-PDUNR/ L* | S*-SDQCR/ L* | S*-SDZCR/ L* |
| | S*-PTFNR/ L* | S*-PWLNR/ L* | | S*-SDUCR/ L* | S*-SDQPR/ L* | |
| | S*-SCFCR* | S*-SCLCR/ L* | | S*-SDUNR/ L* | S*-SVQBR/ L* | |
| | S*-SSKCR/ L* | S*-SCLPR/ L* | | S*-SDUPR/ L* | S*-SVQCR/ L* | |
| | S*-STFCR/ L* | | | S*-SVUBR/ L* | | |
| | S*-STUPR/ L* | | | S*-SVUCR/ L* | | |

| Toolholders for internal turning (Cemented carbide) Klemmhalter Innenbearbeitung (Hartmetall) |  |  |  |  |
|---|---|---|---|---|
| | C*-STUPR/ L* | C*-SCLPR/ L* | C*-SDUPR/ L* | C*-SDQPR/ L* |
| | | | C*-SVUCR/ L* | C*-SVQCR/ L* |

● Parting, Grooving and Threading Tools · **Abstech-, Einstech-, und Gewindewerkzeuge**



External threading tools · Gewindedrehwerkzeuge (Außen) — SWR/ L*

Axial grooving tools · Axial Stechwerkzeuge — QF*D**R/ L*-*H

Parting blade · Abstechschwert — QE*S26/32N

Parting blade holder · Abstechschwert Halter — QZS *26/32

Internal threading tools · Gewindedrehwerkzeuge (Innen) — SNR/ L*

| | |
|---|---|
| External parting, grooving, turning and profiling - Aussenbearbeitung, Abstechen-, Einstechen, Profilbearbeitung | QE* D* R/L GQCR/L** |
| | QZQ* R/L |
| | ZQS* R/L |
| | QT* R |
| Presicion grooving and turning · Präzisions-Stechen & -Drehen | QECD* R/L025 |
| External profiling Profilbearbeitung (Außen) | QX* D* R/L* - 45 |
| Grooving (difficult material) Stechbearbeitung (schwier. Mat.) | QE* S* R/L* - *N |

| | |
|---|---|
| Internal grooving tools · Einstechwerkzeuge (Innen) | C*Q*DR/ L* |
| | S****-QC**R/ L* |
| | C*-QZSR/ L* |

Axial grooving tools · Axial Stechwerkzeuge — QF*D*R/ L*-*L

**NOTES / NOTIZEN:**

# Turning · Drehen

## External Turning Tools · Drehwerkzeuge zur Außenbearbeitung


Turning tools overview · **Drehwerkzeuge Übersicht** **A174-A177**

Turning tools code key · **ISO Kennzeichnung** **A178-A179**

**Detailed table of external turning tools** **A180-A234**
**Drehwerkzeuge zur Außenbearbeitung**

Turning toolholders by D type clamping · Drehwerkzeuge / D Klemmung A181-A187

Turning toolholders by P type clamping · Drehwerkzeuge / P Klemmung A188-A199

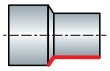
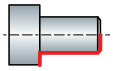
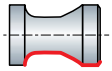
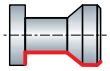
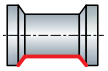
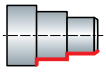
Turning toolholders by M type clamping · Drehwerkzeuge / M Klemmung A200-A215

Turning toolholders by S type clamping · Drehwerkzeuge / S Klemmung A216-A233

Turning toolholders by C type clamping · Drehwerkzeuge / C Klemmung A234

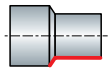
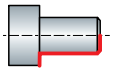
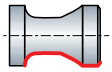
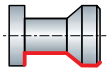
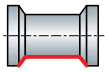
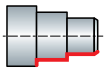
**Detailed table of external turning tools (Ceramic)** **A235-A240**
**Drehwerkzeuge zur Außenbearbeitung für Keramik WSP**

## External turning tools Overview · Drehwerkzeuge zur Außenbearbeitung Übersicht

| Clamping system Klemmsystem | Tool Type Werkzeug Typ | Approach angle Einstellwinkel | Turning Application · Anwendung | | | | | | Workpiece · Werkstück | | Page · Seite |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | External turning Außenbearbeit. | Facing Planbearbeit. | Ext., turning & facing · Außen-, & Planbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Stable Stabil | Unstable Instabil | |
| | | |  |  |  |  |  |  |  |  | |
| D | DCLNR/L  | 95 | | | ✓ | | | | ✓ | | A181 |
| | DDJNR/L  | 93 | | | | | ✓ | | ✓ | | A182 |
| | DSBNR/L  | 75 | ✓ | | | | | | ✓ | | A183 |
| | DTGNR/L  | 91 | ✓ | | | | | | ✓ | | A184 |
| | DVVNN  | 72.5 | | | | | | ✓ | ✓ | | A185 |
| | DVJNR/L  | 93 | | | | | ✓ | | ✓ | | A186 |
| | DWLNR/L  | 95 | | | ✓ | | | | ✓ | | A187 |
| P | PCBNR/ L  | 75 | ✓ | | | | | | ✓ | | A188 |
| | PCLNR/ L  | 95 | | | ✓ | | | | ✓ | | A189 |
| | PDJNR/ L  | 93 | | | | | ✓ | | ✓ | ✓ | A190 |
| | PDNNR/ L  | 63 | | | | | | ✓ | ✓ | | A191 |
| | PSBNR/ L  | 75 | ✓ | | | | | | ✓ | | A192 |
| | PSDNN  | 45 | | | | | | ✓ | ✓ | | A193 |
| | PSKNR/ L  | 75 | | ✓ | | | | | ✓ | | A194 |
| | PSSNR/ L  | 45 | ✓ | | | | | | ✓ | | A195 |

✓ Recommended · Empfehlung

## External turning tools Overview · Drehwerkzeuge zur Außenbearbeitung Übersicht

| Clamping system Klemmsystem | Tool Type Werkzeug Typ | Approach angle Einstellwinkel | Turning Application · Anwendung | | | | | | Workpiece · Werkstück | | Page · Seite |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | External turning Außenbearbeit. | Facing Planbearbeit. | Ext., turning & facing · Außen-, & Planbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Stable Stabil | Unstable Instabil | |
| | | |  |  |  |  |  |  |  |  | |
| P | PTFNR/ L | 91 | | ✓ | | | | | ✓ | ✓ | A196 |
| | PTTNR/ L | 60 | ✓ | | | | | | ✓ | | A197 |
| | PTGNR/ L | 90 | ✓ | | | | | | ✓ | ✓ | A198 |
| | PWLNR/ L | 95 | | | ✓ | | | | ✓ | | A199 |
| M | MCBNR/ L | 75 | ✓ | | | | | | ✓ | | A200 |
| | MCLNR/ L | 95 | | | ✓ | | | | ✓ | | A201 |
| | MDJNR/ L | 93 | | | | | ✓ | | ✓ | ✓ | A202 |
| | MDPNN | 62.5 | | | | | | ✓ | ✓ | | A203 |
| | MSBNR/ L | 75 | ✓ | | | | | | ✓ | | A204 |
| | MSRNR/ L | 75 | ✓ | | | | | | ✓ | | A205 |
| | MSKNR/ L | 75 | | ✓ | | | | | ✓ | | A206 |
| | MSDNN | 45 | | | | | | ✓ | ✓ | | A207 |
| | MTGNR/ L | 90 | ✓ | | | | | | ✓ | ✓ | A208 |
| | MTJNR/ L | 93 | ✓ | | | | | | ✓ | | A209 |
| | MTJNR/L-Z | 93 | | ✓ | | | ✓ | | ✓ | | A210 |

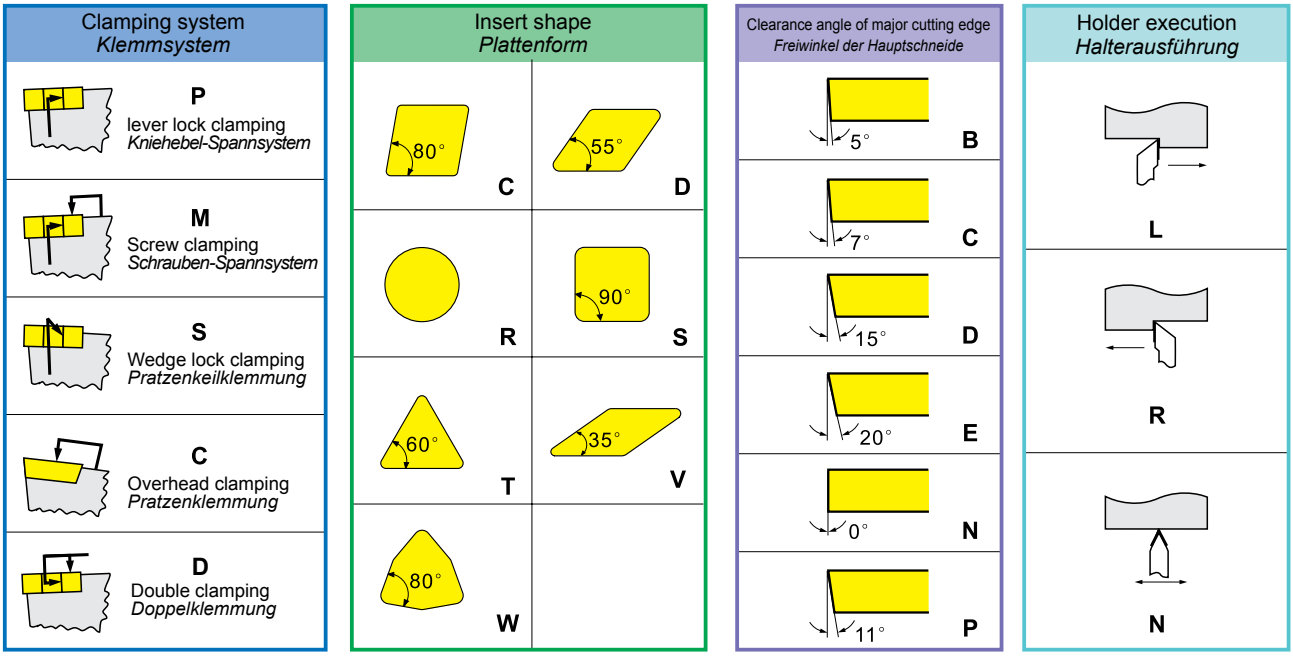
✓ Recommended · Empfehlung

| Clamping system Klemmsystem | Tool Type Werkzeug Typ | Approach angle Einstellwinkel | Turning Application · Anwendung | | | | | | Workpiece · Werkstück | | Page · Seite |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | External turning Außenbearbeit. | Facing Planbearbeit. | Ext., turning & facing · Außen-, & Planbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Stable Stabil | Unstable Instabil | |
| M | MTFNR/ L | 91 | | ✓ | | | | | ✓ | | A211 |
| | MVVNN | 72.5 | | | | | | ✓ | ✓ | | A212 |
| | MVJNR/ L | 93 | | | | | ✓ | | ✓ | ✓ | A213 |
| | MWLNR/ L | 95 | | | ✓ | | | | ✓ | | A214 |
| | MRGNR/ L | - | | | | ✓ | | | ✓ | | A215 |
| | MRDNN | - | | | | | | ✓ | ✓ | | A215 |
| S | SCACR/ L | 90 | ✓ | | | | | | ✓ | ✓ | A216 |
| | SCLCR/ L | 95 | | | ✓ | | | | ✓ | ✓ | A217 |
| | SDACR/ L | 90 | | | | | ✓ | | ✓ | ✓ | A218 |
| | SDJCR/ L | 93 | | | | | ✓ | | ✓ | ✓ | A219 |
| | SDNCN | 62.5 | | | | | | ✓ | ✓ | ✓ | A220 |
| | SVJBR/ L | 93 | | | | | ✓ | | ✓ | ✓ | A221 |
| | SVABR/ L | 90 | | | | | ✓ | | ✓ | ✓ | A222 |
| | SVVBN | 72.5 | | | | | | ✓ | ✓ | ✓ | A223 |
| | SVVCN | 72.5 | | | | | | ✓ | ✓ | ✓ | A224 |

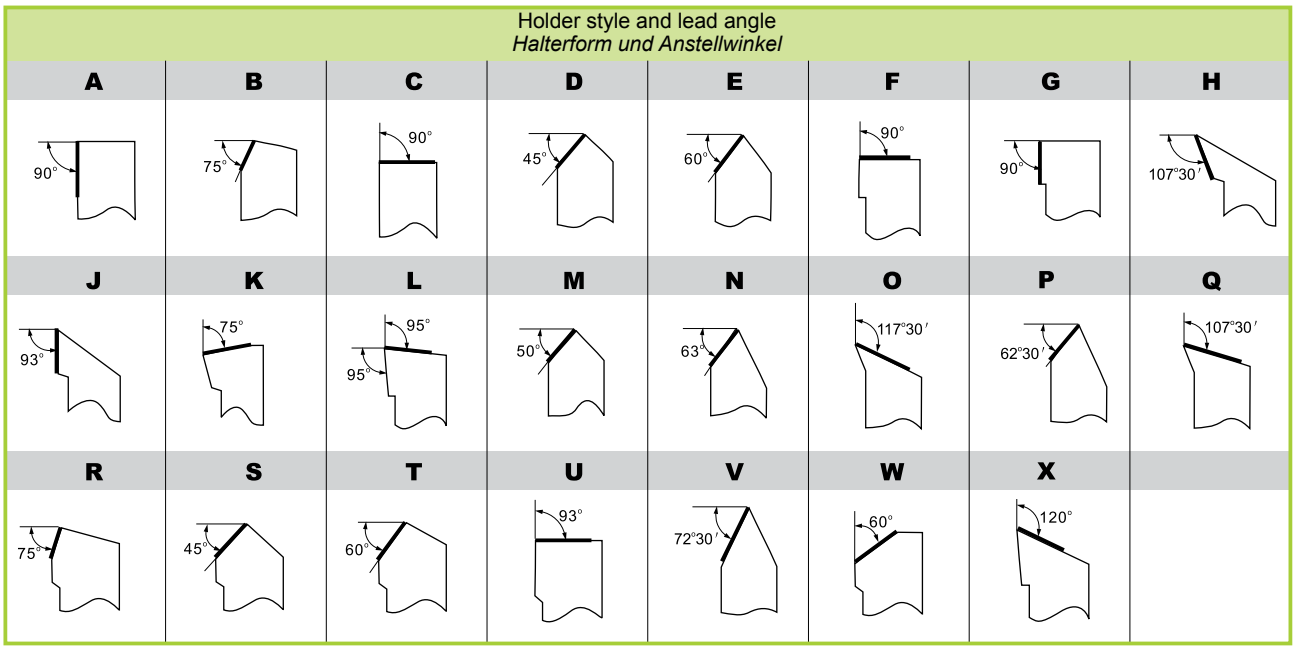
✓ Recommended · Empfehlung

| Clamping system Klemmsystem | Tool Type Werkzeug Typ | Approach angle Einstellwinkel | Turning Application · Anwendung | | | | | | Workpiece · Werkstück | | Page · Seite |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | External turning Außenbearbeit. | Facing Planbearbeit. | Ext., turning & facing ·Außen-, & Planbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Profiling Profilbearbeit. | Stable Stabil | Unstable Instabil | |
| S | SVJCR/ L | 93 | | | | | ✓ | | ✓ | ✓ | A225 |
| | SSBCR/ L | 75 | ✓ | | | | | | ✓ | | A226 |
| | SSDCN | 45 | | | | | | ✓ | ✓ | | A226 |
| | SSKCR/ L | 75 | | ✓ | | | | | ✓ | | A227 |
| | SSSCR/ L | 45 | ✓ | | | | | | ✓ | | A227 |
| | STACR/ L | 90 | ✓ | | | | | | ✓ | ✓ | A228 |
| | STFCR/ L | 91 | | ✓ | | | | | ✓ | | A228 |
| | STGCR/ L | 91 | ✓ | | | | | | ✓ | ✓ | A229 |
| | STTCR/ L | 60 | ✓ | | | | | | ✓ | | A230 |
| | SWACR/ L | 90 | ✓ | | | | | | ✓ | ✓ | A231 |
| | SRDCN | - | | | | | | ✓ | ✓ | | A232 |
| | SRGCR/ L | - | | | | ✓ | | | ✓ | | A233 |
| C | CKJNR/ L | 93 | | | | | ✓ | | ✓ | | A234 |
| | CKNNR/ L | 63 | | | | | | ✓ | ✓ | | A234 |

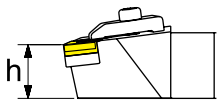
✓ Recommended · Empfehlung


Clamping system
Klemmsystem
P
lever lock clamping
Kniehebel-Spannsystem
M
Screw clamping
Schrauben-Spannsystem
S
Wedge lock clamping
Pratzenkeilklemmung
C
Overhead clamping
Pratzenklemmung
D
Double clamping
Doppelklemmung
Insert shape
Plattenform
80°
C
55°
D
R
90°
S
60°
T
35°
V
80°
W
Clearance angle of major cutting edge
Freiwinkel der Hauptschneide
5°
B
7°
C
15°
D
20°
E
0°
N
11°
P
Holder execution
Halterausführung
L
R
N


P
C
L
N
L

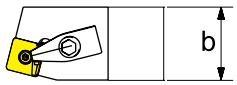

Holder style and lead angle
Halterform und Anstellwinkel
A
90°
B
75°
C
90°
D
45°
E
60°
F
90°
G
90°
H
107°30′
J
93°
K
75°
L
95°
95°
M
50°
N
63°
O
117°30′
P
62°30′
Q
107°30′
R
75°
S
45°
T
60°
U
93°
V
72°30′
W
60°
X
120°

**Height** *Schafthöhe*



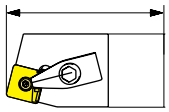

| Code | Height *Höhe* |
|---|---|
| **12** | 12 |
| **16** | 16 |
| **20** | 20 |
| **25** | 25 |
| **32** | 32 |
| **40** | 40 |
| **50** | 50 |

**Schank width** *Schaftbreite*



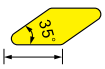

| Code | Width *Breite* |
|---|---|
| **12** | 12 |
| **16** | 16 |
| **20** | 20 |
| **25** | 25 |
| **32** | 32 |
| **40** | 40 |
| **50** | 50 |

**Tool length** *Halterlänge*



| Code | Length *Länge* |
|---|---|
| **H** | 100 |
| **K** | 125 |
| **M** | 150 |
| **P** | 170 |
| **Q** | 180 |
| **R** | 200 |
| **S** | 250 |
| **T** | 300 |

**25 25 M 12**

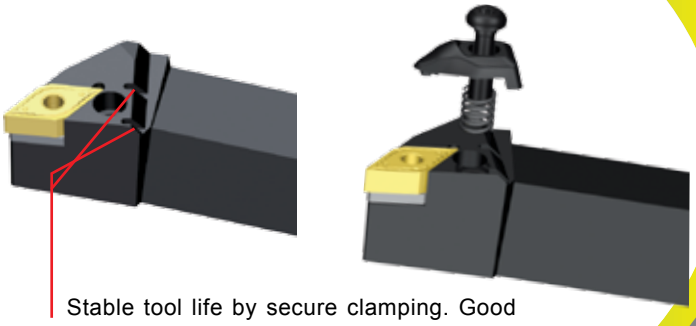
| Insert shape *Plattenform* | Cutting edge length *Schneidkantenlänge* C | D | R | S | T | V | W |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| Diameter of incircle *Durchmesser (mm) IC* | Cutting edge length / *Schneidkantenlänge* | | | | | | |
| 5.556 | --- | --- | --- | --- | 09 | --- | --- |
| 6.350 | 06 | 07 | --- | --- | 11 | --- | --- |
| 9.525 | 09 | 11 | 09 | 09 | 16 | 16 | 06 |
| 12.700 | 12 | 15 | 12 | 12 | 22 | 22 | 08 |
| 15.875 | 16 | 19 | 15 | 15 | 27 | --- | --- |
| 19.050 | 19 | --- | 19 | 19 | 33 | --- | --- |
| 25.400 | 25 | --- | 25 | 25 | 44 | --- | --- |
| 32.000 | --- | --- | 32 | --- | --- | --- | --- |

# D Series double clamping toolholder
# Serie doppel Klemmhalter

D-Type clamp toolholder
Double clamping system in one operation.The special designed clamping finger enable a stable holding of the inserts, with high accuracy and clamping force for better tool life and higher machining accuracy.

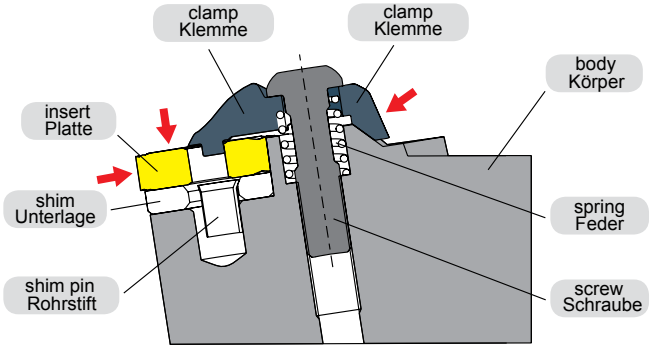
D-Typ Drehhalter
Doppelklemmsystem mit einer Handbewegung. Der speziell designte Spannfinger ermöglicht eine stabile Spannung der Wendeschneidplatten und sorgt für hohe Positioniergenauigkeit und Spannkraft für höhere Standzeiten und Bearbeitungsgenauigkeiten.

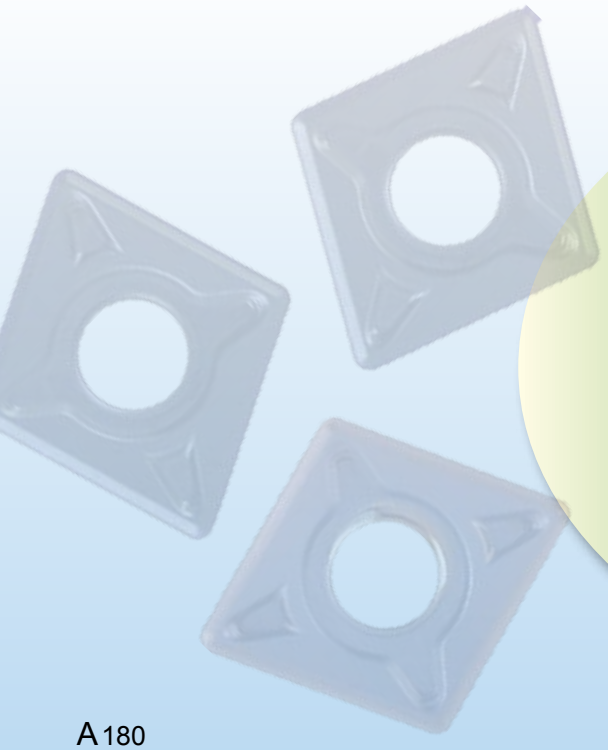
Best indexing accuracy, high clamping force.
Hohe Wiederholgenauigkeit, exzellente Klemmkraft.



Stable tool life by secure clamping. Good anti-corrosive and wear-resistance.

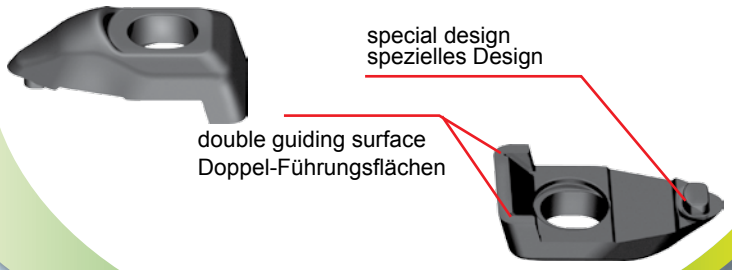
Stabile Standzeiten durch sichere Klemmung. Gute Verschleißfestigkeit.



Special clamp nose design for more stability and high clamping accuracy.

Spezielles Spannfingerdesign für mehr Stabilität und Genauigkeit.



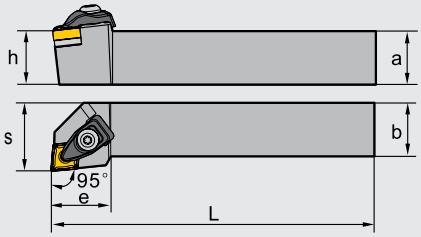
## CN** Toolholder · Halter

D-Clamping · D-Halter

### DCLNR/ L

**Kr:95°**








| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DCLNR/ L** | **1616H09** | ● | ○ | 16 | 16 | 100 | 16 | 20 | 24 | CM5x22C | C09BM | WH30L | C1RA | SM5 ×8.65XA1 | SPR6 |
| | **2020K09** | ● | ● | 20 | 20 | 125 | 20 | 25 | 24 | | | | | | |
| | **2525M09** | ● | ● | 25 | 25 | 150 | 25 | 32 | 24 | | | | | | |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 28 | CM6x25C | C12BM | WH40L | C2RA | SM6 ×10XA1 | SPR4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 28 | | | | | | |
| | **3225P12** | ● | ● | 32 | 25 | 170 | 32 | 32 | 28 | | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A66 | **PM** A67 | **DR** Double side doppel seitig A69 | **HDR** A71 | Flat Glatt A72 | Flat Glatt A137 |
| | **DF** A66 | **DM** A68 | **DR** Single side einseitig A69 | **HPR** A71 | **TC** A69 | |
| | **ADF** A66 | **ZM** A68 | **ER** Double side doppel seitig A70 | | | |
| | **EF** A66 | **EM** A68 | **ER** Single side einseitig A70 | | | |
| | **NF** A67 | **EG** A68 | **SNR** A69 | | | |
| | | **NM** A69 | **LR** Single side einseitig A70 | | | |

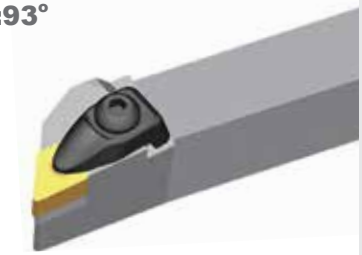
| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **DCLNR/L**H/K/M09** | CN**0903** | CN**0903** | | | | |
| | **DCLNR/L**K/M/P12** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** |

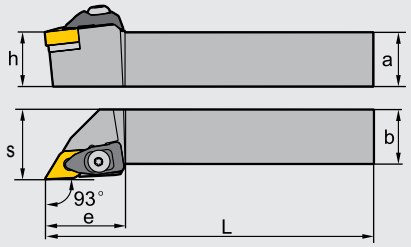
## DN** Toolholder · Halter

D-Clamping · D-Halter

### DDJNR/ L

Kr:93°








| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DDJNR/L** | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 20 | 30 | CM5x22C | D11BM | WH30L | C1RA | SM5 × 8.65XA1 | SPR6 |
| | **2020K11** | ● | ● | 20 | 20 | 125 | 20 | 25 | 30 | | | | | | |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 30 | | | | | | |
| | **3225P11** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 30 | | | | | | |
| | **2020K15** | ● | ● | 20 | 20 | 125 | 20 | 25 | 35 | CM6x25C | D15BM | WH40L | C2RA | SM6 × 10XA1 | SPR4 |
| | **2525M15** | ● | ● | 25 | 25 | 150 | 25 | 32 | 35 | | | | | | |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 40 | 35 | | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A73 | **PM** A75 | **DR** Double side doppel seitig A76 | **HDR** A78 | Flat Glatt A76 | Flat Glatt A138 |
| | **DF** A73 | **DM** A75 | **DR** Single side einseitig A78 | | **TC** A76 | |
| | **ADF** A73 | **ZM** A75 | **ER** Double side doppel seitig A76 | | | |
| | **EF** A74 | **EM** A76 | **ER** Single side einseitig A78 | | | |
| | **NF** A74 | **EG** A76 | **SNR** A78 | | | |
| | **NGF** A74 | **NM** A76 | **LR** Single side einseitig A78 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **DDJNR/L**H/K/M/P11** | DN**1104** | DN**1104** | | | DN**1104** | |
| | **DDJNR/L**K/M/P15** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |

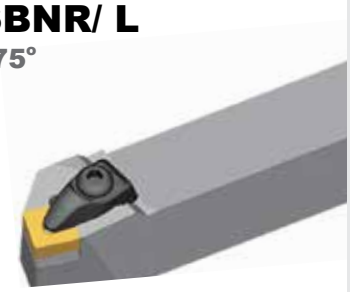
● ex stock · ab Lager ○ on demand · Anfrage

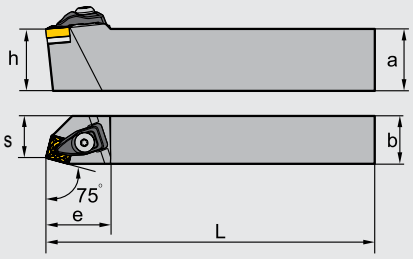
## SN** Toolholder · Halter

D-Clamping · D-Halter

### DSBNR/ L

Kr:75°








| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DSBNR/L** | **1616H09** | ○ | ○ | 16 | 16 | 100 | 16 | 13 | 26 | CM5x22C | S09BM | WH30L | C1RA | SM5 × 8.65XA1 | SPR6 |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 17 | 34 | CM6x25C | S12BM | WH40L | C2RA | SM6 × 10XA1 | SPR4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 22 | 34 | | | | | | |
| | **3225P12** | ● | ● | 32 | 25 | 170 | 32 | 22 | 34 | | | | | | |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 27 | 41 | CM6x25C | S15BM | WH40L | C3RA | SM6 × 10XA2 | SPR4 |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | **HDR**  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **HPR**  A84 | **TC**  A81 | |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | | | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | | | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | | | |

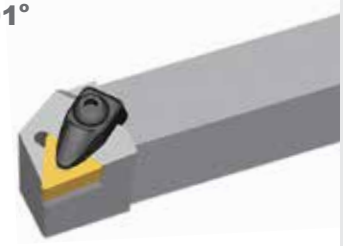
| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **DSBNR/L**H09** | SN**0903** | SN**0903** | | | SN**0903** | |
| | **DSBNR/L**K/M/P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| | **DSBNR/L**P15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** |

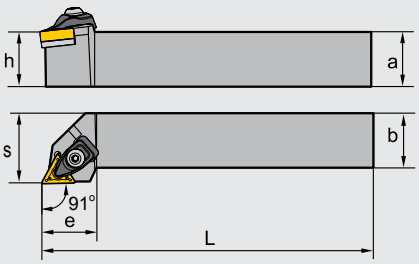
## TN** Toolholder · Halter

D-Clamping · D-Halter

### DTGNR/ L

Kr:91°








| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DTGNR/L** | **1616H16** | ● | ● | 16 | 16 | 100 | 16 | 20 | 25 | CM5x22C | T16BM | WH30L | C1RA | SM5 × 8.65XA1 | SPR6 |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 25 | | | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 25 | | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A88 | **PM** A90 | **DR** Double side doppel seitig A91 | **HDR** A93 | Flat Glatt A94 | Flat Glatt A140 |
| | **DF** A88 | **DM** A90 | **DR** Single side einseitig A92 | | **TC** A91 | |
| | **ADF** A88 | **ZM** A90 | **ER** Double side doppel seitig A92 | | | |
| | **EF** A89 | **EM** A91 | **LR** Single side einseitig A92 | | | |
| | | **EG** A91 | | | | |
| Type · Typ **DTGNR/L**H/K/M16** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |

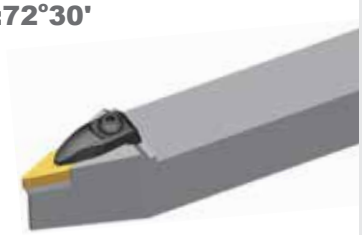
● ex stock · ab Lager ○ on demand · Anfrage

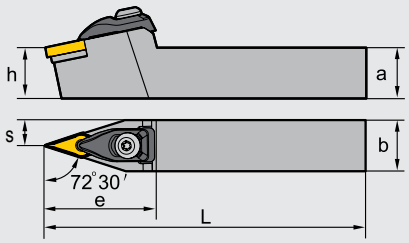
## VN** Toolholder · Halter

D-Clamping · D-Halter

### DVVNN

**Kr:72°30'**

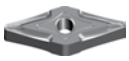







| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | a | b | L | h | s | e | | | | | | |
| **DVVNN** | **2020K16** | ● | 20 | 20 | 125 | 20 | 10 | 44 | CM5×22C | V16BM | WH30L | C6RA | SM5 × 8.65XA1 | SPR6 |
| | **2525M16** | ● | 25 | 25 | 150 | 25 | 12.5 | 44 | | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A95 | **PM**  A96 | **TC**  A96 | Flat Glatt  A141 |
| | **DF**  A95 | **DM**  A96 | | |
| | **ADF**  A95 | **ZM**  A96 | | |
| | **EF**  A95 | **EM**  A96 | | |
| | **NF**  A95 | **NM**  A96 | | |
| | **NGF**  A95 | | | |
| Type · Typ **DVVNN**K/M16** | VN**1604** | VN**1604** | VN**1604** | VN**1604** |

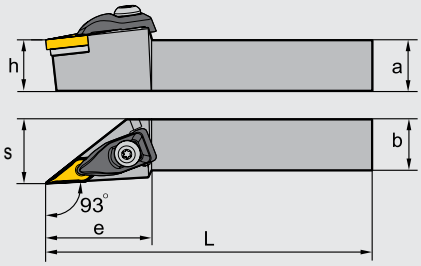
## VN** Toolholder · Halter

D-Clamping · D-Halter

### DVJNR/L

**Kr:93°**








| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DVJNR/L** | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 41 | CM5×22C | V16BM | WH30L | C6RA | SM5 × 8.65XA1 | SPR6 |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 41 | | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A95 | **PM**  A96 | **TC**  A96 | Flat Glatt  A141 |
| | **DF**  A95 | **DM**  A96 | | |
| | **ADF**  A95 | **ZM**  A96 | | |
| | **EF**  A95 | **EM**  A96 | | |
| | **NF**  A95 | **NM**  A96 | | |
| | **NGF**  A95 | | | |
| Type · Typ **DVVNN**K/M16** | VN**1604** | VN**1604** | VN**1604** | VN**1604** |

● ex stock · ab Lager ○ on demand · Anfrage

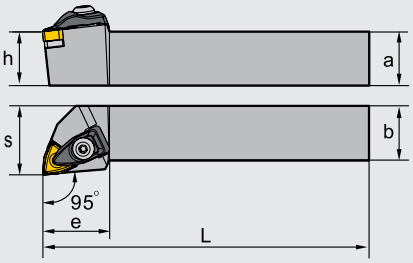
## WN** Toolholder · Halter

D-Clamping · D-Halter

### DWLNR/ L

Kr:95°








| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Shim screw Unterlagsschraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | a | b | L | h | s | e | | | | | | |
| **DWLNR/L** | **1616H06** | ● | ● | 16 | 16 | 100 | 16 | 25 | 24 | CM5×22C | W06BM | WH30L | C1RA | SM5 × 8 .65XA1 | SPR6 |
| | **2020K06** | ● | ● | 20 | 20 | 125 | 20 | 25 | 24 | | | | | | |
| | **2525M06** | ● | ○ | 25 | 25 | 150 | 25 | 32 | 24 | | | | | | |
| | **2020K08** | ● | ● | 20 | 20 | 125 | 20 | 25 | 31 | CM6×25C | W08BM | WH40L | C2RA | SM6 × 10XA1 | SPR4 |
| | **2525M08** | ● | ● | 25 | 25 | 150 | 25 | 32 | 31 | | | | | | |
| | **3225P08** | ● | ● | 32 | 25 | 170 | 32 | 32 | 31 | | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A97 | **PM**  A99 | **DR** Double side doppel seitig  A100 | Flat Glatt  A100 |
| | **DF**  A97 | **DM**  A99 | | **TC**  A100 |
| | **ADF**  A97 | **ZM**  A99 | | |
| | **EF**  A98 | **EM**  A99 | | |
| | **NF**  A98 | **EG**  A99 | | |
| | | **NM**  A99 | | |

| Type · Typ | | | | |
|---|---|---|---|---|
| | DWLNR/L**H/K/M06 | WN**0604** | WN**0604** | WN**0604** | WN**0604** |
| | DWLNR/L**K/M/P08 | WN**0804** | WN**0804** | WN**0804** | WN**0804** |

A

General Turning
Allgemeine Drehbearbeitung

## CN** Toolholder · Halter

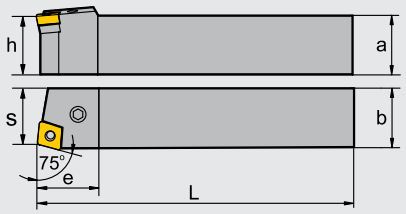
P-Clamping · P-Halter

### PCBNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCBNR/ L** | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 17 | 27 | LEM8×21 | C12AP | WH30L | L4 | SP4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 22 | 27 | | | | | |
| | **3232P12** | ● | ● | 32 | 32 | 170 | 32 | 27 | 27 | | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 22 | 33 | LEM8×25 | C16AP | WH30L | L5 | SP5 |
| | **3232P16** | ● | ● | 32 | 32 | 170 | 32 | 27 | 33 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 27 | 38 | LEM10×27 | C19AP | WH40L | L6 | SP6 |
| | **4040S19** | ● | ● | 40 | 40 | 250 | 40 | 35 | 38 | | | | | |
| | **4040S2507** | ● | ● | 40 | 40 | 250 | 40 | 35 | 50 | LEM12×36A | C25AP-07 | WH50L | L8 | SP8 |
| | **4040S2509** | ● | ● | 40 | 40 | 250 | 40 | 35 | 50 | | C25AP | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A66 | **PM** A67 | **DR** Double side doppel seitig A69 | **HDR** A71 | Flat Glatt A72 |
| | **DF** A66 | **DM** A68 | **DR** Single side einseitig A69 | **HPR** A71 | **TC** A69 |
| | **ADF** A66 | **ZM** A68 | **ER** Double side doppel seitig A70 | | |
| | **EF** A66 | **EM** A68 | **ER** Single side einseitig A70 | | |
| | **NF** A67 | **EG** A68 | **SNR** A69 | | |
| | | **NM** A69 | **LR** Single side einseitig A70 | | |

| Type · Typ | | | | | | |
|---|---|---|---|---|---|---|
| | **PCBNR/L**K / M / P12** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** |
| | **PCBNR/L**M / P16** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | CN**1606** |
| | **PCBNR/L**P / S19** | | CN**1906** | CN**1906** | CN**1906** | CN**1906** |
| | **PCBNR/L**S2507** | | | CN**2507** | | |
| | **PCBNR/L**S2509** | | | CN**2509** | CN**2509** | |

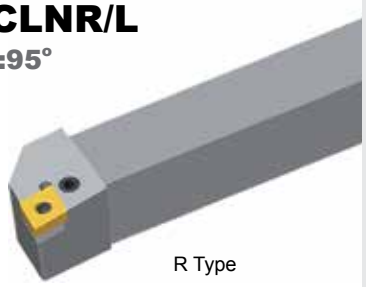
● ex stock · ab Lager ○ on demand · Anfrage

## CN** Toolholder · Halter

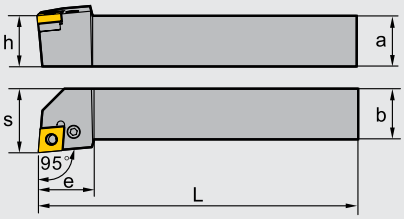
P-Clamping · P-Halter

# PCLNR/L

**Kr:95°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PCLNR/ L** | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 20 | 20 | LEM6×13.4A | C09AP | WH25L | L3 | SP10 |
| | **2020K09** | ● | ● | 20 | 20 | 125 | 20 | 25 | 22 | | | | | |
| | **2525M09** | ● | ● | 25 | 25 | 150 | 25 | 32 | 22 | | | | | |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 28 | LEM8×21 | C12AP | WH30L | L4 | SP4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 28 | | | | | |
| | **3232P12** | ● | ● | 32 | 32 | 170 | 32 | 40 | 28 | | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 33 | LEM8×25 | C16AP | WH30L | L5 | SP5 |
| | **3232P16** | ● | ● | 32 | 32 | 170 | 32 | 40 | 33 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 40 | 38 | LEM10×27 | C19AP | WH40L | L6 | SP6 |
| | **4040S19** | ● | ● | 40 | 40 | 250 | 40 | 50 | 38 | | | | | |
| | **4040S2507** | ● | ● | 40 | 40 | 250 | 40 | 50 | 49 | LEM12×36A | C25AP-07 | WH50L | L8 | SP8 |
| | **4040S2509** | ● | ● | 40 | 40 | 250 | 40 | 50 | 49 | | C25AP | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape<br>Schneidplattenform | **SF** A66 | **PM** A67 | **DR** Double side doppel seitig A69 | **HDR** A71 | Flat Glatt A72 | Flat Glatt A137 |
| | **DF** A66 | **DM** A68 | **DR** Single side einseitig A69 | **HPR** A71 | **TC** A69 | |
| | **ADF** A66 | **ZM** A68 | **ER** Double side doppel seitig A70 | | | |
| | **EF** A66 | **EM** A68 | **ER** Single side einseitig A70 | | | |
| | **NF** A67 | **EG** A68 | **SNR** A69 | | | |
| | | **NM** A69 | **LR** Single side einseitig A70 | | | |

| Type . Typ | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| **PCLNR/L**H / K / M09** | CN**0903** | CN**0903** | | | | |
| **PCLNR/L**K / M / P12** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** |
| **PCLNR/L**M / P16** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | |
| **PCLNR/L**P / S19** | | CN**1906** | CN**1906** | CN**1906** | CN**1906** | |
| **PCLNR/L**S2507** | | | CN**2507** | | | |
| **PCLNR/L**S2509** | | | CN**2509** | CN**2509** | | |

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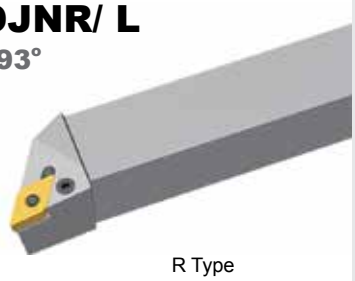
General Turning
Allgemeine Drehbearbeitung

## DN** Toolholder · Halter

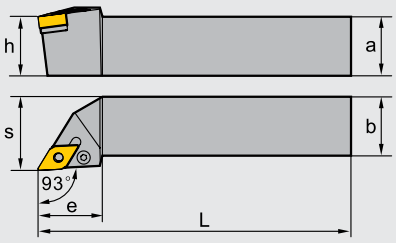
P-Clamping · P-Halter

### PDJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PDJNR/ L** | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 20 | 25 | LEM6×13.4A | D11AP | WH25L | L3 | SP3 |
| | **2020K11** | ● | ● | 20 | 20 | 125 | 20 | 25 | 25 | | | | | |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 30 | | | | | |
| | **2020K15** | ● | ● | 20 | 20 | 125 | 20 | 25 | 35 | LEM8×21 | D15AP | WH30L | L4B | SP4 |
| | **2525M15** | ● | ● | 25 | 25 | 150 | 25 | 32 | 35 | | | | | |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 40 | 35 | | | | | |
| | **2020K15-3** | ● | ● | 20 | 20 | 125 | 20 | 25 | 35 | LEM8×21 | D15AP | WH30L | L4 | SP4 |
| | **2525M15-3** | ● | ● | 25 | 25 | 150 | 25 | 32 | 35 | | | | | |
| | ***3232P15-3** | ● | ● | 32 | 32 | 170 | 32 | 40 | 35 | | | | | |

* For DNMG1504 / *Für DNMG1504*

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A73 | **PM** A75 | **DR** Double side doppel seitig A76 | **HDR** A78 | Flat Glatt A76 | Flat Glatt A138 |
| | **DF** A73 | **DM** A75 | **DR** Single side einseitig A78 | | **TC** A76 | |
| | **ADF** A73 | **ZM** A75 | **ER** Double side doppel seitig A76 | | | |
| | **EF** A74 | **EM** A76 | **ER** Single side einseitig A78 | | | |
| | **NF** A74 | **EG** A76 | **SNR** A78 | | | |
| | **NGF** A74 | **NM** A76 | **LR** Single side einseitig A78 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PDJNR/L**H / K / M11** | DN**1104** | DN**1104** | | | DN**1104** | |
| | **PDJNR/L**K / M / P15** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |
| | **PDJNR/L**K / M / P15-3** | DN**1504** | DN**1504** | | | DN**1504** | DN**1504** |

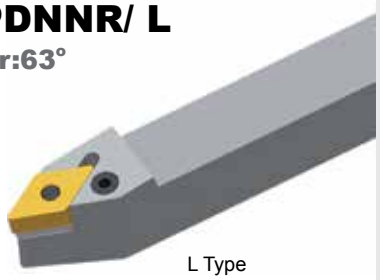
● ex stock · ab Lager ○ on demand · Anfrage

## DN** Toolholder · Halter

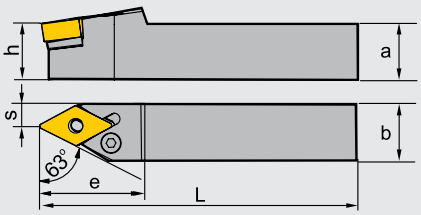
P-Clamping · P-Halter

### PDNNR/ L

**Kr:63°**



L Type
Linksausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PDNNR/ L | 2020K15 | ● | ● | 20 | 20 | 125 | 20 | 8 | 37 | LEM8×21 | D15AP | WH30L | L4B | SP4 |
| | 2525M15 | ● | ● | 25 | 25 | 150 | 25 | 12.5 | 37 | | | | | |
| | 3232P15 | ● | ● | 32 | 32 | 170 | 32 | 16 | 37 | | | | | |
| | 2020K15-3 | ● | ○ | 20 | 20 | 125 | 20 | 8 | 37 | LEM8×21 | D15AP | WH30L | L4 | SP4 |
| | 2525M15-3 | ● | ○ | 25 | 25 | 150 | 25 | 12.5 | 37 | | | | | |
| | *3232P15-3 | ● | ● | 32 | 32 | 170 | 32 | 16 | 37 | | | | | |

* For DNMG1504 / *Für DNMG1504*

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A73 | PM A75 | DR Double side doppel seitig A76 | HDR A78 | Flat Glatt A76 | Flat Glatt A138 |
| | DF A73 | DM A75 | DR Single side einseitig A78 | | TC A76 | |
| | ADF A73 | ZM A75 | ER Double side doppel seitig A76 | | | |
| | EF A74 | EM A76 | ER Single side einseitig A78 | | | |
| | NF A74 | EG A76 | SNR A78 | | | |
| | NGF A74 | NM A76 | LR Single side einseitig A78 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PDNNR/L**K /M/ P15 | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |
| | PDNNR/L**K / M/ P15-3 | DN**1504** | DN**1504** | | | DN**1504** | DN**1504** |

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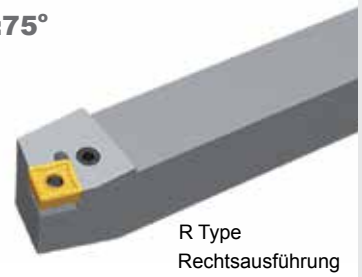
General Turning
Allgemeine Drehbearbeitung

## SN** Toolholder · Halter

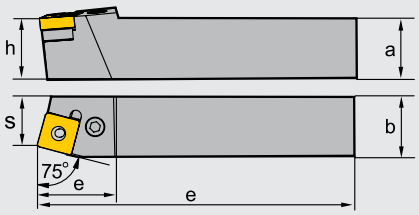
P-Clamping · P-Halter

### PSBNR/ L

Kr:75°



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PSBNR/ L | 1616H09 | ● | ○ | 16 | 16 | 100 | 16 | 13 | 21 | LEM6×13.4A | S09AP | WH25L | L3 | SP10 |
| | 2020K09 | ● | ○ | 20 | 20 | 125 | 20 | 17 | 23 | | | | | |
| | 2020K12 | ● | ● | 20 | 20 | 125 | 20 | 17 | 28 | LEM8×21 | S12AP | WH30L | L4 | SP4 |
| | 2525M12 | ● | ● | 25 | 25 | 125 | 25 | 22 | 28 | | | | | |
| | 3225P12 | ● | ○ | 32 | 25 | 170 | 32 | 22 | 28 | | | | | |
| | 3232P12 | ● | ○ | 32 | 32 | 170 | 32 | 27 | 28 | | | | | |
| | 2525M15 | ● | ○ | 25 | 25 | 150 | 25 | 22 | 35 | LEM8×25 | S15AP | WH30L | L5 | SP5 |
| | 3232P15 | ● | ● | 32 | 32 | 170 | 32 | 27 | 35 | | | | | |
| | 3232P19 | ● | ● | 32 | 32 | 170 | 32 | 27 | 40 | LEM10×27 | S19AP | WH40L | L6 | SP6 |
| | 4040S19 | ● | ● | 40 | 40 | 250 | 40 | 35 | 40 | | | | | |
| | 4040S2507 | ○ | ○ | 40 | 40 | 250 | 40 | 35 | 48 | LEM12×36A | S25AP | WH50L | L8 | SP8 |
| | 4040S2509 | ○ | ○ | 40 | 40 | 250 | 40 | 35 | 48 | | S25AP-09 | | | |

### Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF  A79 | PM  A80 | DR Double side doppel seitig  A82 | HDR  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | DF  A79 | DM  A81 | DR Single side einseitig  A83 | HPR  A84 | TC  A81 | |
| | ADF  A79 | EM  A81 | ER Double side doppel seitig  A82 | | | |
| | EF  A80 | EG  A81 | ER Single side einseitig  A84 | | | |
| | | NM  A82 | LR Single side einseitig  A83 | | | |

| Type · Typ | K09 | M12 | M15 | P19 | S2507 | S2509 |
|---|---|---|---|---|---|---|
| PSBNR/L**H / K09 | SN**0903** | SN**0903** | | | | SN**0903** |
| PSBNR/L**K / M / P12 | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| PSBNR/L**M / P15 | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| PSBNR/L**P / S19 | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |
| PSBNR/L**S2507 | | | SN**2507** | SN**2507** | | |
| PSBNR/L**S2509 | | | SN**2509** | SN**2509** | | |

● ex stock · ab Lager ○ on demand · Anfrage

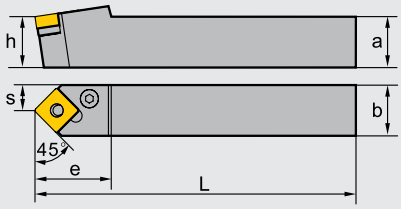
## SN** Toolholder · Halter

P-Clamping · P-Halter

# PSDNN

**Kr:45°**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PSDNN** | **1212F09** | ○ | 12 | 12 | 80 | 12 | 6 | 21 | LEM5×12B | — | WH20L | L3B | — |
| | **1616H09** | ● | 16 | 16 | 100 | 16 | 8 | 23 | LEM6×13.4A | S09AP | WH25L | L3 | SP10 |
| | **2020K12** | ● | 20 | 20 | 125 | 20 | 10 | 30 | LEM8×21 | S12AP | WH30L | L4 | SP4 |
| | **2525M12** | ● | 20 | 20 | 150 | 20 | 12.5 | 30 | | | | | |
| | **3232P12** | ● | 32 | 32 | 170 | 32 | 16 | 40 | | | | | |
| | **2525M15** | ● | 25 | 25 | 150 | 25 | 12.5 | 40 | LEM8×25 | S15AP | WH30L | L5 | SP5 |
| | **3232P15** | ● | 32 | 32 | 170 | 32 | 16 | 40 | | | | | |
| | **3232P19** | ● | 32 | 32 | 170 | 32 | 16 | 40 | LEM10×27 | S19AP | WH40L | L6 | SP6 |
| | **4040S19** | ● | 40 | 40 | 250 | 40 | 20 | 40 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A79 | **PM** A80 | **DR** Double side doppel seitig A82 | **HDR** A84 | Flat Glatt A86 | Flat Glatt A139 |
| | **DF** A79 | **DM** A81 | **DR** Single side einseitig A83 | **HPR** A84 | **TC** A81 | |
| | **ADF** A79 | **EM** A81 | **ER** Double side doppel seitig A82 | | | |
| | **EF** A80 | **EG** A81 | **ER** Single side einseitig A84 | | | |
| | | **NM** A82 | **LR** Single side einseitig A83 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PSDNN**F / H09** | SN**0903** | SN**0903** | | | SN**0903** | |
| | **PSDNN**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| | **PSDNN**M / P15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| | **PSDNN**P / S19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |

A

General Turning
Allgemeine Drehbearbeitung

## SN** Toolholder · Halter

P-Clamping · P-Halter

### PSKNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PSKNR/ L** | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 20 | 17 | LEM6×13.4A | S09AP | WH25L | L3 | SP10 |
| | **2020K09** | ● | ○ | 20 | 20 | 125 | 20 | 25 | 20 | | | | | |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 26 | LEM8×21 | S12AP | WH30L | L4 | SP4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 26 | | | | | |
| | **3232P12** | ● | ● | 32 | 32 | 170 | 32 | 40 | 26 | | | | | |
| | **2525M15** | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | LEM8×25 | S15AP | WH30L | L5 | SP5 |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 40 | 32 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 40 | 36 | LEM10×27 | S19AP | WH40L | L6 | SP6 |
| | **4040S19** | ○ | ● | 40 | 40 | 250 | 40 | 50 | 40 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A79 | **PM** A80 | **DR** Double side doppel seitig A82 | **HDR** A84 | Flat Glatt A86 | Flat Glatt A139 |
| | **DF** A79 | **DM** A81 | **DR** Single side einseitig A83 | **HPR** A84 | **TC** A81 | |
| | **ADF** A79 | **EM** A81 | **ER** Double side doppel seitig A82 | | | |
| | **EF** A80 | **EG** A81 | **ER** Single side einseitig A84 | | | |
| | | **NM** A82 | **LR** Single side einseitig A83 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PSKNR/ L**H / K09** | SN**0903** | SN**0903** | | | SN**0903** | |
| | **PSKNR/ L**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| | **PSKNR/ L**M / P15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| | **PSKNR/ L**P / S19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |

● ex stock · ab Lager ○ on demand · Anfrage

## SN** Toolholder · Halter

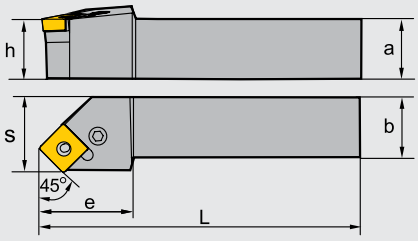
P-Clamping · P-Halter

### PSSNR/ L

**Kr:45°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PSSNR/ L** | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 20 | 25 | LEM6×13.4A | S09AP | WH25L | L3 | SP10 |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 30 | LEM8×21 | S12AP | WH30L | L4 | SP4 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 30 | | | | | |
| | **3232P12** | ● | ● | 32 | 32 | 170 | 32 | 40 | 40 | | | | | |
| | **2525M15** | ● | ● | 25 | 25 | 150 | 25 | 32 | 30 | LEM8×25 | S15AP | WH30L | L5 | SP5 |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 40 | 40 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 40 | 40 | LEM10×27 | S19AP | WH40L | L6 | SP6 |
| | **4040S19** | ● | ● | 40 | 40 | 250 | 40 | 50 | 50 | | | | | |
| | **4040S2507** | ● | ● | 40 | 40 | 250 | 40 | 50 | 50 | LEM12×36A | S25AP | WH50L | L8 | SP8 |
| | **4040S2509** | ● | ● | 40 | 40 | 250 | 40 | 50 | 50 | | S25AP-09 | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A79 | **PM** A80 | **DR** Double side doppel seitig A82 | **HDR** A84 | Flat Glatt A86 | Flat Glatt A139 |
| | **DF** A79 | **DM** A81 | **DR** Single side einseitig A83 | **HPR** A84 | **TC** A81 | |
| | **ADF** A79 | **EM** A81 | **ER** Double side doppel seitig A82 | | | |
| | **EF** A80 | **EG** A81 | **ER** Single side einseitig A84 | | | |
| | | **NM** A82 | **LR** Single side einseitig A83 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PSSNR/ L**H09** | SN**0903** | SN**0903** | SN**0903** | | SN**0903** | |
| | **PSSNR/ L**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| | **PSSNR/ L**M / P15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| | **PSSNR/ L**P / S19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |
| | **PSSNR/ L**S2507** | | | SN**2507** | SN**2507** | | |
| | **PSSNR/ L**S2509** | | | SN**2509** | SN**2509** | | |

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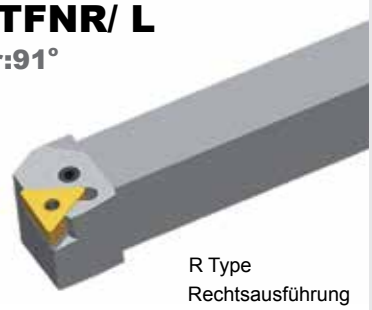
General Turning
Allgemeine Drehbearbeitung

## TN** Toolholder · Halter

P-Clamping · P-Halter

### PTFNR/ L

**Kr:91°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PTFNR/ L** | **1616H16** | ● | ● | 16 | 16 | 100 | 16 | 20 | 20 | LEM6×13.4A | T16AP | WH25L | L3 | SP3 |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 20 | | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 20 | | | | | |
| | **2525M22** | ● | ● | 25 | 25 | 150 | 25 | 32 | 25 | LEM8×21 | T22AP | WH30L | L4 | SP4 |
| | **3232P22** | ● | ● | 32 | 32 | 170 | 32 | 40 | 25 | | | | | |
| | **3232P27** | ● | ○ | 32 | 32 | 170 | 32 | 40 | 34 | LEM8×25 | T27AP | WH30L | L5 | SP5 |
| | **4040S27** | ○ | ○ | 40 | 40 | 250 | 40 | 50 | 34 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A88 | **PM** A90 | **DR** Double side doppel seitig A91 | **HDR** A93 | Flat Glatt A94 | Flat Glatt A140 |
| | **DF** A88 | **DM** A90 | **DR** Single side einseitig A92 | | **TC** A91 | |
| | **ADF** A88 | **ZM** A90 | **ER** Double side doppel seitig A92 | | | |
| | **EF** A89 | **EM** A91 | **LR** Single side einseitig A92 | | | |
| | | **EG** A91 | | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PTFNR/ L**H / K / M16** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | **PTFNR/ L**M / P22** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |
| | **PTFNR/ L**P / S27** | | | TN**2706** | TN**2706** | TN**2706** | |

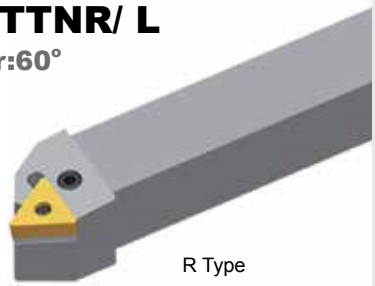
● ex stock · ab Lager ○ on demand · Anfrage

## TN** Toolholder · Halter

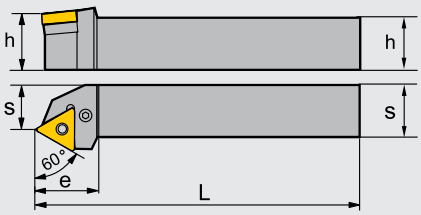
P-Clamping · P-Halter

### PTTNR/ L

**Kr:60°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTTNR/ L | 1616H16 | ● | ● | 16 | 16 | 100 | 16 | 13 | 25 | LEM6×13.4A | T16AP | WH25L | L3 | SP3 |
| | 2020K16 | ● | ○ | 20 | 20 | 125 | 20 | 17 | 25 | | | | | |
| | 2525M22 | ● | ● | 25 | 25 | 150 | 20 | 22 | 32 | LEM8×21 | T22AP | WH30L | L4 | SP4 |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A88 | PM A90 | DR Double side doppel seitig A91 | HDR A93 | Flat Glatt A94 | Flat Glatt A140 |
| | DF A88 | DM A90 | DR Single side einseitig A92 | | TC A91 | |
| | ADF A88 | ZM A90 | ER Double side doppel seitig A92 | | | |
| | EF A89 | EM A91 | LR Single side einseitig A92 | | | |
| | | EG A91 | | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PTTNR / L**H / K16 | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | PTTNR / L**M22 | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |

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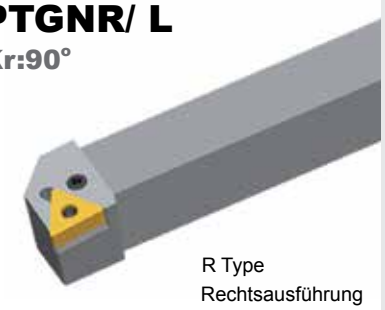
General Turning
Allgemeine Drehbearbeitung

## TN** Toolholder · Halter

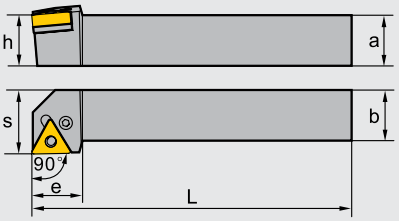
P-Clamping · P-Halter

### PTGNR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTGNR/ L | 1010E11 | ● | ○ | 10 | 10 | 70 | 10 | 14 | 16 | LEM5×9B | — | WH20L | L2 | — |
| | 1212F11 | ● | ● | 12 | 12 | 80 | 12 | 16 | 14 | | | | | |
| | 1616H11 | ● | ○ | 16 | 16 | 100 | 16 | 20 | 18 | | | | | |
| | 2020K11 | ● | ○ | 20 | 20 | 125 | 20 | 25 | 19 | | | | | |
| | 2525M11 | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 20 | | | | | |
| | 1616H16 | ● | ● | 16 | 16 | 100 | 16 | 20 | 20 | LEM6×13.4A | T16AP | WH25L | L3 | SP3 |
| | 2020K16 | ● | ● | 20 | 20 | 125 | 20 | 25 | 20 | | | | | |
| | 2525M16 | ● | ● | 25 | 25 | 150 | 25 | 32 | 20 | | | | | |
| | 3232P16 | ● | ○ | 32 | 32 | 170 | 32 | 40 | 20 | | | | | |
| | 2525M22 | ● | ● | 25 | 25 | 150 | 25 | 32 | 28 | LEM8×21 | T22AP | WH30L | L4 | SP4 |
| | 3232P22 | ● | ● | 32 | 32 | 170 | 32 | 40 | 28 | | | | | |
| | 3232P27 | ● | ○ | 32 | 32 | 170 | 32 | 40 | 33 | LEM8×25 | T27AP | WH30L | L5 | SP5 |
| | 4040S27 | ○ | ○ | 40 | 40 | 250 | 40 | 50 | 33 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A88 | PM A90 | DR Double side doppel seitig A91 | HDR A93 | Flat Glatt A94 | Flat Glatt A140 |
| | DF A88 | DM A90 | DR Single side einseitig A92 | | TC A91 | |
| | ADF A88 | ZM A90 | ER Double side doppel seitig A92 | | | |
| | EF A89 | EM A91 | LR Single side einseitig A92 | | | |
| | | EG A91 | | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PTGNR/L**E / F / H / K / M11 | TN**1103** | TN**1103** | | | TN**1103** | |
| | PTGNR/L**H / K / M16 | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | PTGNR /L**M / P22 | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |
| | PTGNR/L**P / S27 | | | TN**2706** | TN**2706** | TN**2706** | |

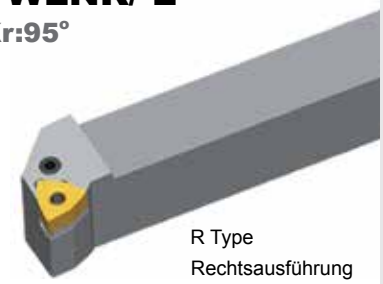
● ex stock · ab Lager ○ on demand · Anfrage

## WN** Toolholder · Halter

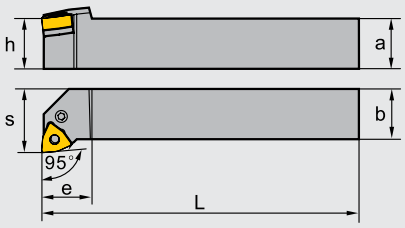
P-Clamping · P-Halter

### PWLNR/ L

**Kr:95°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Wrench Schlüssel | Lever Kniehebel | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PWLNR/ L** | **1616H06** | ● | ● | 16 | 16 | 100 | 16 | 20 | 20 | LEM6×13.4A | W06AP | WH25L | L3 | SP3 |
| | **2020K06** | ● | ● | 20 | 20 | 125 | 20 | 25 | 20 | | | | | |
| | **2525M06** | ● | ● | 25 | 25 | 150 | 25 | 32 | 20 | | | | | |
| | **2020K08** | ● | ● | 20 | 20 | 125 | 20 | 25 | 26 | LEM8×21 | W08AP | WH30L | L4 | SP4 |
| | **2525M08** | ● | ● | 25 | 25 | 150 | 25 | 32 | 26 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A97 | **PM** A99 | **DR** Double side doppel seitig A100 | Flat Glatt A100 |
| | **DF** A97 | **DM** A99 | | **TC** A100 |
| | **ADF** A97 | **ZM** A99 | | |
| | **EF** A98 | **EM** A99 | | |
| | **NF** A98 | **EG** A99 | | |
| | | **NM** A99 | | |

| Type · Typ | | | | | |
|---|---|---|---|---|---|
| | **PWLNR/ L**H / K / M06** | WN**0604** | WN**0604** | WN**0604** | WN**0604** |
| | **PWLNR/ L**K / M08** | WN**0804** | WN**0804** | WN**0804** | WN**0804** |

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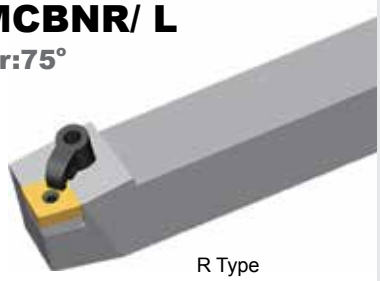
General Turning
Allgemeine Drehbearbeitung

## CN** Toolholder · Halter

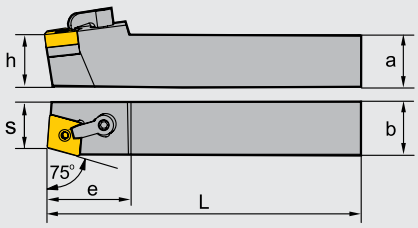
M-Clamping · M-Halter

### MCBNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MCBNR/ L** | **2020K12** | ● | ○ | 20 | 20 | 125 | 20 | 17 | 32 | DM6×25 | C12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 20 | 22 | 32 | DM6×30 | | | | |
| | **3225P12** | ● | ○ | 32 | 25 | 170 | 32 | 22 | 32 | | | | | |
| | **2525M16** | ○ | ○ | 25 | 25 | 150 | 25 | 22 | 40 | DM6×30 | C16BM | WH30L | C2RD | TM8×21 |
| | **3232P16** | ● | ● | 32 | 32 | 170 | 32 | 27 | 40 | | | | | |
| | **3232P19** | ○ | ○ | 32 | 32 | 170 | 32 | 27 | 45 | DM8×30X | C19BM | WH40L | C5RD | TM10×21 |
| | **4040R19** | ○ | ○ | 40 | 40 | 200 | 40 | 35 | 45 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A66 | **PM** A67 | **DR** Double side doppel seitig A69 | **HDR** A71 | Flat Glatt A72 |
| | **DF** A66 | **DM** A68 | **DR** Single side einseitig A69 | **HPR** A71 | **TC** A69 |
| | **ADF** A66 | **ZM** A68 | **ER** Double side doppel seitig A70 | | |
| | **EF** A66 | **EM** A68 | **ER** Single side einseitig A70 | | |
| | **NF** A67 | **EG** A68 | **SNR** A69 | | |
| | | **NM** A69 | **LR** Single side einseitig A70 | | |

| Type · Typ | | | | | | |
|---|---|---|---|---|---|---|
| | **MCBNR/ L**K / M / P12** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** |
| | **MCBNR/ L**M / P16** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | CN**1606** |
| | **MCBNR/ L**P / R19** | | CN**1906** | CN**1906** | CN**1906** | CN**1906** |

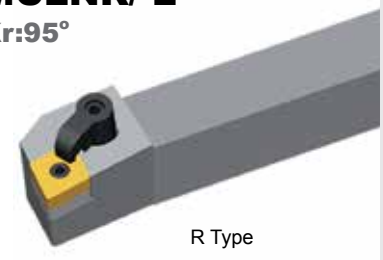
● ex stock · ab Lager ○ on demand · Anfrage

## CN** Toolholder · Halter

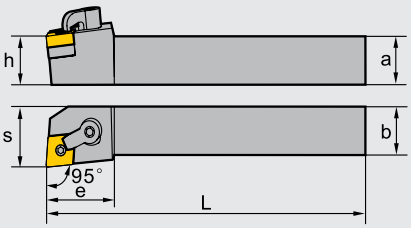
M-Clamping · M-Halter

### MCLNR/ L

**Kr:95°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MCLNR/ L** | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | C12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | **3225P12** | ● | ● | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 38 | DM6×30 | C16BM | WH30L | C2RD | TM8×21 |
| | **3232P16** | ● | ● | 32 | 32 | 170 | 32 | 40 | 38 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 40 | 45 | DM8×30X | C19BM | WH40L | C5RD | TM10×21 |
| | **4040R19** | ● | ○ | 40 | 40 | 200 | 40 | 50 | 45 | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A66 | **PM** A67 | **DR** Double side doppel seitig A69 | **HDR** A71 | Flat Glatt A72 | Flat Glatt A137 |
| | **DF** A66 | **DM** A68 | **DR** Single side einseitig A69 | **HPR** A71 | **TC** A69 | |
| | **ADF** A66 | **ZM** A68 | **ER** Double side doppel seitig A70 | | | |
| | **EF** A66 | **EM** A68 | **ER** Single side einseitig A70 | | | |
| | **NF** A67 | **EG** A68 | **SNR** A69 | | | |
| | | **NM** A69 | **LR** einseitig A70 | | | |

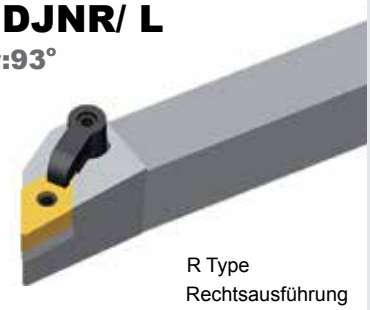
| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **MCLNR/ L**K / M / P12** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** | CN**1204** |
| | **MCLNR/ L**M / P16** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | CN**1606** | |
| | **MCLNR/ L**P / R19** | | CN**1906** | CN**1906** | CN**1906** | CN**1906** | |

## DN** Toolholder · Halter

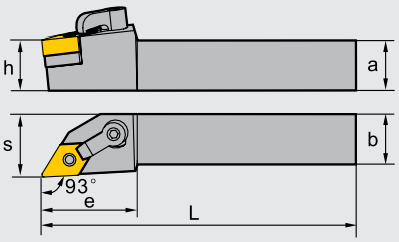
M-Clamping · M-Halter

### MDJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MDJNR/ L** | **2020K11** | ● | ● | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | D11BM | WH20L WH30L | C1RD | TM5×13 |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | **3225P11** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | **2020K15** | ● | ● | 20 | 20 | 125 | 20 | 25 | 38 | DM6×25 | D15BM | WH30L | C2RD | TM6×19 |
| | **2525M15** | ● | ● | 25 | 25 | 150 | 25 | 32 | 38 | DM6×30 | | | | |
| | **3225P15** | ● | ● | 32 | 25 | 170 | 32 | 32 | 38 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A73 | **PM** A75 | **DR** Double side doppel seitig A76 | **HDR** A78 | Flat Glatt A76 | Flat Glatt A138 |
| | **DF** A73 | **DM** A75 | **DR** Single side einseitig A78 | | **TC** A76 | |
| | **ADF** A73 | **ZM** A75 | **ER** Double side doppel seitig A76 | | | |
| | **EF** A74 | **EM** A76 | **ER** Single side einseitig A78 | | | |
| | **NF** A74 | **EG** A76 | **SNR** A78 | | | |
| | **NGF** A74 | **NM** A76 | **LR** Single side einseitig A78 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **MDJNR / L**K / M / P11** | DN**1104** | DN**1104** | | | DN**1104** | |
| | **MDJNR/ L**K / M / P15** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |

● ex stock · ab Lager ○ on demand · Anfrage

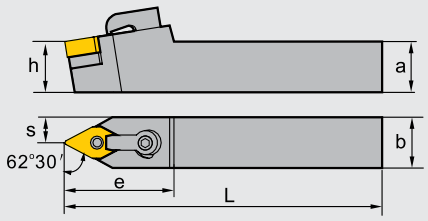
## DN** Toolholder · Halter

M-Clamping · M-Halter

### MDPNN

**Kr:62°30'**

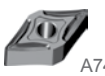
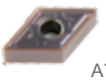







| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e |  |  |  |  |  |
| **MDPNN** | **2020K11** | ● | 20 | 20 | 125 | 20 | 10 | 35 | DM6×25 | D11BM | WH20L WH30L | C1RD | TM5×13 |
| | **2525M11** | ● | 25 | 25 | 150 | 25 | 12.5 | 35 | DM6×30 | | | | |
| | **3225P11** | ● | 32 | 25 | 170 | 32 | 12.5 | 35 | | | | | |
| | **2020K15** | ● | 20 | 20 | 125 | 20 | 10 | 40 | DM6×25 | D15BM | WH30L | C2RD | TM6×19 |
| | **2525M15** | ● | 25 | 25 | 150 | 25 | 12.5 | 40 | DM6×30 | | | | |
| | **3225P15** | ● | 32 | 25 | 170 | 32 | 12.5 | 40 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A73 | **PM**  A75 | **DR** Double side doppel seitig  A76 | **HDR**  A78 | Flat Glatt  A76 | Flat Glatt  A138 |
| | **DF**  A73 | **DM**  A75 | **DR** Single side einseitig  A78 | | **TC**  A76 | |
| | **ADF**  A73 | **ZM**  A75 | **ER** Double side doppel seitig  A76 | | | |
| | **EF**  A74 | **EM**  A76 | **ER** Single side einseitig  A78 | | | |
| | **NF**  A74 | **EG**  A76 | **SNR**  A78 | | | |
| | **NGF**  A74 | **NM**  A76 | **LR** Single side einseitig  A78 | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **MDPNN**K / M / P11** | DN**1104** | DN**1104** | | | DN**1104** | |
| | **MDPNN**K / M / P15** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |

A

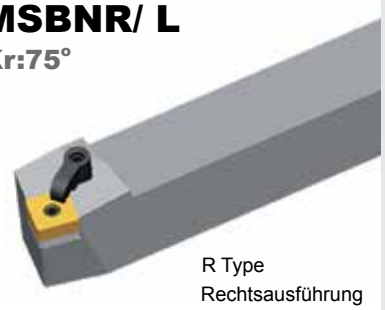
General Turning
Allgemeine Drehbearbeitung

## SN** Toolholder · Halter

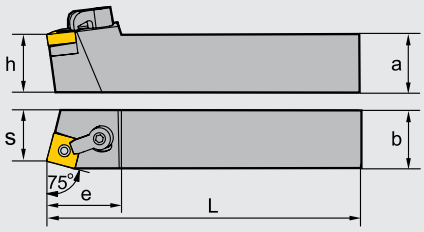
M-Clamping · M-Halter

### MSBNR/ L

Kr:75°



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MSBNR/ L** | **2020K12** | ● | ○ | 20 | 20 | 125 | 20 | 17 | 32 | DM6×25 | S12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | ○ | 25 | 25 | 150 | 25 | 22 | 32 | DM6×30 | | | | |
| | **3225P12** | ● | ● | 32 | 25 | 170 | 32 | 22 | 32 | | | | | |
| | **2525M15** | ○ | ○ | 25 | 25 | 150 | 25 | 22 | 38 | DM6×30 | S15BM | WH30L | C2RD | TM8×21 |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 29 | 38 | | | | | |
| | **4032R15** | ○ | ○ | 40 | 32 | 200 | 40 | 27 | 38 | | | | | |
| | **3232P19** | ● | ● | 32 | 32 | 170 | 32 | 27 | 45 | DM8×30X | S19BM | WH40L | C5RD | TM10×21 |
| | **4040R19** | ○ | ○ | 40 | 40 | 200 | 40 | 35 | 45 | | | | | |
| | **4040R25** | ○ | ○ | 40 | 40 | 200 | 40 | 35 | 50 | DM10×35X | S25BM | WH40L | C6RD | TM12×29 |
| | **4040S2509** | ○ | ○ | 40 | 40 | 250 | 40 | 35 | 50 | | | WH40L WH50L | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | **HDR**  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **HPR**  A84 | **TC**  A81 | |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | | | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | | | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | | | |
| Type · Typ **MSBNR / L**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| **MSBNR / L**M / P / R15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| **MSBNR / L**P / R19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |
| **MSBNR / L**R / S2509** | | | SN**2509** | SN**2509** | | |

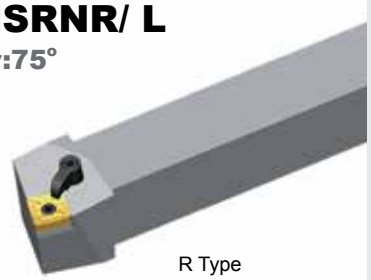
● ex stock · ab Lager ○ on demand · Anfrage

## SN** Toolholder · Halter

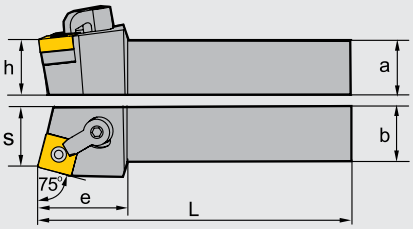
M-Clamping · M-Halter

### MSRNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MSRNR/ L** | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 22 | 36 | DM6×25 | S12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 27 | 36 | DM6×30 | | | | |
| | **3225P12** | ● | ○ | 32 | 25 | 170 | 32 | 27 | 36 | | | | | |
| | **2525M15** | ● | ○ | 25 | 25 | 150 | 25 | 27 | 40 | DM6×30 | S15BM | WH30L | C2RD | TM8×21 |
| | **3232P15** | ● | ● | 32 | 32 | 170 | 32 | 35 | 40 | | | | | |
| | **4032R15** | ○ | ○ | 40 | 32 | 200 | 40 | 35 | 40 | | | | | |
| | **3232P19** | ○ | ○ | 32 | 32 | 170 | 32 | 35 | 45 | DM8×30X | S19BM | WH40L | C5RD | TM10×21 |
| | **4040R19** | ○ | ○ | 40 | 40 | 200 | 40 | 43 | 45 | | | | | |
| | **4040R2509** | ○ | ○ | 40 | 40 | 200 | 40 | 43 | 50 | DM10×35X | S25BM | WH40L WH50L | C6RD | TM12×29 |
| | **4040S2509** | ○ | ○ | 40 | 40 | 250 | 40 | 43 | 50 | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | **HDR**  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **HPR**  A84 | **TC**  A81 | |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | | | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | | | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | | | |
| Type · Typ **MSRNR / L**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| **MSRNR / L**M / P / R15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| **MSRNR / L**P / R19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |
| **MSRNR / L**R / S2509** | | | SN**2509** | SN**2509** | | |

## SN** Toolholder · Halter

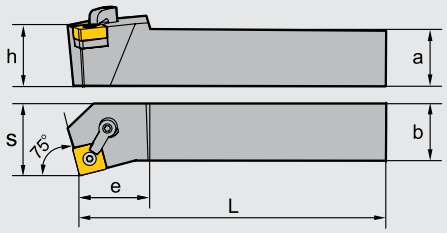
M-Clamping · M-Halter

### MSKNR/ L

Kr:75°



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MSKNR/ L** | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | S12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | **3225P12** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | **2525M15** | ● | ○ | 25 | 25 | 150 | 25 | 32 | 28 | DM6×30 | S15BM | WH30L | C2RD | TM8×21 |
| | **3232P15** | ○ | ○ | 32 | 32 | 170 | 32 | 40 | 38 | | | | | |
| | **4032R15** | ○ | ○ | 40 | 32 | 200 | 40 | 40 | 38 | | | | | |
| | **3232P19** | ● | ○ | 32 | 32 | 170 | 32 | 40 | 45 | DM8×30X | S19BM | WH40L | C5RD | TM10×21 |
| | **4040R19** | ○ | ○ | 40 | 40 | 200 | 40 | 50 | 45 | | | | | |
| | **4040S2509** | ○ | ○ | 40 | 40 | 250 | 40 | 50 | 50 | DM10×35X | S25BM | WH40L WH50L | C6RD | TM12×29 |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | **HDR**  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **HPR**  A84 | **TC**  A81 | |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | | | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | | | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | | | |
| Type · Typ **MSKNR / L**K / M / P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| **MSKNR / L**M / P / R15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |
| **MSKNR / L**P / R19** | | SN**1906** | SN**1906** | SN**1906** | SN**1906** | |
| **MSKNR / L**S2509** | | | SN**2509** | SN**2509** | | |

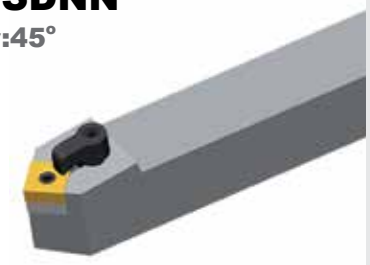
● ex stock · ab Lager ○ on demand · Anfrage

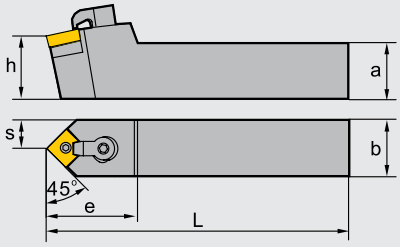
## SN** Toolholder · Halter

M-Clamping · M-Halter

### MSDNN

**Kr:45°**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e |  |  |  |  |  |
| **MSDNN** | **2020K12** | ● | 20 | 20 | 125 | 20 | 10 | 35 | DM6×25 | S12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ● | 25 | 25 | 150 | 25 | 12.5 | 35 | DM6×30 | | | | |
| | **3225P12** | ● | 32 | 25 | 170 | 32 | 12.5 | 35 | | | | | |
| | **2525M15** | ● | 25 | 25 | 150 | 25 | 12.5 | 42 | DM6×30 | S15BM | WH30L | C2RD | TM8×21 |
| | **3232P15** | ○ | 32 | 32 | 170 | 32 | 16 | 42 | | | | | |
| | **4032R15** | ○ | 40 | 32 | 200 | 40 | 16 | 42 | | | | | |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | **HDR**  A84 | Flat Glatt  A86 | Flat Glatt  A139 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **HPR**  A84 | **TC**  A81 | |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | | | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | | | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | | | |
| Type · Typ **MSDNN**K · M · P12** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** | SN**1204** |
| **MSDNN**M · P · R15** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | SN**1506** | |

A

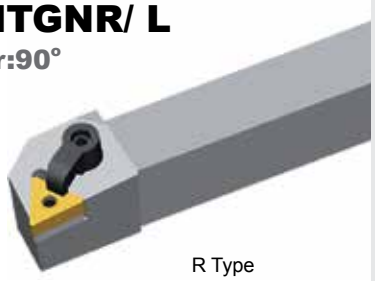
General Turning
Allgemeine Drehbearbeitung

## TN** Toolholder · Halter

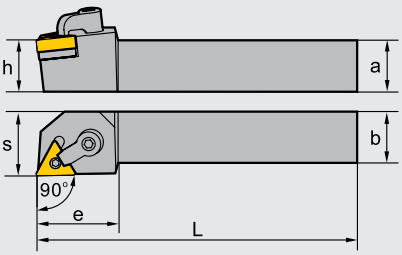
M-Clamping · M-Halter

### MTGNR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MTGNR/ L** | **2020K16** | ● | ○ | 20 | 20 | 125 | 20 | 25 | 33 | DM6×25 | T16BM | WH20L WH30L | C1RD | TM5×13 |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 33 | DM6×30 | | | | |
| | **3225P16** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 33 | | | | | |
| | **2525M22** | ● | ○ | 25 | 25 | 150 | 25 | 32 | 35 | DM6×30 | T22BM | WH30L | C2RD | TM6×17 |
| | **3225P22** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 35 | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A88 | **PM** A90 | **DR** Double side doppel seitig A91 | **HDR** A93 | Flat Glatt A94 | Flat Glatt A140 |
| | **DF** A88 | **DM** A90 | **DR** Single side einseitig A92 | | **TC** A91 | |
| | **ADF** A88 | **ZM** A90 | **ER** Double side doppel seitig A92 | | | |
| | **EF** A89 | **EM** A91 | **LR** Single side einseitig A92 | | | |
| | | **EG** A91 | | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **MTGNR / L** K / M / P16** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | **MTGNR / L**M / P22** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |

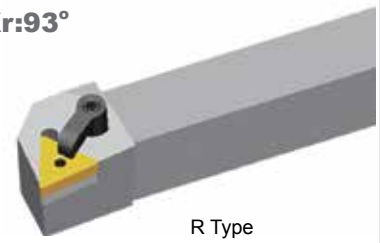
● ex stock · ab Lager ○ on demand · Anfrage

## TN** Toolholder · Halter

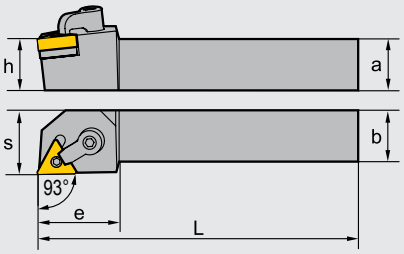
M-Clamping · M-Halter

### MTJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MTJNR/ L | 2020K16 | ● | ○ | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | T16BM | WH20L WH30L | C1RD | TM5×13 |
| | 2525M16 | ● | ○ | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | 3225P16 | ● | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | 2525M22 | ● | ○ | 25 | 25 | 150 | 25 | 32 | 36 | DM6×30 | T22BM | WH30L | C2RD | TM6×17 |
| | 3225P22 | ○ | ● | 32 | 25 | 170 | 32 | 32 | 36 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A88 | PM A90 | DR Double side doppel seitig A91 | HDR A93 | Flat Glatt A94 | Flat Glatt A140 |
| | DF A88 | DM A90 | DR Single side einseitig A92 | | TC A91 | |
| | ADF A88 | ZM A90 | ER Double side doppel seitig A92 | | | |
| | EF A89 | EM A91 | LR Single side einseitig A92 | | | |
| | | EG A91 | | | | |

