Turning/Drehen

ZCC Cutting Tools Europe GmbH
your Partner \ your Value

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

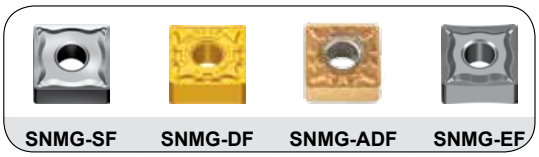
Double Sided Negative Inserts
Doppelseitige Negative Platten

Carbide and Cermet Inserts - Hartmetall- und Cermet-WSP

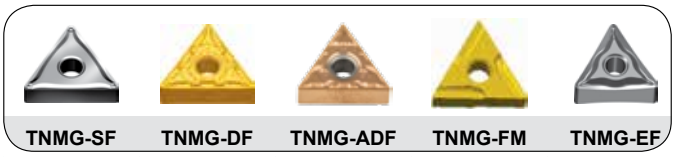
Finishing · Schlichten

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

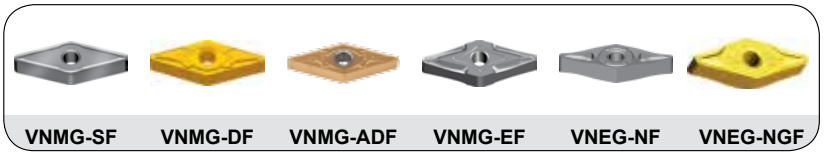
DNMG-SF	DNMG-DF	DNMG-ADF	DNMG-FM	DNMG-EF	DNEG-NF	DNEG-NGF	
11,15	11,15	15	15	11,15	15	15	Edge length · Kantenlänge
A73	A73	A73	A74	A74	A74	A74	Page · Seite



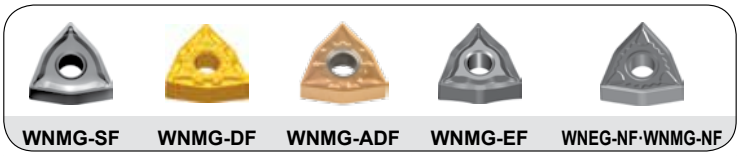
SNMG-SF	SNMG-DF	SNMG-ADF	SNMG-EF	
09,12	12	12	09,12,15	Edge length · Kantenlänge
A79	A79	A79	A80	Page · Seite



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

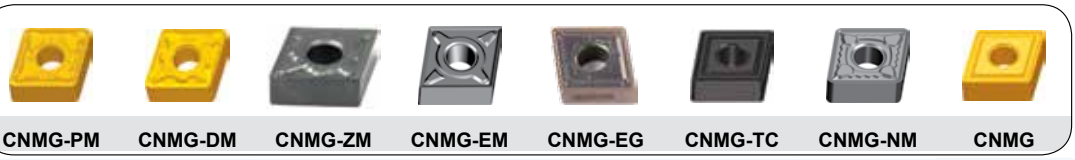


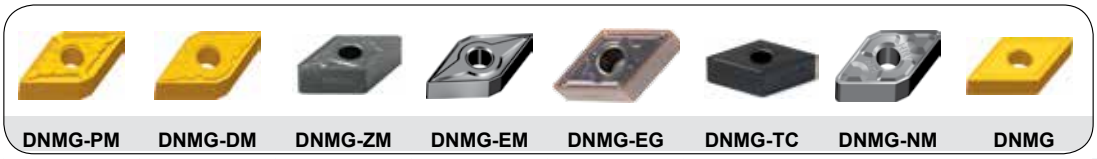
WNMG-SF	WNMG-DF	WNMG-ADF	WNMG-EF	WNEG-NF·WNMG-NF	
06,08	06,08	08	06,08	06,08	Edge length · Kantenlänge
A97	A97	A97	A98	A98	Page · Seite

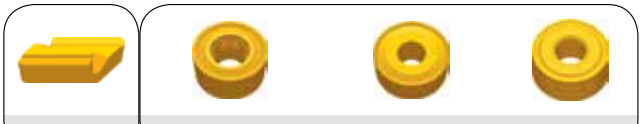
Wiper

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

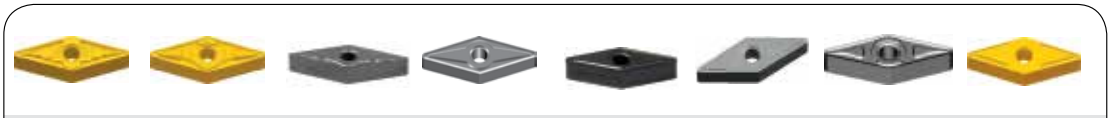
	CNMG-PM	CNMG-DM	CNMG-ZM	CNMG-EM	CNMG-EG	CNMG-TC	CNMG-NM	CNMG	
									
Edge length · Kantenlänge	09,12,16,19	09,12,16,19	12	12,16	12	12,16	12	12,16,19	
Page · Seite	A67	A68	A68	A68	A68	A69	A69	A72	

	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	

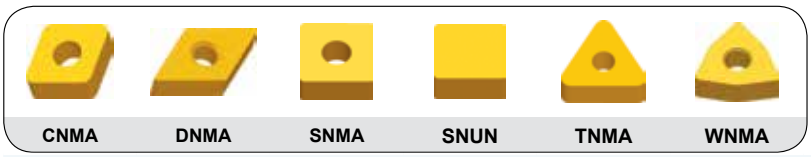
	WNMG-PM	WNMG-DM	WNMG-ZM	WNMG-EM	WNMG-EG	WNMG-TC	WNMG-NM	
Edge length · Kantenlänge	06,08	06,08	08	06,08	08	08	08	
Page · Seite	A99	A99	A99	A99	A99	A99	A100	

A

General Turning
Allgemeine Drehbearbeitung

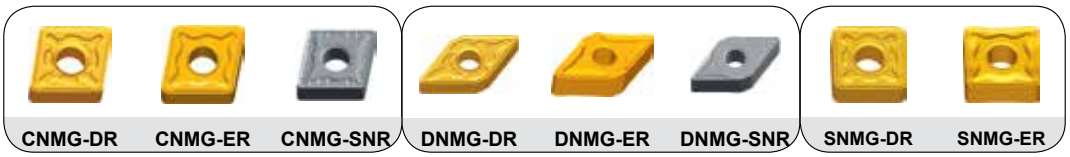
Double Sided Negative Inserts
Doppelseitige Negative Patten

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

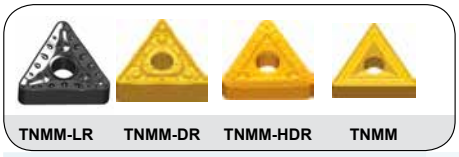
Single Sided Negative Inserts
Einseitige Negative Platten

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

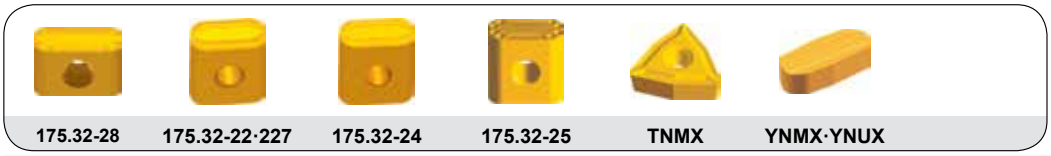
SNMM-LR	SNMM-DR	SNMM-ER	SNMM-HDR	SNMM-HPR	SNMM	
12,15,19,25	15,19,25	25	12,15,19,25	19,25	12	Edge length · Kantelänge
A83	A83	A84	A84	A84	A85	Page · Seite



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

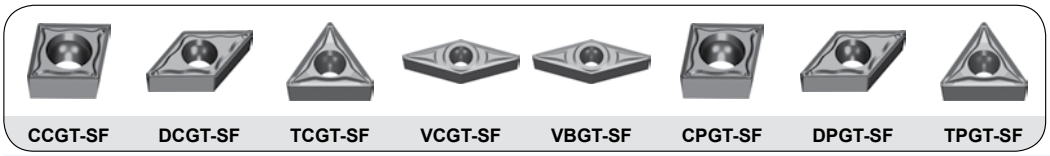


175.32-28	175.32-22·227	175.32-24	175.32-25	TNMX	YNMX·YNUX	
19,30	19	19,30	19	11,15	18,25	Edge length · Kantelänge
A103	A103	A103	A103	A104	A104	Page · Seite

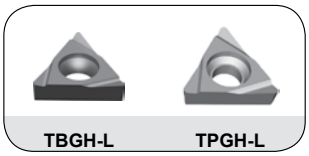
Positive Inserts
Positive Wendeschneidplatten

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



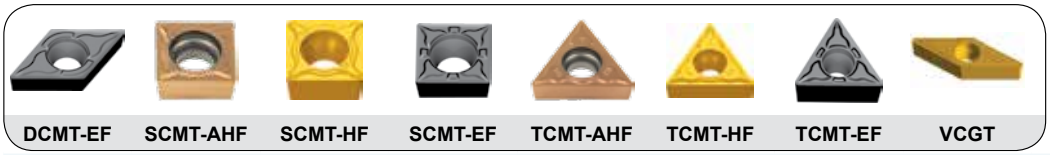
CCGT-SF	DCGT-SF	TCGT-SF	VCGT-SF	VBGT-SF	CPGT-SF	DPGT-SF	TPGT-SF	
06,09	07,11	06,09,11	11,16	11	06,09	07,11	09,11	Edge length · Kantelänge
A105	A110	A119	A125	A127	A109	A113	A124	Page · Seite



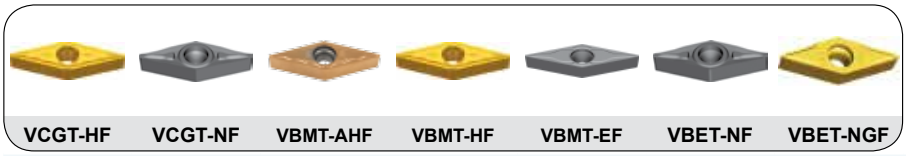
TBGH-L	TPGH-L							
06	09,11							Edge length · Kantelänge
A118	A124							Page · Seite

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

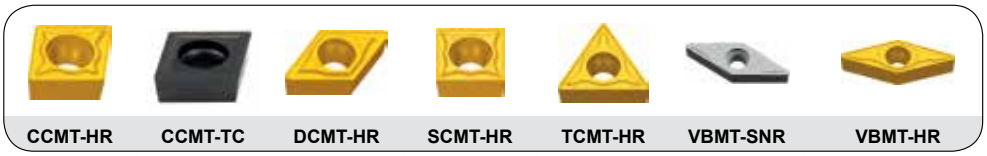
Medium Cutting · Mittlere Bearbeitung

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

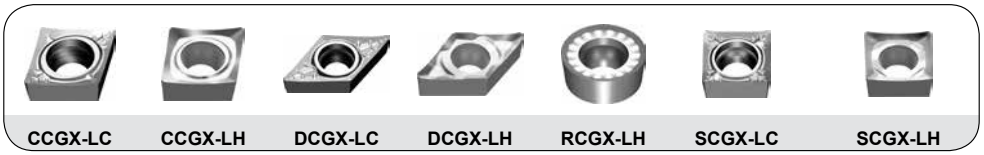
Roughing · Schruppen



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

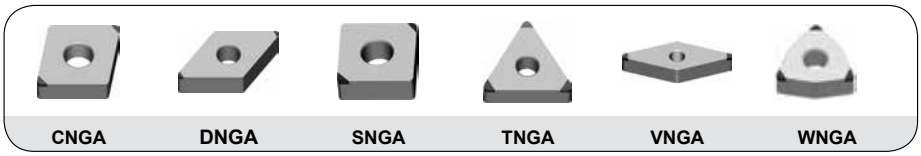


CCGX-LC	CCGX-LH	DCGX-LC	DCGX-LH	RCGX-LH	SCGX-LC	SCGX-LH	
06,09,12	06,09,12	07,11	07,11	08,12	09,12	09,12	Edge length · Kantenlänge
A108	A108	A112	A112	A114	A117	A117	Page · Seite

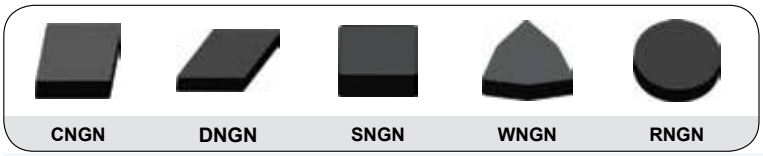
TCGX-LC	TCGX-LH	VCGX-LC	VCGX-LH				
09,11,16	09,11,16	11,16,22	11,16,22				Edge length · Kantenlänge
A123	A123	A126	A126				Page · Seite

Negative Inserts
Negative WSP

PCBN & PCD

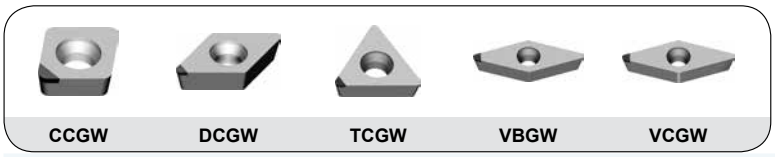


CNGA	DNGA	SNGA	TNGA	VNGA	WNGA	Edge length · Kantelänge
12	15	12	16	16	08,06	
A137	A138	A139	A140	A141	A141	Page · Seite



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

Positive Inserts
Positive WSP



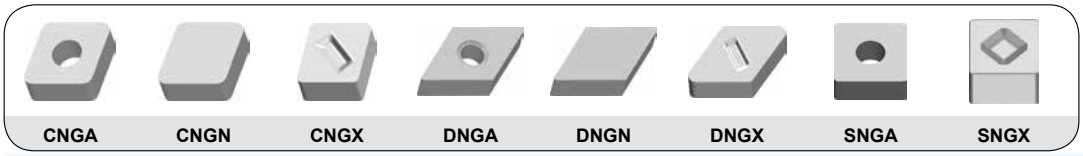
CCGW	DCGW	TCGW	VBGW	VCGW	Edge length · Kantelänge
06,09,12	07,11	11,16	16	16	
A142	A143	A144	A145	A145	Page · Seite

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

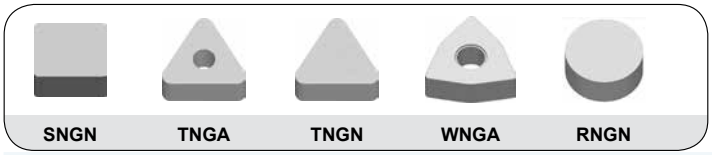
TCGW	VBGT	VBGW	VCGT	VCGW	Edge length · Kantelänge
11,16	16	16	16	16	
A154	A155	A155	A156	A156	Page · Seite

Negative Inserts
Negative WSP

Ceramic Inserts · Keramik Wendeschneidplatten



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



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

A

Parting and Grooving · Ab- und Einstechen

QCR/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 ISO metrisch		Partcial-Profile 60°·55° Teil-Profil 60°·55°		Whitworth Rohrgewinde		
External thread Außengewinde	Internal thread Innengewinde	External thread Außengewinde	Internal thread Innengewinde	External thread Außengewinde	Internal thread 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 Gewindeform UN 60°amerikanisch		BSPT Britain Standard Taper Pipe Thread Rohrgewinde für Dampf-, Gas-, & Wasserleitungen		NPT American Standard Amerikanisches kegeliges Rohrgewinde		
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads 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° Round screw 30°		MJ (Metric) MJ (Spitzgewinde)	UNJ (American) UNJ (American)	
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	External Threads 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°) Tr (ISO trapez 30° Gewinde)		ACME		STUB-ACME		
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads 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) API (Round)		API (inclined trapezoid screw) API (Amerikanisches Sägegewinde)		
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads 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) ISO metrisch (voll Profil)		Partcial-Profile 60°·55° Teil-Profil 60°·55°		Whitworth Rohrgewinde		
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads 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 Gewindeform UN 60°amerikanisch		BSPT Britain Standard Taper Pipe Thread Rohrgewinde für Dampf-, Gas-, & Wasserleitungen		NPT American Standard Amerikanisches kegeliges Rohrgewinde		
External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads Innengewinde	External Threads Außengewinde	Internal Threads 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

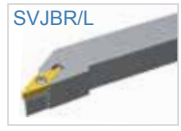
M-type Clamping (clamping finger) · M-Halter (Pratze)

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

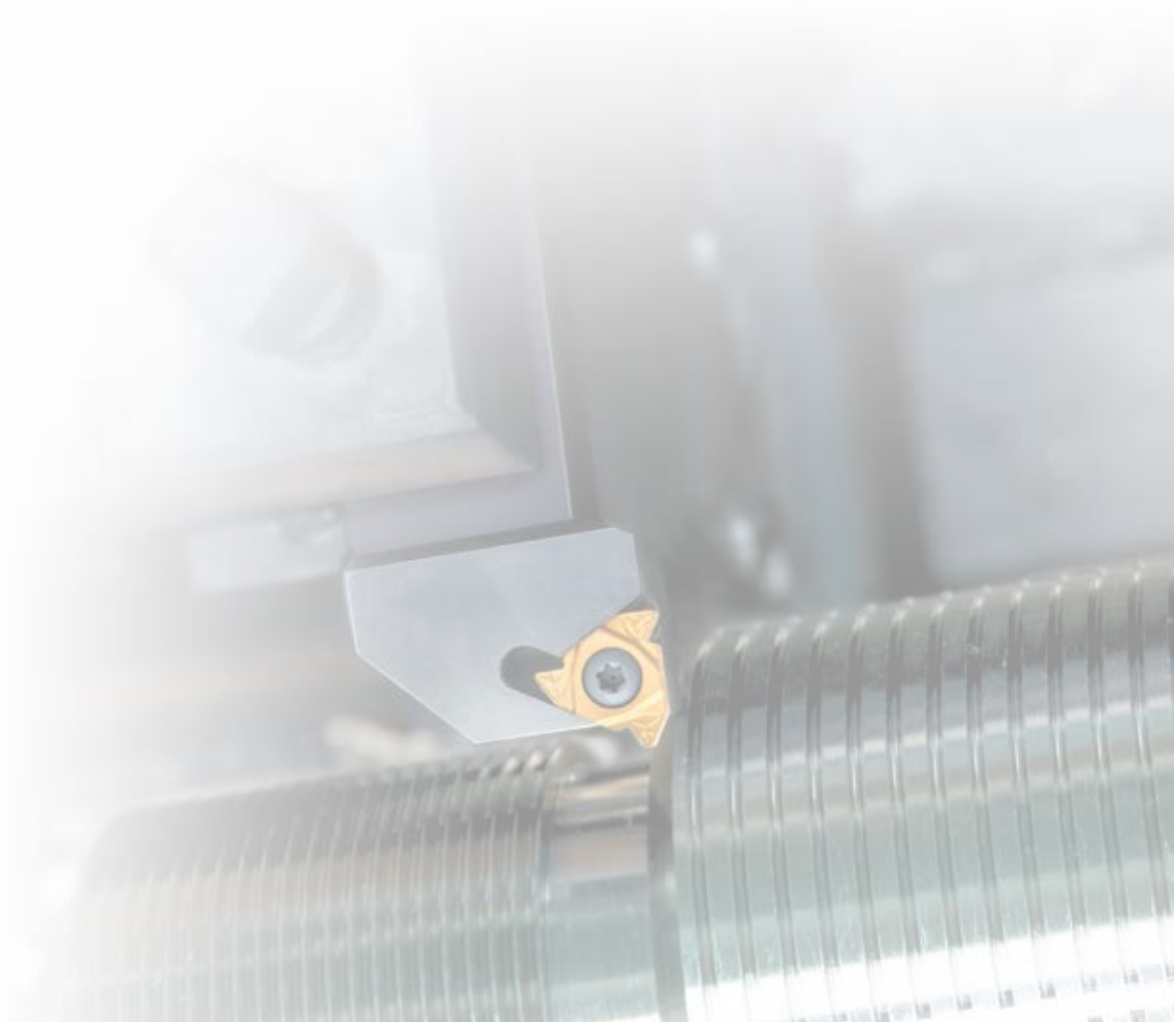
Page · Seite	A309	A308	A310	A310	A311	A312	A312

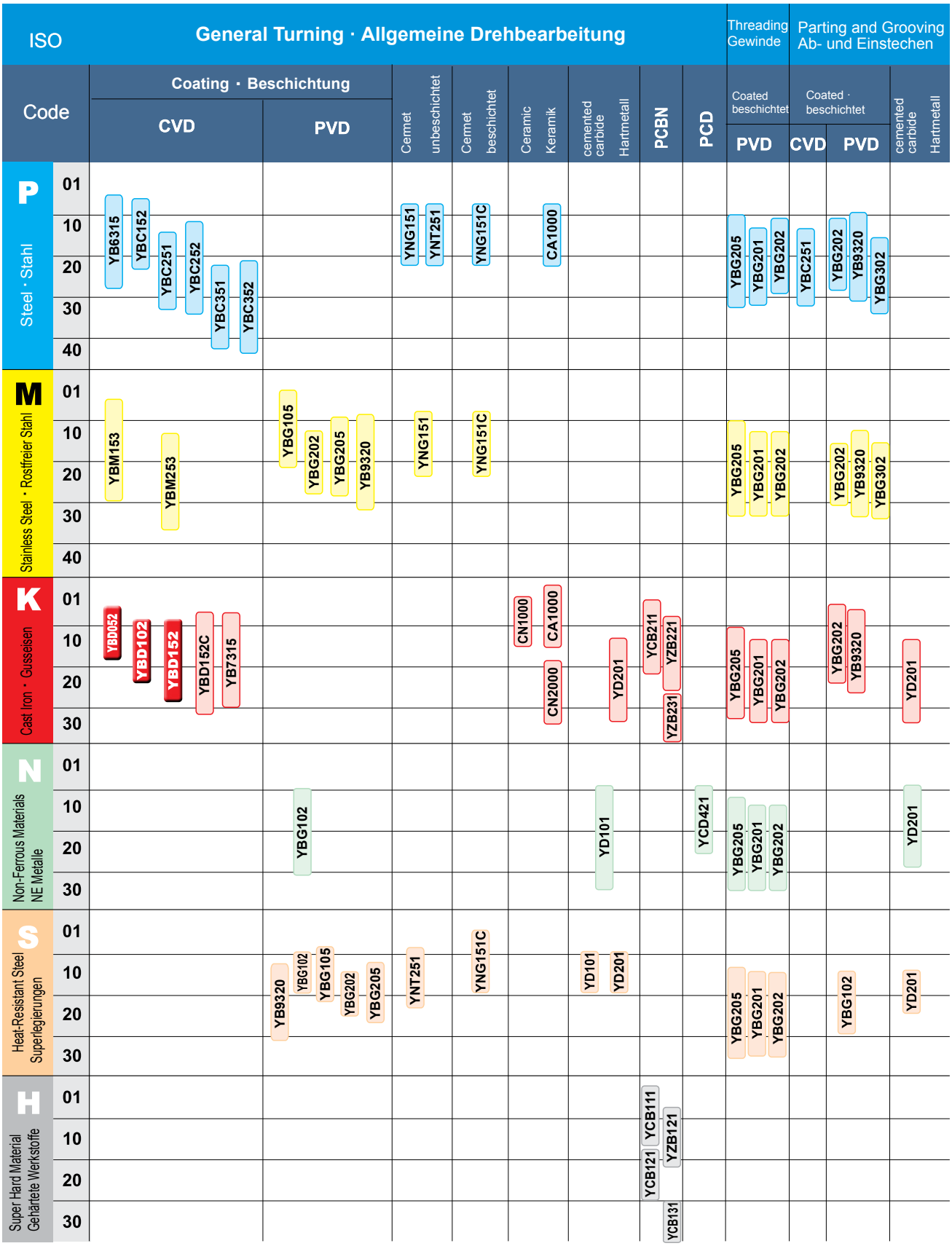
Page · Seite	A313-314	A315-318	A319-320	A321	A308	A321	A323

Page · Seite	A323

Tool Holder for Threading · Halter für Gewindebearbeitung

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

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

ADF

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

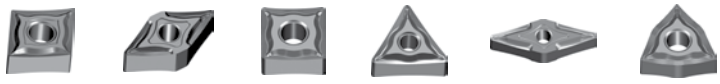
NEW

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.

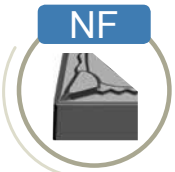
Chip breaker Overview · Spanbrecher Übersicht

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

ZM

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.

PM

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.

TC

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.

NM

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)

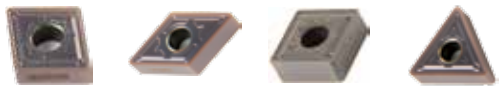
EM

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.

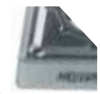
NEU

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.

Chip breaker Overview · Spanbrecher Übersicht

Roughing
Schruppen

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)

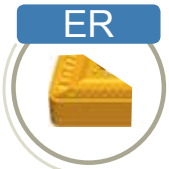
ER

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

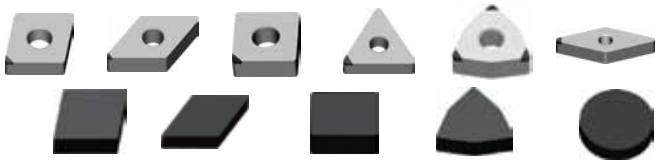
Sharp cutting edge with large & variable rake angles and optimum chip breaker design. SNR is a good solution for the roughing operation.

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.

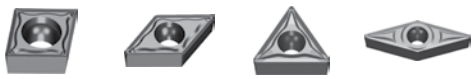
P M
ap· d.o.c. =0.05~2.5(mm)
f= 0.03~0.25(mm/r)

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.

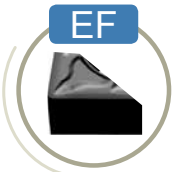
Chip breaker Overview · Spanbrecher Übersicht

Finishing
Schlichten

Positive Inserts
Positive Wendeschneidplatten

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

EF

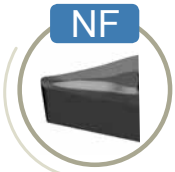


Sharp, positive cutting edge for finishing and semi-finishing of austenitic stainless steel, soft steel and low carbon steel.

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.

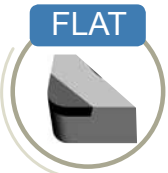
Spanbrecher für die Bearbeitung von Aluminium, Aluminiumlegierungen (NE-Metallen). G-Toleranz Platte mit großem Spanwinkel und polierter Oberfläche zur Vermeidung von Aufbauschneiden. Hervorragender Spanabfluss, gute Oberflächengüte und lange Standzeiten.

CBN & PKD

PCBN H PCD N

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

FLAT

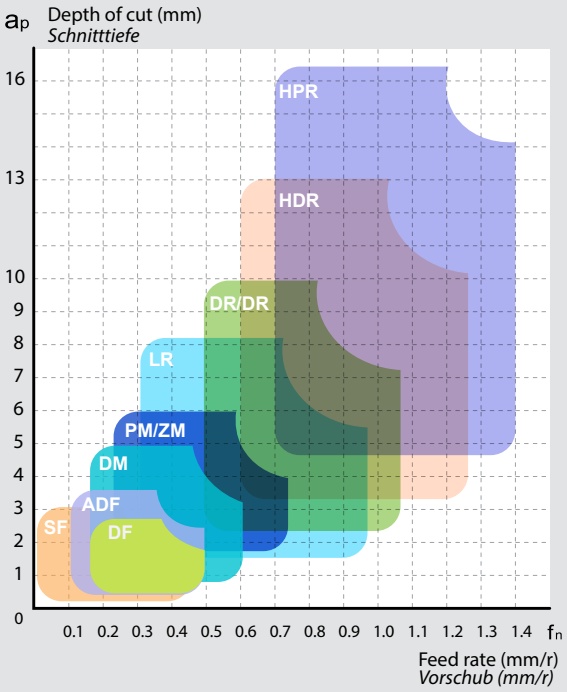


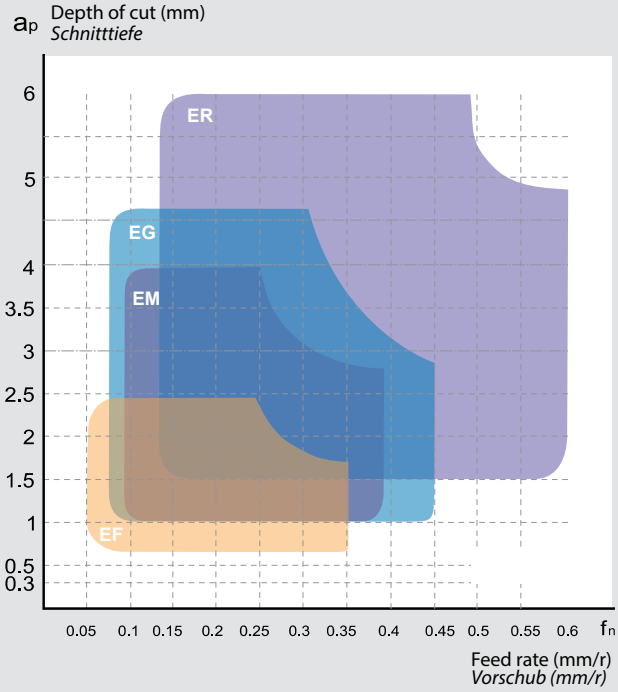
Special inserts G tolerance with brazed CBN or PCD Tip. CBN suitable for finishing of hardened component and cast iron. PCD suitable for finishing of non ferrous metal and non-metal materials.

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.

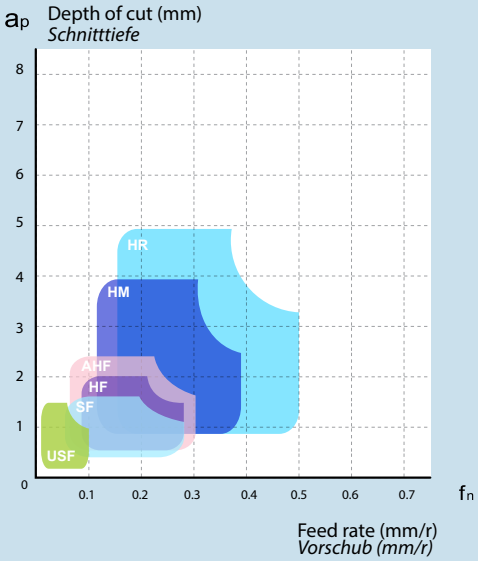
Main Chip breaker for general turning · Hauptspanbrecher für allgemeine Drehbearbeitung

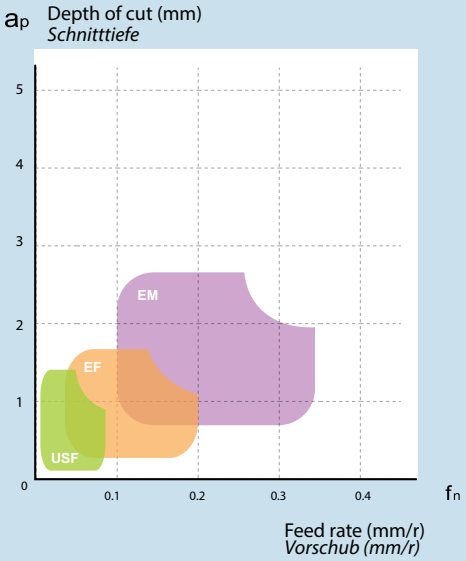
Negative Inserts · Negative Wendeschneidplatten





Positive Inserts · Positive Wendeschneidplatten

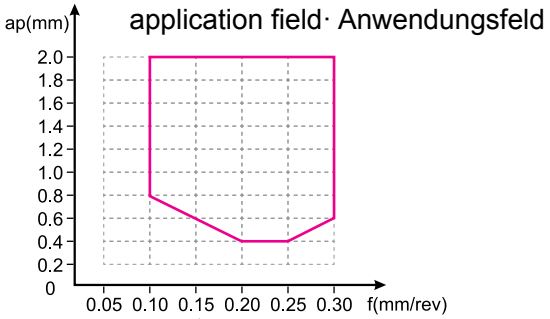


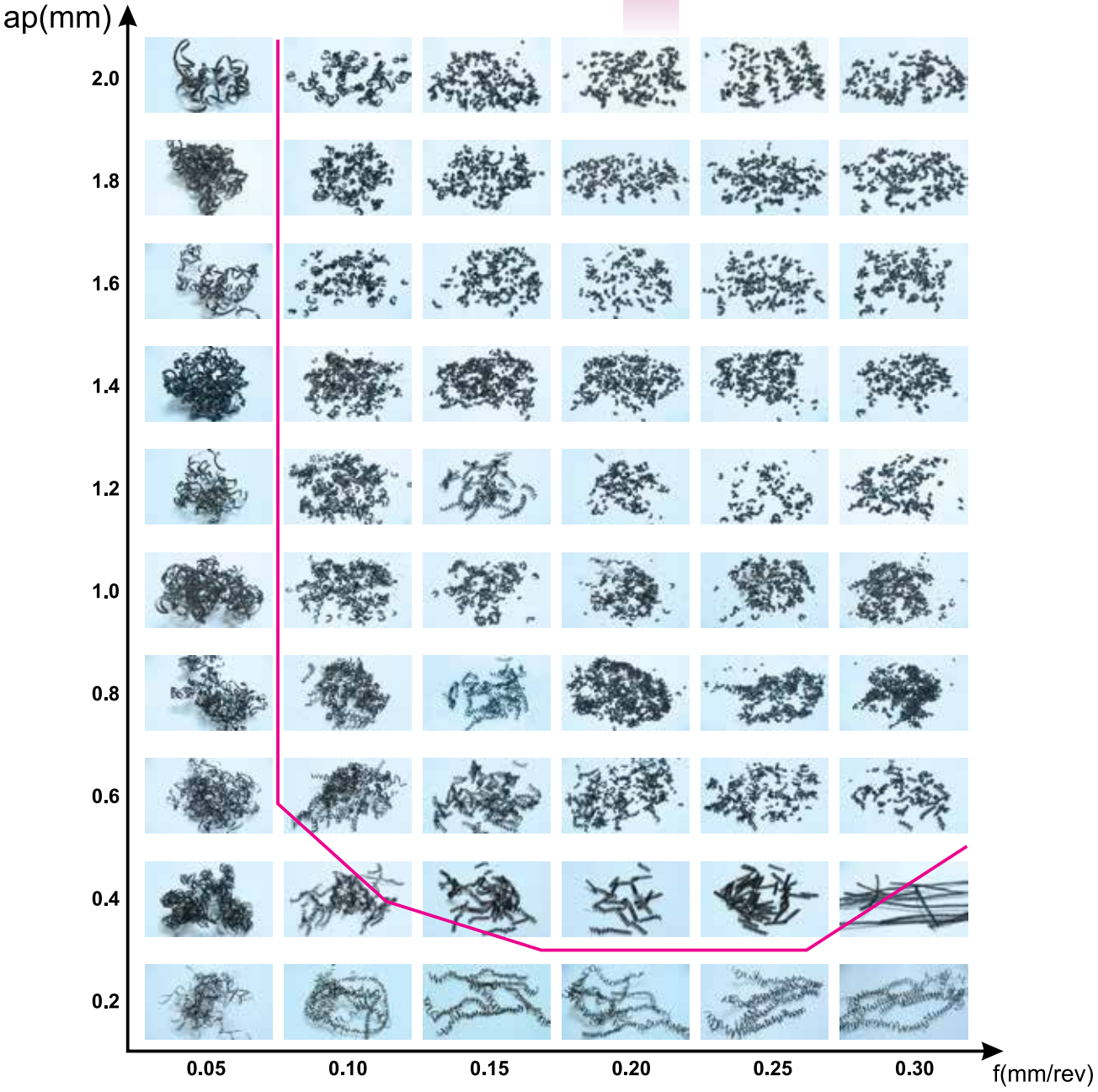


A

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)

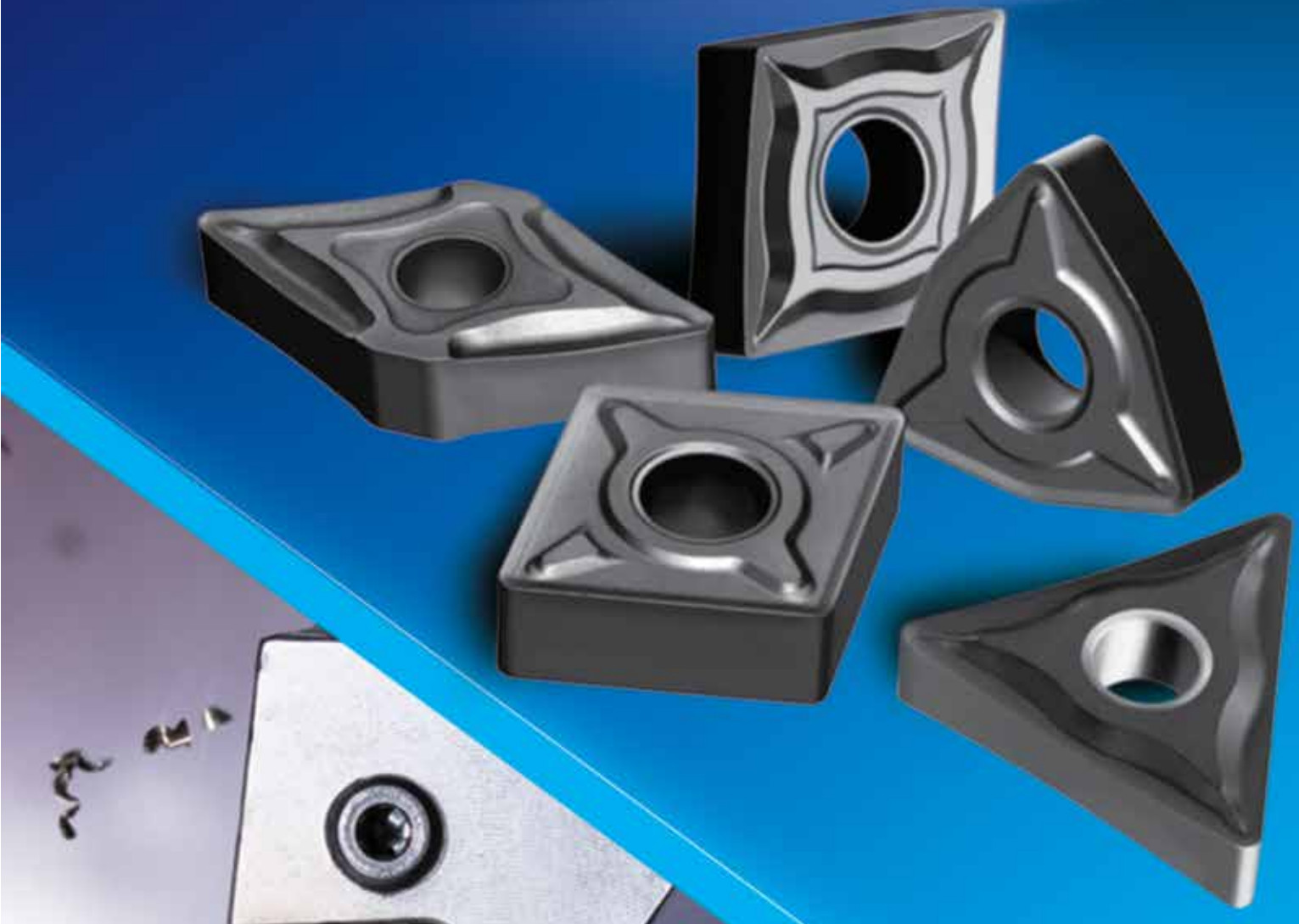




New

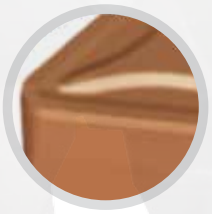
YBM153
YBM253

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

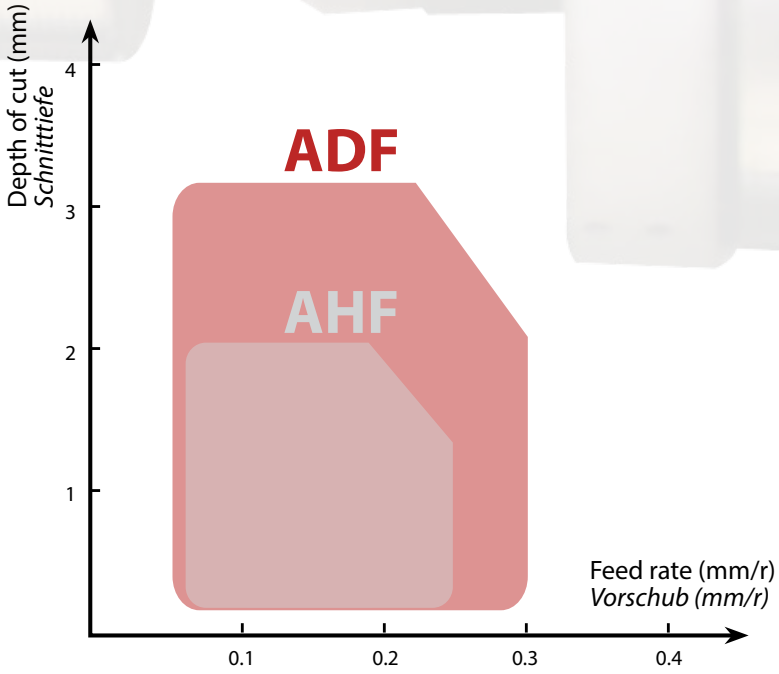
Positive inserts
Positive WSP
e.g. **CCMT ...**

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

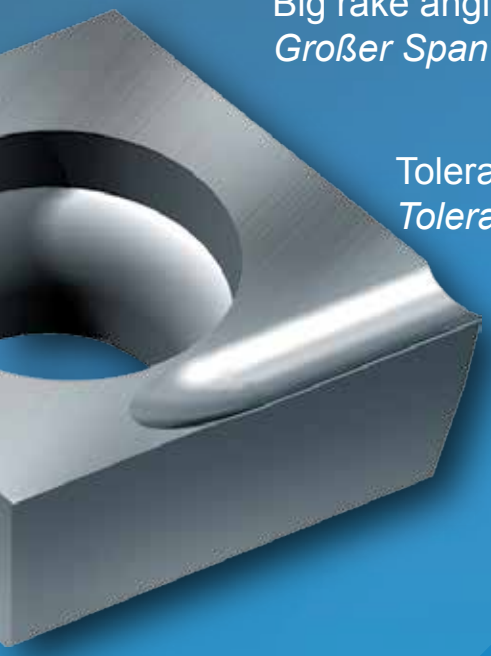
-ADF
-AHF



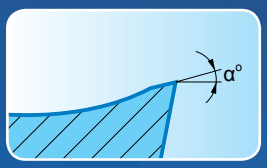
-USF

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

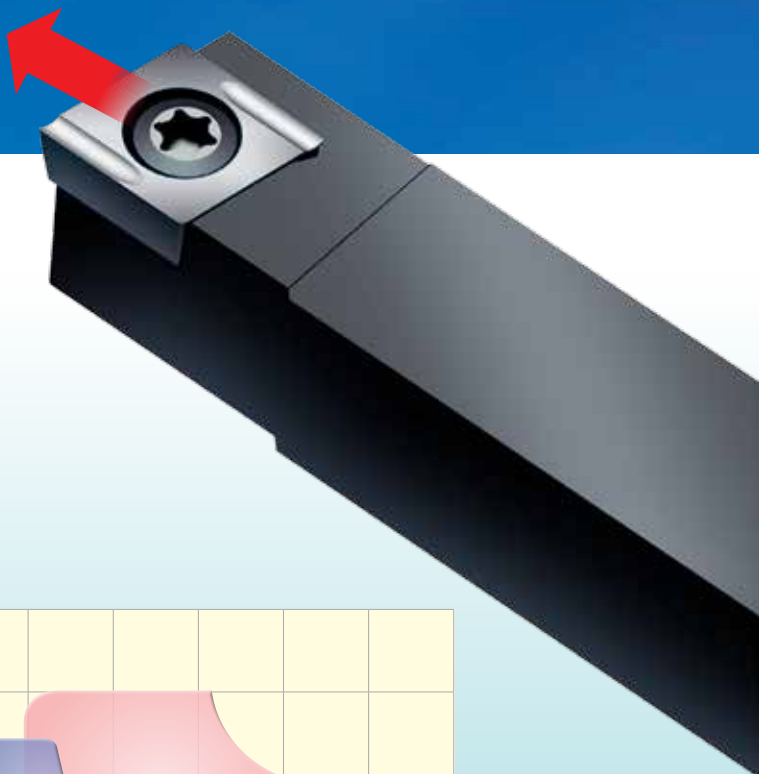


Tolerance of cutting edge radius ≤ 0.02mm
Toleranz des Schneidkantenradius ≤ 0.02mm

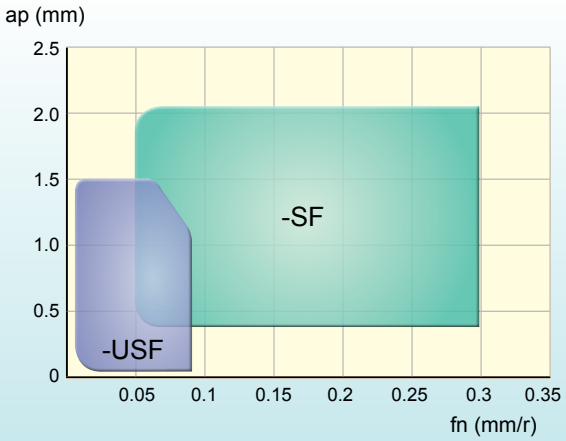


G-Tolerance inserts for high surface quality
G-Toleranz Platten für hohe Oberflächengüte

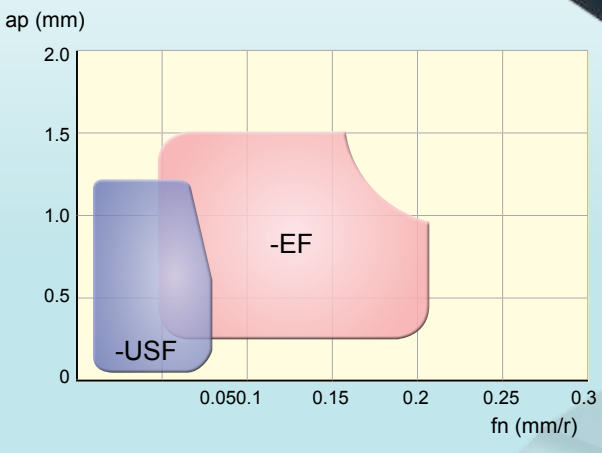
High precise clamping with strong screw
Hochpräzise Schraubenspannung



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



Material: 42CrMo



Material: X10CrNiTi189

-LC Chip Breaker *Spanbrecher*

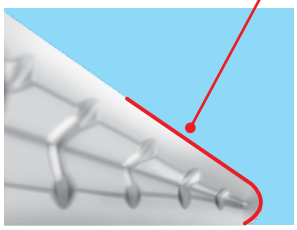
1. Unique chip breaker design, with sharp cutting edge and positive rake angle.
   Einzigartiges Spanbrecherdesign mit scharfer Schneide und positivem Spanwinkel.

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.

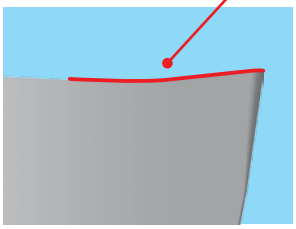
Optimised radius and edge geometry for better surface quality. Optimised chip breaker position.

Optimierter Radius, Noppenposition und Schneidkantengeometrie für sehr gute Oberflächengüten.

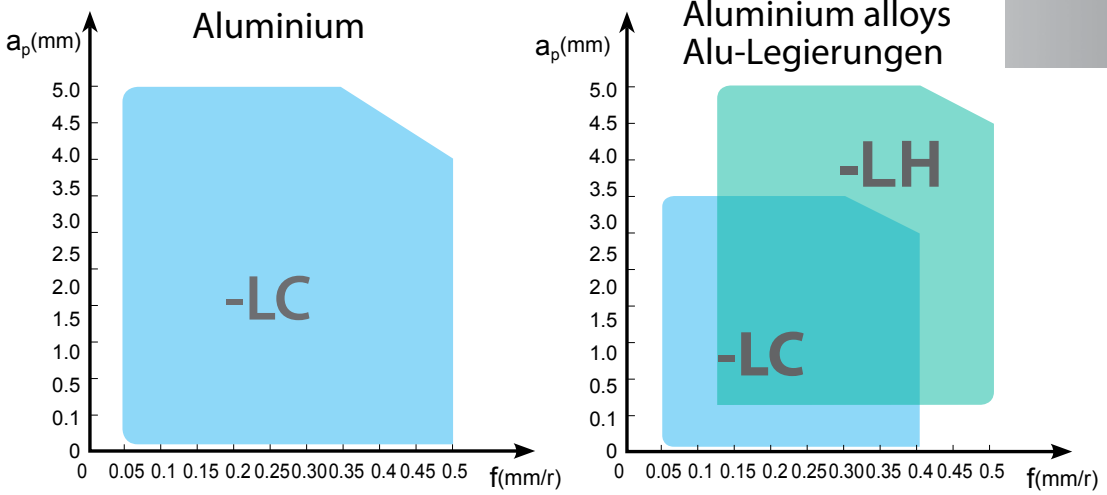


Special rake angle and edge preparation for better chip control.

Spanwinkel und Schneidkante für optimalen Spanfluss.



Comparison of chip breaker
Vergleich der Spanbrecher



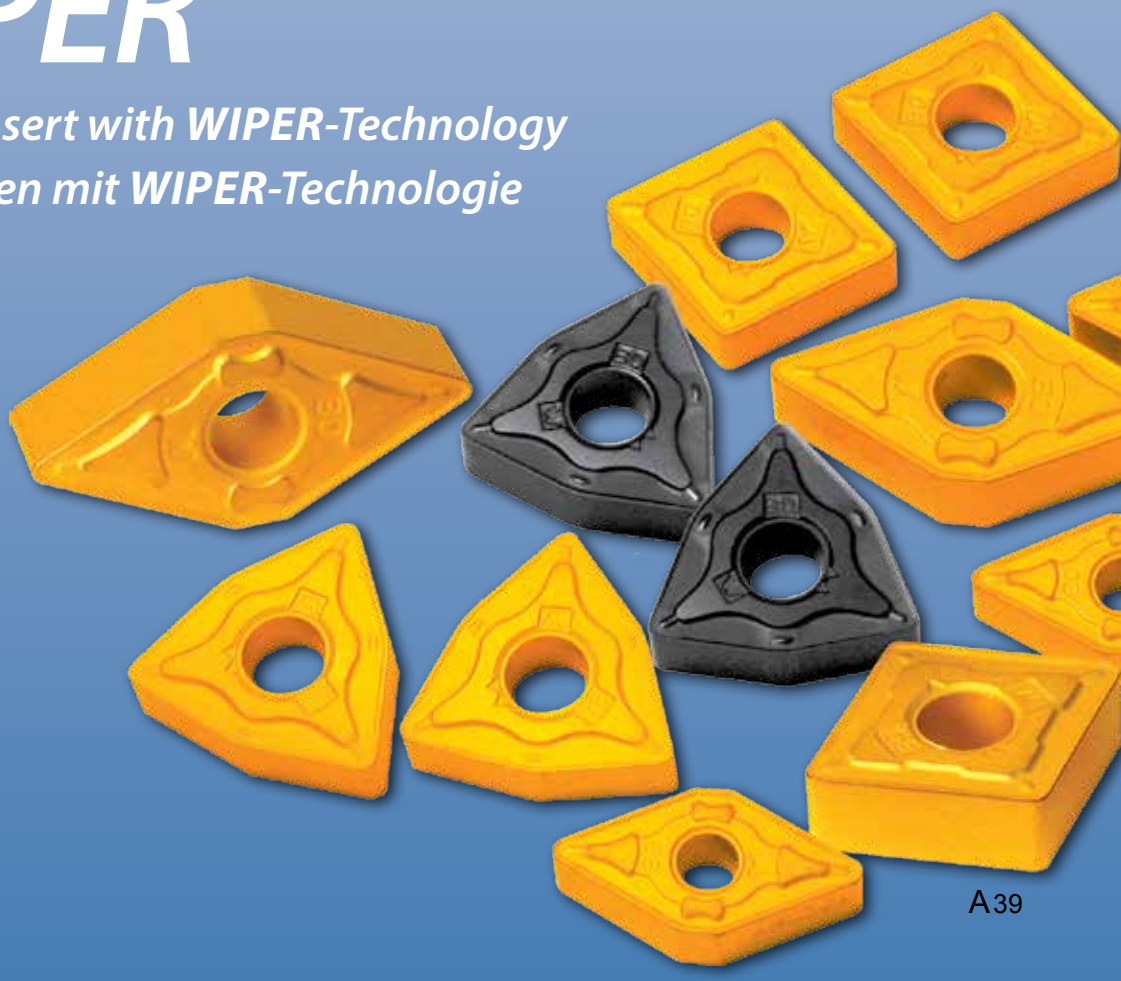
Aluminium		
Cutting data Schnittdaten	v_c=350m/min a_p=0.2mm f=0.2mm/r	
Surface quality Oberflächengüte		
	-LC	Competitor / Wettbewerb

WG

Chip breaker series
Spanbrecher Serie

WIPER

Turning Insert with WIPER-Technology
Drehplatten mit WIPER-Technologie

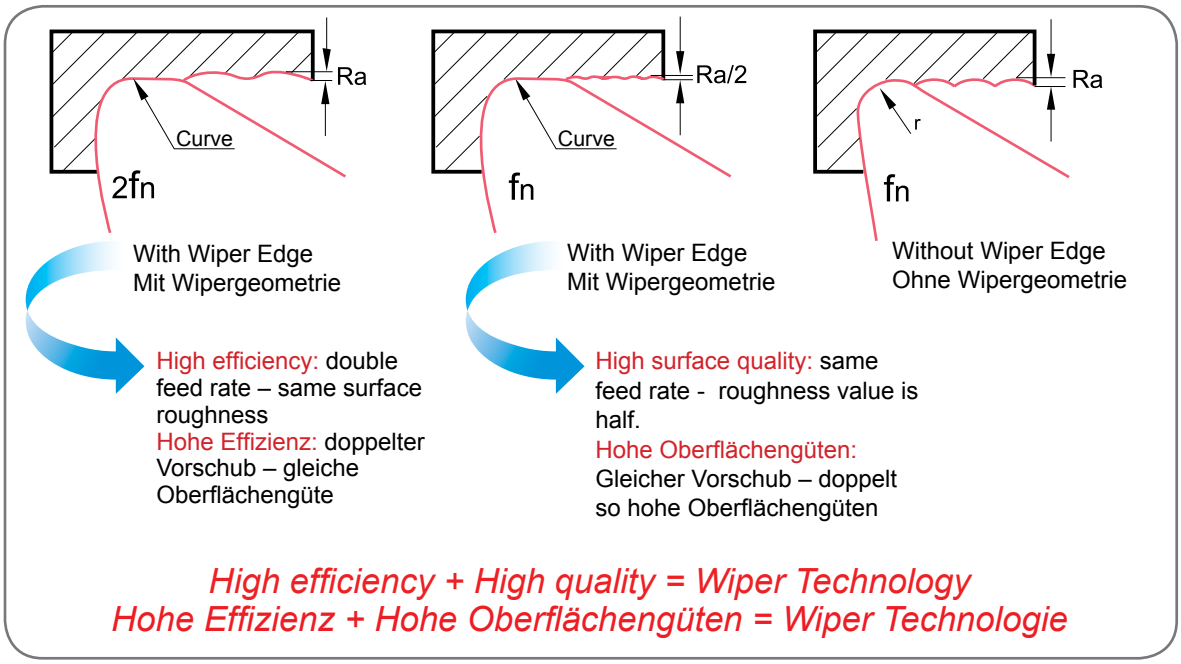


Machining a good surface finish on turned components has become a demand for semi-finishing and finishing operations. The Wiper technology has provided turning with a new means to achieve improved production performance where the key is to being able to raise the feed rate.

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.

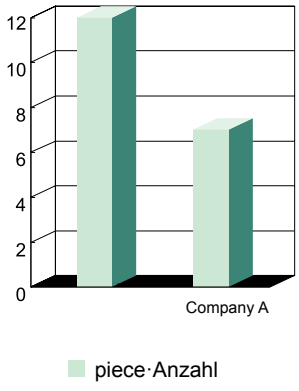
-ER

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

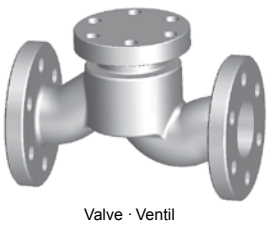
Speziell entwickelter Spanbrecher mit exzellenter Kantenstabilität bei gleichzeitiger Schneidenschärfe, für die Schruppbearbeitung.

Example· Beispiel:

CNMG120408-**EM**
YBM253



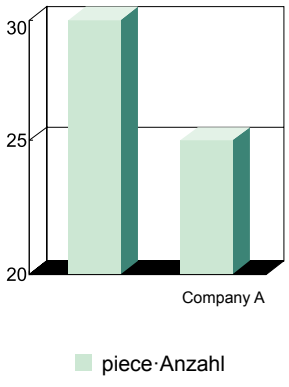
Parameter	
D	135mm
V_c	200 m/min
f	0.25mm/rev
ap	2.5 mm



Valve · Ventil

Example· Beispiel:

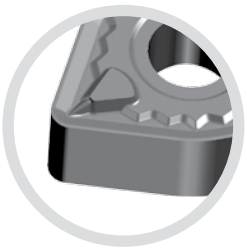
CNMG120408-**EF**
YBG205



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

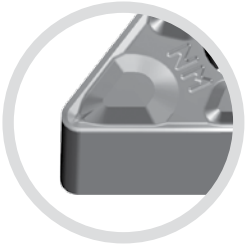
Grounded insert with sharp and positive cutting edge. NF is a good solution for the finishing operation.

