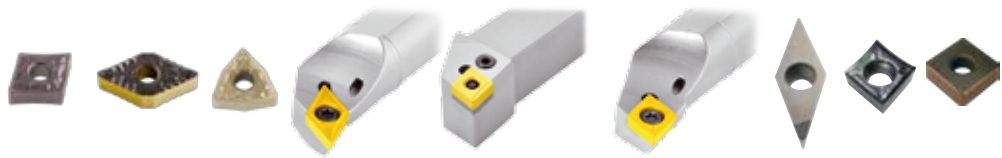


# Gesamtübersicht *General View*

## 1 Drehen Turning



Drehen  
Turning

## 2 Fräswerkzeuge Milling Tools



Fräswerkzeuge  
Milling Tools

## 3 HDS-/VHM- Fräser HDS-/ Solid Carbide Endmills



HDS-/VHM- Fräser  
HDS-/ Solid Carbide  
Endmills

## 4 Stech- und Abstechwerkzeuge Grooving and Parting off Tools



Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

## 5 Mini-/Micro -Werkzeuge Mini-/ Micro Tools



Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

## 6 Gewindewerkzeuge Threading Tools



Gewinde-  
werkzeuge  
Threading Tools

## 7 Wendeplattenbohrer / VHM-Bohrer Indexable Drills Solid / Carbide Drills



Wendeplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## 8 Alphanumerischer Index Alphanumeric Index

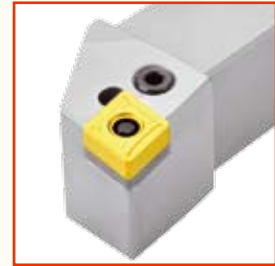
## Allgemeine Liefer- und Verkaufsbedingungen General Delivery and Sales Conditions

Diverses  
Diverse



# Drehen Turning

# 1



Fräswerkzeuge  
Milling Tools

HDS-/VHM- Fräser  
HDS-/Solid Carbide  
Endmills



Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools



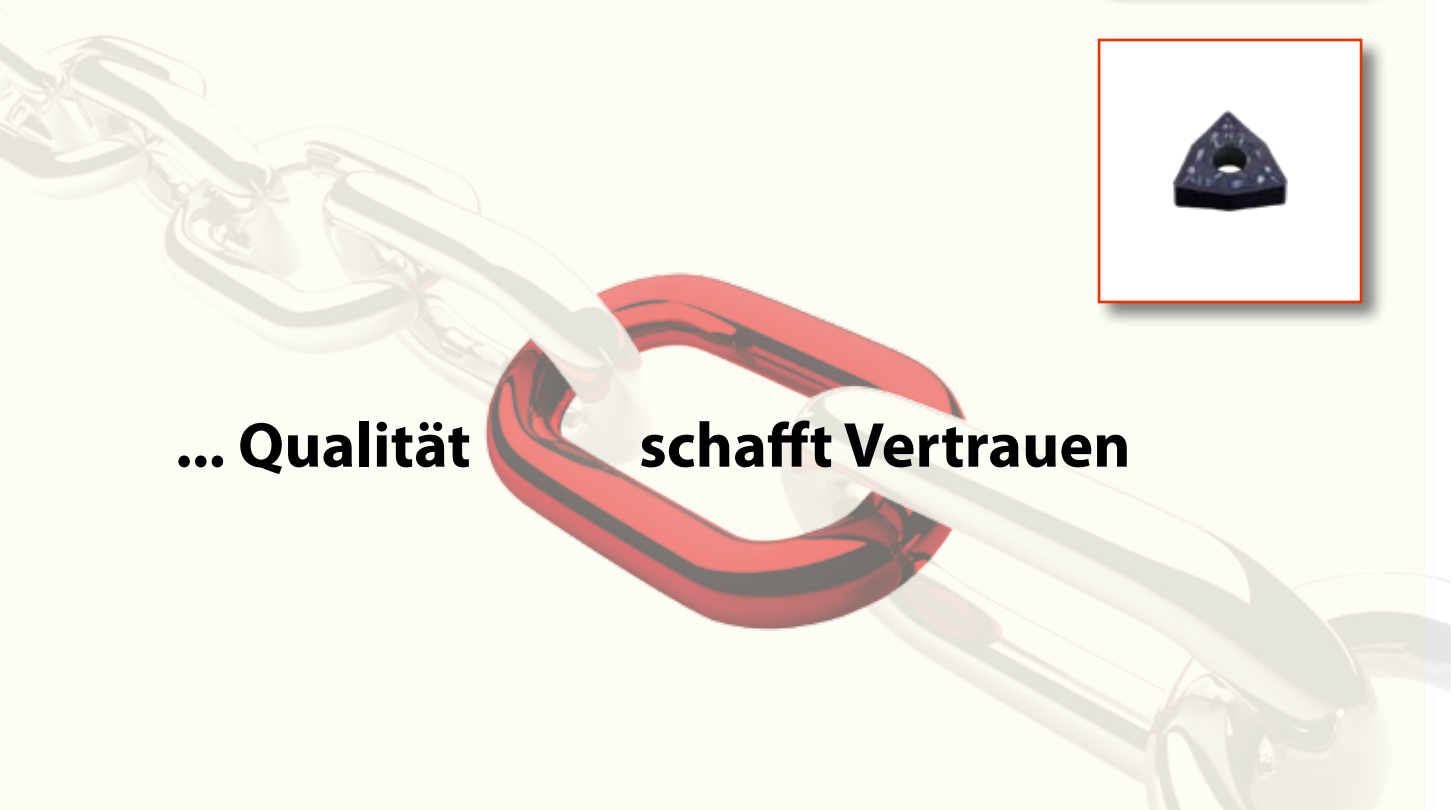
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools



Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

**... Qualität schafft Vertrauen**



- Drehen Turning
- Fräswerkzeuge Milling Tools
- HDS-/VHM- Fräser HDS-/Solid Carbide Endmills
- Stech- und Abstechwerkzeuge Grooving and Parting off Tools
- Mini/ Micro Schneidwerkzeuge Mini/ Micro Tools
- Gewinde- werkzeuge Threading Tools
- Wendepplattenbohrer VHM-Bohrer Indexable Drills Solid Carbide Drills

Drehen  
Turning

Fräswerkzeuge  
Milling Tools




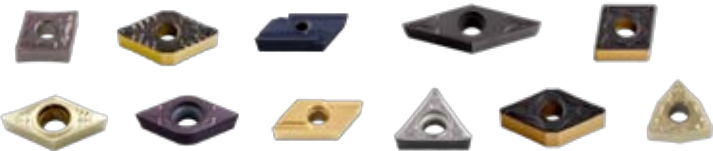
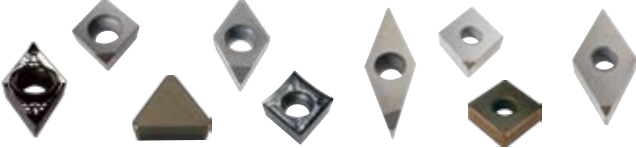
HDS-/VHM-Fräser  
HDS-/ Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

		Seite Page
ISO - Bezeichnungssystem für Klemmhalter <i>Designation System for Toolholders</i>	<b>S C L C R 25 25 M 12</b>	1.02
Drehwerkzeuge für Außenbearbeitung <i>External Turning Tools</i>		1.04
ISO - Bezeichnungssystem für Bohrstangen <i>Designation System for Boring Bars</i>	<b>A 32 S P C L N L 12</b>	1.22
Drehwerkzeuge für Innenbearbeitung <i>Internal Turning Tools</i>		1.24
Bohrstangen - Sets <i>Boring Bar - Sets</i>		1.34
ISO - Bezeichnungssystem für Wendeschneidplatten zum Drehen <i>Designation System for Indexable Inserts for Turning</i>	<b>T N M G 16 04 04 E R</b>	1.40
Wendeschneidplatten zum Drehen <i>Indexable Inserts for Turning</i>		1.42
Wendeschneidplatten zum Drehen CBN, PKD, Keramik <i>Indexable Inserts for Turning</i>		1.61
Schneidstoffsorten-Übersicht zum Drehen <i>Description of Carbide Grades for Turning</i>		1.70
Schneidstoffsorten-Schlüssel zum Drehen <i>Code Explanation of Carbide Grades for Turning</i>		1.71
Spanleitstufen zum Drehen <i>Chipbreakers for Turning</i>		1.72
Schnittdaten-Empfehlungen zum Drehen <i>Cutting Data Recommendations for Turning</i>		1.74

# ISO - Bezeichnungssystem für Klemmhalter / ISO Designation System for Toolholders

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

 Von oben geklemmt <i>Top clamping</i>	 Von oben und über Bohrung geklemmt <i>Top and hole clamping</i>	 Von oben und über Bohrung geklemmt <i>Top and hole clamping</i>	 Über Bohrung geklemmt <i>Hole clamping</i>	 Durch Bohrung aufgeschraubt <i>With screw through hole</i>	80° C 55° D 75° E 86° M 35° V 85° A 82° B 55° K H L O P R S T W	90° A 75° B 90° C 45° D 60° E 90° F 90° G 107.5° H 93° J 75° K 95° L 50° M 63° N 75° R 45° S 60° T 93° U 72.5° V 60° W 85° Y	 3° A 5° B 7° C 15° D 20° E 25° F 30° G 0° N 11° P Sonstige Others O	 R  L  N
--	---	---	---	--	--	---	---	-------------------------

S	C	L	C	R
---	---	---	---	---

Klemmsystem <i>Clamping Method</i>	Plattenform <i>Shape</i>	Halterform <i>Style</i>	Freiwinkel <i>Clearance Angle</i>	Halterausführung <i>Holder Execution</i>
---------------------------------------	-----------------------------	----------------------------	--------------------------------------	---

ISO - Bezeichnungssystem für Klemmhalter / ISO Designation System for Toolholders

Höhe der Schneidenecke  
"h1" in mm

Height of cutting edge  
"h1" in mm

Schaftbreite "b" in mm

Width "b" in mm

L1 (mm)		L1 (mm)
32	<b>A</b>	150 <b>M</b>
40	<b>B</b>	160 <b>N</b>
50	<b>C</b>	170 <b>P</b>
60	<b>D</b>	180 <b>Q</b>
70	<b>E</b>	200 <b>R</b>
80	<b>F</b>	250 <b>S</b>
90	<b>G</b>	300 <b>T</b>
100	<b>H</b>	350 <b>U</b>
110	<b>J</b>	400 <b>V</b>
125	<b>K</b>	450 <b>W</b>
140	<b>L</b>	500 <b>Y</b>
Sonderlänge Special Length		<b>X</b>

d (mm)			
06			
08			
10			
12			
16			
20			
25			
32			

d			
(mm)	(inch)	(mm)	(mm)
<b>06</b>	5/32	3.96	<b>03</b>
<b>09</b>	7/32	5.55	<b>05</b>
<b>11</b>	1/4	6.35	<b>06</b>
<b>16</b>	3/8	9.52	<b>09</b>
<b>22</b>	1/2	12.7	<b>12</b>
<b>27</b>	5/8	15.8	<b>15</b>
<b>33</b>	3/4	19.0	<b>19</b>
<b>44</b>	1	25.4	<b>25</b>

**25**

**25**

**M**

**12**

Schafthöhe  
Height of Shank

Schaftbreite  
Width of Shank

Halterlänge  
Length of Holder

Schneidenlänge  
Length of Cutting Edge

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# Übersicht - Außendrehen Overview - External Turning

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

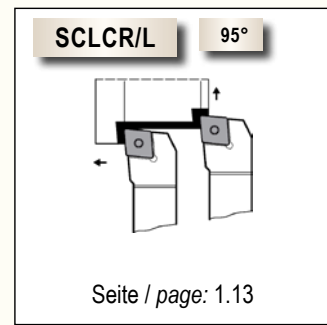
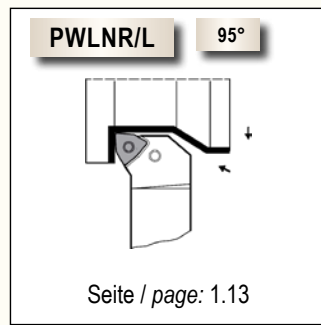
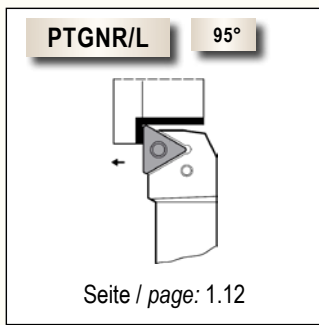
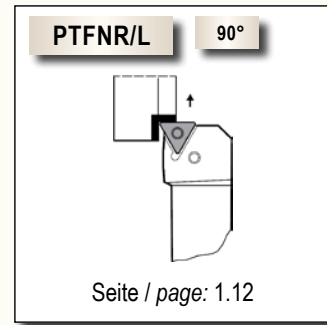
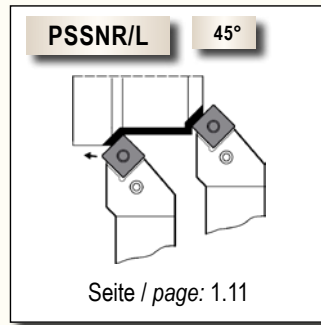
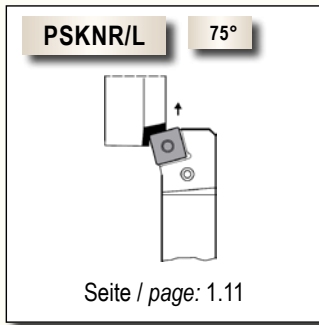
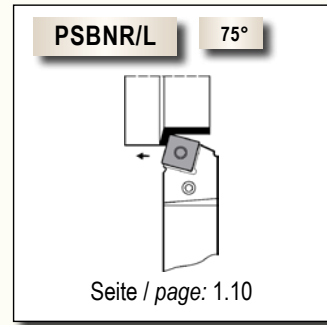
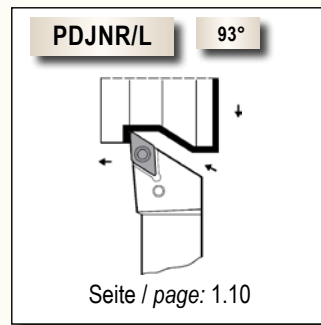
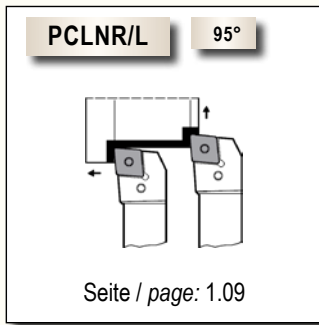
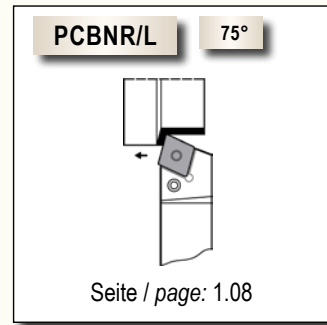
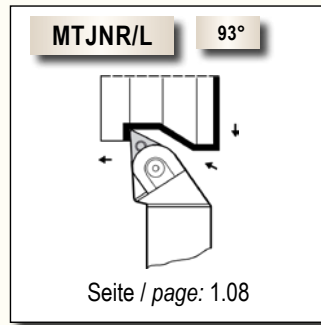
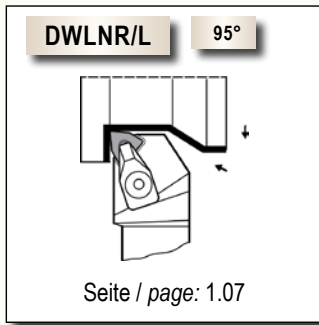
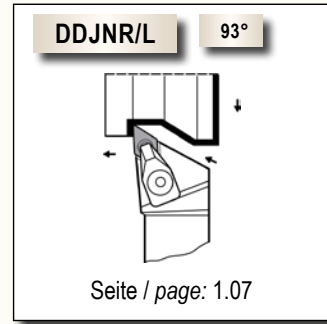
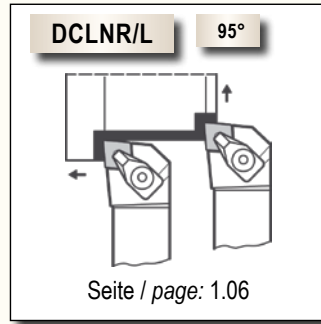
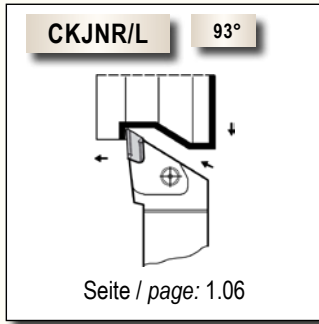
HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

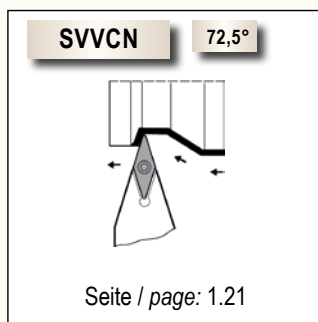
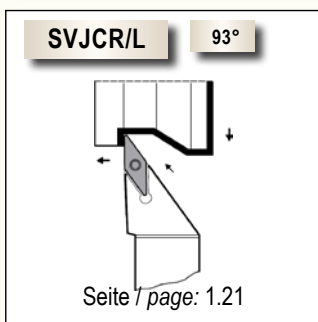
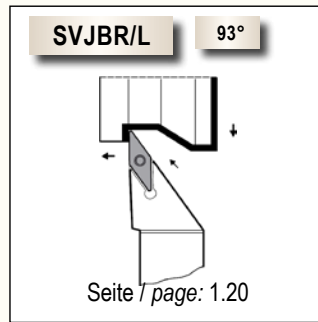
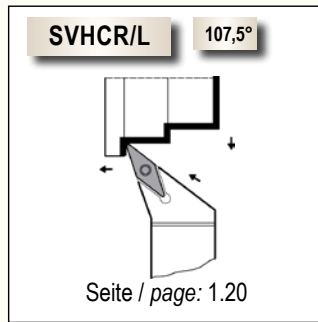
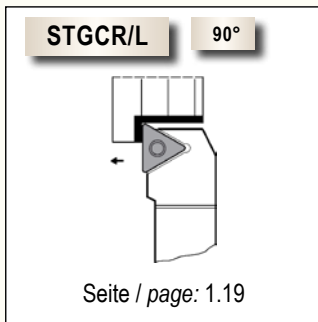
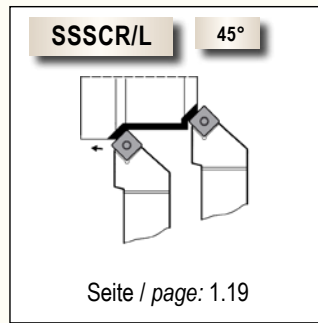
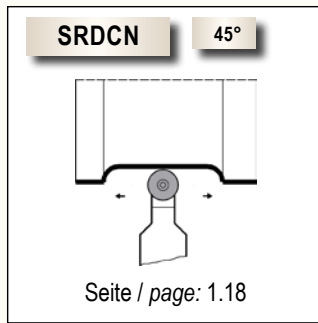
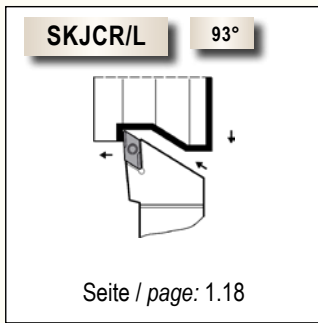
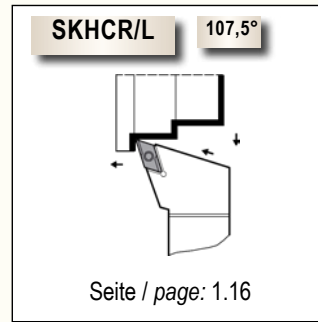
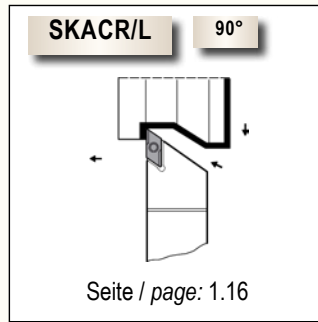
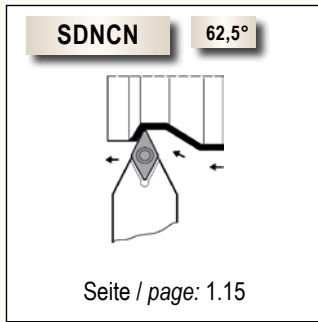
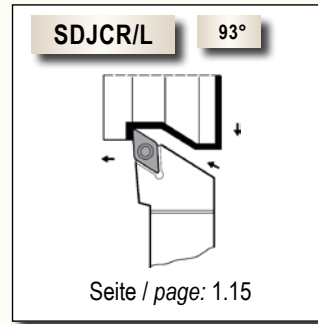
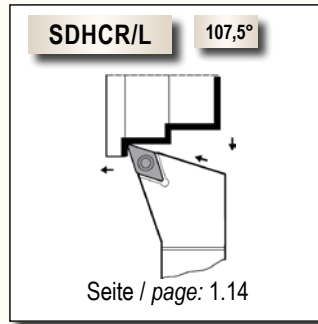
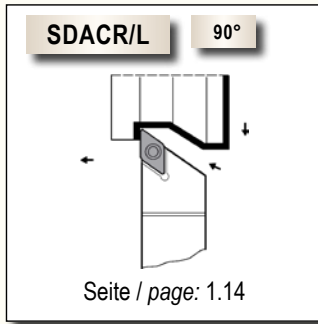
Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills





# Übersicht - Außendrehen Overview - External Turning



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

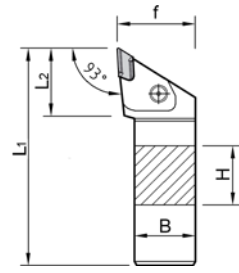
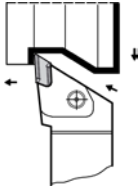
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

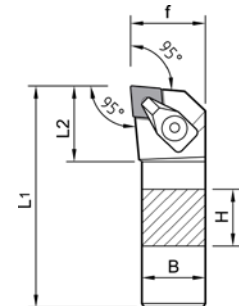
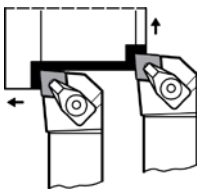
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## CKJNR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.44	Ersatzteile Spare Parts							
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f									
<b>CKJNR 2020 K16</b>	○		20	20	125	32	25	KNUX 1604→R	48.11.705	48.11.105	48.12.606 (SW4)	48.11.503	48.11.500 + 48.11.504	48.11.208	48.11.301	48.12.605 (SW2)
<b>2525 M16</b>	○		25	25	150	32	32									
<b>3232 P16</b>	○		32	32	170	32	40									
<b>CKJNL 2020 K16</b>		○	20	20	125	32	25	KNUX 1604→L	48.11.706	48.11.105	48.12.606 (SW4)	48.11.503	48.11.500 + 48.11.504	48.11.209	48.11.301	48.12.605 (SW2)
<b>2525 M16</b>		○	25	25	150	32	32									
<b>3232 P16</b>		○	32	32	170	32	40									

## DCLNR/L 95°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.40	Ersatzteile Spare Parts							
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f									
<b>DCLNR/L 2020 K12</b>	○	○	20	20	125	30	25	CN → 1204 →	48.34.701	48.34.101	48.12.606 (SW4)	48.33.501	48.33.502	48.33.201	48.34.102	48.12.604 (SW2,5)
<b>2525 M12</b>	○	○	25	25	150	32	32									
<b>3232 P12</b>	○	○	32	32	170	32	40									