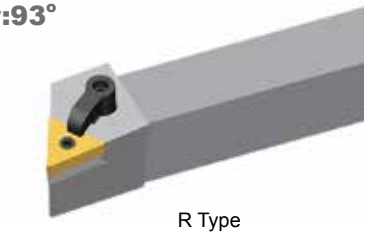
| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | MTJNR / L** K / M / P16 | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | MTJNR / L**M / P22 | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |

## TN** Toolholder · Halter

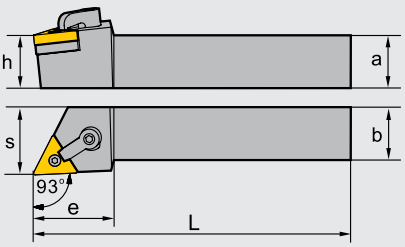
M-Clamping · M-Halter

### MTJNR/ L-Z

Kr:93°



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MTJNR/ L | 2020K16-Z | ● | ● | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | T16BM | WH20L WH30L | C1RD | TM5×13 |
| | 2525M16-Z | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | 3225P16-Z | ● | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | 2525M22-Z | ● | ● | 25 | 25 | 150 | 25 | 32 | 36 | DM6×30 | T22BM | WH30L | C2RD | TM6×17 |
| | 3225P22-Z | ● | ○ | 32 | 25 | 170 | 32 | 32 | 36 | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A88 | PM A90 | DR Double side doppel seitig A91 | HDR A93 | Flat Glatt A94 | Flat Glatt A140 |
| | DF A88 | DM A90 | DR Single side einseitig A92 | | TC A91 | |
| | ADF A88 | ZM A90 | ER Double side doppel seitig A92 | | | |
| | EF A89 | EM A91 | LR Single side einseitig A92 | | | |
| | | EG A91 | | | | |
| Type · Typ MTJNR / L** K / M / P16 | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| MTJNR / L**M / P22 | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |

● ex stock · ab Lager ○ on demand · Anfrage

## TN** Toolholder · Halter

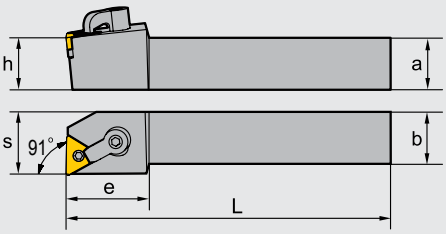
M-Clamping · M-Halter

### MTFNR/ L

**Kr:91°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MTFNR/ L** | **2020K16** | ● | ○ | 20 | 20 | 125 | 20 | 25 | 32 | DM6×25 | T16BM | WH20L WH30L | C1RD | TM5×13 |
| | **2525M16** | ● | ○ | 25 | 25 | 150 | 25 | 32 | 32 | DM6×30 | | | | |
| | **3225P16** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | **2525M22** | ● | ○ | 25 | 25 | 150 | 25 | 32 | 36 | DM6×30 | T22BM | WH30L | C2RD | TM6×17 |
| | **3225P22** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 36 | | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Heavy Duty Schwerzerspanung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A88 | **PM** A90 | **DR** Double side doppel seitig A91 | **HDR** A93 | Flat Glatt A94 | Flat Glatt A140 |
| | **DF** A88 | **DM** A90 | **DR** Single side einseitig A92 | | **TC** A91 | |
| | **ADF** A88 | **ZM** A90 | **ER** Double side doppel seitig A92 | | | |
| | **EF** A89 | **EM** A91 | **LR** Single side einseitig A92 | | | |
| | | **EG** A91 | | | | |

| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **MTFNR / L** K / M / P16** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |
| | **MTFNR / L**M / P22** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | TN**2204** | |

A

General Turning
Allgemeine Drehbearbeitung

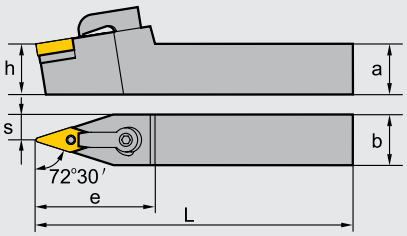
## VN** Toolholder · Halter

M-Clamping · M-Halter

### MVVNN

Kr:72°30'








| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MVVNN | 2020K16 | ● | 20 | 20 | 125 | 20 | 10 | 45 | DM6×25 | V16BM | WH20L WH30L | C3RD | TM5×13 |
| | 2525M16 | ● | 25 | 25 | 150 | 25 | 12.5 | 45 | DM6×30 | | | | |
| | 3225P16 | ○ | 32 | 25 | 170 | 32 | 12.5 | 45 | | | | | |
| | 3232P16 | ● | 32 | 32 | 170 | 32 | 16 | 45 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|
| Insert shape Schneidplattenform | SF A95 | PM A96 | TC A96 | Flat Glatt A141 |
| | DF A95 | DM A96 | | |
| | ADF A95 | ZM A96 | | |
| | EF A95 | EM A96 | | |
| | NF A95 | NM A96 | | |
| | NGF A95 | | | |
| Type · Typ MVVNN** K / M / P16 | VN**1604** | VN**1604** | VN**1604** | VN**1604** |

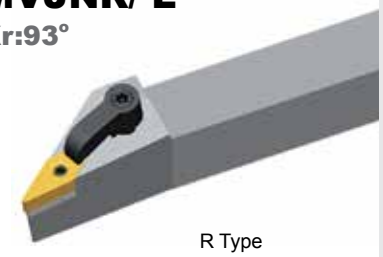
● ex stock · ab Lager ○ on demand · Anfrage

## VN** Toolholder · Halter

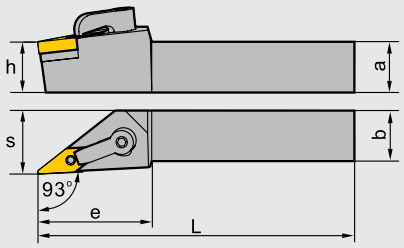
M-Clamping · M-Halter

### MVJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MVJNR/ L** | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 45 | DM6×25 | V16BM | WH20L WH30L | C3RD | TM5×13 |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 45 | DM6×30 | | | | |
| | **3225P16** | ● | ○ | 32 | 25 | 170 | 32 | 32 | 45 | | | | | |
| | **3232P16** | ● | ● | 32 | 32 | 170 | 32 | 40 | 45 | | | | | |

### Applicable insert
Wendeschneidplatten

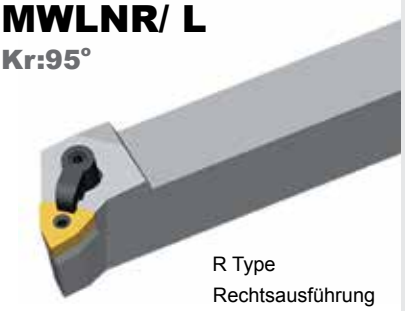
| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A95 | **PM** A96 | **TC** A96 | Flat Glatt A141 |
| | **DF** A95 | **DM** A96 | | |
| | **ADF** A95 | **ZM** A96 | | |
| | **EF** A95 | **EM** A96 | | |
| | **NF** A95 | **NM** A96 | | |
| | **NGF** A95 | | | |
| Type · Typ **MVJNR / L** K / M / P16** | VN**1604** | VN**1604** | VN**1604** | VN**1604** |

## WN** Toolholder · Halter

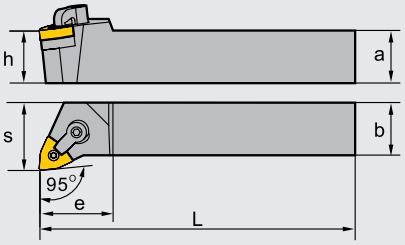
M-Clamping · M-Halter

### MWLNR/ L

Kr:95°



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MWLNR/ L** | **2020K06** | ● | ● | 20 | 20 | 125 | 20 | 25 | 30 | DM6×25 | W06BM | WH20L WH30L | C1RD | TM5×13 |
| | **2525M06** | ● | ● | 25 | 25 | 150 | 25 | 32 | 30 | DM6×30 | | | | |
| | **2020K08** | ● | ● | 20 | 20 | 125 | 20 | 25 | 30 | DM6×25 | W08BM | WH30L | C1RD | TM6×17 |
| | **2525M08** | ● | ● | 25 | 25 | 150 | 25 | 32 | 35 | DM6×30 | | | | |
| | **3525P08** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 35 | | | | | |
| | **3232P08** | ● | ● | 32 | 32 | 170 | 32 | 40 | 35 | | | | | |

Applicable insert
Wendeschneidplatten

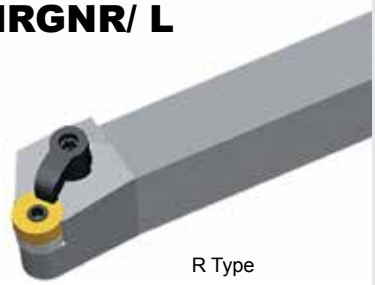
| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A97 | **PM** A99 | **DR** Double side doppel seitig A100 | Flat Glatt A100 |
| | **DF** A97 | **DM** A99 | | **TC** A100 |
| | **ADF** A97 | **ZM** A99 | | |
| | **EF** A98 | **EM** A99 | | |
| | **NF** A98 | **EG** A99 | | |
| | | **NM** A99 | | |
| Type ·Typ **MWLNR / L**K / M06** | WN**0604** | WN**0604** | WN**0604** | WN**0604** |
| **MWLNR / L**K / M / P08** | WN**0804** | WN**0804** | WN**0804** | WN**0804** |

● ex stock · ab Lager ○ on demand · Anfrage

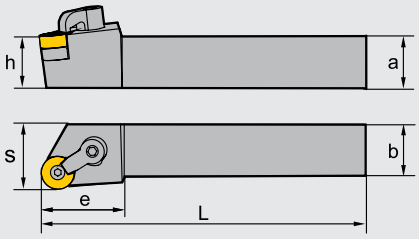
## RN** Toolholder · Halter

M-Clamping · M-Halter

### MRGNR/ L



R Type
Rechtsausführung





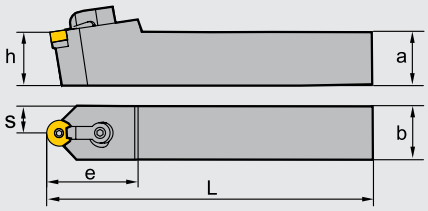

| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamping Screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | a | b | L | h | s | e |  |  |  |  |  |  |
| **MRGNR/ L** | **2020K12** | ○ | ○ | 20 | 20 | 125 | 20 | 25 | 32 | RN**1204** A101 | DM6×25 | R12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 32 | | DM6×30 | | | | |
| | **3225P12** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | | |
| | **3232P12** | ○ | | 32 | 32 | 170 | 32 | 40 | 32 | | | | | | |

## RN** Toolholder · Halter

M-Clamping · M-Halter

### MRDNN







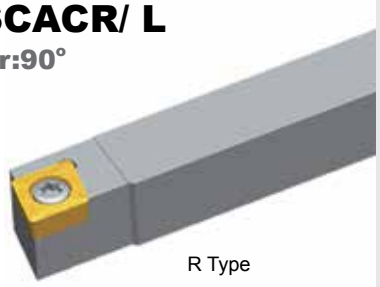

| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamping screw Schraube | Shim Unterlage | Wrench Schlüssel | Clamp Pratze | Dowel pin Passstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e |  |  |  |  |  |  |
| **MRDNN** | **2020K12** | ○ | 20 | 20 | 125 | 20 | 10 | 35 | RN**1204** A101 | DM6×25 | R12BM | WH30L | C1RD | TM6×17 |
| | **2525M12** | ○ | 25 | 25 | 150 | 25 | 12.5 | 35 | | DM6×30 | | | | |
| | **3225P12** | ○ | 32 | 25 | 170 | 32 | 12.5 | 35 | | | | | | |
| | **3232P12** | ○ | 32 | 32 | 170 | 32 | 16 | 35 | | | | | | |

## CC** Toolholder · Halter

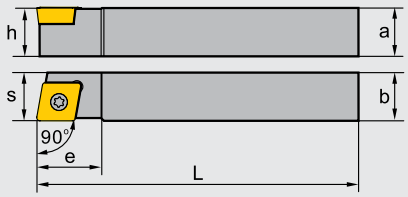
S-Clamping · S-Halter

### SCACR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SCACR/ L** | **1010E06** | ● | ● | 10 | 10 | 70 | 10 | 10.5 | 10 | I60M2.5×6.5 | WT07IP | | |
| | **1212F09** | ● | ● | 12 | 12 | 80 | 12 | 12.7 | 16 | I60M3.5×8 | WT15IP | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN/PCD inserts/WSP |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A105 | **HF** A106 | **HM** A106 | **HR** A108 | **LH** A108 | Flat Glatt A109 | Flat Glatt A142 |
| | **AHF** A106 | **EF** A106 | **EM** A106 | | **LC** A108 | **TC** A108 | |
| Type · Typ **SCACR/ L**E06** | CC**0602** | CC**0602** | CC**0602** | CC**0602** | CCGX 0602** | CC** 0602** | CC** 0602** |
| Type · Typ **SCACR/ L**F09** | CC**09T3** | CC**09T3** | CC**09T3** | CC**09T3** | CCGX 09T3** | CC** 09T3** | CC** 09T3** |

● ex stock · ab Lager ○ on demand · Anfrage

## CC** Toolholder · Halter

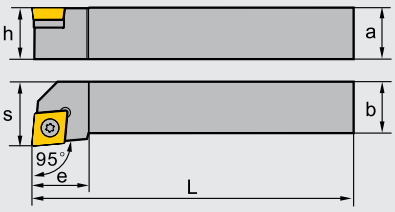
S-Clamping · S-Halter

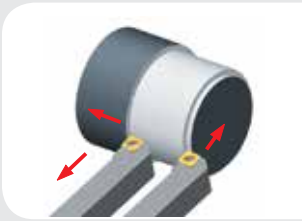
# SCLCR/ L

**Kr:95°**



R Type
Rechtsausführung



| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SCLCR/ L** | **0808D06** | ● | ● | 08 | 08 | 60 | 08 | 10 | 10 | I60M2.5×6.5 | — | — | WT07IP |
| | **1010E06** | ● | ● | 10 | 10 | 70 | 10 | 12 | 10 | | | | |
| | **1212F09** | ● | ● | 12 | 12 | 80 | 12 | 16 | 16 | I60M3.5×8 | — | — | WT15IP |
| | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 20 | 16 | | | | |
| | **2020K09** | ● | ● | 20 | 20 | 125 | 20 | 25 | 25 | | | | |
| | **1616H12** | ● | ● | 16 | 16 | 100 | 16 | 20 | 18 | I60M4×11X | C12BS | SM6×10XA | WT15IP WH40L |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 25 | 25 | | | | |
| | **2525M12** | ● | ● | 25 | 25 | 150 | 25 | 32 | 26 | | | | |
| | **3225P12** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 26 | | | | |
| | **3232P12** | ● | ● | 32 | 32 | 170 | 32 | 40 | 28 | | | | |

Applicable insert
Wendeschneidplatten

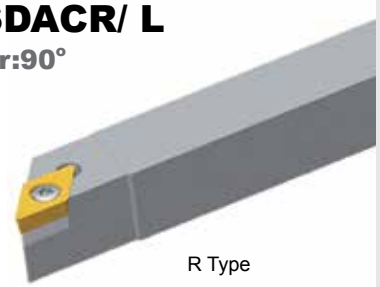
| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. | PCBN/PCD inserts/WSP |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A105 | **HF** A106 | **HM** A106 | **HR** A108 | **LH** A108 | Flat Glatt A109 | Flat Glatt A142 |
| | **AHF** A106 | **EF** A106 | **EM** A106 | | **LC** A108 | **TC** A108 | |
| Type · Typ **SCLCR/ L**D / E06** | CC** 0602** | CC** 0602** | CC** 0602** | CC** 0602** | CCGX 0602** | CC** 0602** | CC** 0602** |
| **SCLCR / L*F / H09** | CC** 09T3** | CC** 09T3** | CC** 09T3** | CC** 09T3** | CCGX 09T3** | CC** 09T3** | CC** 09T3** |
| **SCLCR / L**K / M / P12** | | CC** 1204** | CC** 1204** | CC** 1204** | CCGX 1204** | CC** 1204** | CC** 1204** |

## DC** Toolholder · Halter

S-Clamping · S-Halter

### SDACR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDACR/ L** | **1010E07** | ● | ● | 10 | 10 | 70 | 10 | 10.5 | 15 | I60M2.5×6.5 | — | — | WT07IP |
| | **1212F11** | ● | ● | 12 | 12 | 80 | 12 | 12.5 | 15 | I60M3.5×8 | — | — | WT15IP |
| | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 16.7 | 24 | I60M3.5×12 | D11BS | SM5×8.65XA | WT15IP WH35L |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A110 | **HF** A111 | **HM** A111 | **HR** A112 | **LH** A112 | Flat Glatt A112 | Flat Glatt A143 |
| | **AHF** A110 | **EF** A111 | **EM** A111 | | **LC** A112 | | |
| Type · Typ **SDACR / L**E07** | DC** 0702** | DC** 0702** | DC** 0702** | | DCGX 0702** | DC**0702** | DC**0702** |
| Type · Typ **SDACR / L**F / H11** | DC** 11T3** | DC** 11T3** | DC** 11T3** | DC** 11T3** | DCGX 11T3** | DC** 11T3** | DC** 11T3** |

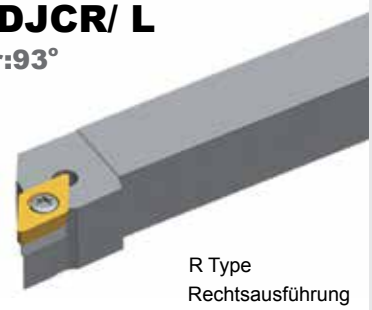
● ex stock · ab Lager ○ on demand · Anfrage

## DC** Toolholder · Halter

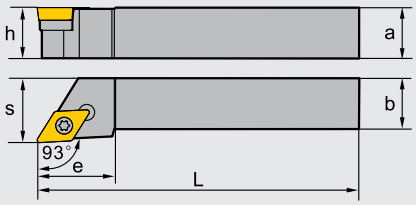
S-Clamping · S-Halter

### SDJCR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDJCR/ L** | **1010E07** | ● | ● | 10 | 10 | 70 | 10 | 12 | 15 | I60M2.5×6.5 | — | — | WT07IP |
| | **1212F07** | ● | ● | 12 | 12 | 80 | 12 | 16 | 15 | | | | |
| | **1616H07** | ● | ● | 16 | 16 | 100 | 16 | 20 | 18 | | | | |
| | **1616H11** | ○ | ● | 16 | 16 | 100 | 16 | 20 | 24 | I60M3.5×12 | D11BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K11** | ● | ● | 20 | 20 | 125 | 20 | 25 | 24 | | | | |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 29 | | | | |
| | **3225P11** | ● | ● | 32 | 25 | 170 | 32 | 32 | 29 | | | | |

### Applicable insert Wendeschneidplatten

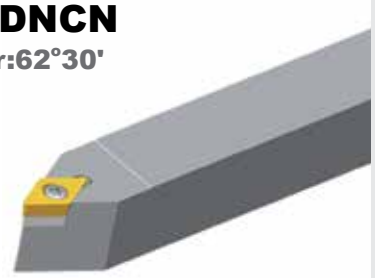
| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A110 | **HF** A111 | **HM** A111 | **HR** A112 | **LH** A112 | Flat Glatt A112 | Flat Glatt A143 |
| | **AHF** A110 | **EF** A111 | **EM** A111 | | **LC** A112 | | |
| Type · Typ **SDJCR / L**E / F / H07** | DC**0702** | DC** 0702** | DC**0702** | | DCGX 0702** | DC** 0702** | DC** 0702** |
| Type · Typ **SDJCR / L**H / K / M / P11** | DC** 11T3** | DC** 11T3** | DC**11T3** | DC**11T3** | DCGX 11T3** | DC** 11T3** | DC** 11T3** |

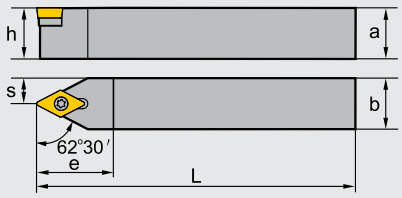
## DC** Toolholder · Halter

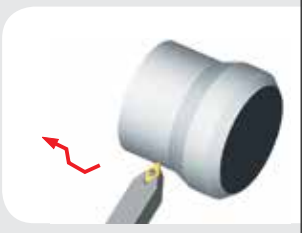
S-Clamping · S-Halter

### SDNCN

**Kr:62°30'**





| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDNCN** | **1010E07** | ● | 10 | 10 | 70 | 10 | 5 | 20 | I60M2.5×6.5 | — | — | WT07IP |
| | **1212F07** | ● | 12 | 12 | 80 | 12 | 6 | 20 | | | | |
| | **1212H11** | ● | 12 | 12 | 100 | 12 | 6 | 30 | I60M3.5×8 | — | — | WT15IP |
| | **1616H11** | ● | 16 | 16 | 100 | 16 | 8 | 30 | I60M3.5×12 | D11BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K11** | ○ | 20 | 20 | 125 | 20 | 10 | 30 | | | | |
| | **2525M11** | ● | 25 | 25 | 150 | 25 | 12.5 | 30 | | | | |

### Applicable insert Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A110 | **HF** A111 | **HM** A111 | **HR** A112 | **LH** A112 | Flat Glatt A112 | Flat Glatt A143 |
| | **AHF** A110 | **EF** A111 | **EM** A111 | | **LC** A112 | | |
| Type · Typ **SDNCN**E / F07** | DC**0702** | DC** 0702** | DC**0702** | | DCGX 0702** | DC** 0702** | DC** 0702** |
| Type · Typ **SDNCN**H / K / M11** | DC** 11T3** | DC** 11T3** | DC**11T3** | DC**11T3** | DCGX 11T3** | DC** 11T3** | DC** 11T3** |

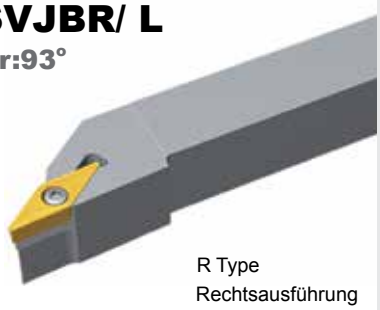
● ex stock · ab Lager ○ on demand · Anfrage

## VB** Toolholder · Halter

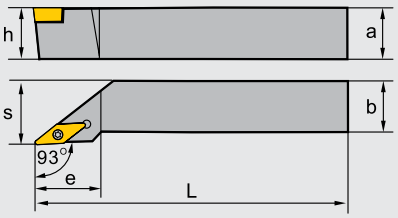
S-Clamping · S-Halter

### SVJBR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVJBR/ L** | **1212F11** | ● | ● | 12 | 12 | 80 | 12 | 16 | 27 | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 20 | 27 | | | | |
| | **2020K11** | ● | ● | 20 | 20 | 125 | 20 | 25 | 27 | | | | |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 27 | | | | |
| | **1616H16** | ● | ● | 16 | 16 | 100 | 16 | 20 | 36 | I60M3.5×12 | V16BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 41 | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 32 | 41 | | | | |
| | **3225P16** | ● | ● | 32 | 25 | 170 | 32 | 32 | 41 | | | | |

### Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Cast iron mach. Grauguss-Bearb. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A127 | **EF** A127 | **HM** A128 | **HR** A128 | Flat Glatt A128 | Flat Glatt A145 |
| | **AHF** A127 | **HF** A127 | **EM** A128 | **SNR** A128 | | |
| | **NGF** A128 | **NF** A127 | | | | |

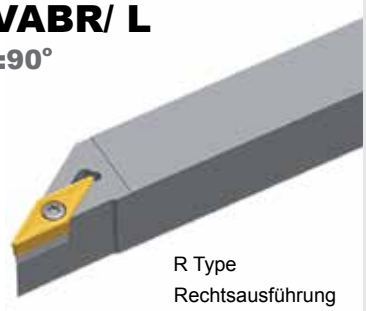
| Type · Typ | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **SVJBR / L**F / H / K / M11** | VB**1102** | VB**1102** | VB**1102** | | | |
| | **SVJBR / L**H / K / M / P16** | | VB**1604** | VB**1604** | VB**1604** | VB**1604** | VB**1604** |

## VB** Toolholder · Halter

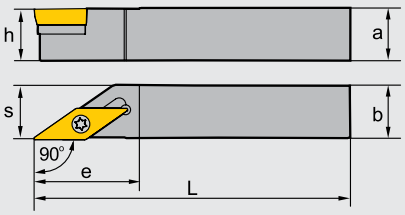
S-Clamping · S-Halter

### SVABR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVABR/ L** | **1010F11** | ● | ● | 10 | 10 | 80 | 10 | - | - | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H16** | ● | ○ | 16 | 16 | 100 | 16 | 16.5 | 28 | I60M3.5×12 | V16BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | ○ | 20 | 20 | 125 | 20 | 20.5 | 28 | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 25.5 | 28 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Cast iron mach. Grauguss-Bearb. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A127 | **EF** A127 | **HM** A128 | **HR** A128 | Flat Glatt A128 | Flat Glatt A145 |
| | **AHF** A127 | **HF** A127 | **EM** A128 | **SNR** A128 | | |
| | **NGF** A128 | **NF** A127 | | | | |
| Type · Typ **SVABR / L**F11** | VB**1102** | VB**1102** | VB**1102** | | | |
| Type · Typ **SVABR / L**H / K / M16** | | VB**1604** | VB**1604** | VB**1604** | VB**1604** | VB**1604** |

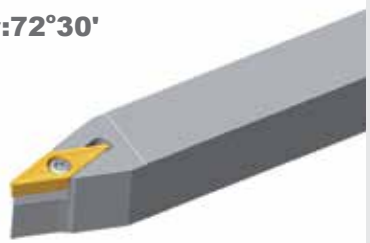
● ex stock · ab Lager ○ on demand · Anfrage

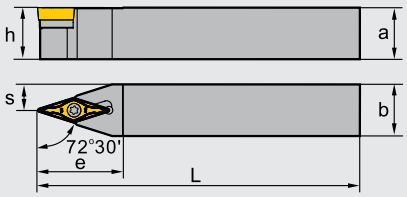
## VB** Toolholder · Halter

S-Clamping · S-Halter

### SVVBN

**Kr:72°30'**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVVBN** | **1212F11** | ● | 12 | 12 | 80 | 12 | 6 | 27 | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H11** | ● | 16 | 16 | 100 | 16 | 8 | 27 | | | | |
| | **2020K11** | ● | 20 | 20 | 125 | 20 | 10 | 30 | | | | |
| | **1616H16** | ● | 16 | 16 | 100 | 16 | 8 | 33 | I60M3.5×12 | V16BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | 20 | 20 | 125 | 20 | 10 | 33 | | | | |
| | **2525M16** | ● | 25 | 25 | 150 | 25 | 12.5 | 38 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Cast iron mach. Grauguss-Bearb. | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A127 | **EF** A127 | **HM** A128 | **HR** A128 | Flat Glatt A128 | Flat Glatt A145 |
| | **AHF** A127 | **HF** A127 | **EM** A128 | **SNR** A128 | | |
| | **NGF** A128 | **NF** A127 | | | | |

| Type · Typ | | | | | | |
|---|---|---|---|---|---|---|
| **SVVBN**F / H / K11** | VB**1102** | VB**1102** | VB**1102** | | | |
| **SVVBN**H / K / M16** | | VB**1604** | VB**1604** | VB**1604** | VB**1604** | VB**1604** |

A

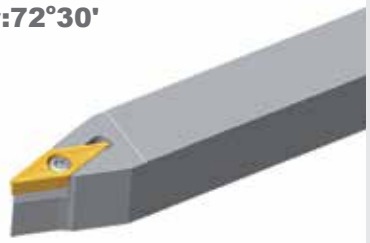
General Turning
Allgemeine Drehbearbeitung

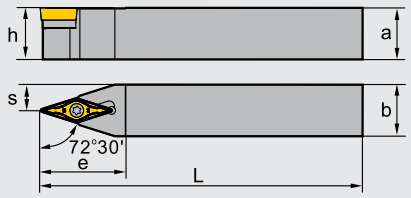
## VC** Toolholder · Halter

S-Clamping · S-Halter

### SVVCN

**Kr:72°30'**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVVCN** | **1212F11** | ● | 12 | 12 | 80 | 12 | 6 | 27 | I60M2.5×6.5 | — | — | WT07IP |
| | **1212M11** | ● | 12 | 12 | 150 | 12 | 6 | 27 | | | | |
| | **1616H11** | ● | 16 | 16 | 100 | 16 | 8 | 27 | | | | |
| | **2020K11** | ● | 20 | 20 | 125 | 20 | 10 | 30 | | | | |
| | **2525M11** | ● | 25 | 25 | 150 | 25 | 12.5 | 38 | | | | |
| | **1616H16** | ● | 16 | 16 | 100 | 16 | 8 | 33 | I60M3.5×12 | V16BSC | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | 20 | 20 | 125 | 20 | 10 | 33 | | | | |
| | **2525M16** | ● | 25 | 25 | 150 | 25 | 12.5 | 38 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu-Bearbeitung | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | | **SF**  A125 | **HF**  A125 | **LH**  A126 | Flat Glatt  A145 |
| | | | **NF**  A125 | **LC**  A126 | |
| Type · Typ | **SVVCN**F / H / K / M11** | VC**1103** | VC**1103** | VCGX1103** | |
| | **SVVCN**H / K / M16** | | VC**1604** | VCGX1604** | VC**1604** |

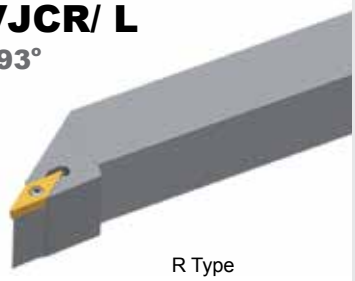
● ex stock · ab Lager ○ on demand · Anfrage

## VC** Toolholder · Halter

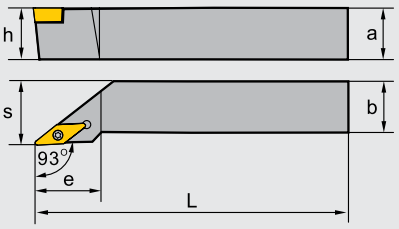
S-Clamping · S-Halter

### SVJCR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVJCR/ L** | **1010E11** | ● | ○ | 10 | 10 | 70 | 10 | 12 | 22 | I60M2.5×6.5 | — | — | WT07IP |
| | **1212F11** | ● | ● | 12 | 12 | 80 | 12 | 16 | 27 | | | | |
| | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 20 | 27 | | | | |
| | **2020K11** | ○ | ● | 20 | 20 | 125 | 20 | 25 | 27 | | | | |
| | **2525M11** | ● | ● | 25 | 25 | 150 | 25 | 32 | 27 | | | | |
| | **1616H16** | ● | ● | 16 | 16 | 100 | 16 | 20 | 36 | I60M3.5×12 | V16BSC | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 41 | | | | |
| | **2020M16** | ● | ● | 20 | 20 | 150 | 20 | 25 | 41 | | | | |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 20 | 32 | 41 | | | | |
| | **3225P16** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 41 | | | | |

Applicable insert
Wendeschneidplatten

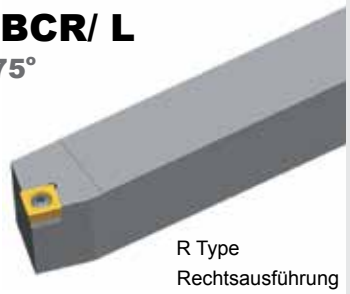
| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu-Bearbeitung | PCBN · PCD PCBN · PKD |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A125 | **HF**  A125 | **LH**  A126 | Flat Glatt  A145 |
| | | **NF**  A125 | **LC**  A126 | |
| Type · Typ **SVJCR / L**E / F / H / K / M11** | VC**1103** | VC**1103** | VCGX1103** | |
| Type · Typ **SVJCR / L**H / K / M / P16** | | VC**1604** | VCGX1604** | VC**1604** |

## SC** Toolholder · Halter

S-Clamping · S-Halter

### SSBCR/ L

**Kr:75°**



R Type
Rechtsausführung





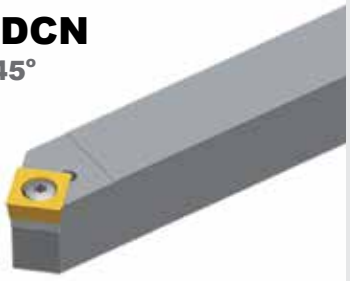

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SSBCR/ L** | **1212F09** | ● | ● | 12 | 12 | 80 | 12 | 11 | 16 | I60M3.5×8 | — | — | WT15IP |
| | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 13 | 16 | I60M3.5×8 | S09BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 17 | 25 | I60M4×11X | S12BS | SM6×10XA | WT15IP WH40L |

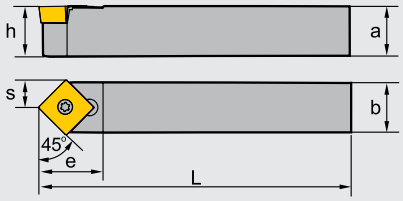
## SC** Toolholder · Halter

S-Clamping · S-Halter

### SSDCN

**Kr:45°**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SSDCN** | **1212F09** | ● | 12 | 12 | 80 | 12 | 6 | 15.5 | I60M3.5×8 | — | — | WT15IP |
| | **1616H09** | ● | 16 | 16 | 100 | 16 | 8 | 15.5 | I60M3.5×12 | S09BS | SM5×8.65XA | WT15IP WH35L |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **AHF** A116 | **HM** A116 | **HR** A117 | **LH** A117 | Flat Glatt A117 |
| | **HF** A116 | **EM** A116 | | **LC** A117 | |
| | **EF** A116 | | | | |
| Type·Typ **SSBCR / L**F / H09** | SC**09T3** | SC**09T3** | SC**09T3** | SCGX09T3** | SC**09T3** |
| Type·Typ **SSBCR / L**K12** | | SC**1204** | SC**1204** | SCGX1204** | SC**1204** |
| Type·Typ **SSDCN**F / H09** | SC**09T3** | SC**09T3** | SC**09T3** | SCGX09T3** | SC**09T3** |

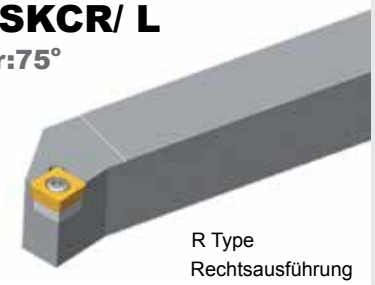
● ex stock · ab Lager ○ on demand · Anfrage

## SC** Toolholder · Halter

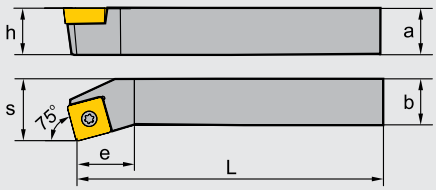
S-Clamping · S-Halter

### SSKCR/ L

**Kr:75°**



R Type
Rechtsausführung

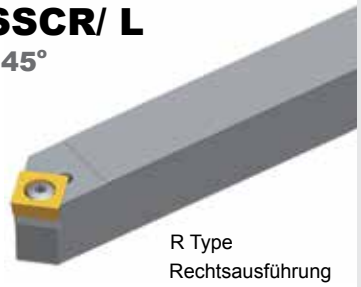




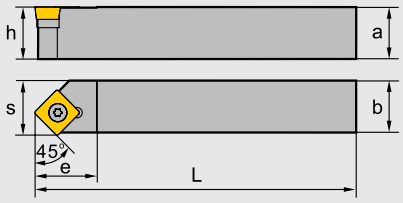

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SSKCR/ L** | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 20 | 13 | I60M3.5×12 | S09BS | SM5×8.65XA | WT15IP WH35L |

### SSSCR/ L

**Kr:45°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SSSCR/ L** | **1616H09** | ● | ● | 16 | 16 | 100 | 16 | 17 | 16 | I60M3.5×12 | — | — | WT15IP |
| | **2020K12** | ● | ● | 20 | 20 | 125 | 20 | 21 | 24 | I60M4×11X | S12BS | SM6×10XA | WT15IP WH40L |

### Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **AHF**  A116 | **HM**  A116 | **HR**  A117 | **LH**  A117 | Flat Glatt  A117 |
| | **HF**  A116 | **EM**  A116 | | **LC**  A117 | |
| | **EF**  A116 | | | | |

| Type · Typ | | | | | | |
|---|---|---|---|---|---|---|
| | **SSKCR / L**H09** | SC**09T3** | SC**09T3** | SC**09T3** | SCGX09T3** | SC**09T3** |
| | **SSSCR / L**H09** | SC**09T3** | SC**09T3** | SC**09T3** | SCGX09T3** | SC**09T3** |
| | **SSSCR / L**K12** | | SC**1204** | SC**1204** | SCGX1204** | SC**1204** |

A

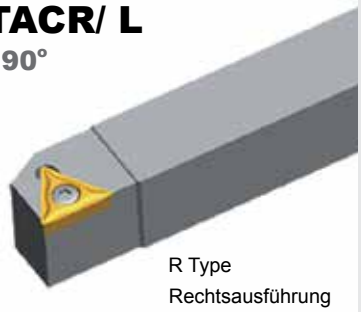
General Turning
Allgemeine Drehbearbeitung

## TC** Toolholder · Halter

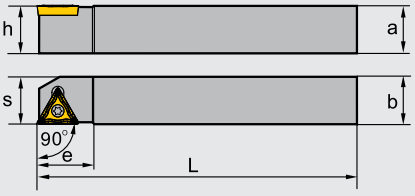
S-Clamping · S-Halter

### STACR/ L

**Kr:90°**



R Type
Rechtsausführung

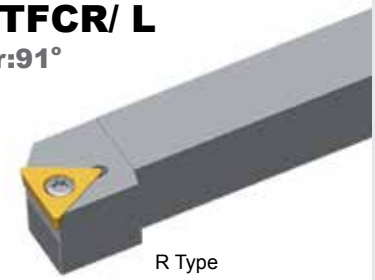




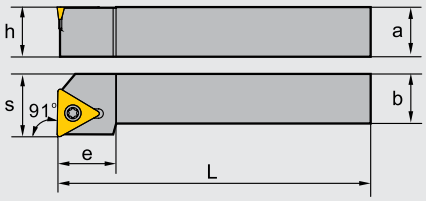

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STACR/ L** | **1212F11** | ● | ● | 12 | 12 | 80 | 12 | 12.5 | 14 | I60M2.5×6.5 | WT07IP | | |

### STFCR/ L

**Kr:91°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STFCR/ L** | **1212F11** | ● | ○ | 12 | 12 | 80 | 12 | 16 | 14 | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H11** | ● | ○ | 16 | 16 | 100 | 16 | 20 | 14 | | | | |
| | **1616H16** | ● | ○ | 16 | 16 | 100 | 16 | 20 | 19 | I60M3.5×12 | T16BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 19 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss Bearbeit. | PCBN/PCD inserts/WSP |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A114 9 | **HF** A120 | **HM** A122 | **HR** A122 | **LH** A123 | Flat Glatt A122 | Flat Glatt A144 |
| | **AHF** A120 | **EF** A120 | **EM** A121 | | **LC** A123 | | |
| Type · Typ **STACR / L****F11** | TC**1102** | TC**1102** | TC**1102** | TC**1102** | TCGX1102** | TC**1102** | TC**1102** |
| **STFCR / L****F / H11** | TC**1102** | TC**1102** | TC**1102** | TC**1102** | TCGX1102** | TC**1102** | TC**1102** |
| **STFCR / L****H / K16** | | TC**16T3** | TC**16T3** | TC**16T3** | TCGX16T3** | TC**16T3** | TC**16T3** |

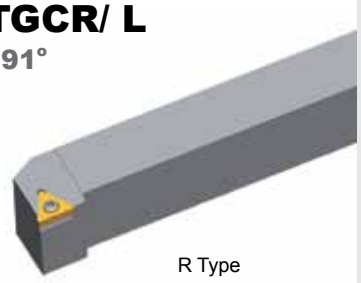
● ex stock · ab Lager ○ on demand · Anfrage

## TC** Toolholder · Halter

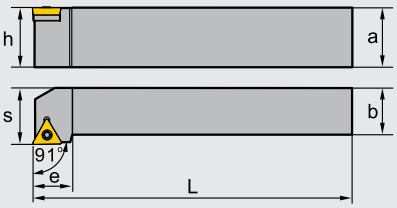
S-Clamping · S-Halter

### STGCR/ L

**Kr:91°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STGCR/ L** | **0808D09** | ○ | ○ | 08 | 08 | 60 | 8 | 10 | 11 | I60M2.2×5.5 | — | — | WT06IP |
| | **1010E09** | ● | ○ | 10 | 10 | 70 | 10 | 12 | 11 | | | | |
| | **1212F11** | ● | ● | 12 | 12 | 80 | 12 | 16 | 14 | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H11** | ● | ● | 16 | 16 | 100 | 16 | 20 | 16 | | | | |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 25 | 21 | I60M3.5×12 | T16BS | SM5×8.65XA | WT15IP WH35L |
| | **2525M16** | ● | ● | 25 | 25 | 150 | 25 | 25 | 21 | | | | |

### Applicable insert Wendeschneidplatten

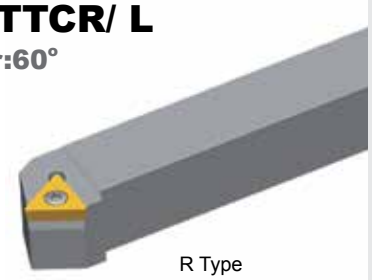
| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss Bearbeit. | PCBN/PCD inserts/WSP |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A114 9 | **HF** A120 | **HM** A122 | **HR** A122 | **LH** A123 | Flat Glatt A122 | Flat Glatt A144 |
| | **AHF** A120 | **EF** A120 | **EM** A121 | | **LC** A123 | | |
| Type · Typ **STGCR / L**D / E09** | TC**0902** | TC**0902** | TC**0902** | TC**0902** | TCGX0902** | TC**0902** | TC**0902** |
| **STGCR / L**F / H11** | TC**1102** | TC**1102** | TC**1102** | TC**1102** | TCGX1102** | TC**1102** | TC**1102** |
| **STGCR / L**K / M16** | | TC**16T3** | TC**16T3** | TC**16T3** | TCGX16T3** | TC**16T3** | TC**16T3** |

## TC** Toolholder · Halter

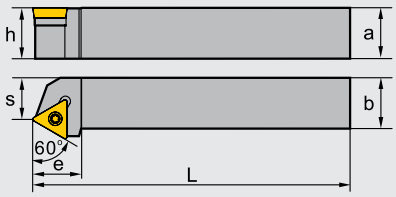
S-Clamping · S-Halter

### STTCR/ L

**Kr:60°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **STTCR/ L** | **1616H11** | ● | ○ | 16 | 16 | 100 | 16 | 13 | 14 | I60M2.5×6.5 | — | — | WT07IP |
| | **1616H16** | ● | ● | 16 | 16 | 100 | 16 | 13 | 19 | I60M3.5×12 | T16BS | SM5×8.65XA | WT15IP WH35L |
| | **2020K16** | ● | ● | 20 | 20 | 125 | 20 | 17 | 19 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss Bearbeit. | PCBN/PCD inserts/WSP |
|---|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A114 9 | **HF** A120 | **HM** A122 | **HR** A122 | **LH** A123 | Flat Glatt A122 | Flat Glatt A144 |
| | **AHF** A120 | **EF** A120 | **EM** A121 | | **LC** A123 | | |
| Type · Typ **STTCR / L**H11** | TC**1102** | TC**1102** | TC**1102** | TC**1102** | TCGX1102** | TC**1102** | TC**1102** |
| **STTCR / L**H / K16** | | TC**16T3** | TC**16T3** | TC**16T3** | TCGX16T3** | TC**16T3** | TC**16T3** |

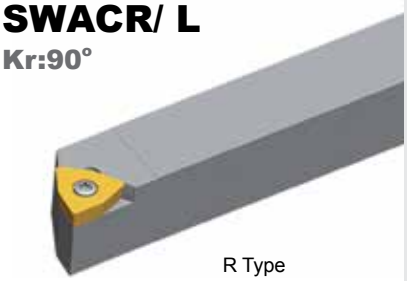
● ex stock · ab Lager ○ on demand · Anfrage

## WC** Toolholder · Halter

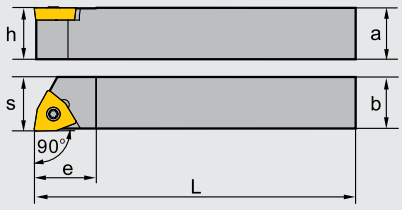
S-Clamping · S-Halter

### SWACR/ L

**Kr:90°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SWACR/ L** | **1010E04** | ● | ○ | 10 | 10 | 70 | 10 | 10.5 | 10 | I60M2.5×6.5 | WT07IP | | |
| | **1212F04** | ● | ○ | 12 | 12 | 80 | 12 | 12.○ | 14 | | | | |
| | **1616H06** | ● | ● | 16 | 16 | 100 | 16 | 16.5 | 20 | I60M3×7 | WT10IP | | |
| | **2020K08** | ● | ● | 20 | 20 | 125 | 20 | 20.5 | 24 | I60M3.5×12 | WT15IP | | |

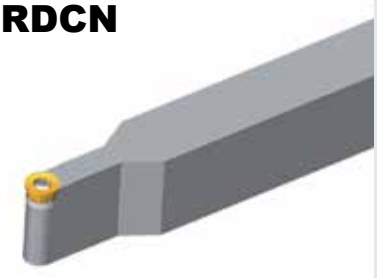
Applicable insert
Wendeschneidplatten

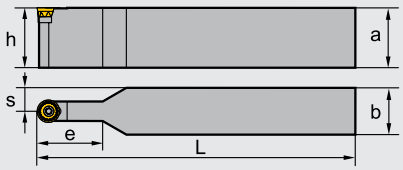
| Application Anwendung | Finishing Schlichten |
|---|---|
| Insert shape Schneidplattenform | **53**  A130 |
| Type · Typ **SWACR / L**E / F04** | WC*X0402** |
| **SWACR / L**H06** | WC*X06T3** |
| **SWACR / L**K08** | WC*X0804** |

## RC** Toolholder · Halter

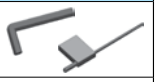
S-Clamping · S-Halter

### SRDCN








| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e |  |  |  |  |
| **SRDCN** | **1616H08** | ○ | 16 | 16 | 100 | 16 | 8 | 16 | I60M3×7 | — | — | WT10IP |
| | **2020K08** | ● | 20 | 20 | 125 | 20 | 10 | 16 | I60M3.5×10 | — | — | WT15IP |
| | **2020K10** | ● | 20 | 20 | 125 | 20 | 10 | 25 | | | | |
| | **2525M10** | ● | 25 | 25 | 150 | 25 | 12.5 | 25 | | | | |
| | **2020K12** | ● | 20 | 20 | 125 | 20 | 10 | 35 | I60M3.5×12 | R12BS | SM5×8.65XA | WT15IP WH35L |
| | **2525M12** | ● | 25 | 25 | 150 | 25 | 12.5 | 35 | | | | |
| | **3225P12** | ● | 32 | 25 | 170 | 32 | 12.5 | 35 | | | | |
| | **3225P16** | ● | 32 | 25 | 170 | 32 | 12.5 | 35 | I60M4×15X | R16BS | SM6×10XA | WT15IP WH40L |
| | **3232P16** | ● | 32 | 32 | 170 | 32 | 16 | 40 | | | | |
| | **4040S16** | ● | 40 | 40 | 250 | 40 | 20 | 50 | | | | |
| | **4040S20** | ● | 40 | 40 | 250 | 40 | 20 | 50 | I43M6×16 | — | — | WT25IT |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Semi-Finishing Mittlere Bearbeitung | Al machining Alu-Bearbeitung |
|---|---|---|
| Insert shape Schneidplattenform |  A114 | LH  A114 |
| **SRDCN**H08** | RCMT0803MO | RCGX0803MO-LH |
| **SRDCN**H / K / M10** | RCMT10T3 MO | |
| **SRDCN**K / M / P12** | RCMT1204 MO | |
| **SRDCN**P / S16** | RCMT1606 MO | |
| **SRDCN**P / S20** | RCMT2006 MO | |

Type · Typ

Holder not suitable for RCMX inserts
Halter nicht für RCMX Platten geeignet

● ex stock · ab Lager ○ on demand · Anfrage

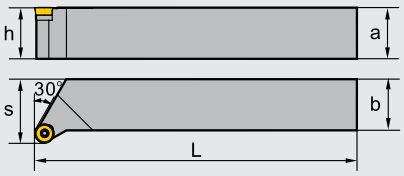
## RC** Toolholder · Halter

S-Clamping · S-Halter

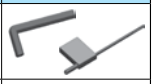
### SRGCR/ L



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |  |  |  |  |
| **SRGCR/ L** | **1616H08** | ● | ● | 16 | 16 | 100 | 16 | 20 | | I60M3×7 | — | — | WT10IP |
| | **1616H10** | ○ | ○ | 16 | 16 | 100 | 16 | 20 | | I60M3.5×10 | — | — | WT15IP |
| | **2020K10** | ● | ○ | 20 | 20 | 125 | 20 | 25 | | | | | |
| | **2525M10** | ● | ○ | 25 | 25 | 100 | 25 | 32 | | | | | |
| | **2020K12** | ● | ○ | 20 | 20 | 125 | 20 | 27 | | I60M3.5×12 | R12BS | SM5×8.65XA | WT15IP WH35L |
| | **2525M12** | ● | ○ | 25 | 25 | 150 | 25 | 32 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Semi-Finishing Mittlere Bearbeitung | Al machining Alu-Bearbeitung |
|---|---|---|
| Insert shape Schneidplattenform |  A114 | LH  A114 |
| Type · Typ **SRGCR / L**H08** | | RCGX0803MO-LH |
| **SRGCR / L**H / K / M10** | RCMT10T3 MO | |
| **SRGCR / L**K / M12** | RCMT1204 MO | |

Holder not suitable for RCMX inserts
Halter nicht für RCMX Platten geeignet

## KNUX** Toolholder · Halter

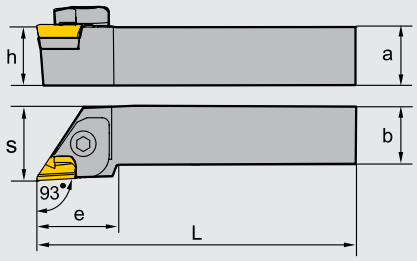
C-Clamping · C-Halter

### CKJNR/ L

**Kr:93°**



R Type
Rechtsausführung

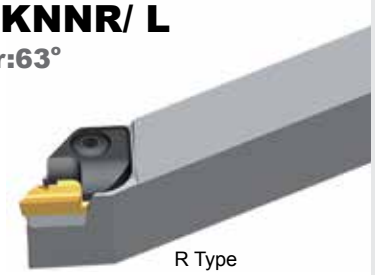




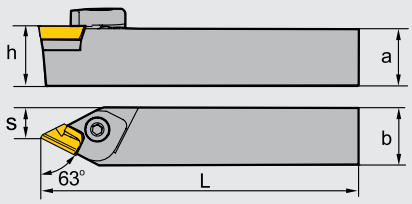

| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Spring Feder | Dowel pin Passstift | Shim Unterlage | Shim screw Unterlages-schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e | | | | | | | | |
| **CKJNR** | **2525M16** | ● | 25 | 25 | 150 | 25 | 32 | 32 | KNUX1604**R A102 | C6R1T | CM6×25A | SPR1 SPR2 | P0515 | K16CC | SM3×10B | WH20L WH40L |
| | **3232P16** | ● | 32 | 32 | 170 | 32 | 40 | 32 | | | | | | | | |
| | **4040R16** | ○ | 40 | 40 | 200 | 40 | 50 | 32 | | | | | | | | |
| **CKJNL** | **2525M16** | ● | 25 | 25 | 150 | 25 | 32 | 32 | KNUX1604**L A102 | C6L1T | | | | K16CCL | | |
| | **3232P16** | ● | 32 | 32 | 170 | 32 | 40 | 32 | | | | | | | | |
| | **4040R16** | ● | 40 | 40 | 200 | 40 | 50 | 32 | | | | | | | | |

### CKNNR/ L

**Kr:63°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Spring Feder | Dowel pin Passstift | Shim Unterlage | Shim screw Unterlages-schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | | | | | | | | |
| **CKNNR** | **2525M16** | ● | 25 | 25 | 150 | 25 | 14.3 | KNUX1604**R A102 | C6R1T | CM6×25A | SPR1 SPR2 | P0515 | K16CC | SM3×10B | WH20L WH40L |
| | **3232P16** | ○ | 32 | 32 | 170 | 32 | 16.8 | | | | | | | | |
| **CKNNL** | **2525M16** | ● | 25 | 25 | 150 | 25 | 14.3 | KNUX1604**L A102 | C6L1T | CM6×25A | SPR1 SPR2 | P0515 | K16CCL | SM3×10B | |
| | **3232P16** | ○ | 32 | 32 | 170 | 32 | 16.8 | | | | | | | | |

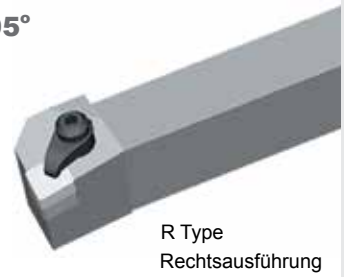
● ex stock · ab Lager ○ on demand · Anfrage

## CN** Toolholder · Halter

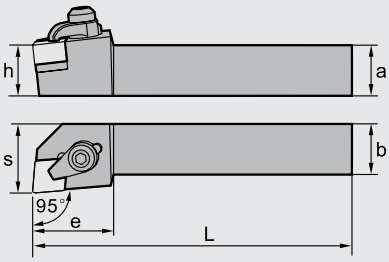
C-Clamping · C-Halter

### CCLNR/ L

**Kr:95°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CCLNR/ L** | **2020K12** | ○ | ○ | 20 | 20 | 125 | 20 | 27 | 32 | CNGN1207** (1204**) A161 | C1RC | CM6×30B | WH20L WH40L | C12CC-07 (C12CC-04) | SM3×10B | SPR1 |
| | **2525M12** | ○ | ● | 25 | 20 | 100 | 25 | 27 | 36 | | | | | | | |
| | **2525M16** | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 36 | CNGN1606** (1604**) A161 | C2RC | CM8×30B | WH30L WH50L | C16CC-06 (16CC-04) | SM4×12B | SPR3 |
| | **3225P16** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 36 | | | | | | | |

## TN** Toolholder · Halter

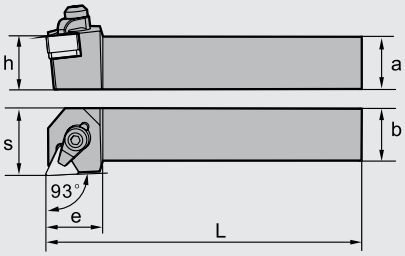
C-Clamping · C-Halter

### CTJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CTJNR/ L** | **2020K16** | ○ | ○ | 20 | 20 | 125 | 20 | 25 | 30 | TNGN1607** (1604**) A167 | C1RC | CM6×30B | WH20L WH40L | T16CC-07 (T16CC-04) | SM3×10B | SPR1 |
| | **2525M16** | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 30 | | | | | | | |

## TN** Toolholder · Halter

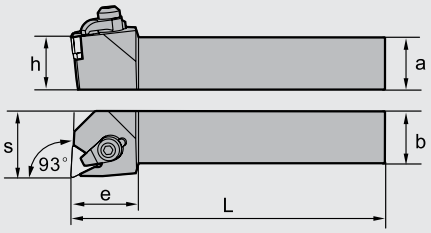
C-Clamping · C-Halter

### CTUNR/ L

**Kr:93°**



R Type
Rechtsausführung





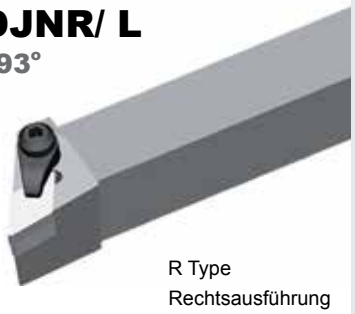

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CTUNR/ L | 2020K12 | ○ | ○ | 20 | 20 | 125 | 20 | 25 | 27 | TNGN1607** (1604**) A167 | C1RC | CM6×30B | WH20L WH40L | T16CC-07 (T16CC-04) | SM3×10B | SPR1 |
| | 2525M16 | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 27 | | | | | | | |

## DN** Toolholder · Halter

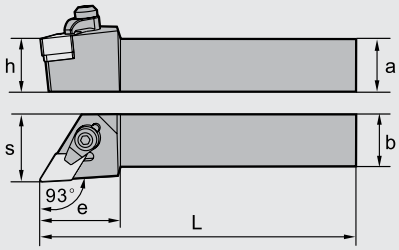
C-Clamping · C-Halter

### CDJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CDJNR/ L | 2525M15 | ● | ● | 25 | 25 | 150 | 25 | 32 | 32 | DNGN1507** (1504**) A163 | C1RC | CM6×30B | WH20L WH40L | D15CC-07 (D15CC-04) | SM3×10B | SPR1 |
| | 3225P15 | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 32 | | | | | | | |

● ex stock · ab Lager ○ on demand · Anfrage

## SN** Toolholder · Halter

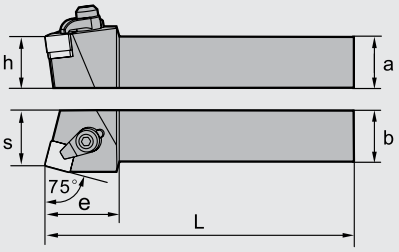
C-Clamping · C-Halter

### CSRNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | a | b | L | h | s | e | | | | | | | |
| **CSRNR/ L** | **2020K12** | ○ | ○ | 20 | 20 | 125 | 20 | 22 | 32 | SNGN1207** (1204**) A165 | C1RC | CM6×30B | WH20L WH40L | S12CC-07 (S12CC-04) | SM3×10B | SPR1 |
| | **2525M12** | ○ | ○ | 25 | 20 | 100 | 25 | 27 | 32 | | | | | | | |
| | **3225P12** | ○ | ○ | 32 | 25 | 170 | 32 | 27 | 32 | | | | | | | |
| | **3225P15** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 40 | SNGN1507** A165 | C2RC | CM8×30B | W○30L WH50L | S15CC-07 | SM4×12B | SPR3 |
| | **4040R15** | ○ | ○ | 40 | 40 | 200 | 40 | 43 | 40 | | | | | | | |

## SN** Toolholder · Halter

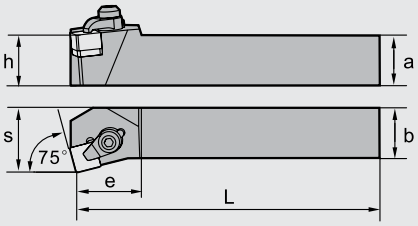
C-Clamping · C-Halter

### CSKNR/ L

**Kr:75°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | a | b | L | h | s | e | | | | | | | |
| **CSKNR/ L** | **2020K12** | ○ | ○ | 20 | 20 | 125 | 20 | 25 | 25 | SNGN1207** (1204**) A165 | C1RC | CM6×30B | WH20L WH40L | S12CC-07 (S12CC-04) | SM3×10B | SPR1 |
| | **2525M12** | ○ | ○ | 25 | 25 | 170 | 25 | 32 | 25 | | | | | | | |
| | **3225P12** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 25 | | | | | | | |
| | **3225P15** | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 30 | SNGN1507** A165 | C2RC | CM8×30B | WH30L WH50L | S15CC-07 | SM4×12B | SPR3 |

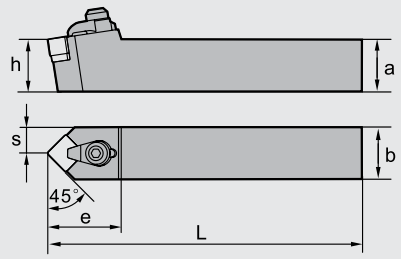
## SN** Toolholder · Halter

C-Clamping · C-Halter

### CSDNN

Kr:45°







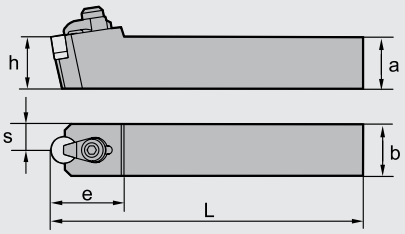

| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e | | | | | | | |
| **CSDNN** | **2020K12** | ○ | 20 | 20 | 125 | 20 | 10 | 35 | SNGN1207** (1204**) A165 | C1RC | CM6×30B | WH20L WH40L | S12CC-07 (S12CC-04) | SM3×10B | SPR1 |
| | **2525M12** | ● | 25 | 25 | 150 | 25 | 12.5 | 3○ | | | | | | | |
| | **3225P12** | ○ | 32 | 25 | 170 | 32 | 12.5 | 35 | | | | | | | |

## RN** Toolholder · Halter

C-Clamping · C-Halter

### CRDNN








| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e | | | | | | | |
| **CRDNN** | **2020K12** | ○ | 20 | 20 | 125 | 20 | 10 | 32 | RNGN1207** (1204**) A168 | C1RC | CM6×30B | WH20L WH40L | R12CC-07 (R12CC-04) | SM3×10B | SPR1 |
| | **2525M12** | ○ | 25 | 25 | 150 | 25 | 12.5 | 32 | | | | | | | |
| | **3225P12** | ○ | 32 | 25 | 170 | 32 | 12.5 | 32 | | | | | | | |
| | **3232P15** | ○ | 32 | 32 | 170 | 32 | 17.5 | 40 | RNGN1507** A168 | C2RC | CM8×30B | WH20L WH50L | R15CC-07 | SM3×10B | SPR3 |
| | **4040R15** | ○ | 40 | 40 | 200 | 40 | 20 | 40 | | | | | | | |

● ex stock · ab Lager ○ on demand · Anfrage

## CN** Toolholder · Halter

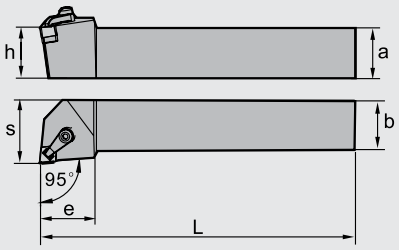
J-Clamping · J-Halter

### JCLNR/ L

**Kr:95°**



R Type
Rechtsausführung





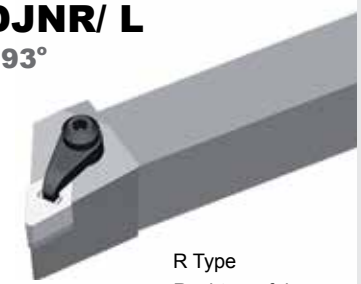

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JCLNR/ L | 2020K12 | ○ | ○ | 20 | 20 | 125 | 20 | 29 | 32 | CNGX1207** A162 | C1RJ | CM6×30B | WH20L WH40L | C12CC-07 | SM3×10B | SPR1 |
| | 2525M12 | ○ | ○ | 25 | 25 | 150 | 25 | 32 | 32 | | | | | | | |

## DN** Toolholder · Halter

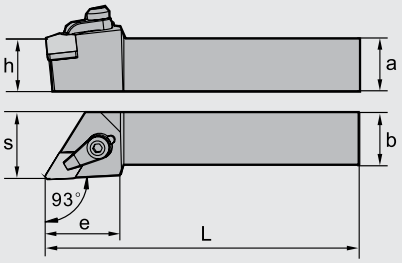
J-Clamping · J-Halter

### JDJNR/ L

**Kr:93°**



R Type
Rechtsausführung






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung a | b | L | h | s | e | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JDJNR/ L | 2525M15 | ● | ○ | 25 | 25 | 150 | 25 | 32 | 38 | DNGX1507** A163 | C1RJ | CM6×30B | WH20L WH40L | D15CC-07 | SM3×10B | SPR1 |
| | 3225P15 | ○ | ○ | 32 | 25 | 170 | 32 | 32 | 38 | | | | | | | |

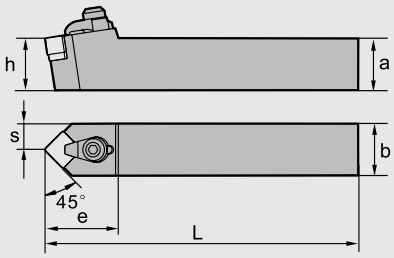
## SN** Toolholder · Halter

J-Clamping · J-Halter

### JSDNN

**Kr:45°**








| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | Application inserts Wendeschneid-platten | Clamp Pratze | Clamp screw Pratzen-schraube | Wrench Schlüssel | Shim Unterlage | Shim screw Unterlages-schraube | Spring Feder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | L | h | s | e |  |  |  |  |  |  |  |
| **JSDNN** | **2020K12** | ○ | 20 | 20 | 125 | 20 | 10 | 40 | SNGX1207** A164 | C1RJ | CM6×30B | WH20L WH40L | S12CC-07 | SM3×10B | SPR1 |
| | **2525M12** | ○ | 25 | 25 | 150 | 25 | 12.5 | 40 | | | | | | | |
| | **3225P12** | ○ | 32 | 25 | 170 | 32 | 12.5 | 40 | | | | | | | |

● ex stock · ab Lager ○ on demand · Anfrage

# Turning · Drehen

## Internal Turning Tools · Drehwerkzeuge zur Innenbearbeitung


Turning tool overview · **Drehwerkzeuge Übersicht** **A243**

Turning tool code key · **ISO Kennzeichnung** **A244-A245**

**Detailed table of Internal turning tool**
**Drehwerkzeuge zur Innenbearbeitung** **A246-A271**

Turning toolholders by P type clamping · Drehwerkzeuge / P Klemmung A246-A253

Turning toolholders by S type clamping · Drehwerkzeuge / S Klemmung A254-A270

Antivibration Tool Holder · Antivibration-Klemmhalter A272-A278



| Clamping system Klemmsystem | Feature Merkmale | 62°30′ | 75° | 85° | 90° | 91° | 93° | 93° | 95° | 107°30′ |
|---|---|---|---|---|---|---|---|---|---|---|
| | |  |  |  |  |  |  |  |  |  |
| **P** | • min. Ø to be machined = 20mm<br>• min. Bearbeitungs Ø = 20mm<br>• neg. inserts with good stability and Economy<br>• Neg. WSP mit guter Stabilität & Wirtschaftlichkeit | **PDSN**  A248 | **PSKN**  A251 | | **PTFN**  A252 | | | **PDUN**  A249 | **PCLN**  A246 | |
| | | | | | | | | | **PWLN**  A253 | |
| **S** | • min. Ø to be machined = 8,5mm (Screw Clamping)<br>• min. Bearbeitungs Ø = 8,5mm (Schraubenklemm.)<br>• Inserts with 5°/7°/11°<br>• Pos.-WSP mit 5°/7°/11° | | **SSKC**  A259 | **SDZC**  A258 | **SCFC**  A269 | **STFC**  A260 | **STUP**  A268 | **SDUC**  A257 | | **SDQC**  A256 |
| | | | | | | | | **SDUP**  A267 | **SCLC**  A254 | **SDQP**  A266 |
| | | | | | | | | **SVUC**  A262 | **SCLC**  A254 | **SVQB**  A263 |
| | | | | | | | | **SVUB**  A264 | **SCLP**  A265 | **SVQC**  A261 |
| Antivibration Antivibration | • Antivibrations toolholder (Cemented Carbide)<br>• min. Ø to be machined = 8,5mm<br>• Inserts with 5°/7°/11°<br>• Antivibrations-Klemmhalter (Hartmetall)<br>• min. Bearbeitungs Ø = 8,5mm<br>• WSP mit 5°/7°/11° | | | | | | **STUP**  A275 | **SDUP**  A274 | **SCLP**  A272 | **SDQP**  A273 |
| | | | | | | | | **SVUC**  A278 | | **SVQC**  A277 |

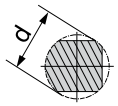
# Turning · Drehen

## Internal turning tools Code Key · Drehwerkzeugen zur Innenbearbeitung ISO Kennzeichnung

### Type of Shank *Schaftausführung*

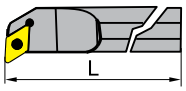
| code | Type *Typ* |
|---|---|
| A | Steel shank+Codant hole *Stahlschaft mit Kühlbohrung* |
| C | Carbide shank *Hartmetallschaft* |
| E | Carbide shank+Oil hole *Hartmetallschaft mit Kühlbohrung* |
| S | Steel shank *Stahlschaft* |
| X | Special insert application *Besondere Anwendung* |

### Shank diameter *Schaftdurchmesser*




| code | diameter *Durchmesser* |
|---|---|
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |
| 32 | 32 |
| 40 | 40 |
| 50 | 50 |

### Tool length *Halterlänge*

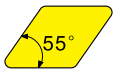



| code | length *Länge* |
|---|---|
| H | 100 |
| K | 125 |
| M | 150 |
| N | 160 |
| Q | 180 |
| R | 200 |
| S | 250 |
| T | 300 |
| U | 350 |
| V | 400 |

### Clamping System *Klemmsystem*

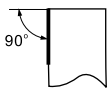
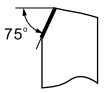
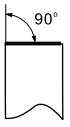
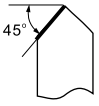
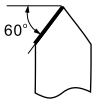
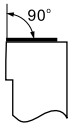
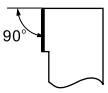
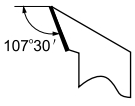
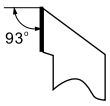
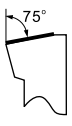
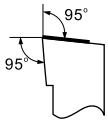
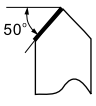
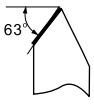
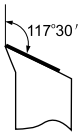
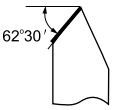
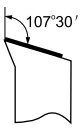
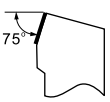
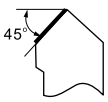
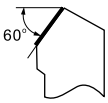
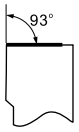
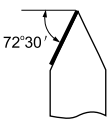
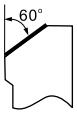
| | |
|---|---|
| P |  |
| M |  Screw clamping *Schraub-Spannsystem* |
| S |  Wedge lock clamping *Pratzenkeilklemmung* |
| C |  Overhead clamping *Pratzenkeilklemmung* |

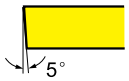
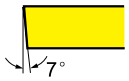
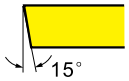
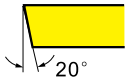
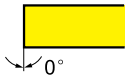
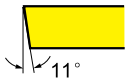
### Insert shape *Plattenform*

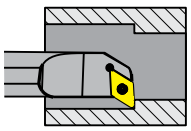
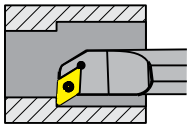
| | |
|---|---|
|  C |  D |
|  R |  S |
|  T |  V |
|  W | |

S 16 R - S D U

### Holder style and lead angle *Halterform und Anstellwinkel*

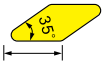
| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
| **J** | **K** | **L** | **M** | **N** | **O** | **P** | **Q** |
|  |  |  |  |  |  |  |  |
| **R** | **S** | **T** | **U** | **V** | **W** | **X** | |
|  |  |  |  |  |  |  | |

| Clearance angle of major cutting edge<br>*Freiwinkel von Hauptschneide* | |
|---|---|
|  | B |
|  | C |
|  | D |
|  | E |
|  | N |
|  | P |

| Holder execution<br>*Halterausführung* | |
|---|---|
|  | L |
|  | R |

| Manufacture option<br>*Herstellungsoptionen* | |
|---|---|
| D | Increase offset f size+1.0mm<br>*Aufmaß von F +1mm erhöhen* |
| E | Increase offset f size+2.0mm<br>*Aufmaß von F +2mm erhöhen* |
| R | Round shank<br>*Rundschaft* |
| W | Wedge clamping<br>*Keil-Klemmung* |
| X | Back boring<br>*Rückwärts drehen* |




| Cutting edge length<br>*Schneidkantenlänge* | | | | | | | |
|---|---|---|---|---|---|---|---|
| insert shape<br>*insert shape* | C | D | R | S | T | V | W |
| |  |  |  |  |  |  |  |
| Diameter of incircle (mm)<br>*Durchmesser von Innenkreis* | Cutting edge length<br>*Schneidkantenlänge* | | | | | | |
| 5.556 | --- | --- | --- | --- | 09 | --- | --- |
| 6.350 | 06 | 07 | --- | --- | 11 | --- | --- |
| 9.525 | 09 | 11 | 09 | 09 | 16 | 16 | 06 |
| 12.700 | 12 | 15 | 12 | 12 | 22 | 22 | 08 |
| 15.875 | 16 | 19 | 15 | 15 | 27 | --- | --- |
| 19.050 | 19 | --- | 19 | 19 | 33 | --- | --- |
| 25.400 | 25 | --- | 25 | 25 | 44 | --- | --- |

A

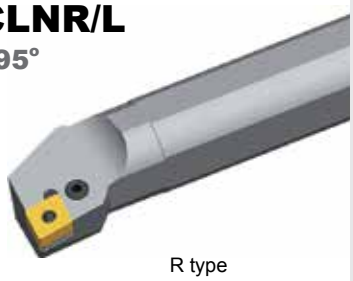
General Turning
Allgemeine Drehbearbeitung

## CN** Toolholder · Halter

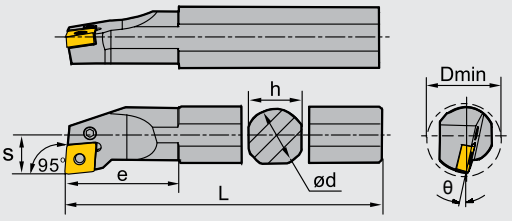
P-Clamping / P-Halter

### PCLNR/L

**Kr:95°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |  |
| **S16M-PCLNR/L09** | ● | ● | 20 | 16 | 15 | 150 | 11 | -12° | 28 | LEM5×9B | WH20L | L3C | —— | —— |
| **S16R-PCLNR/L09** | ● | ● | 20 | 16 | 15 | 200 | 11 | -12° | 28 | | | | | |
| **S20Q-PCLNR/L09** | ● | ● | 25 | 20 | 18 | 180 | 13 | -11° | 31 | | | | | |
| **S20S-PCLNR/L09** | ● | ● | 25 | 20 | 18 | 250 | 13 | -11° | 31 | | | | | |
| **S25Q-PCLNR/L09** | ● | ● | 32 | 25 | 23 | 180 | 17 | -10° | 35 | | | | | |
| **S25T- PCLNR/L09** | ● | ○ | 32 | 25 | 23 | 300 | 17 | -10° | 35 | | | | | |
| **S25Q-PCLNR/L12** | ● | ● | 32 | 25 | 23 | 180 | 17 | -12° | 40 | LEM6×13.4A | WH25L | L4A | —— | —— |
| **S25T- PCLNR/L12** | ● | ● | 32 | 25 | 23 | 300 | 17 | -12° | 40 | | | | | |
| **S32R-PCLNR/L12** | ● | ● | 44 | 32 | 30 | 200 | 22 | -10° | 50 | LEM8×21 | WH30L | L4 | C12APB | SP4 |
| **S32U-PCLNR/L12** | ● | ● | 44 | 32 | 30 | 350 | 22 | -10° | 50 | | | | | |
| **S40S-PCLNR/L12** | ● | ● | 54 | 40 | 37 | 250 | 27 | -10° | 55 | | | | | |
| **S40V-PCLNR/L12** | ● | ● | 54 | 40 | 37 | 400 | 27 | -10° | 55 | | | | | |
| **S50S-PCLNR/L12** | ○ | ○ | 63 | 50 | 47 | 250 | 35 | -10° | 56 | | | | | |
| **S50W-PCLNR/L12** | ● | ○ | 63 | 50 | 47 | 450 | 35 | -10° | 56 | | | | | |
| **S50S-PCLNR/L19** | ○ | ○ | 63 | 50 | 47 | 250 | 35 | -10° | 63 | LEM10×27 | WH40L | L6 | C19AP | SP6 |
| **S50W-PCLNR/L19** | ● | ○ | 63 | 50 | 47 | 450 | 35 | -10° | 63 | | | | | |
| **♦ A25R-PCLNR/L12** | ● | ● | 32 | 25 | 24 | 200 | 17 | -12° | 40 | LEM6×13.4A | WH25L | L4A | —— | —— |
| **♦ A32S-PCLNR/L12** | ● | ● | 44 | 32 | 31 | 250 | 22 | -10° | 50 | LEM8×21 | WH30L | L4 | C12APB | SP4 |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

Applicable insert
Wendeschneidplatten

| Application<br>Anwendung | Finishing<br>Schlichten | Semi-Finishing<br>Mittlere Bearbeitung | Roughing<br>Schruppen | Heavy Duty<br>Schwerzerspanung | Cast iron machining<br>Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape<br>Schneidplattenform | **SF**  A66 | **PM**  A67 | **DR** Double side doppel seitig  A69 | **HDR**  A71 | Flat Glatt  A72 |
| | **DF**  A66 | **DM**  A68 | **DR** Single side einseitig  A69 | **HPR**  A71 | **TC**  A69 |
| | **ADF**  A66 | **ZM**  A68 | **ER** Double side doppel seitig  A70 | | |
| | **EF**  A66 | **EM**  A68 | **ER** Single side einseitig  A70 | | |
| | **NF**  A67 | **EG**  A68 | **SNR**  A69 | | |
| | | **NM**  A69 | **LR** Single side einseitig  A70 | | |

| Type · Typ | | | | | |
|---|---|---|---|---|---|
| **-PCLNR/L09 | CN**0903** | CN**0903** | | CN**0903** | |
| **-PCLNR/L12 | CN**1204** | CN**1204** | CN**1204** | CN**1204** | |
| **-PCLNR/L19 | | | CN**1906** | CN**1906** | |

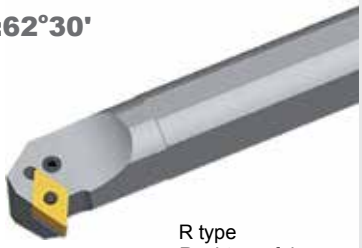
♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

## DN** Toolholder Halter

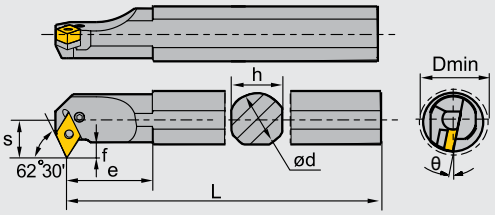
P-Clamping / P-Halter

# PDSNR/L

**Kr:62°30'**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e | f | | | | | |
| **S32R-PDSNR/L15** | ● | ● | 40 | 32 | 30 | 200 | 22 | -11° | 45 | 8.5 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| **S32U-PDSNR/L15** | ● | ● | 40 | 32 | 30 | 350 | 22 | -11° | 45 | 8.5 | | | | | |
| **S32R-PDSNR/L15-3** | ○ | ○ | 40 | 32 | 30 | 200 | 22 | -11° | 45 | 8.5 | LEM8×21 | WH30L | L4 | D15AP | SP4 |
| **S32U-PDSNR/L15-3** | ○ | ○ | 40 | 32 | 30 | 350 | 22 | -11° | 45 | 8.5 | | | | | |
| **S40S-PDSNR/L15** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -11° | 43 | 9.4 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| **S40V-PDSNR/L15** | ○ | ○ | 50 | 40 | 37 | 400 | 27 | -11° | 43 | 9.4 | | | | | |
| **S40S-PDSNR/L15-3** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -11° | 43 | 9.4 | LEM8×21 | WH30L | L4 | D15AP | SP4 |
| **S40V-PDSNR/L15-3** | ● | | 50 | 40 | 37 | 400 | 27 | -11° | 43 | 9.4 | | | | | |
| **♦ A32S- PDSNR/L15** | ● | ● | 40 | 32 | 31 | 250 | 22 | -11° | 45 | 8.5 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| ***♦ A32S- PDSNR/L15-3** | ○ | ○ | 40 | 32 | 31 | 250 | 22 | -11° | 45 | 8.5 | LEM8×21 | WH30L | L4 | D15AP | SP4 |

* For DNMG1504 / *Für DNMG1504*

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF** A73 | **PM** A75 | **DR** Double side doppel seitig A76 | Flat Glatt A76 |
| | **DF** A73 | **DM** A75 | **DR** Single side einseitig A78 | **TC** A76 |
| | **ADF** A73 | **ZM** A75 | **ER** Double side doppel seitig A76 | |
| | **EF** A74 | **EM** A76 | **ER** Single side einseitig A78 | |
| | **NF** A74 | **EG** A76 | **SNR** A78 | |
| | **NGF** A74 | **NM** A76 | **LR** Single side einseitig A78 | |

| Type · Typ | | | | | |
|---|---|---|---|---|---|
| | ****-PDSNR/L-15-3** | DN**1504** | DN**1504** | | DN**1504** |
| | ****-PDSNR/L-15** | DN**1506** | DN**1506** | DN**1506** | DN**1506** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## DN** Toolholder · Halter

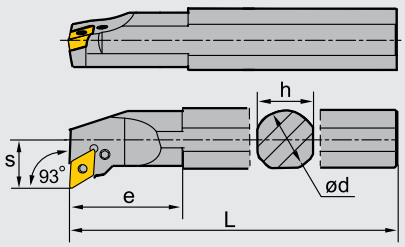
P-Clamping / P-Halter

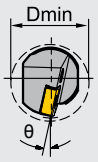
### PDUNR/L

**Kr:93°**



R type
Rechtsausführung



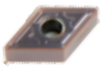



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |  |
| **S20Q-PDUNR/L11** | ● | ● | 25 | 20 | 18 | 180 | 13 | -16° | 30 | LEM5×12B | WH20L | L3D | —— | —— |
| **S20S-PDUNR/L11** | ● | ● | 25 | 20 | 18 | 250 | 13 | -16° | 30 | | | | | |
| **S25Q-PDUNR/L11** | ● | ● | 32 | 25 | 23 | 180 | 17 | -13° | 35 | | | | | |
| **S25T-PDUNR/L11** | ● | ● | 32 | 25 | 23 | 300 | 17 | -13° | 35 | | | | | |
| **S32R-PDUNR/L11** | ● | ○ | 40 | 32 | 30 | 200 | 22 | -16° | 40 | LEM6×17 | WH25L | L3 | D11AP | SP3 |
| **S32U-PDUNR/L11** | ● | ● | 40 | 32 | 30 | 350 | 22 | -16° | 40 | | | | | |
| **S32R-PDUNR/L15** | ● | ● | 40 | 32 | 30 | 200 | 22 | -16° | 50 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| **S32U-PDUNR/L15** | ● | ● | 40 | 32 | 30 | 350 | 22 | -16° | 50 | | | | | |
| **S32R-PDUNR/L15-3** | ○ | ○ | 40 | 32 | 30 | 200 | 22 | -16° | 50 | LEM8×21 | WH30L | L4 | D15AP | SP4 |
| **S32U-PDUNR/L15-3** | ● | ● | 40 | 32 | 30 | 350 | 22 | -16° | 50 | | | | | |
| **S40S-PDUNR/L15** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -11° | 50 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| **S40V-PDUNR/L15** | ● | ● | 50 | 40 | 37 | 400 | 27 | -11° | 50 | | | | | |
| **S40S-PDUNR/L15-3** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -11° | 50 | LEM8×21 | WH30L | L4 | D15AP | SP4 |
| **S40V-PDUNR/L15-3** | ● | ● | 50 | 40 | 37 | 400 | 27 | -11° | 50 | | | | | |
| **♦ A32S- PDUNR/L15** | ● | ● | 40 | 32 | 31 | 250 | 22 | -16° | 50 | LEM8×21 | WH30L | L4B | D15AP | SP4 |
| ***♦ A32S- PDUNR/L15-3** | ● | ● | 40 | 32 | 31 | 250 | 22 | -16° | 50 | LEM8×21 | WH30L | L4 | D15AP | SP4 |

* For DNMG1504 / *Für DNMG1504*

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

Applicable insert
Wendeschneidplatten

| Application<br>Anwendung | Finishing<br>Schlichten | Semi-Finishing<br>Mittlere Bearbeitung | Roughing<br>Schruppen | Cast iron machining<br>Grauguss-Bearbeit. |
|---|---|---|---|---|
| Insert shape<br>Schneidplattenform | **SF**  A73 | **PM**  A75 | **DR** Double side doppel seitig  A76 | Flat Glatt  A76 |
| | **DF**  A73 | **DM**  A75 | **DR** Single side einseitig  A78 | **TC**  A76 |
| | **ADF**  A73 | **ZM**  A75 | **ER** Double side doppel seitig  A76 | |
| | **EF**  A74 | **EM**  A76 | **ER** Single side einseitig  A78 | |
| | **NF**  A74 | **EG**  A76 | **SNR**  A78 | |
| | **NGF**  A74 | **NM**  A76 | **LR** Single side einseitig  A78 | |
| Type · Typ<br>**-PDUNR/L11 | DN**1104** | DN**1104** | | |
| **-PDUNR/L15-3 | DN**1504** | DN**1504** | | DN**1504** |
| **-PDUNR/L15 | DN**1506** | DN**1506** | DN**1506** | DN**1506** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## SN** Toolholder · Halter

