

SAD11E

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT SQUARE SHOULDER AND SLOT MILLING CUTTERS

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

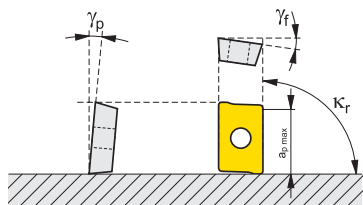
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

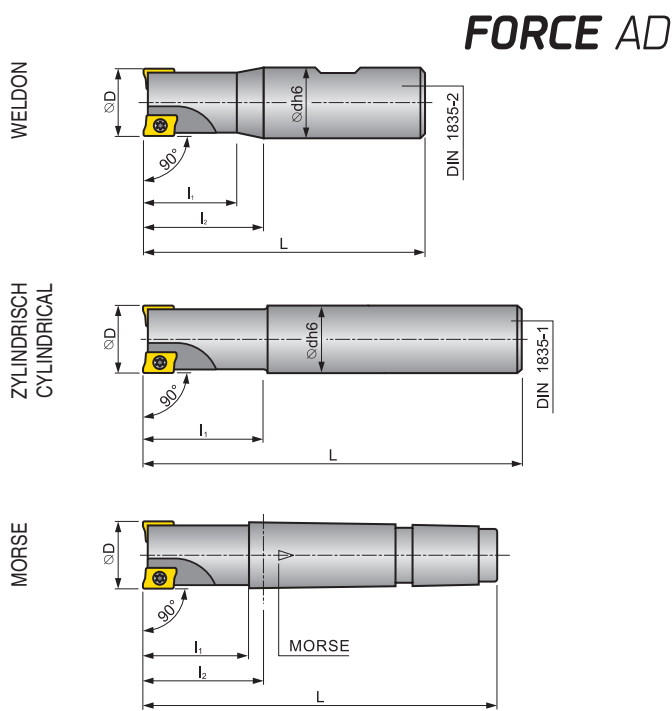


γ_p	+4° - +8°	κ_r	90°
γ_f	-9° - -12,8°	$a_{p\max}$	9 mm



Abmessungen [mm]. / Dimensions [mm].

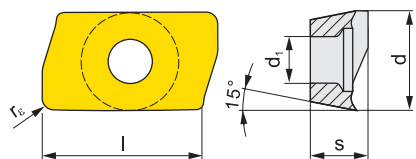
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]	
		D	L	l_1	l_2	dh6	Morse	Z*				
WELDON												
16A2R027B16-SAD11E-C	●	16	75	27	-	16	-	2			+	0,1
20A2R032B20-SAD11E-C	●	20	82	32	-	20	-	2			+	0,2
20A3R032B20-SAD11E-C	●	20	82	32	-	20	-	3			+	0,2
25A3R042B25-SAD11E-C	●	25	98	42	-	25	-	3			+	0,3
25A4R042B25-SAD11E-C	●	25	98	42	-	25	-	4			+	0,3
32A4R042B32-SAD11E-C	●	32	102	42	-	32	-	4			+	0,4
32A5R042B32-SAD11E-C	●	32	102	42	-	32	-	5			+	0,4
ZYLINDRISCH/CYLINDRICAL												
16A2R024A16-SAD11E-C	●	16	135	24	-	16	-	2			+	0,2
16A2R050A16-SAD11E-C	●	16	135	50	-	16	-	2			+	0,2
18A2R029A20-SAD11E-C	●	18	150	29	-	20	-	2			+	0,3
20A2R029A20-SAD11E-C	●	20	150	29	-	20	-	2			+	0,3
20A2R070A20-SAD11E-C	●	20	150	70	-	20	-	2			+	0,3
20A3R029A20-SAD11E-C	●	20	150	29	-	20	-	3			+	0,3
25A3R034A25-SAD11E-C	●	25	170	34	-	25	-	3			+	0,5
25A3R080A25-SAD11E-C	●	25	170	80	-	25	-	3			+	0,5
25A4R034A25-SAD11E-C	●	25	170	34	-	25	-	4			+	0,5
32A3R090A32-SAD11E-C	○	32	195	90	-	32	-	3			+	0,9
32A5R034A32-SAD11E-C	●	32	195	34	-	32	-	5			+	0,9
MORSE												
16A2R030E02-SAD11E-C	○	16	94	25	30	-	2	2			+	0,1
20A3R035E03-SAD11E-C	●	20	116	30	35	-	3	3			+	0,2
25A4R043E03-SAD11E-C	●	25	124	38	43	-	3	4			+	0,3



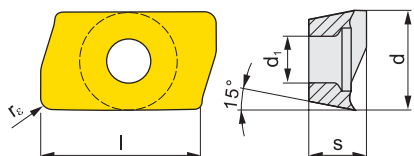
Z* - Anzahl Zähne / Number of teeth

SAD11E

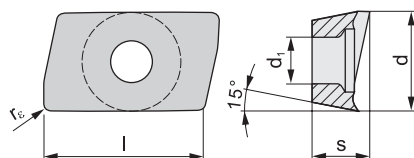
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



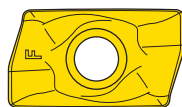
ADMX 11



ADMX 11 (16)



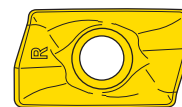
ADEX 11



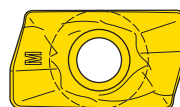
ADMX 11SR-F



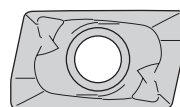
ADMX 11SR-M



ADMX 11PR-R



ADMX 11T316SR-M



ADEX FR-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 11T304SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T304SR-M			●	●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-M	●	●	●	●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T316SR-M					●	●	●		11,000	6,530	3,97	2,90	1,6
ADMX 11T308PR-R	●	●	●		●	●	●		11,000	6,530	3,97	2,90	0,8
ADEX 11T304FR-FA							●		11,000	6,530	3,97	2,90	0,4
ADEX 11T308FR-FA							●		11,000	6,530	3,97	2,90	0,8
ADEX 11T316FR-FA							●		11,000	6,530	3,97	2,90	1,6

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
16 - 32	US 2505-T08P	FLAG T08P

SAD11E

SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM EXCHANGEABLE HEAD FOR SQUARE SHOULDER AND SLOT MILLING CUTTERS

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFENFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER / SLOT MILLING CUTTERS

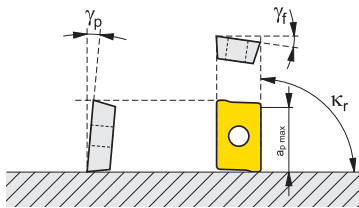
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

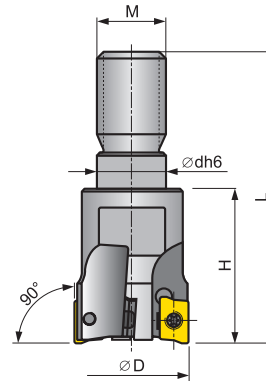
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



γ_p	+4° - +11°	κ_r	90°
γ_f	-8,1° - -12,8°	$a_{p\ max}$	9 mm



FORCE AD



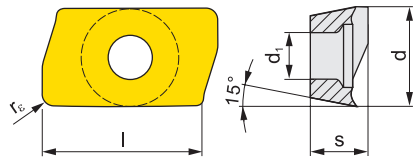
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

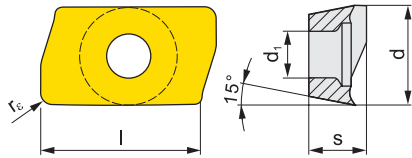
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]	
		D	L	H	M	dh6	Z*				
16A2R024M08-SAD11E-C	●	16	38	24	M8	8,5	2			+	0,1
20A2R026M10-SAD11E-C	●	20	45	26	M10	10,5	2			+	0,1
20A3R026M10-SAD11E-C	●	20	45	26	M10	10,5	3			+	0,1
25A3R033M12-SAD11E-C	●	25	55	33	M12	12,5	3			+	0,1
25A4R033M12-SAD11E-C	●	25	55	33	M12	12,5	4			+	0,1
32A4R043M16-SAD11E-C	●	32	66	43	M16	17,0	4			+	0,1
32A5R043M16-SAD11E-C	●	32	66	43	M16	17,0	5			+	0,1
40A4R043M16-SAD11E-C	○	40	66	43	M16	17,0	4			+	0,2
40A6R043M16-SAD11E-C	●	40	66	43	M16	17,0	6			+	0,2

SAD11E

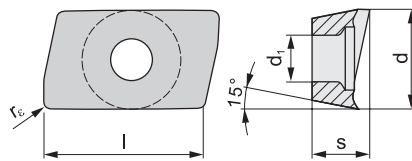
SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



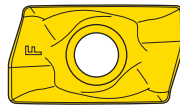
ADMX 11



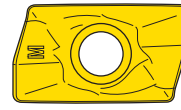
ADMX 11 (16)



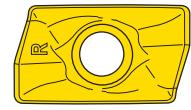
ADEX 11



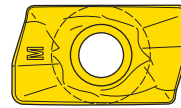
ADMX 11SR-F



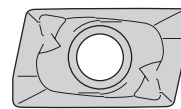
ADMX 11SR-M



ADMX 11PR-R



ADMX 11T316SR-M



ADEX FR-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 11T304SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T304SR-M			●	●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-M	●	●	●	●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T316SR-M					●	●	●		11,000	6,530	3,97	2,90	1,6
ADMX 11T308PR-R	●	●	●		●	●	●		11,000	6,530	3,97	2,90	0,8
ADEX 11T304FR-FA							●		11,000	6,530	3,97	2,90	0,4
ADEX 11T308FR-FA							●		11,000	6,530	3,97	2,90	0,8
ADEX 11T316FR-FA							●		11,000	6,530	3,97	2,90	1,6

ERSATZTEILE / SPARE PARTS

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

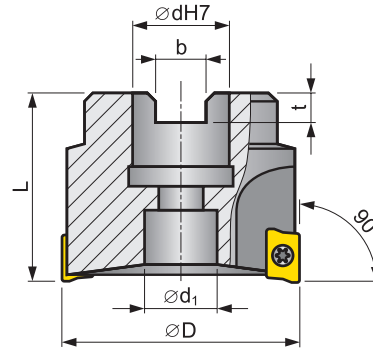
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
16 - 40	US 2505-T08P	FLAG T08P

S90AD11E

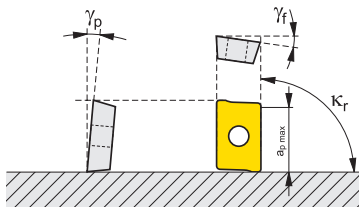
SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS



FORCE AD



γ_p	+11° - +12°	κ_r	90°
γ_f	-5,2° - -8,1°	$a_{p\max}$	9 mm



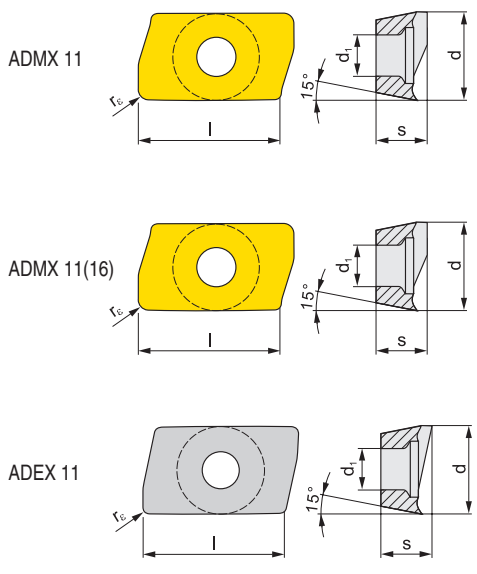
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*			
40A04R-S90AD11E-C	●	40	16	14	40	8,4	5,6	4		+	0,20
40A06R-S90AD11E-C	●	40	16	14	40	8,4	5,6	6		+	0,20
50A05R-S90AD11E-C	●	50	22	18	40	10,4	6,3	5		+	0,30
50A07R-S90AD11E-C	●	50	22	18	40	10,4	6,3	7		+	0,30
63A06R-S90AD11E-C	●	63	22	18	40	10,4	6,3	6		+	0,50
63A09R-S90AD11E-C	●	63	22	18	40	10,4	6,3	9		+	0,50
80A10R-S90AD11E-C	●	80	27	38	50	12,4	7,0	10		+	1,00
100A11R-S90AD11E-C	○	100	32	45	50	14,4	8,0	11		+	1,70
125A12R-S90AD11E-C	○	125	40	56	63	16,4	9,0	12		+	3,50

S90AD11E

SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 11T304SR-F				●	●	●	●		11,000	6,530	3,97	2,9	0,4
ADMX 11T308SR-F				●	●	●	●		11,000	6,530	3,97	2,9	0,8
ADMX 11T304SR-M			●	●	●	●	●		11,000	6,530	3,97	2,9	0,4
ADMX 11T308SR-M	●	●	●	●	●	●	●		11,000	6,530	3,97	2,9	0,8
ADMX 11T316SR-M					●	●	●		11,000	6,530	3,97	2,9	1,6
ADMX 11T308PR-R	●	●	●		●	●	●		11,000	6,530	3,97	2,90	0,80
ADEX 11T304FR-FA								●	11,000	6,530	3,97	2,90	0,40
ADEX 11T308FR-FA								●	11,000	6,530	3,97	2,90	0,80
ADEX 11T316FR-FA								●	11,000	6,530	3,97	2,90	1,60

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 2505-T08P	D-T08P/T15P	FG-15	HS 0830C
50 - 63	US 2505-T08P	D-T08P/T15P	FG-15	HS 1030C
80 - 125	US 2505-T08P	D-T08P/T15P	FG-15	-



● 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

WALZENTIRNFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

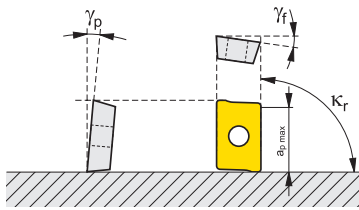
WENDESCHEIDPLATTEN
INDEXABLE INSERTS

SAD16E

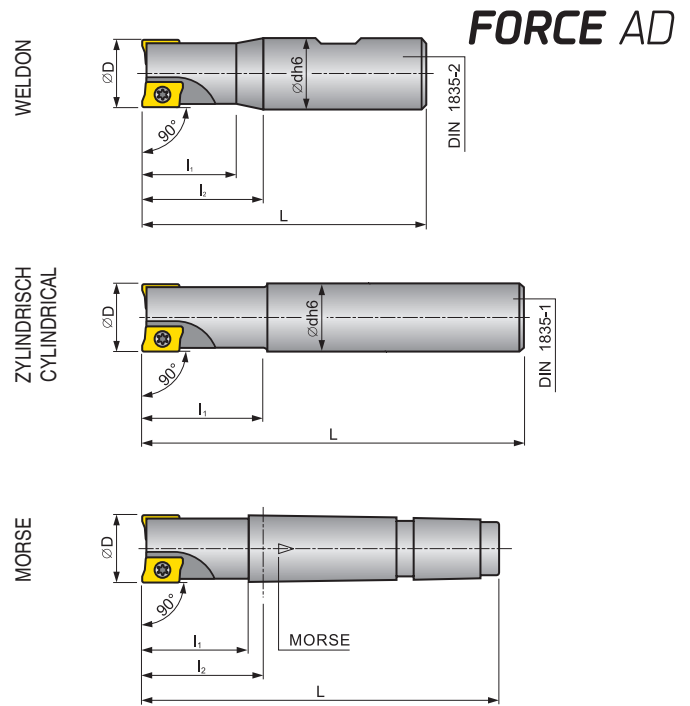
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	+5° - 10,5°	κ_r	90°
γ_f	-8,2° - -13°	$a_{p\max}$	13 mm



Abmessungen [mm]. / Dimensions [mm].

