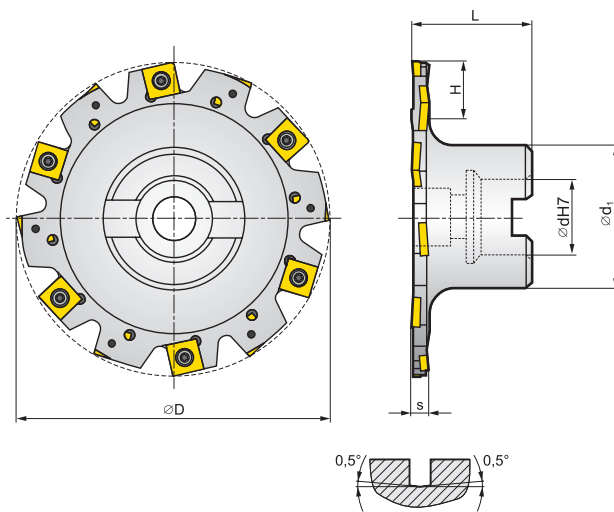
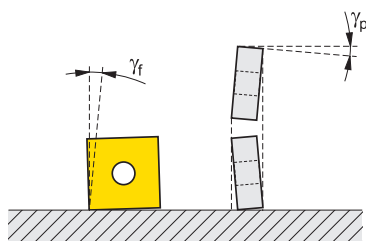


S90SN-R

SCHEIBENFRÄSER DISC MILLING CUTTERS



γ_p	$-0^\circ30'$	κ_r	90°
γ_f	$+2^\circ30'$	$a_{e\max}$	H



Z* - Anzahl Zähne / Number of teeth
K* - Effektive Zähnezahl / Effective number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions									Kühlung / Cooling	[kg]
		D	dH7	H	s	d_1	Z*	K*	L			
63A03R-S90SN11N4	●	63	16	10,5	4	34	6	3	40			0,5
63A03R-S90SN11N5	○	63	16	10,5	5	34	6	3	40			0,5
63A03R-S90SN12N6	○	63	16	10,5	6	34	6	3	40			0,5
80A04R-S90SN11N5	●	80	22	17,5	5	40	8	4	40			0,6
80A04R-S90SN12N6	●	80	22	17,5	6	40	8	4	40			0,6
100A05R-S90SN12N6	●	100	27	23,5	6	48	10	5	50			0,7
125B06R-S90SN12N6	○	125	40	24,0	6	70	12	6	50			1,5
160B08R-S90SN12N10	○	160	40	41,0	10	70	16	8	50			2,1

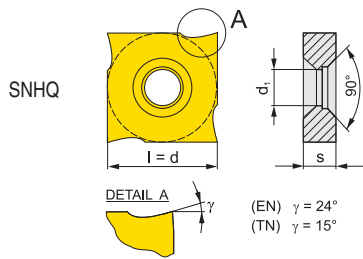
ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

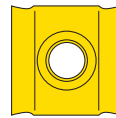
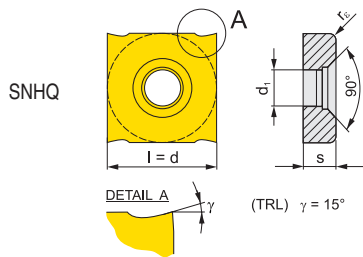
Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
63A03R-S90SN11N4	US 3504-T09P	SDR T09P	HS 0830
63A03R-S90SN11N5	US 3505-T09P	SDR T09P	HS 0830
63A03R-S90SN12N6	US 70	SDR T15	HS 0830
80A04R-S90SN11N5	US 3505-T09P	SDR T09P	HS 1030
80A04R-S90SN12N6	US 70	SDR T15	HS 1030
100A05R-S90SN12N6	US 70	SDR T15	HS 1230
125B06R-S90SN12N6	US 70	SDR T15	-
160B08R-S90SN12N10	US 72	SDR T15	-

S90SN-R

SCHEIBENFRÄSER INSERTS FOR DISC MILLING CUTTERS



(EN) $\gamma = 24^\circ$ für Aluminiumbearbeitung
for machining aluminium
(TN) $\gamma = 15^\circ$ für Stahl- und Gußbearbeitung
for machining steel and cast iron



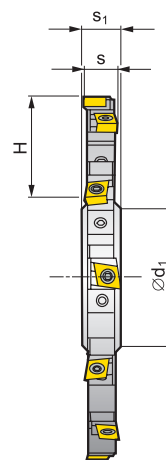
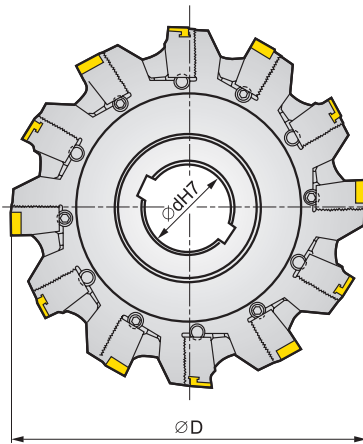
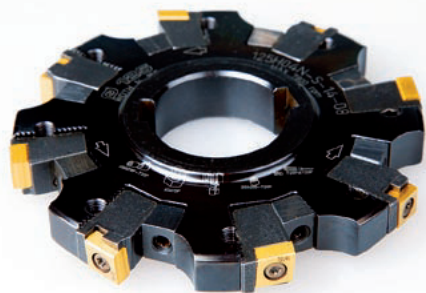
(TN) $\gamma = 15^\circ$ für Stahl- und Gußbearbeitung
for machining steel and cast iron

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

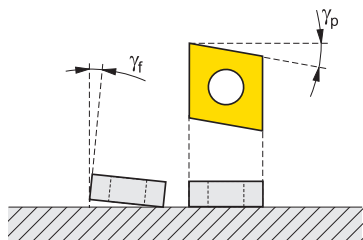
ISO	Materialien/Grades										Abmessungen/Dimensions					
	8215	8230	8240									l	s	d ₁	γ	r _ε
s = 4 mm																
SNHQ 1102AZTN		●	●									11,000	2,300	4,3	15°	-
s = 5 mm																
SNHQ 1103AZTN		●	○									11,000	2,700	4,3	15°	-
s = 6 mm																
SNHQ 1203AZEN	●		○									12,700	3,200	5,00	24°	-
SNHQ 1203AZTN		●	●									12,700	3,200	5,00	15°	-
SNHQ 120305TRL			●									12,700	3,200	5,00	15°	0,5
SNHQ 120310TRL			●									12,700	3,200	5,00	15°	1,0
SNHQ 120315TRL			○									12,700	3,200	5,00	15°	1,5
s = 10 mm																
SNHQ 1205AZEN		○	○									12,700	5,400	5,00	24°	-
SNHQ 1205AZTN		●	●									12,700	5,400	5,00	15°	-
SNHQ 120505TRL			●									12,700	5,400	5,00	15°	0,5
SNHQ 120510TRL			○									12,700	5,400	5,00	15°	1,0
SNHQ 120515TRL			○									12,700	5,400	5,00	15°	1,5

S90CN(XN)

SCHEIBENFRÄSER
ADJUSTABLE DISC MILLING CUTTERS



γ_p	+4° - +5°	κ_r	90°
γ_f	-8° - -10°	$a_{e,max}$	H



Z* - Anzahl Zähne / Number of teeth
K* - Effektive Zähnezahl / Effective number of teeth

Abmessungen [mm]. / Dimensions [mm].

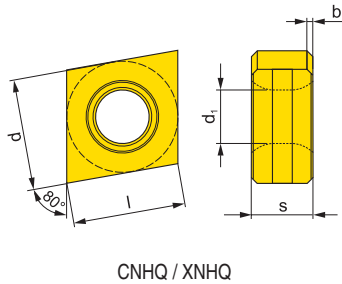
ISO	Sortiment / Assortment	Abmessungen / Dimensions								WSP Inserts	Kühlung / Cooling	[kg]
		D	dH7	s ₁	d ₁	s	H	Z*	K*			
s = 14,0 - 18,5 mm												
125H04N-S90CN10N18	○	125	40	18	56	14,0 - 18,5	34	8	4	CNHQ 1005AZTN		0,7
160H06N-S90CN10N18	○	160	40	18	56	14,0 - 18,5	50	12	6	CNHQ 1005AZTN		1,2
200J07N-S90CN10N18	○	200	50	18	71	14,0 - 18,5	60	14	7	CNHQ 1005AZTN		2,2
250J09N-S90CN10N18	○	250	50	18	71	14,0 - 18,5	85	18	9	CNHQ 1005AZTN		3,7
315J12N-S90CN10N18	○	315	50	18	71	14,0 - 18,5	110	24	12	CNHQ 1005AZTN		7,4
s = 19,0 - 24,3 mm												
160H05N-S90XN12N24	○	160	40	24	56	19,0 - 24,3	50	10	5	XNHQ 1205AZTN		1,7
200J06N-S90XN12N24	○	200	50	24	71	19,0 - 24,3	60	12	6	XNHQ 1205AZTN		3,7
250J08N-S90XN12N24	○	250	50	24	71	19,0 - 24,3	85	16	8	XNHQ 1205AZTN		6,1
315J10N-S90XN12N24	○	315	50	24	71	19,0 - 24,3	110	20	10	XNHQ 1205AZTN		9,6
s = 24,5 - 30,5 mm												
200J06N-S90XN16N30	○	200	50	30	71	24,5 - 30,5	60	12	6	XNHQ 1606AZTN		4,8
250J08N-S90XN16N30	○	250	50	30	71	24,5 - 30,5	85	16	8	XNHQ 1606AZTN		8,0
315K10N-S90XN16N30	○	315	60	30	85	24,5 - 30,5	110	20	10	XNHQ 1606AZTN		12,7

Bitte spezifizieren Sie Ihre gewünschte Breite (welche innerhalb einer Toleranz von +/- 0,03 mm gesetzt ist), wenn Sie einen Scheibenfräser bestellen. Wenn die Breite auf Ihrer Bestellung nicht spezifiziert ist, wird der Scheibenfräser auf eine minimale Schnittbreite des Standards eingestellt.

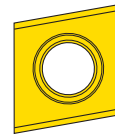
Please specify your desired width (which is set within a tolerance of +/- 0.03 mm) when ordering a disc cutter. If the width is not specified on your order, the disc cutter will be made to the minimum width of cut by default.

S90CN(XN)

SCHEIBENFRÄSER
INSERTS FOR ADJUSTABLE DISC MILLING CUTTERS



CNHQ / XNHQ



CNHQ AZTN / XNHQ AZTN

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8230	8240									(l)	d	s	d ₁	b
CNHQ 1005AZTN	●	●									10,000	10,000	5,40	4,70	0,5 x 45°
XNHQ 1205AZTN	●	●									12,700	10,000	5,40	4,70	0,5 x 45°
XNHQ 1606AZTN	○	●									16,000	12,000	6,40	5,90	0,5 x 45°

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräserdurchmesser „s“ Width of cutter „s“	Fräser Body of cutter	Kassette L Cassete L	Kassette R Cassete R	Klemmkeil Wedge	Diff. Schraube Wedge screw	Spannschraube* Clamping screw*	Justierschraube* Clamping screw*

s = 14 - 18,5 mm

125H04N-S90CN10N18	125H04N-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	US 4011-T15P	SDR T15P	SS 6005-T09P	SDR T09
160H06N-S90CN10N18	160H06N-S-14-12									
200J07N-S90CN10N18	200J07N-S-14-14									
250J09N-S90CN10N18	250J09N-S-14-18									
315J12N-S90CN10N18	315J12N-S-14-24									

s = 19 - 24,3 mm

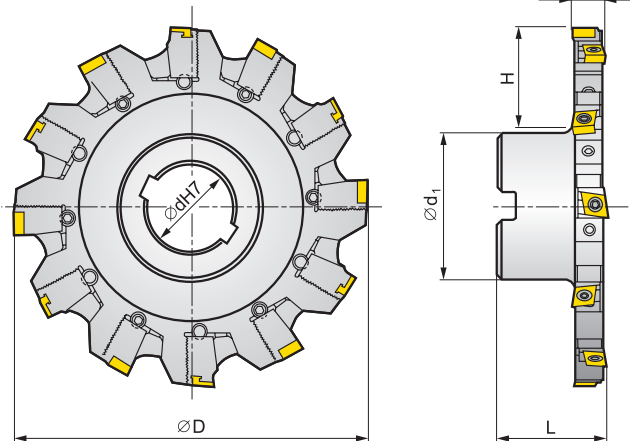
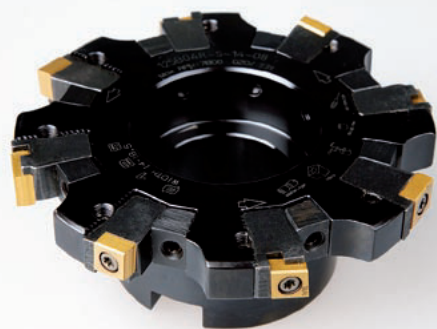
160H05N-S90XN12N24	160H05N-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	HXK 4	US 4011-T15P	SDR T15P	SS 6005-T09P	SDR T09
200J06N-S90XN12N24	200J06N-S-19-12									
250J08N-S90XN12N24	250J08N-S-19-16									
315J10N-S90XN12N24	315J10N-S-19-20									

s = 24,5 - 30,5 mm

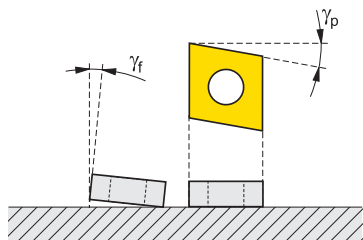
200J06N-S90XN16N30	200J06N-S-25-12	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	HXK 4	US 5012-T15P	SDR T15P	SS 6005-T09P	SDR T09
250J08N-S90XN16N30	250J08N-S-25-16									
315K10N-S90XN16N30	315K10N-S-25-20									

S90CN(XN)-R

SCHEIBENFRÄSER ADJUSTABLE DISC MILLING CUTTERS



γ_p	+4° - +5°	κ_r	90°
γ_f	-8° - -10°	$a_{e\max}$	H



Z* - Anzahl Zähne / Number of teeth
K* - Effektive Zähnezahl / Effective number of teeth

Abmessungen [mm]. / Dimensions [mm].