# DDJNR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.43	Ersatzteile Spare Parts								
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f										
<b>DDJNR/L 2020 K15</b>	●	○	20	20	125	38	25	DN ** 1506 **				48.12.606 (SW4)	48.33.501	48.33.502	48.33.202	48.34.102	48.12.604 (SW2,5)
<b>2525 M15</b>	●	○	25	25	150	38	32										
<b>3232 P15</b>	○	○	32	32	170	38	40										

# DWLNR/L 95°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.54	Ersatzteile Spare Parts								
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f										
<b>DWLNR/L 2020 K08</b>	○	○	20	20	125	35	25	WN ** 0804 **				48.12.606 (SW4)	48.33.501	48.33.502	48.34.201	56.44.102	56.33.614 (T20)
<b>2525 M08</b>	○	○	25	25	150	35	32										

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

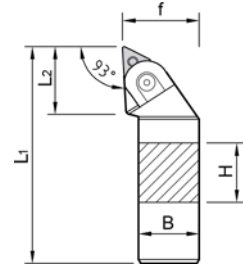
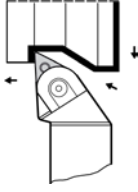
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

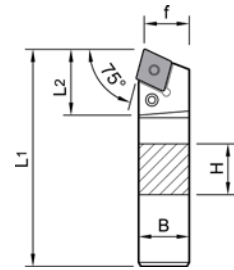
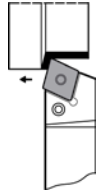
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# MTJNR/L 93°



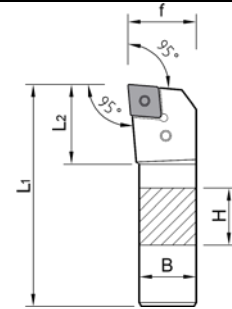
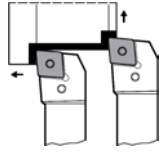
Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile Spare Parts						
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f								
<b>MTJNR/L 2020 K16</b>	●	○	20	20	125	35	25	TN .. 1604 ..							
<b>2525 M16</b>	●	●	25	25	150	35	32								
<b>3232 P16</b>	○	○	32	32	170	35	40								
<b>2525 M22</b>	●	●	25	25	150	40	32	TN .. 2204 ..							
<b>3232 P22</b>	○	○	32	32	170	40	40								

# PCBNR/L 75°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.40	Ersatzteile Spare Parts				
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f						
<b>PCBNR/L 2020 K12</b>	○	○	20	20	125	27	17	CN .. 1204 ..					
<b>2525 M12</b>	○	○	25	25	150	27	22						
<b>3232 P12</b>			32	32	170	27	22						
<b>2525 M16</b>	○		25	25	150	33	22	CN .. 1606 ..					
<b>3232 P16</b>			32	32	170	33	27						
<b>3232 P19</b>	○		32	32	170	40	27	CN .. 1906 ..					
<b>4040 S19</b>			40	40	250	40	35						

# PCLNR/L 95°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

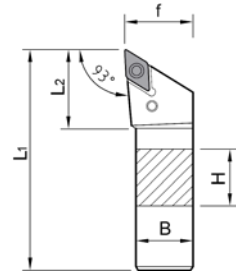
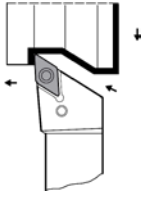
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendeplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

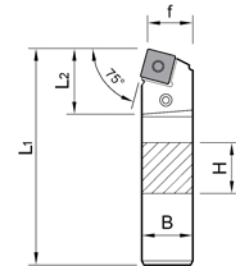
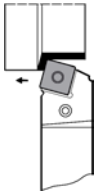
Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.40	Ersatzteile Spare Parts				
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f						
<b>PCLNR/L 1616 H09</b>	○	○	16	16	100	20	20	CN .. 0903 ..	48.12.417	48.12.116	48.12.201	48.12.905	48.12.604 (SW2,5)
<b>2020 K09</b>	○	○	20	20	125	22	25						
<b>2525 M09</b>	○	○	25	25	150	22	32						
<b>1616 H12</b>	●	●	16	16	100	28	20	CN .. 1204 ..	48.12.414	48.12.113	48.33.201	48.12.901	48.12.603 (SW3)
<b>2020 K12</b>	●	●	20	20	125	28	25						
<b>2525 M12</b>	●	●	25	25	150	28	32						
<b>3232 P12</b>	○	○	32	32	170	28	32	CN .. 1606 ..	48.12.415	48.12.114	48.12.202	48.12.902	48.12.606 (SW4)
<b>2525 M16</b>	○	○	25	25	150	33	32						
<b>3232 P16</b>	○	○	32	32	170	33	40						
<b>3232 P19</b>	○	○	32	32	170	38	40	CN .. 1906 ..	48.12.416	48.12.115	48.12.203	48.12.903	48.12.606 (SW4)
<b>4040 S19</b>	○	○	40	40	250	38	50						

## PDJNR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.43	Ersatzteile Spare Parts									
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f											
<b>PDJNR/L 1616 H11</b>	●	○	16	16	100	25	20	DN .. 1104 ..										
<b>2020 K11</b>	●	●	20	20	125	25	25							48.12.417	48.12.116	48.12.204	48.12.905	48.12.604 (SW2,5)
<b>2525 M11</b>	○	○	25	25	150	30	32											
<b>2020 K15</b>	●	●	20	20	125	35	25	DN .. 1506 ..										
<b>2525 M15</b>	●	●	25	25	150	35	32							48.12.418	48.12.113	48.33.202	48.12.901	48.12.603 (SW3)
<b>3232 P15</b>	○	○	32	32	170	35	40											

## PSBNR/L 75°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.47	Ersatzteile Spare Parts									
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f											
<b>PSBNR/L 2020 K12</b>			20	20	125	28	17	SN .. 1204 ..										
<b>2525 M12</b>			25	25	150	28	22							48.12.414	48.12.113	48.12.205	48.12.901	48.12.603 (SW3)
<b>3232 P12</b>			32	32	170	28	27											
<b>2525 M15</b>			25	25	150	35	22	SN .. 1506 ..										
<b>3232 P15</b>			32	32	170	37	27							48.12.415	48.12.114	48.12.206	48.12.902	
<b>3232 P19</b>			32	32	170	40	27											
<b>4040 S19</b>			40	40	250	40	35	SN .. 1906 ..										
									48.12.416	48.12.115	48.12.236	48.12.903	48.12.606 (SW4)					

# PSKNR/L 75°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions				Seite / Page: 1.47	Ersatzteile Spare Parts					
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>		f					
<b>PSKNR/L 2020 K12</b>			20	20	125	26	25	SN .. 1204 ..	48.12.414	48.12.113	48.12.205	48.12.901	48.12.603 (SW3)
<b>2525 M12</b>			25	25	150	26	32						
<b>2525 M15</b>			25	25	150	32	32						
<b>3232 P15</b>			32	32	170	32	40	SN .. 1506 ..	48.12.415	48.12.114	48.12.206	48.12.902	
<b>3232 P19</b>			32	32	170	40	40	SN .. 1906 ..	48.12.416	48.12.115	48.12.236	48.12.903	48.12.606 (SW4)
<b>4040 S19</b>			40	40	250	50	50						

# PSSNR/L 45°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions				Seite / Page: 1.47	Ersatzteile Spare Parts					
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>		f					
<b>PSSNR/L 2020 K12</b>	●	○	20	20	125	30	25	SN .. 1204 ..	48.12.414	48.12.113	48.12.205	48.12.901	48.12.603 (SW3)
<b>2525 M12</b>	●	○	25	25	150	30	32						
<b>2525 M15</b>			25	25	150	30	32						
<b>3232 P15</b>			32	32	170	40	40	SN .. 1506 ..	48.12.415	48.12.114	48.12.206	48.12.902	
<b>3232 P19</b>	○	○	32	32	170	40	40	SN .. 1906 ..	48.12.416	48.12.115	48.12.236	48.12.903	48.12.606 (SW4)
<b>4040 S19</b>	○	○	40	40	250	40	50						

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

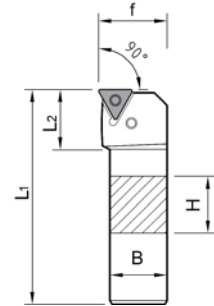
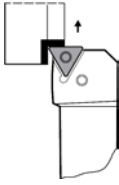
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

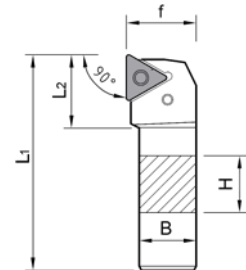
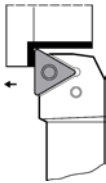
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## PTFNR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile Spare Parts				
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f						
<b>PTFNR/L 1616 H16</b>	○	○	16	16	100	20	20	TN ** 1604 **	48.12.417	48.12.116	48.12.229	48.12.905	48.12.604 (SW2,5)
<b>2020 K16</b>	○	○	20	20	125	20	25						
<b>2525 M16</b>	○	○	25	25	150	20	32						
<b>2525 M22</b>	○	○	25	25	150	25	32	TN ** 2204 **	48.12.414	48.12.113	48.12.230	48.12.901	48.12.603 (SW3)
<b>3232 P22</b>			32	32	170	25	40						
<b>3232 P27</b>			32	32	170	33	40	TN ** 2706 **	48.12.415	48.12.114	48.12.231	48.12.902	
<b>4040 S27</b>			40	40	250	33	50						

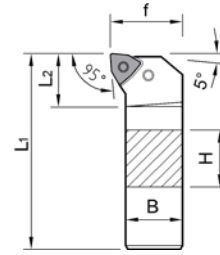
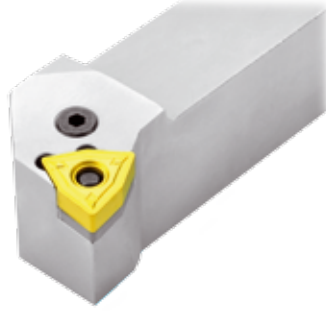
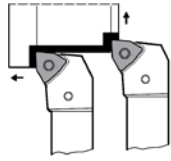
## PTGNR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile Spare Parts				
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f						
<b>PTGNR/L 1616 H16</b>			16	16	100	20	20	TN ** 1604 **	48.12.417	48.12.116	48.12.229	48.12.905	48.12.604 (SW2,5)
<b>2020 K16</b>	○	○	20	20	125	20	25						
<b>2525 M16</b>	○	○	25	25	150	20	32						
<b>3232 P16</b>			32	32	170	20	40	TN ** 2204 **	48.12.414	48.12.113	48.12.230	48.12.901	48.12.603 (SW3)
<b>2525 M22</b>	○	○	25	25	150	28	32						
<b>3232 P22</b>			32	32	170	28	40	TN ** 2706 **	48.12.415	48.12.114	48.12.231	48.12.902	
<b>3232 P27</b>			32	32	170	33	40						
<b>4040 S27</b>			40	40	250	33	50						



# PWLNR/L 95°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

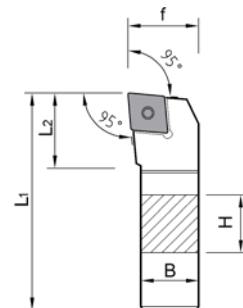
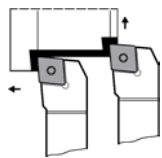
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

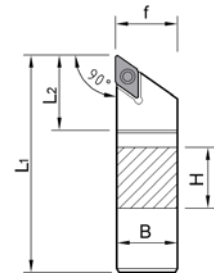
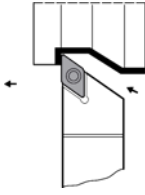
Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions				Seite / Page: 1.54	Ersatzteile Spare Parts						
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>								
<b>PWLNR/L 1616 H06</b>	○	○	16	16	100	20	20	WN-0604						48.12.604 (SW2,5)
<b>2020 K06</b>	○	○	20	20	125	20	25							
<b>2525 M06</b>	○	○	25	25	150	20	32							
<b>2020 K08</b>	●	●	20	20	125	26	25	WN-0804						48.12.603 (SW3)
<b>2525 M08</b>	●	●	25	25	150	26	32							
<b>3232 P08</b>	○	○	32	32	170	26	40							

# SCLCR/L 95°



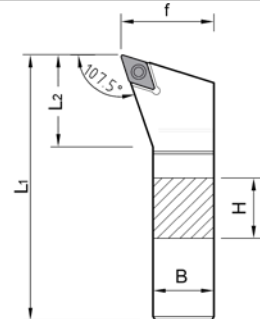
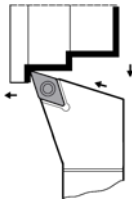
Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions				Seite / Page: 1.38	Ersatzteile Spare Parts				
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>						
<b>SCLCR/L 0808 D06</b>	●	○	8	8	60	12	10	CC-0602	48.24.107	-	-	56.33.612 (T08)
<b>1010 F06</b>	●	○	10	10	80	12	12					
<b>1212 F09</b>	●	●	12	12	80	16	16					
<b>1616 H09</b>	●	●	16	16	100	16	20	CC-09T3	48.13.102	48.13.201	48.13.301	56.33.613 (T15)
<b>2020 K09</b>	●	●	20	20	125	25	25					
<b>1616 H12</b>	○	○	16	16	100	20	20					
<b>2020 K12</b>	●	●	20	20	125	25	25	CC-1204	48.13.103	48.13.202	48.13.302	56.33.613 (T15)
<b>2525 M12</b>	●	●	25	25	150	25	32					
<b>3232 P12</b>	○	○	32	25	170	25	40					

## SDACR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SDACR/L 0808 K07</b>			8	8	125	14	8.5	DC -- 0702 --	48.24.107	-	-	56.33.612 (T08)
<b>1010 M07</b>			10	10	150	14	10.5					
<b>1212 M07</b>			12	12	150	14	12.5					
<b>1212 M11</b>			12	12	150	21	12.5	DC -- 11T3 --	48.24.108	-	-	56.33.613 (T15)
<b>2525 M11</b>			25	25	150	21	25.5		48.13.102	48.13.203	48.13.301	

## SDHCR/L 107,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SDHCR/L 1010 E07</b>	○		10	10	70	15	12	DC -- 0702 --	48.24.107	-	-	56.33.612 (T08)
<b>1212 F07</b>	○	○	12	12	80	15	16					
<b>1616 H11</b>	●	○	16	16	100	16	20	DC -- 11T3 --	48.13.102	48.13.203	48.13.301	56.33.613 (T15)
<b>2020 K11</b>	●	●	20	20	125	21	25					
<b>2525 M11</b>	●	●	25	25	150	22	32					

# SDJCR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SDJCR/L 1010 E07</b>	○		10	10	70	15	12	DC..0702..	48.24.107	-	-	56.33.612 (T08)
<b>1212 F07</b>	●	○	12	12	80	15	16					
<b>1616 H11</b>	●	●	16	16	100	26	20	DC..11T3..	48.13.102	48.13.203	48.13.301	56.33.613 (T15)
<b>2020 K11</b>	●	●	20	20	125	26	25					
<b>2525 M11</b>	●	●	25	25	150	29	32					

# SDNCN 62,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SDNCN 1010 E07</b>	○		10	10	70	20	5	DC..0702..	48.24.107	-	-	56.33.612 (T08)
<b>1212 F07</b>	○		12	12	80	20	6					
<b>1212 M07</b>	○		12	12	150	20	6					
<b>1212 M11</b>	○		12	12	150	30	6	DC..11T3..	48.13.102	48.13.203	48.13.301	56.33.613 (T15)
<b>1616 H11</b>	●	●	16	16	100	30	8					
<b>2020 K11</b>	●	●	20	20	125	30	10					
<b>2525 M11</b>	○		25	25	150	30	12.5					

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

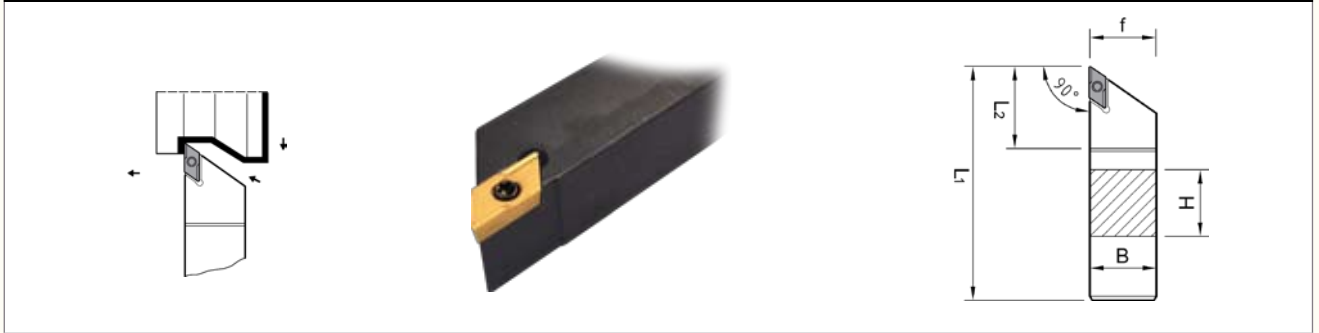
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

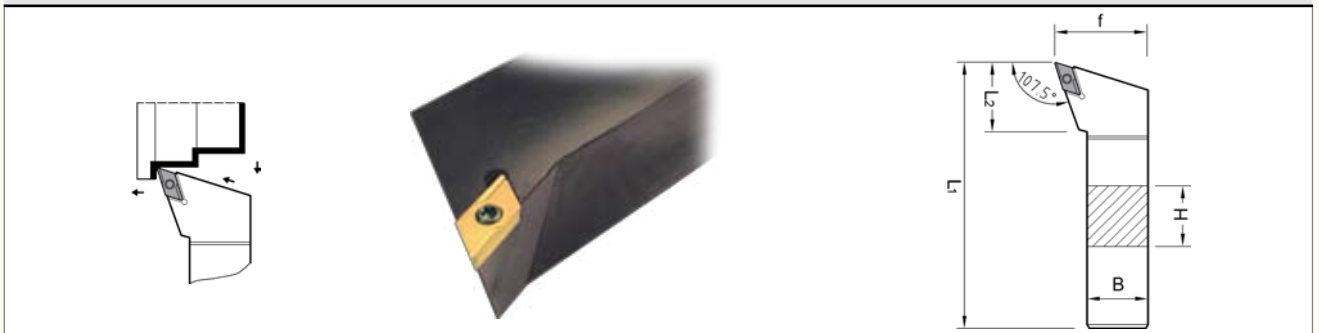
Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## SKACR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SKACR/L 1212 M11</b>	○	●	12	12	150	-	10.5	KC-X 1103 ..	48.13.104	-	-	56.33.612 (T08)
<b>1616 M11</b>	○	●	16	16	150	-	12.5					
<b>2020 M11</b>	○	●	20	20	150	-	16.5					

## SKHCR/L 107,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SKHCR/L 1212 F11</b>	○	●	12	12	80	15	16	KC-X 1103 ..	48.13.104	-	-	56.33.612 (T08)
<b>1616 H11</b>	○	●	16	16	100	24	20					
<b>2020 K11</b>	○	●	20	20	125	24	25					
<b>2525 M11</b>	○	●	25	25	150	29	32					

# SKJCR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.49	Ersatzteile <i>Spare Parts</i>			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SKJCR/L 1212 F11</b>	○		12	12	80	15	16	KC-X 1103 -- R/L	48.13.104	-	-	56.33.612 (T08)
<b>1616 H11</b>	○	○	16	16	100	24	20					
<b>2020 K11</b>	○	○	20	20	125	24	25					
<b>2525 M11</b>	○	○	20	25	150	29	32					

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM- Fräser  
HDS-/ Solid Carbide  
Endmills

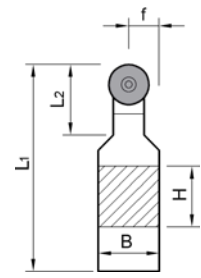
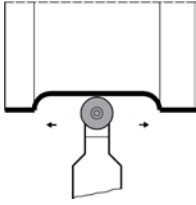
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

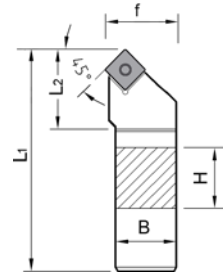
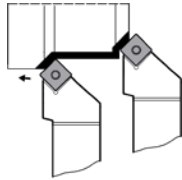
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# SRDCN 45°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.45	Ersatzteile Spare Parts			
			H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SRDCN 1212 F06</b>			12	12	80	12	6	RC-T 0602 ..	48.24.107	-	-	56.33.612 (T08)
<b>1616 H06</b>			16	16	100	12	8					
<b>2020 K06</b>	○		20	20	125	12	10					
<b>2525 M06</b>	○		25	25	150	12	12.5	RC-T 0803 ..	48.13.105	-	-	56.33.613 (T15)
<b>1616 H08</b>			16	16	100	16	8					
<b>2020 K08</b>	○		20	20	125	16	10					
<b>2525 M08</b>	○		25	25	150	16	12.5	RC-T 1003 ..	48.13.102	48.13.204	48.13.301	56.33.613 (T15)
<b>1616 H10</b>			16	16	100	20	8					
<b>2020 K10</b>			20	20	125	20	10					
<b>2525 M10</b>	○		25	25	150	20	12.5					

# SSSCR/L 45°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.46	Ersatzteile Spare Parts			
			R	L	H	B	L <sub>1</sub>		L <sub>2</sub>	f		
<b>SSSCR/L 1212 F09</b>	●		12	12	80	18	16	SC .. 09T3 ..	48.13.102	-	-	56.33.613 (T15)
<b>1616 H09</b>	●	○	16	16	100	20	20					
<b>2020 K09</b>	●	○	20	20	125	22	25					
<b>1616 H12</b>			16	16	100	25	20	SC .. 1204 ..	48.13.103	48.13.206	48.13.302	56.33.613 (T15)
<b>2020 K12</b>	●	○	20	20	125	25	25					
<b>2525 M12</b>	●	○	25	25	150	25	32					
<b>3225 P12</b>			32	25	170	25	38					

# STGCR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					 Seite / Page: 1.48	Ersatzteile <i>Spare Parts</i>			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>STGCR/L 0808 D09</b>	○		8	8	60	8	10	TC.. 0902..	L60M2.2x5	-	-	75.20.621 (T06)
<b>1010 E09</b>	○		10	10	70	10	12					
<b>1212 F11</b>			12	12	80	15	16	TC.. 1102..	48.24.107	-	-	56.33.612 (T08)
<b>1616 H11</b>	○		16	16	100	15	20					
<b>1616 H16</b>			16	16	100	22	20					
<b>2020 K16</b>	○		20	20	125	22	25	TC.. 16T3..	48.13.102	48.13.207	48.13.301	56.33.613 (T15)
<b>2525 M16</b>	○		25	25	150	22	32					

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

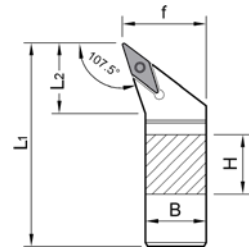
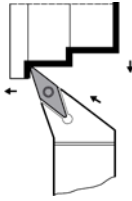
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