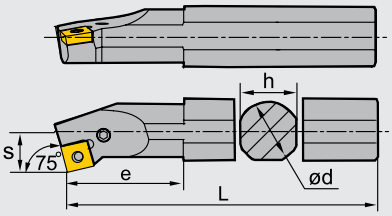
P-Clamping / P-Halter

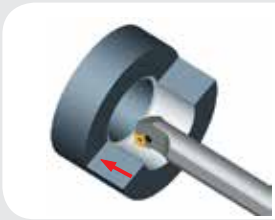
### PSKNR/L

**Kr:75°**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |  |
| **S25Q-PSKNR/L12** | ○ | ○ | 32 | 25 | 23 | 180 | 17 | -12° | 42 | LEM6×13.4A | WH25L | L4A | —— | —— |
| **S25T-PSKNR/L12** | ● | ● | 32 | 25 | 23 | 300 | 17 | -12° | 42 | | | | | |
| **S32R-PSKNR/L12** | ○ | ○ | 44 | 32 | 30 | 200 | 22 | -10° | 45 | LEM8×21 | WH30L | L4 | S12APB | SP4 |
| **S32U-PSKNR/L12** | ● | ● | 44 | 32 | 30 | 350 | 22 | -10° | 45 | | | | | |
| **S40S-PSKNR/L12** | ○ | ○ | 54 | 40 | 37 | 250 | 27 | -10° | 50 | | | | | |
| **S40V-PSKNR/L12** | ● | ○ | 54 | 40 | 37 | 400 | 27 | -10° | 50 | | | | | |
| **♦ A25R-PSKNR/L12** | ● | ● | 32 | 25 | 24 | 200 | 17 | -12° | 42 | LEM6×13.4A | WH25L | L4A | —— | —— |
| **♦ A32S-PSKNR/L12** | ● | ● | 44 | 32 | 31 | 250 | 22 | -12° | 50 | LEM8×21 | WH30L | L4 | S12APB | SP4 |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A79 | **PM**  A80 | **DR** Double side doppel seitig  A82 | Flat Glatt  A86 |
| | **DF**  A79 | **DM**  A81 | **DR** Single side einseitig  A83 | **TC**  A81 |
| | **ADF**  A79 | **EM**  A81 | **ER** Double side doppel seitig  A82 | |
| | **EF**  A80 | **EG**  A81 | **ER** Single side einseitig  A84 | |
| | | **NM**  A82 | **LR** Single side einseitig  A83 | |
| Type · Typ **-PSKNR/L12 | SN**1204** | SN**1204** | SN**1204** | SN**1204** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

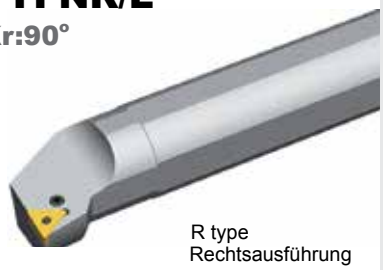
General Turning
Allgemeine Drehbearbeitung

## TN** Toolholder · Halter

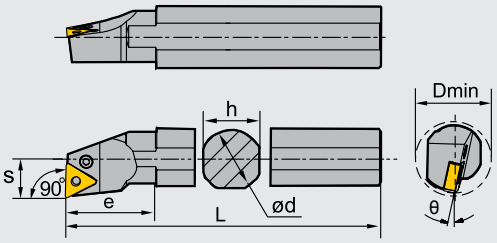
P-Clamping / P-Halter

### PTFNR/L

**Kr:90°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |  |
| **S16M-PTFNR/L11** | ○ | ○ | 20 | 16 | 15 | 150 | 11 | -14° | 28 | LEM5×9B | WH20L | L2 | —— | —— |
| **S16R-PTFNR/L11** | ● | ● | 20 | 16 | 15 | 200 | 11 | -14° | 28 | | | | | |
| **S20Q-PTFNR/L11** | ● | ○ | 25 | 20 | 18 | 180 | 13 | -12° | 31 | | | | | |
| **S20S-PTFNR/L11** | ● | ● | 25 | 20 | 18 | 250 | 13 | -12° | 31 | | | | | |
| **S25Q-PTFNR/L11** | ○ | ○ | 32 | 25 | 23 | 180 | 17 | -10° | 35 | | | | | |
| **S25T-PTFNR/L11** | ● | ● | 32 | 25 | 23 | 300 | 17 | -10° | 35 | | | | | |
| **S25Q-PTFNR/L16** | ○ | ○ | 32 | 25 | 23 | 180 | 17 | -12° | 42 | LEM5×12B | WH20L | L3B | —— | —— |
| **S25T-PTFNR/L16** | ● | ● | 32 | 25 | 23 | 300 | 17 | -12° | 42 | | | | | |
| **S32R-PTFNR/L16** | ○ | ○ | 44 | 32 | 30 | 200 | 22 | -10° | 50 | LEM6×17 | WH25L | L3 | T16APB | SP3 |
| **S32U-PTFNR/L16** | ● | ● | 44 | 32 | 30 | 350 | 22 | -10° | 50 | | | | | |
| **S40S-PTFNR/L16** | ○ | ○ | 54 | 40 | 37 | 250 | 27 | -10° | 55 | | | | | |
| **S40V-PTFNR/L16** | ● | ● | 54 | 40 | 37 | 400 | 27 | -10° | 55 | | | | | |
| **♦ A25R-PTFNR/L16** | ● | ○ | 32 | 25 | 24 | 200 | 17 | -12° | 40 | | | | | |
| **♦ A32S-PTFNR/L16** | ● | ● | 44 | 32 | 31 | 250 | 22 | -10° | 50 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A88 | **PM**  A90 | **DR** Double side doppel seitig  A91 | Flat Glatt  A94 |
| | **DF**  A88 | **DM**  A90 | **DR** Single side einseitig  A92 | **TC**  A91 |
| | **ADF**  A88 | **ZM**  A90 | **ER** Double side doppel seitig  A92 | |
| | **EF**  A89 | **EM**  A91 | **LR** Single side einseitig  A92 | |
| | | **EG**  A91 | | |

| Type · Typ | | | | | |
|---|---|---|---|---|---|
| | ****PTFNR/L11** | TN**1103** | TN**1103** | | TN**1103** |
| | ****PTFNR/L16** | TN**1604** | TN**1604** | TN**1604** | TN**1604** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## WN** Toolholder · Halter

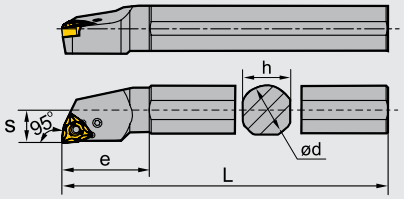
P-Clamping /P-Halter

### PWLNR/L

**Kr:95°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Lever Kniehebel | Shim Unterlage | Shim pin Rohrstift |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |  |
| **S16M-PWLNR/L06** | ● | ● | 20 | 16 | 15 | 150 | 11 | -13° | 25 | LEM5X12B | WH20L | L3B | —— | —— |
| **S16R-PWLNR/L06** | ○ | ○ | 20 | 16 | 15 | 200 | 11 | -13° | 25 | | | | | |
| **S20Q-PWLNR/L06** | ● | ● | 25 | 20 | 18 | 180 | 13 | -13° | 35 | LEM5X12B | WH20L | L3B | —— | —— |
| **S20S-PWLNR/L06** | ● | ○ | 25 | 20 | 18 | 250 | 13 | -13° | 35 | | | | | |
| **S25Q-PWLNR/L06** | ● | ● | 32 | 25 | 23 | 180 | 17 | -13° | 35 | | | | | |
| **S25T-PWLNR/L06** | ○ | ○ | 32 | 25 | 23 | 300 | 17 | -13° | 35 | | | | | |
| **S20Q-PWLNR/L08** | ● | ● | 25 | 20 | 18 | 180 | 13 | -13° | 32 | LEM6X13.4A | WH25L | L4A | —— | —— |
| **S20S-PWLNR/L08** | ● | ○ | 25 | 20 | 18 | 250 | 13 | -13° | 32 | | | | | |
| **S25Q-PWLNR/L08** | ● | ● | 32 | 25 | 23 | 180 | 17 | -13° | 45 | | | | | |
| **S25T-PWLNR/L08** | ● | ○ | 32 | 25 | 23 | 300 | 17 | -13° | 45 | | | | | |
| **S32R-PWLNR/L08** | ● | ● | 40 | 32 | 30 | 200 | 22 | -15° | 50 | LEM8X21 | WH30L | L4 | W08AP | SP4 |
| **S32U-PWLNR/L08** | ● | ● | 40 | 32 | 30 | 350 | 22 | -15° | 50 | | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-Finishing Mittlere Bearbeitung | Roughing Schruppen | Cast iron machining Grauguss Bearbeit. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A97 | **PM**  A99 | **DR** Double side doppel seitig  A100 | Flat Glatt  A100 |
| | **DF**  A97 | **DM**  A99 | | **TC**  A100 |
| | **ADF**  A97 | **ZM**  A99 | | |
| | **EF**  A98 | **EM**  A99 | | |
| | **NF**  A98 | **EG**  A99 | | |
| | | **NM**  A99 | | |

| Type · Typ | | | | |
|---|---|---|---|---|
| ****-PWLNR/L06** | WN**0604** | WN**0604** | WN**0604** | WN**0604** |
| ****-PWLNR/L08** | WN**0804** | WN**0804** | WN**0804** | WN**0804** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

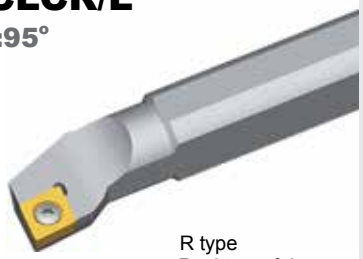
General Turning
Allgemeine Drehbearbeitung

## CC** Toolholder · Halter

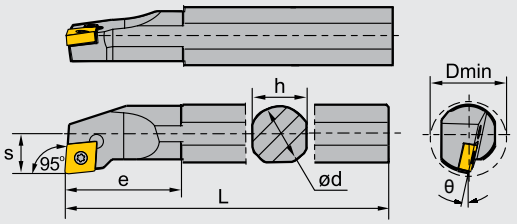
S-Clamping / S-Halter

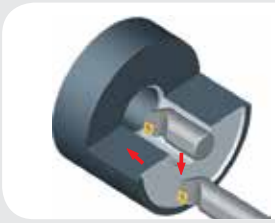
### SCLCR/L

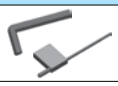
**Kr:95°**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim Unterlage Schraube |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |
| **S08K-SCLCR/L06** | ● | ● | 10 | 8 | 7 | 125 | 5 | -15° | 14 | I60M2.5×5.5 | WT07IP | —— | —— |
| **S10K-SCLCR/L06** | ● | ● | 10 | 10 | 7 | 125 | 5 | -15° | 14 | | | | |
| **S10M-SCLCR/L06** | ● | ● | 12 | 10 | 9 | 150 | 6 | -13° | 14 | | | | |
| **S12M-SCLCR/L06** | ● | ● | 16 | 12 | 11 | 150 | 9 | -10° | 25 | | | | |
| **S12M-SCLCR/L09** | ● | ● | 16 | 12 | 11 | 150 | 9 | -10° | 25 | I60M3.5×8 | WT15IP | —— | —— |
| **S16M-SCLCR/L09** | ● | ● | 20 | 16 | 15 | 150 | 11 | -12° | 32.5 | | | | |
| **S16R-SCLCR/L09** | ● | ● | 20 | 16 | 15 | 200 | 11 | -12° | 32.5 | | | | |
| **S20Q-SCLCR/L09** | ● | ● | 25 | 20 | 18 | 180 | 13 | -8° | 38 | | | | |
| **S20S-SCLCR/L09** | ● | ● | 25 | 20 | 18 | 250 | 13 | -8° | 38 | | | | |
| **S25Q-SCLCR/L09** | ● | ● | 32 | 25 | 23 | 180 | 17 | -6° | 45 | I60M3.5×10 | WT15IP | —— | —— |
| **S25T-SCLCR/L09** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 45 | | | | |
| **S25Q-SCLCR/L12** | ● | ● | 32 | 25 | 23 | 180 | 17 | -6° | 45 | I60M4×11X | WT15IP | —— | —— |
| **S25T-SCLCR/L12** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 45 | I60M4×11X | WT15IP | —— | —— |
| **S32R-SCLCR/L12** | ● | ● | 40 | 32 | 30 | 200 | 22 | -10° | 50 | I60M4×11X | WH40L<br>WT15IP | C12BS | SM6×10XA |
| **S32U-SCLCR/L12** | ● | ● | 40 | 32 | 30 | 350 | 22 | -10° | 50 | | | | |
| **S40S-SCLCR/L12** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -8° | 60 | | | | |
| **S40V-SCLCR/L12** | ● | ● | 50 | 40 | 37 | 400 | 27 | -8° | 60 | | | | |
| **♦ A08F-SCLCR/L06** | ● | ● | 10 | 8 | 7.5 | 80 | 5 | -15° | 14 | I60M2.5×5.5 | WT07IP | —— | —— |
| **♦ A10H-SCLCR/L06** | ● | ● | 12 | 10 | 9.5 | 100 | 6 | -13° | 14 | | | | |
| **♦ A12K-SCLCR/L06** | ● | ● | 16 | 12 | 11.5 | 125 | 9 | -10° | 25 | | | | |
| **♦ A12K-SCLCR/L09** | ● | ● | 16 | 12 | 11.5 | 125 | 9 | -10° | 25 | I60M3.5×8 | WT15IP | —— | —— |
| **♦ A16M-SCLCR/L09** | ● | ● | 20 | 16 | 15.5 | 150 | 11 | -12° | 32.5 | | | | |
| **♦ A20Q-SCLCR/L09** | ● | ● | 25 | 20 | 19 | 180 | 13 | -8° | 38 | | | | |
| **♦ A25R-SCLCR/L09** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 45 | I60M3.5×10 | | | |
| **♦ A25R-SCLCR/L12** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 45 | I60M4×11X | WT15IP | —— | —— |
| **♦ A32S-SCLCR/L12** | ● | ● | 40 | 32 | 31 | 250 | 22 | -10° | 50 | | WH40L,WT15IP | C12BS | SM6×10XA |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

Applicable insert
Wendeschneidplatten

| Application<br>Anwendung | Extra Finishing<br>Feinbearbeitung | Finishing<br>Schlichten | Semi-finishing<br>Mittlere Bearbeit. | Roughing<br>Schruppen | Al machining<br>Alu-Bearbeitung | Cast iron machining<br>Grauguss-Bearbeit. |
|---|---|---|---|---|---|---|
| Insert shape<br>Schneidplattenform | **SF**  A105 | **HF**  A106 | **HM**  A106 | **HR**  A108 | **LH**  A108 | Flat<br>Glatt  A109 |
| | **AHF**  A106 | **EF**  A106 | **EM**  A106 | | **LC**  A108 | **TC**  A108 |
| Type · Typ ****-SCLCR/L06** | CC**0602** | CC**0602** | CC**0602** | CC**0602** | CCGX0602** | CC**0602** |
| ****-SCLCR/L09** | CC**09T3** | CC**09T3** | CC**09T3** | CC**09T3** | CCGX09T3** | CC**09T3** |
| ****-SCLCR/L12** | CC**1204** | CC**1204** | CC**1204** | CC**1204** | CCGX1204** | CC**1204** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## DC** Toolholder · Halter

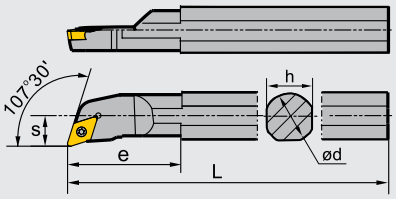
S-Clamping / S-Halter

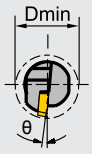
### SDQCR/L

**Kr:107°30'**



R type
Rechtsausführung

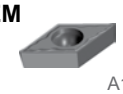





| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10M-SDQCR/L07** | ● | ● | 13 | 10 | 9 | 150 | 7 | -8° | 20 | I60M2.5×5.5 | WT07IP | | |
| **S12M-SDQCR/L07** | ● | ● | 16 | 12 | 11 | 150 | 9 | -8° | 22 | I60M2.5×6.5 | | | |
| **S16M-SDQCR/L07** | ● | ● | 20 | 16 | 15 | 150 | 11 | -6° | 27 | | | | |
| **S16Q-SDQCR/L07** | ● | ● | 20 | 16 | 15 | 150 | 11 | -6° | 27 | | | | |
| **S16R-SDQCR/L07** | ● | ● | 20 | 16 | 15 | 200 | 11 | -6° | 27 | | | | |
| **S20Q-SDQCR/L11** | ● | ○ | 25 | 20 | 18 | 180 | 13 | -6° | 32 | I60M3.5×8 | WT15IP | | |
| **S20S-SDQCR/L11** | ● | ● | 25 | 20 | 18 | 250 | 13 | -6° | 32 | | | | |
| **S25Q-SDQCR/L11** | ● | ○ | 32 | 25 | 23 | 180 | 17 | -6° | 32 | I60M3.5×10 | | | |
| **S25T-SDQCR/L11** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 32 | | | | |
| **♦ A10H-SDQCR/L07** | ● | ● | 13 | 10 | 9.5 | 100 | 7 | -8° | 20 | I60M2.5×5.5 | WT07IP | | |
| **♦ A12K-SDQCR/L07** | ● | ● | 16 | 12 | 11.5 | 125 | 9 | -8° | 22 | I60M2.5×6.5 | | | |
| **♦ A16M-SDQCR/L11** | ● | ● | 20 | 16 | 15.5 | 150 | 11 | -6° | 27 | I60M3.5×8 | WT15IP | | |
| **♦ A20Q-SDQCR/L11** | ● | ● | 25 | 20 | 19 | 180 | 13 | -6° | 32 | | | | |
| **♦ A25R-SDQCR/L11** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 32 | I60M3.5×10 | | | |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A110 | **HF**  A111 | **HM**  A111 | **HR**  A112 | **LH**  A112 | Flat Glatt  A112 |
| | **AHF**  A110 | **EF**  A111 | **EM**  A111 | | **LC**  A112 | |
| Type · Typ ****-SDQCR/L07** | DC**0702** | DC**0702** | DC**0702** | | DCGX0702** | DC**0702** |
| ****-SDQCR/L11** | DC**11T3** | DC**11T3** | DC**11T3** | DC**11T3** | DCGX11T3** | DC**11T3** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## DC** Toolholder · Halter

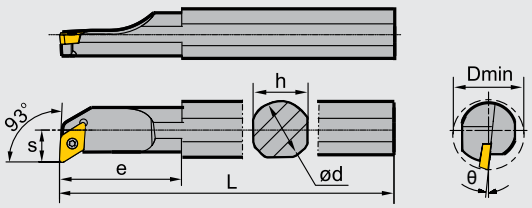
S-Clamping / S-Halter

# SDUCR/L

**Kr:93°**



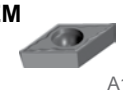
R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10M-SDUCR/L07** | ● | ● | 13 | 10 | 9 | 150 | 7 | -8° | 0 | I60M2.5×5.5 | WT07IP | | |
| **S12M-SDUCR/L07** | ● | ● | 16 | 12 | 11 | 150 | 9 | -8° | 22 | I60M2.5×6.5 | | | |
| **S16M-SDUCR/L07** | ● | ● | 20 | 16 | 15 | 150 | 11 | -6° | 27 | | | | |
| **S16R-SDUCR/L07** | ● | ● | 20 | 16 | 15 | 200 | 11 | -6° | 27 | | | | |
| **S20Q-SDUCR/L11** | ● | ● | 25 | 20 | 18 | 180 | 13 | -6° | 40 | I60M3.5×8 | WT15IP | | |
| **S20S-SDUCR/L11** | ● | ● | 25 | 20 | 18 | 250 | 13 | -6° | 40 | | | | |
| **S25Q-SDUCR/L11** | ● | ● | 32 | 25 | 23 | 180 | 17 | -6° | 46 | I60M3.5×10 | | | |
| **S25T-SDUCR/L11** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 46 | | | | |
| **♦ A10H-SDUCR/L07** | ● | ● | 13 | 10 | 9.5 | 100 | 7 | -8° | 0 | I60M2.5×5.5 | WT07IP | | |
| **♦ A12K-SDUCR/L07** | ● | ● | 16 | 12 | 11.5 | 125 | 9 | -8° | 22 | I60M2.5×6.5 | | | |
| **♦ A16M-SDUCR/L07** | ● | ● | 20 | 16 | 15.5 | 150 | 11 | -6° | 27 | | | | |
| **♦ A20Q-SDUCR/L11** | ● | ● | 25 | 20 | 19 | 180 | 13 | -6° | 40 | I60M3.5×8 | WT15IP | | |
| **♦ A25R-SDUCR/L11** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 46 | I60M3.5×10 | | | |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A110 | **HF**  A111 | **HM**  A111 | **HR**  A112 | **LH**  A112 | Flat Glatt  A112 |
| | **AHF**  A110 | **EF**  A111 | **EM**  A111 | | **LC**  A112 | |
| Type · Typ ****-SDUCR/L07** | DC**0702** | DC**0702** | DC**0702** | | DCGX0702** | DC**0702** |
| ****-SDUCR/L11** | DC**11T3** | DC**11T3** | DC**11T3** | DC**11T3** | DCGX11T3** | DC**11T3** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

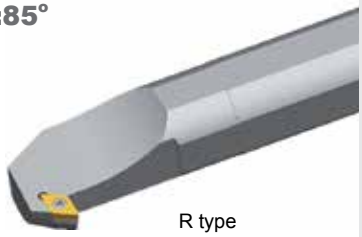
General Turning
Allgemeine Drehbearbeitung

## DC** Toolholder · Halter

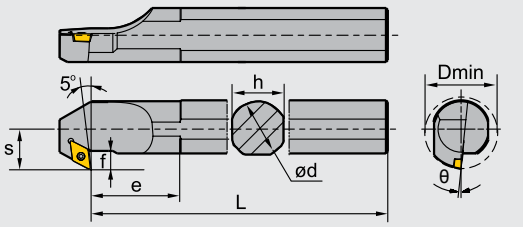
S-Clamping / S-Halter

# SDZCR/L

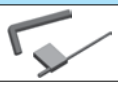
**Kr:85°**



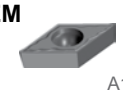
R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim/ Screw Schraube Unterlage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e | f |  |  |  |  |
| **S25Q-SDZCR/L11** | ● | ● | 32 | 25 | 23 | 180 | 17 | -6° | 30 | 6.9 | I60M3.5×10 | WT15IP | | |
| **S25T-SDZCR/L11** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 30 | 6.9 | | | | |
| **S32R-SDZCR/L11** | ○ | ○ | 40 | 32 | 30 | 200 | 22 | -6° | 39 | 8.4 | I60M3.5×12 | WT15IP WH35L | D11BS | SM5×8.65XA |
| **S32U-SDZCR/L11** | ● | ● | 40 | 32 | 30 | 350 | 22 | -6° | 39 | 8.4 | | | | |
| **S40S-SDZCR/L11** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -4° | 47 | 9.4 | | | | |
| **S40V-SDZCR/L11** | ● | ● | 50 | 40 | 37 | 400 | 27 | -4° | 47 | 9.4 | | | | |
| **♦ A25R-SDZCR/L11** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 30 | 4.5 | I60M3.5×10 | WT15IP | | |
| **♦ A32S-SDZCR/L11** | ● | ● | 40 | 32 | 31 | 250 | 22 | -6° | 39 | 6.0 | I60M3.5×12 | WT15IP WH35L | D11BS | SM5×8.65XA |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron mach. Grauguss-Bearbeitung |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A110 | **HF**  A111 | **HM**  A111 | **HR**  A112 | **LH**  A112 | Flat Glatt  A112 |
| | **AHF**  A110 | **EF**  A111 | **EM**  A111 | | **LC**  A112 | |
| Type · Typ ****-SDZCR/L11** | DC**11T3** | DC**11T3** | DC**11T3** | DC**11T3** | DCGX11T3** | DC**11T3** |

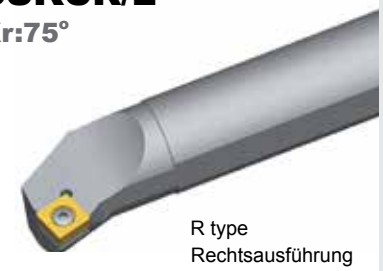
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## SC** Toolholder · Halter

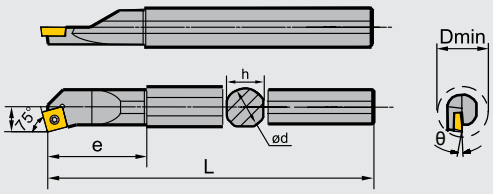
S-Clamping / S-Halter

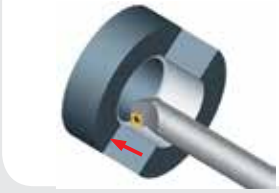
# SSKCR/L

**Kr:75°**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim/ Screw Schraube Unterlage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |
| **S12M- SSKCR/L09** | ● | ● | 16 | 12 | 11 | 150 | 9 | -10 | 26 | I60M3.5×8 | WT15IP | | |
| **S16M- SSKCR/L09** | ○ | ○ | 20 | 16 | 15 | 150 | 11 | -11 | 32.5 | | | | |
| **S16R- SSKCR/L09** | ○ | ○ | 20 | 16 | 15 | 200 | 11 | -11 | 32.5 | | | | |
| **S20Q- SSKCR/L09** | ○ | ○ | 25 | 20 | 18 | 180 | 13 | -6 | 34.5 | | | | |
| **S20S- SSKCR/L09** | ● | ○ | 25 | 20 | 18 | 250 | 13 | -6 | 34.5 | | | | |
| **S25Q- SSKCR/L12** | ○ | ○ | 32 | 25 | 23 | 180 | 17 | -8 | 36.3 | I60M4×11X | WT15IP | | |
| **S25T- SSKCR/L12** | ● | ○ | 32 | 25 | 23 | 300 | 17 | -8 | 36.3 | | | | |
| **S32R- SSKCR/L12** | | ○ | 40 | 32 | 30 | 200 | 22 | -10 | 43.5 | | WT15IP<br>WH40L | S12BS | SM6×10XA |
| **S32U- SSKCR/L12** | ● | ○ | 40 | 32 | 30 | 350 | 22 | -10 | 43.5 | | | | |
| **♦ A12K- SSKCR/L09** | ○ | ○ | 16 | 12 | 11 | 125 | 9 | -10 | 26 | I60M3.5×8 | WT15IP | | |
| **♦ A16M- SSKCR/L09** | ○ | ○ | 20 | 16 | 15 | 150 | 11 | -11 | 32.5 | | | | |
| **♦ A20Q- SSKCR/L09** | ● | ○ | 25 | 20 | 19 | 180 | 13 | -6 | 34.5 | | | | |
| **♦ A25R- SSKCR/L12** | ● | ○ | 32 | 25 | 24 | 200 | 17 | -8 | 41.3 | I60M4×11X | WT15IP | | |
| **♦ A32S- SSKCR/L12** | ● | ○ | 40 | 32 | 31 | 250 | 22 | -10 | 42.8 | | WT15IP<br>WH40L | S12BS | SM6×10XA |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **AHF**  A116 | **HM**  A116 | **HR**  A117 | **LH**  A117 | Flat Glatt  A117 |
| | **HF**  A116 | **EM**  A116 | | **LC**  A117 | |
| | **EF**  A116 | | | | |
| Type· Typ **-SSKCR/L09 | SC**09T3** | SC**09T3** | SC**09T3** | SCGX09T3** | SC**09T3** |
| **-SSKCR/L12 | | SC**1204** | SC**1204** | SCGX1204** | SC**1204** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## TC** Toolholder · Halter

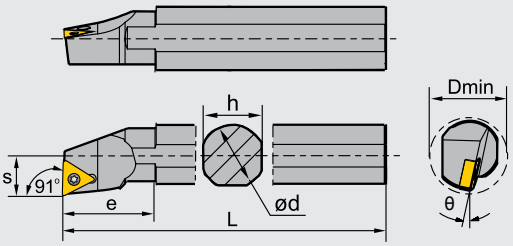
S-Clamping / S-Halter

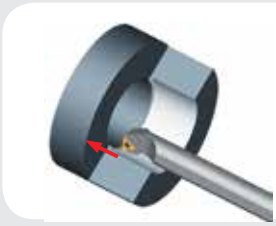
### STFCR/L

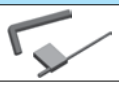
**Kr:91°/*Kr:90°**



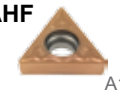
R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim/ Screw Schraube Unterlage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  |  |  |
| **S12M-STFCR/L11** | ● | ● | 16 | 12 | 11 | 150 | 9 | -10° | 30 | I60M2.5×6.5 | WT07IP | | |
| **S16M-STFCR/L11** | ○ | ● | 20 | 16 | 15 | 150 | 11 | -6° | 35 | | | | |
| **S16R-STFCR/L11** | ● | ● | 20 | 16 | 15 | 200 | 11 | -6° | 35 | | | | |
| **S20Q-STFCR/L11** | ○ | ○ | 25 | 20 | 18 | 180 | 13 | -3° | 36 | | | | |
| **S20S-STFCR/L11** | ● | ● | 25 | 20 | 18 | 250 | 13 | -3° | 36 | | | | |
| **S25Q-STFCR/L16** | ● | ○ | 32 | 25 | 23 | 180 | 17 | -6° | 49 | I60M3.5×10 | WT15IP | | |
| **S25T-STFCR/L16** | ● | ● | 32 | 25 | 23 | 300 | 17 | -6° | 49 | | | | |
| **S32R-STFCR/L16** | ● | ● | 40 | 32 | 30 | 200 | 22 | -10° | 50 | I60M3.5×12 | WT15IP WH35L | T16BS | SM5×8.65XA |
| **S32U-STFCR/L16** | ● | ● | 40 | 32 | 30 | 350 | 22 | -10° | 50 | | | | |
| **S40S-STFCR/L16** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -8° | 60 | | | | |
| **S40V-STFCR/L16** | ● | ● | 50 | 40 | 37 | 400 | 27 | -8° | 60 | | | | |
| **♦ A12K-STFCR/L11** | ● | ● | 16 | 12 | 11.5 | 125 | 9 | -10° | 26 | I60M2.5×6.5 | WT07IP | | |
| **♦ A16M-STFCR/L11** | ● | ● | 20 | 16 | 15.5 | 150 | 11 | -6° | 30 | | | | |
| **♦ A20Q-STFCR/L11** | ● | ● | 25 | 20 | 19 | 180 | 13 | -3° | 36 | | | | |
| **♦ A25R-STFCR/L16** | ● | ● | 32 | 25 | 24 | 200 | 17 | -6° | 45 | I60M3.5×10 | WT15IP | | |
| **♦ A32S-STFCR/L16** | ● | ○ | 40 | 32 | 31 | 250 | 22 | -10° | 49 | I60M3.5×12 | WT15IP | T16BS | SM5×8.65XA |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss Bearbeit. |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A114 9 | **HF**  A120 | **HM**  A122 | **HR**  A122 | **LH**  A123 | Flat Glatt  A122 |
| | **AHF**  A120 | **EF**  A120 | **EM**  A121 | | **LC**  A123 | |
| Type · Typ ****-STFCR/L11** | TC**1102** | TC**1102** | TC**1102** | TC**1102** | TCGX1102** | TC**1102** |
| ****-STFCR/L16** | TC**16T3** | TC**16T3** | TC**16T3** | TC**16T3** | TCGX16T3** | TC**16T3** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## VC** Toolholder · Halter

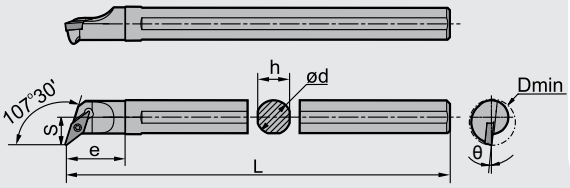
S-Clamping / S-Halter

### SVQCR/L

**Kr:107°30'**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S16Q-SVQCR/L11** | ● | ● | 22 | 16 | 15 | 180 | 13 | -6° | 28 | I60M2.5×6.5 | WT07IP | | |
| **S20R-SVQCR/L11** | ● | ○ | 26 | 20 | 18 | 200 | 15 | -4° | 32 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu Bearbeitung |
|---|---|---|---|
| insert shape Schneidplattenform | **SF**  A125 | **HF**  A125 | **LH**  A126 |
| Type Typ ****-SVQCR/L11** | VC**1103** | VC**1103** | VCGX1103** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## VC** Toolholder · Halter

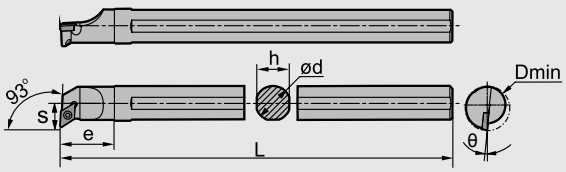
S-Clamping / S-Halter

### SVUCR/L

**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S16Q-SVUCR/L11** | ● | ● | 24 | 16 | 15 | 180 | 15 | -6° | 25 | I60M2.5×6.5 | WT07IP | | |
| **S20R-SVUCR/L11** | ● | ● | 28 | 20 | 18 | 200 | 17 | -4° | 30 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu Bearbeitung |
|---|---|---|---|
| insert shape Schneidplattenform | **SF**  A125 | **HF**  A125 | **LH**  A126 |
| Type Typ ****-SVUCR/L11** | VC**1103** | VC**1103** | VCGX1103** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## VB** Toolholder · Halter

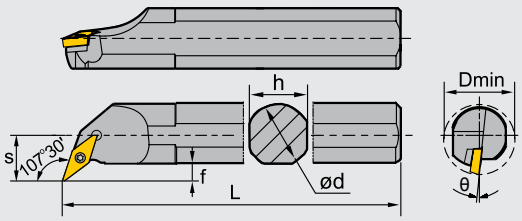
S-Clamping / S-Halter

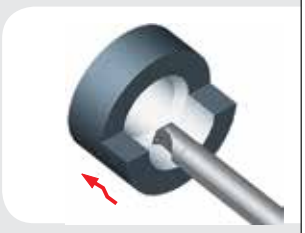
### SVQBR/L

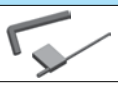
**Kr:107°30'**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim/ Screw Schraube Unterlage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e | f |  |  |  |  |
| **S32R-SVQBR/L16** | ● | ● | 40 | 32 | 30 | 200 | 22 | -8° | 56 | 8.4 | I60M3.5×12 | WT15IP WH35L | V16BS | SM5×8.65XA |
| **S32U-SVQBR/L16** | ● | ● | 40 | 32 | 30 | 350 | 22 | -8° | 56 | 8.4 | | | | |
| **S40S-SVQBR/L16** | ○ | ○ | 50 | 40 | 37 | 250 | 27 | -8° | 64 | 9.4 | | | | |
| **S40V-SVQBR/L16** | ● | ● | 50 | 40 | 37 | 400 | 27 | -8° | 64 | 9.4 | | | | |
| **♦ A32S- SVQBR/L16** | ○ | ○ | 40 | 32 | 31 | 250 | 22 | -8° | 56 | 8.4 | | | | |

### Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Cast iron mach. Grauguss-Bearb. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **EF**  A127 | **HM**  A128 | **HR**  A128 | Flat Glatt  A128 |
| | **HF**  A127 | **EM**  A128 | **SNR**  A128 | |
| | **NF**  A127 | | | |
| Type · Typ ****-SVQBR/L16** | VB**1604** | VB**1604** | VB**1604** | VB**1604** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

## VB** Toolholder · Halter

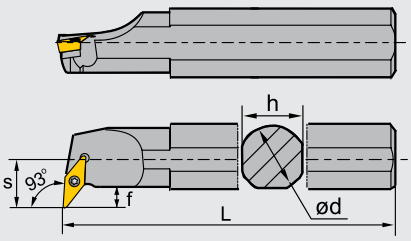
S-Clamping / S-Halter

### SVUBR/L

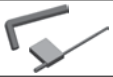
**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | | Screw Schraube | Wrench Schlüssel | Shim Unterlage | Shim/ Screw Schraube Unterlage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e | f |  |  |  |  |
| **S32R-SVUBR/L16** | ● | ○ | 40 | 32 | 30 | 200 | 22 | -8° | 49 | 8.4 | I60M3.5×12 | WT15IP WH35L | V16BS | SM5×8.65XA |
| **S32U-SVUBR/L16** | ● | ● | 40 | 32 | 30 | 350 | 22 | -8° | 49 | 8.4 | | | | |
| **S40S- SVUBR/L16** | ● | ○ | 50 | 40 | 37 | 250 | 27 | -8° | 56.5 | 9.4 | | | | |
| **S40V- SVUBR/L16** | ● | ● | 50 | 40 | 37 | 400 | 27 | -8° | 56.5 | 9.4 | | | | |
| **♦ A32S- SVUBR/L16** | ● | ● | 40 | 32 | 31 | 250 | 22 | -8° | 49 | 8.4 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Cast iron mach. Grauguss-Bearb. |
|---|---|---|---|---|
| Insert shape Schneidplattenform | **EF**  A127 | **HM**  A128 | **HR**  A128 | Flat Glatt  A128 |
| | **HF**  A127 | **EM**  A128 | **SNR**  A128 | |
| | **NF**  A127 | | | |
| Type · Typ ****-SVUBR/L16** | VB**1604** | VB**1604** | VB**1604** | VB**1604** |

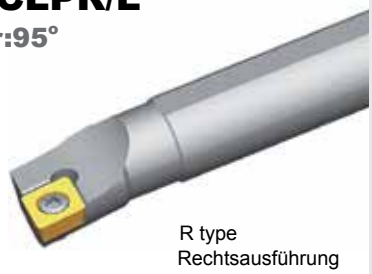
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## CP** Toolholder · Halter

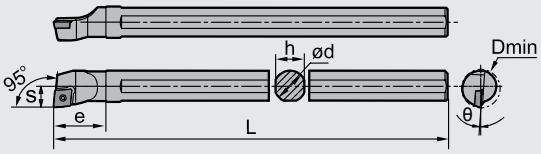
S-Clamping / S-Halter

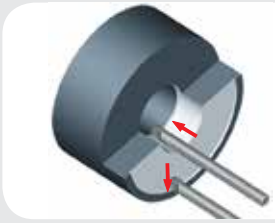
### SCLPR/L

**Kr:95°**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10K-SCLPR/L06** | ● | ● | 12 | 10 | 9 | 125 | 6 | -7° | 17 | I60M2.5×5.5 | WT07IP | | |
| **S12M-SCLPR/L06** | ● | ● | 16 | 12 | 11 | 150 | 8 | -4° | 20 | | | | |
| **S16Q-SCLPR/L09** | ● | ● | 20 | 16 | 15 | 180 | 10 | -4° | 29 | I60M3.5×8 | WT15IP | | |
| **S20R-SCLPR/L09** | ○ | ○ | 25 | 20 | 18 | 200 | 13 | -4° | 35 | | | | |

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | **SF**  A109 |
| Type Typ | ****-SCLPR/L06** | CP**0602** |
| | ****-SCLPR/L09** | CP**09T3** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

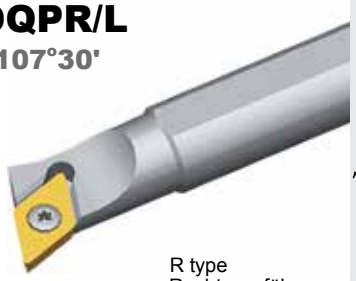
General Turning
Allgemeine Drehbearbeitung

## DP** Toolholder · Halter

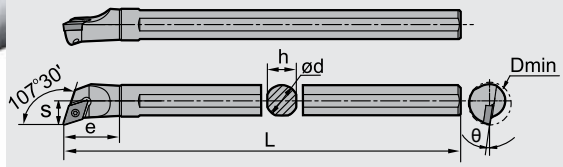
S-Clamping / S-Halter

### SDQPR/L

**Kr:107°30'**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10K-SDQPR/L07** | ● | ● | 13 | 10 | 9 | 125 | 7 | -8° | 20 | I60M2.5×5.5 | WT07IP | | |
| **S12M-SDQPR/L07** | ● | ● | 16 | 12 | 11 | 150 | 9 | -8° | 22 | | | | |
| **S16Q-SDQPR/L07** | ● | ● | 20 | 16 | 15 | 180 | 11 | -6° | 27 | I60M2.5×6.5 | | | |
| **S16Q-SDQPR/L11** | ● | ● | 20 | 16 | 15 | 180 | 11 | -6° | 32 | I60M3.5×8 | WT15IP | | |
| **S20R-SDQPR/L11** | ○ | ○ | 25 | 20 | 18 | 200 | 13 | -6° | 33 | | | | |

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | **SF**  A113 |
| | ****-SDQPR/L07** | DP**0702** |
| | ****-SDQPR/L11** | DP**11T3** |

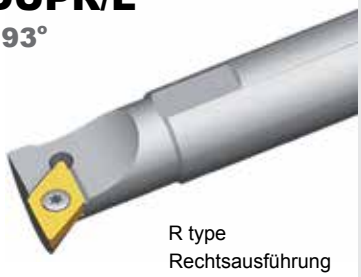
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## DP** Toolholder · Halter

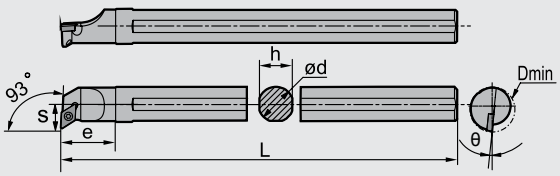
S-Clamping / S-Halter

# SDUPR/L

**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10K-SDUPR/L07** | ● | ● | 15 | 10 | 9 | 125 | 9 | -8° | 18 | I60M2.5×5.5 | WT07IP | | |
| **S12M-SDUPR/L07** | ● | ● | 16 | 12 | 11 | 150 | 9 | -8° | 19 | | | | |
| **S16Q-SDUPR/L07** | ● | ● | 20 | 16 | 15 | 180 | 11 | -6° | 25 | I60M2.5×6.5 | | | |

### Applicable insert
### Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|
| insert shape Schneidplattenform | **SF**  A113 |
| Type Typ **-SDUPR/L07 | DP**0702** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

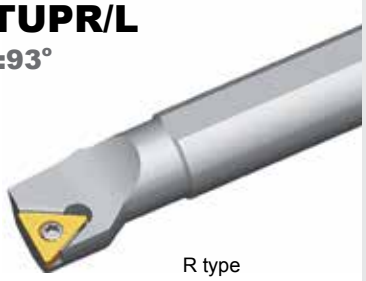
General Turning
Allgemeine Drehbearbeitung

## TP** Toolholder · Halter

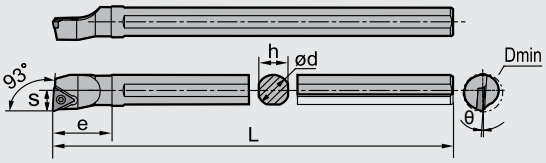
S-Clamping / S-Halter

### STUPR/L

**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | h | L | S | θ | e |  |  | | |
| **S10K-STUPR/L09** | ● | ● | 12 | 10 | 9 | 125 | 6 | -6° | 20 | I60M2.2×5.5 | WT07IP | | |
| **S12M-STUPR/L09** | ● | ● | 16 | 12 | 11 | 150 | 8 | -4° | 22 | | | | |
| **S12M-STUPR/L11** | ● | ● | 16 | 12 | 11 | 150 | 8 | -4° | 25 | I60M2.5×6.5 | WT07IP | | |
| **S16Q-STUPR/L11** | ● | ● | 20 | 16 | 15 | 180 | 10 | -3° | 27 | | | | |

Applicable insert
Wendeschneidplatten

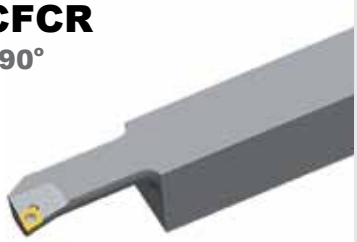
| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | **SF**  A124 |
| | **-STUPR/L09 | TP**0902** |
| | **-STUPR/L11 | TP**1103** |

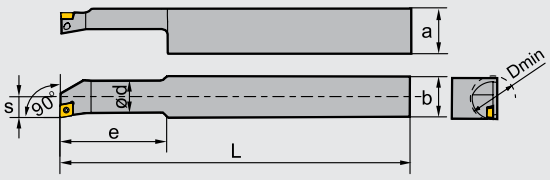
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## CC** Toolholder · Halter

S-Clamping / S-Halter

### SCFCR
**Kr:90°**








| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | L | s | a | b | e |  |  | | |
| **S10M-SCFCR/L06S25** | ● | ○ | 13 | 10 | 150 | 7 | 27 | 25 | 30 | I60M2.5×5.5 | WT07IP | | |
| **S12P-SCFCR/L06S25** | ● | ○ | 16 | 12 | 170 | 9 | 27 | 25 | 35 | I60M2.5×6.5 | | | |
| **S16Q-SCFCR/L09S25** | ● | ○ | 20 | 16 | 180 | 11 | 27 | 25 | 40 | I60M3.5×8 | WT15IP | | |
| **S20R-SCFCR/L09S25** | ● | ○ | 25 | 20 | 200 | 13 | 27 | 25 | 45 | | | | |
| **S25R-SCFCR/L12S25** | ● | ○ | 32 | 25 | 200 | 17 | 27 | 25 | 50 | I60M5×13 | WT20IP | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A105 | **HF**  A106 | **HM**  A106 | **HR**  A108 | **LH**  A108 | Flat Glatt  A109 |
| | **AHF**  A106 | **EF**  A106 | **EM**  A106 | | **LC**  A108 | **TC**  A108 |
| Type · Typ ****-SCFCR06** | CC**0602** | CC**0602** | CC**0602** | CC**0602** | CCGX0602** | CC**0602** |
| ****-SCFCR09** | CC**09T3** | CC**09T3** | CC**09T3** | CC**09T3** | CCGX09T3** | CC**09T3** |
| ****-SCFCR12** | CC**1204** | CC**1204** | CC**1204** | CC**1204** | CCGX1204** | CC**1204** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

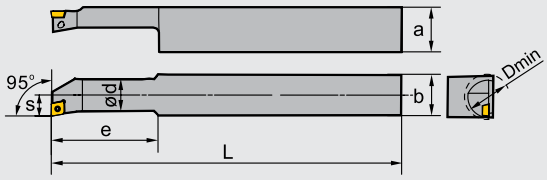
## CC** Toolholder · Halter

S-Clamping / S-Halter

### SCLCR

**Kr:95°**








| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | Dmin | ød | L | s | a | b | e |  |  | | |
| **S10M-SCLCR06S20** | ○ | ○ | 13 | 10 | 150 | 7 | 22 | 20 | 30 | I60M2.5×5.5 | WT07IP | | |
| **S12P-SCLCR06S20** | ○ | ○ | 16 | 12 | 170 | 9 | 22 | 20 | 35 | | | | |
| **S16Q-SCLCR09S20** | ● | ○ | 20 | 16 | 180 | 11 | 22 | 20 | 40 | I60M3.5×8 | WT15IP | | |
| **S20R-SCLCR09S20** | ● | ○ | 25 | 20 | 200 | 13 | 22 | 20 | 60 | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Semi-finishing Mittlere Bearbeit. | Roughing Schruppen | Al machining Alu-Bearbeitung | Cast iron machining Grauguss-Bearbeit. |
|---|---|---|---|---|---|---|
| Insert shape Schneidplattenform | **SF**  A105 | **HF**  A106 | **HM**  A106 | **HR**  A108 | **LH**  A108 | Flat Glatt  A109 |
| | **AHF**  A106 | **EF**  A106 | **EM**  A106 | | **LC**  A108 | **TC**  A108 |
| Type · Typ **-SCLCR06S20 | CC**0602** | CC**0602** | CC**0602** | CC**0602** | CCGX0602** | CC**0602** |
| Type · Typ **-SCLCR09S20 | CC**09T3** | CC**09T3** | CC**09T3** | CC**09T3** | CCGX09T3** | CC**09T3** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

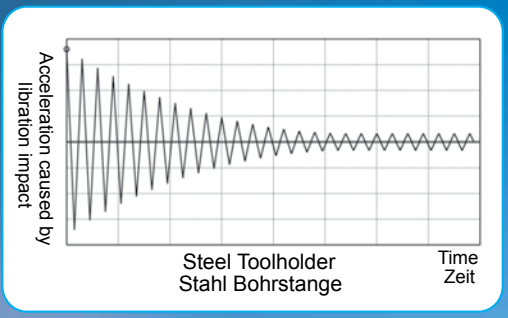
# Anti Vibration Boring Bar
# Anti Vibration Bohrstange

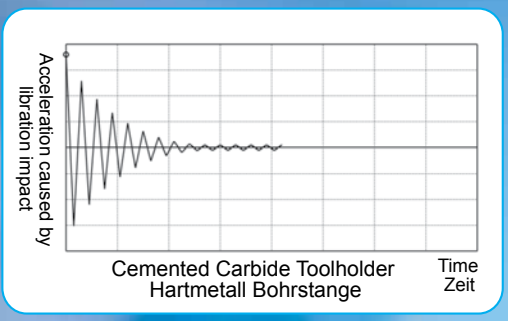
## Technical features · Technische Merkmale

**By increasing the rigidity of the tool materials the vibration will be reduced. The carbide toolholder performs much better than steel toolholder. The cutting data can be increased and the shank overhang extended. Therefore you achieve better surface and higher workpiece precision.**

**Durch den Einsatz von Hartmetall als Werkzeugmaterial wird die Stabilität des Werkzeuges verbessert, und Vibrationen werden reduziert.**
**Die Hartmetall-Bohrstange erlaubt durch die Stabilität höhere Schnittleistungen und eine größere Auskragung. Darüberhinaus wird eine höhere Werkstückpräzision und eine exzellente Oberflächenqualität erzielt.**

Vibration amplitude · Schwingungsausschlag




Under same machining conditions:

Bei gleichen Bearbeitungsbedingungen:

The maximum overhang of carbide toolholder is ca. L≤6D

Die maximale Auskragung beim Einsatz von Hartmetall-Bohrstangen beträgt ca. L≤6D

The maximum overhang of steel toolholder is suggested to be ca. L≤3D

Die maximale Auskragung beim Einsatz von Stahl-Bohrstangen beträgt ca. L≤3D

A

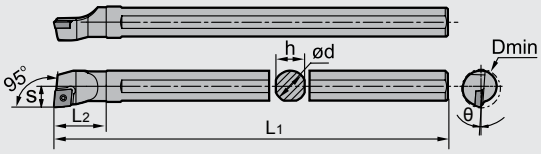
General Turning
Allgemeine Drehbearbeitung

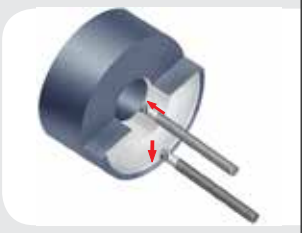
## CP** / CC** Toolholder · Halter S-Clamping / S-Halter

# SCLPR/L
# SCLCR/L
**Kr:95°**



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ØD | ød | s | $L_1$ | $L_2$ | h | θ |  |  | | |
| **C10M-SCLPR/L06** | ● | ● | 12 | 10 | 6 | 150 | 17 | 9 | 7° | I60M2.5×5.5 | WT07IP | | |
| **C12Q-SCLPR/L06** | ● | ○ | 16 | 12 | 8 | 180 | 20 | 11 | 4° | | | | |
| **C16R-SCLPR/L09** | ● | ● | 20 | 16 | 10 | 200 | 29 | 15 | 4° | I60M3.5×8 | WT15IP | | |
| **C20S-SCLPR/L09** | ● | ○ | 25 | 20 | 13 | 250 | 35 | 18 | 4° | | | | |
| **♦ E16R-SCLPR/L09** | ○ | ○ | 19 | 16 | 10 | 200 | - | 15.5 | -2° | I60M3.5×10 | WT15IP | | |
| **♦ E20S-SCLPR/L09** | ○ | ● | 24 | 20 | 13 | 250 | - | 19.5 | -2° | | | | |
| **♦ E08K-SCLCR/L06-09** | ● | ● | 9 | 8 | 5 | 125 | - | 7.5 | -12° | I60M2.5×5.5 | WT07IP | | |
| **♦ E08K-SCLCR/L06-10** | ● | ● | 10 | 8 | 6 | 125 | - | 7.5 | -12° | | | | |
| **♦ E10M-SCLCR/L06** | ● | ● | 12 | 10 | 7 | 150 | - | 9.5 | -10° | | | | |
| **♦ E12Q-SCLCR/L06** | ● | ● | 15 | 12 | 9 | 180 | - | 11.5 | -10° | | | | |
| **♦ E12Q-SCLCR/L09** | ● | ● | 15 | 12 | 9 | 180 | - | 11.5 | -9° | I60M3.5×8 | WT15IP | | |
| **♦ E16R-SCLCR/L06** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -8° | I60M2.5×5.5 | WT07IP | | |
| **♦ E16R-SCLCR/L09** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -10° | I60M3.5×10 | WT15IP | | |
| **♦ E20S-SCLCR/L09** | ● | ● | 24 | 20 | 13 | 250 | - | 19.5 | -8° | | | | |
| **♦ E25T-SCLCR/L09** | ● | ● | 31 | 25 | 17 | 300 | - | 24 | -6° | | | | |

more diameter on demand
Weitere Durchmesser auf Anfrage

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | **SF**  A105 |
| | **C*-SCLPR/L06** | CP**0602** |
| | **C*--SCLPR/L09** | CP**09T3** |
| | **E*-SCLCR/L06** | CC**0602** |
| | **E*--SCLCR/L09** | CC**09T3** |

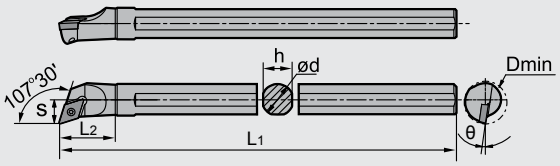
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## DP** / DC** Toolholder · Halter S-Clamping / S-Halter

# SDQPR/L
# SDQCR/L
**Kr:107°30'**



R type
Rechtsausführung






| Type Typ | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung ØD | ød | s | L1 | L2 | h | θ | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C10M-SDQPR/L07** | ● | ● | 13 | 10 | 7 | 150 | 20 | 9 | 8° | I60M2.5×5.5 | WT07IP | | |
| **C12Q-SDQPR/L07** | ○ | ● | 16 | 12 | 9 | 180 | 22 | 11 | 8° | | | | |
| **C16R-SDQPR/L07** | ○ | ○ | 20 | 16 | 11 | 200 | 27 | 15 | 6° | I60M2.5×6.5 | | | |
| **C16R-SDQPR/L11** | ○ | ○ | 20 | 16 | 11 | 200 | 32 | 15 | 6° | I60M3.5×8 | WT15IP | | |
| **C20S-SDQPR/L11** | ● | ○ | 25 | 20 | 13 | 250 | 33 | 18 | 6° | | | | |
| **♦ E08K-SDQCR/L07** | ● | ● | 11 | 8 | 6.5 | 140 | - | 7.5 | -12° | I60M2.5×5.5 | WT07IP | | |
| **♦ E10M-SDQCR/L07** | ● | ● | 12 | 10 | 7 | 150 | - | 9.5 | -10° | | | | |
| **♦ E12Q-SDQCR/L07** | ● | ● | 15 | 12 | 9 | 180 | - | 11.5 | -10° | | | | |
| **♦ E16R-SDQCR/L07** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -6° | | | | |
| **♦ E16R-SDQCR/L11** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -8° | I60M3.5×10 | WT15IP | | |
| **♦ E20S-SDQCR/L07** | ● | ● | 24 | 20 | 13 | 250 | - | 19.5 | -4° | I60M2.5×5.5 | WT07IP | | |
| **♦ E20S-SDQCR/L11** | ● | ● | 24 | 20 | 13 | 250 | - | 19.5 | -8° | I60M3.5×10 | WT15IP | | |
| **♦ E25T-SDQCR/L11** | ● | ○ | 31 | 25 | 17 | 300 | - | 24 | -6° | | | | |

more diameter on demand
Weitere Durchmesser auf Anfrage

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | SF  A110 |
| | **C*-SDQPR/L07** | DP**0702** |
| | **C*-SDQPR/L11** | DP**11T3** |
| | **E*-SDQCR/L07** | DC**0702** |
| | **E*--SDQCR/L11** | DC**11T3** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

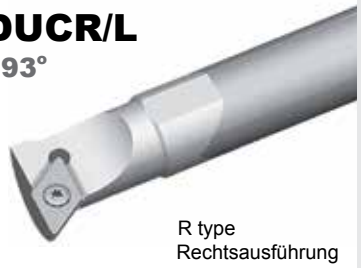
A

General Turning
Allgemeine Drehbearbeitung

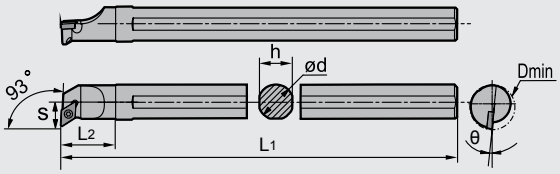
## DP** / DC** Toolholder · Halter

S-Clamping / S-Halter

**SDUPR/L**
**SDUCR/L**
**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ØD | ød | s | L1 | L2 | h | θ |  |  | | |
| **C10M-SDUPR/L07** | ● | ● | 15 | 10 | 9 | 150 | 18 | 9 | 8° | I60M2.5×5.5 | WT07IP | | |
| **C12Q-SDUPR/L07** | ● | ● | 16 | 12 | 9 | 180 | 19 | 11 | 8° | I60M2.5×6.5 | | | |
| **C16R-SDUPR/L07** | ○ | ○ | 20 | 16 | 11 | 200 | 25 | 15 | 6° | | | | |
| **♦ E10M-SDUCR/L07** | ● | ● | 12 | 10 | 7 | 150 | - | 9.5 | -10° | I60M2.5×5.5 | WT07IP | | |
| **♦ E12Q-SDUCR/L07** | ● | ● | 15 | 12 | 9 | 180 | - | 11.5 | -10° | | | | |
| **♦ E16R-SDUCR/L07** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -6° | | | | |
| **♦ E16R-SDUCR/L11** | ● | ● | 18 | 16 | 10 | 200 | - | 15.5 | -8° | I60M3.5×10 | WT15IP | | |
| **♦ E20S-SDUCR/L07** | ● | ○ | 24 | 20 | 13 | 250 | - | 19.5 | -4° | I60M2.5×5.5 | WT07IP | | |
| **♦ E20S-SDUCR/L11** | ● | ● | 24 | 20 | 13 | 250 | - | 19.5 | -8° | I60M3.5×10 | WT15IP | | |
| **♦ E25T-SDUCR/L11** | ○ | ○ | 31 | 25 | 17 | 300 | - | 24 | -6° | | | | |

more diameter on demand
Weitere Durchmesser auf Anfrage

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | **SF**  A110 |
| | **C*-SDUPR/L07** | DP**0702** |
| | **E*-SDUCR/L07** | DC**0702** |
| | **E*-SDUCR/L11** | DC**11T3** |

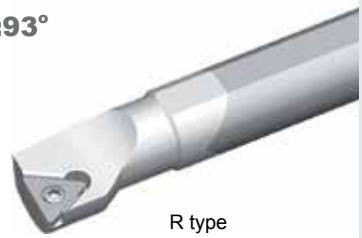
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## TP** Toolholder · Halter

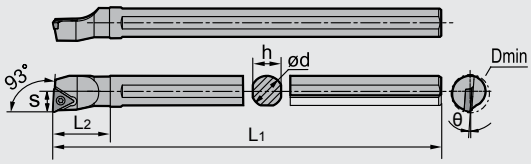
S-Clamping / S-Halter

# STUPR/L

**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung ØD | ød | s | $L_1$ | $L_2$ | h | θ | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C10M-STUPR/L09** | ○ | ○ | 12 | 10 | 6 | 150 | 20 | 9 | 6° | I60M2.2×5.5 | WT07IP | | |
| **C12Q-STUPR/L09** | ● | ● | 16 | 12 | 8 | 180 | 22 | 11 | 4° | | | | |
| **C12Q-STUPR/L11** | ● | ○ | 16 | 12 | 8 | 180 | 25 | 11 | 4° | I60M2.5×6.5 | WT07IP | | |
| **C16R-STUPR/L11** | ○ | ○ | 20 | 16 | 10 | 200 | 27 | 15 | 3° | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|
| insert shape Schneidplattenform | **SF**  A124 |
| Type Typ **C*-STUPR/L09** | TP**0902** |
| Type Typ **C*-STUPR/L11** | TP**1103** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

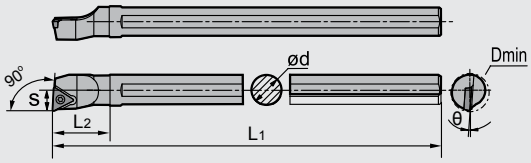
## TC** Toolholder · Halter

S-Clamping / S-Halter

### STFCR/L
### STFPR/L
**Kr:90°**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ØD | ød | s | $L_1$ | $L_2$ | h | θ |  |  | | |
| ♦ E08K-STFCR/L09 | ● | ● | 11 | 8 | 6 | 125 | - | 7.5 | -12 | I60M2.2×5.5 | WT07IP | | |
| ♦ E10M-STFCR/L09 | ● | ● | 12 | 10 | 7 | 150 | - | 9.5 | -10 | | | | |
| ♦ E12Q-STFCR/L11 | ● | ● | 15 | 12 | 9 | 180 | - | 11.5 | -10 | I60M2.5×5.5 | WT07IP | | |
| ♦ E16R-STFCR/L11 | ○ | ○ | 18 | 16 | 10 | 200 | - | 15.5 | -8 | | | | |
| ♦ E20S-STFCR/L11 | ○ | ● | 24 | 20 | 13 | 250 | - | 19.5 | -8 | | | | |
| ♦ E20S-STFCR/L16 | ● | ○ | 24 | 20 | 13 | 250 | - | 19.5 | -8 | I60M3.5×10 | WT15IP | | |
| ♦ E25T-STFCR/L16 | ○ | ○ | 31 | 25 | 17 | 300 | - | 24 | -6 | | | | |
| ♦ E10M-STFPR/L11 | ○ | ○ | 12 | 10 | 6 | 150 | - | 9.5 | -5 | I60M3.0×7.0 | WT08IP | | |
| ♦ E12Q-STFPR/L11 | ○ | ○ | 15 | 12 | 8 | 180 | - | 11.5 | -4 | | | | |
| ♦ E16R-STFPR/L11 | ● | ○ | 19 | 16 | 10 | 200 | - | 15.5 | -2 | | | | |
| ♦ E20S-STFPR/L11 | ● | ○ | 24 | 20 | 13 | 250 | - | 19 | -2 | | | | |

more diameter on demand
Weitere Durchmesser auf Anfrage

Applicable insert
Wendeschneidplatten

| Type Typ | Application Anwendung | Extra Finishing Feinbearbeitung |
|---|---|---|
| | insert shape Schneidplattenform | SF  A124 |
| | E*-STFCR/L09 | TC**0902** |
| | E*-STFCR/L11 | TC**1103** |
| | E*-STFCR/L16 | TC**16T3** |
| | E*-STFPR/L11 | TP**1103** |

● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

## VC** Toolholder · Halter

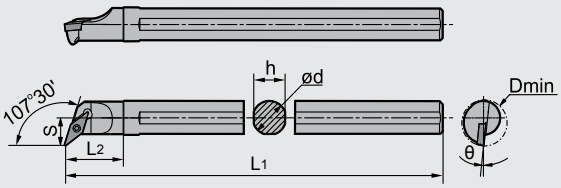
S-Clamping / S-Halter

### SVQCR/L

**Kr:107°30'**



R type
Rechtsausführung






| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ØD | ød | s | $L_1$ | $L_2$ | h | θ |  |  | | |
| **C16R-SVQCR/L11** | ○ | ○ | 22 | 16 | 13 | 200 | 28 | 15 | -6° | I60M2.5×6.5 | WT07IP | | |
| **C20S-SVQCR/L11** | ○ | ○ | 26 | 20 | 15 | 250 | 32 | 18 | -4° | | | | |

Applicable insert
Wendeschneidplatten

| Application Anwendung | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu Bearbeitung |
|---|---|---|---|
| insert shape Schneidplattenform | **SF**  A125 | **HF**  A125 | **LH**  A126 |
| Type Typ **C*-SVQCR/L11** | VC**1103** | VC**1103** | VCGX1103** |
| Type Typ **C*-SVUCR/L11** | VC**1103** | VC**1103** | VCGX1103** |

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

General Turning
Allgemeine Drehbearbeitung

## VC** Toolholder · Halter

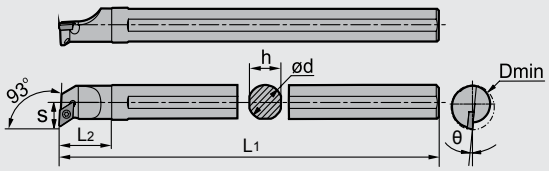
S-Clamping / S-Halter

### SVUCR/L

**Kr:93°**



R type
Rechtsausführung






| Type Typ | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung ØD | ød | s | L1 | L2 | h | θ | Screw Schraube | Wrench Schlüssel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |  |  | | |
| **C16R-SVUCR/L11** | ○ | ○ | 24 | 16 | 15 | 200 | 25 | 15 | 6° | I60M2.5×6.5 | WT07IP | | |
| **C20S-SVUCR/L11** | ● | ● | 28 | 20 | 17 | 250 | 30 | 18 | 4° | | | | |
| **♦ E16R-SVUCR/L11** | ○ | ○ | 22 | 16 | 13 | 200 | - | 15 | -6.5° | I60M2.5×6.5 | WT07IP | | |
| **♦ E20S-SVUCR/L11** | ○ | ○ | 27 | 20 | 13 | 250 | - | 18 | -6.5° | | | | |
| **♦ E25T-SVUCR/L16** | ○ | ○ | 35 | 25 | 20.5 | 300 | - | 23 | -6.5° | I60M3.5×10 | WT15IP | | |
| | | | | | | | | | | | | | |

more diameter on demand
Weitere Durchmesser auf Anfrage

Applicable insert
Wendeschneidplatten

| Application Anwendung | | Extra Finishing Feinbearbeitung | Finishing Schlichten | Al machining Alu Bearbeitung |
|---|---|---|---|---|
| insert shape Schneidplattenform | | **SF**  A125 | **HF**  A125 | **LH**  A126 |
| Type Typ | **C*-SVUCR/L11** | VC**1103** | VC**1103** | VCGX1103** |
| | **E*-SVUCR/L11** | VC**1103** | VC**1103** | VCGX1103** |

● ex Stock Lager · ab Lager ○ on demand · auf Anfrage

♦ Toolholder with wholes for Coolant · Klemmhalter mit Kühlmittelbohrung

## ■ Recommended cutting data · Empfohlene Schnittdaten

| ISO | Workpiece Materials Werk-stückstoff | | Hardness · Härte HB | CVD Coating Beschichtung | | | | | PVD Coating Beschicht. | | | Cermet Cermet | Coated cermet Coated cermet | | | Ceramic Keramik | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | YBC151 | YBC251 | YBC152 | YBC252 | YBC351 | YBG102 | YBG202 | | YNG151 | YNG151C | | | CA1000 | CN2000 |
| | | | | Feed rate Vorschub (mm/rev) | | | | | | | | | | | | | |
| | | | | 0.1-0.6 | 0.1-0.8 | 0.1-0.6 | 0.1-0.8 | 0.2-1.0 | 0.2-0.4 | 0.1-0.6 | | 0.05-0.2 | 0.05-0.2 | | | 0.1-1.5 | 0.1-1.5 |
| | | | | Cutting speed Schnittgeschwindigkeit (m/min) | | | | | | | | | | | | | |
| P | Carbon steel Kohlenstoffstahl | C=0.15% | 125 | 430-200 | 430-190 | 500-270 | 480-240 | 380-165 | 460-220 | 380-180 | | 550-350 | 580-350 | | | 800-300 | |
| | | C=0.35% | 150 | 380-180 | 410-180 | 460-250 | 460-230 | 300-150 | 440-210 | 300-170 | | 500-300 | 520-300 | | | 600-200 | |
| | | C=0.60% | 200 | 330-150 | 350-150 | 400-220 | 400-200 | 260-130 | 380-180 | 260-150 | | 460-260 | 480-260 | | | 400-150 | |
| | Alloy steel legierter Stahl | low alloy, annealed geglüht | 180 | 350-170 | 350-150 | 400-180 | 400-200 | 200-100 | 380-180 | 200-120 | | 410-240 | 430-240 | | | 150-180 | 400-150 |
| | | low alloy, tempered vergütet | 275 | 230-100 | 210-100 | 280-150 | 260-140 | 140-70 | 240-120 | 140-90 | | 300-180 | 320-180 | | | 350-120 | 300-100 |
| | | low alloy, tempered vergütet | 300 | 210-100 | 190-70 | 260-150 | 240-120 | 125-60 | 220-100 | 125-80 | | 250-170 | 270-170 | | | 300-100 | 250-80 |
| | | low alloy, tempered vergütet | 350 | 180-80 | 170-70 | 230-120 | 220-120 | 110-55 | 200-100 | 110-75 | | 230-150 | 250-150 | | | 300-80 | |
| | High alloy steel Hochlegiertrer | high alloy, annealed geglüht | 200 | 320-150 | 260-120 | 360-190 | 310-170 | 175-80 | 290-150 | 175-100 | | 350-200 | 370-200 | | | 400-150 | 350-120 |
| | | high alloy, tempered vergütet | 325 | 140-90 | 100-50 | 190-130 | 150-100 | 85-40 | 130-80 | 85-60 | | 170-110 | 190-110 | | | 300-100 | 280-80 |
| | Cast steel Stahlguss | Non-Alloy unlegiert | 180 | 240-120 | 200-100 | 280-160 | 250-140 | 135-75 | 230-125 | 135-95 | | 260-170 | 280-170 | | | 600-220 | |
| | | Low alloy niedrig legiert | 200 | 230-70 | 170-60 | 280-110 | 220-110 | 120-80 | 200-90 | 120-100 | | 260-170 | 280-170 | | | 400-150 | |
| | | High alloy hoch legiert | 225 | 160-70 | 140-50 | 210-110 | 190-100 | 95-55 | 170-80 | 95-55 | | 260-100 | 280-100 | | | 350-120 | |

| ISO | Workpiece Materials Werk-stückstoff | | Hardness · Härte HB | CVD Coating Beschichtung | | | | | PVD Coating Beschicht. | | | Cermet Cermet | Coated cermet Coated cermet | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | YBM151 | YBM153 | YBM251 | YBM253 | | YBG202 | YBG205 | | YNG151 | YNG151C | | | | |
| | | | | Feed rate Vorschub (mm/rev) | | | | | | | | | | | | | |
| | | | | 0.2-0.6 | 0.2-0.6 | 0.2-0.6 | 0.2-0.6 | | 0.1-0.3 | 0.1-0.3 | | 0.05-0.2 | 0.05-0.2 | | | | |
| | | | | Cutting speed Schnittgeschwindigkeit (m/min) | | | | | | | | | | | | | |
| M | Stainless steel Rostfreier Stahl | Ferrous Ferrous | 200 | 250-180 | 280-180 | 230-140 | 250-140 | | 240-170 | 250-170 | | 330-220 | 350-210 | | | | |
| | | Austenite Austenite | 260 | 220-150 | 250-150 | 180-110 | 200-110 | | 180-110 | 200-100 | | 250-150 | 270-140 | | | | |
| | | Martensite Martensite | 330 | 110-60 | 130-60 | 90-50 | 110-50 | | 120-80 | 130-80 | | 270-170 | 290-160 | | | | |

A

General Turning
Allgemeine Drehbearbeitung

## ■ Recommended table of cutting parameters for general turning
## Empfohlene Schnittparameter für allgemeine Drehbearbeitung

| ISO | Workpiece Materials Werk-stückstoff | | Hardness Härte HB | CVD Coating Beschichtung | | | | | Cermet Cermet | Coated cermet Coated cermet | Ceramic Keramik | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | YBD052 | YBD102 | YBD152 | YBD152C | | YNG151 | YNG151C | CA1000 | CN1000 | CN2000 | | |
| | | | | Feed rate Vorschub (mm/rev) | | | | | | | | | | | |
| | | | | 0.1-0.4 | 0.1-0.4 | 0.1-0.5 | 0.1-0.5 | | 0.1-0.4 | 0.1-0.4 | 0.1-1.5 | 0.1-1.5 | 0.1-1.5 | | |
| | | | | Cutting speed Schnittgeschwindigkeit (m/min) | | | | | | | | | | | |
| K | Malleable cast iron Temperguss | Ferrous Ferrous | 130 | 350-230 | 330-220 | 320-105 | 320-105 | | 280-160 | 300-180 | 1200-200 | 800-600 | 800-600 | | |
| | | Pearlite Pearlite | 230 | 250-105 | 230-100 | 230-100 | 230-100 | | 220-120 | 240-150 | 1000-200 | 700-500 | 700-500 | | |
| | Low cast iron Grauguss | | 180 | 520-200 | 480-200 | 480-190 | 480-190 | | 400-250 | 420-270 | 1200-200 | 800-600 | 700-500 | | |
| | High cast iron Grauguss | | 260 | 230-120 | 220-115 | 210-100 | 210-100 | | 360-240 | 380-260 | 1000-200 | 750-500 | 800-600 | | |
| | Nodular cast iron Nodular cast iron | Ferrous Ferrous | 160 | 310-150 | 300-150 | 290-140 | 290-140 | | 330-190 | 350-210 | 800-200 | 600-450 | 600-450 | | |
| | | Pearlite Pearlite | 250 | 230-110 | 220-105 | 210-100 | 210-100 | | 310-200 | 330-220 | 700-200 | 500-350 | 500-350 | | |

| ISO | Workpiece Materials Werk-stückstoff | | Hardness Härte HB | PVD Coating Beschichtung | | Cemented carbide Hartmetall | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | YBG102 | YBG105 | YD101 | | | | | | | | | |
| | | | | Feed rate Vorschub (mm/rev) | | | | | | | | | | | |
| | | | | 0.05-0.15 | | 0.05-0.35 | | | | | | | | | |
| | | | | Cutting speed Schnittgeschwindigkeit (m/min) | | | | | | | | | | | |
| N | Al alloy Al Legierung | No heat treatment keine Wärmebeh. | 60 | | | 1750-800 | | | | | | | | | |
| | | Heat treatment Wärmebeh. | 100 | | | 510-250 | | | | | | | | | |
| | Cast aluminum alloy Alu. leg. | No heat treatment keine Wärmebeh. | 75 | | | 460-175 | | | | | | | | | |
| | | Heat treatment Wärmebeh. | 90 | | | 300-110 | | | | | | | | | |
| | Copper alloy Kupfer leg. | Cu-alloy short chip Cu-Leg. kurzspanend | 110 | | | 610-205 | | | | | | | | | |
| | | Messing, Bronze Rotguss | 90 | | | 310-195 | | | | | | | | | |
| | | unalloy electrolytic Cupper unlegiert Elektrolyt Kupfer | 100 | | | 225-115 | | | | | | | | | |
| S | Ni-base alloy Ni-base alloy | Ni-base alloy Ni-base alloy | 40 | 90-30 | 100-30 | 70-20 | | | | | | | | | |
| H | Other materials Andere Materialien | Hard steel Harte Stahl | 45 HRC | | | | | | | | | | | | |
| | | Super hard steel Super harte Stahl | 50~60 HRC | | | | | | | | | | | | |
| | | Chilled cast iron gekühlt Gusseisen | 500 | | | | | | | | | | | | |

## ■ Correctional cutting parameters table of internal turning
## Schnittparameter Übersicht zur Innendrehbearbeitung

### Internal turning tools by P type clamping · Drehwerkzeuge (Innen) P Typ Klemmung

| Workpiece material Werkstück Material | | Hardness HB Härte | Machining category Anwendung | L/D≤3 | | L/D=3-4 (Diameter of shank ≥ Φ16mm) (Schaftdurchmesser ≥ Φ16mm) | |
|---|---|---|---|---|---|---|---|
| | | | | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) |
| P | Carbon steel, Alloy steel Kohlenstoff Stahl, Stahlleg. 45#, 42CrMo | HB180—280 | Semi-finishing Mittlere Bear. | 0.1-**0.25**-0.4 | <5.0 | 0.1-**0.2**-0.3 | <4.0 |
| M | Stainless steel Rostfreier Stahl 1Cr18Ni9Ti 0Cr18Ni9 | ≤HB220 | Semi-finishing Mittlere Bear. | 0.1-**0.2**-0.3 | <4.0 | 0.1-**0.15**-0.25 | <3.0 |
| K | Cast iron HT250 Gusseisen | HB170—230 | Semi-finishing Mittlere Bear. | 0.1-**0.25**-0.4 | <5.0 | 0.1-**0.2**-0.3 | <4.0 |

### Internal turning tools by S type clamping · Drehwerkzeuge (Innen) S Typ Klemmung

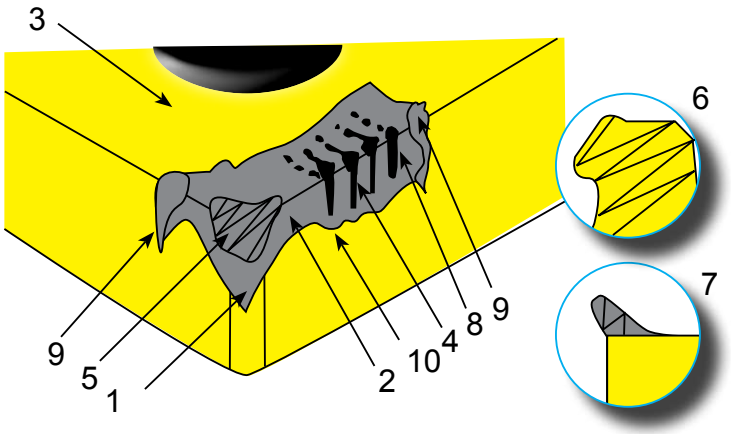
| Workpiece material Werkstück Material | | Hardness HB Härte | Machining category Anwedung | L/D≤3 | | L/D=4 | | L/D=5 | | L/D=6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) |
| P | Carbon steel, Alloy steel Kohlenst. Stahl, leg. Stahl 45#, 42CrMo | HB180-280 | For finishing Schlichten | 0.05-**0.1**-0.15 | <0.2 | 0.05-**0.1**-0.15 | <0.2 | - | - | - | - |
| | | | For semi-finishing Mittlere Bear. | 0.15-**0.25**-0.35 | <3.0 | 0.1-**0.15**-0.2 | <1.5 | - | - | - | - |
| M | Stainless steel Rostfreier Stahl 1Cr18Ni9Ti 0Cr18Ni9 | ≤HB220 | For finishing Schlichten | 0.05-**0.1**-0.15 | <0.2 | 0.05-**0.1**-0.15 | <0.2 | - | - | - | - |
| | | | For semi-finishing Mittlere Bear. | 0.15-**0.2**-0.25 | <2.0 | 0.1-**0.15**-0.2 | <1.0 | - | - | - | - |
| N | Al Alloy Al Leg. | --- | For finishing Schlichten | 0.05-**0.1**-0.15 | <0.2 | 0.05-**0.1**-0.15 | <0.2 | 0.05-**0.1**-0.15 | -0.15 | 0.05-**0.1**-0.15 | <0.1 |
| | | | For semi-finishing Mittlere Bear. | 0.05-**0.1**-0.15 | <2.0 | 0.05-**0.1**-0.15 | <1.5 | 0.05-**0.1**-0.15 | -1.0 | 0.05-**0.1**-0.15 | <1.0 |

### Antivibration internal turning tools · Antivibrations Drehwerkzeuge (Innen)

| Workpiece material Werkstück Material | | Machining conditions Anwendung | Chipbreaker Spanbrecher | Grade Sorte | Feed rate Vorschub (mm/rev) | Cutting depth Schnitttiefe (mm) |
|---|---|---|---|---|---|---|
| P | Steel HB180—280 Stahl | Finishing Schlichten | SF | YNG151 YNG151C | 0.05-**0.2**-0.35 | 0.05-**0.1-0.3**-0.5 |
| M | Stainless steel ≤HB220 Rostfreier Stahl | | | | 0.05-**0.2**-0.35 | 0.05-**0.1-0.3**-0.5 |
| K | Cast iron HB170—230 Gusseisen | | | | 0.05-**0.2**-0.35 | 0.05-**0.1-0.3**-0.5 |

The characters in blue color are recommended cutting parameters.
Die blaue Ziffern sind empfohlene Schnittdaten.

| No. | Tool wear type | Situation | Reason | Countermeasures |
|---|---|---|---|---|
| 1+2 | Flank wear | Poor surface quality and inconsistent measurement. Increase in cutting force. | Grade is too soft<br>Cutting speed is too high.<br>Flank angle is too small.<br>Feed rate is too low | Select grade with higher wear resistance<br>Reduce cutting speed<br>Increase flank angle.<br>Increase feed rate |
| 3 | Crater wear | Bad surface and chip control | Grade is too soft.<br>Cutting speed is too high.<br>Feed rate is too high. | Select grade with higher wear resistance<br>Reduce cutting speed<br>Reduce feed rate |
| 4 | Chipping | Tool life not stable<br>Sudden breakage of cutting edge | Grade is too hard.<br>Feed rate is too high.<br>Cutting edge strength not strong enough<br>The rigidity of holder in insuffiecient (vibration) | Select grade with higher toughness<br>Reduce feed rate<br>Change honing of cutting edge<br>Use holder with bigger shank size |
| 5 | Fracturing | Cutting force increasing<br>Surface roughness and measure becomes bad | Grade is too hard.<br>Feed rate is too high.<br>Cutting edge strength not strong enough<br>The rigidity of holder in insufficient | Select grade with higher toughness<br>Reduce feed rate<br>Change honing of cutting edge<br>Use holder with bigger shank size |
| 6 | Plastic deformation | Inconsistent measure meet.<br>Damage to the cutting edge | Grade is too soft.<br>Cutting speed is too high.<br>Depth of cut and feed rate too high<br>Cutting temperature is high | Grade with high wear resistance.<br>Reduce cutting speed<br>Decrease depth of cut and feed rate.<br>Grade with high thermal conductivity. |
| 7 | Welding | Poor surface quality and inconsistent measurement. Increase in cutting force. | Cutting speed is low.<br>Cutting edge not sharp enough<br>Grade not suitable | Increase cutting speed<br>Increase rake angle.<br>Select grade with lower affinity |
| 8 | Thermal Cracks | Break due to thermal variation effect often caused when cutting is interrupted. | Expansion or shrinkage due to cutting heat<br>Grade is too hard. | Use dry cutting<br>Select grade with higher toughness |
| 9 | Notch wear | Burr increase of Cutting force information | Unstable cutting condition (uncut surface,chilled parts, machining hardened layer)<br>Friction caused by jagged shape chips.<br>Feed rate and cutting speed too high | Grade with high wear resistance.<br>Increase rake angle to improve sharpness<br>Decrease cutting speed |
| 10 | Flaking | Mostly happens during machining of high hard materials or vibration | Cutting edge welding and adhesion.<br>Bad chip removing | Increase rake angle to improve sharpness<br>Use chip breaker with wider chip pocket |



| Bild | Art des Verschleißes | Auswirkungen | Grund | Gegenmaßnahmen |
|---|---|---|---|---|
| 1+2 | Freiflächen-verschleiß | Schlechte Oberflächengüte und Maßhaltigkeit<br>Anstieg der Schnittkraft | Sorte nicht verschleißfest genug<br>Schnittgeschwindigkeit zu hoch<br>Freiwinkel zu klein<br>Vorschub zu gering | Sorte mit höherer Verschleißfestigkeit<br>Schnittgeschwindigkeit reduzieren<br>Freiwinkel vergrößern<br>Vorschub reduzieren |
| 3 | Kolkverschleiß | Schlechte Oberflächengüte und Spankontrolle | Sorte nicht verschleißfest genug<br>Schnittgeschwindigkeit zu hoch<br>Vorschub zu hoch | Sorte mit höherer Verschleißfestigkeit<br>Schnittgeschwindigkeit reduzieren<br>Vorschub reduzieren |
| 4 | Ausbröckelung | Standzeit nicht stabil<br>Plötzlicher Bruch der Schneidkante | Sorte ist zu hart<br>Vorschub zu hoch<br>Schneidkantenstabilität nicht ausreichend<br>Stabilität des Werkzeughalter oder Spannung nicht ausreichend | Sorte mit höherer Zähigkeit<br>Vorschub reduzieren<br>Schneidkanten-verrundung ändern<br>Stabileren Halter verwenden |
| 5 | Bruch | Anstieg der Schnittkraft<br>Schlechte Oberflächengüte und Maßhaltigkeit | Sorte ist zu hart<br>Vorschub zu hoch<br>Schneidkantenstabilität nicht ausreichend<br>Stabilität des Werkzeughalter oder Spannung nicht ausreichend | Sorte mit höherer Zähigkeit<br>Vorschub reduzieren<br>Schneidkanten-verrundung ändern<br>Stabileren Halter verwenden |
| 6 | Plastische Deformation | Schlechte Maßhaltigkeit<br>Beschädigung der Schneidkante | Sorte nicht verschleißfest genug.<br>Schnittgeschwindigkeit zu hoch<br>Schnitttiefe und/oder Vorschub zu hoch<br>Temperatur an der Schneide zu hoch | Sorte mit höherer Verschleißfestigkeit<br>Schnitt-geschwindigkeit reduzieren<br>Schnitttiefe und Vorschub reduzieren<br>Sorte mit höherer Wärmebeständigkeit |
| 7 | Aufbauschneide | Anstieg der Schnittkraft<br>Schlechte Oberflächengüte | Schnittgeschwindigkeit zu niedrig<br>Schneidkante nicht scharf genug<br>Sorte nicht geeignet | Schnittgeschwindigkeit erhöhen<br>Spanwinkel erhöhen<br>Sorte mit geringer Affinität |
| 8 | Thermischer Verschleiß | Bruch durch thermische Wechselwirkung<br>Oft bei unterbrochenem Schnitt (Fräsen) | Durch die Bearbeitungs-Temperatur-schwankungen<br>Sorte ist zu hart | Trockenbearbeitung<br>Sorte mit höherer Zähigkeit |
| 9 | Kerbverschleiß | Gratbildung<br>Anstieg der Schnittkraft | Beschädigung durch Späne (ausgefranste Spankante)<br>Vorschub und Schnittgeschwindigkeit zu hoch | Sorte mit höherer Verschleißfestigkeit<br>Spanwinkel vergrößern um eine schärfere Schneide zu bekommen<br>Schnittgeschwindig-keit verringern |
| 10 | Abplatzung (Beschichtung) | Oft bei der Bearbeitung härterer Werkstoffe oder wenn Vibrationen auftauchen | Verklebungen an der Schneidkante sowie Ausbrüche.<br>Schlechte Spanabfuhr | Spanwinkel vergrößern um eine schärfere Schneide zu bekommen<br>Spanbrecher mit größerer Spankammer |