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

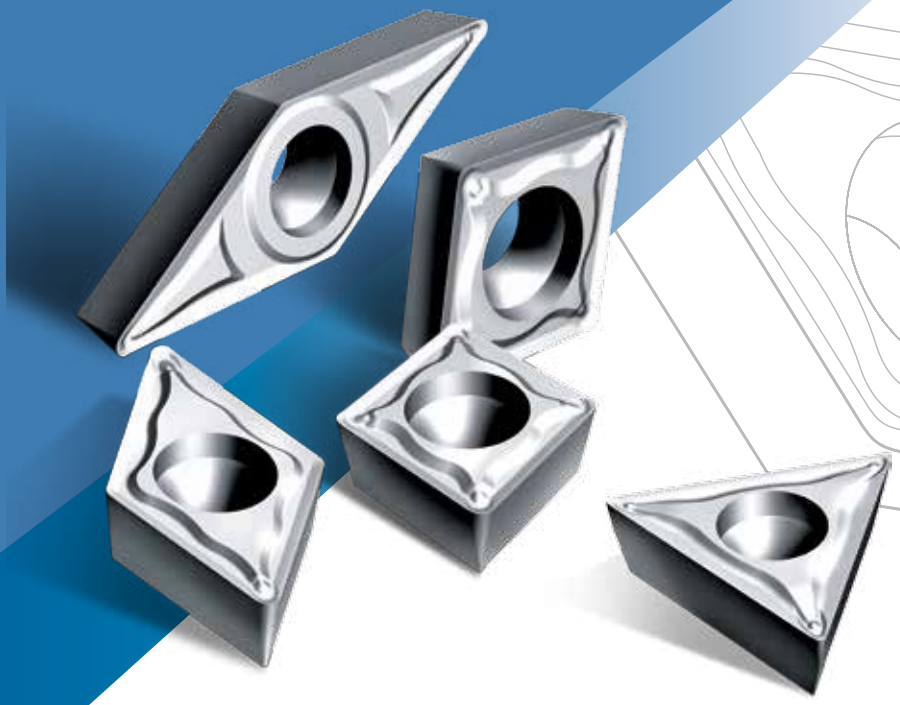
Sharp cutting edge with positive multi-rakes. Special for the semi-finishing of heat resistant super alloys.

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

Chip 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.

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

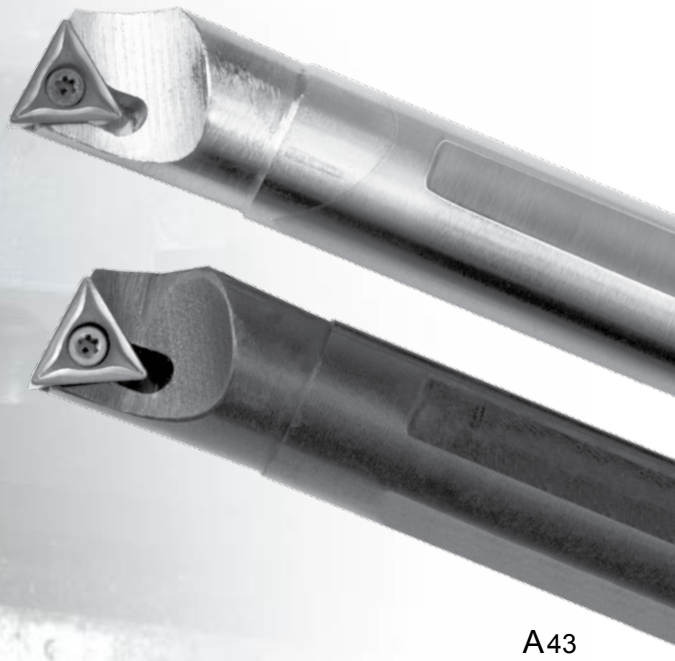
1. High precision
   Hohe Genauigkeit

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

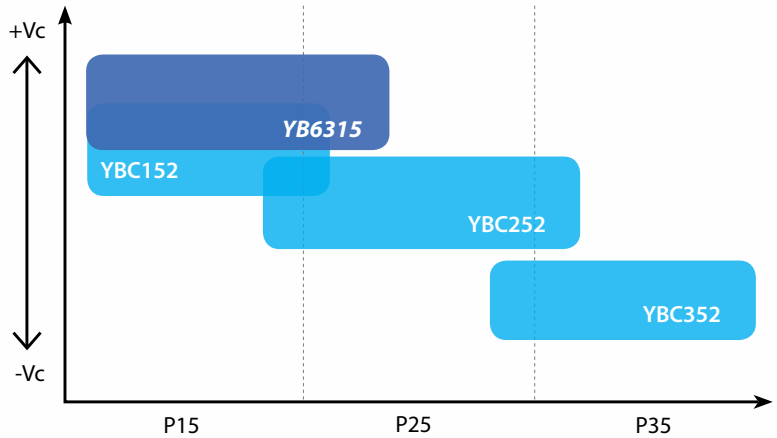
YB6315

-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

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

YBC152

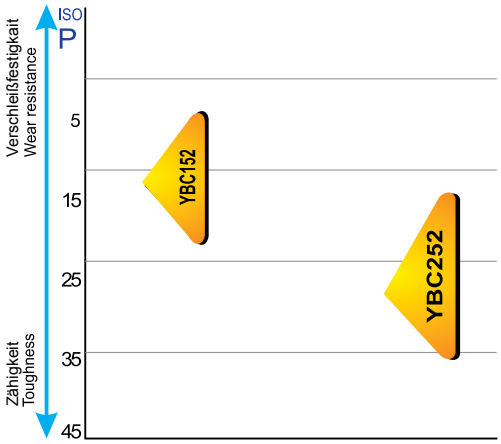
CVD coated carbide grade (P10-P20) for finishing to medium roughing of steel and casting steel in turning operation. Outstanding performance under high cutting speed and temperature with excellent wear resistance.

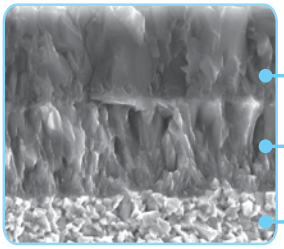
CVD-beschichte Hartmetalsorte (P10-P20) zum Schlichten bis mittlere Bearbeitung von Stahl und Stahlguss bei Drehoperationen. Hervorragende Eigenschaft bei hoher Schnittgeschwindigkeit und Temperatur mit exzellenter Verschleißfestigkeit.

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.

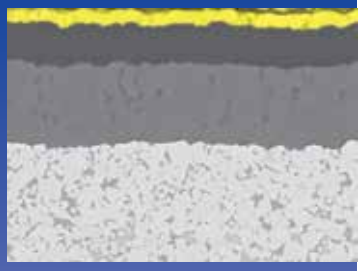




Thick Al_2O_3, Fine grain / *Dicke Al_2O_3, Feinkorn*

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

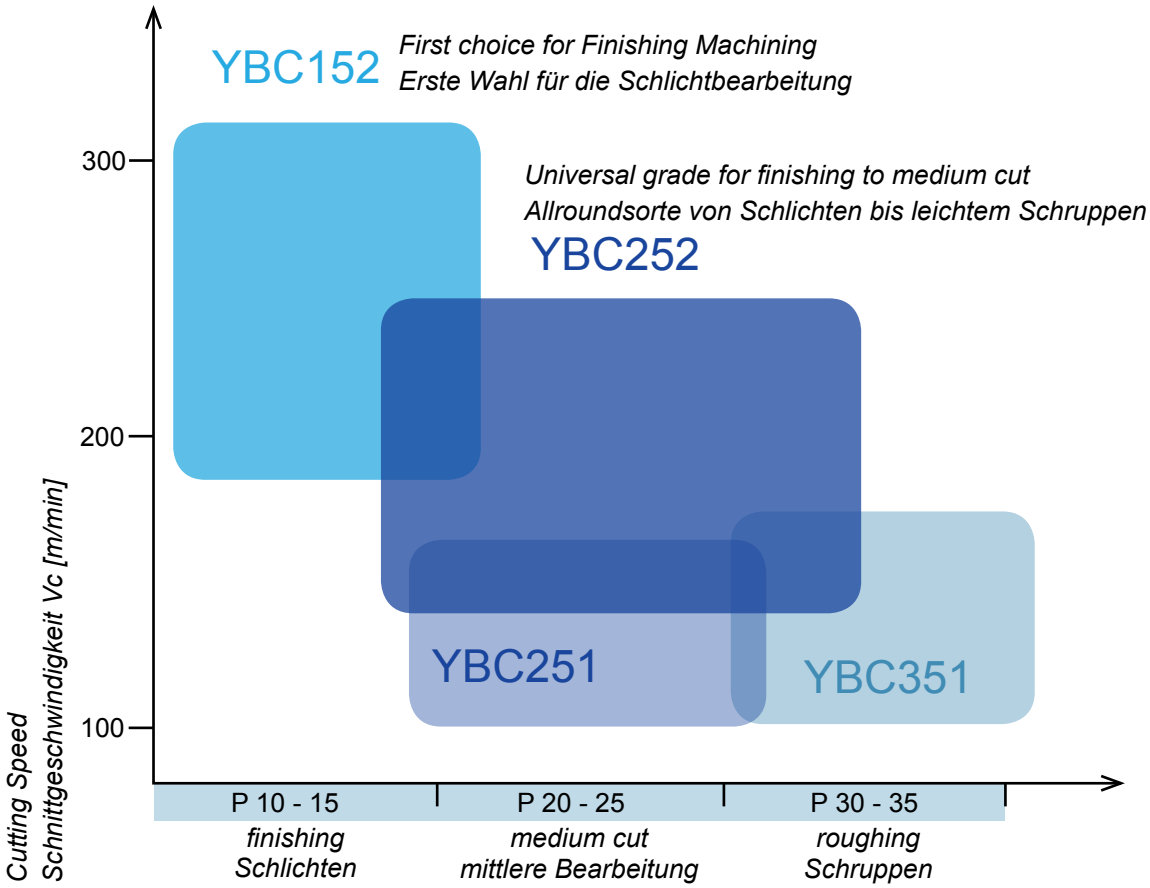
CVD universal grade with excellent combination of toughness and wear resistance. In combination with MT-Ti(CN),layer AL2O3, TiN coating this grade is first choice for medium to light interrupted cutting of steel in lower cutting speed.

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.

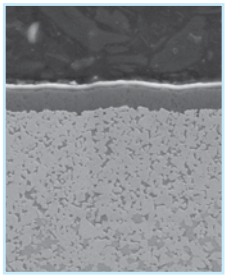
YBC351

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.



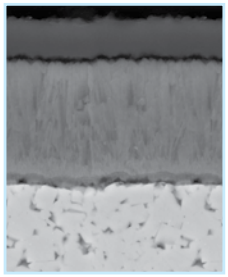
Application field CVD turning grade of stainless steel
Anwendungsbereich CVD Drehsorten für rostfreien Stahl



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

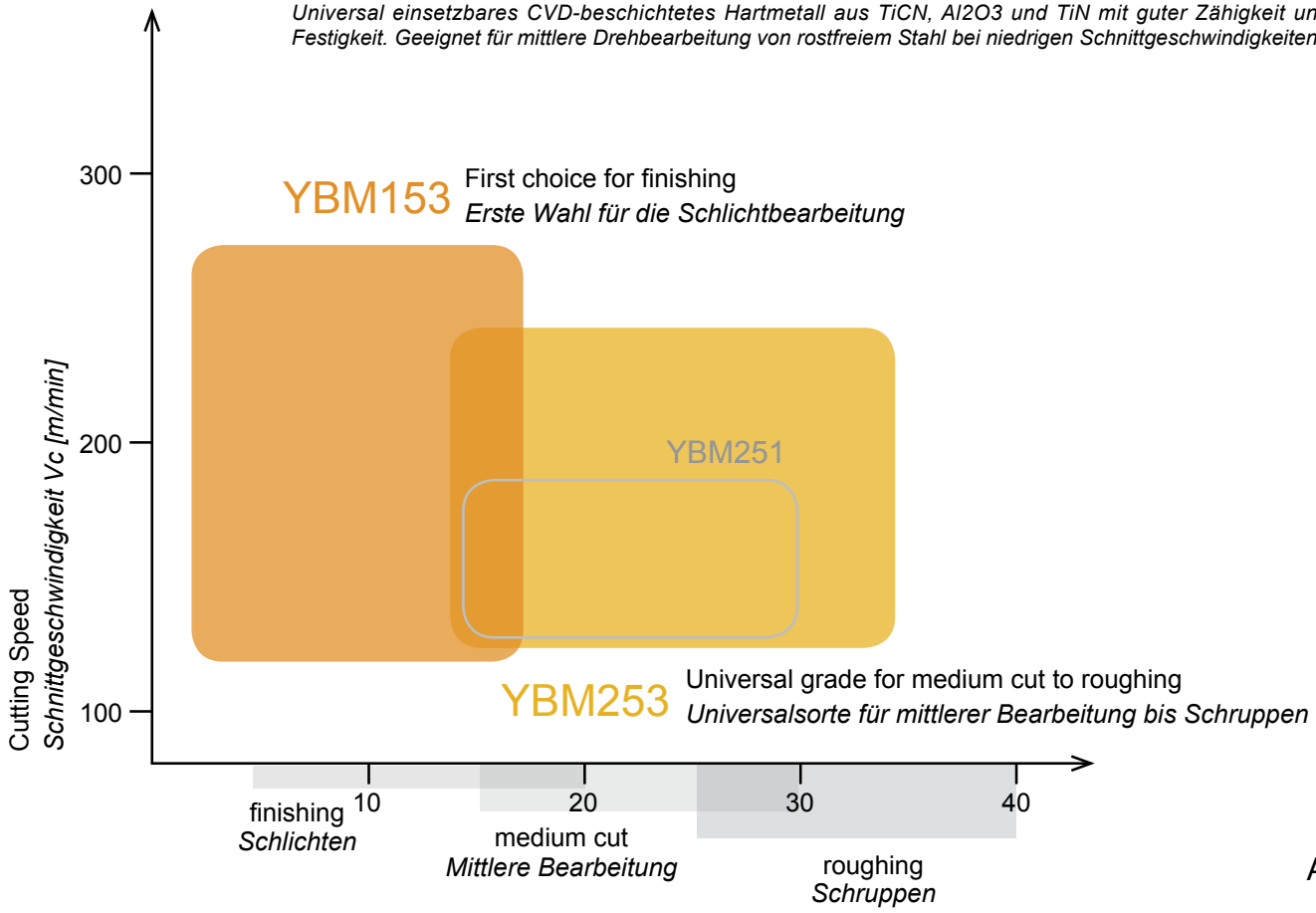
For medium application in stainless steel with:
Geeignet für die mittlere bis Schruppbearbeitung von rostfreien Stählen mit:

- 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.



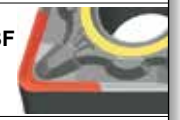
simply coloured

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.

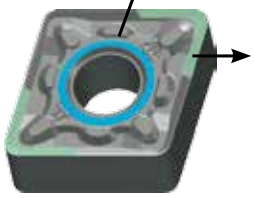
Einfache Auswahl anhand der Tabelle ohne große Kenntnisse über die Sorten und ohne Verpackung möglich.

	P	M
05		
15	YBC152F	YBM153F
25	YBC252F	YBM253F 
35		

Recommended for wet condition / *Für Nassbearbeitung empfohlen*

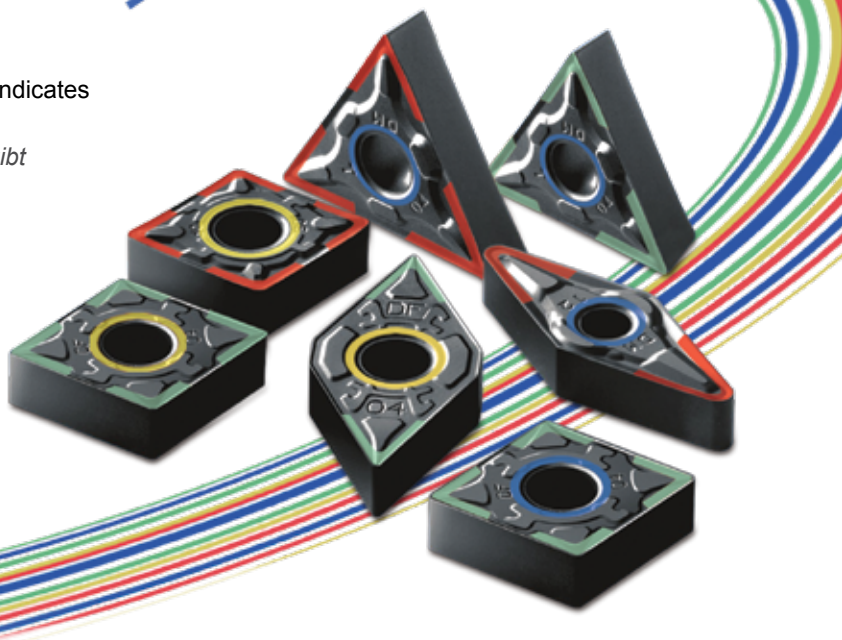
The colour of the inner ring indicates the application range.(P/M)

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.

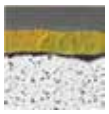
CVD-beschichtete Premiumsorte mit ausgezeichneter Verschleißfestigkeit. Die Kombination von MT-TiCN und einer dicken AL2O3 Auflage eignet sich besonders zum Bearbeiten von Grauguss (GG) bei hohen Schnittgeschwindigkeiten und Trockenbearbeitung.

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.

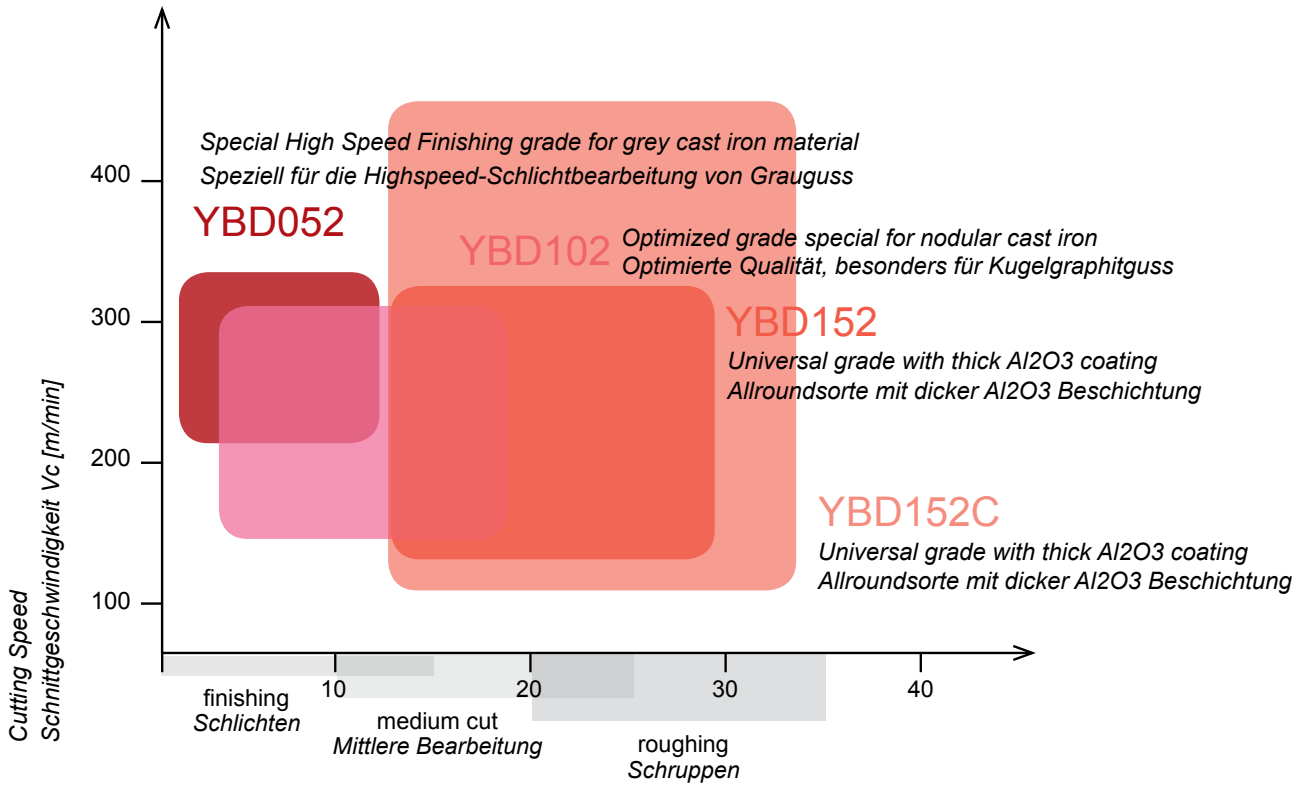
Hartes mittel-feinkörniges Substrat mit TiCN, dicker AL_2O_3 Auflagen. Es ist geeignet für die Bearbeitung von Grauguss und Kugelgraphitguss mit niedrigen bis mittleren Schnittgeschwindigkeiten.

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.



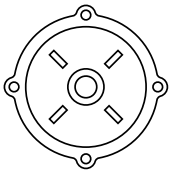
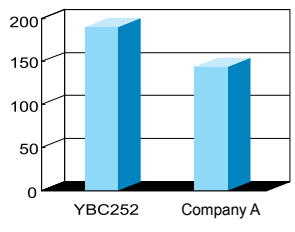
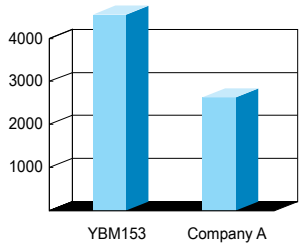
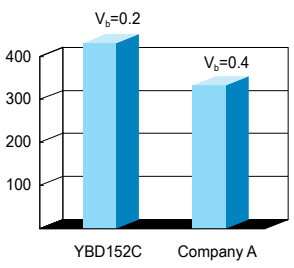
■ Recommended combination of grades, chip breaker and cutting data.
Empfohlene Kombination von Sorten, Spanbrechern und Schnittdaten.

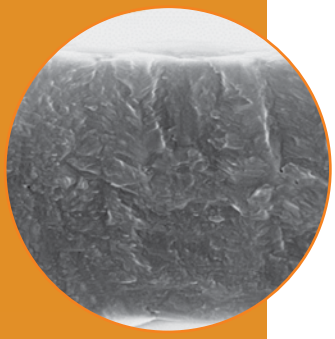
P		M		K	
grade Sorte	chip breaker Spanbrecher	grade Sorte	chip breaker Spanbrecher	grade Sorte	chip breaker Spanbrecher
YBC152	DF DM	YBM153	EF EM	YBD052	PM
YBC252	DM PM	YBM251	EM ER	YBD102	PM, DR
YBC252	DR (doppelseitig)	YBM253	EF EM ER	YBD152	Flat, DR
YBC351	DR			YBD152C	TC
YBC252	LR				
YBC351	HDR				
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 Workpiece per edge Werkstücke pro Schneide				



PVD

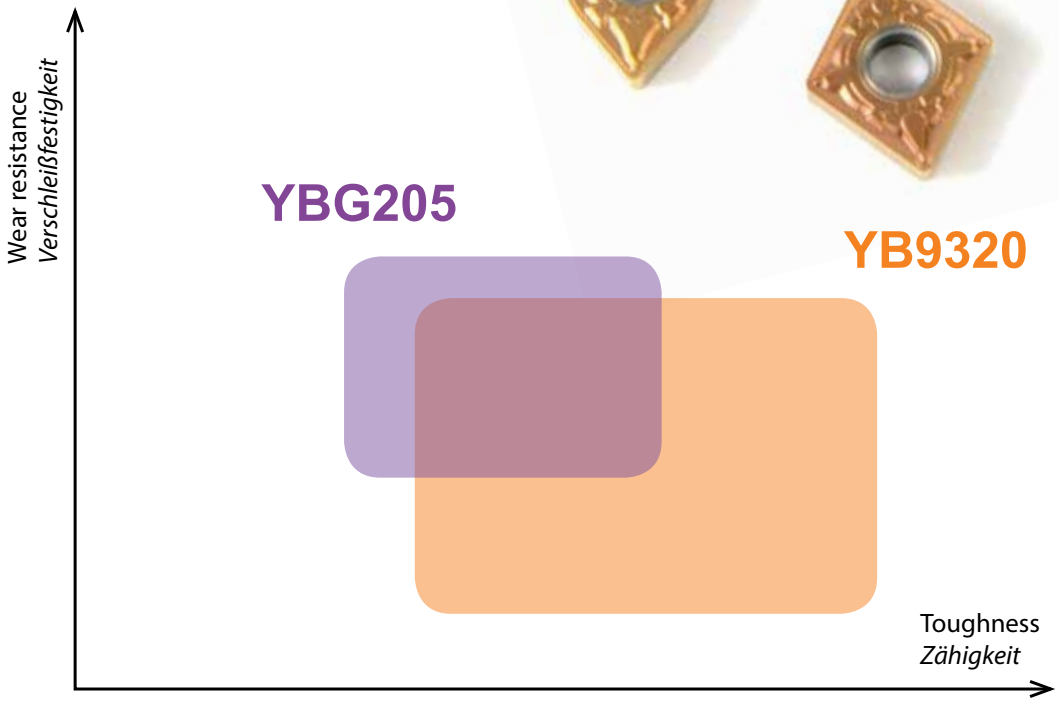
NEW

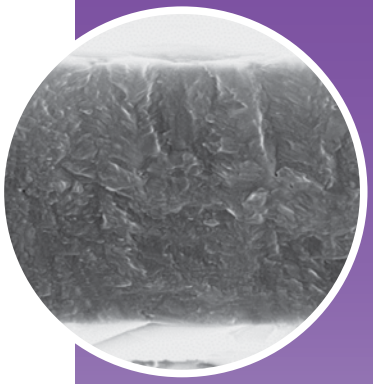
PVD Coated Cemented Carbide
PVD beschichtetes Hartmetall

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

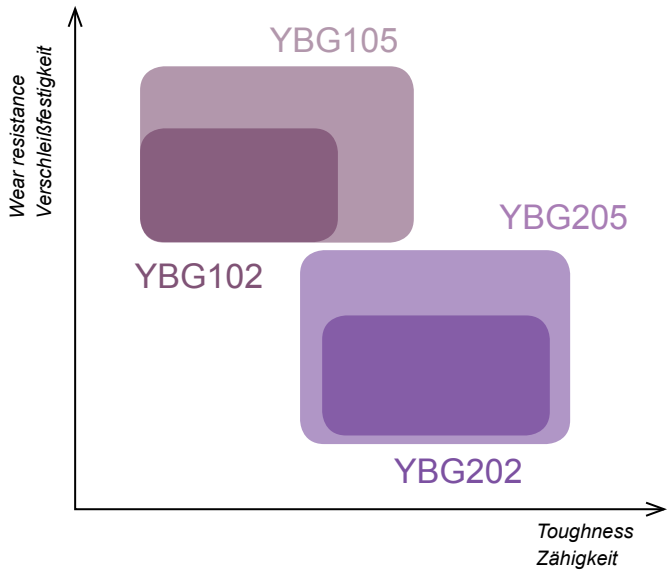
M20 (M10-M30)
S20 (S10-S30)

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.



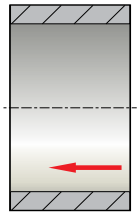
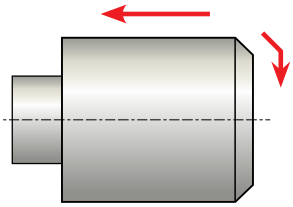
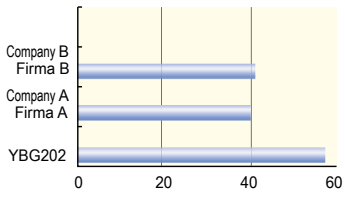
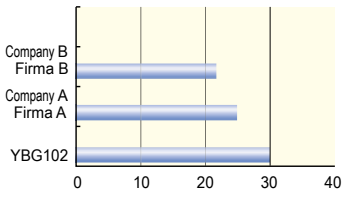
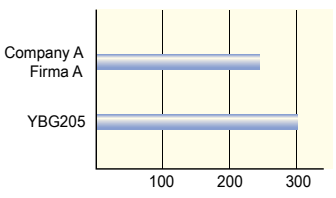
■ Recommended combination of grades, chip breaker and cutting data.
Empfohlene Kombination von Sorten, Spanbrechern und Schnittdaten.

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		

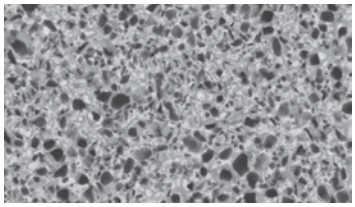
■ Recommended cutting condition · Empfohlene Schnittdaten

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 / YBG 202	DNEG150404-NF / YBG102	WNMG08048-EM / 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 Workpiece per edge Werkstücke pro Schneide				

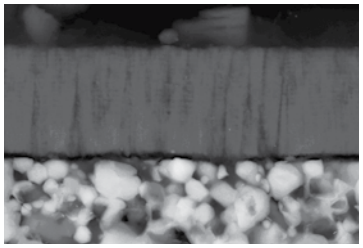
Cermet
Cermet



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

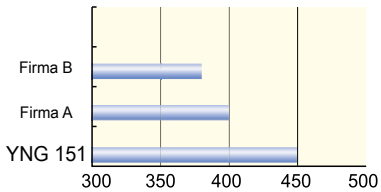
Application/ Anwendung: YNG151·CNMG120404-SF

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

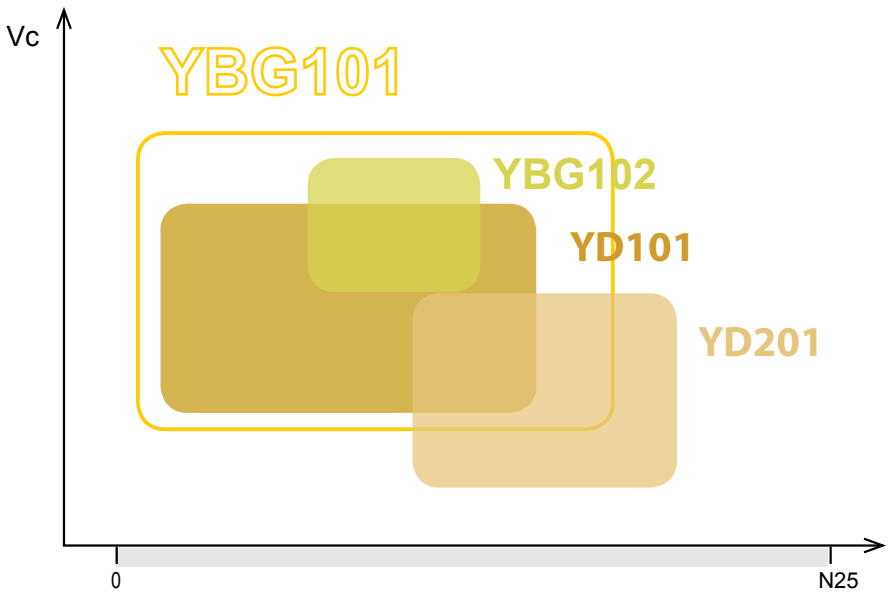
Substrate of YD101 - the combination of cemented WC carbide phase of fine grain and Co bonding phase.

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

YD201

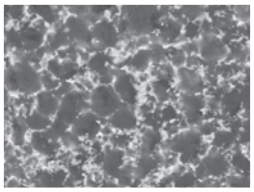
Substrate of YD201 - the combination of cemented WC carbide phase of medium grain and Co bonding phase.

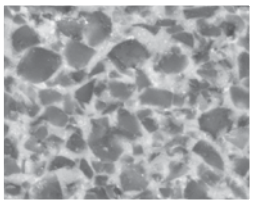
YD201 ist ein unbeschichtetes Hartmetall mit mittlerer Korngröße, aus Wolframcarbid und einer speziell entwickelten Hartphase, die zusammen mit Kobald, welches die Bindephase erzeugt, das Hartmetallgefüge bildet.



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

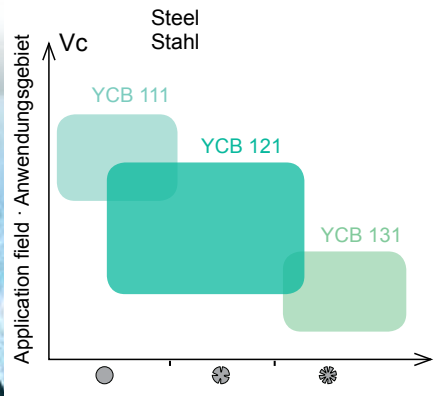
PCD grade with high hardness, good wear resistance, low friction coefficient and good heat conductivity, which is appropriate for cutting of non-ferrous metal (such as Cu, Al, Mg and Ti high silicon alloy etc.) and non-metal materials (such as glass fiber, cermet and enforced plastic etc.)

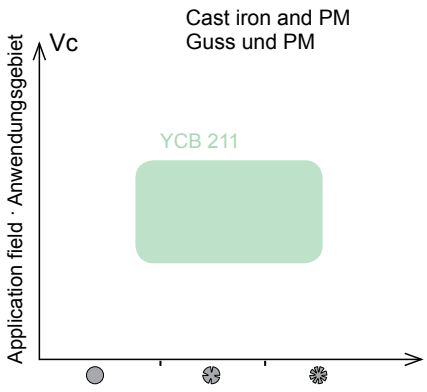
PCD Sorte mit hoher Härte guter Verschleißfähigkeit, und geringer Neigung zur Aufbauschneide.Sie ist besonders geeignet für die Bearbeitung von NE-Metallen (z.B. Cu, Al, Mg und Ti hochsilicium legierte Werkstoffen) und Material wie Fiberglas, Cermets und verstärktes Plastik etc.

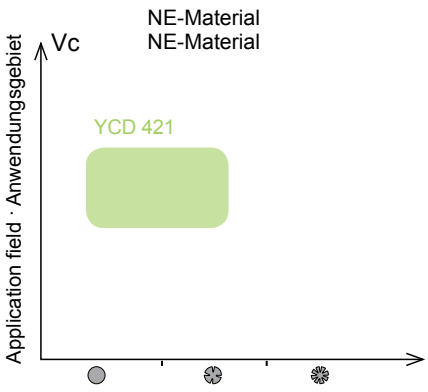
○ Continuous cutting
Vollschnitt

◔ Continuous and interrupted cutting
Voll und leicht unterbrochener Schnitt

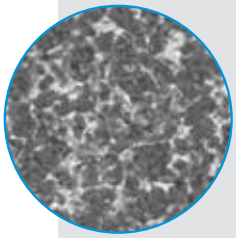
✺ Interrupted cutting
Stark unterbrochener Schnitt



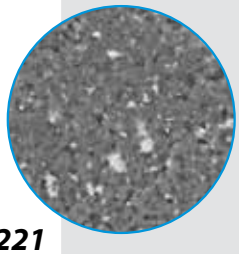




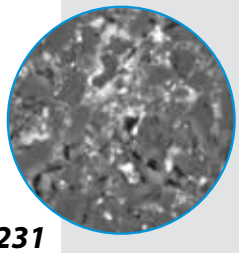
Solid CBN
Voll CBN



YZB121



YZB221



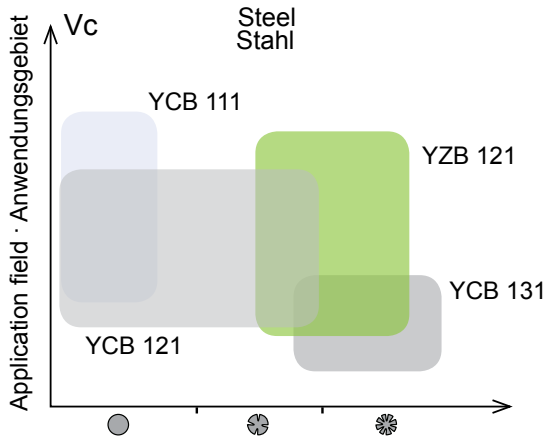
YZB231

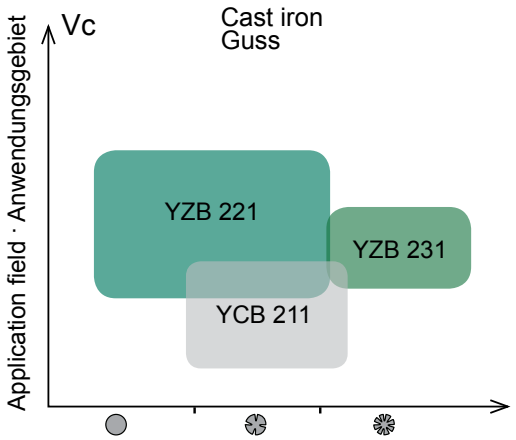
Workpiece material Werkstückstoff		Grade Sorte	Application Anwendung
H	Hardened steel Gehärteter Stahl	YZB121	With good wear resistance and also toughness. Suitable for hardened steel, bearing steel, mould steel, high speed steel with low speed and interrupted cut. Mit guter Verschleißfestigkeit aber 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. 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. 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



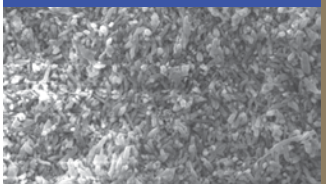


Recommended cutting date · Empfohlene Schnittdaten

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

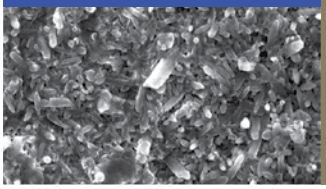
CN1000



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.

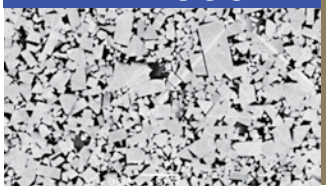
CN2000



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.

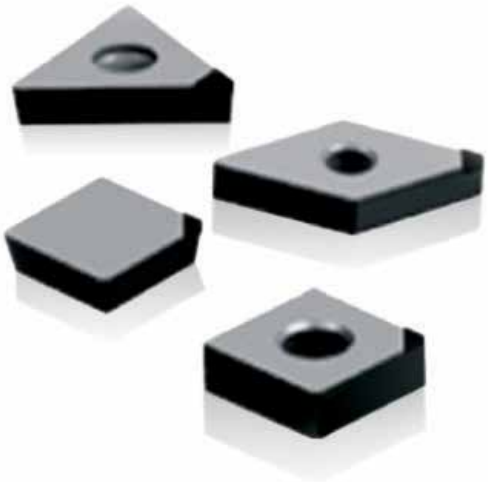
■ Psysical properties · Physikalische Daten

Grade Sorte	Density·Dichte (g/cm^3)	Hardness · Härte Hv(GPa)	Bending strength/ Biegebruchfestigkeit (MPa)	Fracture toughness Bruchzähigkeit ($MPa \cdot m^{1/2}$)
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 Werkstückstoff	Application Anwendung	Cutting Speed Schnittgeschw. (m/min)	Feed rate Vorschub (mm/r)	Cutting depth Schnitttiefe (mm)
CA1000	Grey cast iron Malleable cast iron Grauguss	Roughing Schruppen	150-800	0.2-0.5	3.0-6.0
		Finishing Schlichten	200-1200	0.3-0.5	0.1-0.5
	Chilled cast iron Kokillenhartguss	Roughing Schruppen	30-100	0.1-0.2	0.5-1.5
		Finishing Schlichten	50-200	0.05-0.15	0.1-0.5
	Carbon steel, Alloy steel Ball bearing steel unlegierter Stahl, legierter Stahl, Kugellagerstahl	Roughing Schruppen	150-400	0.2-0.5	2.0-5.0
		Finishing Schlichten	200-800	0.05-0.20	0.1-0.5
	Hardened Steel Gehärteter Stahl	Roughing Schruppen	20-100	0.1-0.2	0.5-1.5
		Semi-finishing Mittlere Bearbeitung	40-200	0.05-0.50	0.1-0.5
		Finishing Schlichten	300-1200	0.05-0.30	0.1-0.5
CN1000	Grey cast iron Grauguss	Finishing Schlichten	150-1100	0.3-0.8	<5
		Finishing Schlichten	250-1200	0.15-0.4	<1
	Chilled cast iron Kokillenhartguss	Finishing Schlichten	20-250	0.2-0.8	<5
		Finishing Schlichten	60-450	0.1-0.6	<1
CN2000	Ni-based alloys, Ni-Superlegierungen	Finishing Schlichten	150-250	0.2-0.4	<5
		Finishing Schlichten	150-450	0.1-0.2	<1

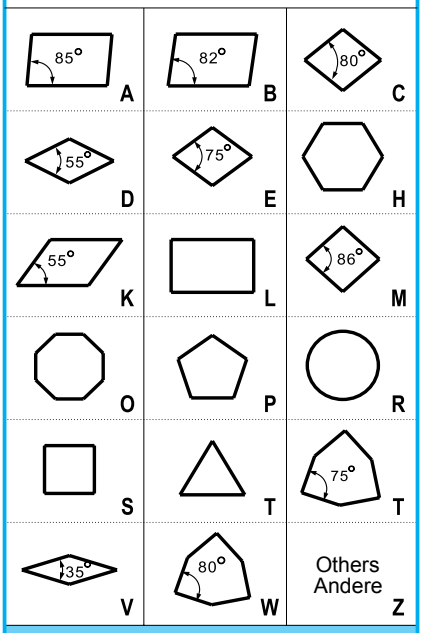
NOTES / NOTIZEN:



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°			----	

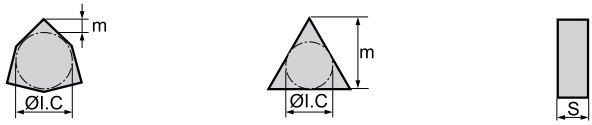
Insert Type / *Plattentyp*

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

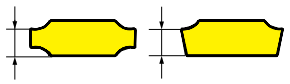
Incircle	regular triangle	square	80° rhomboid	55° rhomboid	35° rhomboid	round *runde*
6.35	±0.05	±0.05	±0.05	±0.05	±0.05	---
9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
12.7	±0.08	±0.08	±0.08	±0.08	---	±0.08
15.875	±0.10	±0.10	±0.10	±0.10	---	±0.10
19.05	±0.10	±0.10	±0.10	±0.10	---	±0.10
25.4	---	±0.13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

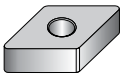
Code	Radius (mm)
00	No Radius
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Others
MO	Round Inserts *Andere Runde Platten*

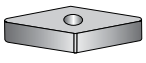
Code Chipbreakers *Spanleitstufen*

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)

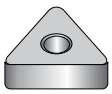
C Type Negative angle/ WSP Negativer Winkel	(ISO)	(Inch)	Chipbreaker/ Spanleitstufe
Plattenform Insert shape	090304	321	-ADF -DF -WG -SF -EF -NF -PM -DM -EG -EM **-TC** -NM -SNR -LR -DR -ER -HDR -HPR
	090308	322	
	120404	431	
	120408	432	
	120412	433	
	120416	434	
	160608	542	
	160612	543	
	160616	544	
	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	

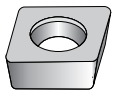
R Type Negative angle/WSP Negativer Winkel	(ISO)	(Inch)	Chipbreaker/ Spanleitstufe
Insert shape Plattenform	0903MO	32	
	1204MO	43	

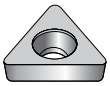
W Type Negative angle/WSP Negativer Winkel	(ISO)	(Inch)	Chipbreaker/ Spanleitstufe
Plattenform Insert shape	06T304	3(2.5)1	-ADF -DF -WG -SF -EF -NF -PM -DM -EM -EG **-TC** -NM -DR
	06T308	3(2.5)2	
	06T312	3(2.5)3	
	060404	331	
	060408	332	
	060412	333	
	080404	431	
	080408	432	
	080412	433	

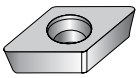
T Type Negative angle/WSP Negativer Winkel	(ISO)	(Inch)	Chipbreaker/ Spanleitstufe
Plattenform Insert shape 	113304	221	-ADF -DF -WG -SF -EF -FM -PM -DM -EM -EG **-TC** -LR -DR -ER -HDR
	110308	222	
	160404	331	
	160408	332	
	160412	333	
	220404	431	
	220408	432	
	220412	433	
	220416	434	
	270608	542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

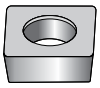
S Type Negative angle/WSP Negativer Winkel	(ISO)	(Inch)	Chipbreaker/ Spanleitstufe
Plattenform Insert shape	090304	321	-ADF -DF -SF -EF -PM -DM -EM -EG **-TC** -NM -LR -DR -ER -HDR -HPR
	090308	322	
	090312	323	
	120404	431	
	120408	432	
	120412	433	
	120416	434	
	150608	542	
	150612	543	
	150616	544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

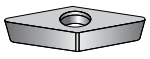
Metric and Imperial system comparison list of general turning insert/ Vergleichstabelle für allgemeine Drehwendeschneidplatten (Metrisch / Imperial System)

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	

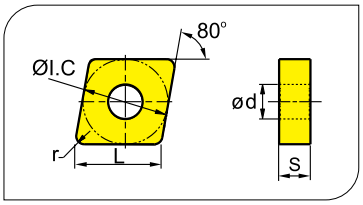
V Type Positive angle/WSP Positiver Winkel	(ISO)	(Inch)	Chipbreaker Spanleitstufe
Plattenform Insert shape 	110202	2(1.5)0	-USF
	110204	2(1.5)1	-SF
	110208	2(1.5)2	-HF
	110302	220	-EF
	110304	221	-AHF
	110308	222	-NF
	160402	330	-NGF
	160404	331	-HM
	160408	332	-EM
	160412	333	-SNR
			-HR
			-LH
			-LC

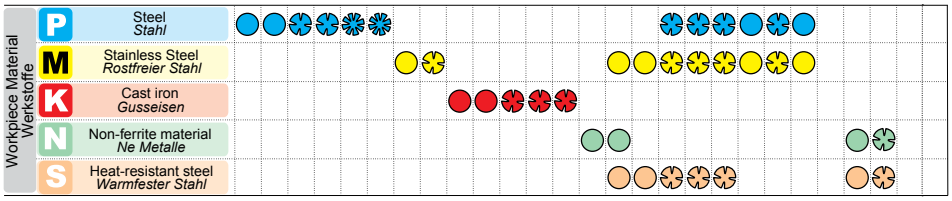
A

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

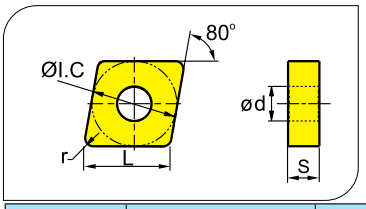
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

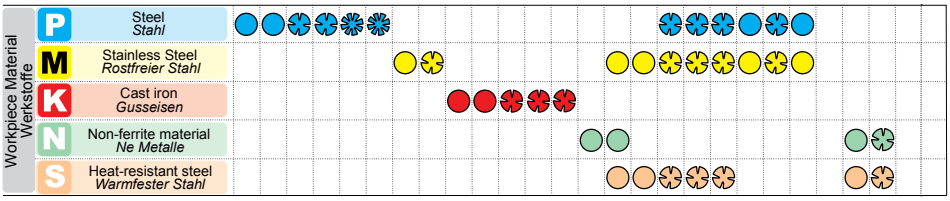
CN** Negative Insert·Negative WSP

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

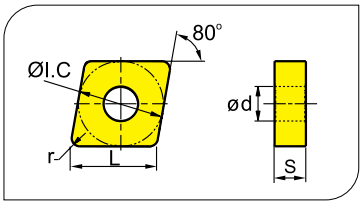
General Turning
Allgemeine Drehbearbeitung

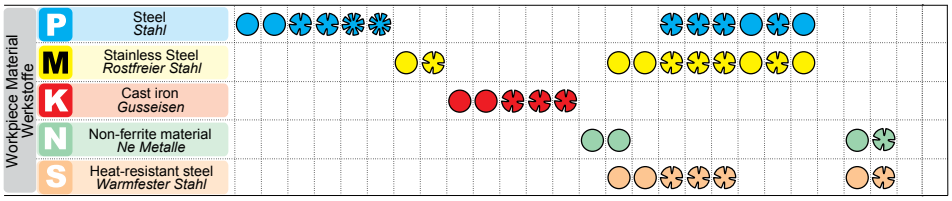
CN** Negative Insert·Negative WSP

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 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 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 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 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° — Page A181

PCBNR/L Kr:75° — Page A188

PCLNR/L Kr:95° — Page A189

MCBNR/L Kr:75° — Page A200

MCLNR/L Kr:95° — Page A201

PCLNR/L Kr:95° — Page A246

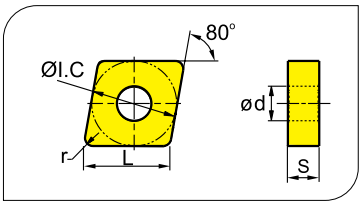
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

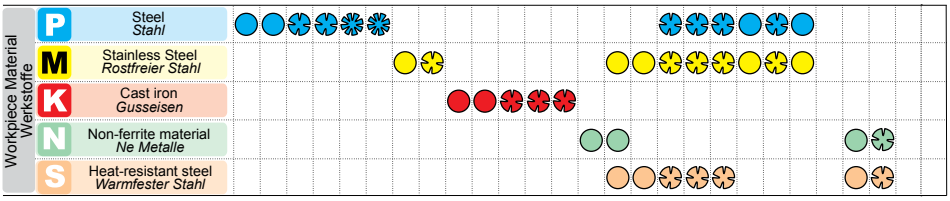
CN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen





Insert Shape 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										●		●											
Medium Cut/ Mittl. Bearb.	**CNMG160612-TC**	16.1	15.875	6.35	6.35	1.2										●		●											
	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

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

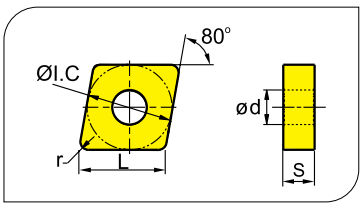
General Turning
Allgemeine Drehbearbeitung

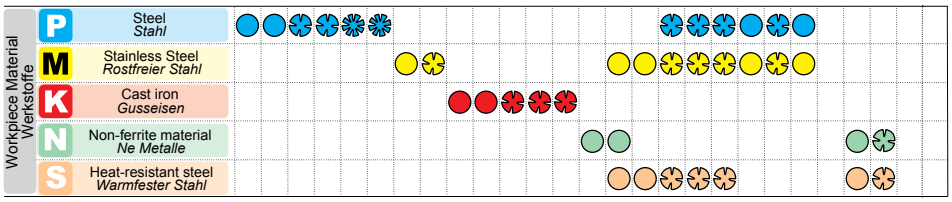
CN** Negative Insert · Negative WSP

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.

A

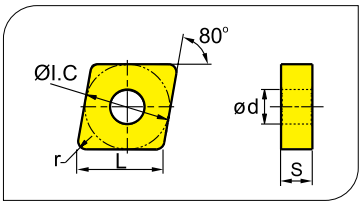
General Turning
Allgemeine Drehbearbeitung

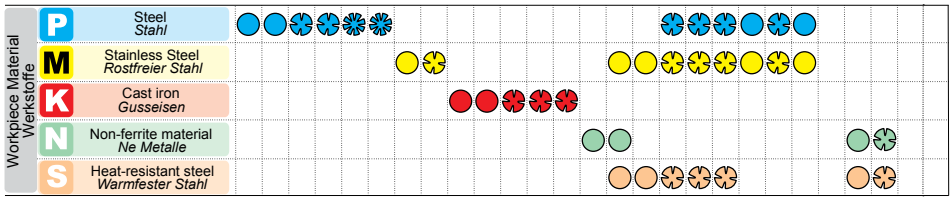
CN** Negative Insert· Negative WSP

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
HDR Roughing 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 Roughing 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

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

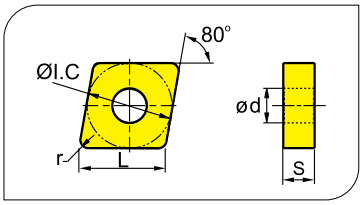
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

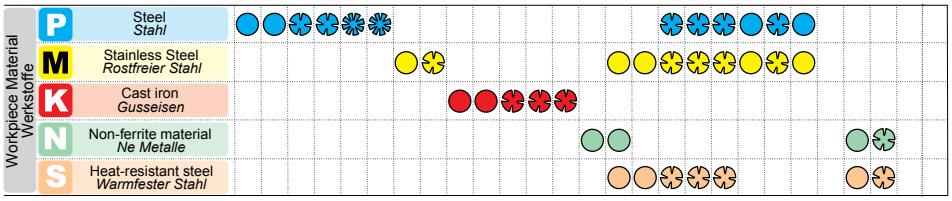
A

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
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°

Page/Seite A181 A188 A189 A200 A201 A246

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

A

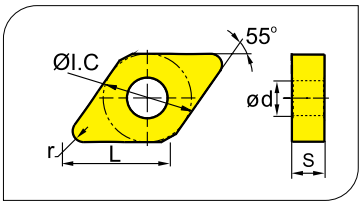
General Turning
Allgemeine Drehbearbeitung

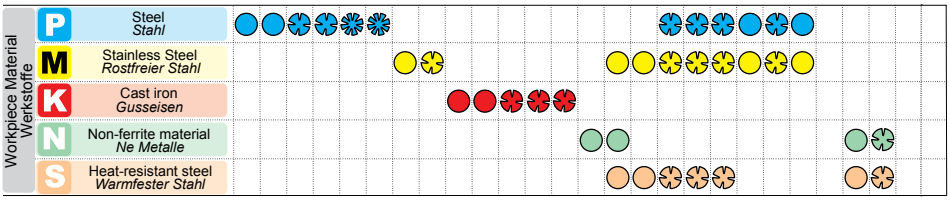
DN** Negative Insert·Negative WSP

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
SF	**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																					●		
Finishing Schlichten	**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	**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		○	○																				
Finishing Schlichten	**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	**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	●																●						
Finishing Schlichten																													
WG	**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		○																					
Wiper	**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

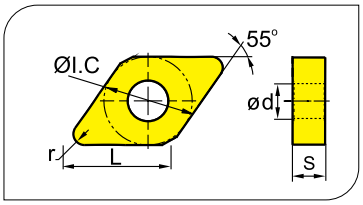
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

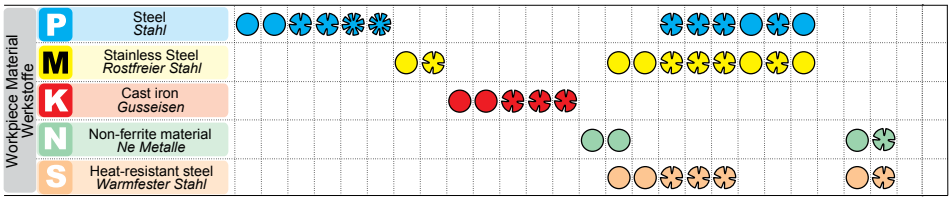
A

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
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

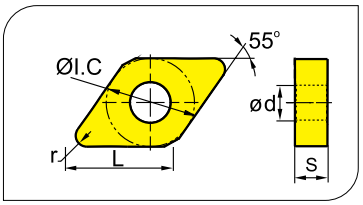
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

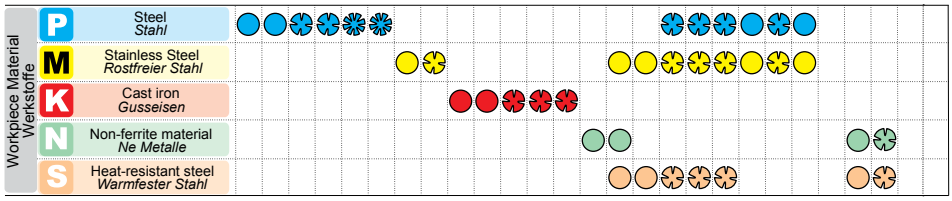
DN** Negative Insert·Negative WSP

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.