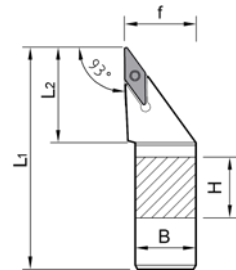
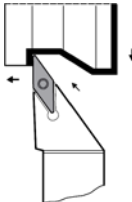
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# SVHCR/L 107,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.52	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SVHCR/L 1212 F11</b>			12	12	80	11.5	16	VC .. 1103 ..	48.24.107	-	-	56.33.612 (T08)
<b>1616 H11</b>			16	16	100	11.5	20					
<b>2020 K11</b>			20	20	125	14.5	25					
<b>2525 M11</b>			25	25	150	20.0	32	VC .. 1604 ..	48.13.102	48.13.209	48.13.301	56.33.613 (T15)
<b>1616 H16</b>	●		16	16	100	13.5	20					
<b>2020 K16</b>	●		20	20	125	13.5	25					
<b>2525 M16</b>	●		25	25	150	20.0	32					

# SVJBR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.51	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SVJBR/L 1212 F11</b>	○		12	12	80	11.5	16	VB .. 1103 ..	48.24.107	-	-	56.33.612 (T08)
<b>1616 M11</b>	○	○	16	16	100	11.5	20					
<b>2020 K11</b>			20	20	125	14.5	25					
<b>2525 M11</b>			25	25	150	20.0	32	VB .. 1604 ..	48.13.102	48.13.209	48.13.301	56.33.613 (T15)
<b>1616 H16</b>	●	○	16	16	100	29.5	20					
<b>2020 K16</b>	●	●	20	20	125	29.5	25					
<b>2525 M16</b>	●	○	25	25	150	32.5	32					



# SVJCR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.52	Ersatzteile Spare Parts			
	R	L	H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SVJCR/L 1010 E11</b>	○		10	10	70	14.5	12	VC.. 1103..	48.24.107	-	-	56.33.612 (T08)
<b>1212 F11</b>	●	○	12	12	80	22.0	16					
<b>1616 H11</b>	●	●	16	16	100	25.0	20					
<b>2020 K11</b>	●	○	20	20	125	32.0	25					
<b>2525 M11</b>	●	○	25	25	150	38.0	32					
<b>1616 H16</b>	●	○	16	16	100	29.5	20	VC.. 1604..	48.13.102	48.13.209	48.13.301	56.33.613 (T15)
<b>2020 K16</b>	●	●	20	20	125	29.5	25					
<b>2525 M16</b>	●	●	25	25	150	32.5	32					
<b>3225 P16</b>	○	○	32	25	170	35.0	32					

# SVVCN 72,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.52	Ersatzteile Spare Parts			
			H	B	L <sub>1</sub>	L <sub>2</sub>	f					
<b>SVVCN 1010 E11</b>	○		10	10	70	18	5	VC.. 1103..	48.24.107	-	-	56.33.612 (T08)
<b>1212 F11</b>	○		12	12	80	27	6					
<b>1616 H11</b>			16	16	100	27	8					
<b>2020 K11</b>	○		20	20	125	27	10					
<b>2525 M11</b>			25	25	150	41	12					
<b>1616 H16</b>	○		16	16	100	36	8	VC.. 1604..	48.13.102	48.13.209	48.13.301	56.33.613 (T15)
<b>2020 K16</b>	○		20	20	125	41	10					
<b>2525 M16</b>	○		25	25	150	41	12					

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# ISO - Bezeichnungssystem für Bohrstangen / ISO Designation System for Boring Bars

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

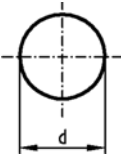
**A**  
Stahlschaft mit  
Kühlbohrung  
Steel shank with  
coolant hole

**B**  
Stahlschaft mit  
Dämpfung  
Steel shank with  
vibration clamping

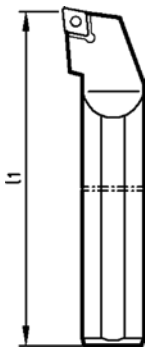
**C**  
Hartmetallschaft mit  
Stahlkopf  
Hardmetal shank with  
steel head

**E**  
Hartmetallschaft mit  
Stahlkopf und  
Kühlbohrung  
Hardmetal shank with  
steel head and coolant  
hole

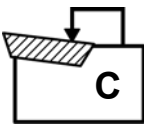
**S**  
Stahlschaft  
Steel shank



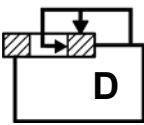
D <sub>1</sub> (mm)
08
10
12
16
20
25
32
40
50
60



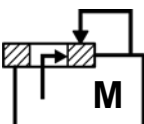
L <sub>1</sub> (mm)		L <sub>1</sub> (mm)
32	<b>A</b>	150 <b>M</b>
40	<b>B</b>	160 <b>N</b>
50	<b>C</b>	170 <b>P</b>
60	<b>D</b>	180 <b>Q</b>
70	<b>E</b>	200 <b>R</b>
80	<b>F</b>	250 <b>S</b>
90	<b>G</b>	300 <b>T</b>
100	<b>H</b>	350 <b>U</b>
110	<b>J</b>	400 <b>V</b>
125	<b>K</b>	450 <b>W</b>
140	<b>L</b>	500 <b>Y</b>
Sonderlänge Special length		<b>X</b>



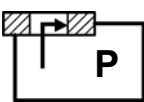
Von oben geklemmt  
Top clamping




Von oben und über  
Bohrung geklemmt  
Top and hole clamping



Von oben und über  
Bohrung geklemmt  
Top and hole clamping



Über Bohrung geklemmt  
Hole clamping



Durch Bohrung  
aufgeschraubt  
With screw through hole

**A**

**32**

**S**

**P**

Schaftausführung  
Type of Shank

Schaft- Ø  
Shank- Ø

Halterlänge  
Length

Klemmsystem  
Clamping Method

# ISO - Bezeichnungssystem für Bohrstangen / ISO Designation System for Boring Bars

	80° <b>C</b>	<b>F</b>			
	55° <b>D</b>	<b>K</b>			
	75° <b>E</b>	<b>K</b>	5° <b>B</b>		
	86° <b>M</b>	<b>L</b>	7° <b>C</b>		
	35° <b>V</b>	<b>Q</b>	15° <b>D</b>		
	85° <b>A</b>	<b>S</b>	20° <b>E</b>		
	82° <b>B</b>	<b>U</b>	25° <b>F</b>		
	55° <b>K</b>	<b>W</b>	30° <b>G</b>		
	85° <b>A</b>	<b>Y</b>	0° <b>N</b>		
	82° <b>B</b>	<b>U</b>	11° <b>P</b>		
	55° <b>K</b>	<b>W</b>	Sonstige <b>O</b>		
	85° <b>A</b>	<b>Y</b>	Others		
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	82° <b>B</b>	<b>Y</b>			
	55° <b>K</b>	<b>Y</b>			
	85° <b>A</b>	<b>Y</b>			
	85°				

# Übersicht - Innendrehen Overview - Internal Turning

Drehwerkzeuge  
Turning Tools

Fräswerkzeuge  
Milling Tools

VHM-Fräser  
Solid Carbide  
Endmills

Stechdreh-  
werkzeuge  
Grooving Tools

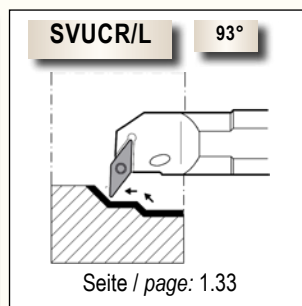
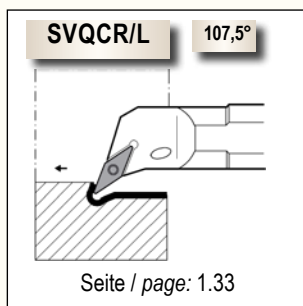
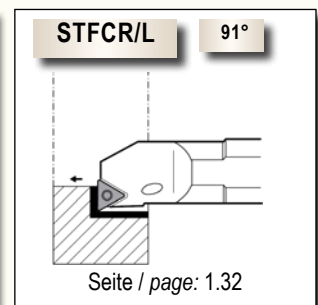
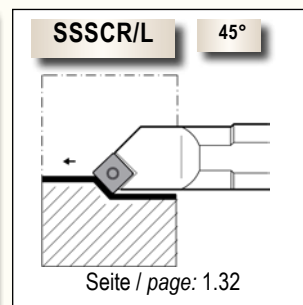
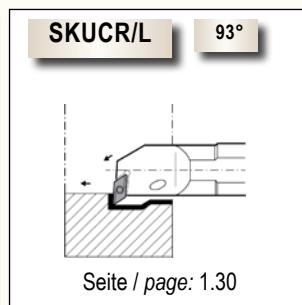
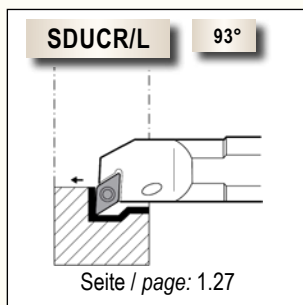
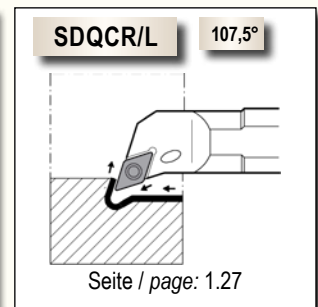
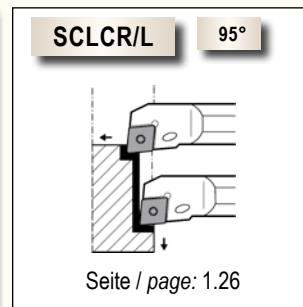
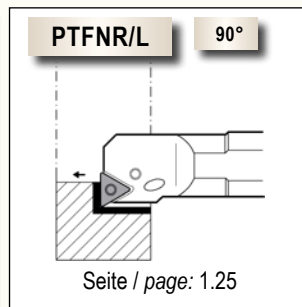
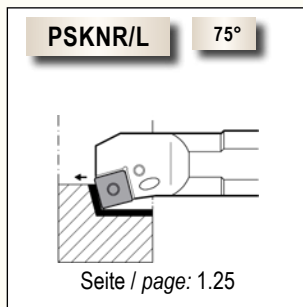
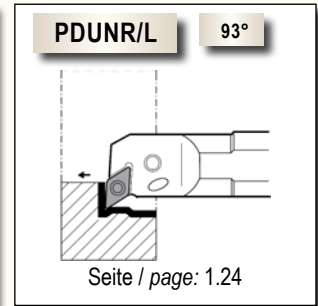
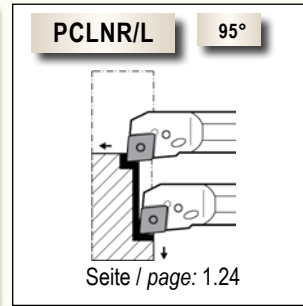
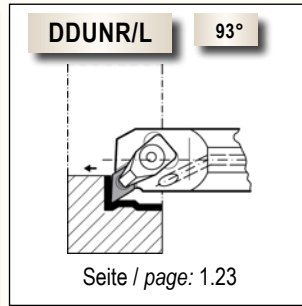
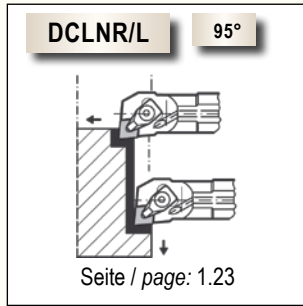
Mini  
Schneidwerkzeuge  
Mini Tools

Micro  
Schneidwerkzeuge  
Micro Tools

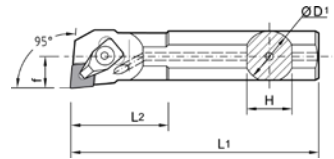
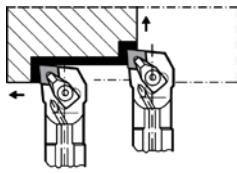
Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
Indexable Drills

VHM-Bohrer  
Solid Carbide Drills



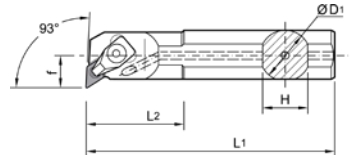
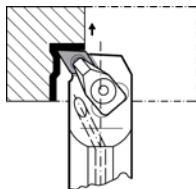
# DCLNR/L 95°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.40	Ersatzteile Spare Parts														
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f														
<b>A25R DCLNR/L 12</b>	●	●	32	25	23	200	50	17	CN ↔ 1204 ↔														
<b>A32S DCLNR/L 12</b>	○	○	40	32	30	250	60	22								48.34.701	48.34.101	48.12.606 (SW4)	48.33.501	48.33.502	48.33.201	48.34.102	48.12.604 (SW2,5)
<b>A40T DCLNR/L 12</b>			50	40	37	300	60	27															
<b>A50U DCLNR/L 12</b>			63	50	47	350	65	35															

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

# DDUNR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.43	Ersatzteile Spare Parts							
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f							
<b>A32S DDUNR/L 15</b>			40	32	30	250	55	22	DN ↔ 1506 ↔							
<b>A40T DDUNR/L 15</b>			50	40	37	300	55	27								48.34.701

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

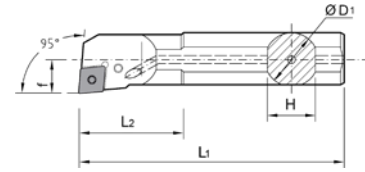
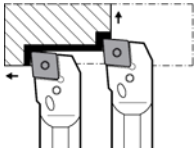
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## PCLNR/L 95°

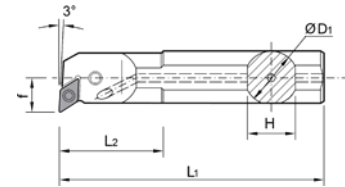
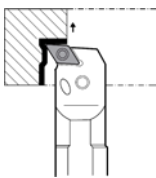


Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.40	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
<b>A25R PCLNR/L 12</b>	●	●	32	25	24	200	40	17	CN .. 1204 ..	48.23.103	48.23.402	-	-	48.12.604 (SW2,5)
<b>A32T PCLNR/L 12</b>	●	●	40	32	30	300	50	22		48.12.113	48.12.414	48.33.204	-	48.12.603 (SW3)
<b>A40T PCLNR/L 12</b>	●	○	54	40	38.5	300	55	27		-	-	48.23.201	48.12.901	-
<b>A50U PCLNR/L 12</b>	○	○	63	50	48.5	350	56	35		-	-	-	-	-

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

S : Stahlschaft / Steel Shank

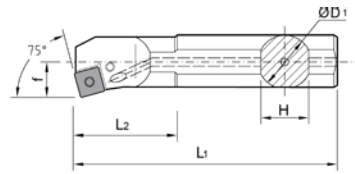
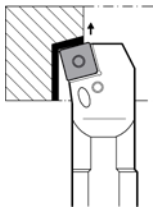
## PDUNR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.43	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
<b>A20Q PDUNR/L 11</b>	●	○	25	20	19	180	-	16	DN .. 1104 ..	48.23.102	48.23.403	-	-	48.12.605 (SW2)
<b>A25R PDUNR/L 11</b>	○	○	31.5	25	24	200	-	18.5		48.12.116	48.12.417	48.12.204	48.12.905	-
<b>A32S PDUNR/L 11</b>	○	○	40	32	31	250	-	22		48.12.113	48.12.418	48.33.202	48.12.901	48.12.603 (SW3)
<b>A32S PDUNR/L 15</b>	●	○	40	32	31	250	50	22	DN .. 1506 ..	-	-	-	-	-
<b>A40T PDUNR/L 15</b>	●	○	50	40	38.5	300	50	27		-	-	-	-	-

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

# PSKNR/L 75°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

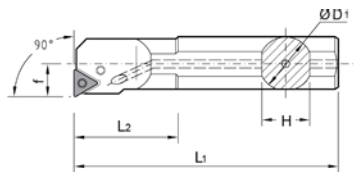
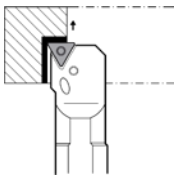
Gewinde-  
werkzeuge  
Threading Tools

Wendepflanzenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.47	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
<b>A25R PSKNR/L 12</b>	○	○	32	25	24	200	42	17	SN .. 1204 ..			-	-	
<b>A32S PSKNR/L 12</b>	○	○	44	32	31	250	50	22		48.23.103	48.23.402	-	-	48.12.604 (SW2,5)
<b>A40T PSKNR/L 12</b>	○	○	54	40	38.5	300	55	27		48.12.113	48.12.414	48.23.203	48.12.901	48.12.603 (SW3)

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

# PTFNR/L 90°

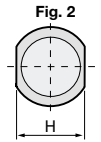
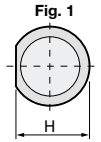
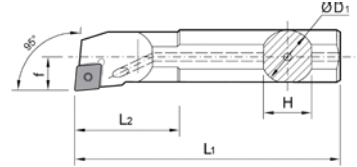
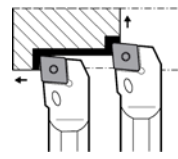


Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.49	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
<b>S16R PTFNR/L 11</b>	○	○	21	16	15	150	-	11	TN .. 1103 ..			-	-	
<b>S20S PTFNR/L 11</b>	○	○	25	20	19	180	-	13		48.23.102	48.23.406	-	-	48.12.605 (SW2)
<b>A25R PTFNR/L 16</b>	○	○	32	25	24	200	40	17	TN .. 1604 ..			-	-	
<b>A32S PTFNR/L 16</b>	○	○	44	32	31	250	50	22		48.23.102	48.23.404	-	-	48.12.605 (SW2)
<b>A40T PTFNR/L 16</b>	○	○	54	40	38.5	300	55	27		48.12.116	48.12.417	48.23.202	48.12.905	48.12.604 (SW2,5)

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

S : Stahlschaft / Steel Shank

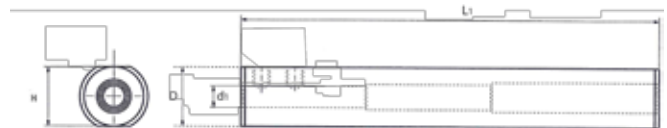
# SCLCR/L 95°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Fig.	Seite / Page: 1.38	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f							
<b>E04G SCLCR/L 0305</b>	●	●	5	4	3.8	90	-	2.5	1		CCET 0301 ..	48.24.142	-	-	75.20.621 (T06)
<b>E05H SCLCR/L 0306</b>	●	○	6	5	4.4	100	-	3.0							
<b>E06J SCLCR/L 0307</b>	○	●	7	6	5.7	110	-	3.5							
<b>E06I SCLCR/L 0407</b>	●	●	7	6	5.7	110	-	3.5							
<b>E07K SCLCR/L 0408</b>	●	●	8	7	6.4	125	-	4.0	2	CC .. 0602 ..	48.24.107	-	-	56.33.612 (T08)	
<b>A0608H SCLCR/L 06</b>	●	●	8	8	7	100	25	4.5							
<b>A0810J SCLCR/L 06</b>	●	●	11	10	9	110	32	6.0							
<b>A1012K SCLCR/L 06</b>	●	●	13	12	11	125	38	7.0							
<b>A1216M SCLCR/L 06</b>	●	●	16	16	15	150	50	9.0	2	CC .. 0602 ..	48.24.107	-	-	56.33.612 (T08)	
<b>A08F SCLCR/L 06</b>	●	●	11	8	7	80	16	5.5							
<b>A10H SCLCR/L 06</b>	●	●	13	10	9	100	20	6.0							
<b>A12K SCLCR/L 06</b>	●	●	17	12	11	125	23	9.0							
<b>A16M SCLCR/L 09</b>	●	●	21	16	15	150	30	11.0	2	CC .. 09T3 ..	48.24.108	-	-	56.33.613 (T15)	
<b>A20Q SCLCR/L 09</b>	●	●	25	20	18	180	38	13.0							
<b>A25R SCLCR/L 09</b>	●	●	32	25	23	200	39	17.0							
<b>A32S SCLCR/L 12</b>	○	○	40	32	31	250	50	22.0							
<b>A40T SCLCR/L 12</b>	○	○	50	40	38.5	300	60	27.0	1	CC .. 1204 ..	48.13.103	48.13.202	48.13.302	56.33.613 (T15)	
<b>E08K SCLCR/L 06</b>	●	●	11	8	7.5	125	-	5.0							
<b>E10M SCLCR/L 06</b>	●	●	14	10	9.5	150	-	6.0							
<b>E12Q SCLCR/L 06</b>	●	●	17	12	11.5	180	-	9.0							
<b>E16R SCLCR/L 09</b>	●	●	21	16	15.5	200	32	11.0	1	CC .. 09T3 ..	48.24.108	-	-	56.33.613 (T15)	
<b>E20S SCLCR/L 09</b>	●	●	25	20	19	250	38	13.0							
<b>E25T SCLCR/L 09</b>	●	●	32	25	24	300	45	17.0							
<b>E32T SCLCR/L 12</b>	○	○	40	32	30	300	50	22.0							
<b>E40T SCLCR/L 12</b>	○	○	50	40	38	300	60	27.0	1	CC .. 1204 ..	48.13.103	48.13.202	48.13.302	56.33.613 (T15)	

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant  
 E : Hartmetallschaft mit Innenkühlung / Carbide Shank with inner coolant  
 S : Stahlschaft / Steel Shank

## Schafthülsen Sleeves for Shanks



Bezeichnung Part Number	Lager Stock	Maße [mm] Dimensions				Ersatzteile Spare Parts		Passende Bohrstangen Suitable Boring bars
		D	d <sub>1</sub>	H	L <sub>1</sub>			
<b>SH 0416</b> <b>SH 0516</b>	●	16	4 5	14	100	32.35.101	48.12.605	<b>E04G SCLCR/L 0305</b> <b>E05H SCLCR/L 0306</b>

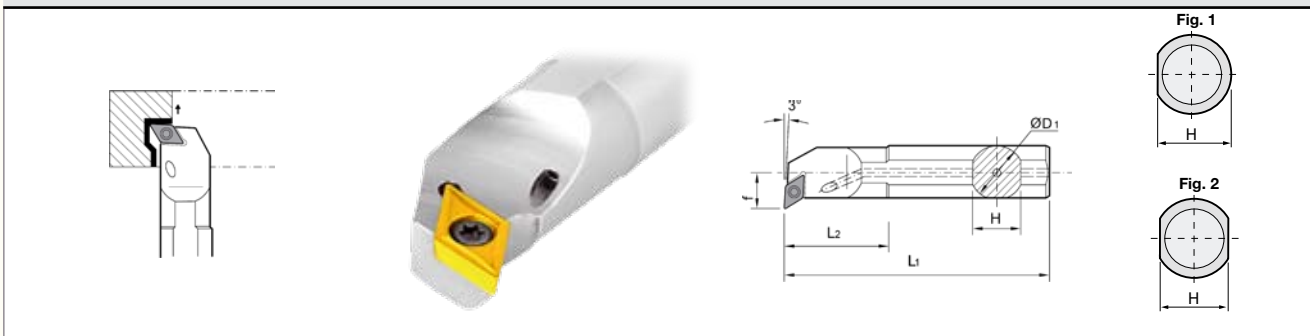


# SDQCR/L 107,5°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Fig.	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
A10H SDQCR/L 07	●	●	12.5	10	9	100	20	7	2	Seite / Page: 1.42				
A12K SDQCR/L 07	●	●	17	12	11	125	24	9						
A16M SDQCR/L 07	●	●	21	16	15	150	30	11						
A20Q SDQCR/L 07	●	●	25	20	18	180	32	13						
A16Q SDQCR/L 11	●	●	21	16	15	180	32	11	1	DC .. 0702 ..	48.24.107	-	-	56.33.612 (T08)
A20Q SDQCR/L 11	●	●	25	20	18	180	32	13						
A25R SDQCR/L 11	●	●	32	25	23	200	40	17						
E10M SDQCR/L 07	●	●	14	10	9.5	150	-	7						
E12Q SDQCR/L 07	●	●	17	12	11.5	180	-	9	DC .. 0702 ..	48.24.107	-	-	56.33.612 (T08)	
E16R SDQCR/L 07	●	●	21	16	15.5	200	-	11						
E20S SDQCR/L 07	●	○	25	20	19	250	-	13						
E25T SDQCR/L 11	●	○	32	25	24	300	-	17						
E32T SDQCR/L 11	○	○	40	32	30	300	50	22	DC .. 11T3 ..	48.24.108	-	-	56.33.613 (T15)	
E40T SDQCR/L 11	○	○	50	40	38	300	60	27						