# Turning · Drehen

## Parting and Grooving · Ab & Einstechen


**Parting and grooving tools overview · Ab- & Einstechen Übersicht** **A285-A287**

**Parting and grooving inserts · Abstech- und Einstechplatten** **A288-A304**

Chip breaker introduction of "Squirrel Series" inserts A288-A289
Spanbrecher der "Squirrel Serie"

Parting, grooving and profiling inserts code key "Squirrel Serie" A290
Ab- & Einstechplatte ISO Kennzeichen "Squirrel Serie"

Inserts of · Stechplatten der "Squirrel Serie" A291-A298

Parting, grooving and profiling inserts code key "QC Serie" A299
Ab- & Einstechplatte ISO Kennzeichen "QC Serie"

Inserts of · Stechplatten "QC" A300-A304

**Parting and grooving tools · Ab- & Einstechwerkzeuge** **A306-A323**

Parting and grooving tools code key · Ab- & Einstechwerkzeuge "Squirrel Serie" A306-307

External parting, grooving and turning tools · Ab- & Einstechwerkzeuge (Außen) A308-309

Precise grooving and turning tools · Präzisions Einstech- & Drehwerkzeuge A310

External recess and profiling tools · Hinterdrehstech- & Profildrehwerkzeuge (Außen) A310

External grooving tools for difficult machining A311
Stechdrehwerkzeuge für die schwierige Bearbeitung (Außen)

External parting blade & holder for external parting A312
Abstech-Schwert zur Außenbearbeitung & Spannblock zur Außenbearbeitung

Axial grooving and turning tools · Axial Einstech- & Drehwerkzeuge A313-318

L type tools for Axial grooving and turning · L Typ Axialstech- & Drehwerkzeug A319-320

Internal grooving and turning tools · Ab- & Einstechwerkzeuge (Innen) A321

Parting and grooving tools code key · Ab- & Einstechwerkzeuge ISO Kennzeichen "QC Serie" A322

Parting and grooving tools · Ab- & Einstechwerkzeuge "QC Serie" A323

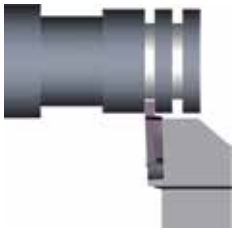
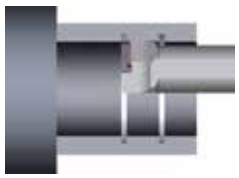
**Application information of parting and grooving** **A324-A325**
**Anwendungsinformation für Ab- & Einstechen**

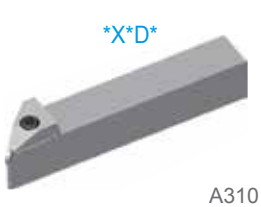
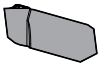
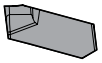
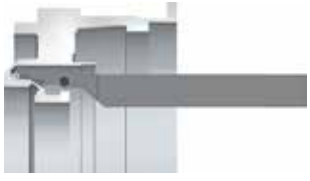
| Machining application | Machining Bearbeitung | | Toolholder Klemmhalter | Inserts Stechplatten | Tool's feature and parameters Werkzeug Eigenschaften & Parameter |
|---|---|---|---|---|---|
| External machining Außenbearbeitung | Parting Abstechen |  | QZ**+QE**<br><br>A312 | ZP*S**<br> | • Assemble structure of parting blade and holder, good rigidity and parting range is adjustable.<br>• The max. parting Ø = 120mm.<br>• Die Auskragung des Abstech-Schwertes ist bei hoher Stabilität einstellbar<br>• Der max. Abstech Ø = 120mm |
| | | | QE**R/L<br><br>A309 | ZP**D*<br><br>ZP*S*<br> | • Inserts have 3d chip breaker, small cutting force, good performance on chip breaking<br>• maximum parting Ø = 60mm<br>• Schneideinsatz mit 3 versch. Spanleitstufen für geringe Schnittkräfte & gute Spankontrolle.<br>• max. Abstech Ø = 120 mm |
| | Grooving and turning Stechen und Drehen |  | QE*R/L<br><br>A311 | Double Doppelseitig<br>ZT*D**<br><br>Profile turning Profildrehen<br>ZR*D*<br><br>Single cutting edge for deep Grooving Einseitig<br>ZT*S*<br> | • Various applications can be realised by one single tool, installed with different inserts for grooving, profiling and parting, It reduces the tool category.<br>• Installed with grooving inserts, the tool realises grooving and transverse cutting. This tool is multifunctional.<br>• The max. slot depth = 30mm.<br>• Bei Anwendung dieses Universal WZ-System und Verwendung der unterschiedlichen Schneideinsätze können die Bearbeitungen wie; Ab-, Stechen, Profil-, Drehen druchgeführt werden<br>• Die max. Nutentiefe = 30mm |
| | Precise grooving Präzisionsstechdrehen |  | QECD<br><br>A310 | Precise grooving Präzisionsstechen<br>ZT*D**-EG<br><br>Edge width1.2~2.4mm Stechbreite | • Grinded insert, used for precise grooving.<br>• Edge width can be any size between 1.0 6.5mm according to customers requirement.<br>• ZT*D*- EG inserts: When edge width is between 1.2-2.4mm, the maximum cutting depth is 2.5mm; When edge width is >2.4~6.5mm, the maximum cutting depth is 22mm<br>• geschliffene Einsätze für das Präzisionsstechen<br>• Die Schneidenbreite kann auf Wunsch zwischen 1.0-6.5mm geschliffen werden.<br>• ZT*D*-EG Stechplatte: bei S.-Breiten von 1.2-2.4mm, und max. Schnitttiefe von 2.5mm; bei S.-Breiten von >2.4~6.5mm, beträgt die max Schnitttiefe 22mm |
| | | | QE*R/L<br><br>A309 | Precise grooving Präzisionsstechen<br>ZT*D**-EG<br><br>Edge width1.2~2.4mm Stechbreite | |

A

General Turning
Allgemeine Drehbearbeitung

Parting & Grooving
Ab- & Einstechen

| Machining application | Machining Bearbeitung | | Toolholder Klemmhalter | Inserts Stechplatten | Tool's feature and parameters Werkzeug Eigenschaften & Parameter |
|---|---|---|---|---|---|
| External Machining Außenbearbeitung | Grooving Stechen |  | QC Series GQCR/L<br><br>A323 | QC16/22□□□□<br> | ● Finish grinding with high tolerance.<br>● Sharp cutting edge with accarate machining.<br>● Good economy with 3-lips grinding edge.<br>● For the light grooving, slot width 0.5-4.8 mm.<br>● Max cutting depth 5 mm.<br>● Präzisionsgeschlifften mit hohen Toleranze.<br>● Scharfe Schneide für präzise Bearbeitung.<br>● Hohe Wirtschaftlichkeit durch 3-schneidige Platte.<br>● Schlichtbearbeitung mit Stechbreiten von 0.5-4.8 mm.<br>● Maximale Stechtiefe 5 mm. |
| Internal machining Innenbearbeitung | Grooving and turning Stechen und |  | C*-Q*R/L*<br><br>A321 | Grooving, Turning Stechen, Drehen<br>ZT*D**<br><br>Profile turning Profildrehen<br>ZR*D**<br> | ● By installing different inserts for grooving & profiling, one single tool realizes various applications, it reduce the tool category.<br>● The max. slot depth can be machined = 13mm<br>● The min Ø can be machined = 27 mm<br><br>● Ein System für Stech- & Profildrehen. Die Anzahl der Stechsysteme wird reduziert.<br>● Die max. Nutentiefe = 13 mm<br>● Der min. Ø = 27 mm |
| | |  | QC Series<br>S□□□-QC□□R/L□<br><br>A323 | QC11/16/22□□□□<br> | ● Fine grinded inserts, high precision<br>● Slot width can be machined is 0.5-4.8mm<br>● The min. Ø can be machined = 16mm<br>● The max. slot depth can be machined = 4 mm<br>● Fein geschliffener Einsatz für hohe Präzision<br>●Stechbreite beträgt 0,5-4,8 mm<br>● Der min. Ø = 16 mm<br>● Die max Nutentiefe = 4 mm |

| | Machining Bearbeitung | | Toolholder Klemmhalter | Inserts Stechplatten | Tool's feature and parameters Werkzeug Eigenschaften & Parameter |
|---|---|---|---|---|---|
| Axial Grooving Axial stechen | Grooving and turning Stechen und Drehen |  | QF**H  A315-A318 | Grooving, Turning Stechen, Drehen ZT*D**  Profile turning Profildrehen ZR*D**  | • By installing different inserts as for grooving and profiling, one single tool realises various applications, it reduces the tool category.<br>• Grooving · Stech Ø 48-400mm<br>• Grooving depth · Nutentiefe 10-30mm<br>• Ein W-System für Stech- & Profildrehen. Die Anzahl der Stechsysteme wird reduziert. |
| | | |  A319-A320 | Grooving, Turning Stechen, Drehen ZT*D**  Profile turning Profildrehen ZR*D**  | • 90° toolholder, top clamping<br>• By installing different inserts as for grooving and profiling, one single tool realizes various applications, it reduce the tool category.<br>• Grooving · Stech Ø 48-400mm<br>• Grooving depth · Nutentiefe 10-30mm<br>• Ein W-System für Stech- & Profildrehen. Die Anzahl der Stech-systeme wird reduziert.<br>• 90° Klemmhalter, Pratzenklemmung |
| Recess Machining Hinterstechen | Recess and turning Hinterstech. und Drehen |  | *X*D*  A310 | Grooving, Turning Stechen, Drehen ZT*D**  Profile turning Profildrehen ZR*D**  | • The unique tool for recess machining<br>• Variing recess machining can be realized, inserts programm is complete<br>• Ein W-System für Hinterstechdrehen<br>• Unterschiedliche Hinterdrehoperationen können durchgeführt werden. Das Einsatzprogramm ist komplett. |
| Alu profiling Aluminium Profildrehen | External mach. Außenbearbeit. |  | QE**R/L  A309 | ZR**-LH  | • The unique chip breaker for profiling Al material<br>• Cutting edge is designed as combination of sharpness and stability, and it's suitable for continuous to intermittent cut.<br>• Used for for external, surface and inner wall machining of Al wheelboss.<br>• Spezielle Spanbrecher für die Alu Bearbeitung.<br>• Schneidkante besitzt Schärfe und Stabilität für kontinuierlichen bis unterbrochenem Schnitt.<br>• Profildrehen, von Alu. Felgen |
| | Inner wall and surface Plan & Längsprofildrehen |  | C40X*  A321 | | |
| Tools for aviation and aerospace industries Werkzeuge für die Raum- & Luftfahrt | External machining Außenbearbeitung |  | QE*S*N  A311 | ZIGQ**  ZIMF**  | • V type locating, top clamping, precisely locating, safely clamping<br>• Inserts are suitable for difficult to machine materials like: Ni-base,Ti alloy, Stainless steel and Exotic material.<br>• V Form Aufnahme, Top Klemmung für Präzisions-Einsatz, Fixierung & sichere Klemmung<br>• Stechplatte für schwierig zu zerspanende Werkstoffen wie: Ni-basiertes Material, Ti-Legierungen, rostfreien Stahl und exotisches Material. |
| | Non-standard Tools Sonderwerkzeug |  | Non-Standard tools Sonderwerkzeug | Select and manufacture according to requirement. Auswahl nach Anwendung | • Instantly supply solutions for machining various parts to satisfy your machining requirement.<br>• Sonderwerkzeuglösungen für die Bearbeitung unterschiedlicher Werkstücke. |



# -MG Chip breaker Spanbrecher

## ■ Universal -MG chip breaker series

Suitable for parting, grooving, profiling and turning etc; good chip control, surface quality and low cutting force

## ■ Universelle -MG Spanbrecherserie

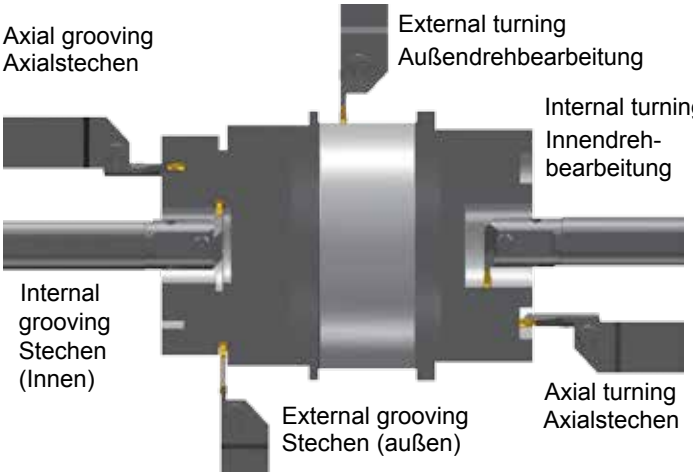
Einsetzbar zum Stechen, Abstechen, für die Profil- und Drehbearbeitung, gute Spankontrolle.
Gute Oberflächengüten und niedrige Schnittkräfte.

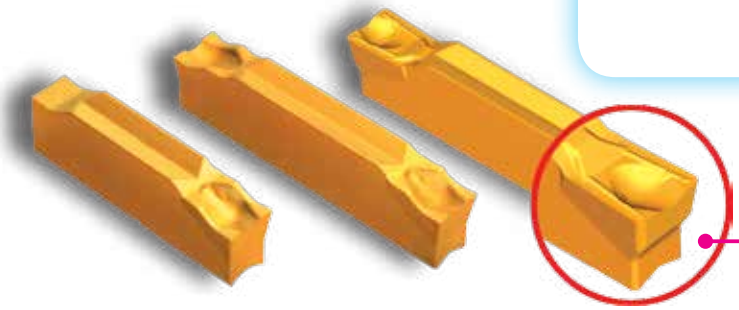
## ■ Reduction of tool cost by using one special design insert in various.

- One insert fits several tool holders
- One insert suitable for serveral applications
- Reduction of tool cost and warehouse charges

## ■ Reduzierung der Werkzeugkosten mit dem Einsatz nur einer Stechgeometrie für viele Anwendungsbereiche.

- Stechplatte paßt auf versch. Haltersysteme
- Stechpl. geignet für versch. Bearbeitungen
- Reduzierung der Werkzeug-und Lagerkosten



## Special design reduce vibration and cutting force by 20%

## Spezielles Spanbrecherdesign reduziert Vibrationen und Schnittkräfte um 20%

## ■ Unique structure design of parting inserts

- A special flank structure is designed to reduce cutting force by 20% and diminish vibration, which improve the surface quality
- A special edge design requires less rigidity of machine, it can be used on machine with low power

## ■ Einzigartiges Schneidkantendesign für Ab- / Stechplatte

- Spezielle Flankenstruktur reduziert die Schnittkräfte um 20%, verhindert Vibrationen und verbessert die Oberflächenqualität
- Eine neu entwickelte Schneidkantenausführung ermöglicht auch den Einsatz auf leistungsschwachen Maschinen.



# -EG

## Precise grooving, profiling & turning inserts

Special chip breaker design, suitable for precision machining of low-carbon steel, stainless steel, sticky materials and nonferrous metal.

## Präzisions-Platten für die Stech-, Profil- & Drehbearbeitung

Spezielles Spanbrecherdesign für die Präzisionsbearbeitung von niedriglegiertem Stahl, rostfreiem Stahl, abrasiven Materialien und Ne-Metallen.

**The edge width between 1.0-6.5mm according to your requirement.**

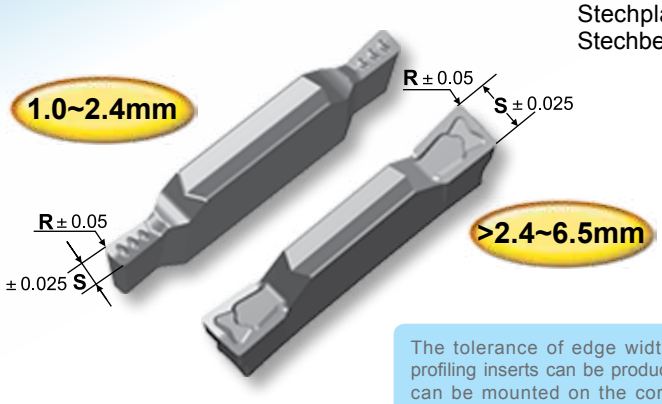
**Stechbreiten von 1.0-6.5 mm je nach Anforderung.**

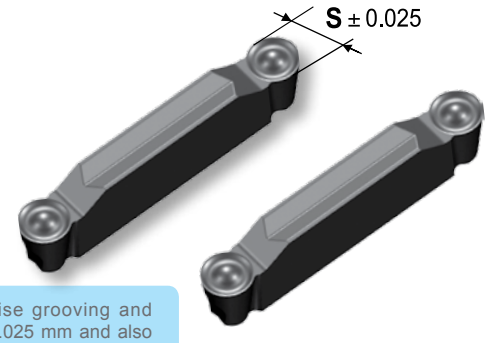
### -EG Precision profiling and turning inserts

Round inserts for precision, turning and grooving

### -EG Präzisions, Profil- & DrehStechplatte

Stechplatte mit Rundprofil für die Profil, Drehstech- und Stechbearbeitung




The tolerance of edge width S of precise grooving and profiling inserts can be produced up to ±0.025 mm and also can be mounted on the corresponding specifications of original toolholder series.

Die Stechbreite S kann mit einer Toleranz bis ±0,025 mm produziert werden und auf der Standard Halterserie eingesetzt werden.

## Profiling turning inserts for AL
## Profilstechdrehplatten für Alu



The unique chip breaker for aluminum profiling machining. Cutting edge is designed by combining sharpness and intensity, The special chip breaker structure which effectively reduces the frictional coefficient between chips and rake face, enable the inserts suitable for continuous and intermittent profiling Al alloy machining.

Das einzigartige Spanbrecherdesign für die Profilbearbeitung von Aluminium verbindet eine scharfe Schneidkantenausführung und gleichzeitige Stabilität. Die spezielle Form verhindert die Aufbauschneidenbildung und ist für die Bearbeitung im glatten und leicht unterbrochenem Schnitt einsetzbar.



## Parting, Grooving, Profiling and Turning Code Key
## Kennzeichnung für Ab- und Einstechen, Profildrehen und Drehen

**Application of insert** *Anwendung*

| | |
|---|---|
| **ZP** | Parting *Abstechen* |
| **ZT** | Grooving and Turning *Einstechen und Drehen* |
| **ZR** | Profile machning *Formdrehen* |

**Code of insert seat size** *Plattensitzgröße*

Corresponding code of toolholder and width of cutting edge.
*Entsprechender Code des Halters und der Schneidenbreite*

| Code | Height / *Höhe* |
|---|---|
| **B** | 2.0 |
| **E** | 2.5 |
| **F** | 3.0 |
| **G** | 4.0 |
| **H** | 5.0 |
| **K** | 6.0 |
| **L** | 8.0 |

**Number of cutting edge** *Anzahl Schneiden*

| | |
|---|---|
| **S** | Single cutting edge *Eine Schneide* |
| **D** | Double cutting edges *Zwei Schneiden* |

**Tolerance class** *Toleranzklasse*

| | |
|---|---|
| **M** | Tolerance class *Toleranzklasse* |
| **E** | Tolerance class *Toleranzklasse* |

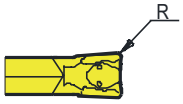
**ZP G D 04 04 - M G**

**Width of cutting edge** *Schneidplattenbreite*




025 = 2.5 mm
03 = 3.0 mm
04 = 4.0 mm
05 = 5.0 mm
06 = 6.0 mm

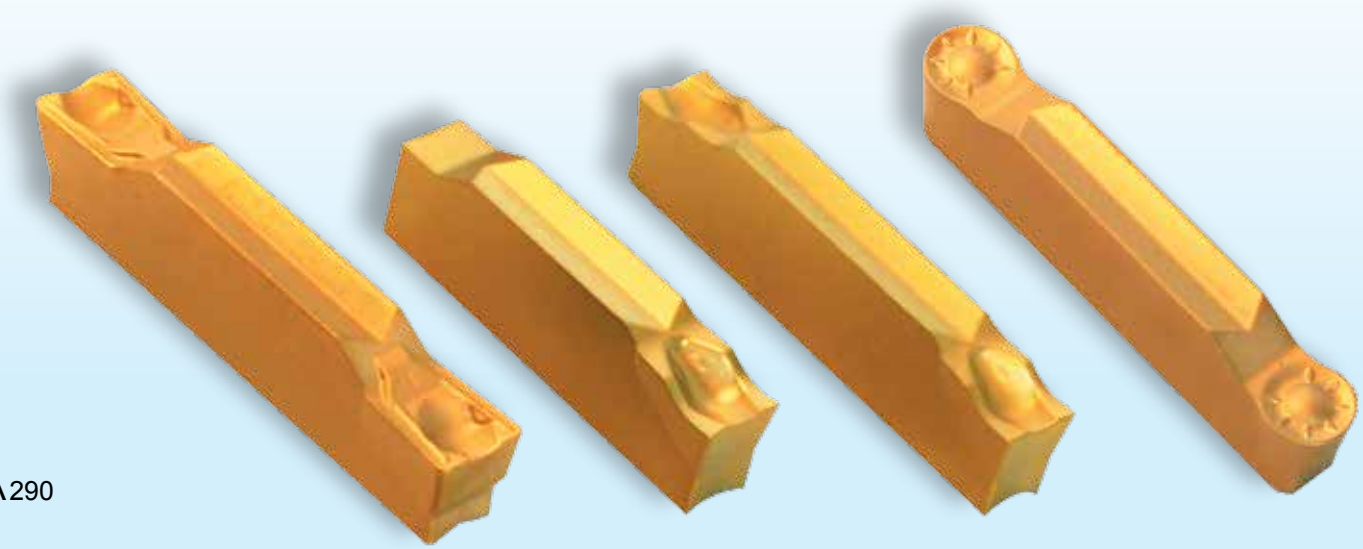
**Corner radius** *Eckenradius*



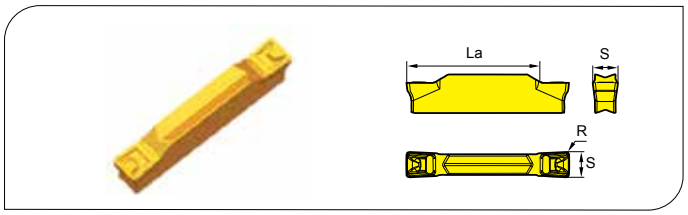

02 = 0.20 mm
03 = 0.30 mm
04 = 0.40 mm
08 = 0.80 mm

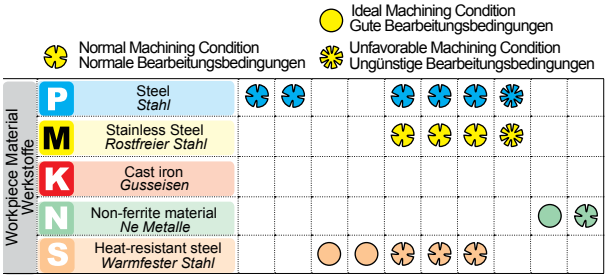
***Chip breaker´s code*** *Spanbrecher*

| | |
|---|---|
| **G** | General chip breaker, suitable for all kinds of machined material. *Allgemeiner Spanbrecher, geeignet für verschiedene Materialien.* |
| **F** | Special chip breaker *Sonder-Spanbrecher* |



## ZTBD-MM Series




| Type Typ | | Dimension (mm) Abmessung | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S | R±0.1 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge<br>2 Schneiden | **ZTBD02002-MM** | 2.0 | 0.2 | 13 | | | | | ● | ● | ○ | ● | | |
| | **ZTED02503-MM** | 2.5 | 0.3 | 17 | | | | | ● | | | | | |
| | **ZTFD0303-MM** | 3.0 | 0.3 | 17 | | | | | ● | | | | | |
| | **ZTGD0404-MM** | 4.0 | 0.4 | 22 | | | | | ● | | | | | |
| | **ZTHD0504-MM** | 5.0 | 0.4 | 22 | | | | | ● | | | | | |
| | **ZTKD0608-MM** | 6.0 | 0.8 | 22 | | | | | ● | | | | | |
| | **ZTLD0808-MM** | 8.0 | 0.8 | 28 | | | | | ● | ○ | | | | |

### Tool holder / Klemmhalter









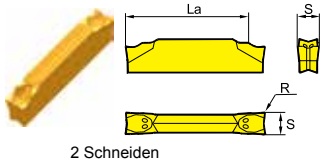


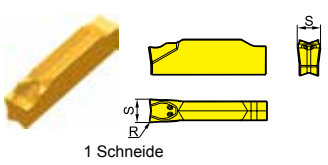


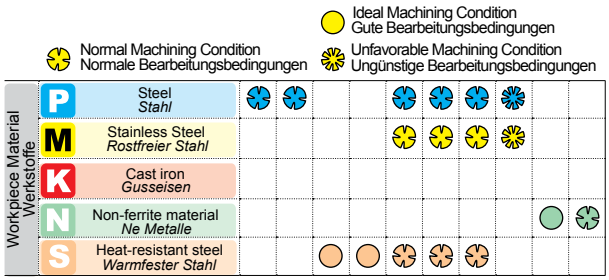
Page / Seite A313-314 A315-316 A317-318 A319-320

● ex stock · ab Lager ○ on demand · auf Anfrage

## Parting inserts · Stechplatte



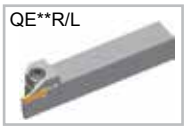




| Type Typ | | Dimension (mm) Abmessung | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $S^{+0.1}_{0}$ | R±0.1 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge 2 Schneiden | **ZPED02502-MG** | 2.5 | 0.2 | 17 | | ● | | | ● | | ● | ● | | |
| | **ZPFD0302-MG** | 3.0 | 0.2 | 17 | | ● | | | ● | | ● | ● | | ○ |
| | **ZPGD0402-MG** | 4.0 | 0.2 | 22 | | ● | | | ● | | ● | ● | | ○ |
| | **ZPHD0503-MG** | 5.0 | 0.3 | 22 | | | | | ● | | ● | ● | | |
| | **ZPKD0604-MG** | 6.0 | 0.4 | 22 | ○ | | | | ● | | ● | ● | | |
| Single cutting edge 1 Schneide | **ZPES02502-MG** | 2.5 | 0.2 | - | | | | | | | ● | ● | | |
| | **ZPFS0302-MG** | 3.0 | 0.2 | - | | ● | | | | | ● | ● | | |
| | **ZPGS0402-MG** | 4.0 | 0.2 | - | | ○ | | | | | ● | ● | | ○ |
| | **ZPHS0503-MG** | 5.0 | 0.3 | - | | | | | | | ○ | ● | | |
| | **ZPKS0604-MG** | 6.0 | 0.4 | - | | | | | | | ● | ● | | |

Insert with single cutting edge only be used to parting blad
Einschneidige Platten ausschließlich für den Einsatz auf Stechschwertern

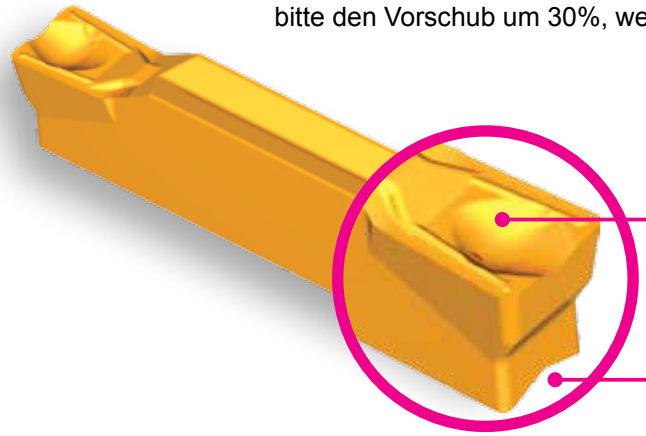
### Tool holder / Klemmhalter




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Please reduce the feed rate by 30% when the insert is approaching the centre of workpiece.
Für eine längere Standzeit der Wendeschneidplatten, reduzieren Sie bitte den Vorschub um 30%, wenn die Platte sich dem Zentrum nähert.

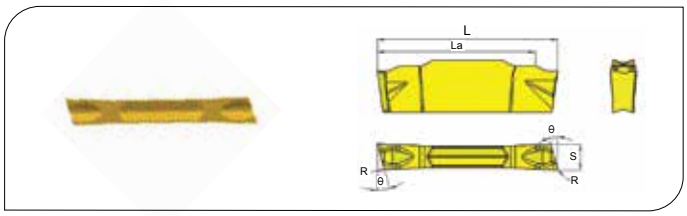


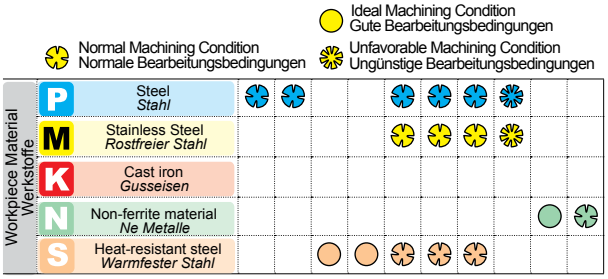
Optimal chip breaker design for good chip control.
Optimaler Spanbrecher für eine gute Spankontrolle.

Cutting force is reduced by 20% less vibration.
Reduziert die Vibrationen und die Schnittkraft um 20%

● ex stock · ab Lager ○ on demand · auf Anfrage

## ZP*D-MG Series




| Type Typ | Dimension (mm) Abmessung | | | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | S | θ | R | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **ZPED02502-MG-6L** | 20 | 2.35 | 6 | 0.2 | 17 | | | | | | | ○ | ● | ○ | |
| **ZPED02502-MG-6R** | 20 | 2.35 | 6 | 0.2 | 17 | | | | | ● | | ○ | ● | ○ | |
| **ZPED02502-MG-15L** | 20 | 2.35 | 15 | 0.2 | 17 | | | | | | | ○ | ○ | ○ | |
| **ZPED02502-MG-15R** | 20 | 2.35 | 15 | 0.2 | 17 | | | | | | | ○ | ○ | ○ | |
| **ZPFD0302-MG-6L** | 20 | 2.85 | 6 | 0.2 | 17 | | | | | ● | | ● | ● | ○ | |
| **ZPFD0302-MG-6R** | 20 | 2.85 | 6 | 0.2 | 17 | | | | | | | ● | ○ | ○ | |
| **ZPFD0302-MG-15L** | 20 | 2.85 | 15 | 0.2 | 17 | | | | | | | ○ | ○ | ○ | |
| **ZPFD0302-MG-15R** | 20 | 2.85 | 15 | 0.3 | 17 | | | | | | | ● | ○ | ○ | |

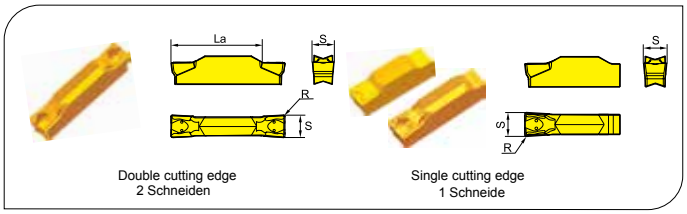
### Tool holder / Klemmhalter




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● ex stock · ab Lager ○ on demand · auf Anfrage

## Grooving and turning inserts
## Einstech- & Drehplatten




Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen

Workpiece Material
Werkstoffe

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Steel *Stahl* | ✱ | ✱ | | | ✱ | ✱ | ✱ | ✱ | | |
| M | Stainless Steel *Rostfreier Stahl* | | | | | ✱ | ✱ | ✱ | ✱ | | |
| K | Cast iron *Gusseisen* | | | | | | | | | | |
| N | Non-ferrite material *Ne Metalle* | | | | | | | | | ● | ✱ |
| S | Heat-resistant steel *Warmfester Stahl* | | | ● | ● | ✱ | ✱ | ✱ | | | |

| Type Typ | | Dimension (mm) Abmessung | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $S^{+0.1}_{0}$ | R±0.1 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge 2 Schneiden | **ZTED02503-MG** | 2.5 | 0.3 | 17 | | | | | | ○ | ● | ● | | |
| | **ZTFD0303-MG** | 3.0 | 0.3 | 17 | | | | ○ | | ● | ● | ● | | |
| | **ZTGD0404-MG** | 4.0 | 0.4 | 22 | | ● | | | | ● | ● | ● | | ● |
| | **ZTHD0504-MG** | 5.0 | 0.4 | 22 | | | | | | ● | ● | ● | | |
| | **ZTKD0608-MG** | 6.0 | 0.8 | 22 | | | | | | ○ | ● | ● | | |
| Single cutting edge 1 Schneide | **ZTHS0504-MG** | 5.0 | 0.4 | - | | | | | | ○ | ● | ● | | |
| | **ZTKS0608-MG** | 6.0 | 0.8 | - | | | | | | ○ | ○ | ● | | |

### Tool holder / Klemmhalter





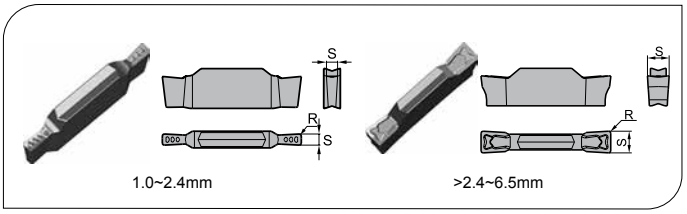


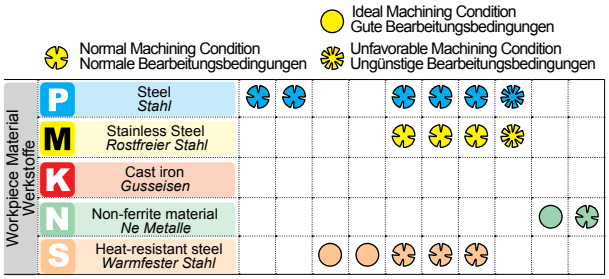



Page / Seite A309 A321 A319

● ex stock · ab Lager ○ on demand · auf Anfrage

## Precise grooving and turning inserts
## Präzisions-Stech- & Drehplatten



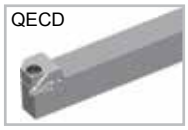

| Type Typ | | Dimension (mm) Abmessung | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S±0.025 | R(2)±0.05 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge 2 Schneiden | **ZTC****-EG** | 1.0~1.6 | (2) | 2.6 | | ○ | | | | ○ | ○ | ○ | | |
| | | 1.6~2.4 | | 3.4 | | ○ | | | | ○ | ○ | ○ | | |
| | **ZTE****-EG** | 2.4~3.0 | | 17 | | ○ | | | | ○ | ○ | ○ | | |
| | **ZTFD****-EG** | 3.0~3.8 | | 17 | | ○ | | | | ○ | ○ | ○ | | |
| | **ZTGD****-EG** | 3.8~4.8 | | 22 | | ○ | | | | ○ | ○ | ○ | | |
| | **ZTHD****-EG** | 4.8~5.8 | | 22 | | ○ | | | | ○ | ○ | ○ | | |
| | **ZTKD****-EG** | 5.8~6.5 | | 22 | | ○ | | | | ○ | ○ | ○ | | |

Note: (1) The code indicated with * is to be designated based on the edge width and edge radius. The code will be ZTFD03503-EG if the ordered insert is with an edge width of 3.5mm and an edge radius of 3.0mm.
(2) Edge radius R is based on customers' requirements

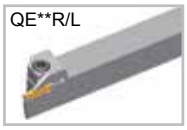
Der Bestellnummernschlüssel:
(1) z.B. ZTFD03503-EG legt eine Schneidbreite 3.5mm und einen Schneideckenradius 0.3mm fest.
(2) Eckenradius nach Kundenwunsch

### Tool holder / Klemmhalter

QECD



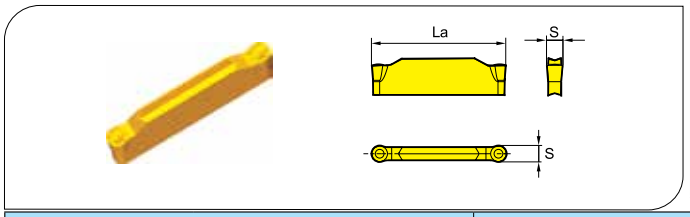
QE**R/L



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● ex stock · ab Lager ○ on demand · auf Anfrage

## Profiling and turing inserts
## Profil- & Stechdrehplatten




Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen

Workpiece Material
Werkstoffe

| | | |
|---|---|---|
| P | Steel | Stahl |
| M | Stainless Steel | Rostfreier Stahl |
| K | Cast iron | Gusseisen |
| N | Non-ferrite material | Ne Metalle |
| S | Heat-resistant steel | Warmfester Stahl |

| Type Typ | | Dimension (mm) Abmessung | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $S^{+0.1}_{0}$ | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge<br>2 Schneiden | **ZRED025-MG** | 2.5 | 20 | | | | | | | ● | ● | | |
| | **ZRFD03-MG** | 3.0 | 20 | | | | | | | ● | ● | | |
| | **ZRGD04-MG** | 4.0 | 25 | | ○ | | | | | ● | ● | | |
| | **ZRHD05-MG** | 5.0 | 25 | | | | | | | ● | ● | | |
| | **ZRKD06-MG** | 6.0 | 25 | | | | | | | ● | ● | | |

### Tool holder / Klemmhalter





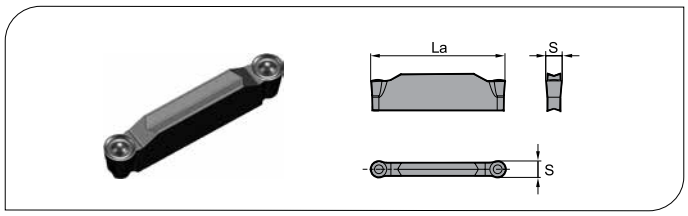







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## Precise profiling and turning inserts
## Präzisions-, Profil- & Stechdrehplatten




Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen

Workpiece Material
Werkstoffe

| | | |
|---|---|---|
| P | Steel | Stahl |
| M | Stainless Steel | Rostfreier Stahl |
| K | Cast iron | Gusseisen |
| N | Non-ferrite material | Ne Metalle |
| S | Heat-resistant steel | Warmfester Stahl |

| Type Typ | | Dimension (mm) Abmessung | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $S^{+0.1}_{0}$ | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| Double cutting edge<br>2 Schneiden | **ZRFD03-EG** | 3.0 | 20 | | | | | ● | | | ○ | | |
| | **ZRGD04-EG** | 4.0 | 25 | | | | | ● | | | ○ | | |
| | **ZRHD05-EG** | 5.0 | 25 | | | | | ● | | | ○ | | |
| | **ZRKD06-EG** | 6.0 | 25 | | | | | ● | | | ○ | | |

### Tool holder / Klemmhalter



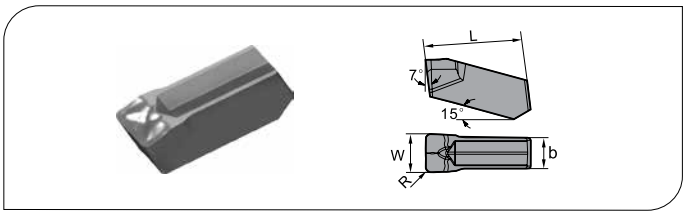




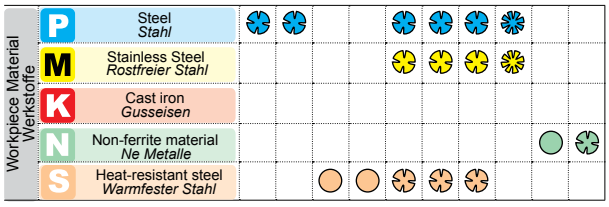

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● ex stock · ab Lager ○ on demand · auf Anfrage

## Single-cutting edge grooving and turning inserts for machining of heatresistance super alloy
## Einseitige Stech- & Drehplatten für die Bearbeitung von warmfesten Superlegierungen




Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Type / Typ | Dimension (mm) Abmessung | | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W±0.05 | R±0.1 | b | L | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **ZIMF304N-NM** | 3 | 0.4 | 2.4 | 15.3 | | | ● | ○ | | | | | | |
| **ZIMF406N-NM** | 4 | 0.6 | 3.2 | 15.3 | | | ● | ○ | | | | | | |
| **ZIMF506N-NM** | 5 | 0.6 | 4 | 15.3 | | | ● | ○ | | | | | | |
| **ZIMF608N-NM** | 6 | 0.8 | 4 | 15.3 | | | ● | ○ | | | | | | |

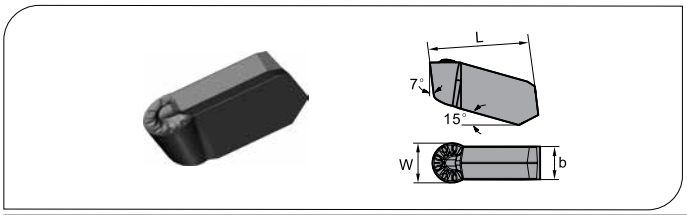
Tool holder / Klemmhalter

QE*S*N

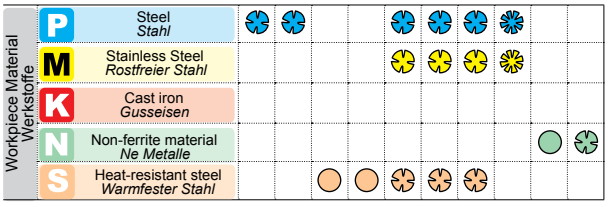


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## Single-cutting edge grooving and turning inserts for machining of heatresistance super alloy
## Einseitige Stech- & Drehplatten für die Bearbeitung von warmfesten Superlegierungen




Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen




| Type / Typ | Dimension (mm) Abmessung | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W±0.05 | b | L | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **ZIGQ3N-NM** | 3 | 2.4 | 15.3 | | | ● | ○ | | | | | | |
| **ZIGQ4N-NM** | 4 | 3.2 | 15.3 | | | ● | ○ | | | | | | |
| **ZIGQ5N-NM** | 5 | 4 | 15.3 | | | ● | ○ | | | | | | |
| **ZIGQ6N-NM** | 6 | 5 | 15.3 | | | ● | ○ | | | | | | |

Tool holder / Klemmhalter

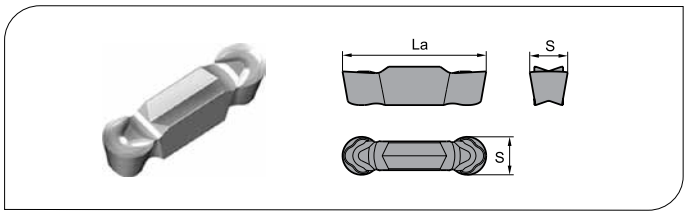
QE*S*N

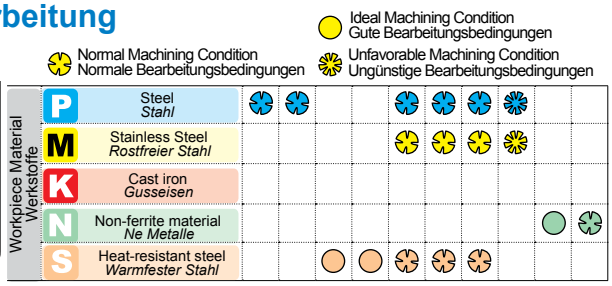


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● ex stock · ab Lager ○ on demand · auf Anfrage

## Profiling Inserts for Al
## Profilstechdrehplatten zur Aluminiumbearbeitung




| Type Typ | Dimension (mm) Abmessung | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S±0.025 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **ZRKD06-LH** | 6.0 | 25 | | | | | | | | | ○ | |
| **ZRLD08-LH** | 8.0 | 30 | | | | | | | | | ● | |

Tool holder / Klemmhalter



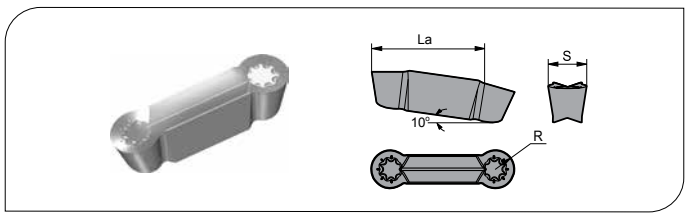


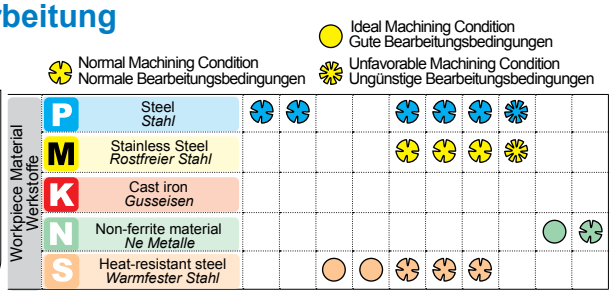





Page / Seite A317-318 A319 A310

## Profiling Inserts for Al
## Profilstechdrehplatten zur Aluminiumbearbeitung




| Type Typ | Dimension (mm) Abmessung | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S±0.025 | La max | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **ZILD08-LC** | 8.0 | 22 | | | | | | | | | ○ | ○ |

● ex stock · ab Lager ○ on demand · auf Anfrage

QC seriers grooving insert / QC-Serie Stechplatten

## QC series grooving insert code key / QC-Serie Kennzeichnung

- Triangular straight grooving insert / Dreieckige Stechplatten mit gerader Kante




Series
Serie

| Cutting edge length code Schneid-kantenlänge | Ø IC (mm) |
|---|---|
| **11** | 6.35 |
| **16** | 9.525 |
| **22** | 12.70 |

| Slot Stechbreite (mm) | |
|---|---|
| code | width Breite |
| **050** | 0.50 |
| **100** | 1.00 |
| **...** | ... |
| **480** | 4.80 |

| Radius or Chamfer Radius (mm) | |
|---|---|
| code | size Groß |
| **005** | 0.05 |
| **02** | 0.2 |
| **03** | 0.3 |
| **04** | 0.4 |

| Direction Schneidrichtung | | |
|---|---|---|
| code | mode | |
| **R** | right Rechts |  |
| **L** | left Links |  |

| Nose shape Kantenform | | |
|---|---|---|
| code | mode | |
| **R** | radius Radius |  |
| **C** | chamfer Fase |  |

- Triangular round grooving insert / Dreieckige Stechplatten mit runder Kante




Series
Serie

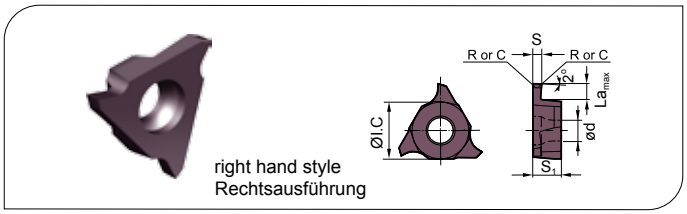
| Cutting edge length code Schneid-kantenlänge | Ø IC (mm) |
|---|---|
| **11** | 6.35 |
| **16** | 9.525 |
| **22** | 12.70 |

| Direction Schneidrichtung | | |
|---|---|---|
| **R** | right Rechts |  |
| **L** | left Links |  |

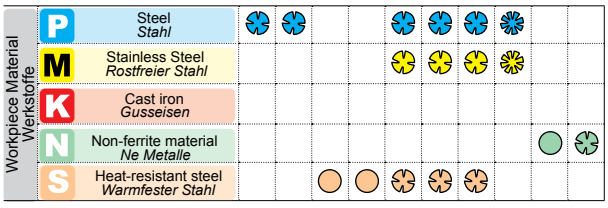
| Slot Stechbreite (mm) | |
|---|---|
| code | width Breite |
| **050** | 0.50 |
| **100** | 1.00 |
| **...** | ... |
| **480** | 4.80 |

Round
Rund

## QC seriers grooving insert / QC-Serie Stechplatten




Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | | CVD | | PVD | | | | | | Uncoated Carbide<br>unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S±0.025 | $La_{max}$ | R/C | ØI.C | $S_1$ | ød | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **QC11R120-R02** | 1.20 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L120-R02** | 1.20 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11R125-R02** | 1.25 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L125-R02** | 1.25 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11R145-R02** | 1.45 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L145-R02** | 1.45 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11R150-R02** | 1.50 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L150-R02** | 1.50 | 1.50 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11R200-R02** | 2.00 | 2.00 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L200-R02** | 2.00 | 2.00 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11R225-R02** | 2.25 | 2.00 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC11L225-R02** | 2.25 | 2.00 | R0.2 | 6.35 | 3.18 | 2.8 | | | | | | ● | ○ | | | |
| **QC16L075-R01** | 0.75 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R075-R01** | 0.75 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R080-R01** | 0.80 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L095-R01** | 0.95 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R095-R01** | 0.95 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L100-R01** | 1.00 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R110-R01** | 1.10 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ● | | | |
| **QC16L110-R01** | 1.10 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ● | ● | | | |
| **QC16R115-R04** | 1.15 | 2.00 | R0.4 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16L120-R01** | 1.20 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16R120-R01** | 1.20 | 2.00 | R0.1 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16R125-R02** | 1.25 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L125-R02** | 1.25 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |

The code of other size for your order, for example: QC22R160-R03 if S±0.025=1.60mm, ØI.C=12.70mm and cutting edge with R=0.3mm
Der Bestellnummernschlüssel: z.B.QC22R160-R03 liegt eine S±0.025=1.60mm, ØI.C=12.70mm und einen Schneideckradius R=0.3mm fest.

### Tool holder / Klemmhalter

QC Serie
S***-QC**R/L*



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## QC seriers grooving insert / QC-Serie Stechplatten

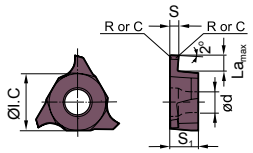
Ideal Machining Condition
Gute Bearbeitungsbedingungen

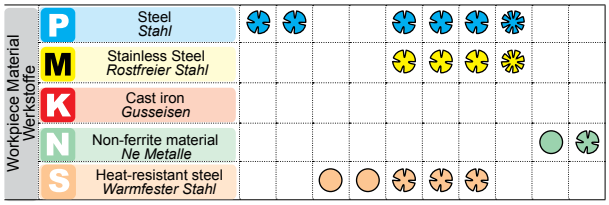
Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen



right hand style
Rechtsausführung




| Type Typ | Dimension (mm) Abmessung | | | | | | CVD | | PVD | | | | | | Uncoated Carbide unbeschicht. Hartmetall | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $S_{\pm 0.025}$ | $La_{max}$ | R/C | ØI.C | $S_1$ | ød | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **QC16R130-R02** | 1.30 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L130-R02** | 1.30 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16R140-R02** | 1.40 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16R145-R02** | 1.45 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L145-R02** | 1.45 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R150-R02** | 1.50 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L150-R02** | 1.50 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R160-R02** | 1.60 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L160-R02** | 1.60 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R165-R02** | 1.65 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L165-R02** | 1.65 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L170-R02** | 1.70 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R170-R02** | 1.70 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R175-R02** | 1.75 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L175-R02** | 1.75 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R180-R02** | 1.80 | 2.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R185-R02** | 1.85 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L185-R02** | 1.85 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R200-R02** | 2.00 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L200-R02** | 2.00 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L210-R02** | 2.1 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L210-R05** | 2.1 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L220-R02** | 2.2 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R220-R02** | 2.2 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R225-R02** | 2.25 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R250-R02** | 2.50 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L250-R02** | 2.50 | 2.50 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16R300-R02** | 3.00 | 3.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L300-R02** | 3.00 | 3.00 | R0.2 | 9.525 | 3.18 | 4.4 | | | | | | ● | ○ | | | |

The code of other size for your order, for example: QC22R160-R03 if S±0.025=1.60mm, ØI.C=12.70mm and cutting edge with R=0.3mm
Der Bestellnummernschlüssel: z.B.QC22R160-R03 liegt eine S±0.025=1.60mm, ØI.C=12.70mm und einen Schneideckradius R=0.3mm fest.

### Tool holder / Klemmhalter

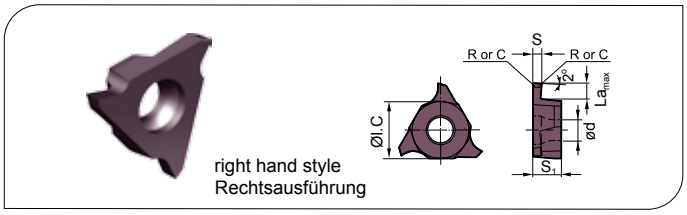
QC Serie
S***-QC**R/L*



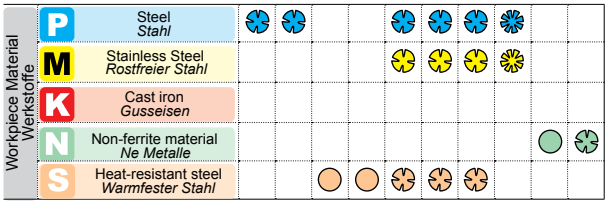
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● ex stock · ab Lager ○ on demand · auf Anfrage

## QC seriers grooving insert / QC-Serie Stechplatten




Ideal Machining Condition
Gute Bearbeitungsbedingungen
Normal Machining Condition
Normale Bearbeitungsbedingungen
Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen




| Type Typ | Dimension (mm) Abmessung | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S±0.025 | $La_{max}$ | R/C | ØI.C | $S_1$ | ød | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **QC22L100-R02** | 1.00 | 2.00 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R125-R02** | 1.25 | 2.00 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L125-R02** | 1.25 | 2.00 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R145-R02** | 1.45 | 2.00 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22L145-R02** | 1.45 | 2.00 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R150-R02** | 1.50 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L150-R02** | 1.50 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R163-R02** | 1.63 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R163-R03** | 1.63 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R175-R02** | 1.75 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L175-R02** | 1.75 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R185-R02** | 1.85 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L185-R02** | 1.85 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R195-R02** | 1.95 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R200-R02** | 2.00 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L200-R02** | 2.00 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R225-R02** | 2.25 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R230-R02** | 2.30 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L230-R02** | 2.30 | 3.50 | R0.2 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R250-R03** | 2.50 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L250-R03** | 2.50 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R265-R03** | 2.65 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L265-R03** | 2.65 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R280-R03** | 2.80 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L280-R03** | 2.80 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |

The code of other size for your order, for example: QC22R160-R03 if S±0.025=1.60mm, ØI.C=12.70mm and cutting edge with R=0.3mm
Der Bestellnummernschlüssel: z.B.QC22R160-R03 liegt eine S±0.025=1.60mm, ØI.C=12.70mm und einen Schneideckradius R=0.3mm fest.

### Tool holder / Klemmhalter

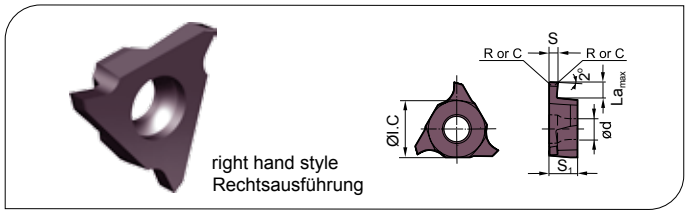
QC Serie
S***-QC**R/L*

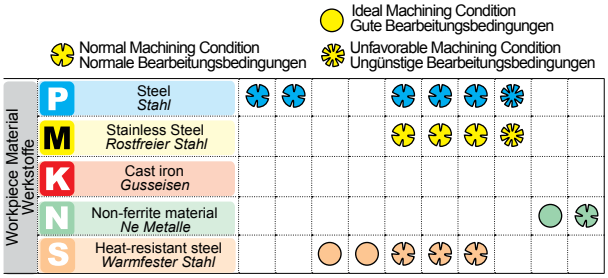


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## Triangular straight grooving insert / Dreieckige Stechplatten mit gerader Kante




| Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $S_{\pm 0.025}$ | $La_{max}$ | R/C | ØI.C | $S_1$ | ød | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **QC22R300-R03** | 3.00 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L300-R03** | 3.00 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R320-R03** | 3.20 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L320-R03** | 3.20 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R330-R03** | 3.30 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L330-R03** | 3.30 | 4.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R350-R03** | 3.50 | 5.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22L350-R03** | 3.50 | 5.00 | R0.3 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R400-R04** | 4.00 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L400-R04** | 4.00 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R430-R04** | 4.30 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22L430-R04** | 4.30 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ● | ● | | | |
| **QC22R450-R04** | 4.50 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L450-R04** | 4.50 | 5.00 | R0.4 | 12.70 | 4.76 | 5.5 | | | | | | ○ | ○ | | | |
| **QC22R480-R04** | 4.80 | 5.00 | R0.4 | 12.70 | 5.06 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L480-R04** | 4.80 | 5.00 | R0.4 | 12.70 | 5.06 | 5.5 | | | | | | ○ | ○ | | | |

The code of other size for your order, for example: QC22R160-R03 if S±0.025=1.60mm, ØI.C=12.70mm and cutting edge with R=0.3mm

### Tool holder / Klemmhalter

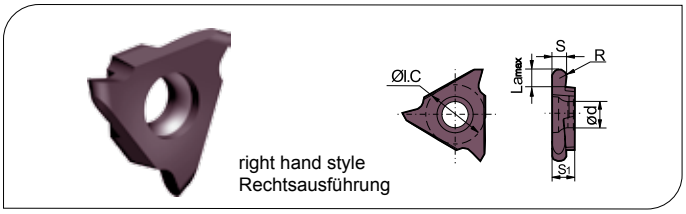
QC Serie
S***-QC**R/L*

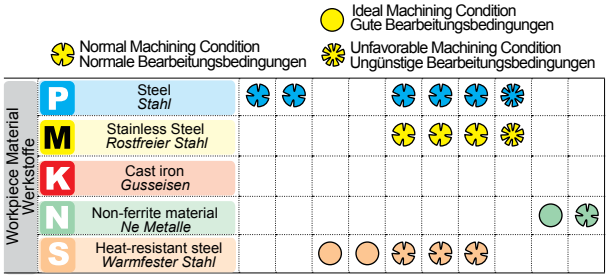


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● ex stock · ab Lager ○ on demand · auf Anfrage

## Triangular round grooving insert / Dreieckige Stechplatten mit runder Kante




| Type<br>Typ | Dimension (mm)<br>Abmessung | | | | | | Grade<br>Sorte | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $S_{\pm 0.025}$ | $La_{max}$ | R/C | ØI.C | $S_1$ | ød | YBC252 | YBC251 | YBG105 | YBG102 | YB9320 | YBG205 | YBG202 | YBG302 | YD101 | YD201 |
| **QC16R100R** | 1.00 | 2.0 | 0.50 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R120R** | 1.20 | 2.0 | 0.60 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R150R** | 1.50 | 2.0 | 0.75 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R200R** | 2.00 | 2.50 | 1.00 | 12.70 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L200R** | 2.00 | 2.50 | 1.00 | 12.70 | 3.18 | 4.4 | | | | | | ○ | ○ | | | |
| **QC16L222R** | 2.22 | 2.50 | 1.11 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R222R** | 2.22 | 2.50 | 1.11 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R250R** | 2.50 | 2.50 | 1.25 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16L280R** | 2.80 | 2.50 | 1.40 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R280R** | 2.80 | 2.50 | 1.40 | 12.70 | 3.18 | 4.4 | | | | | | ○ | | | | |
| **QC16R300R** | 3.00 | 2.50 | 1.50 | 12.70 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC16L300R** | 3.00 | 2.50 | 1.50 | 12.70 | 3.18 | 4.4 | | | | | | ● | ○ | | | |
| **QC22R100R** | 1.00 | 2.00 | 0.50 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L100R** | 1.00 | 2.00 | 0.50 | 12.70 | 4.76 | 5.5 | | | | | | ● | ● | | | |
| **QC22R150R** | 1.50 | 3.50 | 0.75 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L150R** | 1.50 | 3.50 | 0.75 | 12.70 | 4.76 | 5.5 | | | | | | ● | ● | | | |
| **QC22R170R** | 1.70 | 3.50 | 0.85 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R200R** | 2.00 | 3.50 | 1.00 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L200R** | 2.00 | 3.50 | 1.00 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R250R** | 2.50 | 4.00 | 1.25 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L250R** | 2.50 | 4.00 | 1.25 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R300R** | 3.00 | 4.00 | 1.50 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L300R** | 3.00 | 4.00 | 1.50 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22R320R** | 3.20 | 4.00 | 1.60 | 12.70 | 4.76 | 5.5 | | | | | | ○ | | | | |
| **QC22R400R** | 4.00 | 5.00 | 2.00 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |
| **QC22L400R** | 4.00 | 5.00 | 2.00 | 12.70 | 4.76 | 5.5 | | | | | | ● | ○ | | | |

Tool holder / Klemmhalter

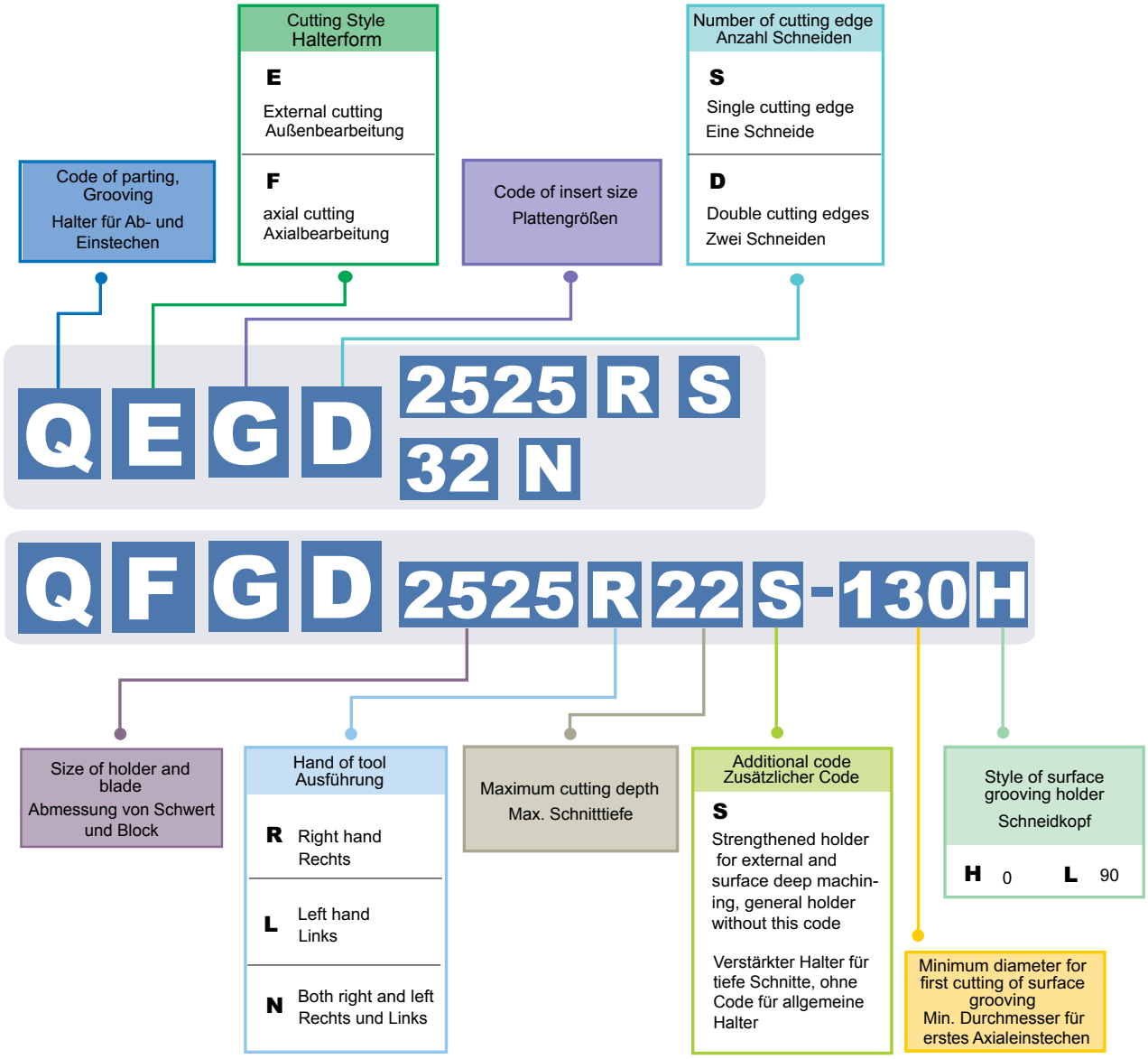
QE Serie GQCR/L

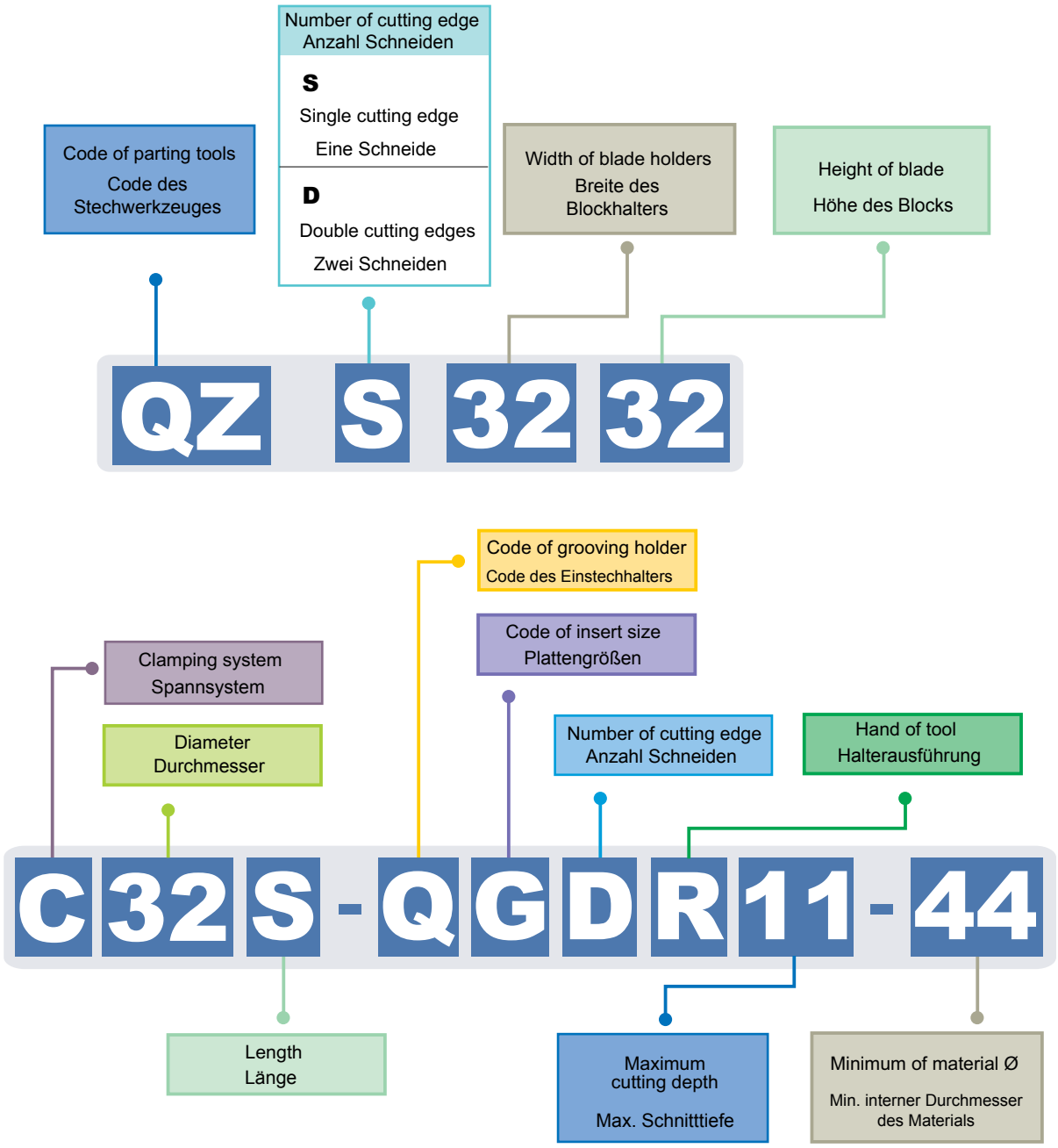


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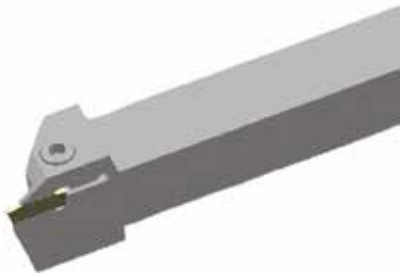
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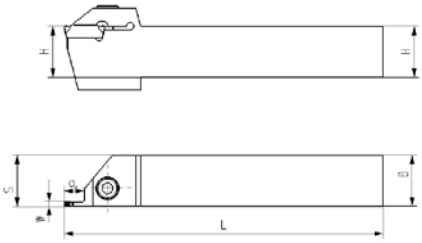
**NOTES / NOTIZEN:**


Code of parting, Grooving
Halter für Ab- und Einstechen
Cutting Style
Halterform
E
External cutting
Außenbearbeitung
F
axial cutting
Axialbearbeitung
Code of insert size
Plattengrößen
Number of cutting edge
Anzahl Schneiden
S
Single cutting edge
Eine Schneide
D
Double cutting edges
Zwei Schneiden
QEGD 2525 R S 32 N
QFGD 2525 R 22 S-130 H
Size of holder and blade
Abmessung von Schwert und Block
Hand of tool
Ausführung
R Right hand
Rechts
L Left hand
Links
N Both right and left
Rechts und Links
Maximum cutting depth
Max. Schnitttiefe
Additional code
Zusätzlicher Code
S
Strengthened holder for external and surface deep machining, general holder without this code
Verstärkter Halter für tiefe Schnitte, ohne Code für allgemeine Halter
Minimum diameter for first cutting of surface grooving
Min. Durchmesser für erstes Axialeinstechen
Style of surface grooving holder
Schneidkopf
H 0
L 90


Number of cutting edge
Anzahl Schneiden
S
Single cutting edge
Eine Schneide
D
Double cutting edges
Zwei Schneiden
Code of parting tools
Code des Stechwerkzeuges
Width of blade holders
Breite des Blockhalters
Height of blade
Höhe des Blocks
QZ S 32 32
Code of grooving holder
Code des Einstechhalters
Code of insert size
Plattengrößen
Clamping system
Spannsystem
Diameter
Durchmesser
Number of cutting edge
Anzahl Schneiden
Hand of tool
Halterausführung
C 32 S - Q G D R 11 - 44
Length
Länge
Maximum
cutting depth
Max. Schnitttiefe
Minimum of material Ø
Min. interner Durchmesser
des Materials

## External parting, grooving and turning tools · Einstech- & Drehwerkzeuge (Außen)






| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | Inserts Stechplatte | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QEBD | 1616R/L04 | ○ | ○ | 16×16 | 150 | 16.17 | 2 | 4 | ZTBD02002-MM | M5×16 | WH40L |
| | 2020R/L07 | ● | ● | 20×20 | 150 | 20.17 | 2 | 7 | ZTBD02002-MM | | |

## Internal parting, grooving and turning tools · Einstech- & Drehwerkzeuge (Innen)



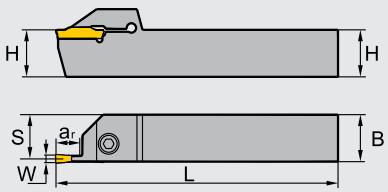



| Type Typ | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung d | L | S | W | ar max | Inserts Stechplatte | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| C16M-QBDR/L04-20 | ● | ○ | 16 | 150 | 12 | 2 | 4 | ZTBD02002-MM | M5×10 | WH40L |

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## External parting, grooving and turning tools · Einstech- & Drehwerkzeuge (Außen)



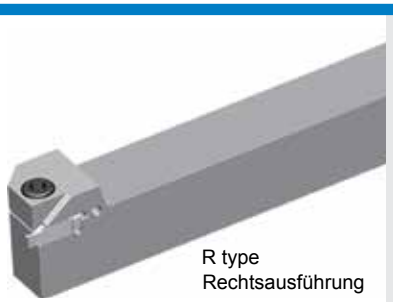




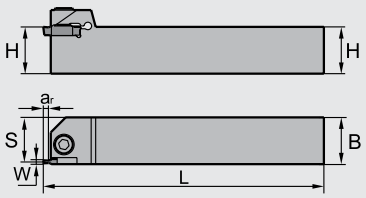

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | $a_{r\,max}$ | Inserts Stechplatte | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| QEED | 1616R/L10 | ● | ● | 16×16 | 125 | 15 | 2.5 | 10 | Z*ED025** | GB70-85-M5×20 | WH40L |
| | 1616R/L17 | ● | ● | 16×16 | 125 | 15 | 2.5 | 17 | Z*ED025** | | |
| | 2020R/L10 | ● | ● | 20×20 | 150 | 10 | 2.5 | 10 | Z*ED025** | GB70-85-M6×20 | WH50L |
| | 2020R/L17 | ● | ● | 20×20 | 125 | 19 | 2.5 | 17 | Z*ED025** | | |
| | 2525R/L10 | ● | ● | 25×25 | 150 | 19 | 2.5 | 10 | Z*ED025** | | |
| | 2525R/L17 | ● | ● | 25×25 | 150 | 19 | 2.5 | 17 | Z*ED025** | | |
| QEFD | 1616R/L10 | ● | ● | 16×16 | 125 | 14.8 | 3 | 10 | Z*FD03** | GB70-85-M5×20 | WH40L |
| | 1616R/L17 | ● | ● | 16×16 | 125 | 14.8 | 3 | 17 | Z*FD03** | | |
| | 2020R/L10 | ● | ● | 20×20 | 125 | 18.8 | 3 | 10 | Z*FD03** | GB70-85-M6×20 | WH50L |
| | 2020R/L17 | ● | ● | 20×20 | 125 | 18.8 | 3 | 17 | Z*FD03** | | |
| | 2525R/L10 | ● | ● | 25×25 | 150 | 23.8 | 3 | 10 | Z*FD03** | | |
| | 2525R/L17 | ● | ● | 25×25 | 150 | 23.8 | 3 | 17 | Z*FD03** | | |
| QEGD | 2020R/L13 | ● | ● | 20×20 | 140 | 18.5 | 4 | 13 | Z*FD04** | GB70-85-M6×20 | WH50L |
| | 2020R/L22 | ● | ● | 20×20 | 140 | 18.5 | 4 | 22 | Z*GD04** | | |
| | 2525R/L13 | ● | ● | 25×25 | 150 | 23.5 | 4 | 13 | Z*GD04** | | |
| | 2525R/L22 | ● | ● | 25×25 | 150 | 23.5 | 4 | 22 | Z*GD04** | | |
| | 3232R/L13 | ● | ● | 32×32 | 170 | 30.5 | 4 | 13 | Z*GD04** | | |
| | 3232R/L22 | ● | ● | 32×32 | 170 | 30.5 | 4 | 22 | Z*GD04** | | |
| QEHD | 2525R/L13 | ● | ● | 25×25 | 150 | 23 | 5 | 13 | Z*HD05** | GB70-85-M6×20 | WH50L |
| | 2525R/L22 | ● | ● | 25×25 | 150 | 23 | 5 | 22 | Z*HD05** | | |
| QEHS | 2525N30 | ● | | 25×25 | 150 | 12.5 | 5 | 30 | Z*HS05** | | |
| QEHD | 3232R/L13 | ● | ● | 32×32 | 170 | 30 | 5 | 13 | Z*HD05** | | |
| | 3232R/L22 | ● | ● | 32×32 | 170 | 30 | 5 | 22 | Z*HD05** | | |
| QEHS | 3232N30 | ● | | 32×32 | 170 | 16 | 5 | 30 | Z*HS05** | | |
| QEKD | 2525R/L13 | ● | ● | 25×25 | 150 | 22.6 | 6 | 13 | Z*KD06** | GB70-85-M6×20 | WH50L |
| | 2525R/L22 | ● | ● | 25×25 | 150 | 22.6 | 6 | 22 | Z*KD06** | | |
| QEKS | 2525N30 | ○ | | 25×25 | 150 | 12.5 | 6 | 30 | Z*KS06** | | |
| QEKD | 3232R/L13 | ● | ● | 32×32 | 170 | 29.6 | 6 | 13 | Z*KD06** | | |
| | 3232R/L22 | ● | ● | 32×32 | 170 | 29.6 | 6 | 22 | Z*KD06** | | |
| QEKS | 3232N30 | ○ | | 32×32 | 170 | 16 | 6 | 30 | Z*KS06** | | |

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## Precise grooving and turning tools · Präzisions Einstech- & Drehwerkzeuge



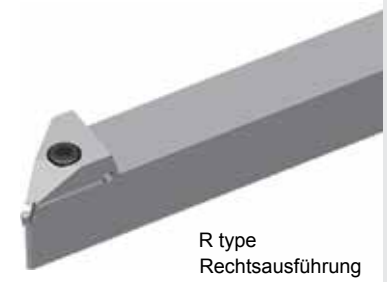
R type
Rechtsausführung



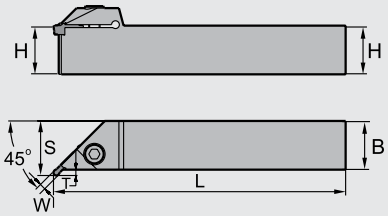


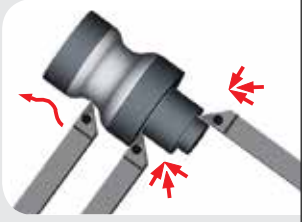

| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | Dimension (mm) Abmessung L | Dimension (mm) Abmessung S | Dimension (mm) Abmessung W | Dimension (mm) Abmessung $a_r$ max | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **QECD** | **1616R/L025** | ○ | ○ | 16×16 | 125 | 14.75 | | 2.5 | ZT**D***-EG | GB70-85-M5×20 | WH40L |
| | **2020R/L025** | ○ | ○ | 20×20 | 125 | 18.75 | | | | GB70-85-M6×20 | WH50L |
| | **2525R/L025** | ○ | ○ | 25×25 | 150 | 23.75 | | | | | |

## External recess and profiling turning tools · Hinterdrehstech- & Profildrehwerkzeuge (Außen)



R type
Rechtsausführung

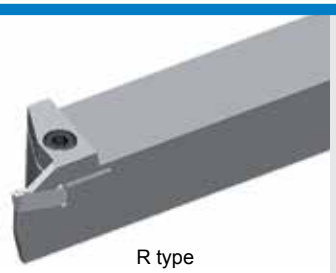


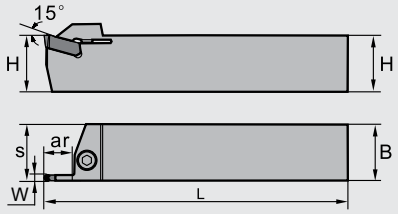
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | Dimension (mm) Abmessung L | Dimension (mm) Abmessung S | Dimension (mm) Abmessung W | Dimension (mm) Abmessung $a_r$ max | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **QXFD** | **2020R/L03-45** | ○ | ○ | 20×20 | 125 | 23 | 3.0 | 3.0 | ZR(T)FD03-EG<br>ZR(T)FD03-MG | GB70-85-M6×20 | WH50L |
| | **2525R/L03-45** | ● | ● | 25×25 | 150 | 28 | | | | | |
| | **3232R/L03-45** | ○ | ○ | 32×32 | 170 | 35 | | | | | |
| **QXGD** | **2020R/L03-45** | ○ | ○ | 20×20 | 125 | 23 | 4.0 | 3.0 | ZR(T)GD04-EG<br>ZR(T)GD04-MG | | |
| | **2525R/L03-45** | ○ | ○ | 25×25 | 150 | 28 | | | | | |
| | **3232R/L03-45** | ○ | ○ | 32×32 | 170 | 35 | | | | | |
| **QXHD** | **2020R/L04-45** | ○ | ○ | 20×20 | 125 | 24 | 5.0 | 4.0 | ZR(T)HD05-EG<br>ZR(T)HD05-MG | | |
| | **2525R/L04-45** | ○ | ○ | 25×25 | 150 | 29 | | | | | |
| | **3232R/L04-45** | ○ | ○ | 32×32 | 170 | 36 | | | | | |
| **QXKD** | **2020R/L04-45** | ○ | ○ | 20×20 | 125 | 24 | 6.0 | 4.0 | ZR(T)KD06-EG<br>ZR(T)KD06-MG | | |
| | **2525R/L04-45** | ○ | ○ | 25×25 | 150 | 29 | | | | | |
| | **3232R/L04-45** | ○ | ○ | 32×32 | 170 | 36 | | | | | |

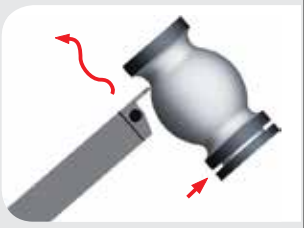
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## External grooving tools for difficult machining
## Stechdrehwerkzeug für die schwierige Bearbeitung (Außen)



R type
Rechtsausführung



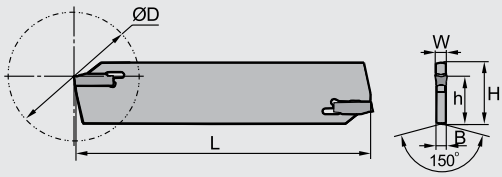



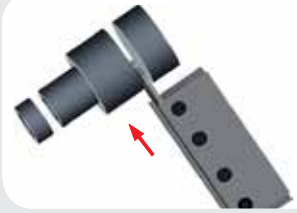
| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | H×B | L | S | W | ar max |  |  |  |
| QEFS | 2525R/L12-3N | ○ | ○ | 25×25 | 150 | 25.3 | 3 | 12 | ZIGQ3N-NM<br>ZIMF304N-NM | GB70-85-M6×20 | WH50L |
| | 3232R/L22-3N | ○ | ○ | 32×32 | 170 | 32.3 | 3 | 22 | | | |
| QEGS | 2525R/L12-4N | ○ | ○ | 25×25 | 150 | 25.3 | 4 | 12 | ZIGQ4N-NM<br>ZIMF406N-NM | | |
| | 3232R/L22-4N | ○ | ○ | 32×32 | 170 | 32.3 | 4 | 22 | | | |
| QEHS | 2525R/L12-5N | ○ | ○ | 25×25 | 150 | 25.4 | 5 | 12 | ZIGQ5N-NM<br>ZIMF506N-NM | | |
| | 3232R/L22-5N | ○ | ○ | 32×32 | 170 | 32.4 | 5 | 22 | | | |
| QEKS | 2525R/L12-6N | ○ | ○ | 25×25 | 150 | 25.4 | 6 | 12 | ZIGQ6N-NM<br>ZIMF608N-NM | | |
| | 3232R/L22-6N | ○ | ○ | 32×32 | 170 | 32.4 | 6 | 22 | | | |

● ex stock · ab Lager ○ on demand · auf Anfrage

## Blade for external parting · Abstechschwert zur Außenbearbeitung





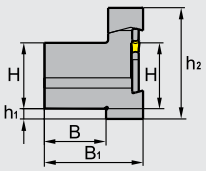



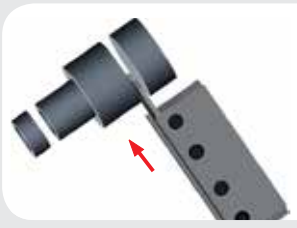
| Type Typ | Stock Lager | Dimension (mm) Abmessung | | | | | | Inserts Stechplatten | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|
| | | L | H | h | B | W | ØD max |  |  |
| **QEES26N** | ● | 110 | 26 | 19 | 2 | 2.5 | 60 | ZPES02502-MG | W50RL |
| **QEFS26N** | ● | 110 | 26 | 19 | 2.4 | 3 | 60 | ZPFS0302-MG | |
| **QEGS26N** | ● | 110 | 26 | 19 | 3.2 | 4 | 70 | ZPGS0402-MG | |
| **QEHS26N** | ● | 110 | 26 | 19 | 4 | 5 | 70 | ZPHS0503-MG | |
| **QEKS26N** | ● | 110 | 26 | 19 | 5 | 6 | 70 | ZPKS0604-MG | |
| **QEES32N** | ● | 150 | 32 | 24.6 | 2 | 2.5 | 100 | ZPES02502-MG | |
| **QEFS32N** | ● | 150 | 32 | 24.6 | 2.4 | 3 | 100 | ZPFS0302-MG | |
| **QEGS32N** | ● | 150 | 32 | 24.6 | 3.2 | 4 | 120 | ZPGS0402-MG | |
| **QEHS32N** | ● | 150 | 32 | 24.6 | 4 | 5 | 120 | ZPHS0503-MG | |
| **QEKS32N** | ● | 150 | 32 | 24.6 | 5 | 6 | 120 | ZPKS0604-MG | |