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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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

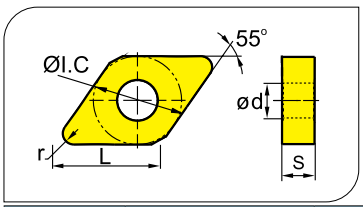
General Turning
Allgemeine Drehbearbeitung

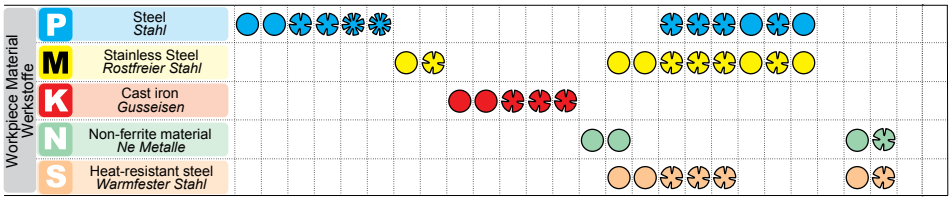
DN** Negative Insert·Negative WSP

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°

Page/Seite A182 A190 A191 A202 A203 A248 A249

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

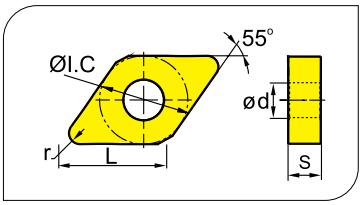
A

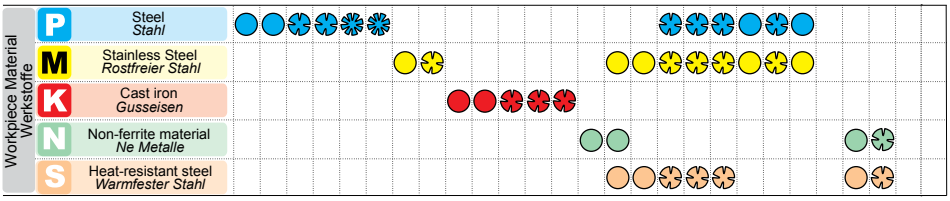
DN** Negative Insert·Negative WSP

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

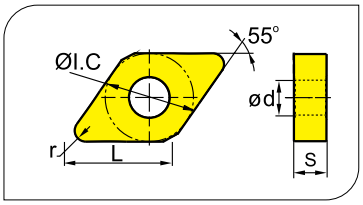
General Turning
Allgemeine Drehbearbeitung

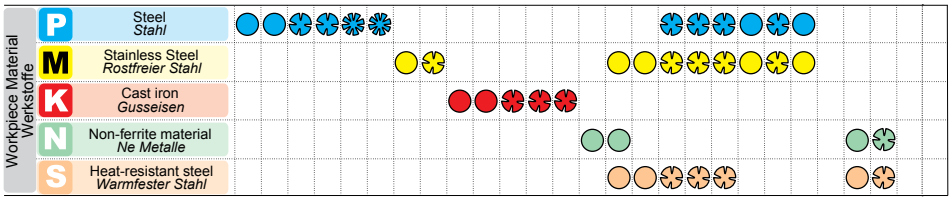
DN** Negative Insert·Negative WSP

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

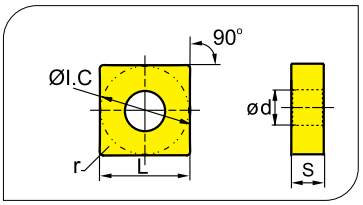
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

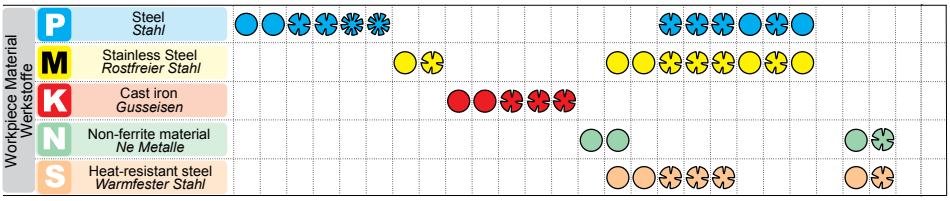
SN** Negative Insert·Negative WSP

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°
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

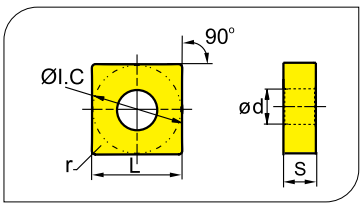
General Turning
Allgemeine Drehbearbeitung

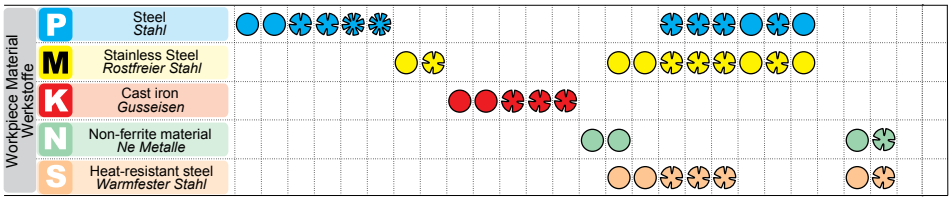
SN** Negative Insert·Negative WSP

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
EF Finishing Schlichten	**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 Medium Cut/ Mittl. Bearb.	**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				○																			

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

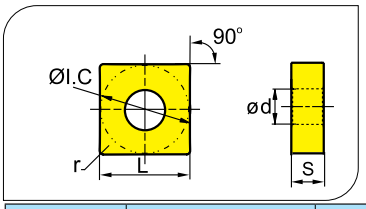
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

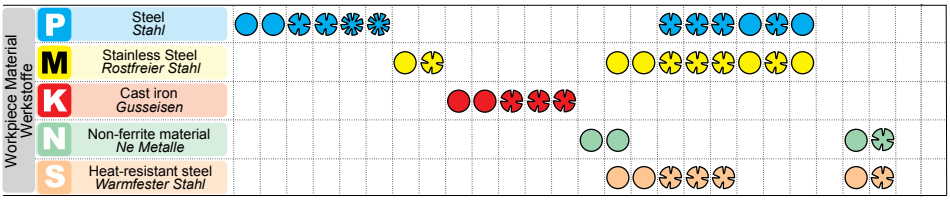
SN** Negative Insert·Negative WSP

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
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

Page/Seite	A183	A192	A185	A194	A195	A204	A205

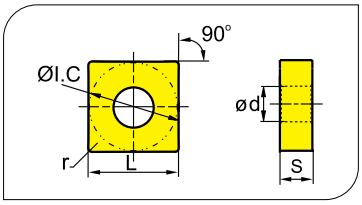
Page/Seite	A206	A207	A251

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

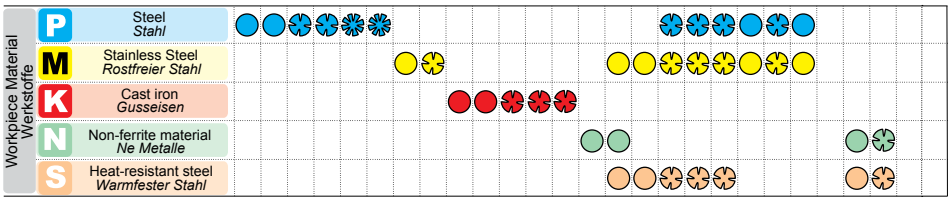
SN** Negative Insert·Negative WSP



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
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°

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

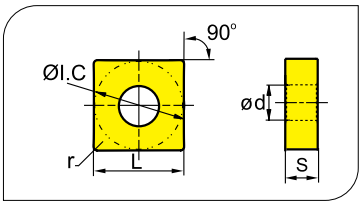
● Ex Stock / ab Lager ○ On demand / auf Anfrage

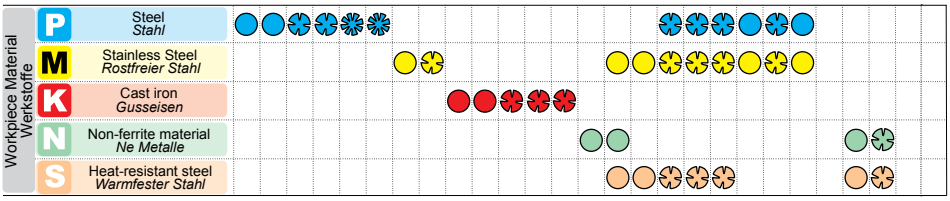
SN** Negative Insert·Negative WSP

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°
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

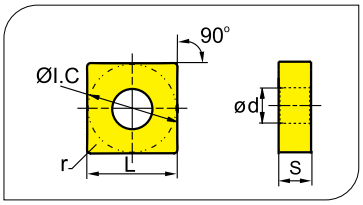
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

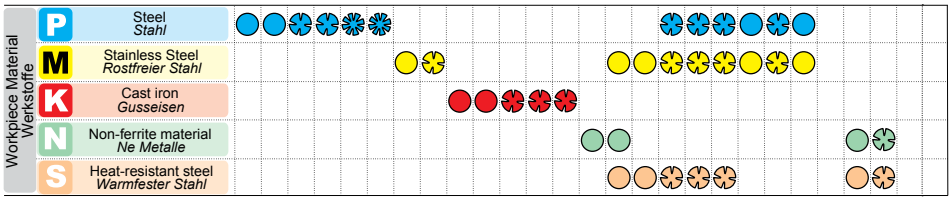
A

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
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°

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MSKNR/L Kr:75°

MSDNN Kr:45°

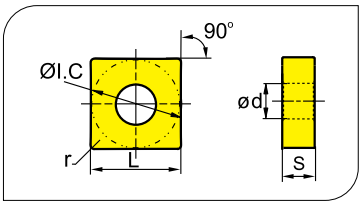
PSKNR/L Kr:75°

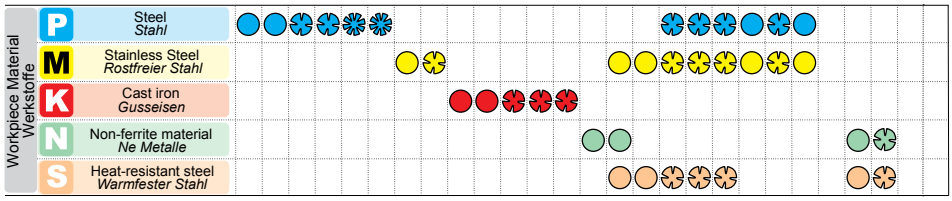
Page/Seite A206 A207 A251

● 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

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Page/Seite A192

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Page/Seite A194

Page/Seite A195

Page/Seite A204

Page/Seite A205

Page/Seite A206

Page/Seite A207

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

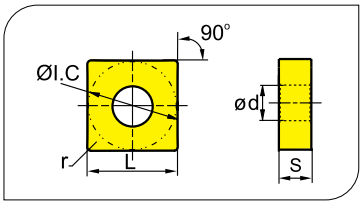
General Turning
Allgemeine Drehbearbeitung

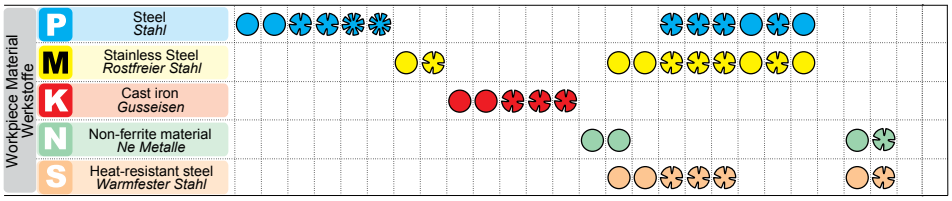
SN** Negative Insert·Negative WSP

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°

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

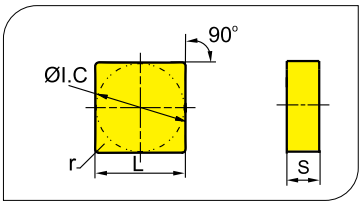
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

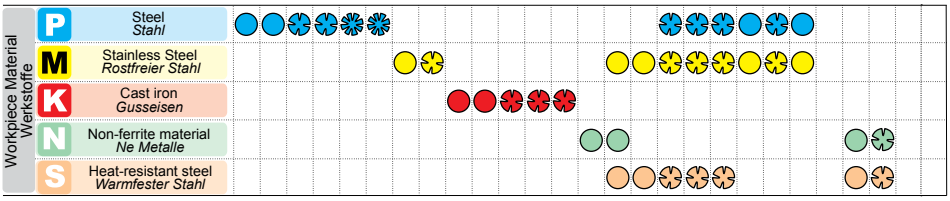
SN** Negative Insert·Negative WSP

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
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

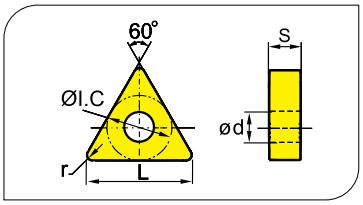
General Turning
Allgemeine Drehbearbeitung

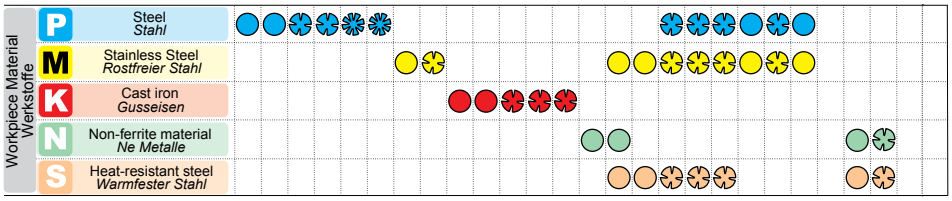
TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige 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	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 Finishing 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 Finishing 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 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°

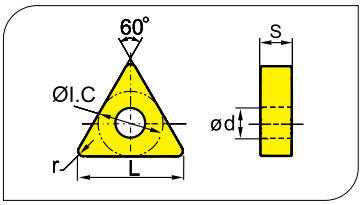
PTFNR/L Kr:90°

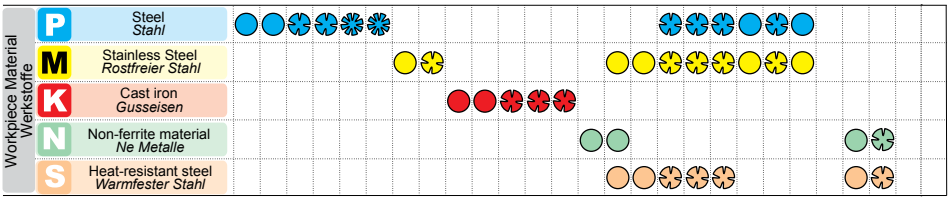
Page/Seite A211 A252

● 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	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							○										●	●					
Finishing Schlichten	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	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			●														●						
Finishing Schlichten	TNMG160408L-FM	16.5	9.525	4.76	3.81	0.8		○	●														●						

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

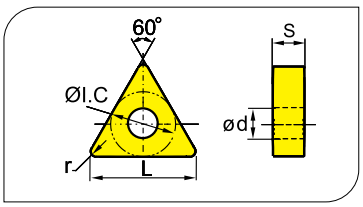
General Turning
Allgemeine Drehbearbeitung

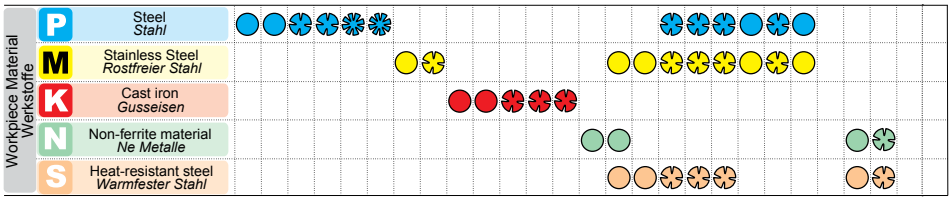
TN** Negative Insert·Negative WSP

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
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

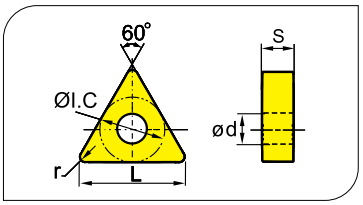
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

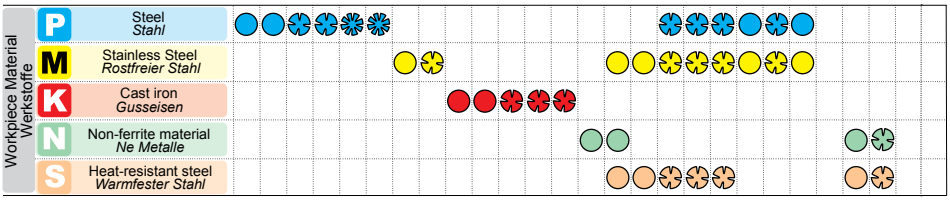
TN** Negative Insert·Negative WSP

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

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Page/Seite A211 A252

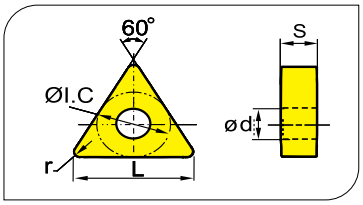
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

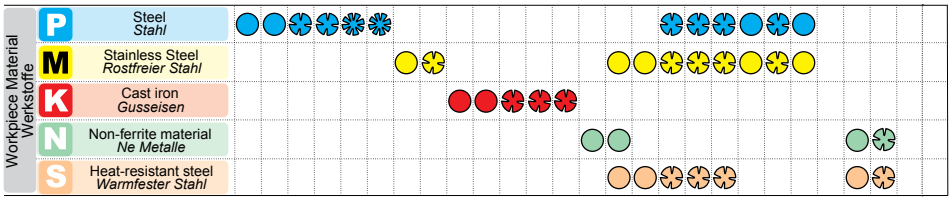
A

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. 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

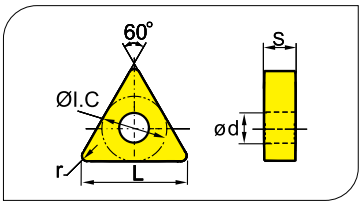
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

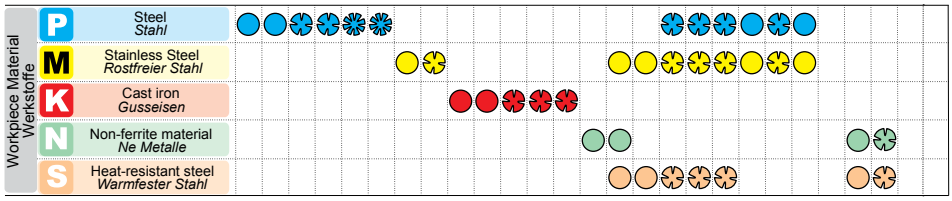
TN** Negative Insert·Negative WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen





Insert Shape Schneidplattenform	Type Typ	Dimension (mm) Abmessung					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 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

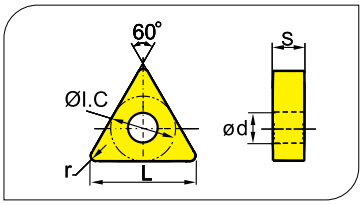
General Turning
Allgemeine Drehbearbeitung

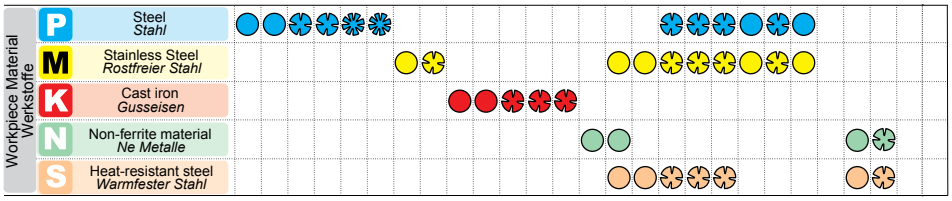
TN** Negative Insert·Negative WSP

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°

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°

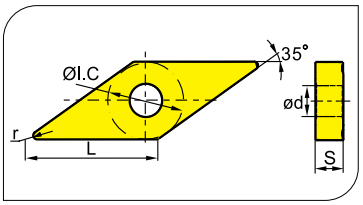
PTFNR/L
Kr:90°

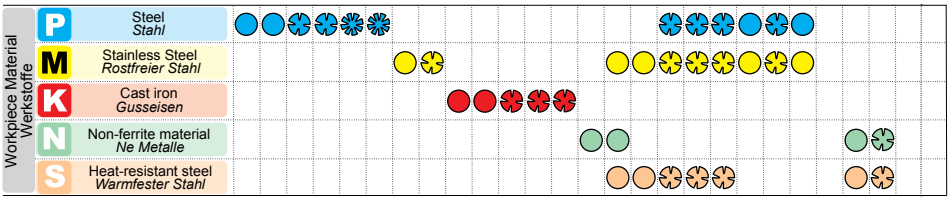
Page/Seite A211 A252

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

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

DVVNN
Kr:72°30'

DVJNR/L
Kr:93°

MVVNN
Kr:72°30'

MVJNR/L
Kr:93°

Page/Seite A185 A186 A212 A213

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

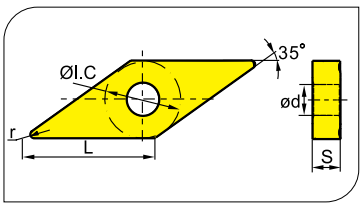
General Turning
Allgemeine Drehbearbeitung

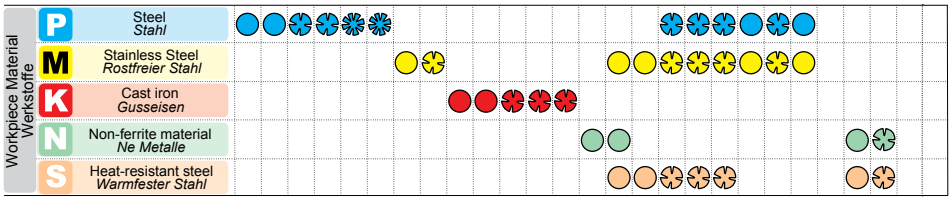
VN** Negative Insert·Negative WSP

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		○																					

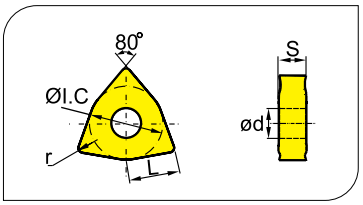
Tool holder / Klemmhalter

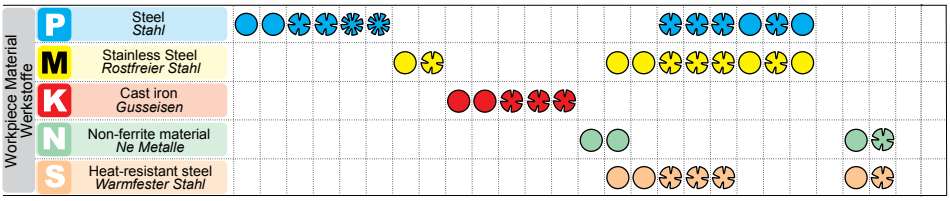
Page/Seite A185 A186 A212 A213

● 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 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
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

Page/Seite A187 A199 A214 A253

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

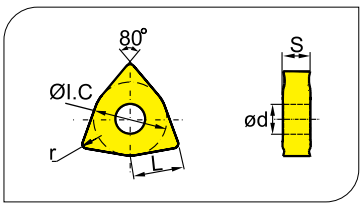
General Turning
Allgemeine Drehbearbeitung

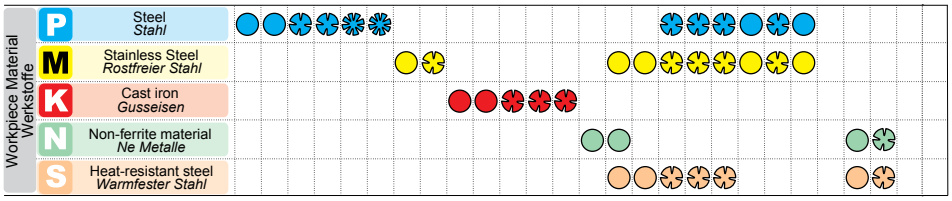
WN** Negative Insert·Negative WSP

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. 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
WG	**WNMG080408-WG**	8.7	12.7	4.76	5.16	0.8		●	●																			
	WNMG080412-WG	8.7	12.7	4.76	5.16	1.2		●	○																			
Wiper																												
EF	**WNMG06T308-EF**	6.5	9.525	3.97	3.81	0.8																	●					
	WNMG06T312-EF	6.5	9.525	3.97	3.81	1.2																						
Finishing Schlichten	**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	**WNMG060408-NF**	6.5	12.7	4.76	5.16	0.8															○	●						
	WNEG080404-NF	8.7	12.7	4.76	5.16	0.4															○	●						
Finishing Schlichten	**WNEG080408-NF**	8.7	12.7	4.76	5.16	0.8																○						

Tool holder / Klemmhalter

DWLNR/L
Kr:95°
Page/Seite A187

PWLNR/L
Kr:95°
A199

MWLNR/L
Kr:95°
A214

PWLNR/L
Kr:95°
A253

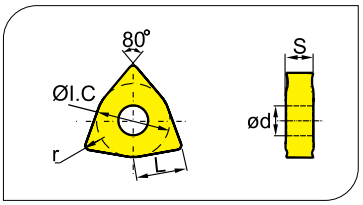
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

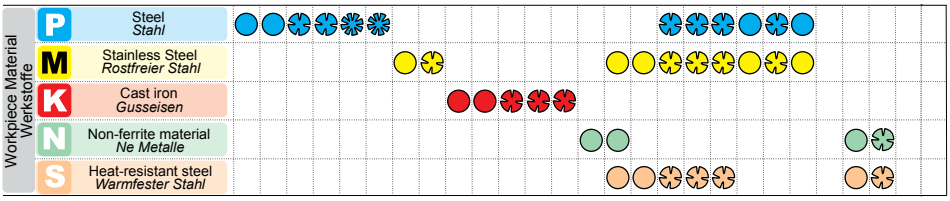
WN** Negative Insert·Negative WSP

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°

Page/Seite A187 A199 A214 A253

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

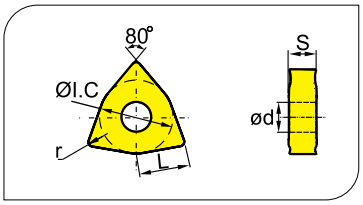
General Turning
Allgemeine Drehbearbeitung

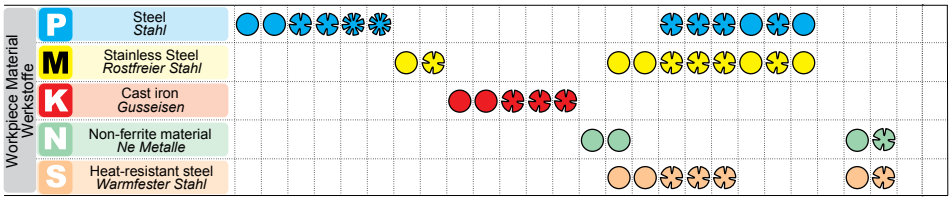
WN** Negative Insert·Negative WSP

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

DWLNR/L
Kr:95°
Page/Seite A187

PWLNR/L
Kr:95°
A199

MWLNR/L
Kr:95°
A214

PWLNR/L
Kr:95°
A253

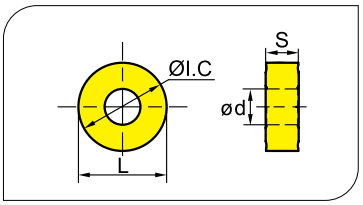
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

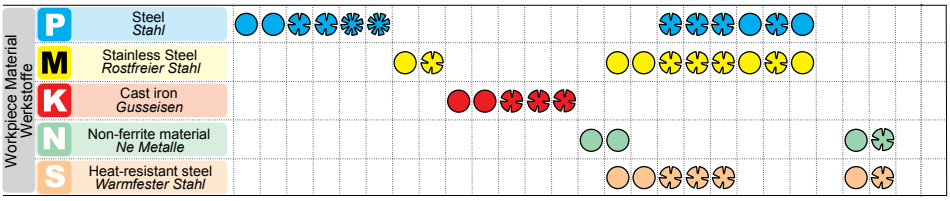
RN** Negative Insert·Negative WSP

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

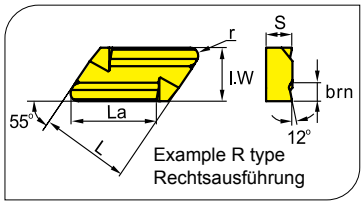
Page/Seite A215 A215

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

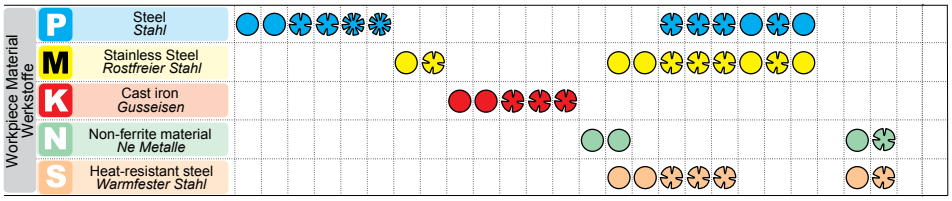
KN** Negative insert·Negative Inserts



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 Schlichten - Mittlere Bearbeitung
12	Medium - Roughing Mittlere Bearbeitung - Schruppen

Tool holder / Klemmhalter

CKJNR/L
Kr:93°

CKNNR/L
Kr:63°

Page/Seite A234 A234

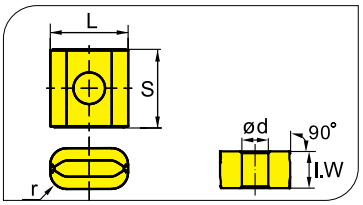
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

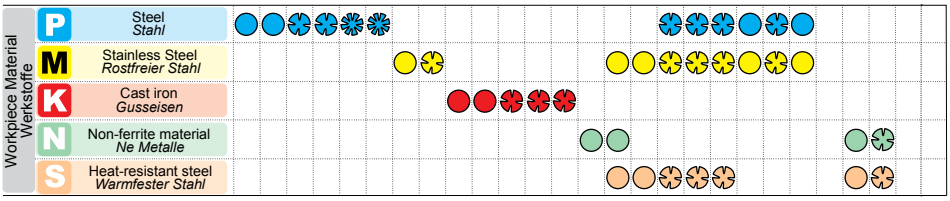
Railway Wheel Machining/ Radsatz Bearbeitung

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			○																				

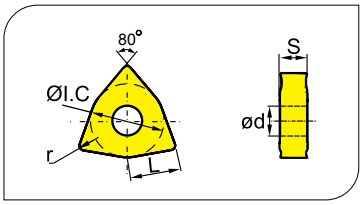
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
Chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

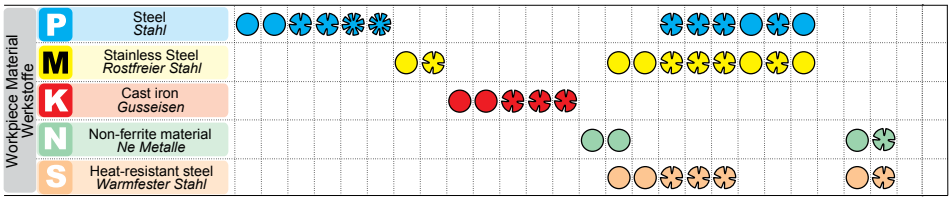
A

General Turning
Allgemeine Drehbearbeitung

TN** Negative Insert/ Negative WSP

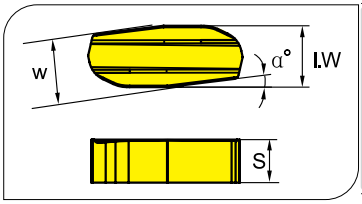
Ideal Machining Condition / Gute Bearbeitungsbedingungen
Normal Machining Condition / Normale Bearbeitungsbedingungen
Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

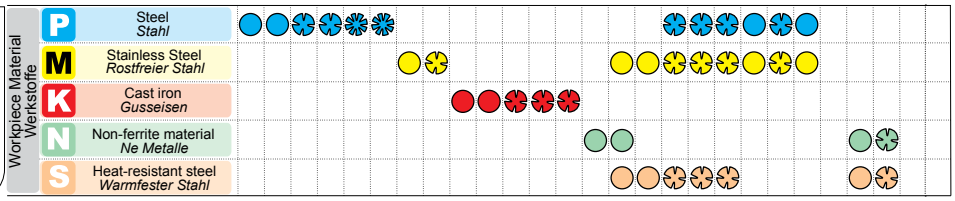




Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung L	I.C	S	d	r	CVD Coating CVD Beschicht. YB6315	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7315	YBD152	YBD152C	PVD Coating PVD Beschicht. YBG101	YBG102	YBG105	YB9320	YBG205	YBG202	Cermet unbeschichtet YNG151	YNT251	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



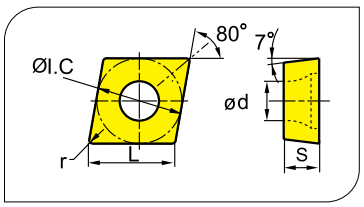


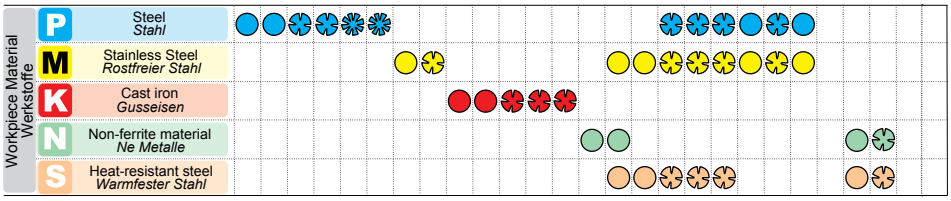
Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung L	I.C	S	d	r	CVD Coating CVD Beschicht. YB6315	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7315	YBD152	YBD152C	PVD Coating PVD Beschicht. YBG101	YBG102	YBG105	YB9320	YBG205	YBG202	Cermet unbeschichtet YNG151	YNT251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

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

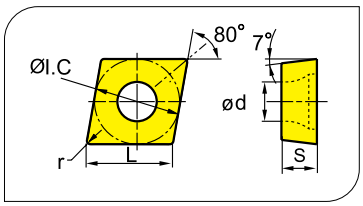
General Turning
Allgemeine Drehbearbeitung

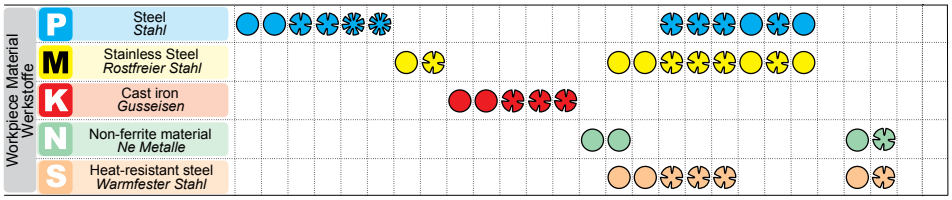
CC** Positive Insert/ Positive WSP

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°

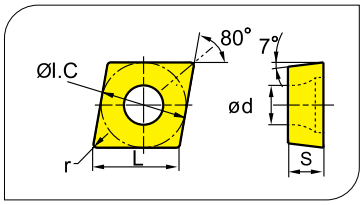
Page/Seite A216 A217 A254 A269 A270

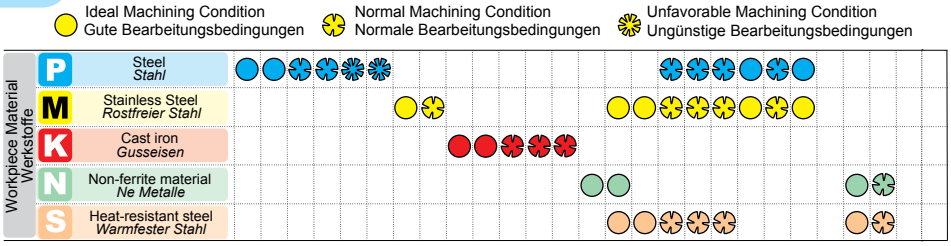
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

A

General Turning
Allgemeine Drehbearbeitung

CC** Positive Insert/ Positive WSP





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	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 Medium Cut/ Mittl. Bearb.	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 Medium Cut/ Mittl. Bearb.	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								○																

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

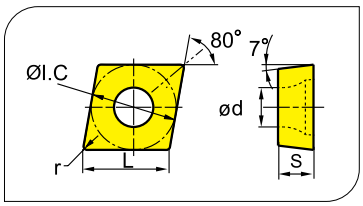
General Turning
Allgemeine Drehbearbeitung

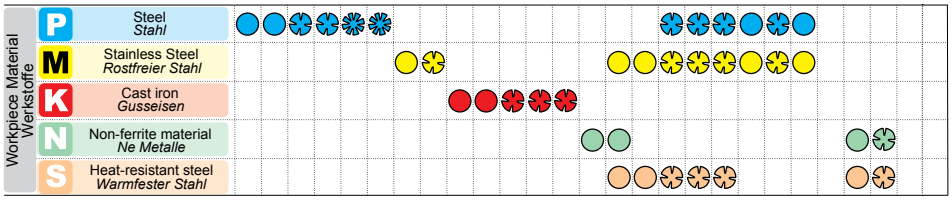
CC** Positive Insert/ Positive WSP

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

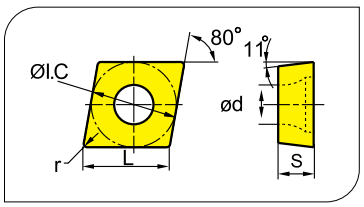
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

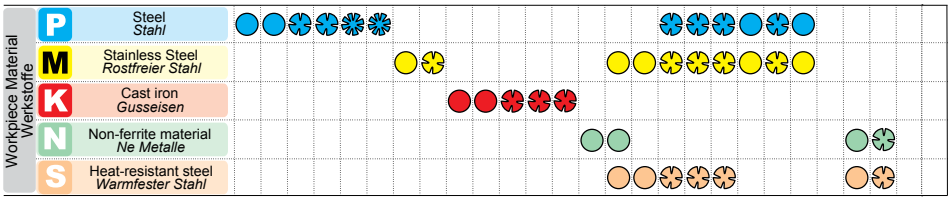
CP** Positive Insert/ Positive WSP

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

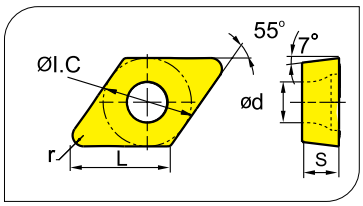
General Turning
Allgemeine Drehbearbeitung

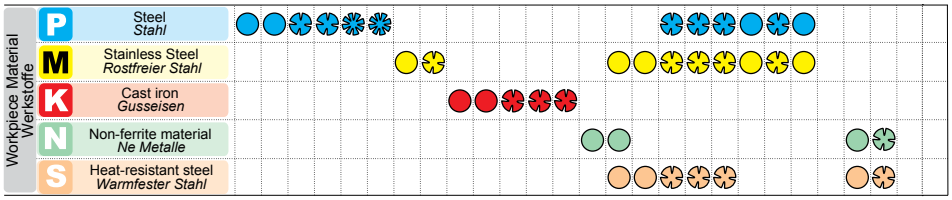
DC** Positive Insert/ Positive WSP

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

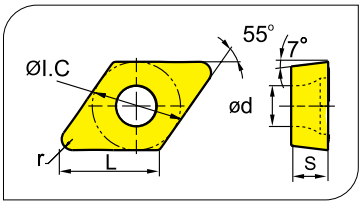
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

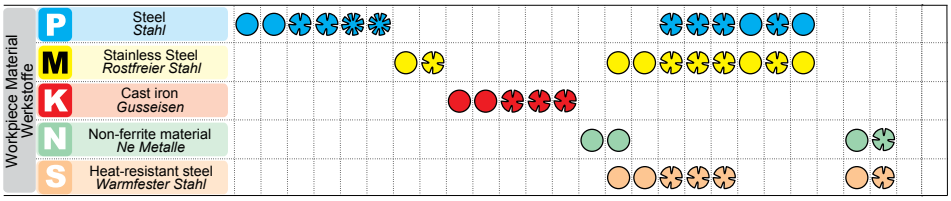
DC** Positive Insert/ Positive WSP

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

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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

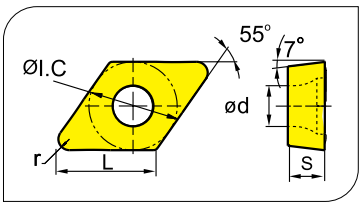
General Turning
Allgemeine Drehbearbeitung

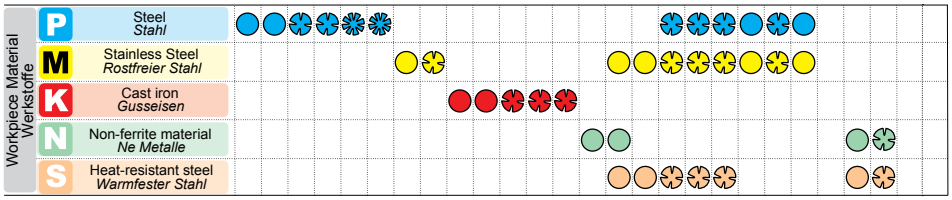
DC** Positive Insert/ Positive WSP

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													●									●	
Aluminium Machining/ Aluminium bearbeitung	**DCGX11T308-LC**	11.6	9.525	3.97	4.4	0.8													●									●	
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														●				●				●	
Aluminium Machining/ Aluminium bearbeitung	**DCGX11T308-LH**	11.6	9.525	3.97	4.4	0.8														●				○				●	
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

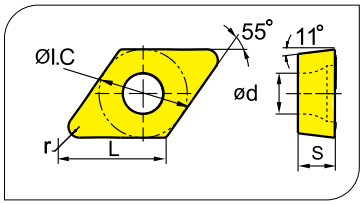
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

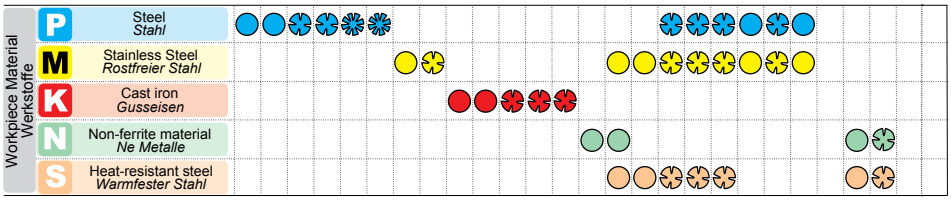
DP** Positive Insert/ Positive WSP

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	**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																		○					
Finishing Schlichten																													
USF	**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																		○					
Finishing Schlichten																													
SF	**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																			○		○		
Finishing Schlichten	**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

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

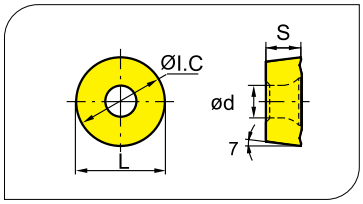
General Turning
Allgemeine Drehbearbeitung

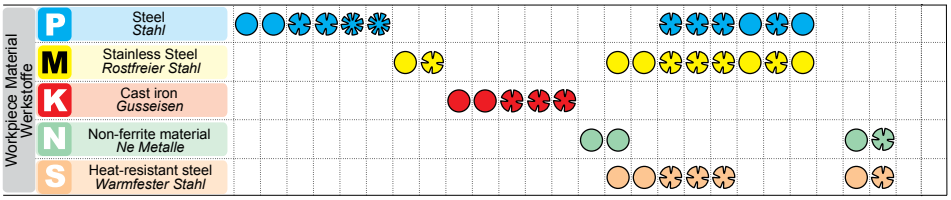
RC** Positive Insert/ Positive WSP

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	\		○	●	●																			

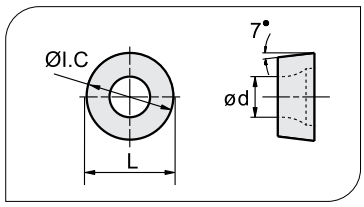
Medium cut.
Mittl. Bearb.

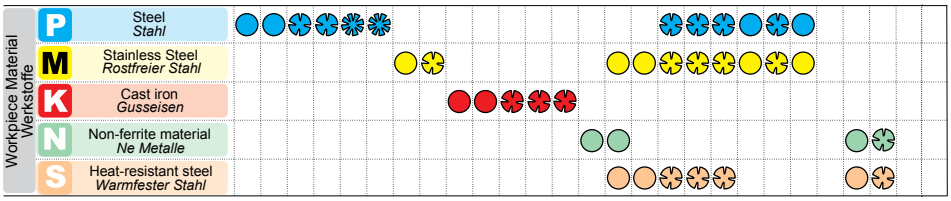
RC** positive insert

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

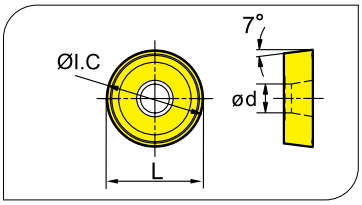
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

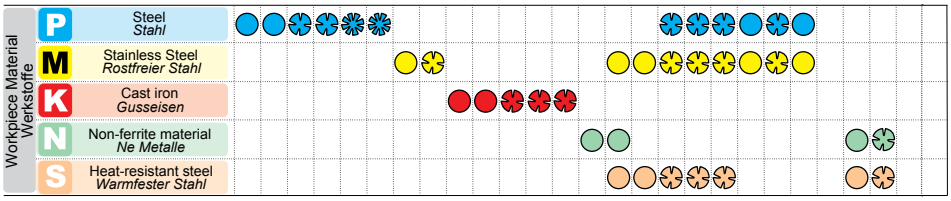
RC** Positive Insert/ Positive WSP

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

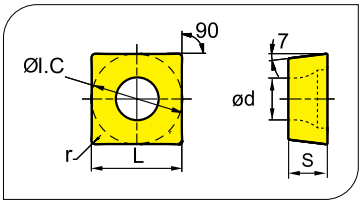
General Turning
Allgemeine Drehbearbeitung

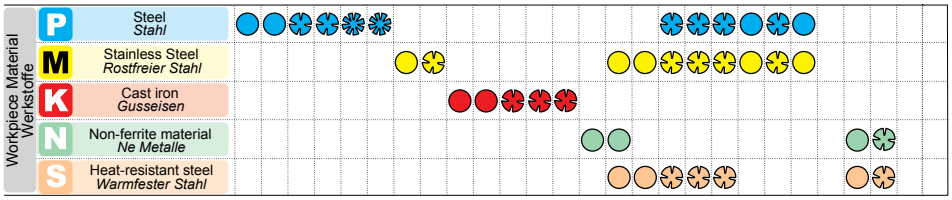
SC** Positive Insert/Positive WSP

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

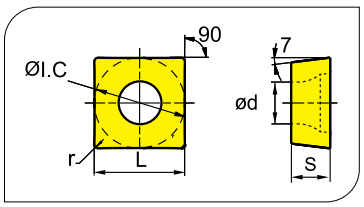
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

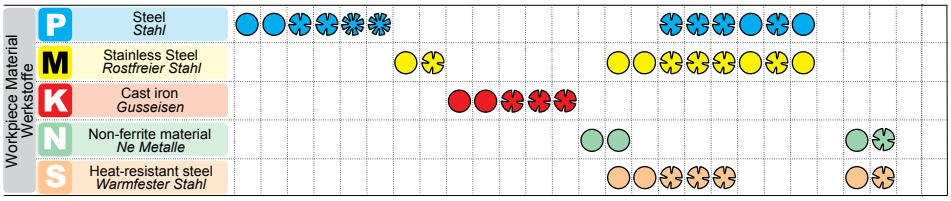
SC** Positive Insert/ Positive WSP

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

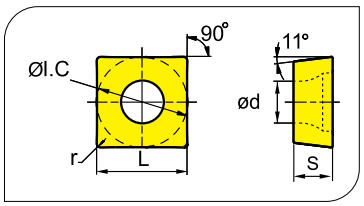
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

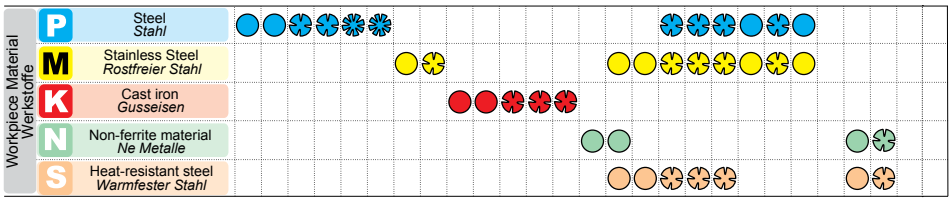
A

General Turning
Allgemeine Drehbearbeitung

SP** Positive Insert/ Positive WSP

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

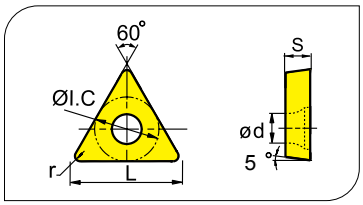


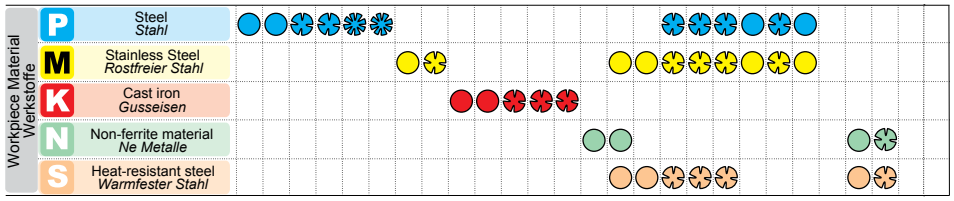


Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung L	I.C	S	d	r	CVD Coating CVD Beschicht. YB6315	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	YBD052	YBD102	YB7315	YBD152	YBD152C	PVD Coating PVD Beschicht. YBG101	YBG102	YBG105	YB9320	YBG205	YBG202	Cermet unbeschichtet YNG151	YNT251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

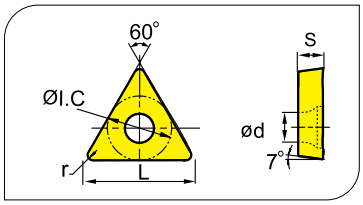
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

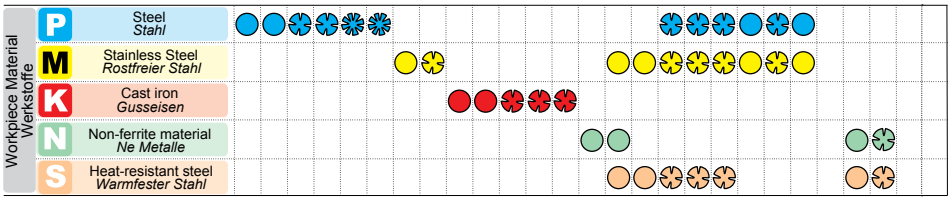
TC** Positive Insert/ Positive WSP

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

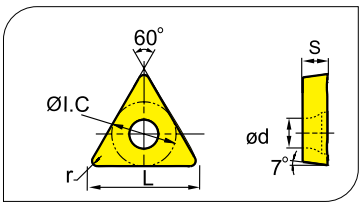
General Turning
Allgemeine Drehbearbeitung

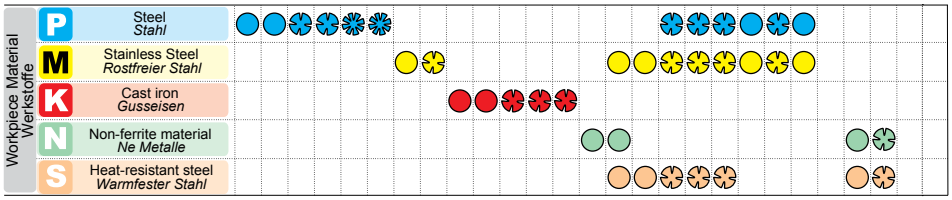
TC** Positive Insert/ Positive WSP

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

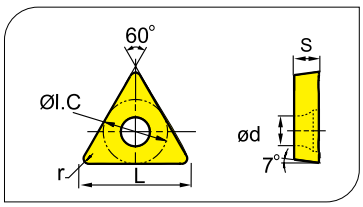
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

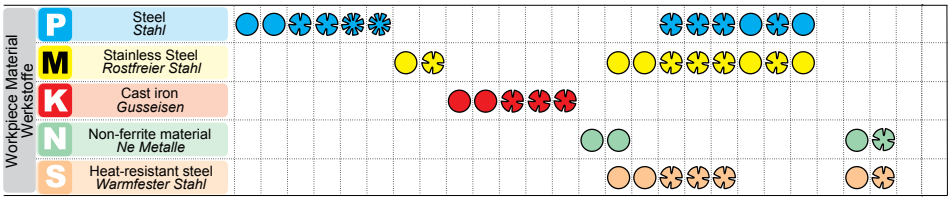
TC** Positive Insert/ Positive WSP

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																		○					
	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																		○					
	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																		○					

Finishing
Schlichten

Medium Cut/
Mittl. Bearb.

Tool holder / Klemmhalter

STACR/L	STFCR/L	STGCR/L	STTCR/L	STFCR/L
Kr:90°	Kr:90°	Kr:90°	Kr:60°	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

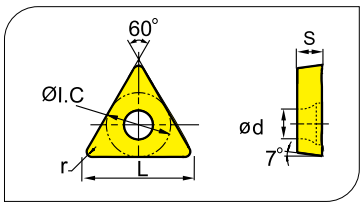
General Turning
Allgemeine Drehbearbeitung

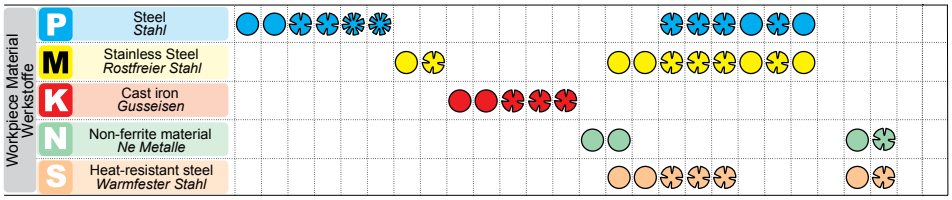
TC** Positive Insert/ Positive WSP

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

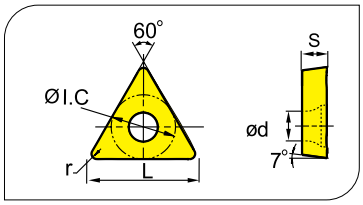
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

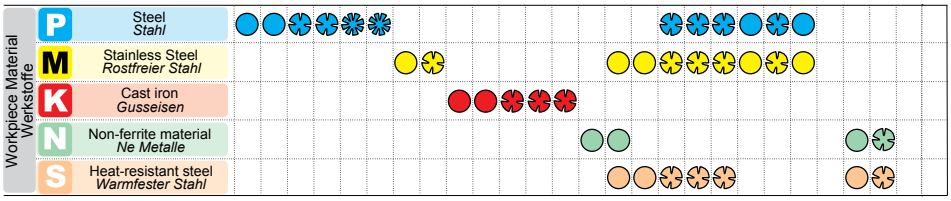
TC** Positive Insert/ Positive WSP

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

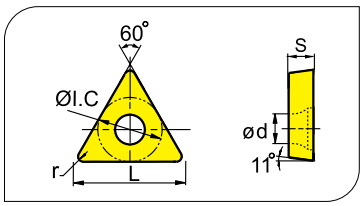
General Turning
Allgemeine Drehbearbeitung

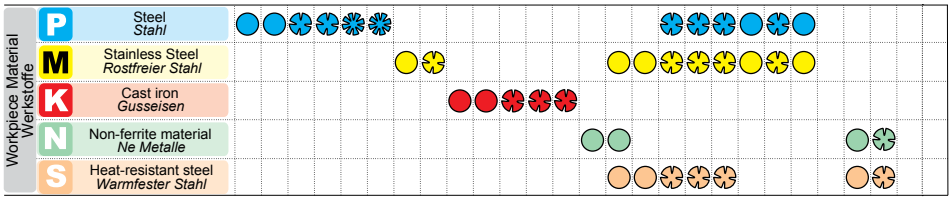
TP** Positive Insert/ Positive WSP

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 Finishing Schlichten	**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																			●		●		
	TPGT110304-SF	11	6.35	3.18	2.8	0.4																			○		●		
	TPGT110308-SF	11	6.35	3.18	2.8	0.8																			○		●		
 Super Finishing Feist bearbeitung	**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															●				●	●			
	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.

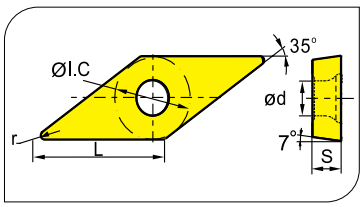
A

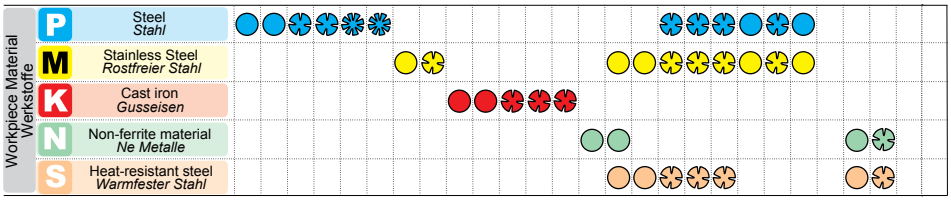
VC** Positive Insert/ Positive WSP

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

Page/ Seite A261 A262 A224 A225

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

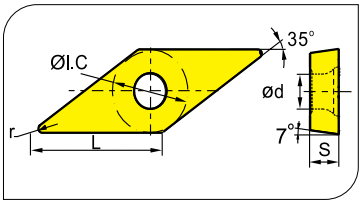
General Turning
Allgemeine Drehbearbeitung

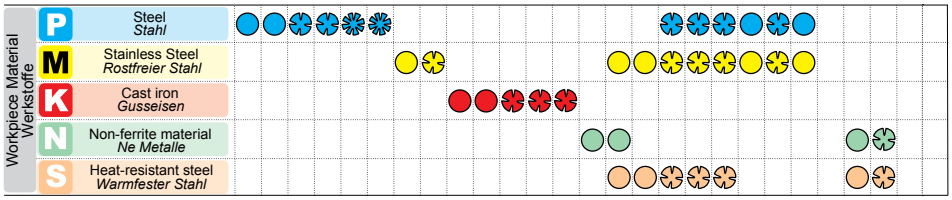
VC** Positive Insert/ Positive WSP

Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen





Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung 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
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														●										●	
Aluminium Machining/ Aluminium bearbeitung	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															●				●					●	
Aluminium bearbeitung	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															○									●	○

Tool holder / Klemmhalter

Page/Seite A261 A262 A224 A225

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

A

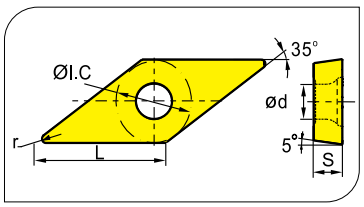
General Turning
Allgemeine Drehbearbeitung

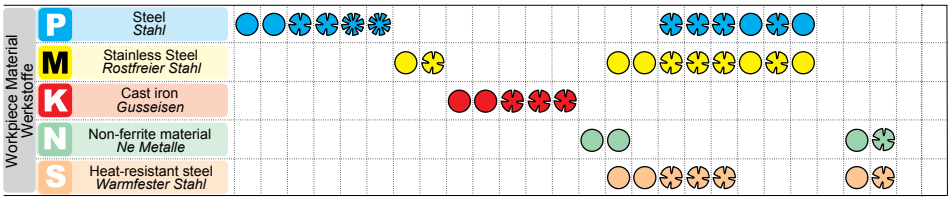
VB** Positive Insert/ Positive WSP

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							●										●	○					
Finishing Schlichten	**VBMT110308-EF**	11	6.35	3.18	2.8	0.8							●										○	●					
	VBMT160404-EF	16.5	9.525	4.76	4.4	0.4							●										●						
	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°

Page/Seite 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

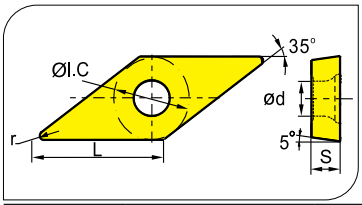
General Turning
Allgemeine Drehbearbeitung

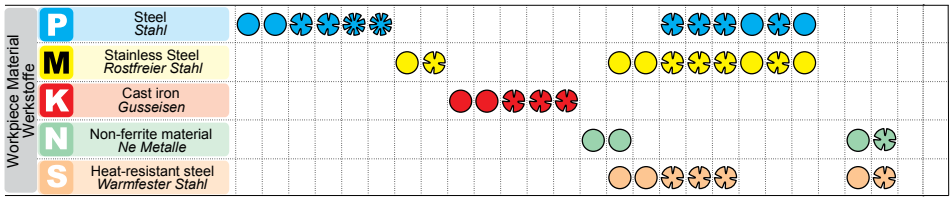
VB** Positive Insert/ Positive WSP

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	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
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'

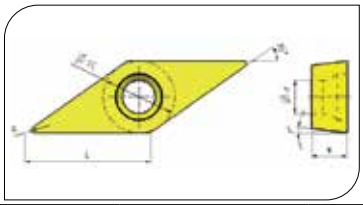
SVQBR/L
Kr:107°30'

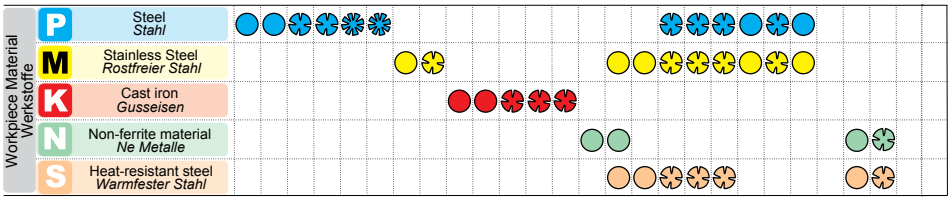
SVUBR/L
Kr:93°

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

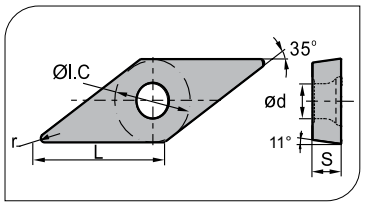


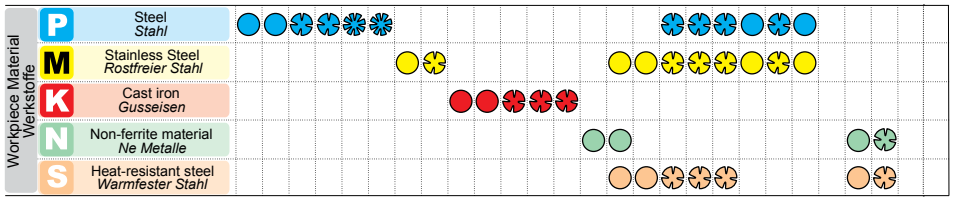


Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung					CVD Coating CVD Beschicht.										PVD Coating PVD Beschicht.						Cermet unbeschichtet	Cermet Coated beschicht. Cerm.	Uncoated Carbide unbeschicht. Hartmetall	
		L	I.C	S	d	r	YB6315	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	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°

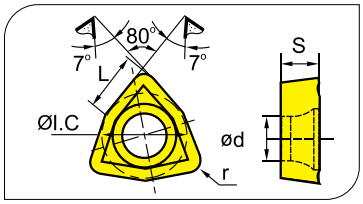
Page/ A221 A222 A223 A263 A264

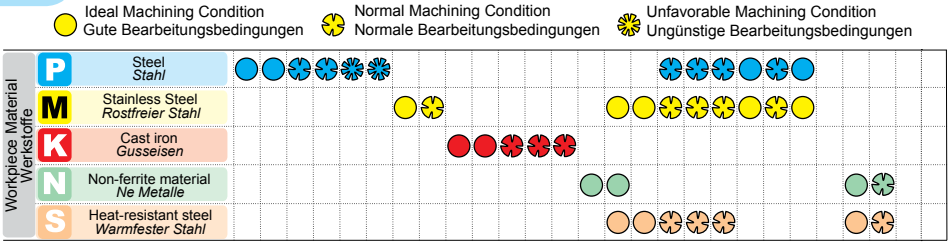
Insert code key ISO Code A62-A63
Grade selection reference Sortenauswahl A17/A44-A59
chip breaker selection reference Spanbrecherauswahl A33-A43
Recommended cutting parameters Empfohlene Schnittparameter A279-A281

A

General Turning
Allgemeine Drehbearbeitung

WC** Positive Insert/Positive WSP

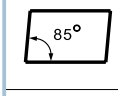
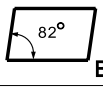
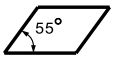




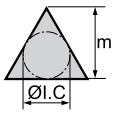
insert shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung					CVD Coating CVD Beschicht.										PVD Coating PVD Beschicht.						Cermet unbeschichtet		Cermet Coated beschicht. Cerm.	Uncoated Carbide unbeschicht. Hartmetall	
		L	I.C	S	d	r	YB6315	YBC152	YBC252	YBC251	YBC352	YBC351	YBM153	YBM253	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																		●					○

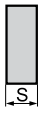
● Ex Stock / ab Lager ○ On demand / auf Anfrage YBC152F, YBC252F, YBM153F, YBM253F available / verfügbar.