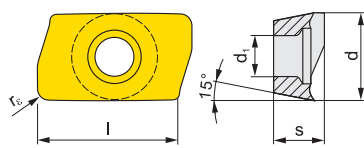


Z* - Anzahl Zähne / Number of teeth

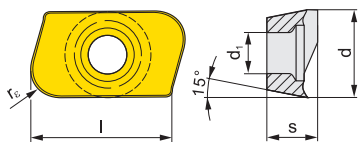
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]	
		D	L	l ₁	l ₂	dh6	Morse	Z*				
WELDON												
25A2R042B25-SAD16E-C	●	25	98	42	-	25	-	2			+	0,30
32A3R040B32-SAD16E-C	●	32	100	40	-	32	-	3			+	0,50
40A3R050B32-SAD16E-C	●	40	110	50	-	32	-	3			+	0,60
40A4R050B32-SAD16E-C	●	40	110	50	-	32	-	4			+	0,60
ZYLINDRISCH/CYLINDRICAL												
25A2R033A25-SAD16E-C	●	25	165	33	-	25	-	2			+	0,50
32A3R033A32-SAD16E-C	●	32	195	33	-	32	-	3			+	0,90
MORSE												
25A2R043E03-SAD16E-C	●	25	98	38	43	-	3	2			+	0,30
32A3R043E03-SAD16E-C	●	32	100	38	43	-	3	3			+	0,50
40A3R054E04-SAD16E-C	○	40	110	48	54	-	4	3			+	0,60
40A4R054E04-SAD16E-C	●	40	110	48	54	-	4	4			+	0,60

SAD16E

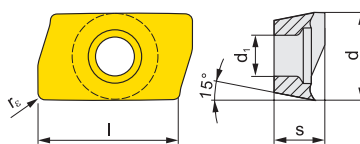
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



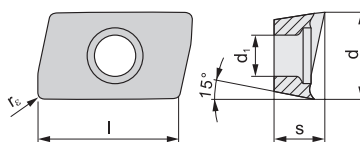
ADMX 16



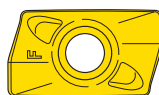
ADMX 16 (16/32)



ADEX 16



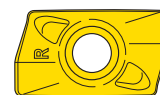
ADEX 16



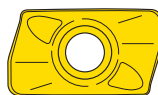
ADMX 16SR-F



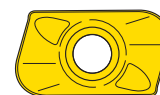
ADMX 16SR-M



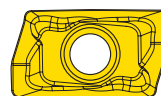
ADMX 16PR-R



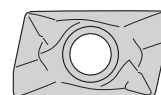
ADMX 160616SR-M



ADMX 160632SR-M



ADEX 16 SR-FM



ADEX 16 FR-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _c
ADMX 160608SR-F				●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160608SR-M	●	●	●	●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160608PR-R	●	●	●		●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160616SR-M			●		●	●	●		16,000	9,950	6,25	4,50	1,6
ADMX 160632SR-M			●		○	●	●		16,000	9,950	6,25	4,50	3,2
ADEX 160608SR-FM			●	●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADEX 160608FR-FA							●		16,000	9,950	6,25	4,50	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 - 40	US 4008-T15P	FLAG T15P

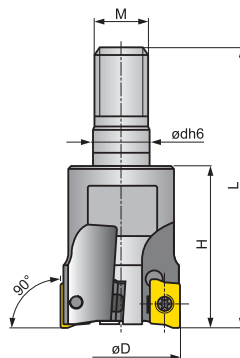
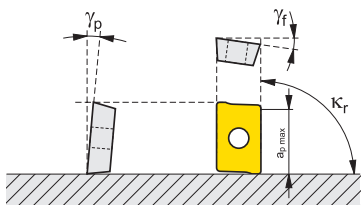
SAD16E

SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM EXCHANGEABLE HEADS FOR SQUARE SHOULDER AND SLOT MILLING CUTTERS

FORCE AD



γ_p	+7° - +10,5°	κ_r	90°
γ_f	-8,2° - -12°	$a_{p\max}$	13 mm



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	L	H	M	dh6	Z*			
32A3R043M16-SAD16E-C	●	32	66	43	M16	17	3	+	0,20	
40A4R043M16-SAD16E-C	●	40	66	43	M16	17	4	+	0,20	

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHLEIFENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

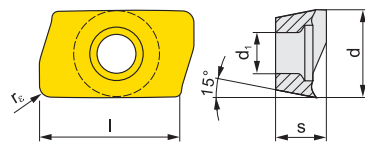
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

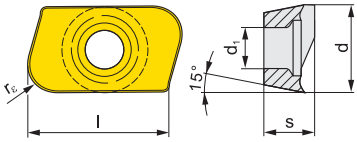
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SAD16E

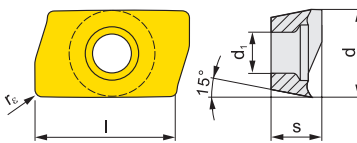
SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



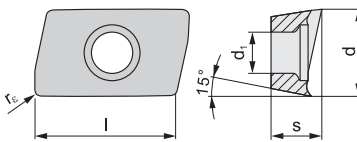
ADMX 16



ADMX 16 (16/32)



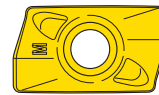
ADEX 16



ADEX 16



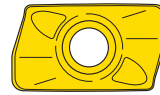
ADMX 16SR-F



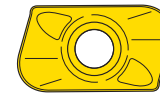
ADMX 16SR-M



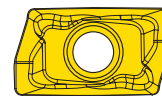
ADMX 16PR-R



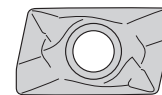
ADMX 160616SR-M



ADMX 160632SR-M



ADEX 16 SR-FM





ADEX 16 FR-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions				
	M5315	M9315	M9325	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 160608SR-F				●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160608SR-M	●	●	●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160608PR-R	●	●	●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADMX 160616SR-M			●	●	●	●		16,000	9,950	6,25	4,50	1,6
ADMX 160632SR-M			●	○	●	●		16,000	9,950	6,25	4,50	3,2
ADEX 160608SR-FM			●	●	●	●		16,000	9,950	6,25	4,50	0,8
ADEX 160608FR-FA							●	16,000	9,950	6,25	4,50	0,8

ERSATZTEILE / SPARE PARTS

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

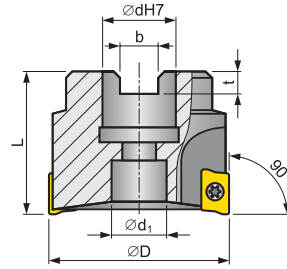
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
32, 40	 US 4008-T15P	 FLAG T15P

S90AD16E

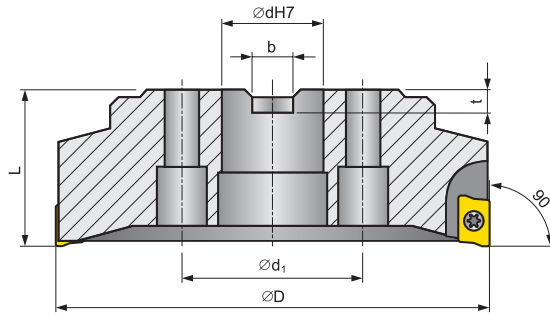
SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS



FORCE AD



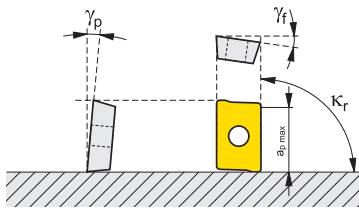
$\varnothing 40 - 125 \text{ mm}$



$\varnothing 160 \text{ mm}$

Z* - Anzahl Zähne / Number of teeth

γ_p	+10,5° - 12°	κ_r	90°
γ_f	-3,8° - -8,2°	$a_{p \max}$	13 mm

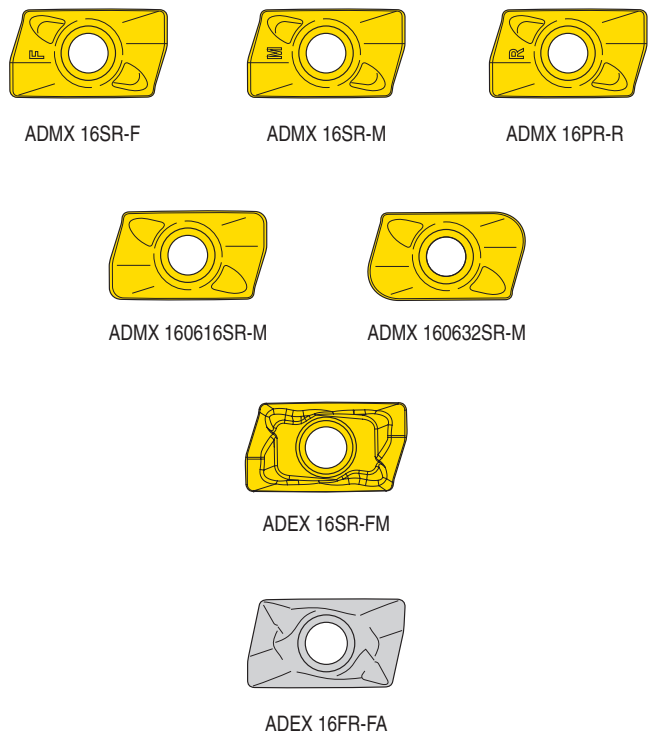
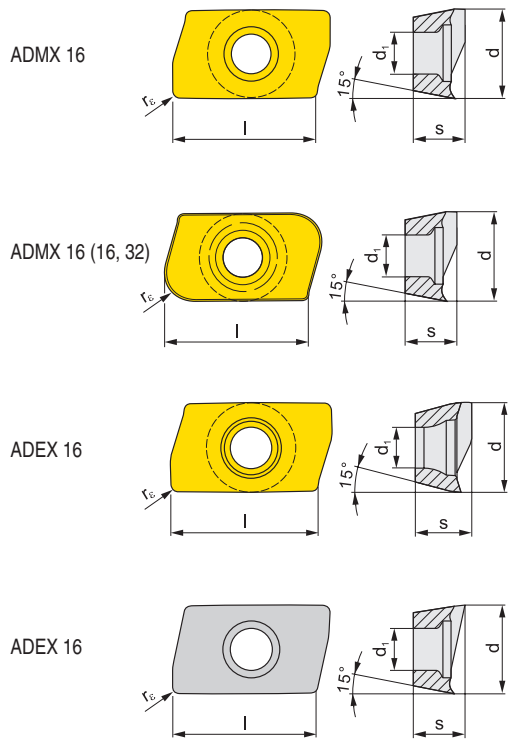


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*			
40A04R-S90AD16E-C	●	40	16	14	40	8,4	5,6	4		+	0,20
50A03R-S90AD16E-C	●	50	22	18	40	10,4	6,3	3		+	0,30
50A05R-S90AD16E-C	●	50	22	18	40	10,4	6,3	5		+	0,30
63A04R-S90AD16E-C	●	63	22	18	40	10,4	6,3	4		+	0,50
63A06R-S90AD16E-C	●	63	22	18	40	10,4	6,3	6		+	0,50
80A05R-S90AD16E-C	●	80	27	38	50	12,4	7,0	5		+	1,00
80A07R-S90AD16E-C	●	80	27	38	50	12,4	7,0	7		+	1,00
100A06R-S90AD16E-C	●	100	32	45	50	14,4	8,0	6		+	1,80
100A08R-S90AD16E-C	●	100	32	45	50	14,4	8,0	8		+	1,70
125A09R-S90AD16E-C	●	125	40	56	63	16,4	9,0	9		+	3,50
160C10R-S90AD16E	●	160	40	66,7	63	16,4	9,0	10			5,70

S90AD16E

SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



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

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions					
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _ε
ADMX 160608SR-F				●	●	●	●		16,000	9,950	6,25	4,5	0,8
ADMX 160608SR-M	●	●	●	●	●	●	●		16,000	9,950	6,25	4,5	0,8
ADMX 160608PR-R	●	●	●		●	●	●		16,000	9,950	6,25	4,5	0,8
ADMX 160616SR-M			●		●	●	●		16,000	9,950	6,25	4,5	1,6
ADMX 160632SR-M			●		○	●	●		16,000	9,950	6,25	4,50	3,20
ADEX 160608SR-FM			●	●	●	●	●		16,000	9,950	6,25	4,50	0,80
ADEX 160608FR-FA							●		16,000	9,950	6,25	4,50	0,80

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	Parafuso de fixação da fresa Clamping screw for taper
40	US 4008-T15P	D-T08P/T15P	FG-15	HS 0830C
50 - 63	US 4011-T15P	D-T08P/T15P	FG-15	HS 1030C
80 - 160	US 4011-T15P	D-T08P/T15P	FG-15	-

CAD15

SCHULTERFRÄSEN - SCHAFT END MILLING CUTTERS

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIFENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

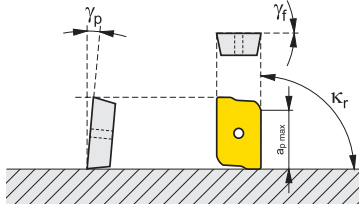
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

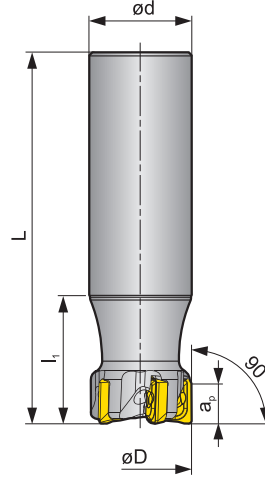
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



γ_p	2°	κ_r	90°
γ_f	0°	$a_{p,max}$	10 mm



MULTISIDE AD



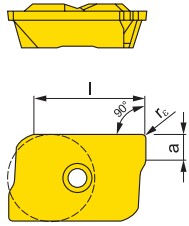
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

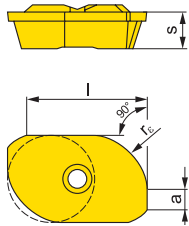
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	L	l_1	d	Z*				
ZYLINDRISCH/CYLINDRICAL									+	0,50
	■	25	160	40	25	3			+	1,04
	■	32	200	40	32	5				



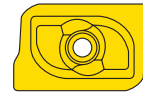
● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
 ● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
 Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen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



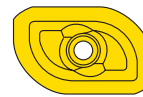
ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)



ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades												Abmessungen / Dimensions				
	M8345	8230											l	d	s	a	r _e
ADKX 15T304ER-F	■	■											12,200	9,525	3,97	2,60	0,4
ADKX 15T308ER-F	■	■											12,200	9,525	3,97	2,20	0,8
ADKX 15T330ER-F	■	■											12,400	9,525	3,97	2,55	3,0
ADKX 15T340ER-F	■	■											12,500	9,525	3,97	2,55	4,0
ADKX 15T360ER-F*	■	■											12,600	9,525	3,97	2,00	6,0

*) Beim Einsatz von WSP mit einem Eckenradius r_e = 6,0 mm muss der Fräskörper nachgearbeitet werden!
 *) When using inserts with corner radius r_e = 6.0 mm, the cutter body must be modified!