## Holder for external parting · Spannblock zur Außenbearbeitung





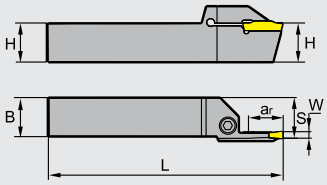
| Type Typ | Stock Lager | Dimension (mm) Abmessung | | | | | | Clamp Klemme | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| | | L | H | $h_1$ | $h_2$ | B | $B_1$ |  |  |  |
| **QZS2026** | ● | 86 | 20 | 10 | 46.6 | 19 | 38 | QZC26 | GB70-85-M6×20 | WH50L |
| **QZS2526** | ● | 86 | 25 | 5 | 46.6 | 23 | 42 | QZC26 | | |
| **QZS3226** | ○ | 86 | 32 | 3 | 51.6 | 30 | 48 | QZC26 | | |
| **QZS2032** | ● | 110 | 20 | 13 | 50 | 19 | 38 | QZC32 | | |
| **QZS2532** | ● | 110 | 25 | 8 | 50 | 23 | 42 | QZC32 | | |
| **QZS3232** | ● | 110 | 32 | 5 | 54 | 30 | 48 | QZC32 | | |

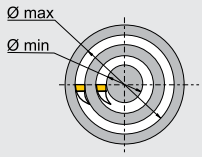
● ex stock · ab Lager ○ on demand · auf Anfrage

## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



L type
Linksausführung



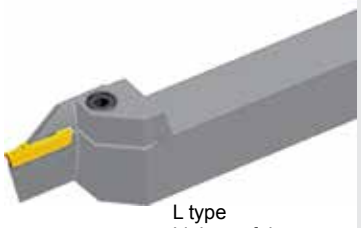

ØD= Range of entering
ØD= Bereich



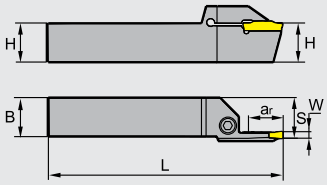
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFFD | 2020R/L7-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 48-66 | ZTFD0303-MG ZTFD0303-MM | GB70-85-M6×20 | WH50L |
| | 2020R/L10-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 48-66 | | | |
| | 2525R/L10-48H | ● | ● | 25×25 | 150 | 26 | 3 | 10 | 48-66 | | | |
| | 2525R/L17-48H | ● | ● | 25×25 | 150 | 26 | 3 | 17 | 48-66 | | | |
| | 2020R/L7-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 60-80 | | | |
| | 2020R/L10-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 60-80 | | | |
| | 2525R/L10-60H | ● | ● | 25×25 | 150 | 26 | 3 | 10 | 60-80 | | | |
| | 2525R/L17-60H | ● | ● | 25×25 | 150 | 26 | 3 | 17 | 60-80 | | | |
| | 2020R/L7-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 74-110 | | | |
| | 2020R/L10-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 74-110 | | | |
| | 2525R/L10-74H | ● | ● | 25×25 | 150 | 26 | 3 | 10 | 74-110 | | | |
| | 2525R/L17-74H | ● | ● | 25×25 | 150 | 26 | 3 | 17 | 74-110 | | | |
| | 2020R/L7-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 100-150 | | | |
| | 2020R/L10-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 100-150 | | | |
| | 2525R/L10-100H | ● | ● | 25×25 | 150 | 26 | 3 | 10 | 100-150 | | | |
| | 2525R/L17-100H | ● | ● | 25×25 | 150 | 26 | 3 | 17 | 100-150 | | | |
| QFGD | 2020R/L10-52H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 52-72 | ZTGD0404-MG ZTGD0404-MM | | |
| | 2525R/L13-52H | ● | ● | 25×25 | 150 | 26 | 4 | 13 | 52-72 | | | |
| | 2020R/L15-52H | ○ | ○ | 20×20 | 150 | 21 | 4 | 15 | 52-72 | | | |
| | 2525R/L22-52H | ● | ● | 25×25 | 150 | 26 | 4 | 22 | 52-72 | | | |
| | 2020R/L10-64H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 64-100 | | | |
| | 2525R/L13-64H | ● | ● | 25×25 | 150 | 26 | 4 | 13 | 64-100 | | | |
| | 2020R/L15-64H | ○ | ○ | 20×20 | 150 | 21 | 4 | 15 | 64-100 | | | |
| | 2525R/L22-64H | ● | ● | 25×25 | 150 | 26 | 4 | 22 | 64-100 | | | |
| | 2020R/L10-90H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 90-140 | | | |
| | 2525R/L13-90H | ● | ● | 25×25 | 150 | 26 | 4 | 13 | 90-140 | | | |
| | 2020R/L15-90H | ○ | ○ | 20×20 | 150 | 21 | 4 | 15 | 90-140 | | | |
| | 2525R/L22-90H | ● | ● | 25×25 | 150 | 26 | 4 | 22 | 90-140 | | | |
| | 2020R/L10-130H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 130-230 | | | |
| | 2525R/L13-130H | ● | ● | 25×25 | 150 | 26 | 4 | 13 | 130-230 | | | |
| | 2020R/L15-130H | ○ | ○ | 20×20 | 150 | 21 | 4 | 15 | 130-230 | | | |
| | 2525R/L22-130H | ● | ○ | 25×25 | 150 | 26 | 4 | 22 | 130-230 | | | |

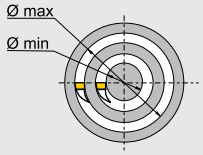
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## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



L type
Linksausführung



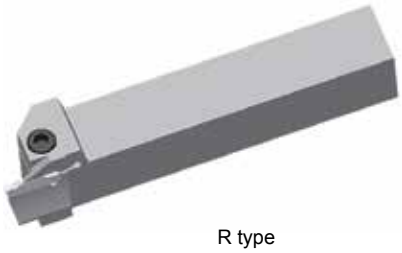

ØD= Range of entering
ØD= Bereich



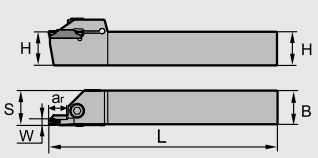
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFHD | 2525R/L13-58H | ● | ● | 25×25 | 150 | 26 | 5 | 13 | 58-96 | ZTHD0504-MG ZTHD0504-MM | GB70-85-M6×20 | WH50L |
| | 2525R/L22-58H | ● | ● | 25×25 | 150 | 26 | 5 | 22 | 58-96 | | | |
| | 2525R/L13-86H | ● | ● | 25×25 | 150 | 26 | 5 | 13 | 86-140 | | | |
| | 2525R/L22-86H | ● | ● | 25×25 | 150 | 26 | 5 | 22 | 86-140 | | | |
| | 2525R/L13-130H | ● | ● | 25×25 | 150 | 26 | 5 | 13 | 130-200 | | | |
| | 2525R/L22-130H | ● | ● | 25×25 | 150 | 26 | 5 | 22 | 130-200 | | | |
| | 2525R/L13-185H | ● | ● | 25×25 | 150 | 26 | 5 | 13 | 185-400 | | | |
| | 2525R/L22-185H | ● | ● | 25×25 | 150 | 26 | 5 | 22 | 185-400 | | | |
| QFHS | 2525R/L30-185H | ● | ● | 25×25 | 150 | 26 | 5 | 30 | 185-400 | ZTHS0504-MG | | |
| QFKD | 2525R/L13-60H | ● | ● | 25×25 | 150 | 26 | 6 | 13 | 60-100 | ZTKD0608-MG ZTKD0608-MM ZRKD06-MG | GB70-85-M6×20 | WH50L |
| | 2525R/L22-60H | ● | ● | 25×25 | 150 | 26 | 6 | 22 | 60-100 | | | |
| | 2525R/L13-88H | ○ | ● | 25×25 | 150 | 26 | 6 | 13 | 88-180 | | | |
| | 2525R/L22-88H | ● | ● | 25×25 | 150 | 26 | 6 | 22 | 88-180 | | | |
| | 2525R/L13-160H | ● | ● | 25×25 | 150 | 26 | 6 | 13 | 160-400 | | | |
| | 2525R/L22-160H | ● | ● | 25×25 | 150 | 26 | 6 | 22 | 160-400 | | | |
| QFKS | 2525R/L30-160H | ● | ● | 25×25 | 150 | 26 | 6 | 30 | 160-400 | ZTKS0608-MG | | |

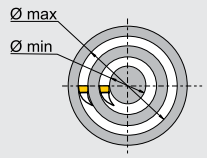
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## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



R type
Rechtsausführung



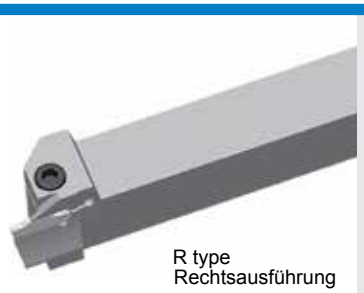

ØD= Range of entering
ØD= Bereich



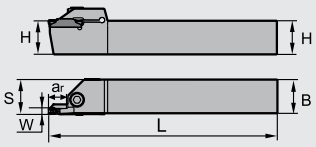
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFFD | 2020RR7-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 48-66 | ZTFD0303-MG ZTFD0303-MM | GB70-85-M6×20 | WH50L |
| | 2020RR10-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 48-66 | | | |
| | 2525RR10-48H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 48-66 | | | |
| | 2525RR17-48H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 48-66 | | | |
| | 2020RR7-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 60-80 | | | |
| | 2020RR10-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 60-80 | | | |
| | 2525RR10-60H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 60-80 | | | |
| | 2525RR17-60H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 60-80 | | | |
| | 2020RR7-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 74-110 | | | |
| | 2020RR10-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 74-110 | | | |
| | 2525RR10-74H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 74-110 | | | |
| | 2525RR17-74H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 74-110 | | | |
| | 2020RR7-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 100-150 | | | |
| | 2020RR10-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 100-150 | | | |
| | 2525RR10-100H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 100-150 | | | |
| | 2525RR17-100H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 100-150 | | | |
| QFGD | 2020RR10-52H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 52-72 | ZTGD0404-MG ZTGD0404-MM | | |
| | 2020RR15-52H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 52-72 | | | |
| | 2525RR13-52H | ● | ○ | 25×25 | 150 | 21 | 4 | 13 | 52-72 | | | |
| | 2525RR22-52H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 52-72 | | | |
| | 2020RR10-64H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 64-100 | | | |
| | 2020RR15-64H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 64-100 | | | |
| | 2525RR13-64H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 64-100 | | | |
| | 2525RR22-64H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 64-100 | | | |
| | 2020RR10-90H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 90-140 | | | |
| | 2020RR15-90H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 90-140 | | | |
| | 2525RR13-90H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 90-140 | | | |
| | 2525RR22-90H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 90-140 | | | |
| | 2020RR10-130H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 130-230 | | | |
| | 2020RR15-130H | ● | ○ | 20×20 | 150 | 26 | 4 | 15 | 130-230 | | | |
| | 2525RR13-130H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 130-230 | | | |
| | 2525RR22-130H | ● | ○ | 25×25 | 150 | 26 | 4 | 22 | 130-230 | | | |

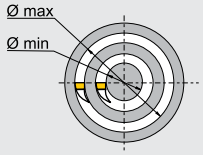
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## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



R type
Rechtsausführung



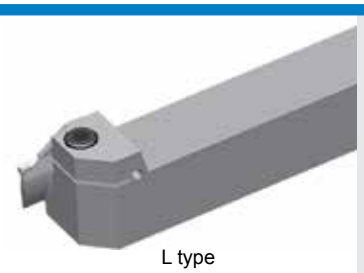

ØD= Range of entering
ØD= Bereich



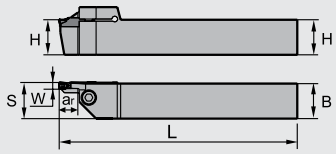
| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | H×B | L | S | W | ar max | ØD (min-max) |  |  |  |
| QFHD | 2525RR13-58H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 58-96 | ZTHD0504-MG<br>ZTHD0504-MM | GB70-85-M6×20 | WH50L |
| | 2525RR22-58H | ● | ○ | 25×25 | 150 | 26 | 5 | 22 | 58-96 | | | |
| | 2525RR13-86H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 86-140 | | | |
| | 2525RR22-86H | ○ | ○ | 25×25 | 150 | 26 | 5 | 22 | 86-140 | | | |
| | 2525RR13-130H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 130-200 | | | |
| | 2525RR22-130H | ● | ○ | 25×25 | 150 | 26 | 5 | 22 | 130-200 | | | |
| | 2525RR13-185H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 185-400 | | | |
| | 2525RR22-185H | ○ | ○ | 25×25 | 150 | 26 | 5 | 22 | 185-400 | | | |
| QFHS | 2525RR30-185H | ○ | ○ | 25×25 | 150 | 26 | 5 | 30 | 185-400 | ZTHS0504-MG | | |
| QFKD | 2525RR13-60H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 60-100 | ZTKD0608-MG<br>ZTKD0608-MM<br>ZRKD06-MG | GB70-85-M6×20 | WH50L |
| | 2525RR22-60H | ○ | ○ | 25×25 | 150 | 26 | 6 | 22 | 60-100 | | | |
| | 2525RR13-88H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 88-180 | | | |
| | 2525RR22-88H | ○ | ○ | 25×25 | 150 | 26 | 6 | 22 | 88-180 | | | |
| | 2525RR13-160H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 160-400 | | | |
| | 2525RR22-160H | ○ | ○ | 25×25 | 150 | 26 | 6 | 22 | 160-400 | | | |
| QFKS | 2525RR30-160H | ○ | ○ | 25×25 | 150 | 26 | 6 | 30 | 160-400 | ZTKS0608-MG | | |

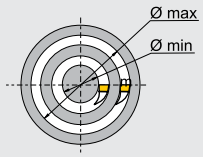
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## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



L type
Rechtsausführung




ØD= Range of entering
ØD= Bereich



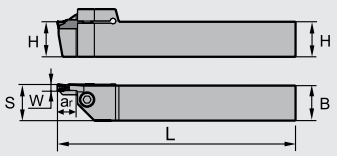
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFFD | 2020LL7-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 48-66 | ZTFD0303-MG<br>ZTFD0303-MM | GB70-85-M6×20 | WH50L |
| | 2020LL10-48H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 48-66 | | | |
| | 2525LL10-48H | ○ | ● | 25×25 | 150 | 26 | 3 | 10 | 48-66 | | | |
| | 2525LL17-48H | ○ | ● | 25×25 | 150 | 26 | 3 | 17 | 48-66 | | | |
| | 2020LL7-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 60-80 | | | |
| | 2020LL10-60H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 60-80 | | | |
| | 2525LL10-60H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 60-80 | | | |
| | 2525LL17-60H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 60-80 | | | |
| | 2020LL7-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 74-110 | | | |
| | 2020LL10-74H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 74-110 | | | |
| | 2525LL10-74H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 74-110 | | | |
| | 2525LL17-74H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 74-110 | | | |
| | 2020LL7-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 7 | 100-150 | | | |
| | 2020LL10-100H | ○ | ○ | 20×20 | 150 | 21 | 3 | 10 | 100-150 | | | |
| | 2525LL10-100H | ○ | ○ | 25×25 | 150 | 26 | 3 | 10 | 100-150 | | | |
| | 2525LL17-100H | ○ | ○ | 25×25 | 150 | 26 | 3 | 17 | 100-150 | | | |
| QFGD | 2020LL10-52H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 52-72 | ZTGD0404-MG<br>ZTGD0404-MM | | |
| | 2020LL15-52H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 52-72 | | | |
| | 2525LL13-52H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 52-72 | | | |
| | 2525LL22-52H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 52-72 | | | |
| | 2020LL10-64H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 64-100 | | | |
| | 2020LL15-64H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 64-100 | | | |
| | 2525LL13-64H | ○ | ● | 25×25 | 150 | 21 | 4 | 13 | 64-100 | | | |
| | 2525LL22-64H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 64-100 | | | |
| | 2020LL10-90H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 90-140 | | | |
| | 2020LL15-90H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 90-140 | | | |
| | 2525LL13-90H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 90-140 | | | |
| | 2525LL22-90H | ○ | ○ | 25×25 | 150 | 26 | 4 | 22 | 90-140 | | | |
| | 2020LL10-130H | ○ | ○ | 20×20 | 150 | 21 | 4 | 10 | 130-230 | | | |
| | 2020LL15-130H | ○ | ○ | 20×20 | 150 | 26 | 4 | 15 | 130-230 | | | |
| | 2525LL13-130H | ○ | ○ | 25×25 | 150 | 21 | 4 | 13 | 130-230 | | | |
| | 2525LL22-130H | ○ | ● | 25×25 | 150 | 26 | 4 | 22 | 130-230 | | | |

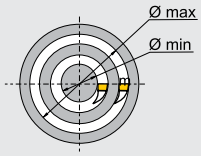
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## Axial grooving and turning tools · Axialstech- & Drehwerkzeug



L type
Linksausführung



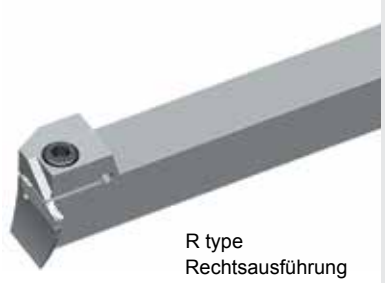

ØD= Range of entering
ØD= Bereich



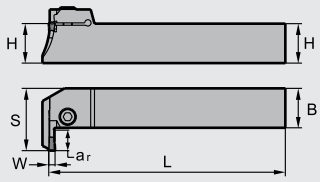
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |  |  |  |
| QFHD | 2525LL13-58H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 58-96 | ZTHD0504-MG ZTHD0504-MM | GB70-85-M6×20 | WH50L |
| | 2525LL22-58H | ○ | ● | 25×25 | 150 | 26 | 5 | 22 | 58-96 | | | |
| | 2525LL13-86H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 86-140 | | | |
| | 2525LL22-86H | ○ | ○ | 25×25 | 150 | 26 | 5 | 22 | 86-140 | | | |
| | 2525LL13-130H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 130-200 | | | |
| | 2525LL22-130H | ○ | ○ | 25×25 | 150 | 26 | 5 | 22 | 130-200 | | | |
| | 2525LL13-185H | ○ | ○ | 25×25 | 150 | 26 | 5 | 13 | 185-400 | | | |
| | 2525LL22-185H | ○ | ○ | 25×25 | 150 | 26 | 5 | 22 | 185-400 | | | |
| QFHS | 2525LL30-185H | ○ | ● | 25×25 | 150 | 26 | 5 | 30 | 185-400 | ZTHS0504-MG | | |
| QFKD | 2525LL13-60H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 60-100 | ZTKD0608-MG ZTKD0608-MM ZRKD06-MG | GB70-85-M6×20 | WH50L |
| | 2525LL22-60H | ○ | ○ | 25×25 | 150 | 26 | 6 | 22 | 60-100 | | | |
| | 2525LL13-88H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 88-180 | | | |
| | 2525LL22-88H | ○ | ○ | 25×25 | 150 | 26 | 6 | 22 | 88-180 | | | |
| | 2525LL13-160H | ○ | ○ | 25×25 | 150 | 26 | 6 | 13 | 160-400 | | | |
| | 2525LL22-160H | ○ | ● | 25×25 | 150 | 26 | 6 | 22 | 160-400 | | | |
| QFKS | 2525LL30-160H | ○ | ○ | 25×25 | 150 | 26 | 6 | 30 | 160-400 | ZTKS0608-MG | | |

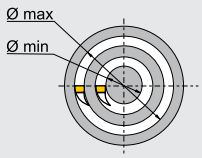
● ex stock · ab Lager ○ on demand · auf Anfrage

## L type tools for Axial grooving and turning · L-Typ Axialstech- & Drehwerkzeug



R type
Rechtsausführung



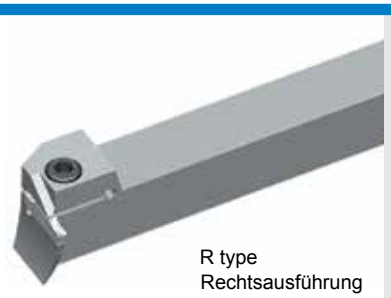

ØD= Range of entering
ØD= Bereich



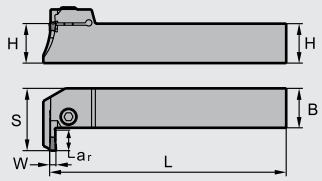
| Type Typ | | Stock Lager | | Dimension (mm) Abmessung | | | | | | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | R | L | H×B | L | S | W | ar max | ØD (min-max) |  |  |  |
| QFFD | 2020R/L7-48L | ○ | ○ | 20×20 | 150 | 28.5 | 3 | 7 | 48-66 | ZTFD0303-MG<br>ZTFD0303-MM | GB70-85-M6×20 | WH50L |
| | 2020R/L10-48L | ● | ● | 20×20 | 150 | 31.5 | 3 | 10 | 48-66 | | | |
| | 2525R/L10-48L | ● | ● | 25×25 | 150 | 36.5 | 3 | 10 | 48-66 | | | |
| | 2525R/L17-48L | ○ | ○ | 25×25 | 150 | 43.5 | 3 | 17 | 48-66 | | | |
| | 2020R/L7-60L | ○ | ○ | 20×20 | 150 | 28.5 | 3 | 7 | 60-80 | | | |
| | 2020R/L10-60L | ● | ● | 20×20 | 150 | 31.5 | 3 | 10 | 60-80 | | | |
| | 2525R/L10-60L | ● | ○ | 25×25 | 150 | 36.5 | 3 | 10 | 60-80 | | | |
| | 2525R/L17-60L | ○ | ○ | 25×25 | 150 | 43.5 | 3 | 17 | 60-80 | | | |
| | 2020R/L7-74L | ○ | ○ | 20×20 | 150 | 28.5 | 3 | 7 | 74-110 | | | |
| | 2020R/L10-74L | ● | ○ | 20×20 | 150 | 31.5 | 3 | 10 | 74-110 | | | |
| | 2525R/L10-74L | ○ | ○ | 25×25 | 150 | 36.5 | 3 | 10 | 74-110 | | | |
| | 2525R/L17-74L | ○ | ○ | 25×25 | 150 | 43.5 | 3 | 17 | 74-110 | | | |
| | 2020R/L7-100L | ○ | ○ | 20×20 | 150 | 28.5 | 3 | 7 | 100-150 | | | |
| | 2020R/L10-100L | ○ | ● | 20×20 | 150 | 31.5 | 3 | 10 | 100-150 | | | |
| | 2525R/L10-100L | ○ | ○ | 25×25 | 150 | 36.5 | 3 | 10 | 100-150 | | | |
| | 2525R/L17-100L | ● | ○ | 25×25 | 150 | 43.5 | 3 | 17 | 100-150 | | | |
| QFGD | 2020R/L10-52L | ○ | ● | 20×20 | 150 | 31.5 | 4 | 10 | 52-72 | ZTGD0404-MG<br>ZTGD0404-MM | | |
| | 2525R/L13-52L | ○ | ○ | 25×25 | 150 | 39.5 | 4 | 13 | 52-72 | | | |
| | 2020R/L15-52L | ○ | ○ | 20×20 | 150 | 36.5 | 4 | 15 | 52-72 | | | |
| | 2525R/L22-52L | ○ | ○ | 25×25 | 150 | 48.5 | 4 | 22 | 52-72 | | | |
| | 2020R/L10-64L | ○ | ○ | 20×20 | 150 | 31.5 | 4 | 10 | 64-100 | | | |
| | 2525R/L13-64L | ○ | ● | 25×25 | 150 | 39.5 | 4 | 13 | 64-100 | | | |
| | 2020R/L15-64L | ○ | ○ | 20×20 | 150 | 36.5 | 4 | 15 | 64-100 | | | |
| | 2525R/L22-64L | ● | ○ | 25×25 | 150 | 48.5 | 4 | 22 | 64-100 | | | |
| | 2020R/L10-90L | ● | ● | 20×20 | 150 | 31.5 | 4 | 10 | 90-140 | | | |
| | 2525R/L13-90L | ○ | ○ | 25×25 | 150 | 39.5 | 4 | 13 | 90-140 | | | |
| | 2020R/L15-90L | ○ | ○ | 20×20 | 150 | 36.5 | 4 | 15 | 90-140 | | | |
| | 2525R/L22-90L | ○ | ○ | 25×25 | 150 | 48.5 | 4 | 22 | 90-140 | | | |
| | 2020R/L10-130L | ● | ○ | 20×20 | 150 | 31.5 | 4 | 10 | 130-230 | | | |
| | 2525R/L13-130L | ○ | ○ | 25×25 | 150 | 39.5 | 4 | 13 | 130-230 | | | |
| | 2020R/L15-130L | ○ | ○ | 20×20 | 150 | 36.5 | 4 | 15 | 130-230 | | | |
| | 2525R/L22-130L | ● | ● | 25×25 | 150 | 48.5 | 4 | 22 | 130-230 | | | |

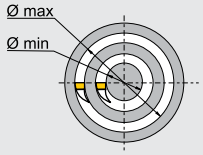
● ex stock · ab Lager ○ on demand · auf Anfrage

## L type tools for Axial grooving and turning · L-Typ Axialstech- & Drehwerkzeug



R type
Rechtsausführung




ØD= Range of entering
ØD= Bereich



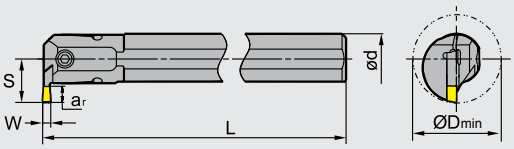
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H×B | L | S | W | ar max | ØD (min-max) | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFHD | 2525R/L13-58L | ○ | ○ | 25×25 | 150 | 39.5 | 5 | 13 | 58-96 | ZTHD0504-MG<br>ZTHD0504-MM | GB70-85-M6×20 | WH50L |
| | 2525R/L22-58L | ○ | ○ | 25×25 | 150 | 48.5 | 5 | 22 | 58-96 | | | |
| | 2525R/L13-86L | ● | ○ | 25×25 | 150 | 39.5 | 5 | 13 | 86-140 | | | |
| | 2525R/L22-86L | ○ | ○ | 25×25 | 150 | 48.5 | 5 | 22 | 86-140 | | | |
| | 2525R/L13-130L | ○ | ○ | 25×25 | 150 | 39.5 | 5 | 13 | 130-200 | | | |
| | 2525R/L22-130L | ○ | ○ | 25×25 | 150 | 48.5 | 5 | 22 | 130-200 | | | |
| | 2525R/L13-185L | ○ | ○ | 25×25 | 150 | 39.5 | 5 | 13 | 185-400 | | | |
| | 2525R/L22-185L | ○ | ○ | 25×25 | 150 | 48.5 | 5 | 22 | 185-400 | | | |
| QFHS | 2525R/L30-185L | ○ | ○ | 25×25 | 150 | 56.5 | 5 | 30 | 185-400 | ZTHS0504-MG | | |
| QFKD | 2525R/L13-60L | ○ | ○ | 25×25 | 150 | 39.5 | 6 | 13 | 60-100 | ZTKD0608-MG<br>ZTKD0608-MM | GB70-85-M6×20 | WH50L |
| | 2525R/L22-60L | ○ | ● | 25×25 | 150 | 48.5 | 6 | 22 | 60-100 | | | |
| | 2525R/L13-88L | ○ | ○ | 25×25 | 150 | 39.5 | 6 | 13 | 88-180 | | | |
| | 2525R/L22-88L | ○ | ● | 25×25 | 150 | 48.5 | 6 | 22 | 88-180 | | | |

● ex stock · ab Lager ○ on demand · auf Anfrage

## Internal grooving and turning tools · Einstech- & Drehwerkzeuge (Innen)



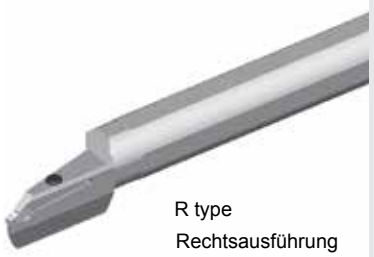
R type
Rechtsausführung



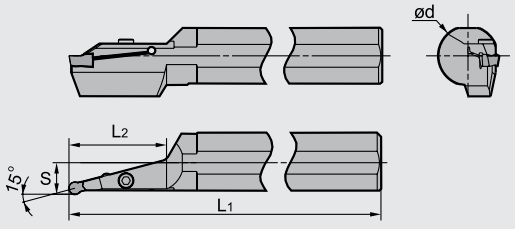


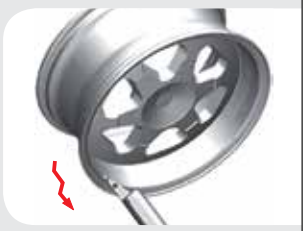

| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ød | L | S | W | ar max | ØDmin |  |  |  |
| **C20Q-QEDR/L05-27** | ● | ● | 20 | 180 | 15.2 | 2.5 | 5 | 27 | ZTED02* ZRED025* | GB70-85-M4×12 | WH30L |
| **C25R-QEDR/L07-33** | ● | ● | 25 | 200 | 20.3 | 2.5 | 7 | 33 | | GB70-85-M5×16 | WH40L |
| **C32S-QEDR/L09-42** | ○ | ● | 32 | 250 | 25.3 | 2.5 | 9 | 42 | | GB70-85-M5×20 | |
| **C20Q-QFDR/L05-27** | ● | ● | 20 | 0 | 15.2 | 3 | 5 | 27 | ZTFD03* ZRFD03* | GB70-85-M4×12 | WH30L |
| **C25R-QFDR/L07-33** | ● | ● | 25 | 200 | 20.3 | 3 | 7 | 33 | | GB70-85-M5×16 | WH40L |
| **C32S-QFDR/L09-42** | ● | ● | 32 | 250 | 25.3 | 3 | 9 | 42 | | GB70-85-M5×20 | |
| **C25R-QGDR/L08-35** | ● | ● | 25 | 200 | 21.5 | 4 | 8 | 35 | ZTGD04* ZRGD04* | GB70-85-M5×16 | WH40L |
| **C32S-QGDR/L11-44** | ● | ● | 32 | 250 | 27.5 | 4 | 11 | 44 | | GB70-85-M6×20 | WH50L |
| **C40T-QGDR/L13-54** | ● | ● | 40 | 300 | 33.5 | 4 | 13 | 5 | | GB70-85-M6×20 | |
| **C25R-QHDR/L08-35** | ● | ● | 25 | 200 | 21.5 | 5 | 8 | 35 | ZTHD05* ZRHD05* | GB70-85-M5×16 | WH40L |
| **C32S-QHDR/L11-44** | ● | ● | 32 | 250 | 27.5 | 5 | 11 | 44 | | GB70-85-M6×20 | WH50L |
| **C40T-QHDR/L13-54** | ● | ● | 40 | 300 | 33.5 | 5 | 13 | 54 | | GB70-85-M6×20 | |
| **C25R-QKDR/L08-35** | ○ | ● | 25 | 200 | 21.5 | 6 | 8 | 35 | ZTKD06* ZRKD06* | GB70-85-M5×16 | WH40L |
| **C32S-QKDR/L11-44** | ● | ● | 32 | 250 | 27.5 | 6 | 11 | 44 | | GB70-85-M6×20 | WH50L |
| **C40T-QKDR/L13-54** | ● | ● | 40 | 300 | 33.5 | 6 | 13 | 54 | | GB70-85-M6×20 | |

## Profiling and turning tools for Al · Profildreh- & Einstechwerkzeuge für Alu (Innen)



R type
Rechtsausführung



| Type Typ | Stock Lager | | Dimension (mm) Abmessung | | | | | Inserts Stechplatten | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | ØD () | ød | S | L1 | L2 |  |  |  |
| **C40X-QLDR/L65-15A** | ○ | ○ | 160 | 40 | 21 | 320 | 65 | ZRLD08-LH | GB70-85-M6×20 | WH50L |
| **C40X-QLDR/L80-15A** | ○ | ○ | 160 | 40 | 21 | 320 | 80 | ZRLD08-LH | | |
| **C40X-QKDR/L60-15A** | ○ | ○ | 160 | 40 | 20 | 320 | 60 | ZRKD06-LH | | |
| **C40X-QKDR/L75-15A** | ● | ○ | 160 | 40 | 20 | 320 | 75 | ZRKD06-LH | | |

● ex stock · ab Lager ○ on demand · auf Anfrage

# QC series tools holder code key / QC-Serie Kennzeichnung für Halter

- External grooving / Außen Ein- und Abstechen

| Direction Schneidrichtung | |
|---|---|
| R | right / Rechts |
| L | left / Links |

| Height Höhe (mm) | |
|---|---|
| code | height / Höhe |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |

| Width range of insert Stechbreitenbereich | |
|---|---|
| 15 | 0.5≤S<1.8(QC16***)<br>1.0≤S<2.3(QC22***) |
| 25 | 1.8≤S<3.0(QC16***)<br>2.3≤S<3.3(QC22***) |
| 35 | 3.3≤S≤4.8 |




Series
Serie

| Dimension Abmaße (mm) | |
|---|---|
| H code | B |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |

| Length of tool holder Länge des Halters (mm) | |
|---|---|
| code | length /Länge |
| K | 125 |
| M | 150 |

| Cutting edge length Schneid-kantenlänge | Ø IC (mm) |
|---|---|
| 11 | 6.35 |
| 16 | 9.525 |
| 22 | 12.70 |

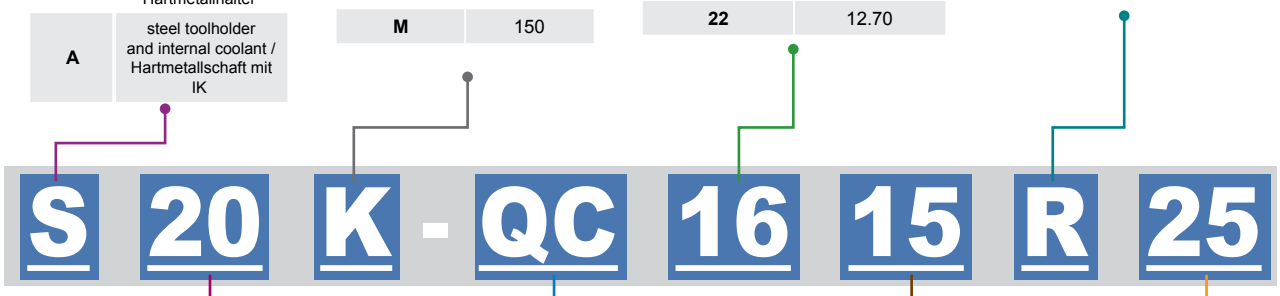
- Internal grooving / Innen Ein- und Abstechen

| Mode of toolholder Ausführung | |
|---|---|
| code | mode |
| S | steel / Stahl |
| C | cemented carbide toolholder / Hartmetallhalter |
| A | steel toolholder and internal coolant / Hartmetallschaft mit IK |

| Length of tool holder Länge des Halters (mm) | |
|---|---|
| code | length /Länge |
| H | 100 |
| K | 125 |
| M | 150 |

| Cutting edge length Schneid-kantenlänge | Ø IC (mm) |
|---|---|
| 11 | 6.35 |
| 16 | 9.525 |
| 22 | 12.70 |

| Direction Schneidrichtung | |
|---|---|
| R | right / Rechts |
| L | left / Links |




| Diameter of toolholder Durchmesser des Halters | |
|---|---|
| code | Ø |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |

Series
Serie

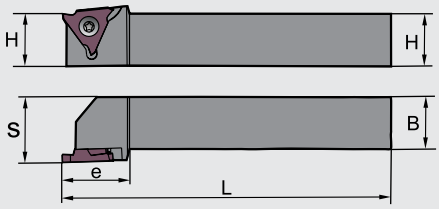
| Width range of insert Stechbreitenbereich | | |
|---|---|---|
| 15 | 0.5≤S<1.8 | QC11***<br>QC16*** |
| 25 | 0.5≤S<1.8 | QC11***<br>QC16*** |
| | 2.3≤S<3.3 | (QC22***) |
| 35 | 3.3≤S≤4.8 | |

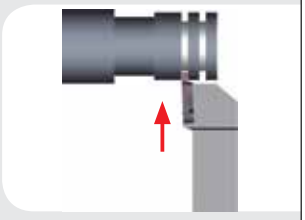
| Minimum diameter for machining Minimum Bearbeitung Ø | |
|---|---|
| code | Ø |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |
| 35 | 35 |

## External grooving / Außen Ein- und Abstechen



Right hand style
Rechtsausführung



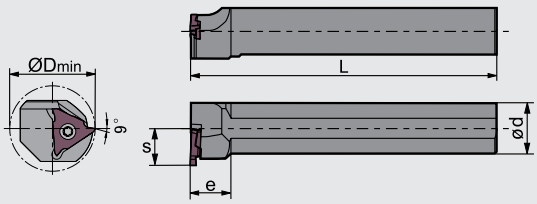



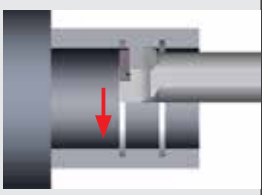
| Type Typ | | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung H | B | S | e | L | Width Breite (mm) | Inserts Stechplatte | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GQCR/L | **1616K16-15** | ● | ● | 16 | 16 | 21 | 25.5 | 125 | 0.5-1.80 | QC16R/L 050~180 | I60M3.5×10 | WT15IP |
| | **2020K16-15** | ● | ● | 20 | 20 | 25 | | 125 | | | | |
| | **2525M16-15** | ● | ● | 25 | 25 | 30 | | 150 | | | | |
| | **1616K16-25** | ● | ● | 16 | 16 | 21 | | 125 | 1.8-3.0 | QC16R/L 180~300 | | |
| | **2020K16-25** | ● | ● | 20 | 20 | 25 | | 125 | | | | |
| | **2525M16-25** | ● | ● | 25 | 25 | 30 | | 150 | | | | |
| | **2020K22-15** | ● | ● | 20 | 20 | 25 | | 125 | 1.0-2.3 | QC22R/L 100~230 | I60M5×13 | WT20IP |
| | **2525M22-15** | ● | ● | 25 | 25 | 30 | | 150 | | | | |
| | **2020K22-25** | ● | ● | 20 | 20 | 25 | | 125 | 2.3-3.3 | QC22R/L 230~330 | | |
| | **2525M22-25** | ● | ● | 25 | 25 | 30 | | 150 | | | | |
| | **2020K22-35** | ● | ● | 20 | 20 | 25 | | 125 | 3.3-4.8 | QC22R/L 330~480 | | |
| | **2525M22-35** | ● | ● | 25 | 25 | 30 | | 150 | | | | |

## Internal grooving / Innen Ein- und Abstechen



Right hand style
Rechtsausführung



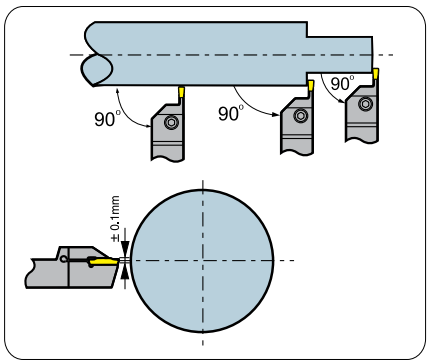



* Right holder with left insert.Left holder with right insert.
*Rechter Halter mit linker Wendeschneidplatte.Linker Halter mit rechter Wendeschneidplatte.*

| Type Typ | Stock Lager R | Stock Lager L | Dimension (mm) Abmessung ØDmin | ød | S | e | L | Width Breite (mm) | Inserts Stechplatte | Screw Schraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **S20K-QC1115R/L16** | ● | ● | 16 | 20 | 11.1 | 40 | 125 | 0.5-1.80 | QC11R/L 050~180 | I60M2.5×6.5 | WT07IP |
| **S20K-QC1125R/L16** | ○ | ○ | 16 | 20 | 11.1 | 40 | 125 | 1.8-3.0 | QC11R/L180~300 | | |
| **S16H-QC1115R/L20** | ● | ● | 21 | 16 | 11.5 | 12 | 100 | 0.5-1.80 | QC11R/L 050~180 | | |
| **S16H-QC1125R/L20** | ● | ● | 21 | 16 | 11.5 | 12 | 100 | 1.8-3.0 | QC11R/L180~300 | | |
| **S20M-QC1615R/L25** | ● | ● | 26 | 20 | 12.5 | 15 | 150 | 0.5-1.80 | QC16R/L050~180 | I60M3.5×10 | WT15IP |
| **S20M-QC1625R/L25** | ● | ● | | | 12.5 | | | 1.8-3.0 | QC16R/L180~300 | | |
| **S25M-QC2215R/L35** | ● | ● | 35 | 25 | 18.2 | | | 1.0-2.3 | QC22R/L100~230 | I60M5×13 | WT20IP |
| **S25M-QC2225R/L35** | ● | ● | | | 18.2 | 20 | | 2.3-3.3 | QC22R/L230~330 | | |
| **S25M-QC2235R/L35** | ○ | ● | | | 18.2 | 20 | | 3.3-4.8 | QC22R/L 330~480 | | |

● ex stock · ab Lager ○ on demand · auf Anfrage

## Center height controlling of parting and grooving tools
## Einstellung der Schneidenhöhe beim Ab- & Einstechen




● No matter what kind of parting and grooving cutting tools you choose, you should keep 90° between the insert and the center line of the work-piece material to get perfect machined surface, and to reduce liberation during machining.

● Bitte montieren Sie den Werkzeughalter so, dass er im 90° Winkel zur Mittelachse des Werkstücks steht. Dadurch erhalten Sie eine bessere Oberflächengüte und verringern das Risiko von Schwingungen.

● Height tolerance between the cutting edge of an insert and the center of work piece should be kept ± 0.1mm, especially for the parting of rods and grooving of materials with a small diameter. You achieve a longer tool lifetime and reduce cutting resistance and burrs.

● Bitte montieren Sie Ihren Werkzeughalter so, dass er beim Abstechen oder Einstechen speziell bei Werkstücken mit kleineren Durchmessern im Toleranzbereich von ± 0,1 mm zur Mittelachse steht. Sie erreichen dadurch eine längere Standzeit, reduzieren die Schnittkräfte und Butzenbildung.

## Parting · Abstechen

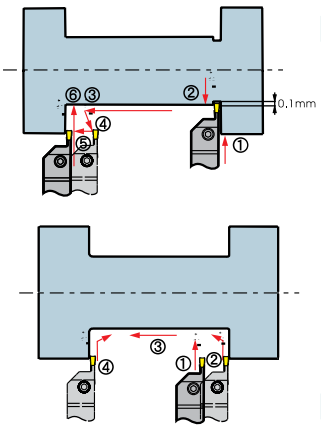
● A reduction of the feedrate by 30% is preferred when the inserts approach the centre of workpiece, prolonging the life-time of the inserts.

● Eine Reduzierung des Vorschubs um 30% bei der Annäherung der Schneide an die Mittelachse des Werkstücks verlängert die Standzeit der Stechplatte.

● A tool holder overhang with as little as possible to insure good stability.

● Werkzeughalter mit kleinstmöglichem Überhang wählen, um Vibrationen und Werkzeugablenkung zu vermeiden.

## External grooving, turning and profile turning
## Längsdrehen,Profildrehen



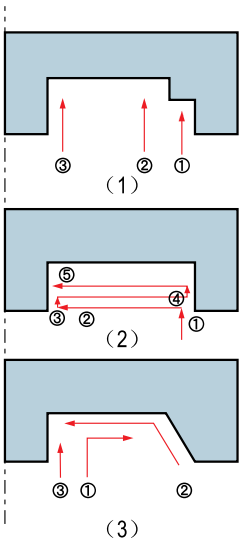

● Cutting sequences: As the cutting depth is bigger than 0.5mm, radial cutting (biggest cutting depth 0.75 x edge width of insert) radial backing 0.1mm axial feed oblique back axial cutting radial cutting to the depth require.

● Bearbeitungsfolge 0,5mm: Radialer Vorschub auf erforderliche Schnitttiefe(ap max. 0.75 x Schneidplattenbreite ), radiales Zurücksetzen um 0.1 mm, Längsdrehen zur gegenüberliegenden Schulter, diagonales Zurücksetzen um 0.5mm nach außen axial Vorschub bis zum Startpunkt, radialer Vorschub auf erforderliche Schnitttiefe usw.

● When cutting bottom border or chamfering, do what the sketch show, reducing liberation by the friction of cutting tools with chippings.

● Beim Drehen des Nutgrundes oder der Fase befolgen Sie die nebenstehenden Arbeitsschritte. Dies reduziert die Auslenkung des Werkzeuges und verhindert Schneidkantenausbrüche.

## Surface grooving and turning · Axialeinstechen




**Roughing · Schruppen**

● Infeed from largest Ø inwards insert offset slightly from inner side of groove when retracting as shown in sketch (1).

● Bearbeitung vom größten Ø zur Achse hin. Beim Zurückfahren des Werkzeugs empfiehlt es sich, diese leicht abzuwinkeln.

**Flute turning · Nutendrehen**

● Depth of axial turning less than 0.75 x S (Width of insert)
width > depth of breaker, suggest to do as shown in sketch (2)
depth > width of breaker, suggest to cut with a lot breaker.

● Spantiefe bei axialem Vorschub kleiner als 0.75 x S (Breite des Schneideinsatzes)
Wenn die Kammerbreite größer ist als die Tiefe, folgen Sie den abgebildeten Arbeitsschritten. Wenn die Kammertiefe größer ist als die Breite, empfehlen wir in einzelnen Schritten auf den geforderten Ø zu stechen (2).

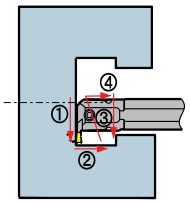
**Finishing · Schlichten**

● Finish machining external Ø and bottom firstly, then machining the internal Ø to the size reqired as shown in sketch (3).

● Zum Schlichten bearbeiten Sie zuerst den äußeren Ø und den Grund. Anschließend bearbeiten Sie den inneren Ø bis zur erforderlichen Größe Skizze (3).

## Internal grooving · Innenbearbeitung

- Follow the machining sequence as shown in the picture.
  Good for chip flow, always feed along the direction of moving from the deepest in the hole to outside.
- Bearbeitungsfolge gemäß Skizze. Bei der Bearbeitung von Sackbohrungen, sollte zur besseren Spanabfuhr von innen nach außen gearbeitet werden.




## Recommended cutting parameters · Empfohlene Schnittparameter

| Inserts Size<br>Stechplatte Größe | Recommended feed rate (mm/rev)<br>Empfohlener Vorschub (mm/U) | | | |
|---|---|---|---|---|
| Inserts width(mm)<br>Stechplatte Breite | Parting<br>Abstechen | Grooving<br>Einstechen | Turning<br>Drehen | Profiling<br>Profildrehen |
| 2.5 | 0.05-0.15 | 0.05-0.15 | 0.05-0.15 | 0.05-0.15 |
| 3 | 0.05-0.15 | 0.05-0.15 | 0.07-0.15 | 0.1-0.2 |
| 4 | 0.05-0.2 | 0.05-0.2 | 0.07-0.25 | 0.1-0.2 |
| 5 | 0.07-0.2 | 0.07-0.22 | 0.1-0.25 | 0.15-0.3 |
| 6 | 0.1-0.3 | 0.07-0.25 | 0.1-0.3 | 0.15-0.3 |

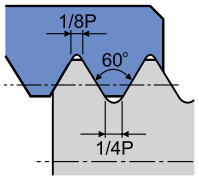
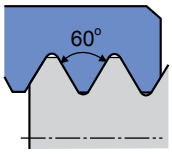
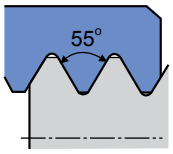
| Workpiece Material<br>Werkstück Material | | Hardness<br>Härte | YBG302 | YBG202 | YBC151 | YBC251 | YD101 | YD201 | YBG102 | YC10 | YC40 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Carbon steel<br>Kohlenstoffstahl | 125≤HB≤170 | 120-260 | 150-280 | 140-280 | 150-280 | | | | 130-280 | 110-260 |
| | Low alloy steel<br>Niedrig legierter Stahl | 180≤HB≤275 | 80-175 | 110-200 | 100-240 | 110-200 | | | | 90-200 | 70-175 |
| | High alloy steel<br>Hoch legierter Stahl | 180≤HB≤325 | 80-160 | 110-190 | 100-220 | 110-190 | | | | 90-190 | 70-160 |
| | Cast steel<br>Stahlguss | 180≤HB≤250 | 75-140 | 100-170 | 80-160 | 100-170 | | | | 80-170 | 60-140 |
| M | Ferrite<br>Martensite | 200≤HB≤300 | 70-170 | 100-200 | | 100-200 | | | | 80-200 | 60-170 |
| | Austenitic<br>Austenite | 180≤HB≤300 | 80-200 | 110-220 | | 110-220 | | | | 90-220 | 70-200 |
| K | Malleable cast iron<br>Temperguss | 130≤HB≤230 | 100-200 | 130-220 | | | | 90-160 | | | |
| | Grey cast iron<br>Grauguss | 180≤HB≤220 | 90-170 | 120-200 | | | | 80-140 | | | |
| | Nodular cast iron<br>Kugelgrafitguss | 160≤HB≤250 | 80-150 | 110-180 | | | | 60-140 | | | |
| N | Al alloy<br>Alu-Legierung | -- | | | | | 200-400 | | | | |
| S | Heat resistant alloy<br>Hitzebeständigen Legierungen | ≤400 | | | | | 20-50 | | 30-60 | | |

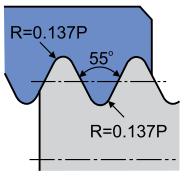
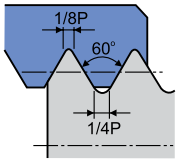
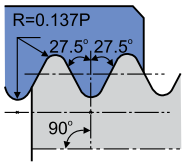
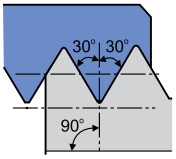
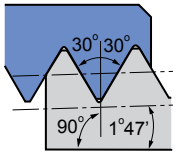
The cutting parameters recommended are suitable for wet machining.
Die angegebenen Schnittparameter werden für die Bearbeitung mit Kühlflüssigkeit empfohlen.
Advice: internal machining and Axial machining, The cutting speed should be reduced by 30%-40%.
Hinweis: Bei Innen- und Axialstechen, sollte die Schnittgeschwindigkeit um 30%-40% reduziert werden.

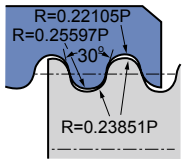
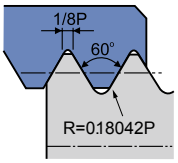
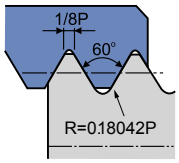
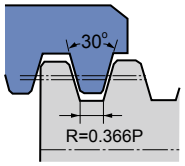
# Turning · Drehen

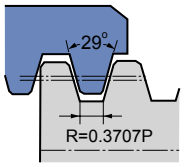
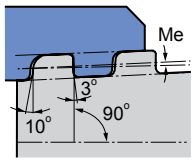
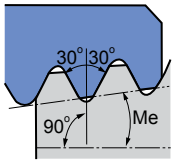
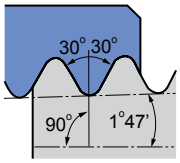
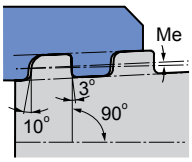
## Threading Tools · Gewindedreh Werkzeuge


| | |
|---|---|
| Threading tools Overview · **Klemmhalter zum Gewindedrehen Übersicht** | **A327-A332** |
| Introduction of threading inserts grade and chipbreaker **Sortenbeschreibung und Spanbrecher der Gewinde WSP** | **A333** |
| Threading inserts · **Gewindedrehplatten** | **A334-A356** |
| Threading inserts code key · Gewindedrehplatten ISO Kennzeichen | A334 |
| ISO metric thread ISO metrische Gewinde | A335-A336 |
| General pitch thread "General pitch" Gewinde | A337 |
| Whitworth thread "Whitworth" Gewinde | A338 |
| Unified thread "Unified" Gewinde | A339 |
| British standard taper piper thread "British standard" Gewinde | A340 |
| American standard taper piper thread "American standard" Gewinde | A341 |
| NPTF 60° thread NPTF 60° Gewinde | A342 |
| 30° conical thread 30° Kegeliges Whitworth Rohrgewinde | A343 |
| MJ Metric thread for air space industry MJ Spitzgewinde Gewinde für Luftfahrtindustrie | A344 |
| UNJ American standard thread for air space industry UNJ Amerikanisches Spitzgewinde für Luftfahrtindustrie | A344 |
| ISO trapezoidal 30° thread ISO Trapez 30° Gewinde | A345 |
| ACME American trapezoid 29° Amerikanisches Trapezgewinde 29° | A346 |
| American ACME thread with short depth Amerikanisches ACME Gewinde, abgeflacht,mit verkürzter Gewindetiefe | A347 |
| API 60° thread API 60° Gewinde | A348 |
| API round thread API Rundgewinde | A349 |
| API Sawtooth threads Amerikanisches Sägegewinde | A350 |
| Thin Type Threading inserts · **Gewindedrehplatten dünne Ausführung** | **A351-A356** |
| ISO metric thread ISO metrische Gewinde | A351 |
| General pitch thread "General pitch" Gewinde | A352 |
| Whitworth thread "Whitworth" Gewinde | A353 |
| Unified thread "Unified" Gewinde | A354 |
| British standard taper piper thread "British standard" Gewinde | A355 |
| American standard taper piper thread "American standard" Gewinde | A356 |
| Threading tools · **Gewindedrehwerkzeuge** | **A357-A360** |
| Threading tools code key · Gewindedrehwerkzeuge ISO Kennzeichen | A357 |
| External threading tools · Gewindedrehwerkzeuge (Außen) | A358 |
| Internal threading tools · Gewindedrehwerkzeuge (Innen) | A359 |
| Thin Type Internal threading tools · Gewindedrehwerkzeuge **dünne Ausführung** | A360 |
| Application information of threading **Anwendungsinformationen für das Gewindedrehen** | **A361-375** |

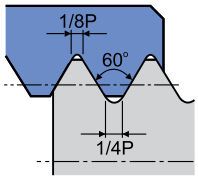
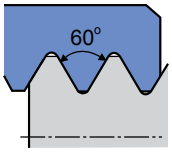
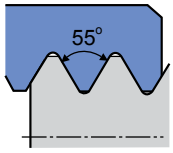
| Applications<br>Anwendungen | | General information<br>Allgemeine Information | | |
|---|---|---|---|---|
| Cutline<br>Cutline | |  |  |  |
| Thread name<br>Gewindebezeichnung | | ISO metric thread<br>Full profile<br>Vollprofil | General pitch thread<br>Partial profile<br>Teilprofil | General pitch thread<br>Partial profile<br>Teilprofil |
| Profile Profil | | **GM** | **60°** | **55°** |
| Shape of insert<br>WSP Abmessung<br>(length / Länge : 11, 16, 22mm) | | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A335-A336 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A337 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A337 |
| Pitch<br>Steigung<br>Toolholder<br>Werkzeughalter | Dimensions (mm)<br>Dimensions (mm)<br>(H×W×L)<br>(Ø×Length×Min.Ø)<br>(Ø×Länge×Min.Ø) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) |
| External thread<br>Außengewinde | <br>A358 | 16×16×100<br>20×20×125<br>25×25×150<br>32×25×170<br>32×32×170<br>40×40×250 | 0.5~6.0 | 0.5~5.0 (5~48) | 0.5~5.0 (5~48) |
| Internal thread<br>Innengewinde | <br>A359 | 16×125×12<br>16×150×16<br>16×150×20<br>20×150×25<br>20×180×25<br>25×150×32<br>32×200×40<br>32×250×40<br>40×300×50<br>50×350×63 | 0.5~6.0 | 0.5~5.0 (5~48) | 0.5~5.0 (5~48) |

| General information<br>Allgemeine Information | For aerospace and aviation industries<br>**Luft- & Raumfahrt** | Pipe thread for heater, gas and water<br>**Rohrgewinde für: Dampf, Gas & Heizung** | For connecting between pipe fitting and coupling of gas and water<br>**Für Gas & Wasser Fittinge und Kupplungen** | For connecting between pipe fitting and coupling of gas and water<br>**Für Gas & Wasser Fittinge und Kupplungen** |
|---|---|---|---|---|
|  |  |  |  |  |
| Whitworth thread<br>Gewinde | Unified thread<br>(American standard threads)<br>UN 60° | British standard taper piper threads<br>BSPT Rohrgewinde | American standard taper pipe threads<br>Amerikanisches Rohrgewinde | American pipe threads dry sealing<br>Amerikanisches Rohrgewinde trocken dichtend |
| **W** | **UN** | **BSPT** | **NPT** | **NPTF** |
| Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A338 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A339 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A340 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A341 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A341 |
| Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) |
| 8~16 | 8~20 | 11~28 | 8~27 | 8~27 |
| 8~16 | 8~20 | 11~28 | 8~27 | 8~27 |

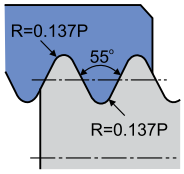
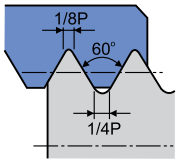
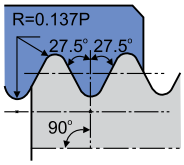
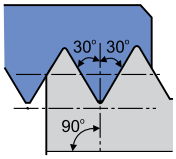
| Applications Anwendungen | For food industry and fire apparatus **Für Lebensmittel-industrie und Feuerwehr** | For aerospace industry **Für Luft- & Raumfahrt** | For aerospace industry **Für Luft- & Raumfahrt** | Drive Screw **Antriebsgewinde** |
|---|---|---|---|---|
| Cutline<br>Cutline |  |  |  |  |
| Thread name<br>Gewindebezeichnung | 30° conical threads<br>30° Kegeliges Whitworth Rohrgewinde | Metric thread for air space industry<br>Spitzgewinde für Luftfahrtindustrie | American standard thread for air industry<br>Amerikanisches Spitzgewinde für Luftfahrtindustrie | ISO trapezoidal 30° thread<br>ISO Trapez 30° Gewinde |
| Profile Profil | **R** | **MJ** | **UNJ** | **Tr** |
| **Shape of insert**<br>WSP Abmessung<br>( length / Länge:<br>**11, 16, 22mm )** | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A343 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A344 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A344 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A345 |
| Dimensions (mm)<br>Dimensions (mm)<br>(H×W×L)<br>(Ø×Length×Min.Ø)<br>(Ø×Länge×Min.Ø) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm |
| External thread<br>Außengewinde<br>16×16×100<br>20×20×125<br>25×25×150<br>32×25×170<br>32×32×170<br>40×40×250 | 6~10 | 1.5~2.0 | 8~32 | 1.5~3.0 |
| Internal thread<br>Innengewinde<br>16×125×12<br>16×150×16<br>16×150×20<br>20×150×25<br>20×180×25<br>25×150×32<br>32×200×40<br>32×250×40<br>40×300×50<br>50×350×63 | 6~10 | ---- | ---- | 1.5~3.0 |

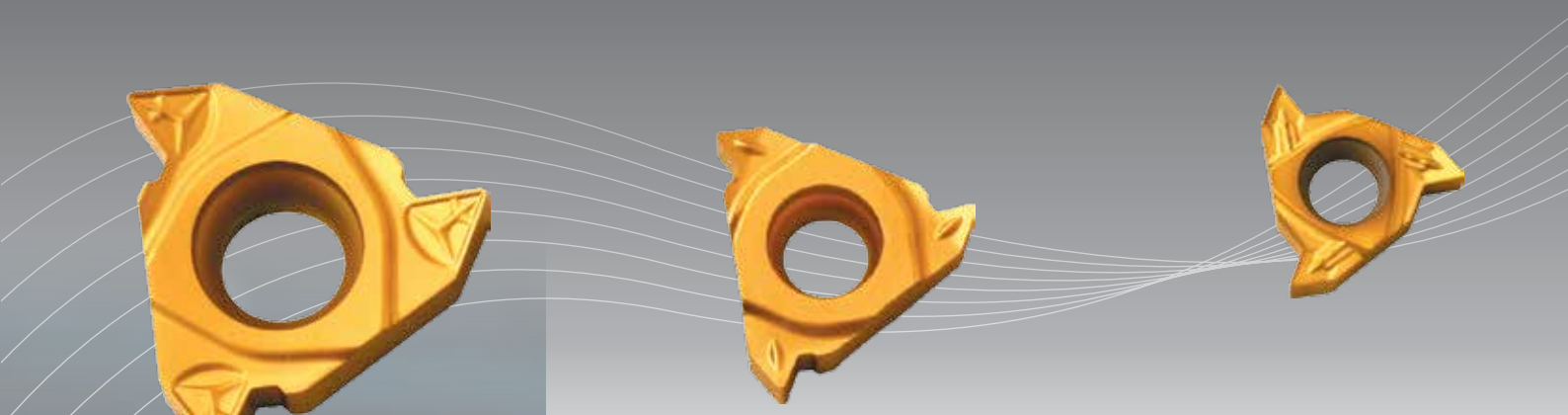
| Drive Screw<br>Antriebsgewinde | | For connecting between pipe fitting and coupling of oil and gas<br>Für Öl & Gas Fittinge und Kupplungen | | |
|---|---|---|---|---|
|  |  |  |  |  |
| **ACME**<br>American trapezoidal 29° thread<br>Amerikanisches Trapezgewinde 29° | american ACME thread with short depth<br>Amerikanisches ACME Gewinde, abgeflacht, mit verkürzter Gewindetiefe | API 60° thread<br>API 60° Gewinde | API round threads<br>API Rundgewinde | API Sawtooth threads<br>Amerikanisches Sägegewinde |
| **AC** | **STAC** | **AP** | **RD** | **BUT** |
| Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A346 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A347 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A347 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A349 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A350 |
| Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) |
| 8~16 | 8~16 | 4~5 | 8~10 | 5 |
| 8~16 | 8~16 | 4~5 | 8~10 | 5 |

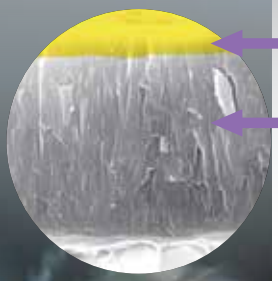
**Thin Type**

| Applications<br>Anwendungen | | General information<br>Allgemeine Information | General information<br>Allgemeine Information | General information<br>Allgemeine Information |
|---|---|---|---|---|
| Cutline<br>Cutline | |  |  |  |
| Thread name<br>Gewindebezeichnung | | ISO metric (full profile)<br>ISO metrisch (Voll-profil) | Partcial-Profile 60°<br>Teil-Profil 60° | Partcial-Profile 55°<br>Teil-Profil 55° |
| Profile / Profil | | **GM** | **60** | **55** |
| Shape of insert<br>WSP Abmessung<br>(length/ Länge: 16mm) | | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A351 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A352 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A352 |
| Toolholder / Werkzeughalter — Pitch / Steigung | Dimensions (mm)<br>Dimensions (mm)<br>(H×W×L)<br>(Ø×Length×Min.Ø)<br>(Ø×Länge×Min.Ø) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) |
| External thread<br>Außengewinde | <br>**R**<br>A360 | 16×16×100<br>20×20×125<br>25×25×150<br>32×25×170<br>32×32×170 | 0.5~3.0 | 0.5~3.0(8~48) | 0.5~3.0(8~48) |
| Internal thread<br>Innengewinde | <br>**R**<br>A360 | 16×150×20<br>20×180×25<br>25×150×32<br>32×200×40<br>32×250×40 | 0.5~3.0 | 0.5~3.0(8~48) | 0.5~3.0(8~48) |

**Thin Type**

| General information<br>Allgemeine Information | For aerospace and aviation industries<br>**Luft- & Raumfahrt** | Pipe thread for heater, gas and water<br>**Rohrgewinde für: Dampf, Gas & Heizung** | For connecting between pipe fitting and coupling of gas and water<br>**Für Gas & Wasser Fittinge und Kupplungen** |
|---|---|---|---|
|  |  |  |  |
| Whitworth<br>Rohrgewinde | UN Unified Conventional Thread<br>Gewindeform UN 60°amerikanisch | BSPT Britain Standard<br>Taper Pipe Thread<br>Rohrgewinde für Dampf-, Gas-, & Wasserleitungen | NPT American Standard<br>Amerikanisches<br>kegeliges Rohrgewinde |
| **W** | **UN** | **BSPT** | **NPT** |
| Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A354 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A354 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A355 | Illustration: external thread right hand.<br>Illustration: Außengewinde in Rechtsausführung.<br><br>A355 |
| Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) | Pitch/mm<br>Steigung/mm<br>(pitch/Inch) |
| 8~16 | 8~20 | 11~28 | 8~27 |
| 8~16 | 8~24 | 11~28 | 8~27 |





The golden TiN Coating reduces friction and provides wear identification.
*Die goldene TiN Beschichtung reduziert die Reibung und ermöglicht die Verschleiß Identifikation.*

Inner layer nc-TiAlN coating provides an excellent wear resistance.
*Die innere Beschichtung nc-TiAlN ermöglicht eine exzellente Verschleißfestigkeit.*

## YBG201

Carbide with PVD coating of TiN + nano-TiAlN has good toughness and wear resistance, ait´s the unique threading grade for machining of carbon steel, stainless steel and cast iron etc.

*Hartmetall mit PVD Multibeschichtung von TiN + nano-TiAlN mit hoher Härte und Verschleißfestigkeit. Es ist die ZCC Gewindesorte für die Bearbeitung von Kohlenstoff-, rostfreien Stahl und Grauguss. etc.*

### The functions and applications of Wiper for threading inserts
*Die Funktionen und Anwendungen der Wiper Schneidplatten*

Reduction of machining processes.
The threading diameter will be machined during threading operation. Good qualitiy and dimensions.

*Reduziert die Bearbeitungsschritte.*
*Der Gewindedurchmesser wird während des Gewindeschneidens in einem Arbeitsgang bearbeitet. Gute Oberfläche und Maßhaltigkeit.*

### Design characteristics chip breaker
*Spezielle Spanbrecherform*



**The ZCC CT Chip-breaker**
The special chip breaker design ensured an excellent chip controled, during machining **different** materials.

***Der ZCC CT Spanbrecher***
*Der speziell entwickelte Spanbrecher stellt eine exzellente Spankontrolle auch bei Bearbeitung **unterschiedlicher** Werkstückstoffe sicher.*

## YBG202

PVD nano-TiAlN coated fine grain carbide grade. Good performance in combination of toughness and wear resistance, suitable for threading turning, parting, grooving of steel, stainless steel and high-temperature alloys in finishing and semi-finishing machining.

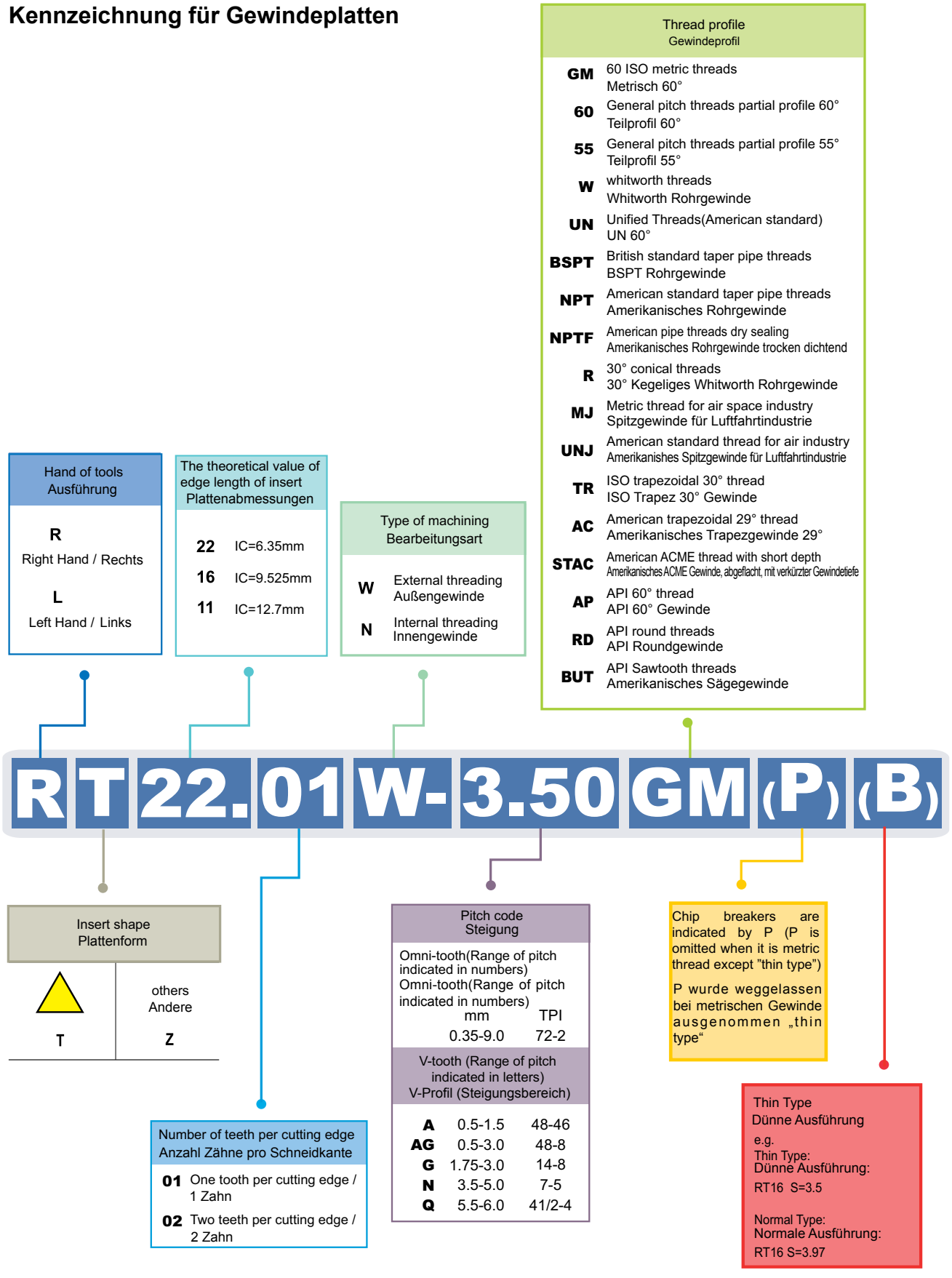
*Nano-TiAlN PVD beschichtete, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit. Zum Gewinden Drehen, Ab- und Einstechen von Stahl, rostfreiem Stahl und warmfesten Superlegierungen bei leichter und mittlerer Bearbeitung.*

## YBG205

Fine grain carbide with PVD coating of nano-TiAlxN adopted from high temperature resistant element. Excellent wear resistance and chemical resistance suitable for turning of stainless steel under higher cutting speed.

*Nano-TiAlxN PVD beschichtete, feinkörnige Hartmetallsorte, ausgezeichnete Verschleißfestigkeit und chemische Widerstandsfähigkeit. Sehr gut geeignet zum Drehen von rostfreiem Stahl mit höherer Schnittgeschwindigkeit.*

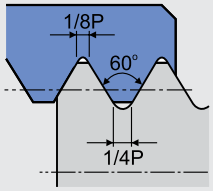
## Threading inserts code key
## Kennzeichnung für Gewindeplatten



## ISO metric thread insert (full profile)
## Allgemeiner Einsatz (Vollprofil)

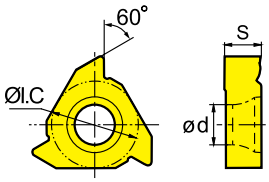
ISO 965-1980
GB·T 197-2003

DIN 13
Tolerances: 6g·6H
Toleranz



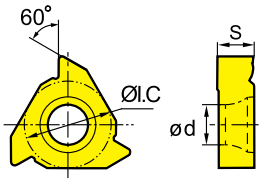



R






L




| | Type<br>Typ | | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Left hand<br>Linksausführung | Pitch · Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| External<br>Außen | **RT16.01W-1.00GM** | **LT16.01W-1.00GM** | 1.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-1.25GM** | **LT16.01W-1.25GM** | 1.25 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-1.50GM** | **LT16.01W-1.50GM** | 1.50 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-1.75GM** | **LT16.01W-1.75GM** | 1.75 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-2.00GM** | **LT16.01W-2.00GM** | 2.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-2.50GM** | **LT16.01W-2.50GM** | 2.50 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01W-3.00GM** | **LT16.01W-3.00GM** | 3.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT22.01W-3.50GM** | **LT22.01W-3.50GM** | 3.50 | 5.56 | 12.7 | 5.5 | ○ | ● | ○ | ○ |
| | **RT22.01W-4.00GM** | **LT22.01W-4.00GM** | 4.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |
| | **RT22.01W-4.50GM** | **LT22.01W-4.50GM** | 4.50 | 5.56 | 12.7 | 5.5 | ○ | ○ | ○ | ○ |
| | **RT22.01W-5.00GM** | **LT22.01W-5.00GM** | 5.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ○ | ○ |
| | **RT22.01W-5.50GM** | **LT22.01W-5.50GM** | 5.50 | 5.56 | 12.7 | 5.5 | ○ | ○ | ○ | ○ |
| | **RT22.01W-6.00GM** | **LT22.01W-6.00GM** | 6.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |

### Tool holder / Klemmhalter



R



R

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A

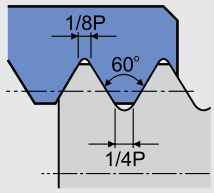
General Turning
Allgemeine Drehbearbeitung

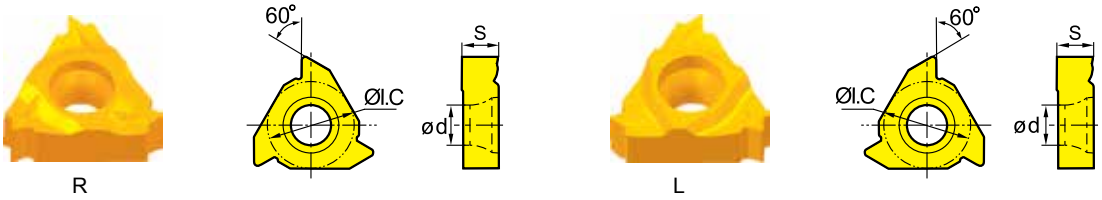
Threading
Gewindedrehen

## ISO metric thread insert (full profile)
## Allgemeiner Einsatz (Vollprofil)

ISO 965-1980
GB·T 197-2003

DIN 13
Tolerances: 6g·6H
Toleranz




| | Type<br>Typ | | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Left hand<br>Linksausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| Internal<br>Innen | **RT11.01N-0.50GM** | **LT11.01N-0.50GM** | 0.50 | 3.18 | 6.35 | 2.8 | ○ | ○ | ○ | ○ |
| | **RT11.01N-0.75GM** | **LT11.01N-0.75GM** | 0.75 | 3.18 | 6.35 | 2.8 | ○ | ○ | ○ | ○ |
| | **RT11.01N-1.00GM** | **LT11.01N-1.00GM** | 1.00 | 3.18 | 6.35 | 2.8 | ○ | ● | ● | ○ |
| | **RT11.01N-1.25GM** | **LT11.01N-1.25GM** | 1.25 | 3.18 | 6.35 | 2.8 | ○ | ○ | ○ | ○ |
| | **RT11.01N-1.50GM** | **LT11.01N-1.50GM** | 1.50 | 3.18 | 6.35 | 2.8 | ○ | ● | ● | ○ |
| | **RT11.01N-1.75GM** | **LT11.01N-1.75GM** | 1.75 | 3.18 | 6.35 | 2.8 | ○ | ● | ○ | ○ |
| | **RT11.01N-2.00GM** | **LT11.01N-2.00GM** | 2.00 | 3.18 | 6.35 | 2.8 | ○ | ● | ● | ○ |
| | **RT16.01N-0.50GM** | **LT16.01N-0.50GM** | 0.50 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-0.75GM** | **LT16.01N-0.75GM** | 0.75 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-1.00GM** | **LT16.01N-1.00GM** | 1.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ○ | ○ |
| | **RT16.01N-1.25GM** | **LT16.01N-1.25GM** | 1.25 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-1.50GM** | **LT16.01N-1.50GM** | 1.50 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01N-1.75GM** | **LT16.01N-1.75GM** | 1.75 | 3.97 | 9.525 | 4.4 | ○ | ● | ○ | ○ |
| | **RT16.01N-2.00GM** | **LT16.01N-2.00GM** | 2.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01N-2.50GM** | **LT16.01N-2.50GM** | 2.5 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT16.01N-3.00GM** | **LT16.01N-3.00GM** | 3.00 | 3.97 | 9.525 | 4.4 | ○ | ● | ● | ○ |
| | **RT22.01N-3.50GM** | **LT22.01N-3.50GM** | 3.50 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |
| | **RT22.01N-4.00GM** | **LT22.01N-4.00GM** | 4.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |
| | **RT22.01N-4.50GM** | **LT22.01N-4.50GM** | 4.50 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |
| | **RT22.01N-5.00GM** | **LT22.01N-5.00GM** | 5.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ○ | ○ |
| | **RT22.01N-5.50GM** | **LT22.01N-5.50GM** | 5.50 | 5.56 | 12.7 | 5.5 | ○ | ○ | ○ | ○ |
| | **RT22.01N-6.00GM** | **LT22.01N-6.00GM** | 6.00 | 5.56 | 12.7 | 5.5 | ○ | ● | ● | ○ |

### Tool holder / Klemmhalter





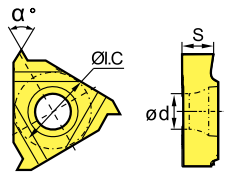


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● ex stock · ab Lager ○ on demand · auf Anfrage

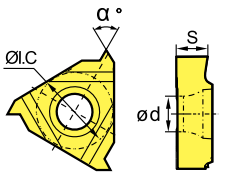
## General pitch thread insert (partical profile)
## Allgemeiner Einsatz (Teilprofil)


R

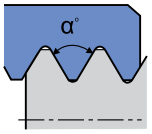




L



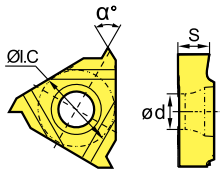



*Inserts with chip-breakers
Platten mit Spanbrecher

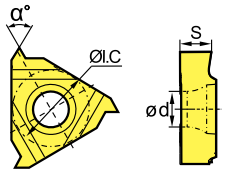
| | | Type Typ | | Dimension (mm) Abmessung | | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | α° | YBG201 | | YBG205 | |
| | | | | | | | | | R | L | R | L |
| External Außen | 60° | **RT16.01W-A60** | **LT16.01W-A60** | 0.5-1.5(48-16) | 3.97 | 9.525 | 4.4 | 60° | ○ | ○ | ● | ○ |
| | | **RT16.01W-G60** | **LT16.01W-G60** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 60° | ○ | ● | ○ | ○ |
| | | **RT16.01W-G60P*** | **LT16.01W-G60P*** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 60° | ○ | ○ | ○ | ○ |
| | | **RT16.01W-AG60** | **LT16.01W-AG60** | 0.5-3.0(48-8) | 3.97 | 9.525 | 4.4 | 60° | ○ | ● | ● | ○ |
| | | **RT22.01W-N60P*** | **LT22.01W-N60P*** | 3.5-5.0(7-5) | 5.56 | 12.7 | 5.5 | 60° | ○ | ○ | ● | ○ |
| | 55° | **RT16.01W-A55** | **LT16.01W-A55** | 0.5-1.5(48-16) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT16.01W-G55** | **LT16.01W-G55** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT16.01W-G55P*** | **LT16.01W-G55P*** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ● | ○ | ○ |
| | | **RT16.01W-AG55** | **LT16.01W-AG55** | 0.5-3.0(48-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT22.01W-N55P*** | **-** | 3.5-5.0(7-5) | 5.56 | 12.7 | 5.5 | 55° | ○ | - | ○ | - |


R

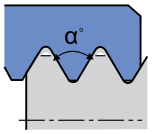




L






*Inserts with chip-breakers
Platten mit Spanbrecher

| | | Type Typ | | Dimension (mm) Abmessung | | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | α° | YBG201 | | YBG205 | |
| | | | | | | | | | R | L | R | L |
| Internal Innen | 60° | **RT16.01N-A60** | **LT16.01N-A60** | 0.5-1.5 (48-16) | 3.97 | 9.525 | 4.4 | 60° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-G60** | **LT16.01N-G60** | 1.75-3.0 | 3.97 | 9.525 | 4.4 | 60° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-G60P*** | **LT16.01N-G60P*** | 1.75-3.0 | 3.97 | 9.525 | 4.4 | 60° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-AG60** | **LT16.01N-AG60** | 0.5-3.0 (48-8) | 3.97 | 9.525 | 4.4 | 60° | ○ | ● | ○ | ● |
| | | **RT22.01N-N60** | **LT22.01N-N60** | 3.5-5.0 (7-5) | 5.56 | 12.7 | 5.5 | 60° | ○ | ○ | ○ | ○ |
| | | **RT22.01N-N60P*** | **LT22.01N-N60P** | 3.5-5.0 (7-5) | 5.56 | 12.7 | 5.5 | 60° | ○ | ○ | ● | ○ |
| | 55° | **RT16.01N-A55** | **LT16.01N-A55** | 0.5-1.5(48-16) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-G55** | **LT16.01N-G55** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-G55P*** | **LT16.01N-G55P*** | 1.75-3.0(14-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ○ | ○ |
| | | **RT16.01N-AG55** | **LT16.01N-AG55** | 0.5-3.0(48-8) | 3.97 | 9.525 | 4.4 | 55° | ○ | ○ | ● | ○ |
| | | **RT22.01N-N55** | **LT22.01N-N55** | 3.5-5.0(7-5) | 5.56 | 12.7 | 5.5 | 55° | ○ | ○ | ○ | ○ |
| | | **RT22.01N-N55P*** | **-** | 3.5-5.0(7-5) | 5.56 | 12.7 | 5.5 | 55° | ○ | - | ○ | - |

### Tool holder / Klemmhalter


R

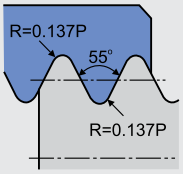

R

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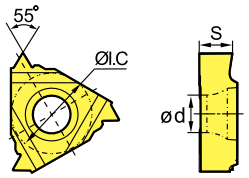
## Whitworth thread insert
## Whitworth Rohrgewinde

ISO 228·1:1982, DIN 259, B.S.84:1956
Tolerance: Medium class A
Toleranz: Medium Klasse A



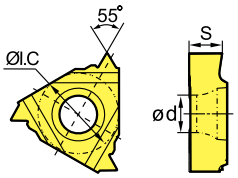


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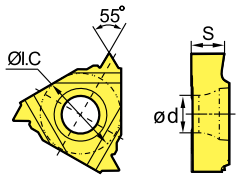


L



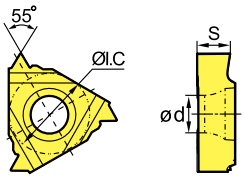

| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| External Außen | **RT16.01W-8W** | **LT16.01W-8W** | 8 | 3.97 | 9.525 | 4.4 | ○ | ● | ○ | ○ |
| | **RT16.01W-9W** | **LT16.01W-9W** | 9 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-10W** | **LT16.01W-10W** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-11W** | **LT16.01W-11W** | 11 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |
| | **RT16.01W-12W** | **LT16.01W-12W** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-14W** | **LT16.01W-14W** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |
| | **RT16.01W-16W** | **LT16.01W-16W** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |


R





L




| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| Internal Innen | **RT16.01N-8W** | **LT16.01N-8W** | 8 | 3.97 | 9.525 | 4.4 | ○ | ● | ○ | ○ |
| | **RT16.01N-9W** | **LT16.01N-9W** | 9 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-10W** | **LT16.01N-10W** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-11W** | **LT16.01N-11W** | 11 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |
| | **RT16.01N-12W** | **LT16.01N-12W** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-14W** | **LT16.01N-14W** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |
| | **RT16.01N-16W** | **LT16.01N-16W** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ | ● | ○ |

### Tool holder / Klemmhalter


R

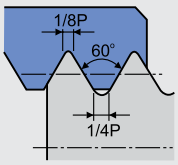

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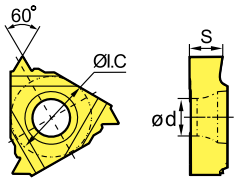
## UN full profile
## UN Vollprofil

ASME B1.1-1989
Tolerances: 2A·2B
Toleranz



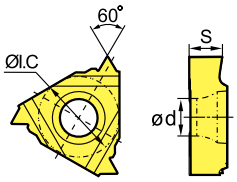


R



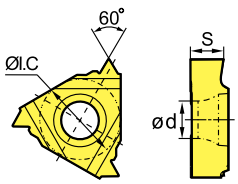


L



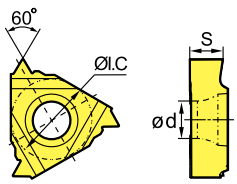

| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| External Außen | **RT16.01W-8UN** | **LT16.01W-8UN** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-10UN** | **LT16.01W-10UN** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-12UN** | **LT16.01W-12UN** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-14UN** | **LT16.01W-14UN** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-16UN** | **LT16.01W-16UN** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-18UN** | **LT16.01W-18UN** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-20UN** | **LT16.01W-20UN** | 20 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |


R





L




| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| Internal Innen | **RT16.01N-8UN** | **LT16.01N-8UN** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-10UN** | **LT16.01N-10UN** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-12UN** | **LT16.01N-12UN** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-14UN** | **LT16.01N-14UN** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-16UN** | **LT16.01N-16UN** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-18UN** | **LT16.01N-18UN** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-20UN** | **LT16.01N-20UN** | 20 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-24UN** | **LT16.01N-24UN** | 24 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |

### Tool holder / Klemmhalter


R


R

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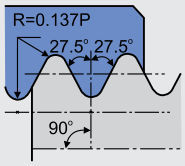
A