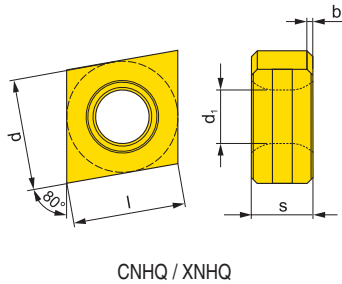
ISO	Sortiment / Assortment	Abmessungen / Dimensions								WSP Inserts	Kühlung Cooling	[kg]
		D	dH7	L	d ₁	s	H	Z*	K*			
s = 14,0 - 18,5 mm												
125B04R-S90CN10N18	○	125	40	50	70	14,0 - 18,5	25	8	4	CNHQ 1005AZTN		1,2
160B06R-S90CN10N18	○	160	40	50	70	14,0 - 18,5	44	12	6	CNHQ 1005AZTN		2,8
200C07R-S90CN10N18	○	200	40	50	90	14,0 - 18,5	52	14	7	CNHQ 1005AZTN		3,3
s = 19,0 - 24,3 mm												
160B05R-S90XN12N24	○	160	40	50	70	19,0 - 24,3	44	10	5	XNHQ 1205AZTN		3,1
200C06R-S90XN12N24	○	200	40	50	90	19,0 - 24,3	52	12	6	XNHQ 1205AZTN		4,6
s = 24,5 - 30,5 mm												
200C06R-S90XN16N30	○	200	60	50	130	24,5 - 30,5	34	12	6	XNHQ 1606AZTN		5,9

Bitte spezifizieren Sie Ihre gewünschte Breite (welche innerhalb einer Toleranz von +/- 0,03 mm gesetzt ist), wenn Sie einen Scheibenfräser bestellen. Wenn die Breite auf Ihrer Bestellung nicht spezifiziert ist, wird der Scheibenfräser auf eine minimale Schnittbreite des Standards eingestellt.

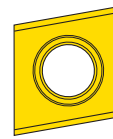
Please specify your desired width (which is set within a tolerance of +/- 0.03 mm) when ordering a disc cutter. If the width is not specified on your order, the disc cutter will be made to the minimum width of cut by default.

S90CN(XN)-R

SCHEIBENFRÄSER
INSERTS FOR ADJUSTABLE DISC MILLING CUTTERS



CNHQ / XNHQ



CNHQ AZTN / XNHQ AZTN

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8230	8240									(l)	d	s	d ₁	b
CNHQ 1005AZTN	●	●									10,000	10,000	5,40	4,70	0,5 x 45°
XNHQ 1205AZTN	●	●									12,700	10,000	5,40	4,70	0,5 x 45°
XNHQ 1606AZTN	○	●									16,000	12,000	6,40	5,90	0,5 x 45°

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräserdurchmesser „s“ Width of cutter „s“	Fräser Body of cutter	Kassette L Cassete L	Kassette R Cassete R	Klemmkeil Wedge	Diff. Schraube Wedge screw	Spannschraube* Clamping screw*	Justierschraube* Clamping screw*
				Schlüssel Key	Schraubendreher Screwdriver	Schraubendreher Screwdriver	Schraubendreher Screwdriver

s = 14 - 18,5 mm

125B04R-S90CN10N18	125B04R-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	US 4011-T15P	SDR T15P	SS 6005-T09P	SDR T09
160B06R-S90CN10N18	160B06R-S-14-12									
200C07R-S90CN10N18	200C07R-S-14-14									

s = 19 - 24,3 mm

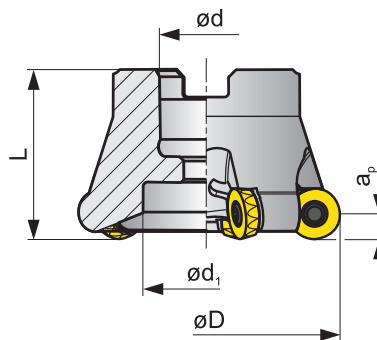
160B05R-S90XN12N24	160B05R-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	HXK 4	US 4011-T15P	SDR T15P	SS 6005-T09P	SDR T09
200C06R-S90XN12N24	200C06R-S-19-12									

s = 24,5 - 30,5 mm

200C06R-S90XN16N30		KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	HXK 4	US 5012-T15P	SDR T15P	SS 6005-T09P	SDR T09
	200C06R-S-25-12									

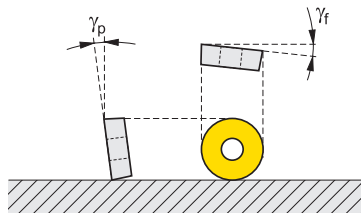
SMORC

KOPIERFRÄSER COPY MILLING CUTTERS



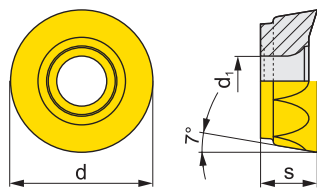
Z* - Anzahl Zähne / Number of teeth

γ_p	-7°	κ_r	-
γ_f	-2° - -3°	$a_{p\max}$	6,0 - 10,0 mm

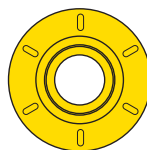


Abmessungen [mm]. / Dimensions [mm].

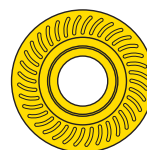
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	d	d ₁	L	Z*	WSP Inserts			
40A03R-SMORC12	■	40	16	12	40	3	RC.. 1204		0,16	
50A04R-SMORC12	■	50	22	18	40	4	RC.. 1204		0,26	
63A05R-SMORC12	■	63	22	30	40	5	RC.. 1204		0,35	
80A05R-SMORC12	■	80	27	37	50	5	RC.. 1204		0,89	
100A06R-SMORC12	■	100	32	45	50	6	RC.. 1204		1,55	
63A04R-SMORC16	■	63	22	18	50	4	RC.. 1606		0,47	
80A05R-SMORC16	■	80	27	37	50	5	RC.. 1606		0,73	
100A06R-SMORC16	■	100	32	45	50	6	RC.. 1606		1,05	
80A04R-SMORC20	■	80	27	28	50	4	RC.. 2006		0,64	
100A05R-SMORC20	■	100	32	45	50	5	RC.. 2006		0,96	



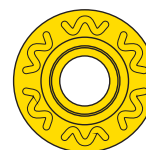
RCMT



RCMT-F



RCMT-M



RCMT-R

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M9315	M9325	M9340	M8310	M8345	8215	8230	8240	d	s	d ₁		
RCMT 1204MOEN-F				■	■	■			12,000	4,760	4,40		
RCMT 1204MOEN-R			■				■		12,000	4,760	4,40		
RCMT 1204MOSN-M	■	■			■	■			12,000	4,760	4,40		
RCMT 1204MOSN-R					■				12,000	4,760	4,40		
RCMT 1606MOEN-F				■				■	16,000	6,350	5,50		
RCMT 1606MOSN-M		■	■		■	■			16,000	6,350	5,50		
RCMT 1606MOSN-R					■				16,000	6,350	5,50		
RCMT 2006MOSN-M	■	■	■		■	■			20,000	6,350	6,50		
RCMT 2006MOSN-R					■				20,000	6,350	6,50		

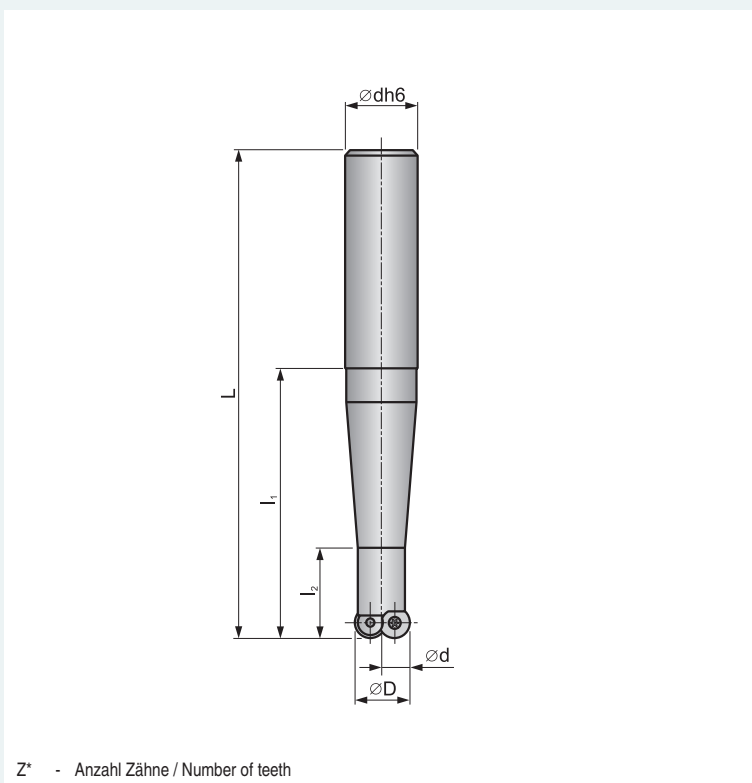
ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
40A03R-SMORC12	US 63509-T15P	D-T08P/T15P	FG-15	-	HS 90835
50A04R-SMORC12	US 63509-T15P	D-T08P/T15P	FG-15	-	HS 1030C
63A05R-SMORC12	US 63509-T15P	D-T08P/T15P	FG-15	-	HS 1030C
80A05R-SMORC12	US 63509-T15P	D-T08P/T15P	FG-15	-	-
100A06R-SMORC12	US 63509-T15P	D-T08P/T15P	FG-15	-	-
63A04R-SMORC16	US 65014-T20P	-	-	SDR T20P-T	HS 1030C
80A05R-SMORC16	US 65014-T20P	-	-	SDR T20P-T	-
100A06R-SMORC16	US 65014-T20P	-	-	SDR T20P-T	-
80A04R-SMORC20	US 66015-T25P	-	-	SDR T25P-T	HS 1230C
100A05R-SMORC20	US 66015-T25P	-	-	SDR T25P-T	-

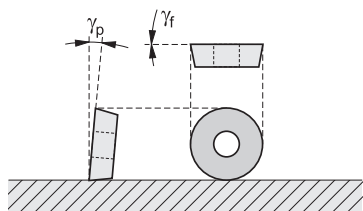
B-SRD

KOPIERFRÄSER - SCHAFT
COPY MILLING CUTTERS



Z* - Anzahl Zähne / Number of teeth

γ_p	+3°	κ_r	-
γ_f	0°	a_{pmax}	2,0; 2,5 mm



Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								WSP Inserts	Kühlung / Cooling	[kg]
		D	d	L	l ₁	l ₂	dh6	Z*				
15E2R040B16-SRD07	○	15	7	88	40	20	16	2	RD.. 0702	+	0,15	
15E2R060B16-SRD07	●	15	7	108	60	20	16	2	RD.. 0702	+	0,25	
15E2R080B20-SRD07	○	15	7	130	80	22	20	2	RD.. 0702	+	0,50	
15E2R100B20-SRD07	○	15	7	150	100	22	20	2	RD.. 0702	+	0,75	
15E2R120B25-SRD07	○	15	7	176	120	22	25	2	RD.. 0702	+	0,80	
20E2R040B20-SRD10	●	20	10	90	40	20	20	2	RD.. 1003	+	0,20	
20E2R060B20-SRD10	●	20	10	110	60	22	20	2	RD.. 1003	+	0,30	
20E2R080B25-SRD10	○	20	10	136	80	25	25	2	RD.. 1003	+	0,60	
20E2R100B25-SRD10	○	20	10	156	100	25	25	2	RD.. 1003	+	0,80	
20E2R120B25-SRD10	○	20	10	176	120	25	25	2	RD.. 1003	+	1,00	

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHLEIFENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

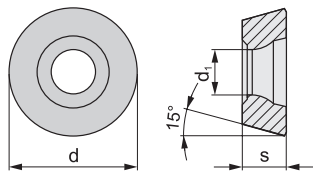
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

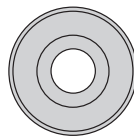
WENDESCHEIDPLATTEN
INDEXABLE INSERTS

B-SRD

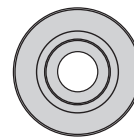
KOPIERFRÄSER - SCHAFT INSERTS FOR COPY MILLING CUTTERS



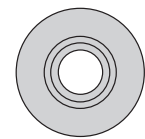
RD..