Insert shape
Schneidplattenform

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

Tolerance
Toleranzklasse

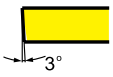
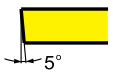
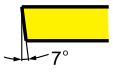
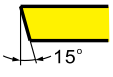
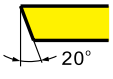
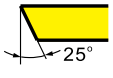
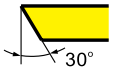
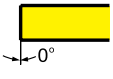




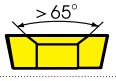
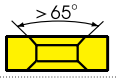
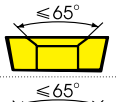
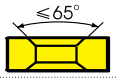
Code	Tolerance *Toleranzklasse*	Tolerance *Toleranzklasse* ØI.C	Thickness S *Dicke*	Code	Tolerance *Toleranzklasse*	Tolerance *Toleranzklasse* ØI.C	Thickness S *Dicke*
A	±0.005	±0.025	±0.025	J	±0.005	±0.05-±0.13	±0.025
F	±0.005	±0.013	±0.025	K	±0.013	±0.05-±0.13	±0.025
C	±0.013	±0.025	±0.025	L	±0.025	±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*

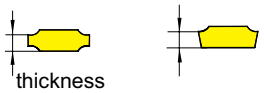
Insert type
Plattentyp

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)

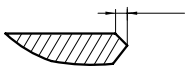
Code	Radius (mm)
00	–
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Others *Andere*
Mo	Round Insert *Runde Platten*

12 04 08 T 020 20 -2 W

Profile of cutting edges
Schneidkantenausführung

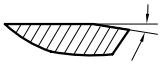
Code	Cutting Edge *Schneidkante*	Shape Form *Plattenform*
F	Sharp edge *Scharfe Kante*	
E	Honing *Verrundung*	
T	Chamfering *Fase*	
S	Chamfering *Fase* + Honing *Verrundung*	

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

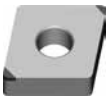
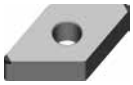
W

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	○	○		○

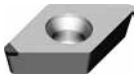
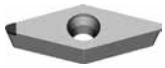
PCBN

	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

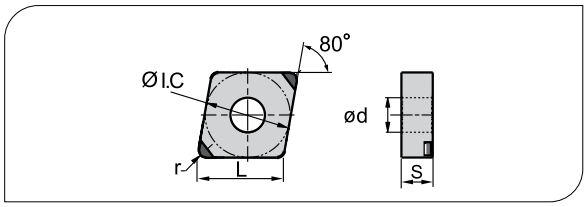
* other edge preparation on demand
andere Fasenausführung auf Anfrage

PCD/PKD

Insert Shape *Schneidplattenform*	Type *Typ*	Grade *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°

PCLNR/L
Kr:95°

PCLNR/L
Kr:95°

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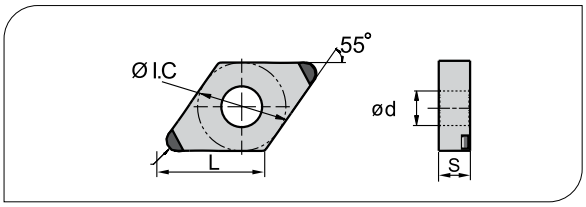
Further insert size, edge preperation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.

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

A

General Turning
Allgemeine Drehbearbeitung

DN**

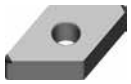


Continuous cutting
Vollschnitt

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'

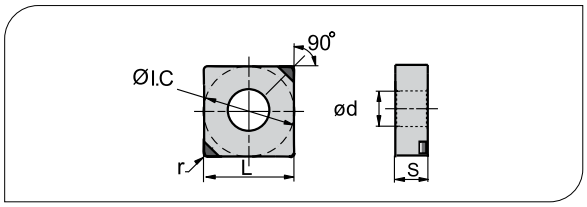
PDUNR/L
Kr:93°

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

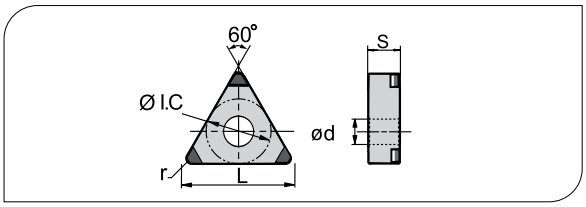
PSSNR/L
Kr:45°
A195

PSKNR/L
Kr:75°
A251

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

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

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°

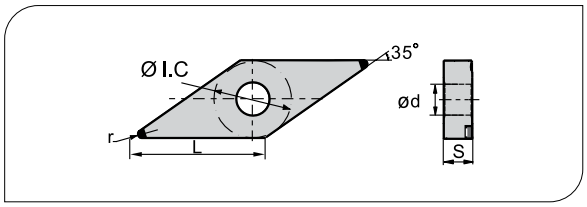
PTFNR/L
Kr:90°

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'

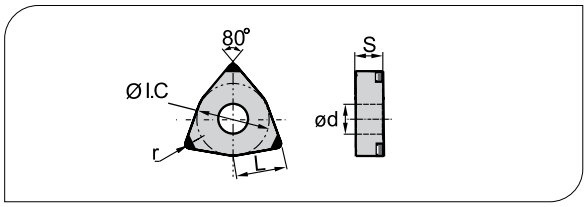
DVJNR/L
Kr:93°

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°

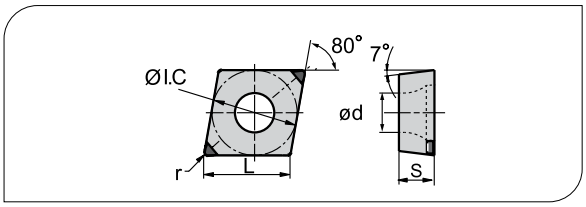
PWLNR/L
Kr:95°

Page · Seite A187 A199 A253

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

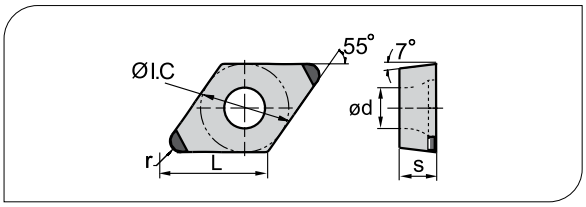
SCFCR
Kr:90°
A269

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**

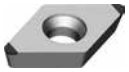


Continuous cutting
Vollschnitt

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°

SDJCR/L
Kr:93°

SDNCN
Kr:62°30°

SDQCR/L
Kr:107°30'

SDUCR/L
Kr:93°

SDZCR/L
Kr:85°

Page · Seite A218 A219 A220 A256 A257 A258

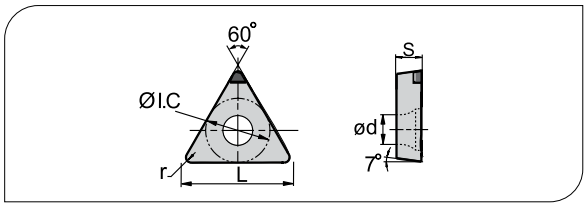
Further insert size, edge preperation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.

● 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

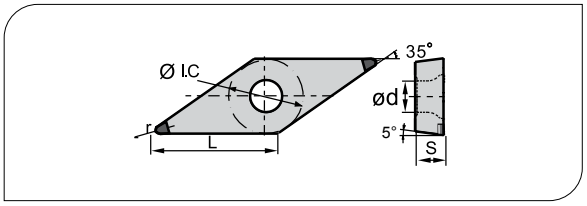
STTCR/L
Kr:60°
A230

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**



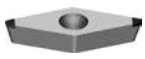
Continuous cutting
Vollschnitt

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°

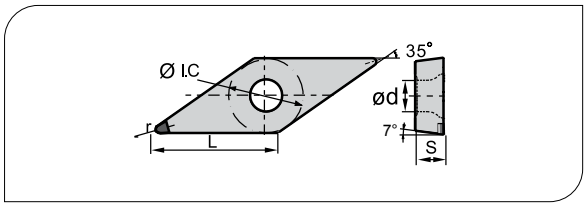
SVVBN
Kr:72°30'

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'

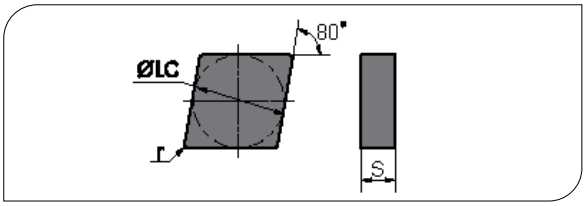
SVUCR/L
Kr:93°

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

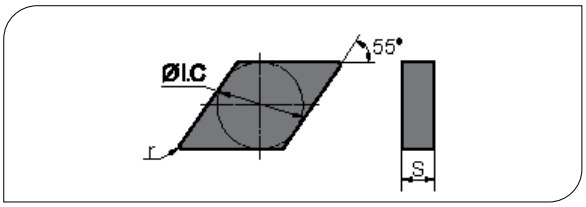
Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt

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

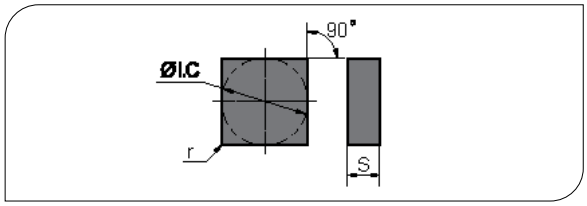
Workpiece Material Werkstoffe				
H	Hardened material *Gehärteter Werkstoff*	◔		
K	Cast iron *Gusseisen*		◕	◕
N	Non-ferrite material *Ne Metalle*			

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

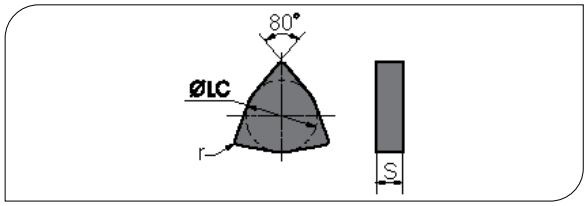
Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material
Werkstoffe

H	Hardened material *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
	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

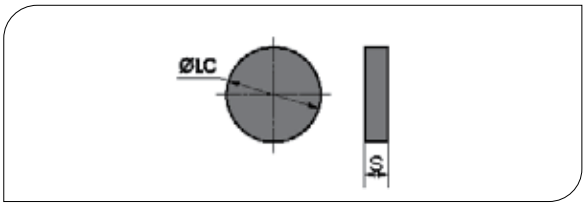
H	Hardened material *Gehärteter Werkstoff*	◔
K	Cast iron *Gusseisen*	◕ ◕
N	Non-ferrite material *Ne Metalle*	

Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung					CBN		
		L	I.C	S	d	r	YZB121	YZB221	YZB231
	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

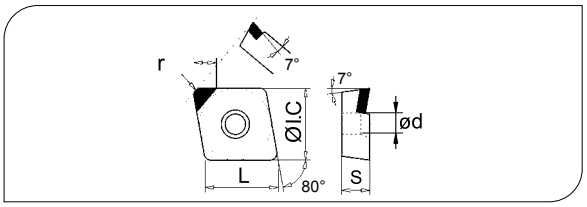
Workpiece Material *Werkstoffe*				
H	Hardened material *Gehärteter Werkstoff*	◔		
K	Cast iron *Gusseisen*		◕	◕
N	Non-ferrite material *Ne Metalle*			

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 *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
	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°

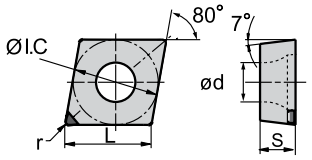
SCLCR
Kr:95°

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	●

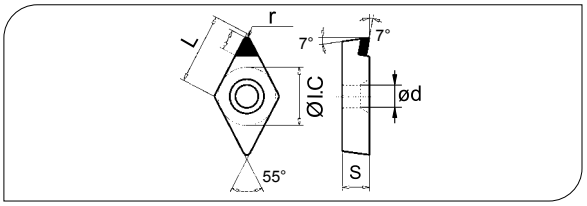
Tool Holder · Klemmhalter

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 *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
	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

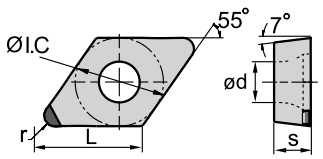
SDUCR/L
Kr:93°
A257

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**



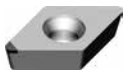
Continuous cutting
Vollschnitt

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°

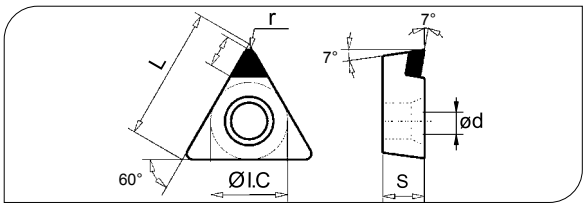
SDZCR/L
Kr:85°

Page · Seite A218 A219 A220 A256 A257 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

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					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 Kr:90°	**STFCR/L** Kr:91°	**STGCR/L** Kr:91°	**STTCR/L** Kr:60°	**STFCR/L** Kr:90°
Page · Seite A228	A228	A229	A230	A260

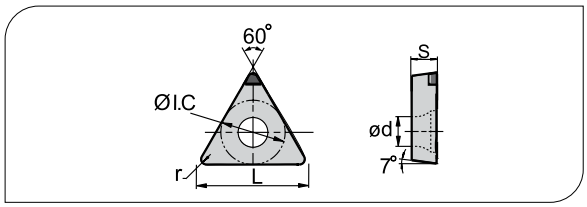
Further insert size, edge preperation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Auftrage möglich.

● 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 *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
	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	○

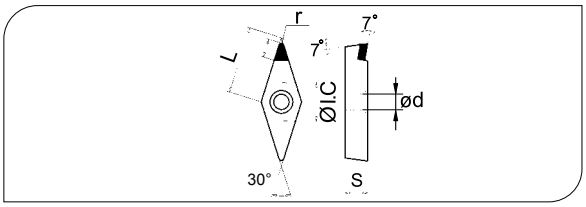
Tool Holder · Klemmhalter

STACR/L Kr:90°	**STFCR/L** Kr:91°	**STGCR/L** Kr:91°	**STTCR/L** Kr:60°	**STFCR/L** 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

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					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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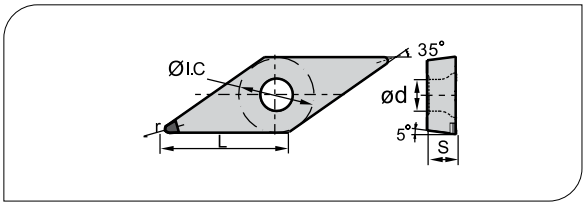
VB**



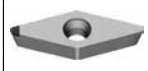
Continuous cutting
Vollschnitt

Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt

Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material
Werkstoffe

H	Hardened material *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
	**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'

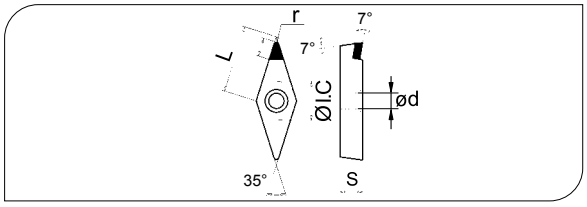
SVUBR/L
Kr:93°

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 Aufrage möglich.

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

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

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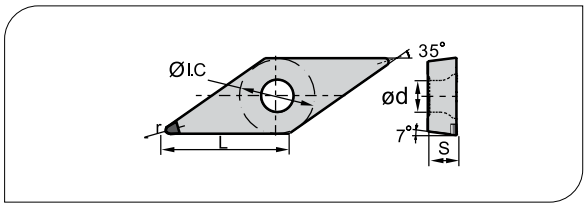
VC**



Continuous cutting
Vollschnitt

Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt

Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material *Werkstoffe*

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
	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

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

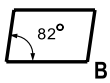
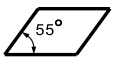
For investigation please send us used inserts. If breakage is problem please use inserts only 80-90% of expected tool life because broken inserts almost have no information.

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.

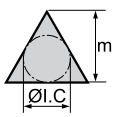
Wear phenomenon	Solution	
	Geometry	Cutting condition
Flank wear	Sharp cutting edge to reduce cutting force - smaller negative lend - change to positive inserts	Reduce cutting speed - increase feed rate to minimise contact time
Notch wear	Bigger nose radius	Use method of altering feed rate
Crater wear/ Breakage due to crater wear	Crater wear · due to crater wear	Reduce cutting spped - 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 - smaller negative lend - change to positive inserts	Increase feed rate to reduce cutting time
Thermal crack	Sharp cutting edge to reduce cutting force - smaller negative lend - 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 für weniger Schnittkraft - kleinere Negativfase - positive Platten verwenden	Schnittgeschwindigkeit reduzieren - Vorschub erhöhen, um Eingriffszeit zu reduzieren
Kerbverschleiß	Größerer Radius	“Methode des varierenden Vorschubs” verwenden
Kolkverschließ/ Kolkbruch		- Schnittgeschwindigkeit reduzieren - 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 - kleinere Negativfase - positive Platten verwenden	- Vorschub erhöhen, um Eingriffszeit zu reduzieren
Thermische Risse · Bruch	Schärfere Schneidkante für weniger Schnittkraft - kleinere Negativfase - 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

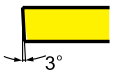
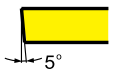
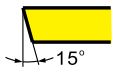
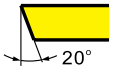
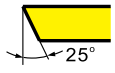
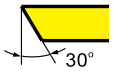
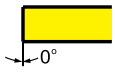
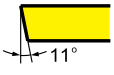
Tolerance
Toleranzklasse



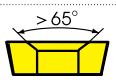
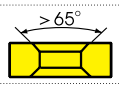
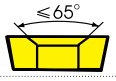
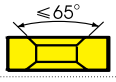
Code	Tolerance *Toleranzklasse*	Tolerence *Toleranzklasse* ØI.C	Thickness S *Dicke*	Code	Tolerence *Toleranzklasse*	Tolerence *Toleranzklasse* ØI.C	Thickness S *Dicke*
A	±0.005	±0.025	±0.025	J	±0.005	±0.05-±0.13	±0.025
F	±0.005	±0.013	±0.025	K	±0.013	±0.05-±0.13	±0.025
C	±0.013	±0.025	±0.025	L	±0.025	±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	 3°	B	 5°
C	7°	D	 15°
E	 20°	F	 25°
G	 30°	N	 0°
P	 11°	O	Others *Andere*

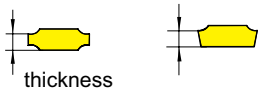
Insert type
Plattentyp

Code	Hole *Loch*	Insert Section *Ausführung*
N	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

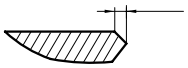
code	Radius (mm)
00	no Radius
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Others *Andere*
Insert diameter *WSP Durchmesser* Mo (metric)	Runde insert *Runde Platten*

12 04 08 T 020 20

Profile of cutting edges
Scheidekantenausführung

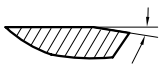
code	Cutting Edge *Schneidkante*	Shape Form *Plattenform*
E	Honing *Verrundung*	
T	Chamfering *Fase*	
S	Chamfering *Fase* + Honing *Verrundung*	
F	Sharp edges *Scharfe Kante*	

Width of chamfer
Breite der Fase

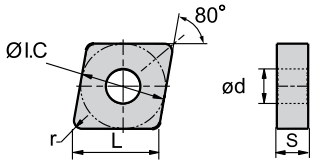


010	0.10	**040**	0.40
015	0.15	**045**	0.45
020	0.20	**050**	0.50
025	0.25	**100**	1.00
030	0.30	**200**	2.00
035	0.35		

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

DCLNR/L
Kr:95°

PCBNR/L
Kr:75°

PCLNR/L
Kr:95°

PCLNR/L
Kr:95°

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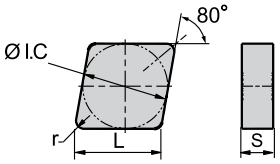
● Ex Stock / ab Lager ○ On demand / auf Anfrage



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°

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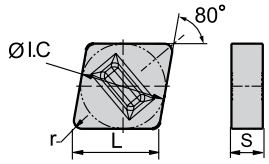
● Ex Stock / ab Lager ○ On demand / auf Anfrage

● Ideal Machining Condition
Gute Bearbeitungsbedingungen

◐ Normal Machining Condition
Normale Bearbeitungsbedingungen

◐ Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen



Workpiece Material *Werkstoffe*		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

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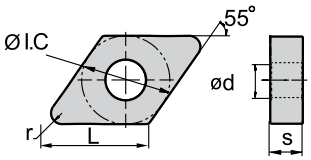
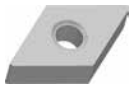
● Ideal Machining Condition
Gute Bearbeitungsbedingungen

◐ 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

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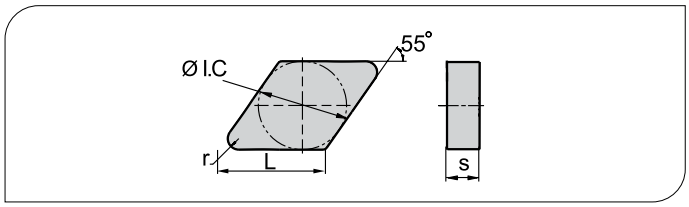
● Ex Stock / ab Lager ○ On demand / auf Anfrage

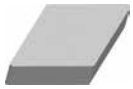
Ideal Machining Condition
Gute Bearbeitungsbedingungen

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

CDJNR/L
Kr:93°

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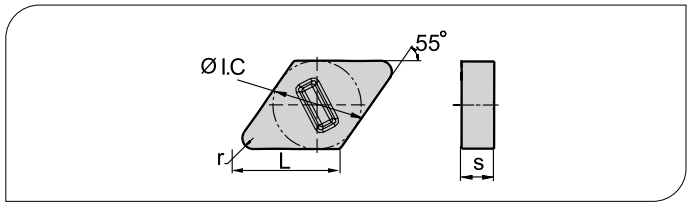
Ideal Machining Condition
Gute Bearbeitungsbedingungen

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

JDJNR/L
Kr:93°

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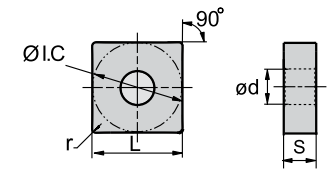
● Ex Stock / ab Lager ○ On demand / auf Anfrage

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
	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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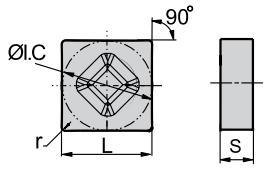
Ideal Machining Condition
Gute Bearbeitungsbedingungen

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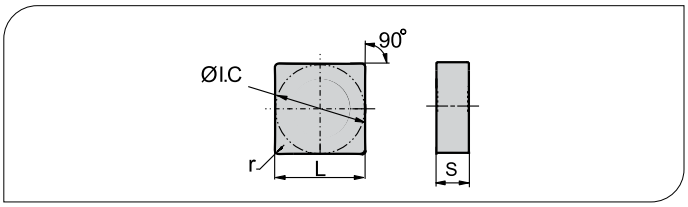
● Ex Stock / ab Lager ○ On demand / auf Anfrage



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*	●	● ✱	✱

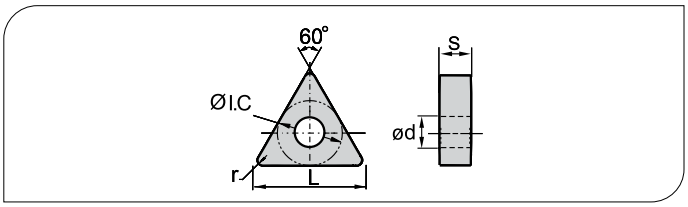
Insert Shape Schneid plattenform	Type Typ	Dimension (mm) Abmessung					Grade Sorte		
		L	I.C	S	d	r	CA1000	CN1000	CN2000
	SNGN090308T01020	9.525	9.525	3.18	-	0.8	○		
	SNGN090312T01020	9.525	9.525	3.18	-	1.2	○		
	SNGN120404T02020	12.7	12.7	4.76	-	0.4	○		
	SNGN120408T02020	12.7	12.7	4.76	-	0.8	●	●	○
	SNGN120412T02020	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°

Page · Seite A237

● 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°
Page · Seite A184

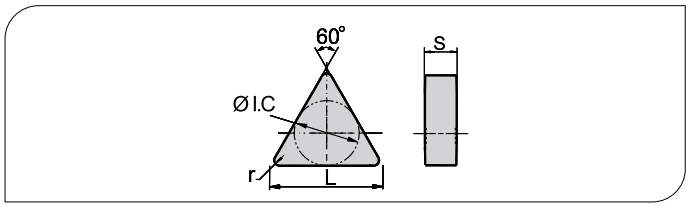
PTFNR/L
Kr:90°
Page · Seite A196

PTTNR/L
Kr:60°
Page · Seite A197

PTGNR/L
Kr:90°
Page · Seite A198

PTFNR/L
Kr:90°
Page · Seite 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°

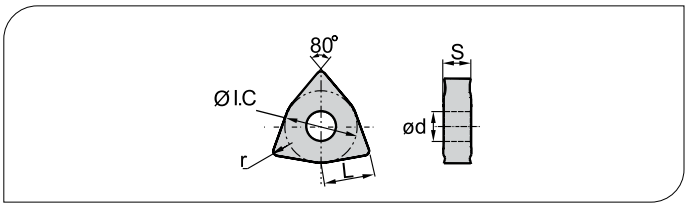
Page · Seite A235

● 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					Grade Sorte		
		L	I.C	S	d	r	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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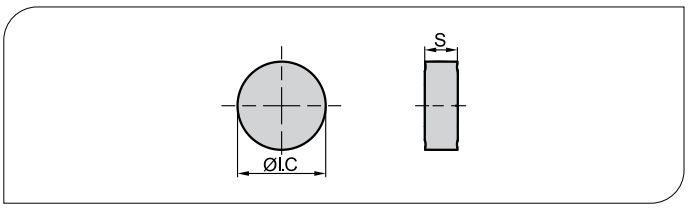
● Ideal Machining Condition
Gute Bearbeitungsbedingungen

● 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					Grade Sorte		
		L	I.C	S	d	r	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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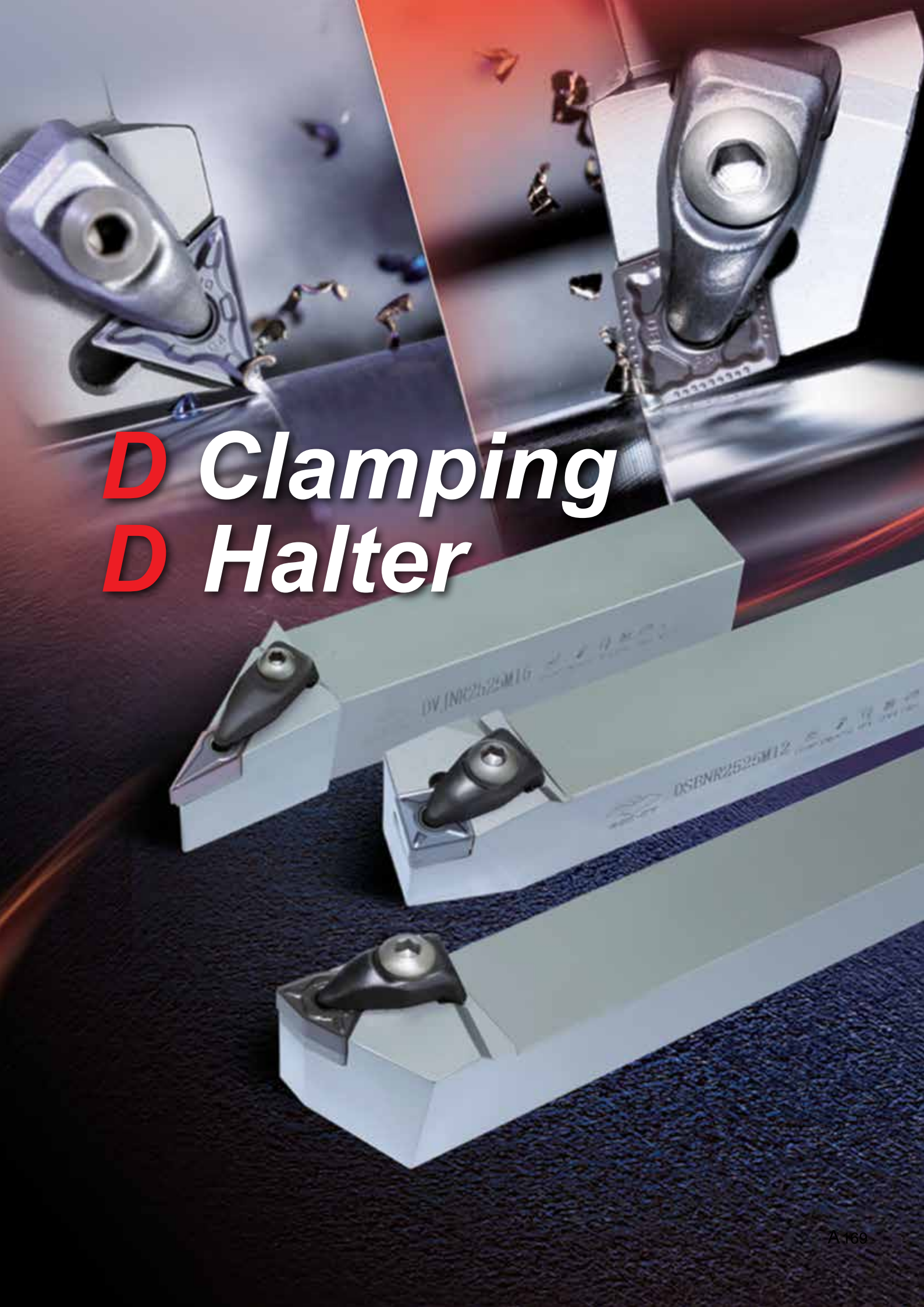
● Ex Stock / ab Lager ○ On demand / auf Anfrage

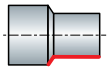


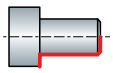
D Clamping
D Halter

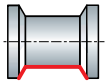
A

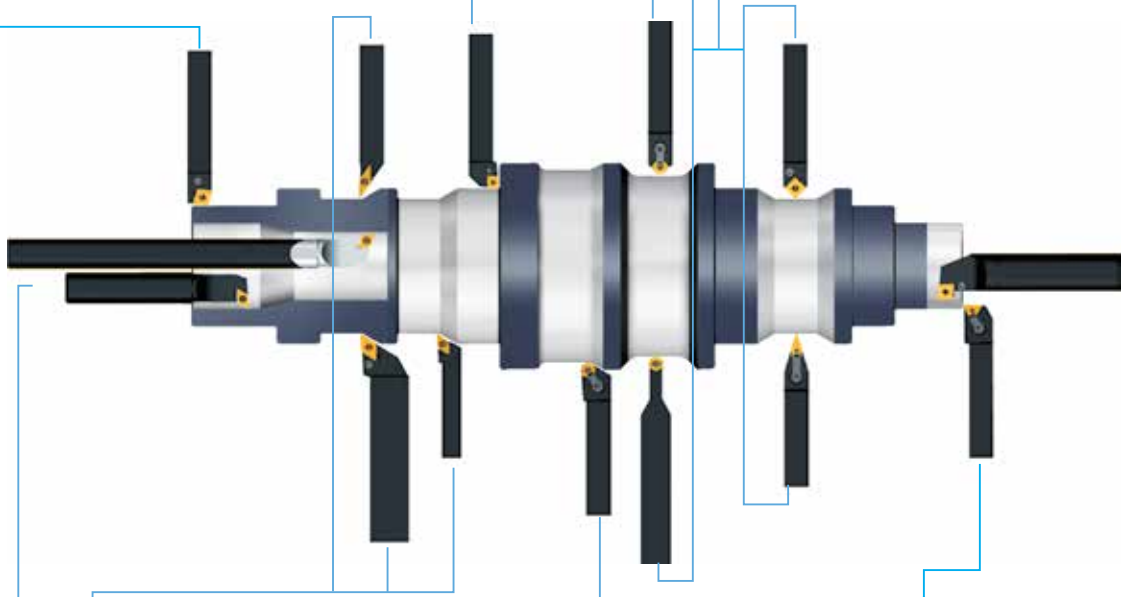
General Turning
Allgemeine Drehbearbeitung

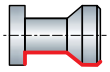
External and internal turning · Außen- und Innenbearbeitung

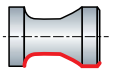
External Turning · Außenbearbeitung	Type · Typ					
	PCBNR/ L**	PSBNR/ L**	PSSN *	PTGNR/ L**	PTTNR/ L**	MCBNR/ L**
	MSBNR/ L**	MSRNR/ L**	MTGNR/ L**	MTJNR/ L**	MTJNR/ L-Z	SCACR/ L**
	SSBCR/ L**	SSSCR/ L**	STACR/ L**	STGCR/ L**	STTCR/ L**	SWACR/ L**
	DTJNR/L**	DSBNR/L**				

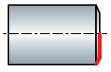
External facing & turning · Außen- & Planbearbeitung	Type · Typ	
	PCLNR/ L**	PWLNR/ L**
	MCLNR/ L**	MWLNR/ L**
	SCLCR/ L**	DCLNR/ L**
	DWLNR/ L**	

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**	

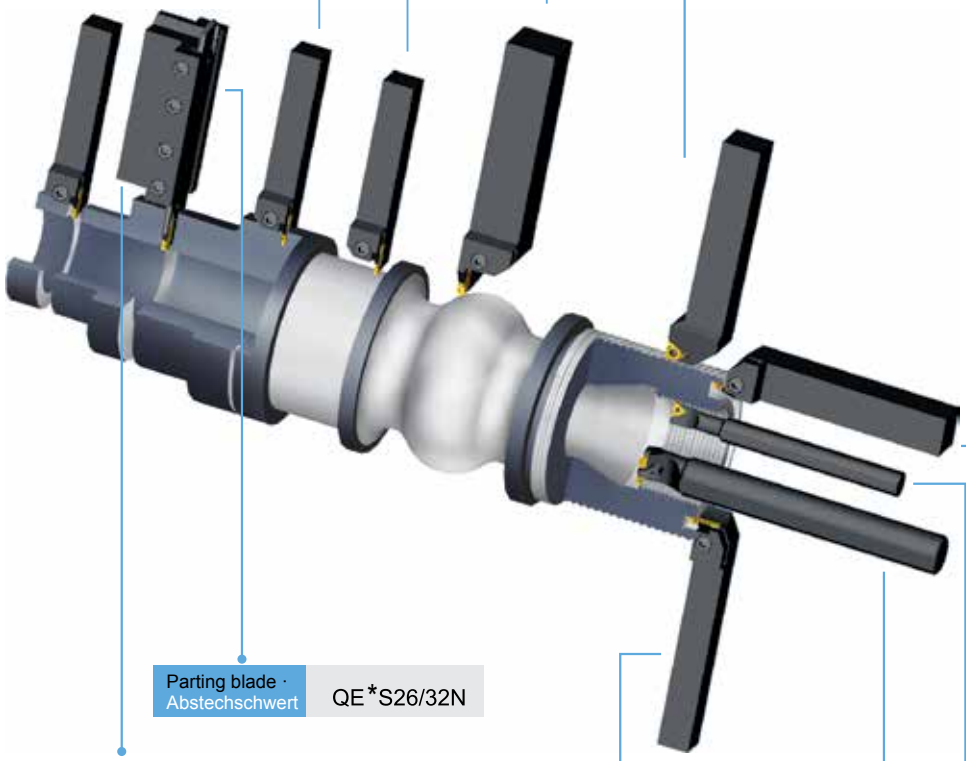
Profiling · Profilbearbeit.	Type · Typ
	MRGNR/ L**
	SRGCR/ L**

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

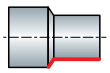
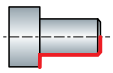
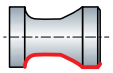
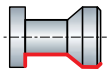
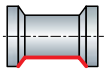
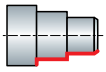
Turning toolholders by M type clamping · Drehwerkzeuge / M Klemmung A200-A215

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

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

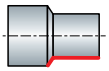
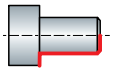
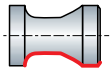
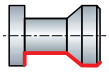
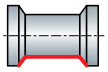
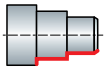
Detailed table of external turning tools (Ceramic) **A235-A240**
Drehwerkzeuge zur Außenbearbeitung für Keramik WSP

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
P	PTTNR/ L	60	✓						✓		A197
P	PTGNR/ L	90	✓						✓	✓	A198
P	PWLNR/ L	95			✓				✓		A199
M	MCBNR/ L	75	✓						✓		A200
M	MCLNR/ L	95			✓				✓		A201
M	MDJNR/ L	93					✓		✓	✓	A202
M	MDPNN	62.5						✓	✓		A203
M	MSBNR/ L	75	✓						✓		A204
M	MSRNR/ L	75	✓						✓		A205
M	MSKNR/ L	75		✓					✓		A206
M	MSDNN	45						✓	✓		A207
M	MTGNR/ L	90	✓						✓	✓	A208
M	MTJNR/ L	93	✓						✓		A209
M	MTJNR/L-Z	93		✓			✓		✓		A210

✓ Recommended · Empfehlung

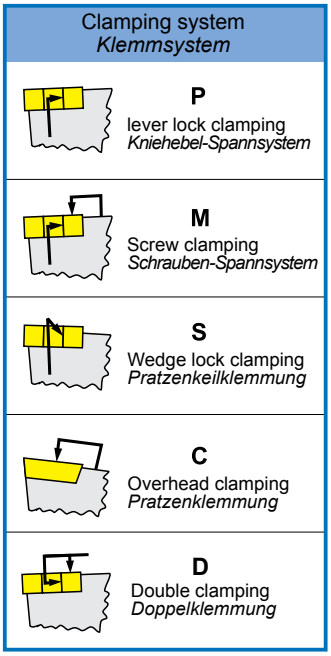
Clamping system Klemmsystem	Tool Type Werkzeug Typ	Approach angle Einstellwinkel	Turning Application · Anwendung						Workpiece · Werkstück		Page · Seite
			External turning Außenbearbeit.	Facing Planbearbeit.	Ext., turning & facing · Außen-, & Planbearbeit.	Profiling Profilbearbeit.	Profiling Profilbearbeit.	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

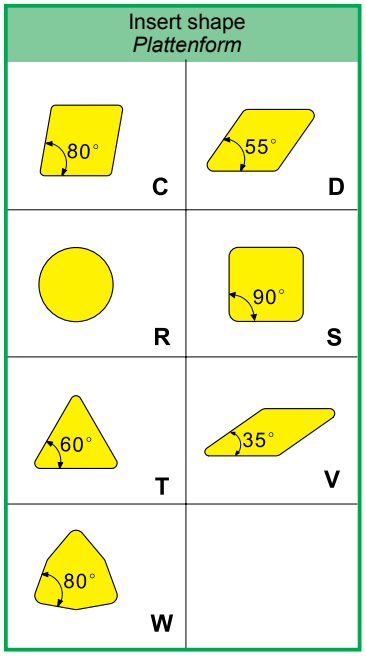
Clamping system Klemmsystem	Tool Type Werkzeug Typ	Approach angle Einstellwinkel	Turning Application · Anwendung						Workpiece · Werkstück		Page · Seite
			External turning Außenbearbeit.	Facing Planbearbeit.	Ext., turning & facing ·Außen-, & Planbearbeit.	Profiling Profilbearbeit.	Profiling Profilbearbeit.	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

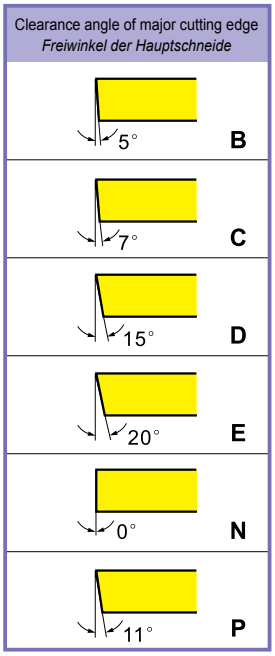
Clamping system *Klemmsystem*



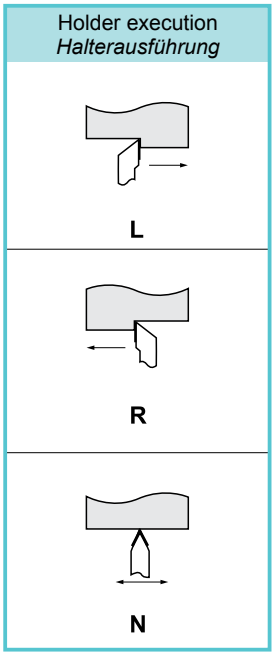
Insert shape *Plattenform*



Clearance angle of major cutting edge *Freiwinkel der Hauptschneide*

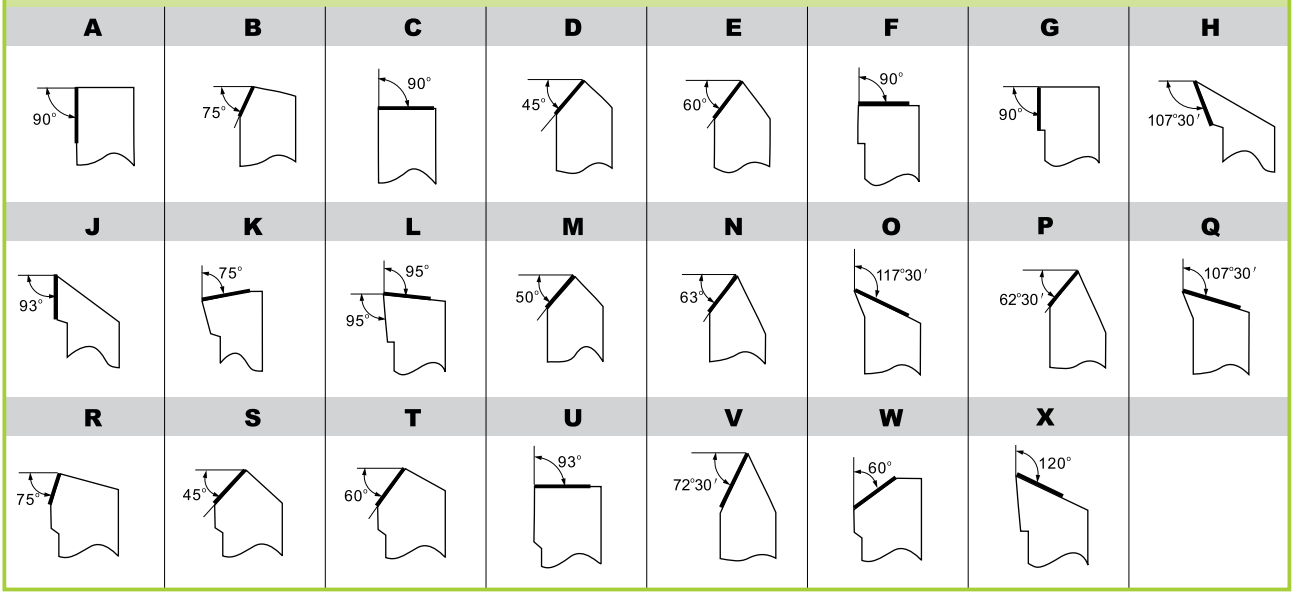


Holder execution *Halterausführung*

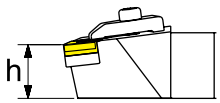


P C L N L

Holder style and lead angle *Halterform und Anstellwinkel*

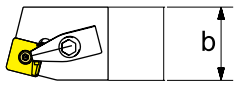


Height
Schafthöhe



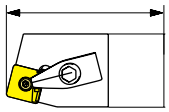
Code	Height *Höhe*
12	12
16	16
20	20
25	25
32	32
40	40
50	50

Schank width
Schaftbreite



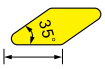
Code	Width *Breite*
12	12
16	16
20	20
25	25
32	32
40	40
50	50

Tool length
Halterlänge



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

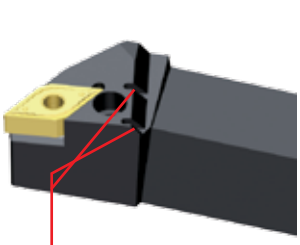
25 25 M 12

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	---	---	---	---

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.

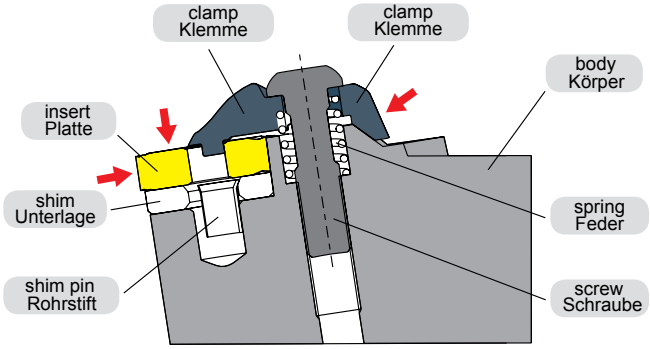
Best indexing accuracy, high clamping force.
Hohe Wiederholgenauigkeit, exzellente Klemmkraft.



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

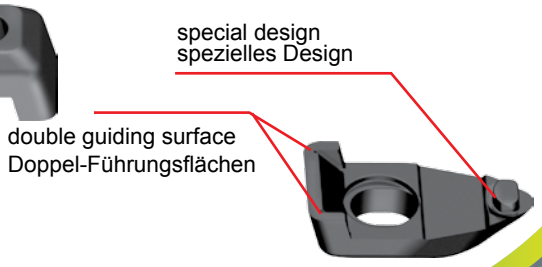
Stabile Standzeiten durch sichere Klemmung. Gute Verschleißfestigkeit.

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.



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

Spezielles Spannfingerdesign für mehr Stabilität und Genauigkeit.

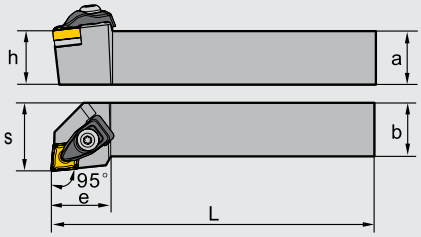


CN** Toolholder · Halter

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			

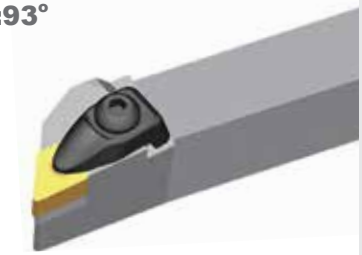
Type · Typ							
	DCLNR/LH/K/M09**	CN**0903**	CN**0903**				
	DCLNR/LK/M/P12**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**

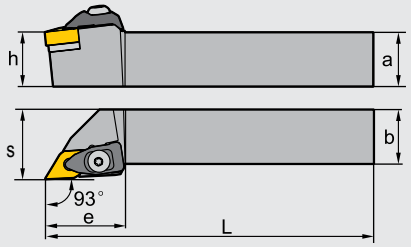
DN** Toolholder · Halter

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/LH/K/M/P11**	DN**1104**	DN**1104**			DN**1104**	
	DDJNR/LK/M/P15**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**

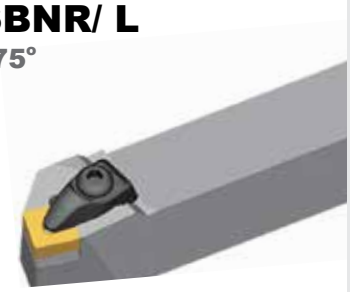
● ex stock · ab Lager ○ on demand · Anfrage

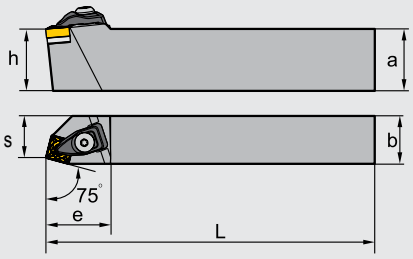
SN** Toolholder · Halter

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/LH09**	SN**0903**	SN**0903**			SN**0903**	
	DSBNR/LK/M/P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	DSBNR/LP15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**

A

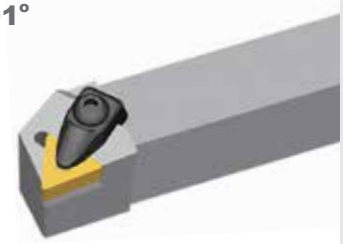
General Turning
Allgemeine Drehbearbeitung

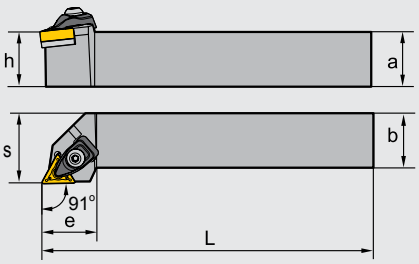
TN** Toolholder · Halter

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**

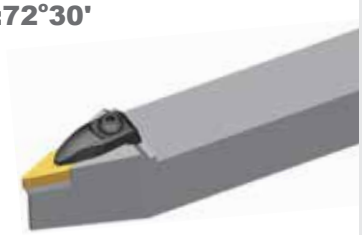
● ex stock · ab Lager ○ on demand · Anfrage

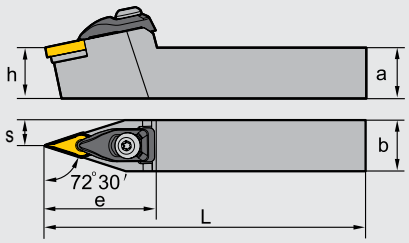
VN** Toolholder · Halter

D-Clamping · D-Halter

DVVNN

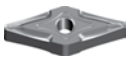
Kr:72°30'





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

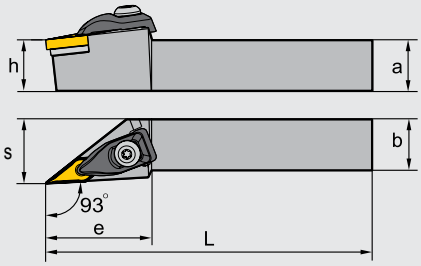
Application Anwendung	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Cast iron machining Grauguss-Bearbeit.	PCBN · PCD PCBN · PKD
Insert shape Schneidplattenform	**SF** A95	**PM** A96	**TC** A96	Flat Glatt A141
	DF A95	**DM** A96		
	ADF A95	**ZM** A96		
	EF  A95	**EM** A96		
	NF A95	**NM** 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**

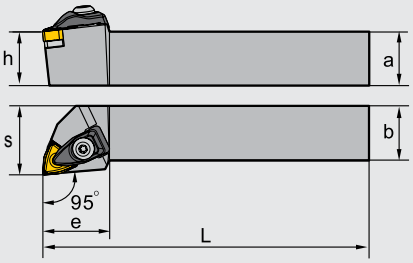
● ex stock · ab Lager ○ on demand · Anfrage

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

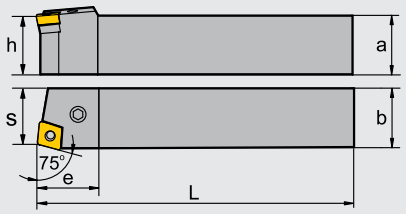
CN** Toolholder · Halter

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/LK / M / P12**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**
	PCBNR/LM / P16**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	CN**1606**
	PCBNR/LP / S19**		CN**1906**	CN**1906**	CN**1906**	CN**1906**
	PCBNR/LS2507**			CN**2507**		
	PCBNR/LS2509**			CN**2509**	CN**2509**	

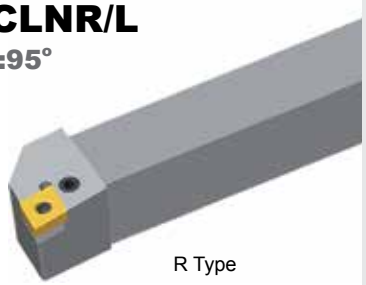
● ex stock · ab Lager ○ on demand · Anfrage

CN** Toolholder · Halter

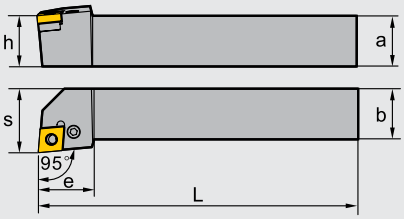
P-Clamping · P-Halter

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 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/LH / K / M09**	CN**0903**	CN**0903**				
PCLNR/LK / M / P12**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**
PCLNR/LM / P16**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	
PCLNR/LP / S19**		CN**1906**	CN**1906**	CN**1906**	CN**1906**	
PCLNR/LS2507**			CN**2507**			
PCLNR/LS2509**			CN**2509**	CN**2509**		

A

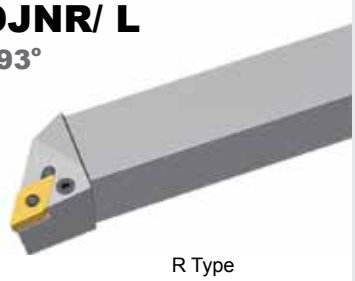
General Turning
Allgemeine Drehbearbeitung

DN** Toolholder · Halter

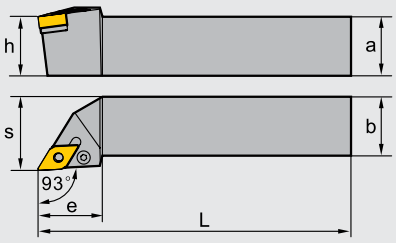
P-Clamping · P-Halter

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/LH / K / M11**	DN**1104**	DN**1104**			DN**1104**	
	PDJNR/LK / M / P15**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**
	PDJNR/LK / M / P15-3**	DN**1504**	DN**1504**			DN**1504**	DN**1504**

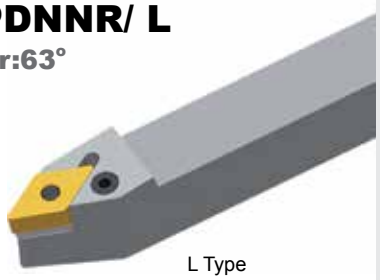
● ex stock · ab Lager ○ on demand · Anfrage

DN** Toolholder · Halter

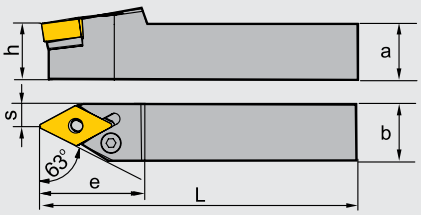
P-Clamping · P-Halter

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**

A

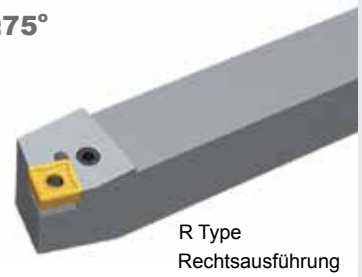
General Turning
Allgemeine Drehbearbeitung

SN** Toolholder · Halter

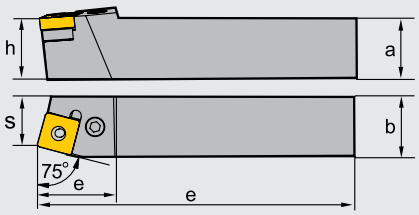
P-Clamping · P-Halter

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							
	PSBNR/LH / K09**	SN**0903**	SN**0903**			SN**0903**	
	PSBNR/LK / M / P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	PSBNR/LM / P15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
	PSBNR/LP / S19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	
	PSBNR/LS2507**			SN**2507**	SN**2507**		
	PSBNR/LS2509**			SN**2509**	SN**2509**		

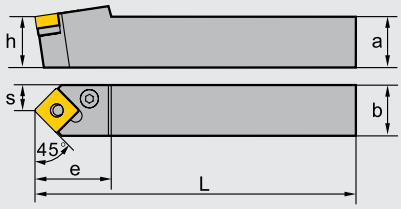
● ex stock · ab Lager ○ on demand · Anfrage

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							
	PSDNNF / H09**	SN**0903**	SN**0903**			SN**0903**	
	PSDNNK / M / P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	PSDNNM / P15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
	PSDNNP / 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/ LH / K09**	SN**0903**	SN**0903**			SN**0903**	
	PSKNR/ LK / M / P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	PSKNR/ LM / P15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
	PSKNR/ LP / S19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	