General Turning
Allgemeine Drehbearbeitung

Threading
Gewindedrehen

## British standard taper pipe thread insert
## Rohrgewinde für Dampf-, Gas- und Wasserleitungen

ISO 7·1:1994 B.S.21:1985
Standard BSPT
Standard BSPT





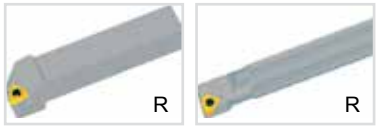


| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| External Außen | **RT16.01W -11 BSPT** | **LT16.01W-11 BSPT** | 11 | 3.97 | 9.525 | 4.4 | ○ | ● | ○ | ○ |
| | **RT16.01W-14 BSPT** | **LT16.01W-14 BSPT** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-19 BSPT** | **LT16.01W-19 BSPT** | 19 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-28 BSPT** | **LT16.01W-28 BSPT** | 28 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |




| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| Internal Innen | **RT16.01N-11 BSPT** | **LT16.01N-11 BSPT** | 11 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-14 BSPT** | **LT16.01N-14 BSPT** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-19 BSPT** | **LT16.01N-19 BSPT** | 19 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-28 BSPT** | **LT16.01N-28 BSPT** | 28 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |

### Tool holder / Klemmhalter

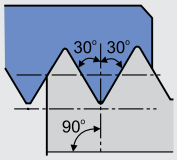



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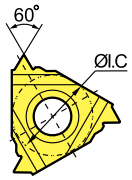
## NPT American standard taper pipe with a shoulder
## Amerikanisches kegeliges Rohrgewinde

ASME B1.20.1-1983
Standard NPT
Standard NPT



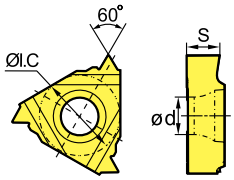


R



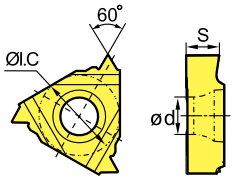


L



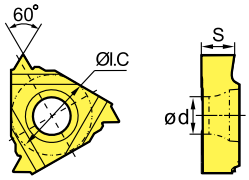

| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| External Außen | **RT16.01W-8 NPT** | **LT16.01W-8NPT** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-11.5 NPT** | **LT16.01W-11.5NPT** | 11.5 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-14 NPT** | **LT16.01W-14NPT** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-18 NPT** | **LT16.01W-18NPT** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01W-27 NPT** | **LT16.01W-27NPT** | 27 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |


R





L




| | Type Typ | | Dimension (mm) Abmessung | | | | Grade Sorte | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Left hand Linksausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | | YBG205 | |
| | | | | | | | R | L | R | L |
| Internal Innen | **RT16.01N-8 NPT** | **LT16.01N-8 NPT** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-11.5 NPT** | **LT16.01N-11.5 NPT** | 11.5 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-14 NPT** | **LT16.01N-14 NPT** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-18 NPT** | **LT16.01N-18 NPT** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |
| | **RT16.01N-27 NPT** | **LT16.01N-27 NPT** | 27 | 3.97 | 9.525 | 4.4 | ○ | ○ | ○ | ○ |

### Tool holder / Klemmhalter


R

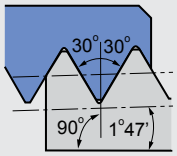

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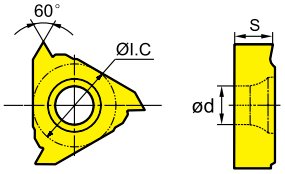
## NPTF60°

ANSI B1.20.1-1983
Tolerance: 2
Toleranz





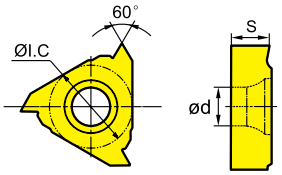

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-8NPTF** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-11.5NPTF** | 11.5 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-14NPTF** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-18NPTF** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-27NPTF** | 27 | 3.97 | 9.525 | 4.4 | ○ | ○ |



R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01N-8NPTF** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-11.5NPTF** | 11.5 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-14NPTF** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-18NPTF** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-27NPTF** | 27 | 3.97 | 9.525 | 4.4 | ○ | ○ |

### Tool holder / Klemmhalter



R



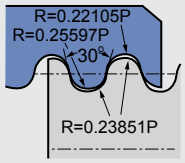
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

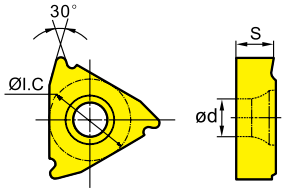
## Round screw 30°
## Round screw 30°

DIN 405
Tolerance: 7
Toleranz



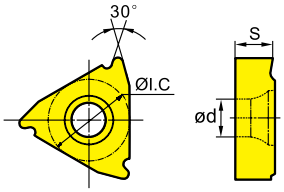


R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External Außen | **RT16.01W-6R** | 6 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-8R** | 8 | 3.97 | 9.525 | 4.4 | ○ | ● |
| | **RT16.01W-10R** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |


R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal Innen | **RT16.01N-6R** | 6 | 3.97 | 9.525 | 4.4 | ○ | ● |
| | **RT16.01N-8R** | 8 | 3.97 | 9.525 | 4.4 | ○ | ● |
| | **RT16.01N-10R** | 10 | 3.97 | 9.525 | 4.4 | ○ | ● |

### Tool holder / Klemmhalter


R

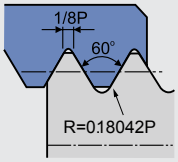

R

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● ex stock · ab Lager ○ on demand · auf Anfrage

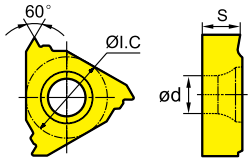
## MJ (Metric)
## MJ (Spitzgewinde)

ISO 5855-1999
Tolerance: 4
Toleranz





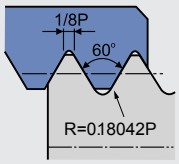

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-1.50MJ** | 1.50 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-2.00MJ** | 2.00 | 3.97 | 9.525 | 4.4 | ○ | ○ |

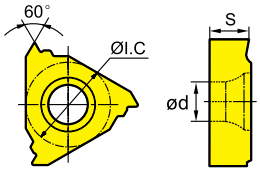
## UNJ (American)
## UNJ (American)

ISO 3161-1999
Tolerance: 3A
Toleranz






R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-8UNJ** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-10UNJ** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-12UNJ** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-14UNJ** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-16UNJ** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-18UNJ** | 18 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-20UNJ** | 20 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-24UNJ** | 24 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-28UNJ** | 28 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-32UNJ** | 32 | 3.97 | 9.525 | 4.4 | ○ | ○ |

Tool holder / Klemmhalter



R



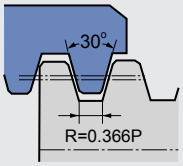
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

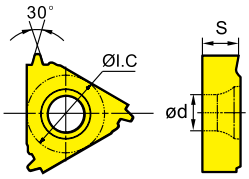
## Tr (ISO trapezoid thread 30°)
## Tr (ISO Trapez 30° Gewinde)

ISO 2901-2904
Tolerance: 7
Toleranz





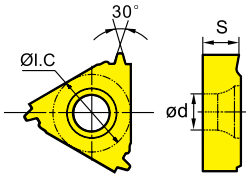

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-1.50TR** | 1.50 | 3.97 | 9.525 | 4.4 | ○ | ● |
| | **RT16.01W-2.00TR** | 2.00 | 3.97 | 9.525 | 4.4 | ○ | ● |
| | **RT16.01W-3.00TR** | 3.00 | 3.97 | 9.525 | 4.4 | ○ | ○ |



R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal<br>Innen | **RT16.01N-1.50TR** | 1.50 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-2.00TR** | 2.00 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-3.00TR** | 3.00 | 3.97 | 9.525 | 4.4 | ○ | ● |

### Tool holder / Klemmhalter



R



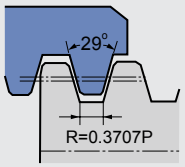
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

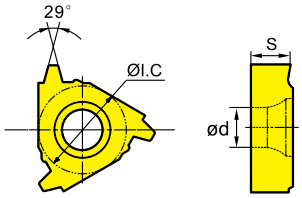
ACME American standard trapezoid 29°
ACME Amerikanisches Trapezgewinde 29°

ANSI B1.5-1988 ANSI B1.5-1988
Tolerance: 2G
Toleranz





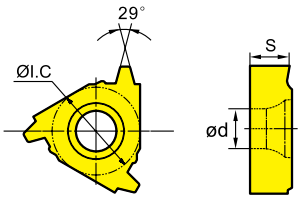

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-8AC** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-10AC** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-12AC** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-14AC** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-16AC** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ |



R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal<br>Innen | **RT16.01N-8AC** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-10AC** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-12AC** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-14AC** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-16AC** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ |

Tool holder / Klemmhalter



R



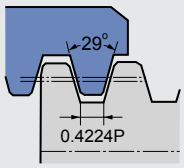
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

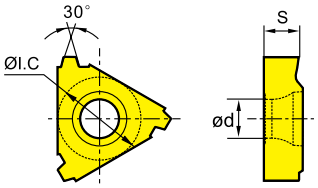
## STUB - ACME Short teeth
## STUB - ACME Verkürzte Gewindetiefe

ANSI B1.8-1988
Tolerance: 2G
Toleranz





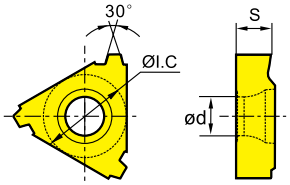

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-8STAC** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-10STAC** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-12STAC** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-14STAC** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-16STAC** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ |



R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal<br>Innen | **RT16.01N-8STAC** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-10STAC** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-12STAC** | 12 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-14STAC** | 14 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-16STAC** | 16 | 3.97 | 9.525 | 4.4 | ○ | ○ |

### Tool holder / Klemmhalter



R



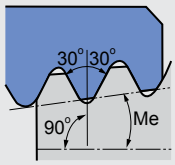
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

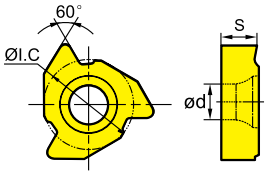
## API 60°

Me=taper, 2i.p.f—4°46', 3i.p.f—7°01'
API SPEC7:1990, Tolerance: API standard
Toleranz: API standard





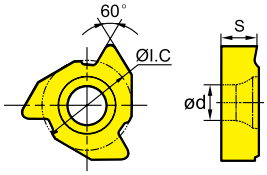

R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External Außen | **RT22.01W-4AP382** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-4AP383** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-5AP403** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-4AP502** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-4AP503** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |



R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal Innen | **RT22.01N-4AP382** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-4AP383** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-5AP403** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-4AP502** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-4AP503** | 4 | 5.56 | 12.7 | 5.5 | ○ | ○ |

### Tool holder / Klemmhalter



R



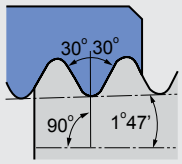
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

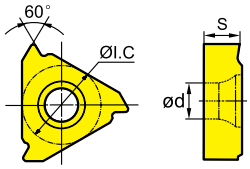
## API (round)
## API (Ruund)

API spec.5B
Tolerance: API RD
Toleranz





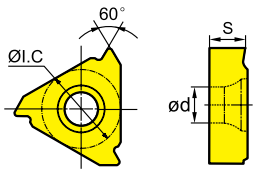

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External<br>Außen | **RT16.01W-8RD** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01W-10RD** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT22.01W-8RD** | 8 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-10RD** | 10 | 5.56 | 12.7 | 5.5 | ○ | ○ |



R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal<br>Innen | **RT16.01N-8RD** | 8 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT16.01N-10RD** | 10 | 3.97 | 9.525 | 4.4 | ○ | ○ |
| | **RT22.01N-8RD** | 8 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-10RD** | 10 | 5.56 | 12.7 | 5.5 | ○ | ○ |

Tool holder / Klemmhalter



R



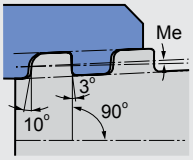
R

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● ex stock · ab Lager ○ on demand · auf Anfrage

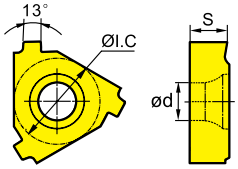
API (inclined trapezoid screw)
API (Amerikanisches Sägegewinde)

Me=taper 3/4i.p.f–1°47'for Ø 4 1/2~13 3/8"
1i.p.f—2°23'for Ø 16"
SEPC.5B.1979
Tolerance: API standard
Toleranz: API standard





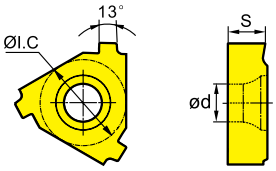

R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| External Außen | **RT22.01W-5BUT** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01W-5BUT1** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |



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| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG201 | YBG205 |
| Internal Innen | **RT22.01N-5BUT** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |
| | **RT22.01N-5BUT1** | 5 | 5.56 | 12.7 | 5.5 | ○ | ○ |

Tool holder / Klemmhalter



R



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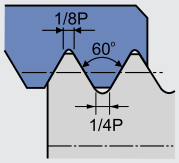
Page / Seite A358 A359

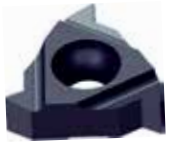
● ex stock · ab Lager ○ on demand · auf Anfrage

ISO metric thread insert (full profile)
Allgemeiner Einsatz (Vollprofil)

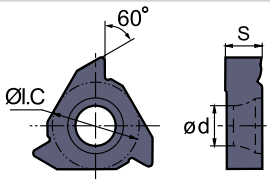
**Thin Type**

ISO 965-1980, DIN 13, GB/T 197-2003
Tolerances: 6g/6H
Toleranz



R



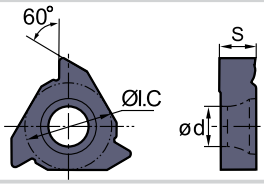



*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| External Außen | **RT16.01W-0.50GMB** | 0.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-0.75GMB** | 0.75 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-1.00GMB** | 1.00 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-1.25GMB** | 1.25 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01W-1.50GMB** | 1.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-1.75GMB** | 1.75 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01W-2.00GMB** | 2.00 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-2.50GMB** | 2.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-3.00GMB** | 3.00 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-1.50GMPB*** | 1.50 | 3.52 | 9.525 | 4.0 | ○ | ● |



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*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| Internal Innen | **RT16.01N-0.50GMB** | 0.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-0.75GMB** | 0.75 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-1.00GMB** | 1.00 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01N-1.25GMB** | 1.25 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01N-1.50GMB** | 1.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-1.75GMB** | 1.75 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01N-2.00GMB** | 2.00 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-2.50GMB** | 2.50 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-3.00GMB** | 3.00 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-1.00GMPB*** | 1.00 | 3.52 | 9.525 | 4.0 | | ● |
| | **RT16.01N-2.00GMPB*** | 2.00 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01N-3.00GMPB*** | 3.00 | 3.52 | 9.525 | 4.0 | | ● |

Tool holder / Klemmhalter



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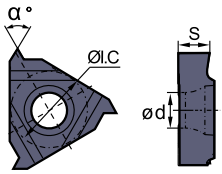
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● ex stock · ab Lager ○ on demand · auf Anfrage

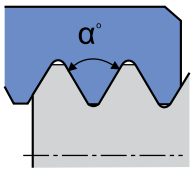
## General pitch thread insert (partical profile) Allgemeiner Einsatz (Teilprofil) Thin Type


R



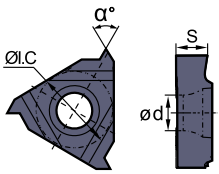


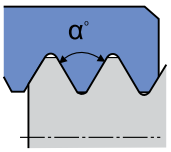
*Inserts with chip-breakers
Platten mit Spanbrecher




| | | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|---|---|
| | | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | α° | YBG202 | YBG205 |
| Externa Innen | 60° | **RT16.01W-A60B** | 0.5-1.5(48-16) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | | **RT16.01W-G60B** | 1.75-3.0(14-8) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | | **RT16.01W-AG60B** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | | **RT16.01W-AG60PB*** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 60° | ● | ● |
| | 55° | **RT16.01W-A55B** | 0.5-1.5(48-16) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |
| | | **RT16.01W-G55B** | 1.75-3.0(14-8) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |
| | | **RT16.01W-AG55PB*** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |
| | | **RT16.01W-AG55B** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |


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| | | Type Typ | Dimension (mm) Abmessung | | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|---|---|
| | | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | α° | YBG202 | YBG205 |
| Internal Innen | 60° | **RT16.01N-A60B** | 0.5-1.5(48-16) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | | **RT16.01N-G60B** | 1.75-3.0(14-8) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | | **RT16.01N-AG60B** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 60° | ● | ○ |
| | 55° | **RT16.01N-A55B** | 0.5-1.5(48-16) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |
| | | **RT16.01N-G55B** | 1.75-3.0(14-8) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |
| | | **RT16.01N-AG55B** | 0.5-3.0(48-8) | 3.52 | 9.525 | 4.0 | 55° | ● | ○ |

### Tool holder / Klemmhalter


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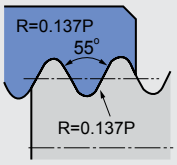

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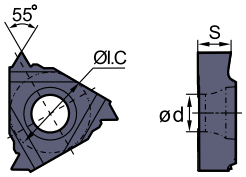
## Whitworth thread insert Whitworth Rohrgewinde — Thin Type

ISO 228/1:1982,DIN 259,B.S.84:1956
Tolerance: Medium class A
Toleranz: Medium Klasse A

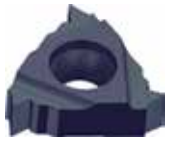




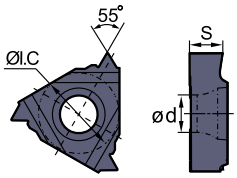

R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| External Außen | **RT16.01W-8WB** | 8 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-9WB** | 9 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-10WB** | 10 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-11WB** | 11 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-12WB** | 12 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-14WB** | 14 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-16WB** | 16 | 3.52 | 9.525 | 4.0 | ● | ○ |



R






*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| Internal Außen | **RT16.01N-8WB** | 8 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-9WB** | 9 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-10WB** | 10 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-11WB** | 11 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-11WPB*** | 11 | 3.52 | 9.525 | 4.0 | ● | ● |
| | **RT16.01N-12WB** | 12 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-14WB** | 14 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-14WPB*** | 14 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01N-16WB** | 16 | 3.52 | 9.525 | 4.0 | ○ | ○ |

### Tool holder / Klemmhalter



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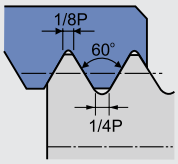
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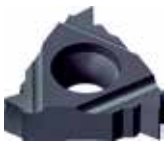
● ex stock · ab Lager ○ on demand · auf Anfrage

UN full profile
UN Vollprofil

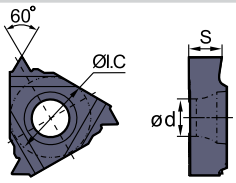
**Thin Type**

ASME B1.1-1989
Tolerances: 2A/2B
Toleranz



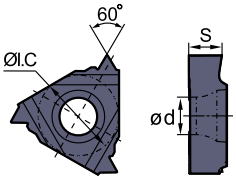
R




| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| External Außen | **RT16.01W-8UNB** | 8 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-10UNB** | 10 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-12UNB** | 12 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-14UNB** | 14 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-16UNB** | 16 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-18UNB** | 18 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-20UNB** | 20 | 3.52 | 9.525 | 4.0 | ● | ○ |



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| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| Internal Innen | **RT16.01N-8UNB** | 8 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-10UNB** | 10 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-12UNB** | 12 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-14UNB** | 14 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-16UNB** | 16 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-18UNB** | 18 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-20UNB** | 20 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-24UNB** | 24 | 3.52 | 9.525 | 4.0 | ○ | ○ |

Tool holder / Klemmhalter



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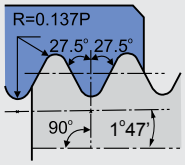
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● ex stock · ab Lager ○ on demand · auf Anfrage

## British standard taper pipe thread insert
## Rohrgewinde für Dampf-, Gas- und Wasserleitungen

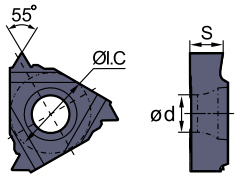
**Thin Type**

ISO 7/1:1994,B.S.21:1985
Standard BSPT
Standard BSPT






R



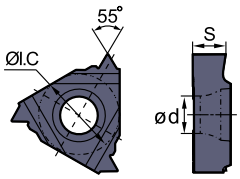



*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| External Außen | **RT16.01W-11BSPTB** | 11 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-14BSPTB** | 14 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-14BSPTPB*** | 14 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01W-19BSPTB** | 19 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-28BSPTB** | 28 | 3.52 | 9.525 | 4.0 | ○ | ○ |



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*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type Typ | Dimension (mm) Abmessung | | | | Grade Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand Rechtsausführung | Pitch Steigung (T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| Internal Innen | **RT16.01N-11BSPTB** | 11 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-14BSPTB** | 14 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-14BSPTPB*** | 14 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01N-19BSPTB** | 19 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-28BSPTB** | 28 | 3.52 | 9.525 | 4.0 | ○ | ○ |

### Tool holder / Klemmhalter



R



R

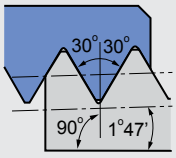
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● ex stock · ab Lager ○ on demand · auf Anfrage

## NPT American standard taper pipe with a shoulder
## Amerikanisches kegeliges Rohrgewinde

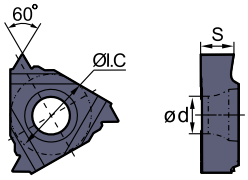
**Thin Type**

ASME B1.20.1-1983
Standard NPT
Standard NPT





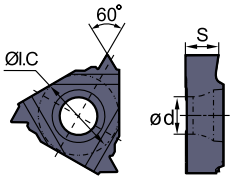

R




| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| External<br>Außen | **RT16.01W-8NPTB** | 8 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01W-11.5NPTB** | 11.5 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-14NPTB** | 14 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01W-18NPTB** | 18 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01W-27NPTB** | 27 | 3.52 | 9.525 | 4.0 | ○ | ○ |



R






*Inserts with chip-breakers
Platten mit Spanbrecher

| | Type<br>Typ | Dimension (mm)<br>Abmessung | | | | Grade<br>Sorte | |
|---|---|---|---|---|---|---|---|
| | Right hand<br>Rechtsausführung | Pitch<br>Steigung<br>(T.P.i) | S | ØI.C | ød | YBG202 | YBG205 |
| Internal<br>Innen | **RT16.01N-8NPTB** | 8 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-11.5NPTB** | 11.5 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-11.5NPTPB*** | 11.5 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01N-14NPTB** | 14 | 3.52 | 9.525 | 4.0 | ● | ○ |
| | **RT16.01N-14NPTPB*** | 14 | 3.52 | 9.525 | 4.0 | ○ | ● |
| | **RT16.01N-18NPTB** | 18 | 3.52 | 9.525 | 4.0 | ○ | ○ |
| | **RT16.01N-27NPTB** | 27 | 3.52 | 9.525 | 4.0 | ○ | ○ |

### Tool holder / Klemmhalter



R



R

Page / Seite A360 A360

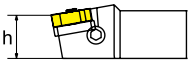
● ex stock · ab Lager ○ on demand · auf Anfrage

## Threading toolholders code key
## Kennzeichnung für Gewindehalter

**Type of screw**
**Bearbeitungsart**

- **W** External threading / Außengewinde
- **N** Internal threading / Innengewinde

**Height**
**Höhe**




Integers to be proceeded by 0
eg: h=8 indicated by 08
Schafthöhe h

**Tool length**
**Schaftlänge**

| Code | Length / Länge |
|---|---|
| **H** | 100 |
| **K** | 125 |
| **M** | 150 |
| **P** | 170 |
| **Q** | 180 |
| **R** | 200 |
| **S** | 250 |
| **T** | 300 |
| **U** | 350 |

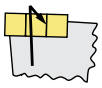
**Toolholder for "Thin Type" insert**
**Halter für "Thin Type" Platten**

**S W R 20 20 K 16 (B)**

**Clamping system**
**Klemmsystem**

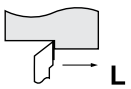


**C**
Top clamping
Pratzenklemmung

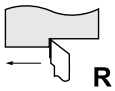


**S**
Screw on
Schraubenklemmung

**Hand of tools**
**Ausführung**

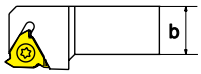


**L** lefthand / Links



**R** Righthand / Rechts

**Shank width**
**Schaftbreite**




Integers to be proceeded by 0
eg: h=8 indicated by 08
Schaftbereit b

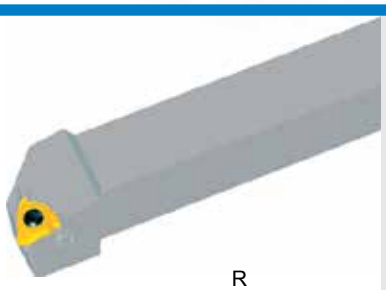
**Insert Dimension**
**Plattenabmessung**

| Cutting edge length / Schneidkantenlänge | IC (mm) |
|---|---|
| **22** | 6.35 |
| **16** | 9.525 |
| **11** | 12.7 |

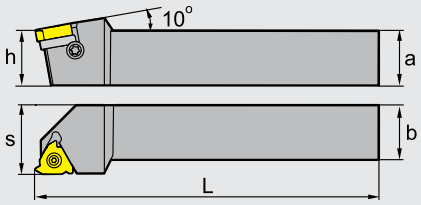




## External threading tools · Aussengewindehalter



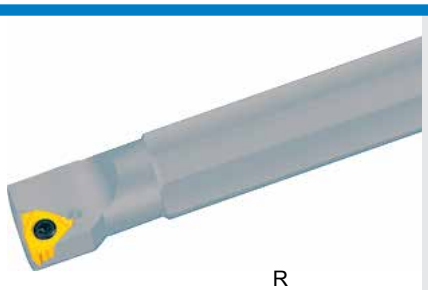
R



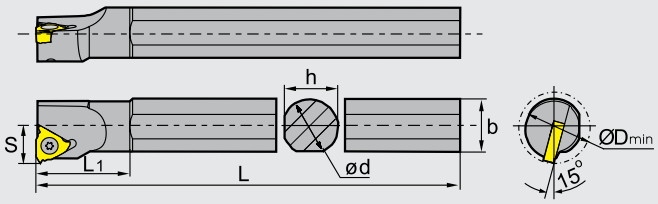

| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | h | b | L | s | Inserts Wendeschneidplatten | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWR | 1616H16 | ● | 16 | 16 | 16 | 100 | 20 | RT16.01W-**** | I60M3.5×12 | MT16-**M | SM4×8C | WT15IP |
| | 2020K16 | ● | 20 | 20 | 20 | 125 | 25 | | | | | |
| | 2525M16 | ● | 25 | 25 | 25 | 150 | 32 | | | | | |
| | 3225P16 | ● | 32 | 32 | 25 | 170 | 32 | | | | | |
| | 3232P16 | ● | 32 | 32 | 32 | 170 | 40 | | | | | |
| | 2525M22 | ● | 25 | 25 | 25 | 150 | 32 | RT22.01W-**** | I60M5×17 | MT22-**M | SM5×8.5C | WT15IP WT20IP |
| | 3225P22 | ○ | 32 | 32 | 25 | 170 | 32 | | | | | |
| | 3232P22 | ● | 32 | 32 | 32 | 170 | 40 | | | | | |
| | 4040S22 | ○ | 40 | 40 | 40 | 250 | 50 | | | | | |
| SWL | 1616H16 | ● | 16 | 16 | 16 | 100 | 20 | LT16.01W-**** | I60M3.5×12 | MT16-**M | SM4×8C | WT15IP |
| | 2020K16 | ● | 20 | 20 | 20 | 125 | 25 | | | | | |
| | 2525M16 | ● | 25 | 25 | 25 | 150 | 32 | | | | | |
| | 3225P16 | ● | 32 | 32 | 25 | 170 | 32 | | | | | |
| | 3232P16 | ○ | 32 | 32 | 32 | 170 | 40 | | | | | |
| | 2525M22 | ● | 25 | 25 | 25 | 150 | 32 | LT22.01W-**** | I60M5×17 | MT22-**M | SM5×8.5C | WT15IP WT20IP |
| | 3225P22 | ○ | 32 | 32 | 25 | 170 | 32 | | | | | |
| | 3232P22 | ● | 32 | 32 | 32 | 170 | 40 | | | | | |
| | 4040S22 | ○ | 40 | 40 | 40 | 250 | 50 | | | | | |

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## Internal threading tools · Innengewindehalter



R

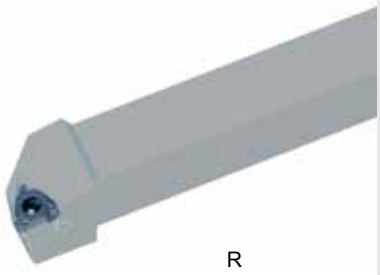



| Type Typ | | Stock Lager | Dimension (mm) Abmessung | | | | | | | Inserts Wendeschneidplatten | Screw Schraube | Shim Unterlage | Shim screw Unterlagesschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | d | L | b | Dmin | s | h | L1 | | | | | |
| SNR | 0016K11 | ● | 16 | 125 | 16 | 12 | 10 | 15 | 20.9 | RT11.01N-**** | I60 M2.5×6.5 | --- | --- | WT07IP |
| | 0016M11 | ● | 16 | 150 | 15.5 | 16 | 10.5 | 15 | 25.9 | | | | | |
| | 0016M16 | ● | 16 | 150 | 15.5 | 20 | 12 | 15 | 27 | RT16.01N-**** | I60 M3.5×8 | --- | --- | WT15IP |
| | 0020M16 | ● | 20 | 150 | 19 | 25 | 14 | 18 | 28.7 | | I60 M3.5×12 | MT16-**M | SM4×8C | WT15IP |
| | 0020Q16 | ● | 20 | 180 | 19 | 25 | 14 | 18 | 34 | | | | | |
| | 0025M16 | ● | 25 | 150 | 24 | 32 | 17 | 23 | 28.8 | | | | | |
| | 0032R16 | ● | 32 | 200 | 31 | 40 | 22 | 30 | 30.9 | | | | | |
| | 0032S16 | ● | 32 | 250 | 31 | 40 | 22 | 30 | 30.9 | | | | | |
| | 0040T16 | ● | 40 | 300 | 38.5 | 50 | 27 | 37 | 31.5 | | | | | |
| | 0050U16 | ○ | 50 | 350 | 49.5 | 63 | 35 | 49 | 40.2 | | | | | |
| | 0020Q22 | ● | 20 | 180 | 21.5 | 25 | 15 | 18 | 35 | RT22.01N-**** | I60 M5×10 | | | WT20IP |
| | 0025R22 | ● | 25 | 200 | 24 | 32 | 19 | 23 | 39 | | I60 M5×17 | MT22-**M | SM5×8.5C | WT15IP WT20IP |
| | 0032S22 | ● | 32 | 250 | 31 | 40 | 22 | 30 | 36.4 | | | | | |
| | 0040T22 | ● | 40 | 300 | 38.5 | 50 | 27 | 37 | 37.2 | | | | | |
| | 0050U22 | ● | 50 | 350 | 48.5 | 63 | 35 | 47 | 42.6 | | | | | |
| SNL | 0016K11 | ● | 16 | 125 | 16 | 12 | 10 | 15 | 20.9 | LT11.01N-**** | I60 M2.5×6.5 | --- | --- | WT07IP |
| | 0016M11 | ● | 16 | 150 | 15.5 | 16 | 10.5 | 15 | 25.9 | | | | | |
| | 0016M16 | ● | 16 | 150 | 15.5 | 20 | 12 | 15 | 27 | LT16.01N-**** | I60 M3.5×8 | --- | --- | WT15IP |
| | 0020M16 | ○ | 20 | 150 | 19 | 25 | 14 | 18 | 28.7 | | I60 M3.5×12 | MT16-**M | SM4×8C | WT15IP |
| | 0020Q16 | ● | 20 | 180 | 19 | 25 | 14 | 18 | 34 | | | | | |
| | 0025M16 | ● | 25 | 150 | 24 | 32 | 17 | 23 | 28.8 | | | | | |
| | 0032R16 | ● | 32 | 200 | 31 | 40 | 22 | 30 | 30.9 | | | | | |
| | 0032S16 | ○ | 32 | 250 | 31 | 40 | 22 | 30 | 30.9 | | | | | |
| | 0040T16 | ● | 40 | 300 | 38.5 | 50 | 27 | 37 | 31.5 | | | | | |
| | 0050U16 | ○ | 50 | 350 | 49.5 | 63 | 35 | 49 | 40.2 | | | | | |
| | 0020Q22 | ● | 20 | 180 | 21.5 | 25 | 15 | 18 | 35 | LT22.01N-**** | I60 M5×10 | --- | --- | WT20IP |
| | 0025R22 | ○ | 25 | 200 | 24 | 32 | 19 | 23 | 39 | | I60 M5×17 | MT22-**M | SM5×8.5C | WT15IP WT20IP |
| | 0032S22 | ● | 32 | 250 | 31 | 40 | 22 | 30 | 36.4 | | | | | |
| | 0040T22 | ● | 40 | 300 | 38.5 | 50 | 27 | 37 | 37.2 | | | | | |
| | 0050U22 | ● | 50 | 350 | 48.5 | 63 | 35 | 47 | 42.6 | | | | | |

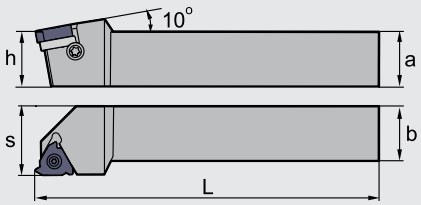
● ex stock · ab Lager ○ on demand · auf Anfrage

## External threading tools
## Außen Gewindehalter

**Thin Type**



R



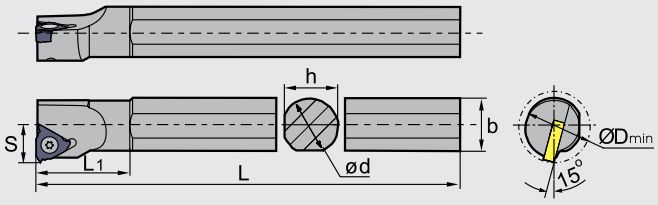

| Type Typ | | Stock Lager | Dimension (mm) Abmessung a | h | b | L | s | Inserts Wendeschneidplatten | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWR | 1616H16B | ● | 16 | 16 | 16 | 100 | 20 | RT16.01W-****B | I60M3.5×12TT | MT16-**M | SM4×8C | WT15IP |
| | 2020K16B | ● | 20 | 20 | 20 | 125 | 25 | | | | | |
| | 2525M16B | ● | 25 | 25 | 25 | 150 | 32 | | | | | |
| | 3225P16B | ● | 32 | 32 | 25 | 170 | 32 | | | | | |
| | 3232P16B | ● | 32 | 32 | 32 | 170 | 40 | | | | | |

## Internal threading tools
## Innengewindehalter

**Thin Type**



R




| Type Typ | | Stock Lager | Dimension (mm) Abmessung d | L | b | $D_{min}$ | s | h | $L_1$ | Inserts Wendeschneidplatten | Screw Schraube | Shim Unterlage | Shim screw Unterlagsschraube | Wrench Schlüssel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SNR | 0016M16B | ● | 16 | 150 | 15.5 | 20 | 12 | 15 | 27 | RT16.01N-□□□□B | I60M3.5×08TT | — | — | WT15IP |
| | 0020Q16B | ● | 20 | 180 | 19 | 25 | 14 | 18 | 34 | | I60M3.5×12TT | MT16-**M | SM4×8C | |
| | 0025M16B | ● | 25 | 150 | 24 | 32 | 17 | 23 | 28.8 | | | | | |
| | 0032R16B | ● | 32 | 200 | 31 | 40 | 22 | 30 | 30.9 | | | | | |
| | 0032S16B | ● | 32 | 250 | 31 | 40 | 22 | 30 | 30.9 | | | | | |

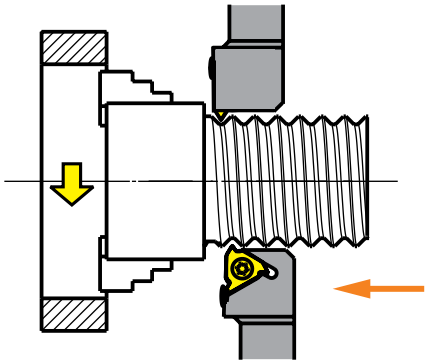
● ex stock · ab Lager ○ on demand · auf Anfrage

Steps to get the best threading result:
Bearbeitungsfolge für beste Ergebnisse beim Gewindeschneiden:

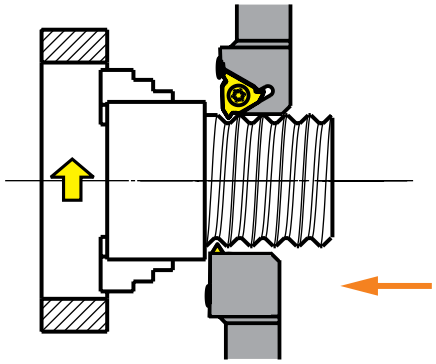
1. Select thread machining method
   **Wahl der Gewindedrehmethode**
2. Decide helical angle, select shim
   **Auswahl des Winkels und der Unterlage**
3. Choose insert and toolholder size
   **Auswahl der Halter und Platten**
4. By checking reference table of standard threading program, select feasible cutting parameters.
   **Auswahl der Schnittparameter**
5. Select feed way
   **Auswahl der Schnittrichtung**

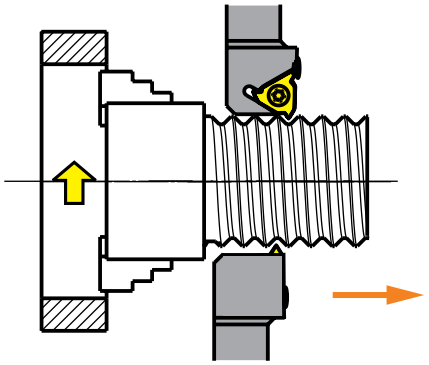
## Thread machining method · Gewindedrehmethode

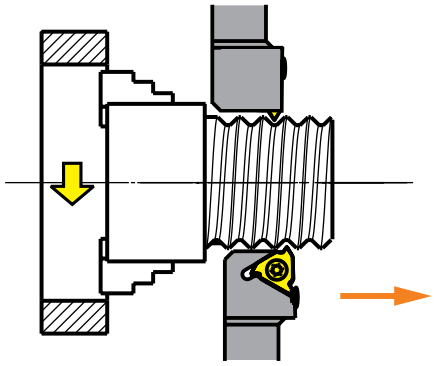
External threading machining (Right thread)
Außenbearbeitung (Rechtsausführung)



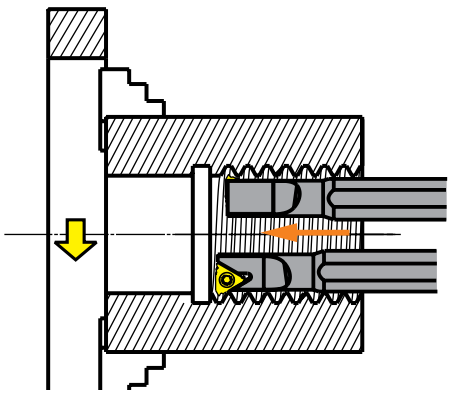
External threading machining (Left thread)
Außenbearbeitung (Linksausführung)



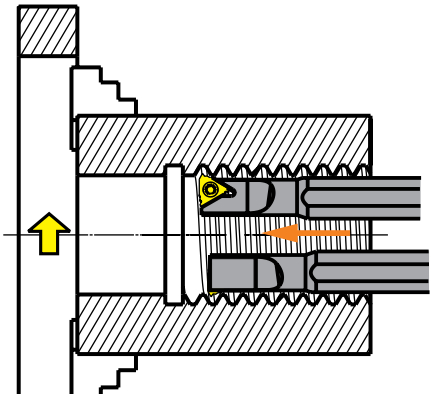




Internal threading machining (Right thread)
Innenbearbeitung (Rechtsausführung)



Internal threading machining (Left thread)
Innenbearbeitung (Linksausführung)

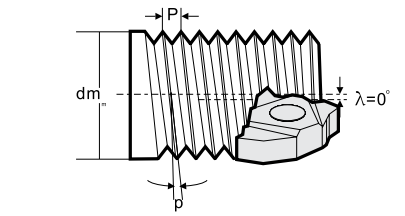


## Decide helical angle, select shim · Auswahl des Winkels und der Unterlage

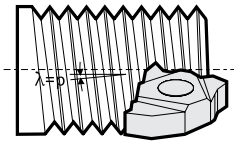
The flank clearance angles of the thread profile is dependent on the helix angle of the thread. The helix angle of the thread must coincide with the insert's angle of inclination angle as far as possible to get the ideal profile, to avoid longer unfavourable wear on one of the flanks and thus to ensure tool life.

Die Flankenfreiwinkel des Gewindeprofils sind vom Steigungswinkel des Gewindes abhängig.
Der Steigungswinkel des Gewindes muss mit dem Neigungswinkel der Gewindeplatte soweit wie möglich übereinstimmen, um Profil-Genauigkeit zu erzielen, ungleichmäßigen Freiflächenverschleiß der Gewindeplatte zu vermeiden und eine längere Standzeit zu gewährleisten.

p = Helix angle
Steigungswinkel




λ = Inclination angle
Neigungswinkel




$$\lambda = \arctan \frac{p}{d_2 \times \pi}$$

p = Pitch
Steigung

$d_2$= Effective diameter of thread
Flankendurchmesser

λ = Inclination angle
Neigungswinkel

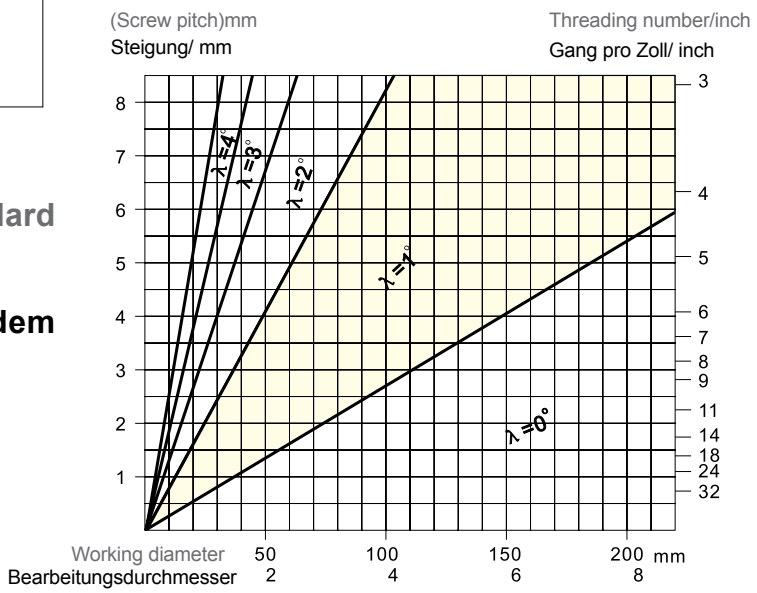
Shim specification table are as following:
Wahl der Unterlegplatte

| Screw pitch range Steigungs-bereich | Insert dimensions Abmessung | Inclined angle Neigungs-winkel | Shim Unterlage |
|---|---|---|---|
| 0.5-3.0 | 16 | 0<br>1<br>2<br>3 | MT16-00M<br>MT16-01M<br>MT16-02M<br>MT16-03M |
| 3.5-6.0 | 22 | 0<br>1<br>2<br>3 | MT22-00M<br>MT22-01M<br>MT22-02M<br>MT22-03M |

**Shim for λ= 1° is as the standard shim with the toolholder.**

**Die Unterlage λ=1° wird mit dem Halter geliefert.**

Select shim:
Wahl der richtigen Unterlage:



## Select proper inserts and size of toolholder (Please refer to detailed table of threading tools and inserts)
## Ausgewählt zweckmäßige Gewindeplatten und Haltergrößen

## Parameter table for threading machining program under different conditions
## Parametertabelle für das Gewindedrehprogramm für unterschiedliche Bedingungen

Table of recommended infeed for metric **ISO external threading with wiper edge**
Empfohlene Zustellungswerte für metrische **ISO Außengewinde mit Wiper**

| Pitch(mm) Steigung | 1.0 | 1.25 | 1.5 | 1.75 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 |
|---|---|---|---|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.72 | 0.86 | 1.02 | 1.17 | 1.33 | 1.63 | 1.94 | 2.58 | 3.21 |
| Cutting times(nap) Anzahl der Schnitte | 5 | 6 | 7 | 8 | 9 | 11 | 13 | 15 | 17 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X . Axial Z | | | | | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.20/- | 0.20/- | 0.21/- | 0.22/- | 0.24/- | 0.25/- | 0.26/- | 0.35/- | 0.40/- |
| 2 | 0.18/0.10 | 0.18/0.10 | 0.18/0.10 | 0.20/0.12 | 0.22/0.13 | 0.24/0.14 | 0.24/0.14 | 0.30/0.17 | 0.35/0.20 |
| 3 | 0.16/0.09 | 0.14/0.09 | 0.18/0.10 | 0.18/0.10 | 0.20/0.12 | 0.21/0.12 | 0.20/0.12 | 0.25/0.14 | 0.30/0.17 |
| 4 | 0.10/0.06 | 0.10/0.08 | 0.15/0.09 | 0.15/0.09 | 0.15/0.09 | 0.18/0.10 | 0.20/0.12 | 0.20/0.12 | 0.28/0.16 |
| 5 | 0.08/- | 0.08/0.06 | 0.12/0.07 | 0.13/0.08 | 0.12/0.07 | 0.15/0.09 | 0.18/0.10 | 0.18/0.10 | 0.25/0.14 |
| 6 | | | 0.10/0.06 | 0.11/0.06 | 0.12/0.07 | 0.12/0.07 | 0.15/0.09 | 0.18//0.10 | 0.20/0.12 |
| 7 | | | 0.08/- | 0.10/0.06 | 0.10/0.06 | 0.12/0.07 | 0.13/0.08 | 0.16/0.09 | 0.18/0.10 |
| 8 | | | | 0.08/- | 0.10/0.06 | 0.10/0.06 | 0.12/0.07 | 0.15/0.09 | 0.16/0.09 |
| 9 | | | | | 0.08/- | 0.10/0.06 | 0.10/0.06 | 0.15/0.09 | 0.15/0.09 |
| 10 | | | | | | 0.08/0.05 | 0.10/0.06 | 0.13/0.08 | 0.15/0.09 |
| 11 | | | | | | 0.08/- | 0.08/0.06 | 0.12/0.07 | 0.13/0.08 |
| 12 | | | | | | | 0.08/0.05 | 0.12/0.07 | 0.13/0.08 |
| 13 | | | | | | | | 0.11/0.06 | 0.12/0.07 |
| 14 | | | | | | | | 0.10/0.06 | 0.12/0.07 |
| 15 | | | | | | | | 0.08/- | 0.11/0.06 |
| 16 | | | | | | | | | 0.10/0.06 |
| 17 | | | | | | | | | 0.08/- |

Table of recommended infeed for metric **ISO internal threading with wiper edge**
Empfohlene Zustellungswerte für metrische **ISO Innengewinde mit Wiper**

| Pitch(mm) Steigung | 1.00 | 1.25 | 1.5 | 1.75 | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 |
|---|---|---|---|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.62 | 0.77 | 0.92 | 1.06 | 1.21 | 0.15 | 1.79 | 2.36 | 2.95 |
| Cutting times(nap) Anzahl der Schnitte | 5 | 6 | 7 | 8 | 9 | 11 | 13 | 15 | 17 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X . Axial Z | | | | | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.18/- | 0.20/- | 0.22/- | 0.23/- | 0.24/- | 0.25/- | 0.26/- | 0.30/- | 0.32/- |
| 2 | 0.14/0.08 | 0.15/0.09 | 0.16/0.09 | 0.16/0.09 | 0.18/0.10 | 0.20/0.12 | 0.20/0.12 | 0.25/0.14 | 0.28/0.16 |
| 3 | 0.12/0.07 | 0.12/0.07 | 0.14/0.08 | 0.14/0.08 | 0.15/0.09 | 0.15/0.09 | 0.20/0.12 | 0.22/0.13 | 0.25/0.14 |
| 4 | 0.10/0.06 | 0.12/0.07 | 0.12/0.07 | 0.13/0.08 | 0.14/0.08 | 0.15/0.09 | 0.18/0.10 | 0.20/0.12 | 0.22/0.13 |
| 5 | 0.08/- | 0.10/0.06 | 0.11/0.06 | 0.12/0.07 | 0.12/0.07 | 0.13/0.08 | 0.15/0.09 | 0.18/0.10 | 0.21/0.12 |
| 6 | | | 0.09/0.05 | 0.10/0.06 | 0.11/0.06 | 0.12/0.07 | 0.12/0.07 | 0.15/0.09 | 0.20/0.12 |
| 7 | | | 0.08/- | 0.10/0.06 | 0.10/0.06 | 0.12/0.07 | 0.12/0.07 | 0.15/0.09 | 0.18/0.10 |
| 8 | | | | 0.08/- | 0.09/0.05 | 0.10/0.06 | 0.10/0.06 | 0.15/0.09 | 0.18/0.10 |
| 9 | | | | | 0.08/- | 0.10/0.06 | 0.10/0.06 | 0.12/0.07 | 0.15/0.09 |
| 10 | | | | | | 0.09/0.05 | 0.10/0.06 | 0.12/0.07 | 0.15/0.09 |
| 11 | | | | | | 0.08/- | 0.10/0.06 | 0.12/0.07 | 0.15/0.09 |
| 12 | | | | | | | 0.08/0.05 | 0.11/0.06 | 0.15/0.09 |
| 13 | | | | | | | | 0.11/0.06 | 0.12/0.07 |
| 14 | | | | | | | | 0.10/0.06 | 0.11/0.06 |
| 15 | | | | | | | | 0.08/- | 0.10/0.06 |
| 16 | | | | | | | | | 0.10/0.06 |
| 17 | | | | | | | | | 0.08/- |

Table of recommended infeed for **American unified standard external threading inserts**
Empfohlene Zustellungswerte für **American unified standard Außengewinde Schneidplatten**

| Pitch (mm) Steigung | 24 | 20 | 18 | 16 | 14 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.649 | 0.779 | 0.866 | 0.974 | 1.113 | 1.299 | 1.416 | 1.558 | 1.731 | 1.948 | 2.226 | 2.597 | 3.116 |
| Cutting times(nap Anzahl der Schnitte | 5 | 6 | 6 | 7 | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X . Axial Z | | | | | | | | | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.206 / — | 0.210 / — | 0.233 / — | 0.226 / — | 0.196 / — | 0.229 / — | 0.220 / — | 0.214 / — | 0.210 / — | 0.211 / — | 0.213 / — | 0.218 / — | 0.229 / — |
| 2 | 0.148 / 0.086 | 0.163 / 0.094 | 0.181 / 0.104 | 0.188 / 0.109 | 0.189 / 0.110 | 0.222 / 0.128 | 0.228 / 0.132 | 0.240 / 0.139 | 0.256 / 0.148 | 0.276 / 0.160 | 0.304 / 0.176 | 0.343 / 0.198 | 0.399 / 0.230 |
| 3 | 0.114 / 0.066 | 0.125 / 0.072 | 0.139 / 0.080 | 0.145 / 0.083 | 0.146 / 0.084 | 0.170 / 0.098 | 0.176 / 0.102 | 0.184 / 0.106 | 0.196 / 0.113 | 0.212 / 0.122 | 0.234 / 0.135 | 0.263 / 0.152 | 0.306 / 0.177 |
| 4 | 0.096 / 0.055 | 0.105 / 0.061 | 0.117 / 0.068 | 0.122 / 0.070 | 0.123 / 0.071 | 0.143 / 0.083 | 0.148 / 0.086 | 0.155 / 0.090 | 0.165 / 0.095 | 0.179 / 0.103 | 0.197 / 0.114 | 0.222 / 0.128 | 0.258 / 0.149 |
| 5 | 0.085 / 0.049 | 0.093 / 0.054 | 0.103 / 0.059 | 0.107 / 0.062 | 0.108 / 0.062 | 0.126 / 0.073 | 0.131 / 0.075 | 0.137 / 0.079 | 0.146 / 0.084 | 0.158 / 0.091 | 0.173 / 0.100 | 0.195 / 0.113 | 0.227 / 0.131 |
| 6 | | 0.084 / 0.048 | 0.093 / 0.054 | 0.097 / 0.056 | 0.098 / 0.056 | 0.114 / 0.066 | 0.118 / 0.068 | 0.124 / 0.072 | 0.132 / 0.076 | 0.142 / 0.082 | 0.157 / 0.091 | 0.177 / 0.102 | 0.205 / 0.119 |
| 7 | | | | 0.089 / 0.052 | 0.090 / 0.052 | 0.105 / 0.061 | 0.109 / 0.063 | 0.114 / 0.066 | 0.121 / 0.070 | 0.131 / 0.076 | 0.144 / 0.083 | 0.163 / 0.094 | 0.189 / 0.109 |
| 8 | | | | | 0.084 / 0.048 | 0.098 / 0.056 | 0.101 / 0.058 | 0.106 / 0.061 | 0.113 / 0.065 | 0.122 / 0.070 | 0.134 / 0.078 | 0.151 / 0.087 | 0.176 / 0.101 |
| 9 | | | | | 0.079 / 0.045 | 0.092 / 0.053 | 0.095 / 0.055 | 0.100 / 0.057 | 0.106 / 0.061 | 0.114 / 0.066 | 0.126 / 0.073 | 0.142 / 0.082 | 0.165 / 0.095 |
| 10 | | | | | | | 0.090 / 0.052 | 0.094 / 0.054 | 0.100 / 0.058 | 0.108 / 0.063 | 0.119 / 0.069 | 0.134 / 0.078 | 0.156 / 0.090 |
| 11 | | | | | | | | 0.090 / 0.052 | 0.095 / 0.055 | 0.103 / 0.059 | 0.113 / 0.065 | 0.128 / 0.074 | 0.149 / 0.086 |
| 12 | | | | | | | | | 0.091 / 0.053 | 0.098 / 0.057 | 0.108 / 0.063 | 0.122 / 0.071 | 0.142 / 0.082 |
| 13 | | | | | | | | | | 0.094 / 0.054 | 0.104 / 0.060 | 0.117 / 0.068 | 0.136 / 0.079 |
| 14 | | | | | | | | | | | 0.100 / 0.058 | 0.113 / 0.065 | 0.131 / 0.076 |
| 15 | | | | | | | | | | | | 0.109 / 0.063 | 0.126 / 0.073 |
| 16 | | | | | | | | | | | | | 0.122 / 0.071 |

Table of recommended infeed for **American unified standard internal threading inserts**
Empfohlene Zustellungswerte für **American unified standard Innengewinde Schneidplatten**

| Pitch (mm) Steigung | 24 | 20 | 18 | 16 | 14 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.573 | 0.687 | 0.764 | 0.860 | 0.982 | 1.146 | 1.250 | 1.375 | 1.528 | 1.719 | 1.964 | 2.291 | 2.750 |
| Cutting times(nap) Anzahl der Schnitte | 5 | 6 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X . Axial Z | | | | | | | | | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.193 / — | 0.200 / — | 0.222 / — | 0.219 / — | 0.220 / — | 0.228 / — | 0.250 / — | 0.247 / — | 0.246 / — | 0.252 / — | 0.262 / — | 0.278 / — | 0.302 / — |
| 2 | 0.127 / 0.073 | 0.239 / 0.081 | 0.155 / 0.089 | 0.161 / 0.093 | 0.173 / 0.100 | 0.190 / 0.110 | 0.207 / 0.120 | 0.216 / 0.125 | 0.229 / 0.132 | 0.247 / 0.142 | 0.271 / 0.156 | 0.304 / 0.176 | 0.353 / 0.204 |
| 3 | 0.098 / 0.056 | 0.107 / 0.062 | 0.119 / 0.069 | 0.124 / 0.072 | 0.132 / 0.076 | 0.146 / 0.084 | 0.159 / 0.092 | 0.166 / 0.096 | 0.176 / 0.101 | 0.189 / 0.109 | 0.208 / 0.120 | 0.234 / 0.135 | 0.271 / 0.156 |
| 4 | 0.082 / 0.048 | 0.090 / 0.052 | 0.100 / 0.058 | 0.104 / 0.060 | 0.112 / 0.064 | 0.123 / 0.071 | 0.134 / 0.077 | 0.140 / 0.081 | 0.148 / 0.086 | 0.160 / 0.092 | 0.175 / 0.101 | 0.197 / 0.114 | 0.228 / 0.132 |
| 5 | 0.073 / 0.042 | 0.079 / 0.046 | 0.088 / 0.051 | 0.092 / 0.053 | 0.098 / 0.057 | 0.108 / 0.062 | 0.118 / 0.068 | 0.123 / 0.071 | 0.130 / 0.075 | 0.141 / 0.081 | 0.1543 / 0.089 | 0.173 / 0.100 | 0.201 / 0.116 |
| 6 | | 0.072 / 0.041 | 0.080 / 0.046 | 0.083 / 0.048 | 0.089 / 0.051 | 0.098 / 0.056 | 0.107 / 0.062 | 0.111 / 0.064 | 0.118 / 0.068 | 0.127 / 0.073 | 0.140 / 0.081 | 0.157 / 0.091 | 0.182 / 0.105 |
| 7 | | | | 0.077 / 0.044 | 0.082 / 0.047 | 0.090 / 0.052 | 0.098 / 0.057 | 0.102 / 0.059 | 0.108 / 0.063 | 0.117 / 0.067 | 0.128 / 0.074 | 0.144 / 0.083 | 0.167 / 0.097 |
| 8 | | | | | 0.076 / 0.044 | 0.084 / 0.048 | 0.091 / 0.053 | 0.095 / 0.055 | 0.101 / 0.058 | 0.109 / 0.063 | 0.119 / 0.069 | 0.134 / 0.078 | 0.156 / 0.090 |
| 9 | | | | | | 0.079 / 0.045 | 0.086 / 0.050 | 0.090 / 0.052 | 0.095 / 0.055 | 0.102 / 0.059 | 0.112 / 0.065 | 0.126 / 0.073 | 0.146 / 0.084 |
| 10 | | | | | | | | 0.085 / 0.049 | 0.090 / 0.052 | 0.097 / 0.056 | 0.106 / 0.061 | 0.119 / 0.069 | 0.138 / 0.080 |
| 11 | | | | | | | | | 0.085 / 0.049 | 0.092 / 0.053 | 0.101 / 0.058 | 0.113 / 0.065 | 0.131 / 0.076 |
| 12 | | | | | | | | | | 0.088 / 0.051 | 0.096 / 0.056 | 0.108 / 0.063 | 0.126 / 0.073 |
| 13 | | | | | | | | | | | 0.092 / 0.053 | 0.101 / 0.060 | 0.121 / 0.070 |
| 14 | | | | | | | | | | | | 0.100 / 0.058 | 0.116 / 0.067 |
| 15 | | | | | | | | | | | | | 0.112 / 0.065 |

Table of recommended infeed for **British standard internal and external threading inserts**
Empfohlene Zustellungswerte für **British Standard Innen- und Außengewinde Schneidplatten**

| Pitch(mm) Steigung | 28 | 20 | 19 | 16 | 14 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.581 | 0.813 | 0.856 | 1.017 | 1.162 | 1.355 | 1.479 | 1.626 | 1.807 | 2.033 | 2.324 | 2.711 | 3.253 |
| Cutting times(nap) Anzahl der Schnitte | 5 | 6 | 6 | 8 | 8 | 9 | 9 | 10 | 11 | 12 | 14 | 15 | 16 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X . Axial Z | | | | | | | | | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.179 / — | 0.211 / — | 0.223 / — | 0.196 / — | 0.223 / — | 0.226 / — | 0.246 / — | 0.236 / — | 0.230 / — | 0.255 / — | 0.195 / — | 0.197 / — | 0.204 / — |
| 2 | 0.134 / 0.070 | 0.172 / 0.089 | 0.181 / 0.094 | 0.186 / 0.097 | 0.213 / 0.111 | 0.234 / 0.122 | 0.255 / 0.133 | 0.226 / 0.139 | 0.282 / 0.147 | 0.304 / 0.158 | 0.322 / 0.167 | 0.361 / 0.189 | 0.421 / 0.219 |
| 3 | 0.104 / 0.054 | 0.132 / 0.069 | 0.139 / 0.072 | 0.143 / 0.074 | 0.163 / 0.085 | 0.180 / 0.093 | 0.197 / 0.102 | 0.206 / 0.106 | 0.216 / 0.113 | 0.233 / 0.121 | 0.247 / 0.128 | 0.278 / 0.145 | 0.323 / 0.168 |
| 4 | 0.087 / 0.045 | 0.111 / 0.058 | 0.117 / 0.061 | 0.120 / 0.063 | 0.138 / 0.072 | 0.151 / 0.079 | 0.165 / 0.086 | 0.172 / 0.090 | 0.182 / 0.095 | 0.197 / 0.102 | 0.208 / 0.108 | 0.234 / 0.122 | 0.272 / 0.142 |
| 5 | 0.077 / 0.040 | 0.098 / 0.051 | 0.103 / 0.054 | 0.106 / 0.055 | 0.121 / 0.063 | 0.133 / 0.069 | 0.145 / 0.076 | 0.152 / 0.079 | 0.161 / 0.084 | 0.1738 / 0.090 | 0.183 / 0.095 | 0.207 / 0.108 | 0.240 / 0.125 |
| 6 | | 0.089 / 0.046 | 0.093 / 0.049 | 0.096 / 0.050 | 0.110 / 0.057 | 0.121 / 0.063 | 0.131 / 0.068 | 0.137 / 0.071 | 0.145 / 0.076 | 0.157 / 0.082 | 0.166 / 0.086 | 0.187 / 0.097 | 0.217 / 0.113 |
| 7 | | | | 0.088 / 0.046 | 0.101 / 0.052 | 0.111 / 0.058 | 0.121 / 0.063 | 0.126 / 0.066 | 0.134 / 0.070 | 0.144 / 0.075 | 0.152 / 0.079 | 0.172 / 0.089 | 0.200 / 0.104 |
| 8 | | | | 0.082 / 0.043 | 0.093 / 0.049 | 0.103 / 0.054 | 0.113 / 0.059 | 0.117 / 0.061 | 0.124 / 0.065 | 0.134 / 0.070 | 0.142 / 0.074 | 0.160 / 0.083 | 0.186 / 0.097 |
| 9 | | | | | | 0.097 / 0.050 | 0.106 / 0.055 | 0.110 / 0.057 | 0.117 / 0.061 | 0.126 / 0.066 | 0.133 / 0.069 | 0.150 / 0.078 | 0.174 / 0.091 |
| 10 | | | | | | | | 0.104 / 0.054 | 0.111 / 0.058 | 0.119 / 0.062 | 0.126 / 0.066 | 0.142 / 0.074 | 0.165 / 0.086 |
| 11 | | | | | | | | | 0.105 / 0.055 | 0.113 / 0.059 | 0.120 / 0.062 | 0.135 / 0.070 | 0.157 / 0.082 |
| 12 | | | | | | | | | | 0.108 / 0.056 | 0.114 / 0.060 | 0.129 / 0.067 | 0.150 / 0.078 |
| 13 | | | | | | | | | | | 0.110 / 0.055 | 0.124 / 0.064 | 0.144 / 0.075 |
| 14 | | | | | | | | | | | | 0.119 / 0.062 | 0.138 / 0.072 |
| 15 | | | | | | | | | | | | 0.115 / 0.060 | 0.133 / 0.069 |

Table of recommended infeed for **NPT internal and external threading inserts**
Empfohlene Zustellungswerte für **NPT Innen- und Außengewinde Schneidplatten**

| Pitch (mm) Steigung | 27 | 18 | 14 | 11.5 | 8 |
|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.75 | 1.129 | 1.451 | 1.767 | 2.54 |
| Cutting times(nap) Anzahl der Schnitte | 6 | 8 | 10 | 12 | 14 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X · Axial Z | | | | |
| | X/Z | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.19/- | 0.22/- | 0.240/- | 0.24/- | 0.255/- |
| 2 | 0.15/0.087 | 0.181/0.104 | 0.200/0.115 | 0.208/0.120 | 0.250/0.144 |
| 3 | 0.13/0.075 | 0.152/0.088 | 0.170/0.098 | 0.182/0.105 | 0.245/0.141 |
| 4 | 0.11/0.063 | 0.141/0.081 | 0.150/0.086 | 0.168/0.097 | 0.230/0.133 |
| 5 | 0.09/0.052 | 0.131/0.075 | 0.140/0.081 | 0.155/0.089 | 0.210/0.121 |
| 6 | 0.08/0.46 | 0.121/0.070 | 0.130/0.075 | 0.145/0.084 | 0.195/0.112 |
| 7 | | 0.101/0.058 | 0.120/0.069 | 0.138/0.079 | 0.180/0.104 |
| 8 | | 0.082/0.047 | 0.110/0.063 | 0.124/0.072 | 0.175/0.101 |
| 9 | | | 0.100/0.058 | 0.117/0.067 | 0.170/0.098 |
| 10 | | | 0.091/0.052 | 0.105/0.060 | 0.155/0.089 |
| 11 | | | | 0.095/0.055 | 0.140/0.080 |
| 12 | | | | 0.090/0.052 | 0.125/0.072 |
| 13 | | | | | 0.110/0.063 |
| 14 | | | | | 0.100/0.058 |

Table of recommended infeed for **BSPT internal and external threading inserts**
Empfohlene Zustellungswerte für **BSPT Innen- und Außengewinde Schneidplatten**

| Pitch (mm) Steigung | 28 | 19 | 14 | 11 |
|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 0.581 | 0.856 | 1.162 | 1.479 |
| Cutting times(nap) Anzahl der Schnitte | 5 | 6 | 8 | 10 |
| Cutting order Schnittaufteilung | Radial X · Axial Z<br>Radial X · Axial Z | | | |
| | X/Z | X/Z | X/Z | X/Z |
| 1 | 0.179/- | 0.223/- | 0.222/- | 0.214/- |
| 2 | 0.134/0.070 | 0.181/0.094 | 0.213/0.111 | 0.242/0.126 |
| 3 | 0.103/0.054 | 0.139/0.072 | 0.163/0.085 | 0.186/0.097 |
| 4 | 0.087/0.045 | 0.117/0.061 | 0.138/0.072 | 0.157/0.082 |
| 5 | 0.078/0.040 | 0.103/0.054 | 0.121/0.063 | 0.138/0.072 |
| 6 | | 0.093/0.049 | 0.110/0.057 | 0.125//0.065 |
| 7 | | | 0.101/0.052 | 0.115/0.060 |
| 8 | | | 0.094/0.049 | 0.107/0.056 |
| 9 | | | | 0.100/0.052 |
| 10 | | | | 0.095//0.049 |

## Table of recommended infeed for **NPTF 60° internal and external threading inserts**
## Empfohlene Zustellungswerte für **NPTF 60° Innen- und Außengewinde Schneidplatten**

### External / Außen

| Pitch(mm) Steigung | 8 | 11.5 | 14 | 18 | 27 |
|---|---|---|---|---|---|
| Total feed(a) Gesamtzustellung | 2.38 | 1.63 | 1.35 | 1.00 | 0.64 |
| Cutting times(nap) Anzahl der Schnitte | 15 | 12 | 10 | 8 | 6 |
| Cutting order Schnittaufteilung | Radial X Radial X | | | | |
| 1 | 0.32 | 0.24 | 0.23 | 0.19 | 0.16 |
| 2 | 0.27 | 0.23 | 0.21 | 0.16 | 0.14 |
| 3 | 0.23 | 0.19 | 0.16 | 0.14 | 0.11 |
| 4 | 0.19 | 0.15 | 0.14 | 0.13 | 0.09 |
| 5 | 0.17 | 0.13 | 0.13 | 0.12 | 0.08 |
| 6 | 0.16 | 0.11 | 0.12 | 0.11 | 0.06 |
| 7 | 0.15 | 0.11 | 0.11 | 0.09 | |
| 8 | 0.14 | 0.11 | 0.10 | 0.06 | |
| 9 | 0.13 | 0.10 | 0.09 | | |
| 10 | 0.12 | 0.10 | 0.06 | | |
| 11 | 0.12 | 0.10 | | | |
| 12 | 0.11 | 0.06 | | | |
| 13 | 0.11 | | | | |
| 14 | 0.10 | | | | |
| 15 | 0.06 | | | | |

### Internal / Innen

| Pitch(mm) Steigung | 8 | 11.5 | 14 | 18 | 27 |
|---|---|---|---|---|---|
| Total feed(a) Gesamtzustellung | 2.38 | 1.63 | 1.35 | 1.00 | 0.64 |
| Cutting times(nap) Anzahl der Schnitte | 15 | 12 | 10 | 8 | 6 |
| Cutting order Schnittaufteilung | Radial X Radial X | | | | |
| 1 | 0.35 | 0.27 | 0.25 | 0.2 | 0.15 |
| 2 | 0.29 | 0.22 | 0.20 | 0.17 | 0.13 |
| 3 | 0.26 | 0.20 | 0.18 | 0.15 | 0.12 |
| 4 | 0.20 | 0.16 | 0.14 | 0.12 | 0.09 |
| 5 | 0.17 | 0.13 | 0.12 | 0.1 | 0.08 |
| 6 | 0.15 | 0.12 | 0.11 | 0.09 | 0.08 |
| 7 | 0.14 | 0.10 | 0.10 | 0.09 | |
| 8 | 0.12 | 0.10 | 0.09 | 0.08 | |
| 9 | 0.12 | 0.09 | 0.08 | | |
| 10 | 0.11 | 0.08 | 0.08 | | |
| 11 | 0.10 | 0.08 | | | |
| 12 | 0.10 | 0.08 | | | |
| 13 | 0.09 | | | | |
| 14 | 0.09 | | | | |
| 15 | 0.09 | | | | |

## Table of recommended infeed for **30° round screw internal and external threading inserts**
## Empfohlene Zustellungswerte für **30° runde Gewinde Innen- und Außengewinde Schneidplatten**

### External / Außen

| Pitch(mm) Steigung | 6 | 8 | 10 |
|---|---|---|---|
| Total feed(a) Gesamtzustellung | 2.12 | 1.59 | 1.27 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 10 | 8 |
| Cutting order Schnittaufteilung | Radial X Radial X | | |
| 1 | 0.26 | 0.23 | 0.23 |
| 2 | 0.225 | 0.21 | 0.21 |
| 3 | 0.24 | 0.20 | 0.20 |
| 4 | 0.22 | 0.19 | 0.19 |
| 5 | 0.21 | 0.18 | 0.16 |
| 6 | 0.19 | 0.16 | 0.12 |
| 7 | 0.17 | 0.14 | 0.10 |
| 8 | 0.16 | 0.12 | 0.06 |
| 9 | 0.14 | 0.10 | |
| 10 | 0.12 | 0.06 | |
| 11 | 0.10 | | |
| 12 | 0.06 | | |

### Internal / Innen

| Pitch(mm) Steigung | 6 | 8 | 10 |
|---|---|---|---|
| Total feed(a) Gesamtzustellung | 2.12 | 1.59 | 1.27 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 10 | 8 |
| Cutting order Schnittaufteilung | Radial X Radial X | | |
| 1 | 0.35 | 0.29 | 0.26 |
| 2 | 0.29 | 0.24 | 0.22 |
| 3 | 0.26 | 0.22 | 0.20 |
| 4 | 0.20 | 0.17 | 0.15 |
| 5 | 0.17 | 0.14 | 0.13 |
| 6 | 0.15 | 0.13 | 0.11 |
| 7 | 0.14 | 0.11 | 0.10 |
| 8 | 0.13 | 0.10 | 0.09 |
| 9 | 0.12 | 0.10 | |
| 10 | 0.11 | 0.09 | |
| 11 | 0.10 | | |
| 12 | 0.10 | | |

Table of recommended infeed for **MJ und UNJ external threading inserts**
Empfohlene Zustellungswerte für **MJ und UNJ Außengewinde Schneidplatten**

MJ

| Pitch(mm) Steigung | 1.5 | 2.0 |
|---|---|---|
| Total feed(a) Gesamtzustellung | 0.87 | 1.16 |
| Cutting times(nap) Anzahl der Schnitte | 6 | 8 |
| Cutting order Schnittaufteilung | Radial X Radial X | |
| 1 | 0.22 | 0.25 |
| 2 | 0.19 | 0.21 |
| 3 | 0.16 | 0.18 |
| 4 | 0.13 | 0.15 |
| 5 | 0.11 | 0.12 |
| 6 | 0.06 | 0.10 |
| 7 | | 0.09 |
| 8 | | 0.06 |

UNJ

| Pitch(mm) Steigung | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 28 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total feed(a) Gesamtzustellung | 1.83 | 1.47 | 1.22 | 1.05 | 0.92 | 0.81 | 0.73 | 0.61 | 0.52 | 0.46 |
| Cutting times(nap) Anzahl der Schnitte | 11 | 9 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 4 |
| Cutting order Schnittaufteilung | Radial X Radial X | | | | | | | | | |
| 1 | 0.31 | 0.30 | 0.28 | 0.26 | 0.26 | 0.23 | 0.19 | 0.17 | 0.16 | 0.16 |
| 2 | 0.30 | 0.29 | 0.27 | 0.23 | 0.21 | 0.18 | 0.16 | 0.14 | 0.12 | 0.14 |
| 3 | 0.23 | 0.21 | 0.20 | 0.17 | 0.14 | 0.14 | 0.13 | 0.14 | 0.09 | 0.10 |
| 4 | 0.18 | 0.15 | 0.17 | 0.12 | 0.12 | 0.10 | 0.10 | 0.10 | 0.09 | 0.06 |
| 5 | 0.15 | 0.13 | 0.13 | 0.11 | 0.10 | 0.010 | 0.09 | 0.06 | 0.06 | |
| 6 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | 0.06 | 0.06 | | | |
| 7 | 0.13 | 0.11 | 0.06 | 0.06 | | | | | | |
| 8 | 0.12 | 0.10 | | | | | | | | |
| 9 | 0.11 | 0.06 | | | | | | | | |
| 10 | 0.10 | | | | | | | | | |
| 11 | 0.06 | | | | | | | | | |

Table of recommended infeed for **Tr internal and external threading inserts**
Empfohlene Zustellungswerte für **Tr Innen- und Außengewinde Schneidplatten**

External / Außen

| Pitch(mm) Steigung | 1.5 | 2 | 3 |
|---|---|---|---|
| Total feed(a) Gesamtzustellung | 0.90 | 1.25 | 1.75 |
| Cutting times(nap) Anzahl der Schnitte | 6 | 7 | 9 |
| Cutting order Schnittaufteilung | Radial X Radial X | | |
| 1 | 0.23 | 0.29 | 0.32 |
| 2 | 0.21 | 0.26 | 0.31 |
| 3 | 0.16 | 0.21 | 0.24 |
| 4 | 0.13 | 0.17 | 0.19 |
| 5 | 0.11 | 0.14 | 0.18 |
| 6 | 0.06 | 0.12 | 0.17 |
| 7 | | 0.06 | 0.15 |
| 8 | | | 0.13 |
| 9 | | | 0.06 |

Internal / Innen

| Pitch(mm) Steigung | 1.5 | 2 | 3 |
|---|---|---|---|
| Total feed(a) Gesamtzustellung | 0.90 | 1.25 | 1.75 |
| Cutting times(nap) Anzahl der Schnitte | 6 | 7 | 9 |
| Cutting order Schnittaufteilung | Radial X Radial X | | |
| 1 | 0.22 | 0.28 | 0.34 |
| 2 | 0.18 | 0.23 | 0.28 |
| 3 | 0.17 | 0.21 | 0.26 |
| 4 | 0.13 | 0.16 | 0.20 |
| 5 | 0.11 | 0.14 | 0.17 |
| 6 | 0.10 | 0.12 | 0.15 |
| 7 | | 0.11 | 0.13 |
| 8 | | | 0.12 |
| 9 | | | 0.10 |

## For ACME internal and external threading inserts
## Für ACME Innen- und Außengewinde Schneidplatten

| Pitch(mm) Steigung | 8 | 10 | 12 | 14 | 16 |
|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 1.86 | 1.55 | 1.21 | 1.05 | 0.94 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 10 | 8 | 7 | 6 |
| Cutting order Schnittaufteilung | | | Radial X Radial X | | |
| 1 | 0.31 | 0.28 | 0.25 | 0.23 | 0.23 |
| 2 | 0.26 | 0.23 | 0.21 | 0.20 | 0.19 |
| 3 | 0.23 | 0.21 | 0.18 | 0.18 | 0.17 |
| 4 | 0.18 | 0.16 | 0.15 | 0.14 | 0.14 |
| 5 | 0.15 | 0.15 | 0.12 | 0.11 | 0.11 |
| 6 | 0.14 | 0.13 | 0.11 | 0.10 | 0.10 |
| 7 | 0.12 | 0.11 | 0.10 | 0.09 | |
| 8 | 0.11 | 0.10 | 0.09 | | |
| 9 | 0.10 | 0.09 | | | |
| 10 | 0.09 | 0.09 | | | |
| 11 | 0.09 | | | | |
| 12 | 0.08 | | | | |

## For STUB-ACME internal and external threading inserts
## Für STUB-ACME Innen- und Außengewinde Schneidplatten

| Pitch(mm) Steigung | 8 | 10 | 12 | 14 | 16 |
|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 1.28 | 1.08 | 0.81 | 0.73 | 0.66 |
| Cutting times(nap) Anzahl der Schnitte | 9 | 8 | 7 | 6 | 5 |
| Cutting order Schnittaufteilung | | | Radial X Radial X | | |
| 1 | 0.22 | 0.20 | 0.17 | 0.17 | 0.17 |
| 2 | 0.20 | 0.18 | 0.14 | 0.14 | 0.15 |
| 3 | 0.18 | 0.15 | 0.12 | 0.12 | 0.14 |
| 4 | 0.15 | 0.13 | 0.1 | 0.11 | 0.11 |
| 5 | 0.12 | 0.12 | 0.1 | 0.1 | 0.09 |
| 6 | 0.11 | 0.11 | 0.09 | 0.09 | |
| 7 | 0.11 | 0.10 | 0.09 | | |
| 8 | 0.10 | 0.09 | | | |
| 9 | 0.09 | | | | |

## Table of recommended infeed for **API 60° internal and external threading inserts**
## Empfohlene Zustellungswerte für **API 60° Innen- und Außengewinde Schneidplatten**

### External / Außen

| Pitch(mm) Steigung | 4(382) | 4(383) | 5(403) | 4(502) | 4(503) |
|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 3.12 | 3.11 | 3.00 | 3.78 | 3.77 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 12 | 12 | 15 | 15 |
| Cutting order Schnittaufteilung | | | Radial X Radial X | | |
| 1 | 0.51 | 0.50 | 0.47 | 0.51 | 0.51 |
| 2 | 0.47 | 0.47 | 0.44 | 0.48 | 0.48 |
| 3 | 0.42 | 0.42 | 0.40 | 0.44 | 0.44 |
| 4 | 0.35 | 0.35 | 0.35 | 0.39 | 0.39 |
| 5 | 0.31 | 0.31 | 0.30 | 0.34 | 0.34 |
| 6 | 0.26 | 0.26 | 0.25 | 0.30 | 0.30 |
| 7 | 0.22 | 0.22 | 0.21 | 0.26 | 0.26 |
| 8 | 0.18 | 0.18 | 0.17 | 0.22 | 0.22 |
| 9 | 0.13 | 0.13 | 0.14 | 0.19 | 0.19 |
| 10 | 0.11 | 0.11 | 0.11 | 0.16 | 0.16 |
| 11 | 0.10 | 0.10 | 0.10 | 0.13 | 0.13 |
| 12 | 0.06 | 0.06 | 0.06 | 0.11 | 0.10 |
| 13 | | | | 0.10 | 0.10 |
| 14 | | | | 0.09 | 0.09 |
| 15 | | | | 0.06 | 0.06 |

### Internal / Innen

| Pitch(mm) Steigung | 4(382) | 4(383) | 5(403) | 4(502) | 4(503) |
|---|---|---|---|---|---|
| Total feed (a) Gesamtzustellung | 3.12 | 3.11 | 3.00 | 3.78 | 3.77 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 12 | 12 | 15 | 15 |
| Cutting order Schnittaufteilung | | | Radial X Radial X | | |
| 1 | 0.52 | 0.52 | 0.51 | 0.55 | 0.54 |
| 2 | 0.43 | 0.43 | 0.42 | 0.46 | 0.46 |
| 3 | 0.39 | 0.39 | 0.38 | 0.42 | 0.42 |
| 4 | 0.30 | 0.30 | 0.29 | 0.32 | 0.32 |
| 5 | 0.25 | 0.25 | 0.24 | 0.27 | 0.27 |
| 6 | 0.22 | 0.22 | 0.21 | 0.24 | 0.24 |
| 7 | 0.20 | 0.20 | 0.19 | 0.22 | 0.22 |
| 8 | 0.18 | 0.18 | 0.17 | 0.20 | 0.20 |
| 9 | 0.17 | 0.17 | 0.16 | 0.18 | 0.18 |
| 10 | 0.16 | 0.16 | 0.15 | 0.17 | 0.17 |
| 11 | 0.15 | 0.15 | 0.14 | 0.16 | 0.16 |
| 12 | 0.15 | 0.14 | 0.14 | 0.16 | 0.16 |
| 13 | | | | 0.15 | 0.15 |
| 14 | | | | 0.14 | 0.14 |
| 15 | | | | 0.14 | 0.14 |

Table of recommended infeed for **API round internal and external threading inserts**
Empfohlene Zustellungswerte für **API rund Innen- und Außengewinde Schneidplatten**

### External / Außen

| Pitch(mm) Steigung | 8 | 10 |
|---|---|---|
| Total feed (a) Gesamtzustellung | 1.81 | 1.41 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 10 |
| Cutting order Schnittaufteilung | Radial X Radial X | |
| 1 | 0.25 | 0.25 |
| 2 | 0.24 | 0.23 |
| 3 | 0.19 | 0.16 |
| 4 | 0.16 | 0.14 |
| 5 | 0.14 | 0.12 |
| 6 | 0.14 | 0.12 |
| 7 | 0.13 | 0.12 |
| 8 | 0.13 | 0.11 |
| 9 | 0.13 | 0.1 |
| 10 | 0.13 | 0.06 |
| 11 | 0.11 | |
| 12 | 0.06 | |

### Internal / Innen

| Pitch(mm) Steigung | 8 | 10 |
|---|---|---|
| Total feed (a) Gesamtzustellung | 1.81 | 1.41 |
| Cutting times(nap) Anzahl der Schnitte | 12 | 10 |
| Cutting order Schnittaufteilung | Radial X Radial X | |
| 1 | 0.30 | 0.26 |
| 2 | 0.25 | 0.21 |
| 3 | 0.22 | 0.19 |
| 4 | 0.17 | 0.15 |
| 5 | 0.15 | 0.13 |
| 6 | 0.13 | 0.11 |
| 7 | 0.12 | 0.10 |
| 8 | 0.11 | 0.09 |
| 9 | 0.10 | 0.09 |
| 10 | 0.09 | 0.08 |
| 11 | 0.09 | |
| 12 | 0.08 | |

Table of recommended infeed for **API inclined trapezoidal screw internal and external threading inserts**
Empfohlene Zustellungswerte für **API Amerikanisches Säge Innen- und Außengewinde Schneidplatten**

### External / Außen

| Pitch(mm) Steigung | 5 |
|---|---|
| Total feed (a) Gesamtzustellung | 1.55 |
| Cutting times(nap) Anzahl der Schnitte | 11 |
| Cutting order Schnittaufteilung | Radial X Radial X |
| 1 | 0.25 |
| 2 | 0.23 |
| 3 | 0.17 |
| 4 | 0.15 |
| 5 | 0.13 |
| 6 | 0.12 |
| 7 | 0.12 |
| 8 | 0.11 |
| 9 | 0.11 |
| 10 | 0.1 |
| 11 | 0.06 |
| | |

### Internal / Innen

| Pitch(mm) Steigung | 5 |
|---|---|
| Total feed (a) Gesamtzustellung | 1.55 |
| Cutting times(nap) Anzahl der Schnitte | 11 |
| Cutting order Schnittaufteilung | Radial X Radial X |
| 1 | 0.27 |
| 2 | 0.22 |
| 3 | 0.20 |
| 4 | 0.16 |
| 5 | 0.13 |
| 6 | 0.12 |
| 7 | 0.10 |
| 8 | 0.10 |
| 9 | 0.09 |
| 10 | 0.08 |
| 11 | 0.08 |
| | |

## ■ Recommended Cutting parameters · Empfohlene Schnittparameter

| ISO | Workpiece Material Werkstück Material | | Hardness HB Härte HB | Grade Sorte YBG201/YBG202/YBG205 Cutting speed (m·min) Schnittgeschwindigkeit (m·min) |
|---|---|---|---|---|
| P | Carbon steel Kohlenstoffstahl | C=0.15%<br>C=0.35%<br>C=0.60% | 125<br>150<br>200 | 150-175<br>140-155<br>130-145 |
| | Alloy steel Legierter Stahl | Anneal / Geglüht<br>Tempered / Vergütet<br>Tempered / Vergütet<br>Tempered / Vergütet | 180<br>275<br>300<br>350 | 110-130<br>80-100<br>70-90<br>60-80 |
| | High alloy steel Hochlegierter Stahl | Anneal / Geglüht<br>Hardened / Vergütet | 200<br>325 | 90-115<br>70-90 |
| | Cast steel Gussstahl | Non-alloy / Unlegiert<br>Low alloy / Niedrig legiert<br>High alloy / Hoch legiert<br>Martensite steel 12%Mn<br>Martensit Stahl 12%Mn | 180<br>200<br>225<br>250 | 180-210<br>90-115<br>90-115<br>40-50 |
| M | Stainless steel Rostfreier Stahl | Austenite Austenitisch | 180 | 110-130 |
| | | Martensite·Ferrite Martensitisch·Ferritisch | 200 | 130-170 |
| K | Malleable cast iron Temperguss | Ferrite / Ferritisch<br>Pearlite / Perlitisch | 130<br>230 | 110-140<br>85-105 |
| | Grey cast iron Grauguss | Martensite / Martensitisch<br>Ferrite / Ferritisch | 180<br>260 | 110-140<br>90-115 |
| | Nodular cast iron Kugelgraphitguss | Ferrite / Ferritisch<br>Pearlite / Perlitisch | 160<br>250 | 110-130<br>80-100 |
| N | Al alloy Aluminiumlegierung | Non-aging treatment Unbehandelt<br>Aging treatment Vergütet | 60<br>100 | 1300-1450<br>450-500 |
| | Cast aluminum alloy Aluminium-Gusslegierung | Non-aging treatment Unbehandelt<br>Aging treatment Vergütet | 75<br>90 | 430-470<br>250-290 |
| S | Heat resistant alloy Hitzebeständige Legierung | Iron Base Eisen Basis — Anneal Geglüht<br>Aging Vergütet | 200<br>280 | 35-50<br>25-35 |
| | | Ni- Or Co-Base Basis — Anneal Geglüht<br>Aging Vergütet<br>Casting Guss | 250<br>350<br>320 | 15-25<br>10-20<br>10-15 |
| H | Hardened steel Gehärteter Stahl | Hardened Gehärtet | HRC55 | 40-50 |

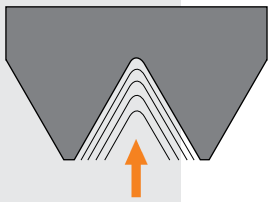
## Infeed way of threading · Zustellarten beim Gewindedrehen

The Number of passes and infeed are the key points of threading operation. Please choose the cutting parameters with the recommended form according to experience data. In case of breakages or to much wear. Please have a look at page 302 (Troubleshooting).