# SDUCR/L 93°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Fig.	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
A0810H SDUCR/L 07	●	●	12.5	10	9	100	22	7	2	Seite / Page: 1.42				
A1012K SDUCR/L 07	●	●	15.5	12	11	125	28	9						
A1216M SDUCR/L 07	●	●	19.5	16	15	150	36	11						
A10H SDUCR/L 07	●	●	14	10	9	100	20	7						
A12K SDUCR/L 07	●	●	17	12	11	125	24	9	DC .. 11T3 ..	48.24.108	-	-	56.33.612 (T08)	
A16M SDUCR/L 07	●	●	21	16	15	150	30	11						
A16M SDUCR/L 11	○	○	20	16	15	150	30	11						
A20Q SDUCR/L 11	●	●	25	20	18	180	32	13						
A25R SDUCR/L 11	●	●	32	25	23	200	40	17	1	DC .. 0702 ..	48.24.107	-	-	56.33.613 (T15)
A32S SDUCR/L 11	●	○	40	32	31	250	50	22						
A40T SDUCR/L 11	○	○	50	40	37	300	60	27						
E10M SDUCR/L 07	●	●	14	10	9.5	150	-	7						
E12Q SDUCR/L 07	●	●	17	12	11.5	180	-	9	DC .. 11T3 ..	48.24.108	-	-	56.33.612 (T08)	
E16R SDUCR/L 07	●	●	21	16	15.5	200	-	11						
E20S SDUCR/L 11	●	●	25	20	19	250	-	13						
E25T SDUCR/L 11	●	●	32	25	24	300	-	17						
E32T SDUCR/L 11	○	○	40	32	31	300	50	22	DC .. 11T3 ..	48.13.102	48.13.203	48.13.301	56.33.613 (T15)	
E40T SDUCR/L 11	○	○	50	40	38	300	60	27						

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

E : Hartmetallschaft mit Innenkühlung / Carbide Shank with inner coolant

● JD-Lager / JD-Stock

○ begrenzte Lagerhaltung - auf Anfrage / limited stock - upon request

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

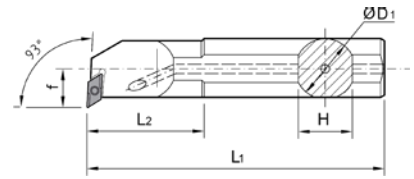
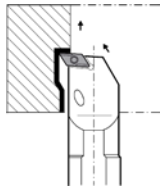
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# SKUCR/L 93°

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

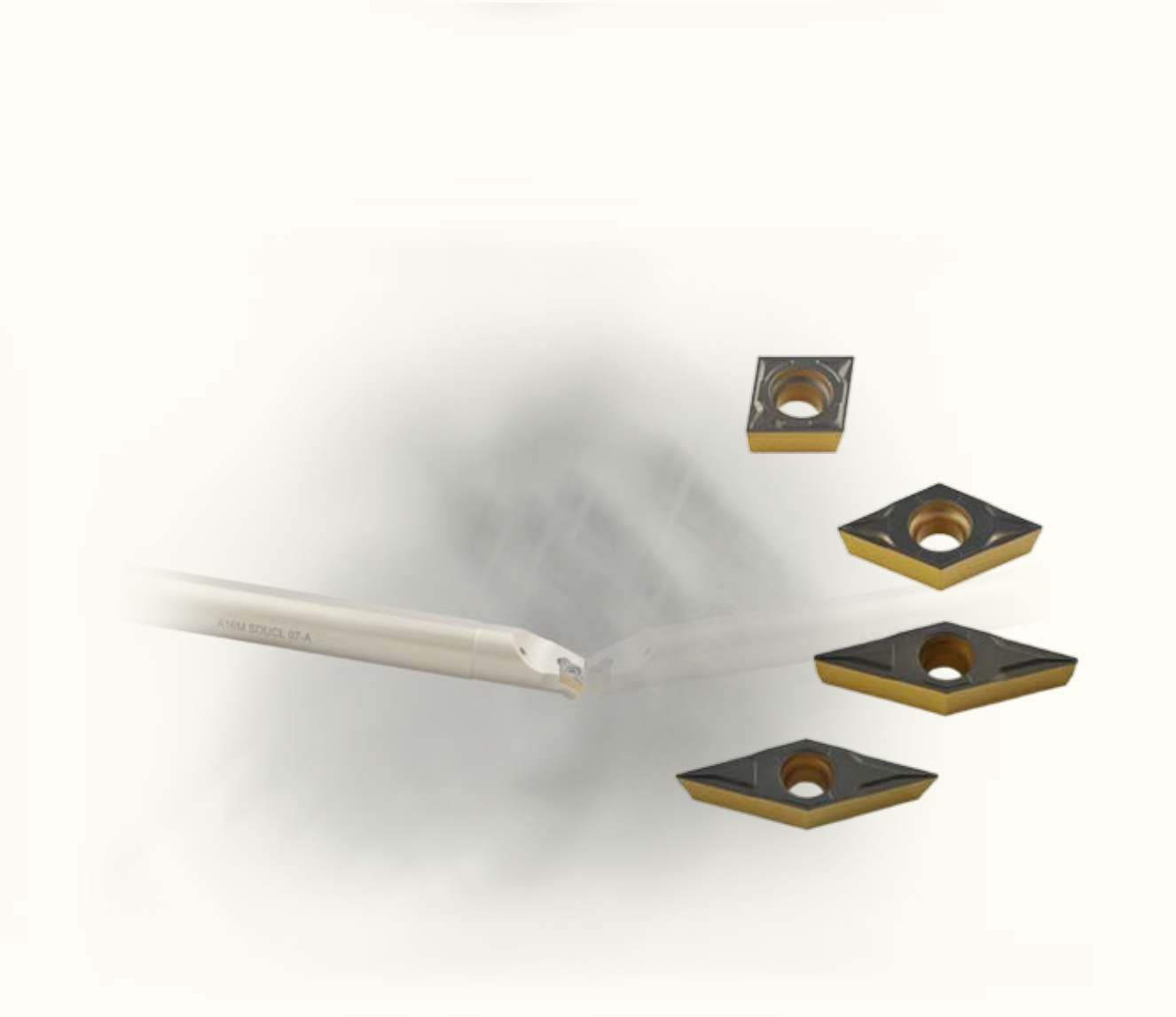
Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

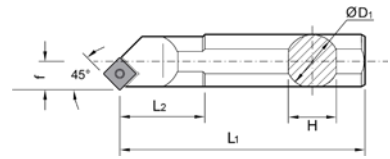
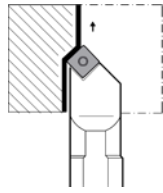
Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.49	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f					
<b>A12K SKUCR/L 11</b>	●	○	17	12	11.5	125	-	9.3	KC-X 1103 **	48.13.104	-	-	56.33.612 (T08)
<b>A16M SKUCR/L 11</b>	●	○	21	16	15	150	-	11.3					
<b>A20Q SKUCR/L 11</b>	●	○	25	20	19	180	-	13.5					
<b>A25R SKUCR/L 11</b>	●	○	32	25	24	200	-	17.0					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant



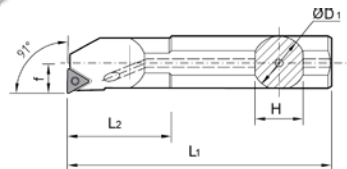
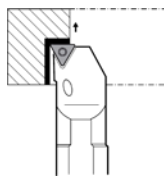
## SSSCR/L 45°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.46	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f				
<b>A16M SSSCR/L 09</b>			21	16	15	150	30	11	SC .. 09T3 ..	48.24.108	-	-	56.33.613 (T15)
<b>A20Q SSSCR/L 09</b>	●	○	25	20	18	180	32	13					
<b>A25R SSSCR/L 09</b>			32	25	23	200	36	17					
<b>A32S SSSCR/L 12</b>			40	32	31	250	50	22	SC .. 1204 ..	48.13.103	48.13.206	48.13.302	
<b>A40T SSSCR/L 12</b>			49	40	39	300	60	27					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

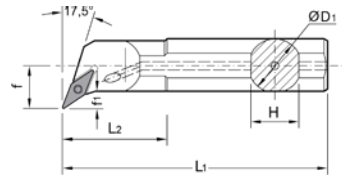
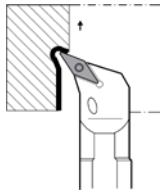
## STFCR/L 90°



Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.48	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f				
<b>A12K STFCR/L 11</b>			17	12	11	125	30	9	TC .. 1102 ..	48.24.107	-	-	56.33.612 (T08)
<b>A16Q STFCR/L 11</b>			21	16	15	180	35	11					
<b>A20Q STFCR/L 11</b>			25	20	18	180	36	13					
<b>A25R STFCR/L 16</b>			32	25	23	200	49	17	TC .. 16T3 ..	48.13.102	48.13.207	48.13.301	56.33.613 (T15)
<b>A32S STFCR/L 16</b>			40	32	31	250	50	22					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

# SVQCR/L 107,5°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

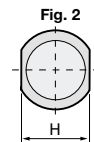
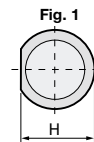
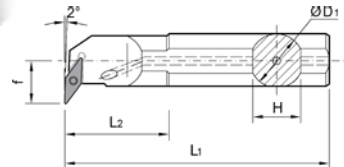
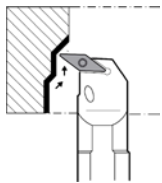
Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Fig.	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f						
A16Q SVQCR/L 11	●	○	21	16	15	180	30	11	Seite / Page: 1.52					
A20Q SVQCR/L 11	○	○	25	20	18	180	32	13		VC .. 1103 ..	48.24.107	-	-	56.33.612 (T08)
A25R SVQCR/L 11	○	○	32	25	23	200	36	17		VC .. 1604 ..	48.13.102	48.13.208	48.13.301	56.33.613 (T15)
A32S SVQCR/L 16			40	32	30	250	50	22						

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

# SVUCR/L 93°



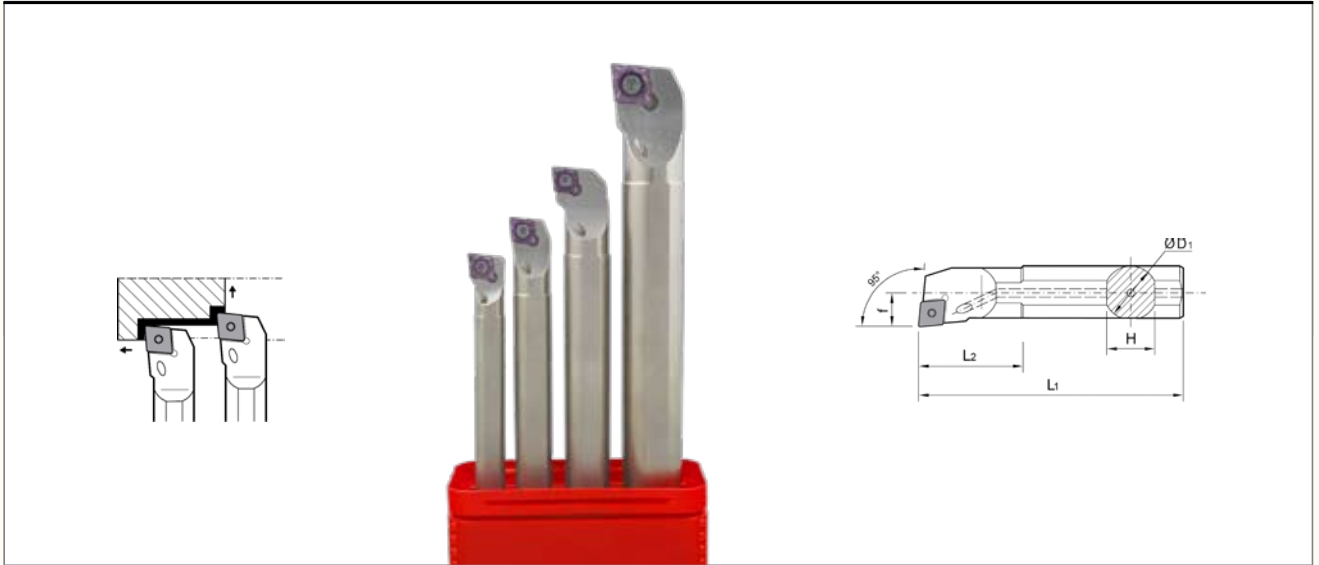
Bezeichnung Part Number	Lager Stock		Maße [mm] Dimensions						Fig.	Ersatzteile Spare Parts					
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f							
A16Q SVUCR/L 11	●	○	21	16	15	180	30	11	Seite / Page: 1.52						
A20Q SVUCR/L 11	●	○	25	20	18	180	32	13		2	VC .. 1103 ..	48.24.107	-	-	56.33.612 (T08)
A25R SVUCR/L 11	○	○	32	25	23	200	36	17		VC .. 1604 ..	48.13.102	48.13.208	48.13.301	56.33.613 (T15)	
E16R SVUCR/L 11	○	○	21	16	15.5	200	16	11	1						
E20S SVUCR/L 11	○	○	25	20	19	250	20	13		VC .. 1103 ..	48.24.107	-	-	56.33.612 (T08)	
E25T SVUCR/L 11	○	○	32	25	24	300	25	17							

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

E : Hartmetallschaft mit Innenkühlung / Carbide Shank with inner coolant

# SET A08H-A16M SCLCR/L 95°

Bohrstangen mit IK  
Boring Bars with IC



Bestehend aus: Consisting of:	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.38	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f				
<b>A08H SCLCR/L 06</b>			10	8	7	100	16	5	CC .. 0602 ..	48.24.107	-	-	56.33.612 (T08)
<b>A10J SCLCR/L 06</b>	•	•	12	10	9	110	20	7		48.24.108	-	-	56.33.613 (T15)
<b>A12K SCLCR/L 06</b>			16	12	11	125	22	9					
<b>A16M SCLCR/L 09</b>			20	16	15	150	30	11	CC .. 09T3 ..				

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

# SET A10J-A16M SDQCR/L 107,5°

Bohrstangen mit IK  
Boring Bars with IC



Bestehend aus: Consisting of:	Lager Stock		Maße [mm] Dimensions					Seite / Page: 1.42	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f				
<b>A10J SDQCR/L 07</b>			12	10	9	110	20	7	DC .. 0702 ..	48.24.107	-	-	56.33.612 (T08)
<b>A12K SDQCR/L 07</b>	•	•	16	12	11	125	22	9		48.24.108	-	-	56.33.613 (T15)
<b>A16M SDQCR/L 07</b>			20	16	15	150	30	11					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

# SET A10J-A16M SDUCR/L 93°

Bohrstangen mit IK  
Boring Bars with IC



Bestehend aus: Consisting of:	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f					
<b>A10J SDUCR/L 07</b>			12	10	9	110	20	7	DC-- 0702--	48.24.107	-	-	56.33.612 (T08)
<b>A12K SDUCR/L 07</b>	●	●	16	12	11	125	24	9					
<b>A16M SDUCR/L 07</b>			20	16	15	150	30	11					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

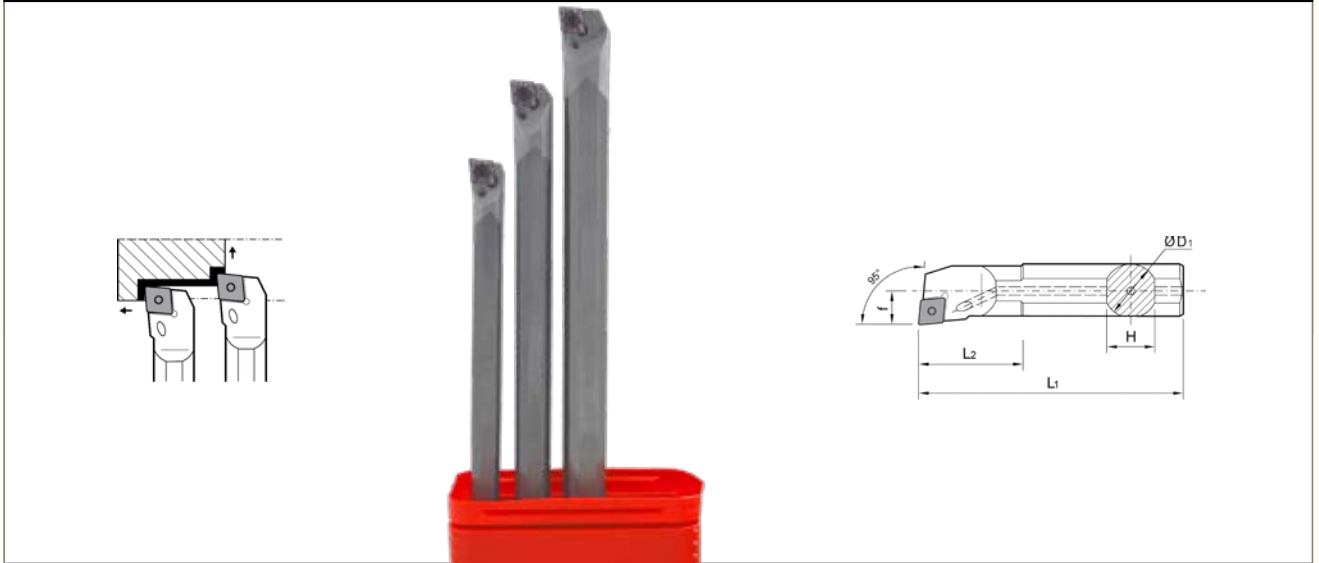
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# SET E-SCLCR/L 95°

Hartmetall Bohrstangen mit IK  
Carbide Boring Bars with IC



Bezeichnung Part Number	Lager Stock		Bestehend aus: Consisting of:					Seite / Page: 1.38	Ersatzteile Spare Parts								
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f								
<b>E08K SCLCR/L 06</b>			11	8	7.5	125	17	5	CC.. 0602..								
<b>E10M SCLCR/L 06</b>	●	●	14	10	9.5	150	20	6						48.24.107	-	-	56.33.612 (T08)
<b>E12Q SCLCR/L 06</b>			17	12	11.5	180	22	9									

E : Hartmetallschaft mit Innenkühlung / Carbide Shank with inner coolant  
Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

# SET E-SDUCR/L 93°

Hartmetall Bohrstangen mit IK  
Carbide Boring Bars with IC



Bezeichnung Part Number	Lager Stock		Bestehend aus: Consisting of:					Seite / Page: 1.42	Ersatzteile Spare Parts				
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>		f				
<b>E10M SDUCR/L 07</b>			14	10	9.5	150	-	7	DC.. 0702..				
<b>E12Q SDUCR/L 07</b>	●	●	17	12	11.5	180	-	9					

E : Hartmetallschaft mit Innenkühlung / Carbide Shank with inner coolant  
Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.



# SET A0608H-A1216M SCLCR/L 06<sup>95</sup> Abgesetzte Bohrstangen mit IK Boring Bars with IC



Bestehend aus: Consisting of:	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.38	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f					
<b>A0608H SCLCR/L 06</b>			8	8	7	100	25.0	4.5	CC.. 0602..	48.24.107	-	-	56.33.612 (T08)
<b>A0810J SCLCR/L 06</b>	•	•	11	10	9	110	32.0	6.0					
<b>A1012K SCLCR/L 06</b>			13	12	11	125	38.0	7.0					
<b>A1216M SCLCR/L 06</b>			16	16	15	150	50.0	9.0					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

# SET A0810H-A1216M SDUCR/L 07<sup>93</sup> Abgesetzte Bohrstangen mit IK Boring Bars with IC

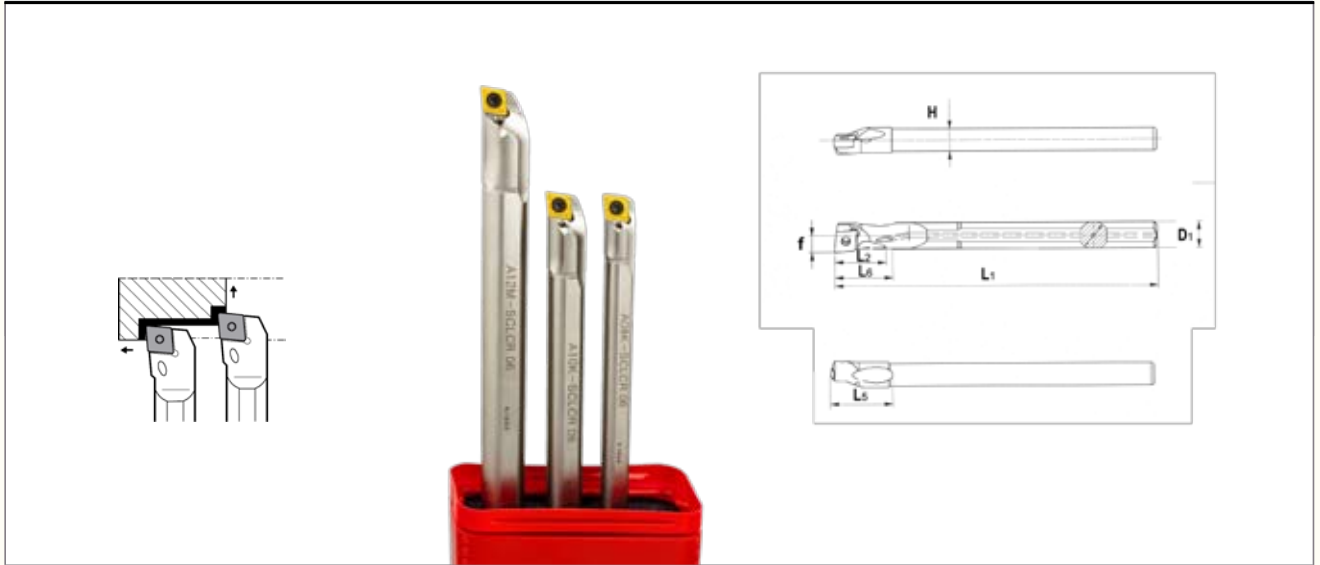


Bestehend aus: Consisting of:	Lager Stock		Maße [mm] Dimensions						Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f					
<b>A0810H SDUCR/L 07</b>			12.5	10	9	100	22	7	DC.. 0702..	48.24.107	-	-	56.33.612 (T08)
<b>A1012K SDUCR/L 07</b>	•	•	15.5	12	11	125	28	9					
<b>A1216M SDUCR/L 07</b>			19.5	16	15	150	36	11					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant

Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

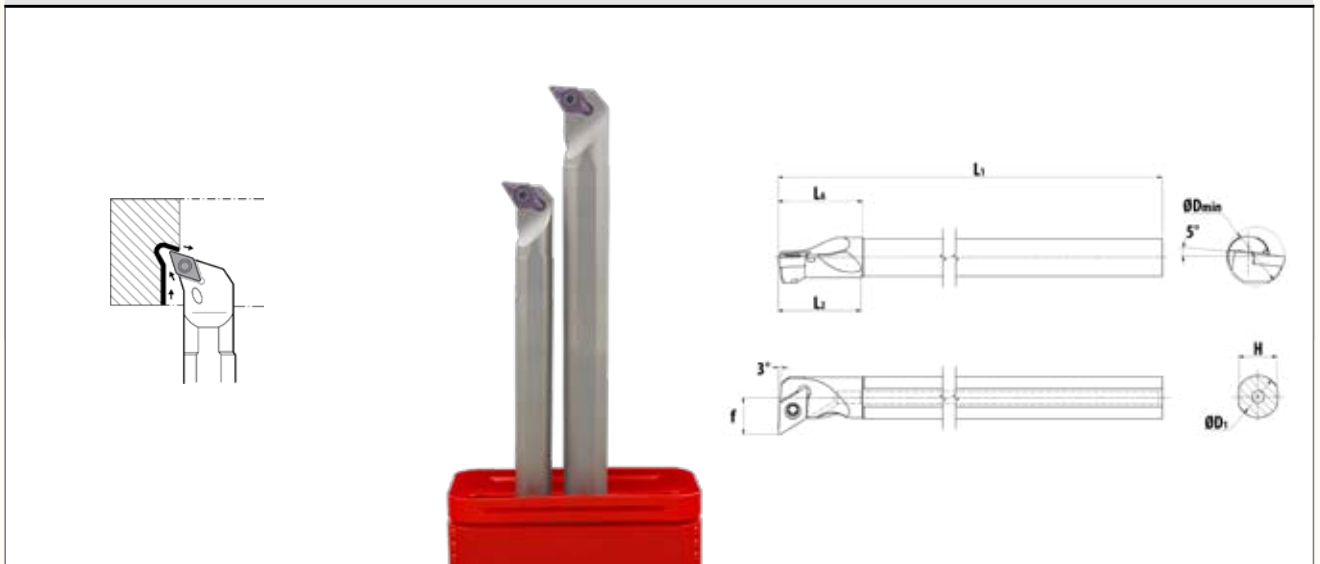
# SET A08K-A12M SCLCR/L 06-CB <sup>95°</sup> Vibrationsreduzierte Bohrstangen Anti Vibration Bars



Bezeichnung Part Number	Lager Stock		Bestehend aus: Consisting of:								Seite / Page: 1.38	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f	L <sub>3</sub>	L <sub>6</sub>					
<b>A08K SCLCR/L 06-CB</b>			10	8	7	125	16	5	20	17	CC.. 0602..	48.24.107	-	-	56.33.612 (T08)
<b>A10K SCLCR/L 06-CB</b>	•	•	12	10	9	125	20	6	25	21					
<b>A12M SCLCR/L 06-CB</b>			14	12	11	150	24	7	30	25					

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant  
Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.