● ex stock · ab Lager ○ on demand · Anfrage

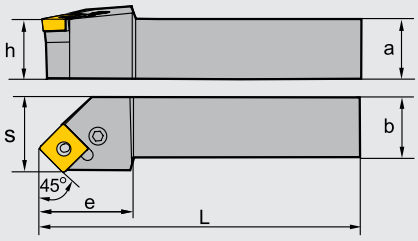
SN** Toolholder · Halter

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/ LH09**	SN**0903**	SN**0903**	SN**0903**		SN**0903**	
	PSSNR/ LK / M / P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	PSSNR/ LM / P15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
	PSSNR/ LP / S19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	
	PSSNR/ LS2507**			SN**2507**	SN**2507**		
	PSSNR/ LS2509**			SN**2509**	SN**2509**		

A

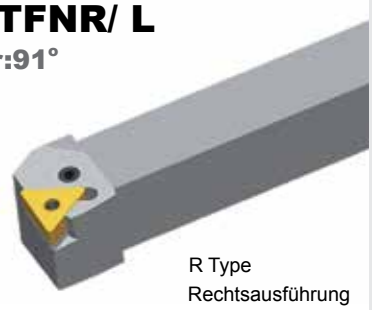
General Turning
Allgemeine Drehbearbeitung

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/ LH / K / M16**	TN**1604**	TN**1604**	TN**1604**	TN**1604**	TN**1604**	TN**1604**
	PTFNR/ LM / P22**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	
	PTFNR/ LP / S27**			TN**2706**	TN**2706**	TN**2706**	

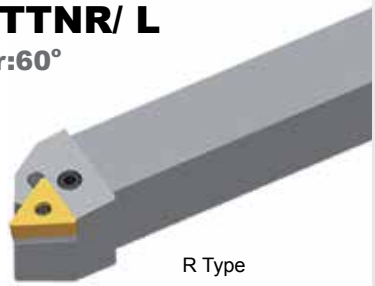
● ex stock · ab Lager ○ on demand · Anfrage

TN** Toolholder · Halter

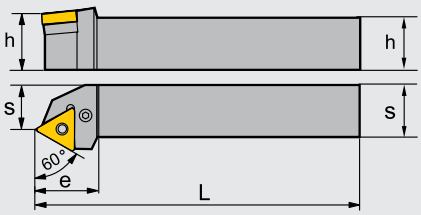
P-Clamping · P-Halter

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**	

A

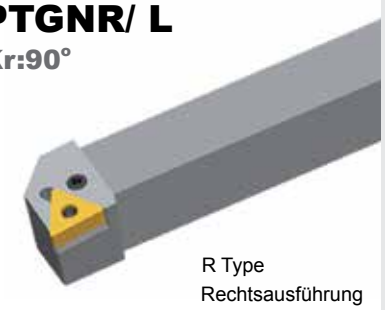
General Turning
Allgemeine Drehbearbeitung

TN** Toolholder · Halter

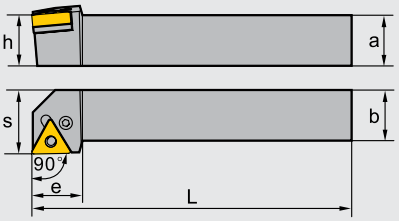
P-Clamping · P-Halter

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**	

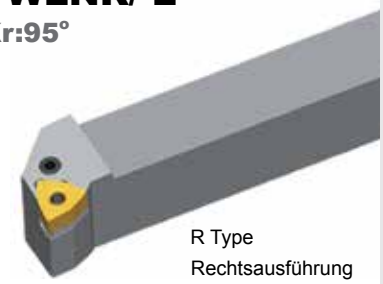
● ex stock · ab Lager ○ on demand · Anfrage

WN** Toolholder · Halter

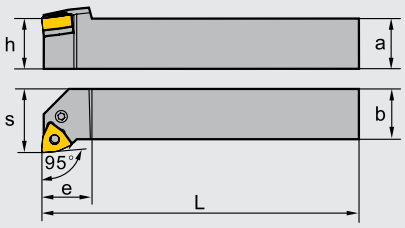
P-Clamping · P-Halter

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		

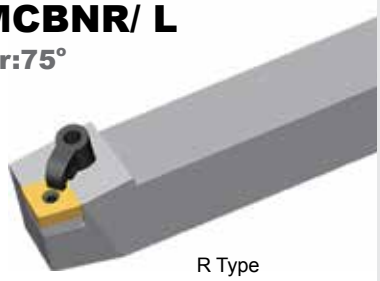
Type · Typ					
	PWLNR/ L**H / K / M06	WN**0604**	WN**0604**	WN**0604**	WN**0604**
	PWLNR/ L**K / M08	WN**0804**	WN**0804**	WN**0804**	WN**0804**

CN** Toolholder · Halter

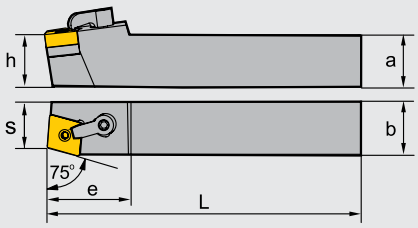
M-Clamping · M-Halter

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/ LK / M / P12**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**
	MCBNR/ LM / P16**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	CN**1606**
	MCBNR/ LP / R19**		CN**1906**	CN**1906**	CN**1906**	CN**1906**

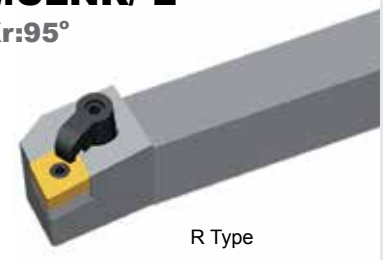
● ex stock · ab Lager ○ on demand · Anfrage

CN** Toolholder · Halter

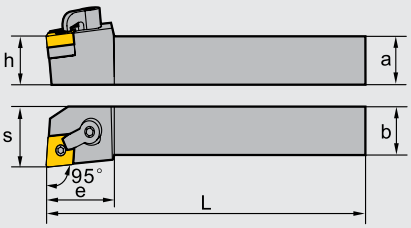
M-Clamping · M-Halter

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			

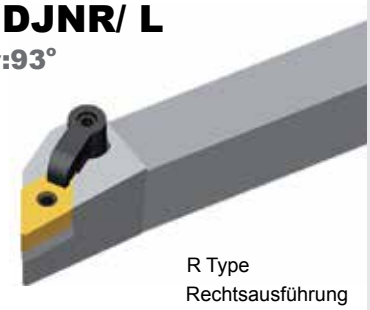
Type · Typ							
	MCLNR/ LK / M / P12**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**	CN**1204**
	MCLNR/ LM / P16**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	CN**1606**	
	MCLNR/ LP / R19**		CN**1906**	CN**1906**	CN**1906**	CN**1906**	

DN** Toolholder · Halter

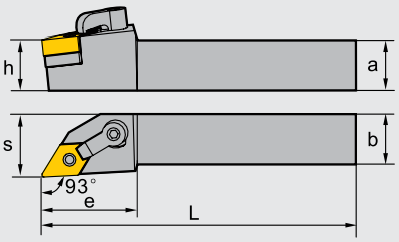
M-Clamping · M-Halter

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 / LK / M / P11**	DN**1104**	DN**1104**			DN**1104**	
	MDJNR/ LK / M / P15**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**

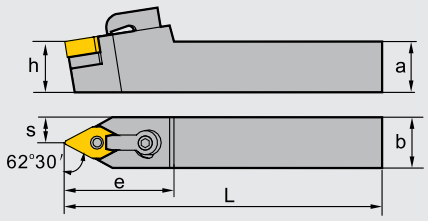
● ex stock · ab Lager ○ on demand · Anfrage

DN** Toolholder · Halter

M-Clamping · M-Halter

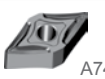
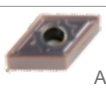
MDPNN

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							
	MDPNNK / M / P11**	DN**1104**	DN**1104**			DN**1104**	
	MDPNNK / M / P15**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**	DN**1506**

A

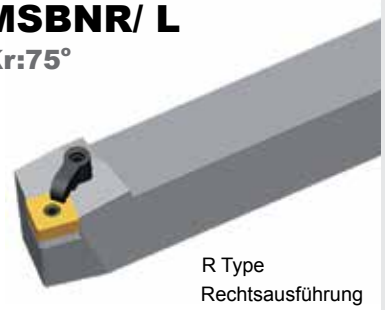
General Turning
Allgemeine Drehbearbeitung

SN** Toolholder · Halter

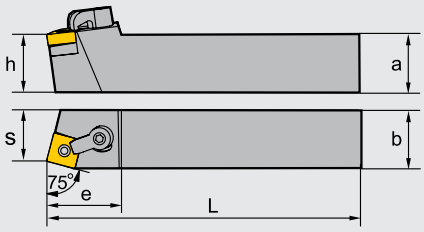
M-Clamping · M-Halter

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 / LM / P / R15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
MSBNR / LP / R19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	
MSBNR / LR / S2509**			SN**2509**	SN**2509**		

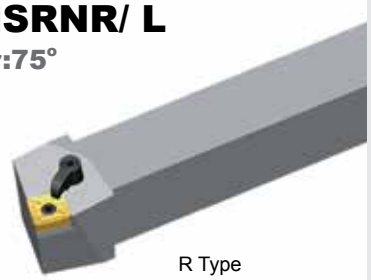
● ex stock · ab Lager ○ on demand · Anfrage

SN** Toolholder · Halter

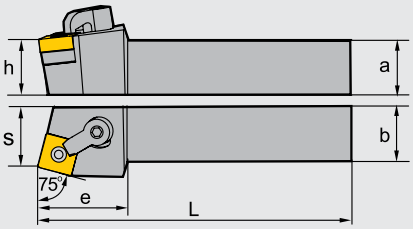
M-Clamping · M-Halter

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 / LK / M / P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	MSRNR / LM / P / R15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
	MSRNR / LP / R19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	
	MSRNR / LR / S2509**			SN**2509**	SN**2509**		

A

General Turning
Allgemeine Drehbearbeitung

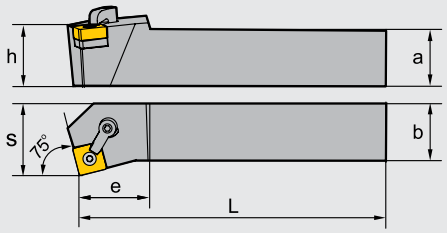
SN** Toolholder · Halter

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 / LM / P / R15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	
MSKNR / LP / R19**		SN**1906**	SN**1906**	SN**1906**	SN**1906**	
MSKNR / LS2509**			SN**2509**	SN**2509**		

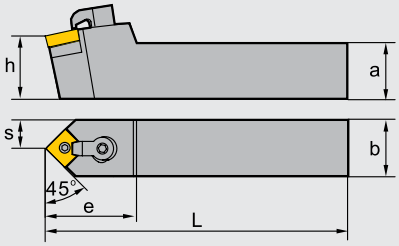
● ex stock · ab Lager ○ on demand · Anfrage

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							
	MSDNNK · M · P12**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**	SN**1204**
	MSDNNM · P · R15**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	SN**1506**	

A

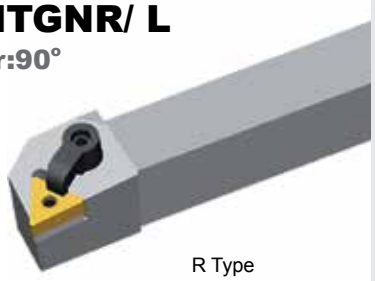
General Turning
Allgemeine Drehbearbeitung

TN** Toolholder · Halter

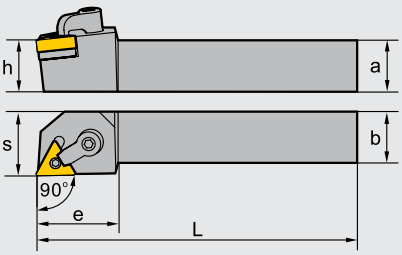
M-Clamping · M-Halter

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 / LM / P22**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	

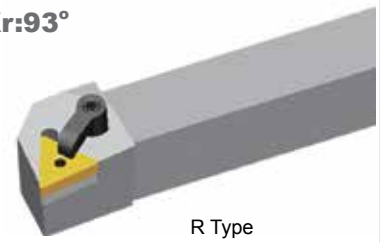
● ex stock · ab Lager ○ on demand · Anfrage

TN** Toolholder · Halter

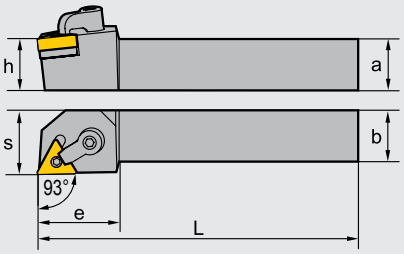
M-Clamping · M-Halter

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				

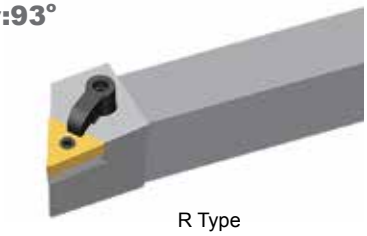
Type · Typ							
	MTJNR / L K / M / P16**	TN**1604**	TN**1604**	TN**1604**	TN**1604**	TN**1604**	TN**1604**
	MTJNR / LM / P22**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	

TN** Toolholder · Halter

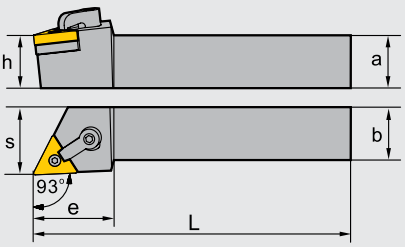
M-Clamping · M-Halter

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

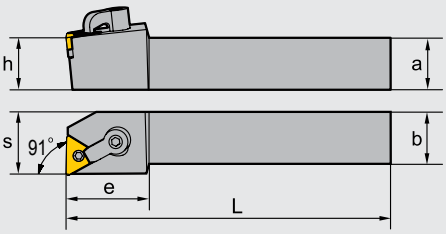
TN** Toolholder · Halter

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

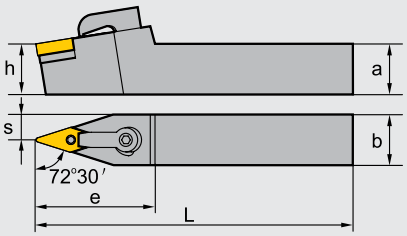
Application Anwendung	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Roughing Schruppen	Heavy Duty Schwerzerspanung	Cast iron machining Grauguss-Bearbeit.	PCBN · PCD PCBN · PKD
Insert shape Schneidplattenform	**SF** A88	**PM** A90	**DR** Double side doppel seitig A91	**HDR** A93	Flat Glatt 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 / LM / P22**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	TN**2204**	

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**

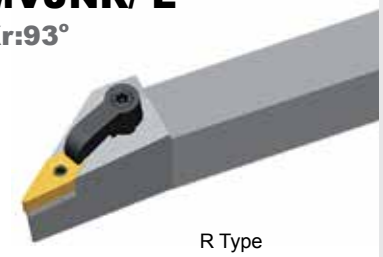
● ex stock · ab Lager ○ on demand · Anfrage

VN** Toolholder · Halter

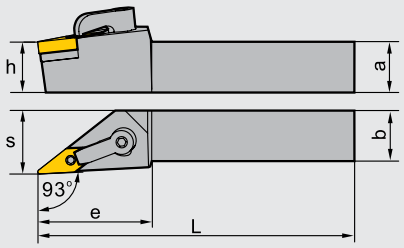
M-Clamping · M-Halter

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

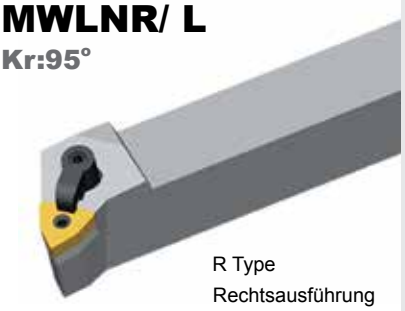
Application Anwendung	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Cast iron machining Grauguss-Bearbeit.	PCBN · PCD PCBN · PKD
Insert shape Schneidplattenform	**SF** A95	**PM** A96	**TC** A96	Flat Glatt A141
	DF A95	**DM** A96		
	ADF A95	**ZM** A96		
	EF A95	**EM** A96		
	NF A95	**NM** A96		
	NGF A95			
Type · Typ **MVJNR / L** K / M / P16**	VN**1604**	VN**1604**	VN**1604**	VN**1604**

WN** Toolholder · Halter

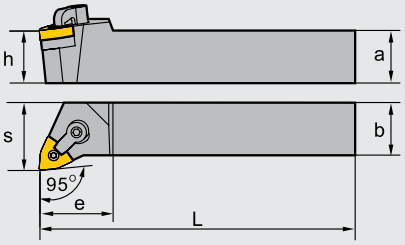
M-Clamping · M-Halter

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

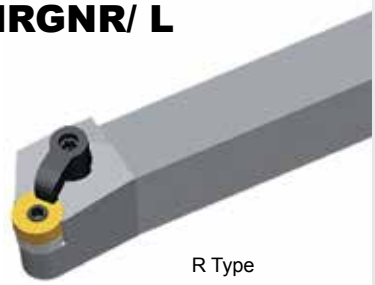
Application Anwendung	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Roughing Schruppen	Cast iron machining Grauguss-Bearbeit.
Insert shape Schneidplattenform	**SF** A97	**PM** A99	**DR** Double side doppel seitig A100	Flat Glatt A100
	DF A97	**DM** A99		**TC** A100
	ADF A97	**ZM** A99		
	EF A98	**EM** A99		
	NF A98	**EG** A99		
		NM A99		
Type ·Typ **MWLNR / L**K / M06**	WN**0604**	WN**0604**	WN**0604**	WN**0604**
MWLNR / LK / M / P08**	WN**0804**	WN**0804**	WN**0804**	WN**0804**

● ex stock · ab Lager ○ on demand · Anfrage

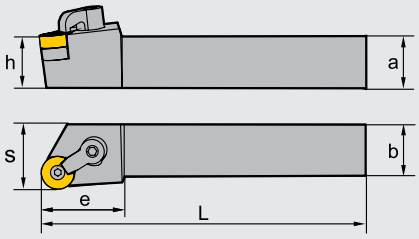
RN** Toolholder · Halter

M-Clamping · M-Halter

MRGNR/ L



R Type
Rechtsausführung

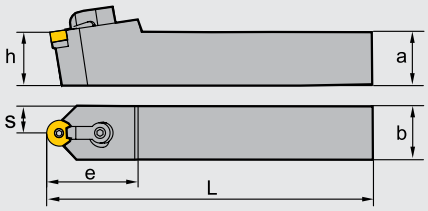


Type Typ		Stock Lager		Dimension (mm) Abmessung						Application inserts Wendeschneid-platten	Clamping Screw Schraube	Shim Unterlage	Wrench Schlüssel	Clamp Pratze	Dowel pin Passstift
		R	L	a	b	L	h	s	e						
MRGNR/ L	**2020K12**	○	○	20	20	125	20	25	32	RN**1204** A101	DM6×25	R12BM	WH30L	C1RD	TM6×17
	2525M12	○	○	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



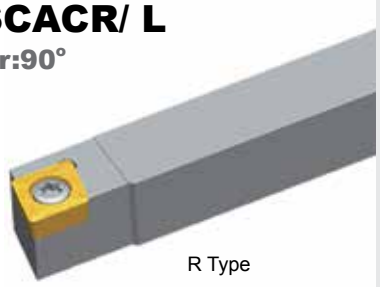
Type Typ		Stock Lager	Dimension (mm) Abmessung						Application inserts Wendeschneid-platten	Clamping screw Schraube	Shim Unterlage	Wrench Schlüssel	Clamp Pratze	Dowel pin Passstift
			a	b	L	h	s	e						
MRDNN	**2020K12**	○	20	20	125	20	10	35	RN**1204** A101	DM6×25	R12BM	WH30L	C1RD	TM6×17
	2525M12	○	25	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

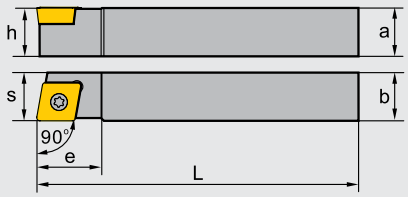
S-Clamping · S-Halter

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

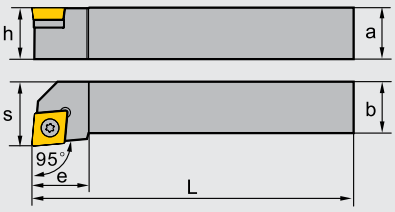
CC** Toolholder · Halter

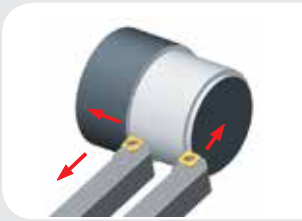
S-Clamping · S-Halter

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

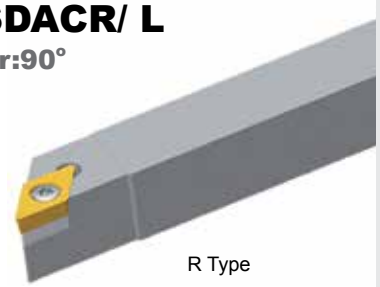
Application Anwendung	Extra Finishing Feinbearbeitung	Finishing Schlichten	Semi-finishing Mittlere Bearbeit.	Roughing Schruppen	Al machining Alu-Bearbeitung	Cast iron machining Grauguss-Bearbeit.	PCBN/PCD inserts/WSP
Insert shape Schneidplattenform	**SF** A105	**HF** A106	**HM** A106	**HR** A108	**LH** 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 / LK / M / P12**		CC** 1204**	CC** 1204**	CC** 1204**	CCGX 1204**	CC** 1204**	CC** 1204**

DC** Toolholder · Halter

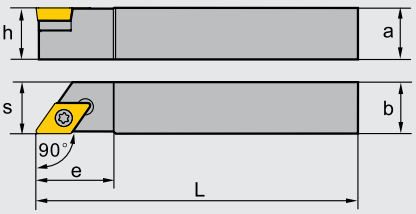
S-Clamping · S-Halter

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**
SDACR / LF / H11**	DC** 11T3**	DC** 11T3**	DC** 11T3**	DC** 11T3**	DCGX 11T3**	DC** 11T3**	DC** 11T3**

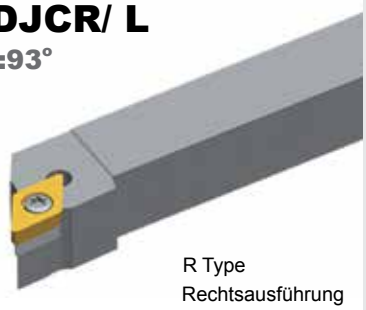
● ex stock · ab Lager ○ on demand · Anfrage

DC** Toolholder · Halter

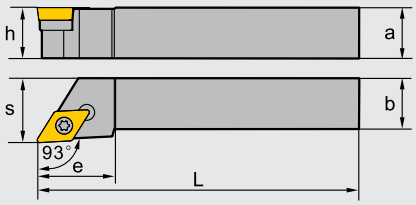
S-Clamping · S-Halter

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

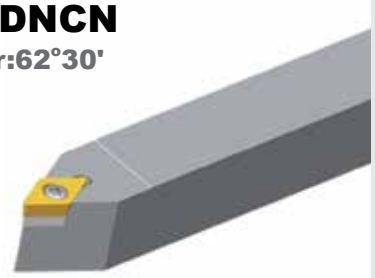
Application Anwendung	Extra Finishing Feinbearbeitung	Finishing Schlichten	Semi-finishing Mittlere Bearbeit.	Roughing Schruppen	Al machining Alu-Bearbeitung	Cast iron mach. Grauguss-Bearbeitung	PCBN · PCD PCBN · PKD
Insert shape Schneidplattenform	**SF** A110	**HF** A111	**HM** A111	**HR** A112	**LH** 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**

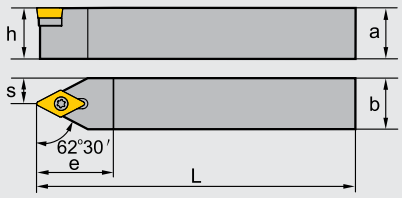
DC** Toolholder · Halter

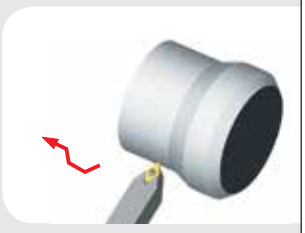
S-Clamping · S-Halter

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**

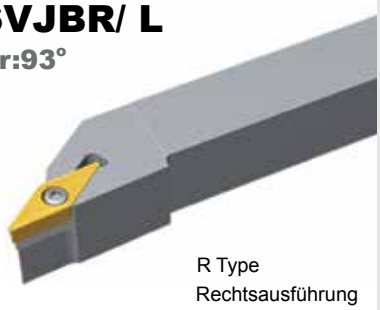
● ex stock · ab Lager ○ on demand · Anfrage

VB** Toolholder · Halter

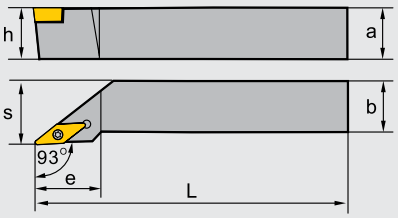
S-Clamping · S-Halter

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				

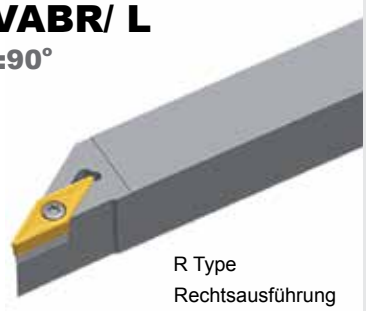
Type · Typ							
	SVJBR / LF / H / K / M11**	VB**1102**	VB**1102**	VB**1102**			
	SVJBR / LH / K / M / P16**		VB**1604**	VB**1604**	VB**1604**	VB**1604**	VB**1604**

VB** Toolholder · Halter

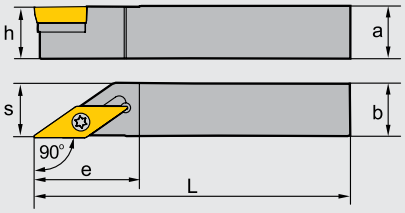
S-Clamping · S-Halter

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 / LF11**	VB**1102**	VB**1102**	VB**1102**			
	SVABR / LH / K / M16**		VB**1604**	VB**1604**	VB**1604**	VB**1604**	VB**1604**

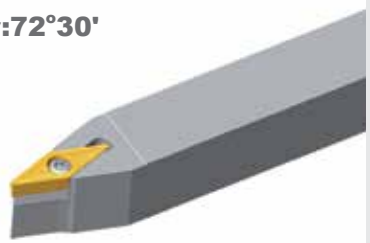
● ex stock · ab Lager ○ on demand · Anfrage

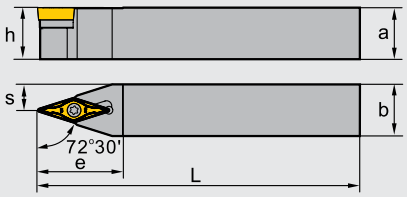
VB** Toolholder · Halter

S-Clamping · S-Halter

SVVBN

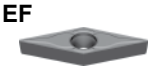
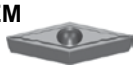
Kr:72°30'





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				

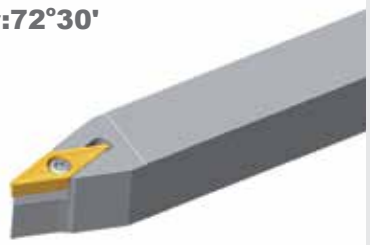
Type · Typ						
SVVBN****F / H / K11**	VB**1102**	VB**1102**	VB**1102**			
SVVBN****H / K / M16**		VB**1604**	VB**1604**	VB**1604**	VB**1604**	VB**1604**

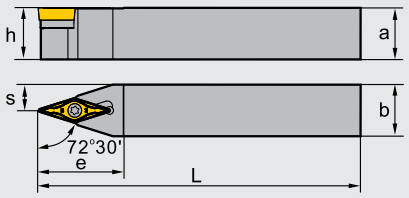
VC** Toolholder · Halter

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**	
Type · Typ **SVVCN**H / K / M16**		VC**1604**	VCGX1604**	VC**1604**

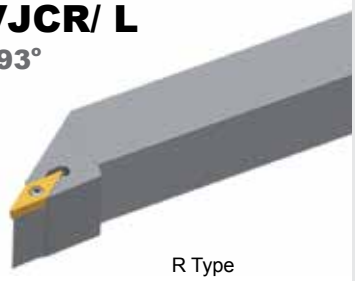
● ex stock · ab Lager ○ on demand · Anfrage

VC** Toolholder · Halter

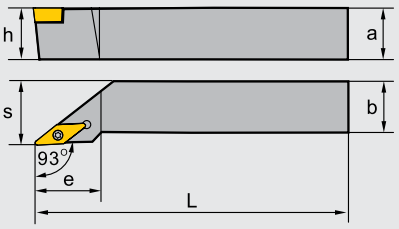
S-Clamping · S-Halter

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

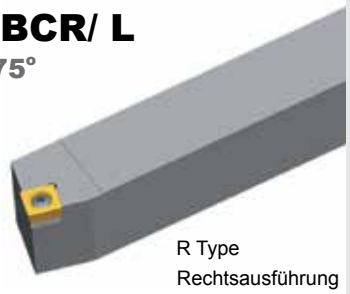
Application Anwendung	Extra Finishing Feinbearbeitung	Finishing Schlichten	Al machining Alu-Bearbeitung	PCBN · PCD PCBN · PKD
Insert shape Schneidplattenform	**SF** A125	**HF** A125	**LH** A126	Flat Glatt A145
		NF A125	**LC** A126	
Type · Typ **SVJCR / L**E / F / H / K / M11**	VC**1103**	VC**1103**	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

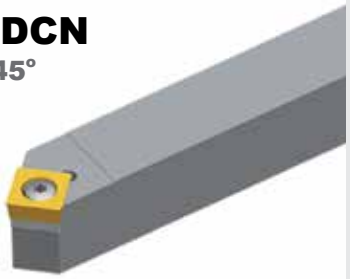
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Screw Schraube	Shim Unterlage	Shim screw Unterlagsschraube	Wrench Schlüssel
SSBCR/ L	**1212F09**	●	●	12	12	80	12	11	16	I60M3.5×8	—	—	WT15IP
	1616H09	●	●	16	16	100	16	13	16	I60M3.5×8	S09BS	SM5×8.65XA	WT15IP WH35L
	2020K12	●	●	20	20	125	20	17	25	I60M4×11X	S12BS	SM6×10XA	WT15IP WH40L

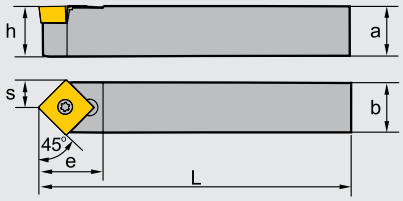
SC** Toolholder · Halter

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 / LF / H09**	SC**09T3**	SC**09T3**	SC**09T3**	SCGX09T3**	SC**09T3**
	SSBCR / LK12**		SC**1204**	SC**1204**	SCGX1204**	SC**1204**
	SSDCNF / H09**	SC**09T3**	SC**09T3**	SC**09T3**	SCGX09T3**	SC**09T3**

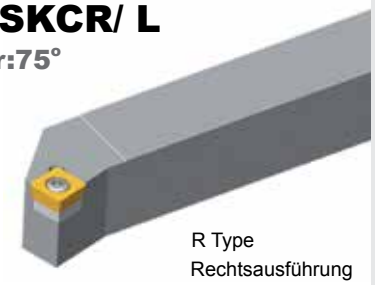
● ex stock · ab Lager ○ on demand · Anfrage

SC** Toolholder · Halter

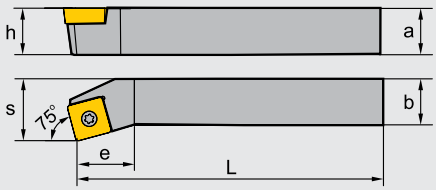
S-Clamping · S-Halter

SSKCR/ L

Kr:75°



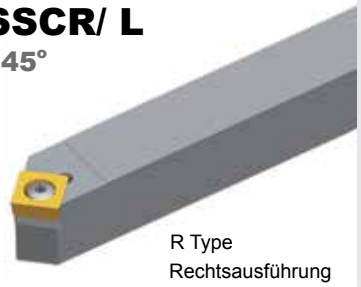
R Type
Rechtsausführung



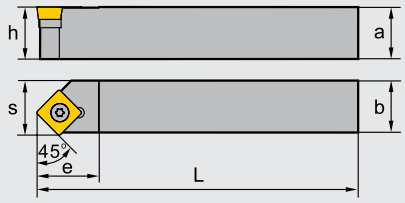
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Screw Schraube	Shim Unterlage	Shim screw Unterlagsschraube	Wrench Schlüssel
SSKCR/ L	**1616H09**	●	●	16	16	100	16	20	13	I60M3.5×12	S09BS	SM5×8.65XA	WT15IP WH35L

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				

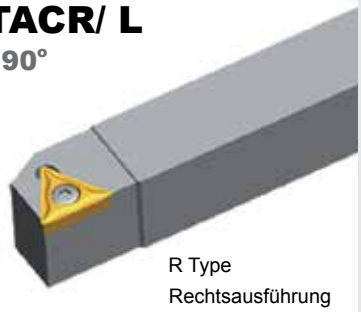
Type · Typ						
	SSKCR / LH09**	SC**09T3**	SC**09T3**	SC**09T3**	SCGX09T3**	SC**09T3**
	SSSCR / LH09**	SC**09T3**	SC**09T3**	SC**09T3**	SCGX09T3**	SC**09T3**
	SSSCR / LK12**		SC**1204**	SC**1204**	SCGX1204**	SC**1204**

TC** Toolholder · Halter

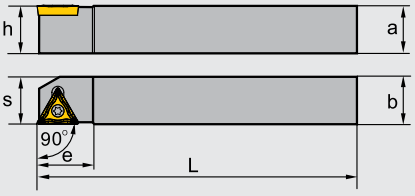
S-Clamping · S-Halter

STACR/ L

Kr:90°



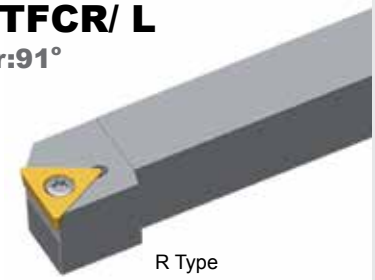
R Type
Rechtsausführung



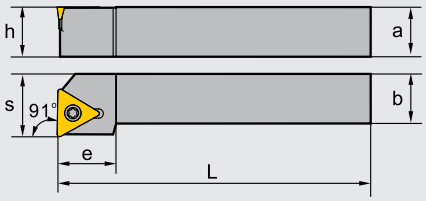
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Screw Schraube	Wrench Schlüssel		
STACR/ L	**1212F11**	●	●	12	12	80	12	12.5	14	I60M2.5×6.5	WT07IP		

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**

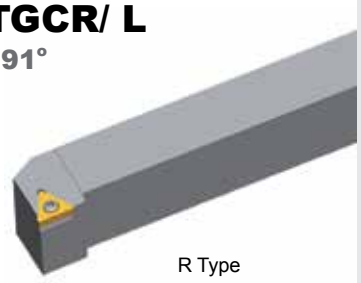
● ex stock · ab Lager ○ on demand · Anfrage

TC** Toolholder · Halter

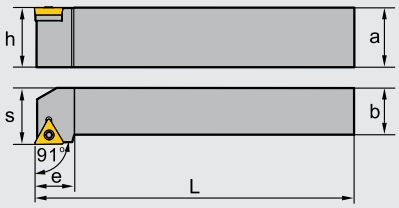
S-Clamping · S-Halter

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

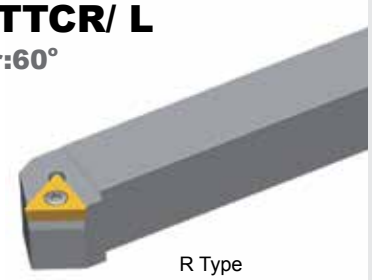
Application Anwendung	Extra Finishing Feinbearbeitung	Finishing Schlichten	Semi-finishing Mittlere Bearbeit.	Roughing Schruppen	Al machining Alu-Bearbeitung	Cast iron machining Grauguss Bearbeit.	PCBN/PCD inserts/WSP
Insert shape Schneidplattenform	**SF** A114 9	**HF** A120	**HM** A122	**HR** A122	**LH** 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 / LF / H11**	TC**1102**	TC**1102**	TC**1102**	TC**1102**	TCGX1102**	TC**1102**	TC**1102**
STGCR / LK / M16**		TC**16T3**	TC**16T3**	TC**16T3**	TCGX16T3**	TC**16T3**	TC**16T3**

TC** Toolholder · Halter

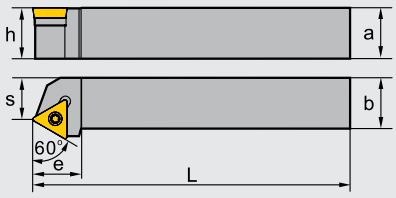
S-Clamping · S-Halter

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
	2020K16	●	●	20	20	125	20	17	19				WH35L

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 / LH / K16**		TC**16T3**	TC**16T3**	TC**16T3**	TCGX16T3**	TC**16T3**	TC**16T3**

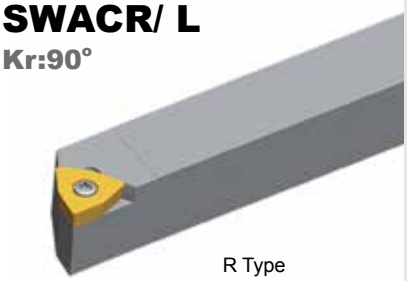
● ex stock · ab Lager ○ on demand · Anfrage

WC** Toolholder · Halter

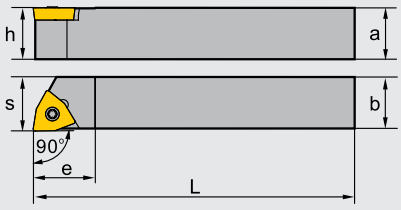
S-Clamping · S-Halter

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 / LH06**	WC*X06T3**
SWACR / LK08**	WC*X0804**

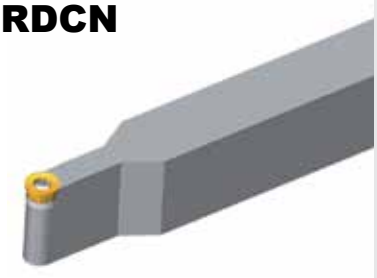
A

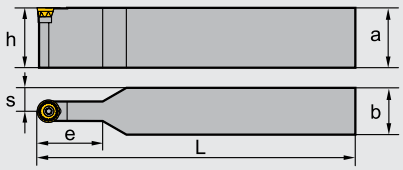
General Turning
Allgemeine Drehbearbeitung

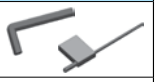
RC** Toolholder · Halter

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
Type · Typ	**SRDCN**H08**	RCMT0803MO	RCGX0803MO-LH
	SRDCNH / K / M10**	RCMT10T3 MO	
	SRDCNK / M / P12**	RCMT1204 MO	
	SRDCNP / S16**	RCMT1606 MO	
	SRDCNP / S20**	RCMT2006 MO	

Holder not suitable for RCMX inserts
Halter nicht für RCMX Platten geeignet

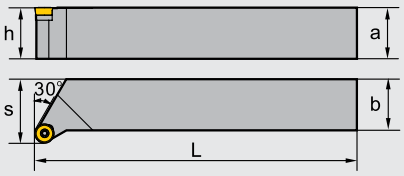
● ex stock · ab Lager ○ on demand · Anfrage

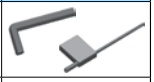
RC** Toolholder · Halter

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
SRGCR / LH08**		RCGX0803MO-LH
SRGCR / LH / K / M10**	RCMT10T3 MO	
SRGCR / LK / M12**	RCMT1204 MO	

Type · Typ

Holder not suitable for RCMX inserts
Halter nicht für RCMX Platten geeignet

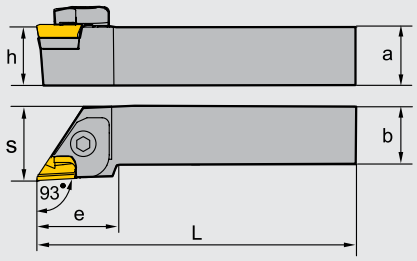
KNUX** Toolholder · Halter

C-Clamping · C-Halter

CKJNR/ L

Kr:93°

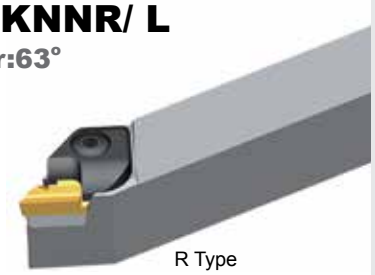
R Type
Rechtsausführung



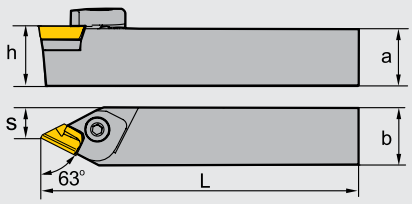
Type Typ		Stock Lager	Dimension (mm) Abmessung						Application inserts Wendeschneid-platten	Clamp Pratze	Clamp screw Pratzen-schraube	Spring Feder	Dowel pin Passstift	Shim Unterlage	Shim screw Unterlages-schraube	Wrench Schlüssel
			a	b	L	h	s	e								
CKJNR	**2525M16**	●	25	25	150	25	32	32	KNUX1604**R 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								

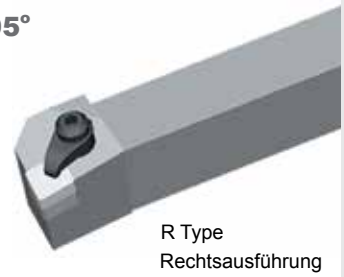
● ex stock · ab Lager ○ on demand · Anfrage

CN** Toolholder · Halter

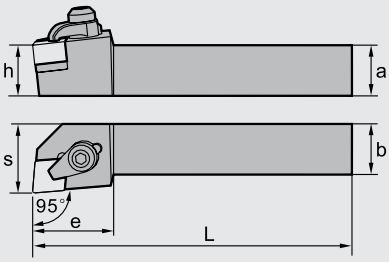
C-Clamping · C-Halter

CCLNR/ L

Kr:95°



R Type
Rechtsausführung



Type Typ		Stock Lager		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							
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							

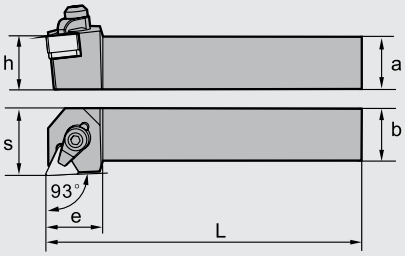
TN** Toolholder · Halter

C-Clamping · C-Halter

CTJNR/ L

Kr:93°

R Type
Rechtsausführung



Type Typ		Stock Lager		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							
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							

A

General Turning
Allgemeine Drehbearbeitung

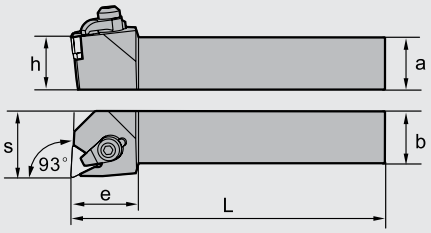
TN** Toolholder · Halter

C-Clamping · C-Halter

CTUNR/ L

Kr:93°

R Type
Rechtsausführung



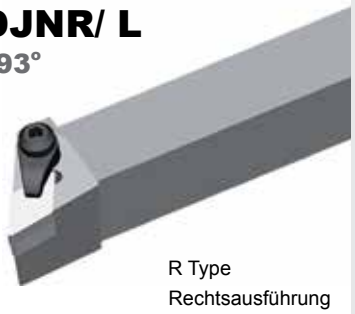
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Application inserts Wendeschneid-platten	Clamp Pratze	Clamp screw Pratzen-schraube	Wrench Schlüssel	Shim Unterlage	Shim screw Unterlages-schraube	Spring Feder
CTUNR/ L	**2020K12**	○	○	20	20	125	20	25	27	TNGN1607** (1604**) A167	C1RC	CM6×30B	WH20L WH40L	T16CC-07 (T16CC-04)	SM3×10B	SPR1
	2525M16	○	○	25	25	150	25	32	27							

DN** Toolholder · Halter

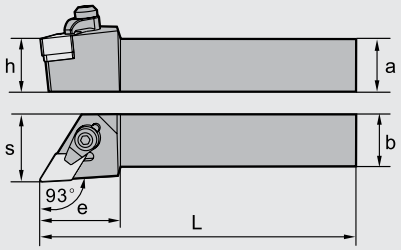
C-Clamping · C-Halter

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

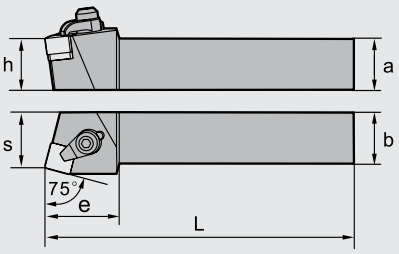
SN** Toolholder · Halter

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							

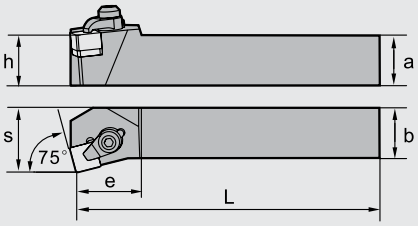
SN** Toolholder · Halter

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

A

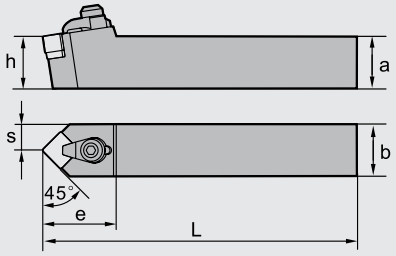
General Turning
Allgemeine Drehbearbeitung

SN** Toolholder · Halter

C-Clamping · C-Halter

CSDNN

Kr:45°

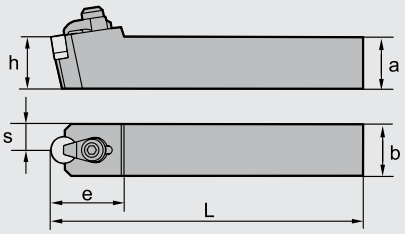


Type Typ		Stock Lager	Dimension (mm) Abmessung						Application inserts Wendeschneid-platten	Clamp Pratze	Clamp screw Pratzen-schraube	Wrench Schlüssel	Shim Unterlage	Shim screw Unterlages-schraube	Spring Feder
			a	b	L	h	s	e							
CSDNN	**2020K12**	○	20	20	125	20	10	35	SNGN1207** (1204**) A165	C1RC	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

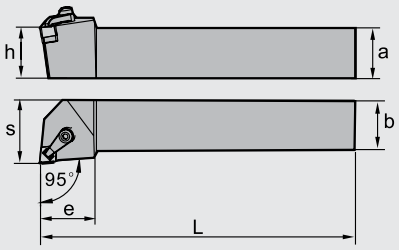
CN** Toolholder · Halter

J-Clamping · J-Halter

JCLNR/ L

Kr:95°

R Type
Rechtsausführung



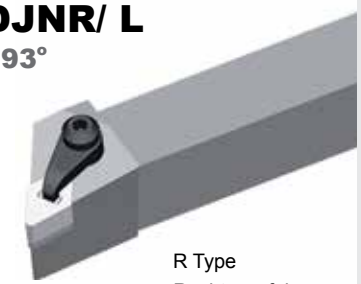
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Application inserts Wendeschneid-platten	Clamp Pratze	Clamp screw Pratzen-schraube	Wrench Schlüssel	Shim Unterlage	Shim screw Unterlages-schraube	Spring Feder
JCLNR/ L	2020K12	○	○	20	20	125	20	29	32	CNGX1207** A162	C1RJ	CM6×30B	WH20L WH40L	C12CC-07	SM3×10B	SPR1
	2525M12	○	○	25	25	150	25	32	32							

DN** Toolholder · Halter

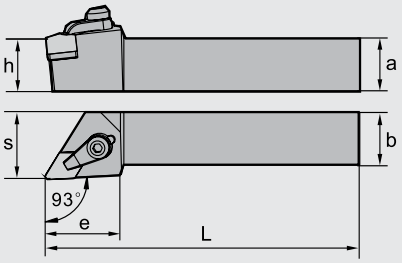
J-Clamping · J-Halter

JDJNR/ L

Kr:93°



R Type
Rechtsausführung



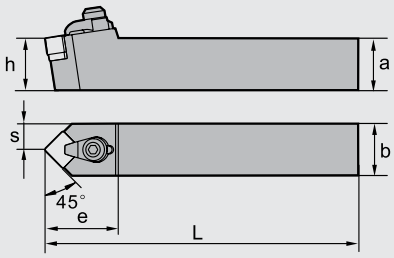
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung a	b	L	h	s	e	Application inserts Wendeschneid-platten	Clamp Pratze	Clamp screw Pratzen-schraube	Wrench Schlüssel	Shim Unterlage	Shim screw Unterlages-schraube	Spring Feder
JDJNR/ L	2525M15	●	○	25	25	150	25	32	38	DNGX1507** A163	C1RJ	CM6×30B	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 • min. Bearbeitungs Ø = 20mm • neg. inserts with good stability and Economy • 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) • min. Bearbeitungs Ø = 8,5mm (Schraubenklemm.) • Inserts with 5°/7°/11° • 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) • min. Ø to be machined = 8,5mm • Inserts with 5°/7°/11° • Antivibrations-Klemmhalter (Hartmetall) • min. Bearbeitungs Ø = 8,5mm • WSP mit 5°/7°/11°						**STUP** A275	**SDUP** A274	**SCLP** A272	**SDQP** A273
								SVUC A278		**SVQC** A277

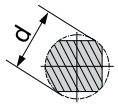
Turning · Drehen

Internal turning tools Code Key · Drehwerkzeugen zur Innenbearbeitung ISO Kennzeichnung

Type of Shank *Schaftausführung*

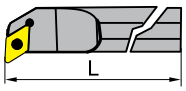
code	Type *Typ*
A	Steel shank+Codant hole *Stahlschaft mit Kühlbohrung*
C	Carbide shank *Hartmetallschaft*
E	Carbide shank+Oil hole *Hartmetallschaft mit Kühlbohrung*
S	Steel shank *Stahlschaft*
X	Special insert application *Besondere Anwendung*

Shank diameter *Schaftdurchmesser*



code	diameter *Durchmesser*
16	16
20	20
25	25
32	32
40	40
50	50

Tool length *Halterlänge*

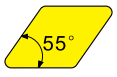


code	length *Länge*
H	100
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400

Clamping System *Klemmsystem*

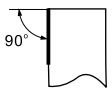
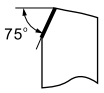
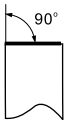
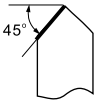
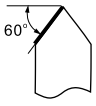
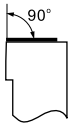
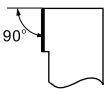
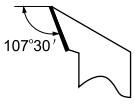
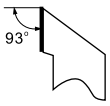
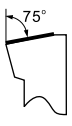
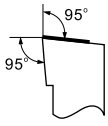
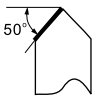
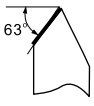
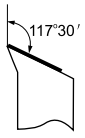
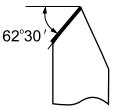
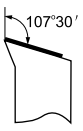
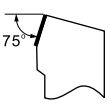
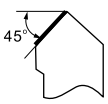
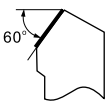
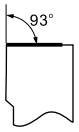
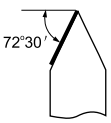
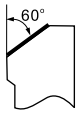
P	
M	Screw clamping *Schraub-Spannsystem*
S	Wedge lock clamping *Pratzenkeilklemmung*
C	Overhead clamping *Pratzenkeilklemmung*

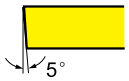
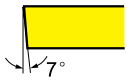
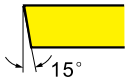
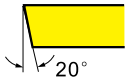
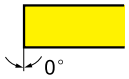
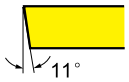
Insert shape *Plattenform*

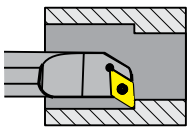
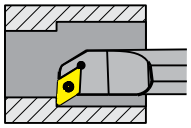
C	 D
R	S
T	V
W	

S 16 R - S D U

Holder style and lead angle *Halterform und Anstellwinkel*

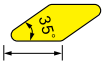
A	B	C	D	E	F	G	H
							
J	**K**	**L**	**M**	**N**	**O**	**P**	**Q**
							
R	**S**	**T**	**U**	**V**	**W**	**X**	
							

Clearance angle of major cutting edge *Freiwinkel von Hauptschneide*	
	B
	C
	D
	E
	N
	P

Holder execution *Halterausführung*	
	L
	R

Manufacture option *Herstellungsoptionen*	
D	Increase offset f size+1.0mm *Aufmaß von F +1mm erhöhen*
E	Increase offset f size+2.0mm *Aufmaß von F +2mm erhöhen*
R	Round shank *Rundschaft*
W	Wedge clamping *Keil-Klemmung*
X	Back boring *Rückwärts drehen*

Cutting edge length
Schneidkantenlänge

insert shape *insert shape*	C	D	R	S	T	V	W
							
Diameter of incircle (mm) *Durchmesser von Innenkreis*	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	---	---

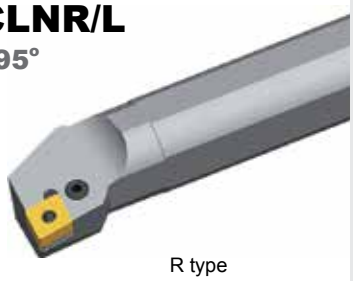
A

CN** Toolholder · Halter

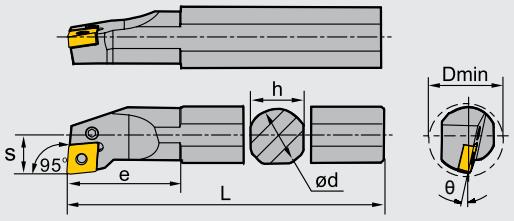
P-Clamping / P-Halter

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 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					
**-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

A

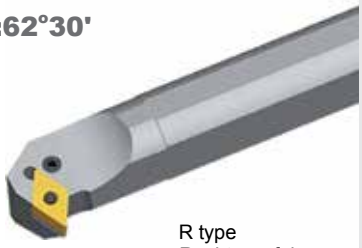
General Turning
Allgemeine Drehbearbeitung

DN** Toolholder Halter

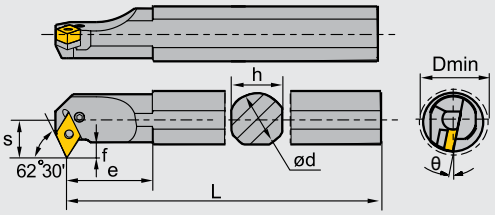
P-Clamping / P-Halter

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

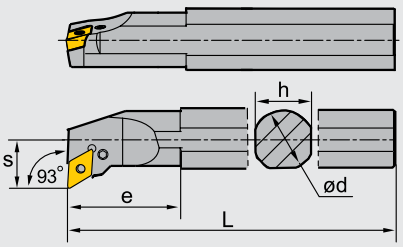
DN** Toolholder · Halter

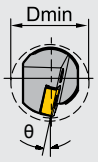
P-Clamping / P-Halter

PDUNR/L

Kr:93°

R type
Rechtsausführung



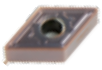


Type Typ	Stock Lager		Dimension (mm) Abmessung							Screw Schraube	Wrench Schlüssel	Lever Kniehebel	Shim Unterlage	Shim pin Rohrstift
	R	L	Dmin	ød	h	L	S	θ	e					
S20Q-PDUNR/L11	●	●	25	20	18	180	13	-16°	30	LEM5×12B	WH20L	L3D	——	——
S20S-PDUNR/L11	●	●	25	20	18	250	13	-16°	30					
S25Q-PDUNR/L11	●	●	32	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 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 **-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

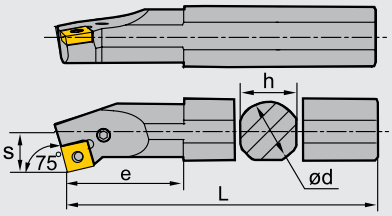
SN** Toolholder · Halter

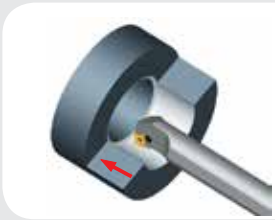
P-Clamping / P-Halter

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

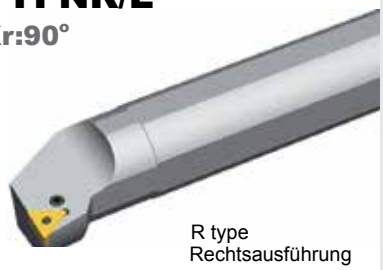
General Turning
Allgemeine Drehbearbeitung

TN** Toolholder · Halter

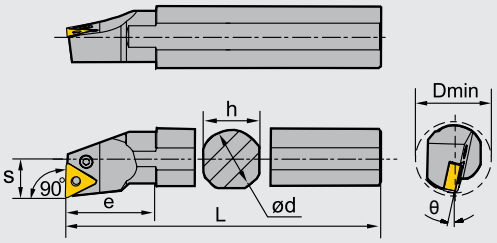
P-Clamping / P-Halter

PTFNR/L

Kr:90°



R type
Rechtsausführung



Type Typ	Stock Lager R	Stock Lager L	Dimension (mm) Abmessung Dmin	ød	h	L	S	θ	e	Screw Schraube	Wrench Schlüssel	Lever Kniehebel	Shim Unterlage	Shim pin Rohrstift
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	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Roughing Schruppen	Cast iron machining Grauguss-Bearbeit.
**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

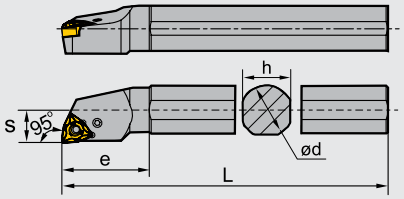
WN** Toolholder · Halter

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

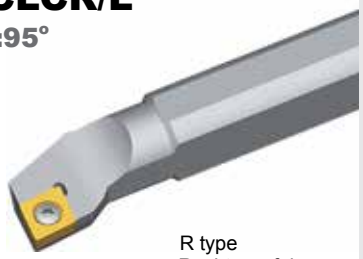
General Turning
Allgemeine Drehbearbeitung