RDHX MOT



RDGT MOT



RDHT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions					
	M9340	M8310	M8325	M8345	7205	7010	7025	7040	5040	HF7	d	d ₁	s			
RDHX 0702MOT		■	■		●	○	○				7,000	2,80	2,38			
RDHX 1003MOT		■	■	■	●	○	○	○	○		10,000	3,90	3,18			
RDGT 0702MOT		□	□	□		○	○	○			7,000	2,80	2,38			
RDGT 1003MOT	●	□	■	■		○	○	○			10,000	3,90	3,18			
RDHT 0702MO-FA									●		7,000	2,80	2,38			
RDHT 1003MO-FA									●		10,000	3,90	3,18			

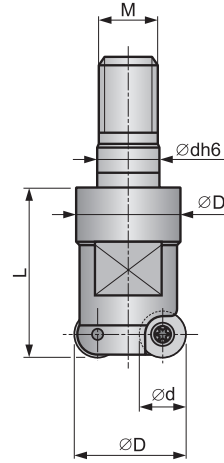
ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

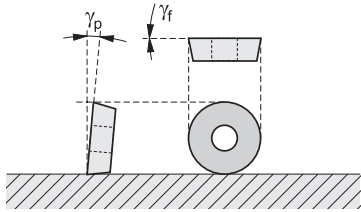
Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
..SRD07	US 25	SDR T07
..SRD10	US 3507-T15	SDR T15

SCRD

KOPIERFRÄSER - MODULARES SYSTEM EXCHANGEABLE HEADS FOR COPY MILLING CUTTERS



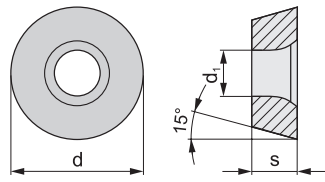
γ_p	+3°	κ_r	-
γ_f	0°	$a_{p\max}$	1,5 - 4,0 mm



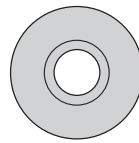
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

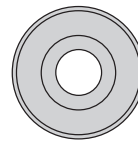
ISO	Sortiment/Assortment	Abmessungen / Dimensions								WSP Inserts	Kühlung Cooling	[kg]
		D	d	L	D ₁	dh6	M	Z*				
10E2R020M06-SRD05	○	10	5	20	9,8	6,5	M6	2	RD.. 0501	+	0,10	
12E3R020M06-SRD05	○	12	5	20	10	6,5	M6	3	RD.. 0501	+	0,10	
15E4R020M08-SRD05	●	15	5	20	13,5	8,5	M8	4	RD.. 0501	+	0,10	
15E2R028M08-SRD07	●	15	7	28	13,5	8,5	M8	2	RD.. 0702	+	0,10	
15E3R028M08-SRD07	●	15	7	28	13,5	8,5	M8	3	RD.. 0702	+	0,20	
20E4R028M10-SRD07	●	20	7	28	18	10,5	M10	4	RD.. 0702	+	0,30	
25E5R028M12-SRD07	○	25	7	28	21	12,5	M12	5	RD.. 0702	+	0,40	
20E2R028M10-SRD10	●	20	10	28	18	10,5	M10	2	RD.. 1003	+	0,30	
25E2R032M12-SRD10	○	25	10	32	21	12,5	M12	2	RD.. 1003	+	0,40	
25E3R032M12-SRD10	●	25	10	32	21	12,5	M12	3	RD.. 1003	+	0,35	
30E4R042M16-SRD10	●	30	10	42	29	17	M16	4	RD.. 1003	+	0,50	
35E5R042M16-SRD10	●	35	10	42	29	17	M16	5	RD.. 1003	+	0,55	
24E2R032M12-SCRD12	●	24	12	32	21	12,5	M12	2	RD.. 12T3	+	0,35	
35E3R042M16-SCRD12	●	35	12	42	29	17	M16	3	RD.. 12T3	+	0,55	
35E4R042M16-SRD12	●	35	12	42	29	17	M16	4	RD.. 12T3	+	0,50	
42E4R042M16-SCRD12	○	42	12	42	29	17	M16	4	RD.. 12T3	+	0,65	
42E5R042M16-SRD12	○	42	12	42	29	17	M16	5	RD.. 12T3	+	0,60	
32E2R042M16-SCRD16	○	32	16	42	29	17	M16	2	RD.. 1604	+	0,55	



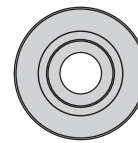
RD..



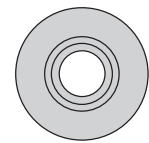
RDHX MOE



RDHX MOT



RDGT MOT



RDHT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions					
	M9340	M8310	M8325	M8345	7205	7010	7025	7040	5040	HF7	d	d ₁	s			
RDHX 0501MOE	■					○					5,000	2,20	1,51			
RDHX 07T1MOT	■	□				○	○				7,000	2,80	1,98			
RDHX 0702MOT	■	■			●	○	○				7,000	2,80	2,38			
RDHX 1003MOT	■	■	■		●	○	○	○	○		10,000	3,90	3,18			
RDHX 12T3MOT	■	■	■		●	○	○	○	○		12,000	3,90	3,97			
RDHX 1604MOT	■	■	■			○	○	○	○		16,000	5,20	4,76			
RDGT 0702MOT		□	□	□		○	○	○			7,000	2,80	2,38			
RDGT 1003MOT	●	□	■	■		○	○	○			10,000	3,90	3,18			
RDGT 12T3MOT	●	■	■	■		○	○	○			12,000	3,90	3,97			
RDGT 1604MOT	●	□	■	■		○	○	○			16,000	5,20	4,76			
RDHT 07T1MO-FA									○		7,000	2,80	1,98			
RDHT 0702MO-FA									●		7,000	2,80	2,38			
RDHT 1003MO-FA									●		10,000	3,90	3,18			
RDHT 12T3MO-FA									●		12,000	3,90	3,97			
RDHT 1604MO-FA									○		16,000	5,20	4,76			

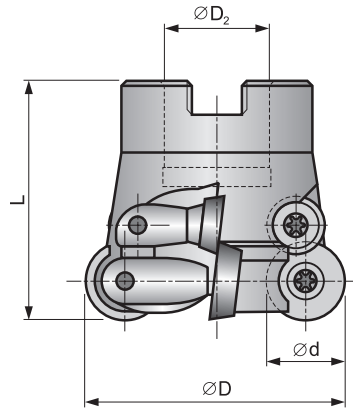
ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

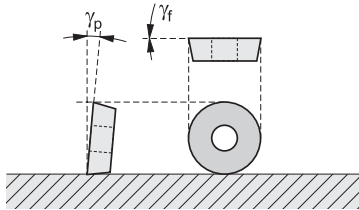
Fräser Marking of cutter	Spannschraube* Clamping screw*	Spannschraube Clamping screw	Klemmschuh Clamp	Schraubendreher Screwdriver
..SRD05	US 20	-	-	SDR T06
..SRD07	US 25	-	-	SDR T07
..SRD10	US 3507-T15	-	-	SDR T15
..SCRD12	US 3507-T15	CS12	-	SDR T15
..SRD12	US 3507-T15	-	-	SDR T15
..SCRD16	US 4511-T20	-	LA 12T3	SDR T20
..SRD16	US 4511-T20	-	-	SDR T20

SCMORD

KOPIERFRÄSER COPY MILLING CUTTERS



γ_p	+5°	κ_r	-
γ_f	0°	$a_{p\max}$	3; 4 mm

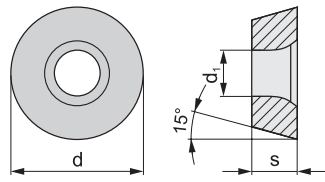


Z* - Anzahl Zähne / Number of teeth

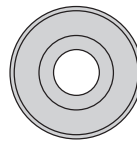
Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	d	D ₂	L	Z*	WSP Inserts			
50A05R-SCMORD12	●	50	12	22	50	5	RD.. 12T3	+	0,70	
52A05R-SCMORD12	●	52	12	22	50	5	RD.. 12T3	+	0,70	
66A06R-SCMORD12	●	66	12	27	50	6	RD.. 12T3	+	0,90	
80B07R-SCMORD12	●	80	12	27	52	7	RD.. 12T3	+	1,40	
52A04R-SCMORD16*	●	52	16	22	50	4	RD.. 1604	+	0,70	
66A05R-SCMORD16	●	66	16	27	50	5	RD.. 1604	+	0,90	
80A06R-SCMORD16	●	80	16	27	52	6	RD.. 1604	+	1,40	
100A07R-SCMORD16	○	100	16	32	52	7	RD.. 1604		2,00	

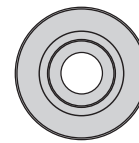
*) ângulo axial 0° / axial angle 0°



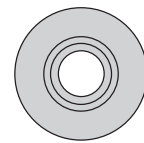
RD..



RDHX MOT



RDGT MOT



RDHT-FA

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions					
	M9340	M8310	M8325	M8345	7205	7010	7025	7040	5040	HF7	d	d ₁	s			
RDHX 12T3MOT		■	■	■	●	○	○	○	○		12,000	3,90	3,97			
RDHX 1604MOT		■	■	■		○	○	○	○		16,000	5,20	4,76			
RDGT 12T3MOT	●	■	■	■		○	○	○			12,000	3,90	3,97			
RDGT 1604MOT	●	□	■	■		○	○	○			16,000	5,20	4,76			
RDHT 12T3MO-FA									●		12,000	3,90	3,97			
RDHT 1604MO-FA									○		16,000	5,20	4,76			

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Spannschraube Clamping screw	Klemmschuh Clamp	Schraubendreher Screwdriver
..SCMORD12	US 3507-T15	CS 12	-	SDR T15
..SCMORD16	US 4511-T20	-	LA 12T3	SDR T20

SPD09

HFC FRÄSER - SCHAFT
HIGH FEED MILLING CUTTERS

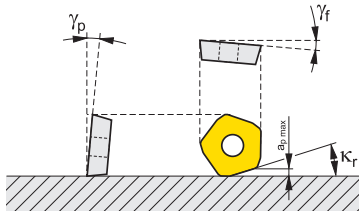
PLANFRÄSER
FACE MILLING CUTTERS



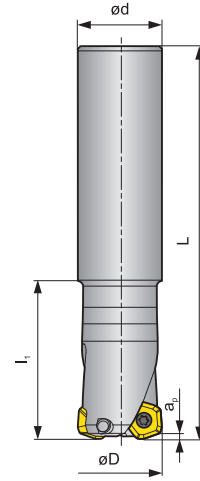
ECKFRÄSER
SHOULDER END MILLING CUTTERS

γ_p	10°	κ_r	19°
γ_f	-10° - -24°	$a_{p \max}$	2 mm

WALZENSTRICHFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER / SLOT MILLING CUTTERS



PENTA HF



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	L	l_1	d	Z*				
32E2R060A32-SPD09	■	32	250	60	32	2			1,42	
40E3R060A32-SPD09	■	40	250	60	32	3			1,50	

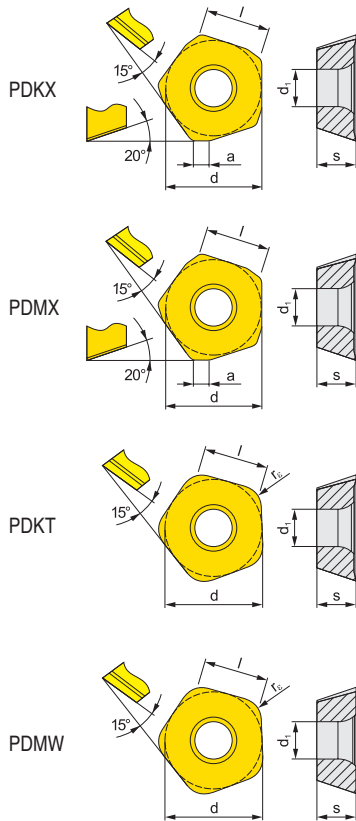
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



● Lagertyp / ○ Kein Lagertyp, ■ Lager ab 1.04.2014 / □ Kein Lager ab 1.04.2014
● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades					Abmessungen / Dimensions					
	M9325	M9340	M8345	8215	8230	l	d	s	d ₁	a	r _c
PDKX 0905ZEER-FM		■	■			9,00	13,50	5,47	5,50	2,00	-
PDMX 0905ZEER-M		■	■	■	■	9,00	13,50	5,47	5,50	2,00	-
PDMX 0905ZESR-R			■	■	■	9,00	13,50	5,47	5,50	2,00	-
PDKT 090530ER-FM			■	■	■	9,00	13,50	5,47	5,50	-	3,0
PDMW 090530SR	■	■				9,00	13,50	5,47	5,50	-	3,0

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

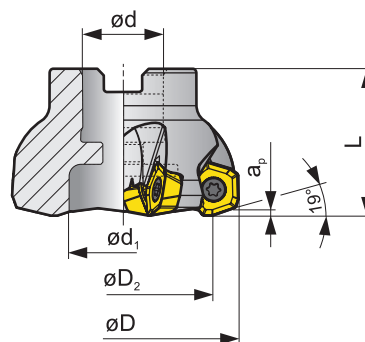
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
32 - 40	US 45011-T20P	FLAG T20P

S19PD09

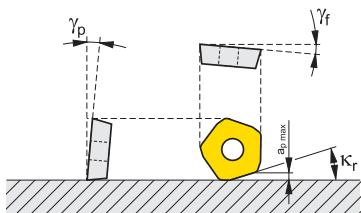
HFC FRÄSER
HIGH FEED MILLING CUTTERS



PENTA HF



γ_p	10°	κ_r	19°
γ_f	-1° - -24°	$a_{p,max}$	2 mm



Z* - Anzahl Zähne / Number of teeth

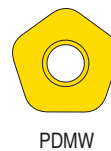
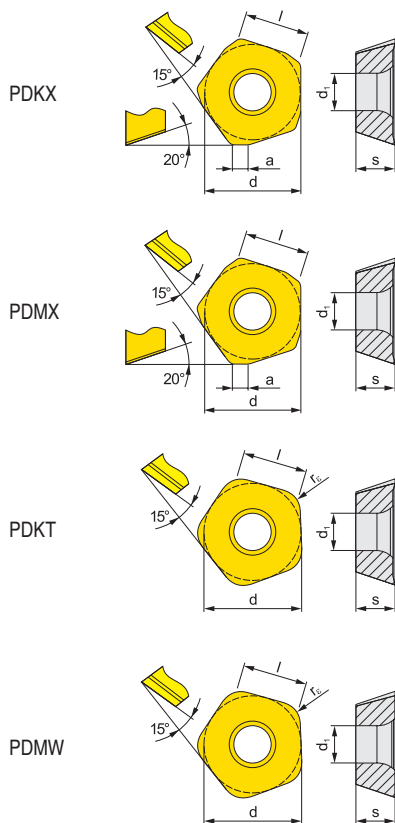
Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	d	d ₁	L	D ₂	Z*			
42A03R-S19PD09-C	■	42	16	12	40	28	3		+	0,18
50A04R-S19PD09-C	■	50	22	18	40	36	4		+	0,23
52A04R-S19PD09-C	■	52	22	18	40	38	4		+	0,24
63A05R-S19PD09-C	■	63	22	18	40	49	5		+	0,31
66A06R-S19PD09-C	■	66	22	18	40	52	6		+	0,32
80A05R-S19PD09-C	■	80	27	37	50	66	5		+	0,83
100A06R-S19PD09-C	■	100	32	45	50	86	6		+	1,40
100A08R-S19PD09-C	■	100	32	45	50	86	8		+	1,38

S19PD09

HFC FRÄSER INSERTS FOR HIGH FEED MILLING CUTTERS

2014



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions					
	M9325	M9340	M8345	8215	8230	8240	l	d	s	d ₁	a	r _ε
PDKX 0905ZEER-FM	■	■					9,00	13,50	5,47	5,50	2,0	-
PDMX 0905ZEER-M	■	■	■	■			9,00	13,50	5,47	5,50	2,0	-
PDMX 0905ZESR-R			■	■	■		9,00	13,50	5,47	5,50	2,0	-
PDKT 090530ER-FM			■	■	■		9,00	13,50	5,47	5,50	-	3,0
PDMW 090530SR	■	■					9,00	13,50	5,47	5,50	-	3,0

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
42	US 45011-T20P	SDR T20P-T	HS 90835
50 - 66	US 45011-T20P	SDR T20P-T	HS 1030C
80 - 100	US 45011-T20P	SDR T20P-T	-

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

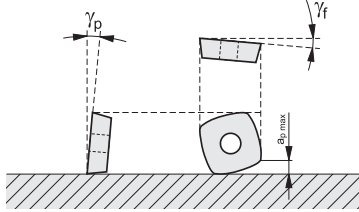
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SZD

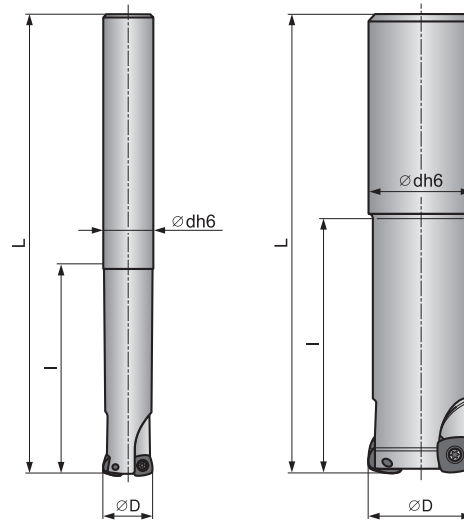
HFC FRÄSER - SCHAFT HIGH FEED MILLING CUTTERS



γ_p	+8° - +10°	κ_r	-
γ_f	-5° - -6°	$a_{p\max}$	1,0; 1,6 mm



FEED ZD



ZYLINDRISCH
CYLINDRICAL

WELDON

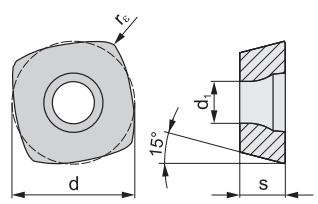
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

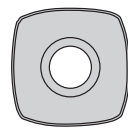
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	L	l	dh6	Z*	WSP Inserts			
ZYLINDRISCH / CYLINDRICAL										
16E2R030A16-SZD07	●	16	100	30	16	2	ZD.. 0703		+	0,1
16E2R065A16-SZD07	●	16	145	65	16	2	ZD.. 0703		+	0,2
20E3R040A20-SZD07	●	20	120	40	20	3	ZD.. 0703		+	0,3
20E3R080A20-SZD07	●	20	165	80	20	3	ZD.. 0703		+	0,3
25E3R050A25-SZD07	●	25	140	50	25	3	ZD.. 0703		+	0,5
25E3R100A25-SZD07	●	25	190	100	25	3	ZD.. 0703		+	0,6
WELDON										
25E2R080B25-SZD09-C	●	25	140	80	25	2	ZD.. 09T3		+	0,5
25E2R140B25-SZD09-C	●	25	200	140	25	2	ZD.. 09T3		+	0,7
25E2R240B25-SZD09-C	○	25	300	240	25	2	ZD.. 09T3		+	1,0
32E2R080B32-SZD09-C	●	32	140	80	32	2	ZD.. 09T3		+	0,8
32E2R140B32-SZD09-C	●	32	200	140	32	2	ZD.. 09T3		+	1,1
32E2R240B32-SZD09-C	○	32	300	240	32	2	ZD.. 09T3		+	1,6
40E4R080B32-SZD12-C	●	40	140	80	32	4	ZD.. 1204		+	0,8
40E4R140B32-SZD12-C	○	40	200	140	32	4	ZD.. 1204		+	1,1
40E4R240B32-SZD12-C	○	40	300	240	32	4	ZD.. 1204		+	1,3

SZD

HFC FRÄSER - SCHAFT INSERTS FOR HIGH FEED MILLING CUTTERS



ZDCW / ZDEW




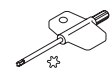
ZDCW / ZDEW

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions						
	M8310	M8325	M8345	7205	7215	7230	7010	7025	7040				l	d	s	d ₁	r _ε
ZDCW 070304		■	■		●	●		○	○				6,800	6,800	3,18	2,60	0,4
ZDCW 09T304	■	■	■	○	●	●	○	○	○				9,525	9,525	3,97	3,40	0,4
ZDEW 120408	■	■	■	●			○	○	○				12,700	12,700	4,76	4,40	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
..SZD07	US 2205-T07P 	FLAG T07P 
..SZD09	US 3006-T09P	FLAG T09P
..SZD12	US 4011-T15P	FLAG T15P



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

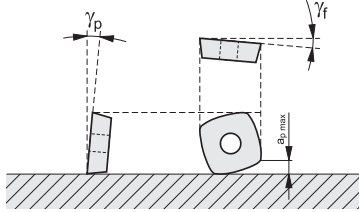
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SZD

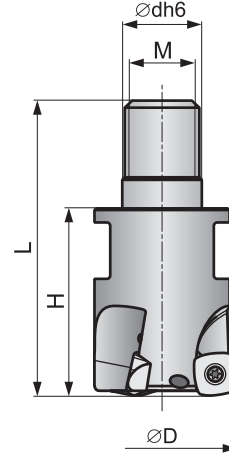
HFC FRÄSER - MODULARES SYSTEM EXCHANGEABLE HEADS FOR HIGH FEED MILLING



γ_p	+8°; +10°	κ_r	-
γ_f	-5°; -6°	$a_{p\ max}$	1,0; 1,6 mm



FEED ZD



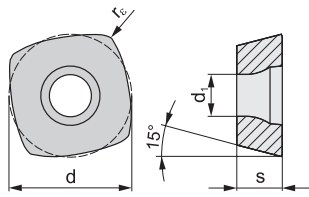
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

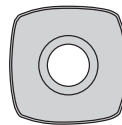
ISO	Sortiment / Assortment	Abmessungen / Dimensions							WSP Inserts			Kühlung / Cooling	[kg]
		D	H	L	dh6	M	Z*						
16E2R030M08-SZD07	●	16	30	48	8,5	M8	2	ZD.. 0703			+	0,00	
20E3R030M10-SZD07	●	20	30	49	10,5	M10	3	ZD.. 0703			+	0,10	
25E3R032M12-SZD07	●	25	32	54	12,5	M12	3	ZD.. 0703			+	0,10	
25E4R032M12-SZD07	●	25	32	54	12,5	M12	4	ZD.. 0703			+	0,10	
32E4R040M16-SZD07	○	32	40	65	17,0	M16	4	ZD.. 0703			+	0,20	
25E2R032M12-SZD09-C	●	25	32	54	12,5	M12	2	ZD.. 09T3			+	0,10	
25E3R032M12-SZD09-C	●	25	32	54	12,5	M12	3	ZD.. 09T3			+	0,10	
32E3R040M16-SZD09-C	●	32	40	63	17,0	M16	3	ZD.. 09T3			+	0,20	
32E3R040M16-SZD12-C	●	32	40	63	17,0	M16	3	ZD.. 1204			+	0,17	
40E4R040M16-SZD12-C	●	40	40	63	17,0	M16	4	ZD.. 1204			+	0,20	

SZD

HFC FRÄSER - MODULARES SYSTEM INSERTS FOR EXCHANGEABLE HEADS FOR HIGH FEED MILLING



ZDCW / ZDEW



ZDCW / ZDEW

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions							
	M8310	M8325	M8345	7205	7215	7230	7010	7025	7040					l	d	s	d ₁	r _ε
ZDCW 070304		■	■		●	●		○	○					6,800	6,800	3,18	2,60	0,4
ZDCW 09T304	■	■	■	○	●	●	○	○	○					9,525	9,525	3,97	3,40	0,4
ZDEW 120408	■	■	■	●			○	○	○					12,700	12,700	4,76	4,40	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
..SZD07	US 2205-T07P	FLAG T07P
..SZD09	US 3006-T09P	FLAG T09P
..SZD12	US 4011-T15P	FLAG T15P



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

PLANFRÄSER
FACE MILLING CUTTERS

 ECKFRÄSER
SHOULDER END MILLING CUTTERS

 WALZENSTIRNFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS

 KOPIERFRÄSER
COPY MILLING CUTTERS

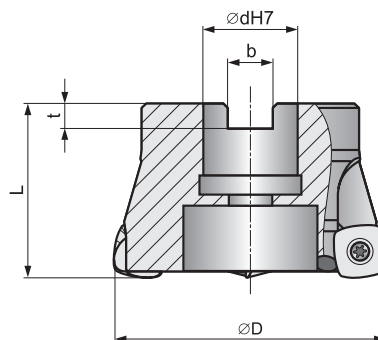
 FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

 WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SMOZD

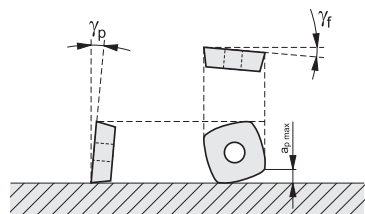
HFC FRÄSER
HIGH FEED MILLING CUTTERS

FEED ZD



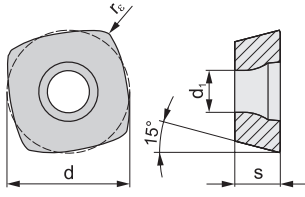
Z* - Anzahl Zähne / Number of teeth

γ_p	+10°	κ_r	-
γ_f	-6°	$a_{p\max}$	1,0; 1,6 mm

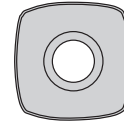


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								WSP Inserts	Kühlung Cooling	[kg]
		D	dH7	L	b	t	Z*					
40A03R-SMOZD09-C	○	40	16	40	8,4	5,6	3		ZD.. 09T3		+	0,2
40A04R-SMOZD09-C	●	40	16	40	8,4	5,6	4		ZD.. 09T3		+	0,2
50A04R-SMOZD12-C	●	50	22	40	10,4	6,4	4		ZD.. 1204		+	0,2
63A04R-SMOZD12-C	○	63	22	40	10,4	6,4	4		ZD.. 1204		+	0,5
63A05R-SMOZD12-C	●	63	22	40	10,4	6,4	5		ZD.. 1204		+	0,4
80A05R-SMOZD12-C	●	80	27	50	12,0	7,0	5		ZD.. 1204		+	1,0



ZDCW / ZDEW



ZDCW / ZDEW

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades									Abmessungen / Dimensions				
	M8310	M8325	M8345	7205	7215	7230	7010	7025	7040	l	d	s	d ₁	r _ε
ZDCW 09T304	■	■	■	○	●	●	○	○	○	9,525	9,525	3,97	3,40	0,4
ZDEW 120408	■	■	■	●			○	○	○	12,700	12,700	4,76	4,40	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

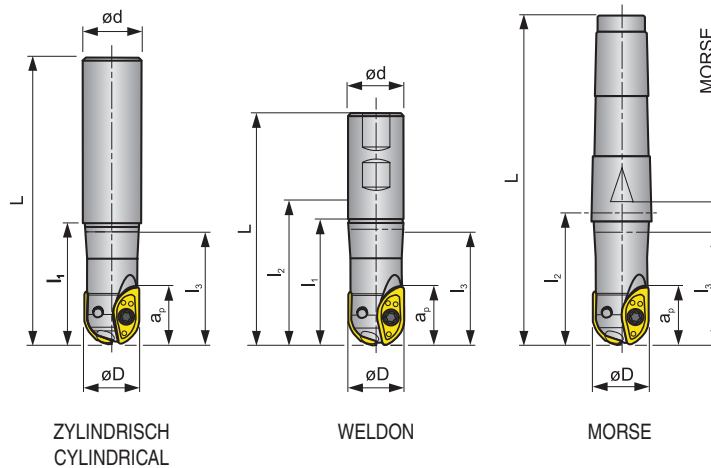
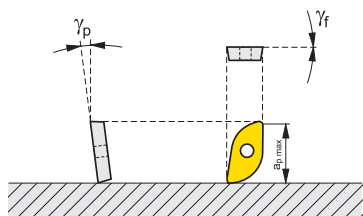
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
40	US 3006-T09P	D-T07P/T09P	FG-15	HS 0830C
50, 63	US 4011-T15P	D-T08P/T15P	FG-15	HS 1030C
80	US 4011-T15P	D-T08P/T15P	FG-15	-

L2-SZP

KOPIERFRÄSER - SCHAFT COPY MILLING CUTTERS



γ_p	-10°	κ_r	-
γ_f	0°	a_{pmax}	-

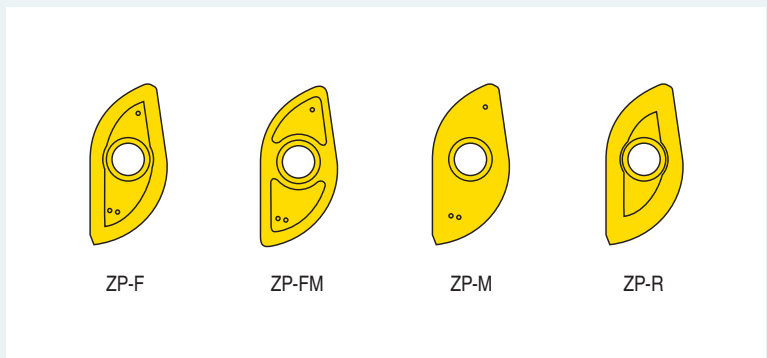
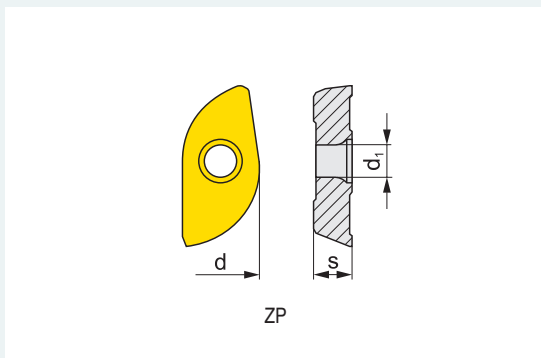


Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions										Kühlung / Cooling	[kg]
		D	L	l ₁	l ₂	l ₃	d	Morse	Z*	WSP Inserts	a _{pmax}		
ZYLINDRISCH / CYLINDRICAL													
10L2R050A16-SZP10	■	10	160	50,0	-	22,3	16	-	2	ZP 10..	8,9		0,21
12L2R045A20-SZP12	■	12	200	44,8	-	22,0	20	-	2	ZP 12..	10,7		0,43
16L2R045A20-SZP16-C	■	16	200	44,5	-	29,4	20	-	2	ZP 16..	14,4	+	0,43
20L2R050A20-SZP20-C	■	20	250	50,0	-	-	20	-	2	ZP 20..	17,9	+	0,85
20L2R055A25-SZP20-C	■	20	200	54,4	-	36,1	25	-	2	ZP 20..	17,9	+	0,65
20L2R055A32-SZP20-C	■	20	250	55,7	-	34,5	32	-	2	ZP 20..	17,9	+	1,40
25L2R060A25-SZP25-C	■	25	250	60,0	-	-	25	-	2	ZP 25..	22,3	+	1,29
25L2R065A32-SZP25-C	■	25	250	64,7	-	43,0	32	-	2	ZP 25..	22,3	+	1,29
32L2R070A32-SZP32-C	■	32	250	70,3	-	-	32	-	2	ZP 32..	28,6	+	1,37
WELDON													
12L2R040B20-SZP12	□	12	91	40	66,5	21,5	20	-	2	ZP 12..	10,7		0,16
12L2R060B20-SZP12	■	12	111	60	86,5	23,8	20	-	2	ZP 12..	10,7		0,19
16L2R040B20-SZP16-C	■	16	91	40	66,5	28,3	20	-	2	ZP 16..	14,4	+	0,16
16L2R060B20-SZP16-C	■	16	111	60	86,5	32,9	20	-	2	ZP 16..	14,4	+	0,20
20L2R050B25-SZP20-C	■	20	107	50	75,5	35,1	25	-	2	ZP 20..	17,9	+	0,29
20L2R070B25-SZP20-C	■	20	127	70	95,5	39,5	25	-	2	ZP 20..	17,9	+	0,35
25L2R060B25-SZP25-C	■	25	117	60	85,5	-	25	-	2	ZP 25..	22,3	+	0,35
25L2R080B25-SZP25-C	■	25	137	80	105,0	-	25	-	2	ZP 25..	22,3	+	0,41
32L2R070B32-SZP32-C	■	32	131	70	95,5	-	32	-	2	ZP 32..	28,6	+	0,62
32L2R100B32-SZP32-C	■	32	161	100	125,5	-	32	-	2	ZP 32..	28,6	+	0,79
40L2R070B32-SZP40-C	■	40	131	70	95,5	-	32	-	2	ZP 40..	35,7	+	0,72
40L2R100B40-SZP40-C	■	40	171	100	131,0	-	40	-	2	ZP 40..	35,7	+	1,33
50L2R100B50-SZP50-C	□	50	181	100	136,5	-	50	-	2	ZP 50..	44,7	+	2,13

ISO	Sortiment / Assortment	Abmessungen / Dimensions										Kühlung Cooling	[kg]
		D	L	l ₁	l ₂	l ₃	d	Morse	Z	WSP Inserts	a _{pmax}		
MORSE													
10L2R050E02-SZP10	■	10	114	-	50	21,9	-	2	2	ZP 10..	8,9	0,12	
12L2R040E02-SZP12	■	12	104	-	40	22,5	-	2	2	ZP 12..	10,7	0,11	
12L2R060E02-SZP12	■	12	124	-	60	25,8	-	2	2	ZP 12..	10,7	0,14	
12L2R090E02-SZP12	■	12	154	-	90	25,8	-	2	2	ZP 12..	10,7	0,19	
16L2R040E02-SZP16	□	16	104	-	40	31,3	-	2	2	ZP 16..	14,4	0,12	
16L2R060E02-SZP16	■	16	124	-	60	42,2	-	2	2	ZP 16..	14,4	0,15	
16L2R090E02-SZP16	■	16	154	-	90	75,9	-	2	2	ZP 16..	14,4	0,19	
20L2R050E03-SZP20	□	20	131	-	50	36,6	-	3	2	ZP 20..	17,9	0,27	
20L2R070E03-SZP20	■	20	151	-	70	-	-	3	2	ZP 20..	17,9	0,33	
20L2R100E03-SZP20	■	20	181	-	100	77,4	-	3	2	ZP 20..	17,9	0,39	
25L2R080E03-SZP25	■	25	161	-	80	-	-	3	2	ZP 25..	22,3	0,39	
25L2R110E04-SZP25	■	25	213	-	110	92,7	-	4	2	ZP 25..	22,3	0,76	
32L2R100E04-SZP32	■	32	203	-	100	-	-	4	2	ZP 32..	28,6	0,83	
32L2R150E04-SZP32	■	32	253	-	150	-	-	4	2	ZP 32..	28,6	1,10	
50L2R100E05-SZP50	□	50	230	-	100	-	-	5	2	ZP 50..	44,7	2,00	




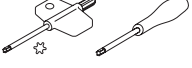



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions		
	M8310	M8345	8230	8240					d	s	d ₁
ZP 20ER-F	■								20,00	3,97	4,0
ZP 50ER-F	□								50,00	7,94	9,6
ZP 10ER-FM	■	■							10,00	1,70	2,2
ZP 12ER-FM	■	■							12,00	2,38	2,9
ZP 16ER-FM	■	■							16,00	3,18	2,9
ZP 20ER-FM	■	□							20,00	3,97	4,0
ZP 25ER-FM	■	□							25,00	4,76	4,7
ZP 32ER-FM	■	□							32,00	6,35	5,9
ZP 12ER-M		■	■	■					12,00	2,38	2,9
ZP 16ER-M		■	■	■					16,00	3,18	2,9
ZP 20ER-M		■	■						20,00	3,97	4,0

ISO	Materialien/Grades												Abmessungen/Dimensions				
	M8310	M8345	8230	8240									d	s	d ₁		
ZP 25ER-M		■	■										25,00	4,76	4,7		
ZP 32ER-M		■	■										32,00	6,35	5,9		
ZP 16ER-R		■											16,00	3,18	2,9		
ZP 20ER-R		■											20,00	3,97	4,0		
ZP 25ER-R		■											25,00	4,76	4,7		
ZP 32ER-R		■	■										32,00	6,35	5,9		
ZP 40ER-R		■											40,00	7,94	7,0		
ZP 50ER-R		□											50,00	7,94	9,6		

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Unterlage Shim seat	Unterlegplattenschraube Pad screw	Schraubendreher Screwdriver
					
SZP10	US 62004-T06P	FLAG T06P	-	-	-
SZP12	US 62506-T08P	FLAG T08P	-	-	-
SZP16	US 62508-T08P	FLAG T08P	-	-	-
SZP20	US 63510-T10P	FLAG T10P	-	-	-
SZP25	US 4011A-T15P	FLAG T15P	-	-	-
SZP32	US 65013-T20	SDR T20	-	-	-
SZP40	US 66015-T25P	SDR T25P	-	-	-
SZP50	US 68020-T30P	SDR T30	SZN 400322	US3508-T15P	FLAG T15P

UPI GRADE®



PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZSTIRNFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

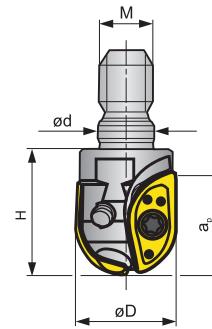
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

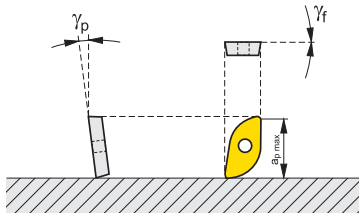
L2-SZP

KOPIERFRÄSER - MODULARES SYSTEM
EXCHANGEABLE HEADS FOR COPY MILLING



Z* - Anzahl Zähne / Number of teeth

γ_p	-10°	κ_r	-
γ_f	0°	$a_{p \max}$	$a_{p \max}$

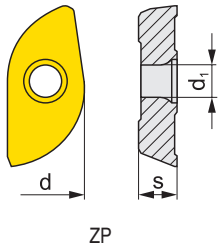


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							WSP Inserts	$a_{p \max}$	Kühlung / Cooling	[kg]
		D	H	d	M	Z*						
10L2R025M08-SZP10	□	10	25	8,5	M8	2		ZP 10..	8,9		0,02	
12L2R025M08-SZP12	■	12	25	8,8	M8	2		ZP 12..	10,7		0,02	
16L2R025M08-SZP16	■	16	25	8,5	M8	2		ZP 16..	14,4		0,02	
20L2R030M10-SZP20-C	■	20	30	10,5	M10	2		ZP 20..	17,9	+	0,04	
25L2R035M12-SZP25-C	■	25	35	12,5	M12	2		ZP 25..	22,3	+	0,07	

L2-SZP

KOPIERFRÄSER - MODULARES SYSTEM INSERTS FOR COPY MILLING



ZP



ZP-F



ZP-FM



ZP-M



ZP-R

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades				Abmessungen / Dimensions			
	M8310	M8345	8230	8240	d	s	d ₁	
ZP 20ER-F	■				20,00	3,97	4,0	
ZP 10ER-FM	■	■			10,00	1,70	2,2	
ZP 12ER-FM	■	■			12,00	2,38	2,9	
ZP 16ER-FM	■	■			16,00	3,18	2,9	
ZP 20ER-FM	■	□			20,00	3,97	4,0	
ZP 25ER-FM	■	□			25,00	4,76	4,7	
ZP 12ER-M		■	■	■	12,00	2,38	2,9	
ZP 16ER-M		■	■	■	16,00	3,18	2,9	
ZP 20ER-M		■	■		20,00	3,97	4,0	
ZP 25ER-M		■	■		25,00	4,76	4,7	
ZP 16ER-R		■			16,00	3,18	2,9	
ZP 20ER-R		■			20,00	3,97	4,0	
ZP 25ER-R		■			25,00	4,76	4,7	

ERSATZTEILE / SPARE PARTS

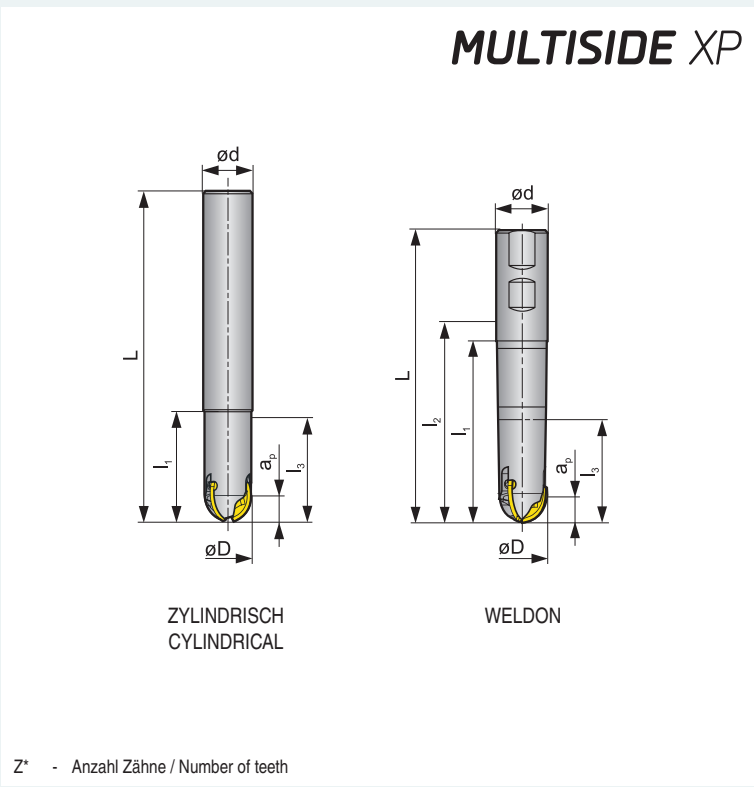
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
SZP10	US 62004-T06P	FLAG T06P
SZP12	US 62506-T08P	FLAG T08P
SZP16	US 62508-T08P	FLAG T08P
SZP20	US 63510-T10P	FLAG T10P
SZP25	US 4011A-T15P	FLAG T15P

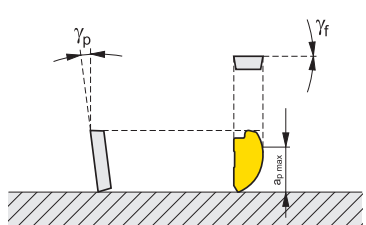
K3-CXP

KOPIERFRÄSER - SCHAFT
COPY MILLING CUTTERS

MULTISIDE XP



γ_p	-5°	κ_r	-
γ_f	0°	$a_{p\max}$	-

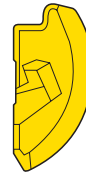
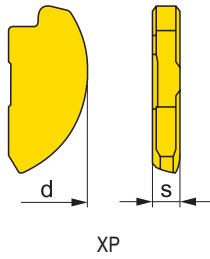


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								WSP Inserts	$a_{p\max}$	Kühlung / Cooling	[kg]
		D	L	l_1	l_2	l_3	d	Z*					
ZYLINDRISCH / CYLINDRICAL													
16K3R050A16-CXP16	■	16	200	50	-	-	16	3	XP 16..	8,0		0,29	
16K3R050A20-CXP16	■	16	200	50	-	42,2	20	3	XP 16..	8,0		0,43	
20K3R050A20-CXP20	■	20	200	50	-	-	20	3	XP 20..	10,0		0,45	
20K3R060A25-CXP20	■	20	250	60	-	43,9	25	3	XP 20..	10,0		0,85	
25K3R060A25-CXP25	■	25	250	60	-	-	25	3	XP 25..	12,5		0,88	
32K3R080A32-CXP32	■	32	250	80	-	-	32	3	XP 32..	16,0		1,42	
WELDON													
16K3R060B20-CXP16	■	16	111	60	86,5	44,4	20	3	XP 16..	8,0		0,20	
20K3R070B25-CXP20	■	20	127	70	95,5	46,3	25	3	XP 20..	10,0		0,36	
25K3R080B25-CXP25	■	25	137	80	105	-	25	3	XP 25..	12,5		0,44	

K3-CXP

KOPIERFRÄSER - SCHAFT INSERTS FOR COPY MILLING CUTTERS



XP-FM

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades			Abmessungen / Dimensions						
	M8310	M8345	8230			d	s			
XP 16ER-FM	■	■	■			16,00	2,00			
XP 20ER-FM	■	■	■			20,00	2,50			
XP 25ER-FM	■	■	■			25,00	3,17			
XP 32ER-FM	■	■	■			32,00	4,00			

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
CXP16	US 63009-T09P	FLAG T09P
CXP20	US 63513-T15P	FLAG T15P
CXP25	US 64014-T15P	FLAG T15P
CXP32	US 65017-T20P	FLAG T20P



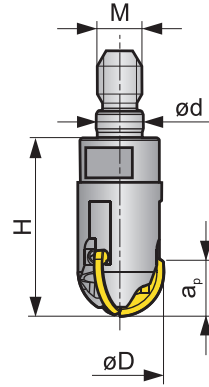
● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

K3-CXP

KOPIERFRÄSER - MODULARES SYSTEM
EXCHANGEABLE HEADS FOR COPY MILLING

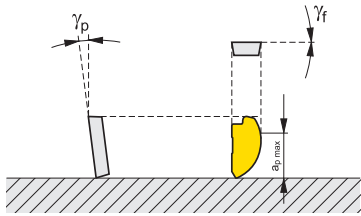


MULTISIDE XP



Z* - Anzahl Zähne / Number of teeth

γ_p	-5°	κ_r	-
γ_f	0°	$a_{p\max}$	-

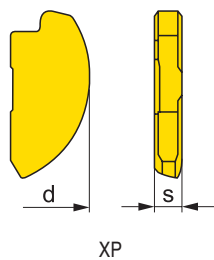


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	H	d	M	Z*	WSP Inserts	$a_{p\max}$		
16K3R035M08-CXP16	■	16	35	8,5	M8	3	XP 16..	8,0		0,04
16K3R035M10-CXP16	■	16	35	10,5	M10	3	XP 16..	8,0		0,05
20K3R040M10-CXP20	■	20	40	10,5	M10	3	XP 20..	10,0		0,07
25K3R045M12-CXP25	■	25	45	12,5	M12	3	XP 25..	12,5		0,11
32K3R055M16-CXP32	■	32	55	17,0	M16	3	XP 32..	16,0		0,24

K3-CXP

KOPIERFRÄSER - MODULARES SYSTEM INSERTS FOR COPY MILLING



XP



XP-FM

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions						
	M8310	M8345	8230					d	s					
XP 16ER-FM	■	■	■					16,00	2,00					
XP 20ER-FM	■	■	■					20,00	2,50					
XP 25ER-FM	■	■	■					25,00	3,17					
XP 32ER-FM	■	■	■					32,00	4,00					

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
CXP16	US 63009-T09P	FLAG T09P
CXP20	US 63513-T15P	FLAG T15P
CXP25	US 64014-T15P	FLAG T15P
CXP32	US 65017-T20P	FLAG T20P



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

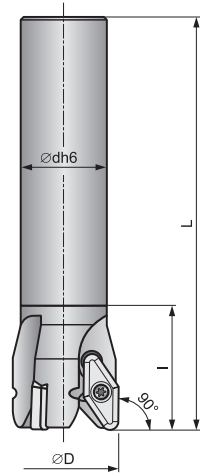
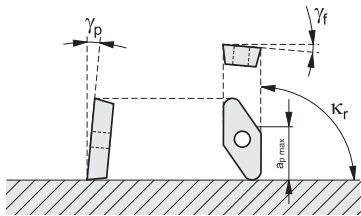
2014
 PLANFRÄSER
FACE MILLING CUTTERS
 ECKFRÄSER
SHOULDER END MILLING CUTTERS
 WALZENSTIRNFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS
 KOPIERFRÄSER
COPY MILLING CUTTERS
 FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION
 WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SVC22C

FRÄSER ZUR ALUMINIUMBEARBEITUNG - SCHAFT CUTTERS FOR MACHINING ALUMINIUM



γ_p	+3°	κ_r	90°
γ_f	+4° - +8°	$a_{p\max}$	16 mm



Z* - Anzahl Zähne / Number of teeth

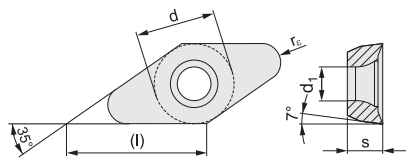
Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung Cooling	[kg]
		D	dh6	L	I	Z					
32A2R045A25-SVC22C	●	32	25	120	45	2				+	0,41
40A3R045A32-SVC22C	○	40	32	150	45	3				+	0,84

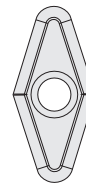
● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

SVC22C

FRÄSER ZUR ALUMINIUMBearbeitung - SCHAFT INSERTS FOR MACHINING ALUMINIUM



VCMT



VCMT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades					Abmessungen/Dimensions				
	HF7					(l)	d	s	d ₁	r _e
VCMT 220530F-FA	●					22,000	12,700	5,50	5,20	3,0

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehmomentgriff Torque handle
32 - 40	US 4511-T20	D-T20	MR-5,0



● Lagersortiment / ◯ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ◯ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

2014
 PLANFRÄSER
FACE MILLING CUTTERS
 ECKFRÄSER
SHOULDER END MILLING CUTTERS
 WALZENSTIRNFRÄSER/SCHIEBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS
 KOPIERFRÄSER
COPY MILLING CUTTERS
 FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION
 WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SVC22C

FRÄSER ZUR ALUMINIUMBearBEITUNG EXCHANGABLE HEADS FOR MACHINING ALUMINIUM

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

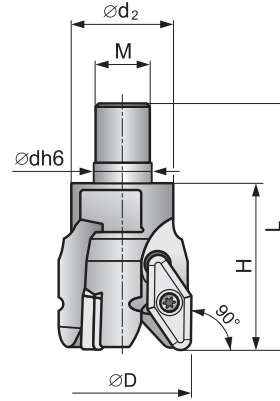
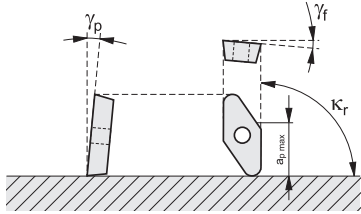
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



γ_p	+3°	κ_r	90°
γ_f	+11° - +13°	$a_{p\max}$	16 mm



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]	
		D	dh6	d ₂	M	L	H	Z*				
32A2R048M16-SVC22C	●	32	17	29	M16	71	48	2			+	0,20
40A3R048M16-SVC22C	●	40	17	29	M16	71	48	3			+	0,24



● Lagertyp / ○ Kein Lagertyp, ■ Lagertyp ab 1.04.2014 / □ Kein Lagertyp ab 1.04.2014
● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
Derzeitiges Lagerbestandssortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

SVC22C

FRÄSER ZUR ALUMINIUMBEARBEITUNG INSERTS FOR MACHINING ALUMINIUM

2014

PLANFRÄSER
FACE MILLING CUTTERS

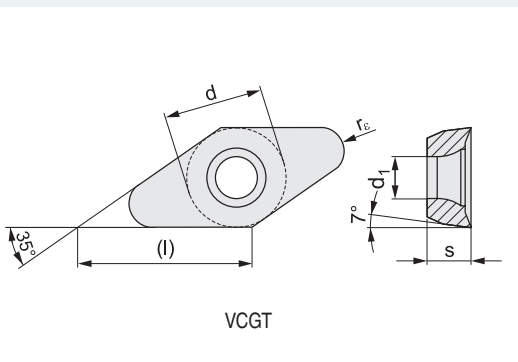
ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENTIRNFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	HF7										(l)	d	s	d ₁	r _e
VCGT 220530F-FA	●										22,000	12,700	5,50	5,20	3,0

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehmomentgriff Torque handle
32 - 40	US 4511-T20	D-T20	MR-5,0



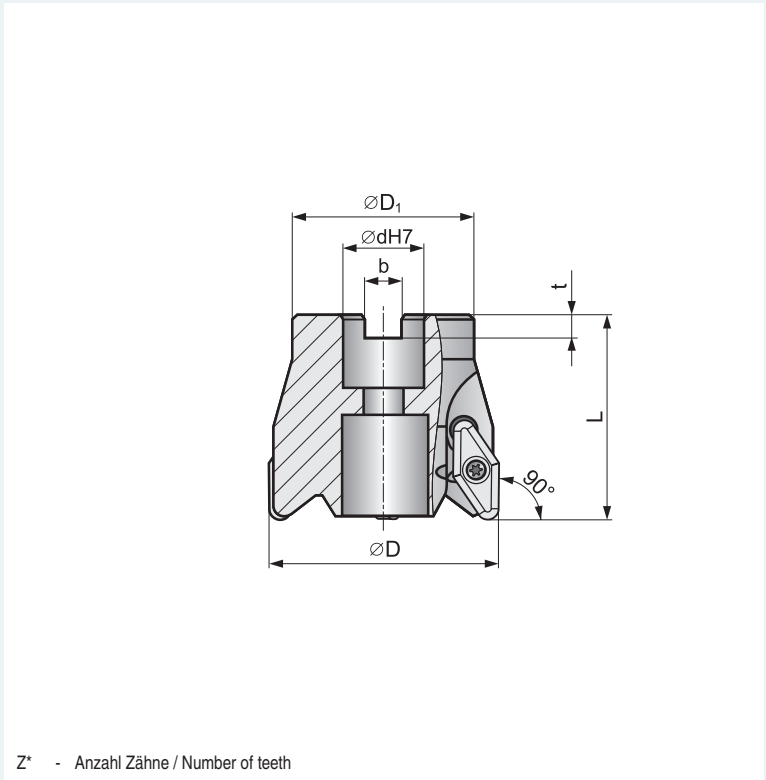
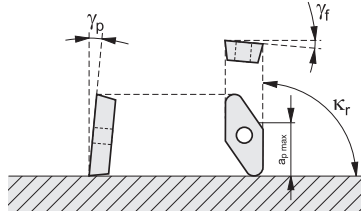
● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

S90VC22C

FRÄSER ZUR ALUMINIUMBEARBEITUNG
CUTTERS FOR MACHINING ALUMINIUM



γ_p	+3°	κ_r	90°
γ_f	+4° - +8°	$a_{p\max}$	16 mm



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	dH7	D ₁	L	b	t	Z*		
50A03R-S90VC22C	●	50	22	40	56	10	6,3	3	+	0,37
63A04R-S90VC22C	●	63	22	50	56	10	6,3	4	+	0,65
80A05R-S90VC22C	○	80	27	63	56	12	7,0	5	+	1,10

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER / SLOT MILLING CUTTERS

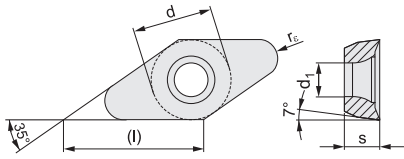
KOPPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

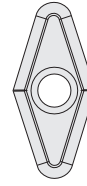
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

S90VC22C

FRÄSER ZUR ALUMINIUMBearBEITUNG INSERTS FOR MACHINING ALUMINIUM



VCGT



VCGT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions				
	HF7						(l)	d	s	d ₁	r _e
VCGT 220530F-FA	●						22,000	12,700	5,50	5,20	3,0

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehmomentgriff Torque handle	Schraube für Messerkopf Screw for taper clamping
50 - 63	US 4511-T20	D-T20	MR-5,0	HS 1030
80	US 4511-T20	D-T20	MR-5,0	-

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SSD09

ANFASEN 45° - SCHAFT
SHANK CUTTERS FOR 45° CHAMFERING

PLANFRÄSER
FACE MILLING CUTTERS

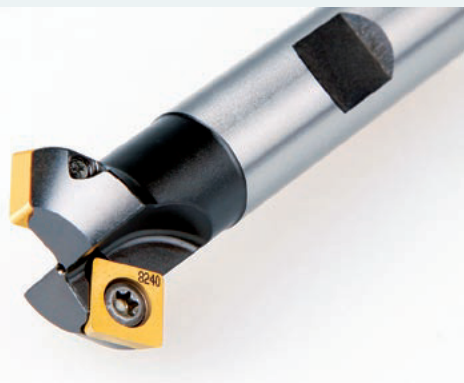
ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHLEIFENFRÄSER
SLOT MILLING CUTTERS

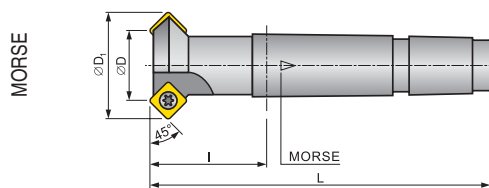
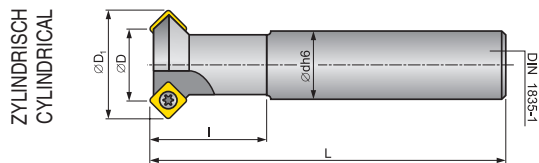
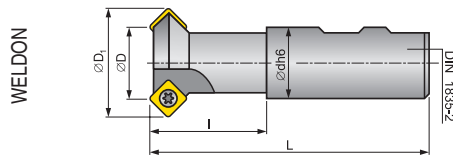
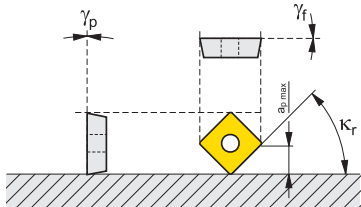
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



γ_p	0°	κ_r	45°
γ_f	0°	$a_{p\max}$	4,5 mm



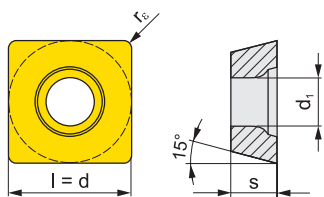
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

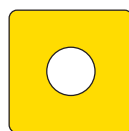
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	D ₁	L	l	Morse	dh6	Z*		
WELDON										
10N1R027B16-SSD09-A	●	10	22	75	27	-	16	1		0,12
16N2R027B16-SSD09-A	●	16	28	75	27	-	16	2		0,20
25N3R042B25-SSD09-A	●	25	37	98	42	-	25	3		0,40
ZYLINDRISCH/CYLINDRICAL										
16N2R027A16-SSD09	●	16	28	200	27	-	16	2		0,40
25N3R042A25-SSD09	●	25	37	200	42	-	25	3		0,70
MORSE										
10N1R030E02-SSD09-A	○	10	22	94	30	2	-	1		0,20
16N2R030E02-SSD09-A	●	16	28	94	30	2	-	2		0,25
25N3R043E03-SSD09-A	●	25	37	124	43	3	-	3		0,50

SSD09

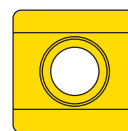
ANFASEN 45° - SCHAFT
INSERTS FOR CHAMFER MILLING



SDEW / SDEX



SDEW EN/SN



SDEX-74

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions					
	8215	8230	8240							l	d	s	d ₁	r _ε
SDEW 090308EN		●	●							9,525	9,525	3,18	4,40	0,8
SDEW 090308SN	●	●	●							9,525	9,525	3,18	4,40	0,8
SDEX 090308FN-74		●								9,525	9,525	3,18	4,40	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
10 - 16	US 3507-T15	SDR T15
25	US 3509-T15	SDR T15



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

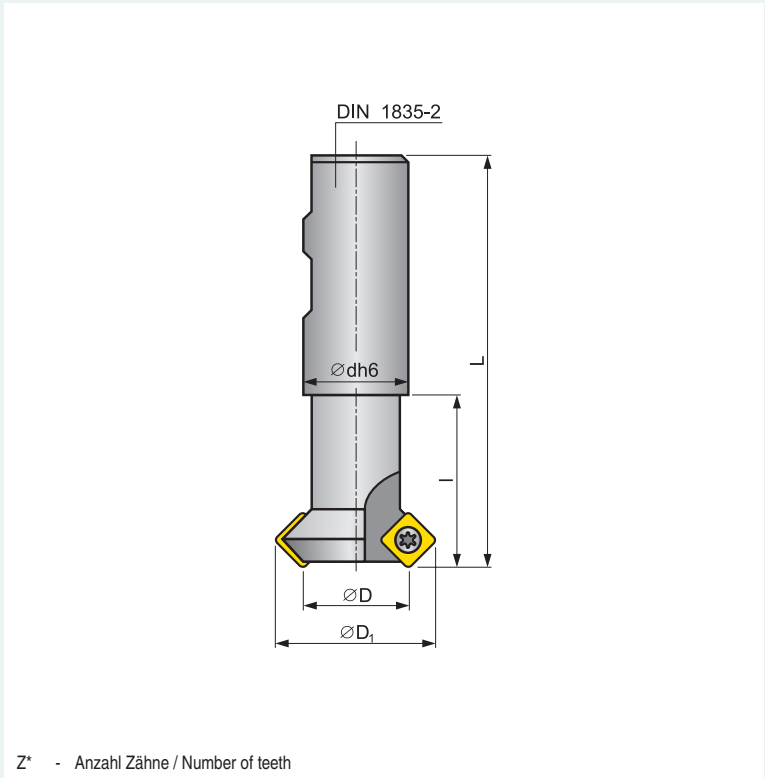
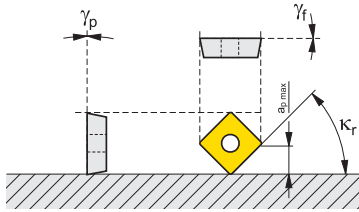
WENDESCHEIDPLATTEN
INDEXABLE INSERTS

N-SS009

ANFASEN 45° - SCHAFT SHANK CUTTERS FOR 45° CHAMFERING



γ_p	0°	κ_r	45°
γ_f	0°	$a_{p,max}$	4,5 mm



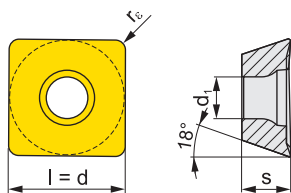
Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment/ Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	D ₁	L	Z*	l	dh6			
8N1R027B16-SS009-C	●	8	20,5	90	1	27	16		+	0,12
16N2R027B16-SS009-C	●	16	28,8	110	2	27	16		+	0,15
25N3R042B25-SS009-C	●	25	37,8	125	3	42	25		+	0,40

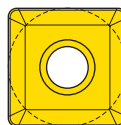
● Lagersortiment / ◯ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ◯ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
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N-SS009

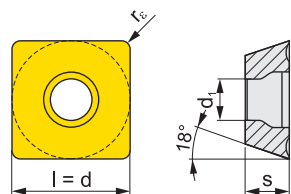
ANFASEN 45° - SCHAFT
INSERTS FOR CHAMFER MILLING



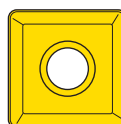
SOMT-P



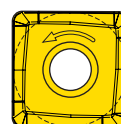
SOMT-P



SOMT



SOMT-MI



SOMT-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	M8310	8215	8230	8240	7010	7025	(l)	d	s	d ₁	r _e
SOMT 09T304-P			●				●	●	○	○	9,550	9,550	3,97	3,50	0,4
SOMT 09T304-MI		●		●	■	●	●	●	○		9,550	9,550	3,97	3,50	0,4
SOMT 09T308-M	●	●				●	●	●			9,550	9,550	3,97	3,50	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

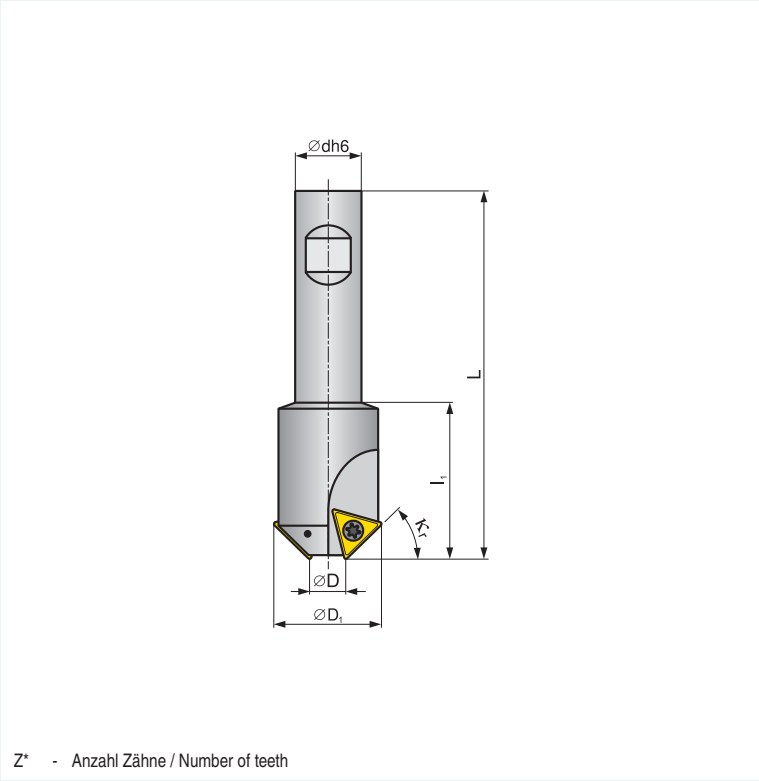
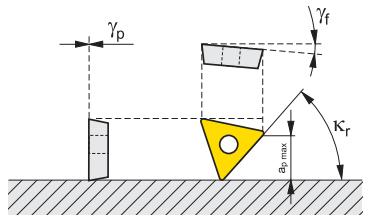
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
8 - 25	US 3006-T09P	SDR T09P

2516

**ANFASEN 45° - SCHAFT
SHANK CUTTERS FOR 45° CHAMFERING**



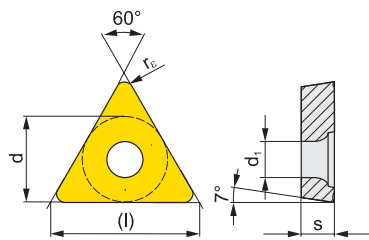
γ_p	0°	κ_r	45°
γ_f	-9°	$a_{p,max}$	8,5 mm



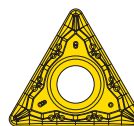
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	D ₁	L	Z	l	dh6				
2516-45-11	●	11	31	100	2	30	16			+	0,25
2516-45-19	●	19	39	100	2	30	20			+	0,35



TCMT



TCMT-FM

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	T8315	T8330						l	d	d ₁	s	r _e	
TCMT 16T308E-FM	•	•						16,50	9,53	4,40	3,97	0,8	

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
2516-45-11	US 4011-T15P	SDR T15P
2516-45-19	US 4011-T15P	SDR T15P



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
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PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDERSLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

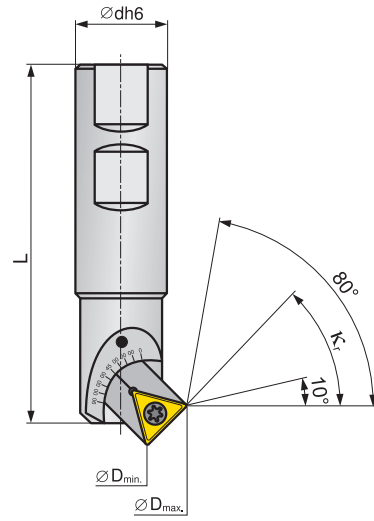
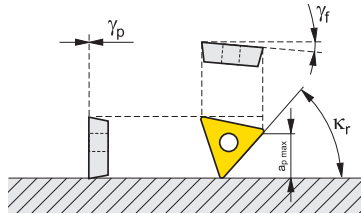
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

2636

ANFASEN EINSTELLBAR - SCHAFT ADJUSTABLE CUTTER FOR EDGE CHAMFERING



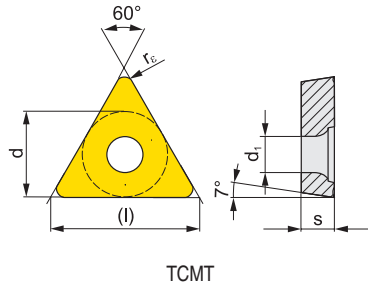
γ_p	0°	κ_r	10° - 80°
γ_f	-8°	$a_{p,max}$	-



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		dh6	L	κ_r	D_{min}	D_{max}				
2636-05-25	●	25	100	10°	5,0	31,0				0,30
				15°	5,5	31,0				0,30
				30°	7,0	29,5				0,30
				45°	11,0	29,5				0,30
				60°	16,0	28,5				0,30
				75°	21,0	26,5				0,30
				80°	23,0	26,0				0,30



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades						Abmessungen/Dimensions							
	T8315	T8330					l	d	d ₁	s	r _e			
TCMT 16T304E-FM	●	●					16,50	9,53	4,40	3,97	0,4			
TCMT 16T308E-FM	●	●					16,50	9,53	4,40	3,97	0,8			

ERSATZTEILE / SPARE PARTS

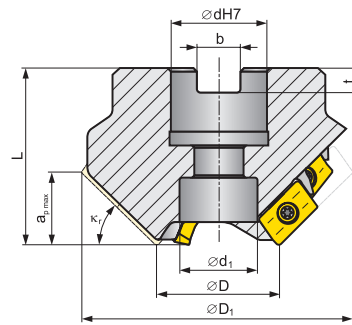
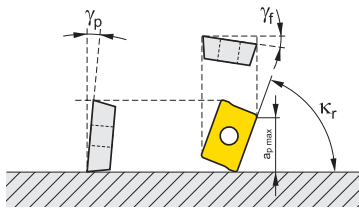
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Unterlage Shim	Spannschraube* Clamping screw*	Schraube Screw	Schraubendreher Screwdriver
2636-05-25	CA 2669	US 4011-T15P	USI 0614	SDR T15P

SxxXP

ANFASEN 15°-75°
MILLING CUTTERS FOR CHAMFERING

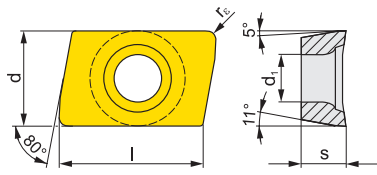
γ_p	$-1^\circ \div +5^\circ$	κ_r	$15^\circ \div 75^\circ$
γ_f	$-6^\circ \div -4^\circ$	$a_{p,max}$	—



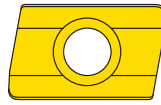
Z* - Anzahl Zähne / Number of teeth
ZN* - Número de pastilhas / Number of inserts

Abmessungen [mm]. / Dimensions [mm].

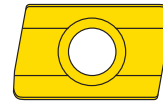
ISO	Sortiment / Assortment	Abmessungen / Dimensions										Kühlung / Cooling	[kg]	
		D	κ_r	$a_{p,max}$	dH7	d_1	L	D_1	b	t	Z*			ZN*
35T03R-S15XP1607-C	○	35	15	7	27	22	50	88	12,4	7	3	6	+	1,18
35T03R-S25XP1612-C	○	35	25	12	27	22	50	84	12,4	7	3	6	+	1,05
35T03R-S30XP1614-C	○	35	30	14	27	22	50	82	12,4	7	3	6	+	0,97
35T03R-S35XP1616-C	○	35	35	16	27	22	50	81	12,4	7	3	6	+	0,93
35T03R-S40XP1618-C	●	35	40	18	27	22	50	79	12,4	7	3	6	+	0,86
35T03R-S45XP1620-C	●	35	45	20	27	22	50	74	12,4	7	3	6	+	0,77
35T03R-S50XP1622-C	●	35	50	22	27	22	50	71	12,4	7	3	6	+	0,69
35T03R-S55XP1623-C	○	35	55	23	27	22	50	66	12,4	7	3	6	+	0,61
35T03R-S60XP1625-C	●	35	60	25	27	22	50	64	12,4	7	3	6	+	0,53
45T04R-S25XP1612-C	○	45	25	12	27	22	50	94	12,4	7	4	8	+	1,14
45T04R-S30XP1614-C	●	45	30	14	27	22	50	92	12,4	7	4	8	+	1,08
45T04R-S35XP1616-C	○	45	35	16	27	22	50	92	12,4	7	4	8	+	1,12
45T04R-S40XP1618-C	●	45	40	18	27	22	50	89	12,4	7	4	8	+	0,98
45T04R-S45XP1620-C	●	45	45	20	27	22	50	85	12,4	7	4	8	+	0,90
45T04R-S50XP1622-C	●	45	50	22	27	22	50	82	12,4	7	4	8	+	0,83
45T04R-S55XP1623-C	○	45	55	23	27	22	50	76	12,4	7	4	8	+	0,75
45T04R-S60XP1625-C	●	45	60	25	27	22	50	73	12,4	7	4	8	+	0,68
45T03R-S75XP1628-C	●	45	75	28	27	22	50	60	12,4	7	3	6	+	0,51



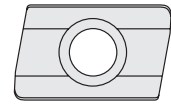
XPHT



XPHT 16-E



XPHT 16-S



XPHT 16-FA

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions				
	M9325	M9340	8215	8230	8240	HF7						
							l	d	d ₁	s	r _e	
XPHT 160412E			●	●			15,875	9,525	4,40	4,76	1,2	
XPHT 160412S	●	●	●	●	●		15,875	9,525	4,40	4,76	1,2	
XPHT 160408F-FA						●	15,875	9,525	4,40	4,76	0,8	

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

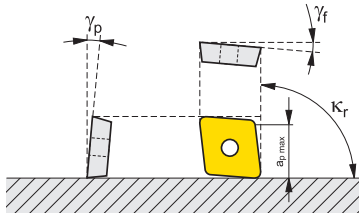
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
35 - 45	US 3509-T15	D-T07P/T15	FG-15	HS 1230C

SCC

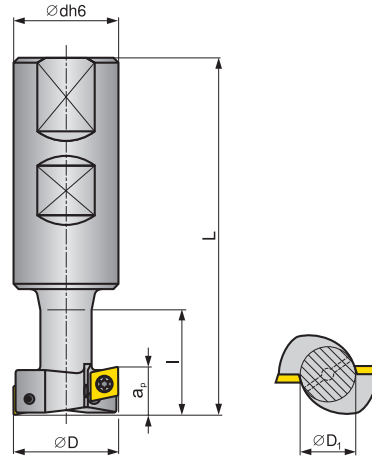
T-NUTENFRÄSER MILLING CUTTERS FOR T-SLOTS



γ_p	+2°	κ_r	90°
γ_f	-4°	$a_{p max}$	a_p



Abmessungen [mm]. / Dimensions [mm].

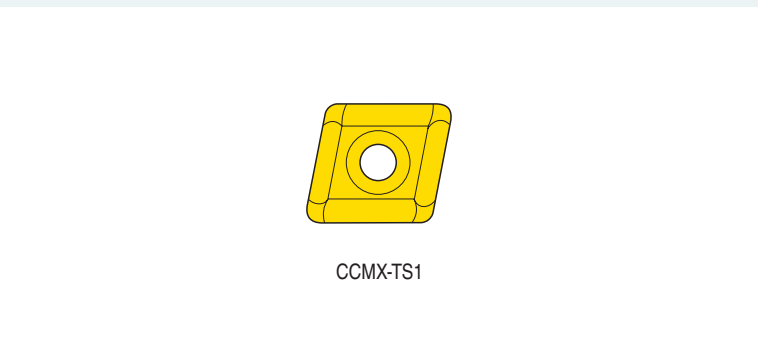
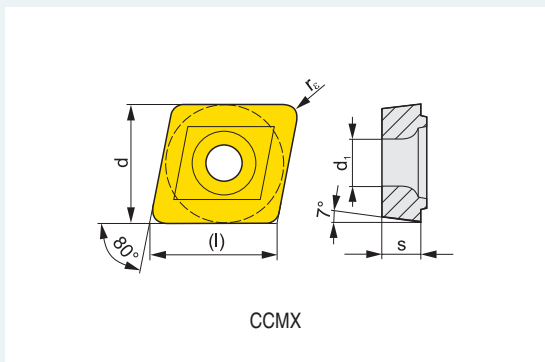


Z* - Anzahl Zähne / Number of teeth
K* - Effektive Zähnezahl / Effective number of teeth

ISO	Sortiment / Assortment	Abmessungen / Dimensions									WSP Inserts	Kühlung / Cooling	[kg]
		D	L	l	dh6	D ₁	a _p	Z*	K*				
25F1R030B25-SCC06-C	●	25	86	25	25	12	11	2	1	CCMX 0603	+	0,20	
32F1R038B32-SCC08-C	●	32	98	33	32	16	14	2	1	CCMX 08T3	+	0,40	
40F2R046B32-SCC09-C	●	40	105	41	32	20	18	4	2	CCMX 09T3	+	0,50	

SCC

T-NUTENFRÄSER INSERTS FOR T SLOT CUTTERS




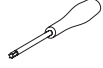
CCMX-TS1

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions				
	8230	8240					l	d	s	d ₁	r _ε
CCMX 060304S-TS1	○	●					6,400	6,350	3,50	2,80	0,4
CCMX 08T308S-TS1	●	○					8,100	8,030	4,40	3,50	0,8
CCMX 09T308S-TS1	●	○					9,700	9,525	3,97	3,50	0,8

ERSATZTEILE / SPARE PARTS

*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
25	US 2506-T07P 	SDR T07P 
32	US 3007-T09P	SDR T09P
40	US 3007-T09P	SDR T09P



● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
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