# SET A10K-A12M SDUCR/L 07-CB <sup>93°</sup> Vibrationsreduzierte Bohrstangen Anti Vibration Bars



Bezeichnung Part Number	Lager Stock		Bestehend aus: Consisting of:								Seite / Page: 1.42	Ersatzteile Spare Parts			
	R	L	Dmin	D <sub>1</sub>	H	L <sub>1</sub>	L <sub>2</sub>	f	L <sub>3</sub>	L <sub>6</sub>					
<b>A10K SDUCR/L 07-CB</b>	•	•	14	10	9	125	20	9	22	DC.. 0702..	48.24.107	-	-	56.33.612 (T08)	
<b>A12M SDUCR/L 07-CB</b>			16	12	11	150	21	11	24						

A : Stahlschaft mit Innenkühlung / Steel Shank with inner coolant  
Bitte wählen Sie linkes oder rechtes Set. Please choose left or right set.



# ISO - Bezeichnungssystem für Wendschneidplatten

## ISO Designation System for Indexable Inserts

Drehen  
Turning

Fräswerkzeuge  
Milling Tools



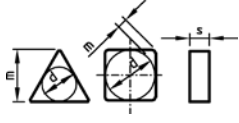

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

<p>80° <b>C</b></p> <p>55° <b>D</b></p>  <p>75° <b>E</b></p> <p>86° <b>M</b></p> <p>35° <b>V</b></p>		 <p>Grenzabmaße (mm) Range of tolerance</p> <table border="1"> <thead> <tr> <th>d +/-</th> <th>m +/-</th> <th>s +/-</th> <th>Klasse</th> </tr> </thead> <tbody> <tr> <td>0.025</td> <td>0.005</td> <td>0.025</td> <td><b>A</b></td> </tr> <tr> <td>0.025</td> <td>0.013</td> <td>0.025</td> <td><b>C</b></td> </tr> <tr> <td>0.025</td> <td>0.025</td> <td>0.025</td> <td><b>E</b></td> </tr> <tr> <td>0.013</td> <td>0.005</td> <td>0.025</td> <td><b>F</b></td> </tr> <tr> <td>0.025</td> <td>0.025</td> <td>0.05-0.13</td> <td><b>G</b></td> </tr> <tr> <td>0.013</td> <td>0.013</td> <td>0.025</td> <td><b>H</b></td> </tr> <tr> <td>0.05-0.15</td> <td>0.005</td> <td>0.025</td> <td><b>J</b></td> </tr> <tr> <td>0.05-0.15</td> <td>0.013</td> <td>0.025</td> <td><b>K</b></td> </tr> <tr> <td>0.05-0.15</td> <td>0.025</td> <td>0.025</td> <td><b>L</b></td> </tr> <tr> <td>0.05-0.15</td> <td>0.08-0.2</td> <td>0.05-0.13</td> <td><b>M</b></td> </tr> <tr> <td>0.05-0.15</td> <td>0.08-0.2</td> <td>0.025</td> <td><b>N</b></td> </tr> <tr> <td>0.08-0.25</td> <td>0.13-0.38</td> <td>0.13</td> <td><b>U</b></td> </tr> </tbody> </table>	d +/-	m +/-	s +/-	Klasse	0.025	0.005	0.025	<b>A</b>	0.025	0.013	0.025	<b>C</b>	0.025	0.025	0.025	<b>E</b>	0.013	0.005	0.025	<b>F</b>	0.025	0.025	0.05-0.13	<b>G</b>	0.013	0.013	0.025	<b>H</b>	0.05-0.15	0.005	0.025	<b>J</b>	0.05-0.15	0.013	0.025	<b>K</b>	0.05-0.15	0.025	0.025	<b>L</b>	0.05-0.15	0.08-0.2	0.05-0.13	<b>M</b>	0.05-0.15	0.08-0.2	0.025	<b>N</b>	0.08-0.25	0.13-0.38	0.13	<b>U</b>	<p>3° <b>A</b></p> <p>5° <b>B</b></p> <p>7° <b>C</b></p> <p>15° <b>D</b></p> <p>20° <b>E</b></p> <p>25° <b>F</b></p> <p>30° <b>G</b></p> <p>0° <b>N</b></p> <p>11° <b>P</b></p> <p>Sonstige Others <b>O</b></p>		<p><b>A</b></p> <p><b>C</b></p> <p><b>F</b></p> <p><b>G</b></p> <p><b>H</b></p> <p><b>J</b></p> <p><b>M</b></p> <p><b>N</b></p> <p><b>Q</b></p> <p><b>R</b></p> <p><b>T</b></p> <p><b>U</b></p> <p><b>W</b></p> <p>Sonderausführung Special Shape <b>X</b></p>
d +/-	m +/-	s +/-	Klasse																																																						
0.025	0.005	0.025	<b>A</b>																																																						
0.025	0.013	0.025	<b>C</b>																																																						
0.025	0.025	0.025	<b>E</b>																																																						
0.013	0.005	0.025	<b>F</b>																																																						
0.025	0.025	0.05-0.13	<b>G</b>																																																						
0.013	0.013	0.025	<b>H</b>																																																						
0.05-0.15	0.005	0.025	<b>J</b>																																																						
0.05-0.15	0.013	0.025	<b>K</b>																																																						
0.05-0.15	0.025	0.025	<b>L</b>																																																						
0.05-0.15	0.08-0.2	0.05-0.13	<b>M</b>																																																						
0.05-0.15	0.08-0.2	0.025	<b>N</b>																																																						
0.08-0.25	0.13-0.38	0.13	<b>U</b>																																																						
<b>T</b>	<b>N</b>	<b>M</b>	<b>G</b>																																																						
Plattenform <i>Shape</i>	Freiwinkel <i>Clearance Angle</i>	Toleranzen <i>Tolerances</i>	Plattentyp <i>Type of Inserts</i>																																																						

**ISO - Bezeichnungssystem für Wendeschneidplatten**  
**ISO Designation System for Indexable Inserts**

							<p><b>F</b></p> <p>Scharf <i>Sharp</i></p>		<p><b>R</b></p>																																																								
<table border="1"> <thead> <tr> <th colspan="3">d (mm)</th> </tr> </thead> <tbody> <tr><td>06</td></tr> <tr><td>08</td></tr> <tr><td>10</td></tr> <tr><td>12</td></tr> <tr><td>16</td></tr> <tr><td>20</td></tr> <tr><td>25</td></tr> <tr><td>32</td></tr> </tbody> </table>			d (mm)			06	08	10	12	16	20	25	32	<table border="1"> <thead> <tr> <th>s (mm)</th> <th>Kennzahl Index</th> </tr> </thead> <tbody> <tr><td>1.59</td><td>01</td></tr> <tr><td>1.98</td><td>T1</td></tr> <tr><td>2.38</td><td>02</td></tr> <tr><td>3.18</td><td>03</td></tr> <tr><td>3.97</td><td>T3</td></tr> <tr><td>4.76</td><td>04</td></tr> <tr><td>5.56</td><td>05</td></tr> <tr><td>6.35</td><td>06</td></tr> <tr><td>7.94</td><td>07</td></tr> <tr><td>9.52</td><td>09</td></tr> <tr><td>11.11</td><td>11</td></tr> <tr><td>12.70</td><td>12</td></tr> </tbody> </table>		s (mm)	Kennzahl Index	1.59	01	1.98	T1	2.38	02	3.18	03	3.97	T3	4.76	04	5.56	05	6.35	06	7.94	07	9.52	09	11.11	11	12.70	12	<table border="1"> <thead> <tr> <th>r (mm)</th> <th>Kennzahl Index</th> </tr> </thead> <tbody> <tr><td>0.2</td><td>02</td></tr> <tr><td>0.4</td><td>04</td></tr> <tr><td>0.8</td><td>08</td></tr> <tr><td>1.2</td><td>12</td></tr> <tr><td>1.6</td><td>16</td></tr> <tr><td>2.4</td><td>24</td></tr> <tr><td>0</td><td>00</td></tr> </tbody> </table>		r (mm)	Kennzahl Index	0.2	02	0.4	04	0.8	08	1.2	12	1.6	16	2.4	24	0	00	<p><b>E</b></p> <p>Gerundet <i>Rounded</i></p>		<p><b>T</b></p> <p>Gefast <i>Chamfered</i></p>		<p><b>L</b></p>	
d (mm)																																																																	
06																																																																	
08																																																																	
10																																																																	
12																																																																	
16																																																																	
20																																																																	
25																																																																	
32																																																																	
s (mm)	Kennzahl Index																																																																
1.59	01																																																																
1.98	T1																																																																
2.38	02																																																																
3.18	03																																																																
3.97	T3																																																																
4.76	04																																																																
5.56	05																																																																
6.35	06																																																																
7.94	07																																																																
9.52	09																																																																
11.11	11																																																																
12.70	12																																																																
r (mm)	Kennzahl Index																																																																
0.2	02																																																																
0.4	04																																																																
0.8	08																																																																
1.2	12																																																																
1.6	16																																																																
2.4	24																																																																
0	00																																																																
<table border="1"> <thead> <tr> <th colspan="3">d = IC</th> </tr> <tr> <th>(mm)</th> <th>(inch)</th> <th>(mm)</th> </tr> </thead> <tbody> <tr><td>06</td><td>5/32</td><td>3.96</td></tr> <tr><td>09</td><td>7/32</td><td>5.55</td></tr> <tr><td>11</td><td>1/4</td><td>6.35</td></tr> <tr><td>16</td><td>3/8</td><td>9.52</td></tr> <tr><td>22</td><td>1/2</td><td>12.7</td></tr> <tr><td>27</td><td>5/8</td><td>15.8</td></tr> <tr><td>33</td><td>3/4</td><td>19.0</td></tr> <tr><td>44</td><td>1</td><td>25.4</td></tr> </tbody> </table>			d = IC			(mm)	(inch)	(mm)	06	5/32	3.96	09	7/32	5.55	11	1/4	6.35	16	3/8	9.52	22	1/2	12.7	27	5/8	15.8	33	3/4	19.0	44	1	25.4	<p>00: Runde Platte (Zoll) <i>Round Insert (inch)</i></p> <p>MO: Runde Platte (metr.) <i>Round Insert (metr.)</i></p>		<p><b>S</b></p> <p>Gefast und gerundet <i>Chamfered and rounded</i></p>		<p><b>N</b></p>																												
d = IC																																																																	
(mm)	(inch)	(mm)																																																															
06	5/32	3.96																																																															
09	7/32	5.55																																																															
11	1/4	6.35																																																															
16	3/8	9.52																																																															
22	1/2	12.7																																																															
27	5/8	15.8																																																															
33	3/4	19.0																																																															
44	1	25.4																																																															

<b>16</b>	<b>04</b>	<b>04</b>	<b>E</b>	<b>R</b>
-----------	-----------	-----------	----------	----------

Schneidenlänge <i>Length of Cutting Edge</i>	Plattendicke <i>Thickness of Insert</i>	Eckenradius <i>Corner Radius</i>	Schneidkante <i>Cutting Edge</i>	Schneidrichtung <i>Cutting Direction</i>
---	--	-------------------------------------	-------------------------------------	---

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

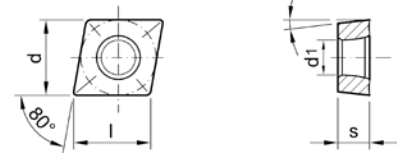
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

CC

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

Werkstück / Workpiece	Beschichtet / Coated													Unbeschichtet / Uncoated	Maße / Dimensions [mm]				Schnittdaten / Cutting Data [mm]		Passende Trägerwerkzeuge / Suitable Toolholders					
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP 4025+	TP 5025	TP 5345		TU 3015	TU 5525	TWS7225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	3.30	3.50	1.39	1.90	0,01~0,05	0,10~0,30	SCLC R/L / 1.26	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	3.30	3.50	1.39	1.90	0,01~0,10	0,10~0,30			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	4.10	4.30	1.79	2.30	0,01~0,10	0,10~0,50			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	4.10	4.30	1.79	2.30	0,01~0,10	0,10~0,50			
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									

Machinentyp  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Werkstück / Workpiece	Beschichtet / Coated													Unbeschichtet / Uncoated	Maße / Dimensions [mm]				Schnittdaten / Cutting Data [mm]		Passende Trägerwerkzeuge / Suitable Toolholders				
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP 4025+	TP 5025	TP 5345		TU 3015	TU 5525	TWS7225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	6.20	6.35	2.38	2.80	0,01~0,30	0,05~3,00	SCLC R/L / 1.13	SCLC R/L / 1.26
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	6.00	6.35	2.38	2.80	0,02~0,40	0,10~3,00		
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	9.40	9.52	3.97	4.40	0,01~0,30	0,05~3,00		
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	9.20	9.52	3.97	4.40	0,02~0,40	0,10~4,00		
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	8.80	9.52	3.97	4.40	0,03~0,50	0,10~5,00		
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.60	12.70	4.76	5.50	0,01~0,30	0,50~5,00		
		○	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.50	0,02~0,40	0,10~5,00		
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.00	12.70	4.76	5.50	0,03~0,50	0,10~5,00		

Machinentyp  
Machining types

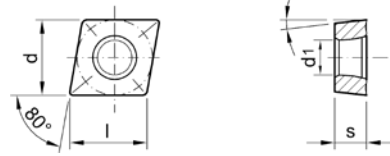
- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendeleitbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

CC



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

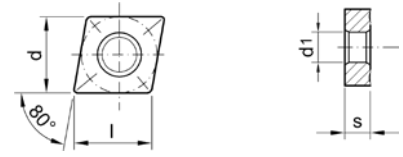
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück / Workpiece	Stahl / Steel	A (P)																					Machinentyp Machining types			
	Rostfreier Stahl / Stainless steel	R (M)																								
	Guss / Cast iron	F (K)																					● Gute Bearbeitungsbedingungen / Continuous cutting ● Normale Bearbeitungsbedingungen / General cutting ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting			
	Nichtmet. Werkstoffe / Non-fer. metall.	N																								
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																								
	Gehärteter Stahl / Hardened steel	H																								
Wendepplatten Inserts	Bezeichnung Part Number	Beschichtet Coated										Ungeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders							
		TK 5210+	TK 5310	TK 5515	TK 5710	TK 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120		TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW 5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
	<b>06 02 02 -F30</b>																		6.30	6.35	2.38	2.80	0,03~0,11	0,06~1,70	SCLC R/L / 1.13	SCLC R/L / 1.26
	<b>06 02 04 -F30</b>																		6.00	6.35	2.38	2.80	0,05~0,17	0,10~1,70		
	<b>09 T3 02 -F30</b>																		9.50	9.52	3.97	4.40	0,04~0,15	0,08~2,00		
	<b>09 T3 04 -F30</b>																		9.20	9.52	3.97	4.40	0,06~0,23	0,11~2,00		
	<b>12 04 02 -F30</b>																		12.70	12.70	4.76	5.50	0,05~0,15	0,10~2,00		
<b>12 04 04 -F30</b>																			12.40	12.70	4.76	5.50	0,07~0,27	0,14~2,00		
	<b>06 02 04 -JTM</b>																		6.00	6.35	2.38	2.80	0,06~0,20	0,20~2,00	SCLC R/L / 1.13	SCLC R/L / 1.26
	<b>06 02 08 -JTM</b>																		5.70	6.35	2.38	2.80	0,08~0,30	0,20~2,00		
	<b>09 T3 04 -JTM</b>																		9.40	9.52	3.97	4.40	0,06~0,20	0,20~3,00		
	<b>09 T3 08 -JTM</b>																		8.80	9.52	3.97	4.40	0,10~0,30	0,30~3,00		
	<b>12 04 04 -JTM</b>																		12.40	12.70	4.76	5.50	0,05~0,25	0,20~1,50		
	<b>12 04 08 -JTM</b>																		12.00	12.70	4.76	5.50	0,20~0,40	0,80~3,50		
<b>12 04 12 -JTM</b>																		11.60	12.70	4.76	5.50	0,20~0,50	0,80~4,00			
	<b>06 02 04 -M30</b>																		6.00	6.35	2.38	2.80	0,05~0,20	0,40~1,00	SCLC R/L / 1.13	SCLC R/L / 1.26
	<b>06 02 08 -M30</b>																		5.70	6.35	2.38	2.80	0,05~0,25	0,40~1,00		
	<b>09 T3 04 -M30</b>																		9.40	9.52	3.97	4.40	0,05~0,20	0,40~1,50		
	<b>09 T3 08 -M30</b>																		8.80	9.52	3.97	4.40	0,05~0,25	0,40~1,50		
	<b>12 04 04 -M30</b>																		12.40	12.70	4.76	5.56	0,05~0,20	0,50~2,00		
<b>12 04 08 -M30</b>																		12.00	12.70	4.76	5.56	0,05~0,25	0,50~2,00			
	<b>06 02 04 -MD</b>																		6.00	6.35	2.38	2.80	0,06~0,17	0,20~2,30	SCLC R/L / 1.13	SCLC R/L / 1.26
	<b>06 02 08 -MD</b>																		5.60	6.35	2.38	2.80	0,08~0,23	0,40~2,30		
	<b>09 T3 04 -MD</b>																		9.20	9.52	3.97	4.40	0,06~0,17	0,20~2,50		
	<b>09 T3 08 -MD</b>																		8.80	9.52	3.97	4.40	0,08~0,23	0,30~2,50		
	<b>12 04 04 -MD</b>																		12.40	12.70	4.76	5.50	0,06~0,17	0,30~3,50		
	<b>12 04 08 -MD</b>																		12.00	12.70	4.76	5.50	0,08~0,23	0,50~3,50		

CN



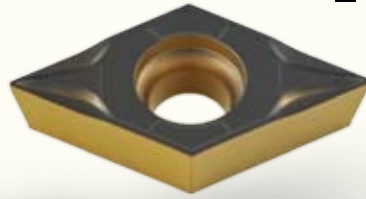
Werkstück/Workpiece	Beschichtet Coated										Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders								
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120		TP 4025+	TP 5025	TP 5345	TU 3015	TU 5525	TWS7225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,05~0,28	0,23~4,80	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,10~0,40	0,80~3,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-A20</b>	<b>12 04 04 - A20</b> <b>12 04 08 - A20</b>																●	12.40	12.70	4.76	5.16	0,05~0,28	0,23~4,80			
																	○	12.00	12.70	4.76	5.16	0,10~0,40	0,80~3,50			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,05~0,30	0,60~3,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,10~0,40	0,80~4,00			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-C22</b>	<b>12 04 04 - C22</b> <b>12 04 08 - C22</b>																●	12.40	12.70	4.76	5.16	0,05~0,30	0,60~3,50			
																	○	12.00	12.70	4.76	5.16	0,10~0,40	0,80~4,00			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,08~0,18	0,10~2,00	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,10~0,35	0,10~2,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-JBF</b>	<b>12 04 04 - JBF</b> <b>12 04 08 - JBF</b>																●	12.40	12.70	4.76	5.16	0,08~0,18	0,10~2,00			
																	○	12.00	12.70	4.76	5.16	0,10~0,35	0,10~2,50			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,10~0,25	0,35~3,00	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,10~0,40	0,40~3,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	11.60	12.70	4.76	5.16	0,13~0,50	0,40~3,50			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-JBM</b>	<b>12 04 04 - JBM</b> <b>12 04 08 - JBM</b> <b>12 04 12 - JBM</b>																●	12.40	12.70	4.76	5.16	0,10~0,25	0,35~3,00	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
																	○	12.00	12.70	4.76	5.16	0,10~0,40	0,40~3,50			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,15~0,40	0,40~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,25~0,55	1,20~5,00			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	11.60	12.70	4.76	5.16	0,25~0,70	1,75~8,00			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-JBR</b>	<b>12 04 04 - JBR</b> <b>12 04 08 - JBR</b> <b>12 04 12 - JBR</b>																●	12.40	12.70	4.76	5.16	0,15~0,40	0,40~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
																	○	12.00	12.70	4.76	5.16	0,25~0,55	1,20~5,00			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,15~0,40	0,40~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,25~0,55	1,20~5,00			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	11.60	12.70	4.76	5.16	0,25~0,70	1,75~8,00			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-MD</b>	<b>12 04 04 - MD</b> <b>12 04 08 - MD</b> <b>12 04 12 - MD</b>																●	12.40	12.70	4.76	5.16	0,05~0,35	0,80~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
																	○	12.00	12.70	4.76	5.16	0,08~0,45	1,00~4,50			
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.40	12.70	4.76	5.16	0,05~0,35	0,80~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	12.00	12.70	4.76	5.16	0,10~0,50	1,20~4,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○									
<b>CNMG-S30</b>	<b>12 04 04 - S30</b> <b>12 04 08 - S30</b>																●	12.40	12.70	4.76	5.16	0,05~0,25	0,50~4,50	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24	
																	○	12.00	12.70	4.76	5.16	0,10~0,40	0,50~4,50			