CC** Toolholder · Halter

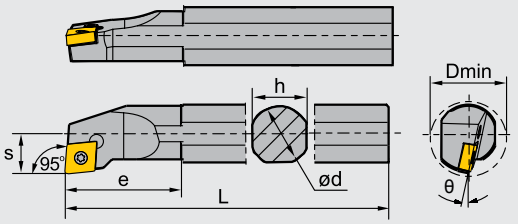
S-Clamping / S-Halter

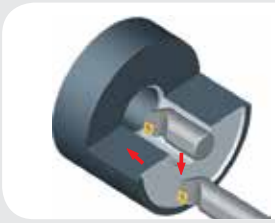
SCLCR/L

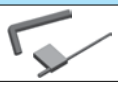
Kr:95°



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 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 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 **-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

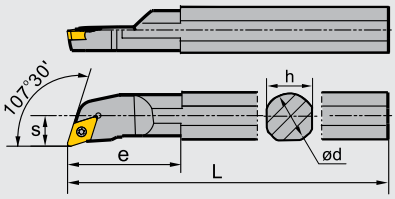
DC** Toolholder · Halter

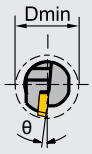
S-Clamping / S-Halter

SDQCR/L

Kr:107°30'

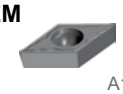
R type
Rechtsausführung





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

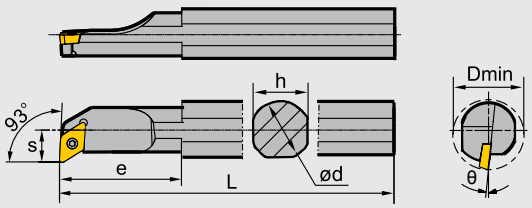
DC** Toolholder · Halter

S-Clamping / S-Halter

SDUCR/L

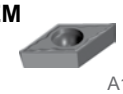
Kr:93°

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

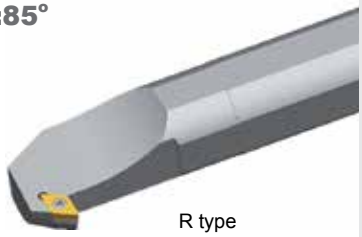
General Turning
Allgemeine Drehbearbeitung

DC** Toolholder · Halter

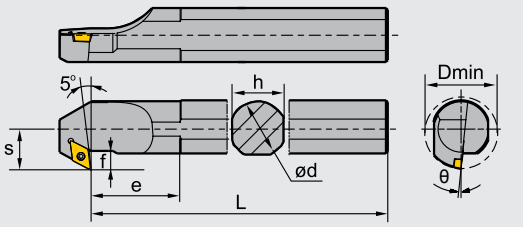
S-Clamping / S-Halter

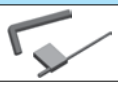
SDZCR/L

Kr:85°

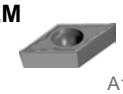


R type
Rechtsausführung



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**

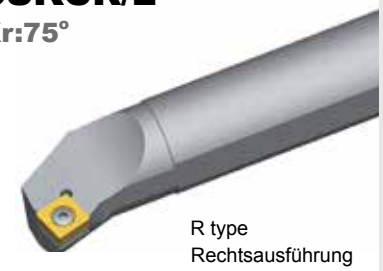
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

SC** Toolholder · Halter

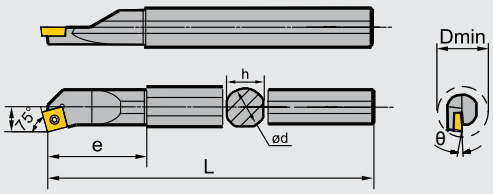
S-Clamping / S-Halter

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 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 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

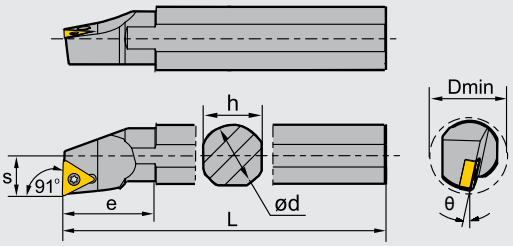
TC** Toolholder · Halter

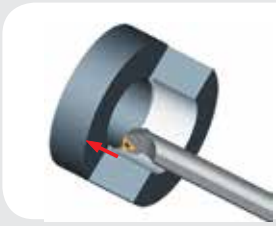
S-Clamping / S-Halter

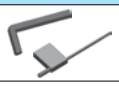
STFCR/L

Kr:91°/*Kr:90°

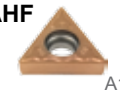
R type
Rechtsausführung





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

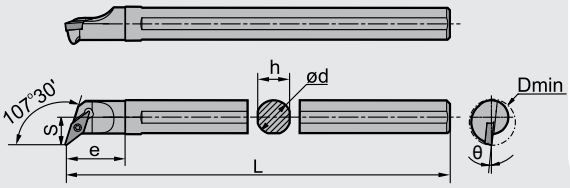
VC** Toolholder · Halter

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

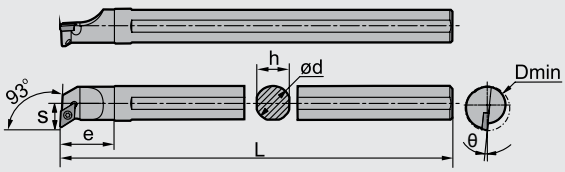
VC** Toolholder · Halter

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

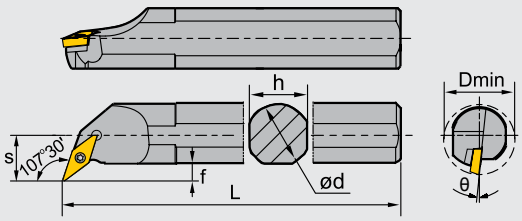
VB** Toolholder · Halter

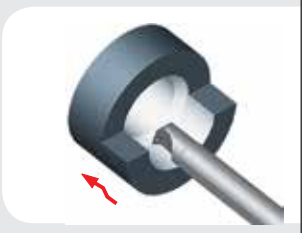
S-Clamping / S-Halter

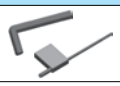
SVQBR/L

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

A

General Turning
Allgemeine Drehbearbeitung

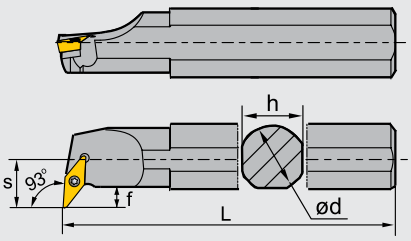
VB** Toolholder · Halter

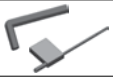
S-Clamping / S-Halter

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**

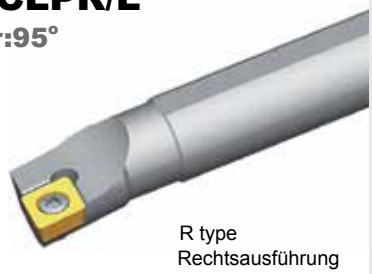
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

CP** Toolholder · Halter

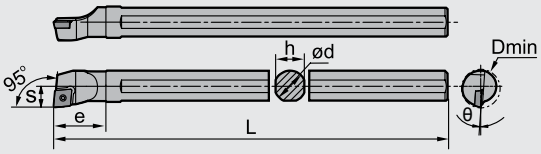
S-Clamping / S-Halter

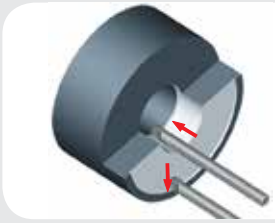
SCLPR/L

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**

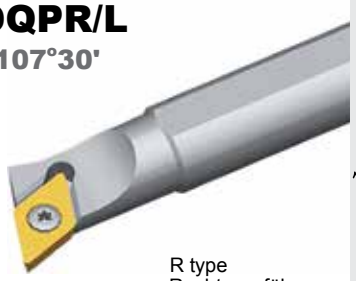
♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

DP** Toolholder · Halter

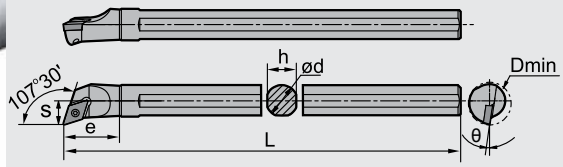
S-Clamping / S-Halter

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**

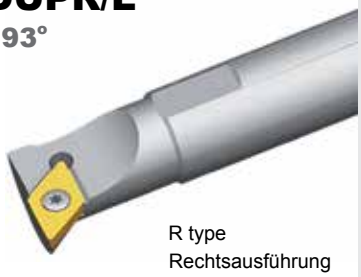
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

DP** Toolholder · Halter

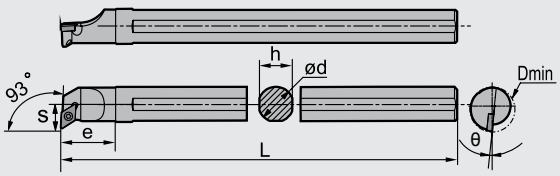
S-Clamping / S-Halter

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

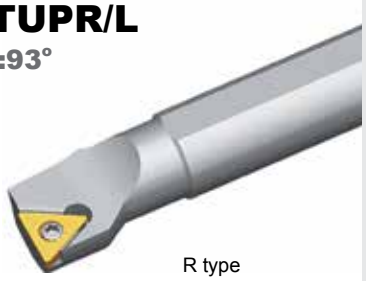
General Turning
Allgemeine Drehbearbeitung

TP** Toolholder · Halter

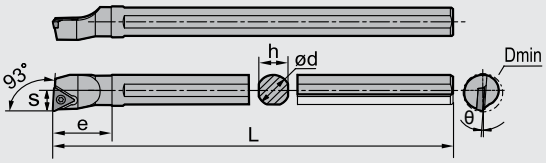
S-Clamping / S-Halter

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

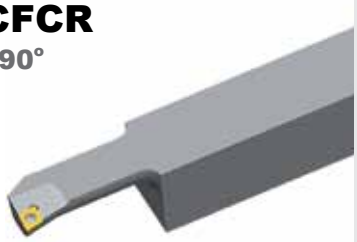
Application Anwendung	Extra Finishing Feinbearbeitung
insert shape Schneidplattenform	**SF** A124
Type Typ **-STUPR/L09	TP**0902**
Type Typ **-STUPR/L11	TP**1103**

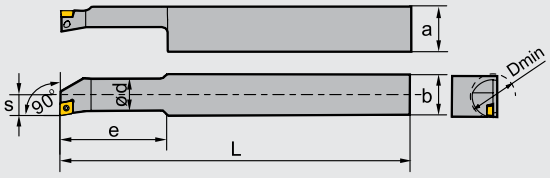
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

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

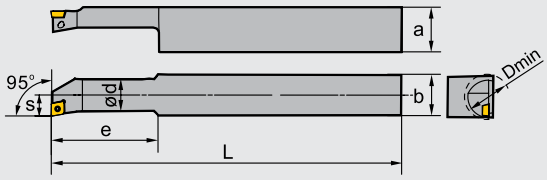
General Turning
Allgemeine Drehbearbeitung

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**
**-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:

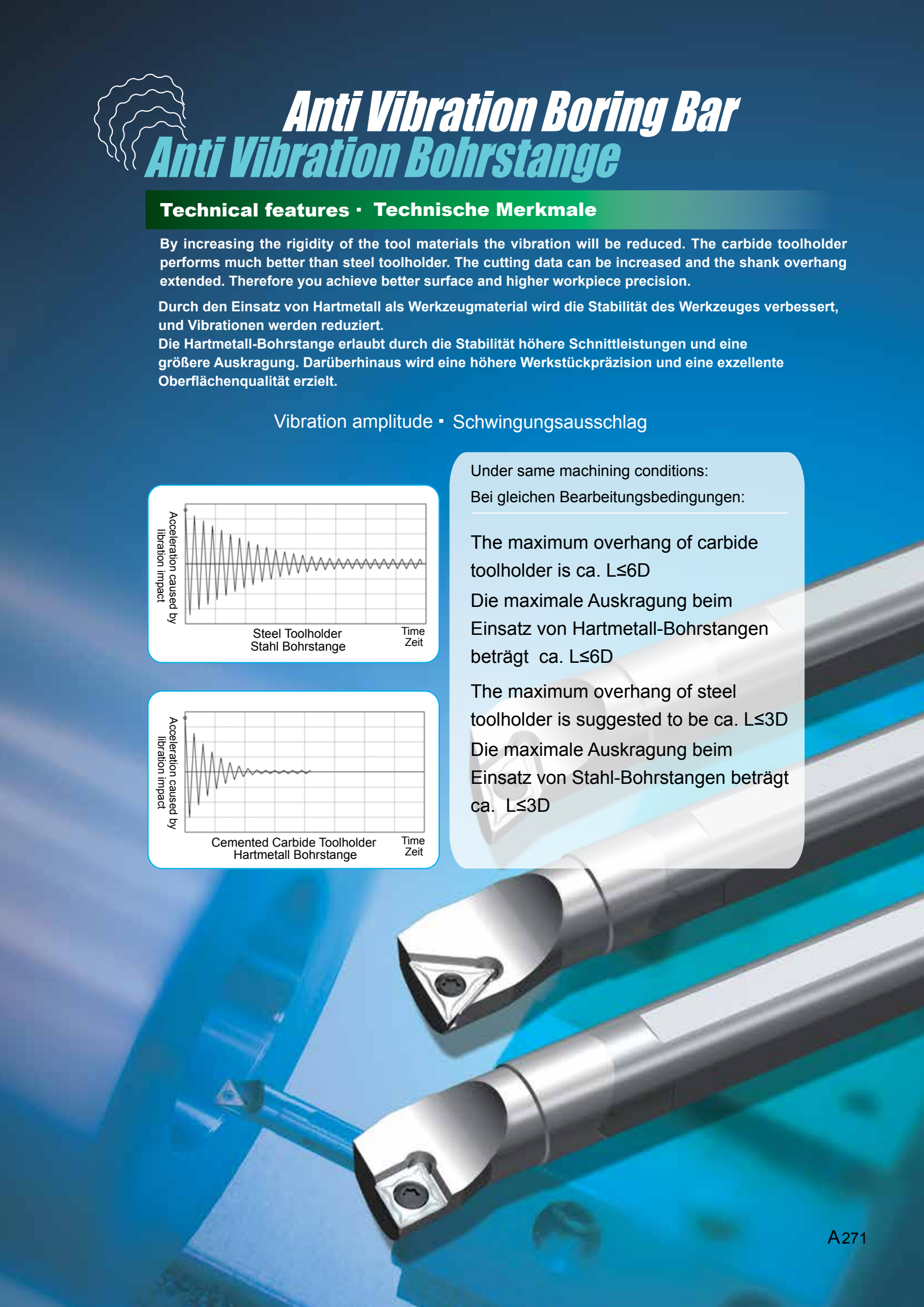
Bei gleichen Bearbeitungsbedingungen:

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



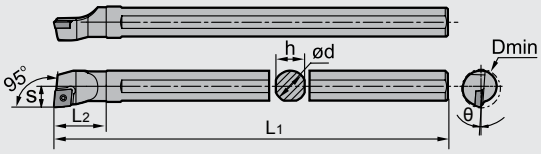
A

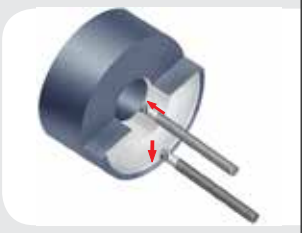
General Turning
Allgemeine Drehbearbeitung

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

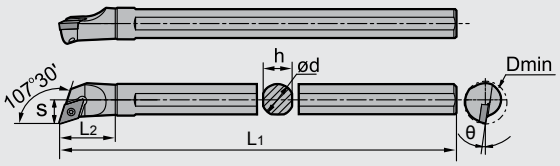
Type Typ	Application Anwendung	Extra Finishing Feinbearbeitung
	insert shape Schneidplattenform	**SF** A105
	C*-SCLPR/L06	CP**0602**
	C*--SCLPR/L09	CP**09T3**
	E*-SCLCR/L06	CC**0602**
	E*--SCLCR/L09	CC**09T3**

● 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**

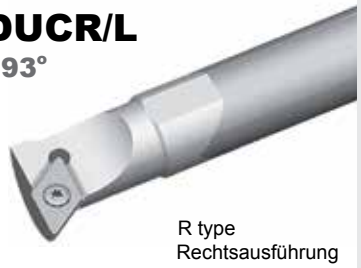
♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

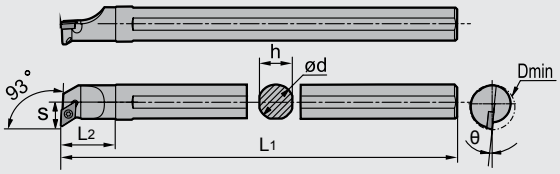
General Turning
Allgemeine Drehbearbeitung

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	L_1	L_2	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**

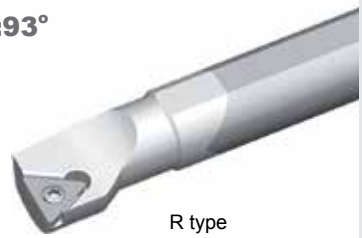
● ex stock · ab Lager ○ on demand · auf Anfrage ♦ Toolholder with holes for coolant · Klemmhalter mit Kühlmittelbohrung

TP** Toolholder · Halter

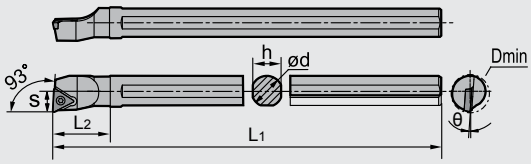
S-Clamping / S-Halter

STUPR/L

Kr:93°



R type
Rechtsausführung



Type Typ	Stock Lager		Dimension (mm) Abmessung							Screw Schraube	Wrench Schlüssel		
	R	L	ØD	ød	s	L_1	L_2	h	θ				
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

Type Typ	Application Anwendung	Extra Finishing Feinbearbeitung
	insert shape Schneidplattenform	**SF** A124
Type Typ	**C*-STUPR/L09**	TP**0902**
	C*-STUPR/L11	TP**1103**

♦ Toolholder with holes for Coolant · Klemmhalter mit Kühlmittelbohrung ● ex stock · ab Lager ○ on demand · auf Anfrage

A

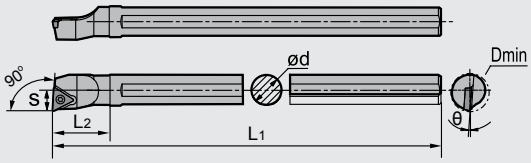
General Turning
Allgemeine Drehbearbeitung

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

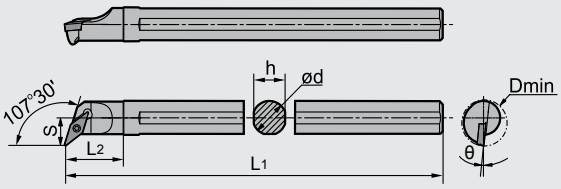
VC** Toolholder · Halter

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

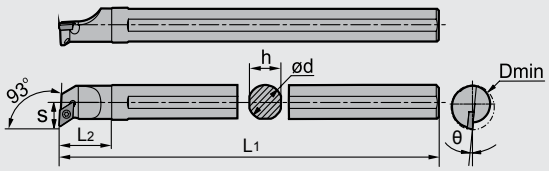
VC** Toolholder · Halter

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 Cutting speed is too high. Flank angle is too small. Feed rate is too low	Select grade with higher wear resistance Reduce cutting speed Increase flank angle. Increase feed rate
3	Crater wear	Bad surface and chip control	Grade is too soft. Cutting speed is too high. Feed rate is too high.	Select grade with higher wear resistance Reduce cutting speed Reduce feed rate
4	Chipping	Tool life not stable Sudden breakage of cutting edge	Grade is too hard. Feed rate is too high. Cutting edge strength not strong enough The rigidity of holder in insuffiecient (vibration)	Select grade with higher toughness Reduce feed rate Change honing of cutting edge Use holder with bigger shank size
5	Fracturing	Cutting force increasing Surface roughness and measure becomes bad	Grade is too hard. Feed rate is too high. Cutting edge strength not strong enough The rigidity of holder in insufficient	Select grade with higher toughness Reduce feed rate Change honing of cutting edge Use holder with bigger shank size
6	Plastic deformation	Inconsistent measure meet. Damage to the cutting edge	Grade is too soft. Cutting speed is too high. Depth of cut and feed rate too high Cutting temperature is high	Grade with high wear resistance. Reduce cutting speed Decrease depth of cut and feed rate. Grade with high thermal conductivity.
7	Welding	Poor surface quality and inconsistent measurement. Increase in cutting force.	Cutting speed is low. Cutting edge not sharp enough Grade not suitable	Increase cutting speed Increase rake angle. 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 Grade is too hard.	Use dry cutting Select grade with higher toughness
9	Notch wear	Burr increase of Cutting force information	Unstable cutting condition (uncut surface,chilled parts, machining hardened layer) Friction caused by jagged shape chips. Feed rate and cutting speed too high	Grade with high wear resistance. Increase rake angle to improve sharpness Decrease cutting speed
10	Flaking	Mostly happens during machining of high hard materials or vibration	Cutting edge welding and adhesion. Bad chip removing	Increase rake angle to improve sharpness Use chip breaker with wider chip pocket

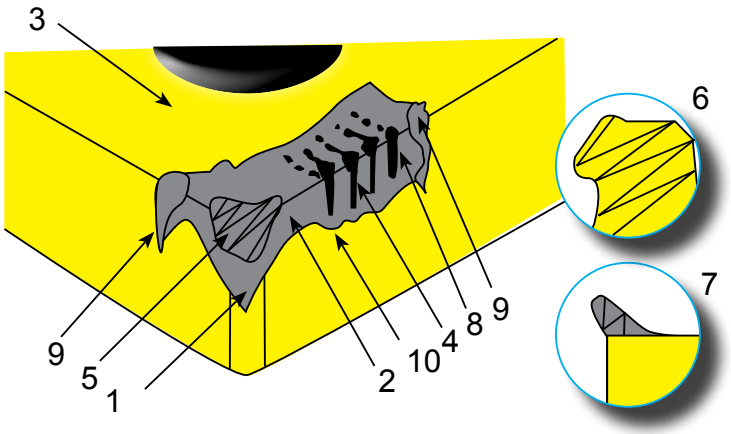


Bild	Art des Verschleißes	Auswirkungen	Grund	Gegenmaßnahmen
1+2	Freiflächen-verschleiß	Schlechte Oberflächengüte und Maßhaltigkeit Anstieg der Schnittkraft	Sorte nicht verschleißfest genug Schnittgeschwindigkeit zu hoch Freiwinkel zu klein Vorschub zu gering	Sorte mit höherer Verschleißfestigkeit Schnittgeschwindigkeit reduzieren Freiwinkel vergrößern Vorschub reduzieren
3	Kolkverschleiß	Schlechte Oberflächengüte und Spankontrolle	Sorte nicht verschleißfest genug Schnittgeschwindigkeit zu hoch Vorschub zu hoch	Sorte mit höherer Verschleißfestigkeit Schnittgeschwindigkeit reduzieren Vorschub reduzieren
4	Ausbröckelung	Standzeit nicht stabil Plötzlicher Bruch der Schneidkante	Sorte ist zu hart Vorschub zu hoch Schneidkantenstabilität nicht ausreichend Stabilität des Werkzeughalter oder Spannung nicht ausreichend	Sorte mit höherer Zähigkeit Vorschub reduzieren Schneidkanten-verrundung ändern Stabileren Halter verwenden
5	Bruch	Anstieg der Schnittkraft Schlechte Oberflächengüte und Maßhaltigkeit	Sorte ist zu hart Vorschub zu hoch Schneidkantenstabilität nicht ausreichend Stabilität des Werkzeughalter oder Spannung nicht ausreichend	Sorte mit höherer Zähigkeit Vorschub reduzieren Schneidkanten-verrundung ändern Stabileren Halter verwenden
6	Plastische Deformation	Schlechte Maßhaltigkeit Beschädigung der Schneidkante	Sorte nicht verschleißfest genug. Schnittgeschwindigkeit zu hoch Schnitttiefe und/oder Vorschub zu hoch Temperatur an der Schneide zu hoch	Sorte mit höherer Verschleißfestigkeit Schnitt-geschwindigkeit reduzieren Schnitttiefe und Vorschub reduzieren Sorte mit höherer Wärmebeständigkeit
7	Aufbauschneide	Anstieg der Schnittkraft Schlechte Oberflächengüte	Schnittgeschwindigkeit zu niedrig Schneidkante nicht scharf genug Sorte nicht geeignet	Schnittgeschwindigkeit erhöhen Spanwinkel erhöhen Sorte mit geringer Affinität
8	Thermischer Verschleiß	Bruch durch thermische Wechselwirkung Oft bei unterbrochenem Schnitt (Fräsen)	Durch die Bearbeitungs-Temperatur-schwankungen Sorte ist zu hart	Trockenbearbeitung Sorte mit höherer Zähigkeit
9	Kerbverschleiß	Gratbildung Anstieg der Schnittkraft	Beschädigung durch Späne (ausgefranste Spankante) Vorschub und Schnittgeschwindigkeit zu hoch	Sorte mit höherer Verschleißfestigkeit Spanwinkel vergrößern um eine schärfere Schneide zu bekommen Schnittgeschwindig-keit verringern
10	Abplatzung (Beschichtung)	Oft bei der Bearbeitung härterer Werkstoffe oder wenn Vibrationen auftauchen	Verklebungen an der Schneidkante sowie Ausbrüche. Schlechte Spanabfuhr	Spanwinkel vergrößern um eine schärfere Schneide zu bekommen 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

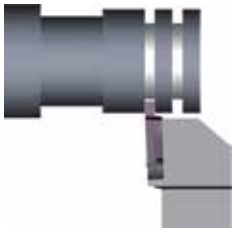
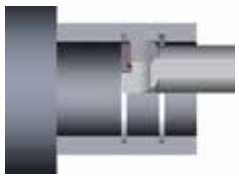
Internal grooving and turning tools · Ab- & Einstechwerkzeuge (Innen) A321

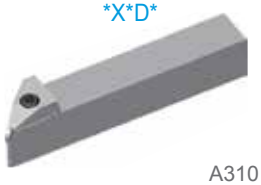
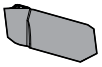
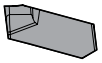
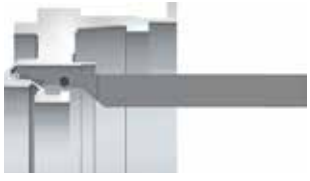
Parting and grooving tools code key · Ab- & Einstechwerkzeuge ISO Kennzeichen "QC Serie" A322

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** A312	ZP*S** 	• Assemble structure of parting blade and holder, good rigidity and parting range is adjustable. • The max. parting Ø = 120mm. • Die Auskragung des Abstech-Schwertes ist bei hoher Stabilität einstellbar • Der max. Abstech Ø = 120mm
			QE**R/L A309	ZP**D* ZP*S* 	• Inserts have 3d chip breaker, small cutting force, good performance on chip breaking • maximum parting Ø = 60mm • Schneideinsatz mit 3 versch. Spanleitstufen für geringe Schnittkräfte & gute Spankontrolle. • max. Abstech Ø = 120 mm
	Grooving and turning Stechen und Drehen		QE*R/L A311	Double Doppelseitig ZT*D** Profile turning Profildrehen ZR*D* Single cutting edge for deep Grooving Einseitig ZT*S* 	• Various applications can be realised by one single tool, installed with different inserts for grooving, profiling and parting, It reduces the tool category. • Installed with grooving inserts, the tool realises grooving and transverse cutting. This tool is multifunctional. • The max. slot depth = 30mm. • Bei Anwendung dieses Universal WZ-System und Verwendung der unterschiedlichen Schneideinsätze können die Bearbeitungen wie; Ab-, Stechen, Profil-, Drehen druchgeführt werden • Die max. Nutentiefe = 30mm
	Precise grooving Präzisionsstechdrehen		QECD A310	Precise grooving Präzisionsstechen ZT*D**-EG Edge width1.2~2.4mm Stechbreite	• Grinded insert, used for precise grooving. • Edge width can be any size between 1.0 6.5mm according to customers requirement. • 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 • geschliffene Einsätze für das Präzisionsstechen • Die Schneidenbreite kann auf Wunsch zwischen 1.0-6.5mm geschliffen werden. • 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 A309	Precise grooving Präzisionsstechen ZT*D**-EG Edge width1.2~2.4mm Stechbreite	

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 A323	QC16/22□□□□	● Finish grinding with high tolerance. ● Sharp cutting edge with accarate machining. ● Good economy with 3-lips grinding edge. ● For the light grooving, slot width 0.5-4.8 mm. ● Max cutting depth 5 mm. ● Präzisionsgeschlifften mit hohen Toleranze. ● Scharfe Schneide für präzise Bearbeitung. ● Hohe Wirtschaftlichkeit durch 3-schneidige Platte. ● Schlichtbearbeitung mit Stechbreiten von 0.5-4.8 mm. ● Maximale Stechtiefe 5 mm.
Internal machining Innenbearbeitung	Grooving and turning Stechen und		C*-Q*R/L* A321	Grooving, Turning Stechen, Drehen ZT*D** Profile turning Profildrehen ZR*D**	● By installing different inserts for grooving & profiling, one single tool realizes various applications, it reduce the tool category. ● The max. slot depth can be machined = 13mm ● The min Ø can be machined = 27 mm ● Ein System für Stech- & Profildrehen. Die Anzahl der Stechsysteme wird reduziert. ● Die max. Nutentiefe = 13 mm ● Der min. Ø = 27 mm
			QC Series S□□□-QC□□R/L□ A323	QC11/16/22□□□□	● Fine grinded inserts, high precision ● Slot width can be machined is 0.5-4.8mm ● The min. Ø can be machined = 16mm ● The max. slot depth can be machined = 4 mm ● Fein geschliffener Einsatz für hohe Präzision ●Stechbreite beträgt 0,5-4,8 mm ● Der min. Ø = 16 mm ● 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. • Grooving · Stech Ø 48-400mm • Grooving depth · Nutentiefe 10-30mm • 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 • By installing different inserts as for grooving and profiling, one single tool realizes various applications, it reduce the tool category. • Grooving · Stech Ø 48-400mm • Grooving depth · Nutentiefe 10-30mm • Ein W-System für Stech- & Profildrehen. Die Anzahl der Stech-systeme wird reduziert. • 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 • Variing recess machining can be realized, inserts programm is complete • Ein W-System für Hinterstechdrehen • 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 • Cutting edge is designed as combination of sharpness and stability, and it's suitable for continuous to intermittent cut. • Used for for external, surface and inner wall machining of Al wheelboss. • Spezielle Spanbrecher für die Alu Bearbeitung. • Schneidkante besitzt Schärfe und Stabilität für kontinuierlichen bis unterbrochenem Schnitt. • 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 • Inserts are suitable for difficult to machine materials like: Ni-base,Ti alloy, Stainless steel and Exotic material. • V Form Aufnahme, Top Klemmung für Präzisions-Einsatz, Fixierung & sichere Klemmung • 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. • 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

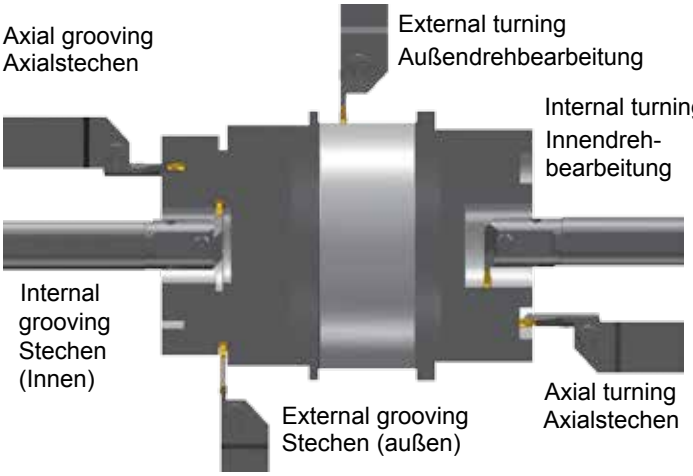
Einsetzbar zum Stechen, Abstechen, für die Profil- und Drehbearbeitung, gute Spankontrolle.
Gute Oberflächengüten und niedrige Schnittkräfte.

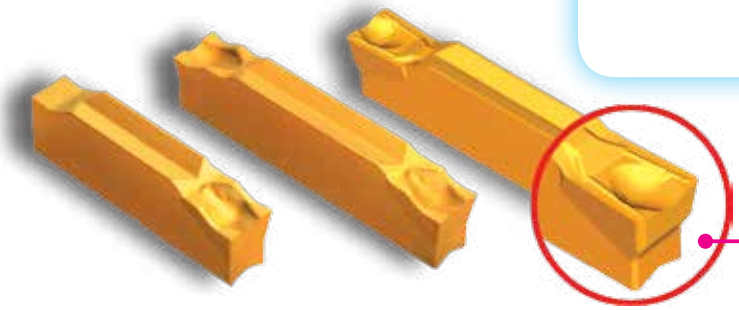
■ Reduction of tool cost by using one special design insert in various.

- 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





■ 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.

Special design reduce vibration and cutting force by 20%

Spezielles Spanbrecherdesign reduziert Vibrationen und Schnittkräfte um 20%

-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.

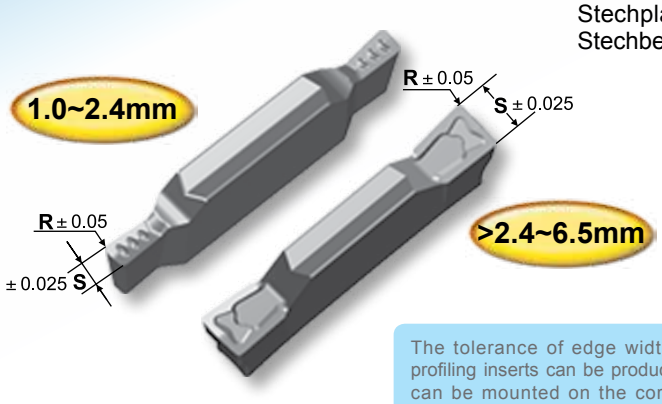
Stechbreiten von 1.0-6.5 mm je nach Anforderung.

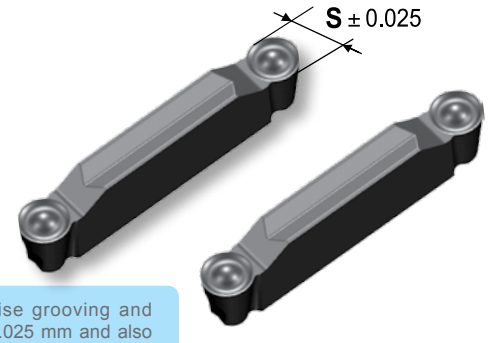
-EG Precision profiling and turning inserts

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*

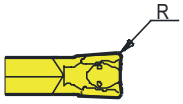
M	Tolerance class *Toleranzklasse*
E	Tolerance class *Toleranzklasse*

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

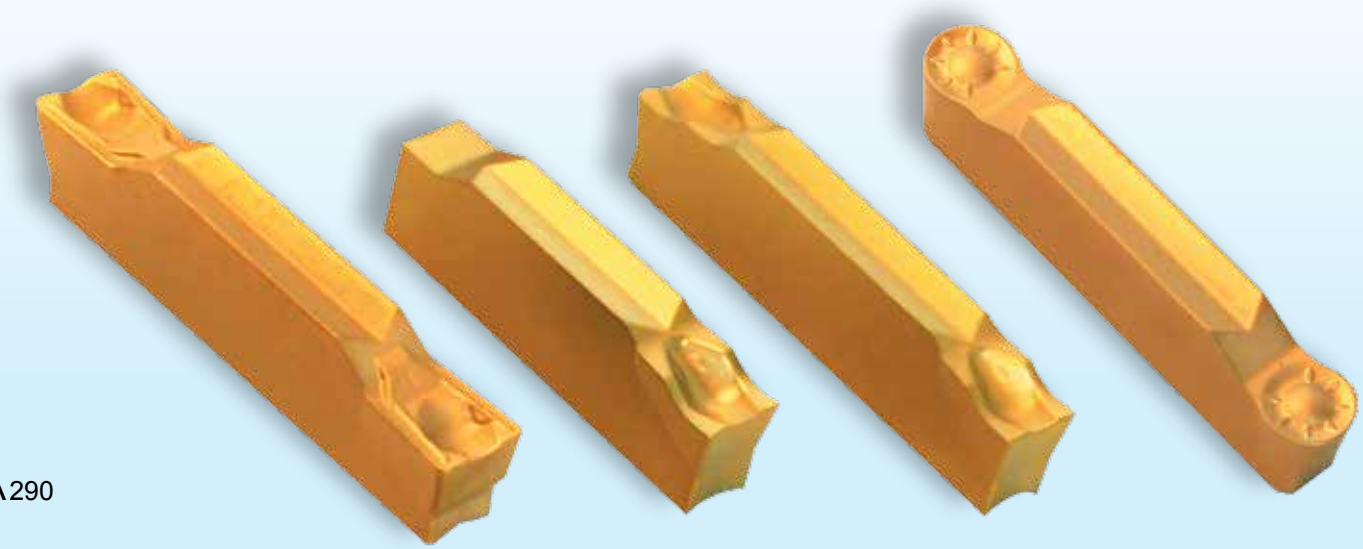
Corner radius *Eckenradius*



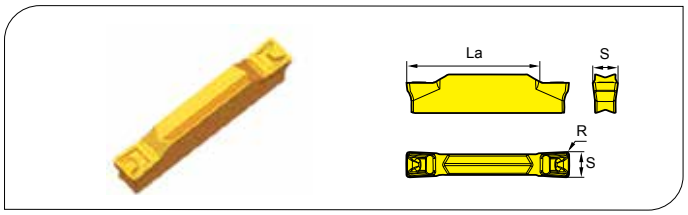
02 = 0.20 mm
03 = 0.30 mm
04 = 0.40 mm
08 = 0.80 mm

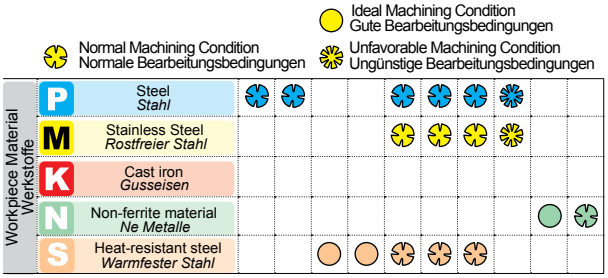
Chip breaker´s code *Spanbrecher*

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 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

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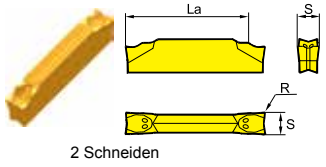
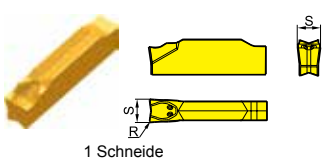
● ex stock · ab Lager ○ on demand · auf Anfrage

Parting inserts · Stechplatte



2 Schneiden



1 Schneide

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	**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

QZ**+QE**

QE**R/L

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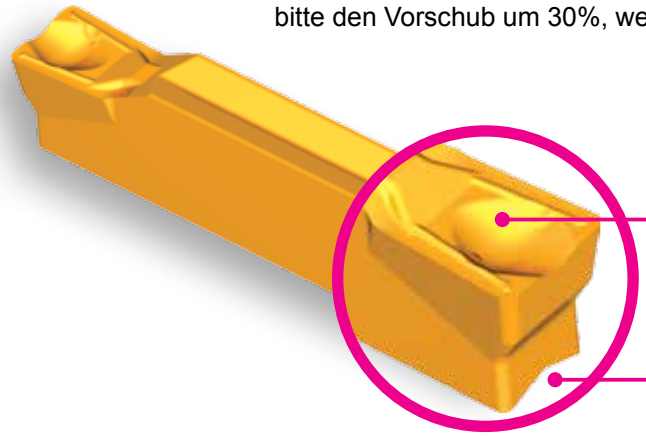
Please reduce the feed rate by 30% when the insert is approaching the centre of workpiece.
Für eine längere Standzeit der Wendeschneidplatten, reduzieren Sie bitte den Vorschub um 30%, wenn die Platte sich dem Zentrum nähert.

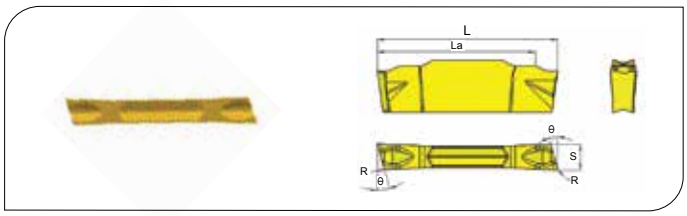


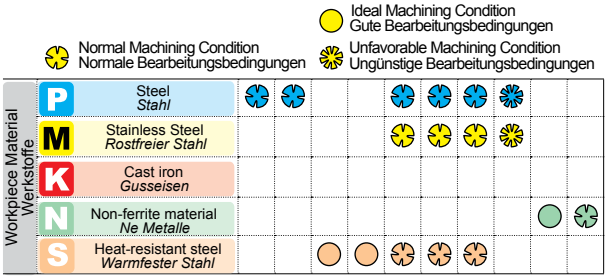
Optimal chip breaker design for good chip control.
Optimaler Spanbrecher für eine gute Spankontrolle.

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

QE**R/L

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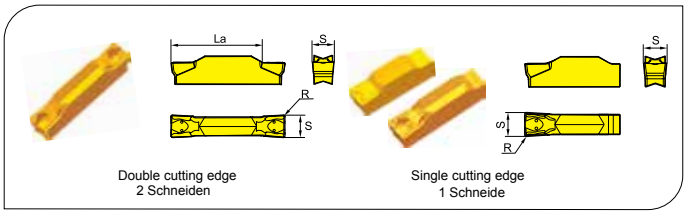
● ex stock · ab Lager ○ on demand · auf Anfrage

Grooving and turning inserts
Einstech- & Drehplatten



Double cutting edge
2 Schneiden

Single cutting edge
1 Schneide

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

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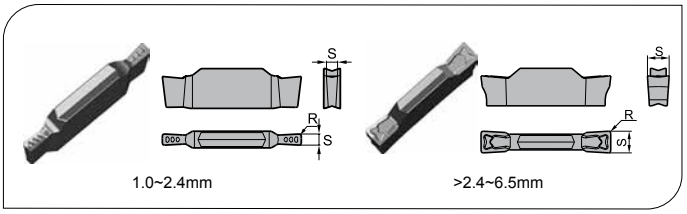
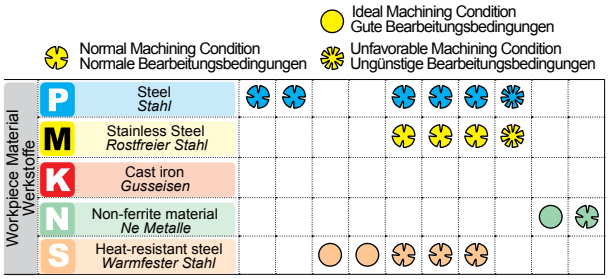
● ex stock · ab Lager ○ on demand · auf Anfrage

Precise grooving and turning inserts
Präzisions-Stech- & Drehplatten





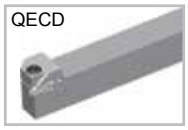
Type Typ		Dimension (mm) Abmessung			CVD		PVD						Uncoated Carbide unbeschicht. Hartmetall	
		S±0.025	R(2)±0.05	La max	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
Double cutting edge 2 Schneiden	**ZTC****-EG**	1.0~1.6	(2)	2.6		○				○	○	○		
		1.6~2.4		3.4		○				○	○	○		
	ZTE**-EG**	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

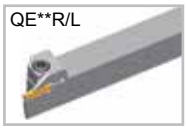
Der Bestellnummernschlüssel:
(1) z.B. ZTFD03503-EG legt eine Schneidbreite 3.5mm und einen Schneideckenradius 0.3mm fest.
(2) Eckenradius nach Kundenwunsch

Tool holder / Klemmhalter

QECD



QE**R/L



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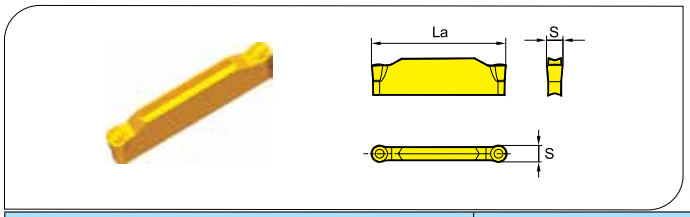
● ex stock · ab Lager ○ on demand · auf Anfrage

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 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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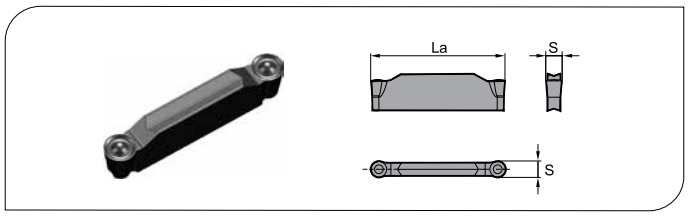
Precise profiling and turning inserts
Präzisions-, Profil- & Stechdrehplatten



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 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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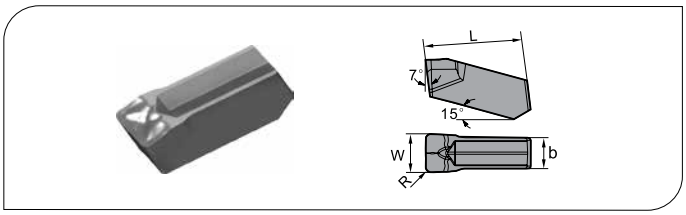
● ex stock · ab Lager ○ on demand · auf Anfrage

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

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	
	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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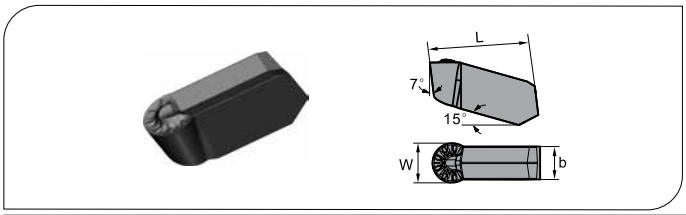
Single-cutting edge grooving and turning inserts for machining of heatresistance super alloy
Einseitige Stech- & Drehplatten für die Bearbeitung von warmfesten Superlegierungen



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

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	
	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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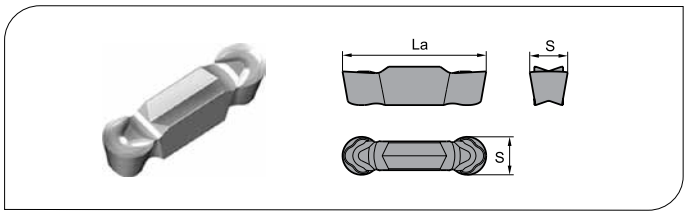
● ex stock · ab Lager ○ on demand · auf Anfrage

Profiling Inserts for Al
Profilstechdrehplatten zur Aluminiumbearbeitung



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±0.025	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

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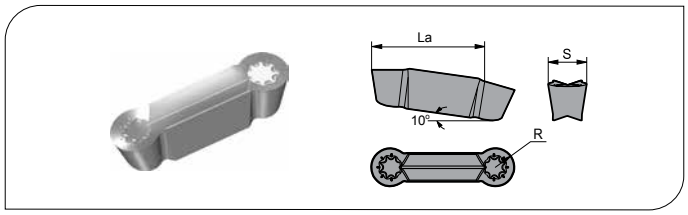
Profiling Inserts for Al
Profilstechdrehplatten zur Aluminiumbearbeitung



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±0.025	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

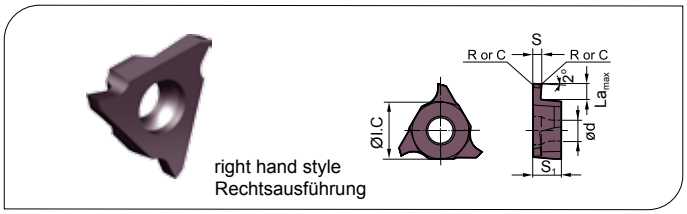
Cutting edge length code Schneid-kantenlänge	Ø IC (mm)
11	6.35
16	9.525
22	12.70

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



right hand style
Rechtsausführung

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±0.025	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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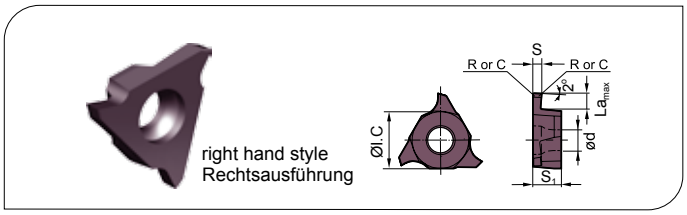
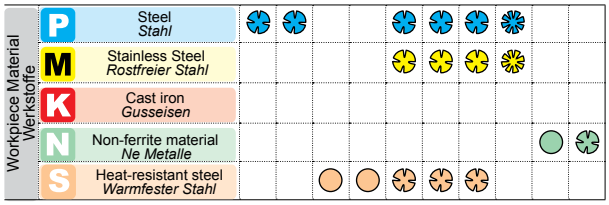
● ex stock · ab Lager ○ on demand · auf Anfrage

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						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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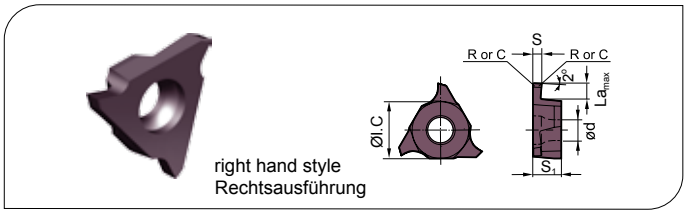
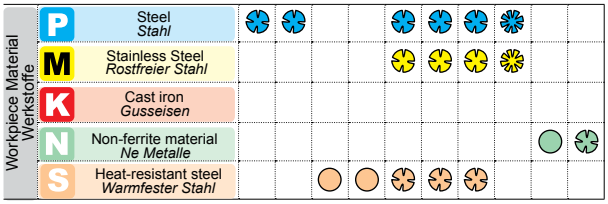
● ex stock · ab Lager ○ on demand · auf Anfrage

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						YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	S±0.025	La_{max}	R/C	ØI.C	S_1	ød										
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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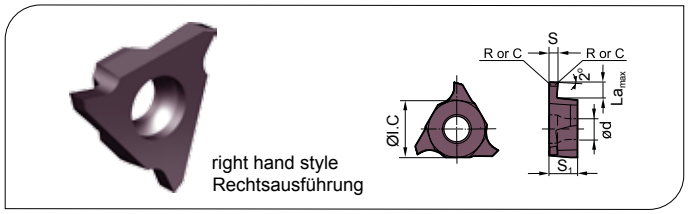
● ex stock · ab Lager ○ on demand · auf Anfrage

Triangular straight grooving insert / Dreieckige Stechplatten mit gerader Kante



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						YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	$S_{\pm 0.025}$	La_{max}	R/C	ØI.C	S_1	ød										
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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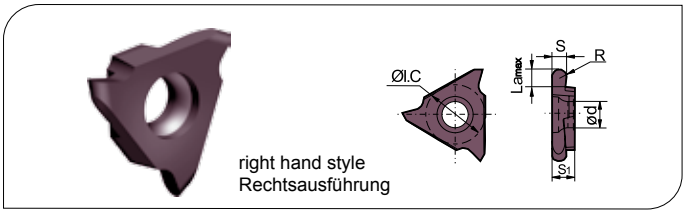
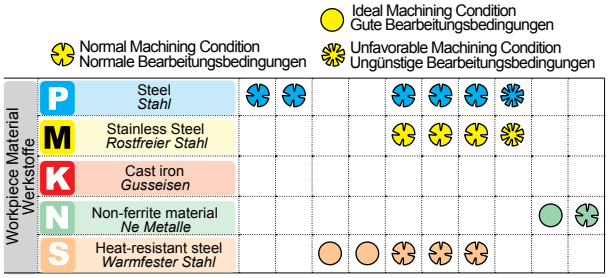
● ex stock · ab Lager ○ on demand · auf Anfrage

Triangular round grooving insert / Dreieckige Stechplatten mit runder Kante





Type Typ	Dimension (mm) Abmessung						Grade 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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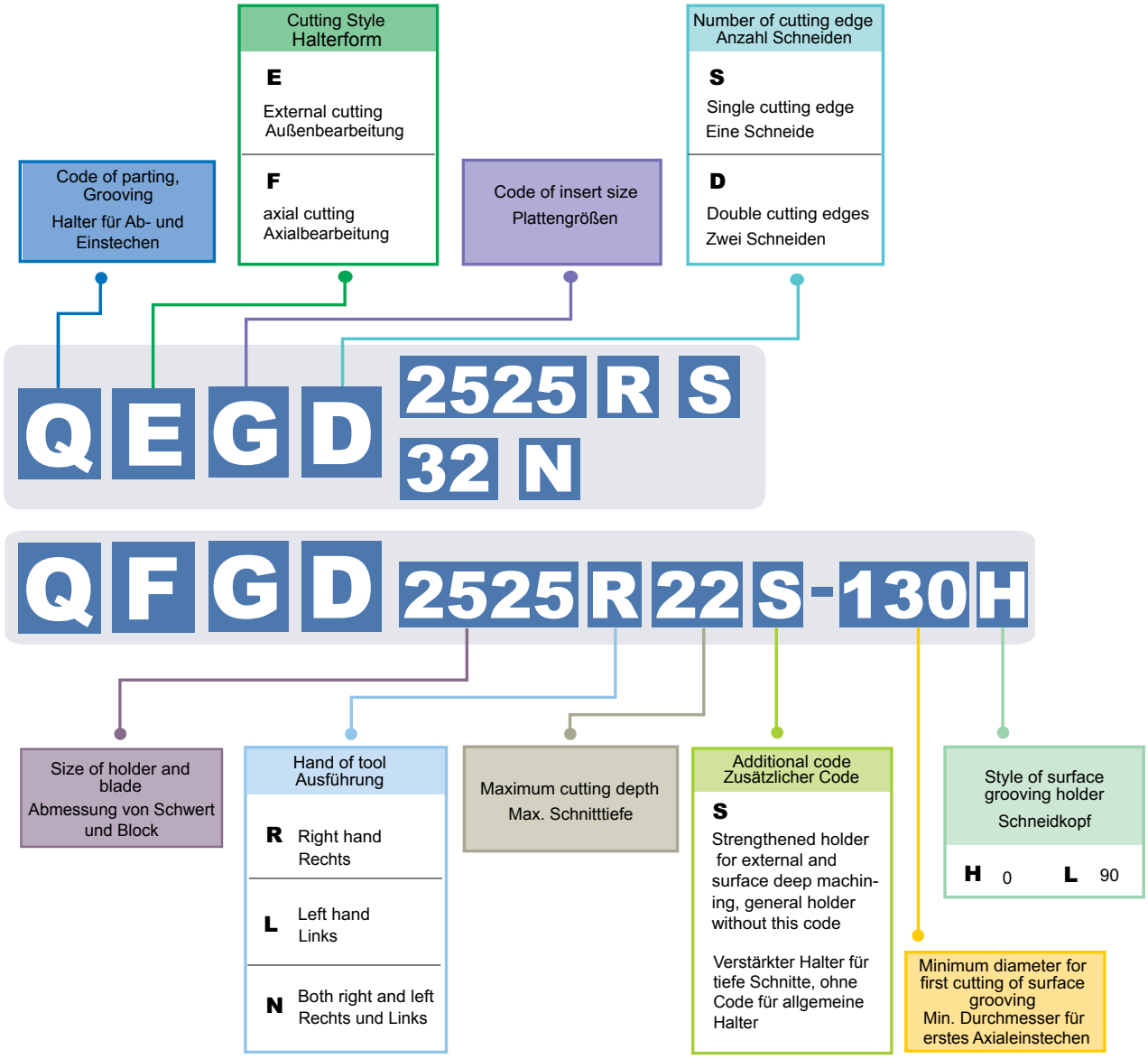
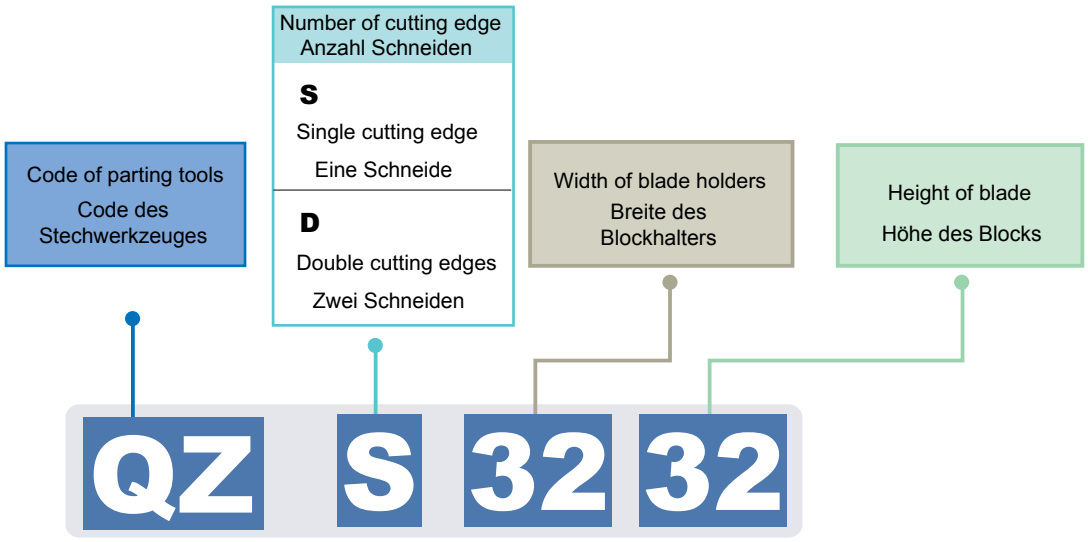
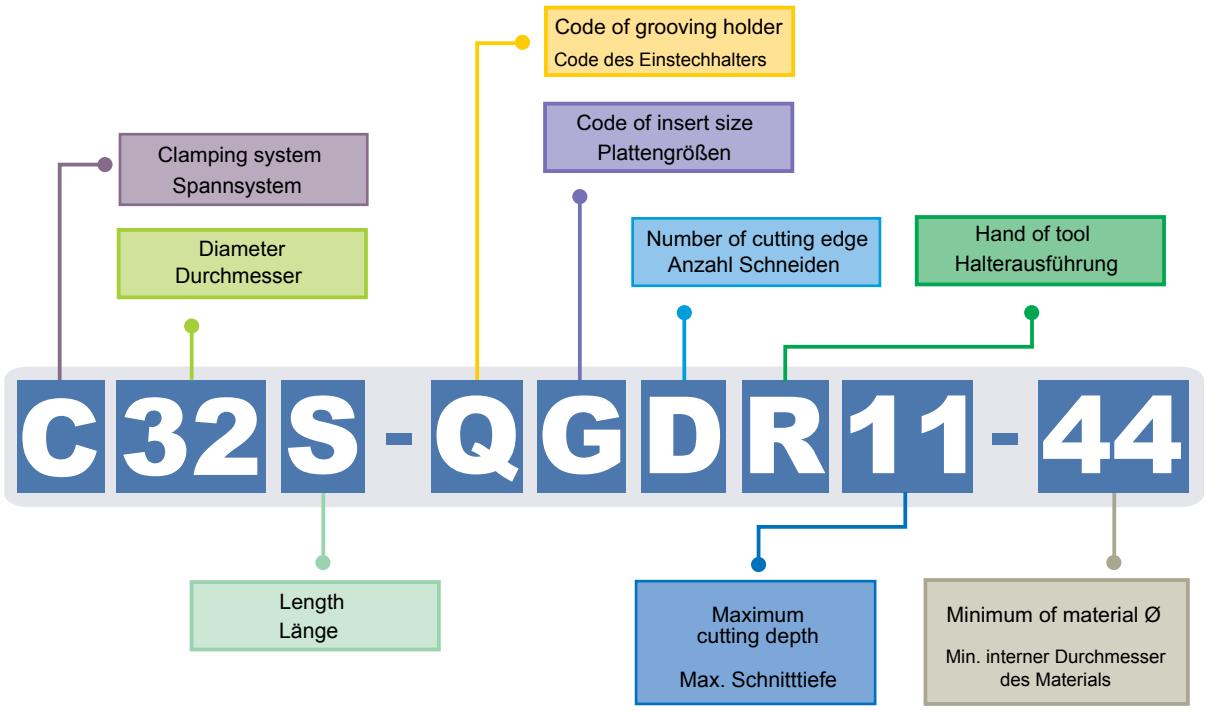
● ex stock · ab Lager ○ on demand · auf Anfrage

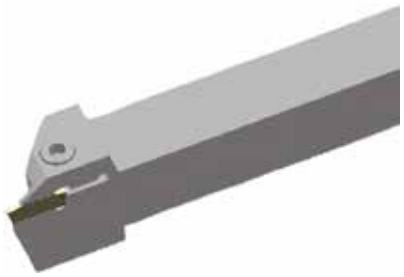
NOTES / NOTIZEN:

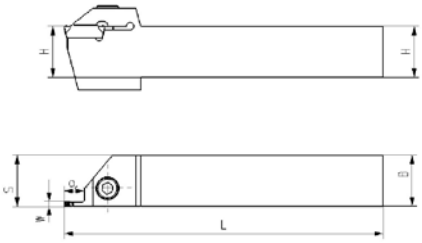

Code of parting, Grooving
Halter für Ab- und Einstechen
Cutting Style
Halterform
E
External cutting
Außenbearbeitung
F
axial cutting
Axialbearbeitung
Code of insert size
Plattengrößen
Number of cutting edge
Anzahl Schneiden
S
Single cutting edge
Eine Schneide
D
Double cutting edges
Zwei Schneiden
QEGD 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


Code of parting tools
Code des Stechwerkzeuges
Number of cutting edge
Anzahl Schneiden
S
Single cutting edge
Eine Schneide
D
Double cutting edges
Zwei Schneiden
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)





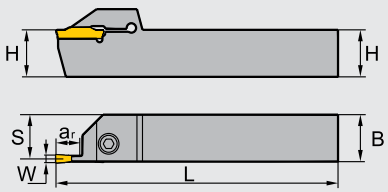
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	ar max	Inserts Stechplatte	Screw Schraube	Wrench Schlüssel
QEBD	1616R/L04	○	○	16×16	150	16.17	2	4	ZTBD02002-MM	M5×16	WH40L
	2020R/L07	●	●	20×20	150	20.17	2	7	ZTBD02002-MM		

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

● ex stock · ab Lager ○ on demand · auf Anfrage

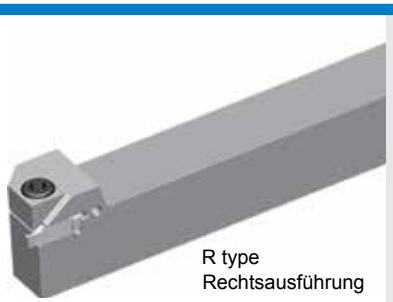
External parting, grooving and turning tools · Einstech- & Drehwerkzeuge (Außen)



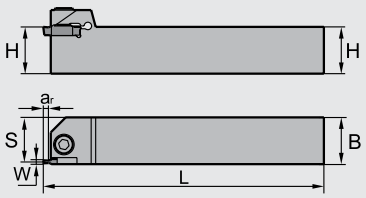
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	$a_{r\,max}$	Inserts Stechplatte	Screw Schraube	Wrench Schlüssel
QEED	1616R/L10	●	●	16×16	125	15	2.5	10	Z*ED025**	GB70-85-M5×20	WH40L
	1616R/L17	●	●	16×16	125	15	2.5	17	Z*ED025**		
	2020R/L10	●	●	20×20	150	10	2.5	10	Z*ED025**	GB70-85-M6×20	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**		

● ex stock · ab Lager ○ on demand · auf Anfrage

Precise grooving and turning tools · Präzisions Einstech- & Drehwerkzeuge

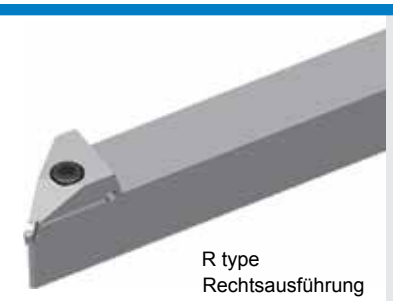


R type
Rechtsausführung

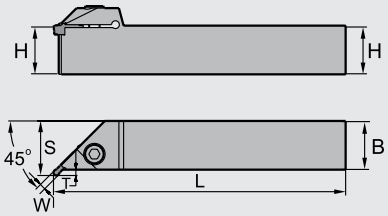


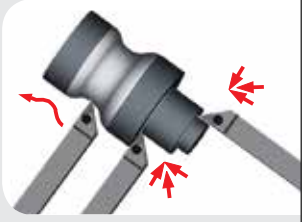
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	a_r max	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QECD	1616R/L025	○	○	16×16	125	14.75		2.5	ZT**D***-EG	GB70-85-M5×20	WH40L
	2020R/L025	○	○	20×20	125	18.75				GB70-85-M6×20	WH50L
	2525R/L025	○	○	25×25	150	23.75					

External recess and profiling turning tools · Hinterdrehstech- & Profildrehwerkzeuge (Außen)



R type
Rechtsausführung

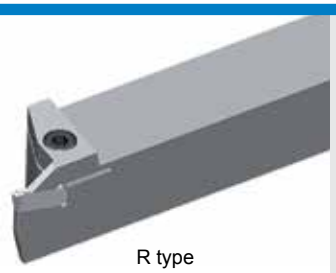




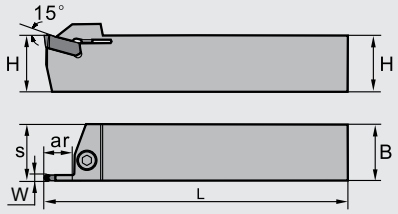
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	a_r max	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QXFD	2020R/L03-45	○	○	20×20	125	23	3.0	3.0	ZR(T)FD03-EG ZR(T)FD03-MG	GB70-85-M6×20	WH50L
	2525R/L03-45	●	●	25×25	150	28					
	3232R/L03-45	○	○	32×32	170	35					
QXGD	2020R/L03-45	○	○	20×20	125	23	4.0	3.0	ZR(T)GD04-EG 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 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 ZR(T)KD06-MG		
	2525R/L04-45	○	○	25×25	150	29					
	3232R/L04-45	○	○	32×32	170	36					

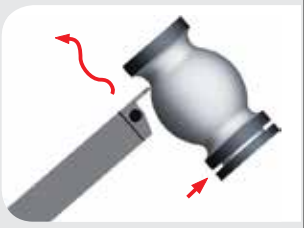
● ex stock · ab Lager ○ on demand · auf Anfrage

External grooving tools for difficult machining
Stechdrehwerkzeug für die schwierige Bearbeitung (Außen)



R type
Rechtsausführung

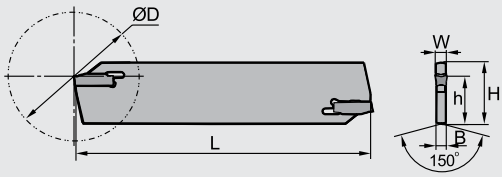


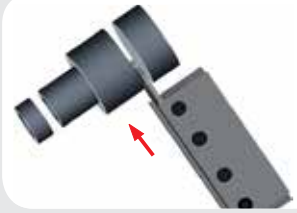


Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	ar max	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QEFS	2525R/L12-3N	○	○	25×25	150	25.3	3	12	ZIGQ3N-NM ZIMF304N-NM	GB70-85-M6×20	WH50L
	3232R/L22-3N	○	○	32×32	170	32.3	3	22			
QEGS	2525R/L12-4N	○	○	25×25	150	25.3	4	12	ZIGQ4N-NM 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 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 ZIMF608N-NM		
	3232R/L22-6N	○	○	32×32	170	32.4	6	22			

● ex stock · ab Lager ○ on demand · auf Anfrage

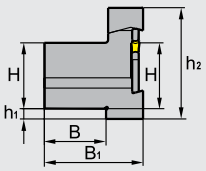
Blade for external parting · Abstechschwert zur Außenbearbeitung

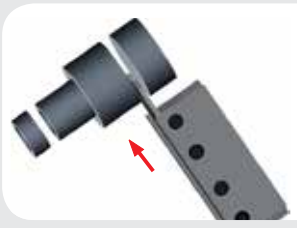




Type Typ	Stock Lager	Dimension (mm) Abmessung						Inserts Stechplatten	Wrench Schlüssel
		L	H	h	B	W	ØD max		
QEES26N	●	110	26	19	2	2.5	60	ZPES02502-MG	W50RL
QEFS26N	●	110	26	19	2.4	3	60	ZPFS0302-MG	
QEGS26N	●	110	26	19	3.2	4	70	ZPGS0402-MG	
QEHS26N	●	110	26	19	4	5	70	ZPHS0503-MG	
QEKS26N	●	110	26	19	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



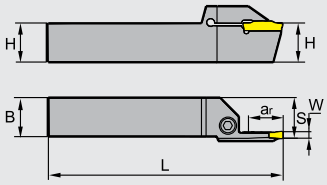


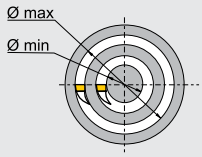
Type Typ	Stock Lager	Dimension (mm) Abmessung						Clamp Klemme	Screw Schraube	Wrench Schlüssel
		L	H	h_1	h_2	B	B_1			
QZS2026	●	86	20	10	46.6	19	38	QZC26	GB70-85-M6×20	WH50L
QZS2526	●	86	25	5	46.6	23	42	QZC26		
QZS3226	○	86	32	3	51.6	30	48	QZC26		
QZS2032	●	110	20	13	50	19	38	QZC32		
QZS2532	●	110	25	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			

● ex stock · ab Lager ○ on demand · auf Anfrage

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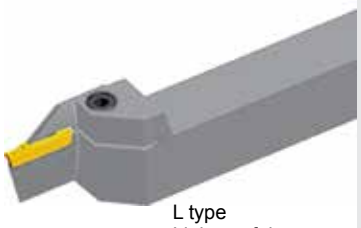
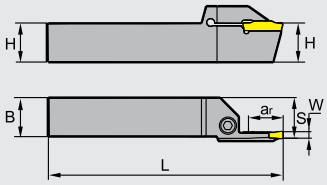
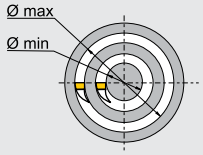


L type
Linksausführung





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	**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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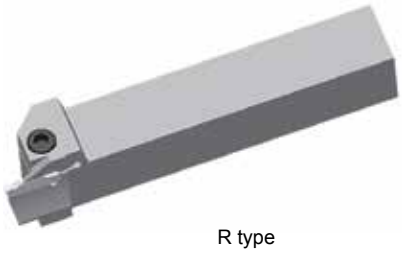
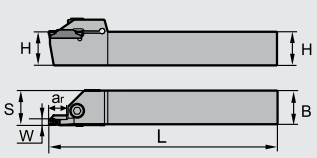
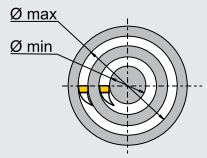


R type
Rechtsausführung





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			

● ex stock · ab Lager ○ on demand · auf Anfrage

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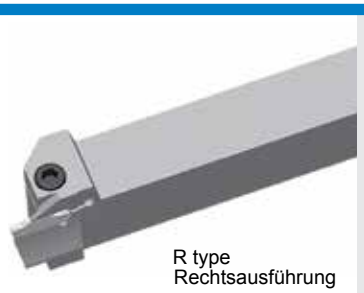
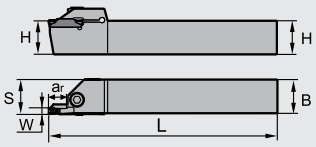
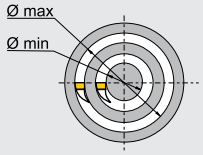


R type
Rechtsausführung



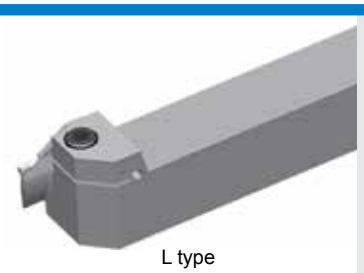


ØD= Range of entering
ØD= Bereich

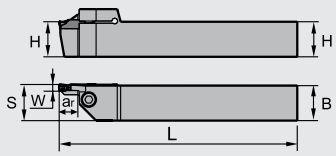
Type Typ		Stock Lager		Dimension (mm) Abmessung						Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
		R	L	H×B	L	S	W	ar max	ØD (min-max)			
QFHD	2525RR13-58H	○	○	25×25	150	26	5	13	58-96	ZTHD0504-MG ZTHD0504-MM	GB70-85-M6×20	WH50L
	2525RR22-58H	●	○	25×25	150	26	5	22	58-96			
	2525RR13-86H	○	○	25×25	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 ZTKD0608-MM 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		

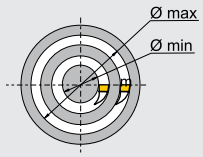
● ex stock · ab Lager ○ on demand · auf Anfrage

Axial grooving and turning tools · Axialstech- & Drehwerkzeug



L type
Rechtsausführung





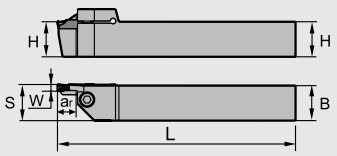
ØD= Range of entering
ØD= Bereich

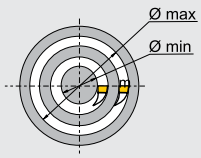
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	ar max	ØD (min-max)	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QFFD	2020LL7-48H	○	○	20×20	150	21	3	7	48-66	ZTFD0303-MG ZTFD0303-MM	GB70-85-M6×20	WH50L
	2020LL10-48H	○	○	20×20	150	21	3	10	48-66			
	2525LL10-48H	○	●	25×25	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 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			

● ex stock · ab Lager ○ on demand · auf Anfrage

Axial grooving and turning tools · Axialstech- & Drehwerkzeug

L type
Linksausführung



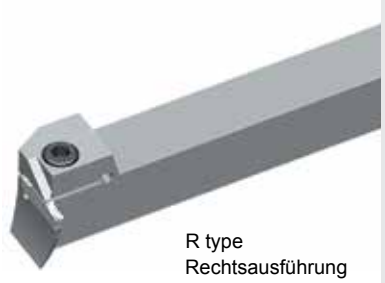


ØD= Range of entering
ØD= Bereich

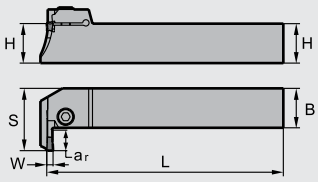
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	ar max	ØD (min-max)	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QFHD	2525LL13-58H	○	○	25×25	150	26	5	13	58-96	ZTHD0504-MG ZTHD0504-MM	GB70-85-M6×20	WH50L
	2525LL22-58H	○	●	25×25	150	26	5	22	58-96			
	2525LL13-86H	○	○	25×25	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		

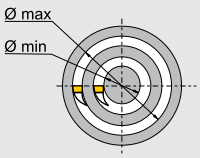
● ex stock · ab Lager ○ on demand · auf Anfrage

L type tools for Axial grooving and turning · L-Typ Axialstech- & Drehwerkzeug



R type
Rechtsausführung



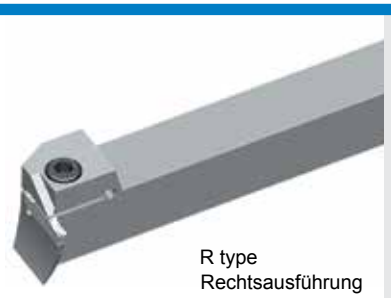


ØD= Range of entering
ØD= Bereich

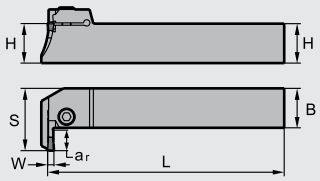
Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H×B	L	S	W	ar max	ØD (min-max)	Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
QFFD	2020R/L7-48L	○	○	20×20	150	28.5	3	7	48-66	ZTFD0303-MG ZTFD0303-MM	GB70-85-M6×20	WH50L
	2020R/L10-48L	●	●	20×20	150	31.5	3	10	48-66			
	2525R/L10-48L	●	●	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 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			

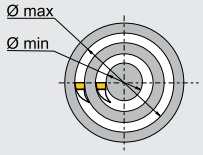
● ex stock · ab Lager ○ on demand · auf Anfrage

L type tools for Axial grooving and turning · L-Typ Axialstech- & Drehwerkzeug



R type
Rechtsausführung





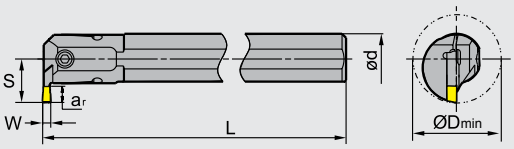
ØD= Range of entering
ØD= Bereich

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 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 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)

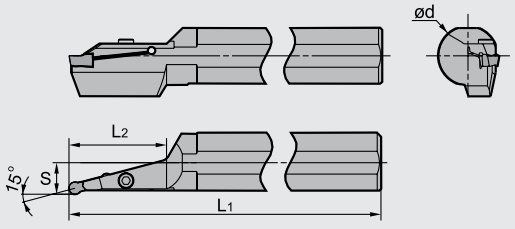
R type
Rechtsausführung

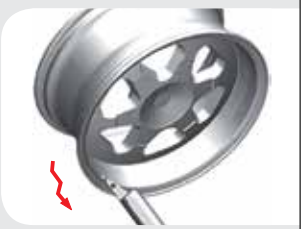


Type Typ	Stock Lager		Dimension (mm) Abmessung						Inserts Stechplatten	Screw Schraube	Wrench Schlüssel
	R	L	ød	L	S	W	ar max	ØDmin			
C20Q-QEDR/L05-27	●	●	20	180	15.2	2.5	5	27	ZTED02* ZRED025*	GB70-85-M4×12	WH30L
C25R-QEDR/L07-33	●	●	25	200	20.3	2.5	7	33		GB70-85-M5×16	WH40L
C32S-QEDR/L09-42	○	●	32	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***) 1.0≤S<2.3(QC22***)
25	1.8≤S<3.0(QC16***) 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

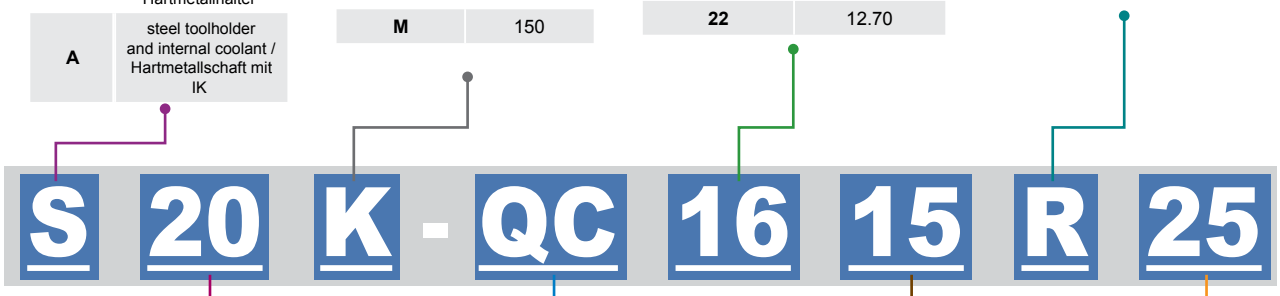
- Internal grooving / Innen Ein- und Abstechen

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

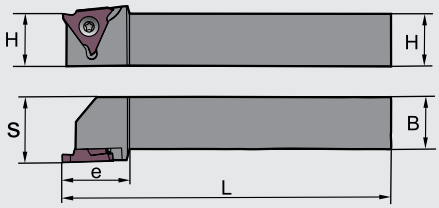
Series Serie

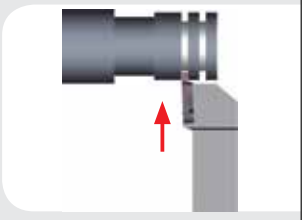
Width range of insert Stechbreitenbereich		
15	0.5≤S<1.8	QC11*** QC16***
25	0.5≤S<1.8	QC11*** QC16***
	2.3≤S<3.3	(QC22***)
35	3.3≤S≤4.8	

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

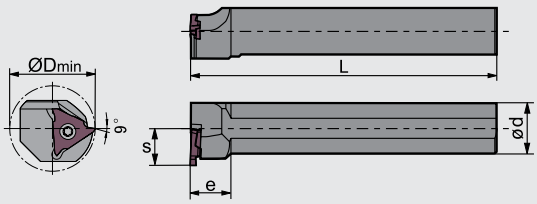


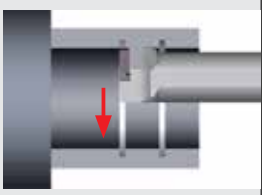


Type Typ		Stock Lager R	Stock Lager L	Dimension (mm) Abmessung H	B	S	e	L	Width Breite (mm)	Inserts Stechplatte	Screw Schraube	Wrench Schlüssel
GQCR/L	**1616K16-15**	●	●	16	16	21	25.5	125	0.5-1.80	QC16R/L 050~180	I60M3.5×10	WT15IP
	2020K16-15	●	●	20	20	25		125				
	2525M16-15	●	●	25	25	30		150				
	1616K16-25	●	●	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



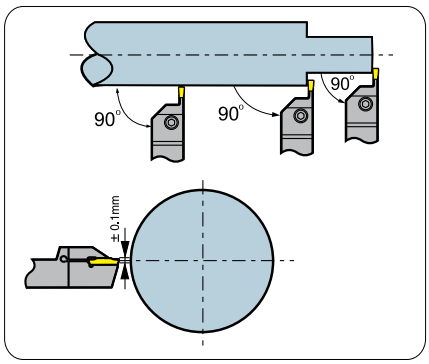


* Right holder with left insert.Left holder with right insert.
Rechter Halter mit linker Wendeschneidplatte.Linker Halter mit rechter Wendeschneidplatte.

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	20		1.0-2.3	QC22R/L100~230	I60M5×13	WT20IP
S25M-QC2225R/L35	●	●			18.2			2.3-3.3	QC22R/L230~330		
S25M-QC2235R/L35	○	●			18.2			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

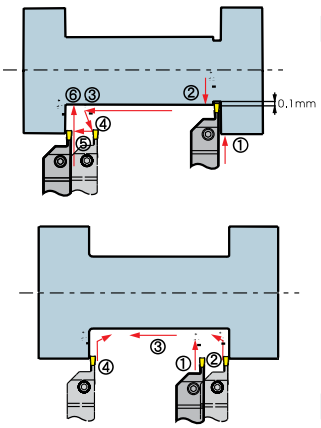
● A reduction of the feedrate by 30% is preferred when the inserts approach the centre of workpiece, prolonging the life-time of the inserts.

● 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



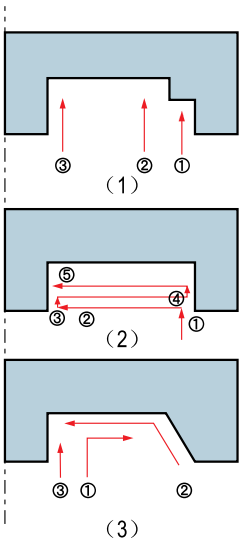
● Cutting sequences: As the cutting depth is bigger than 0.5mm, radial cutting (biggest cutting depth 0.75 x edge width of insert) radial backing 0.1mm axial feed oblique back axial cutting radial cutting to the depth require.

● 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).

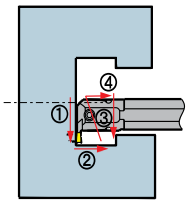
Finishing · Schlichten

● 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 Stechplatte Größe	Recommended feed rate (mm/rev) Empfohlener Vorschub (mm/U)			
Inserts width(mm) Stechplatte Breite	Parting Abstechen	Grooving Einstechen	Turning Drehen	Profiling 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

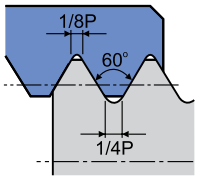
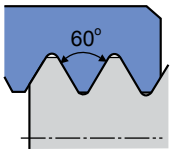
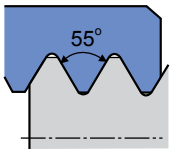
Workpiece Material Werkstück Material		Hardness Härte	YBG302	YBG202	YBC151	YBC251	YD101	YD201	YBG102	YC10	YC40
P	Carbon steel Kohlenstoffstahl	125≤HB≤170	120-260	150-280	140-280	150-280				130-280	110-260
	Low alloy steel Niedrig legierter Stahl	180≤HB≤275	80-175	110-200	100-240	110-200				90-200	70-175
	High alloy steel Hoch legierter Stahl	180≤HB≤325	80-160	110-190	100-220	110-190				90-190	70-160
	Cast steel Stahlguss	180≤HB≤250	75-140	100-170	80-160	100-170				80-170	60-140
M	Ferrite Martensite	200≤HB≤300	70-170	100-200		100-200				80-200	60-170
	Austenitic Austenite	180≤HB≤300	80-200	110-220		110-220				90-220	70-200
K	Malleable cast iron Temperguss	130≤HB≤230	100-200	130-220				90-160			
	Grey cast iron Grauguss	180≤HB≤220	90-170	120-200				80-140			
	Nodular cast iron Kugelgrafitguss	160≤HB≤250	80-150	110-180				60-140			
N	Al alloy Alu-Legierung	--					200-400				
S	Heat resistant alloy Hitzebeständigen Legierungen	≤400					20-50		30-60		

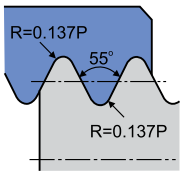
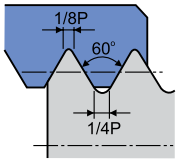
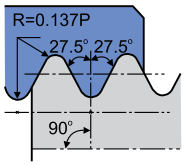
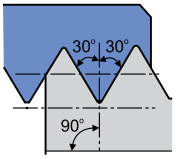
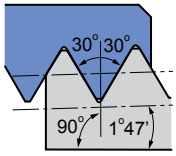
The cutting parameters recommended are suitable for wet machining.
Die angegebenen Schnittparameter werden für die Bearbeitung mit Kühlflüssigkeit empfohlen.
Advice: internal machining and Axial machining, The cutting speed should be reduced by 30%-40%.
Hinweis: Bei Innen- und Axialstechen, sollte die Schnittgeschwindigkeit um 30%-40% reduziert werden.

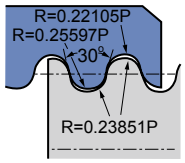
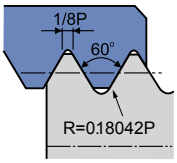
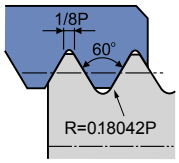
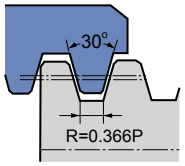
Turning · Drehen

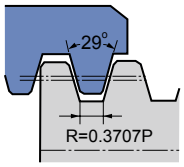
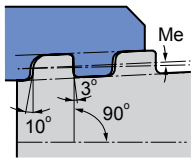
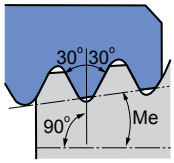
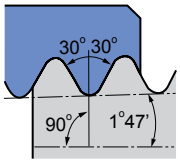
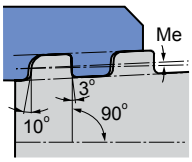
Threading Tools · Gewindedreh Werkzeuge

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**

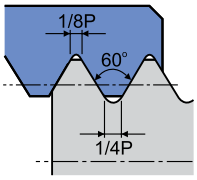
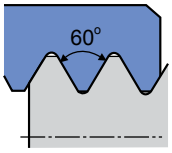
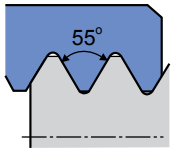
Applications Anwendungen		General information Allgemeine Information		
Cutline Cutline				
Thread name Gewindebezeichnung		ISO metric thread Full profile Vollprofil	General pitch thread Partial profile Teilprofil	General pitch thread Partial profile Teilprofil
Profile Profil		**GM**	**60°**	**55°**
Shape of insert WSP Abmessung (length / Länge : 11, 16, 22mm)		Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A335-A336	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A337	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A337
Pitch Steigung Toolholder Werkzeughalter	Dimensions (mm) Dimensions (mm) (H×W×L) (Ø×Length×Min.Ø) (Ø×Länge×Min.Ø)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)
External thread Außengewinde	 A358	16×16×100 20×20×125 25×25×150 32×25×170 32×32×170 40×40×250	0.5~6.0	0.5~5.0 (5~48)	0.5~5.0 (5~48)
Internal thread Innengewinde	 A359	16×125×12 16×150×16 16×150×20 20×150×25 20×180×25 25×150×32 32×200×40 32×250×40 40×300×50 50×350×63	0.5~6.0	0.5~5.0 (5~48)	0.5~5.0 (5~48)

General information Allgemeine Information	For aerospace and aviation industries **Luft- & Raumfahrt**	Pipe thread for heater, gas and water **Rohrgewinde für: Dampf, Gas & Heizung**	For connecting between pipe fitting and coupling of gas and water **Für Gas & Wasser Fittinge und Kupplungen**	For connecting between pipe fitting and coupling of gas and water **Für Gas & Wasser Fittinge und Kupplungen**
				
Whitworth thread Gewinde	Unified thread (American standard threads) UN 60°	British standard taper piper threads BSPT Rohrgewinde	American standard taper pipe threads Amerikanisches Rohrgewinde	American pipe threads dry sealing Amerikanisches Rohrgewinde trocken dichtend
W	**UN**	**BSPT**	**NPT**	**NPTF**
Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A338	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A339	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A340	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A341	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A341
Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)
8~16	8~20	11~28	8~27	8~27
8~16	8~20	11~28	8~27	8~27

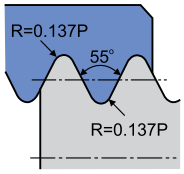
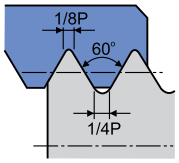
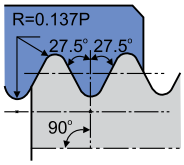
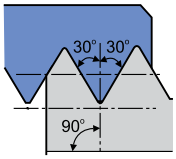
Applications Anwendungen		For food industry and fire apparatus **Für Lebensmittel-industrie und Feuerwehr**	For aerospace industry **Für Luft- & Raumfahrt**	For aerospace industry **Für Luft- & Raumfahrt**	Drive Screw **Antriebsgewinde**
Cutline Cutline					
Thread name Gewindebezeichnung		30° conical threads 30° Kegeliges Whitworth Rohrgewinde	Metric thread for air space industry Spitzgewinde für Luftfahrtindustrie	American standard thread for air industry Amerikanisches Spitzgewinde für Luftfahrtindustrie	ISO trapezoidal 30° thread ISO Trapez 30° Gewinde
Profile Profil		**R**	**MJ**	**UNJ**	**Tr**
Shape of insert WSP Abmessung (length / Länge: **11, 16, 22mm)**		Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A343	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A344	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A344	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A345
Dimensions (mm) Dimensions (mm) (H×W×L) (Ø×Length×Min.Ø) (Ø×Länge×Min.Ø)		Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm
External thread Außengewinde	16×16×100 20×20×125 25×25×150 32×25×170 32×32×170 40×40×250	6~10	1.5~2.0	8~32	1.5~3.0
Internal thread Innengewinde	16×125×12 16×150×16 16×150×20 20×150×25 20×180×25 25×150×32 32×200×40 32×250×40 40×300×50 50×350×63	6~10	----	----	1.5~3.0

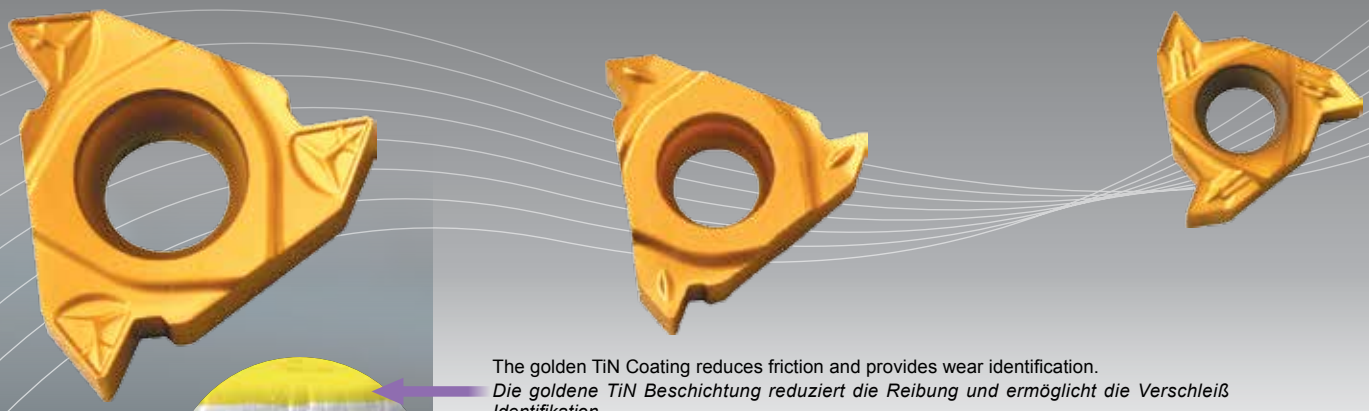
Drive Screw Antriebsgewinde		For connecting between pipe fitting and coupling of oil and gas Für Öl & Gas Fittinge und Kupplungen		
				
ACME American trapezoidal 29° thread Amerikanisches Trapezgewinde 29°	american ACME thread with short depth Amerikanisches ACME Gewinde, abgeflacht, mit verkürzter Gewindetiefe	API 60° thread API 60° Gewinde	API round threads API Rundgewinde	API Sawtooth threads Amerikanisches Sägegewinde
AC	**STAC**	**AP**	**RD**	**BUT**
Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A346	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A347	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A347	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A349	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A350
Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)
8~16	8~16	4~5	8~10	5
8~16	8~16	4~5	8~10	5

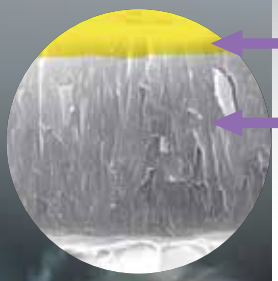
Thin Type

Applications Anwendungen		General information Allgemeine Information	General information Allgemeine Information	General information Allgemeine Information
Cutline Cutline				
Thread name Gewindebezeichnung		ISO metric (full profile) ISO metrisch (Voll-profil)	Partcial-Profile 60° Teil-Profil 60°	Partcial-Profile 55° Teil-Profil 55°
Profile / Profil		**GM**	**60**	**55**
Shape of insert WSP Abmessung (length/ Länge: 16mm)		Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A351	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A352	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A352
Toolholder / Werkzeughalter — Pitch / Steigung	Dimensions (mm) Dimensions (mm) (H×W×L) (Ø×Length×Min.Ø) (Ø×Länge×Min.Ø)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)
External thread Außengewinde	 **R** A360	16×16×100 20×20×125 25×25×150 32×25×170 32×32×170	0.5~3.0	0.5~3.0(8~48)	0.5~3.0(8~48)
Internal thread Innengewinde	 **R** A360	16×150×20 20×180×25 25×150×32 32×200×40 32×250×40	0.5~3.0	0.5~3.0(8~48)	0.5~3.0(8~48)

Thin Type

General information Allgemeine Information	For aerospace and aviation industries **Luft- & Raumfahrt**	Pipe thread for heater, gas and water **Rohrgewinde für: Dampf, Gas & Heizung**	For connecting between pipe fitting and coupling of gas and water **Für Gas & Wasser Fittinge und Kupplungen**
			
Whitworth Rohrgewinde	UN Unified Conventional Thread Gewindeform UN 60°amerikanisch	BSPT Britain Standard Taper Pipe Thread Rohrgewinde für Dampf-, Gas-, & Wasserleitungen	NPT American Standard Amerikanisches kegeliges Rohrgewinde
W	**UN**	**BSPT**	**NPT**
Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A354	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A354	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A355	Illustration: external thread right hand. Illustration: Außengewinde in Rechtsausführung. A355
Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (pitch/Inch)	Pitch/mm Steigung/mm (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.

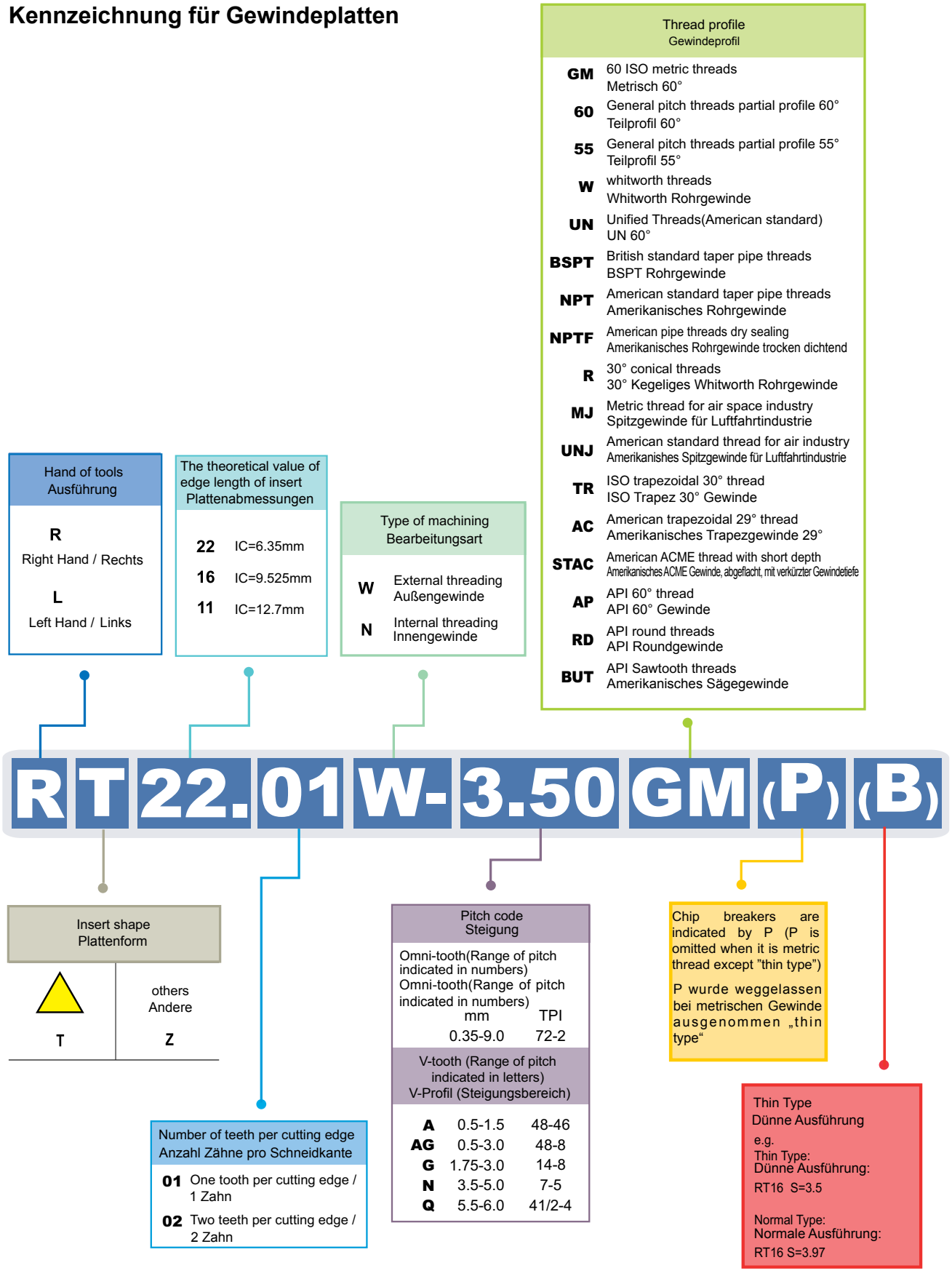
Nano-TiAlN PVD beschichtete, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit. Zum Gewinden Drehen, Ab- und Einstechen von Stahl, rostfreiem Stahl und warmfesten Superlegierungen bei leichter und mittlerer Bearbeitung.

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.

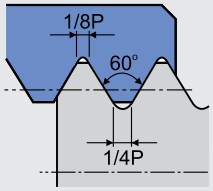
Threading inserts code key
Kennzeichnung für Gewindeplatten



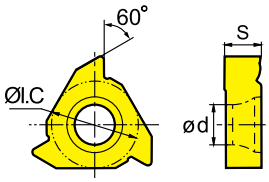
ISO metric thread insert (full profile)
Allgemeiner Einsatz (Vollprofil)

ISO 965-1980
GB·T 197-2003

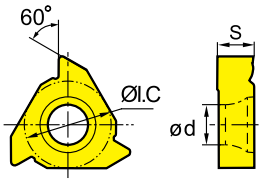
DIN 13
Tolerances: 6g·6H
Toleranz



R



L



	Type 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-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

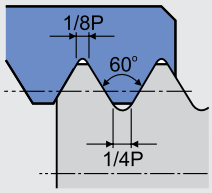
General Turning
Allgemeine Drehbearbeitung

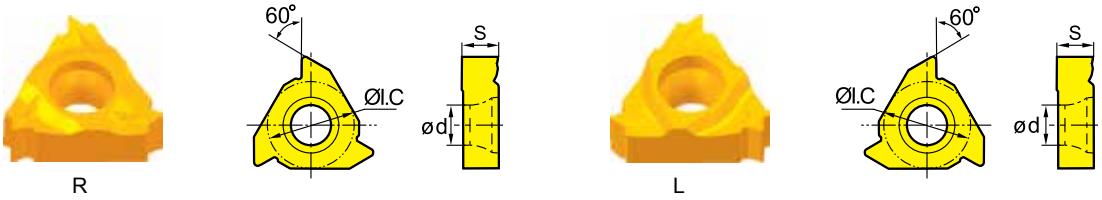
Threading
Gewindedrehen

ISO metric thread insert (full profile)
Allgemeiner Einsatz (Vollprofil)

ISO 965-1980
GB·T 197-2003

DIN 13
Tolerances: 6g·6H
Toleranz





	Type 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	**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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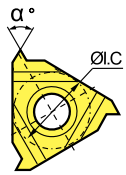
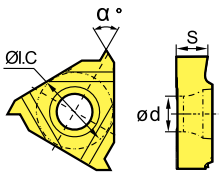
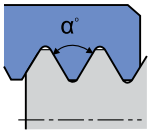
General pitch thread insert (partical profile)
Allgemeiner Einsatz (Teilprofil)

R



L

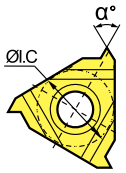




*Inserts with chip-breakers
Platten mit Spanbrecher

		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



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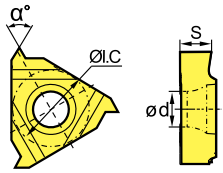

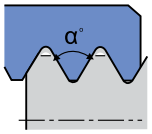

*Inserts with chip-breakers
Platten mit Spanbrecher

		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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● ex stock · ab Lager ○ on demand · auf Anfrage

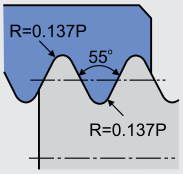
A

General Turning
Allgemeine Drehbearbeitung

Threading
Gewindedrehen

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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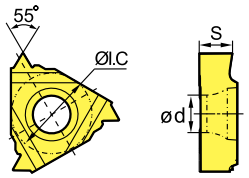

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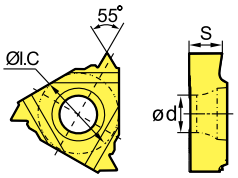
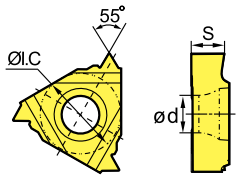


	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
External Außen	**RT16.01W-8W**	**LT16.01W-8W**	8	3.97	9.525	4.4	○	●	○	○
	RT16.01W-9W	**LT16.01W-9W**	9	3.97	9.525	4.4	○	○	○	○
	RT16.01W-10W	**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



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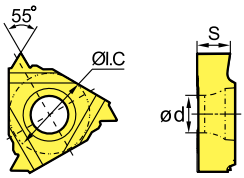

	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
Internal Innen	**RT16.01N-8W**	**LT16.01N-8W**	8	3.97	9.525	4.4	○	●	○	○
	RT16.01N-9W	**LT16.01N-9W**	9	3.97	9.525	4.4	○	○	○	○
	RT16.01N-10W	**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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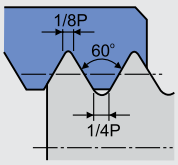
● ex stock · ab Lager ○ on demand · auf Anfrage

UN full profile
UN Vollprofil

ASME B1.1-1989
Tolerances: 2A·2B
Toleranz



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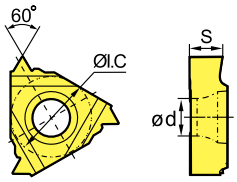

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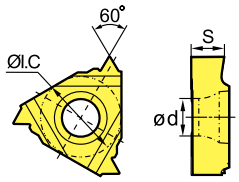
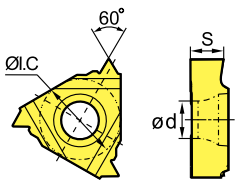


	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
External Außen	**RT16.01W-8UN**	**LT16.01W-8UN**	8	3.97	9.525	4.4	○	○	○	○
	RT16.01W-10UN	**LT16.01W-10UN**	10	3.97	9.525	4.4	○	○	○	○
	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



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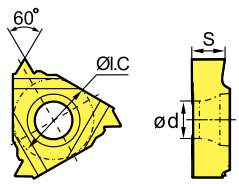

	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
Internal Innen	**RT16.01N-8UN**	**LT16.01N-8UN**	8	3.97	9.525	4.4	○	○	○	○
	RT16.01N-10UN	**LT16.01N-10UN**	10	3.97	9.525	4.4	○	○	○	○
	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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● ex stock · ab Lager ○ on demand · auf Anfrage

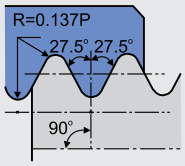
A

General Turning
Allgemeine Drehbearbeitung

Threading
Gewindedrehen

British standard taper pipe thread insert
Rohrgewinde für Dampf-, Gas- und Wasserleitungen

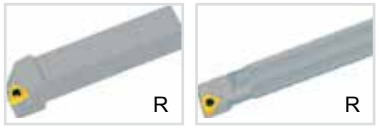
ISO 7·1:1994 B.S.21:1985
Standard BSPT
Standard BSPT



	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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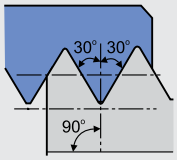
● ex stock · ab Lager ○ on demand · auf Anfrage

NPT American standard taper pipe with a shoulder
Amerikanisches kegeliges Rohrgewinde

ASME B1.20.1-1983
Standard NPT
Standard NPT



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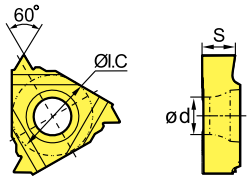

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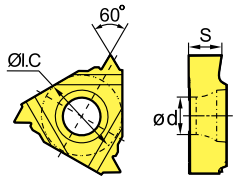
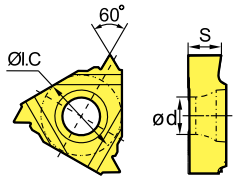


	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
External Außen	**RT16.01W-8 NPT**	**LT16.01W-8NPT**	8	3.97	9.525	4.4	○	○	○	○
	RT16.01W-11.5 NPT	**LT16.01W-11.5NPT**	11.5	3.97	9.525	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



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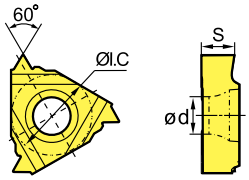

	Type Typ		Dimension (mm) Abmessung				Grade Sorte			
	Right hand Rechtsausführung	Left hand Linksausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201		YBG205	
							R	L	R	L
Internal Innen	**RT16.01N-8 NPT**	**LT16.01N-8 NPT**	8	3.97	9.525	4.4	○	○	○	○
	RT16.01N-11.5 NPT	**LT16.01N-11.5 NPT**	11.5	3.97	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

R

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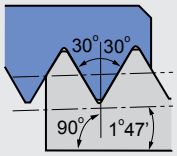
● ex stock · ab Lager ○ on demand · auf Anfrage

NPTF60°

ANSI B1.20.1-1983
Tolerance: 2
Toleranz



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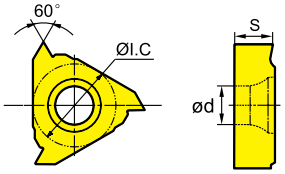
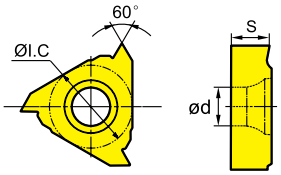


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-8NPTF**	8	3.97	9.525	4.4	○	○
	RT16.01W-11.5NPTF	11.5	3.97	9.525	4.4	○	○
	RT16.01W-14NPTF	14	3.97	9.525	4.4	○	○
	RT16.01W-18NPTF	18	3.97	9.525	4.4	○	○
	RT16.01W-27NPTF	27	3.97	9.525	4.4	○	○

R



	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External 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

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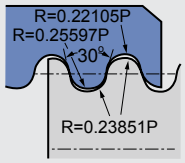
● ex stock · ab Lager ○ on demand · auf Anfrage

Round screw 30°
Round screw 30°

DIN 405
Tolerance: 7
Toleranz



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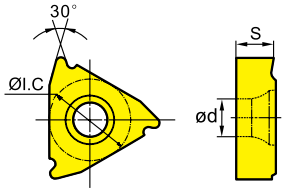
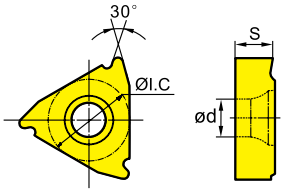


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-6R**	6	3.97	9.525	4.4	○	○
	RT16.01W-8R	8	3.97	9.525	4.4	○	●
	RT16.01W-10R	10	3.97	9.525	4.4	○	○

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

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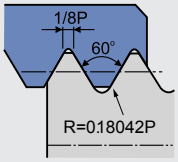
● ex stock · ab Lager ○ on demand · auf Anfrage

MJ (Metric)
MJ (Spitzgewinde)

ISO 5855-1999
Tolerance: 4
Toleranz



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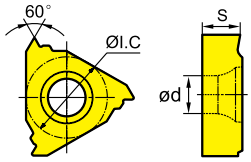
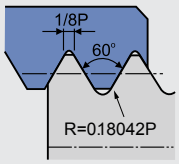


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-1.50MJ**	1.50	3.97	9.525	4.4	○	○
	RT16.01W-2.00MJ	2.00	3.97	9.525	4.4	○	○

UNJ (American)
UNJ (American)

ISO 3161-1999
Tolerance: 3A
Toleranz



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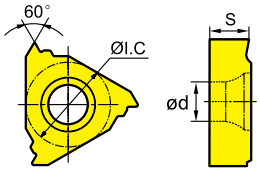

	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-8UNJ**	8	3.97	9.525	4.4	○	○
	RT16.01W-10UNJ	10	3.97	9.525	4.4	○	○
	RT16.01W-12UNJ	12	3.97	9.525	4.4	○	○
	RT16.01W-14UNJ	14	3.97	9.525	4.4	○	○
	RT16.01W-16UNJ	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

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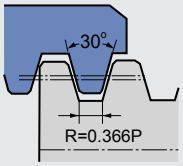
● ex stock · ab Lager ○ on demand · auf Anfrage

Tr (ISO trapezoid thread 30°)
Tr (ISO Trapez 30° Gewinde)

ISO 2901-2904
Tolerance: 7
Toleranz



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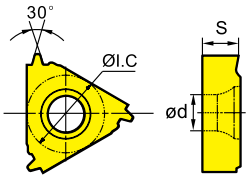
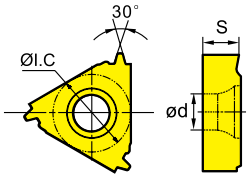


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-1.50TR**	1.50	3.97	9.525	4.4	○	●
	RT16.01W-2.00TR	2.00	3.97	9.525	4.4	○	●
	RT16.01W-3.00TR	3.00	3.97	9.525	4.4	○	○

R



	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
Internal 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

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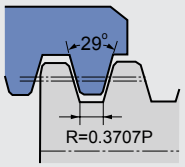
● ex stock · ab Lager ○ on demand · auf Anfrage

ACME American standard trapezoid 29°
ACME Amerikanisches Trapezgewinde 29°

ANSI B1.5-1988 ANSI B1.5-1988
Tolerance: 2G
Toleranz



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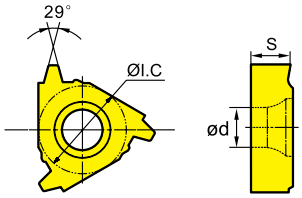
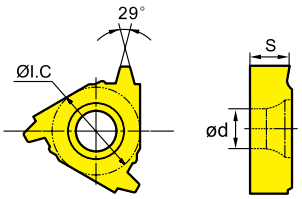


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-8AC**	8	3.97	9.525	4.4	○	○
	RT16.01W-10AC	10	3.97	9.525	4.4	○	○
	RT16.01W-12AC	12	3.97	9.525	4.4	○	○
	RT16.01W-14AC	14	3.97	9.525	4.4	○	○
	RT16.01W-16AC	16	3.97	9.525	4.4	○	○

R



	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
Internal 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

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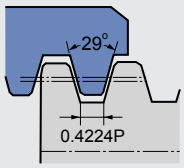
● ex stock · ab Lager ○ on demand · auf Anfrage

STUB - ACME Short teeth
STUB - ACME Verkürzte Gewindetiefe

ANSI B1.8-1988
Tolerance: 2G
Toleranz



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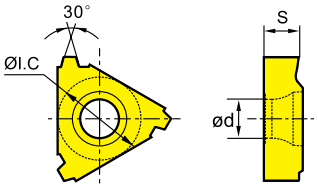
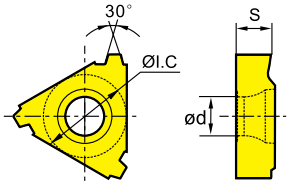


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT16.01W-8STAC**	8	3.97	9.525	4.4	○	○
	RT16.01W-10STAC	10	3.97	9.525	4.4	○	○
	RT16.01W-12STAC	12	3.97	9.525	4.4	○	○
	RT16.01W-14STAC	14	3.97	9.525	4.4	○	○
	RT16.01W-16STAC	16	3.97	9.525	4.4	○	○

R



	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
Internal 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

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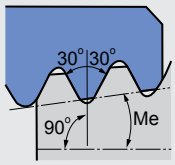
● ex stock · ab Lager ○ on demand · auf Anfrage

API 60°

Me=taper, 2i.p.f—4°46', 3i.p.f—7°01'
API SPEC7:1990, Tolerance: API standard
Toleranz: API standard



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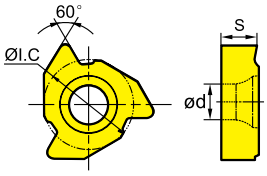
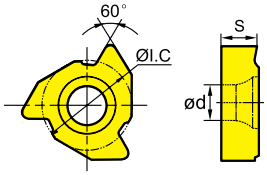


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External Außen	**RT22.01W-4AP382**	4	5.56	12.7	5.5	○	○
	RT22.01W-4AP383	4	5.56	12.7	5.5	○	○
	RT22.01W-5AP403	5	5.56	12.7	5.5	○	○
	RT22.01W-4AP502	4	5.56	12.7	5.5	○	○
	RT22.01W-4AP503	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

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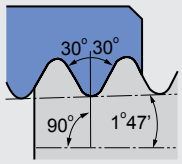
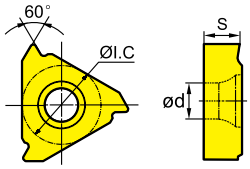
● ex stock · ab Lager ○ on demand · auf Anfrage

API (round)
API (Ruund)

API spec.5B
Tolerance: API RD
Toleranz

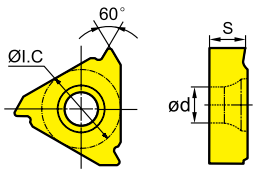


R



	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
External 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 Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG201	YBG205
Internal 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

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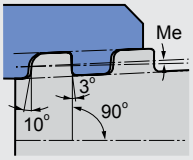
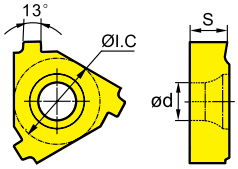
● ex stock · ab Lager ○ on demand · auf Anfrage

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

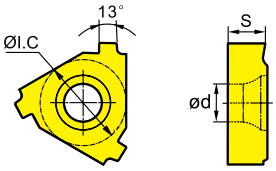


R



	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	○	○

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-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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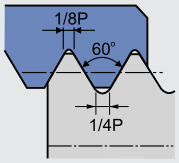
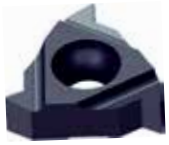
● ex stock · ab Lager ○ on demand · auf Anfrage

ISO metric thread insert (full profile)
Allgemeiner Einsatz (Vollprofil)

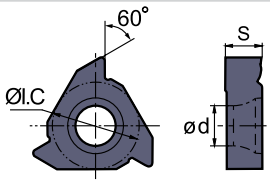
Thin Type

ISO 965-1980, DIN 13, GB/T 197-2003
Tolerances: 6g/6H
Toleranz





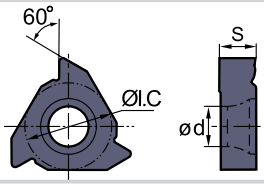
R



*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	○	●

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 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

R

R

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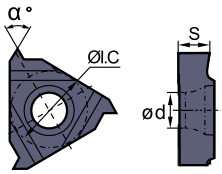
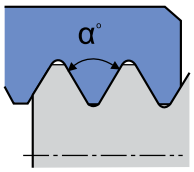
● ex stock · ab Lager ○ on demand · auf Anfrage

General pitch thread insert (partical profile) Allgemeiner Einsatz (Teilprofil) Thin Type

R

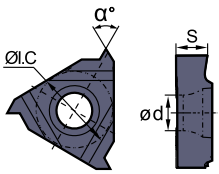


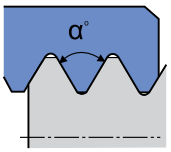
*Inserts with chip-breakers
Platten mit Spanbrecher



	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°	●	○

R





	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

R

R

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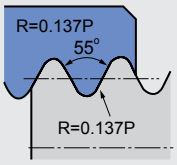
● ex stock · ab Lager ○ on demand · auf Anfrage

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



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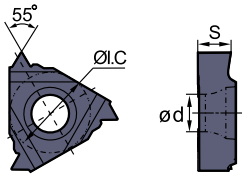
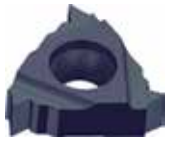


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
External Außen	**RT16.01W-8WB**	8	3.52	9.525	4.0	●	○
	RT16.01W-9WB	9	3.52	9.525	4.0	●	○
	RT16.01W-10WB	10	3.52	9.525	4.0	●	○
	RT16.01W-11WB	11	3.52	9.525	4.0	●	○
	RT16.01W-12WB	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	●	○



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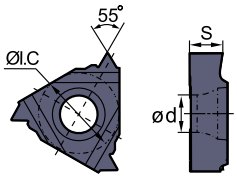

*Inserts with chip-breakers
Platten mit Spanbrecher

	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
Internal 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

R

R

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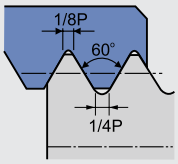
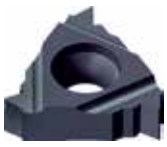
● ex stock · ab Lager ○ on demand · auf Anfrage

UN full profile
UN Vollprofil

Thin Type

ASME B1.1-1989
Tolerances: 2A/2B
Toleranz





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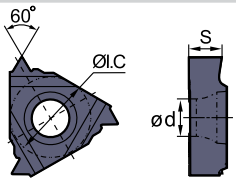
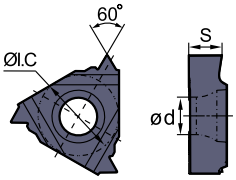


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
External Außen	**RT16.01W-8UNB**	8	3.52	9.525	4.0	●	○
	RT16.01W-10UNB	10	3.52	9.525	4.0	●	○
	RT16.01W-12UNB	12	3.52	9.525	4.0	●	○
	RT16.01W-14UNB	14	3.52	9.525	4.0	●	○
	RT16.01W-16UNB	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	●	○

R



	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

R

R

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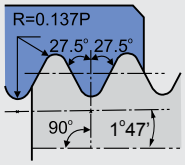
● ex stock · ab Lager ○ on demand · auf Anfrage

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



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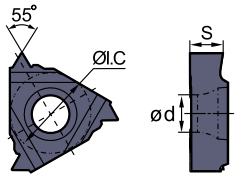
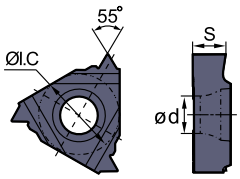


*Inserts with chip-breakers
Platten mit Spanbrecher

	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
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	○	○

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 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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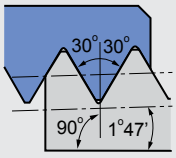
● ex stock · ab Lager ○ on demand · auf Anfrage

NPT American standard taper pipe with a shoulder
Amerikanisches kegeliges Rohrgewinde

Thin Type

ASME B1.20.1-1983
Standard NPT
Standard NPT



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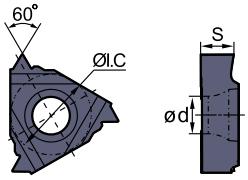
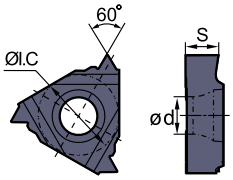


	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
External Außen	**RT16.01W-8NPTB**	8	3.52	9.525	4.0	○	○
	RT16.01W-11.5NPTB	11.5	3.52	9.525	4.0	●	○
	RT16.01W-14NPTB	14	3.52	9.525	4.0	○	●
	RT16.01W-18NPTB	18	3.52	9.525	4.0	●	○
	RT16.01W-27NPTB	27	3.52	9.525	4.0	○	○

R



*Inserts with chip-breakers
Platten mit Spanbrecher

	Type Typ	Dimension (mm) Abmessung				Grade Sorte	
	Right hand Rechtsausführung	Pitch Steigung (T.P.i)	S	ØI.C	ød	YBG202	YBG205
Internal 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

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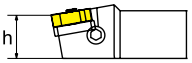
● ex stock · ab Lager ○ on demand · auf Anfrage

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

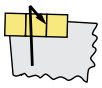
Code	Length Länge
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300
U	350

Toolholder for
"Thin Type" insert
Halter für
"Thin Type" Platten

S W R 20 20 K 16 (B)

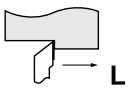
Clamping system
Klemmsystem

C
Top clamping
Pratzenklemmung

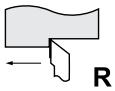


S
Screw on
Schraubenklemmung

Hand of tools
Ausführung

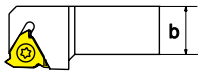


L
lefthand
Links



R
Righthand
Rechts

Shank width
Schaftbreite

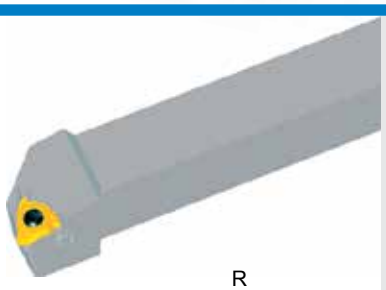


Integers to be proceeded by 0
eg: h=8 indicated by 08
Schaftbereit b

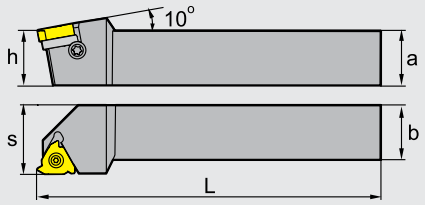
Insert Dimension
Plattenabmessung

Cutting edge length Schneidkantenlänge	IC (mm)
22	6.35
16	9.525
11	12.7

External threading tools · Aussengewindehalter



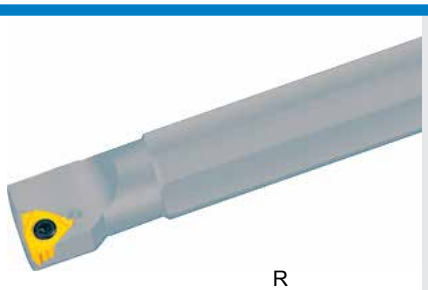
R



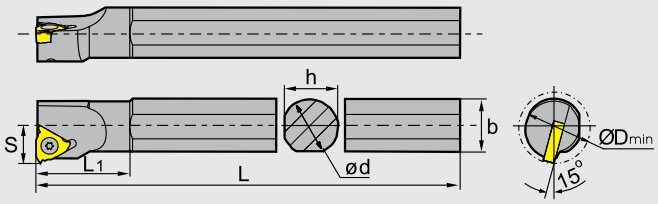
Type Typ		Stock Lager	Dimension (mm) Abmessung a	h	b	L	s	Inserts Wendeschneidplatten	Screw Schraube	Shim Unterlage	Shim screw Unterlagsschraube	Wrench Schlüssel
SWR	**1616H16**	●	16	16	16	100	20	RT16.01W-****	I60M3.5×12	MT16-**M	SM4×8C	WT15IP
	2020K16	●	20	20	20	125	25					
	2525M16	●	25	25	25	150	32					
	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					

● ex stock · ab Lager ○ on demand · auf Anfrage

Internal threading tools · Innengewindehalter



R

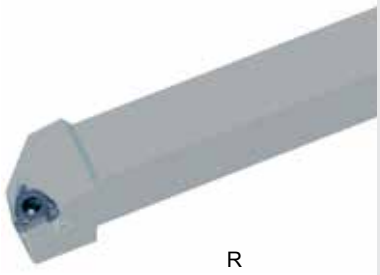


Type Typ		Stock Lager	Dimension (mm) Abmessung							Inserts Wendeschneidplatten	Screw Schraube	Shim Unterlage	Shim screw Unterlagesschraube	Wrench Schlüssel
			d	L	b	Dmin	s	h	L1					
SNR	0016K11	●	16	125	16	12	10	15	20.9	RT11.01N-****	I60 M2.5×6.5	---	---	WT07IP
	0016M11	●	16	150	15.5	16	10.5	15	25.9					
	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



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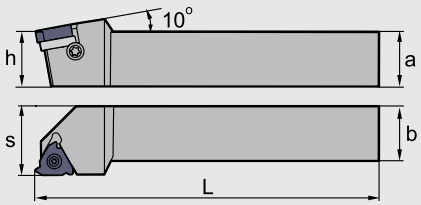
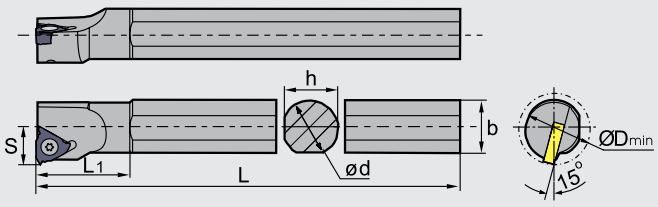


Type Typ		Stock Lager	Dimension (mm) Abmessung a	h	b	L	s	Inserts Wendeschneidplatten	Screw Schraube	Shim Unterlage	Shim screw Unterlagsschraube	Wrench Schlüssel
SWR	1616H16B	●	16	16	16	100	20	RT16.01W-****B	I60M3.5×12TT	MT16-**M	SM4×8C	WT15IP
	2020K16B	●	20	20	20	125	25					
	2525M16B	●	25	25	25	150	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					

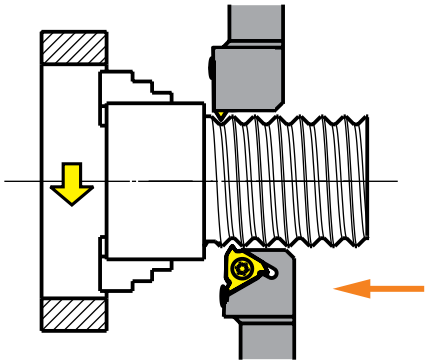
● ex stock · ab Lager ○ on demand · auf Anfrage

Steps to get the best threading result:
Bearbeitungsfolge für beste Ergebnisse beim Gewindeschneiden:

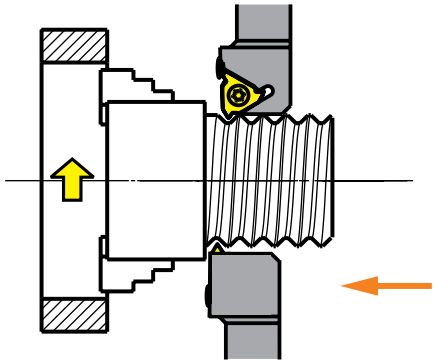
1. Select thread machining method
   Wahl der Gewindedrehmethode
2. Decide helical angle, select shim
   Auswahl des Winkels und der Unterlage
3. Choose insert and toolholder size
   Auswahl der Halter und Platten
4. By checking reference table of standard threading program, select feasible cutting parameters.
   Auswahl der Schnittparameter
5. Select feed way
   Auswahl der Schnittrichtung

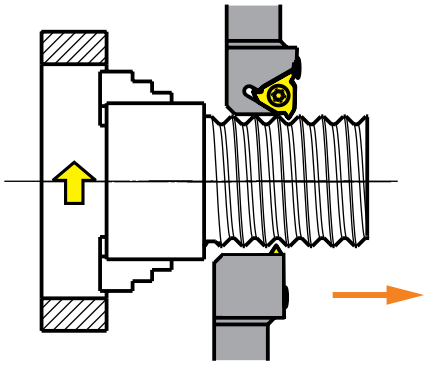
Thread machining method · Gewindedrehmethode

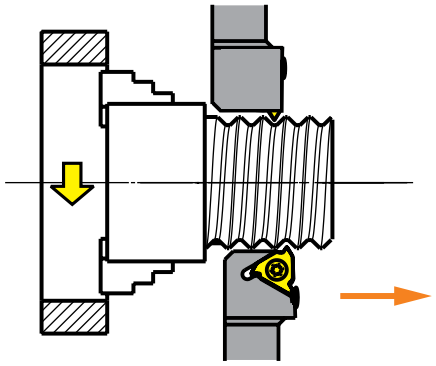
External threading machining (Right thread)
Außenbearbeitung (Rechtsausführung)



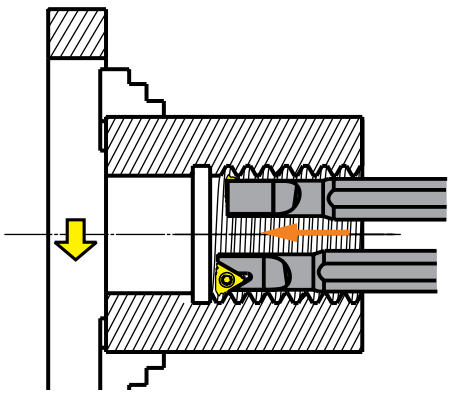
External threading machining (Left thread)
Außenbearbeitung (Linksausführung)



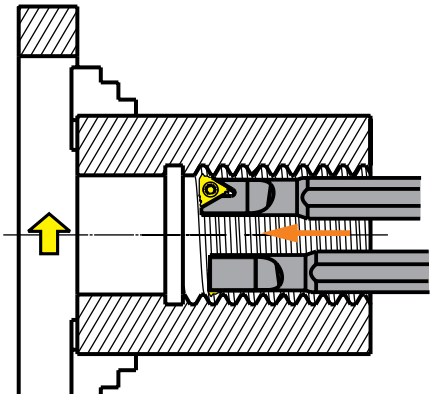




Internal threading machining (Right thread)
Innenbearbeitung (Rechtsausführung)



Internal threading machining (Left thread)
Innenbearbeitung (Linksausführung)

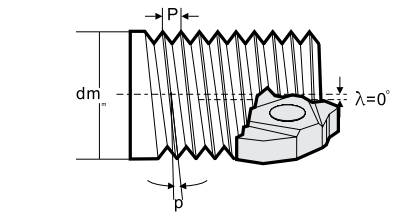


Decide helical angle, select shim · Auswahl des Winkels und der Unterlage

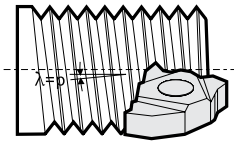
The flank clearance angles of the thread profile is dependent on the helix angle of the thread. The helix angle of the thread must coincide with the insert's angle of inclination angle as far as possible to get the ideal profile, to avoid longer unfavourable wear on one of the flanks and thus to ensure 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

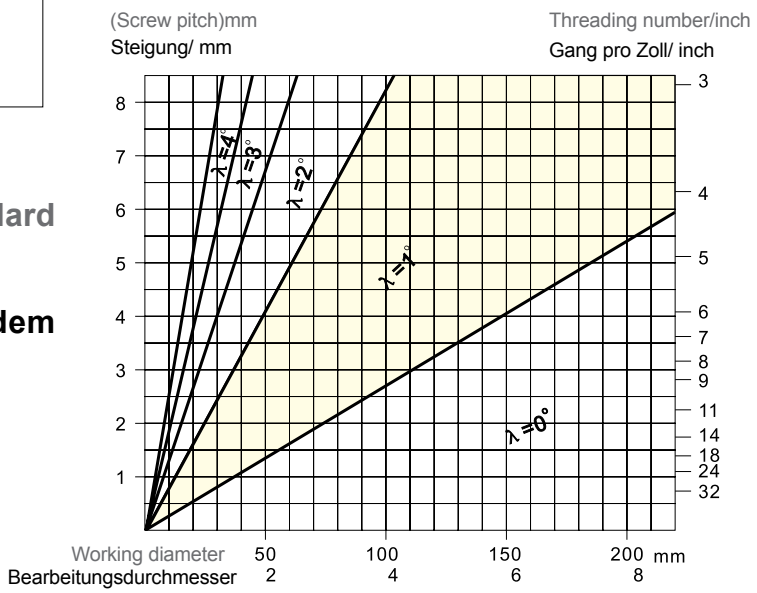
Shim specification table are as following:
Wahl der Unterlegplatte

Screw pitch range Steigungs-bereich	Insert dimensions Abmessung	Inclined angle Neigungs-winkel	Shim Unterlage
0.5-3.0	16	0 1 2 3	MT16-00M MT16-01M MT16-02M MT16-03M
3.5-6.0	22	0 1 2 3	MT22-00M MT22-01M MT22-02M 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 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 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 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 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 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 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 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

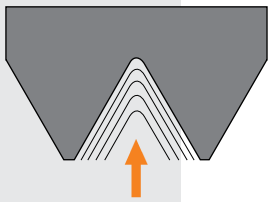
ISO	Workpiece Material Werkstück Material		Hardness HB Härte HB	Grade Sorte YBG201/YBG202/YBG205 Cutting speed (m·min) Schnittgeschwindigkeit (m·min)
P	Carbon steel Kohlenstoffstahl	C=0.15% C=0.35% C=0.60%	125 150 200	150-175 140-155 130-145
	Alloy steel Legierter Stahl	Anneal / Geglüht Tempered / Vergütet Tempered / Vergütet Tempered / Vergütet	180 275 300 350	110-130 80-100 70-90 60-80
	High alloy steel Hochlegierter Stahl	Anneal / Geglüht Hardened / Vergütet	200 325	90-115 70-90
	Cast steel Gussstahl	Non-alloy / Unlegiert Low alloy / Niedrig legiert High alloy / Hoch legiert Martensite steel 12%Mn Martensit Stahl 12%Mn	180 200 225 250	180-210 90-115 90-115 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 Pearlite / Perlitisch	130 230	110-140 85-105
	Grey cast iron Grauguss	Martensite / Martensitisch Ferrite / Ferritisch	180 260	110-140 90-115
	Nodular cast iron Kugelgraphitguss	Ferrite / Ferritisch Pearlite / Perlitisch	160 250	110-130 80-100
N	Al alloy Aluminiumlegierung	Non-aging treatment Unbehandelt Aging treatment Vergütet	60 100	1300-1450 450-500
	Cast aluminum alloy Aluminium-Gusslegierung	Non-aging treatment Unbehandelt Aging treatment Vergütet	75 90	430-470 250-290
S	Heat resistant alloy Hitzebeständige Legierung	Iron Base Eisen Basis — Anneal Geglüht Aging Vergütet	200 280	35-50 25-35
		Ni- Or Co-Base Basis — Anneal Geglüht Aging Vergütet Casting Guss	250 350 320	15-25 10-20 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).

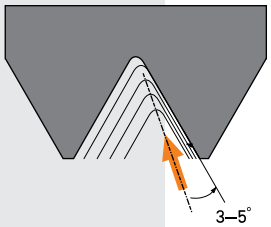
Radial infeed
Radiale Zustellung



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.

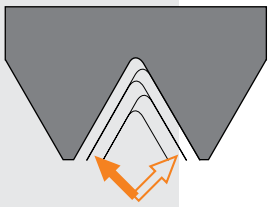
Modified flank infeed
Modifizierte Flankenzustellung



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.

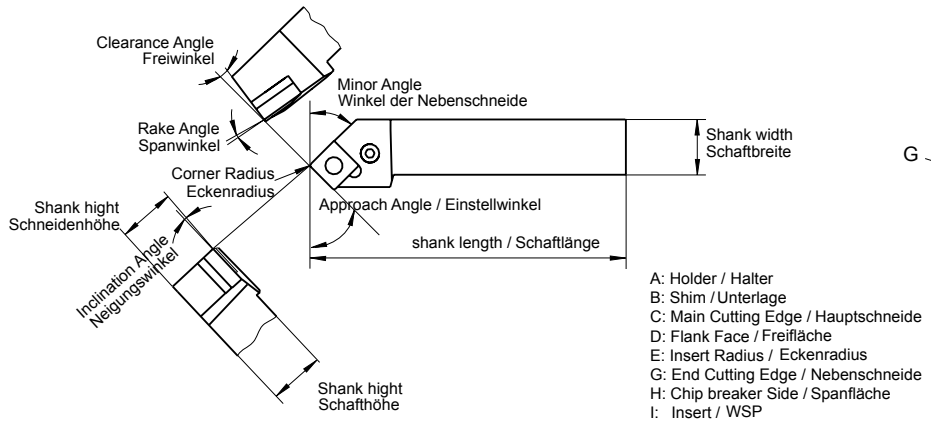
Wechselseitige Zustellung entlang beider Flanken. Anwendung bei großen Steigungen und langspanenden Werkstoffen. Gleichmäßiger Flankenverschleiß an beiden Schneidkanten.

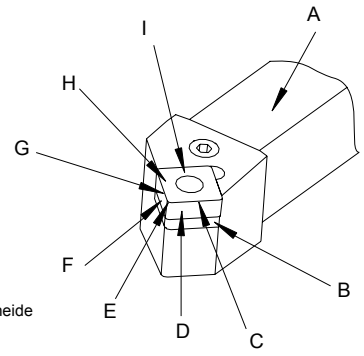
Typical problem in threading and its solution
Typische Probleme bei der Gewindebearbeitung und Lösungsvorschläge

Problem / Problemstellung	Cause / Ursache	Solution / Lösung
Big flank wear Großer Freiflächenverschleiß	Cutting speed too high Schnittgeschwindigkeit zu hoch	Reduce cutting speed 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 Unterschiedliche Verschleißmarken an linker und rechter Seite	Incorrect method for flank infeed / Seitliche Zustellung nicht optimal	Change method of flank infeed Seitliche Zustellung korrigieren
	Insert inclination angle does not correspont to the lead angle of the thread Neigungswinkel und Hauptwinkel stehen nicht optimal zueinander	Change shim to obtain correct angle of inclination 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 Schnittkraft zu hoch	Increase number of infeeds. Reduce size of the largest infeeds Anzahl der Zustellungen erhöhen, Zustellgröße verringern
	Unstable condition Instabile Verhältnisse	Check and improve clamping and tool overhang to prevent vibration Werkstückspannung und Auskraglänge verbessern, um Vibrationen zu verhindern
	Bad chip control Schlechte Spankontrolle	Increase pressure of cooling for better chip evacuation Kühlmitteldruck erhöhen für bessere Spanabfuhr
Plastic deformation Plastische Deformation	Cutting speed and temperature too high Schnittgeschwindigkeit und Temperatur zu hoch	Decrease cutting speed / Schnittgeschwindigkeit verringern Increase number of infeeds. Reduce size of the largest infeeds Anzahl der Zustellungen erhöhen, Zustellgröße verringern
	Insufficient cooling supply / Schlechte Kühlmittelzufuhr	Improve coolant supply / Kühlzufuhr verbessern
Thread surface quality is poor Oberflächenqualität des Gewindes nicht gut	Cutting speed too low / Schnittgeschwindigkeit zu niedrig	Increase cutting speed 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 Gewindeprofil nicht korrekt	Wrong centre height Plattenhöhe nicht korrekt	Change centre height 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 Aufbauschneidenbildung	Temperature on cutting edge too low / Temperatur an der Schneide zu gering	Increase cutting speed Schnittgeschwindigkeit erhöhen
	Often occures in low carbon or stainless steel Oft bei der Bearbeitung von Kohlenstoffstahl oder rostfreiem Stahl	Choose grade with good toughness (PVD coated) Sorte mit ausreichend Zähigkeit verwenden (PVD beschichtet)
Vibration Vibrationen	Incorrect cutting parameter Falsche Schnittparameter	Increase cutting speed or slow down cutting speed Schnittgeschwindigkeit erhöhen oder stark verringern
	Wrong centre height / Plattenhöhe nicht korrekt	Change centre height / Plattenhöhe verändern
	Clamping of work piece not good Werkstückspannung nicht ausreichend	Improve clamping system and minimize over hang 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.

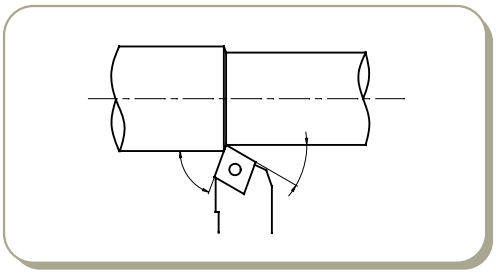
Eine Vergrößerung des Freiwinkels hat eine Verringerung der Reibung zwischen Werkstück und Werkzeug zur Folge. Die Schnittkräfte sind insgesamt geringer und es können bessere Oberflächengüten erreicht werden. Ein zu großer Freiwinkel schwächt allerdings die Schneidkantenstabilität. Je nach Anwendung 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.

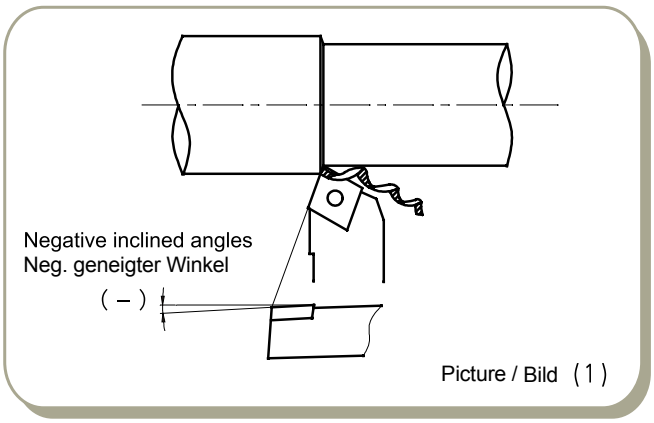
7. CORNER RADIUS · ECKENRADIUS

The corner radius effects the cutting edge strength and the finished surface.

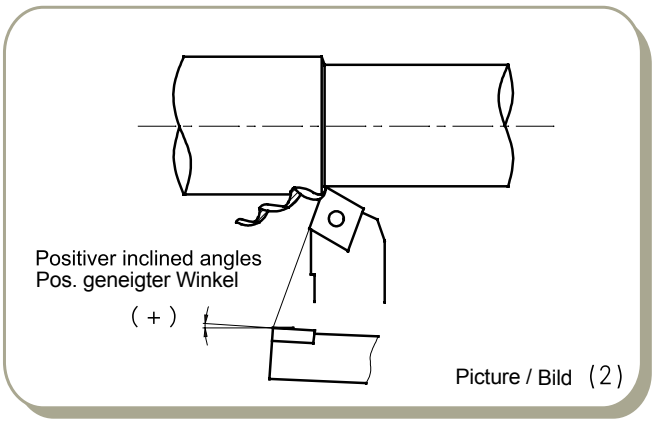
By increasing the corner radius the surface finish becomes better and the cutting edge strength improves. Flank and rake wear decreases. If the radius becomes to big cutting force increases and causes vibration. Also chip control becomes worth.

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 • Rigidity of machine is insufficient	• Schlichtbearbeitung mit kleinen Schnitttiefen • Bearbeitung von langen, dünnen Wellen • Geringe Maschinenstabilität oder Spannung
Big corner radius	Großer Radius	• Rough machining, high cutting edge strength is required • Rigidity of machine is good • Machining harden materials and interrupted cut	• Schruppbearbeitung mit hoher Schneidkantenstabilität • Hoher Maschinenstabilität • Bearbeitung mit unterbrochenem Schnitt oder Schmiedehaut



Picture / Bild (1)



Picture / Bild (2)

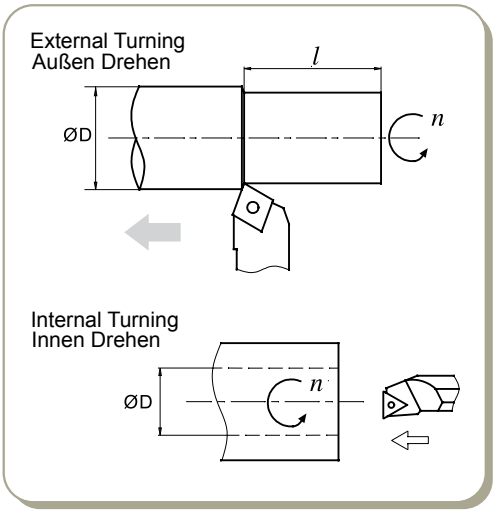
1. CUTTING SPEED · SCHNITTGESCHWINDIGKEIT

$$Vc=\frac{\pi \times D \times n}{1000}\ (m/min)$$

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=...]



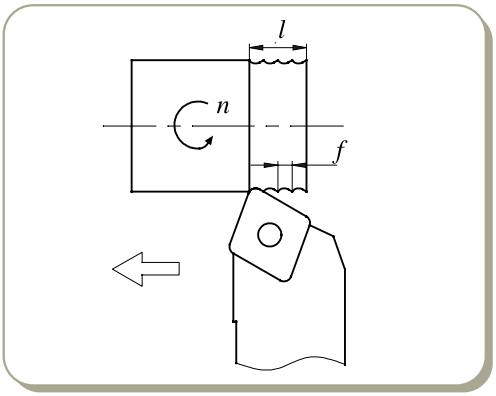
2. FEED RATE · VORSCHUBSGESCHWINDIGKEIT (F)

$$f=\frac{l}{n}\ (mm/rev)$$

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=.....]

$$f=\frac{l}{n}=\frac{100}{500}=0.2(mm/rev)$$



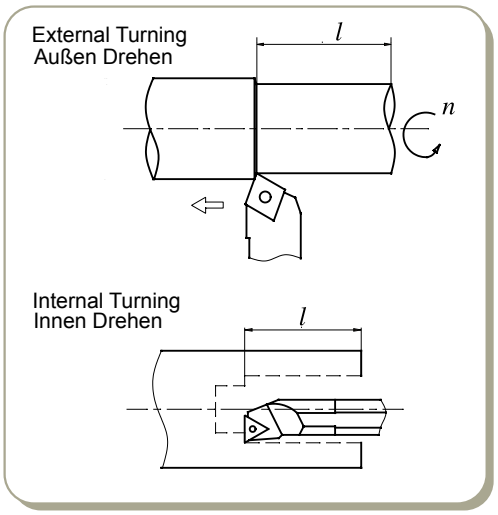
3. CUTTING TIME · SCHNITTZEIT

$$T_c = \frac{l}{f \times n} \ (min)$$

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

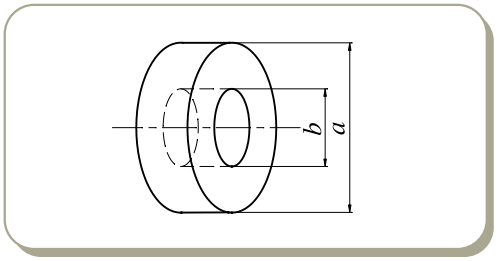
Result / Ergebnis: [hier dann die Formel Tc=...]



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)

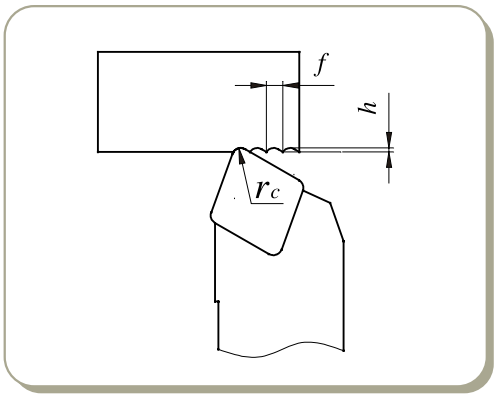


5. THEORETICAL SURFACE ROUGHNESS THEORETISCHE OBERFLÄCHEN-RAUHIGKEIT (R)

$$R = \frac{f^2}{8 r_c} \times 1000 \ (\mu m)$$

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

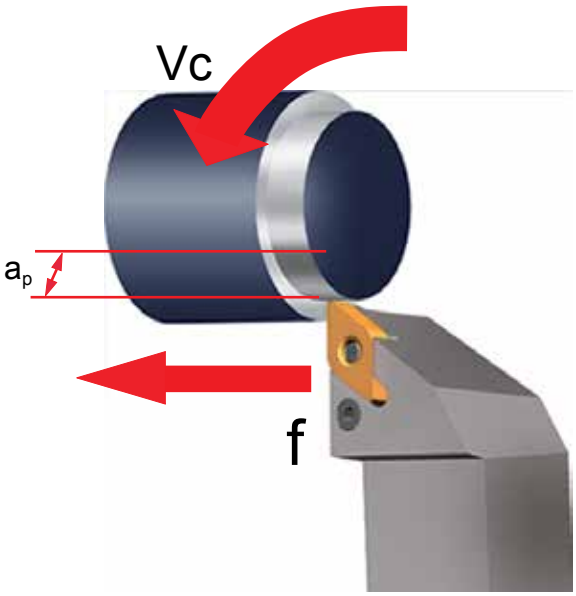


Three effects of cutting condition for turning
Einfluss der drei Schnittparameter beim Drehen

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

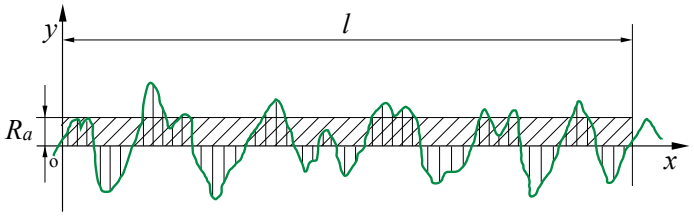
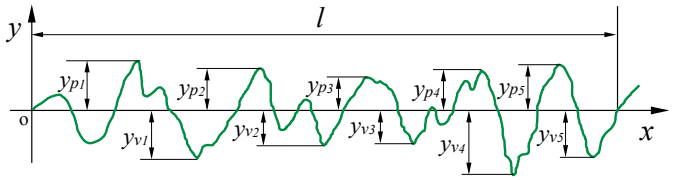
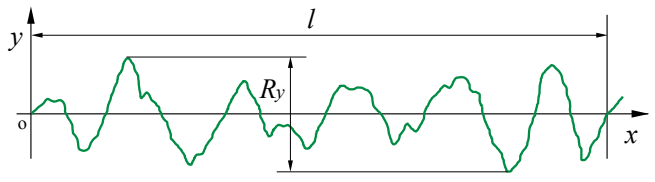
Thread code Gewindebez.	Pre-hole diameter (mm) Kerndurchmesser
M3×0.5	2.5
M3.5×0.6	2.9
M4×0.7	3.3
M5×0.8	4.2
M6×1.0	5.0
M7×1.0	6.0
M8×1.25	6.75
M9×1.25	7.75
M10×1.5	8.5
M11×1.5	9.5
M12×1.75	10.25
M14×2.0	12.0
M16×2.0	14.0
M18×2.5	15.5
M20×2.5	17.5
M24×3.0	21.0
M27×3.0	24.0
M30×3.5	26.5

- 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 Typ	Code	Calculation method · Berechnungsmethode	Calculation example (figure) · Meßaufnahme (Abb.)
Arithmetic average deviation of profile Mittlere Rauhtiefe	Ra	Within sampling length l, the arithmetic average absolute value of profile deviation is $Ra = \frac{1}{l}\int_0^l \lvert y(x)\rvert dx$ 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. 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 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 $Rz = \frac{\sum_{i=1}^{5} y_{pi} + \sum_{i=1}^{5} y_{vi}}{5}$ 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. 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. 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 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. 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. 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**											
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	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	-	-

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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 3310	1.5752	14NiCr14	655M13 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; SCM430	30ChM
	35CrMo	4137;4135	1.7220	34CrMo4	708A37	19B	2234	35CD4	35CrMo4	34CrMo4	SCM432; SCRRM3	AS38ChGM
	40CrMoA	4140;4142	1.7223	41CrMo4	708M40	19A	2244	42CD4TS	41CrMo4	41CrMo4	SCM440	40 ChFA
	42CrMo 42CrMnMo	4140	1.7225	42CrMo4	708M40	19A	2244	42CD4	42CrMo4	42CrMo4	SCM440(H)	-
	-	-	1.7262	15CrMo5	-	-	2216	12CD4	-	12CrMo4	SCM415(H)	-
	-	ASTM A182 F11;F12	1.7335	13CrMo44	1501-620Gr.27	-	-	15CD3.5; 15CD4.5	14CrMo44	14CrMo45	-	12ChM , 15ChM
	-	-	1.7361	32CrMo12	722M24	40B	2240	30CD12	32CrMo12	F.124.A	-	-
	-	ASTM A182 F.22	1.7380	10CrMo910	1501- 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	-	-	-

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	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_1105	C98KU C100KU	F.515 F.516	-	U10A
	T12A	W.112	1.1663	C125W	-	-	-	Y_2120	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_1105V	-	-	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 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 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 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 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. 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 Für Gesenkstempel, Meßkaliber, Papierschneidmesser, Werkzeuge
	9CrWMn	01 mod.	-	SKS3 mod.	GOA		Blanking die, gauge calipers, drawing die, taps, Perforated punch. Für Schnittmatrizen, Meßkaliber, Gewindebohrer, Perforationswerkzeuge, Kaltziehsteine
	Cr12MoV	D2	X165CrMoV12	SKD11	DC11		Blanking die, cold forming die, cold drawing die, forming roller, punch Für Schnittmatrizen, Kaltformpressgesenke, Kaltziehsteine, Formwalzen.
	-	D2 mod.	-	SKD11 mod.	DC53		Blanking die, cold forming die, cold drawing die, forming roll, punch 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 Aluminium Druckgesenke, Verbindungsstücke für Druckgesenke, Heißpressgesenke, Heiß-Extruder-Gesenke, warmfeste Schnittmesser ect.
	-	-	-	-	DH21		Long life Aluminum compression die Alu-Druckgesenke für lange Lebensdauer
	-	-	-	-	DH31-S		Compression die, Druckgesenke
	-	-	-	-	DH2F		Compression die, plastic die 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

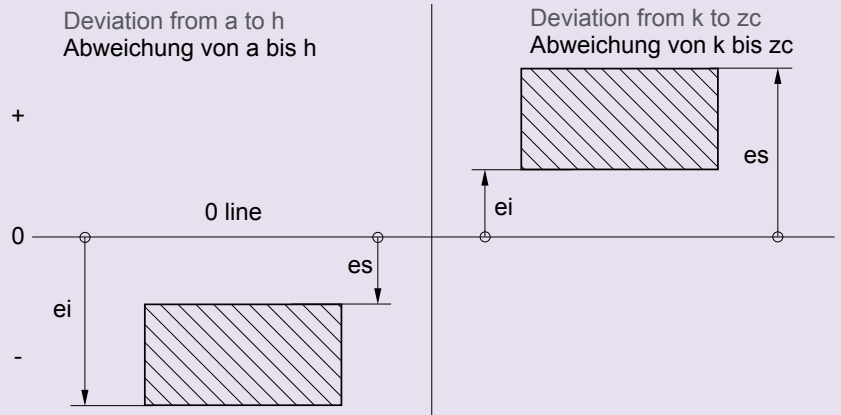
Basic dimensions (mm)		Standard tolerance class of holes · Standard-Toleranzklassen																	
		IT1	IT2	IT3	IT4	IT5	IT6	IT7	IT8	IT9	IT10	IT11	IT12	IT13	IT14	IT15	IT16	IT17	IT18
>	≤	μm											mm						
---	3	0.8	1.2	2	3	4	6	10	14	25	40	60	0.1	0.14	0.25	0.4	0.6	1	1.4
3	6	1	1.5	2.5	4	5	8	12	18	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.

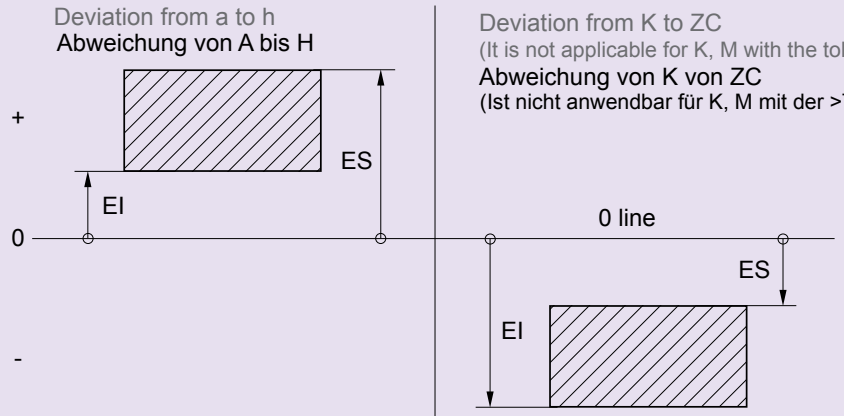


ES= negative (-) basic tolerance of hole
ES= neg(-) Basistoleranz der Bohrung
ei=es-IT

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 IT6	IT7	IT8	IT4 IT7	≤IT3 >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 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 -220	-430 -470	-620 -680	-940 -1050													
-120	-250 -260	-520 -580	-780 -840	-1150 -1300													
-140	-300 -330	-640 -720	-960 -1050	-1450 -1600													
-170	-370	-820	-1200	-1850													
	-400	-920	-1350	-2000													
-195	-440 -460	-1000 -1100	-1500 -1650	-2300 -2500													
-240	-550 -580	-1250 -1400	-1900 -2100	-2900 -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			

Coated Cemeted Carbide CVD · beschichtetes Hartmetall CVD

ISO		ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec	Widia
P01-05	P Steel · Stahl	YBC052	GC4205 GC4305	KCP05 KC9105	AC805P	UE6005 UE6105	T9005 T9105	CA5505	WPP01 WPP05	IC8150 IC9150 IC428	TP0500 TP0501			
P10-15		YB6315 YBC152 YBC252	GC4315 GC4215	KCP10 KC9110	AC810P AC700G	UC6110 MY5015	T9015 T9115	CA510 CA5515 CA510	WPP10 WPP10S	IC8150 IC8250 IC9150 IC9250 IC9015	TP1500 TP1501	NC3010	TT8115 TT8125	WP15CT
P20-25		YBC252 YBC251	GC4325 GC4225 GC4025	KCP25 KC9125	AC820P AC8020P AC900G AC2000	UE6020 MC6025	T9025 T9125	CA5525 CA525 CR9025	WPP20 WPP20S	IC8150 IC8250 IC9250 IC9025	TP2501 TP2500 TP200	NC3220 NC3120	TT8125 TT3500	WP25CT
P30-35		YBC352 YBC351	GC4335 GC4235 GC4035	KCP30 KC8050	AC830P AC3000	UE6035 UE6400	T903 T9135	CA530 CA5535 CA535	WPP30 WPP30S	IC8250 IC8350 IC9350	TP3500	NC3030 NC5330 NC500H	TT5100 TT8135	WP35CT
M10	M Stainless Steel Rostfreier Stahl	YBM151 YBM153	GC2015 GC1515	KCM15	AC610M	MC7015	T9115			IC8250 IC9250 IC6015			TT9215	WM15CT
M20		YBM253 YBM251	GC2015 GC2025	KCM25 KC9225	AC610M AC630M	US7020 MC7015 MC7025	T6020 T6120 T9125	CA6515	WAM20	IC8250 IC9350 IC9025 IC6025	TM 2000 TP200 TP2500	NC9025	TT5100 TT9225	WM25CT
M30		YBM351 YBM253	GC2025 GC2035	KCM25 KCM35 KC9225	AC630M AC6030M AC830P AC3000	US735 US7025	T6030 T6130	CA6525	WAM30	IC8350 IC9350 IC9025	TP3500 TM4000		TT5100 TT7100 TT9235	WM35CT
M40		YBM351	GC2035	KCM35 KC9240 KC9245	AC630M AC6030M AC830P AC3000	US735	T6030 T6130	CA6525		IC6025 IC9350	TP40		TT5100 TT7100 TT9235	
K01-05	K Cast iron · Guss	YBD052	GC3005 GC3205	KCK05	AC405K AC410K	UC5005 UC5105	T5105	CA4505		IC5005 IC9007		NC6205	TT1300 TT7005	WK05CT
K10-15		YB7315 YBD102 YBD152 YBD152C	GC3215	KCK15 KC9315	AC410K AC415K AC420K AC700G	MC5015 UC5115 MY5015	T5105 T5115	CA4010 CA4515 CA4115	WAK10 WAK10S	IC9015 IC9007 IC8150 IC5010 IC428 IC4028 IC9150	TK1001 TK1000	NC6210	TT1300 TT7310 T7015	
K20-25		YB7315 YBD152 YBD152C	GC3225	KCK20 KC9320	AC420K AC900G	MC5015 UC5115 UE6110 MY5015	T5125 T9125	CA4125	WAK20 WKK20S	IC5010 IC428 IC4028 C9150	TK2000 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													
P01-05			GC1105					PR1005						
P10-15		YBG101 YBG102 YBG105	GC1515 GC1115 GC1025	KC5010 KC5510 KC7215 KC7315	AC510U	VP10MF VP15TF	AH710	PR930 PR1005 PR930 PR115	WSM10 WXN10	IC520N IC507 IC570 IC807 IC907 IC908				
P20-25		YB9320 YBG205 YBG202	GC1515 GC1125 GC1025	KC5025 KC5525 KU25T	AC520U	VP20RT VP20MF	AH725 AH120	PR930 PR1025 PR1225	WSM20 WMP20S WSM21	IC228 IC250 IC308 IC828 IC350 IC354 IC507 IC807 IC808 IC907 IC908 IC928 IC1008 IC1028 IC3028	CP200 CP250 TP2000 TS2500		TT8020 TT9020	
P30-35		YBG302	GC1125 GC2035	KC7335	AC530U		SH730 J740 GH130 AH740	PR660	WSM30	IC228 IC250 IC328 IC330 IC354 IC528 IC1008 IC1028 IC3028	CP500	PC5300		
M	Stainless Steel Rostfreier Stahl													
M10		YBG101 YBG102 YBG105	GC1105 GC1115 GC1025 GC1125 GC1515	KCU10 KC5010 KC5510 KC6005 KC6015	EH10Z AC510U AC530U	VP10MF	AH710	PR915 PR1005	WSM10	IC330 IC354 IC507 IC520 IC570 IC807 IC1028 IC3028	CP500 TS2000	PC8110	TT5080	WS10PT
M20		YB9320 YBG205 YBG202	GC1025 GC1125	KC501 KCU25	AC520U AC530U	VP10RT VP15TF VP20RT VP20MF	AH120 AH725 SH730 AH710 AH630 GH330	PR1025 PR1125 PR1225	WSM10 WMP20S WSM20 WSM21	IC228 IC250 IC354 IC808 IC908 IC1008 IC1028 IC3028	TS2000 TS2500 CP200 CP250		TT8020 TT9020 TT9080	WS25PT
M30		YBG302	GC2035	KC5025 KCU25		VP10RT VP15TF VP20RT VP20MF MP7035	AH12 AH725 SH730 AH710 AH630 GH330 J740	PR1025 PR1125	WSM20 WSM21 WSM30	IC228 IC250 IC328 IC330 IC1008 IC1028 IC3028	CP500 TS2500	PC5300 PC9030		
S	Heat resist. super all. & Ti-alloys Warmf. Legi. & Ti-Legierung													
S05			S05F			MP9005	AH905			IC507 IC907				
S10		YBG102 YBG105 YBG202 YBG205	GC1105 GC1115	KC5010 KCU10 KC5510 KCS10	AC510U EH510Z	MP9015 VP10RT	AH905 SH730 AH110 AH120		WSM10	IC507 IC807 IC808 IC806 IC907	CP200 CP250 TS2000 TS2500	PC8110	TT5080	WS10PT
S20		YB9320 YBG205 YBG202	GC1025 GC1125 GC1515	KC5010 KCU10 KC5025 KCU25 KC5525	AC520U EH520Z	MP9015 MT9015 VP20RT	AH120 AH725	PR1125	WSM20 WSM21 WSM30	IC507 IC807 IC907	CP250 TS2500 CP500	PC5300	TT5080 TT8020 TT9080	WS25PT
S30		YBG302			AC520U	VP15TF	AH725	PR1125	WSM30	IC3028 IC808 IC830		PC5400	TT8020	
N	Nonferrite Mat. Ne-metalle													
N10		YBG101 YBG102 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 T1000A	AP25N VP25N	NS520 AT520 GT520 GT720	TN30 TN6010 PV30 PV7010		IC20N IC520N		CN1000 CC105	CT3000 PV3010	
	P10-15	YNG151 YNG151C	CT5015 CT530	KT315 KT125	T1200A T2000Z T1500A T1500Z	NX2525 AP25N VP25N	NS520 NS730 GT730 NS9530 GT9530	TN60 TN6010 PV60 PV6010		IC20N IC520N IC530N	CM TP1020 TP1030 CMP	CN1000 CT10 CN2000 CC115	CT3000 PV3010	TTI15
	P20-25	YNT251	GC1525	KT325 KT1120 KT5020	T1200A T2000Z T1500A T1500Z	NX2525 NX3035 AP25N VP25N MP3025	NS530 NS730 GT730 NS9530 GT9530	TN60 TN6020 PV60 PV7020 PV7025		IC20N IC30N IC75T IC520N IC530N	CM TP1020 TP1030 CMP	CN20 CN2000 CC115		TTI15
	P30-35				T3000Z	MP3025 VP45N		PV7025 PV90		IC75T				
M	M10	YNG151 YNG151C	GC1525	KT125	T110A T1000A T1500Z T2000Z	NX2525 AP25N VP25N	NS520 AT530 GT530 GT720	TN60 TN6020 PV60 PV7020			CM TP1020 TP1030 CMP		CT3000 PV3010	TTI15
	M20	YNT251	CT5015 CT530	HT2	T110A T1000A T1500Z T2000Z	NX2525 AP25N VP25N	NS530 GT730 NS730	TN90 TN6020 PV90 PV7020 PV7025					CT3000 PV3010	TTI15
	M30		T3000Z											
	M40													
K	K01-05				T110A T1000A T2000Z T1500Z	NX2525 AP25N	NS520 GT730 NS730	TN30 TN6010 PV30 PV7005 PV7010				CN1000	CT3000 PV3010	
	K10-15	YNG151 YNG151C	CT5015	KT325 KT125	T1200A T1500A T2000Z T1500Z	NX2525 AP25N	NS520 GT730 NS730	TN60 TN6020 PV60 PV7020 PV7025				CN1000	CT3000 PV3010	
	K20-25	YNT251	CT5015		T3000Z	NX2525 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 YD201	H10 H13A	KF1	H1		KS05F				883 890			
N10	YD101 YD201	H10 H13A	K313 K68 KF1 THM-F	H1	HTi10	KS15F	KW10	WK01 WK10	IC20	890 KX HX	H01	K10	THM
N20	YD101 YD201	H10 H13A	K313 K68 KF1 THM-F			KS15F	KW15		IC20	KX HX			

Material / Class		ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec
P Steel · Stahl	P05		K20W GC4220			F7010							
	P10		K20W GC3040 GC4220 GC4230		ACP100	F7010				IC4100 IC5100	MP1500	NC5330 NCM325	IN6505 IN6520
	P20	**YBC301 YBC302 YBC251 YBC253**	GC3040 GC4230		CS3000	FH7020	T3130		WKP25 WKP25S	IC4050 IC4100 IC5100 IC5400	MP1500 MP2500 MS2500 T25M	NC5330 NCM325	IN6505 IN6520 IN7035
	P30	**YBC301 YBC302 YBM253 YBM351**	GC2040 GC4240	KC930M KC935M	CS3000	F7030	T3130		WKP35 WKP35S WTP35	IC4050 IC5400	MK3000 T25M T350M	NCM325	IN7035 IN6530
	P40	**YBC401 YBM351**	GC2040 GC4240								T350M		IN6530
M Stainless Steel Rostfreier Stahl	M10		GC4230			F7010					MP1500	NCM325 NC5330	IN6520
	M20	**YBM251 YBM253**	GC4230			F7020	T3130			IC4050	MP1500 MP2500 MS2500 T25M	NCM325 NCM335	IN7035 IN6520 IN6505
	M30	**YBM351**	GC2040 GC4240	KC930M KC935M		F7030	T3130		WTP35		MP2500 MS2500 T25M T350M	NCM335	IN6530 IN7035 IN6505
	M40		GC2040 GC4240								T350M		IN6530
K Cast iron · Guss	K05	**YBD152**		KCK15		F7010 MC5020				DT7150 IC4100			
	K10	**YBD152 YBD252**	K20W	KCK15	ACK200	F7010 MC5020	T1115		WAK15	DT7150 IC4100 IC4010	MP1500 MK1500	NC5330	IN6520
	K20	**YBD252**	K20W		ACK200		T1115		WKP25 WKP25S	DT7150 IC4100	MP1500 MP2500 MS2500 T25M MK1500	NC5330	IN6530 IN6515 IN6520
	K30			KC930M KC935M					WKP35 WKP35S	IC4050	MK3000 MP2500 MS2500		IN6530 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										MK3000		
S10												
S20										MP2500 MS2500 T25M		IN7035 IN6520
S30		GC2040						WTP35		MM4500 T350M		
N05												
N10												
N20										MP2500 25M		
H05												
H10		K20W										
H20		K20W GC3040										

S Super alloys Ti-Legierung

N Nonferrite materials Ne-metalle

H Hadened materiel Hd-metalle

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 GC1025 GC1020	KC522M KC525M KC610M KC643M KC715M	ACZ10M ACZ20W	VP10H	AH120 GH130	PR730 PR1225 PR1525	WHX15 WHH15 WXM15	IC903 IC950 IC1008	F15M		IN2004 IN2006
	P20	**YBG202** **YBG252**	GC1020 GC1025 GC1010 GC2030	KC522M KC525M KC643M KC715M KC725M	ACP200 ACZ330 ACX70 ACW30 AC350 ACZ50M	VP15TF VP20M VP20RT	AH725 AH120 AH130 AH330 AH725 AH730 GH330	PR630 PR830 PR730 PR1225 PR1230 PR1525	WXM15	IC810 IC380 IC830 IC900 IC908 IC910 IC950 IC1008	F25M MP3000	PC3500 PC3600	IN2006 IN1030 IN2004 IN2005 IN2015 IN2030 IN2505 IN2540
	P30	**YBG302**	GC1030 GC2030	KC530M KC725M KC735M	ACP200 ACP300 ACZ50M ACZ330 ACZ350 ACX70 ACW30 AC350	VP30RT	AH740 AH130 AH140	PR630 PR660 PR830 PR1230	WXM35	IC300 IC328 IC830 IC900 IC928 IC350 IC808 IC908	F30M MP3000	PC3500 PC3600 PC5300 PC3545 PC9570T	IN1030 IN2005 IN2015 IN2030 IN2035 IN2040 IN2505 IN2530 IN4035
	P40		GC1030	KC735M	ACP300 ACZ350		AH140 AH750		WXP45 WSP45 WSP46	IC300 IC328 IC928	F40M	PC5300 PC3545	IN2035 IN2040
M Stainless Steel Rostfreier Stahl	M10		GC1020	KC522M KC610M KC643M KC715M	ACZ20W ACZ350 EH20Z		AH330 GH110 GH130	PR730 PR1225 PR660 PR1525		PR730 PR660 PR1225 PR1525	F15M	PC8110	IN2505
	M20	**YBG202** **YBG205** **YBG252** **YB9320**	GC1020 GC1025 GC1030 GC203	KC522M KC525M KC610M KC715M KC725M	ACP200 ACZ50M ACZ20M ACZ350 EH20Z AC350	VP15TF VP20RT	AH725 AH730 GH110	PR730 PR1025 PR660 PR1225 PR1525	WXM15	PR730 PR660 PR1025 PR1225 PR1525	F25M MP3000	PC5300 PC8110 PC9530	IN2005 IN2015 IN2505
	M30	**YBG302**	GC1040 GC203	KC525M KC530M KC725M KC735M	ACP300 ACZ50M ACX80 AC350	VP30RT	AH740 AH120 AH130 GH330 GH340				F30M MP3000	PC9530 PC3545 PC9570T	IN1030 IN2015 IN2030 IN2035 IN2530 IN4035
	M40		GC1040	KC530M KC735M	ACP300 ACX80		AH140 AH750 GH330 GH340		WSM35 WSM36 WXM35		F40M	PC3545	IN1030 IN2030 IN2035 IN2530 IN4035
K Cast iron · Guss	K05		GC1010	KC510M	ACZ10M ACZ120 ACZ310		AH330	PR905 PR1210 PR1510			MH1000	PC8110	IN2510
	K10	**YBG102** **YBG152**	GC1010	KC510M KC520M KC620M KC643M	EH20Z ACZ310		AH120 AH330 AH725	PR905 PR1210 PR1510	WXH15 WHH15 WXM15	IC810 IC950 IC1008	F15M MK2000	PC6510	IN2004 IN2010 IN2510
	K20		GC1020	KC520M KC620M KC725M	ACK300 EH20Z ACX80 ACW30	VP15TF	GH130		WKK25	IC328 IC830 IC950 IC350 IC808 IC908 IC1008	F25M MK2000 MO3000	PC6510 PC5300	IN1030 IN2004 IN2010 IN2015 IN2030 IN2505
	K30		GC1020	KC620M KC725M	ACK300 ACZ50M					IC328 IC830 IC900 IC908 IC350 IC808 IC908	F30M F40M MP3000	PC5300 PC9570T	IN2005 IN2015 IN2030 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 K110M				WK10		IC20N		H01	IN04S
N10	YD101		K313	EH520	HTi10		WKM	GW25	IC08	H15	G10	IN10K IN05S
N20	YD201	H13A H10F	KMF	EH520	TF15		KMG40		IC28	H25		IN15K

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175.32-22 A103
175.32-24 A103
175.32-25 A103
175.32-28 A103

A

APKT-ALH B205
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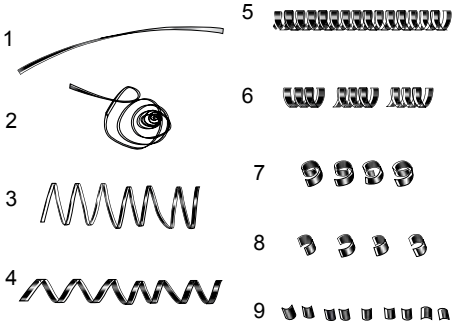
Test Report
Versuchsprotokoll

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**				
1 2 3 4 5 6 7 8 9 		○	○	○	○
		Conclusion / Zusammenfassung			
		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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