ERSATZTEILE / SPARE PARTS

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

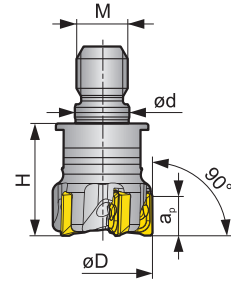
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
25 - 32	US 63511D-T15P	FLAG T15P

CAD15

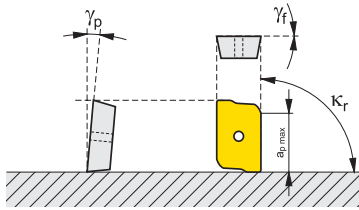
SCHULTERFRÄSEN - MODULARES SYSTEM EXCHANGEABLE HEADS FOR MULTISIDE AD



MULTISIDE AD



γ_p	2°	κ_r	90°
γ_f	0°	$a_{p,max}$	10 mm



Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	H	d	M	Z				
25A3R030M12-CAD15-C	<input type="checkbox"/>	25	30	12,5	M12	3			+	0,07
32A5R035M16-CAD15-C	<input type="checkbox"/>	32	35	17,0	M16	5			+	0,15
40A6R035M16-CAD15-C	<input type="checkbox"/>	40	35	17,0	M16	6			+	0,18

PLANFRÄSER
FACE MILLING CUTTERS

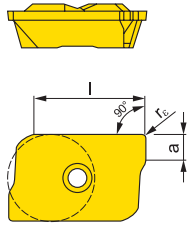
ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

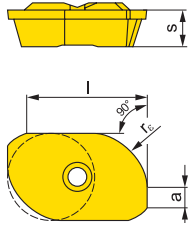
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

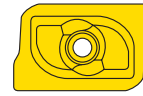
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



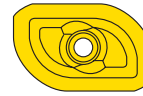
ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)



ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades												Abmessungen / Dimensions				
	M8345	8230											l	d	s	a	r _e
ADKX 15T304ER-F	■	■											12,200	9,525	3,97	2,60	0,4
ADKX 15T308ER-F	■	■											12,200	9,525	3,97	2,20	0,8
ADKX 15T330ER-F	■	■											12,400	9,525	3,97	2,55	3,0
ADKX 15T340ER-F	■	■											12,500	9,525	3,97	2,55	4,0
ADKX 15T360ER-F*	■	■											12,600	9,525	3,97	2,00	6,0

*) Beim Einsatz von WSP mit einem Eckenradius r_e = 6,0 mm muss der Fräskörper nachgearbeitet werden!
 *) When using inserts with corner radius r_e = 6.0 mm, the cutter body must be modified!

ERSATZTEILE / SPARE PARTS

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

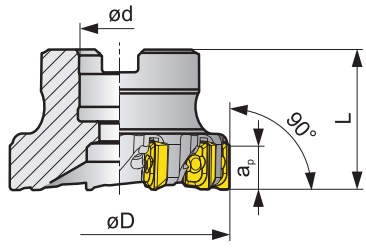
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
25 - 40	US 63511D-T15P	FLAG T15P

C90AD15

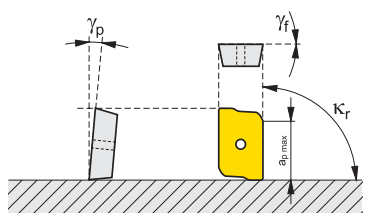
SCHULTERFRÄSEN SHOULDER MILLING CUTTERS



MULTISIDE AD



γ_p	2°	κ_r	90°
γ_f	0°	$a_{p,max}$	10 mm



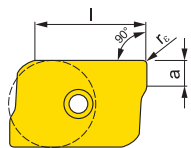
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

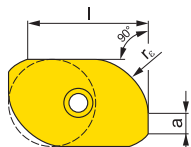
ISO	Sortiment / Assortment	Abmessungen / Dimensions						Kühlung / Cooling	[kg]
		D	d	L	Z				
40A06R-C90AD15-C	■	40	16	40	6			+	0,17
50A08R-C90AD15-C	■	50	22	40	8			+	0,26
63A10R-C90AD15-C	■	63	22	40	10			+	0,40
80A10R-C90AD15-C	■	80	27	50	10			+	0,71
80A14R-C90AD15-C	□	80	27	50	14			+	0,71

C90AD15

SCHULTERFRÄSEN INSERTS FOR MULTISIDE AD



ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)



ADKX 15 (04, 08)



ADKX 15 (30, 40, 60)

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	M8345	8230									l	d	s	a	r _e
ADKX 15T304ER-F	■	■									12,200	9,525	3,97	2,60	0,4
ADKX 15T308ER-F	■	■									12,200	9,525	3,97	2,20	0,8
ADKX 15T330ER-F	■	■									12,400	9,525	3,97	2,55	3,0
ADKX 15T340ER-F	■	■									12,500	9,525	3,97	2,55	4,0
ADKX 15T360ER-F*	■	■									12,600	9,525	3,97	2,00	6,0

*) Beim Einsatz von WSP mit einem Eckenradius r_e = 6,0 mm muss der Fräskörper nachgearbeitet werden!
 *) When using inserts with corner radius r_e = 6.0 mm, the cutter body must be modified!

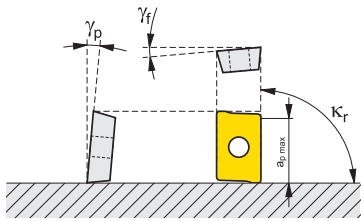
ERSATZTEILE / SPARE PARTS

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

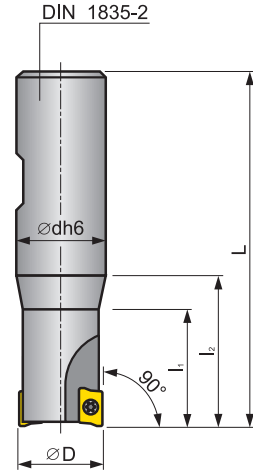
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle
40 - 80	US 63511D-T15P	D-T08P/T15P	FG-15

SAP10D

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	+4° - +10°	κ_r	90°
γ_f	+12°	$a_{p,max}$	9 mm



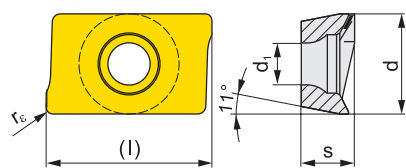
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

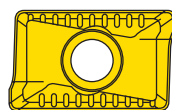
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	L	l_1	l_2	Z*	dh6			
10A1R020B16-SAP10D-C	●	10	78	20	30	1	16		+	0,1
12A1R027B16-SAP10D-C	●	12	75	-	27	1	16		+	0,2
14A1R027B16-SAP10D-C	●	14	75	-	27	1	16		+	0,2
16A2R032B16-SAP10D-C	●	16	80	-	32	2	16		+	0,3
18A2R032B20-SAP10D-C	●	18	82	-	32	2	20		+	0,4
20A3R032B20-SAP10D-C	●	20	82	-	32	3	20		+	0,8
25A3R042B25-SAP10D-C	●	25	98	-	42	3	25		+	1,1
25A4R042B25-SAP10D-C	○	25	98	-	42	4	25		+	1,1
32A5R042B32-SAP10D-C	○	32	102	-	42	5	32		+	1,5

SAP10D

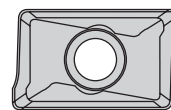
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



APKT



APKT-M



APKT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions				
	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _ε
APKT 1003PDER-M	●	●	●	●	●	●		11,000	6,700	3,50	2,88	0,5
APKT 1003PDFR-FA							●	11,000	6,700	3,50	2,88	0,5

ERSATZTEILE / SPARE PARTS

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

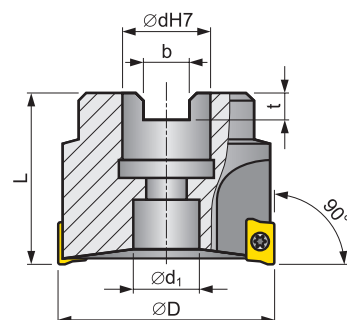
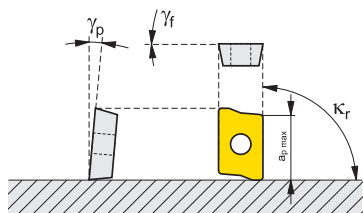
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
10 - 32	US 2506-T07P	SDR T07P

S90AP10D

SCHULTERFRÄSEN UND NUTFRÄSEN
SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	+3°	κ_r	90°
γ_f	0°	$a_{p\max}$	9 mm



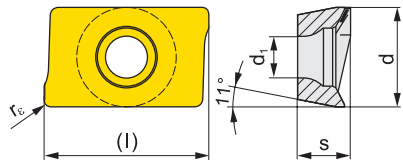
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

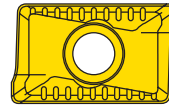
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*		
40A6R-S90AP10D	○	40	16	14	40	8,4	5,6	6		0,80
50A7R-S90AP10D	○	50	22	18	40	10,4	6,3	7		1,10
63A9R-S90AP10D	○	63	22	18	50	10,4	6,3	9		1,30

S90AP10D

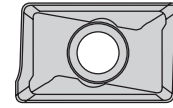
SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



APKT



APKT-M



APKT-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades							Abmessungen / Dimensions				
	M9315	M9325	M9340	8215	8230	8240	HF7	l)	d	s	d ₁	r _ε
APKT 1003PDER-M	●	●	●	●	●	●		11,000	6,700	3,5	2,88	0,5
APKT 1003PDFR-FA							●	11,000	6,700	3,5	2,88	0,5

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
40 - 63	US 2506-T07P	SDR T07P



● 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.

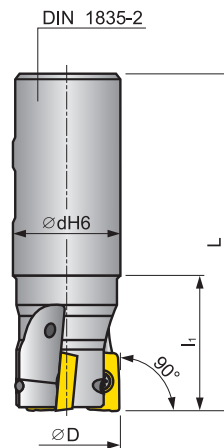
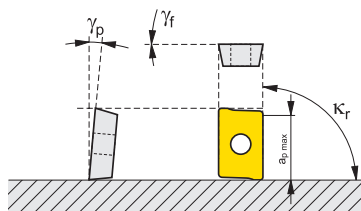
2014
 PLANFRÄSER
FACE MILLING CUTTERS
 ECKFRÄSER
SHOULDER END MILLING CUTTERS
 WALZENSTRICHFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS
 KOPIERFRÄSER
COPY MILLING CUTTERS
 FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION
 WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SAP16D

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	0° - +8°	κ_r	90°
γ_f	0°	$a_{p,max}$	13 mm



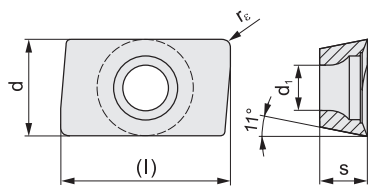
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

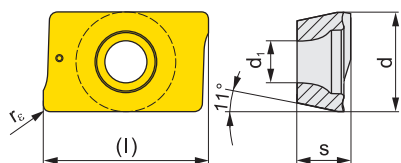
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	L	l_1	dh6	Z*				
25A2R042B25-SAP16D-C	○	25	98	42	25	2			+	0,4
32A3R040B32-SAP16D-C	○	32	100	40	32	3			+	0,6
40A3R050B32-SAP16D-C	○	40	110	50	32	3			+	0,8
40A4R050B32-SAP16D-C	○	40	110	50	32	4			+	0,8

SAP16D

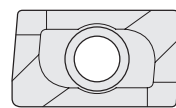
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



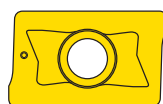
APET



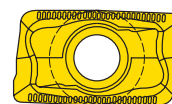
APKT



APET-FA



APKT-HM (04, 08, 16, 31)



APKT-GM

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	l	d	s	d ₁	r _e
APET 160408FR-FA								●	17,000	9,600	4,76	4,50	0,8
APKT 1604PDR-GM		●	●	●		●	●		17,000	9,440	5,67	4,60	0,8
APKT 1604PDR-HM	●	●	●		●	●	●		17,000	9,440	5,67	4,60	0,8
APKT 160404-HM								●	17,000	9,440	5,67	4,60	0,4
APKT 160416-HM								●	17,000	9,440	5,67	4,60	1,6
APKT 160431-HM								●	17,000	9,440	5,67	4,60	3,1

ERSATZTEILE / SPARE PARTS

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

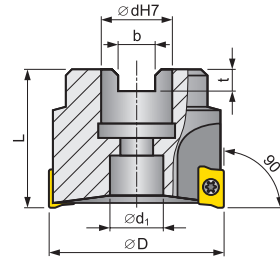
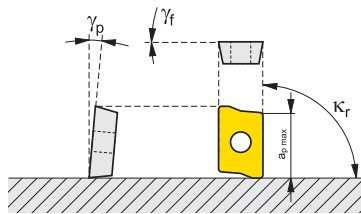
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
25	US 4008-T15P	SDR T15P
32 - 40	US 4011-T15P	SDR T15P

S90AP16D

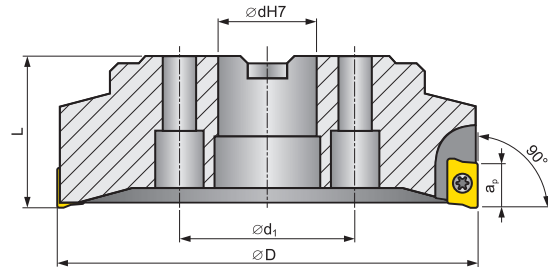
SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	+6°	κ_r	90°
γ_f	0°	$a_{p \max}$	13 mm



$\varnothing 40 - 125 \text{ mm}$



$\varnothing 160 \text{ mm}$

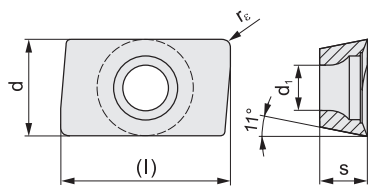
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

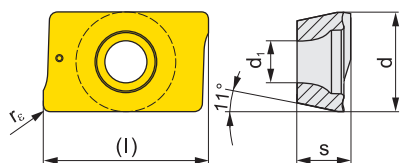
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*			
40A4R-S90AP16D	●	40	16	11	40	8,4	5,6	4			0,70
50A5R-S90AP16D	●	50	22	18	40	10,4	6,3	5			0,80
63A6R-S90AP16D	●	63	22	18	40	10,4	6,3	6			1,10
80B5R-S90AP16D	●	80	27	38	50	12,4	7,0	5			1,40
80B7R-S90AP16D	○	80	27	38	50	12,4	7,0	7			1,30
100B6R-S90AP16D	○	100	32	45	50	14,4	8,0	6			2,10
100B8R-S90AP16D	○	100	32	45	50	14,4	8,0	8			2,00
125B9R-S90AP16D	●	125	40	60	63	16,4	9,0	9			2,70
160C10R-S90AP16D	○	160	40	66,7	63	16,4	9,0	10			3,70

S90AP16D

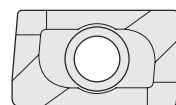
SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING



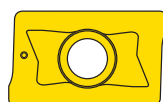
APET



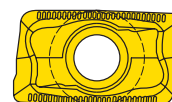
APKT



APET-FA



APKT-HM (04, 08, 16, 31)



APKT-GM

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	l	d	s	d ₁	r _e
APET 160408FR-FA								●	17,000	9,600	4,76	4,5	0,8
APKT 1604PDR-GM		●	●	●		●	●		17,000	9,400	5,67	4,6	0,8
APKT 1604PDR-HM	●	●	●		●	●	●		17,000	9,400	5,67	4,6	0,8
APKT 160404-HM								●	17,000	9,400	5,67	4,60	0,4
APKT 160416-HM								●	17,000	9,400	5,67	4,60	1,6
APKT 160431-HM								●	17,000	9,400	5,67	4,60	3,1

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
40 - 160	US 4011-T15P	SDR T15P

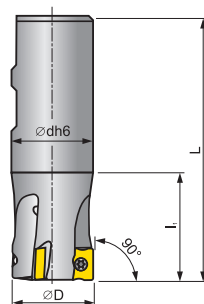
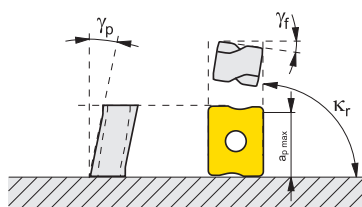
SLN12

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT SQUARE SHOULDER AND SLOT MILLING CUTTERS (4 CUTTING EDGES)

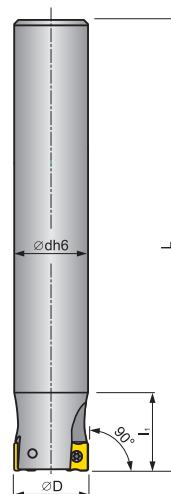


ECON LN

γ_p	-6° - -8°	κ_r	90°
γ_f	-15° - -23°	$a_{p\max}$	9 mm



WELDON



ZYLINDRISCH
CYLINDRICAL

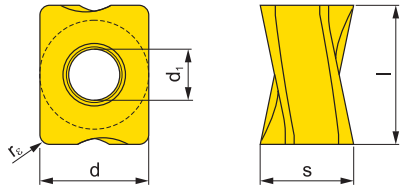
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

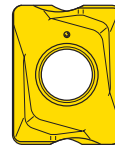
ISO	Sortiment / Assortment	Abmessungen / Dimensions						Kühlung / Cooling	[kg]
		D	L	l_1	dh6	Z*			
WELDON									
25A2R042B25-SLN12-C	●	25	99	42	25	2		+	0,1
32A3R042B32-SLN12-C	●	32	103	42	32	3		+	0,5
40A4R050B32-SLN12-C	●	40	111	50	32	4		+	0,6
ZYLINDRISCH/CYLINDRICAL									
25A2R034A25-SLN12-C	●	25	170	34	25	2		+	0,5
25A2R080A25-SLN12-C	●	25	170	80	25	2		+	0,5
32A2R034A32-SLN12-C	●	32	195	34	32	2		+	0,9
32A2R090A32-SLN12-C	●	32	195	90	32	2		+	0,9

SLN12

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR ECON LN (4 EDGES)



LNGX 12




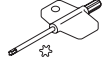
LNGX 12-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades						Abmessungen/Dimensions				
	M9315	M9325	M9340	8215	8230	8240	l	d	s	d ₁	r _ε
LNGX 120508ER-M	●	●	●	●	●	●	12,000	9,500	7,1	4,5	0,8

ERSATZTEILE / SPARE PARTS

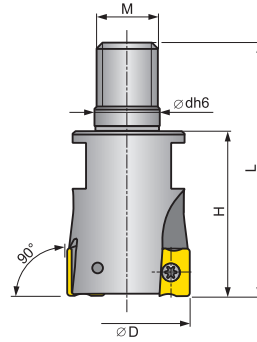
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Fräser Marking of cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
SLN12	 US 44012-T15P	 FLAG T15P

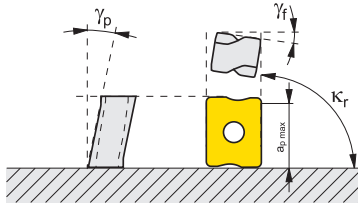
SLN12

SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM EXCHANGEABLE HEADS FOR ECON LN

ECON LN



γ_p	-6°	κ_r	90°
γ_f	-15°	$a_{p\ max}$	9 mm



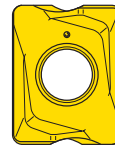
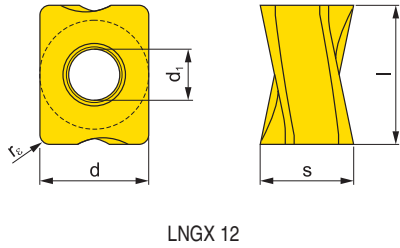
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	L	H	M	dh6	Z*			
32A2R043M16-SLN12-C	●	32	66	43	M16	17	2		+	0,20
40A3R043M16-SLN12-C	●	40	66	43	M16	17	3		+	0,20

SLN12

SCHULTERFRÄSEN UND NUTFRÄSEN - MODULARES SYSTEM INSERTS FOR ECON LN (4 EDGES)





WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades						Abmessungen/Dimensions				
	M9315	M9325	M9340	8215	8230	8240	(l)	d	s	d ₁	r _ε
LNGX 120508ER-M	●	●	●	●	●	●	12,000	9,500	7,1	4,5	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
SLN12	US 44012-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

WENDESCHEIDPLATTEN
INDEXABLE INSERTS

S90LN12

SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS (4 CUTTING EDGES)

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRICHFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

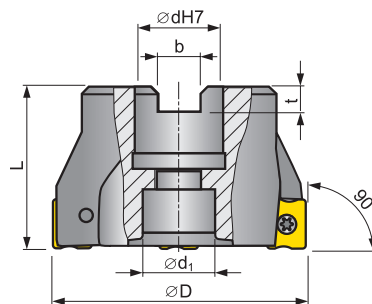
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

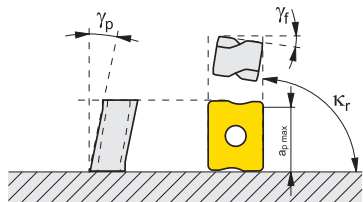


ECON LN



Z* - Anzahl Zähne / Number of teeth

γ_p	-6°	κ_r	90°
γ_f	-14°--15°	$a_{p\max}$	9 mm

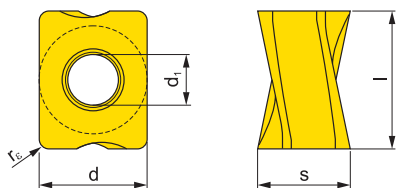


Abmessungen [mm]. / Dimensions [mm].

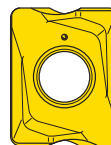
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*			
40A04R-S90LN12-C	●	40	16	14	40	8,4	5,6	4		+	0,2
50A04R-S90LN12-C	●	50	22	18	40	10,4	6,3	4		+	0,3
50A05R-S90LN12-C	●	50	22	18	40	10,4	6,3	5		+	0,3
63A04R-S90LN12-C	●	63	22	18	40	10,4	6,3	4		+	0,5
63A06R-S90LN12-C	●	63	22	18	40	10,4	6,3	6		+	0,5
80A05R-S90LN12-C	●	80	27	38	50	12,4	7,0	5		+	1,0
80A07R-S90LN12-C	●	80	27	38	50	12,4	7,0	7		+	1,0
100A06R-S90LN12-C	●	100	32	45	50	14,4	8,0	6		+	1,7
100A08R-S90LN12-C	●	100	32	45	50	14,4	8,0	8		+	1,7
110A06R-S90LN12-C	●	110	32	45	50	14,4	8,0	6		+	2,3

S90LN12

SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR ECON LN (4 EDGES)



LNGX 12



LNGX 12-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions				
	M9315	M9325	M9340	8215	8230	8240	l	d	s	d ₁	r _ε
LNGX 120508ER-M	•	•	•	•	•	•	12,000	9,500	7,10	4,50	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 44012-T15P	D-T08P/T15P	FG-15	HS 0830C
50 - 63	US 44012-T15P	D-T08P/T15P	FG-15	HS 1030C
80 - 110	US 44012-T15P	D-T08P/T15P	FG-15	-



● 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.

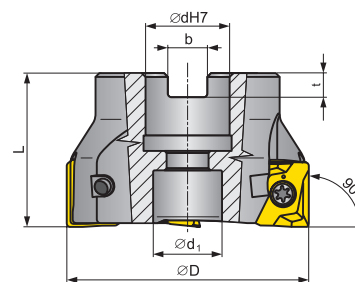
2014
 PLANFRÄSER
FACE MILLING CUTTERS
 ECKFRÄSER
SHOULDER END MILLING CUTTERS
 WALZENSTIRNFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER SLOT MILLING CUTTERS
 KOPIERFRÄSER
COPY MILLING CUTTERS
 FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION
 WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

S90LN16

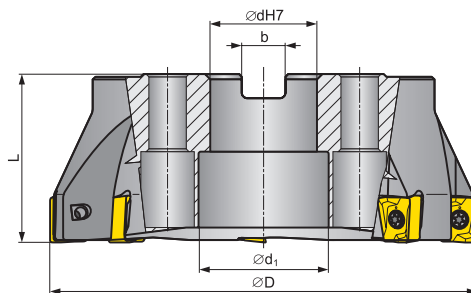
SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS (4 CUTTING EDGES)



ECON LN



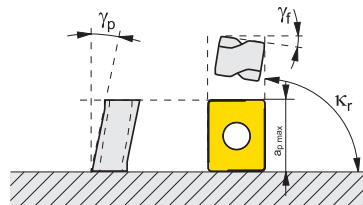
ø 63 - 140 mm



ø 160 - 175 mm

Z* - Anzahl Zähne / Number of teeth

γ_p	-6°	κ_r	90°
γ_f	-10,5°	$a_{p,max}$	13 mm

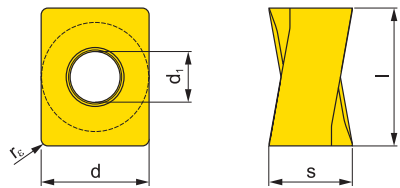


Abmessungen [mm]. / Dimensions [mm].

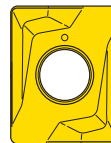
ISO	Sortiment / Assortment	Abmessungen / Dimensions										Kühlung / Cooling	[kg]	
		D	dH7	d ₁	L	b	t	Z*	-	-	-			-
63A04R-S90LN16-C	●	63	22	18,0	40	10,4	6,3	4					+	0,5
63A05R-S90LN16-C	●	63	22	18,0	40	10,4	6,3	5					+	0,5
80A04R-S90LN16-C	●	80	27	38,0	50	12,4	7,0	4					+	1,0
80A06R-S90LN16-C	●	80	27	38,0	50	12,4	7,0	6					+	1,0
100A05R-S90LN16-C	●	100	32	45,0	50	14,4	8,0	5					+	1,8
100A07R-S90LN16-C	●	100	32	45,0	50	14,4	8,0	7					+	1,7
125A06R-S90LN16-C	●	125	40	56,0	63	16,4	9,0	6					+	3,5
125A08R-S90LN16-C	●	125	40	56,0	63	16,4	9,0	8					+	3,3
140A06R-S90LN16-C	●	140	40	56,0	63	16,4	9,0	6					+	4,5
160C08R-S90LN16	●	160	40	66,7	63	16,4	9,0	8						5,7
175C08R-S90LN16	●	175	40	66,7	63	16,4	9,0	8						6,7

S90LN16

SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR ECON LN (4 EDGES)



LNGU 16



LNGU 16-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades					Abmessungen/Dimensions				
	M9315	M9325	8215	8230	8240	l	d	s	d ₁	r _ε
LNGU 160708SR-M	●	●	●	●	●	16,600	13,200	10,00	5,70	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	Schraube für Messerkopf Screw for taper clamping
63	US 45012-T20P	SDR T20P-T	HS 1030C
80 - 175	US 45012-T20P	SDR T20P-T	-



● 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

WALZSTIRNFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

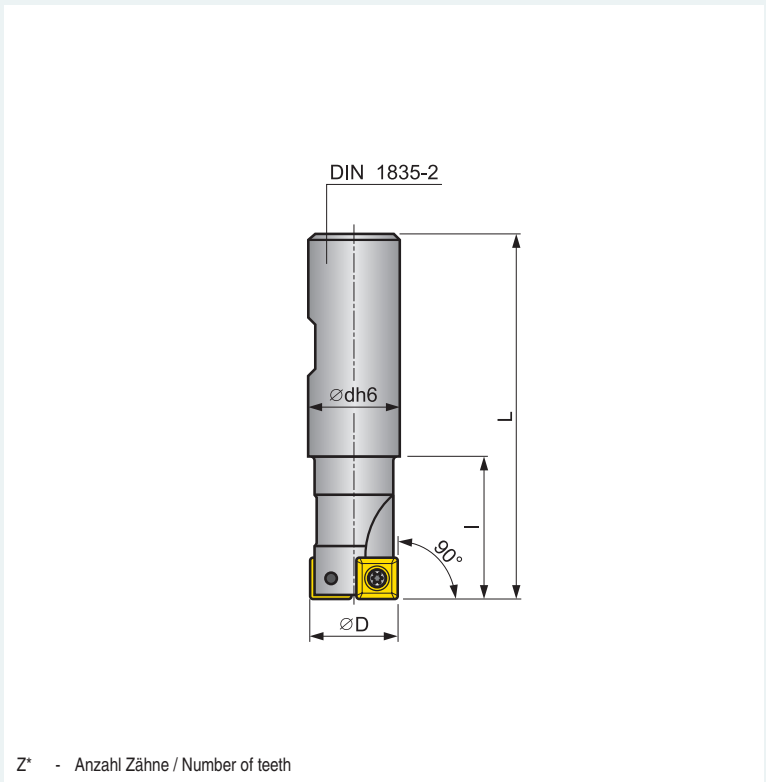
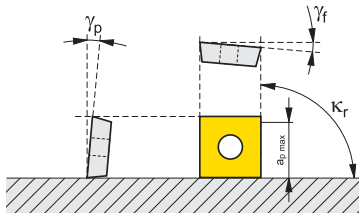
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

SSO09

SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT
 SQUARE SHOULDER AND SLOT MILLING CUTTERS



γ_p	+6 - +10°	κ_r	90°
γ_f	-10° - -12°	$a_{p\ max}$	8 mm



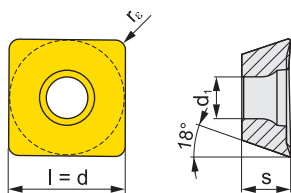
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

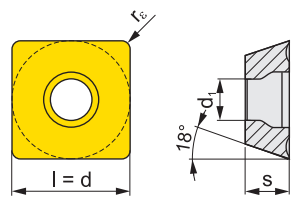
ISO	Sortiment / Assortment	Abmessungen / Dimensions						Kühlung / Cooling	[kg]
		D	L	l	dh6	Z*			
20A2R032B20-SSO09-C	●	20	82	32	20	2		+	0,1
25A3R042B25-SSO09-C	●	25	98	42	25	3		+	0,3
32A4R042B32-SSO09-C	●	32	102	42	32	4		+	0,7

SS009

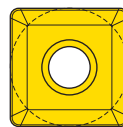
SCHULTERFRÄSEN UND NUTFRÄSEN - SCHAFT INSERTS FOR SQUARE SHOULDER AND SLOT MILLING CUTTERS



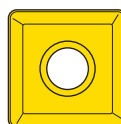
SOMT-P



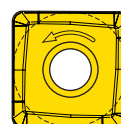
SOMT



SOMT-P



SOMT-MI



SOMT-M

WENDESCHEIDPLATTEN (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

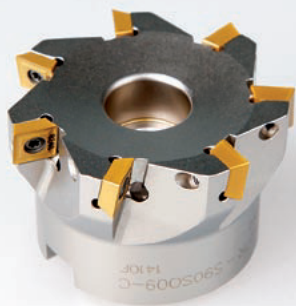
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
20 - 32	US 3006-T09P	SDR T09P

S90SO09

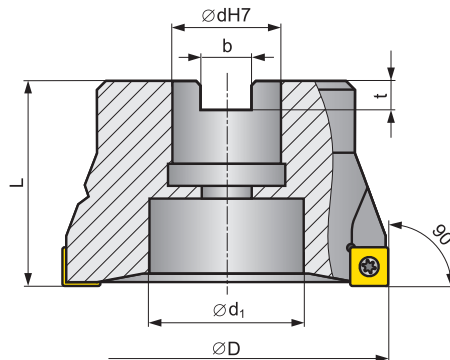
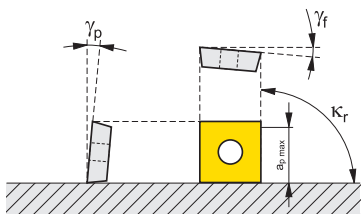
SCHULTERFRÄSEN UND NUTFRÄSEN
SQUARE SHOULDER AND SLOT MILLING CUTTERS

PLANFRÄSER
FACE MILLING CUTTERS



ECKFRÄSER
SHOULDER END MILLING CUTTERS

γ_p	$+10^\circ$	κ_r	90°
γ_f	$-8^\circ - -9^\circ$	a_{pmax}	8 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*			
40A05R-S90SO09-C	●	40	16	14	40	8,4	5,6	5		+	0,15
50A06R-S90SO09-C	●	50	22	18	40	10,4	6,4	6		+	0,30
63A07R-S90SO09-C	●	63	22	18	40	10,4	6,4	7		+	0,51
80A09R-S90SO09-C	●	80	27	38	50	12,4	7,0	9		+	0,97
100A10R-S90SO09-C	●	100	32	45	50	14,4	8,0	10		+	1,61
125A12R-S90SO09-C	○	125	40	60	63	16,4	9,0	12		+	2,97

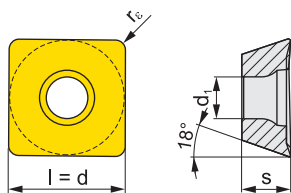
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

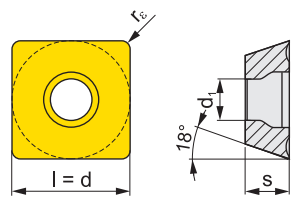
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

S90S009

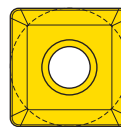
SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING CUTTERS



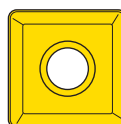
SOMT-P



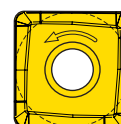
SOMT



SOMT-P



SOMT-MI



SOMT-M

WENDESCHEIDPLATTEN (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	3,5	0,4
SOMT 09T304-MI		●		●	■	●	●	●	○		9,550	9,550	3,97	3,5	0,4
SOMT 09T308-M	●	●				●	●	●			9,550	9,550	3,97	3,5	0,8

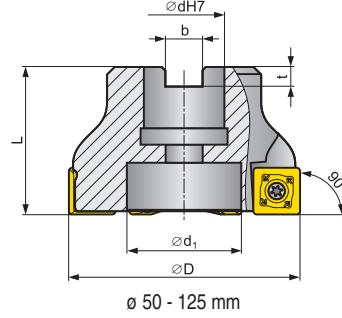
ERSATZTEILE / SPARE PARTS

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

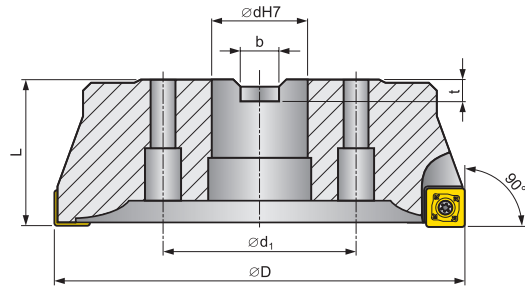
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Schraube für Messerkopf Screw for taper clamping
40	US 3006-T09P	SDR T09P	HS 0830C
50 - 63	US 3006-T09P	SDR T09P	HS 1030C
80 - 125	US 3006-T09P	SDR T09P	-

S90SD12

SCHULTERFRÄSEN UND NUTFRÄSEN SQUARE SHOULDER AND SLOT MILLING CUTTERS

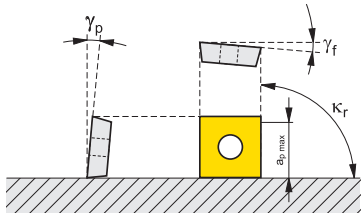


ø 50 - 125 mm



ø 160 mm

γ_p	+8°	κ_r	90°
γ_f	-5°	$a_{p,max}$	10 mm



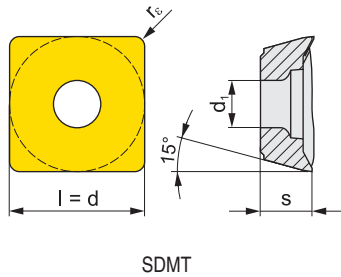
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

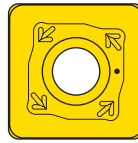
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	dH7	d ₁	L	b	t	Z*			
50A05R-S90SD12-C	●	50	22	18	40	10,4	6,3	5		+	0,26
63A06R-S90SD12-C	●	63	22	18	40	10,4	6,3	6		+	0,42
80A06R-S90SD12-C	●	80	27	38	50	12,4	7,0	6		+	1,02
100A08R-S90SD12-C	●	100	32	45	50	14,4	8,0	8		+	1,63
125A09R-S90SD12-C	●	125	40	56	63	16,4	9,0	9		+	2,93
160C12R-S90SD12	●	160	40	66,7	63	16,4	9,0	12			6,01

S90SD12

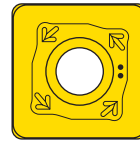
SCHULTERFRÄSEN UND NUTFRÄSEN INSERTS FOR SQUARE SHOULDER AND SLOT MILLING CUTTERS



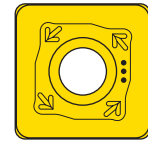
SDMT



SDMT SR-F



SDMT SR-M



SDMT PR-R

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades					Abmessungen / Dimensions				
	M9315	M9325	8215	8230	8240	l	d	s	d ₁	r _ε
SDMT 120508SR-F			●	○		12,700	12,700	5,00	4,40	0,8
SDMT 120508SR-M		●	●	●		12,700	12,700	5,00	4,40	0,8
SDMT 120508PR-R	●	●	●	●		12,700	12,700	5,00	4,40	0,8

ERSATZTEILE / SPARE PARTS

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

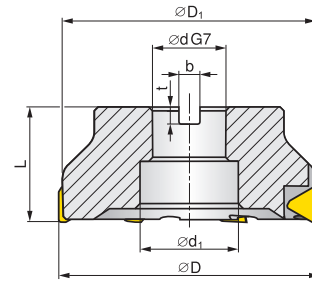
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver	Unterlage Shim	Unterlagschraube Screw of shim	Schlüssel Key	Schraube für Messerkopf Screw for taper clamping
50 - 63	US 3511-T15	SDR T15	-	-	-	HS 1030C
80 - 160	US 3511-T15	SDR T15	SSN 100312	MS 3510	HXK 3,5	-

F90TB27X

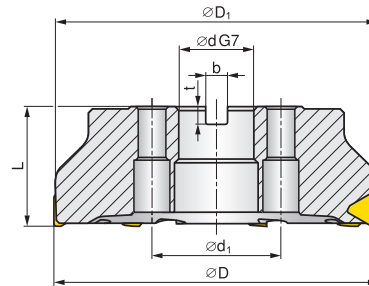
ECKFRÄSER FÜR SCHWERE BEARBEITUNG
FACE MILLING CUTTERS - FOR HEAVY MACHINING



ROUGH TB



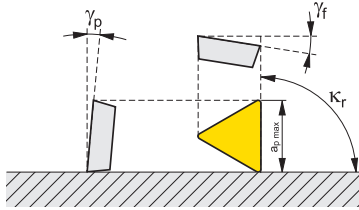
$\varnothing 140$ mm



$\varnothing 175 - 260$ mm

Z* - Anzahl Zähne / Number of teeth

γ_p	+9°	κ_r	90°
γ_f	-9°	$a_{p\max}$	18 mm



Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	D ₁	dG7	L	d ₁	t	b	Z		
140B05R-F90TB27X	○	140	135,7	40	63	56,0	9,0	16,4	5		3,9
140B07R-F90TB27X	○	140	135,7	40	63	56,0	9,0	16,4	7		3,7
175C06R-F90TB27X	○	175	169,6	40	63	66,7	16,4	16,4	6		6,5
175C08R-F90TB27X	○	175	169,6	40	63	66,7	16,4	16,4	8		6,3
210C08R-F90TB27X	○	210	204,1	60	63	101,6	25,7	25,7	8		9,4
210C10R-F90TB27X	○	210	204,1	60	63	101,6	25,7	25,7	10		9,1
260C10R-F90TB27X	○	260	253,4	60	63	101,6	25,7	25,7	10		16,4
260C12R-F90TB27X	○	260	253,4	60	63	101,6	25,7	25,7	12		16,2

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFENFRÄSER / SCHEIBENFRÄSER
SQUARE SHOULDER / SLOT MILLING CUTTERS

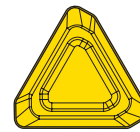
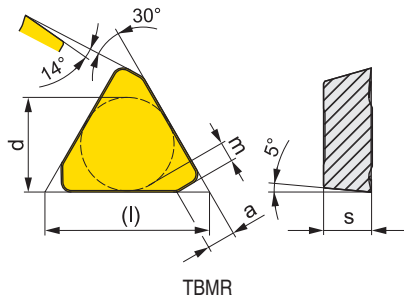
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

F90TB27X

ECKFRÄSER FÜR SCHWERE BEARBEITUNG
INSERTS FOR FACE MILLING CUTTERS - FOR HEAVY MACHINING



TBMR PZSR

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions				
	8026T	8240					l	d	s	m	a
TBMR 2707PZSR	●	●					27,496	15,875	7,94	3,2	4,61

ERSATZTEILE / SPARE PARTS

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

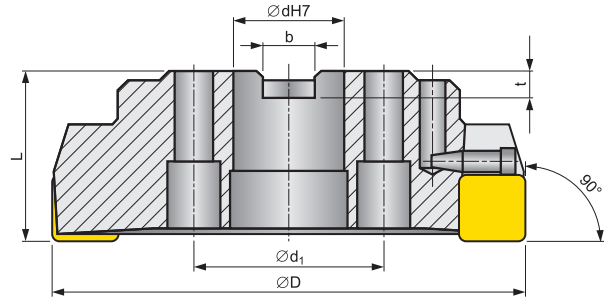
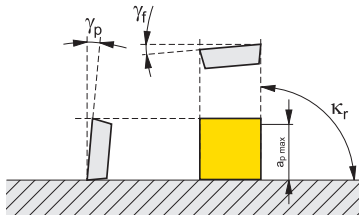
Ø Fräser Ø Cutter	Unterlage Shim	Spannschraube* Clamping screw*	Schlüssel Key	Klemmkeil Clamping wedge	Diff. Schraube Differential screw	Schlüssel Key	Schraube für Messerkopf Screw for taper clamping
140	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	-
175	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1240
210 - 260	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1655

W90SP25P

ECKFRÄSER FÜR SCHWERE BEARBEITUNG
MILLING CUTTERS FOR HEAVY MACHINING



γ_p	+5°	κ_r	90°
γ_f	+2°	$a_{p\max}$	22 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*		
175C06R-W90SP25P	○	175	40	66,7	63	16,4	9	6		7,5
210C08R-W90SP25P	○	210	60	101,6	63	25,7	14	8		11,0
260C10R-W90SP25P	○	260	60	101,6	63	25,7	14	10		19,0

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

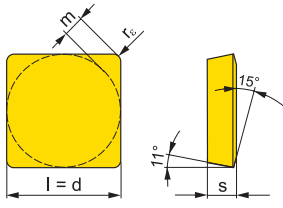
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

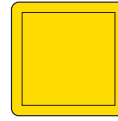
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

W90SP25P

ECKFRÄSER FÜR SCHWERE BEARBEITUNG INSERTS FOR MILLING CUTTERS FOR HEAVY MACHINING



SPUN



SPUN S

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades						Abmessungen / Dimensions				
	8240	8026T	S26				(l)	d	s	m	r _e
SPUN 250616S		●					25,400	25,400	6,35	4,60	1,6
SPUN 250620S	●	●	●				25,400	25,400	6,35	4,43	2,0

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Klemmkeil Clamping wedge	Diff. Schraube Differential screw	Anschlag Stop	Schlüssel Key
175 - 260	KU 23	DS 02	PS 04	HXK 5

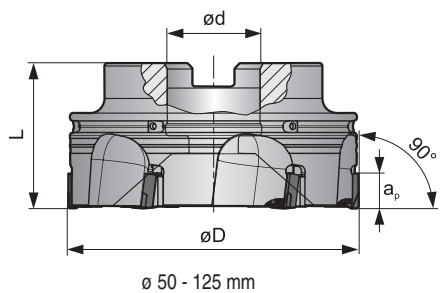


● Lagersortiment / ○ Kein Lagersortiment, ■ Lagersortiment ab 1.04.2014 / □ Kein Lagersortiment ab 1.04.2014
● stocked as standard / ○ not stocked as standard, ■ stocked as standard from 1.4.2014 / □ not stocked as standard from 1.4.2014
Derzeitiges Lagerbestandsortiment ist abhängig von der gültigen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

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

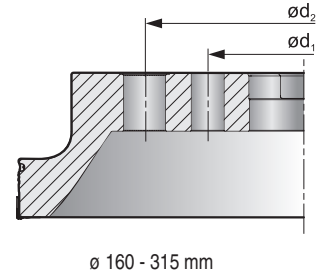
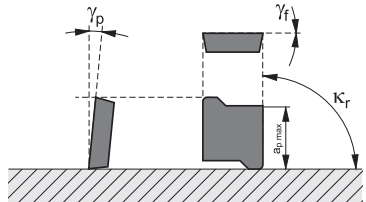
W90XO12

ECKFRÄSER FÜR ALUMINIUMLEGIERUNGEN SHOULDER MILLING CUTTERS FOR ALUMINUM ALLOYS



ø 50 - 125 mm

γ_p	8°	κ_r	90°
γ_f	0°-3°	$a_{p\max}$	10 mm



ø 160 - 315 mm

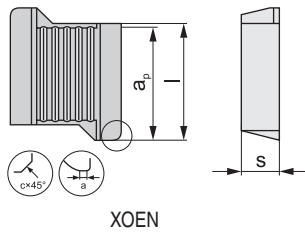
Z* - Anzahl Zähne / Number of teeth

Abmessungen [mm]. / Dimensions [mm].

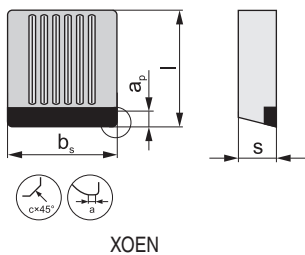
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	d	L	d ₁	d ₂	Z*				
50A04R-W90XO12	■	50	22	40	-	-	4				0,31
50A06R-W90XO12	□	50	22	40	-	-	6				0,32
63A05R-W90XO12	■	63	22	40	-	-	5				0,49
63A07R-W90XO12	■	63	22	40	-	-	7				0,52
80A06R-W90XO12	■	80	27	50	-	-	6				0,94
80A09R-W90XO12	■	80	27	50	-	-	9				0,98
100A06R-W90XO12	■	100	32	50	-	-	6				1,68
100A12R-W90XO12	■	100	32	50	-	-	12				1,74
125A08R-W90XO12	■	125	40	63	-	-	8				2,54
125A15R-W90XO12	□	125	40	63	-	-	15				2,64
160C10R-W90XO12	□	160	40	63	66,7	-	10				4,23
160C18R-W90XO12	□	160	40	63	66,7	-	18				4,38
200C12R-W90XO12	□	200	60	63	101,6	-	12				6,60
200C24R-W90XO12	□	200	60	63	101,6	-	24				6,74
250C16R-W90XO12	□	250	60	63	101,6	-	16				9,26
250C30R-W90XO12	□	250	60	63	101,6	-	30				9,51
315C20R-W90XO12	□	315	60	80	101,6	177,8	20				17,66
315C36R-W90XO12	□	315	60	80	101,6	177,8	36				17,92

W90XO12

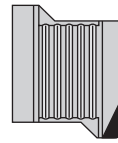
ECKFRÄSER FÜR ALUMINIUMLEGIERUNGEN INSERTS FOR SHOULDER MILLING CUTTERS FOR ALUMINUM ALLOYS



XOEN



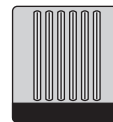
XOEN



XOEN RF/LF



XOEN RH



XOEN NH

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	D720										l	s	c×45°	a	a _{p max}
XOEN 12T304LF	□										12,00	4,00	-	5°	3,30
XOEN 12T304RF	■										12,00	4,00	-	5°	3,30
XOEN 12T308LF	□										12,00	4,00	-	1,20	3,30
XOEN 12T308RF	■										12,00	4,00	-	1,20	3,30
XOEN 12T308RH	■										12,00	4,00	-	1,00	10,00
XOEN 12T304ZZNH	■										12,00	4,00	-	10,80	0,76
XOEN 12T308ZZNH	■										12,00	4,00	-	10,10	0,76
XOEN 12T3AZ08RF	■										12,00	4,00	0,80	1,20	3,30
XOEN 12T3AZ08RH	■										12,00	4,00	0,80	1,00	10,00
XOEN 12T3AZZ08NH	□										12,00	4,00	0,80	10,00	0,76

ERSATZTEILE / SPARE PARTS

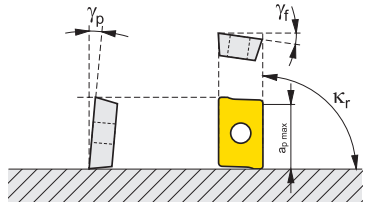
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Klemmkeil Clamping wedge	Diff. Schraube Differential screw	Axial-Verstellschraube Adjustable screw	Schlüssel Key	Schraubendreher Screwdriver
50 - 315	KU XO12T3	DS 0420	SS 0413	HXK 2	FLAG T08P

J-SAD11E



γ_p	+11° - +12°	κ_r	90°
γ_f	-5,2° - -8,1°	$a_{p,max}$	l_1

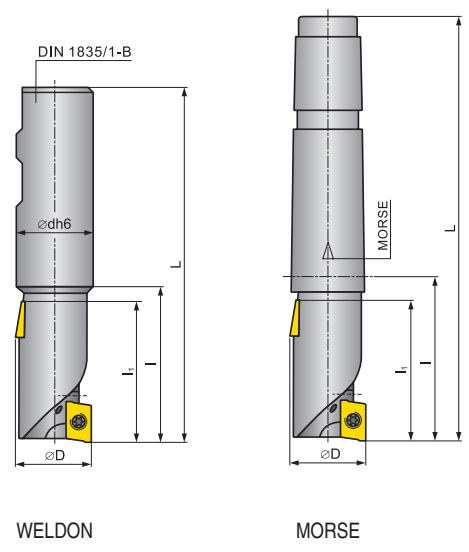


Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	L	l	l_1	dh6	Morse	Z*	ZN*		
WELDON											
25J2R50B25-SAD11E38-C	●	25	106,0	50	38	25	-	2	8	+	0,3
32J2R60B32-SAD11E47-C	●	32	120,0	60	47	32	-	2	10	+	0,6
40J2R60B40-SAD11E47-C	●	40	130,0	60	47	40	-	2	10	+	0,9
40J3R70B40-SAD11E56-C	●	40	140,0	70	56	40	-	3	18	+	1,0
MORSE											
25J2R55E03-SAD11E38-C	●	25	136,0	55	38	-	3	2	8	+	0,4
32J2R65E04-SAD11E47-C	●	32	167,5	65	47	-	4	2	10	+	0,7
40J3R75E04-SAD11E56-C	●	40	177,5	75	56	-	4	3	18	+	1,1

WALZENSTIRNFRÄSER - SCHAFT HELICAL END MILLING CUTTERS FOR ROUGHING

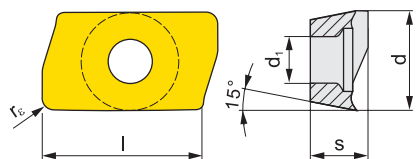
FORCE AD



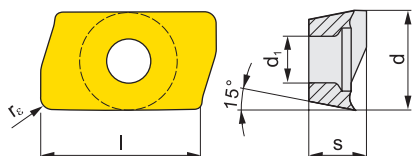
Z* - Anzahl Zähne / Number of teeth
ZN* - Anzahl der WSP / Number of inserts

J-SAD11E

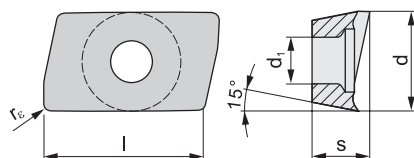
WALZENSTIRNFRÄSER - SCHAFT INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING



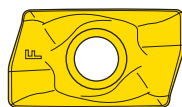
ADMX 11



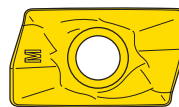
ADMX 11 (16)



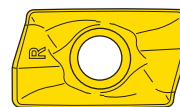
ADEX 11



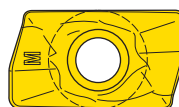
ADMX 11SR-F



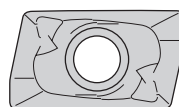
ADMX 11SR-M



ADMX 11PR-R



ADMX 11T316SR-M



ADEX FR-FA

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades								Abmessungen/Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 11T304SR-F				●	●	●	●		11,000	6,530	3,97	2,9	0,4
ADMX 11T308SR-F				●	●	●	●		11,000	6,530	3,97	2,9	0,8
ADMX 11T304SR-M			●	●	●	●	●		11,000	6,530	3,97	2,9	0,4
ADMX 11T308SR-M	●	●	●	●	●	●	●		11,000	6,530	3,97	2,9	0,8
ADMX 11T316SR-M					●	●	●		11,000	6,530	3,97	2,9	1,6
ADMX 11T308PR-R	●	●	●		●	●	●		11,000	6,530	3,97	2,90	0,80
ADEX 11T304FR-FA								●	11,000	6,530	3,97	2,90	0,40
ADEX 11T308FR-FA								●	11,000	6,530	3,97	2,90	0,80
ADEX 11T316FR-FA								●					

ERSATZTEILE / SPARE PARTS

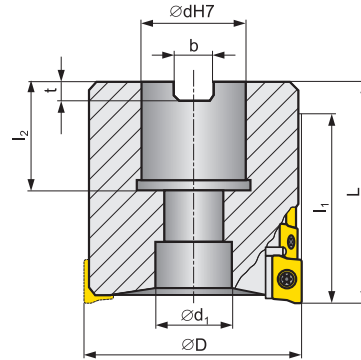
*) Empfohlene Torxschraube - siehe Seite / For screw torques see pages: 318 - 321.

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
25 - 40	US 2506-T07P	FLAG T07P

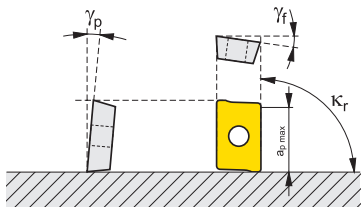
T-S90AD11E

WALZENSTIRNFRÄSER
HELICAL END MILLING CUTTERS FOR ROUGHING

FORCE AD



γ_p	+11° - +12°	κ_r	90°
γ_f	-5,2° - -8,1°	$a_{p \max}$	l_1



Z* - Anzahl Zähne / Number of teeth
ZN* - Anzahl der WSP / Number of inserts

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Kühlung / Cooling	[kg]
		D	L	l_1	l_2	d_1	dH7	Z*	ZN*		
50T03R-S90AD11E37-C	●	50	58	37	21	18	22	3	12	+	0,50

T-S90AD11E

WALZENSTIRNFRÄSER INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING

2014

PLANFRÄSER
FACE MILLING CUTTERS

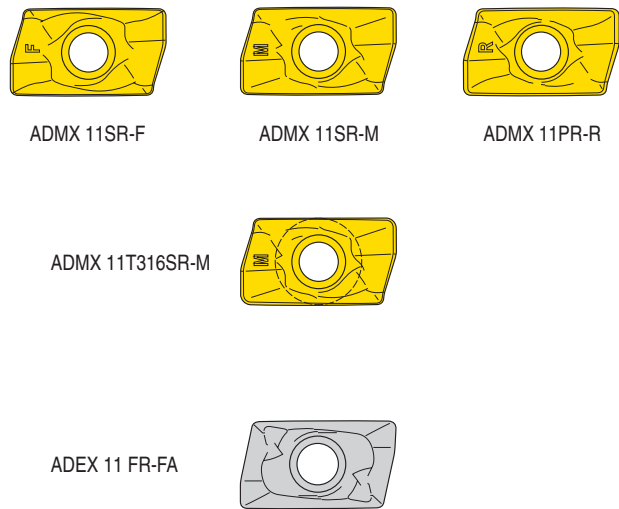
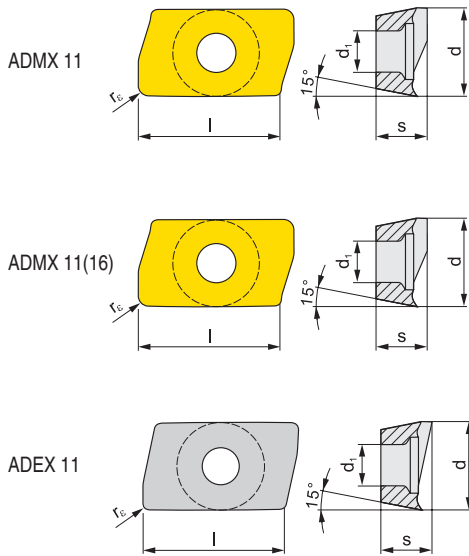
ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER/SCHIEBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades								Abmessungen / Dimensions				
	M5315	M9315	M9325	M9340	8215	8230	8240	HF7	(l)	d	s	d ₁	r _e
ADMX 11T304SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-F				●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T304SR-M			●	●	●	●	●		11,000	6,530	3,97	2,90	0,4
ADMX 11T308SR-M	●	●	●	●	●	●	●		11,000	6,530	3,97	2,90	0,8
ADMX 11T316SR-M					●	●	●		11,000	6,530	3,97	2,90	1,6
ADMX 11T308PR-R	●	●	●		●	●	●		11,000	6,530	3,97	2,90	0,8
ADEX 11T304FR-FA								●	11,000	6,530	3,97	2,90	0,4
ADEX 11T308FR-FA								●	11,000	6,530	3,97	2,90	0,8
ADEX 11T316FR-FA								●					

ERSATZTEILE / SPARE PARTS

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

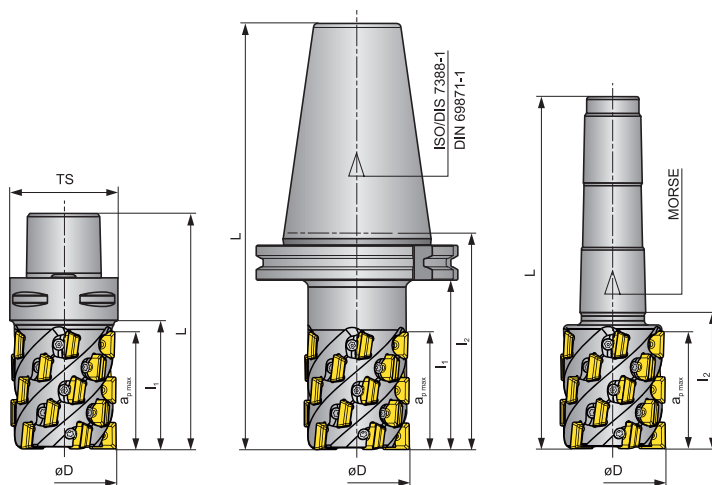
Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schaft Shank	Drehgriff Handle	Schraube für Messerkopf Screw for taper clamping
50	US 2506-T07P	D-T07P/T09P	FG-15	HS 1030C

J-CSD12X

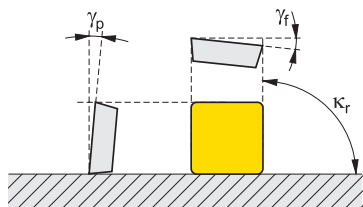
WALZENSTIRNFRÄSER HELICAL END MILLING CUTTERS FOR ROUGHING



MULTISIDE SD



γ_p	8°	κ_r	90°
γ_f	-5°	a_{pmax}	-



CAPTO

DIN 69871

MORSE

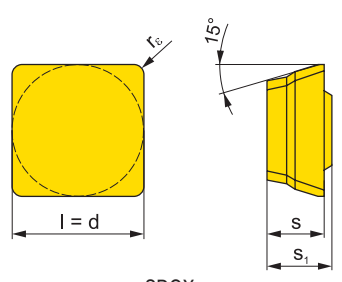
- Z* - Anzahl Zähne / Number of teeth
- ZN* - Anzahl der WSP / Number of inserts
- TS* - Steilkegelgröße / Taper size

Abmessungen [mm]. / Dimensions [mm].

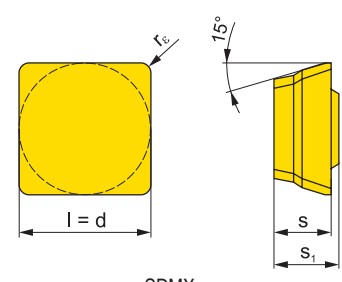
ISO	Sortiment / Assortment	Abmessungen / Dimensions									Kühlung / Cooling	[kg]
		D	a_{pmax}	L	l_1	l_2	Z*	ZN*	TS*	Steilkegel Taper		
40J4R080XC5-CSD12X44	□	40	44,1	80,0	59	-	4	16	C5	CAPTO		0,71
50J5R080XC5-CSD12X55	■	50	54,9	80,0	59	-	5	25	C5	CAPTO		0,90
63J6R095XC6-CSD12X66	■	63	65,7	95,0	72	-	6	36	C6	CAPTO		1,86
40J4R090H40-CSD12X44	■	40	44,1	158,4	70	90	4	16	40	ISO/DIS 7388-1		1,17
50J5R100H50-CSD12X55	■	50	54,9	201,7	80	100	5	25	50	ISO/DIS 7388-1		3,35
63J6R110H50-CSD12X66	■	63	65,7	211,7	90	110	6	36	50	ISO/DIS 7388-1		4,10
80J8R130H50-CSD12X88	□	80	87,3	231,9	110	130	8	64	50	ISO/DIS 7388-1		5,49
50J5R065E04-CSD12X55	■	50	54,9	167,5	-	65	5	25	4	MORSE		0,90

J-CSD12X

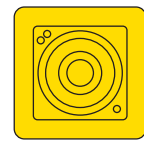
WALZENSTIRNFRÄSER INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING



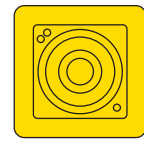
SDGX



SDMX



SDGX-FM



SDMX-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions					
	M8345	8230										l	d	s	s ₁	r _e
SDGX 120508EN-FM	■	■										12,700	12,700	5,56	6,35	0,8
SDMX 120508EN-M	■	■										12,700	12,700	5,56	6,35	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
40 - 80	US 63511D-T15P	D-T08P/T15P	FG-15



● 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

C90SD12X

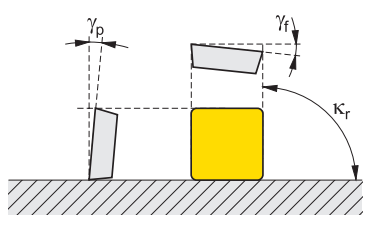
WALZENSTIRNFRÄSER
HELICAL END MILLING CUTTERS FOR ROUGHING

PLANFRÄSER
FACE MILLING CUTTERS

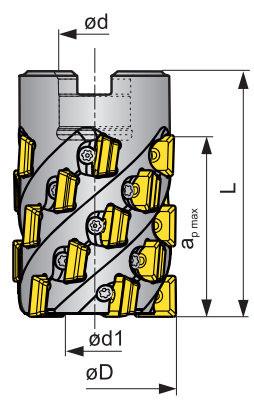


ECKFRÄSER
SHOULDER END MILLING CUTTERS

γ_p	8°	κ_r	90°
γ_f	-5°	$a_{p\ max}$	-



MULTISIDE SD



Z* - Anzahl Zähne / Number of teeth
ZN* - Anzahl der WSP / Number of inserts

Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	$a_{p\ max}$	L	d	Z*	ZN*			
50T05R-C90SD12X55	■	50	54,9	78	22	5	25		0,62	
63T06R-C90SD12X66	■	63	65,7	90	27	6	36		1,30	
80T08R-C90SD12X88	■	80	87,3	115	40	8	64		2,71	

WALZENSTIRNFRÄSER/SCHLEIFENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

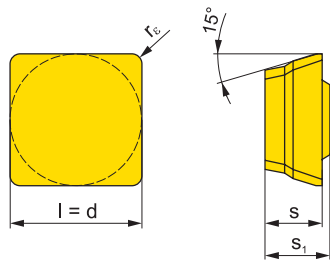
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

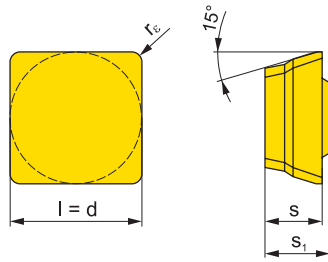
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

C90SD12X

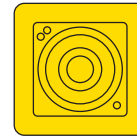
WALZENSTIRNFRÄSER INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING



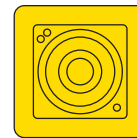
SDGX



SDMX



SDGX-FM



SDMX-M

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	M8345	8230									l	d	s	s ₁	r _e
SDGX 120508EN-FM	■	■									12,700	12,700	5,56	6,35	0,8
SDMX 120508EN-M	■	■									12,700	12,700	5,56	6,35	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
50	US 63511D-T15P	D-T08P/T15P	FG-15	HS 1070
63	US 63511D-T15P	D-T08P/T15P	FG-15	HS 1280
80	US 63511D-T15P	D-T08P/T15P	FG-15	HS 20100



● 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

SLSN

WALZENSTIRNFRÄSER ZUM SCHRUPPEN - GETEILT HELICAL END MILLING CUTTERS FOR ROUGHING - DIVIDED

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIFENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

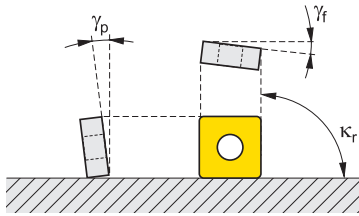
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

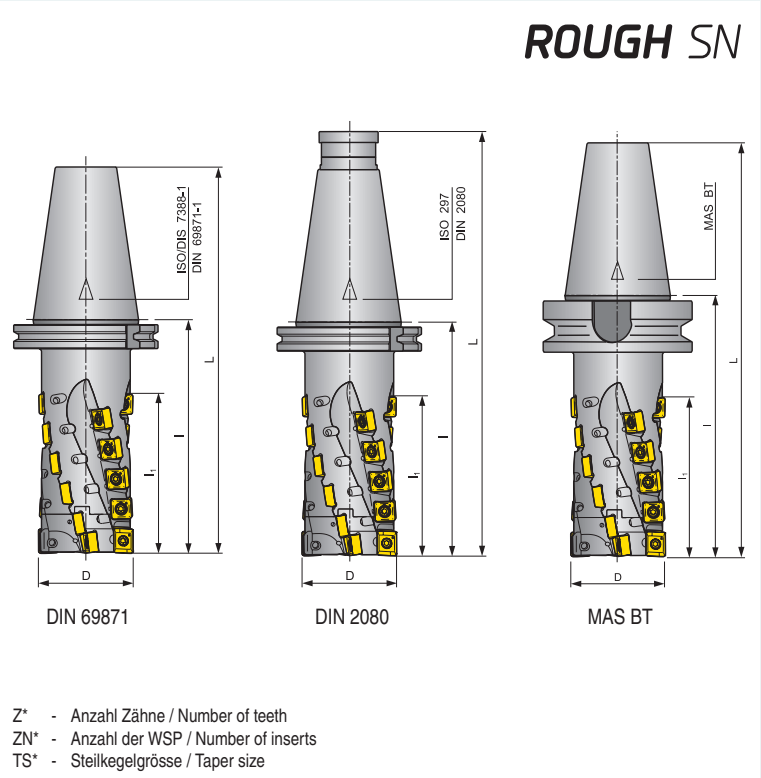


γ_p	-10°	κ_r	90°
γ_f	-9°	$a_{p\max}$	l1



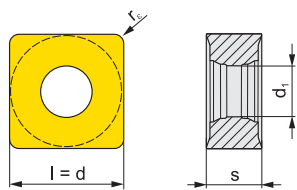
Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions								Steilkegel Taper	Kühlung Cooling	[kg]
		D	L	l	l ₁	Z*	ZN*	TS*				
63J2R155H50-SLSN104-C	●	63	257	155	104	2+2	2+20	50	ISO/DIS 7388-1	+	4,2	
80J2R190H50-SLSN134-C	●	80	292	190	134	2+2	2+26	50	ISO/DIS 7388-1	+	6,6	
63J2R155G50-SLSN104-C	●	63	282	155	104	2+2	2+20	50	ISO 297	+	4,2	
80J2R190G50-SLSN134-C	●	80	317	190	134	2+2	2+26	50	ISO 297	+	6,6	
63J2R175X50-SLSN104-C	●	63	277	175	104	2+2	2+20	50	MAS BT	+	5,4	
80J2R210X50-SLSN134-C	●	80	312	210	134	2+2	2+26	50	MAS BT	+	7,8	

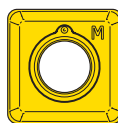


SLSN

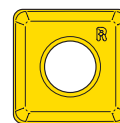
WALZENSTIRNFRÄSER ZUM SCHRUPPEN - GETEILT INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING - DIVIDED



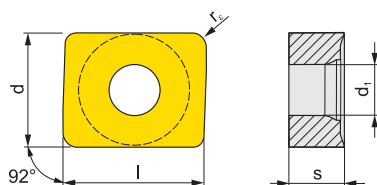
SNGX 13



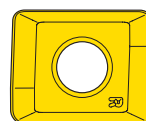
SNGX 13-M



SNGX 13-R



LNET 16



LNET 16-R

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8230	8240									l	d	s	d ₁	r _e
LNET 160616SR-R	●	●									16,400	13,200	6,38	5,90	1,6
SNGX 130512PN-R	●	●									13,200	13,200	6,36	5,90	1,2
SNGX 130512SN-M	●	●									13,200	13,200	6,36	5,90	1,2

ERSATZTEILE / SPARE PARTS

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

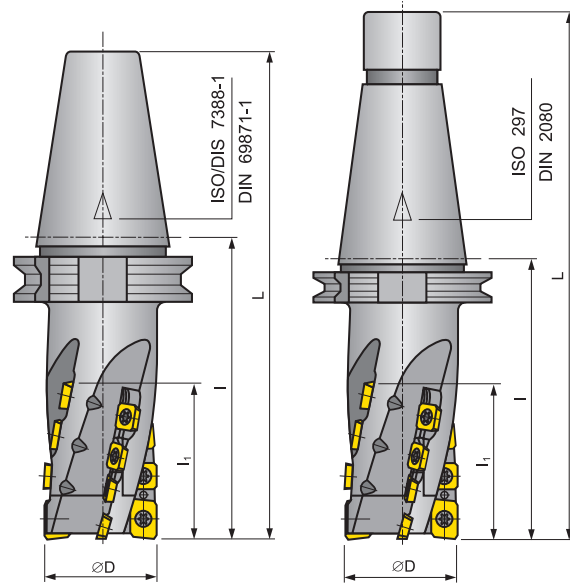
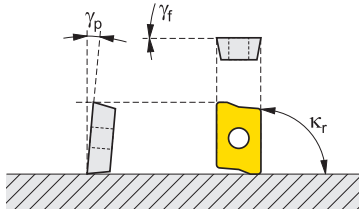
Ø Fräser Ø Cutter	Austauschbarer Kopf Indexable front part	Verbindungsschraube Mounting screw	Schlüssel Key	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
63	EH6326-SL-C	HS1230	HXK 10	US 45012-T20P	SDR T20P-T
80	EH8036-SL-C	HS1640	HXK 14	US 45012-T20P	SDR T20P-T

SSAP

WALZENSTIRNFRÄSER ZUM SCHRUPPEN - GETEILT HELICAL END MILLING CUTTERS FOR ROUGHING - DIVIDED



γ_p	+7°	κ_r	90°
γ_f	0°	$a_{p\max}$	l_1



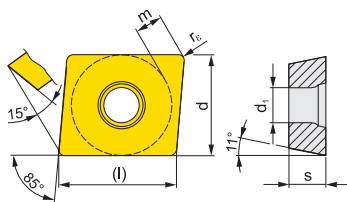
Z* - Anzahl Zähne / Number of teeth
 ZN* - Anzahl der WSP / Number of inserts
 TS* - Steilkegelgröße / Taper size

Abmessungen [mm]. / Dimensions [mm].

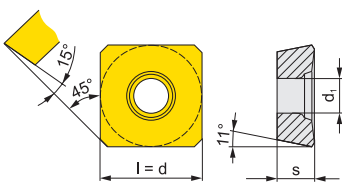
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Steilkegel Taper	Kühlung Cooling	[kg]
		D	L	l	l ₁	Z*	ZN*	TS*				
50J4R110H50-SSAP37+21	○	50	212	110	58	2+2	2+12	50	ISO/DIS 7388-1		3,5	
50J4R128H50-SSAP55+21	○	50	230	128	76	2+2	2+16	50	ISO/DIS 7388-1		3,8	
63J4R150H50-SSAP74+21	○	63	252	150	95	2+2	2+20	50	ISO/DIS 7388-1		4,5	
50J4R106X50-SSAP37+21	○	50	233	106	58	2+2	2+12	50	ISO 297		3,5	
50J4R124X50-SSAP55+21	●	50	251	124	76	2+2	2+16	50	ISO 297		3,8	
63J4R146X50-SSAP74+21	●	63	273	146	95	2+2	2+20	50	ISO 297		4,5	

SSAP

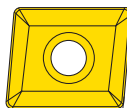
WALZENSTIRNFRÄSER ZUM SCHRUPPEN - GETEILT INSERTS FOR HELICAL END MILLING CUTTERS FOR ROUGHING - DIVIDED



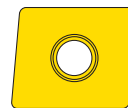
APET / APEW



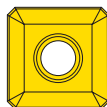
SPET / SPEW



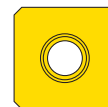
APET EN/SN



APEW EN/SN



SPET EN/SN



SPEW EN/SN

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8230	8240									(l)	d	s	d ₁	r _e
APET 150412EN	●										15,900	12,700	4,76	5,50	1,2
APET 150412SN	●	●									15,900	12,700	4,76	5,50	1,2
APEW 150412ER	●	○									15,900	12,700	4,76	5,50	1,2
APEW 150412SR	●	○									15,900	12,700	4,76	5,50	1,2
SPET 1204ADEN	●	●									12,700	12,700	4,76	5,50	-
SPET 1204ADSN	●	●									12,700	12,700	4,76	5,50	-
SPEW 1204ADEN	●	○									12,700	12,700	4,76	5,50	-
SPEW 1204ADSN	●	●									12,700	12,700	4,76	5,50	-

ERSATZTEILE / SPARE PARTS

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

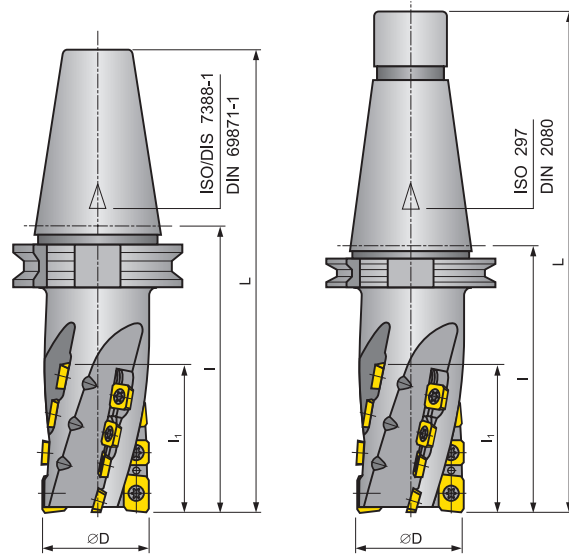
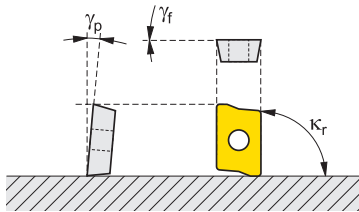
Ø Fräser Ø Cutter	Austauschbarer Kopf Indexable front part	Verbindungsschraube Mounting screw	Schlüssel Key	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
50	P50 x 21	SR 25	HXK 6	US 4511-T20	SDR T20
63	P63 x 21	SR 26	HXK 8	US 4511-T20	SDR T20

SSAP-A

WALZENSTIRNFRÄSER ZUM SCHRUPPEN - NICHT GETEILT
HELICAL END MILLING CUTTERS FOR ROUGHING - UNDIVIDED



γ_p	+7°	κ_r	90°
γ_f	0°	$a_{p\max}$	l1



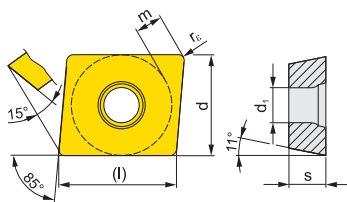
Z* - Anzahl Zähne / Number of teeth
ZN* - Anzahl der WSP / Number of inserts
TS* - Steilkegelgröße / Taper size

Abmessungen [mm]. / Dimensions [mm].

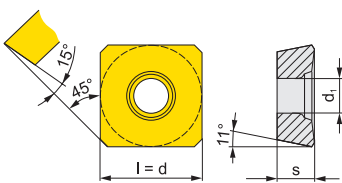
ISO	Sortiment / Assortment	Abmessungen / Dimensions								Steilkegel Taper	Kühlung Cooling	[kg]
		D	L	l	l ₁	Z*	ZN*	TS*				
50J4R110H50-SSAP58-A	○	50	212	110	58	2+2	2+12	50	ISO/DIS 7388-1		3,5	
50J4R128H50-SSAP76-A	○	50	230	128	76	2+2	2+16	50	ISO/DIS 7388-1		3,8	
63J4R150H50-SSAP95-A	○	63	252	150	95	2+2	2+20	50	ISO/DIS 7388-1		4,5	
80J6R155H50-SSAP95-A	○	80	257	155	95	3+3	3+30	50	ISO/DIS 7388-1		8,0	
50J4R106X50-SSAP58-A	○	50	233	106	58	2+2	2+12	50	ISO 297		3,5	
50J4R124X50-SSAP76-A	●	50	251	124	76	2+2	2+16	50	ISO 297		3,8	
63J4R146X50-SSAP95-A	●	63	273	146	95	2+2	2+20	50	ISO 297		4,5	
80J6R151X50-SSAP95-A	●	80	275	151	95	3+3	3+30	50	ISO 297		8,0	

SSAP-A

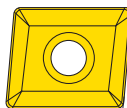
WALZENSTIRNFRÄSER ZUM SCHRUPPEN - NICHT GETEILT INSERTS FOR END MILLING CUTTERS FOR ROUGHING - UNDIVIDED



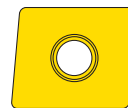
APET / APEW



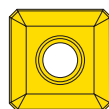
SPET / SPEW



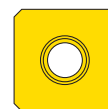
APET EN/SN



APEW EN/SN



SPET EN/SN



SPEW EN/SN

WENDESCHEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien / Grades										Abmessungen / Dimensions				
	8230	8240									(l)	d	s	d ₁	r _e
APET 150412EN	●										15,900	12,700	4,76	5,50	1,2
APET 150412SN	●	●									15,900	12,700	4,76	5,50	1,2
APEW 150412ER	●	○									15,900	12,700	4,76	5,50	1,2
APEW 150412SR	●	○									15,900	12,700	4,76	5,50	1,2
SPET 1204ADEN	●	●									12,700	12,700	4,76	5,50	-
SPET 1204ADSN	●	●									12,700	12,700	4,76	5,50	-
SPEW 1204ADEN	●	○									12,700	12,700	4,76	5,50	-
SPEW 1204ADSN	●	●									12,700	12,700	4,76	5,50	-

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
50, 63, 80	US 4511-T20	SDR T20

2416-E

WALZENSTIRNSCHLICHTFRÄSER - SCHAFT HELICAL MILLING CUTTERS

PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTRIFRÄSER/SCHLEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

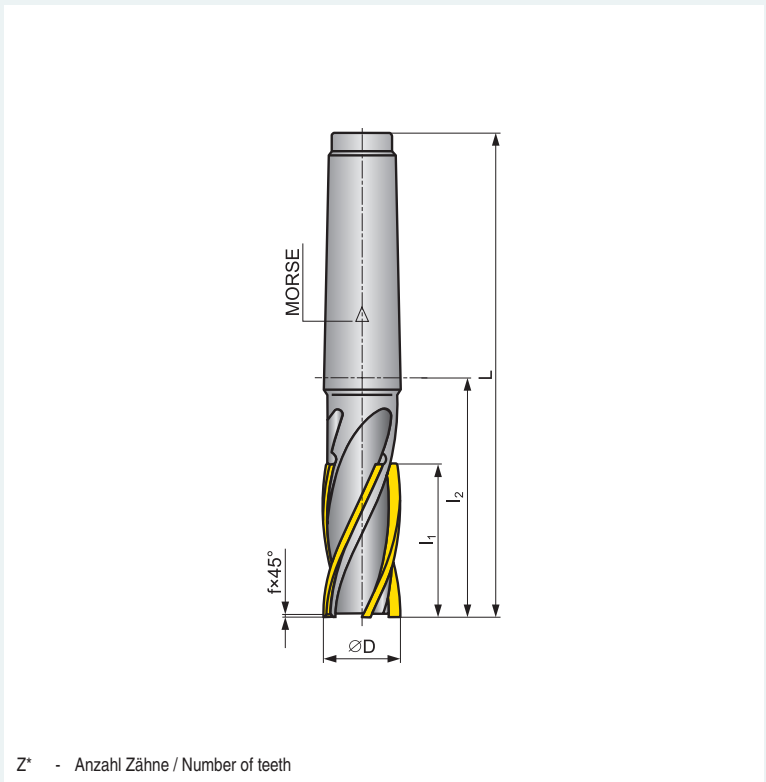
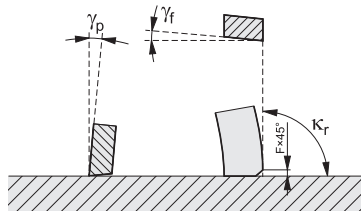
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

WENDESCHNEIDPLATTEN
INDEXABLE INSERTS



γ_p	-	κ_r	-
γ_f	-	$a_{p,max}$	-



Abmessungen [mm]. / Dimensions [mm].

ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung Cooling	[kg]
		D	L	l ₁	l ₂	Z*	Morse	f		
2416-20R-E3-P	●	20	146	40	65	4	3	0,5		0,30
2416-25R-E3-P	●	25	160	50	79	4	3	0,5		0,40
2416-32R-E4-P	●	32	180	50	78	4	4	0,5		0,70
2416-40R-E4-P	●	40	200	63	98	6	4	0,8		1,00



● 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 Lagerbestandsortiment ist abhängig von der gültigen Preisliste. / See price list for current availability.

UPI GRADE®



PLANFRÄSER
FACE MILLING CUTTERS

ECKFRÄSER
SHOULDER END MILLING CUTTERS

WALZENSTIRNFRÄSER/SCHIEBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERS

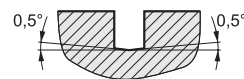
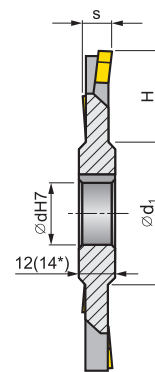
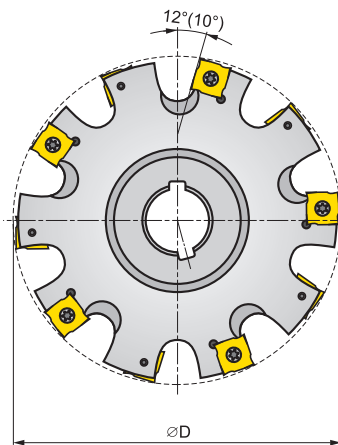
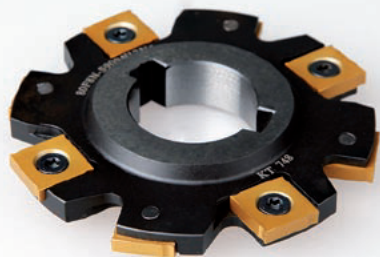
KOPIERFRÄSER
COPY MILLING CUTTERS

FRÄSER FÜR SPEZ. ANWENDUNGEN
CUTTERS FOR SPECIAL APPLICATION

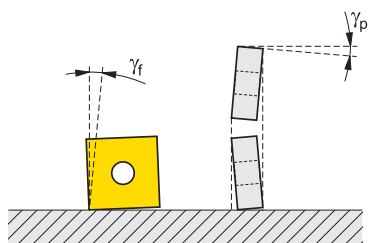
WENDESCHNEIDPLATTEN
INDEXABLE INSERTS

S90SN

SCHEIBENFRÄSER SIDE AND FACE MILLING CUTTERS



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



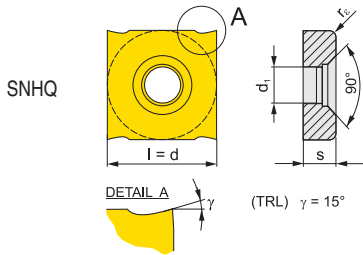
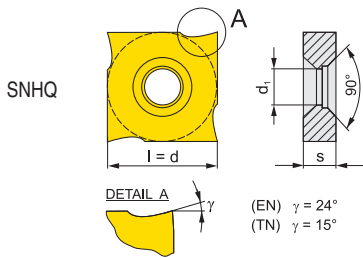
- Z* - Anzahl Zähne / Number of teeth
- * - Per s = 14 mm / For s = 14 mm
- ** - Auch mit anderem Durchmesser dH7 / Also available with other dH7 diameters upon request

Abmessungen [mm]. / Dimensions [mm].

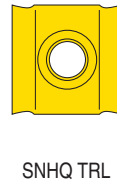
ISO	Sortiment / Assortment	Abmessungen / Dimensions							Kühlung / Cooling	[kg]
		D	dH7**	H	s	d ₁	Z*			
80F8N-S90SN11N4	●	80	27	18	4	42	8		0,2	
80F8N-S90SN11N5	○	80	27	18	5	42	8		0,2	
80F8N-S90SN12N6	●	80	27	18	6	42	8		0,2	
80F8N-S90SN12N8	●	80	27	18	8	42	8		0,3	
100G10N-S90SN12N6	●	100	32	25	6	48	10		0,3	
100G10N-S90SN12N8	○	100	32	25	10	48	10		0,4	
100G10N-S90SN12N10	●	100	32	25	12	48	10		0,5	
100G10N-S90SN12N12	○	100	32	25	12	48	10		0,5	
125H12N-S90SN12N6	●	125	40	31	6	58	12		0,5	
125H12N-S90SN12N8	●	125	40	31	8	58	12		0,6	
125H12N-S90SN12N10	○	125	40	31	10	58	12		0,6	
125H12N-S90SN12N12	○	125	40	31	12	58	12		0,6	
160H16N-S90SN12N6	●	160	40	44	6	58	16		1,0	
160H16N-S90SN12N8	○	160	40	44	8	58	16		1,1	
160H16N-S90SN12N10	○	160	40	44	10	58	16		1,2	
160H16N-S90SN12N12	○	160	40	44	12	58	16		1,3	
160H15N-S90SN12N14	○	160	40	44	14	58	15		1,4	
200J18N-S90SN12N6	●	200	50	62	6	72	18		1,5	
200J18N-S90SN12N8	○	200	50	62	8	72	18		1,6	
200J18N-S90SN12N10	○	200	50	62	10	72	18		1,9	
200J18N-S90SN12N12	○	200	50	62	12	72	18		2,1	
200J18N-S90SN12N14	○	200	50	62	14	72	18		2,3	

S90SN

SCHEIBENFRÄSER INSERTS FOR SIDE AND FACE MILLING CUTTERS



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





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

WENDESCHNEIDPLATTEN (WSP) / INDEXABLE CUTTING INSERTS

ISO	Materialien/Grades						Abmessungen/Dimensions					
	8215	8230	8240				l	s	d ₁	γ	r _e	
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 = 8 mm												
SNHQ 1204AZEN	○		○				12,700	4,500	5,00	24°	-	
SNHQ 1204AZTN		●	●				12,700	4,500	5,00	15°	-	
SNHQ 120405TRL			●				12,700	4,500	5,00	15°	0,5	
SNHQ 120410TRL			○				12,700	4,500	5,00	15°	1,0	
SNHQ 120415TRL			○				12,700	4,500	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	
s = 12, 14 mm												
SNHQ 1207AZEN	○		○				12,700	7,000	5,00	24°	-	
SNHQ 1207AZTN		●	●				12,700	7,000	5,00	15°	-	
SNHQ 120705TRL			○				12,700	7,000	5,00	15°	0,5	
SNHQ 120710TRL			●				12,700	7,000	5,00	15°	1,0	
SNHQ 120715TRL			○				12,700	7,000	5,00	15°	1,5	

ERSATZTEILE / SPARE PARTS

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

Ø Fräser Ø Cutter	Spannschraube* Clamping screw*	Schraubendreher Screwdriver
		
4	US 3504-T09P	SDR T09P
5	US 3504-T09P	SDR T09P
6	US 70	SDR T15
8	US 71	SDR T15
10	US 72	SDR T15
12; 14	US 73	SDR T15

PLANFRÄSER
FACE MILLING CUTTERSECKFRÄSER
SHOULDER END MILLING CUTTERSWALZENSTRINFRÄSER/SCHEIBENFRÄSER
SQUARE SHOULDER/SLOT MILLING CUTTERSKOPIERFRÄSER
COPY MILLING CUTTERSFRÄSER FÜR SPEZ. ANWENDUNGEN
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