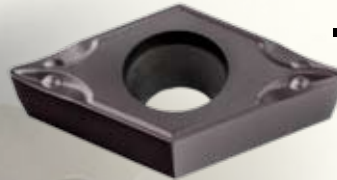
# Unsere bewährten Geometrien

## *Our well known geometries*

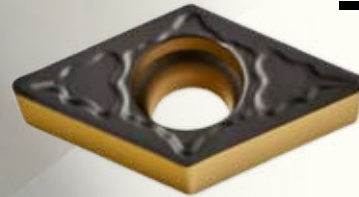
- F30



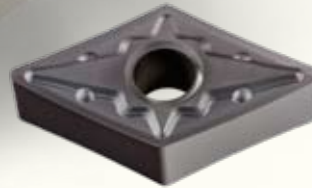
- M30



- MD



- S30

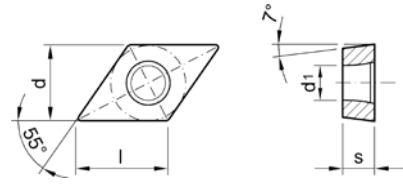


- C22



DC

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

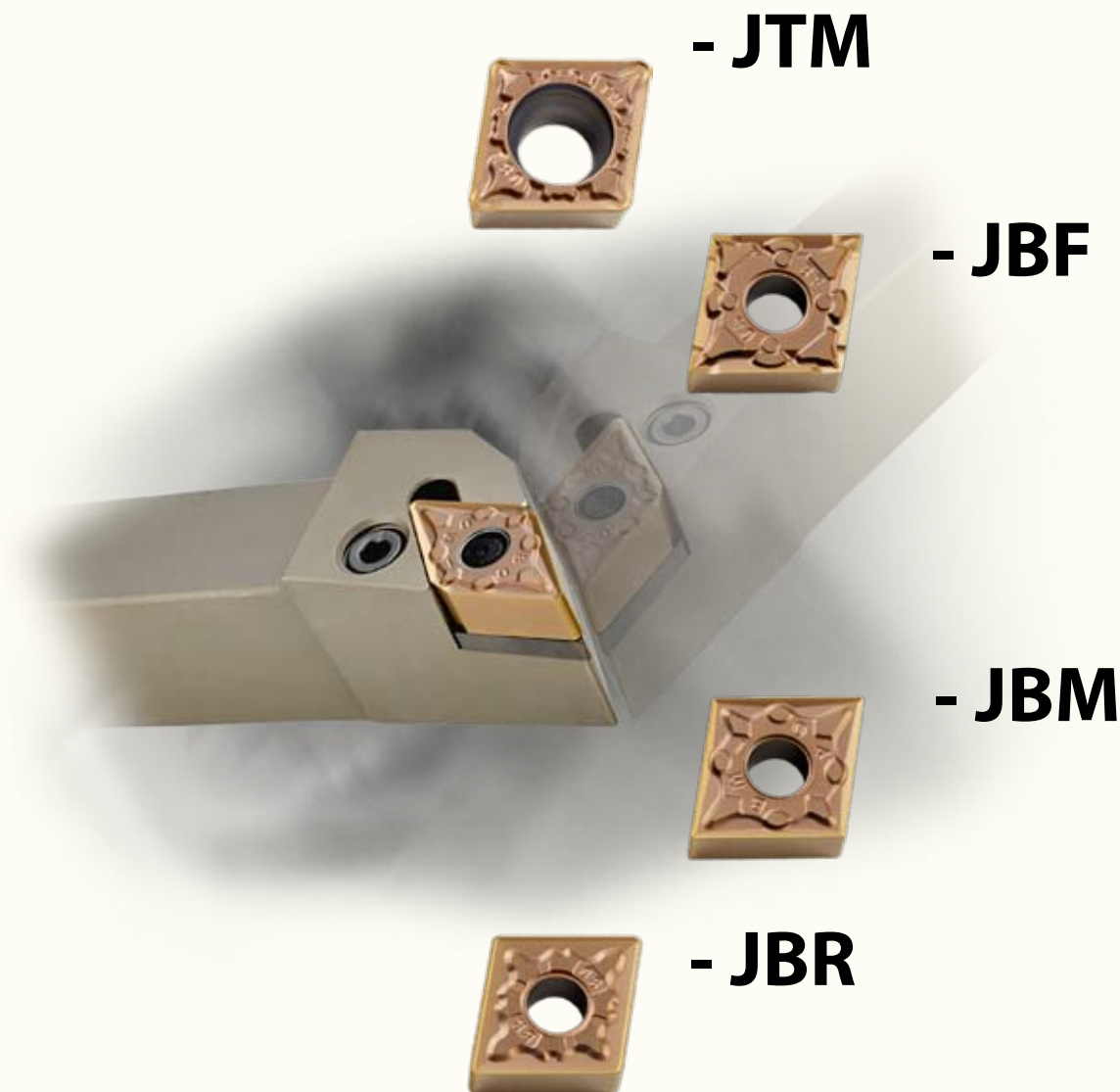
Werkstück/Workpiece	Beschichtet Coated											Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders						
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	7.50	6.35	2.38	2.80	0,01~0,30	0,05~3,00	SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	7.30	6.35	2.38	2.80	0,02~0,40	0,10~4,00			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	6.80	6.35	2.38	2.80	0,02~0,40	0,10~4,00			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	11.40	9.52	3.97	4.40	0,02~0,30	0,05~4,00			
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	11.20	9.52	3.97	4.40	0,03~0,50	0,10~5,00			
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.80	9.52	3.97	4.40	0,03~0,50	0,10~5,00			
	07 02 02 - F30										●						7.50	6.35	2.38	2.80	0,03~0,11	0,06~1,50	SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27	
	07 02 04 - F30										●						7.30	6.35	2.38	2.80	0,05~0,17	0,10~1,50			
	11 T3 02 - F30										●						11.60	9.52	3.97	4.40	0,04~0,15	0,08~2,00			
	11 T3 04 - F30										●						11.20	9.52	3.97	4.40	0,06~0,23	0,11~2,00			
	07 02 04 - JTM														●		7.30	6.35	2.38	2.80	0,06~0,20	0,20~2,00	SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27	
	07 02 08 - JTM														●		7.10	6.35	2.38	2.80	0,08~0,30	0,20~2,00			
	11 T3 04 - JTM														●		11.20	9.52	3.97	4.40	0,08~0,25	0,30~3,00			
	11 T3 08 - JTM														●		10.80	9.52	3.97	4.40	0,10~0,35	0,30~3,00			
	11 T3 12 - JTM														○		10.40	9.52	3.97	4.40	0,05~0,25	0,20~1,50			
	07 02 04 - M30			●						●							7.30	6.35	2.38	2.80	0,05~0,20	0,20~1,50	SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27	
	07 02 08 - M30			●						●							7.10	6.35	2.38	2.80	0,05~0,25	0,20~1,50			
	11 T3 04 - M30			●							●						11.20	9.52	3.97	4.40	0,08~0,23	0,25~2,00			
	11 T3 08 - M30			●							●						10.80	9.52	3.97	4.40	0,08~0,25	0,25~2,00			
	07 02 04 - MD										●						7.30	6.35	2.38	2.80	0,06~0,17	0,20~2,40	SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27	
	11 T3 04 - MD										●						11.20	9.52	3.97	4.40	0,06~0,17	0,30~3,00			
	11 T3 08 - MD										●						10.80	9.52	3.97	4.40	0,08~0,23	0,50~3,00			

Machinentyp  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- ✱ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

# Unsere neuen Geometrien

## *Our new geometries*



**- JTM**

**- JBF**

**- JBM**

**- JBR**

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

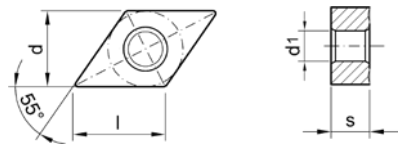
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

DN



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

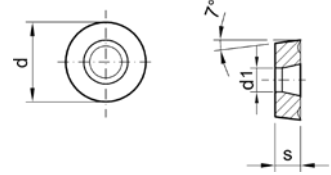
Werkstück/Worpiece	Machinentyp Machining types											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders								
	A (P)	R (M)	F (K)	N	S	H	+	+	+	+	+	+	+	+	+	+	+	+	+							
Stahl / Steel																										
Rostfreier Stahl / Stainless steel																										
Guss / Cast iron																										
Nichtmet. Werkstoffe / Non-fer. metall.																										
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.																										
Gehärteter Stahl / Hardened steel																										
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Unbeschichtet Uncoated				f <sub>n</sub> (mm/rev)		a <sub>p</sub> (mm)		Klemmhalter / Seite Toolholder / Page		Bohrstange / Seite Boring Bar / Page			
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>				
	<b>15 06 04 - A20</b>																	15.50	12.70	6.35	5.16	0,05~0,25	0,80~3,50	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>15 06 08 - A20</b>																	15.50	12.70	6.35	5.16	0,05~0,40	0,80~3,50			

Werkstück/Worpiece	Machinentyp Machining types											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders								
	A (P)	R (M)	F (K)	N	S	H	+	+	+	+	+	+	+	+	+	+	+	+	+							
Stahl / Steel																										
Rostfreier Stahl / Stainless steel																										
Guss / Cast iron																										
Nichtmet. Werkstoffe / Non-fer. metall.																										
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.																										
Gehärteter Stahl / Hardened steel																										
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Unbeschichtet Uncoated				f <sub>n</sub> (mm/rev)		a <sub>p</sub> (mm)		Klemmhalter / Seite Toolholder / Page		Bohrstange / Seite Boring Bar / Page			
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>				
	<b>15 06 04 - C22</b>																	12.70	12.70	6.35	5.16	0,05~0,30	0,50~3,50	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>15 06 08 - C22</b>																	12.40	12.70	6.35	5.16	0,10~0,40	0,70~4,00			
	<b>15 06 04 - JBF</b>																	15.10	12.70	6.35	5.16	0,08~0,18	0,10~2,00	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>15 06 08 - JBF</b>																	14.70	12.70	6.35	5.16	0,10~0,35	0,10~2,50			
	<b>15 04 04 - JBM</b>																	15.10	12.70	4.76	3.81	0,10~0,25	0,35~3,00	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>15 04 08 - JBM</b>																	14.70	12.70	4.76	3.81	0,10~0,40	0,40~3,50			
	<b>15 06 12 - JBM</b>																	14.40	12.70	4.76	5.16	0,13~0,50	0,80~4,50			
	<b>15 06 04 - JBM</b>																	15.10	12.70	6.35	5.16	0,10~0,25	0,40~3,00			
	<b>15 06 08 - JBM</b>																	14.70	12.70	6.35	5.16	0,10~0,40	0,50~5,50			
	<b>11 04 04 - MD</b>																	11.20	9.52	4.76	3.81	0,05~0,35	0,80~5,00	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>11 04 08 - MD</b>																	10.80	9.52	4.76	3.81	0,05~0,35	0,80~5,00			
	<b>15 06 04 - MD</b>																	15.10	12.70	6.35	5.16	0,05~0,35	0,80~5,00			
	<b>15 06 08 - MD</b>																	14.70	12.70	6.35	5.16	0,08~0,45	1,00~5,00			
	<b>15 06 04 - S30</b>																	15.10	12.70	6.35	5.16	0,05~0,25	0,50~4,00	DDJN R/L / 1.07 PDJN R/L / 1.10	DDUN R/L / 1.23 PDUN R/L / 1.24	
	<b>15 06 08 - S30</b>																	14.70	12.70	6.35	5.16	0,10~0,40	1,00~4,50			



# RC

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

Werkstück/Workpiece	Beschichtet Coated													Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders				
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345		TU 3015	TU 5525	TW5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		10.00	3.18	4.00	0,10~0,30	1,00~3,00	SRDCN / 1.16	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		12.00	4.76	4.40	0,10~0,35	1,00~3,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									

**Machinentyp**  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- Ungünstige Bearbeitungsbedingungen / Interrupted cutting

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills



Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Werkstück/Workpiece	Beschichtet Coated													Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders			
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345		TU 3015	TU 5525	TW5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		6.00	2.38	-	0,04-0,17	0,50-2,40	SRDCN / 1.16	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		8.00	3.18	-	0,10-0,80	0,80-3,20		
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		10.00	3.97	-	0,16-1,40	1,00-4,00		
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		12.00	4.76	-	0,20-1,80	1,20-4,80		
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								

**Machinentyp**  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- Ungünstige Bearbeitungsbedingungen / Interrupted cutting

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools



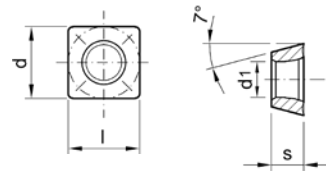
Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

SC



90°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

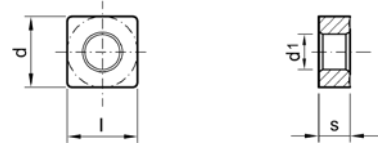
Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück/Workpiece	Stahl / Steel	A (P)												Machinentyp Machining types												
	Rostfreier Stahl / Stainless steel	R (M)												● Gute Bearbeitungsbedingungen / Continuous cutting ● Normale Bearbeitungsbedingungen / General cutting ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting												
	Guss / Cast iron	F (K)																								
	Nichtmet. Werkstoffe / Non-fer. metall.	N																								
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																								
	Gehärteter Stahl / Hardened steel	H																								
Wendepplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders							
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5130	TM 5125	TM 5220	TP 2135	TP 3020	TP 3170	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>09 T3 02 - ALX</b>																	○	9.30	9.52	3.97	4.40	0,02~0,40	0,10~4,00	SSSC R/L / 1.17	SSSC R/L / 1.28
	<b>09 T3 04 - ALX</b>																	●	9.10	9.52	3.97	4.40	0,02~0,40	0,10~4,00		
	<b>09 T3 08 - ALX</b>																	●	8.70	9.52	3.97	4.40	0,03~0,50	0,10~5,00		
	<b>12 04 04 - ALX</b>																	●	12.30	12.70	4.76	5.50	0,02~0,40	0,10~5,00		
	<b>12 04 08 - ALX</b>																	●	11.90	12.70	4.76	5.50	0,03~0,50	0,10~5,00		

Werkstück/Workpiece	Stahl / Steel	A (P)												Machinentyp Machining types												
	Rostfreier Stahl / Stainless steel	R (M)												● Gute Bearbeitungsbedingungen / Continuous cutting ● Normale Bearbeitungsbedingungen / General cutting ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting												
	Guss / Cast iron	F (K)																								
	Nichtmet. Werkstoffe / Non-fer. metall.	N																								
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																								
	Gehärteter Stahl / Hardened steel	H																								
Wendepplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders							
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5130	TM 5125	TM 5220	TP 2135	TP 3020	TP 3170	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>09 T3 04 - F30</b>																	○	9.10	9.52	3.97	4.40	0,06~0,23	0,11~2,00	SSSC R/L / 1.17	SSSC R/L / 1.28
	<b>12 04 04 - F30</b>																	○	12.30	12.70	4.76	5.50	0,07~0,27	0,14~2,00		
	<b>09 T3 04 - JTM</b>																	●	9.10	9.52	3.97	4.40	0,08~0,25	0,30~3,00	SSSC R/L / 1.17	SSSC R/L / 1.28
	<b>09 T3 08 - JTM</b>																	●	8.70	9.52	3.97	4.40	0,10~0,30	0,30~3,00		
	<b>12 04 04 - JTM</b>																	●	12.30	12.70	4.76	5.56	0,10~0,25	0,30~3,50		
	<b>12 04 08 - JTM</b>																	●	11.90	12.70	4.76	5.56	0,15~0,35	0,30~4,00		
	<b>12 04 12 - JTM</b>																	○	11.50	12.70	4.76	5.56	0,05~0,25	0,20~1,50		
	<b>12 04 08 - M30</b>				●					●									11.90	12.70	4.76	5.56	0,08~0,25	0,25~2,00	SSSC R/L / 1.17	SSSC R/L / 1.28
	<b>09 T3 04 - MD</b>																	●	9.10	9.52	3.97	4.40	0,06~0,17	0,20~2,50	SSSC R/L / 1.17	SSSC R/L / 1.28
	<b>09 T3 08 - MD</b>																	○	8.70	9.52	3.97	4.40	0,08~0,23	0,30~2,50		
	<b>12 04 04 - MD</b>																	○	12.30	12.70	4.76	5.50	0,06~0,17	0,30~3,50		
	<b>12 04 08 - MD</b>																	○	11.90	12.70	4.76	5.50	0,08~0,23	0,50~3,50		

# SN



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

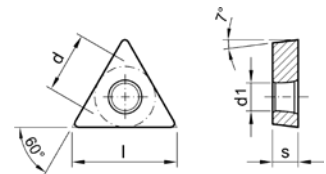
Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück/Worpiece	Beschichtet Coated											Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders						
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	12.30	12.70	4.76	5.16	0,08~0,18	0,10~2,00	PSBN R/L / 1.10 PSKN R/L / 1.11 PSSN R/L / 1.11	PSKN R/L / 1.25
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	11.90	12.70	4.76	5.16	0,10~0,40	0,30~5,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
<b>SNMG-JBF</b> 	12 04 04 - JBF																●	12.30	12.70	4.76	5.16	0,08~0,18	0,10~2,00	PSBN R/L / 1.10 PSKN R/L / 1.11 PSSN R/L / 1.11	PSKN R/L / 1.25
	12 04 08 - JBF																●	11.90	12.70	4.76	5.16	0,10~0,40	0,30~5,50		
<b>SNMG-JBM</b> 	12 04 04 - JBM																●	12.30	12.70	4.76	5.16	0,10~0,25	0,40~3,00	PSBN R/L / 1.10 PSKN R/L / 1.11 PSSN R/L / 1.11	PSKN R/L / 1.25
	12 04 08 - JBM																●	11.90	12.70	4.76	5.16	0,10~0,40	0,40~3,50		
	12 04 12 - JBM																●	11.50	12.70	4.76	5.16	0,13~0,50	0,80~4,50		
<b>SNMG-JBR</b> 	12 04 08 - JBR																●	11.90	12.70	4.76	5.16	0,15~0,40	0,40~4,50	PSBN R/L / 1.10 PSKN R/L / 1.11 PSSN R/L / 1.11	PSKN R/L / 1.25
	12 04 12 - JBR																●	11.50	12.70	4.76	5.16	0,25~0,55	1,20~4,50		

Machinentyp  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- ✘ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

# TC



Werkstück/Worpiece	Beschichtet Coated											Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders					
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.50	6.35	2.38	2.80	0,01~0,30	0,05~5,50	STGC R/L / 1.17	STFC R/L / 1.28
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.00	6.35	2.38	2.80	0,02~0,40	0,10~4,00		
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	9.00	6.35	2.38	2.80	0,03~0,50	0,10~5,00		
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	15.00	9.52	3.97	4.40	0,01~0,30	0,05~4,50		
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	15.50	9.52	3.97	4.40	0,02~0,40	0,10~5,00		
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14.50	9.52	3.97	4.40	0,03~0,50	0,10~5,00		
<b>TCGT-ALX</b> 	11 02 02 - ALX		○	●												●	10.50	6.35	2.38	2.80	0,01~0,30	0,05~5,50	STGC R/L / 1.17	STFC R/L / 1.28
	11 02 04 - ALX		○	●												●	10.00	6.35	2.38	2.80	0,02~0,40	0,10~4,00		
	11 02 08 - ALX		○	●												●	9.00	6.35	2.38	2.80	0,03~0,50	0,10~5,00		
	16 T3 02 - ALX		○	○												○	15.00	9.52	3.97	4.40	0,01~0,30	0,05~4,50		
	16 T3 04 - ALX		○	○												○	15.50	9.52	3.97	4.40	0,02~0,40	0,10~5,00		
	16 T3 08 - ALX		○	○												○	14.50	9.52	3.97	4.40	0,03~0,50	0,10~5,00		

Machinentyp  
Machining types

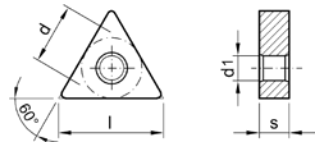
- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- ✘ Ungünstige Bearbeitungsbedingungen / Interrupted cutting





# TN

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

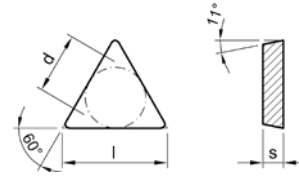
Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück/Worpiece	Machinentyp Machining types											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders										
	Stahl / Steel	A (P)	R (M)	F (K)	N	S	H	+	•	•	•	•	•	•	•	•	•	•	•	•								
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Unbeschichtet Uncoated				f <sub>n</sub> (mm/rev)		a <sub>p</sub> (mm)		Klemmhalter / Seite Toolholder / Page		Bohrstange / Seite Boring Bar / Page					
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP 4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>						
	16 04 04 - A20																	○	15.50	9.52	4.76	3.80	0,12~0,30	1,00~3,50	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 08 - A20	○	○															○	14.50	9.52	4.76	3.80	0,15~0,35	1,30~3,50				

Werkstück/Worpiece	Machinentyp Machining types											Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders										
	Stahl / Steel	A (P)	R (M)	F (K)	N	S	H	+	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Unbeschichtet Uncoated				f <sub>n</sub> (mm/rev)		a <sub>p</sub> (mm)		Klemmhalter / Seite Toolholder / Page		Bohrstange / Seite Boring Bar / Page					
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP 4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW 57225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>						
	16 04 04 - JBF																	•	15.50	9.52	4.76	3.81	0,08~0,18	0,10~2,00	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 08 - JBF																	•	14.50	9.52	4.76	3.81	0,10~0,35	0,10~2,50				
	16 04 04 - JBM																	•	15.50	9.52	4.76	3.81	0,10~0,25	0,40~3,00	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 08 - JBM																	•	14.50	9.52	4.76	3.81	0,10~0,40	0,40~3,50				
	16 04 08 - JBR																	•	14.50	9.52	4.76	3.81	0,14~0,40	0,40~4,50	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 12 - JBR																	•	13.50	9.52	4.76	3.81	0,25~0,55	1,20~5,00				
	16 04 04 - MD																	○	15.50	9.52	4.76	3.81	0,05~0,35	0,80~4,50	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 08 - MD																	○	14.50	9.52	4.76	3.81	0,08~0,45	1,00~4,50				
	22 04 08 - MD																	•	20.80	12.70	4.76	5.16	0,10~0,50	1,00~6,00				
	16 04 04 - ER																	•	15.50	9.52	4.76	3.81	0,10~0,30	0,80~3,00	MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25		
	16 04 08 - ER																	•	14.50	9.52	4.76	3.81	0,12~0,35	1,00~3,50				

# TP

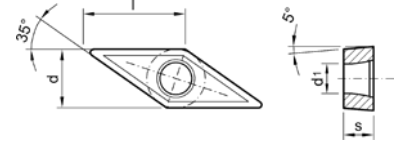
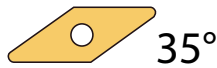


Werkstück / Workpiece	Stahl / Steel	A (P)																				Machinentyp Machining types				
	Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●			
	Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated														Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders				
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TWS7225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>TPMR-EL</b>	<b>16 03 04 - EL</b>									○								15.50	9.52	3.18	-	0,08~0,25	0,50~4,00			
<b>TPMR-ER</b>	<b>16 03 04 - ER</b>									○								15.50	9.52	3.18	-	0,08~0,25	0,50~4,00			

Werkstück / Workpiece	Stahl / Steel	A (P)																				Machinentyp Machining types				
	Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●			
	Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Wendeplatten Inserts	Bezeichnung Part Number	Beschichtet Coated														Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders				
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TWS7225	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>TPUN-EN</b>	<b>16 03 04 - EN</b>									○								15.50	9.52	3.18	-	0,08~0,25	1,00~5,00			