Die Anzahl der Durchgänge und die Zustellungsgröße sind ein entscheidender Faktor bei der Gewindebearbeitung. Die empfohlenen Daten sind als Startwerte zu betrachten. Im Falle von erhöhtem Verschleiß, schauen Sie bitte auf Seite 302 (Problemlösung).



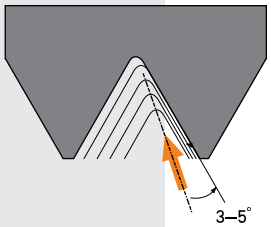
### Radial infeed
### Radiale Zustellung



Radial infeed requires low cutting depth, sharp cutting edge and tough grade. It is recommended when the pitch is smaller than 2mm, not ideal for material with long chips.

Radiale Zustellung fordert eine niedrige Schnitttiefe, eine scharfe Schneidkante und zähe Sorte.

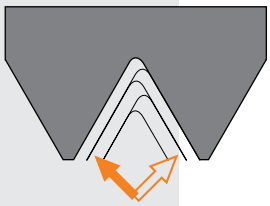
### Modified flank infeed
### Modifizierte Flankenzustellung




Infeed at an angle of 3-5° to the flank of the teeth. It is easy for chips flow. Suitable for long chip material and internal threading.

Zustellung unter einem Winkel von 3-5° zur Flanke des Gewindes, guter Spanablauf. Geeignet für langspanende Werkstoffe und Innengewinde.

### Alternate flank infeed
### Wechselseitige Zustellung



Alternating flank infeed is mainly used for large pitches and long chip materials. To get equal insert wear on both edges.

Wechselseitige Zustellung entlang beider Flanken. Anwendung bei großen Steigungen und langspanenden Werkstoffen. Gleichmäßiger Flankenverschleiß an beiden Schneidkanten.

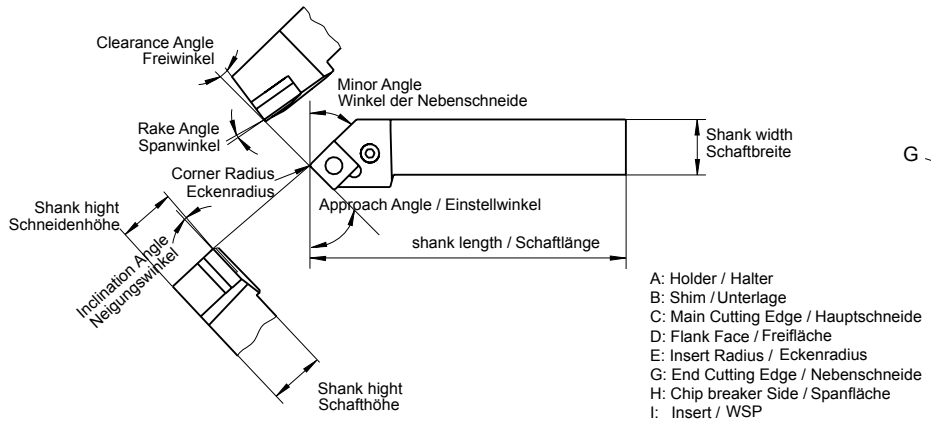


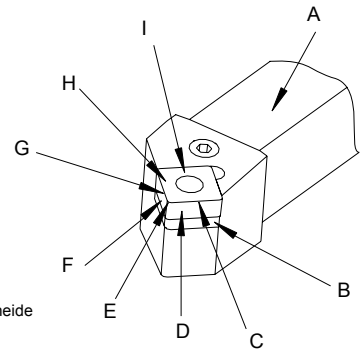
## Typical problem in threading and its solution
## Typische Probleme bei der Gewindebearbeitung und Lösungsvorschläge

| Problem / Problemstellung | Cause / Ursache | Solution / Lösung |
|---|---|---|
| Big flank wear<br>Großer Freiflächenverschleiß | Cutting speed too high<br>Schnittgeschwindigkeit zu hoch | Reduce cutting speed<br>Schnittgeschwindigkeit verringern |
| | Infeed depth too small / Zustellung zu gering | Reduce number of infeeds / Anzahl der Zustellungen verringern |
| | Inserts is over centre line / Platte steht über Mitte | Adjust correct centre line / Plattenhöhe korrigieren |
| Asymmetric wear on left and right cutting edge<br>Unterschiedliche Verschleißmarken an linker und rechter Seite | Incorrect method for flank infeed /<br>Seitliche Zustellung nicht optimal | Change method of flank infeed<br>Seitliche Zustellung korrigieren |
| | Insert inclination angle does not correspont to the lead angle of the thread<br>Neigungswinkel und Hauptwinkel stehen nicht optimal zueinander | Change shim to obtain correct angle of inclination<br>Wechsel der Unterlage um korrekten Winkel zu erzeugen |
| Breakage / Bruch | Cutting speed too low / Schnittgeschwindigkeit zu niedrig | Increase cutting speed / Schnittgeschwindigkeit erhöhen |
| | Cutting force too big<br>Schnittkraft zu hoch | Increase number of infeeds. Reduce size of the largest infeeds<br>Anzahl der Zustellungen erhöhen, Zustellgröße verringern |
| | Unstable condition<br>Instabile Verhältnisse | Check and improve clamping and tool overhang to prevent vibration<br>Werkstückspannung und Auskraglänge verbessern, um Vibrationen zu verhindern |
| | Bad chip control<br>Schlechte Spankontrolle | Increase pressure of cooling for better chip evacuation<br>Kühlmitteldruck erhöhen für bessere Spanabfuhr |
| Plastic deformation<br>Plastische Deformation | Cutting speed and temperature too high<br>Schnittgeschwindigkeit und Temperatur zu hoch | Decrease cutting speed / Schnittgeschwindigkeit verringern<br>Increase number of infeeds. Reduce size of the largest infeeds<br>Anzahl der Zustellungen erhöhen, Zustellgröße verringern |
| | Insufficient cooling supply / Schlechte Kühlmittelzufuhr | Improve coolant supply / Kühlzufuhr verbessern |
| Thread surface quality is poor<br>Oberflächenqualität des Gewindes nicht gut | Cutting speed too low /<br>Schnittgeschwindigkeit zu niedrig | Increase cutting speed<br>Schnittgeschwindigkeit erhöhen |
| | Inserts is over centre line / Platte steht über Mitte | Adjust correct centre line / Plattenhöhe korrigieren |
| | Bad chip control / Schlechte Spankontrolle | Modified flank infeed / Zustellung verändern |
| Incorrect profile<br>Gewindeprofil nicht korrekt | Wrong centre height<br>Plattenhöhe nicht korrekt | Change centre height<br>Plattenhöhe verändern |
| | Toolholder not 90° to centre line / Halter steht nicht im 90° Winkel | Adjust tool holder / Halter neu ausrichten |
| | Pitch error in machine / Steigungsfehler der Maschine | Adjust machine / Maschine neu ausrichten |
| Shallow profile / Gewindeprofil | Wrong centre height / Plattenhöhe nicht korrekt | Change centre height / Plattenhöhe verändern |
| | Breakage of insert / Schneidkantenbruch | Change insert / Plattenwechsel |
| | Wear to big / Verschleiß zu groß | Change insert / Plattenwechsel |
| Build up edge<br>Aufbauschneidenbildung | Temperature on cutting edge too low /<br>Temperatur an der Schneide zu gering | Increase cutting speed<br>Schnittgeschwindigkeit erhöhen |
| | Often occures in low carbon or stainless steel<br>Oft bei der Bearbeitung von Kohlenstoffstahl oder rostfreiem Stahl | Choose grade with good toughness (PVD coated)<br>Sorte mit ausreichend Zähigkeit verwenden (PVD beschichtet) |
| Vibration<br>Vibrationen | Incorrect cutting parameter<br>Falsche Schnittparameter | Increase cutting speed or slow down cutting speed<br>Schnittgeschwindigkeit erhöhen oder stark verringern |
| | Wrong centre height / Plattenhöhe nicht korrekt | Change centre height / Plattenhöhe verändern |
| | Clamping of work piece not good<br>Werkstückspannung nicht ausreichend | Improve clamping system and minimize over hang<br>Spannsystem verbessern und Werkzeugauskragung minimieren |

**NOTES NOTIZEN:**

## 1. CUTTING TOOL GEOMETRY · SCHNEIDENGEOMETRIE




## 2. RAKE ANGLE · SPANWINKEL

Rake angle is a cutting edge angle that has large effects on cutting resistance, chip disposal, cutting temperature and tool life. Increasing rake angle in positive direction improves sharpness of the cutting edge and the cutting force decreases but at the same time it lowers the strength. To increase the cutting resistance the rake angle must be increased in negative direction.

Eine Vergrößerung des Spanwinkels reduziert Schnittkräfte, weil der Span wenig aus seiner Fliessrichtung gelenkt wird. Hierdurch ist das Schneidensystem insgesamt schärfer und erzeugt dadurch eine geringere Schneidenbelastung, geringere Temperaturbelastung und insgesamt weniger Werkzeugverschleiß und somit eine hohe Zerspanungsleistung. Gleichzeitig bedeutet dies aber eine Schwächung des Schneidkeils, die Schneidenbelastung nimmt zu und die Gefahr von Schneidenausbrüchen steigt.

| Selecting value | Auswahl | Specific machining situation | Anwendung |
|---|---|---|---|
| Small rake angle | Kleiner Spanwinkel | Machining of fragile and hard materials. Rough machining and interrupted cut | Bearbeitung von harten und spröden Werkstoffen Schruppbearbeitung und unterbrochener Schnitt |
| Big rake angle | Großer Spanwinkel | Machining of plastic materials and soft materials Precision machining | Bearbeitung von weichen und zähen Werkstoffen Präzisionsbearbeitung |

## 3. RELIEF ANGLE · FREIWINKEL

Flank angle prevents friction between flank face and work piece resulting in smooth feed. Increasing flank angle decreases the cutting force and surface roughness becomes better but on the other hand this lowers the cutting edge strength and decrease the flank wear occurrence.

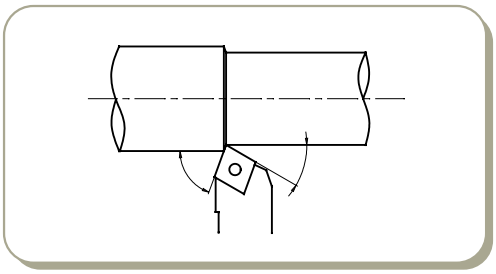
Eine Vergrößerung des Freiwinkels hat eine Verringerung der Reibung zwischen Werkstück und Werkzeug zur Folge. Die Schnittkräfte sind insgesamt geringer und es können bessere Oberflächengüten erreicht werden. Ein zu großer Freiwinkel schwächt allerdings die Schneidkantenstabilität. Je nach Anwendung liegen die Freiwinkel zwischen 3° und 12°.

| Selecting value | Auswahl | Specific machining situation | Anwendung |
|---|---|---|---|
| Small flank angle | Kleiner Freiwinkel | Machining of hard and demure materials. For roughing operation with stable cutting edge | Bearbeitung von harten und spröden Werkstoffen Schruppbearbeitung mit stabiler Scheidkante |
| Big flank angle | Großer Freiwinkel | Precision machining with low cutting force Work pieces suffer from work hardening easily. | Für die Präzisionbearbeitung, mit geringen Schnittkräften. Material das schnell zu Gefügeveränderungen neigt |

## 4. INCLINATION ANGLE · NEIGUNGSWINKEL

The positive and negative edge inclined angle decides the discharging direction of chips. In heavy cutting, the cutting edge receives extremely large shock at the beginning of cutting. Cutting edge inclination keeps the cutting edge from receiving this shock and prevents fracturing. On the other hand the back force increases and occurs vibration. A finishing operation a positive angle is more suitable.

Shown on page A379 Picture (1), when the edge inclined angle is negative, i.e. the cutting edge is located at the lowest point relative to the bottom plane of the tool holder, the chips flow to the machined surface of work piece. Shown on page A379 Picture (2), when the edge inclined angle is positive, i.e. the cutting edge is located at the highest point relative to the bottom plane of the tool holder, the chips flow to the un-machined surface of work piece.



Die positive oder negative Anstellung der Schneidkante hat maßgeblichen Einfluß auf die Fliessrichtung der Späne und die Belastung am Schneidpunkt.

Wie im Bild Seite A379 (1) dargestellt, bewirkt ein negativer Schneidkantenwinkel durch seinen zur Halterober-fläche niedrigeren Schneidpunkt einen Spanabfluß zur bereits bearbeiteten Werkstückoberfläche.

Wie im Bild Seite A379 (2) dargestellt bewirkt ein positiver Schneidkantenwinkel durch seinen zur Halteroberfläche höheren Schneidpunkt einen Spanabfluß zur unbearbeiteten Werkstückoberfläche.

Die Veränderung des Schneidkantenwinkels hat Einfluss auf die Stabilität der Schneide bzw. des Schneidenpunktes. Diese wird bei einem negativem Winkel erhöht und schützt somit das Werkzeug vor der Schlagbeanspruchung z.B. bei Schruppanwendungen oder Bearbeitungen mit unterbrochenem Schnitt. Dabei wird aber auch die Gegenkraft erhöht, was zu Vibrationen führen kann. Ein positiver Schneidkantenwinkel ist vorteilhaft bei der Schlichtbearbeitung, da die Späne von der bereits bearbeiteten Oberfläche weggeführt werden.

## 5. ENTERING ANGLE (APPROACH ANGLE) · EINSTELLWINKEL (HAUPTSCHNEIDE)

Reducing the lead angle increases the strength of the cutting edge. Heat dispersion is good and roughness of machining surface is small. Because lead angel is small, the cutting width is long, the force on the unit cutting edge length is small. At the same time, reducing the lead angle can increase the tool life.

Normally, when turn thin long shaft and ladder shaft, the lead angle adapts 90°. The lead angle is increased, radial force is reduced, cutting is stable, cutting thickness is increased and chip breaking performance is good.

Eine Reduzierung des Einstellwinkels erhöht die Stabilität der Schneide. Der Anteil der Schneide zur Spanbildung wird dabei vergrößert, die Belastung für die Schneide wird besser verteilt und die Wärme besser abgeführt. Ein kleiner Einstellwinkel wirkt sich positiv auf die Standzeit aus.

Ein großer Einstellwinkel von 90° wird bei der Bearbeitung von langen, dünnen Wellen benutzt, um eine Verbiegung des Werkstückes zu verhindern.

| Selecting value | Auswahl | Specific machining situation | Anwendung |
|---|---|---|---|
| Small entering angle | kleiner Einstellw. | For material with high tensile strenght, high hardness or hardened layer on surface. | Für Materialien mit hoher Zugfestigkeit, hoher Härte oder gehärteter Oberfläche |
| Big entering angle | großer Einstellw. | For machine with low rigidity | Für Maschinen mit geringer Stabilität. |

## 6. MINOR ANGLE · NEBENSCHEIDENWINKEL

The minor cutting edge angle is the main angle on influence surface roughness; its size is also influence strength of cutter. When the minor cutting edge angle is too small, the cutting force increases and results in chattering and vibration.
The selection principle for the minor cutting edge angle is, under the condition of rough machining, or un-influencing friction and producing vibration, the smaller angle should be chosen; the bigger angle can be used for precision machining.

Die Größe des Nebenschneidenwinkels beeinflusst die Oberflächengüte des Werkstücks und auch die Schneidkantenstabilität. Ist der Winkel zu klein können Vibrationen auftreten.
Ein kleiner Winkel sollte daher bei der Schruppbearbeitung angewendet werden, da die Schneide eine höhere Stabilität aufweist. Für die Präzisionsbearbeitung mit hohen Oberflächengüten sollte ein möglichst großer Winkel gewählt werden.

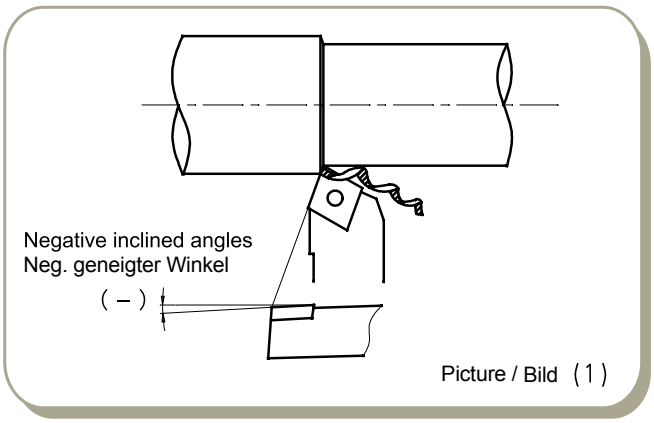
## 7. CORNER RADIUS · ECKENRADIUS

The corner radius effects the cutting edge strength and the finished surface.

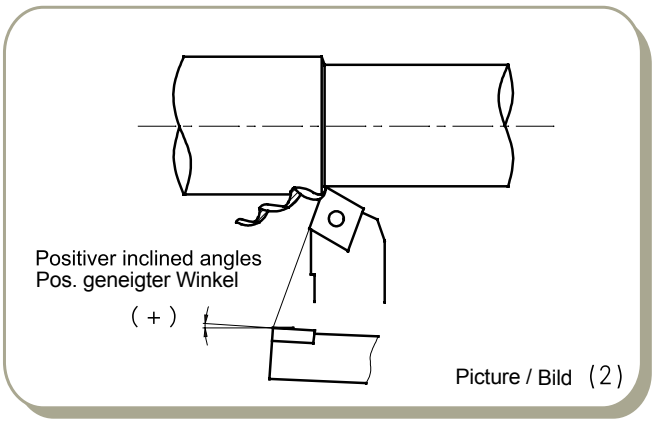
By increasing the corner radius the surface finish becomes better and the cutting edge strength improves. Flank and rake wear decreases. If the radius becomes to big cutting force increases and causes vibration. Also chip control becomes worth.

Der Eckenradius hat Einfluss auf die Schneidkantenstabilität und Oberflächengüte sowie auf die Schnittdaten.
Durch die Erhöhung des Eckenradius wird die Oberfläche besser und die Schneidkantenstabilität vergrößert. Freiflächen und Spanflächenverschleiß nehmen ab. Mit der Zunahme des Radius erhöht sich auch der Schnittdruck, ist dieser zu groß, kann Vibrationen auftreten. Was sich auch auf die Spankontrolle auswirkt.

| Selecting value | Auswahl | Specific machining situation | Anwendung |
|---|---|---|---|
| Small corner radius | Kleiner Radius | • Finishing with small cutting depth Machining thin long shafts<br>• Rigidity of machine is insufficient | • Schlichtbearbeitung mit kleinen Schnitttiefen<br>• Bearbeitung von langen, dünnen Wellen<br>• Geringe Maschinenstabilität oder Spannung |
| Big corner radius | Großer Radius | • Rough machining, high cutting edge strength is required<br>• Rigidity of machine is good<br>• Machining harden materials and interrupted cut | • Schruppbearbeitung mit hoher Schneidkantenstabilität<br>• Hoher Maschinenstabilität<br>• Bearbeitung mit unterbrochenem Schnitt oder Schmiedehaut |



Picture / Bild (1)



Picture / Bild (2)

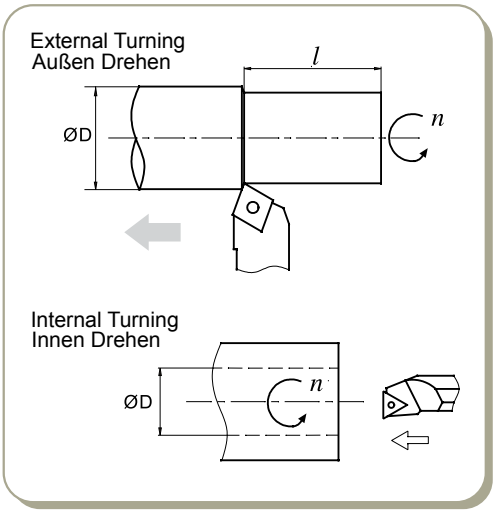
## 1. CUTTING SPEED · SCHNITTGESCHWINDIGKEIT

$$Vc=\frac{\pi \times D \times n}{1000}\ (m/min)$$

Vc: Cutting Speed/ Schnittgeschwindigkeit (m/min)
n: Revolution per min (rev/min)/ Drehzahl (U/min)
f: Feed per revolution (mm/rev)/ Vorschub pro Umdrehung (mm/U)

Example/Beispiel: n=250 U/min, f=0,2 mm/U, l=150mm

Result/Ergebnis: [hier dann die Formel Vc=...]



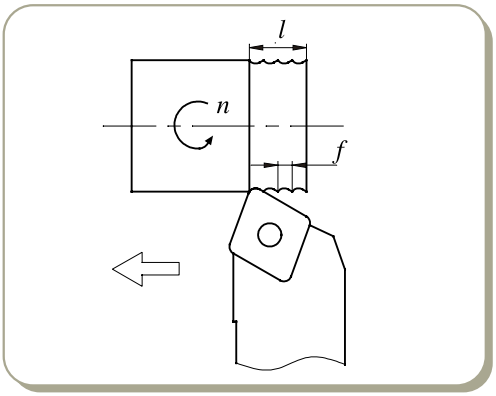

## 2. FEED RATE · VORSCHUBSGESCHWINDIGKEIT (F)

$$f=\frac{l}{n}\ (mm/rev)$$

f: Feed per Revolution/Vorschub pro Umdrehung (mm/U)
l: Cutting length per Min/Schnittlänge pro Minute (mm)
n: Revolution per min (rev/min)/Drehzahl (U/min)

Example/Beispiel: n=500 U/min, l=100 mm/min
Result/Ergebnis: [hier dann die Formel f=.....]

$$f=\frac{l}{n}=\frac{100}{500}=0.2(mm/rev)$$



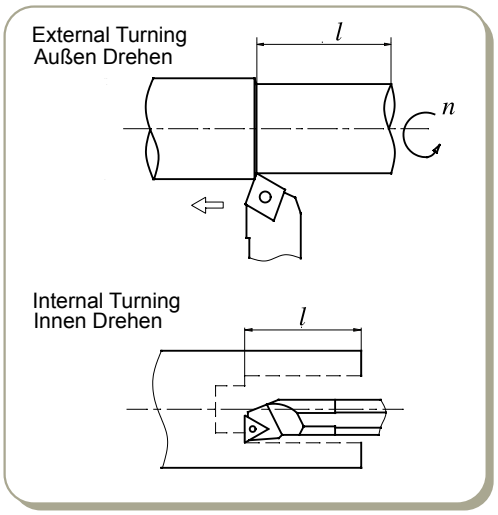
## 3. CUTTING TIME · SCHNITTZEIT

$$T_c = \frac{l}{f \times n} \ (min)$$

Tc: Cutting Time / Schnittzeit (min)
l: Cutting length per Min / Schnittlänge pro Minute (mm)
f: Feed per revolution (mm/rev) / Vorschub pro Umdrehung (mm/U)
n: Revolution per min (rev/min) / Drehzahl (U/min)

Example / Beispiel: n=250 U/min, f=0,2 mm/U, l=150mm

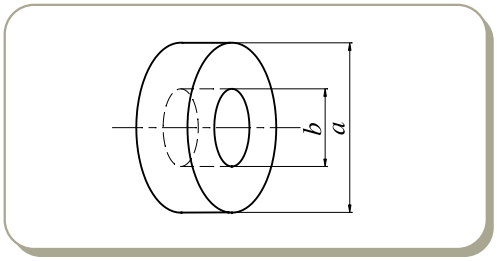
Result / Ergebnis: [hier dann die Formel Tc=...]




## 4. CUTTING TIME · SCHNITTZEIT FÜR PLANBEARBEITUNG

$$T_c = \frac{\pi \times (a^2 - b^2)}{4000 \times Vc \times f} \ (min)$$

Tc: Cutting Time / Schnittzeit (min)
Vc: Cutting Speed / Schnittgeschwindigkeit (m/min)
f: Feed per revolution (mm/rev)/
Vorschub pro Umdrehung (mm/U)

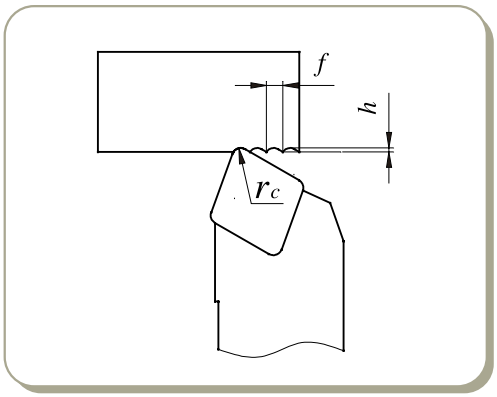



## 5. THEORETICAL SURFACE ROUGHNESS THEORETISCHE OBERFLÄCHEN-RAUHIGKEIT (R)

$$R = \frac{f^2}{8 r_c} \times 1000 \ (\mu m)$$

R: Surface Roughness / Oberflächenrauhigkeit (µm)
f: Feed per revolution (mm/rev) /
Vorschub pro Umdrehung (mm/U)
rc: Insert Radius / Radius des WSP (mm)

Example / Beispiel: f=0,2 mm/U, rc=0,4 mm



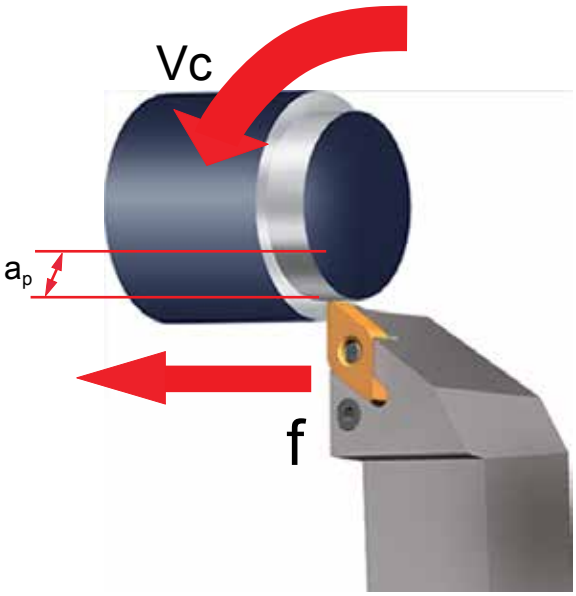
# Three effects of cutting condition for turning
# Einfluss der drei Schnittparameter beim Drehen



## Three effects of cutting
## Die drei Einflussgrößen

Today short machining time, long tool life and high machining accuracy is expected from modern tools. Based on the machine performance, material shape and hardness of the components the right choice of tool and cutting conditions are the premise for a successful machining process. Cutting speed, feed rate and depth of cut we call the "Three effects of cutting".

Die heutigen Anforderungen an moderne Zerspanungswerkzeuge sind in erster Linie kurze Bearbeitungszyklen, lange Werkzeugstandzeiten und hohe Bearbeitungsgenauigkeit.
In Abhängigkeit z.B. der Maschinenleistung, Material, Form und Härte des Werkstückes ist die Wahl der Werkzeuge und vor allem die richtigen Schnittparameter Voraussetzung für eine wirtschaftliche Zerspanung. Dieses nennen wir den „Einfluss der drei Schnittparameter beim Drehen"




## Cutting speed
## Schnittgeschwindigkeit (Vc)

Cutting speed is defined as the rate (or speed) that the material moves past the cutting edge of the tool. The unit for Vc is meter per minute [m/min].

Die Schnittgeschwindigkeit ist die Geschwindigkeit, mit der eine Werkzeugschneide in Schnittrichtung durch den zu bearbeitenden Werkstoff geführt wird und somit einen Span abnimmt. Die Einheit wird in Meter pro Minute [m/min] angegeben.

## Cutting speed influence
## Einfluss der Schnittgeschwindigkeit

Cutting speed is one of the three important effects of turning and has influence on tool life. Increasing the cutting speed also increases the cutting temperature and that decreases the tool life. Depending on the hardness and type of material the cutting speed varies. Therefore to choose a suitable grade for the cutting speed is necessary.
In general situation, when cutting speed is increased by 20% the tool life will be reduced ½; when the cutting speed is increased by 50% the tool life decreases 1/5
Lower cutting speed results in vibration which will shorten tool life.

Die Schnittgeschwindigkeit ist eine der wichtigsten Größen bei der Zerspanung, denn sie beeinflusst entscheidend die Fertigungszeit. Die Wahl der Schnittgeschwindigkeit hängt im Wesentlichen von der Zusammensetzung und Festigkeit des zu bearbeitenden Werkstoffes, der Zähigkeit und Härte des eingesetzten Schneidstoffes sowie der gewünschten Maßgenauigkeit

und Oberflächengüte ab. Sie beeinflusst aufgrund des parabolischen Anstiegs der Schneidentemperatur bei steigender Geschwindigkeit wesentlich den Verschleiß und somit die Standzeit des Werkzeuges. Die Schnittgeschwindigkeit ist daher so zu wählen, dass ein günstiges Verhältnis zwischen der Arbeits- und Schnittzeit und der für die Wiederinstandsetzung (Wechsel der Wendeschneidplatte) des Werkzeuges und Neueinrichten der Bearbeitungsmaschine erforderlichen Zeit entsteht.
Erhöhung Vc um 20% verringert die Standzeit auf die Hälfte; Erhöhung Vc um 50% beträgt die Standzeit nur noch ca. 1/5. Geringes Vc führt zu Vibrationen und verkürzt die Standzeit.

## Feed rate
## Vorschub (f)

In turning application feed rate is the distance the tool holder moves per work piece revolution. That has influence to the surface quality. The unit for feed rate is millimetre per revolution [mm/rev]

Bei der Drehbearbeitung versteht man unter dem Vorschub den zurückgelegten Weg des Werkzeug(-halters) pro Umdrehung des Werkstückes und hat Einfluss auf die Oberflächengüte des Werkstückes. Die Einheit des Vorschubes ist Millimeter pro Umdrehung [mm/U]

## Feed rate influence
## Einfluss des Vorschubes

Decreasing the feed rate will increase flank wear and tool life will be shorten. Increasing feed rate increases the cutting temperature and also flank wear. On the other hand the efficiency will be improved.

Bei einer Reduzierung des Vorschubes steigt gleichzeitig der Freiflächenverschleiß an und die Standzeit des Werkzeuges wird herabgesetzt. Bei einer Erhöhung des Vorschubes steigt zwar die Wirtschaftlichkeit der Bearbeitung, allerdings auch die Schnitttemperatur und die Verschleißgröße.

## Depth of cut (doc)
## Schnitttiefe (ap)

The depth of cut refers to the half different value between the diameter of the unmachined and machined work piece. The unit is millimeter [mm]

Die Schnitttiefe ist die halbe Differenz des Rohteildurchmessers zum gefertigten Durchmesser des Werkstückes. Die Einheit der Schnitttiefe ist Millimeter [mm].

## Depth of cut influence
## Einfluss der Schnitttiefe

Changing depth of cut has no big influence to the tool life. Machining hardened layer with small depth of cut results in friction and short tool life. Machining uncut surface or cast iron material, choose maximum depth of cut according to the machine power so that the cutting edge and corner radius is out of the hardened layer. That helps to prevent chipping and abnormal wear.

Das Ändern der Schnitttiefe hat keinen großen Einfluss auf die Standzeit. Bei der Bearbeitung von Materialien mit harter Oberfläche führt eine zu klein gewählte Schnitttiefe zu verkürzten Standzeiten. Bei der Bearbeitung von unbearbeiteten Oberflächen oder Gussmaterialien sollte das Maximum der Schnitttiefe je nach Leistung der Maschine gewählt werden, sodass die Schneidkante und der Eckenradius tiefer im Eingriff ist als die harte Schicht. Das hilft übermäßigen Verschleiß zu verhindern.

**NOTES / NOTIZEN:**

## Threading pre-hole diameter · Kernlochdurchmesser

- Metric Coarse thread
- Metrisch - Gewinde

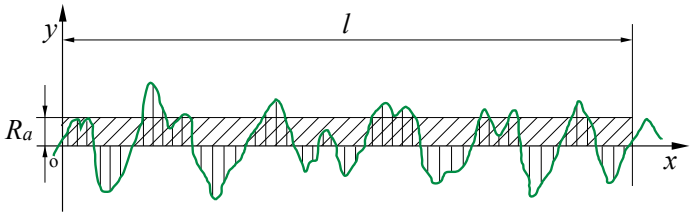
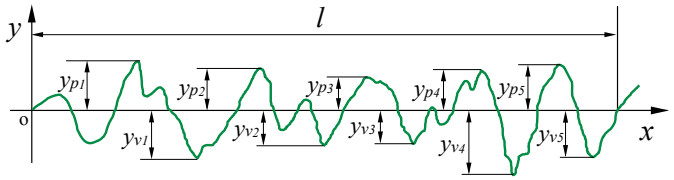
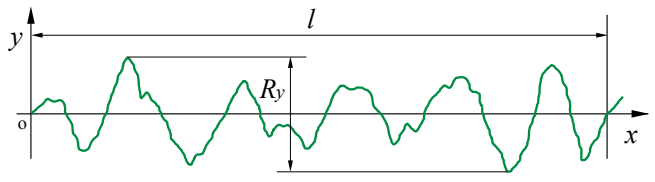
| Thread code Gewindebez. | Pre-hole diameter (mm) Kerndurchmesser |
|---|---|
| M3×0.5 | 2.5 |
| M3.5×0.6 | 2.9 |
| M4×0.7 | 3.3 |
| M5×0.8 | 4.2 |
| M6×1.0 | 5.0 |
| M7×1.0 | 6.0 |
| M8×1.25 | 6.75 |
| M9×1.25 | 7.75 |
| M10×1.5 | 8.5 |
| M11×1.5 | 9.5 |
| M12×1.75 | 10.25 |
| M14×2.0 | 12.0 |
| M16×2.0 | 14.0 |
| M18×2.5 | 15.5 |
| M20×2.5 | 17.5 |
| M24×3.0 | 21.0 |
| M27×3.0 | 24.0 |
| M30×3.5 | 26.5 |

- Metric fine screw fine
- Metrisch - Feingewinde

| Thread code Gewindebez. | Pre-hole diameter (mm) Kerndurchmesser |
|---|---|
| M3×0.35 | 2.65 |
| M3.5×0.35 | 3.15 |
| M4×0.5 | 3.5 |
| M4.5×0.5 | 4.0 |
| M5×0.5 | 4.5 |
| M5.5×0.5 | 5.0 |
| M6×0.75 | 5.25 |
| M7×0.75 | 6.25 |
| M8×1.0 | 7.0 |
| M8×0.75 | 7.25 |
| M9×1.0 | 8.0 |
| M9×0.75 | 8.25 |
| M10×1.25 | 8.75 |
| M10×1.0 | 9.0 |
| M10×0.75 | 9.25 |
| M11×1.0 | 10.0 |
| M11×0.75 | 10.25 |
| M12×1.5 | 10.5 |
| M12×1.25 | 10.75 |
| M12×1.0 | 11.0 |

| Thread code Gewindebez. | Pre-hole diameter (mm) Kerndurchmesser |
|---|---|
| M14×1.5 | 12.5 |
| M14×1.0 | 13.0 |
| M15×1.5 | 13.5 |
| M15×1.0 | 14.0 |
| M16×1.5 | 14.5 |
| M16×1.0 | 15.0 |
| M17×1.5 | 15.5 |
| M17×1.0 | 16.0 |
| M18×2.0 | 16.0 |
| M18×1.5 | 16.5 |
| M18×1.0 | 17.0 |
| M20×2.0 | 18.0 |
| M20×1.5 | 18.5 |
| M20×1.0 | 19.0 |
| M22×2.0 | 20.0 |
| M22×1.5 | 20.5 |
| M22×1.0 | 21.0 |
| M24×2.0 | 22.0 |
| M24×1.5 | 22.5 |
| M24×1.0 | 23.0 |

## Surface roughness · Oberflächenrauhigkeit

| Type<br>Typ | Code | Calculation method · Berechnungsmethode | Calculation example (figure) · Meßaufnahme (Abb.) |
|---|---|---|---|
| Arithmetic average deviation of profile<br>Mittlere Rauhtiefe | Ra | Within sampling length l, the arithmetic average absolute value of profile deviation is<br>$Ra = \frac{1}{l}\int_0^l \lvert y(x)\rvert dx$<br>In the formula, the profile deviation y is the distance between profile points and reference line in the measuring direction. Reference line is the profile least-square average line O. This line divide the profile and make the sum of squares of profile deviation to be the minimum within the sampling length.<br><br>Der Mittelrauhwert Ra ist der arithmetische Mittelwert der absoluten Beträge der Abstände y des Rauhheitsprofils von der Mittellinie innerhalb der Messstrecke. Dies ist gleichbedeutetend mit der Höhe des Rechtecks, dessen Länge gleich der Gesamtstrecke l ist und das flächengleich mit der Summe der zwischen dem Rauheitsprofil und der Mittellinie eingeschlossenen Fläche ist y=f |  |
| Irregularity ten-point high<br>Gemittelte Rauhtiefe | Rz | Within sampling length l, the sum of the average value of heights of five highest profile peak and the depths of five deepest profile valleys<br>$Rz = \frac{\sum_{i=1}^{5} y_{pi} + \sum_{i=1}^{5} y_{vi}}{5}$<br>In the formula, ypi means the height of 'i'th highest profile peak. In the formula, yvi means the depth of 'i'th deepest profile valley.<br>Maximum height of profile Ry: the distance between the top profile peak line and the bottom profile valley line in the longitudinal direction within the sampling length l.<br><br>Die gemittelte Rauhtiefe Rz ist das arithmetische Mittel aus den Einzelrauhtiefen fünf aufeinander grenzender Einzelmessstrecken gleicher Länge. Rz wird ebenfalls in (µm) angegeben. |  |
| Maximum height of profile<br>Maximale Rauhtiefe | Ry | The distance between the inner profile peak line and the bottom profile valley line in the longitudinal direction within the sampling length l.<br>Top profile peak line is the line that parallels to the reference line and passes through the highest point of profile peak. Bottom profile line is the line that parallels to the reference line and passes through the lowest point of profile valley.<br><br>Die maximale Rauhtiefe Ry ist die größte der auf der Gesamtmeßstrecke l vorkommenden Einzelrauhtiefen, Ry wird auch in (µm) Mikrometer angegeben. (Bemerkung) Um Rz herausfinden, wird ein Anteil ohne außergewöhnliche Höhen und Tiefen als Stichprobenlänge ausgewählt und als Schwachstelle betrachtet. |  |

## Material comparison table · Werkstoffe Vergleichstabelle



| ISO | Country and Standard · **Standardbezeichnung nach Länder** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| P | Alloy steel · Legierter Stahl | | | | | | | | | | | |
| | 15 | 1015 | 1.0401 | C15 | 080M15 | - | 1350 | CC12 | C15C16 | F.111 | - | |
| | 20 | 1020 | 1.0402 | C22 | 050A20 | 2C | 1450 | CC20 | C20C21 | F.112 | - | 20 |
| | 35 | 1035 | 1.0501 | C35 | 060A35 | - | 1550 | CC35 | C35 | F.113 | - | 35 |
| | 45 | 1045 | 1.0503 | C45 | 080M40 | - | 1650 | CC45 | C45 | F.114 | - | 45 |
| | 55 | 1055 | 1.0535 | C55 | 070M55 | - | 1655 | - | C55 | - | - | 55 |
| | 60 | 1060 | 1.0601 | C60 | 080A62 | 43D | - | CC55 | C60 | - | - | 60 |
| | Y15 | 1213 | 1.7015 | 9SMn28 | 230M07 | - | 1912 | S250 | CF9SMn28 | 11SMn28 | SUM22 | 15Ch |
| | - | 12L13 | 1.0718 | 9SMnPb28 | - | - | 1914 | S250Pb | CF9MnPb28 | 11SMnPb28 | SUM22L | - |
| | - | - | 1.0722 | 10SPb20 | - | - | - | 10PbF2 | CF10Pb20 | 10SPb20 | - | - |
| | - | 1140 | 1.0726 | 35S20 | 212M36 | 8M | 1957 | 35MF4 | - | F210G | - | - |
| | Y13 | 1215 | 1.0736 | 9SMn36 | 240M07 | 1B | - | S300 | CF9SMn36 | 12SMn35 | - | - |
| | - | 12L14 | 1.0737 | 9SMnPb36 | - | - | 1926 | S300Pb | CF9SMnPb36 | 12SMnP35 | - | - |
| | 55Si2Mn | 9255 | 1.0904 | 55Si9 | 250A53 | 45 | 2085 | 55S7 | 55Si8 | 56Si7 | - | - |
| | - | 9262 | 1.0961 | 60SiCr7 | - | - | - | 60SC7 | 60SiCr8 | 60SiCr8 | - | - |
| | 15 | 1015 | 1.1141 | Ck15 | 080M15 | 32C | 1370 | XC12 | C16 | C15K | S15C | 15 |
| | 40Mn | 1039 | 1.1157 | 40Mn4 | 150M36 | 15 | - | 35M5 | - | - | - | 40G |
| | 25 | 1025 | 1.1158 | Ck25 | - | - | - | - | - | - | S25C | 25 |
| | 35Mn2 | 1335 | 1.1167 | 36Mn5 | - | - | 2120 | 40Mn5 | - | 36Mn5 | SMn438(H) | 35G2,35GL |
| | 30Mn | 1330 | 1.1170 | 28Mn6 | 150M28 | 14A | - | 20M5 | C28Mn | - | SCMn1 | 30G |
| | 35Mn | 1035 | 1.1183 | Cf35 | 060A35 | - | 1572 | XS38TS | C36 | - | S35C | - |
| | Ck45 | 1045 | 1.1191 | 45 | 080M46 | - | 1672 | XC42 | C45 | C45K | S45C | - |
| | 55 | 1055 | 1.1203 | Ck55 | 070M55 | - | - | XC45 | C50 | C55K | S55C | 55 |
| | 50 | 1050 | 1.1213 | Cf53 | 060A52 | - | 1674 | XC48TS | C53 | - | S50C | - |
| | 60Mn | 1060 | 1.1221 | Ck60 | 080A62 | 43D | 1678 | XC60 | C60 | - | S58C | 60,60G |
| | - | 1095 | 1.1274 | Ck101 | 060A96 | - | 1870 | - | - | - | SUP4 | - |
| | - | - | 1.3401 | X120Mn12 | Z120M12 | - | - | X120M12 | XG120Mn12 | X120Mn12 | SCMnH/1 | 110G13L |
| | Gr15;45Gr | 52100 | 1.3505 | 100Cr6 | 534A99 | 31 | 2258 | 100C6 | 100Cr6 | F.131 | SUJ2 | SchCh 15 |
| | - | ASTM A204Gr.A | 1.5415 | 15Mo3 | 1501-240 | - | 2912 | 15D3 | 16Mo3KW | 16Mo3 | - | - |
| | - | 4520 | 1.5426 | 16Mo5 | 1503-245-420 | - | - | - | 16Mo5 | 16Mo5 | - | - |
| | - | ASTM A350LF5 | 1.5622 | 14Ni6 | - | - | - | 16N6 | 14Ni6 | 15Ni6 | - | - |
| | - | ASTM A353 | 1.5662 | X8Ni9 | 1501-509;510 | - | - | - | X10Ni9 | XBNi09 | - | - |

## Material comparison table · Werkstoffe Vergleichstabelle

| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| P | Alloy steel · Legierter Stahl | | | | | | | | | | | |
| | - | 2515 | 1.5680 | 12Ni19 | - | - | - | Z18N5 | - | - | - | - |
| | - | 3135 | 1.5710 | 36NiCr6 | 640A35 | 111A | - | 35NC6 | - | - | SNC236 | - |
| | - | 3415 | 1.5732 | 14NiCr10 | - | - | - | 14NC11 | 16NiCr11 | 15NiCr11 | SNC415(H) | - |
| | - | 3415<br>3310 | 1.5752 | 14NiCr14 | 655M13<br>655A12 | 36A | - | 12NC15 | - | - | SNC815(H) | - |
| | - | 9840 | 1.6511 | 36CrNiMo4 | 816M40 | 110 | - | 40NCD3 | 38CrNiMo4(KB) | 35CrNiMo4 | - | 40 ChN2MA |
| | - | 8620 | 1.6523 | 21NiCrMo2 | 850M20 | 362 | 2503 | 20NCD2 | 20NiCrMo2 | 20NiCrMo2 | SNCCM220(H) | - |
| | - | 8740 | 1.6546 | 40NiCrMo2 | 311-Type7 | - | - | - | 40NiCrMo2(KB) | 40NiCrMo2 | SNC240 | 38ChGNM |
| | 40CrNiMoA | 4340 | 1.6582 | 34CrNiMo6 | 817M40 | 24 | 2541 | 35NCD6 | 35CrNiMo6(KB) | - | - | 38Ch2N2MA |
| | - | - | 1.6587 | 17CrNiMo6 | 820A16 | - | - | 18NCD6 | - | 14CrNiMo13 | - | - |
| | 15Cr | 5015 | 1.7015 | 15Cr3 | 523M15 | - | - | 12C3 | - | - | SCr415(H) | 15Ch |
| | 35Cr | 5132 | 1.7033 | 34Cr4 | 530A32 | 18B | - | 32C4 | 34Cr4(KB) | 35Cr4 | SCr430(H) | 35Ch |
| | 40Cr | 5140 | 1.7035 | 41Cr4 | 530M40 | 18 | - | 42C4 | 41Cr4 | 42Cr4 | SCr440(H) | 40Ch |
| | 40Cr | 5140 | 1.7045 | 42Cr4 | - | - | 2245 | - | - | 42Cr4 | SCr440 | 40Ch |
| | 18CrMn | 5115 | 1.7131 | 16MnCr15 | (527M20) | - | 2511 | 16MC5 | 16MnCr15 | 16MnCr15 | - | 18ChG |
| | 20CrMn | 5155 | 1.7176 | 55Cr3 | 527A60 | 48 | - | 55C3 | - | - | SUP9(A) | 50ChGA |
| | 30CrMn | 4130 | 1.7218 | 25CrMo4 | 1717CDS110 | - | 2225 | 25CD4 | 25CrMo4(KB) | 55Cr3 | SCM420;<br>SCM430 | 30ChM |
| | 35CrMo | 4137;4135 | 1.7220 | 34CrMo4 | 708A37 | 19B | 2234 | 35CD4 | 35CrMo4 | 34CrMo4 | SCM432;<br>SCRRM3 | AS38ChGM |
| | 40CrMoA | 4140;4142 | 1.7223 | 41CrMo4 | 708M40 | 19A | 2244 | 42CD4TS | 41CrMo4 | 41CrMo4 | SCM440 | 40 ChFA |
| | 42CrMo<br>42CrMnMo | 4140 | 1.7225 | 42CrMo4 | 708M40 | 19A | 2244 | 42CD4 | 42CrMo4 | 42CrMo4 | SCM440(H) | - |
| | - | - | 1.7262 | 15CrMo5 | - | - | 2216 | 12CD4 | - | 12CrMo4 | SCM415(H) | - |
| | - | ASTM A182<br>F11;F12 | 1.7335 | 13CrMo44 | 1501-620Gr.27 | - | - | 15CD3.5;<br>15CD4.5 | 14CrMo44 | 14CrMo45 | - | 12ChM ,<br>15ChM |
| | - | - | 1.7361 | 32CrMo12 | 722M24 | 40B | 2240 | 30CD12 | 32CrMo12 | F.124.A | - | - |
| | - | ASTM A182<br>F.22 | 1.7380 | 10CrMo910 | 1501-<br>622Gr.31;45 | - | 2218 | 12CD9;10 | 12CrMo9,10 | TU.H | - | - |
| | - | - | 1.7715 | 14MoV63 | 1503-660-440 | - | - | - | - | 13MoCrV6 | - | - |
| | 50CrVA | 6150 | 1.8159 | 50CrV4 | 735A50 | 47 | 2230 | 50CV4 | 50CrV4 | 51CrV4 | SUP10 | 50ChGFA |
| | - | - | 1.8509 | 41CrAlMo7 | 905M39 | 41B | 2940 | 40CAD6,12 | 41CrAlMo7 | 41CrAlMo7 | - | 38ChMJuA |
| | - | - | 1.8523 | 39CrMoV139 | 897M39 | 40C | - | - | 36CrMoV12 | - | - | - |

## Material comparison table · Werkstoffe Vergleichstabelle



| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/ SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| P | Tool steel · Werkzeugstahl | | | | | | | | | | | |
| | T10 | W.110 | 1.1545 | C105W1 | - | - | 1880 | $Y_1$105 | C98KU C100KU | F.515 F.516 | - | U10A |
| | T12A | W.112 | 1.1663 | C125W | - | - | - | $Y_2$120 | C120KU | (C120) | SK2 | U13 |
| | CrV;9SiCr | L3 | 1.2067 | 100Cr6 | BL3 | - | - | Y100C6 | - | 100Cr6 | - | - |
| | Cr12 | D3 | 1.2080 | X210Cr12 | BD3 | - | - | Z200Cr12 | X210Cr13KU X250Cr12KU | X210Cr12 | SKD1 | Ch12 |
| | 4Cr5MoVSi | H13 | 1.2344 | X40CrMoV5 1 | BH13 | - | 2242 | Z40CDV5 | X35CrMoV05KU X40CrMoV51KU | X40CrMoV5 | SKD61 | 4Ch5MF1S |
| | Cr6WV | A2 | 1.2363 | X100CrMoV5 1 | BA2 | - | 2260 | Z100CDV5 | X100CrMoV51KU | X100CrMoV5 | SKD12 | - |
| | CrWMo | - | 1.2419 | 105WCr6 | - | - | 2140 | 105WC13 | 10WCr6 107WCr5KU | 105WCr5 | SKS31 SKS2 SKS3 | ChWG |
| | Cr12W | - | 1.2436 | X210CrW12 | - | - | 2312 | - | X215CrW12 1KU | X210CrW12 | SKD2 | - |
| | 5CrNiMo | S1 | 1.2542 | 45WCrV7 | BS1 | - | 2710 | - | 45WCrV8KU | 45WCrSi8 | - | - |
| | 3Cr2W8V | H21 | 1.2581 | X30WCrV9 3 X30WCrV93KU | BH21 | - | - | Z30WCV9 | X28W09KU X30WCrV9 3KU | X30WCrV9 | SKD5 | 3Ch2W8F |
| | Cr12MoV | - | 1.2601 | X165CrMoV 12 | - | - | 2310 | - | X165CrMoW12KU | X160CrMoV12 | SKD11 | - |
| | 5CrNiMo | L6 | 1.2713 | 55NiCrMoV6 | - | - | - | 55NCDV7 | - | F.250.S | SKT4 | 5ChNM |
| | V | W210 | 1.2833 | 100V1 | BW2 | - | - | $Y_1$105V | - | - | SKS43 | - |
| | W6Mo5Cr4V2Co5 | - | 1.3243 | S6-5-2-5 | - | - | 2723 | Z85WDKCV | HS6-5-2-5 | HS6-5-2-5 | SKH55 | R6M5K5 |
| | W18Cr4VCo5 | T4 | 1.3255 | S18-1-2-5 | BT4 | - | - | Z80WKCV 10-05-04-01 | X78WCo1805KU | HS18-1-1-5 | SKH3 | - |
| | W6Mo5Cr4V2 | M2 | 1.3343 | S6-5-2 | BM2 | - | 2722 | Z85WDCV 06-05-04-02 | X82WMo0605KU | HS6-5-2 | SKH9 | R6M5 |
| | - | M7 | 1.3348 | S2-9-2 | - | -Z- | 2782 | Z100WCWV 09-02-04-02 | HS2-9-2 | HS2-9-2 | - | - |
| | W18Cr4V | T1 | 1.3355 | S18-0-1 | BT1 | - | - | Z80WCV 18-04-01 | X75W18KU | HS18-0-1 | SKH2 | - |
| | W6Mo5Cr4V3 | M3 | - | S6-5-3 | - | - | - | - | - | - | SKH52 | - |
| | - | M42 | - | - | BM42 | - | - | - | - | - | SKH59 | - |

| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | Main application<br>Hauptanwendung |
|---|---|---|---|---|---|---|---|
| | China | USA | Germany | Japan | Daido Steel Co., Ltd (Japan) | Russia | |
| | GB | AISI/SAE | DIN | JIS | DAIDO | GOST | |
| P | Plastic die steel · Gesenkstahl | | | | | | |
| | - | P20 mod. | | - | PX5N | | For mass production of large mirror dies. Automobile tail light, front fender of car, video camera, household electrical appliances etc<br>Große hochglänzende Präzisionsgesenke für die Serienproduktion. Automobilteile, Videokameras, elektr. Haushaltsgeräte ect. |
| | - | - | | - | NAK55 | | High precision mirror die. Video camera, music disc, Cosmetic Containers, transparent covers, transparent films etc<br>Hochglänzende Präzisionsgesenke für Videokameras, Musik CDs, Kosmetik Behälter, Transparente Abdeckungen. |
| | - | - | | - | NAK80 | | High precision mirror die. Video camera, music disc, Cosmetic Containers, transparent covers, transparent films etc<br>Hochglänzende Präzisionsgesenke für Videokameras, Musik CDs, Kosmetik Behälter, Transparente Abdeckungen und Beläge. |
| | 3Cr13 | 420 mod. | | SUS420J2 mod. | S-STAR | | For ultra-mirror corrosion resistant precise dies. Accessories of camera, CD, lens, watch case.<br>Für ultra-fein spiegelnde korrosionsbeständige Gesenke für Zubehör von Kameras. CD, Linsen, Armbanduhren. |
| | Cold-working die steel · Kaltarbeitsstahl | | | | | | |
| | - | 02 | - | SKS93 | YK30 | | Stamping die, gauge calipers, paper cutter, auxiliary tools<br>Für Gesenkstempel, Meßkaliber, Papierschneidmesser, Werkzeuge |
| | 9CrWMn | 01 mod. | - | SKS3 mod. | GOA | | Blanking die, gauge calipers, drawing die, taps, Perforated punch.<br>Für Schnittmatrizen, Meßkaliber, Gewindebohrer, Perforationswerkzeuge, Kaltziehsteine |
| | Cr12MoV | D2 | X165CrMoV12 | SKD11 | DC11 | | Blanking die, cold forming die, cold drawing die, forming roller, punch<br>Für Schnittmatrizen, Kaltformpressgesenke, Kaltziehsteine, Formwalzen. |
| | - | D2 mod. | - | SKD11 mod. | DC53 | | Blanking die, cold forming die, cold drawing die, forming roll, punch<br>Für Schnittmatrizen, Kaltformpressgesenke, Kaltziehsteine, Formwalzen. |
| | Hot-working die steel · Warmarbeitsstahl | | | | | | |
| | 4Cr5MoSiV1 | H13 | X40CrMoV51 | SKD61 | DHA1 | | Aluminum-compression die, connecting parts of compression die, hot stamping die, hot extrusion die, thermal shear cutting blade<br>Aluminium Druckgesenke, Verbindungsstücke für Druckgesenke, Heißpressgesenke, Heiß-Extruder-Gesenke, warmfeste Schnittmesser ect. |
| | - | - | - | - | DH21 | | Long life Aluminum compression die<br>Alu-Druckgesenke für lange Lebensdauer |
| | - | - | - | - | DH31-S | | Compression die, Druckgesenke |
| | - | - | - | - | DH2F | | Compression die, plastic die<br>Druckgesenke, Plastik-Gesenke |

| ISO | Country and Standard · **Standardbezeichnung nach Länder** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/ SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| M | Stainless steel · Rostfreier Stahl | | | | | | | | | | | |
| | 0Cr13; 1Cr12 | 403 | 1.4000 | X6Cr13 | 403S17 | - | 2301 | Z6C13 | X6Cr13 | F.3110 | SUS403 | 08Ch13 |
| | - | - | 1.4001 | X7Cr14 | - | - | - | - | - | F.8401 | - | - |
| | 1Cr13 | 410 | 1.4006 | X10Cr13 | 410S21 | 56A | 2302 | Z10C14 | X12Cr13 | F.3401 | SUS410 | 12Ch13 |
| | 1Cr17 | 430 | 1.4016 | X6Cr17 | 430S15 | 60 | 220 | Z8C17 | X8Cr17 | F.3113 | SUS430 | 12Ch17 |
| | 2Cr13 | 410 | 1.4021 | X20Cr13 | S62 | 56B; 56C | - | Z20C13 | X20C13 | F.3401 | SUS410 | 20Ch13 |
| | - | - | 1.4027 | G-X20Cr14 | 420C29 | 56B | - | Z20C13M | - | - | SCS2 | 20Ch13L |
| | 4Cr13 | - | 1.4034 | X46Cr13 | 420S45 | 56D | 2304 | Z40CM Z38C13M | X40Cr14 | F.3405 | SUS420J2 | 40Ch13 |
| | 1Cr17Ni2 | 431 | 1.4057 | X20CrNi172 | 431S29 | 57 | 2321 | Z15CNi6.02 | X16CNi16 | F.3427 | SUS431 | 20Ch17N2 |
| | Y1Cr17 | 430F | 1.4104 | X12CrMoS17 | - | - | 2383 | Z10CF17 | X10CrS17 | F.3117 | SUS430F | - |
| | 1Cr17Mo | 434 | 1.4113 | X6CrMo171 | 434S17 | - | 2325 | Z8CD17.01 | X8CrMo17 | - | SUS434 | - |
| | - | - | 1.4313 | X5CrNi134 | 425C11 | - | - | Z4CND13.4M | - | - | SCS5 | - |
| | - | - | 1.4408 | G-X6CrNiMo1810 | 316C16 | - | - | - | - | F.8414 | SCS14 | 07Ch18N10G2S2M2L |
| | 4Cr9Si2 | HW3 | 1.4718 | X45CrSi93 | 401S45 | 52 | - | Z45CS9 | X45CrSi8 | F.322 | SUH1 | 40Ch9S2 |
| | 0Cr13Al | 405 | 1.4724 | X10CrAl13 | 403S17 | - | - | Z10C13 | X10CrAl12 | F.311 | SUS405 | 10Ch13SJu |
| | Cr17 | 430 | 1.4742 | X10CrAl18 | 430S15 | 60 | - | Z10CAS18 | X8Cr17 | F.3113 | SUS430 | 15Ch18SJu |
| | 8Cr20Si2Ni | HNV6 | 1.4757 | X80CrNiSi20 | 443S65 | 59 | - | Z80CSN20.02 | X80CrSiNi20 | F.320V | SUH4 | - |
| | 2Cr25N | 446 | 1.4762 | X10CrAl24 | - | - | 2322 | Z10CAS24 | X16Cr26 | - | SUH446 | - |
| | Austenitic stainless steel · Austenitischer Rostfreier Stahl | | | | | | | | | | | |
| | 0Cr18Ni9 | 304 | 1.4301 | X5CrNi1810 | 304S15 | 58E | 2332 | Z6CN18.09 | X5CrNi1810 | F.3551; F.3541; F.3504 | SUS304 | 08Ch18N10 |
| | 1Cr18Ni9MoZr | 303 | 1.4305 | X10CrNiS189 | 303S21 | 58M | 2346 | Z10CNF18.09 | X10CrNiS18.09 | F.3508 | SUS303 | - |
| | 0Cr19Ni10 | 304L | 1.4306 | X2CrNi1911 | 304S12 | - | 2352 | Z2CN18.10 | X2CrNi18.11 | F.3503 | SCS19 | 03Ch18N11 |
| | - | - | 1.4308 | G-X6CrNi189 | 304C15 | - | - | Z6CN18.10M | - | - | SCS13 | 07Ch18N9L |
| | Cr17Ni7 | 301 | 1.4310 | X12CrNi177 | - | - | 2331 | Z12CN17.07 | X12CrNi1707 | F.3517 | SUS301 | - |
| | - | 304LN | 1.4311 | X2CrNiN1810 | 304S62 | - | 2371 | Z2CN18.10 | - | - | SUS304LN | - |
| | 0Cr19Ni9 | 304 | 1.4350 | X5CrNi189 | 304S31 | 58E | - | Z6CN18.09 | X5CrNi1810 | - | SUS304 | - |
| | 0Cr17Ni11Mo2 | 316 | 1.4401 | X5CrNiMo1712 | 316S16 | Z6CND17.11 | 2347 | 1.4401 | X5CrNiMo1712 | F.3543 | SUS316 | - |
| | 00Cr17Ni13Mo2 | 316LN | 1.4429 | X2CrNiMoN17133 | - | - | 2375 | Z2CND17.13 | - | - | SUS316LN | - |
| | 0Cr27Ni12Mo3 | 316L | 1.4435 | X2CrNiMo18143 | 316S12 | - | 2353 | Z2CDN17.13 | X2CrNiMo1713 | - | SCS16, | 03Ch17N14M2 |
| | 00Cr19Ni13Mo3 | 317L | 1.4438 | X2CrNiMo17133 | 317S12 | - | 2367 | Z2CND19.15 | X2CrNiMo18.16 | - | SUS317L | - |
| | - | 329L | 1.4460 | X8CrNiMo275 | - | - | 2324 | - | - | - | SUS329L; SCH11; SCS11 | - |
| | 1Cr18Ni9Ti | 321 | 1.4541 | X6CrNiTi1810 | 2337 | 321S12 | 58B | Z6CNT18.10 | X6CrNiTi1811 | F.3553 | SUS321 | 12Ch18N10T |
| | 1Cr18Ni11Nb | 347 | 1.4550 | X6CrNiNb1810 | 347S17 | 58F | 2338 | Z6CNNb18.1 | X6CrNiTi1811 | F.3552 | SUS347 | 08Ch18N12B |
| | Cr18Ni12Mo2Ti | 316Ti | 1.4571 | X6CrNiMoTi17122 | 320S17 | 58J | 2350 | Z6NDT17.12 | X6CrNiMoTi17 | F.3535 | - | 10Ch17N13M2T |

| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/ SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| M | Austenitic stainless steel · Austenitischer Rostfreier Stahl | | | | | | | | | | | |
| | - | - | 1.4581 | G-X5CrNiMoNb1810 | 318C7 | - | - | Z4CNDNb1812M | XG8CrNiMo18 | - | SCS22 | - |
| | Cr17Ni12Mo3Nb | 318 | 1.4583 | X10CrNiMoNb1812 | - | - | - | Z6CNDNb1713B | X6CrNiMoTiNb17 | - | - | - |
| | 1Cr23Ni13 | 309 | 1.4828 | X15CrNiSi2012 | 309S24 | - | - | Z15CNS20.1 | - | - | SUH309 | 20Ch20N14S2 |
| | 0Cr25Ni20 | 310S | 1.4845 | X12CrNi2521 | 310S24 | - | 2361 | Z12CN2520 | X6CrNi2520 | F.331 | SUH310 | 20Ch23N18 |
| | Cr15Ni36W3Ti | 330 | 1.4864 | X12NiCrSi3616 | - | - | - | Z12CNS35.1 | - | - | SUH330 | - |
| | - | - | 1.4865 | G-X40NiCrSi3818 | 330C11 | - | - | - | XG50NiCr3919 | - | SCH15 | - |
| | 5Cr2Mn9Ni4N | EV8 | 1.4871 | X53CrMnNiN219 | 349S54; 321S12 | - 58B | - | Z52CMN21.0 | X53CrMnNiN219 | - | SUH35 | 55Ch20G9AN4 |
| | 1Cr18Ni9Ti | 321 | 1.4878 | X12CrNiTi189 | 321S320 | 58C | - | Z6CNT18.12 | X6CrNiTi1811 | F.3523 | SU321 | 09Ch18N10T |

| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | Great Britain | Sweden | France | Italy | Spain | Japan | Russia |
| K | Nodular cast iron · GGG | | | | | | | | | |
| | QT400-18 | 60-40-18 | GGG40 | 400/17 | 0717-02 | FGS370-17 | GS370-17 | FGE38-17 | FCD400 | VC 42-12 |
| | QT450-10 | 65-45-12 | -- | 420/12 | -- | FGS400-12 | GS400-12 | FGE42-12 | FCD450 | - |
| | QT500-7 | 70-50-05 | GGG50 | 500/7 | 0727-02 | FGS500-7 | GS500-7 | FGE50-7 | FCD500 | VC 50-2 |
| | QT600-3 | 80-60-03 | GGG60 | 600/7 | 0732-03 | FGS600-2 | GS600-2 | FGE60-2 | FCD600 | VC 60-2 |
| | QT700-2 | 100-70-03 | GGG70 | 700/2 | 0737-01 | FGS700-2 | GS700-2 | FGE70-2 | FCD700 | VC 70-2 |
| | QT800-2 | 120-90-02 | GGG80 | 800/2 | 0864-03 | FGS800-2 | GS800-2 | FGE80-2 | FCD800 | VC 80-2 |
| | QT900-2 | -- | -- | 900/2 | -- | -- | -- | -- | -- | - |
| | Grey cast iron · Grauguss | | | | | | | | | |
| | -- | NO.60 | GG40 | -- | 0140 | FGL400 | -- | -- | | Sc 40 |
| | HT350 | NO.50 | GG35 | 350 | 0135 | FGL350 | G35 | FG35 | FC350 | Sc 35 |
| | HT300 | NO.45 | GG30 | 300 | 0130 | FGL300 | G30 | FG30 | FC300 | Sc 30 |
| | HT250 | NO.35 | GG25 | 250 | 0125 | FGL250 | G25 | FG25 | FC250 | Sc 25 |
| | HT200 | NO.30 | GG20 | 200 | 0120 | FGL200 | G20 | FG20 | FC200 | Sc 20 |
| | HT150 | NO.20 | GG15 | 150 | 0115 | FGL150 | G15 | FG15 | FC150 | Sc 15 |
| | HT100 | -- | -- | 100 | 0110 | -- | G10 | -- | FC100 | - |

| ISO | Country and Standard · Standardbezeichnung nach Länder | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/ SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| H | Hardened materials · Gehärtete Werkstoffe | | | | | | | | | | | |
| | - | 440A | 1.4108 | X100CrMo03 | - | - | 2258 08 | - | - | - | C4BS | - |
| | - | 610 | 1.4111 | X100CrMoV15 | - | - | 2534 05 | - | - | | AC4A | - |
| | - | 0-2 | - | X65CrMo14 | - | - | 2541 06 | - | - | | AC4A | - |

| ISO | Country and Standard · **Standardbezeichnung nach Länder** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| **N** | Aluminium-bassed alloys · Aluminium Legierungen | | | | | | | | | | | |
| | - | SC64D | 3.2373 | G-AlSI9MGWA | | | 4251 | A-S7G | | | C4BS | - |
| | - | DG-AlSI12 | | G-ALMG5 | LM5 | | 4252 | A-SU12 | | | AC4A | |
| | - | 356.1 | | | LM25 | | 4244 | | | | A5052 | |
| | - | A413.0 | | GD-AlSi12 | | | 4247 | | | | A6061 | |
| | - | A380.1 | | GD-AlSi8Cu3 | LM24 | | 4250 | | | | A7075 | |
| | - | A413.1 | | G-AlSi12(Cu) | LM20 | | 4260 | | | | ADC12 | |
| | - | A413.2 | | G-AlSi12 | LM6 | | 4261 | | | | | |
| | - | A360.2 | | G-AlSi10Mg(Cu) | LM9 | | 4253 | | | | | |

| ISO | Country and Standard · **Standardbezeichnung nach Länder** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | China | USA | Germany | | Great Britain | | Sweden | France | Italy | Spain | Japan | Russia |
| | GB | AISI/SAE | W.-nr | DIN | BS | EN | SS | AFNOR | UNI | UNE | JIS | GOST |
| **S** | Nickel based alloys · Nickel Legierungen | | | | | | | | | | | |
| | - | 5391 | LW2 4670 | S-NiCr13A16MoNb | mar-46 | - | - | NC12AD | - | - | | |
| | - | AMS 5397 | LW2 4674 | NiCo15Cr10MoAlTi | - | - | - | - | - | - | | |
| | - | 5660 | LW2.4662 | NiFe35Cr14MoTi | - | - | - | ZSNCDT42 | - | - | | |
| | - | 5383 | LW2.4668 | NiCr19Fe19NbMo | HR8 | - | - | NC19eNB | - | - | | |
| | - | - | 2.4631 | NiCr20TiAk | Hr401.601 | - | - | NC20TA | - | - | | - |
| | - | AMS 5399 | 2.4973 | NiCr19Co11MoTi | - | - | - | NC19KDT | - | - | | - |
| | - | AMS 5544 | LW2.4668 | NiCr19Fe19NbMo | - | - | - | NC20K14 | - | - | | |
| | - | 5390A | 2.4603 | - | - | - | - | NC22FeD | - | - | | - |
| | - | 5666 | 2.4856 | NiCr22Mo9Nb | - | - | - | NC22FeDNB | - | - | | - |
| | - | - | 2.4630 | NiCr20Ti | HR5.2034 | - | - | NC20T | - | - | | - |
| | - | 4676 | 2.4375 | NiCu30AL3Ti | 3072-76 | - | - | - | - | - | | - |
| | Cobalt based alloys · Kobalt Legierungen | | | | | | | | | | | |
| | - | 5537C AMS | | CoCr20W15Ni | - | - | - | KC20WN | - | - | | |
| | - | 5772 | LW2.4964 | CoCr20W14Ni | | | | KC22WN | | | | |
| | Titannium alloys · Titannium Legierungen | | | | | | | | | | | |
| | - | UNS R54520 | 3.7115.1 | TiAl5Sn2.5 | TA14/17 | - | - | T-A5E | - | - | | |
| | - | | | | | | | UNS R56400 | | | | |
| | - | - | 3.7165.1 | TiAl6V4 | TA10-13/ TA28 | | - | UNS R56401 | T-A6V | - | - | |
| | - | | | TiAl5V5Mo5Cr3 | | | | | | | | |
| | - | - | 3.7185 | TiAl4Mo4Sn4Si0.5 | - | - | - | - | - | - | | |

## Fitting dimension tolerance · Passtoleranzen

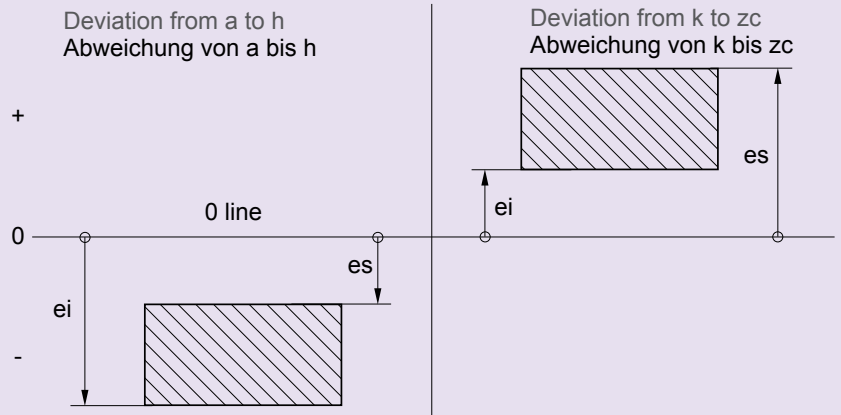
| Basic dimensions (mm) | | Standard tolerance class of holes · Standard-Toleranzklassen | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IT1 | IT2 | IT3 | IT4 | IT5 | IT6 | IT7 | IT8 | IT9 | IT10 | IT11 | IT12 | IT13 | IT14 | IT15 | IT16 | IT17 | IT18 |
| > | ≤ | μm | | | | | | | | | | | mm | | | | | | |
| --- | 3 | 0.8 | 1.2 | 2 | 3 | 4 | 6 | 10 | 14 | 25 | 40 | 60 | 0.1 | 0.14 | 0.25 | 0.4 | 0.6 | 1 | 1.4 |
| 3 | 6 | 1 | 1.5 | 2.5 | 4 | 5 | 8 | 12 | 18 | 30 | 48 | 75 | 0.12 | 0.18 | 0.3 | 0.48 | 0.75 | 1.2 | 1.8 |
| 6 | 10 | 1 | 1.5 | 2.5 | 4 | 6 | 9 | 15 | 22 | 36 | 58 | 90 | 0.15 | 0.22 | 0.36 | 0.58 | 0.9 | 1.5 | 2.2 |
| 10 | 18 | 1.2 | 2 | 3 | 5 | 8 | 11 | 18 | 27 | 43 | 70 | 110 | 0.18 | 0.27 | 0.43 | 0.7 | 1.1 | 1.8 | 2.7 |
| 18 | 30 | 1.5 | 2.5 | 4 | 6 | 9 | 13 | 21 | 33 | 52 | 84 | 130 | 0.21 | 0.33 | 0.52 | 0.84 | 1.3 | 2.1 | 3.3 |
| 30 | 50 | 1.5 | 2.5 | 4 | 7 | 11 | 16 | 25 | 39 | 62 | 100 | 160 | 0.25 | 0.39 | 0.62 | 1 | 1.6 | 2.5 | 3.9 |
| 50 | 80 | 2 | 3 | 5 | 8 | 13 | 19 | 30 | 46 | 74 | 120 | 190 | 0.3 | 0.46 | 0.74 | 1.2 | 1.9 | 3. | 4.6 |
| 80 | 120 | 2.5 | 4 | 6 | 10 | 15 | 22 | 35 | 54 | 87 | 140 | 220 | 0.35 | 0.54 | 0.87 | 1.4 | 2.2 | 3.5 | 5.4 |
| 120 | 180 | 3.5 | 5 | 8 | 12 | 18 | 25 | 40 | 63 | 100 | 160 | 250 | 0.4 | 0.63 | 1 | 1.6 | 2.5 | 4 | 6.3 |
| 180 | 250 | 4.5 | 7 | 10 | 14 | 20 | 29 | 46 | 72 | 115 | 185 | 290 | 0.46 | 0.72 | 1.15 | 1.85 | 2.9 | 4.6 | 7.2 |
| 250 | 315 | 6 | 8 | 12 | 16 | 23 | 32 | 52 | 81 | 130 | 210 | 320 | 0.52 | 0.81 | 1.3 | 2.1 | 3.2 | 5.2 | 8.1 |
| 315 | 400 | 7 | 9 | 13 | 18 | 25 | 36 | 57 | 89 | 140 | 230 | 360 | 0.57 | 0.89 | 1.4 | 2.3 | 3.6 | 5.7 | 8.9 |
| 400 | 500 | 8 | 10 | 15 | 20 | 27 | 40 | 63 | 97 | 155 | 250 | 400 | 0.63 | 0.97 | 1.55 | 2.5 | 4 | 6.3 | 9.7 |
| 500 | 630 | 9 | 11 | 16 | 22 | 32 | 44 | 70 | 110 | 175 | 280 | 440 | 0.7 | 1.1 | 1.75 | 2.8 | 4.4 | 7 | 11 |
| 630 | 800 | 10 | 13 | 18 | 25 | 36 | 50 | 80 | 125 | 200 | 320 | 500 | 0.8 | 1.25 | 2 | 3.2 | 5 | 8 | 12.5 |
| 800 | 1000 | 11 | 15 | 21 | 28 | 40 | 56 | 90 | 140 | 230 | 360 | 560 | 0.9 | 1.4 | 2.3 | 3.6 | 5.6 | 9 | 14 |
| 1000 | 1250 | 13 | 18 | 24 | 33 | 47 | 66 | 105 | 165 | 260 | 420 | 660 | 1.05 | 1.65 | 2.6 | 4.2 | 6.6 | 10.5 | 16.5 |
| 1250 | 1600 | 15 | 21 | 29 | 39 | 55 | 78 | 125 | 195 | 310 | 500 | 780 | 1.25 | 1.95 | 3.1 | 5 | 7.8 | 12.5 | 19.5 |
| 1600 | 2000 | 18 | 25 | 35 | 46 | 65 | 92 | 150 | 230 | 370 | 600 | 920 | 1.5 | 2.3 | 3.7 | 6 | 9.2 | 15 | 23 |
| 2000 | 2500 | 22 | 30 | 41 | 55 | 78 | 110 | 175 | 280 | 440 | 700 | 1100 | 1.75 | 2.8 | 4.4 | 7 | 11 | 17.5 | 28 |
| 2500 | 3150 | 26 | 36 | 50 | 68 | 96 | 135 | 210 | 330 | 540 | 860 | 1350 | 2.1 | 3.3 | 5.4 | 8.6 | 13.5 | 21 | 33 |

Note:
From IT1 to IT5, the standard tolerance with basic dimension more than 500 mm is as trial.
When the basic dimension 1 mm, the tolerances from IT4 to IT8 are invalid.

Bemerkung:
Für die Standardt Toleranzen IT1 bis IT5 bei Durchmesser über 500 mm ist eine Anpassung notwendig. Bei Basis abmessungen unter 1 mm ist das Toleranzfeld IT4 bis IT8 ungültig.

The shaft lower deviation(ei) and upper deviation (es) can be obtained by basic tolerance and standard tolerance (IT) of shaft.

Toleranz Einheitswelle: Die geringste Abweichung (ei) und die größte Abweichung (es) sind als Basis bzw. Standard-Toleranzen (IT) in der Tabelle angegeben.

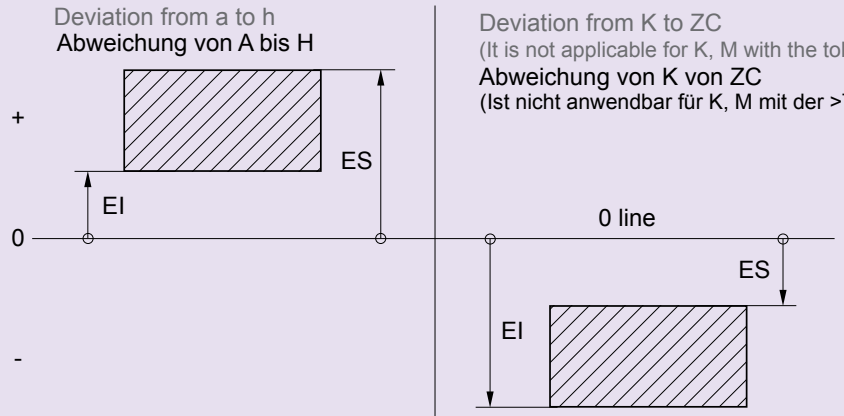



ES= negative (-) basic tolerance of hole
ES= neg(-) Basistoleranz der Bohrung
ei=es-IT

EI= positive (+) basic tolerance of hole
EI= pos(+) Basistoleranz der Bohrung
es=ei+IT

The hole lower deviation(EI) and upper deviation (ES) can be obtained by basic tolerance and standard tolerance (IT) of hole.

Toleranz Einheitsbohrung: Die geringste Abweichung (EI) und die größte Abweichung (ES) sind als Basis bzw. Standard-Toleranzen (IT)- Bohrung in der Tabelle angegeben.




EI= postive (+) basic tolerance of hole
EI= pos(+) Basistoleranz der Bohrung
ES=EI+IT

ES=negitive (-) basic tolerance of hole
ES= neg(-) Basistoleranz der Bohrung
EI=ES+IT

For example: for a hole with diameter 3 mm and tolerance H7, we can find that the lower deviation EI=0 in relation to H7 from the basic tolerance table, and the standard tolerance IT=10μm corresponding to H7, thus the upper deviation ES=EI+IT=10μm. Therefore the hole fitting

dimension is Ø $3^{+0.01}_{0}$mm.

Beispiel: Bei einem Durchmesser von 3mm und einer Toleranz H7 ist bei der Basis Toleranz H7 EI=0 bei der Standard-Toleranz H7 ist es IT=10μm. Die größte Abweichung ist demzufolge: ES=EI+IT=10μm.

Die Bohrungstoleranz ist bei einem Ø $3^{+0.01}_{0}$mm.

- **Basic deviations value of shaft**
- **Basistoleranzwerte Einheitswelle**

| Diameter Durchmesser Ø (mm) | | Basic deviation value · Basistoleranzwerte | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Upper deviation es · Höchstabweichung | | | | | | | | | | | |
| | | Standard tolerance class · Standard-Toleranzklasse | | | | | | | | | | | |
| > | ≤ | a | b | c | cd | d | e | ef | f | fg | g | h | js |
| --- | 3 | -270 | -140 | -60 | -34 | -20 | -14 | -10 | -6 | -4 | -2 | 0 | Die Formel für die Abweichung $=\pm\frac{IT_n}{2}$, ITn ist der IT Wert entsprechend zu "n" zugeordnet. In the formula Deviation $=\pm\frac{IT_n}{2}$, ITn is the IT value corresponding to ' n'. |
| 3 | 6 | -270 | -140 | -70 | -46 | -30 | -20 | -14 | -10 | -6 | -4 | 0 | |
| 6 | 10 | -280 | -150 | -80 | -56 | -40 | -25 | -18 | -13 | -8 | -5 | 0 | |
| 10 | 14 | -290 | -150 | -95 | | -50 | -32 | | -16 | | -6 | 0 | |
| 14 | 18 | | | | | | | | | | | | |
| 18 | 24 | -300 | -160 | -110 | | -65 | -40 | | -20 | | -7 | 0 | |
| 24 | 30 | | | | | | | | | | | | |
| 30 | 40 | -310 | -170 | -120 | | -80 | -50 | | -25 | | -9 | 0 | |
| 40 | 50 | -320 | -180 | -130 | | | | | | | | | |
| 50 | 65 | -340 | -190 | -140 | | -100 | -60 | | -30 | | -10 | 0 | |
| 65 | 80 | -360 | -200 | -150 | | | | | | | | | |
| 80 | 100 | -380 | -220 | -170 | | -120 | -72 | | -36 | | -12 | 0 | |
| 100 | 120 | -410 | -240 | -180 | | | | | | | | | |
| 120 | 140 | -460 | -260 | -200 | | -145 | -85 | | -43 | | -14 | 0 | |
| 140 | 160 | -520 | -280 | -210 | | | | | | | | | |
| 160 | 180 | -580 | -310 | -230 | | | | | | | | | |
| 180 | 200 | -660 | -340 | -240 | | -170 | -100 | | -50 | | -15 | 0 | |
| 200 | 225 | -740 | -380 | -260 | | | | | | | | | |
| 225 | 250 | -820 | -420 | -280 | | | | | | | | | |
| 250 | 280 | -920 | -480 | -300 | | -190 | -110 | | -56 | | -17 | 0 | |
| 280 | 315 | -1050 | -540 | -330 | | | | | | | | | |
| 315 | 355 | -1200 | -600 | -360 | | -210 | -125 | | -62 | | -18 | 0 | |
| 355 | 400 | -1350 | -680 | -400 | | | | | | | | | |
| 400 | 450 | -1500 | -760 | -440 | | -230 | -135 | | -68 | | -20 | 0 | |
| 450 | 500 | -1650 | -840 | -480 | | | | | | | | | |
| 500 | 560 | | | | | -260 | -145 | | -76 | | -22 | 0 | |
| 560 | 630 | | | | | | | | | | | | |
| 630 | 710 | | | | | -290 | -160 | | -80 | | -24 | 0 | |
| 710 | 800 | | | | | | | | | | | | |
| 800 | 900 | | | | | -320 | -170 | | -86 | | -26 | 0 | |
| 900 | 1000 | | | | | | | | | | | | |
| 1000 | 1120 | | | | | -350 | -195 | | -98 | | -28 | 0 | |
| 1120 | 1250 | | | | | | | | | | | | |
| 1250 | 1400 | | | | | -390 | -220 | | -110 | | -30 | 0 | |
| 1400 | 1600 | | | | | | | | | | | | |
| 1600 | 1800 | | | | | -430 | -240 | | -120 | | -32 | 0 | |
| 1800 | 2000 | | | | | | | | | | | | |
| 2000 | 2240 | | | | | -480 | -260 | | -130 | | -34 | 0 | |
| 2240 | 2500 | | | | | | | | | | | | |
| 2500 | 2800 | | | | | -520 | -290 | | -145 | | -38 | 0 | |
| 2800 | 3150 | | | | | | | | | | | | |

Note: 1. If basic dimension ≤1mm, the basic deviation a and b are not adopted.

Bemerkungen: 1. Bei Abmessungen ≤ 1mm, sind die Basisabweichungen a und b nicht berücksichtigt.

µm

| Basic deviation value · Basistoleranzwerte Einheitswelle | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lower deviationei · geringste Abweichung | | | | | | | | | | | | | | | | | | |
| IT5<br>IT6 | IT7 | IT8 | IT4<br>IT7 | ≤IT3<br>>IT7 | Standard tolerance class · Standard-Toleranzklasse | | | | | | | | | | | | | |
| j | | | k | | m | n | p | r | s | t | u | v | x | y | z | zn | zb | zc |
| -2 | -4 | -6 | 0 | 0 | +2 | +4 | +6 | +10 | +14 | | +18 | | +20 | | +26 | +32 | +40 | +60 |
| -2 | -4 | | +1 | 0 | +4 | +8 | +12 | +15 | +19 | | +23 | | +28 | | +35 | +42 | +50 | +80 |
| -2 | -5 | | +1 | 0 | +6 | +10 | +15 | +19 | +23 | | +28 | | +34 | | +42 | +52 | +67 | +97 |
| -3 | -6 | | +1 | 0 | +7 | +12 | +18 | +23 | +28 | | +33 | | +40 | | +50 | +64 | +90 | +130 |
| | | | | | | | | | | | | +39 | +45 | | +60 | +77 | +108 | +150 |
| -4 | -8 | | +2 | 0 | +8 | +15 | +22 | +28 | +35 | | +41 | +47 | +54 | +63 | +73 | +98 | +136 | +188 |
| | | | | | | | | | | +41 | +48 | +55 | +64 | +75 | +88 | +118 | +160 | +218 |
| -5 | -10 | | +2 | 0 | +9 | +17 | +26 | +34 | +43 | +48 | +60 | +68 | +80 | +94 | +112 | +148 | +200 | +274 |
| | | | | | | | | | | +54 | +70 | +81 | +97 | +114 | +136 | +180 | +242 | +325 |
| -7 | -12 | | +2 | 0 | +11 | +20 | +32 | +41 | +53 | +66 | +87 | +102 | +122 | +144 | +172 | +226 | +300 | +405 |
| | | | | | | | | +43 | +59 | +75 | +102 | +120 | +146 | +174 | +210 | +274 | +360 | +480 |
| -9 | -15 | | +3 | 0 | +13 | +23 | +37 | +51 | +71 | +91 | +124 | +146 | +178 | +214 | +258 | +335 | +445 | +585 |
| | | | | | | | | +54 | +79 | +104 | +144 | +172 | +210 | +254 | +310 | +400 | +525 | +690 |
| -11 | -18 | | +3 | 0 | +15 | +27 | +43 | +63 | +92 | +122 | +170 | +202 | +248 | +300 | +365 | +470 | +620 | +800 |
| | | | | | | | | +65 | +100 | +134 | +190 | +228 | +280 | +340 | +415 | +535 | +700 | +900 |
| | | | | | | | | +68 | +108 | +146 | +210 | +252 | +310 | +380 | +465 | +600 | +780 | +1000 |
| -13 | -21 | | +4 | 0 | +17 | +31 | +50 | +77 | +122 | +166 | +236 | +284 | +350 | +425 | +520 | +670 | +880 | +1150 |
| | | | | | | | | +80 | +130 | +180 | +258 | +310 | +385 | +470 | +575 | +740 | +960 | +1250 |
| | | | | | | | | +84 | +140 | +196 | +284 | +340 | +425 | +520 | +640 | +820 | +1050 | +1350 |
| -16 | -26 | | +4 | 0 | +20 | +34 | +56 | +94 | +158 | +218 | +315 | +385 | +475 | +580 | +710 | +920 | +1200 | +1550 |
| | | | | | | | | +98 | +170 | +240 | +350 | +425 | +525 | +650 | +790 | +1000 | +1300 | +1700 |
| -18 | -28 | | +4 | 0 | +21 | +37 | +62 | +108 | +190 | +268 | +390 | +475 | +590 | +730 | +900 | +1150 | +1500 | +1900 |
| | | | | | | | | +114 | +208 | +294 | +435 | +530 | +660 | +820 | +1000 | +1300 | +1650 | +2100 |
| -20 | -32 | | +5 | 0 | +23 | +40 | +68 | +126 | +232 | +330 | +490 | +595 | +740 | +920 | +1100 | +1450 | +1850 | +2400 |
| | | | | | | | | +132 | +252 | +360 | +540 | +660 | +820 | +1000 | +1250 | +1600 | +2100 | +2600 |
| | | | 0 | 0 | +26 | +44 | +78 | +150 | +280 | +400 | +600 | | | | | | | |
| | | | | | | | | +155 | +310 | +450 | +660 | | | | | | | |
| | | | 0 | 0 | +30 | +50 | +88 | +175 | +340 | +500 | +740 | | | | | | | |
| | | | | | | | | +185 | +380 | +560 | +840 | | | | | | | |
| | | | 0 | 0 | +34 | +56 | +100 | +210 | +430 | +620 | +940 | | | | | | | |
| | | | | | | | | +220 | +470 | +680 | +1050 | | | | | | | |
| | | | 0 | 0 | +40 | +66 | +120 | +250 | +520 | +780 | +1150 | | | | | | | |
| | | | | | | | | +260 | +580 | +840 | +1300 | | | | | | | |
| | | | 0 | 0 | +48 | +78 | +140 | +300 | +640 | +960 | +1450 | | | | | | | |
| | | | | | | | | +330 | +720 | +1050 | +1600 | | | | | | | |
| | | | 0 | 0 | +58 | +92 | +170 | +370 | +820 | +1200 | +1850 | | | | | | | |
| | | | | | | | | +400 | +920 | +1350 | +2000 | | | | | | | |
| | | | 0 | 0 | +68 | +110 | +195 | +440 | +1000 | +1500 | +2300 | | | | | | | |
| | | | | | | | | +460 | +1100 | +1650 | +2500 | | | | | | | |
| | | | 0 | 0 | +76 | +135 | +240 | +550 | +1250 | +1900 | +2900 | | | | | | | |
| | | | | | | | | +580 | +1400 | +2100 | +3200 | | | | | | | |

## • Basic deviations value of hole
## • Basistoleranzwerte Einheitsbohrung

| Diameter Durchmesser Ø (mm) | | Basic deviation value · Basis-Toleranzwerte Einheitswelle | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lower deviation EI · geringste Abweichung EI | | | | | | | | | | | Upper deviation ES · Höchstabweichung ES | | | | | | | | | |
| | | Standard tolerance class · Standard-Toleranzklasse | | | | | | | | | | | IT6 | IT7 | IT8 | ≤IT8 | >IT8 | ≤IT8 | >IT8 | ≤IT8 | >IT8 | ≤IT7 |
| > | ≤ | A | B | C | CD | D | E | EF | F | FG | G | H | JS | J | | | K | | M | | N | | P to ZC |
| --- | 3 | +270 | +140 | +60 | +34 | +20 | +14 | +10 | +6 | +4 | +2 | 0 | In the formula Deviation $=\pm\frac{IT_n}{2}$, ITn is the IT value corresponding to ' n'. Die Formel für die Abweichung $=\pm\frac{IT_n}{2}$, ITn ist der IT Wert entsprechend zu "n" zugeordnet. | +2 | +4 | +6 | 0 | 0 | -2 | -2 | -4 | -4 | Wenn IT ≥IT7, wird der a Δ wert zuaddiert. If IT ≥IT7, add a Δ value to the relevant value |
| 3 | 6 | +270 | +140 | +70 | +46 | +30 | +20 | +14 | +10 | +6 | +4 | 0 | | +5 | +6 | +10 | -1+Δ | | -4+Δ | -4 | -8+Δ | 0 | |
| 6 | 10 | +280 | +150 | +80 | +56 | +40 | +25 | +18 | +13 | +8 | +5 | 0 | | +5 | +8 | +12 | -1+Δ | | -6+Δ | -6 | -10+Δ | 0 | |
| 10 | 14 | +290 | +150 | +95 | | +50 | +32 | | +16 | | +6 | 0 | | +6 | +10 | +15 | -1+Δ | | -7+Δ | -7 | -12+Δ | 0 | |
| 14 | 18 | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 24 | +300 | +160 | +110 | | +65 | +40 | | +20 | | +7 | 0 | | +8 | +12 | +20 | -2+Δ | | -8+Δ | -8 | -15+Δ | 0 | |
| 24 | 30 | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 40 | +310 | +170 | +120 | | +80 | +50 | | +25 | | +9 | 0 | | +10 | +14 | +24 | -2+Δ | | -9+Δ | -9 | -17+Δ | 0 | |
| 40 | 50 | +320 | +180 | +130 | | | | | | | | | | | | | | | | | | | |
| 50 | 65 | +340 | +190 | +140 | | +100 | +60 | | +30 | | +10 | 0 | | +13 | +18 | +28 | -2+Δ | | -11+Δ | -11 | -20+Δ | 0 | |
| 65 | 80 | +360 | +200 | +150 | | | | | | | | | | | | | | | | | | | |
| 80 | 100 | +380 | +220 | +170 | | +120 | +72 | | +36 | | +12 | 0 | | +16 | +22 | +34 | -3+Δ | | -13+Δ | -13 | -23+Δ | 0 | |
| 100 | 120 | +410 | +240 | +180 | | | | | | | | | | | | | | | | | | | |
| 120 | 140 | +460 | +260 | +200 | | +145 | +85 | | +43 | | +14 | 0 | | +18 | +26 | +41 | -3+Δ | | -15+Δ | -15 | -27+Δ | 0 | |
| 140 | 160 | +520 | +280 | +210 | | | | | | | | | | | | | | | | | | | |
| 160 | 180 | +580 | +310 | +230 | | | | | | | | | | | | | | | | | | | |
| 180 | 200 | +660 | +340 | +240 | | +170 | +100 | | +50 | | +15 | 0 | | +22 | +30 | +47 | -4+Δ | | -17+Δ | -17 | -31+Δ | 0 | |
| 200 | 225 | +740 | +380 | +260 | | | | | | | | | | | | | | | | | | | |
| 225 | 260 | +820 | +420 | +280 | | | | | | | | | | | | | | | | | | | |
| 260 | 280 | +920 | +480 | +300 | | +190 | +110 | | +56 | | +17 | 0 | | +25 | +36 | +55 | -4+Δ | | -20+Δ | -20 | -34+Δ | 0 | |
| 280 | 315 | +1050 | +540 | +330 | | | | | | | | | | | | | | | | | | | |
| 315 | 355 | +1200 | +600 | +360 | | +210 | +125 | | +62 | | +18 | 0 | | +29 | +39 | +60 | -4+Δ | | -21+Δ | -21 | -37+Δ | 0 | |
| 355 | 400 | +1350 | +680 | +400 | | | | | | | | | | | | | | | | | | | |
| 400 | 450 | +1500 | +760 | +440 | | +230 | +135 | | +68 | | +20 | 0 | | +33 | +43 | +66 | -5+Δ | | -23+Δ | -23 | -40+Δ | 0 | |
| 450 | 500 | +1650 | +840 | +480 | | | | | | | | | | | | | | | | | | | |
| 500 | 560 | | | | | +260 | +145 | | +76 | | +22 | 0 | | | | | 0 | | -26 | | -44 | | |
| 560 | 630 | | | | | | | | | | | | | | | | | | | | | | |
| 630 | 710 | | | | | +290 | +160 | | +80 | | +24 | 0 | | | | | 0 | | -30 | | -50 | | |
| 710 | 800 | | | | | | | | | | | | | | | | | | | | | | |
| 800 | 900 | | | | | +320 | +170 | | +86 | | +26 | 0 | | | | | 0 | | -34 | | -56 | | |
| 900 | 1000 | | | | | | | | | | | | | | | | | | | | | | |
| 1000 | 1120 | | | | | +350 | +195 | | +98 | | +28 | 0 | | | | | 0 | | -40 | | -66 | | |
| 1120 | 1250 | | | | | | | | | | | | | | | | | | | | | | |
| 1250 | 1400 | | | | | +390 | +220 | | +110 | | +30 | 0 | | | | | 0 | | -48 | | -78 | | |
| 1400 | 1600 | | | | | | | | | | | | | | | | | | | | | | |
| 1600 | 1800 | | | | | +430 | +240 | | +120 | | +32 | 0 | | | | | 0 | | -58 | | -92 | | |
| 1800 | 2000 | | | | | | | | | | | | | | | | | | | | | | |
| 2000 | 2240 | | | | | +480 | +260 | | +130 | | +34 | 0 | | | | | 0 | | -68 | | -110 | | |
| 2240 | 2500 | | | | | | | | | | | | | | | | | | | | | | |
| 2500 | 2800 | | | | | +520 | +290 | | +145 | | +38 | 0 | | | | | 0 | | -76 | | -135 | | |
| 2800 | 3150 | | | | | | | | | | | | | | | | | | | | | | |

μm

| Basic deviation value · Basis-Toleranzwerte Einheitswelle | | | | | | | | | | | | Δ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Upper deviation ES · Höchstabweichung ES | | | | | | | | | | | | | | | | | |
| Standard tolerance class >IT7 · Standard-Toleranzklasse > IT7 | | | | | | | | | | | | Standard tolerance class<br>Standard-Toleranzklasse | | | | | |
| P | R | S | T | U | V | X | Y | Z | ZA | ZB | ZC | IT3 | IT4 | IT5 | IT6 | IT7 | IT8 |
| -6 | -10 | -14 | | -18 | | -20 | | -26 | -32 | -40 | -60 | 0 | 0 | 0 | 0 | 0 | 0 |
| -12 | -15 | -19 | | -23 | | -28 | | -35 | -42 | -50 | -80 | 1 | 1.5 | 1 | 3 | 4 | 6 |
| -15 | -19 | -23 | | -28 | | -34 | | -42 | -52 | -67 | -97 | 1 | 1.5 | 2 | 3 | 6 | 7 |
| -18 | -23 | -28 | | -33 | | -40 | | -50 | -64 | -90 | -130 | 1 | 2 | 3 | 3 | 7 | 9 |
| | | | | | -39 | -45 | | -60 | -77 | -108 | -150 | | | | | | |
| -22 | -28 | -35 | | -41 | -47 | -54 | -63 | -73 | -98 | -136 | -188 | 1.5 | 2 | 3 | 4 | 8 | 12 |
| | | | -41 | -48 | -55 | -64 | -75 | -88 | -118 | -160 | -218 | | | | | | |
| -26 | -34 | -43 | -48 | -60 | -68 | -80 | -94 | -112 | -148 | -200 | -274 | 1.5 | 3 | 4 | 5 | 9 | 14 |
| | | | -54 | -70 | -81 | -97 | -114 | -136 | -180 | -242 | -325 | | | | | | |
| -32 | -41 | -53 | -66 | -87 | -102 | -122 | -144 | -172 | -226 | -300 | -405 | 2 | 3 | 5 | 6 | 11 | 16 |
| | -43 | -59 | -75 | -102 | -120 | -146 | -174 | -210 | -274 | -360 | -480 | | | | | | |
| -37 | -51 | -71 | -91 | -124 | -146 | -178 | -214 | -258 | -335 | -445 | -585 | 2 | 4 | 5 | 7 | 13 | 19 |
| | -54 | -79 | -104 | -144 | -172 | -210 | -254 | -310 | -400 | -525 | -690 | | | | | | |
| -43 | -63 | -92 | -122 | -170 | -202 | -248 | -300 | -365 | -470 | -620 | -800 | 3 | 4 | 6 | 7 | 15 | 23 |
| | -65 | -100 | -134 | -190 | -228 | -280 | -340 | -415 | -535 | -700 | -900 | | | | | | |
| | -68 | -108 | -146 | -210 | -252 | -310 | -380 | -465 | -600 | -780 | -1000 | | | | | | |
| -50 | -77 | -122 | -166 | -236 | -284 | -350 | -425 | -520 | -670 | -880 | -1150 | 3 | 4 | 6 | 9 | 17 | 26 |
| | -80 | -130 | -180 | -258 | -310 | -385 | -470 | -575 | -740 | -960 | -1250 | | | | | | |
| | -84 | -140 | -196 | -284 | -340 | -425 | -520 | -640 | -820 | -1050 | -1350 | | | | | | |
| -56 | -94 | -158 | -218 | -315 | -385 | -475 | -580 | -710 | -920 | -1200 | -1550 | 4 | 4 | 7 | 9 | 20 | 29 |
| | -98 | -170 | -240 | -350 | -425 | -525 | -650 | -790 | -1000 | -1300 | -1700 | | | | | | |
| -62 | -108 | -190 | -268 | -390 | -475 | -590 | -730 | -900 | -1150 | -1500 | -1900 | 4 | 5 | 7 | 11 | 21 | 32 |
| | -114 | -208 | -294 | -435 | -530 | -660 | -820 | -1000 | -1300 | -1650 | -2100 | | | | | | |
| -68 | -126 | -232 | -330 | -490 | -595 | -740 | -920 | -1100 | -1450 | -1850 | -2400 | 5 | 5 | 7 | 13 | 23 | 34 |
| | -132 | -252 | -360 | -540 | -660 | -820 | -1000 | -1250 | -1600 | -2100 | -2600 | | | | | | |
| -78 | -150 | -280 | -400 | -600 | | | | | | | | | | | | | |
| | -155 | -310 | -450 | -660 | | | | | | | | | | | | | |
| -88 | -175 | -340 | -500 | -740 | | | | | | | | | | | | | |
| | -185 | -380 | -560 | -840 | | | | | | | | | | | | | |
| 100 | -210<br>-220 | -430<br>-470 | -620<br>-680 | -940<br>-1050 | | | | | | | | | | | | | |
| -120 | -250<br>-260 | -520<br>-580 | -780<br>-840 | -1150<br>-1300 | | | | | | | | | | | | | |
| -140 | -300<br>-330 | -640<br>-720 | -960<br>-1050 | -1450<br>-1600 | | | | | | | | | | | | | |
| -170 | -370 | -820 | -1200 | -1850 | | | | | | | | | | | | | |
| | -400 | -920 | -1350 | -2000 | | | | | | | | | | | | | |
| -195 | -440<br>-460 | -1000<br>-1100 | -1500<br>-1650 | -2300<br>-2500 | | | | | | | | | | | | | |
| -240 | -550<br>-580 | -1250<br>-1400 | -1900<br>-2100 | -2900<br>-3200 | | | | | | | | | | | | | |

## Hardness reference table (conversion of hardness and strength for ferrous metal)
## Härte Vergleichstabelle (Konversationstabelle von Härte und Zugfestigkeit für Stahl)

| Hardness · Härte | | | | Tensile strength Zugfestigkeit N/mm² |
|---|---|---|---|---|
| Rockwell hardness · Härte | | Vickers hardn. · Härte | Brinell hardn. · Härte | |
| HRC | HRA | HV | HB | |
| 70.0 | 86.6 | 1037 | — | — |
| 69.5 | 86.3 | 1017 | — | — |
| 69.0 | 86.1 | 997 | — | — |
| 68.5 | 85.8 | 978 | — | — |
| 68.0 | 85.5 | 959 | — | — |
| 67.5 | 85.2 | 941 | — | — |
| 67.0 | 85.0 | 923 | — | — |
| 66.5 | 84.7 | 906 | — | — |
| 66.0 | 84.4 | 889 | — | — |
| 65.5 | 84.1 | 872 | — | — |
| 65.0 | 83.9 | 856 | — | — |
| 64.5 | 83.6 | 840 | — | — |
| 64.0 | 83.3 | 825 | — | — |
| 63.5 | 83.1 | 810 | — | — |
| 63.0 | 82.8 | 795 | — | — |
| 62.5 | 82.5 | 780 | — | — |
| 62.0 | 82.2 | 766 | — | — |
| 61.5 | 82.0 | 752 | — | — |
| 61.0 | 81.7 | 739 | — | — |
| 60.5 | 81.4 | 726 | — | — |
| 60.0 | 81.2 | 713 | — | 2555 |
| 59.5 | 80.9 | 700 | — | 2500 |
| 59.0 | 80.6 | 688 | — | 2450 |
| 58.5 | 80.3 | 676 | — | 2395 |
| 58.0 | 80.1 | 664 | — | 2345 |
| 57.5 | 79.8 | 653 | — | 2295 |
| 57.0 | 79.5 | 642 | — | 2250 |
| 56.5 | 79.3 | 631 | — | 2205 |
| 56.0 | 79.0 | 620 | — | 2160 |
| 55.5 | 78.7 | 609 | — | 2115 |
| 55.0 | 78.5 | 599 | — | 2075 |
| 54.5 | 78.2 | 589 | — | 2035 |
| 54.0 | 77.9 | 579 | — | 1995 |
| 53.5 | 77.7 | 570 | — | 1955 |
| 53.0 | 77.4 | 561 | — | 1920 |
| 52.5 | 77.1 | 551 | — | 1885 |
| 52.0 | 76.9 | 543 | — | 1850 |
| 51.5 | 76.6 | 534 | — | 1815 |

| Hardness · Härte | | | | Tensile strength Zugfestigkeit N/mm² |
|---|---|---|---|---|
| Rockwell hardness · Härte | | Vickers hardn. · Härte | Brinell hardn. · Härte | |
| HRC | HRA | HV | HB | |
| 51.0 | 76.3 | 525 | 501 | 1780 |
| 50.5 | 76.1 | 517 | 494 | 1750 |
| 50.0 | 75.8 | 509 | 488 | 1720 |
| 49.5 | 75.5 | 501 | 481 | 1690 |
| 49.0 | 75.3 | 493 | 474 | 1660 |
| 48.5 | 75.0 | 485 | 468 | 1630 |
| 48.0 | 74.7 | 478 | 461 | 1605 |
| 47.5 | 74.5 | 470 | 455 | 1575 |
| 47.0 | 74.2 | 463 | 449 | 1550 |
| 46.5 | 73.9 | 456 | 442 | 1525 |
| 46.0 | 73.7 | 449 | 436 | 1500 |
| 45.5 | 73.4 | 443 | 430 | 1475 |
| 45.0 | 73.2 | 436 | 424 | 1450 |
| 44.5 | 72.9 | 429 | 418 | 1430 |
| 44.0 | 72.6 | 423 | 413 | 1405 |
| 43.5 | 72.4 | 417 | 407 | 1385 |
| 43.0 | 72.1 | 411 | 401 | 1360 |
| 42.5 | 71.8 | 405 | 396 | 1340 |
| 42.0 | 71.6 | 399 | 391 | 1320 |
| 41.5 | 71.3 | 393 | 385 | 1300 |
| 41.0 | 71.1 | 388 | 380 | 1280 |
| 40.0 | 70.8 | 382 | 375 | 1260 |
| 40.0 | 70.5 | 377 | 370 | 1245 |
| 39.5 | 70.3 | 372 | 365 | 1225 |
| 39.0 | 70.0 | 367 | 360 | 1210 |
| 38.5 | — | 362 | 355 | 1190 |
| 38.0 | — | 357 | 350 | 1175 |
| 37.5 | — | 352 | 345 | 1160 |
| 37.0 | — | 347 | 341 | 1140 |
| 36.5 | — | 342 | 336 | 1125 |
| 36.0 | — | 338 | 332 | 1110 |
| 35.5 | — | 333 | 327 | 1095 |
| 35.0 | — | 329 | 323 | 1080 |
| 34.5 | — | 324 | 318 | 1065 |
| 34.0 | — | 320 | 314 | 1050 |
| 33.5 | — | 316 | 310 | 1035 |
| 33.0 | — | 312 | 306 | 1020 |
| 32.5 | — | 308 | 302 | 1010 |

## Hardness reference table (conversion of hardness and strength for ferrous metal)
## Härte Vergleichstabelle (Konversationstabelle von Härte und Zugfestigkeit für Stahl)



| Hardness · Härte | | | | Tensile strength Zugfestigkeit N/mm² | | Hardness · Härte | | | | Tensile strength Zugfestigkeit N/mm² |
|---|---|---|---|---|---|---|---|---|---|---|
| Rockwell hardness · Härte | | Vickers hardn. · Härte | Brinell hardn. · Härte | | | Rockwell hardness · Härte | | Vickers hardn. · Härte | Brinell hardn. · Härte | |
| HRC | HRA | HV | HB | | | HRC | HRA | HV | HB | |
| 32.0 | — | 304 | 298 | 995 | | 24.0 | — | 249 | 245 | 820 |
| 31.5 | — | 300 | 294 | 980 | | 23.5 | — | 246 | 242 | 810 |
| 31.0 | — | 296 | 291 | 970 | | 23.0 | — | 243 | 240 | 800 |
| 30.5 | — | 292 | 287 | 960 | | 22.5 | — | 240 | 237 | 790 |
| 30.0 | — | 289 | 283 | 950 | | 22.0 | — | 237 | 234 | 785 |
| 29.5 | — | 285 | 280 | 935 | | 21.5 | — | 234 | 232 | 775 |
| 29.0 | — | 281 | 276 | 920 | | 21.0 | — | 231 | 229 | 765 |
| 28.5 | — | 278 | 273 | 910 | | 20.5 | — | 229 | 227 | 760 |
| 28.0 | — | 274 | 269 | 900 | | 20.0 | — | 226 | 225 | 750 |
| 27.5 | — | 271 | 266 | 890 | | 19.5 | — | 223 | 222 | 745 |
| 27.0 | — | 268 | 263 | 880 | | 19.0 | — | 221 | 220 | 735 |
| 26.5 | — | 264 | 260 | 870 | | 18.5 | — | 218 | 218 | 730 |
| 26.0 | — | 261 | 257 | 860 | | 18.0 | — | 216 | 216 | 725 |
| 25.5 | — | 258 | 254 | 850 | | 17.5 | — | 214 | 214 | 715 |
| 25.0 | — | 255 | 251 | 835 | | 17.0 | — | 211 | 211 | 710 |
| 24.5 | — | 252 | 248 | 830 | | | | | | |

Note: The conversion values for steel in the table are commonly applicable for the steels with carbon from low to high.
Bemerkung: Die in der Tabelle aufgeführten Werte sind für Kohlenstoffstahl anwendbar.

## Comparison table for turning inserts chip breaker Übersichtstabelle der WSP-Spanbrecher

| ISO | Application Anwendung | ZCC-CT | | Sandvik | | Seco | | Kennametal | | ISCAR | | Walter | | Mitsubishi | | Sumitomo | | Tungaloy | | Kyocera | | Korloy | | Ingersoll Tague Tec | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos |
| P Steel · Stahl | Wiper-finishing Wiper-Schlichten | WG | | WF WL | WF WK | W-MF2 | W-F1 | FW MW | FW MW | WF | | NF | PF | SW | FW | NLU-W | NLU-W | ASW | | WP | | VW LW | | WS | |
| | Finishing Schlichten | DF EF | SF HF | PF QF | PF UF 23 | FF1 MF1 | FF1 F1 | FF FN | 11 UF LF | SF | PF SM | NF3 NS6 | PF4 PF5 | FH FS | FJ FV | NSE NSU NLU NFA NFL | NLU NFP NFK | TF TS 17 | PF 01 | DP GP VF | CF | VG VF VL | VF | FG FC VF | FA SA FG |
| | Semi-finishing Schlichten-Mittlere Bearbeitung | DM EM | HM | PM QM | PM UM | MF2 | F2 | FN | MF | NF TF SM | 14 16 17 19 | NS6 | PS5 | SH SA | SW SV MV | NSX | NSU NSC NSK | TS TM AS | PS | HQ CQ CJ | CK DP GP VF XP | VQ VC VB | HMP | WT ML | WT |
| | Medium machining -light roughing Mittlere Bearb.-leichte Schruppbearbeitung | DM PM | HR | PM QM | PR UR | M3 MF3 | F2 | MN | MF | GN PP NR | 17 19 | NM4 NM6 | PM5 | MV MZ MA | MV MW | NGE NGU NUX | NMU NSF | TM DM | PM | GS CS HS PS | HQ XQ GK G | VM | C25 | PC MC MT MG MF | PC MT PMR |
| | Wiper-medium | | | WR WM | WM | W-M3 W-R4 W-R7 | W-F2 | MW RW | MW | WG | | NM | PM | MW | | NGU-W | | | | WQ | | | | | |
| | Roughing Schruppen | DR | | PR QR 31 | | M5 MR5 MR7 | | RP UN RN | | TNM GN | 19 | NM9 | | GH MAT MT | | NMU NMX | NMU | TH TR TU | | PT GT HT | G St-form | HR | | RT | |
| | Single Side roughing Einseitige WSP Schruppen | HDR 31HPR DR LR | | HR QR | | R8 RR9 -56 -57 -UX | | RH RM RP | | NM | | NR6 NR8 | | HA HZ HH HV HX | | NMP NHG NHP NHU NHW | | | | HX | | GH VH VT | | HT HD HY HZ RX RH | CMX |
| M Stainless Steel · Rostfreier Stahl | Wiper-finishing Wiper-Schlichten | WG | | WF WL WMX | WF WK | W-MF2 | | FW MW | FW MW | WF | | | PF | SW | FW | NLU-W | NLU-W | | | | | | | | |
| | Finishing Schlichten | EF DF | EF HF | MF | MF UF | FF1 F2 MF1 | F1 | FF FP | 11 UF LF | NF VL | PF SM | NF4 | PF4 PF5 | FS | FJ FV | NSU NLU | NSU NLU | SS | SS | GU | | | VF | EA SF | FG |
| | Semi-finishing Schlichten-Mittlere Bearbeitung | EF EM | EF EM HF HM | MF MM | MF MM UM | MF3 | F2 | FP | MF | PP TF | 14 16 17 19 | NM4 | PS5 | SH MS | SW SV MV | NEX NUP | NSU | SS SM | PS | MS | CK DP GP VF XP | VP2 | HMP | | |
| | Medium machining -light roughing Mittlere Bearbeitung -leichte Schruppbearbeitung | EM DM | EM HM | MM | MM UM | R6 56 | F2 | MP | HP | PP TF | 17 19 | NM4 NR4 | PM5 | MS ES MH | MV MW | NGU | NMU | SA S | PM | MS | HQ XQ GK G | HS VP3 | C25 | EM SU MT | MT PMR WT |
| | Wiper medium | | | WR WM | WM | W-M3 | | MW RW | MW | WG | | | PM | MW | | NGU -W | | | | | | | | | |
| | Roughing Schruppen | ER DR | HR | MR QR PR | MR | R7 R8 | | MP -P | | HTW NR | 19 | NR4 | | GH HZ | | NMU NMX NHG | | | | | | VM | | ET | CMX |
| | Single Side roughing Einseitige WSP Schruppen | ER DR HDR LR | | HR QR | | -56 | | RP | | NM | | | | | | NMP NHG NHP NHU NHW | NMP NHG NHP NHU NHW | | | | | | | | |

## Comparison table for turning inserts chip breaker · Übersichtstabelle der WSP-Spanbrecher

| ISO | Application Anwendung | ZCC-CT | | Sandvik | | Seco | | Kennametal | | ISCAR | | Walter | | Mitsubishi | | Sumitomo | | Tungaloy | | Kyocera | | Korloy | | Ingersoll Tague Tec | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos | Neg | Pos |
| K Cast ironGuss | Wiper-finishing Wiper-Schlichten | WG | | WF WM | WF | W-MF2 | W-F1 | FW MW | FW MW | WF | | | | | | NLU-W | NLU-W | | | | | | | | |
| | Finishing · Schlichten | DF | HF | KF | KF | F1 | F1 | FF FN | 11 UF LF | NF SM | 14 19 | | PS5 | | | NSU | NLU | | | C | | VM | | | |
| | Semi-finishing Schlichten-Mittlere Bearbeitung | PM | HM | KF KM | KF KM | M3 | F2 | FN | MF | GN | 14 19 | NM5 | PS5 | GH | | NUX NGU | NSU | CM | | C Stand. form | | B25 | HMP | | |
| | Medium machining light roughing Mittlere Bearbeitung-leichte Schruppbearbeitung | DR | HM HR | KM QM | KM | M3 | F2 | UN | HP | GN NR | | NM6 | PM5 | | | NUZ NGU NMU | NMU | CM | | GC ZS | | VK GR | C25 | MT MG | MT PMR WT |
| | Wiper medium | | | | | W-M3 W-R4 W-R7 | | MW | MW | WG | | NM | PM | | | NGU-W | | | | | | | | | |
| | Roughing Schruppbearbeitung | DR *NMA | HR | KR QR | KR UR | M5 | | | | NR | | NR6 | | GH | | NMU | | | | ZS | | MA | | RT | CMX |
| N Nonferrite Materials Ne-metalle | Finishing · Schlichten | | LC | | AL | | | | LF | NF | | | PM2 | | | | | | | | | | | | |
| | Semi-finishing Schlichten-Mittlere Bearbeitung | | LC | | AL | | AL | GP | | NF PP | AS | | | | | | NAG | | | AH | AH | HA | AK | | FL SA |
| | Medium machining-light roughing Mittlere Bearbeitung-leichtes Schruppbearbeitung | | LH | | AL | | AL | GG-FS MS | HP | NMS | | | | | | | | | | | | | AR | | |
| S Heat resist. super alloys & Ti-alloys Warmf. Legi. & Ti-Legierung | Finishing · Schlichten | NF EF | NF | NGP | MF | MF1 | | FS | GT-HP | SF PF | PF SM | | PF4 | FJ | | NSU | NSU | | | | | VP1 | | | |
| | Semi-finishing Schlichten-Mittlere Bearbeitung | NF NM EM | NF | 23 | MM | MF1 M1 | | FS MS | GT-MF | SF PF | PF SM | | PF5 | MJ | | NEX NUP | NSU NSK | | | | | VP2 | AK | | |
| | Medium machining-light roughing Mittlere Bearbeitung-leichte Schruppen | NM EM | | MF | MM UM | M1 | | MS | MT-LF | PP TF | | | PS5 | MS | | NMU | NSK | | | | | VP3 | HMP | SU | |
| | Roughing Schruppbearbeitung | ER | | SR | | MR3 MR4 | | RP | | TF HTW NR | | | | GJ | | | | | | | | VM | | | |

| ISO | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec | Widia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P Steel · Stahl | P01-05 | **YBC052** | GC4205<br>GC4305 | KCP05<br>KC9105 | AC805P | UE6005<br>UE6105 | T9005<br>T9105 | CA5505 | WPP01<br>WPP05 | IC8150<br>IC9150<br>IC428 | TP0500<br>TP0501 | | | |
| | P10-15 | **YB6315**<br>**YBC152**<br>**YBC252** | GC4315<br>GC4215 | KCP10<br>KC9110 | AC810P<br>AC700G | UC6110<br>MY5015 | T9015<br>T9115 | CA510<br>CA5515<br>CA510 | WPP10<br>WPP10S | IC8150<br>IC8250<br>IC9150<br>IC9250<br>IC9015 | TP1500<br>TP1501 | NC3010 | TT8115<br>TT8125 | WP15CT |
| | P20-25 | **YBC252**<br>**YBC251** | GC4325<br>GC4225<br>GC4025 | KCP25<br>KC9125 | AC820P<br>AC8020P<br>AC900G<br>AC2000 | UE6020<br>MC6025 | T9025<br>T9125 | CA5525<br>CA525<br>CR9025 | WPP20<br>WPP20S | IC8150<br>IC8250<br>IC9250<br>IC9025 | TP2501<br>TP2500<br>TP200 | NC3220<br>NC3120 | TT8125<br>TT3500 | WP25CT |
| | P30-35 | **YBC352**<br>**YBC351** | GC4335<br>GC4235<br>GC4035 | KCP30<br>KC8050 | AC830P<br>AC3000 | UE6035<br>UE6400 | T903<br>T9135 | CA530<br>CA5535<br>CA535 | WPP30<br>WPP30S | IC8250<br>IC8350<br>IC9350 | TP3500 | NC3030<br>NC5330<br>NC500H | TT5100<br>TT8135 | WP35CT |
| M Stainless Steel Rostfreier Stahl | M10 | **YBM151**<br>**YBM153** | GC2015<br>GC1515 | KCM15 | AC610M | MC7015 | T9115 | | | IC8250<br>IC9250<br>IC6015 | | | TT9215 | WM15CT |
| | M20 | **YBM253**<br>**YBM251** | GC2015<br>GC2025 | KCM25<br>KC9225 | AC610M<br>AC630M | US7020<br>MC7015<br>MC7025 | T6020<br>T6120<br>T9125 | CA6515 | WAM20 | IC8250<br>IC9350<br>IC9025<br>IC6025 | TM 2000<br>TP200<br>TP2500 | NC9025 | TT5100<br>TT9225 | WM25CT |
| | M30 | **YBM351**<br>**YBM253** | GC2025<br>GC2035 | KCM25<br>KCM35<br>KC9225 | AC630M<br>AC6030M<br>AC830P<br>AC3000 | US735<br>US7025 | T6030<br>T6130 | CA6525 | WAM30 | IC8350<br>IC9350<br>IC9025 | TP3500<br>TM4000 | | TT5100<br>TT7100<br>TT9235 | WM35CT |
| | M40 | **YBM351** | GC2035 | KCM35<br>KC9240<br>KC9245 | AC630M<br>AC6030M<br>AC830P<br>AC3000 | US735 | T6030<br>T6130 | CA6525 | | IC6025<br>IC9350 | TP40 | | TT5100<br>TT7100<br>TT9235 | |
| K Cast iron · Guss | K01-05 | **YBD052** | GC3005<br>GC3205 | KCK05 | AC405K<br>AC410K | UC5005<br>UC5105 | T5105 | CA4505 | | IC5005<br>IC9007 | | NC6205 | TT1300<br>TT7005 | WK05CT |
| | K10-15 | **YB7315**<br>**YBD102**<br>**YBD152**<br>**YBD152C** | GC3215 | KCK15<br>KC9315 | AC410K<br>AC415K<br>AC420K<br>AC700G | MC5015<br>UC5115<br>MY5015 | T5105<br>T5115 | CA4010<br>CA4515<br>CA4115 | WAK10<br>WAK10S | IC9015<br>IC9007<br>IC8150<br>IC5010<br>IC428<br>IC4028<br>IC9150 | TK1001<br>TK1000 | NC6210 | TT1300<br>TT7310<br>T7015 | |
| | K20-25 | **YB7315**<br>**YBD152**<br>**YBD152C** | GC3225 | KCK20<br>KC9320 | AC420K<br>AC900G | MC5015<br>UC5115<br>UE6110<br>MY5015 | T5125<br>T9125 | CA4125 | WAK20<br>WKK20S | IC5010<br>IC428<br>IC4028<br>C9150 | TK2000<br>TK2001 | NC5330 | | WK20CT |

## Coated Cemeted Carbide PVD · beschichtetes Hartmetall PVD

| ISO | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec | Widia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | Steel · Stahl | | GC1105 | | | | | PR1005 | | | | | | |
| P01-05 | | YBG101<br>YBG102<br>YBG105 | GC1515<br>GC1115<br>GC1025 | KC5010<br>KC5510<br>KC7215<br>KC7315 | AC510U | VP10MF<br>VP15TF | AH710 | PR930<br>PR1005<br>PR930<br>PR115 | WSM10<br>WXN10 | IC520N IC507<br>IC570 IC807<br>IC907 IC908 | | | | |
| P10-15 | | YB9320<br>YBG205<br>YBG202 | GC1515<br>GC1125<br>GC1025 | KC5025<br>KC5525<br>KU25T | AC520U | VP20RT<br>VP20MF | AH725<br>AH120 | PR930<br>PR1025<br>PR1225 | WSM20<br>WMP20S<br>WSM21 | IC228 IC250<br>IC308 IC828<br>IC350 IC354<br>IC507 IC807<br>IC808 IC907<br>IC908 IC928<br>IC1008 IC1028<br>IC3028 | CP200<br>CP250<br>TP2000<br>TS2500 | | TT8020<br>TT9020 | |
| P20-25 | | | | | | | | | | | | | | |
| P30-35 | | YBG302 | GC1125<br>GC2035 | KC7335 | AC530U | | SH730<br>J740<br>GH130<br>AH740 | PR660 | WSM30 | IC228 IC250<br>IC328 IC330<br>IC354 IC528<br>IC1008 IC1028<br>IC3028 | CP500 | PC5300 | | |
| M | Stainless Steel<br>Rostfreier Stahl | | | | | | | | | | | | | |
| M10 | | YBG101<br>YBG102<br>YBG105 | GC1105<br>GC1115<br>GC1025<br>GC1125<br>GC1515 | KCU10<br>KC5010<br>KC5510<br>KC6005<br>KC6015 | EH10Z<br>AC510U<br>AC530U | VP10MF | AH710 | PR915<br>PR1005 | WSM10 | IC330 IC354<br>IC507 IC520<br>IC570 IC807<br>IC1028 IC3028 | CP500<br>TS2000 | PC8110 | TT5080 | WS10PT |
| M20 | | YB9320<br>YBG205<br>YBG202 | GC1025<br>GC1125 | KC501<br>KCU25 | AC520U<br>AC530U | VP10RT<br>VP15TF<br>VP20RT<br>VP20MF | AH120 AH725<br>SH730 AH710<br>AH630 GH330 | PR1025<br>PR1125<br>PR1225 | WSM10<br>WMP20S<br>WSM20<br>WSM21 | IC228 IC250<br>IC354 IC808<br>IC908 IC1008<br>IC1028 IC3028 | TS2000<br>TS2500<br>CP200<br>CP250 | | TT8020<br>TT9020<br>TT9080 | WS25PT |
| M30 | | YBG302 | GC2035 | KC5025<br>KCU25 | | VP10RT<br>VP15TF<br>VP20RT<br>VP20MF<br>MP7035 | AH12 AH725<br>SH730 AH710<br>AH630 GH330<br>J740 | PR1025<br>PR1125 | WSM20<br>WSM21<br>WSM30 | IC228 IC250<br>IC328 IC330<br>IC1008 IC1028<br>IC3028 | CP500<br>TS2500 | PC5300<br>PC9030 | | |
| S | Heat resist. super all. & Ti-alloys Warmf. Legi. & Ti-Legierung | | | | | | | | | | | | | |
| S05 | | | S05F | | | MP9005 | AH905 | | | IC507<br>IC907 | | | | |
| S10 | | YBG102<br>YBG105<br>YBG202<br>YBG205 | GC1105<br>GC1115 | KC5010<br>KCU10<br>KC5510<br>KCS10 | AC510U<br>EH510Z | MP9015<br>VP10RT | AH905<br>SH730<br>AH110<br>AH120 | | WSM10 | IC507<br>IC807<br>IC808<br>IC806<br>IC907 | CP200<br>CP250<br>TS2000<br>TS2500 | PC8110 | TT5080 | WS10PT |
| S20 | | YB9320<br>YBG205<br>YBG202 | GC1025<br>GC1125<br>GC1515 | KC5010<br>KCU10<br>KC5025<br>KCU25<br>KC5525 | AC520U<br>EH520Z | MP9015<br>MT9015<br>VP20RT | AH120<br>AH725 | PR1125 | WSM20<br>WSM21<br>WSM30 | IC507<br>IC807<br>IC907 | CP250<br>TS2500<br>CP500 | PC5300 | TT5080<br>TT8020<br>TT9080 | WS25PT |
| S30 | | YBG302 | | | AC520U | VP15TF | AH725 | PR1125 | WSM30 | IC3028<br>IC808<br>IC830 | | PC5400 | TT8020 | |
| N | Nonferrite Mat.<br>Ne-metalle | | | | | | | | | | | | | |
| N10 | | YBG101<br>YBG102<br>YBG105 | GC1515 | KC5410 | | | | | WXN10 | IC520 | | | | |

## Cutting material comparison table-Turning · Schneidstoff Vergleichstabelle-Drehen

### ■ Cermet

| ISO | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec | Widia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P | P01-05 | | CT5005 | | T110A<br>T1000A | AP25N<br>VP25N | NS520<br>AT520<br>GT520<br>GT720 | TN30<br>TN6010<br>PV30<br>PV7010 | | IC20N<br>IC520N | | CN1000<br>CC105 | CT3000<br>PV3010 | |
| | P10-15 | YNG151<br>YNG151C | CT5015<br>CT530 | KT315<br>KT125 | T1200A<br>T2000Z<br>T1500A<br>T1500Z | NX2525<br>AP25N<br>VP25N | NS520<br>NS730<br>GT730<br>NS9530<br>GT9530 | TN60<br>TN6010<br>PV60<br>PV6010 | | IC20N<br>IC520N<br>IC530N | CM<br>TP1020<br>TP1030<br>CMP | CN1000<br>CT10<br>CN2000<br>CC115 | CT3000<br>PV3010 | TTI15 |
| | P20-25 | YNT251 | GC1525 | KT325<br>KT1120<br>KT5020 | T1200A<br>T2000Z<br>T1500A<br>T1500Z | NX2525<br>NX3035<br>AP25N<br>VP25N<br>MP3025 | NS530<br>NS730<br>GT730<br>NS9530<br>GT9530 | TN60<br>TN6020<br>PV60<br>PV7020<br>PV7025 | | IC20N<br>IC30N<br>IC75T<br>IC520N<br>IC530N | CM<br>TP1020<br>TP1030<br>CMP | CN20<br>CN2000<br>CC115 | | TTI15 |
| | P30-35 | | | | T3000Z | MP3025<br>VP45N | | PV7025<br>PV90 | | IC75T | | | | |
| M | M10 | YNG151<br>YNG151C | GC1525 | KT125 | T110A<br>T1000A<br>T1500Z<br>T2000Z | NX2525<br>AP25N<br>VP25N | NS520<br>AT530<br>GT530<br>GT720 | TN60<br>TN6020<br>PV60<br>PV7020 | | | CM<br>TP1020<br>TP1030<br>CMP | | CT3000<br>PV3010 | TTI15 |
| | M20 | YNT251 | CT5015<br>CT530 | HT2 | T110A<br>T1000A<br>T1500Z<br>T2000Z | NX2525<br>AP25N<br>VP25N | NS530<br>GT730<br>NS730 | TN90<br>TN6020<br>PV90<br>PV7020<br>PV7025 | | | | | CT3000<br>PV3010 | TTI15 |
| | M30 | | T3000Z | | | | | | | | | | | |
| | M40 | | | | | | | | | | | | | |
| K | K01-05 | | | | T110A<br>T1000A<br>T2000Z<br>T1500Z | NX2525<br>AP25N | NS520<br>GT730<br>NS730 | TN30<br>TN6010<br>PV30<br>PV7005<br>PV7010 | | | | CN1000 | CT3000<br>PV3010 | |
| | K10-15 | YNG151<br>YNG151C | CT5015 | KT325<br>KT125 | T1200A<br>T1500A<br>T2000Z<br>T1500Z | NX2525<br>AP25N | NS520<br>GT730<br>NS730 | TN60<br>TN6020<br>PV60<br>PV7020<br>PV7025 | | | | CN1000 | CT3000<br>PV3010 | |
| | K20-25 | YNT251 | CT5015 | | T3000Z | NX2525<br>AP25N | | | | | | | | |

## Cutting material comparison table-Turning · Schneidstoff Vergleichstabelle-Drehen

### ■ Carbide uncoated · Hartmetall Unbeschichtet

| ISO | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec | Widia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N Nonferrite Mat. Ne-metalle | | | | | | | | | | | | | |
| N01 | YD101<br>YD201 | H10<br>H13A | KF1 | H1 | | KS05F | | | | 883<br>890 | | | |
| N10 | YD101<br>YD201 | H10<br>H13A | K313<br>K68<br>KF1<br>THM-F | H1 | HTi10 | KS15F | KW10 | WK01<br>WK10 | IC20 | 890<br>KX<br>HX | H01 | K10 | THM |
| N20 | YD101<br>YD201 | H10<br>H13A | K313<br>K68<br>KF1<br>THM-F | | | KS15F | KW15 | | IC20 | KX<br>HX | | | |

| Material / Class | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P Steel · Stahl | P05 | | K20W<br>GC4220 | | | F7010 | | | | | | | |
| | P10 | | K20W<br>GC3040<br>GC4220<br>GC4230 | | ACP100 | F7010 | | | | IC4100<br>IC5100 | MP1500 | NC5330<br>NCM325 | IN6505<br>IN6520 |
| | P20 | **YBC301<br>YBC302<br>YBC251<br>YBC253** | GC3040<br>GC4230 | | CS3000 | FH7020 | T3130 | | WKP25<br>WKP25S | IC4050<br>IC4100<br>IC5100<br>IC5400 | MP1500<br>MP2500<br>MS2500<br>T25M | NC5330<br>NCM325 | IN6505<br>IN6520<br>IN7035 |
| | P30 | **YBC301<br>YBC302<br>YBM253<br>YBM351** | GC2040<br>GC4240 | KC930M<br>KC935M | CS3000 | F7030 | T3130 | | WKP35<br>WKP35S<br>WTP35 | IC4050<br>IC5400 | MK3000<br>T25M<br>T350M | NCM325 | IN7035<br>IN6530 |
| | P40 | **YBC401<br>YBM351** | GC2040<br>GC4240 | | | | | | | | T350M | | IN6530 |
| M Stainless Steel Rostfreier Stahl | M10 | | GC4230 | | | F7010 | | | | | MP1500 | NCM325<br>NC5330 | IN6520 |
| | M20 | **YBM251<br>YBM253** | GC4230 | | | F7020 | T3130 | | | IC4050 | MP1500<br>MP2500<br>MS2500<br>T25M | NCM325<br>NCM335 | IN7035<br>IN6520<br>IN6505 |
| | M30 | **YBM351** | GC2040<br>GC4240 | KC930M<br>KC935M | | F7030 | T3130 | | WTP35 | | MP2500<br>MS2500<br>T25M<br>T350M | NCM335 | IN6530<br>IN7035<br>IN6505 |
| | M40 | | GC2040<br>GC4240 | | | | | | | | T350M | | IN6530 |
| K Cast iron · Guss | K05 | **YBD152** | | KCK15 | | F7010<br>MC5020 | | | | DT7150<br>IC4100 | | | |
| | K10 | **YBD152<br>YBD252** | K20W | KCK15 | ACK200 | F7010<br>MC5020 | T1115 | | WAK15 | DT7150<br>IC4100<br>IC4010 | MP1500<br>MK1500 | NC5330 | IN6520 |
| | K20 | **YBD252** | K20W | | ACK200 | | T1115 | | WKP25<br>WKP25S | DT7150<br>IC4100 | MP1500<br>MP2500<br>MS2500<br>T25M<br>MK1500 | NC5330 | IN6530<br>IN6515<br>IN6520 |
| | K30 | | | KC930M<br>KC935M | | | | | WKP35<br>WKP35S | IC4050 | MK3000<br>MP2500<br>MS2500 | | IN6530<br>IN6515 |

## CVD milling grades · CVD Fräsen Klasse

| Material / Class | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S05 | S | | | | | | | | | | MK3000 | | |
| S10 | Super alloys Ti-Legierung | | | | | | | | | | | | |
| S20 | | | | | | | | | | | MP2500 MS2500 T25M | | IN7035 IN6520 |
| S30 | | | GC2040 | | | | | | WTP35 | | MM4500 T350M | | |
| N05 | N | | | | | | | | | | | | |
| N10 | Nonferrite materials Ne-metalle | | | | | | | | | | | | |
| N20 | | | | | | | | | | | MP2500 25M | | |
| H05 | H | | | | | | | | | | | | |
| H10 | Hadened materiel Hd-metalle | | K20W | | | | | | | | | | |
| H20 | | | K20W GC3040 | | | | | | | | | | |

| Material / Class | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P Steel · Stahl | P05 | | | | ACZ120 | VP05HT | GH130 | | | IC903 | | | |
| | P10 | **YBG102** | GC1010<br>GC1025<br>GC1020 | KC522M<br>KC525M<br>KC610M<br>KC643M<br>KC715M | ACZ10M<br>ACZ20W | VP10H | AH120<br>GH130 | PR730<br>PR1225<br>PR1525 | WHX15<br>WHH15<br>WXM15 | IC903<br>IC950<br>IC1008 | F15M | | IN2004<br>IN2006 |
| | P20 | **YBG202**<br>**YBG252** | GC1020<br>GC1025<br>GC1010<br>GC2030 | KC522M<br>KC525M<br>KC643M<br>KC715M<br>KC725M | ACP200 ACZ330<br>ACX70 ACW30<br>AC350 ACZ50M | VP15TF<br>VP20M<br>VP20RT | AH725 AH120<br>AH130 AH330<br>AH725 AH730<br>GH330 | PR630<br>PR830<br>PR730<br>PR1225<br>PR1230<br>PR1525 | WXM15 | IC810 IC380<br>IC830 IC900<br>IC908 IC910<br>IC950 IC1008 | F25M<br>MP3000 | PC3500<br>PC3600 | IN2006 IN1030<br>IN2004 IN2005<br>IN2015 IN2030<br>IN2505 IN2540 |
| | P30 | **YBG302** | GC1030<br>GC2030 | KC530M<br>KC725M<br>KC735M | ACP200 ACP300<br>ACZ50M ACZ330<br>ACZ350 ACX70<br>ACW30 AC350 | VP30RT | AH740<br>AH130<br>AH140 | PR630<br>PR660<br>PR830<br>PR1230 | WXM35 | IC300 IC328<br>IC830 IC900<br>IC928 IC350<br>IC808 IC908 | F30M<br>MP3000 | PC3500<br>PC3600<br>PC5300<br>PC3545<br>PC9570T | IN1030 IN2005<br>IN2015 IN2030<br>IN2035 IN2040<br>IN2505 IN2530<br>IN4035 |
| | P40 | | GC1030 | KC735M | ACP300<br>ACZ350 | | AH140<br>AH750 | | WXP45<br>WSP45<br>WSP46 | IC300<br>IC328<br>IC928 | F40M | PC5300<br>PC3545 | IN2035<br>IN2040 |
| M Stainless Steel Rostfreier Stahl | M10 | | GC1020 | KC522M KC610M<br>KC643M KC715M | ACZ20W<br>ACZ350<br>EH20Z | | AH330<br>GH110<br>GH130 | PR730 PR1225<br>PR660 PR1525 | | PR730 PR660<br>PR1225<br>PR1525 | F15M | PC8110 | IN2505 |
| | M20 | **YBG202**<br>**YBG205**<br>**YBG252**<br>**YB9320** | GC1020<br>GC1025<br>GC1030<br>GC203 | KC522M<br>KC525M<br>KC610M<br>KC715M<br>KC725M | ACP200 ACZ50M<br>ACZ20M ACZ350<br>EH20Z AC350 | VP15TF<br>VP20RT | AH725<br>AH730<br>GH110 | PR730 PR1025<br>PR660 PR1225<br>PR1525 | WXM15 | PR730 PR660<br>PR1025<br>PR1225<br>PR1525 | F25M<br>MP3000 | PC5300<br>PC8110<br>PC9530 | IN2005<br>IN2015<br>IN2505 |
| | M30 | **YBG302** | GC1040<br>GC203 | KC525M<br>KC530M<br>KC725M<br>KC735M | ACP300<br>ACZ50M<br>ACX80<br>AC350 | VP30RT | AH740<br>AH120<br>AH130<br>GH330<br>GH340 | | | | F30M<br>MP3000 | PC9530<br>PC3545<br>PC9570T | IN1030 IN2015<br>IN2030 IN2035<br>IN2530 IN4035 |
| | M40 | | GC1040 | KC530M<br>KC735M | ACP300<br>ACX80 | | AH140 AH750<br>GH330 GH340 | | WSM35<br>WSM36<br>WXM35 | | F40M | PC3545 | IN1030 IN2030<br>IN2035 IN2530<br>IN4035 |
| K Cast iron · Guss | K05 | | GC1010 | KC510M | ACZ10M<br>ACZ120<br>ACZ310 | | AH330 | PR905<br>PR1210<br>PR1510 | | | MH1000 | PC8110 | IN2510 |
| | K10 | **YBG102**<br>**YBG152** | GC1010 | KC510M<br>KC520M<br>KC620M<br>KC643M | EH20Z<br>ACZ310 | | AH120<br>AH330<br>AH725 | PR905<br>PR1210<br>PR1510 | WXH15<br>WHH15<br>WXM15 | IC810<br>IC950<br>IC1008 | F15M<br>MK2000 | PC6510 | IN2004<br>IN2010<br>IN2510 |
| | K20 | | GC1020 | KC520M<br>KC620M<br>KC725M | ACK300<br>EH20Z<br>ACX80<br>ACW30 | VP15TF | GH130 | | WKK25 | IC328 IC830<br>IC950 IC350<br>IC808 IC908<br>IC1008 | F25M<br>MK2000<br>MO3000 | PC6510<br>PC5300 | IN1030 IN2004<br>IN2010 IN2015<br>IN2030 IN2505 |
| | K30 | | GC1020 | KC620M<br>KC725M | ACK300<br>ACZ50M | | | | | IC328 IC830<br>IC900 IC908<br>IC350 IC808<br>IC908 | F30M<br>F40M<br>MP3000 | PC5300<br>PC9570T | IN2005<br>IN2015<br>IN2030<br>IN2505 |

## PVD milling grades · PVD Fräsen Klasse

| Material / Class | | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Kyocera | Walter | Iscar | SECO | Korloy | Ingersoll Tague Tec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S05 | S Super alloys Ti-Legierung | YBG102 | | | | | | | | | MH1000 F15M | PC8110 | |
| S10 | | YBG102 YBG202 YBG205 | | KC525M KC643M | ACZ20W | VP15TF | | PR905 PR1210 PR1510 | | IC808 | NH1000 F15M F25M | PC5300 | |
| S20 | | YBG202 YBG205 | S30T GC1025 GC1030 GC2030 | KC525M KC643M | ACZ20W | | | PR905 PR1210 PR1510 | | IC908 IC380 IC900 IC903 IC908 IC928 IC830 IC808 | F25M F30M | PC5300 PC3545 | IN2005 IN2505 |
| S30 | | | GC2030 | KC725M KC735M | ACZ50M | | | | WSM35 WSM36 WSP45 WSP46 WXM35 WXP45 | IC328 IC928 IC830 | F40M | PC3545 | IN1030 IN2030 IN2035 IN2530 IN4035 |
| N05 | N Nonferrite materials Ne-metalle | | | KC510M | | | | | | | MH1000 F15M | | |
| N10 | | YBG202 | GC1025 GC1030 | KC510M KC620M KC522M | EH20Z | | | | WXN15 | | MH1000 F15M | | |
| N20 | | | GC1025 GC1030 | KC620M KC522M KC525M KC651M | | | | | | | F25M F30M F40M MP3000 | | |
| H05 | H Hadened materiel Hd-metalle | | | | | VP05HT | | | | IC903 | MH1000 F15M | PC210F | IN2004 IN2006 |
| H10 | | YBG102 | GC1010 | KC643M | | VP10MF | | | WXH15 WHH15 | IC900 IC808 | MK2000 F30M MP3000 | PC210F | IN2004 IN2005 IN2006 |
| H20 | | YBG202 | GC1010 GC1025 GC1030 | | | VP15TF | | | | IC810 IC908 | F30M F40M MK2000 MP3000 | | |

## Uncoated milling grades · Unbeschichtet Fräsen Klasse

| ISO | ZCC-CT | Sandvik | Kennametal | Sumitomo | Mitsubishi | Toshiba Tungaloy | Walter | Kyocera | Iscar | SECO | Korloy | Ingersoll Tague Tec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N Nonferrite Mat. Ne-metalle | | | | | | | | | | | | |
| N01 | | H10 | K115M<br>K110M | | | | WK10 | | IC20N | | H01 | IN04S |
| N10 | YD101 | | K313 | EH520 | HTi10 | | WKM | GW25 | IC08 | H15 | G10 | IN10K<br>IN05S |
| N20 | YD201 | H13A<br>H10F | KMF | EH520 | TF15 | | KMG40 | | IC28 | H25 | | IN15K |

## 1

175.32-22 A103
175.32-24 A103
175.32-25 A103
175.32-28 A103

## A

APKT-ALH B205
APKT-APF B205
APKT-APM B205
APKT-KM/PM B207
APKT-LH B205
APKT-PF B205
APKT-PM B205
APKT-PR B205
ANGX*PNR-GM B204
ANGX*PNR-LH B204
APMT_PDER B206
APMT_PDR B206

## C

CCGT A149
CCGT-SF A105
CCGT-USF A105
CCGW A142
CCGW(PCD) A150
CCGX-LC A108
CCGX-LH A108
CCMT-AHF A106
CCMT-EF A107
CCMT-EM A107
CCMT-HF A106
CCMT-HM A107
CCMT-HR A108
CCMT-TC A108
CCMW A108
CNE-A B207
CNE-B B207
CNEG-NF A67
CNGA A137
CNGA A160
CNGN A161
CNGN(CBN) A146
CNGX A162
CNMA A72
CNMG A72
CNMG-ADF A66
CNMG-DF A66
CNMG-DM A68
CNMG-DR A69
CNMG-EF A66
CNMG-EG A68
CNMG-EM A68
CNMG-ER A70
CNMG-NM A69
CNMG-PM A67
CNMG-SF A66
CNMG-SNR A69
CNMG-TC A69
CNMG-WG A66
CNMG-ZM A68
CNMM A71
CNMM-DR A70
CNMM-ER A70
CNMM-HDR A71
CNMM-HPR A71
CNMM-LR A70
CPGT A106
CPGT-SF A109
CPGW A109
CPMT-HF A109
CPMT-HM A109

## D

DCGT-SF A110
DCGT-USF A110
DCGW A143
DCGX-LC A112
DCGX-LH A112
DCGT A151
DCGT-SF A110
DCGT-USF A110
DCMT-AHF A110
DCMT-EF A111
DCMT-EM A111
DCMT-HF A111
DCMT-HM A111
DCMT-HR A112
DCMW A112
DCGW(PCD) A152
DNEG-NF A74
DNEG-NGF A74
DNGA A138
DNGA A162
DNGN A163
DNGN(CBN) A146
DNGX A163
DNMA A77
DNMG A78
DNMG-ADF A73
DNMG-DF A73
DNMG-DM A75
DNMG-DR A76
DNMG-EF A74
DNMG-EG A76
DNMG-EM A76
DNMG-ER A77
DNMG-FM A74
DNMG-NM A76
DNMG-PM A75
DNMG-SF A73
DNMG-SNR A76
DNMG-TC A76
DNMG-ZM A75
DNMM-DR A78
DNMM-ER A78
DNMM-HDR A78
DNMM-LR A78
DNMX-WG A73
DPGT-SF A113
DPGT-USF A113
DPMW A113

## H

HNEX-DF B208
HNEX-DM B208
HNEX-DR B208
HNGX-MR B208
HNGX-HDR B208

## K

KNUX A102

## L

LNCX B210
LNE32.534 B209
LNE32:302 B209
LNKT-ZR B209
LT****N-A(G) A337
LT****N-BSPT A340
LT****N-GM A336
LT****N-NPT A341
LT****N-UN A339
LT****N-W A338
LT****W-A(G) A337
LT****W-BSPT A340
LT****W-GM A335
LT****W-NPT A341
LT****W-UN A339
LT****W-W A338

## M

MPHT B210

## O

OFKR-DF B211
OFKR-DM B211
OFKR-LH B211
OFKT-DF B211
OFKT-DM B211
OFKT-LH B211
ONHU-PF B212
ONHU-PM B212

ONHU-GM B212
ONHU-W B212

## P

PNEG-CF B213
PNEG-CM B213
PNEG-CR B213
PNEG-PF B213
PNEG-PM B213
PNEG-PR B213

## Q

QC**R/L B214/215
QC**R/L A300
QC**R/L***R A304

## R

RCGT A114
RCGX-LH A114
RCKT-DM B216
RCKT-DR B216
RCKT-ER B216
RCKT-NM B216
RCMG A101
RCMT A114
RCMX A115
RDKW B217
RNGN A168
RNGN(CBN) A148
RNMG A101
ROHX B218
RT****N-A(G) A337
RT****N-A(G)B A352
RT****N-AC A346
RT****N-AP A348
RT****N-BSPT A340
RT****N-BSPTB A355
RT****N-BUT A350
RT****N-GM A336
RT****N-GMB A351
RT****N-NPT A341
RT****N-NPTB A356
RT****N-NPTF A342
RT****N-R A343
RT****N-RD A349
RT****N-STAC A347
RT****N-TR A345
RT****N-UN A339
RT****N-UNB A354
RT****N-W A338
RT****N-WB A353
RT****W-A(G) A337
RT****W-A(G)B A352
RT****W-AC A346
RT****W-AP A348
RT****W-BSPT A340
RT****W-BSPTB A355
RT****W-BUT A350
RT****W-GM A335
RT****W-GMB A351
RT****W-MJ A344
RT****W-NPT A341
RT****W-NPTB A356
RT****W-NPTF A342
RT****W-R A343
RT****W-RD A349
RT****W-STAC A347
RT****W-TR A345
RT****W-UN A339
RT****W-UNB A354
RT****W-UNJ A344
RT****W-W A338
RT****W-WB A353

## S

A117
SCGX-LC A117
SCGX-LH A117
SCMT A116
SCMT-AHF A116
SCMT-EF A116
SCMT-EM A116
SCMT-HF A116
SCMT-HM A117
SCMT-HR A117
SCMW B218
SDMT B219
SDMT-DM B219
SDMT-PM B222
SEEN B220
SEET-CF B220
SEET-CM B220
SEET-CR B220
SEET-DF B220
SEET-DM B220
SEET-DR B220
SEET-EF B220
SEET-EM B220
SEET-LH B221
SEET-LH B221
SEET_PER-* B220
SEET-W B222
SEKN B222
SEKR B223
SNEG-GM/GR B223
SNEG-E B223
SNEG-W A139
SNGA A164
SNGA A165
SNGN A147
SNGN(CBN) A164
SNGX B223
SNKN A86
SNMA A85
SNMG A79
SNMG-ADF A79
SNMG-DF A81
SNMG-DM A82
SNMG-DR A80
SNMG-EF A81
SNMG-EM A81
SNMG-EG A82
SNMG-ER A82
SNMG-NM A80
SNMG-PM A79
SNMG-SF A81
SNMG-TC A85
SNMM A83
SNMM-DR A84
SNMM-ER A84
SNMM-HDR A84
SNMM-HPR A83
SNMM-LR A87
SNUN B224
SPAN B224
SPCN B227
SPEX B229
SPGN C134
SPGT-EM C134
SPGT-PM B225
SPKN B226
SPKR-GM B228
SPKT B226
SPKW B228
SPMR B228
SPMT B228
SPMT-HT B228
SPMT-KM B228
SPMT-KT B228
SPMT-PM A118
SPMW B229
SPUN

## T

A118
TBGH-L A153
TCGT A119
TCGT-SF A119
TCGT-USF A144
TCGW A154
TCGW(PCD) A123
TCGX-LC A123
TCGX-LH A122
TCMT A120
TCMT-AHF A121
TCMT-EF A121
TCMT-EM A120
TCMT-HF A122
TCMT-HM A122
TCMT-HR A122
TCMW A140

TNGA A166
TNGA A167
TNGN A94
TNMA A93
TNMG A88
TNMG-ADF A88
TNMG-DF A90
TNMG-DM A91
TNMG-DR A89
TNMG-EF A91
TNMG-EM A91
TNMG-EG A92
TNMG-ER A89
TNMG-FM A90
TNMG-PM A88
TNMG-SF A91
TNMG-TC A90
TNMG-ZM A94
TNMM A92
TNMM-DR A93
TNMM-HDR A92
TNMM-LR A104
TNMX A88
TNMX-WG B230
TPAN B230
TPCN A124
TPGH-L A124
TPGT-SF B231
TPKN B232
TPMR B232
TPUN

## V

A127
VBET-NF A128
VBET-NGF A155
VBGT A127
VBGT-SF A145
VBGW A155
VBGW(PCD) A127
VBMT-AHF A127
VBMT-EF A128
VBMT-EM A127
VBMT-HF A128
VBMT-HM A128
VBMT-HR A128
VBMT-SNR A128
VBMW A125
VCGT A156
VCGT(PCD) A125
VCGT-HF A125
VCGT-NF A125
VCGT-SF A125
VCGT-USF A145
VCGW A156
VCGW(PCD) A126
VCGX-LC A126
VCGX-LH A129
VCMT-EM A129
VCMT-EF A129
VPGT-USF A95
VNEG-NF A95
VNEG-NGF A141
VNGA A96
VNMG A95
VNMG-ADF A95
VNMG-DF A96
VNMG-DM A95
VNMG-EF A96
VNMG-EM A96
VNMG-NM A96
VNMG-PM A95
VNMG-SF A96
VNMG-SNR A96
VNMG-TC A96
VNMG-ZM

## W

C135
WCMX A130
WCMX-53 C135
WCMX-53 C135
WCMX-PG A98
WNEG-NF A141
WNGA A168
WNGA A147
WNGN(CBN) A100
WNMA A97
WNMG-ADF A97
WNMG-DF A99
WNMG-DM A100
WNMG-DR A98
WNMG-EF A99
WNMG-EM A99
WNMG-EG A98
WNMG-NF A100
WNMG-NM A99
WNMG-PM A97
WNMG-SF A99
WNMG-TC A98
WNMG-WG A99
WNMG-ZM B233
WPGT B233
WPGT-PM

## X

B233
XPHT-GM B234
XSEQ

## Y

A104
A104
YNMX
YNUX

## Z

B234
ZDET A297
ZIGQ-NM A298
ZILD-LC A297
ZIMF-NM B235
ZOHX-GF B235
ZOHX-GM A292
ZP*D-MG A293
ZP*D-MG-* A292
ZP*S-MG B235
ZPNT A296
ZR*D-EG A298
ZR*D-LH A296
ZR*D-MG A295
ZT*D-EG A294
ZT*D-MG A291
ZT*D-MM A294
ZT*S-MG

## 1


| | |
|---|---|
| 1101SC05 | C84-C87 |
| 1105SC03 | C84-C87 |
| 1143SC120 | C94 |
| 1143SC90 | C94 |
| 1165PA03 | C88-C90 |
| 1534SH03 | C83 |
| 1534SP03C | C63-C66 |
| 1534ST03C | C66-C81 |
| 1534SU03 | C10-C50 |
| 1534SU03C | C10-C50 |
| 1536ST05C | C66-C81 |
| 1536SU05 | C06-C50 |
| 1536SU05C | C06-C50 |
| 1538SU08C | C06-C50 |
| 1557SU03 | C51 |
| 1576PC05 | C91-C93 |
| 1576PC05C | C91-C93 |
| 1579PC15C | C91-C93 |
| 1588SL10C | C52-C62 |
| 1588SL12C | C52-C62 |
| 1588SL15C | C52-C62 |
| 1588SL20C | C52-C62 |
| 1588SL30C | C52-C62 |
| 1634SU03C | C06-C50 |
| 1636SU05C | C06-C50 |
| 1734SU03C | C06-C50 |
| 1636ST05C | C70-C81 |
| 1736SU05C | C06-C50 |


## 3


| | |
|---|---|
| 3101H7 | C144 |
| 3102H7 | C145 |
| 3103H7 | C147 |
| 3112H7 | C146 |


## 4


| | |
|---|---|
| 4111 | C169 |
| 4122A | C156 |
| 4122M | C158 |
| 4222A | C157 |
| 4222M | C158 |
| 4201A | C164 |
| 4201C | C160 |
| 4202A | C166 |
| 4202C | C162 |



| | |
|---|---|
| 5501/5601 | B529 |
| 5601 | B530 |
| 5501R302GM | B304 |
| 5501R303GM | B330 |
| 5501R304GF | B348 |
| 5501R38414GM | B501 |
| 5502R302GM | B306 |
| 5502R303GM | B332 |
| 5502R304GF | B350 |
| 5502R38414GM | B502 |
| 5502R38414GM-R | B504 |
| 5502R402NM | B452 |
| 5502R453GM | B334 |
| 5502R55MHH | B414 |
| 5508R454GM | B352 |
| 5565R302GF | B368 |
| 5565R302GH | B420 |
| 5565R302HH | B422 |
| 5565R302NH | B483 |
| 5566R302GF | B370 |
| 5566R302GH | B421 |
| 5566R302HH | B423 |
| 5566R302NH | B484 |
| 5566R304HH | B438 |
| 5585R554HHR | B443 |
| 5586R554HHR | B444 |
| 5589R45MGFR | B362 |
| 5601R302GM | B305 |
| 5601R303GM | B331 |
| 5601R304GF | B349 |
| 5602R302GM | B307 |
| 5602R303GM | B333 |
| 5602R304GF | B351 |
| 5602R303/304GR | B391 |
| 5602R305GR | B391 |
| 5602R38414GM-R | B505 |
| 5602R38414GM | B503 |
| 5602R453GM | B335 |
| 5602R454GM | B353 |
| 5665R202GM | B369 |


## A


| | |
|---|---|
| AL-2B | B485 |
| AL-1E | B465 |
| AL-2E | B467 |
| AL-2EL | B468 |
| AL-3E | B472 |
| AL-3EL | B473 |
| AL-2R-AIR | B489 |
| AL-2RL-AIR | B490 |
| AL-3R-AIR | B493 |
| AL-3RL-AIR | B494 |
| AL-3W | B481 |
| ALG-2E | B470 |
| ALG-3E | B475 |
| ALP-3E | B477 |
| ALP-4E | B479 |


## B


| | |
|---|---|
| BMR01 | B119 |
| BMR02 | B121 |
| BMR03 | B123-B126 |
| BMR04 | B135-B136 |


## C


| | |
|---|---|
| C16M-QBDR/L | A308 |
| C40X-Q*DR/L | A321 |
| CCLNR/L | A235 |
| CDJNR/L | A236 |
| CKJNR/L | A234 |
| CKNNR/L | A234 |
| C(E)***-SCLPR/L | A272 |
| C (E)***-SDQPR/L | A273 |
| C (E)***-SDUPR/L | A274 |
| C (E)***-STUPR/L | A275 |
| C (E)***-STFCR/L | A276 |
| C (E)***-STFPR/L | A276 |
| C (E)***-SVQCR/L | A277 |
| C (E)***-SVUCR/L | A278 |
| CMA01 | B172 |
| CMD01 | B173 |
| CMZ01 | B171 |
| CRDNN | A238 |
| CSDNN | A238 |
| CSKNR/L | A237 |
| CSRNR/L | A237 |
| CTJNR/L | A235 |
| CTUNR/L | A236 |
| C***-Q*DR/L | A321 |


## D


| | |
|---|---|
| DCLNR/L | A181 |
| DDJNR/L | A182 |
| DSBNR/L | A183 |
| DTGNR/L | A184 |
| DVJNR/L | A186 |
| DVVNN | A185 |
| DWLNR/L | A187 |

## E

EMP01 B95
EMP02 B102
EMP03 B106
EMP04 B107
EMP05 B111
EMP13 B115

## F

FMA01 B28
FMA02 B29
FMA03 B33
FMA04(OFKT) B36
FMA04(OFKR) B40
FMA07 B43
FMA11 B47
FMA12 B51
FMD02(PN11) B54
FMD02(HN09) B57
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FMP03 B78
FMR01 B80
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GM-2BL B372
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GM-2EL B309
GM-2EP B322-B323
GM-2ES B324
GM-2EX B310
GM-2F B312
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GM-2R B386
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GM-4E B345
GM-4EFP B347
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GM-4EL B346
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HM-2BP B433-B434
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PCBNR/L A188
PCLNR/L A189
PDJNR/L A190
PDNNR/L A191
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PM-2BC B282-285
PM-2BFP B281
PM-2BL B280
PM-2E B264
PM-2EL B265
PM-2R B293
PM-4B B290
PM-4BL B291
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QCH-RD B192,B194
QCH-SDMT B182
QCH-WPGT B184
QCH-XPHT B179
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QEBDR/L A308
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QE*SR/L A311
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QE**R/L A309
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QF**R/L A313-A314
QF**RR/LL A315-A318
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S***-PCLNR/L A246
S***-PDSNR/L A248
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S***-SCLCR/L A254
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S***-SSKCR/L A259
S***-STFCR/L A260
S***-STUPR/L A268
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UM-4RL B519

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## X

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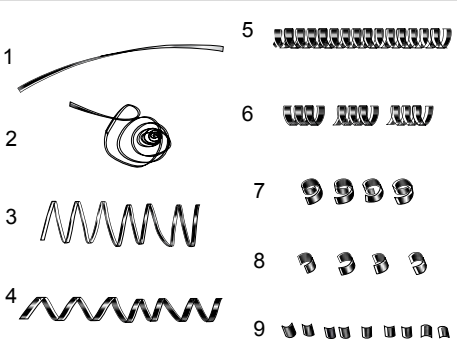
## Z

ZD03 C130-C131
ZTD02/03 C126-127
ZTD04/05 C128-129

# Test Report
# Versuchsprotokoll

**Date**

**ZCC Cutting Tools Europe GmbH**

| | | | | | |
|---|---|---|---|---|---|
| **General** | **Allgemein** | End User / Anwender | | Distributor / Händler | |
| Company | Firma | | | | |
| Contact person | Gesprächspartner | | | | |
| **Machine** | **Maschine** | | | | |
| Type | Typ | | | | |
| Producer | Hersteller | | | | |
| Power (kW) | Leisung (kW) | | | | |
| Adaptor / Tooling System | Werkzeugaufnahme | | | | |
| **Workpiece** | **Werkstück** | | | | |
| Material | Werkstoff | | | | |
| Hardness / Tensile Strength | Härte / Zugfestigkeit N / $mm^2$ | | | | |
| Heattreatment / Surface | Wärmebeh. / Oberfläche | | | | |
| Interrupt cutting | Schnittunterbrechungen | | | | |
| **Cutting tools** | **Werkzeug** | | | | |
| Producer / Supplier | Hersteller (Halter) | | | | |
| Toolholder / Milling body | Halter Bezeichnung | | | | |
| Teeth Z | Zähnezahl Z | | | | |
| Producer / Sopplier | Hersteller (Werkzeug) | | | | |
| Insert type / Tool Nr. | Platten-Typ / Werkzeug Nr. | | | | |
| Grade | Schneidstoff Sorte | | | | |
| Solid carbide tools art | Vollhartmetallwerkzeug Nr. | | | | |
| Cooling | Kühlmittel int. / ext. | | | | |
| **Cutting Data** | **Schnittdaten** | | | | |
| RPM n = U / min | Drehzahl n = U / min | | | | |
| Cutting speed Vc = m / min | Schnittgeschw. Vc = m / min | | | | |
| Feed rate f = mm / r | Vorschub f = mm / U | | | | |
| Feed rate Vf = mm / min | Vorschubgeschw. Vf = mm / min | | | | |
| Depth of cut $a_p$ mm | Schnitttiefe $a_p$ = mm | | | | |
| Depth of cut $a_e$ mm | Schnittbreite $a_e$ = mm | | | | |
| Machining length mm | Eingriffslänge mm | | | | |
| Cutting time T min | Eingriffszeit T mm | | | | |
| **Results** | **Ergebnis** | | | | |
| Machined pieces / Edge | Anzahl Werkst. / Schneidkante | | | | |
| Surface quality | Oberfläche Werkstück | | | | |
| Flankwear VB | Freiflächenverschleiß VB | | | | |
| Criteria | Kriterium | | | | |
| Notch Wear | Kerbverschleiß | | | | |
| Crater Wear | Kolkverschleiß | | | | |
| Plastic deformation | Plastische Verformung | | | | |
| Built-up edge | Aufbauschneidenbildung | | | | |
| Insert breakage | Plattenbruch | | | | |
| Cutting edge breakage | Schneidkantenbruch | | | | |
| **Chipforms** | **Spanformen** | | | | |
|  | | ○ | ○ | ○ | ○ |
| | | **Conclusion / Zusammenfassung** | | | |



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Sign / Unterschrift _____

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ZCC-CT




ZCC-CT





Zhuzhou Cemented Carbide Cutting Tools Co., Ltd. (ZCC-CT) is located in Zhuzhou, Hunan province, China and is the largest supplier of carbide tools into the Chinese market. The ZCC-CT cutting tool company is part of the "Zhuzhou cemented carbide Group" who manufacture carbide materials and powders. Both of these companies are part of the "Minmetals Corporation" who mine and produce raw tungsten carbide materials.

Since its foundation in 1953 ZCC-CT has developed rapidly by progressively using highly advanced modern production technology as well as having a highly qualified and committed workforce. With over 2,000 employees the company is now the largest producer of carbide cutting tools in China and one of the leading carbide manufacturers worldwide.

Using this advanced production technology, ZCC-CT products are manufactured to the highest quality standards to maintain a constant quality and high performance. The wide range of products contains indexable carbide inserts (coated and uncoated), inserts of Cermets, CBN, PCD and ceramics, solid carbide cutting tools as well as tool holders and milling bodies. The products are produced to various international standards such as ISO DIN, ANSI, JIS and BSI. Furthermore customised and special carbide product are also offered.

Research and development plays a major and significant role at ZCC-CT. The production facilities use the most sophisticated and advanced equipment available and this is supplied by the leading machine and equipment manufacturers in Germany and Switzerland. A highly qualified and skilled team of engineers in the R&D departments are constantly developing new and improved cutting tools. There is a constant desire to continually enhance the quality, to fulfill the ever increasing market requirements for new and initiative products and to achieve the best possible result for the customers.

The production and administration facilities in China are certified to ISO 9001:2000 and they maintain strict environmental management to ISO 14001:2004 standards.

Since 2003 ZCC Cutting Tools has operated a sales organisation in Europe. This sales and warehousing subsidiary of ZCC-CT is based in Düsseldorf (Germany) and has been progressively build up and expanded by Mr. Quanliang Zhao the European Managing Director.

Sales to all European countries, as well as Russia and Turkey, are controlled and managed from this European central warehouse in Düsseldorf, with the majority of the products being dispatched on the same day of ordering. The business operates under the quality management system for "Distribution and Logistics of Metal Cutting Tools" and is certified with DIN EN ISO 9001:2008.

ZCC Cutting Tools Europe has a constantly growing number of employees covering sales, marketing, warehouse and distribution, technical support, IT, HR and accounting. Our external sales team and our partners from around Europe are there to support you on-site in your production facilities or distribution operations. Our internal, highly qualified, technical application engineering staff are always available to give the customer technical advice and support via telephone, by email or in person. The internal sales team takes care of your enquiries and orders and together with dedicated warehouse staff they ensure that products are dispatched to you as quickly as possible.

The complete team at ZCC Cutting Tools Europe are there to support you and be your competent and efficient partner in the global Cutting Tool Industry.

*Zhuzhou Cemented Carbide Cutting Tools Co., Ltd. (ZCC-CT) mit Sitz in Zhuzhou, Hunan, in der Volksrepublik China ist der größte Lieferant von Hartmetallwerkzeugen im chinesischen Markt. ZCC-CT gehört zur „Zhuzhou cemented carbide Group", die Hartmetall-Produkte und Hartmetall-Pulver herstellt. Beide Unternehmen sind Teil der „Minmetals Corporation", die Metalle und Mineralien abbaut und mit diesen handelt.*

*Seit der Gründung 1953 hat sich ZCC Cutting Tools auf dem Gebiet der Hartmetallproduktion durch neueste Technologien sowie hochqualifiziertes Personal zu einem der weltweit führenden Hartmetallhersteller mit mehr als 2.000 Mitarbeitern entwickelt.*

*Auf Basis der neuesten Produktionstechnologien produziert ZCC-CT Produkte gleichbleibender Qualität auf höchstem Niveau. Die umfangreiche Produktpalette beinhaltet Hartmetallwendeschneidplatten (beschichtet und unbeschichtet), Wendeschneidplatten aus Cermet, CBN, PKD und Keramik, Vollhartmetallwerkzeuge sowie Werkzeughalter und Fräskörper. Die Produkte werden nach verschiedenen internationalen Standards produziert wie z.B. ISO DIN, ANSI, JIS und BSI. Des Weiteren werden auch kundenspezifische Lösungen und spezielle Hartmetallprodukte angeboten.*

*Forschung und Entwicklung haben bei ZCC-CT einen besonders hohen Stellenwert. Für diesen Bereich werden die weltweit modernsten Anlagen und fortschrittlichsten Maschinen aus Deutschland und der Schweiz genutzt und überdurchschnittlich hohe Investitionen getätigt. Mit gut ausgebildeten Ingenieuren und einem kompetenten Team forscht und entwickelt ZCC Cutting Tools stetig neue und verbesserte Produkte. Das Unternehmen strebt kontinuierlich danach die Qualität zu verbessern, den gestiegenen Anforderungen nach neuen und innovativen Produkten gerecht zu werden und ein bestmögliches Ergebnis für den Kunden zu erreichen.*

*Die Produktion und Verwaltung in China unterliegt qualitativ der ISO Normen 9001:2008 und im Bereich Umwelt-Management der ISO 14001:2004.*

*Seit 2003 hat ZCC Cutting Tools eine Vertriebszentrale in Europa. Der Sitz der Niederlassung befindet sich in Düsseldorf (Deutschland) und wurde kontinuierlich vom Geschäftsführer Quanliang Zhao aufgebaut.*

*Mittlerweile werden von dort alle europäischen Länder und Russland sowie die Türkei betreut. Auch das europäische Zentrallager befindet sich in Düsseldorf, so dass die meisten Artikel noch am Tag der Bestellung an den Kunden verschickt werden. Das Qualitätsmanagementsystem des Unternehmens ist im Bereich „Vertrieb und Logistik von Werkzeugen für die Metallverarbeitung" nach der DIN EN ISO 9001:2008 zertifiziert.*

*Die Anzahl der Mitarbeiter im Vertrieb, im technischen Support und in den Bereichen Lager, Marketing, IT, Personal und Buchhaltung wächst bei ZCC Cutting Tools Europe stetig. Unsere Außendienstmitarbeiter und unsere Partner in Europe betreuen Sie vor Ort und unsere Anwendungstechniker stehen Ihnen telefonisch, per E-mail oder auch persönlich mit Rat und Tat beiseite. Das Team im Vertriebsinnendienst kümmert sich um Ihre Anfragen und sorgt zusammen mit den Mitarbeitern im Lager dafür, dass die Bestellungen so schnell wie möglich auf den Weg zum Kunden gebracht werden.*

*Alle gemeinsam sind wir als ZCC Cutting Tools Europe für Sie da und stehen Ihnen als kompetenter Partner in der globalen Zerspanungsindustrie zur Seite!*





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