# VB

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück/Workpiece	Beschichtet Coated											Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders						
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW 5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.5	6.35	3.18	2.80	0,01~0,30	0,05~3,50	SVJB R/L / 1.18	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.0	6.35	3.18	2.80	0,02~0,40	0,10~4,00			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	15.6	9.52	4.76	4.40	0,02~0,40	0,10~5,00			
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	14.6	9.52	4.76	4.40	0,02~0,40	0,10~5,00			
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									

**Machinentyp  
Machining types**

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- Ungünstige Bearbeitungsbedingungen / Interrupted cutting

Werkstück/Workpiece	Beschichtet Coated											Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders					
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW 5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.50	6.35	3.18	2.80	0,03~0,13	0,06~1,70	SVJB R/L / 1.18	
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10.00	6.35	3.18	2.80	0,05~0,19	0,10~1,70		
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	15.60	9.52	4.76	4.40	0,05~0,20	0,10~1,80		
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
Stahl / Steel	A (P)																10.00	6.35	3.18	2.80	0,06~0,20	0,20~2,00	SVJB R/L / 1.18	
Rostfreier Stahl / Stainless steel	R (M)																9.00	6.35	3.18	2.80	0,08~0,30	0,20~2,00		
Guss / Cast iron	F (K)																15.60	9.52	4.76	4.40	0,08~0,25	0,30~3,00		
Nichtmet. Werkstoffe / Non-fer. metall.	N																14.60	9.52	4.76	4.40	0,10~0,30	0,30~3,00		
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																13.60	9.52	4.76	4.40	0,05~0,25	0,20~1,50		
Gehärteter Stahl / Hardened steel	H																							
Stahl / Steel	A (P)					●											11.00	6.35	3.18	2.80	0,05~0,20	0,30~2,00	SVJB R/L / 1.18	
Rostfreier Stahl / Stainless steel	R (M)					●										16.64	9.52	4.76	4.40	0,05~0,20	0,30~2,50			
Guss / Cast iron	F (K)					●										16.64	9.52	4.76	4.40	0,05~0,25	0,30~2,50			
Nichtmet. Werkstoffe / Non-fer. metall.	N									●														
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																							
Gehärteter Stahl / Hardened steel	H																							
Stahl / Steel	A (P)															15.60	9.52	4.76	4.40	0,09~0,19	0,30~2,70	SVJB R/L / 1.18		
Rostfreier Stahl / Stainless steel	R (M)														14.60	9.52	4.76	4.40	0,09~0,23	0,50~2,70				

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM- Fräser  
HDS-/Solid Carbide  
Endmills

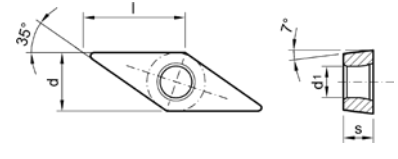
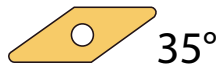
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# VC



Werkstück / Workpiece	Stahl / Steel		Machinentyp / Machining types																		
	A (P)	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

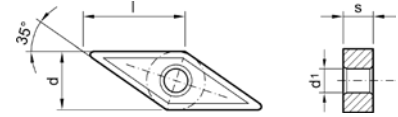
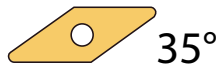
Wendepalten Inserts	Bezeichnung Part Number	Beschichtet Coated															Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders			
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW57225	TK 1210	l	∅ d	s	∅ d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page	
	<b>11 03 02 - ALX</b>	●	●	●													●	10.50	6.35	3.18	2.80	0,01~0,30	0,05~3,50	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29	
	<b>11 03 04 - ALX</b>	○	●	●									●				●	10.00	6.35	3.18	2.80	0,02~0,40	0,10~4,00			
	<b>11 03 08 - ALX</b>	○	●	●														●	9.00	6.35	3.18	2.80	0,03~0,50			0,10~5,00
	<b>13 03 02 - ALX</b>	●	●	●														●	10.50	7.94	3.18	3.40	0,01~0,30			0,10~4,50
	<b>13 03 04 - ALX</b>	○	●	●														●	10.00	7.94	3.18	3.40	0,02~0,40			0,10~4,50
	<b>16 04 02 - ALX</b>	●	●	●										●				●	16.10	9.52	4.76	4.40	0,01~0,30			0,05~4,50
	<b>16 04 04 - ALX</b>	●	●	●														●	15.60	9.52	4.76	4.40	0,02~0,40			0,10~5,00
	<b>16 04 08 - ALX</b>	●	●	●														●	14.00	9.52	4.76	4.40	0,03~0,50			0,10~5,00
	<b>16 04 12 - ALX</b>	○	●	●														●	13.60	9.52	4.76	4.40	0,03~0,50			0,10~5,00
<b>22 05 30 - ALX</b>	○	●	●														●	14.30	12.70	5.56	5.60	0,08~1,00	0,15~7,00			

Werkstück / Workpiece	Stahl / Steel		Machinentyp / Machining types																		
	A (P)	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Wendepalten Inserts	Bezeichnung Part Number	Beschichtet Coated															Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders		
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5025	TP 5345	TU 3015	TU 5525	TW57225	TK 1210	l	∅ d	s	∅ d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>11 03 02 - F30</b>																○	10.50	6.35	3.18	2.80	0,03~0,13	0,07~1,50	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29
	<b>11 03 04 - F30</b>																○	10.00	6.35	3.18	2.80	0,05~0,19	0,10~1,50		
	<b>16 04 02 - F30</b>																●	16.10	9.52	4.76	4.40	0,04~0,14	0,07~1,80		
	<b>16 04 04 - F30</b>																●	15.60	9.52	4.76	4.40	0,05~0,20	0,10~1,80		
	<b>11 03 04 - JTM</b>																●	10.00	6.35	3.18	2.80	0,06~0,20	0,20~2,00	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29
	<b>11 03 08 - JTM</b>																●	9.00	6.35	3.18	2.80	0,08~0,30	0,20~2,00		
	<b>16 04 04 - JTM</b>																●	15.60	9.52	4.76	4.40	0,08~0,25	0,30~3,00		
	<b>16 04 08 - JTM</b>																●	14.00	9.52	4.76	4.40	0,10~0,30	0,30~3,00		
<b>16 04 12 - JTM</b>																	○	13.60	9.52	4.76	4.40	0,05~0,25	0,20~1,50		
	<b>16 04 04 - M30</b>				●					●								15.60	9.52	4.76	4.40	0,05~0,20	0,30~2,50	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29
	<b>16 04 04 - M30</b>				●					●								14.00	9.52	4.76	4.40	0,05~0,25	0,30~2,50		
	<b>11 03 04 - MD</b>																●	10.00	6.35	3.18	2.80	0,06~0,19	0,20~2,50	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29
	<b>16 04 04 - MD</b>																●	15.60	9.52	4.76	4.40	0,06~0,19	0,30~2,70		
	<b>16 04 08 - MD</b>																●	14.00	9.52	4.76	4.40	0,09~0,23	0,50~2,70		

# VN

Drehen  
Turning



Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück/Worpiece	Beschichtet Coated													Unbeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders		
	TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+	TP 5345	TU 3015		TU 5525	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)	Klemmhalter / Seite Toolholder / Page
Stahl / Steel	A (P)	●	●	●	●	●	●	●	●	●	●	●	●	●	○	15.60	9.52	4.76	3.80	0,08~0,18	0,10~2,00	SVHC R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29
Rostfreier Stahl / Stainless steel	R (M)	●	●	●	●	●	●	●	●	●	●	●	●	●	14.60	9.52	4.76	3.80	0,10~0,35	0,10~2,50			
Guss / Cast iron	F (K)	●	●	●	●	●	●	●	●	●	●	●	●	●									
Nichtmet. Werkstoffe / Non-fer. metall.	N	●	●	●	●	●	●	●	●	●	●	●	●	●									
Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S	●	●	●	●	●	●	●	●	●	●	●	●	●									
Gehärteter Stahl / Hardened steel	H	●	●	●	●	●	●	●	●	●	●	●	●	●									
<b>VNMG-JBF</b>	<b>16 04 04 - JBF</b> <b>16 04 08 - JBF</b>																						
<b>VNMG-JBM</b>	<b>16 04 04 - JBM</b> <b>16 04 08 - JBM</b> <b>16 04 12 - JBM</b>																						
<b>VNMG-S30</b>	<b>16 04 04 - S30</b> <b>16 04 08 - S30</b>				○																		
					●																		

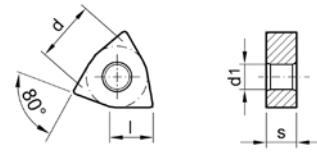
Machinentyp  
Machining types

- Gute Bearbeitungsbedingungen / Continuous cutting
- Normale Bearbeitungsbedingungen / General cutting
- Ungünstige Bearbeitungsbedingungen / Interrupted cutting

# WN



80°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendelplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Werkstück / Workpiece	Stahl / Steel	A (P)															Machinentyp Machining types								
	Rostfreier Stahl / Stainless steel	R (M)											● Gute Bearbeitungsbedingungen / Continuous cutting		● Normale Bearbeitungsbedingungen / General cutting		✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting								
	Guss / Cast iron	F (K)																							
	Nichtmet. Werkstoffe / Non-fer. metall.	N																							
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S																							
	Gehärteter Stahl / Hardened steel	H																							
Wendelplatten Inserts	Bezeichnung Part Number	Beschichtet Coated											Ungeschichtet Uncoated	Maße Dimensions [mm]				Schnittdaten Cutting Data [mm]		Passende Trägerwerkzeuge Suitable Toolholders					
		TK 5210+	TK 5310	TK 5515	TK 5710	TM 5125	TM 5130	TM 5220	TP 2135	TP 3020	TP 3120	TP4025+		TP 5025	TP 5345	TU 3015	TU 5525	TW 5725	TK 1210	l	Ø d	s	Ø d <sub>1</sub>	f <sub>n</sub> (mm/rev)	a <sub>p</sub> (mm)
	<b>WNGG-A20</b>	<b>06 04 04 - A20</b>	○	○													○	6.20	9.52	4.76	3.80	0,10~0,30	0,50~3,00	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>06 04 08 - A20</b>	○	○														○	6.10	9.52	4.76	3.80	0,10~0,40	0,80~3,50		
	<b>08 04 04 - A20</b>	●	●														●	8.40	12.70	4.76	5.16	0,10~0,45	0,50~4,50		
	<b>08 04 08 - A20</b>	○	●	●													●	8.30	12.70	4.76	5.16	0,10~0,45	0,50~4,50		
	<b>WNMG-C22</b>	<b>08 04 04 - C22</b>															○	8.40	12.70	4.76	5.16	0,05~0,30	0,80~4,00	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>08 04 08 - C22</b>	●															●	8.30	12.70	4.76	5.16	0,10~0,40	0,80~4,00		
	<b>WNMG-JBF</b>	<b>08 04 04 - JBF</b>															●	8.40	12.70	4.76	5.16	0,08~0,18	0,10~2,00	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>08 04 08 - JBF</b>	●															●	8.30	12.70	4.76	5.16	0,10~0,35	0,10~2,50		
	<b>WNMG-JBM</b>	<b>06 04 12 - JBM</b>															○	6.20	9.52	3.81	3.81	0,13~0,50	0,80~4,50	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>06 T3 12 - JBM</b>	○															○	6.10	9.52	3.81	3.81	0,13~0,50	0,80~4,50		
	<b>08 04 04 - JBM</b>	●															●	8.40	12.70	4.76	5.16	0,10~0,25	0,40~3,00		
	<b>08 04 08 - JBM</b>	●															●	8.30	12.70	4.76	5.16	0,10~0,40	0,40~3,50		
	<b>WNMG-JBR</b>	<b>08 04 08 - JBR</b>															●	8.30	12.70	4.76	5.16	0,15~0,40	0,40~4,50	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>08 04 12 - JBR</b>	●															●	8.20	12.70	4.76	5.16	0,25~0,55	1,20~5,00		
	<b>WNMG-MD</b>	<b>06 04 04 - MD</b>															○	6.20	9.52	4.76	3.81	0,05~0,30	0,80~3,00	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>06 04 08 - MD</b>	●															●	6.10	9.52	4.76	3.81	0,10~0,35	1,00~3,00		
	<b>08 04 04 - MD</b>	●															●	8.40	12.70	4.76	5.16	0,05~0,35	0,80~4,00		
	<b>08 04 08 - MD</b>	●															●	8.30	12.70	4.76	5.16	0,08~0,45	1,00~4,00		
	<b>WNMG-S30</b>	<b>06 04 08 - S30</b>			●													6.40	9.52	3.97	3.81	0,10~0,25	1,00~3,50	DWLN R/L / 1.07 PWLN R/L / 1.13	
	<b>08 04 04 - S30</b>	●																8.40	12.70	4.76	5.16	0,05~0,25	0,50~3,50		
	<b>08 04 08 - S30</b>	●																8.30	12.70	4.76	5.16	0,10~0,40	1,00~4,00		

# ALUMINIUM



**Für jede Anwendung  
die richtige Sorte.**

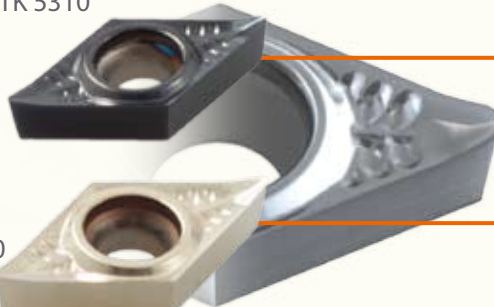
***For each application  
the best grade.***

DCGT-TK 1210



Unbeschichtet *uncoated*  
(Feinstkorn Micrograin)  
für for Aluminium

DCGT-TK 5310



**Saphitec** für for  
Aluminium, HRSA, GFK, CFK,

DCGT-TK 5710



**Goldtec** ZrN-beschichtet *coated*  
Aluminium + Sonderlegierungen  
*Special Alloys*

DCGT-TP 5345



für for  
Niro Stainless Steel



# CBN



CCMW CNMA CPMW

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> Machining types <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊖ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊖		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊖			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>CCMW</b>	<b>06 02 02</b>	○	○	SCLC R/L / 1.13	SCLC R/L / 1.26
		<b>06 02 04</b>	○	○		
		<b>06 02 08</b>	○	○		
		<b>09 T3 02</b>	○	○		
		<b>09 T3 04</b>	○	○		
		<b>09 T3 08</b>	○	○		
		<b>12 04 02</b>	○	○		
		<b>12 04 04</b>	○	○		
	<b>12 04 08</b>	○	○			

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> Machining types <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊖ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊖		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊖			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>CNMA</b>	<b>09 03 02</b>	○	○	DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24
		<b>09 03 04</b>	○	○		
		<b>09 03 08</b>	○	○		
		<b>12 04 02</b>	○	○		
		<b>12 04 04</b>	○	○		
		<b>12 04 08</b>	○	○		
		<b>12 04 12</b>	○	○		

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> Machining types <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊖ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊖		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊖			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>CPMW</b>	<b>05 02 02</b>	○	○		
		<b>05 02 04</b>	○	○		
		<b>06 02 02</b>	○	○		
		<b>06 02 04</b>	○	○		
		<b>09 T3 02</b>	○	○		
		<b>09 T3 04</b>	○	○		
		<b>09 T3 08</b>	○	○		
		<b>12 04 02</b>	○	○		
		<b>12 04 04</b>	○	○		
		<b>12 04 08</b>	○	○		

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

# CBN


**DCMW DNMA**

**EPMW**

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders
			F	T	
	<b>DCMW</b>				
		<b>07 02 02</b>	○	○	
		<b>07 02 04</b>	○	○	SDAC R/L / 1.14
		<b>07 02 08</b>	○	○	SDHC R/L / 1.14
		<b>11 T3 02</b>	○	○	SDJC R/L / 1.15
		<b>11 T3 04</b>	○	○	SDNCN / 1.15
	<b>11 T3 08</b>	○	○		
					SDQC R/L / 1.27 SDUC R/L / 1.27

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders
			F	T	
	<b>DNMA</b>				
		<b>15 04 02</b>	○	○	
		<b>15 04 04</b>	○	○	
		<b>15 04 08</b>	○	○	DDJN R/L / 1.07
		<b>15 06 02</b>	○	○	PDJN R/L / 1.10
		<b>15 06 04</b>	○	○	
	<b>15 06 08</b>	○	○		
	<b>15 06 12</b>	○	○		
					DDUN R/L / 1.23 PDUN R/L / 1.24

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders
			F	T	
	<b>EPMW</b>				
		<b>05 02 02</b>	○	○	
		<b>05 02 04</b>	○	○	
		<b>06 02 02</b>	○	○	
		<b>06 02 04</b>	○	○	
		<b>08 03 02</b>	○	○	
	<b>08 03 04</b>	○	○		
	<b>08 03 08</b>	○	○		

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

# CBN



90°

**SCMW SNMA SNMN**

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <b>Machining types</b> <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊕		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊕			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>SCMW</b>  	<b>09 03 02</b>	○	○	SSSC R/L / 1.17	SSSC R/L / 1.28	
	<b>09 03 04</b>	○	○			
	<b>09 03 08</b>	○	○			
	<b>09 T3 02</b>	○	○			
	<b>09 T3 04</b>	○	○			
	<b>09 T3 08</b>	○	○			
	<b>12 04 02</b>	○	○			
<b>12 04 04</b>	○	○				
<b>12 04 08</b>	○	○				

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <b>Machining types</b> <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊕		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊕			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>SNMA</b>  	<b>12 03 02</b>	○	○	PSBN R/L / 1.10 PSKN R/L / 1.25 PSSN R/L / 1.11	PSKN R/L / 1.25	
	<b>12 04 02</b>	○	○			
	<b>12 04 08</b>	○	○			

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <b>Machining types</b> <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>	
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)	●	⊕		
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
Gehärteter Stahl / Hardened steel	H	●	⊕			
Wendeplatten Inserts		Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
			F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>SNMN</b>  	<b>12 03 04</b>	○	○	PSBN R/L / 1.10 PSKN R/L / 1.25 PSSN R/L / 1.11	PSKN R/L / 1.25	
	<b>12 03 08</b>	○	○			
	<b>12 04 04</b>	○	○			

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

# CBN



90°

**SPMN**


60°

**TCMW TNMA**

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>SPMN</b>				
	<b>09 03 02</b>	○	○		
	<b>09 03 04</b>	○	○		
	<b>09 03 08</b>	○	○		
	<b>12 03 02</b>	○	○		
	<b>12 03 04</b>	○	○		
<b>12 03 08</b>	○	○			

- Gute Bearbeitungsbedingungen / Continuous cutting
- ⊕ Normale Bearbeitungsbedingungen / General cutting
- ⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>TCMW</b>				
	<b>09 02 02</b>	○	○		
	<b>09 02 04</b>	○	○		
	<b>09 02 08</b>	○	○		
	<b>11 02 02</b>	○	○		
	<b>11 02 04</b>	○	○		
	<b>11 02 08</b>	○	○		
	<b>16 T3 02</b>	○	○		
	<b>16 T3 04</b>	○	○		
<b>16 T3 08</b>	○	○			

- Gute Bearbeitungsbedingungen / Continuous cutting
- ⊕ Normale Bearbeitungsbedingungen / General cutting
- ⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

STGC R/L / 1.17

STFC R/L / 1.28

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊕	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊕	
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
	<b>TNMA</b>				
	<b>16 04 02</b>	○	○		
	<b>16 04 04</b>	○	○		
	<b>16 04 08</b>	○	○		

- Gute Bearbeitungsbedingungen / Continuous cutting
- ⊕ Normale Bearbeitungsbedingungen / General cutting
- ⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting

MTJN R/L / 1.08

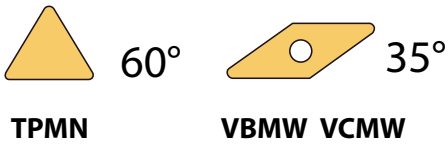
PTFN R/L / 1.12

PTGN R/L / 1.12

PTFN R/L / 1.25

**Bitte angeben / Please state :** F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

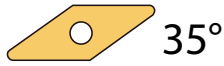
# CBN


**TPMN**
**VBMW VCMW**

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types	● Gute Bearbeitungsbedingungen / Continuous cutting ● Normale Bearbeitungsbedingungen / General cutting ✚ Ungünstige Bearbeitungsbedingungen / Interrupted cutting
	Rostfreier Stahl / Stainless steel	R (M)	●	●		
	Guss / Cast iron	F (K)				
	Nichtmet. Werkstoffe / Non-fer. metall.	N				
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●		
	Gehärteter Stahl / Hardened steel	H	●	●		
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders		
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page	
<b>TPMN</b> 	<b>11 03 02</b>	○	○			
	<b>11 03 04</b>	○	○			
	<b>11 02 08</b>	○	○			
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders		
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page	
<b>VBMW</b> 	<b>16 04 02</b>	○	○			
	<b>16 04 04</b>	○	○			
	<b>16 04 08</b>	○	○	SVJB R/L / 1.18		
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders		
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page	
<b>VCMW</b> 	<b>11 03 02</b>	○	○			
	<b>11 03 04</b>	○	○			
	<b>11 03 08</b>	○	○	SVHC R/L / 1.18		
	<b>16 04 02</b>	○	○	SVJC R/L / 1.19	SVQC R/L / 1.29	
	<b>16 04 04</b>	○	○	SVVCN / 1.19	SVUC R/L / 1.29	
	<b>16 04 08</b>	○	○			
	<b>16 04 12</b>	○	○			

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

# CBN



**VNMA**

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <b>Machining types</b> <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊖ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊕ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)	●	⊖	
	Nichtmet. Werkstoffe / Non-fer. metall.	N			
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S		●	
	Gehärteter Stahl / Hardened steel	H	●	⊖	
Wendeplatten Inserts	Bezeichnung Part Number	Ecke Corner EW CDX 09		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<p><b>VNMA</b></p>	<b>16 04 02</b>	○	○		
	<b>16 04 04</b>	○	○		
	<b>16 04 08</b>	○	○		

**Bitte angeben / Please state :** F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendeplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# PKD



80°

**CCMW CNMA**


55°

**DCMW**

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊗ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)				
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	⊕		
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S				
Gehärteter Stahl / Hardened steel	H					
Wendeplatten Inserts		Bezeichnung Part Number		1 Ecke / Corner TY 1110 PKD	Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T		Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>CCMW</b> 		<b>06 02 01</b>			SCLC R/L / 1.13	SCLC R/L / 1.26
		<b>06 02 02</b>				
		<b>06 02 04</b>				
		<b>09 T3 02</b>				
		<b>09 T3 04</b>				
		<b>09 T3 08</b>				
		<b>12 04 04</b> <b>12 04 08</b>				

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊗ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)				
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	⊕		
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S				
Gehärteter Stahl / Hardened steel	H					
Wendeplatten Inserts		Bezeichnung Part Number		1 Ecke / Corner TY 1110 PKD	Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T		Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>CNMA</b> 		<b>12 04 04</b>			DCLN R/L / 1.06 PCBN R/L / 1.08 PCLN R/L / 1.09	DCLN R/L / 1.23 PCLN R/L / 1.24
		<b>12 04 08</b>				

Werkstück Workpiece	Stahl / Steel	A (P)			Machinentyp Machining types	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊗ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)				
	Guss / Cast iron	F (K)				
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	⊕		
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S				
Gehärteter Stahl / Hardened steel	H					
Wendeplatten Inserts		Bezeichnung Part Number		1 Ecke / Corner TY 1110 PKD	Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T		Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>DCMW</b> 		<b>07 02 01</b>			SDAC R/L / 1.14 SDHC R/L / 1.14 SDJC R/L / 1.15 SDNCN / 1.15	SDQC R/L / 1.27 SDUC R/L / 1.27
		<b>07 02 02</b>				
		<b>07 02 04</b>				
		<b>11 T3 02</b>				
		<b>11 T3 04</b>				
		<b>11 T3 08</b>				

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

# PKD



**DNMA**



**RCMW**



**TCMW**

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <i>Machining types</i>	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / <i>Continuous cutting</i></li> <li>⊕ Normale Bearbeitungsbedingungen / <i>General cutting</i></li> <li>⊗ Ungünstige Bearbeitungsbedingungen / <i>Interrupted cutting</i></li> </ul>
	Rostfreier Stahl / <i>Stainless steel</i>	R (M)				
	Guss / <i>Cast iron</i>	F (K)				
	Nichtmet. Werkstoffe / <i>Non-fer. metall.</i>	N	●	⊕		
	Warmf. Leg., Titanleg. / <i>Heat res. alloys, Titan. all.</i>	S				
	Gehärteter Stahl / <i>Hardened steel</i>	H				
Wendeplatten Inserts	Bezeichnung Part Number	1 Ecke / Corner TY 1110 PKD		Passende Trägerwerkzeuge / <i>Suitable Toolholders</i>		
		F	T	Klemmhalter / Seite <i>Toolholder / Page</i>		Bohrstange / Seite <i>Boring Bar / Page</i>
	<b>11 04 04</b> <b>11 04 08</b> <b>15 06 04</b> <b>15 06 08</b>	○	○	DDJN R/L / 1.07 PDJN R/L / 1.10		DDUN R/L / 1.23 PDUN R/L / 1.24

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <i>Machining types</i>	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / <i>Continuous cutting</i></li> <li>⊕ Normale Bearbeitungsbedingungen / <i>General cutting</i></li> <li>⊗ Ungünstige Bearbeitungsbedingungen / <i>Interrupted cutting</i></li> </ul>
	Rostfreier Stahl / <i>Stainless steel</i>	R (M)				
	Guss / <i>Cast iron</i>	F (K)				
	Nichtmet. Werkstoffe / <i>Non-fer. metall.</i>	N	●	⊕		
	Warmf. Leg., Titanleg. / <i>Heat res. alloys, Titan. all.</i>	S				
	Gehärteter Stahl / <i>Hardened steel</i>	H				
Wendeplatten Inserts	Bezeichnung Part Number	Fullface TY 1110 PKD		Passende Trägerwerkzeuge / <i>Suitable Toolholders</i>		
		F	T	Klemmhalter / Seite <i>Toolholder / Page</i>		Bohrstange / Seite <i>Boring Bar / Page</i>
	<b>06 02 00</b> <b>08 03 00</b> <b>10 03 00</b> <b>12 T3 00</b>			SRDCN / 1.16		

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> <i>Machining types</i>	<ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / <i>Continuous cutting</i></li> <li>⊕ Normale Bearbeitungsbedingungen / <i>General cutting</i></li> <li>⊗ Ungünstige Bearbeitungsbedingungen / <i>Interrupted cutting</i></li> </ul>
	Rostfreier Stahl / <i>Stainless steel</i>	R (M)				
	Guss / <i>Cast iron</i>	F (K)				
	Nichtmet. Werkstoffe / <i>Non-fer. metall.</i>	N	●	⊕		
	Warmf. Leg., Titanleg. / <i>Heat res. alloys, Titan. all.</i>	S				
	Gehärteter Stahl / <i>Hardened steel</i>	H				
Wendeplatten Inserts	Bezeichnung Part Number	1 Ecke / Corner TY 1110 PKD		Passende Trägerwerkzeuge / <i>Suitable Toolholders</i>		
		F	T	Klemmhalter / Seite <i>Toolholder / Page</i>		Bohrstange / Seite <i>Boring Bar / Page</i>
	<b>09 02 01</b> <b>09 02 02</b> <b>09 02 04</b> <b>11 02 02</b> <b>11 02 04</b> <b>11 02 08</b> <b>16 T3 04</b> <b>16 T3 08</b>			STGC R/L / 1.17		STFC R/L / 1.28

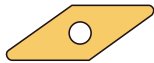
Bitte angeben / *Please state* : F: scharfe Ausführung / *sharp version* T: gefaste Ausführung / *chamfered version*



# PKD



60°



35°

**TNMA**
**VCMW**

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> Machining types <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊗ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)			
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	⊕	
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S			
Gehärteter Stahl / Hardened steel	H				
Wendeplatten Inserts	Bezeichnung Part Number	1 Ecke / Corner TY 1110 PKD		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>TNMA</b> 	<b>16 04 02</b> <b>16 04 04</b> <b>16 04 08</b>			MTJN R/L / 1.08 PTFN R/L / 1.12 PTGN R/L / 1.12	PTFN R/L / 1.25

Werkstück Workpiece	Stahl / Steel	A (P)			<b>Machinentyp</b> Machining types <ul style="list-style-type: none"> <li>● Gute Bearbeitungsbedingungen / Continuous cutting</li> <li>⊕ Normale Bearbeitungsbedingungen / General cutting</li> <li>⊗ Ungünstige Bearbeitungsbedingungen / Interrupted cutting</li> </ul>
	Rostfreier Stahl / Stainless steel	R (M)			
	Guss / Cast iron	F (K)			
	Nichtmet. Werkstoffe / Non-fer. metall.	N	●	⊕	
	Warmf. Leg., Titanleg. / Heat res. alloys, Titan. all.	S			
Gehärteter Stahl / Hardened steel	H				
Wendeplatten Inserts	Bezeichnung Part Number	1 Ecke / Corner TY 1110 PKD		Passende Trägerwerkzeuge / Suitable Toolholders	
		F	T	Klemmhalter / Seite Toolholder / Page	Bohrstange / Seite Boring Bar / Page
<b>VCMW</b> 	<b>11 03 02</b> <b>11 03 04</b> <b>11 03 08</b> <b>16 04 02</b> <b>16 04 04</b> <b>16 04 08</b>			SVHC R/L / 1.18 SVJB R/L / 1.18 SVJC R/L / 1.19 SVVCN / 1.19	SVQC R/L / 1.29 SVUC R/L / 1.29

Bitte angeben / Please state : F: scharfe Ausführung / sharp version T: gefaste Ausführung / chamfered version

## Schneidstoffsorten-Übersicht zum Drehen Description of Carbide Grades for Turning

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

ISO	P						M				K					Gehärtet Hardened	
	hoch high		mittel medium		niedrig low	unterbrochener Schnitt intermittent cutting	hoch high	mittel medium		niedrig low	hoch high	mittel medium		niedrig low		niedrig low	
	P01	P10	P20	P30	P40	P50	M10	M20	M30	M40	K01	K10	K20	K30	K40		
Hartmetall beschichtet Coated Carbide			TK 5210+														
				TWS 7225													
			TP 3020														
CBN																	CDX09
Hartmetall unbeschichtet Uncoated Carbide																	

**Schneidstoffsorten-Schlüssel zum Drehen**  
**Code Explanation of Carbide Grades for Turning**

# C N M G 120404 - A20



Anwendung 1 Application 1	T	Drehen / Turning
	M	Fräsen / Milling
	G	Stechen / Grooving
	T	Gewinde / Threading
	D	Bohren / Drilling

Anwendung 2 Application 2	P	Stahl / Steel
	M	Niro / Stainless Steel
	K	Nichteisen, Kunststoff, Aluminium Non Metallic Materials
	S	warmfeste Legierungen / Heat Resistant Alloys
	H	gehärteter Stahl / Hardened Steel
	U	universell / all-purpose
	W	DIA
	X	CBN
	Y	PKD
	Z	Cermet
	D	DLC
	C	Keramik / Ceramics

Serien-Nr. Serial-No.	11-20	unbeschichtet / uncoated
	21-50	CVD
	51-99	PVD

ISO	10	
	20	
	30	
	40	
	50	
	...	

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills


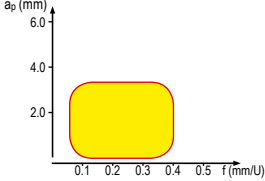

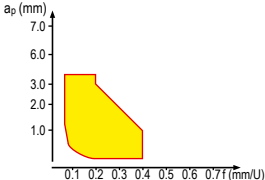

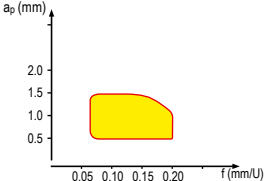

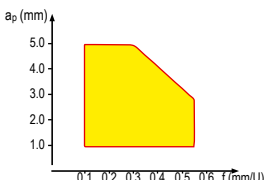

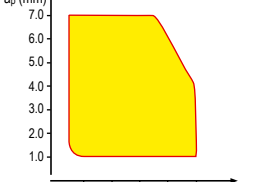

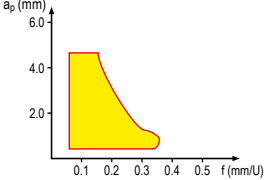

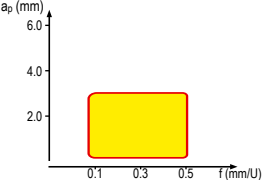
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## Spanleitstufen zum Drehen / Chipbreakers for Turning

Spanleitstufe Chipbreaker	Anwendungsbereich Application Range	Highlights	Highlights
<b>A20</b> 		<ul style="list-style-type: none"> <li>Alu-Legierungen, Niro, St 37</li> <li>scharfe Schneidkanten ( Umfangsschliff)</li> <li>extrem großer Spanwinkel</li> </ul>	<ul style="list-style-type: none"> <li>Alu-alloys, stainless steel</li> <li>Sharp cutting edge (ground circumference)</li> <li>Extremely high helix</li> </ul>
<b>C22</b> 		<ul style="list-style-type: none"> <li>hervorragende Spankontrolle beim Kopierdrehen und der Innenbearbeitung</li> <li>sehr gute Oberflächen beim Plandrehen</li> </ul>	<ul style="list-style-type: none"> <li>Excellent chip control while copy turning and internal machining</li> <li>Very good surface while face turning</li> </ul>
<b>JBF</b> 		<ul style="list-style-type: none"> <li>hohe Oberflächengüte durch gute Spankontrolle bei geringen Schnitttiefen</li> </ul>	<ul style="list-style-type: none"> <li>High quality surface due to good chip control while low cutting depths</li> </ul>
<b>JBM</b> 		<ul style="list-style-type: none"> <li>weiter Anwendungsbereich bei der mittleren Schlichtbearbeitung bis hin zur mittleren Schruppbearbeitung</li> <li>typischer Einsatz in der universellen Anwendung auf CNC- Maschinen</li> </ul>	<ul style="list-style-type: none"> <li>Wide range of application while middle finishing up to middle roughing</li> <li>Typical usage in universal working on CNC machines</li> </ul>
<b>JBR</b> 		<ul style="list-style-type: none"> <li>erste Wahl für unterbrochenen Schnitt und Schruppen im P- und M- Anwendungsbereich</li> </ul>	<ul style="list-style-type: none"> <li>First choice for interrupted cut and roughing of P- and M- application range</li> </ul>
<b>MD</b> 		<p>Standard-Geometrie im mittleren Bereich</p> <ul style="list-style-type: none"> <li>vor allem CNC-Bearbeitung</li> <li>sehr gute Spankontrolle</li> <li>geeignet für Niro - Bearbeitung</li> </ul>	<p>Medium cutting</p> <ul style="list-style-type: none"> <li>Wide range of chip control from medium-finishing to medium-roughing</li> <li>Chip breaker especially for CNC machining</li> <li>Suitable for stainless steel machining</li> </ul>
<b>S30</b> 		<ul style="list-style-type: none"> <li>scharfe, stabile Schneidkante</li> <li>hervorragende Spankontrolle auch bei langspanenden, weichen, rostfreien Stählen und Baustählen</li> </ul>	<ul style="list-style-type: none"> <li>Sharp, strong cutting edge</li> <li>Excellent chip control also at long-chipping soft stainless and mild steels</li> </ul>

Negative Wendeschneidplatten / Negative Inserts

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills


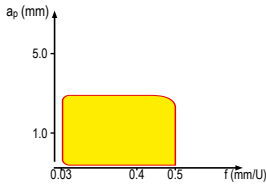

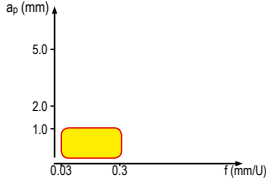

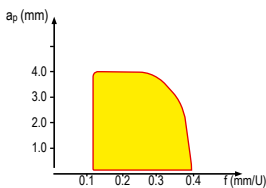

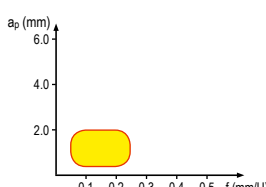

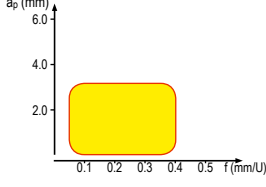
Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepaltenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## Spanleitstufen zum Drehen / Chipbreakers for Turning

Spanleitstufe Chipbreaker	Anwendungsbereich Application Range	Highlights	Highlights
<b>ALX</b> 		<b>Aluminiumbearbeitung</b> • sehr großer Spanwinkel, geschliffene Schneidkante • Bearbeitung von Aluminium, Kunststoffen, Feinstbearbeitung von Niro	<b>Aluminium cutting</b> • Exclusive chipbreaker for aluminium and aluminium alloy, finishing of stainless steel • High rake angle, precision-ground cutting edge
<b>F30</b> 		<b>Schlichtbearbeitung</b> • großer Spanwinkel, scharfe Schneidkante • hohe Oberflächengüten, auch bei der Innenbearbeitung	<b>Finishing</b> • High helix, sharp cutting edge • Very good surface quality, also in case of internal machining
<b>JTM</b> 		• universelle Geometrie für die mittlere Bearbeitung im P-, M- und S-Anwendungsbereich • exzellente Spankontrolle über einen sehr großen Vorschubbereich	• Universal geometry for the middle machining in P-, M-, and S-application range • Excellent chip control for a wide range of feeds
<b>M30</b> 		<b>Mittlere Bearbeitung bis Schlichten</b> • optimale Spankontrolle auch bei zähen Zerspannmaterialien • hohe Oberflächengüte durch scharfe Schneidkante und geringe Schnittkräfte	<b>Medium cutting</b> • Optimized chipcontrol at ductile materials • Very good surface due to sharp cutting edge and marginal cutting force
<b>MD</b> 		<b>Mittlere Bearbeitung</b> • auf antriebschwachen Maschinen und Bohrungsbearbeitung	<b>Medium cutting</b> • Excellent chip control at wide range of cutting conditions • Suitable for stainless steel cutting

Positive Wendeschneidplatten / Positive Inserts

 Drehen  
Turning

 Fräswerkzeuge  
Milling Tools

 HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

 Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

 Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

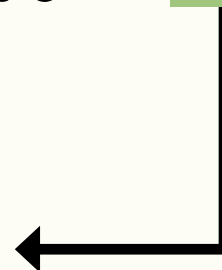
 Gewinde-  
werkzeuge  
Threading Tools

 Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Anwendung / Application

# C N M G 120408 M ...

A	Aluminium / Aluminium
C	Kopieren / Copying
F	Schlichten / Finishing
H	Schweres Schruppen / Heavy Roughing
M	Mittlere Bearbeitung / Medium Cutting
R	Schruppen / Roughing
S	Mittlere Bearbeitung für Niro / Medium Cutting of Stainless Steel



## Schnittdaten-Empfehlungen zum Drehen Cutting Data Recommendations for Turning

	Werkstückwerkstoff Material	Legierung Alloy	Brinell-Härte hardness HB	VDI 3323 Gruppe	Schnittgeschwindigkeiten / Cutting speeds $v_c$ [m/min]			
					TK 1210 K10	TK5210+ K20C	TK 5310 K10C	TK 5710 K10C
<b>A (P)</b>	unlegierter Stahl / mild steel	geglüht / annealed $\leq 0,15\% C$	125	1				100 - 150
		geglüht / annealed 0,15% - 0,45% C	150-250	2				80 - 140
		vergütet / heat treated $\geq 0,45\% C$	300	3				70 - 110
	niedriglegierter Stahl / lower alloyed steel	geglüht / annealed	180	6				80 - 130
		vergütet / heat treated	275	7				70 - 120
		vergütet / heat treated	300	8				60 - 90
		vergütet / heat treated	350	9				
	hochlegierter Stahl / highly alloyed steel	geglüht / annealed	200	10				80 - 110
		vergütet / heat treated	350	11				
	nichtrostender Stahl / corrosion-resistant steel	geglüht / annealed	200	12				130 - 180
vergütet / heat treated		350	13					
<b>R (M)</b>	rostfreier Stahl / stainless steel	ferritisch, martensitisch, geglüht / ferritic, martensitic, annealed	200	14				
		austenitisch / austenitic	180	14				90 - 130
		Duplex	230-260	14				
		austenitisch, ferritisch / austenitic, ferritic	330	14				
<b>F (K)</b>	Grauguss / grey cast iron	perlitisch, ferritisch / pearlitic, ferritic	180	15	140 - 200		100 - 200	160 - 220
		perlitisch, martensitisch / pearlitic, martensitic	260	16	100 - 160		100 - 220	130 - 180
	Grauguss mit Kugelgraphit / nodular cast iron	ferritisch / ferritic	160	17	160 - 200		120 - 200	150 - 220
		perlitisch / pearlitic	250	18	110 - 150		120 - 250	120 - 170
	Temperguss / malleable cast iron	ferritisch / ferritic	130	19	160 - 220		120 - 200	160 - 220
		perlitisch / pearlitic	230	20	140 - 180		100 - 200	140 - 200
<b>N</b>	Aluminium - Knetlegierungen / forging alloy	nicht aushärtbar / not hardenable	60	21	300 - 3000		250 - 3000	250 - 2800
		aushärtbar / hardenable	100	22	200 - 2000		250 - 2500	180 - 2500
	Aluminium - Gusslegierungen / casting alloy	nicht aushärtbar / not hardenable $< 12\% Si$	80	23	400 - 2000		400 - 2000	300 - 1800
		aushärtbar / hardenable $< 12\% Si$	90	24	400 - 1100		300 - 1200	300 - 1800
		nicht aushärtbar / not hardenable $> 12\% Si$	130	25	200 - 1000		200 - 700	170 - 1000
	Kupfer und Kupfer-legierungen (Bronze, Messing) / copper and copper alloys (bronze, brass)	Automatenlegierungen / free cutting alloys (1% Pb)		26	250 - 800			220 - 900
		Messing, Rotguss / brass, red bronze		27	200 110			190 - 800
		Bronze / bronze	90	28	150 - 600			150 - 650
		bleifreies Kupfer und Elektrolytkupfer / unleaded copper	100	29	150 - 400			130 - 500
	nichtmetallische Werkstoffe / non metallic materials	Duroplaste / thermoset	100	29	100 - 220			70 - 200
faserverstärkte Kunststoffe / fiber reinforced plastic			29	80 - 200			70 - 220	
Hartgummi / ebonite			30	100 - 300			90 - 280	
<b>S</b>	warmfeste Legierungen / heat resistant alloys	Fe-Basis/base, geglüht / annealed	200	31	35 - 50			30 - 60
		Fe-Basis/base(Incoloy), ausgehärtet / hardened	280	32	25 - 40			20 - 50
		Ni-Basis/base (Inconel), geglüht / annealed	250	33	25 - 40			20 - 50
		Ni- oder Co-Basis, ausgehärtet / hardened	30-58 HRC	24	20 - 30			20 - 40
		Ni- oder Co-Basis, gegossen / cast	1500-2200 Nmm <sup>2</sup>	35	15 - 25			20 - 30
	Titanlegierungen / titanium alloys	Reintitan / Pure titanium	Rm 400	36	80 - 150			60 - 150
Alpha- + Beta-Legierungen / alloys	Rm 1050	37	40 - 120			30 - 70		
<b>H</b>	gehärteter Stahl / hardened steel	gehärtet und angelassen / hardened and tempered	55 HRC	38				
		gehärtet und angelassen / hardened and tempered	60 HRC	39				
	Hartguss / chilled cast iron	gegossen / cast	400	40				
Gehärtetes Gusseisen / hardened cast iron	gehärtet und angelassen / hardened and tempered	55 HRC	40					

## Schnittdaten-Empfehlungen zum Drehen Cutting Data Recommendations for Turning

Schnittgeschwindigkeiten / Cutting speeds $v_c$ [m/min]												
TM 5125 M25C	TM 5130 M30C	TM 5220 M20C	TP 2135 TP 2235 P35C	TP 3020 P20/K15C	TP 3120 P25C	TP 4025+ P25/M20C	TP 5025 P25C	TP 5345 P45C	TU 3015 P/K/H15C	TWS 7225 M25/P30C	CDX09	TY 1110 PKD
120 - 280			170 - 230	180 - 300	180 - 300	120 - 280	120 - 280	180 - 240	250 - 450	190 - 280		
130 - 250			150 - 180	150 - 220	150 - 220	130 - 250	130 - 250	150 - 200	220 - 400	170 - 240		
100 - 180			110 - 150	120 - 200	120 - 200	100 - 180	100 - 180	150 - 200	180 - 280	130 - 200		
80 - 200			160 - 190	160 - 250	160 - 250	100 - 230	100 - 230	170 - 200	240 - 400	170 - 250		
60 - 180			80 - 140	90 - 180	90 - 180	80 - 200	80 - 200	100 - 160	160 - 290	100 - 190		
			70 - 130	80 - 170	80 - 170	60 - 180	60 - 180	90 - 150	140 - 270	90 - 170		
			60 - 120	120 - 190	120 - 190	50 - 130	50 - 130	80 - 140	120 - 250	80 - 160		
			110 - 200	80 - 160	80 - 160	80 - 180	80 - 180	130 - 170	180 - 300	130 - 200		
			40 - 80	120 - 180	120 - 180	50 - 120	50 - 120	80 - 130	100 - 250	80 - 150		
100 - 180			130 - 170	100 - 170	100 - 170	100 - 180	100 - 180	140 - 180	160 - 300	130 - 210		
70 - 150			100 - 160	90 - 180	90 - 180	70 - 150	70 - 150	115 - 170	150 - 260	110 - 190		
120 - 220	100 - 200	120 - 220	130 - 200	140 - 200	140 - 200	120 - 220		140 - 200	200 - 260	140 - 200		
80 - 200	60 - 180	80 - 200	90 - 190	90 - 180	90 - 180	100 - 200		110 - 190		90 - 200		
60 - 140	40 - 90	60 - 140	70 - 150					80 - 150		80 - 130		
50 - 120		50 - 120	40 - 60	60 - 90	60 - 90			55 - 75		80 - 100	80 - 150	
				100 - 200	100 - 200	130 - 280			140 - 350		300 - 1000	
				90 - 180	90 - 180	120 - 270			130 - 300		300 - 800	
				100 - 180	100 - 180	110 - 260			190 - 390		300 - 450	
						100 - 250			120 - 250		250 - 350	
				150 - 220	150 - 220	90 - 250			180 - 450			
				100 - 180	100 - 180	90 - 250			150 - 300			
								100 - 500				250 - 3500
								100 - 400				250 - 1300
								100 - 350				250 - 3500
								100 - 800				250 - 1500
								80 - 250				200 - 500
												100 - 600
												100 - 1300
												250 - 2500
												60 - 320
												80 - 250
												60 - 180
20 - 40			20 - 45							80 - 110		
			20 - 40							60 - 100		
			8 - 22							35 - 80		
			4 - 16							30 - 40		
			4 - 16							20 - 35		
			80 - 140							60 - 100		
			15 - 35							30 - 60		
											80 - 200	
											40 - 180	
											40 - 180	

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/ Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills