

INNOTOOL

LOOK FORWARD



>>>2019

INNOTOOL

INNOTOOL, which stands for „Innovative Tooling“, is a market leader in indexable milling products.

The high shear geometry design of cutter body and inserts ensures that Innotool performs very well on low powered machines and often the cutting data can be increased considerably due to the soft cutting action.

The range of standard tooling has increased to now also contain a full range of tools for die & mould machining, as well as a range of indexable insert short hole drills.

In addition to the complete range of standard end mills, square shoulder mills, helical end mills, side and face mills and die and mould tooling, INNOTOOL can offer an excellent and fast service for special solutions.

We look forward to being of service.





STANDARD PLUS

Innotool's standard program comprises a broad and worldwide established range of cutting tools, suitable for the most various applications.

This range of cutting tools is constantly expanded: End mills, shell end mills, shoulder-type milling cutters, face mills, slotting cutters, form milling cutters, drills, solid carbide, adaptations, set-up equipment and indexable inserts.

The development and production of special-purpose tools according to customer-specific requirements is another important factor for Innotool.

Our know-how and great potential of experience, combined with our own demand for quality, functionality and innovation, guarantees our customers the optimum cutting tool solution - for individual machining tasks, for all industries.





LOOK FORWARD



8-13 General Technical Information

14-33 End Mills

34-47 Helical End Mills

48-61 Square Shoulder Cutters

62-77 Face Mills

78-93 Side and Face Cutters

94-109 Form Cutters

110-205 Mold and Die

206-291 Drills / Thread Milling

292-309 Tool Holders and Adaptors

310-327 Index

GENERAL TECHNICAL INFORMATION

O

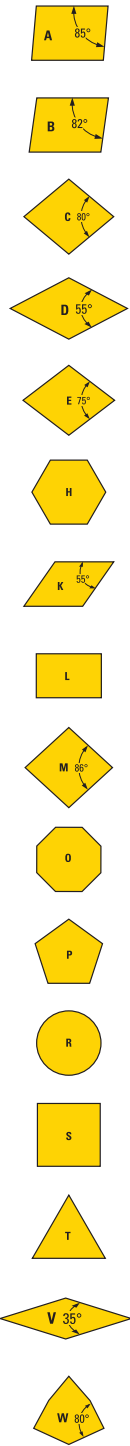
N

C

U

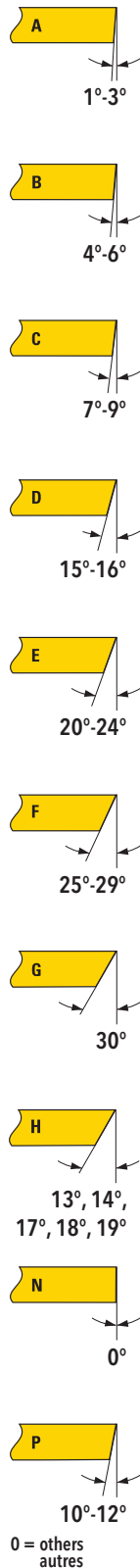
05

INSERT SHAPE



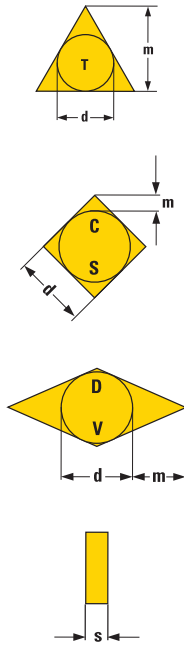
U = High feed geometry
Z = Chip breaker geometry

CLEARANCE ANGLE



0 = others
autres

TOLERANCES

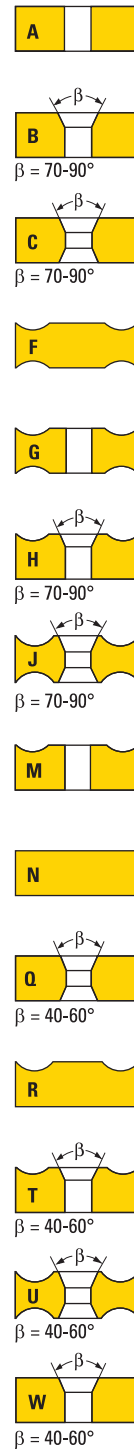


	d	m	s
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,05-0,13
H	±0,013	±0,013	±0,025
J ¹	±0,05-0,15 ²	±0,005	±0,025
K ¹	±0,05-0,15 ²	±0,013	±0,025
L ¹	±0,05-0,15 ²	±0,013	±0,025
M	±0,05-0,15 ²	±0,08-0,20 ²	±0,013
N	±0,05-0,15 ²	±0,08-0,20 ²	±0,025
U	±0,05-0,25 ²	±0,13-0,38 ²	±0,05-0,13

¹Inserts with ground wiper

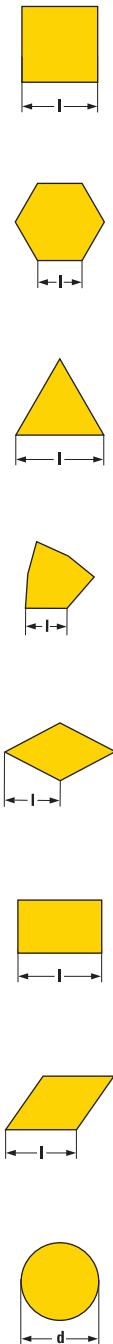
²Depending on insert size
(see ISO standard 1832)

INSERT TYPE



X = Special design
(description required)

CUTTING EDGE LENGTH



GENERAL TECHNICAL INFORMATION

05

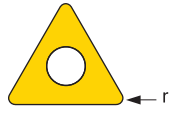
INSERT THICKNESS



01 s=1,59
T1 s= 1,98
02 s= 2,38
T2 s= 2,78
03 s= 3,18
T3 s= 3,97
04 s= 4,76
05 s= 5,56
06 s= 6,35
07 s= 7,94
09 s= 9,52

AN

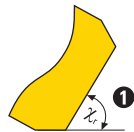
CORNER RADIUS



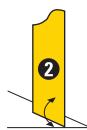
02 r= 0,2
04 r= 0,4
08 r= 0,8
12 r= 1,2
16 v 1,6
24 r= 2,4



00 dia. in inch measures converted to mm
M0 dia. in metric measures



1 Lead angle χ_r
A = 45°
D = 60°
E = 75°
F = 85°
P = 90°
Z = others / autres



2 Clearance angle on wiper
A = 3°
B = 5°
C = 7°
D = 15°
E = 20°
F = 25°
G = 30°
N = 0°
P = 11°
Z = other

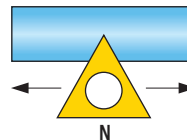
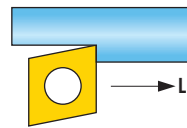
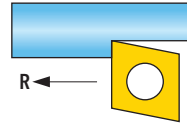
T

CUTTING EDGE



N

CUTTING DIRECTION



HR

INTERNAL DESIGNATION

For example:

P = Polished

W = With wiper finishing edge / facette

HR = Heat grooves

GENERAL TECHNICAL INFORMATION

X

TOOLTYPE

- 1** End or shell-type mill with straight flute
- 2** Stepped end mills
- 4** Solid carbide end mills & screw-type mills, helical flute

X

DENSITY

- 5** Solid carbide, 1 & 2 no. of flutes, large spacing
- 6** Solid carbide, 3 no. of flutes, normal spacing
- 7** Solid carbide, 4 & 5 no. of flutes, narrow spacing
- 8** Solid carbide, 6-9 no. of flutes, extra narrow spacing
- 9** Solid carbide, 10 or more flutes, extra narrow spacing
- R** Blank

A

STYLE

- A** High speed cutter
- B** Ball nose cutter - cylindrical
- C** 90° cutting angle with chamfer on cutting edge
- D** 90° cutting angle with radius on cutting edge
- J** 90° cutting angle with sharp cutting edge
- M** 60° - 74° cutting angle
- N** 45° - 59° cutting angle
- P** 1° - 44° cutting angle
- R** Outside radius chamfer mill
- T** T-slot mill
- U** Torus form mill
- X** Ball nose mill - spherical
- Y** Thread mill
- Z** Centering mil

XXX

TOOL DIAMETER

3-digit number
e.g. diameter 12.0mm = 120

GENERAL TECHNICAL INFORMATION

XX

CUTTING LENGTH OR TOOL HEIGHT

2-digit number
e.g. cutting edge 7.0mm = 70

EE

ADAPTION CODE

T0 8 mm cyl. shank
T1 10 mm cyl. shank
T2 12 mm cyl. shank
T3 16 mm cyl. shank
T4 20 mm cyl. shank
T5 25 mm cyl. shank
T6 ChipSurfer thread
T7 6 mm cyl. shank
T8 ChipSurfer thread
T9 3 mm cyl. shank
TQ ChipSurfer thread
TR ChipSurfer thread
TS ChipSurfer thread
TU ChipSurfer thread
UA 7 mm cyl. shank
UD 2 mm cyl. shank
UE 2,5 mm cyl. shank
UF 3,5 mm cyl. shank
UG 4,5 mm cyl. shank
UH 5,5 mm cyl. shank
UO 4 mm cyl. shank
U1 5 mm cyl. shank
U2 18 mm cyl. shank
U8 14 mm cyl. shank
U9 9 mm cyl. shank
WE 6 mm Weldon DIN 6535 HB
WF 14 mm Weldon DIN 6535 HB
WG 18 mm Weldon DIN 6535 HB
W0 8 mm Weldon DIN 6535 HB
W1 10 mm Weldon DIN 6535 HB
W2 12 mm Weldon DIN 6535 HB
W3 16 mm Weldon DIN 6535 HB
W4 20 mm Weldon DIN 6535 HB
W5 25 mm Weldon DIN 6535 HB
WR 5 mm Weldon DIN 6535 HB

H

ROTATING DIRECTION

R R. H. mills
L L. H. mills
 - neutral (R. H. / L. H.)

00

STANDARD OR SPECIAL TOOL

A 0°-25° pos. helical angle
B 26°-34° pos. helical angle
C 35°-44° pos. helical angle
D pos. helical angle > 45°
F 0°-25° neg. helical angle
G 26°-34° neg. helical angle
H 35°-44° neg. helical angle
J neg. helical angle > 45°
K neg. chamfer
L 0°-30° pos. helical angle with chipbreaker
M 31°-44° pos. helical angle with chipbreaker
N > 45° pos. helical angle with chip breaker resp. neutral slot mill
P positive slot mill
Q HPC divers spacing
T HPC divers spacing and divers helical angle
U 45° roughing and finishing
W High precision cutter

GENERAL TECHNICAL INFORMATION

	Grade	Coating	ISO-group	milling	drilling	solid carbide	Application and Material	
Carbide	IN05S	-	N10-N25	•			for machining of AL-alloys and non-ferrous materials	
	IN10K	-	K10-K25	•			for finish machining of cast iron	
	IN15K	-	N10-N25	•	•		for finish machining of AL-alloys and non-ferrous materials	
			N15-N30	•			for machining of AL-alloys and non-ferrous materials	
PVD coated	IN2004	TiAlN	P10-P20	•			for milling of alloyed steel	
			K10-K25	•			for medium machining of gray cast iron - especially CGI	
			H05-H15	•			for finish machining of hardened steel at medium up to high cutting speed	
	IN2005	TiAlN	P15-P30	•	•	•	for general machining of steel at high cutting speed	
			M15-M35	•	•	•	for general machining of stainless steel	
			K20-K40	•	•	•	for general machining of cast iron	
			S05-S20	•		•	for general milling of heat resistant alloys and titanium also for wet machining	
	IN2006	TiAlN	P05-P20	•		•	for finish machining at high cutting speed and low cutting depth	
				H05-H20	•		•	for finish machining of hardened steel up to 63 HRC
	IN2010	TiAlN	K10-K30	•	•		for finish machining and drilling of cast iron material	
	IN2035	TiAlN	P25-P50	•			for high feed machining of steel	
			M20-M40	•			for machining of stainless and austenitic steel and heat resistant alloys	
			S20-S30	•			mainly for milling of materials of machining group ,S'	
	IN2040	TiAlN	P15-P35	•			for finish machining of unalloyed steel and tempered steel	
	IN2504	TiAlN / TiN	P05-P25	•		•	for milling of steel at medium up to high cutting speed	
			H05-H25	•		•	for milling of hardened steel at medium up to high cutting speed	
	IN2505	TiAlN / TiN	P15-P30	•	•		for semi-finish and rough machining of steel with high strength	
			M15-M35	•	•		for general machining of stainless steel	
			S05-S20	•	•		for general machining of heat resistant alloys	
	IN2510	TiAlN / TiN	K10-K30	•			for general machining of gray cast and non-ferrous metal	
	IN2515	TiAlN / TiN	P20-P35	•			for milling of steel with high strength at medium cutting speed	
			K30-K50	•			for general machining of gray cast and nodular cast iron	
	IN2530	TiAlN / TiN	P20-P40	•	•		tough grade for general machining of steel	
M15-M30			•	•		for general machining of stainless steel		
K20-K40			•			for general machining of cast iron		
S15-S30			•	•		for general machining of heat resistant alloys		
IN2540	TiAlN / TiN	P15-P35	•			for semi-finish and rough machining of unalloyed steel and tempered steel		
IN4005	TiAlN / Al ₂ O ₃	P15-P30	•			for general machining of steel		
		M15-M35	•			for general machining of stainless steel		
		K20-K40	•			for general machining of cast iron		
		S05-S20	•			for general machining of heat resistant alloys and titanium		
IN4010	TiAlN / Al ₂ O ₃	K10-K30	•			for general machining of cast iron		
IN4015	TiAlN / Al ₂ O ₃	P20-P35	•			for milling of steel with high strength at medium cutting speed		
		K30-K50	•			for general milling of gray cast and nodular cast iron		
IN4030	TiAlN / Al ₂ O ₃	P20-P40	•			tough grade for general machining of steel		
		M15-M30	•			for general machining of stainless and austenitic steel		
		S15-S25	•			for general machining of heat resistant alloys		
IN4035	TiAlN / Al ₂ O ₃	P25-P50	•			for high feed machining of steel		
		M20-M40	•			for machining of stainless steel, austenitic steel and heat resistant alloys		
		S20-S30	•			mainly for milling of materials of machining group ,S'		
IN4040	TiAlN / Al ₂ O ₃	P15-P30	•			for medium machining of unalloyed and tempered steel		
CVD coated	IN6505	TiCN / Al ₂ O ₃ / TiN	P10-P25		•		for drilling of steel, used only at peripheral insert of QUADOTWIST ™ drill	
	IN6520	TiCN / Al ₂ O ₃ / TiN	P10-P40		•		for drilling of steel, used only at peripheral insert of QUADODRILL ™ drill	
	IN6535	TiCN / Al ₂ O ₃ / TiN	M20-M35	•			for dry machining of stainless steel and heat resistant alloys at high cutting speed	
			S15-S30	•			mainly for milling of materials of machining group ,S'	
	IN7035	TiCN / Al ₂ O ₃ / TiCN	P20-P40	•			for high feed machining of steel	
M20-M35			•			for machining of stainless and austenitic steel and heat resistant alloys		
S15-S30			•			mainly for milling of materials of machining group ,S'		
Cermet	IN0560	TiN	P05-P15	•			for finish machining of steel at medium up to high cutting speed	
			M05-M15	•			for finish machining of stainless steel at medium up to high cutting speed	
SIN	IN70N	-	K10-K20	•			for machining of gray cast at extremely high cutting speed	
CBN	IN80B	-	K05-K15	•			for machining of surface hardened cast materials and chill cast	
			H05-H15	•			for machining of hardened steel	
PKD	IN90D	-	N01-N10	•			for machining of aluminum, non-ferrous materials and graphite	

GENERAL TECHNICAL INFORMATION

Application	Grade	ISO-group						
milling	IN2006	P05-P20					H05-H20	Hardness ↑ ↓ Toughness
	IN2004	P10-P20		K10-K20			H05-H15	
	IN4010			K10-K30				
	IN2510			K10-K30				
	IN2005	P15-P30	M15-M35	K20-K40			S05-S20	
	IN2505	P15-P30	M15-M35				S05-S20	
	IN4040	P15-P30						
	IN2540	P15-P35						
	IN4015	P20-P30		K30-K50				
	IN2515	P20-P30		K30-K50				
	IN4030	P20-P40	M15-M30				S15-S25	
	IN2530	P20-P40	M15-M30	K20-K40			S15-S25	
	IN6535		M20-M35				S15-S30	
	IN7035	P20-P40	M20-M35				S15-S30	
IN4035	P25-P50	M20-M40				S20-S30		
IN2035	P25-P50	M20-M40				S20-S30		
drilling	IN2010		K10-K30					Hardness ↑ ↓ Toughness
	IN6505	P10-P25						
	IN6520	P10-P40						
	IN2505	P20-P40	M20-M40				S05-S20	
IN2005	P15-P30	M15-M35	K20-K40			S05-S20		
solid carbide	IN2504	P05-P25					H05-H25	Hardness ↑ ↓ Toughness
	IN2006	P05-P20					H05-H20	
	IN2005	P15-P30	M15-M35	K20-K40			S05-S20	

END MILLS

	D	a	Description	Code	Page
	10 - 25	5,7	HIPOS MICRO SA06D02	SA06D02	16
	9,5 - 25	5,7	HIPOS MICRO SA06D03	SA06D03	17
	10 - 35	5,7	HIPOS MICRO SA06E01	SA06E01	18
	12 - 25	9	HIPOS PLUS SB09D03	SB09D03	20
	12 - 35	9	HIPOS PLUS SB09E01	SB09E01	22
	20 - 32	12	HIPOS PLUS SB13D03B	SB13D03B	24
	20 - 40	12	HIPOS PLUS SB13E01B	SB13E01B	26
	16 - 32	3,8	EBD 6 SW04D03	SW04D03	28
	16 - 40	3,8	EBD 6 SW04E01	SW04E01	29
	25 - 40	5,8	EBD 6 SW06D03	SW06D03	30
	25 - 40	5,8	EBD 6 SW06E01	SW06E01	31
	25 - 40	8,4	ALUMINATOR SS11E01	SS11E01	32

Subject to printing error or technical changes.

END MILLS

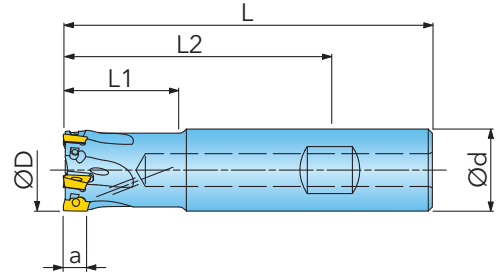
	D	a	Description	Code	Page



Subject to printing error or technical changes.

END MILLS

ADAPTION ACC. TO DIN 1835 A



Designation	D	d	L	L1	a	Z			
SA.010.006	10	10	55	16	5,7	2	10,0	✓	0,03
SA.012.007	12	12	60	17	5,7	3	6,5	✓	0,04
SA.016.009	16	16	90	19	5,7	4	4,0	✓	0,11
SA.020.015	20	20	105	19	5,7	5	2,5	✓	0,21
SA.025.015	25	20	115	65	5,7	7	2,0	✓	0,24

Programming radius 1mm

AOMT060202R 	AOMT060204R 	AOMT060208R
AOMT060216R 	AOCT060204FR-P 	AOMT060202R-DT1
UOMT0602TR 		

Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530	IN90D	
AOMT060202R	0,06/0,12	positive geometry R0,2								
AOMT060204R	0,06/0,12	positive geometry R0,4								
AOMT060208R	0,06/0,12	positive geometry R0,8								
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6								
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4								
AOMT060202R-DT1	0,05/0,12	with short PCD-tip R0,2								
UOMT0602TR	0,30/0,80	high feed geometry								

¹⁾Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H



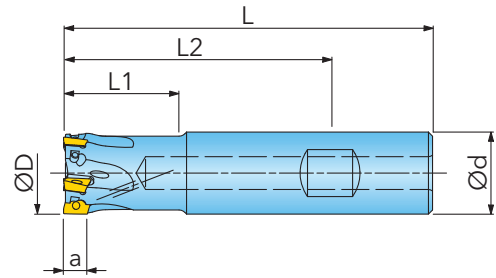
SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

HIPOS MICRO SA06D02

END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z			
SA.010.004	9,5	16	80	18	56	5,7	2	10,5	✓	0,09
SA.010.005	10	16	80	18	56	5,7	2	10,0	✓	0,09
SA.012.005	11,5	16	80	20	56	5,7	3	7,0	✓	0,09
SA.012.006	12	16	80	20	56	5,7	3	6,5	✓	0,09
SA.014.004	13,5	16	80	22	56	5,7	3	5,5	✓	0,09
SA.014.005	14	16	80	22	56	5,7	3	5,2	✓	0,09
SA.016.008	16	16	85	26	61	5,7	4	4,0	✓	0,10
SA.020.014	20	20	90	30	65	5,7	5	2,5	✓	0,17
SA.025.014	25	25	100	40	68	5,7	7	2,0	✓	0,31

Programming radius 1mm

AOMT060202R 	AOMT060204R 	AOMT060208R
AOMT060216R 	AOCT060204FR-P 	AOMT060202R-DT1
UOMT0602TR 		

Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530	IN90D
AOMT060202R	0,06/0,12	positive geometry R0,2							
AOMT060204R	0,06/0,12	positive geometry R0,4							
AOMT060208R	0,06/0,12	positive geometry R0,8							
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6							
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4							
AOMT060202R-DT1	0,05/0,12	with short PCD-tip R0,2							
UOMT0602TR	0,30/0,80	high feed geometry							

¹⁾ Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

① ②

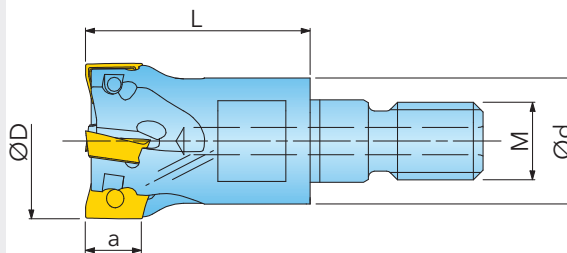
SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

HIPOS-MICRO SA06D03

END MILLS

SCREW-IN TYPE ADAPTION

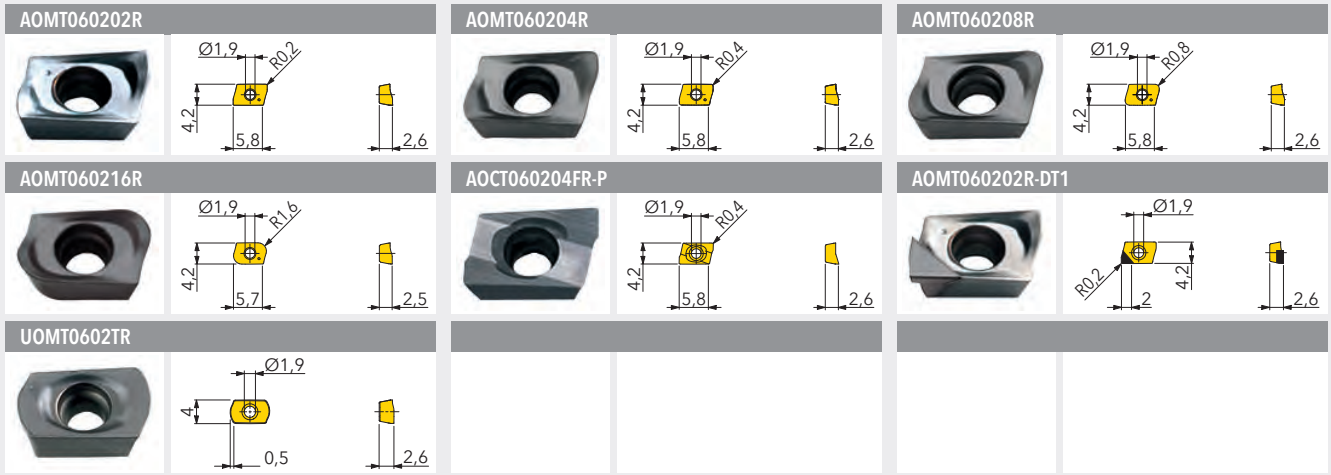


Designation	D	d1	L	a	M	Z			
SA.010.009	10	9,8	17	5,7	M6	2	10	✓	0,01
SA.012.008	12	11,8	23	5,7	M6	3	6,5	✓	0,02
SA.015.002	15	13	23	5,7	M8	4	4,4	✓	0,02
SA.016.010	16	13	23	5,7	M8	4	4,0	✓	0,03
SA.020.016	20	18	30	5,7	M10	5	2,5	✓	0,06
SA.025.016	25	21	35	5,7	M12	7	2,0	✓	0,10
SA.030.001	30	29	43	5,7	M16	8	1,7	✓	0,21
SA.032.018	32	29	43	5,7	M16	8	1,6	✓	0,22
SA.035.002	35	29	43	5,7	M16	9	1,4	✓	0,24

Programming radius 1mm

HIPOS MICRO SA06E01

END MILLS



Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530	IN90D		
AOMT060202R	0,06/0,12	positive geometry R0,2									
AOMT060204R	0,06/0,12	positive geometry R0,4									
AOMT060208R	0,06/0,12	positive geometry R0,8									
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6									
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4									
AOMT060202R-DT1	0,05/0,12	with short PCD-tip R0,2									
UOMT0602TR	0,30/0,80	high feed geometry									

¹⁾Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

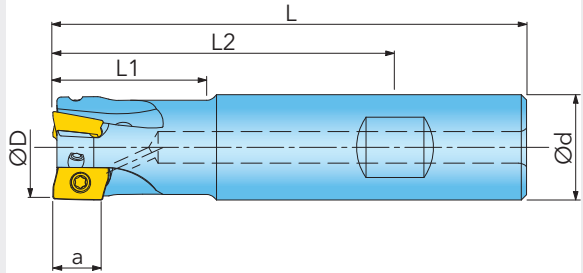


SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z			
SB.012.001	12	16	80	20	56	9	1	1,5	✓	0,09
SB.016.001	16	16	85	26	61	9	2	10,0	✓	0,10
SB.020.010	20	20	90	30	65	9	2	7,0	✓	0,18
SB.020.005	20	20	90	30	65	9	3	7,0	✓	0,17
SB.020.006	20	20	125	75	100	9	2	7,0	✓	0,23
SB.025.009	25	25	100	40	68	9	4	4,4	✓	0,31
SB.025.010	25	25	145	85	113	9	3	4,4	✓	0,45
SB.025.014	25	25	145	85	113	9	4	4,4	✓	0,45

HIPOS PLUS SB09D03

SPARE PARTS



Diameter Range

12 - 16	SM25-054-00 (1,1Nm) DS-T08S
20 - 25	SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

END MILLS

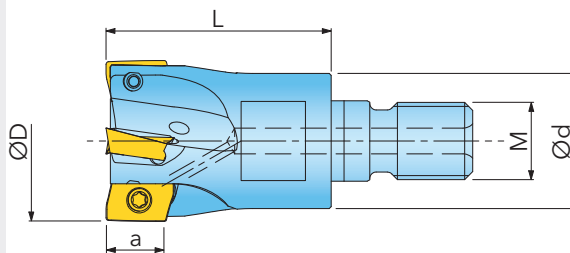


Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT09T304R	0,10/0,15	positive geometry R0,4				●	●	●	●		
BOMT09T308R	0,10/0,15	positive geometry R0,8				●	●	●	●	●	
BOMT09T316R ¹⁾	0,10/0,15	positive geometry R1,6				●		●	●		
BOMT09T320R ¹⁾	0,10/0,15	positive geometry R2,0				●		●	●		
BOMT09T331R ¹⁾	0,10/0,15	positive geometry R3,1				●		●	●		
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4									●
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4									●
BODT09T304R	0,05/0,15	ground finishing geometry R0,4			●		●				
BODT09T304R-001	0,05/0,15	finishing geometry, short R0,4			●		●				
BODT09T308R	0,05/0,15	ground finishing geometry R0,8			●		●				
BODT09T308R-001	0,05/0,15	finishing geometry, short R0,8			●		●				
BODT09T320R-001	0,05/0,15	finishing geometry, short R2,0			●		●				
ZOMT09T304R ²⁾	0,10/0,15	chip splitter geometry R0,4				●		●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

END MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
SB.012.002	12	11,8	30	9	M6	1	1,5	✓	0,02
SB.015.001	15	13	30	9	M8	2	12,0	✓	0,03
SB.016.003	16	13	35	9	M8	2	10,0	✓	0,03
SB.020.011	20	18	35	9	M10	2	7,0	✓	0,07
SB.020.009	20	18	35	9	M10	3	7,0	✓	0,06
SB.025.013	25	21	35	9	M12	4	4,4	✓	0,09
SB.032.012	32	29	43	9	M16	4	2,8	✓	0,20
SB.032.011	32	29	43	9	M16	5	2,8	✓	0,20
SB.035.002	35	29	43	9	M16	5	2,5	✓	0,22

HIPOS PLUS SB09E01

SPARE PARTS



Diameter Range

12 - 16	SM25-054-00 (1,1Nm) DS-T08S
20 - 35	SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

END MILLS

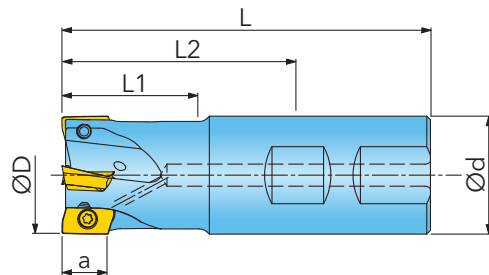


Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT09T304R	0,10/0,15	positive geometry R0,4				●	●	●	●		
BOMT09T308R	0,10/0,15	positive geometry R0,8				●	●	●	●	●	
BOMT09T316R ¹⁾	0,10/0,15	positive geometry R1,6				●	●	●	●		
BOMT09T320R ¹⁾	0,10/0,15	positive geometry R2,0				●	●	●	●		
BOMT09T331R ¹⁾	0,10/0,15	positive geometry R3,1				●	●	●	●		
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4									●
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4									●
BODT09T304R	0,05/0,15	ground finishing geometry R0,4			●		●				
BODT09T304R-001	0,05/0,15	finishing geometry, short R0,4			●		●				
BODT09T308R	0,05/0,15	ground finishing geometry R0,8			●		●				
BODT09T308R-001	0,05/0,15	finishing geometry, short R0,8			●		●				
BODT09T320R-001	0,05/0,15	finishing geometry, short R2,0			●		●				
ZOMT09T304R ²⁾	0,10/0,15	chip splitter geometry R0,4				●		●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z			
SB.020.001	20	20	90	30	65	12	2	7,0	✓	0,17
SB.025.015	25	25	100	40	68	12	2	7,9	✓	0,32
SB.025.005	25	25	100	40	68	12	3	7,9	✓	0,30
SB.032.007	32	25	100	40	68	12	4	5,0	✓	0,33
SB.032.005	32	32	100	38	64	12	4	5,0	✓	0,51

HIPOS PLUS SB13D03B

SPARE PARTS



SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

END MILLS

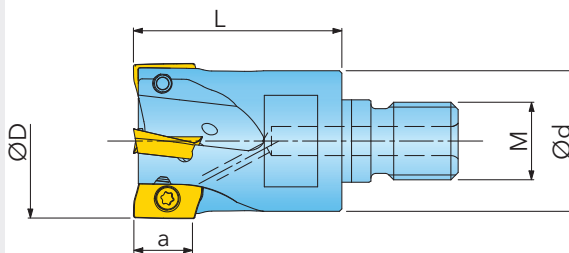


Designation	fz(min/max)	Design	Grade	Material								
				IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D	
BOMT130404R	0,12/0,20	positive geometry R0,4					●	●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8					●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6						●	●	●	●	
BOMT130420R	0,12/0,20	positive geometry R2,0						●	●	●	●	
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4						●	●	●	●	
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●	●	●	
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0						●	●	●	●	
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4	●									
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8	●									
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4										●
BODT130404R	0,05/0,20	ground finishing geometry R0,4		●				●				
BODT130404R-001	0,05/0,20	finishing geometry, short R0,4		●				●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8		●				●				
BODT130408R-001	0,05/0,20	finishing geometry, short R0,8		●				●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

END MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
SB.020.002	20	18	35	12	M10	2	7,0	✓	0,06
SB.025.016	25	21	35	12	M12	2	7,9	✓	0,09
SB.025.006	25	21	35	12	M12	3	7,9	✓	0,08
SB.032.006	32	29	43	12	M16	4	5,0	✓	0,19
SB.035.001	35	29	43	12	M16	4	4,2	✓	0,20
SB.040.002	40	29	43	12	M16	4	3,2	✓	0,25
SB.040.001	40	29	43	12	M16	5	3,2	✓	0,23

HIPOS PLUS SB13E01B

SPARE PARTS



SM35-088-10 (3,0Nm) DST10S

① = Insert screw ② = Screw driver

END MILLS

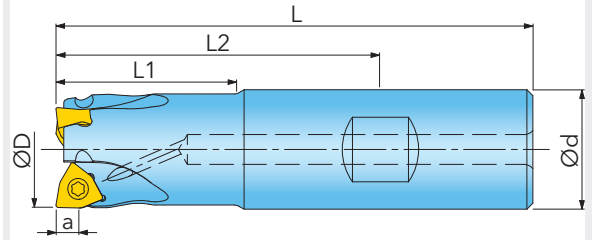
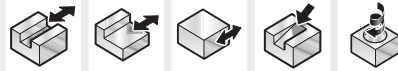


Designation	fz(min/max)	Design	Grade									
				IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D	
BOMT130404R	0,12/0,20	positive geometry R0,4					●	●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8					●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6						●	●	●	●	
BOMT130420R	0,12/0,20	positive geometry R2,0						●	●	●	●	
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4						●	●	●	●	
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●	●	●	
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0						●	●	●	●	
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4	●									
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8	●									
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4										●
BODT130404R	0,05/0,20	ground finishing geometry R0,4		●				●				
BODT130404R-001	0,05/0,20	finishing geometry, short R0,4		●				●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8		●				●				
BODT130408R-001	0,05/0,20	finishing geometry, short R0,8		●				●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

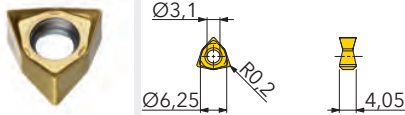
END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)

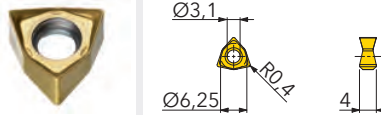


Designation	D	d	L	L1	L2	a	Z			
SW.016.001	16	16	85	26	61	3,8	2	3,0	✓	0,11
SW.020.001	20	20	90	30	65	3,8	3	2,4	✓	0,18
SW.025.003	25	25	100	40	68	3,8	5	1,9	✓	0,33
SW.032.003	32	25	100	40	68	3,8	6	1,5	✓	0,35

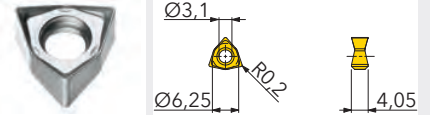
WNMU04T302N



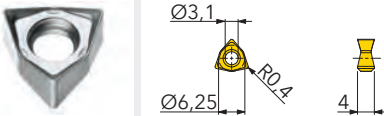
WNMU04T304N



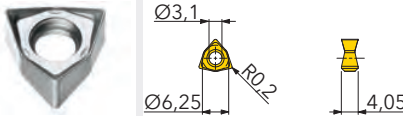
WNCU04T302FN-P



WNCU04T304FN-P



WNCU04T308FN-P



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNMU04T302N	0,07/0,18	positive geometry R0,2							
WNMU04T304N	0,07/0,18	positive geometry R0,4							
WNCU04T302FN-P	0,05/0,20	non-ferrous geometry R0,2							
WNCU04T304FN-P	0,05/0,20	non-ferrous geometry R0,4							
WNCU04T308FN-P	0,05/0,20	non-ferrous geometry R0,8							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



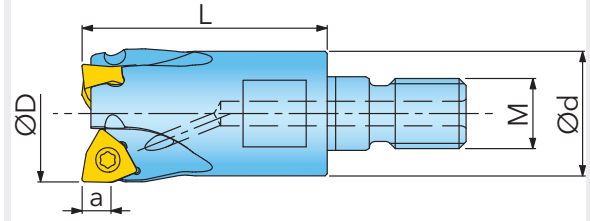
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

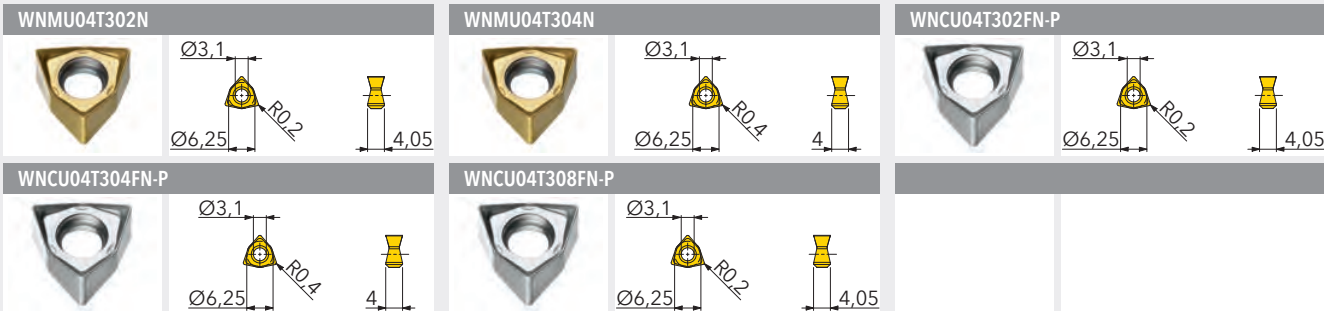
ECO 6 SW04D03

END MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
SW.016.002	16	13	23	3,8	M8	2	3,0	✓	0,03
SW.020.002	20	18	35	3,8	M10	3	2,4	✓	0,07
SW.025.004	25	21	35	3,8	M12	5	1,9	✓	0,10
SW.032.004	32	29	43	3,8	M16	6	1,5	✓	0,22
SW.035.001	35	29	43	3,8	M16	6	1,7	✓	0,23
SW.040.003	40	29	43	3,8	M16	7	2,1	✓	0,25



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNMU04T302N	0,07/0,18	positive geometry R0,2							
WNMU04T304N	0,07/0,18	positive geometry R0,4							
WNCU04T302FN-P	0,05/0,20	non-ferrous geometry R0,2							
WNCU04T304FN-P	0,05/0,20	non-ferrous geometry R0,4							
WNCU04T308FN-P	0,05/0,20	non-ferrous geometry R0,8							

● = P ● = M ● = K ● = N ● = S ○ = H



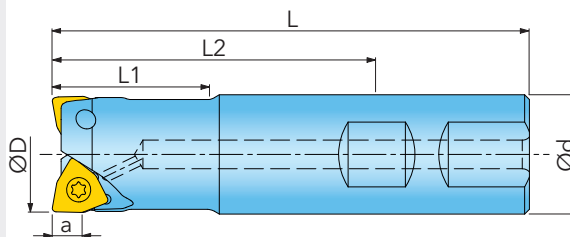
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

ECO 6 SW04E01

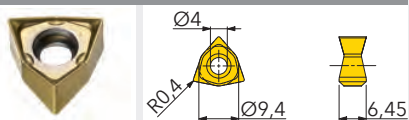
END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)

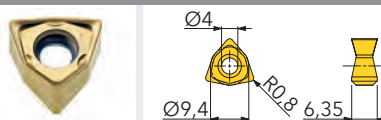


Designation	D	d	L	L1	L2	a	Z			
SW.025.001	25	25	100	30	68	5,8	2	2,9	✓	0,32
SW.032.001	32	32	110	40	74	5,8	3	2,2	✓	0,58
SW.040.001	40	32	115	40	79	5,8	4	1,8	✓	0,66

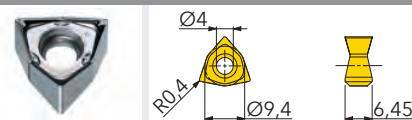
WNMU060604N



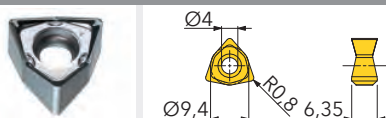
WNMU060608N



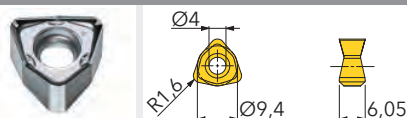
WNCU060604FN-P



WNCU060608FN-P



WNCU060616FN-P



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNMU060604N	0,13/0,35	positive geometry R0,4							
WNMU060608N	0,13/0,35	positive geometry R0,8							
WNCU060604FN-P	0,05/0,35	non-ferrous geometry R0,4							
WNCU060608FN-P	0,05/0,35	non-ferrous geometry R0,8							
WNCU060616FN-P	0,05/0,35	non-ferrous geometry R1,6							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



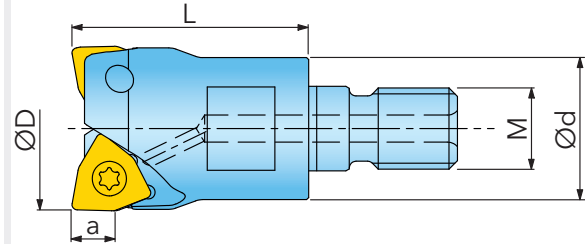
SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

ECO 6 SW06D03

END MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
SW.025.002	25	21	35	5,8	M12	2	2,9	✓	0,10
SW.032.002	32	29	43	5,8	M16	3	2,2	✓	0,21
SW.040.002	40	29	43	5,8	M16	4	1,8	✓	0,25

WNCU060604N	WNCU060608N	WNCU060604FN-P
WNCU060608FN-P	WNCU060616FN-P	

Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNCU060604N	0,13/0,35	positive geometry R0,4							
WNCU060608N	0,13/0,35	positive geometry R0,8							
WNCU060604FN-P	0,05/0,35	non-ferrous geometry R0,4							
WNCU060608FN-P	0,05/0,35	non-ferrous geometry R0,8							
WNCU060616FN-P	0,05/0,35	non-ferrous geometry R1,6							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

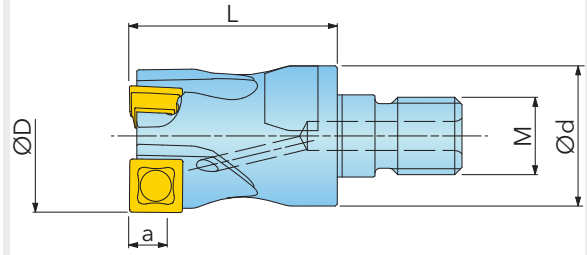
① ②

SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

END MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
SS.025.006	25	21	35	8,4	M12	2	7,0	✓	0,08
SS.032.006	32	29	43	8,4	M16	3	6,0	✓	0,18
SS.040.002	40	29	43	8,4	M16	3	4,0	✓	0,22

ALUMINATOR SS11E01

END MILLS

Designation	fz(min/max)	Design	Grade	IN15K								
SHET110502FR-P	0,05/0,30	non-ferrous geometry, polished R0,2		●								
SHET110505FR-P	0,05/0,30	non-ferrous geometry, polished R0,5		●								
SHET110508FR-P	0,05/0,30	non-ferrous geometry, polished R0,8		●								
SHET110516FR-P	0,05/0,30	non-ferrous geometry, polished R1,6		●								
SHET110524FN-P	0,05/0,30	non-ferrous geometry, polished R2,4		●								
SHET110532FN-P	0,05/0,30	non-ferrous geometry, polished R3,2		●								
SHET110540FN-P	0,05/0,30	non-ferrous geometry, polished R4,0		●								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

① 

② 

SM40-093-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

HELICAL END MILLS



	D	a	Description	Code	Page
	16 - 25	16,5 - 27	HIPOS MICRO IA06D03	IA06D03	36
	16 - 25	17 - 27	HIPOS MICRO IA06M01	IA06M01	37
	25 - 32	26 - 34	HIPOS PLUS IB09D03	IB09D03	38
	25 - 40	26 - 42,5	HIPOS PLUS IB09M01	IB09M01	40
	32 - 40	35 - 46	HIPOS PLUS IB13D02B	IB13D02B	42
	32 - 63	35 - 138	HIPOS PLUS IB13M01B	IB13M01B	44
	40 - 80	35 - 46	HIPOS PLUS IB13D10B	IB13D10B	46

Subject to printing error or technical changes.

HELICAL END MILLS

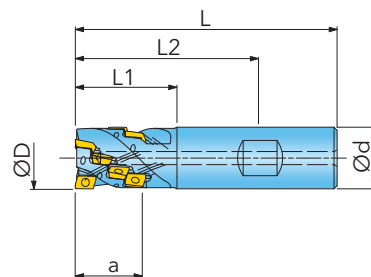
	D	a	Description	Code	Page

Subject to printing error or technical changes.



HELICAL END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z	Zeff			
IA.016.001	16	16	80	30	56	16,5	6	2	4,0	✓	0,10
IA.019.001	19	20	85	32	60	22	12	3	2,6	✓	0,16
IA.020.003	20	20	85	32	60	22	12	3	2,5	✓	0,16
IA.022.001	22	20	85	32	60	22	16	4	2,3	✓	0,17
IA.025.003	25	25	95	36	63	27	20	4	2,0	✓	0,29

AOMT060202R	AOMT060204R	AOMT060208R
AOMT060216R	AOCT060204FR-P	

Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530		
AOMT060202R	0,06/0,12	positive geometry R0,2								
AOMT060204R	0,06/0,12	positive geometry R0,4								
AOMT060208R	0,06/0,12	positive geometry R0,8								
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6								
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4								

¹⁾ Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS MICRO IA06D03

SPARE PARTS

①

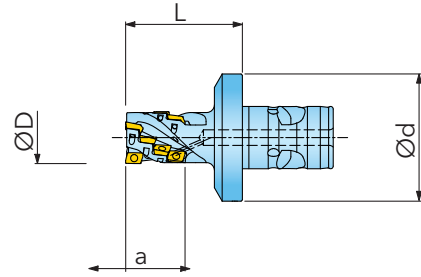
②

SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

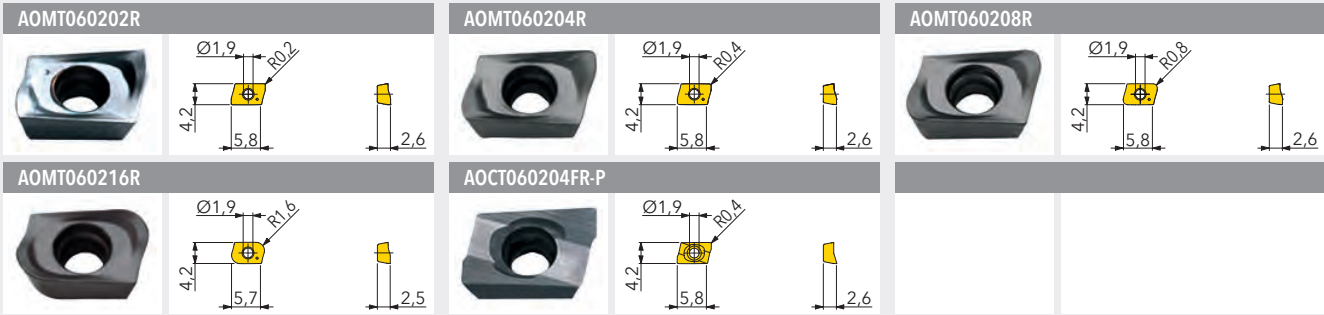
① = Insert screw ② = Screw driver

HELICAL END MILLS

MODULAR MILLING ADAPTOR INNOFIT



Designation	D	d	L	L1	a	MOD	Z	Zeff			
IA.016.002	16	49	45	32	17	40	6	2	4,0	✓	0,27
IA.020.004	20	49	45	32	22	40	12	3	2,5	✓	0,28
IA.025.004	25	49	55	43	27	40	20	4	2,0	✓	0,34



Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530			
AOMT060202R	0,06/0,12	positive geometry R0,2									
AOMT060204R	0,06/0,12	positive geometry R0,4									
AOMT060208R	0,06/0,12	positive geometry R0,8									
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6									
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4									

¹⁾ Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

②

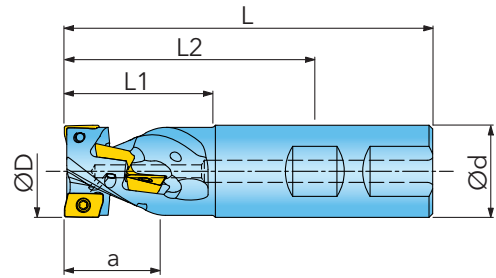
SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

HIPOS MICRO IA06M01

HELICAL END MILLS

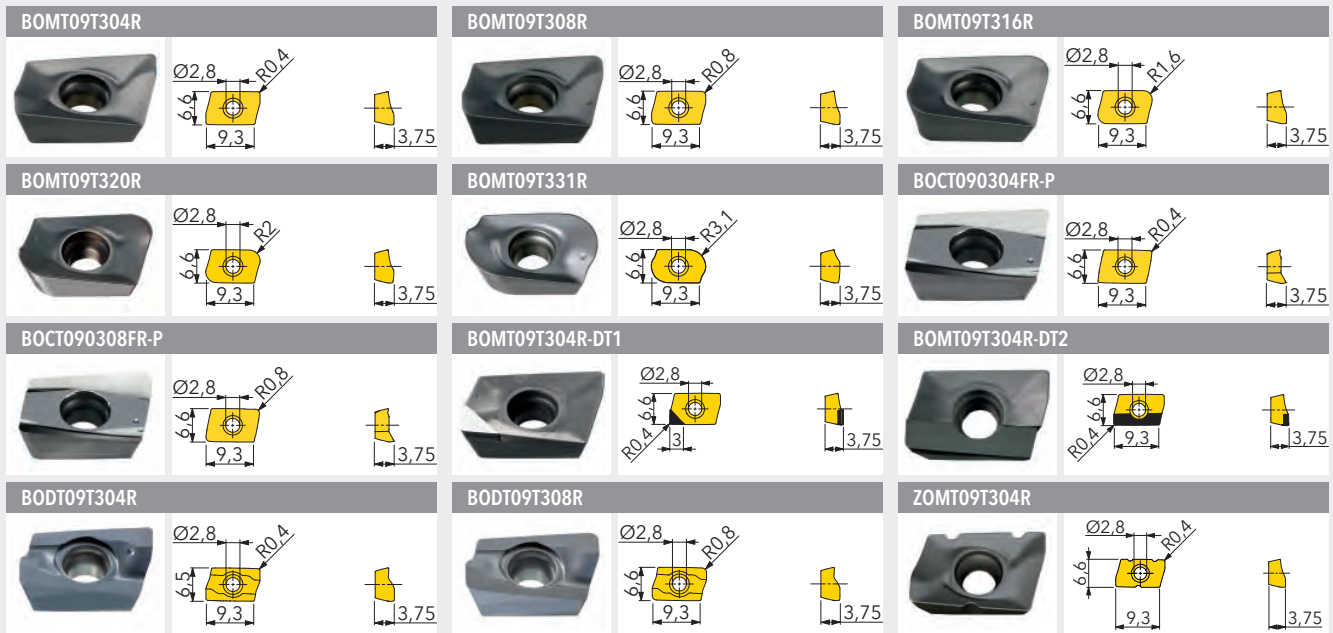
ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z	Zeff			
IB.025.001	25	25	100	40	68	26	6	2	4,4	✓	0,28
IB.032.007	32	32	110	50	74	34	8	2	2,8	✓	0,56
IB.032.005	32	32	110	50	74	34	12	3	2,8	✓	0,52

HIPOS PLUS IB09D03

HELICAL END MILLS



Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT09T304R	0,10/0,15	positive geometry R0,4				●	●	●	●	●	
BOMT09T308R	0,10/0,15	positive geometry R0,8				●	●	●	●	●	
BOMT09T316R ¹⁾	0,10/0,15	positive geometry R1,6				●		●	●		
BOMT09T320R ¹⁾	0,10/0,15	positive geometry R2,0				●		●	●		
BOMT09T331R ¹⁾	0,10/0,15	positive geometry R3,1				●		●	●		
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4									●
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4									●
BODT09T304R	0,05/0,15	ground finishing geometry R0,4		●			●				
BODT09T308R	0,05/0,15	ground finishing geometry R0,8		●			●				
ZOMT09T304R ²⁾	0,10/0,15	chip splitter geometry R0,4				●		●	●	●	

¹⁾ Cutter body has to be modified; ²⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

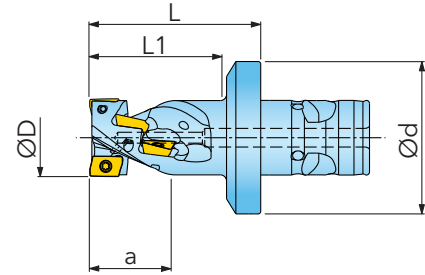
②

SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

HELICAL END MILLS

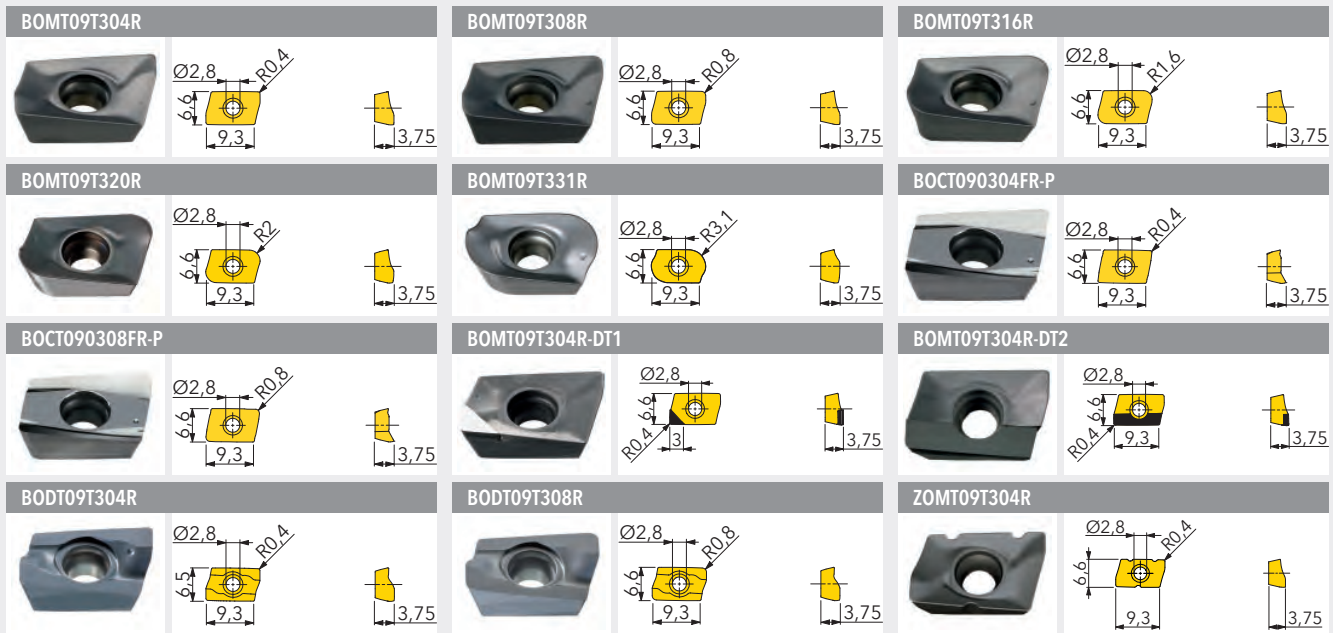
MODULAR MILLING ADAPTOR INNOFIT



Designation	D	d	L	L1	a	MOD	Z	Zeff			
IB.025.002	25	49	55	43	26	40	6	2	4,4	✓	0,33
IB.028.001	28	49	72	60	34	40	8	2	3,7	✓	0,42
IB.032.008	32	49	72	60	34	40	8	2	2,8	✓	0,51
IB.032.006	32	49	72	60	34	40	12	3	2,8	✓	0,48
IB.040.014	40	49	72	60	42,5	40	20	4	2,4	✓	0,58

HIPOS PLUS IB09M01

HELICAL END MILLS



Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT09T304R	0,10/0,15	positive geometry R0,4				●	●	●	●	●	
BOMT09T308R	0,10/0,15	positive geometry R0,8				●	●	●	●	●	
BOMT09T316R ¹⁾	0,10/0,15	positive geometry R1,6				●		●	●		
BOMT09T320R ¹⁾	0,10/0,15	positive geometry R2,0				●		●	●		
BOMT09T331R ¹⁾	0,10/0,15	positive geometry R3,1				●		●	●		
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4									●
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4									●
BODT09T304R	0,05/0,15	ground finishing geometry R0,4		●			●				
BODT09T308R	0,05/0,15	ground finishing geometry R0,8		●			●				
ZOMT09T304R ²⁾	0,10/0,15	chip splitter geometry R0,4				●		●	●	●	

¹⁾ Cutter body has to be modified; ²⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

① 

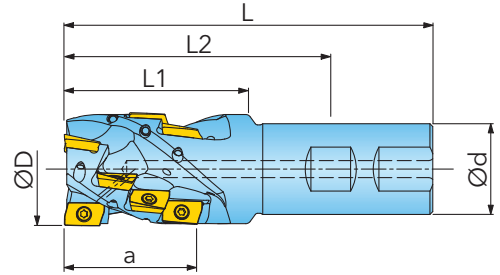
② 

SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

HELICAL END MILLS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z	Zeff			
IB.032.003	32	32	110	48	74	35	6	2	5,0	✓	0,50
IB.040.015	40	32	130	65	94	46	8	2	3,2	✓	0,77
IB.040.008	40	32	130	65	94	46	12	3	3,2	✓	0,71

HIPOS PLUS IB13D02B

SPARE PARTS



SM35-088-10 (3,0Nm) DST10S

① = Insert screw ② = Screw driver

HELICAL END MILLS

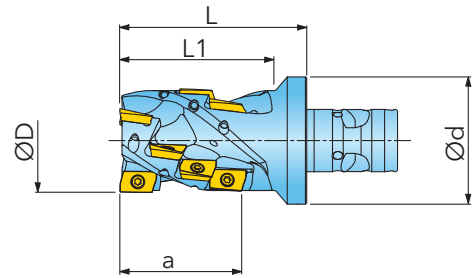


Designation	fz(min/max)	Design	Grade								
			IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D	
BOMT130404R	0,12/0,20	positive geometry R0,4				●	●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8				●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6						●	●		
BOMT130420R	0,12/0,20	positive geometry R2,0						●	●		
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4						●	●		
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●		
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0						●	●		
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4	●								
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8	●								
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4								●	
BODT130404R	0,05/0,20	ground finishing geometry R0,4		●			●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8		●			●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	

¹⁾ Cutter body has to be modified; ²⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

HELICAL END MILLS

MODULAR MILLING ADAPTOR INNOFIT



Designation	D	d	L	L1	a	MOD	Z	Zeff			
IB.032.004	32	49	60	49	35	40	6	2	5,0	✓	0,38
IB.040.017	40	49	72	60	46	40	8	2	3,2	✓	0,60
IB.040.010	40	49	72	60	46	40	12	3	3,2	✓	0,54
IB.040.021	40	49	72	60	46	40	16	4	3,2	✓	0,57
IB.040.018	40	49	94	83	69	40	12	2	3,2	✓	0,70
IB.040.024	40	49	94	83	69	40	24	4	3,2	✓	0,67
IB.040.011	40	49	94	83	69	40	18	3	3,2	✓	0,64
IB.040.019	40	78	100	79	69	50	12	2	3,2	✓	1,34
IB.040.012	40	78	100	79	69	50	18	3	3,2	✓	1,28
IB.040.020	40	78	112	91	81	50	14	2	3,2	✓	1,40
IB.040.013	40	78	112	91	81	50	21	3	3,2	✓	1,32
IB.050.009	50	49	72	72	46	40	16	4	2,1	✓	0,80
IB.050.010	50	78	100	80	69	50	24	4	2,1	✓	1,60
IB.063.007	63	78	120	102	92	50	32	4	1,4	✓	2,43
IB.063.008	63	78	143	125	115	50	40	4	1,4	✓	2,76
IB.063.009	63	78	166	148	138	50	48	4	1,4	✓	3,09

SPARE PARTS



SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

HELICAL END MILLS

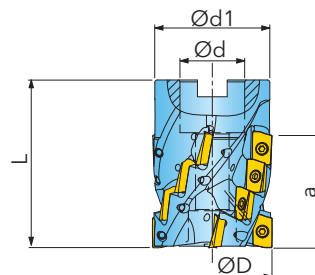


Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT130404R	0,12/0,20	positive geometry R0,4					●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8				●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6					●	●	●		
BOMT130420R	0,12/0,20	positive geometry R2,0					●	●	●		
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4					●	●	●		
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●		
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0					●	●			
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4		●							
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8		●							
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4									●
BODT130404R	0,05/0,20	ground finishing geometry R0,4			●		●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8			●		●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	

¹⁾ Cutter body has to be modified; ²⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

HELICAL END MILLS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	Zeff			
IB.040.016	40	16	36	55	35	6	2	3,2	✓	0,28
IB.040.009	40	16	36	55	35	9	3	3,2	✓	0,23
IB.050.012	50	22	48	70	46	16	4	2,1	✓	0,54
IB.050.008	50	27	48	70	46	16	4	2,1	✓	0,48
IB.063.006	63	27	55	70	46	16	4	1,4	✓	0,98
IB.080.004	80	32	73	70	46	16	4	1,0	✓	1,66
IB.080.003	80	32	73	70	46	20	5	1,0	✓	1,62

HIPOS PLUS IB13D10B

SPARE PARTS



SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver



HELICAL END MILLS



Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT130404R	0,12/0,20	positive geometry R0,4					●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8				●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6						●	●		
BOMT130420R	0,12/0,20	positive geometry R2,0						●	●		
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4						●	●		
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●		
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0						●	●		
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4		●							
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8		●							
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4									●
BODT130404R	0,05/0,20	ground finishing geometry R0,4		●			●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8		●			●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	

¹⁾ Cutter body has to be modified; ²⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

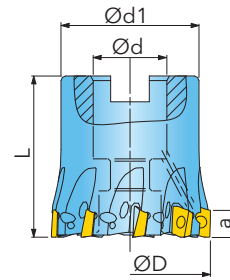
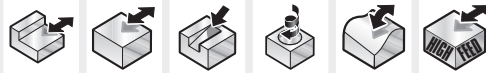
SQUARE SHOULDER CUTTERS

	D	a	Description	Code	Page
	32 - 40	5,7	HIPOS MICRO EA06D10	EA06D10	50
	32 - 100	9	HIPOS PLUS EB09D10A	EB09D10A	51
	32 - 100	9	HIPOS PLUS EB09D10	EB09D10	52
	35 - 125	12	HIPOS PLUS EB13D10B	EB13D10B	54
	32 - 63	3,8	EBO 6 EW04D10	EW04D10	56
	40 - 125	5,8	EBO 6 EW06D10	EW06D10	57
	40 - 80	7,5	HIPOS QUAD ES08D10	ES08D10	58
	50 - 160	11,3	HIQUAD ES13D10	ES13D10	59
	50 - 100	8,4	ALUMINATOR ES11D10	ES11D10	60
	50 - 160	8,7	SUPER 8 ES09D10	ES09D10	61

Subject to printing error or technical changes.

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
EA.032.003	32	16	30	32	5,7	8	1,6	✓	0,11
EA.035.002	35	16	30	35	5,7	9	1,4	✓	0,14
EA.040.005	40	22	38	40	5,7	10	1,2	✓	0,22

Programming radius 1mm

AOMT060202R 	AOMT060204R 	AOMT060208R
AOMT060216R 	AOCT060204FR-P 	AOMT060202R-DT1
UOMT0602TR 		

Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530	IN90D
AOMT060202R	0,06/0,12	positive geometry R0,2							
AOMT060204R	0,06/0,12	positive geometry R0,4							
AOMT060208R	0,06/0,12	positive geometry R0,8							
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6							
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4							
AOMT060202R-DT1	0,05/0,12	with short PCD-tip R0,2							
UOMT0602TR	0,30/0,80	high feed geometry							

¹⁾ Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

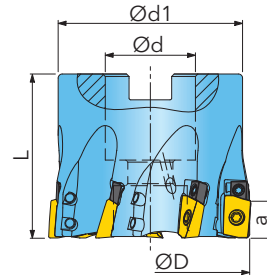
SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

HIPOS MICRO EA06D10

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	IK	kg
EB.032.002	32	16	30	32	9	5	✓	0,09
EB.040.005	40	16	30	40	9	6	✓	0,16
EB.050.004	50	22	45	40	9	7	✓	0,32
EB.063.004	63	22	55	40	9	8	✓	0,56
EB.080.003	80	27	70	50	9	10	✓	1,30
EB.100.004	100	32	85	50	9	13	✓	1,95

BOCT090304FR-P 	BOCT090308FR-P 	BODT09T304R
BODT09T304R-001 	BODT09T308R 	BODT09T308R-001
BODT09T320R-001 	BOMT09T304R-DT1 	BOMT09T304R-DT2

Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2504	IN90D				
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BODT09T304R	0,05/0,15	ground finishing geometry R0,4			●	●					
BODT09T304R-001	0,05/0,15	finishing geometry, short R0,4			●	●					
BODT09T308R	0,05/0,15	ground finishing geometry R0,8			●	●					
BODT09T308R-001	0,05/0,15	finishing geometry, short R0,8			●	●					
BODT09T320R-001	0,05/0,15	finishing geometry, short R2,0			●	●					
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4					●				
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4					●				

● = P ● = M ● = K ● = N ● = S ○ = H

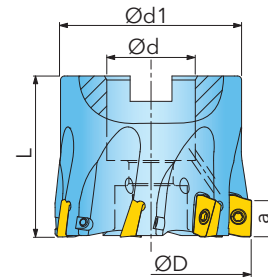
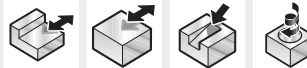
S.PARTS	①	②	③	④	⑤
	SM25-064-00 (1,1Nm) DS-T08S	PAR5092	PAR5092	SB025-00	DS-T05F

① = Insert screw ② = Screw driver ③ = Wedge ④ = Differential screw ⑤ = Screw driver

HIPOS PLUS EB09D10A

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
EB.032.003	32	16	30	32	9	4	2,8	✓	0,09
EB.032.001	32	16	30	32	9	5	2,8	✓	0,09
EB.035.002	35	16	30	32	9	6	2,5	✓	0,10
EB.040.006	40	16	30	40	9	4	2,4	✓	0,15
EB.040.004	40	16	30	40	9	6	2,4	✓	0,16
EB.050.005	50	22	45	40	9	4	1,3	✓	0,32
EB.050.007	50	22	45	40	9	6	1,3	✓	0,32
EB.050.003	50	22	45	40	9	7	1,3	✓	0,32
EB.063.005	63	22	55	40	9	6	1,0	✓	0,55
EB.063.003	63	22	55	40	9	8	1,0	✓	0,55
EB.080.005	80	27	70	50	9	10	0,6	✓	1,25
EB.100.005	100	32	85	50	9	12	0,5	✓	1,95

SPARE PARTS



SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

HIPOS PLUS EB09D10

SQUARE SHOULDER CUTTERS

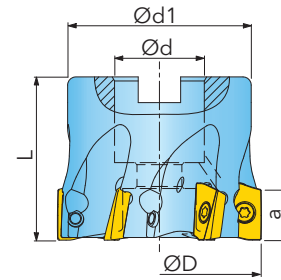
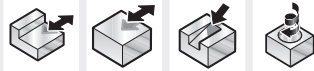


Designation	fz(min/max)	Design	Grade	IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT09T304R	0,10/0,15	positive geometry R0,4				●	●	●	●		
BOMT09T308R	0,10/0,15	positive geometry R0,8				●	●	●	●	●	
BOMT09T316R ¹⁾	0,10/0,15	positive geometry R1,6				●		●	●		
BOMT09T320R ¹⁾	0,10/0,15	positive geometry R2,0				●		●	●		
BOMT09T331R ¹⁾	0,10/0,15	positive geometry R3,1				●		●	●		
BOCT090304FR-P	0,05/0,20	non-ferrous geometry, polished R0,4		●							
BOCT090308FR-P	0,05/0,20	non-ferrous geometry, polished R0,8		●							
BOMT09T304R-DT1	0,05/0,20	with short PCD-tip R0,4									●
BOMT09T304R-DT2	0,05/0,20	with long PCD-tip R0,4									●
BODT09T304R	0,05/0,15	ground finishing geometry R0,4			●		●				
BODT09T304R-001	0,05/0,15	finishing geometry, short R0,4			●		●				
BODT09T308R	0,05/0,15	ground finishing geometry R0,8			●		●				
BODT09T308R-001	0,05/0,15	finishing geometry, short R0,8			●		●				
BODT09T320R-001	0,05/0,15	finishing geometry, short R2,0			●		●				
ZOMT09T304R ²⁾	0,10/0,15	chip splitter geometry R0,4				●		●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
EB.035.001	35	16	30	35	12	4	4,2	✓	0,10
EB.040.007	40	16	38	40	12	4	3,2	✓	0,22
EB.040.002	40	16	38	40	12	5	3,2	✓	0,21
EB.040.008	40	22	38	40	12	4	3,2	✓	0,18
EB.040.003	40	22	38	40	12	5	3,2	✓	0,18
EB.050.006	50	22	45	40	12	4	2,1	✓	0,29
EB.050.002	50	22	45	40	12	6	2,1	✓	0,30
EB.052.001	52	22	40	50	12	5	2,0	✓	0,37
EB.063.006	63	22	55	40	12	6	1,4	✓	0,54
EB.063.002	63	22	55	40	12	7	1,4	✓	0,54
EB.066.001	66	27	48	50	12	6	1,2	✓	0,60
EB.080.004	80	27	70	50	12	6	1,0	✓	1,21
EB.080.002	80	27	70	50	12	9	1,0	✓	1,20
EB.085.001	85	27	70	50	12	7	0,9	✓	1,33
EB.100.003	100	32	85	50	12	8	0,8	✓	1,88
EB.100.002	100	32	85	50	12	11	0,8	✓	1,89
EB.125.003	125	40	100	63	12	10	0,6	✓	3,70
EB.125.002	125	40	100	63	12	13	0,6	✓	3,76

HIPOS PLUS EB13D10B

SPARE PARTS



SM35-088-10 (3,0Nm) DST10S

① = Insert screw ② = Screw driver

SQUARE SHOULDER CUTTERS

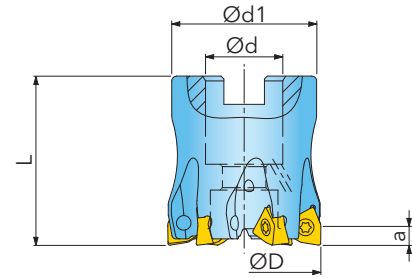
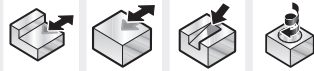


Designation	fz(min/max)	Design	Grade									
				IN10K	IN0560	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D	
BOMT130404R	0,12/0,20	positive geometry R0,4					●	●	●	●	●	
BOMT130408R	0,12/0,20	positive geometry R0,8					●	●	●	●	●	
BOMT130416R	0,12/0,20	positive geometry R1,6						●	●	●	●	
BOMT130420R	0,12/0,20	positive geometry R2,0						●	●	●	●	
BOMT130424R ¹⁾	0,12/0,20	positive geometry R2,4						●	●	●	●	
BOMT130431R ¹⁾	0,12/0,20	positive geometry R3,1				●		●	●	●	●	
BOMT130440R ¹⁾	0,12/0,20	positive geometry R4,0						●	●	●	●	
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4	●									
BOCT130408FR-P	0,05/0,25	non-ferrous geometry, polished R0,8	●									
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4										●
BODT130404R	0,05/0,20	ground finishing geometry R0,4		●				●				
BODT130404R-001	0,05/0,20	finishing geometry, short R0,4		●				●				
BODT130408R	0,05/0,20	ground finishing geometry R0,8		●				●				
BODT130408R-001	0,05/0,20	finishing geometry, short R0,8		●				●				
ZOMT130404R ²⁾	0,12/0,20	chip splitter geometry R0,4				●		●	●	●	●	

¹⁾Cutter body has to be modified; ²⁾Best results are achieved on tools with an even number of teeth. Please mount inserts alternating. ● = P ● = M ● = K ● = N ● = S ○ = H

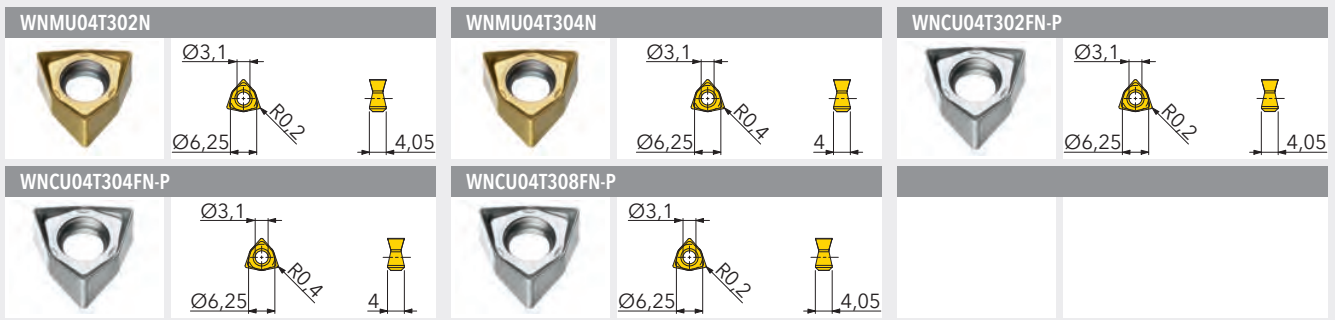
SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
EW.032.001 ¹⁾	32	16	30	35	3,8	6	1,5	✓	0,13
EW.040.006 ¹⁾	40	16	30	40	3,8	7	2,1	✓	0,18
EW.040.005	40	16	30	40	3,8	5	2,1	✓	0,18
EW.040.004 ¹⁾	40	22	38	40	3,8	7	2,1	✓	0,23
EW.040.003	40	22	38	40	3,8	5	2,1	✓	0,23
EW.050.006 ¹⁾	50	22	45	40	3,8	9	2,5	✓	0,35
EW.050.005	50	22	45	40	3,8	6	2,5	✓	0,36
EW.063.006 ¹⁾	63	22	55	40	3,8	11	2,4	✓	0,62
EW.063.005	63	22	55	40	3,8	8	2,4	✓	0,61

¹⁾Narrow spacing (only for short chip producing materials)



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNMU04T302N	0,07/0,18	positive geometry R0,2							
WNMU04T304N	0,07/0,18	positive geometry R0,4							
WNCU04T302FN-P	0,05/0,20	non-ferrous geometry R0,2							
WNCU04T304FN-P	0,05/0,20	non-ferrous geometry R0,4							
WNCU04T308FN-P	0,05/0,20	non-ferrous geometry R0,8							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

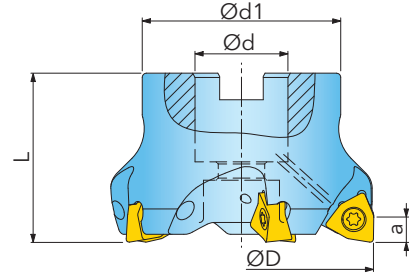
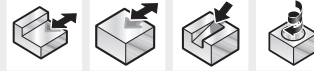
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

ECO 6 EW04D10

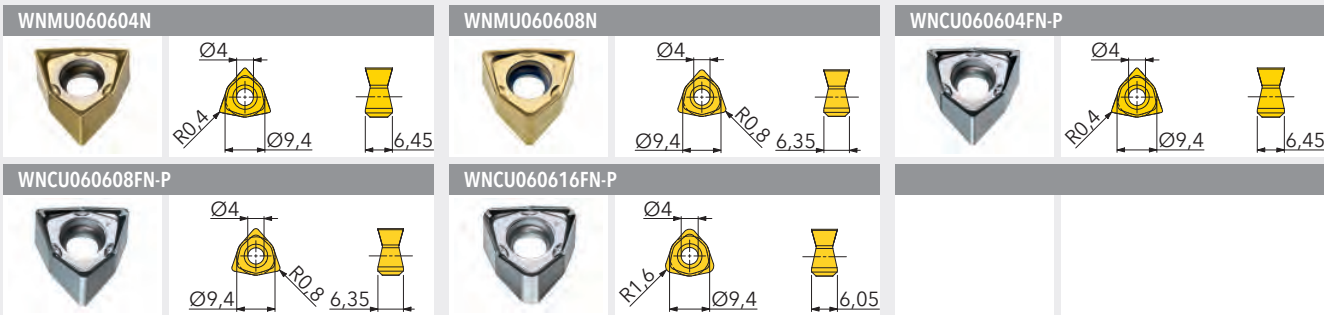
SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
EW.040.002 ¹⁾	40	16	38	40	5,8	4	1,8	✓	0,22
EW.050.003	50	22	45	40	5,8	4	1,7	✓	0,32
EW.050.004 ¹⁾	50	22	45	40	5,8	6	1,7	✓	0,31
EW.063.003	63	22	47	40	5,8	5	2,6	✓	0,45
EW.063.004 ¹⁾	63	22	47	40	5,8	7	2,6	✓	0,46
EW.080.003	80	27	58	50	5,8	7	2,9	✓	0,94
EW.080.004 ¹⁾	80	27	58	50	5,8	9	2,9	✓	0,94
EW.100.003	100	32	85	50	5,8	8	2,2	✓	1,80
EW.100.004 ¹⁾	100	32	85	50	5,8	11	2,2	✓	1,80
EW.125.003	125	40	85	63	5,8	10	1,3	✓	2,87
EW.125.004 ¹⁾	125	40	85	63	5,8	14	1,3	✓	2,87

¹⁾Narrow spacing (only for short chip producing materials)



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
WNMU060604N	0,13/0,35	positive geometry R0,4							
WNMU060608N	0,13/0,35	positive geometry R0,8							
WNCU060604FN-P	0,05/0,35	non-ferrous geometry R0,4							
WNCU060608FN-P	0,05/0,35	non-ferrous geometry R0,8							
WNCU060616FN-P	0,05/0,35	non-ferrous geometry R1,6							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

②

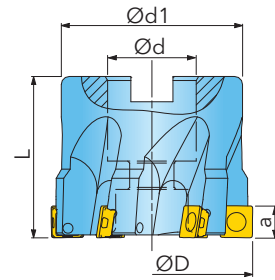
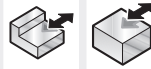
SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

ECC 6 EW06D10

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z		kg
ES.040.001	40	22	38	40	7,5	5	1,5	0,21
ES.050.002	50	22	45	40	7,5	6	1,2	0,34
ES.063.003	63	22	55	40	7,5	5	1,0	0,56
ES.063.002 ¹⁾	63	22	55	40	7,5	7	1,0	0,59
ES.080.004	80	27	70	50	7,5	7	0,5	1,26
ES.080.003 ¹⁾	80	27	70	50	7,5	9	0,5	1,25

¹⁾Narrow spacing (only for short chip producing materials)

SDMT080305N	SDMW080305TN	SDCT080305FN-P
SDMW080305TN-W		

Designation	fz(min/max)	Design	Grade	IN05S	IN2505	IN4030					
SDMT080305N	0,13/0,17	positive geometry R0,5									
SDMW080305TN	0,13/0,20	neutral geometry, K-land R0,5									
SDCT080305FN-P	0,05/0,20	non-ferrous geometry, polished R0,5									
SDMW080305TN-W	0,13/0,20	wiper insert R0,5									

● = P ● = M ● = K ● = N ● = S ○ = H

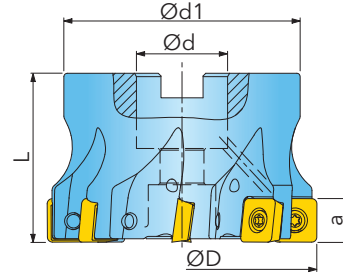
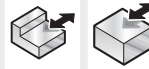
SPARE PARTS		
	SM30-065-00 (2,0Nm)	DS-T09S

① = Insert screw ② = Screw driver

HIPOS QUAD ES08D10

SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
ES.050.007	50	22	45	40	11,3	5	3,7	✓	0,30
ES.063.008	63	22	55	40	11,3	6	2,0	✓	0,48
ES.080.010	80	27	70	50	11,3	8	1,3	✓	1,06
ES.100.006	100	32	85	50	11,3	10	1,0	✓	1,70
ES.125.004	125	40	100	63	11,3	13	0,7	✓	3,20
ES.160.004	160	40	100	63	11,3	16	0,5	✓	4,42

* fz-values see manual „Cutting Data for Milling & Boring Tools“

SDES130515N 	SDES130515N-001 	SDMS130515R-PH
SDXS130515R-PH 	SDXS130515N-HR 	SDES130532R-001
SDES130540R-001 		

Designation	fz(min/max)	Design	Grade	IN2035	IN2505	IN2530	IN4030	IN4035			
SDES130515N	*/*	neutral geometry, K-land R1,5									
SDES130515N-001	*/*	neutral geometry, sharp R1,5									
SDMS130515R-PH	*/*	positive geometry, chamfered R1,5									
SDXS130515R-PH	*/*	positive geometry, chamfered R1,5									
SDXS130515N-HR	*/*	positive titanium geometry R1,5, K-land									
SDES130532R-001	*/*	neutral geometry, sharp R3,2									
SDES130540R-001 ¹⁾	*/*	neutral geometry, sharp R4,0									

¹⁾ Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

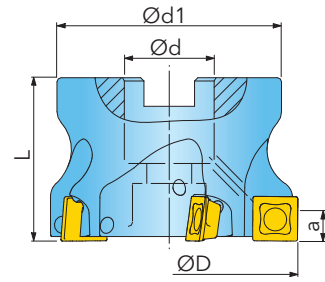
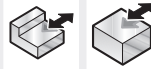
① ②

SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

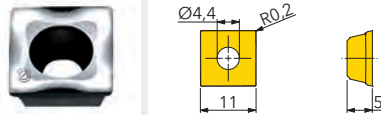
SQUARE SHOULDER CUTTERS

ADAPTION ACC. TO DIN 8030

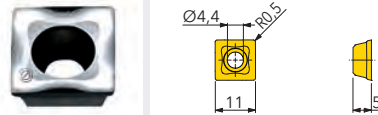


Designation	D	d	d1	L	a	Z			
ES.050.004	50	22	45	40	8,4	4	2,0	✓	0,24
ES.063.005	63	22	55	40	8,4	5	1,0	✓	0,45
ES.080.007	80	27	70	50	8,4	7	0,5	✓	1,08
ES.100.004	100	32	85	50	8,4	9	0,5	✓	1,72

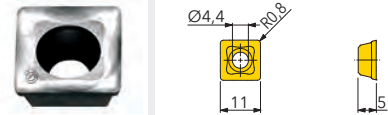
SHET110502FR-P



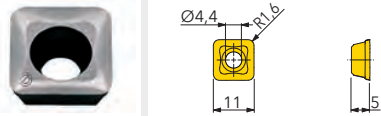
SHET110505FR-P



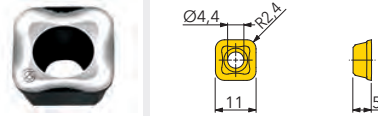
SHET110508FR-P



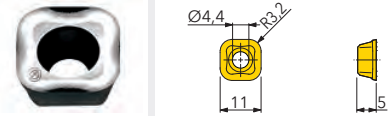
SHET110516FR-P



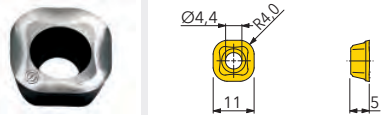
SHET110524FN-P



SHET110532FN-P



SHET110540FN-P



Designation	fz(min/max)	Design	Grade	IN15K								
SHET110502FR-P	0,05/0,30	non-ferrous geometry, polished R0,2		●								
SHET110505FR-P	0,05/0,30	non-ferrous geometry, polished R0,5		●								
SHET110508FR-P	0,05/0,30	non-ferrous geometry, polished R0,8		●								
SHET110516FR-P	0,05/0,30	non-ferrous geometry, polished R1,6		●								
SHET110524FN-P	0,05/0,30	non-ferrous geometry, polished R2,4		●								
SHET110532FN-P	0,05/0,30	non-ferrous geometry, polished R3,2		●								
SHET110540FN-P	0,05/0,30	non-ferrous geometry, polished R4,0		●								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



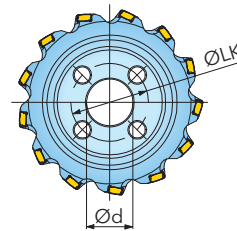
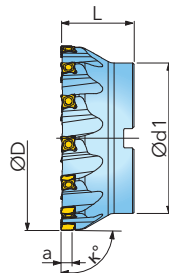
SM40-093-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

ALUMINATOR ES11D10

SQUARE SHOULDER CUTTERS

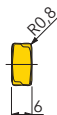
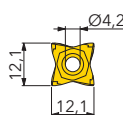
ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	LK	L	κ	a	Z		
ES.050.008 ¹⁾	50	22	45	-	40	90	8,7	6	✓	0,39
ES.050.004	50	22	45	-	40	90	8,7	5	✓	0,37
ES.063.009 ¹⁾	63	22	55	-	40	90	8,7	8	✓	0,65
ES.063.010	63	22	55	-	40	90	8,7	6	✓	0,63
ES.080.011 ¹⁾	80	27	70	-	50	90	8,7	10	✓	1,31
ES.080.012	80	27	70	-	50	90	8,7	8	✓	1,28
ES.100.006 ¹⁾	100	32	80	-	50	90	8,7	13	✓	2,02
ES.100.007	100	32	80	-	50	90	8,7	9	✓	1,93
ES.125.005 ¹⁾	125	40	100	-	63	90	8,7	16		4,00
ES.125.006	125	40	100	-	63	90	8,7	10		3,97
ES.160.005 ¹⁾	160	40	130	66,7	63	90	8,7	21		5,16
ES.160.006	160	40	130	66,7	63	90	8,7	13		4,90

¹⁾Narrow spacing (only for short chip producing materials)

SGM-44R001



Designation	fz(min/max)	Design	Grade	IN2505	IN2530	IN4005	IN4015	IN4030			
SGM-44R001	0,10/0,25	positive geometry R0,8									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



SM40-120-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

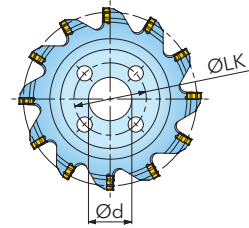
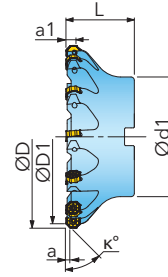
FACE MILLS

	D	a	Description	Code	Page
	40 - 160	3	OBTO PLUS PO05D10B	PO05D10B	64
	63 - 315	5	OBTO PLUS PO09D10a	PO09D10a	65
	80 - 315	5	OBTO PLUS PO09D10b	PO09D10b	66
	24,3 - 32	3,4	ROTOMILL PO05E01	PO05E01	67
	33 - 125	3,4	ROTOMILL PO05D10a	PO05D10a	68
	50 - 160	4,8	ROTOMILL PO07D10a	PO07D10a	69
	40 - 160	6	HIPOS DEKA PP08D10	PP08D10	70
	20,1 - 22,1	4,9	HIFEED QUAD SA13E01	SA13E01	71
	30,1 - 80,1	4,9	HIFEED QUAD EA13D10	EA13D10	72
	51,7 - 131,7	7,8	HIFEED QUAD EA19D10	EA19D10	73
	50 - 125	7	SUPER S PS09D10	PS09D10	74
	30 - 42	0,3	SUPER FINISH PT11E01	PT11E01	75
	50 - 125	0,3	SUPER FINISH PT11D10	PT11D10	76

Subject to printing error or technical changes.

FACE MILLS

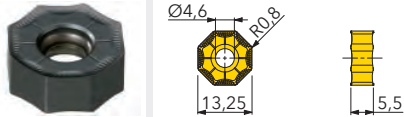
ADAPTION ACC. TO DIN 8030



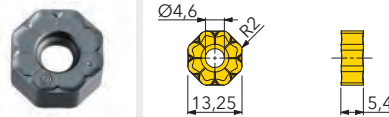
Designation	D	D1	d	d1	LK	L	κ	a	a1	Z		
PO.040.003	40	48,3	16	30	-	40	43	3	8	4	✓	0,17
PO.050.003	50	58,3	22	45	-	40	43	3	8	4	✓	0,31
PO.050.004 ¹⁾	50	58,3	22	45	-	40	43	3	8	6	✓	0,32
PO.063.003	63	71,3	22	55	-	40	43	3	8	6	✓	0,53
PO.063.004 ¹⁾	63	71,3	22	55	-	40	43	3	8	8	✓	0,55
PO.080.003	80	88,3	27	70	-	50	43	3	8	7	✓	1,17
PO.080.004 ¹⁾	80	88,3	27	70	-	50	43	3	8	10	✓	1,25
PO.100.003	100	108,3	32	85	-	55	43	3	8	8	✓	2,00
PO.100.004 ¹⁾	100	108,3	32	85	-	55	43	3	8	12	✓	2,16
PO.125.003	125	133,3	40	100	-	63	43	3	8	10	✓	3,54
PO.125.004 ¹⁾	125	133,3	40	100	-	63	43	3	8	16	✓	3,70
PO.160.002	160	168,3	40	110	66,7	63	43	3	8	12		3,62
PO.160.003 ¹⁾	160	168,3	40	110	66,7	63	43	3	8	20		3,74

¹⁾Narrow spacing (only for short chip producing materials)

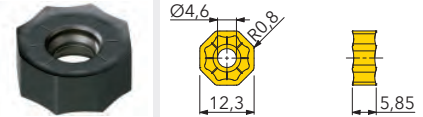
ONCU0505ANTN-HR



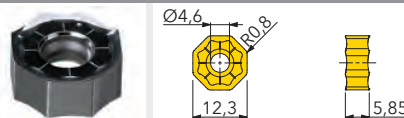
ONCU050520TN



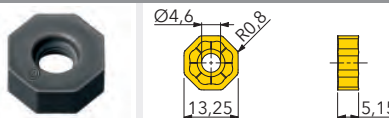
ONCU0505ANEN



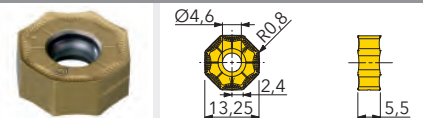
ONCU0505ANFN-P



ONCU0505ANN



ONCU0505ANTN-W



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN4010	IN4030	IN6535	IN70N
ONCU0505ANTN-HR	0,22/0,40	positive geometry									
ONCU050520TN	0,08/0,35	roughing geometry									
ONCU0505ANEN	0,08/0,30	high positive geometry									
ONCU0505ANFN-P	0,05/0,30	non-ferrous geometry, polished									
ONCU0505ANN	0,10/0,18	positive geometry silicon nitride									
ONCU0505ANTN-W	fu max. = 2,4	wiper finishing insert									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



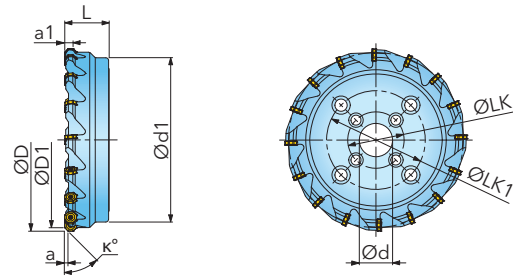
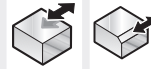
SM40-100-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

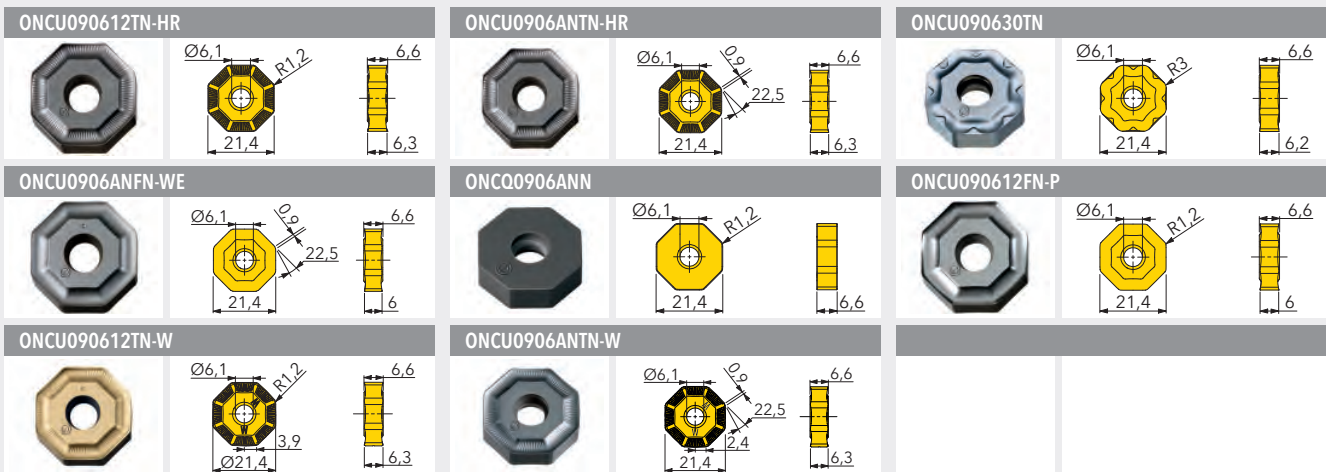
OCTO PLUS P005D10B

FACE MILLS

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	LK	LK1	L	κ	a	a1	Z		
PO.063.005	63	76,6	22	55	-	-	40	43	5	14	5	✓	0,55
PO.080.005	80	93,6	27	70	-	-	55	43	5	14	6	✓	1,37
PO.100.005	100	113,6	32	85	-	-	55	43	5	14	7	✓	2,16
PO.125.005	125	138,6	40	100	-	-	63	43	5	14	8	✓	3,87
PO.160.004	160	173,6	40	130	66,7	-	63	43	5	14	10		5,95
PO.200.001	200	213,6	60	160	101,6	-	63	43	5	14	12		8,65
PO.250.001	250	263,6	60	190	101,6	-	63	43	5	14	14		14,05
PO.315.001	315	328,6	60	255	101,6	177,8	80	43	5	14	16		26,38



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2505	IN2510	IN4005	IN4010	IN4030	IN70N
ONCU090612TN-HR	0,30/0,40	positive geometry R1,2									
ONCU0906ANTN-HR	0,30/0,40	positive geometry									
ONCU090630TN	0,08/0,40	roughing geometry									
ONCU0906ANFN-WE	0,08/0,40	positive cast iron geometry									
ONCQ0906ANN	0,10/0,30	neutral geometry silicon nitride									
ONCU090612FN-P	0,05/0,40	non-ferrous geometry, polished									
ONCU090612TN-W	fz max. = 3,9	wiper finishing insert									
ONCU0906ANTN-W	fz max. = 3,8	wiper finishing insert									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

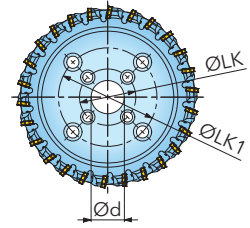
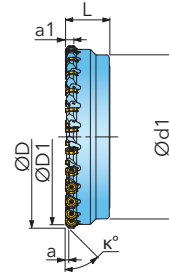


SM50-130-R0 (7,5Nm) DS-T20T

① = Insert screw ② = Screw driver

FACE MILLS

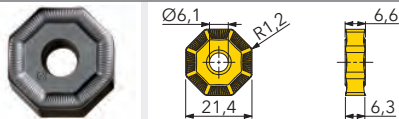
ADAPTION ACC. TO DIN 8030



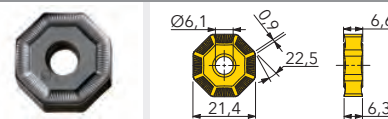
Designation	D	D1	d	d1	LK	LK1	L	κ	a	a1	Z		
PO.080.006	80	93,8	27	70	-	-	55	43	5	14	7	✓	1,42
PO.100.006	100	113,7	32	85	-	-	55	43	5	14	9	✓	2,15
PO.125.006	125	138,6	40	100	-	-	63	43	5	14	12	✓	3,87
PO.160.005	160	173,6	40	130	66,7	-	63	43	5	14	15		6,03
PO.200.005	200	213,6	60	160	101,6	-	63	43	5	14	18		8,77
PO.250.005	250	263,4	60	190	101,6	-	63	43	5	14	22		14,15
PO.315.005	315	328,5	60	255	101,6	177,8	80	43	5	14	26		26,71

Narrow spacing (only for short chip producing materials)

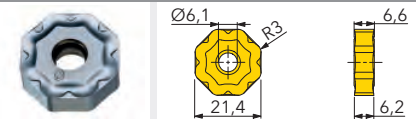
ONCU090612TN-HR



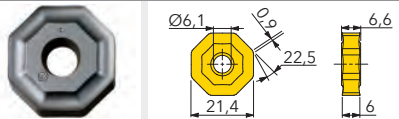
ONCU0906ANTN-HR



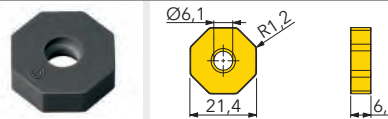
ONCU090630TN



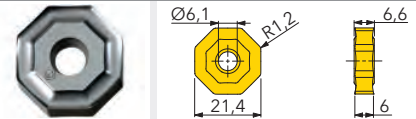
ONCU0906ANFN-WE



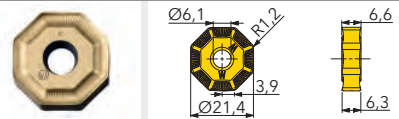
ONCQ0906ANN



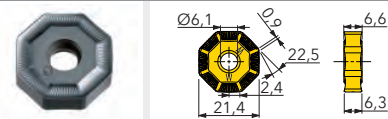
ONCU090612FN-P



ONCU090612TN-W



ONCU0906ANTN-W



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2505	IN2510	IN4005	IN4010	IN4030	IN70N
ONCU090612TN-HR	0,30/0,40	positive geometry R1,2									
ONCU0906ANTN-HR	0,30/0,40	positive geometry									
ONCU090630TN	0,08/0,40	roughing geometry									
ONCU0906ANFN-WE	0,08/0,40	positive cast iron geometry									
ONCQ0906ANN	0,10/0,30	neutral geometry silicon nitride									
ONCU090612FN-P	0,05/0,40	non-ferrous geometry, polished									
ONCU090612TN-W	fu max. = 3,9	wiper finishing insert									
ONCU0906ANTN-W	fu max. = 3,8	wiper finishing insert									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



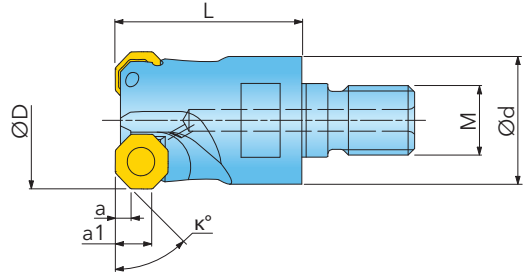
SM50-130-R0 (7,5Nm) DS-T20T

① = Insert screw ② = Screw driver

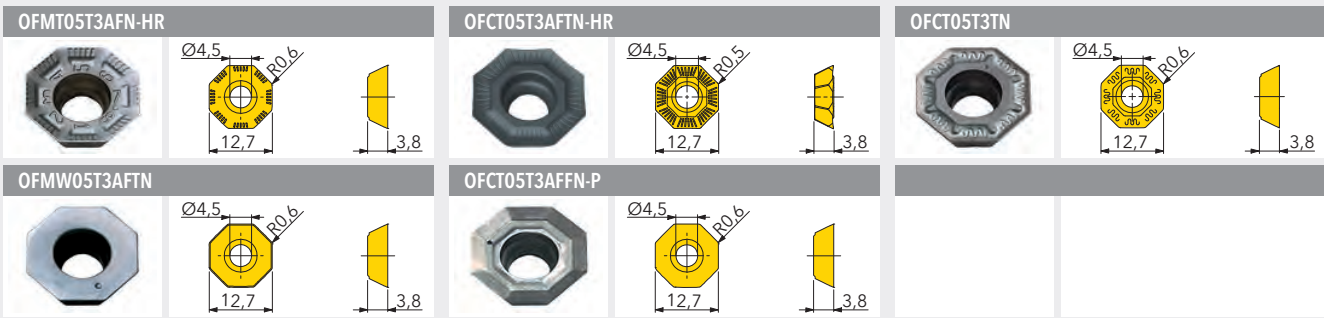
OCTO PLUS P009D10B

FACE MILLS

SCREW-IN TYPE ADAPTION



Designation	D	D1	d1	L	κ	a	a1	M	Z			
PO.032.002	24,3	32	29	43	43	3,4	8,3	M16	2	17,0	✓	0,19
PO.040.002	32	40	29	43	43	3,4	8,3	M16	3	9,0	✓	0,21



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2505	IN2510	IN2530	IN4030	IN6535
OFMT05T3AFN-HR	0,10/0,25	high-positive geometry								
OFCT05T3AFTN-HR	0,18/0,30	positive geometry, ground								
OFCT05T3TN	0,20/0,35	semi-positive geometry								
OFMW05T3AFTN	0,20/0,40	neutral geometry, K-land								
OFCT05T3AFFN-P	0,05/0,30	non-ferrous geometry, polished								

● = P ● = M ● = K ● = N ● = S ○ = H

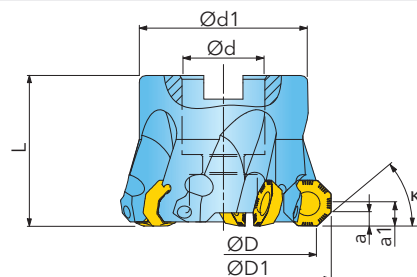
SPARE PARTS		
	SM40-080-10 (4,5Nm) DS-T15S	

① = Insert screw ② = Screw driver

ROTO-MILL P005E01

FACE MILLS

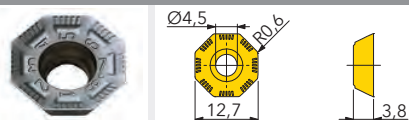
ADAPTION ACC. TO DIN 8030



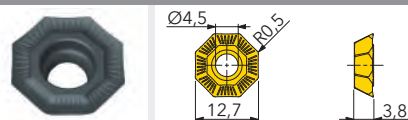
Designation	D	D1	d	d1	L	κ	a	a1	Z			
PO.032.001	33	41,2	16	30	40	43	3,4	8,3	3	8,7	✓	0,14
PO.040.001	40	48,1	16	30	40	43	3,4	8,3	4	6,4	✓	0,18
PO.040.004 ¹⁾	40	48,1	16	30	40	43	3,4	8,3	5	6,4	✓	0,15
PO.050.002	50	58	22	45	40	43	3,4	8,3	5	4,7	✓	0,34
PO.050.005 ¹⁾	50	58	22	45	40	43	3,4	8,3	6	4,7	✓	0,31
PO.063.002	63	71	22	55	40	43	3,4	8,3	6	3,4	✓	0,57
PO.063.007 ¹⁾	63	71	22	55	40	43	3,4	8,3	8	3,4	✓	0,55
PO.080.002	80	87,9	27	70	50	43	3,4	8,3	7	2,6	✓	1,23
PO.080.013 ¹⁾	80	87,9	27	70	50	43	3,4	8,3	9	2,6	✓	1,22
PO.100.002	100	108	32	85	50	43	3,4	8,3	8	2,0	✓	1,91
PO.100.013 ¹⁾	100	108	32	85	50	43	3,4	8,3	10	2,0	✓	1,82
PO.125.002	125	133	40	100	63	43	3,4	8,3	9	1,5	✓	3,66
PO.125.013 ¹⁾	125	133	40	100	63	43	3,4	8,3	11	1,5	✓	3,64

¹⁾Narrow spacing (only for short chip producing materials)

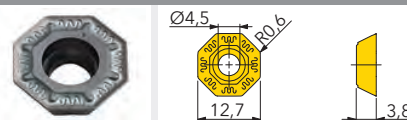
OFMT05T3AFN-HR



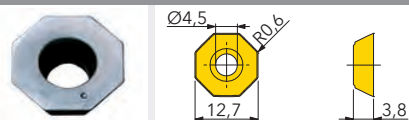
OFCT05T3AFTN-HR



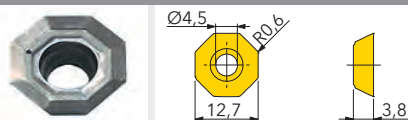
OFCT05T3TN



OFMW05T3AFTN



OFCT05T3AFFN-P



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2505	IN2510	IN2530	IN4030	IN6535
OFMT05T3AFN-HR	0,10/0,25	high-positive geometry								
OFCT05T3AFTN-HR	0,18/0,30	positive geometry, ground								
OFCT05T3TN	0,20/0,35	semi-positive geometry								
OFMW05T3AFTN	0,20/0,40	neutral geometry, K-land								
OFCT05T3AFFN-P	0,05/0,30	non-ferrous geometry, polished								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



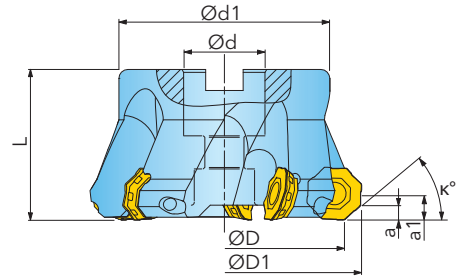
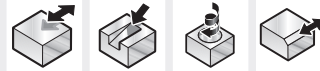
SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

ROTO-MILL P005D10A

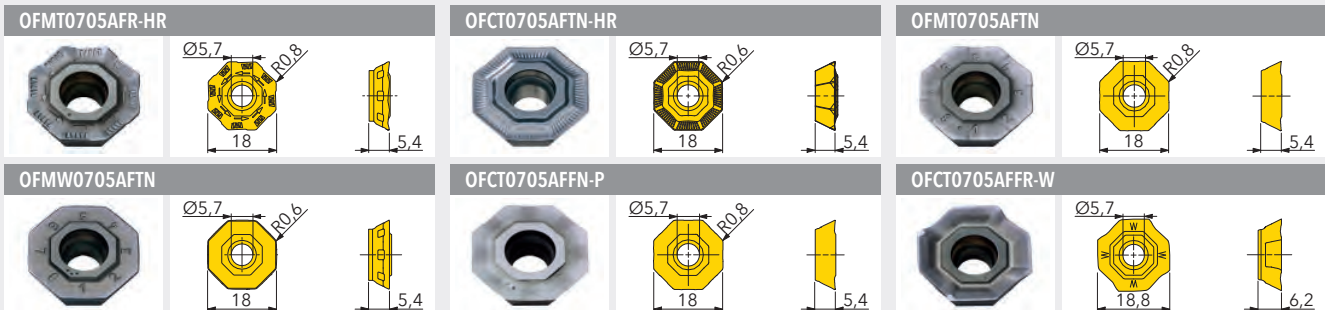
FACE MILLS

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	a1	Z			
PO.050.001	50	62	22	45	50	41	4,8	11,8	3	7,1	✓	0,41
PO.050.006 ¹⁾	50	62	22	45	50	41	4,8	11,8	4	7,1	✓	0,38
PO.063.001	63	75	22	55	40	41	4,8	11,8	4	5,1	✓	0,51
PO.063.008 ¹⁾	63	75	22	55	40	41	4,8	11,8	5	5,1	✓	0,50
PO.080.001	80	92	27	70	50	41	4,8	11,8	5	3,7	✓	1,22
PO.080.014 ¹⁾	80	92	27	70	50	41	4,8	11,8	7	3,7	✓	1,17
PO.100.001	100	112	32	85	50	41	4,8	11,8	6	2,8	✓	1,82
PO.100.014 ¹⁾	100	112	32	85	50	41	4,8	11,8	8	2,8	✓	1,74
PO.125.001	125	137	40	100	63	41	4,8	11,8	8	2,2	✓	3,58
PO.125.014 ¹⁾	125	137	40	90	63	41	4,8	11,8	9	2,2	✓	3,40
PO.160.001	160	172	40	100	63	41	4,8	11,8	10	1,6		5,28
PO.160.013 ¹⁾	160	172	40	90	63	41	4,8	11,8	11	1,6		5,12

¹⁾Narrow spacing (only for short chip producing materials)



Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2505	IN4005	IN4030	IN6535	
OFMT0705AFR-HR	0,15/0,30	high-positive geometry								
OFCT0705AFTN-HR	0,25/0,35	positive geometry, ground								
OFMT0705AFTN	0,15/0,30	semi-positive geometry								
OFMW0705AFTN	0,25/0,50	neutral geometry, K-land								
OFCT0705AFFN-P	0,05/0,30	positive non-ferrous geometry, polished								
OFCT0705AFFR-W	0,15/0,30	wiper finishing insert								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

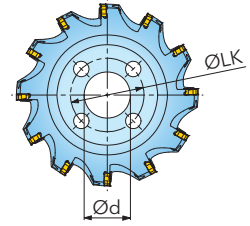
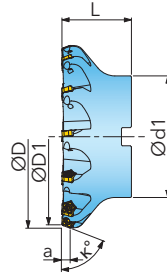


SM50-130-R0 (7,5Nm) DS-T20T

① = Insert screw ② = Screw driver

FACE MILLS

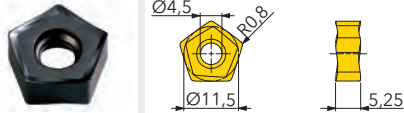
ADAPTION ACC. TO DIN 8030



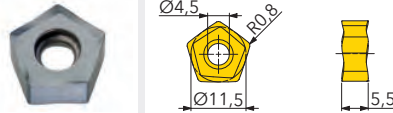
Designation	D	D1	d	d1	LK	L	κ	a	Z	IK	kg
PP.040.001	40	45,4	16	30	-	40	70	6	4	✓	0,18
PP.050.002 ¹⁾	50	55,4	22	45	-	40	70	6	6	✓	0,34
PP.050.001	50	55,4	22	45	-	40	70	6	4	✓	0,32
PP.063.002 ¹⁾	63	68,4	22	55	-	40	70	6	8	✓	0,58
PP.063.001	63	68,4	22	55	-	40	70	6	6	✓	0,58
PP.080.002 ¹⁾	80	85,4	27	70	-	50	70	6	10	✓	1,31
PP.080.001	80	85,4	27	70	-	50	70	6	7	✓	1,30
PP.100.002 ¹⁾	100	105,4	32	85	-	50	70	6	12	✓	2,00
PP.100.001	100	105,4	32	85	-	50	70	6	8	✓	1,97
PP.125.002 ¹⁾	125	130,4	40	100	-	63	70	6	16	✓	3,84
PP.125.001	125	130,4	40	100	-	63	70	6	10	✓	3,82
PP.160.002 ¹⁾	160	165,5	40	110	66,7	63	70	6	20		3,95
PP.160.001	160	165,5	40	110	66,7	63	70	6	12		3,82

¹⁾Narrow spacing (only for short chip producing materials)

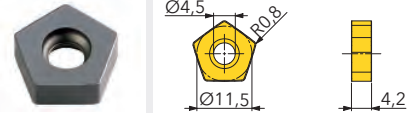
PNCU0805GNTR



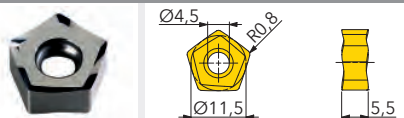
PNCU0805GNFR-HS



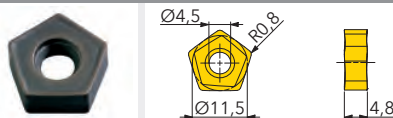
PNCQ0804GNTN



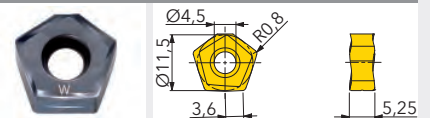
PNCU0805GNFR-P



PNCU0805GNR



PNCU0805GNTR-W



Designation	fz(min/max)	Design	Grade	IN05S	IN0560	IN2035	IN2505	IN4005	IN4015	IN4030	IN70N
PNCU0805GNTR	0,22/0,40	positive geometry									
PNCU0805GNFR-HS	0,08/0,30	high positive geometry									
PNCQ0804GNTN	0,21/0,40	neutral geometry, K-land									
PNCU0805GNFR-P	0,05/0,40	positive non-ferrous geometry, polished									
PNCU0805GNR	0,10/0,18	positive geometry silicon nitride									
PNCU0805GNTR-W	fu max. = 3,6	wiper insert									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



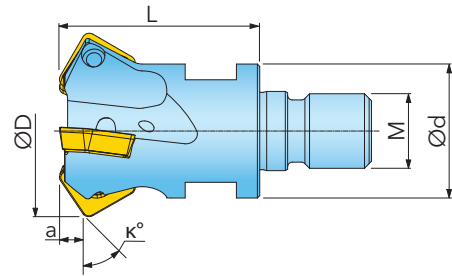
SM40-100-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

HIPOS DEKA PP08D10

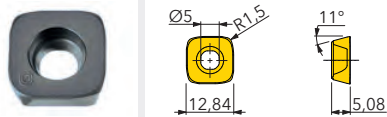
FACE MILLS

SCREW-IN TYPE ADAPTION

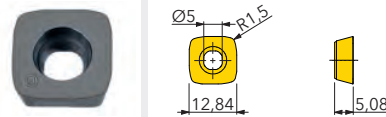


Designation	D	D1	d1	L	κ	a	M	Z		
PS.040.003	20,1	40	29	43	30	4,9	M16	3	✓	0,18
PS.042.003	22,1	42	29	43	30	4,9	M16	3	✓	0,18

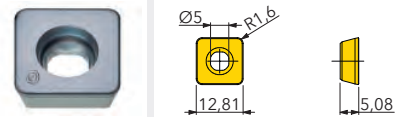
SDES1305MPR



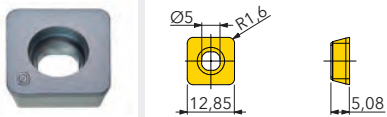
SDES1305MPR-001



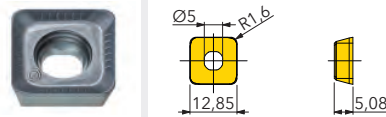
SDES130516N-PF



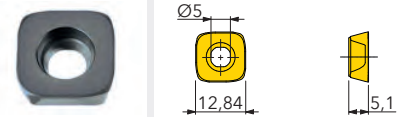
SDES130516N-PF1



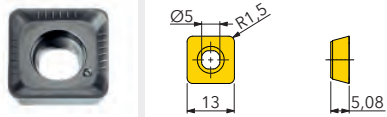
SDMS130516R-PP



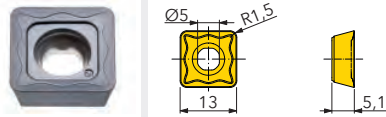
SDXS1305MPR-MR



SDXS130515R-PH



SDXS130515N-HR



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN4005	IN4030	IN4035
SDES1305MPR	*/*	neutral geometry convex, chamfered							
SDES1305MPR-001	*/*	neutral geometry convex, sharp							
SDES130516N-PF	*/*	neutral geometry, K-land R1,6							
SDES130516N-PF1	*/*	neutral geometry, sharp R1,6							
SDMS130516R-PP	*/*	positive geometry, sharp R1,6							
SDXS1305MPR-MR	*/*	neutral geometry convex, chamfered							
SDXS130515R-PH	*/*	positive geometry, chamfered R1,5							
SDXS130515N-HR	*/*	positive titanium geometry R1,5, K-land							

* fz-values see manual „Cutting Data for Milling & Boring Tools“

= P = M = K = N = S = H

SPARE PARTS



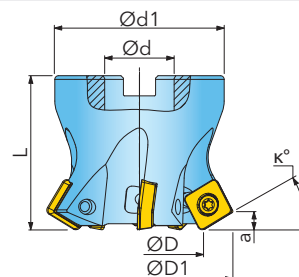
SM40-100-R0 (4,5Nm) DS-A00T

① = Insert screw ② = Screw driver

HIFEED QUAD SA13E01

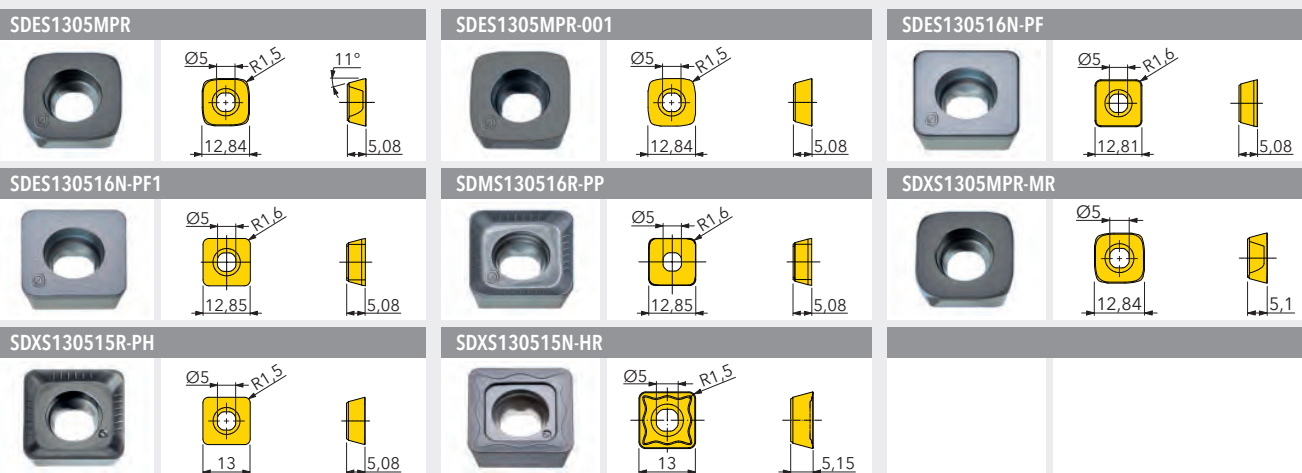
FACE MILLS

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	Z	IK	kg
PS.050.006	30,1	50	22	45	50	30	4,9	4	✓	0,30
PS.050.005 ¹⁾	30,1	50	22	45	50	30	4,9	5	✓	0,30
PS.063.007	43,1	63	22	55	50	30	4,9	5	✓	0,50
PS.063.006 ¹⁾	43,1	63	22	55	50	30	4,9	6	✓	0,50
PS.080.011	60,1	80	27	70	50	30	4,9	6	✓	1,00
PS.080.010 ¹⁾	60,1	80	27	70	50	30	4,9	7	✓	1,00
PS.100.011	80,1	100	32	85	55	30	4,9	7	✓	1,80
PS.100.010 ¹⁾	80,1	100	32	85	55	30	4,9	9	✓	1,80

¹⁾Narrow spacing (only for short chip producing materials)



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN4005	IN4030	IN4035		
SDES1305MPR	*/*	neutral geometry convex, chamfered					●	●		●	
SDES1305MPR-001	*/*	neutral geometry convex, sharp				●	●	●	●		
SDES130516N-PF	*/*	neutral geometry, K-land R1,6				●	●				
SDES130516N-PF1	*/*	neutral geometry, sharp R1,6						●	●		
SDMS130516R-PP	*/*	positive geometry, sharp R1,6					●	●	●		
SDXS1305MPR-MR	*/*	neutral geometry convex, chamfered			●		●	●		●	
SDXS130515R-PH	*/*	positive geometry, chamfered R1,5						●	●		
SDXS130515N-HR	*/*	positive titanium geometry R1,5, K-land		●							

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



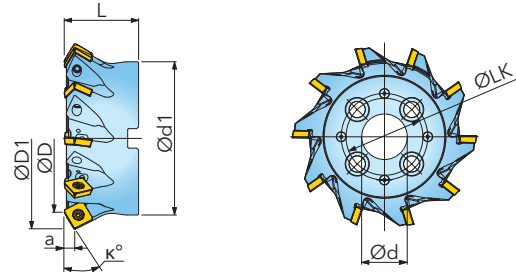
SM40-100-R0 (4,5Nm) DS-A00T

① = Insert screw ② = Screw driver

HIFEED QUAD EA13D10

FACE MILLS

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	LK	L	κ	a	Z		
BS.032.015	51,7	80	27	70	-	55	30	7,8	6	✓	0,90
BS.035.011	71,7	100	32	85	-	55	30	7,8	7	✓	1,50
BS.040.015	96,7	125	40	100	-	63	30	7,8	8	✓	2,70
BS.042.012	131,7	160	40	130	66,7	63	30	7,8	10	✓	4,40

SDES1906MPR-001 	SDES1906ZPR-PF 	SDMS1906ZPR-PP
SDES190620N 	SDMS190620R-PH 	SDES190620N-001
SDXS1906MPR-MR 		

Designation	fz(min/max)	Design	Grade	IN2505	IN4005	IN4030	IN4035				
SDES1906MPR-001	*/*	neutral geometry convex, sharp									
SDES1906ZPR-PF	*/*	neutral wiper geometry with K-land									
SDMS1906ZPR-PP	*/*	positive wiper geometry									
SDES190620N	*/*	neutral geometry, chamfered R2									
SDMS190620R-PH	*/*	positive geometry, chamfered R2									
SDES190620N-001	*/*	neutral geometry, sharp R2									
SDXS1906MPR-MR	*/*	neutral geometry convex, chamfered									

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H



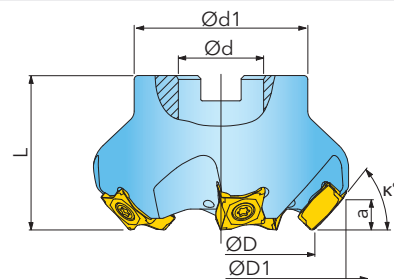
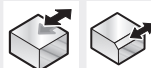
SM60-135-R0 (8,0Nm) DS-T25S

① = Insert screw ② = Screw driver

HIFEED QUAD EA19D10

FACE MILLS

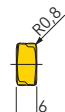
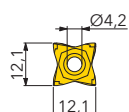
ADAPTION ACC. TO DIN 8030



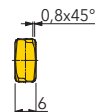
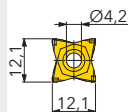
Designation	D	D1	d	d1	L	κ	a	Z		
PS.050.011	50	66	22	45	40	45	7	5	✓	0,52
PS.050.012 ¹⁾	50	66	22	45	40	45	7	6	✓	0,52
PS.063.010	63	80	22	55	40	45	7	6	✓	0,82
PS.063.011 ¹⁾	63	80	22	55	40	45	7	8	✓	0,82
PS.080.015	80	97	27	70	50	45	7	8	✓	1,70
PS.080.016 ¹⁾	80	97	27	70	50	45	7	10	✓	1,71
PS.100.013	100	117	32	80	50	45	7	9	✓	2,29
PS.100.014 ¹⁾	100	117	32	80	50	45	7	13	✓	2,35
PS.125.007	125	142	40	100	63	45	7	10	✓	4,46
PS.125.008 ¹⁾	125	142	40	100	63	45	7	16	✓	4,57

¹⁾Narrow spacing (only for short chip producing materials)

SGM-44R001



SGM-44R100



Designation	fz(min/max)	Design	Grade	IN2505	IN2530	IN4005	IN4015	IN4030		
SGM-44R001	0,10/0,25	positive geometry R0,8								
SGM-44R100	0,10/0,25	positive wiper finishing geometry 0,8x45°								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



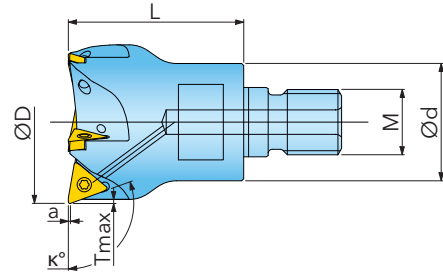
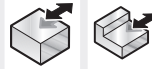
SM40-120-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

SUPER B PS09D10

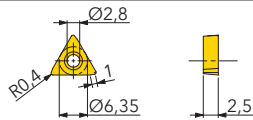
FACE MILLS

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	κ	a	Tmax	M	Z		
PT.030.001	30	29	43	110	0,3	0,5	M16	4	✓	0,20
PT.035.001	35	29	43	110	0,3	0,5	M16	4	✓	0,24
PT.040.001	40	29	43	110	0,3	0,5	M16	5	✓	0,27
PT.042.001	42	29	43	110	0,3	0,5	M16	5	✓	0,28

TCHW110204R-W



Designation	fz(min/max)	Design	Grade	IN0560	IN2035	IN2504	IN4004				
TCHW110204R-W	0,08/0,15	wiper finishing edge R0,4									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



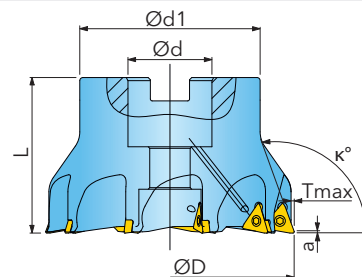
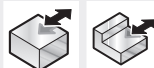
SM25-064-00 (1,1Nm) DS-T08S



① = Insert screw ② = Screw driver

SUPER FINISH PT11E01

FACE MILLS

ADAPTION ACC. TO DIN 8030

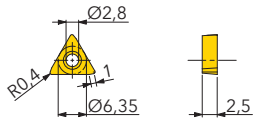


Designation	D	d	d1	L	κ	a	Tmax	Z		
PT.050.002	50	22	45	40	110	0,3	0,5	5	✓	0,35
PT.050.001	50	22	45	40	110	0,3	0,5	7	✓	0,35
PT.063.002	63	22	45	40	110	0,3	0,5	6	✓	0,49
PT.063.001	63	22	45	40	110	0,3	0,5	9	✓	0,50
PT.080.002	80	27	58	50	110	0,3	0,5	7	✓	1,07
PT.080.001	80	27	58	50	110	0,3	0,5	10	✓	1,08
PT.100.002	100	32	85	50	110	0,3	0,5	8	✓	2,03
PT.100.001	100	32	85	50	110	0,3	0,5	12	✓	2,05
PT.125.002	125	40	100	63	110	0,3	0,5	10	✓	3,90
PT.125.001	125	40	100	63	110	0,3	0,5	14	✓	3,86

SUPER FINISH PT11D10

FACE MILLS

TCHW110204R-W



Designation

fz(min/max)

Design

Grade

IN0560

IN2035

IN2504

IN4004

TCHW110204R-W

0,08/0,15

wiper finishing edge R0,4



● = P ● = M ● = K ● = N ● = S ○ = H










SPARE PARTS



SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

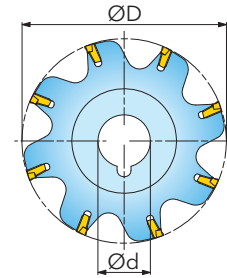
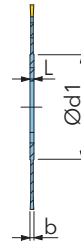
SIDE AND FACE CUTTERS

	D	b	Description	Code	Page
	75 - 125	1,6 - 2,2	SLOT IN DFD01	DFD01	80
	100 - 160	2,4 - 4,1	SLOT IN DFD01A for Flange Drive	DFD01A	81
	63 - 200	10 - 14	HIPOS QUAD DS08D10	DS08D10	82
	63 - 160	4 - 14/15	POWER SLOT DSD10 4-15 mm	DS10D10	84
	50	3 - 6	THIN PRO DLE01 3-6 mm	DLE01	86
	63 - 160	3 - 6	THIN PRO DLD10 3-6 mm	DLD10	88
	63 - 160	7 - 10	THIN PRO DLD10 7-10 mm	DLD10	90
	100 - 315	11-13	THIN PRO DID10 11-13 mm	DID10	92
	100 - 315	13-17	THIN PRO DID10 13-17 mm	DID10	93

Subject to printing error or technical changes.

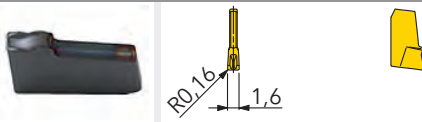
SIDE AND FACE CUTTERS

ADAPTION ACC. TO DIN 138

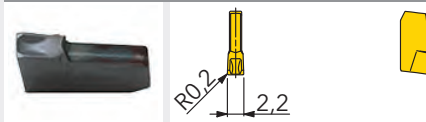


Designation	D	d	d1	L	b	n max.	Z	kg	Related Insert
DF.075.1.6B	75	22	39	2,4	1,6	1050	8	0,03	A
DF.075.2.2B	75	22	39	2,4	2,2	1050	8	0,04	B
DF.100.1.6B	100	22	39	2,4	1,6	800	10	0,06	A
DF.100.2.2B	100	22	39	2,4	2,2	800	10	0,08	B
DF.125.1.6B	125	27	64	2,4	1,6	640	12	0,11	A
DF.125.2.2B	125	27	64	2,4	2,2	640	12	0,15	B

A GCXF071601N



B GCXF082202N



Designation	fz(min/max)	Design	Grade	IN1030	IN2005
GCXF071601N	0,08/0,15	positive geometry R0,15		●	●
GCXF082202N	0,08/0,15	positive geometry R0,2		●	●

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



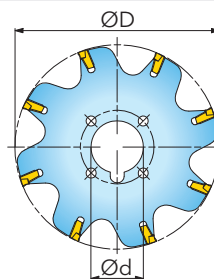
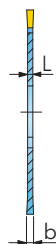
DR-0032

① = Ejector

SLOT IN DFD01

SIDE AND FACE CUTTERS

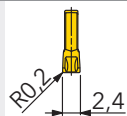
ADAPTION ACC. TO DIN 138



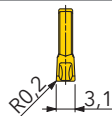
Designation	D	d	L	b	n max.	Z	kg	Related Insert
DF.100.2.4F	100	22	1,9	2,4	800	10	0,09	A
DF.100.3.1F	100	22	2,4	3,1	800	6	0,10	B
DF.100.4.1F	100	22	3,2	4,1	800	6	0,12	C
DF.125.2.4F	125	32	1,9	2,4	640	12	0,14	A
DF.125.3.1F	125	32	2,4	3,1	640	8	0,15	B
DF.125.4.1F	125	32	3,2	4,1	640	8	0,20	C
DF.160.2.4F	160	32	1,9	2,4	500	16	0,25	A
DF.160.3.1F	160	40	2,4	3,1	500	10	0,27	B
DF.160.4.1F	160	40	3,2	4,1	500	10	0,35	C

Spigot set has to be ordered separately

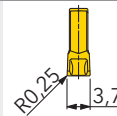
A GCXF092402N



B GCXF113102N



C GCXF114103N



Designation	fz(min/max)	Design	Grade	IN1030	IN2005								
GCXF092402N	0,08/0,15	positive geometry R0,2		●●	●●								
GCXF113102N	0,08/0,15	positive geometry R0,2		●●	●●								
GCXF114103N	0,08/0,15	positive geometry R0,25		●●	●●								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



Cutting Width

2,4 DR-0032

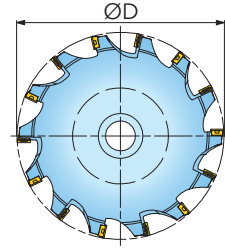
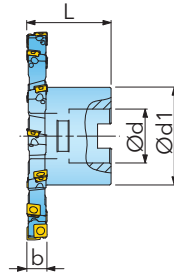
3,1 - 4,1 DR-0031

① = Ejector

SLOT-IN DFD01A FOR FLANGE DRIVE


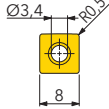


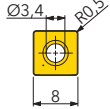


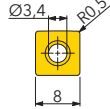





SIDE AND FACE CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	b	Z	Z _{eff}	kg
DS.063.010	63	16	30	32	10	8	4	0,20
DS.063.011	63	16	30	32	12	8	4	0,22
DS.063.012	63	16	30	32	14	8	4	0,24
DS.080.010	80	22	40	40	10	10	5	0,41
DS.080.011	80	22	40	40	12	10	5	0,44
DS.080.012	80	22	40	40	14	10	5	0,48
DS.100.012	100	27	45	45	10	12	6	0,68
DS.100.013	100	27	45	45	12	12	6	0,75
DS.100.014	100	27	45	45	14	12	6	0,80
DS.125.012	125	32	58	50	10	14	7	1,21
DS.125.013	125	32	58	50	12	14	7	1,30
DS.125.014	125	32	58	50	14	14	7	1,40
DS.160.008	160	40	70	60	10	16	8	2,10
DS.160.009	160	40	70	60	12	16	8	2,29
DS.160.010	160	40	70	60	14	16	8	2,52
DS.200.006	200	40	70	60	10	18	9	2,70
DS.200.007	200	40	70	60	12	18	9	3,03
DS.200.008	200	40	70	60	14	18	9	3,35

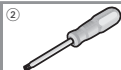
SIDE AND FACE CUTTERS

SDMT080305N			SDMW080305TN			SDCT080305FN-P		
								
Designation	fz(min/max)	Design	Grade	IN05S	IN2505	IN4030		
SDMT080305N	0,13/0,17	positive geometry R0,5						
SDMW080305TN	0,13/0,20	neutral geometry, K-land R0,5						
SDCT080305FN-P	0,05/0,20	non-ferrous geometry, polished R0,5						

● = P ● = M ● = K ● = N ● = S ○ = H



SPARE PARTS

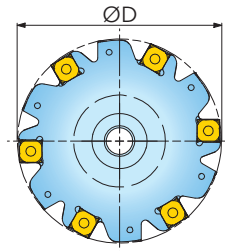
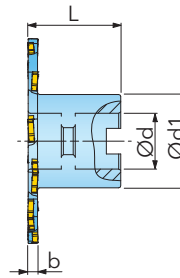


SM30-065-00 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

SIDE AND FACE CUTTERS

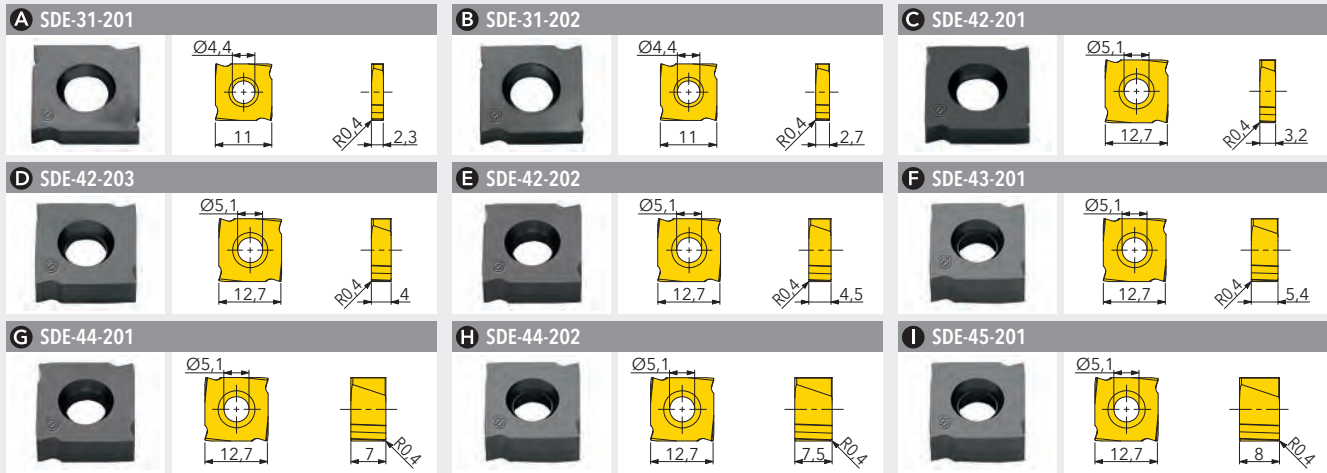
ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	b	Z	Z _{eff}	kg	Related Insert
DS.063.004	63	16	30	32	4	8	4	0,17	A
DS.063.005	63	16	30	32	5	8	4	0,18	B
DS.063.006	63	16	30	32	6	6	3	0,18	C
DS.063.014	63	16	30	32/32,5	7/8	6	3	0,20	DE
DS.063.017	63	16	30	32	9	6	3	0,21	F
DS.063.018	63	16	30	32	10	6	3	0,22	F
DS.063.021	63	16	30	32/32,5	12/13	6	3	0,22	GH
DS.063.022	63	16	30	32/32,5	14/15	6	3	0,24	HI
DS.080.004	80	22	38	40	4	10	5	0,33	A
DS.080.005	80	22	38	40	5	10	5	0,35	B
DS.080.006	80	22	38	40	6	8	4	0,36	C
DS.080.014	80	22	38	40/40,5	7/8	8	4	0,37	DE
DS.080.017	80	22	38	40	9	8	4	0,38	F
DS.080.018	80	22	38	40	10	8	4	0,40	F
DS.080.021	80	22	38	40/40,5	12/13	8	4	0,42	GH
DS.080.022	80	22	38	40/40,5	14/15	8	4	0,46	HI
DS.100.008	100	27	45	45	4	12	6	0,52	A
DS.100.009	100	27	45	45	5	12	6	0,56	B
DS.100.010	100	27	45	45	6	10	5	0,57	C
DS.100.011	100	27	45	45/45,5	7/8	10	5	0,61	DE
DS.100.017	100	27	45	45	9	10	5	0,62	F
DS.100.018	100	27	45	45	10	10	5	0,66	F
DS.100.021	100	27	45	45/45,5	12/13	10	5	0,72	GH
DS.100.022	100	27	45	45/45,5	14/15	10	5	0,79	HI
DS.125.008	125	32	58	50	4	14	7	0,99	A
DS.125.009	125	32	58	50	5	14	7	1,05	B
DS.125.010	125	32	58	50	6	12	6	1,08	C
DS.125.023	125	22	38	40/40,5	7/8	12	6	0,64	DE
DS.125.011	125	32	58	50/50,5	7/8	12	6	1,13	DE
DS.125.017	125	32	58	50	9	12	6	1,15	F
DS.125.018	125	32	58	50	10	12	6	1,21	F
DS.125.021	125	32	58	50/50,5	12/13	12	6	1,30	GH
DS.125.022	125	32	58	50/50,5	14/15	12	6	1,43	HI
DS.140.001	140	22	38	40	7/8	12	6	0,89	DE
DS.160.011	160	40	70	60	6	16	8	1,89	C
DS.160.012	160	40	70	60/60,5	7/8	16	8	1,99	DE
DS.160.015	160	40	70	60	9	16	8	2,01	F
DS.160.016	160	40	70	60	10	16	8	2,12	F
DS.160.019	160	40	70	60/60,5	12/13	16	8	2,30	GH
DS.160.020	160	40	70	60/60,5	14/15	16	8	2,50	HI



POWER SLOT DSD10 4-15 MM

SIDE AND FACE CUTTERS



Designation	fz(min/max)	Design	Grade	IN4030								
SDE-31-201	0,15/0,20	positive geometry		●								
SDE-31-202	0,15/0,20	positive geometry		●								
SDE-42-201	0,15/0,20	positive geometry		●								
SDE-42-203	0,15/0,20	positive geometry		●								
SDE-42-202	0,15/0,20	positive geometry		●								
SDE-43-201	0,15/0,20	positive geometry		●								
SDE-44-201	0,15/0,20	positive geometry		●								
SDE-44-202	0,15/0,20	positive geometry		●								
SDE-45-201	0,15/0,20	positive geometry		●								

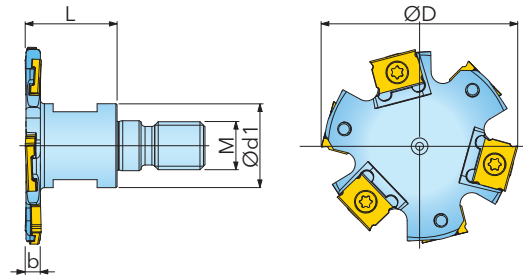
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Cutting Width	
4	SM35-034-50 (1,4Nm) DS-T09S
5	SM35-042-50 (1,4Nm) DS-T09S
6	SM40-050-50 (4,5Nm) DS-T15S
7/8	SM40-060-50 (4,5Nm) DS-T15S
9 - 10	SM40-080-50 (4,5Nm) DS-T15S
12/13 - 14/15	SM40-106-50 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

SIDE AND FACE CUTTERS

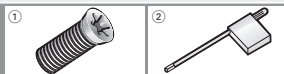
SCREW-IN TYPE ADAPTION



Designation	D	d1	L	b	M	Z	Z _{eff}	kg	Related Insert
DI.050.001	50	21	23	3	M12	6	3	0,10	AB
DI.050.002	50	21	23	4	M12	6	3	0,10	CDEFG
DI.050.003	50	21	23	5	M12	6	3	0,12	H I J K L
DI.050.004	50	21	23	6	M12	4	2	0,13	M N O P Q R

THIN PRO DLE01 3-6 MM

SPARE PARTS



Cutting Width

3	SM25-024-80 (0,7Nm)	DS-T06F
4	SM35-034-50 (1,4Nm)	DS-T09S
5	SM35-042-50 (1,4Nm)	DS-T09S
6	SM40-050-50 (4,5Nm)	DS-T15S

① = Insert screw ② = Screw driver

SIDE AND FACE CUTTERS

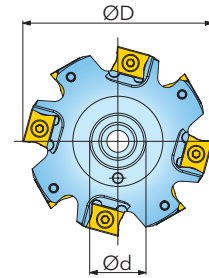
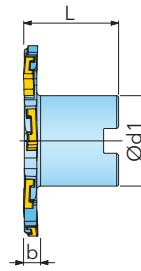
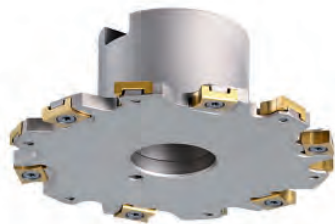


Designation	fz(min/max)	Design	Grade	IN05S	IN250S	IN251S	IN2530	IN403S				
IEE211-001	0,05/0,12	positive geometry R0,4			●		●	●				
IEE211-001-P	0,05/0,12	non-ferrous geometry, polished R0,4	●									
IEE311-001	0,05/0,12	positive geometry R0,4			●	●	●	●				
IEE311-001-P	0,05/0,12	non-ferrous geometry, polished R0,4	●									
IEE311-002	0,05/0,15	positive geometry R0,8			●	●	●	●				
IEE311-002-P	0,05/0,15	non-ferrous geometry, polished R0,8	●									
IEE311-004	0,05/0,15	positive geometry 0,15x20°			●		●					
IEE312-001	0,05/0,17	positive geometry R0,4			●	●	●	●				
IEE312-001-P	0,05/0,17	non-ferrous geometry, polished R0,4	●									
IEE312-002	0,05/0,17	positive geometry R0,8			●	●	●	●				
IEE312-002-P	0,05/0,17	non-ferrous geometry, polished R0,8	●									
IEE312-004	0,05/0,17	positive geometry 0,15x20°			●		●					
IXE412-001	0,05/0,20	positive geometry R0,4			●	●	●	●				
IXE412-001-P	0,05/0,20	non-ferrous geometry, polished R0,4	●									
IXE412-002	0,05/0,20	positive geometry R0,8			●	●	●	●				
IXE412-002-P	0,05/0,20	non-ferrous geometry, polished R0,8	●									
IXE412-003	0,05/0,20	positive geometry R1,6			●		●					
IXE412-004	0,05/0,20	positive geometry 0,3x17°			●		●					

● = P ● = M ● = K ● = N ● = S ○ = H

SIDE AND FACE CUTTERS

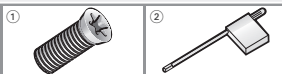
ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	b	Z	Z _{eff}	kg	Related Insert
DI.063.009	63	16	30	32	3	8	4	0,16	AB
DI.063.010	63	16	30	32	4	8	4	0,19	CDEFG
DI.063.011	63	16	30	32	5	8	4	0,21	HIJKL
DI.063.012	63	16	30	32	6	6	3	0,22	MNOPQR
DI.080.009	80	22	38	40	3	10	5	0,32	AB
DI.080.010	80	22	38	40	4	10	5	0,36	CDEFG
DI.080.011	80	22	38	40	5	10	5	0,38	HIJKL
DI.080.012	80	22	38	40	6	8	4	0,40	MNOPQR
DI.100.009	100	27	45	45	3	14	7	0,52	AB
DI.100.010	100	27	45	45	4	12	6	0,56	CDEFG
DI.100.011	100	27	45	45	5	12	6	0,60	HIJKL
DI.100.012	100	27	45	45	6	10	5	0,62	MNOPQR
DI.125.008	125	32	58	50	4	14	7	1,04	CDEFG
DI.125.009	125	32	58	50	5	14	7	1,10	HIJKL
DI.125.010	125	32	58	50	6	12	6	1,14	MNOPQR
DI.160.008	160	40	70	60	4	18	9	1,83	CDEFG
DI.160.009	160	40	70	60	5	18	9	1,93	HIJKL
DI.160.010	160	40	70	60	6	16	8	2,00	MNOPQR

THIN PRO DLD10 3-6 MM

SPARE PARTS



Cutting Width

3	SM25-024-80 (0,7Nm)	DS-T06F
4	SM35-034-50 (1,4Nm)	DS-T09S
5	SM35-042-50 (1,4Nm)	DS-T09S
6	SM40-050-50 (4,5Nm)	DS-T15S

① = Insert screw ② = Screw driver

SIDE AND FACE CUTTERS

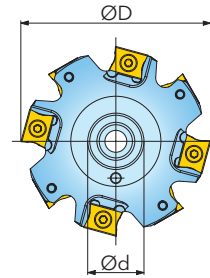
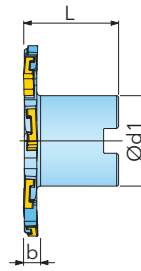
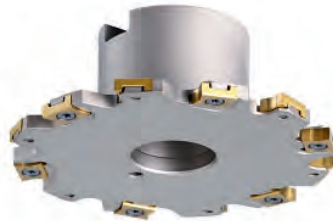


Designation	fz(min/max)	Design	Grade	IN05S	IN250S	IN251S	IN2530	IN403S				
IEE211-001	0,05/0,12	positive geometry R0,4			●		●	●				
IEE211-001-P	0,05/0,12	non-ferrous geometry, polished R0,4	●									
IEE311-001	0,05/0,12	positive geometry R0,4			●	●	●	●				
IEE311-001-P	0,05/0,12	non-ferrous geometry, polished R0,4	●									
IEE311-002	0,05/0,15	positive geometry R0,8			●	●	●	●				
IEE311-002-P	0,05/0,15	non-ferrous geometry, polished R0,8	●									
IEE311-004	0,05/0,15	positive geometry 0,15x20°			●		●					
IEE312-001	0,05/0,17	positive geometry R0,4			●	●	●	●				
IEE312-001-P	0,05/0,17	non-ferrous geometry, polished R0,4	●									
IEE312-002	0,05/0,17	positive geometry R0,8			●	●	●	●				
IEE312-002-P	0,05/0,17	non-ferrous geometry, polished R0,8	●									
IEE312-004	0,05/0,17	positive geometry 0,15x20°			●		●					
IXE412-001	0,05/0,20	positive geometry R0,4			●	●	●	●				
IXE412-001-P	0,05/0,20	non-ferrous geometry, polished R0,4	●									
IXE412-002	0,05/0,20	positive geometry R0,8			●	●	●	●				
IXE412-002-P	0,05/0,20	non-ferrous geometry, polished R0,8	●									
IXE412-003	0,05/0,20	positive geometry R1,6			●		●					
IXE412-004	0,05/0,20	positive geometry 0,3x17°			●		●					

● = P ● = M ● = K ● = N ● = S ○ = H

SIDE AND FACE CUTTERS

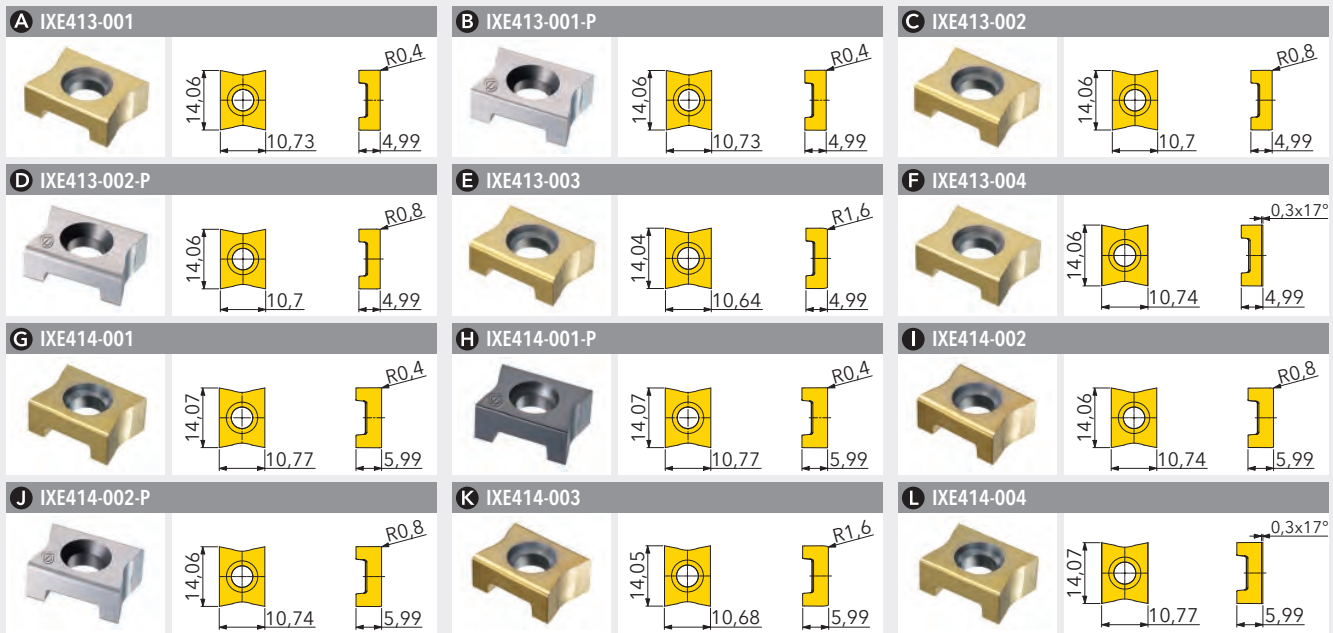
ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	b	Z	Z _{eff}	 kg	Related Insert
DI.063.013	63	16	30	32	7	6	3	0,23	ABCDEF
DI.063.014	63	16	30	32	8	6	3	0,24	ABCDEF
DI.063.015	63	16	30	32	9	6	3	0,26	GHIJKL
DI.063.016	63	16	30	32	10	6	3	0,27	GHIJKL
DI.080.013	80	22	38	40	7	8	4	0,42	ABCDEF
DI.080.014	80	22	38	40	8	8	4	0,45	ABCDEF
DI.080.015	80	22	38	40	9	8	4	0,48	GHIJKL
DI.080.016	80	22	38	40	10	8	4	0,50	GHIJKL
DI.100.013	100	27	45	45	7	10	5	0,66	ABCDEF
DI.100.014	100	27	45	45	8	10	5	0,70	ABCDEF
DI.100.015	100	27	45	45	9	10	5	0,72	GHIJKL
DI.100.016	100	27	45	45	10	10	5	0,76	GHIJKL
DI.125.011	125	32	58	50	7	12	6	1,20	ABCDEF
DI.125.012	125	32	58	50	8	12	6	1,26	ABCDEF
DI.125.013	125	32	58	50	9	12	6	1,29	GHIJKL
DI.125.014	125	32	58	50	10	12	6	1,35	GHIJKL
DI.160.011	160	40	70	60	7	16	8	2,10	ABCDEF
DI.160.012	160	40	70	60	8	16	8	2,21	ABCDEF
DI.160.013	160	40	70	60	9	16	8	2,27	GHIJKL
DI.160.014	160	40	70	60	10	16	8	2,38	GHIJKL

THIN PRO DLD10 7-10 MM

SIDE AND FACE CUTTERS



Designation	fz(min/max)	Design	Grade								
				IN05S	IN2505	IN2515	IN2530	IN4035			
IXE413-001	0,05/0,20	positive geometry R0,4			●	●	●	●			
IXE413-001-P	0,05/0,20	non-ferrous geometry, polished R0,4	●								
IXE413-002	0,05/0,20	positive geometry R0,8			●	●	●	●			
IXE413-002-P	0,05/0,20	non-ferrous geometry, polished R0,8	●								
IXE413-003	0,05/0,20	positive geometry R1,6			●		●				
IXE413-004	0,05/0,20	positive geometry 0,3x17°			●		●				
IXE414-001	0,05/0,25	positive geometry R0,4			●	●	●	●			
IXE414-001-P	0,05/0,25	non-ferrous geometry, polished R0,4	●								
IXE414-002	0,05/0,25	positive geometry R0,8			●	●	●	●			
IXE414-002-P	0,05/0,25	non-ferrous geometry, polished R0,8	●								
IXE414-003	0,05/0,25	positive geometry R1,6			●		●				
IXE414-004	0,05/0,25	positive geometry 0,3x17°			●		●				

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



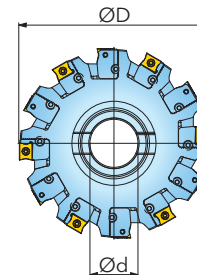
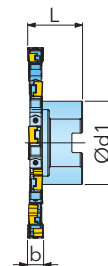
Cutting Width

7	SM40-060-50 (4,5Nm) DS-T15S
8	SM40-070-50 (4,5Nm) DS-T15S
9 - 10	SM40-080-50 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

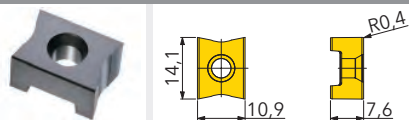
SIDE AND FACE CUTTERS

ADAPTION ACC. TO DIN 8030

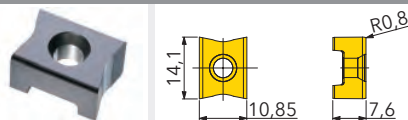


Designation	D	d	d1	L	b	Z	Zeff	kg
DI.100.017	100	27	47	45	11-13	6	3	0,87
DI.125.015	125	32	58	45	11-13	8	4	1,14
DI.160.015	160	40	70	45	11-13	12	6	1,76
DI.200.006	200	40	90	45	11-13	14	7	3,24
DI.250.001	250	60	130	45	11-13	18	9	5,31
DI.315.001	315	60	130	45	11-13	20	10	7,41

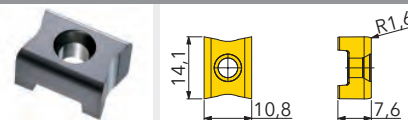
IXH415-G01



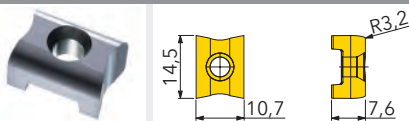
IXH415-G02



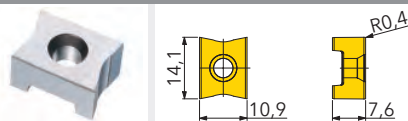
IXH415-G03



IXH415-G04



IXH415-G01-P



Designation	fz(min/max)	Design	Grade								
			IN05S	IN4005	IN4030	IN4035					
IXH415-G01	0,08/0,25	positive geometry R0,4									
IXH415-G02	0,08/0,25	positive geometry R0,8									
IXH415-G03	0,08/0,25	positive geometry R1,6									
IXH415-G04	0,08/0,25	positive geometry R3,2									
IXH415-G01-P	0,05/0,20	positive geometry, polished R0,4									

● = P ● = M ● = K ● = N ● = S ○ = H

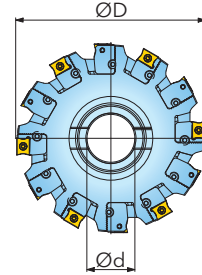
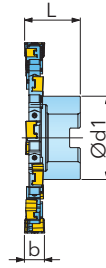
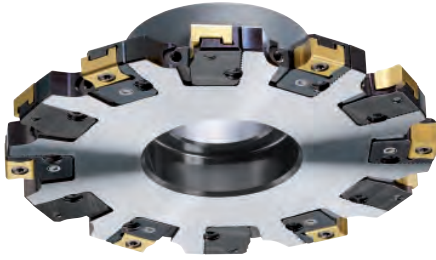
THIN PRO DID10 11-13 MM

SPARE PARTS	1	2	3	4	5	6	7
	SM40-090-00 (4,5Nm)	DS-T15S	4VW101R00	4VW101L00	SC080-01	SB040-07	2K0410-02

① = Insert screw ② = Screw driver ③ = Cartridge RH ④ = Cartridge LH ⑤ = Setting screw ⑥ = Differential screw ⑦ = Locking wedge

SIDE AND FACE CUTTERS

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	b	Z	Zeff	kg
DI.100.018	100	27	47	45	13-17	6	3	0,94
DI.125.016	125	32	58	45	13-17	8	4	1,27
DI.160.016	160	40	70	45	13-17	12	6	1,97
DI.200.007	200	40	90	45	13-17	14	7	3,58
DI.250.002	250	60	130	45	13-17	18	9	5,80
DI.315.002	315	60	130	45	13-17	20	10	8,35

IXH416-G01	IXH416-G02	IXH416-G03
IXH416-G04	IXH416-G01-P	

Designation	fz(min/max)	Design	Grade	IN05S	IN4005	IN4030	IN4035				
IXH416-G01	0,08/0,25	positive geometry R0,4			●●●	●●●	●●●				
IXH416-G02	0,08/0,25	positive geometry R0,8			●●●	●●●	●●●				
IXH416-G03	0,08/0,25	positive geometry R1,6			●●●	●●●	●●●				
IXH416-G04	0,08/0,25	positive geometry R3,2			●●●	●●●	●●●				
IXH416-G01-P	0,05/0,20	positive geometry, polished R0,4	●								

● = P ● = M ● = K ● = N ● = S ○ = H

S.PARTS	①	②	③	④	⑤	⑥	⑦
	SM40-110-00 (4,5Nm) DS-T15S		4W121R00	4W121L00	SC080-01	SB040-07	2K0410-02
	① = Insert screw ② = Screw driver ③ = Cartridge RH ④ = Cartridge LH ⑤ = Setting screw ⑥ = Differential screw ⑦ = Locking wedge						

THIN PRO DID10 13-17 MM

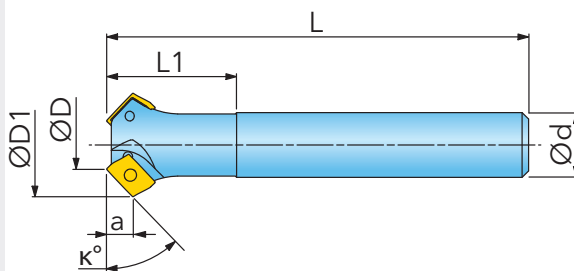
FORM CUTTERS

	D	a	Description	Code	Page
	8	2,7 - 4,8	HIPOS MICRO FA06D02	FA06D02	96
	20	2,9 - 11,6	HIPOS PLUS FB13D03B	FB13D03B	97
	45	9 - 33,9	HIPOS PLUS FB13D10C	FB13D10C	98
	45	6,4 - 24,4	ALUMINATOR FB25D10	FB25D10	99
	10,6	3,2	HIPOS QUAD FS05D02	FS05D02	100
	6 - 16	3,5 - 5,1	HIPOS QUAD FS08D03	FS08D03	101
	20	5	HIPOS QUAD FS08E01	FS08E01	102
	25	1 - 6	FAST BREAK F__D03	F__D03	103
	25	1 - 6	FAST BREAK F__E01	F__E01	104
	25 - 58	11 - 26	HIQUAD TSO_D03	TSO_D03	105
	25 - 58	11 - 26	HIQUAD TSO_M01	TSO_M01	106
	21,9	10,1	TRI GRAV FT10D03	FT10D03	107
	21,9	10,1	TRI GRAV FT10E01	FT10E01	108

Subject to printing error or technical changes.

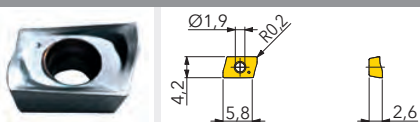
FORM CUTTERS

ADAPTION ACC. TO DIN 1835 A

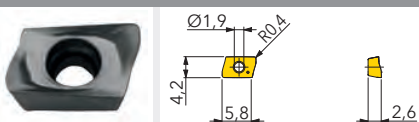


Designation	D	D1	d	L	L1	κ	a	Z	kg
FA.008.001	8	17,7	10	65	20	30	2,7	2	0,04
FA.008.002	8	16,0	10	65	20	45	3,9	2	0,04
FA.008.003	8	13,7	10	65	20	60	4,8	2	0,04

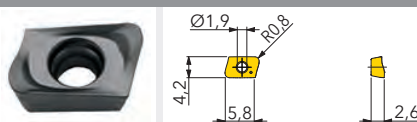
AOMT060202R



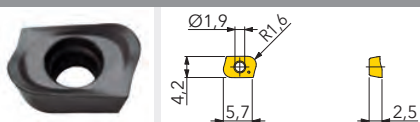
AOMT060204R



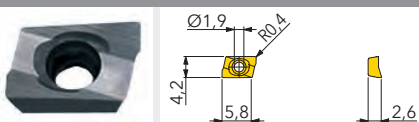
AOMT060208R



AOMT060216R



AOCT060204FR-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2035	IN2504	IN2505	IN2530			
AOMT060202R	0,06/0,12	positive geometry R0,2			●	●	●	●			
AOMT060204R	0,06/0,12	positive geometry R0,4				●	●	●			
AOMT060208R	0,06/0,12	positive geometry R0,8			●	●	●	●			
AOMT060216R ¹⁾	0,06/0,12	positive geometry R1,6				●	●	●			
AOCT060204FR-P	0,05/0,12	non-ferrous geometry, polished R0,4		●							

¹⁾Cutter body has to be modified

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



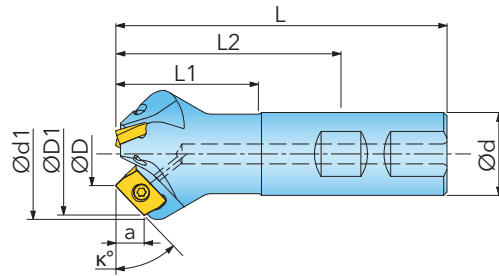
SM18-041-00 (0,5Nm) DS-TP06S (TX-Plus)

① = Insert screw ② = Screw driver

HIPOS MICRO FA06D02

FORM CUTTERS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	D1	d	d2	L	L1	L2	κ	a	Z		
FB.020.006	20	42,1	25	43,2	100	44	68	15	2,9	3	✓	0,38
FB.020.007	20	40,4	25	40,7	100	44	68	30	5,9	3	✓	0,35
FB.020.008	20	36,9	25	39,5	100	44	68	45	8,4	3	✓	0,36
FB.020.009	20	31,9	25	32,2	100	44	68	60	10,3	3	✓	0,33
FB.020.010	20	26,2	25	26,4	100	44	68	75	11,6	3	✓	0,31

BOMT130404R			BOCT130404FR-P			BOMT130404R-DT2				
Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030	IN90D
BOMT130404R	0,12/0,20	positive geometry R0,4								
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4								
BOMT130404R-DT2	0,05/0,25	with long PCD-tip R0,4								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

②

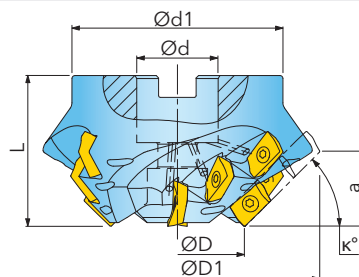
SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

HIPOS PLUS FB13D03B

FORM CUTTERS

ADAPTION ACC. TO DIN 8030

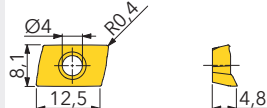


Designation	D	D1	d	d1	L	κ	a	Z	Z _{eff}		
FB.045.006	45	112,5	27	70	50	15	9	12	4	✓	1,70
FB.045.007	45	105,4	27	70	50	30	17,3	12	4	✓	1,40
FB.045.008	45	94,4	27	70	50	45	24,6	12	4	✓	1,10
FB.045.009	45	80,0	27	70	50	60	30,2	12	4	✓	0,81
FB.045.010	45	63,2	22	45	50	75	33,9	12	4	✓	0,43

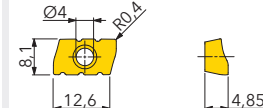
BOMT130404R



BOCT130404FR-P



ZOMT130404R



Designation	fz(min/max)	Design	Grade							
				IN10K	IN2035	IN2504	IN2505	IN2530	IN4030	
BOMT130404R	0,12/0,20	positive geometry R0,4								
BOCT130404FR-P	0,05/0,25	non-ferrous geometry, polished R0,4								
ZOMT130404R ¹⁾	0,12/0,20	chip splitter geometry R0,4								

¹⁾ Best results are achieved on tools with an even number of teeth. Please mount inserts alternating.

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



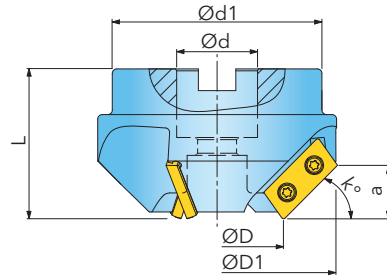
SM35-088-10 (3,0Nm) DST10S

① = Insert screw ② = Screw driver

HIPOS PLUS FB13D10C

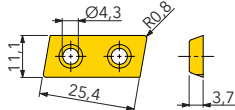
FORM CUTTERS

ADAPTION ACC. TO DIN 8030

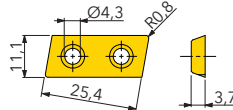


Designation	D	D1	d	d1	L	κ	a	Z		
FB.045.001	45	93,4	27	70	50	15	6,4	3	✓	1,63
FB.045.002	45	88,5	27	70	50	30	12,4	3	✓	1,38
FB.045.003	45	80,7	27	70	50	45	17,8	3	✓	1,05
FB.045.004	45	70,3	27	70	50	60	21,8	3	✓	0,82
FB.045.005	45	58,1	22	45	50	75	24,4	3	✓	0,43

BEHW250308R



BEHW250308R-P



Designation	fz(min/max)	Design	Grade	IN15K	IN2540						
BEHW250308R	0,08/0,20	neutral geometry R0,8									
BEHW250308R-P	0,05/0,20	non-ferrous geometry, polished R0,8									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



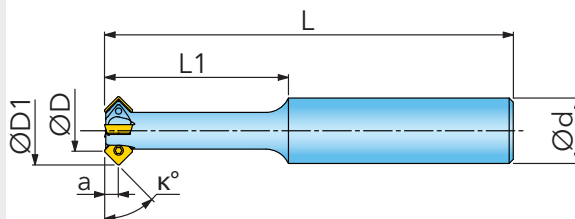
SM35-089-00 (3,0Nm) DS-T15S

① = Insert screw ② = Screw driver

ALUMINATOR FB25D10

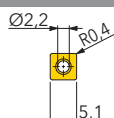
FORM CUTTERS

ADAPTION ACC. TO DIN 1835 A

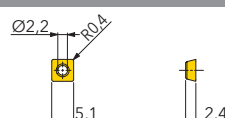


Designation	D	D1	d	L	L1	κ	a	Z	kg
FS.017.001	10,6	17	16	100	45	45	3,2	4	0,11

SDMT050204N



SDCT050204FN-P



Designation	fz(min/max)	Design	Grade	IN10K	IN2505						
SDMT050204N	0,06/0,12	positive geometry R0,4									
SDCT050204FN-P	0,05/0,15	non-ferrous geometry, polished R0,4									

● = P ● = M ● = K ● = N ● = S ○ = H

HIPOS QUAD FS05D02

SPARE PARTS



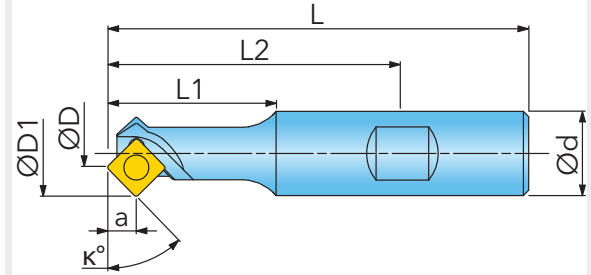
DS-TP06S (TX-Plus)

SM20-043-00 (0,7Nm)

① = Screw driver ② = Insert screw

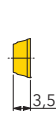
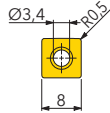
FORM CUTTERS

ADAPTION ACC. TO DIN 1835 B (WELDON)

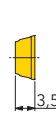
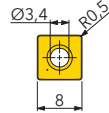


Designation	D	D1	d	L	L1	L2	κ	a	Z	if kg
FS.006.003	6	18,6	16	80	32	56	30	3,5	1	0,09
FS.006.001	6	16,3	16	80	32	56	45	5,1	1	0,09
FS.006.002	6	13,1	16	80	32	56	60	6,2	1	0,09
FS.016.001	16	26,4	20	85	35	60	45	5,1	2	0,19

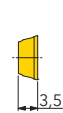
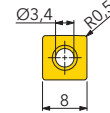
SDMT080305N



SDMW080305TN



SDCT080305FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2505	IN4030					
SDMT080305N	0,13/0,17	positive geometry R0,5									
SDMW080305TN	0,13/0,20	neutral geometry, K-land R0,5									
SDCT080305FN-P	0,05/0,20	non-ferrous geometry, polished R0,5									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



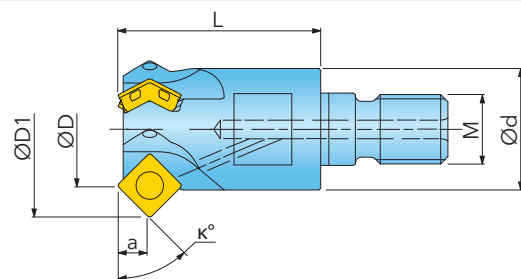
SM30-065-00 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

HIPOS QUAD FS08D03

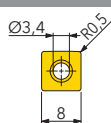
FORM CUTTERS

SCREW-IN TYPE ADAPTION

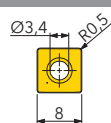


Designation	D	D1	d1	L	κ	a	M	Z	IK	kg
FS.020.001	20	30,4	21	35	45	5	M12	3	✓	0,09

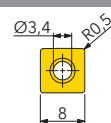
SDMT080305N



SDMW080305TN



SDCT080305FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2505	IN4030				
SDMT080305N	0,13/0,17	positive geometry R0,5			●	●				
SDMW080305TN	0,13/0,20	neutral geometry, K-land R0,5				●				
SDCT080305FN-P	0,05/0,20	non-ferrous geometry, polished R0,5	●							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



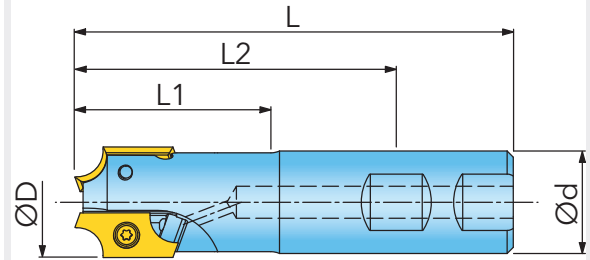
SM30-065-00 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

HIPOS QUAD FS08E01

FORM CUTTERS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	Z	Insert	IK	kg	Related Insert
FB.025.001	25	25	100	40	68	2	BEEW	✓	0,28	A B C D E
FF.025.001	25	25	100	40	68	2	FEEW	✓	0,34	F G H

A BEEW120310R-CR 	B BEEW120316R-CR 	C BEEW120320R-CR
D BEEW120325R-CR 	E BEEW120330R-CR 	F FEEW250340R-CR
G FEEW250350R-CR 	H FEEW250360R-CR 	

Designation	fz(min/max)	Design	Grade	IN2530								
BEEW120310R-CR	0,08/0,20	neutral geometry R1,0	●●●●●									
BEEW120316R-CR	0,08/0,20	neutral geometry R1,6	●●●●●									
BEEW120320R-CR	0,08/0,20	neutral geometry R2,0	●●●●●									
BEEW120325R-CR	0,08/0,20	neutral geometry R2,5	●●●●●									
BEEW120330R-CR	0,08/0,20	neutral geometry R3,0	●●●●●									
FEEW250340R-CR	0,08/0,20	neutral geometry R4,0	●●●●●									
FEEW250350R-CR	0,08/0,20	neutral geometry R5,0	●●●●●									
FEEW250360R-CR	0,08/0,20	neutral geometry R6,0	●●●●●									

● = P ● = M ● = K ● = N ● = S ○ = H

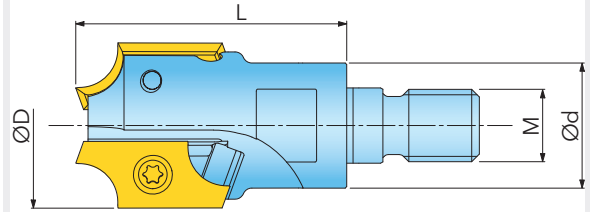
SPARE PARTS	①	②
WSP-Typ		
BEEW	SM35-070-00 (3,0Nm) DS-T15S	
FEEW	SM40-093-20 (4,5Nm) DS-T15S	

① = Insert screw ② = Screw driver

FAST BREAK F..._D03

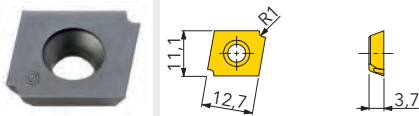
FORM CUTTERS

SCREW-IN TYPE ADAPTION

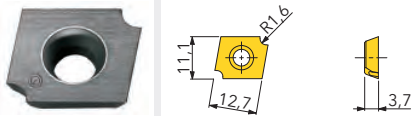


Designation	D	d1	L	M	Z	Insert			Related Insert
FB.025.002	25	21	35	M12	2	BEEW	✓	0,10	A B C D E
FF.025.002	25	21	43	M12	2	FEEW	✓	0,11	F G H

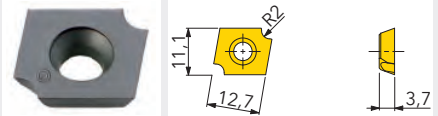
A BEEW120310R-CR



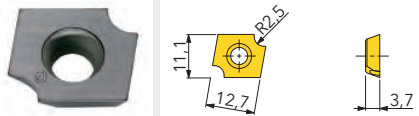
B BEEW120316R-CR



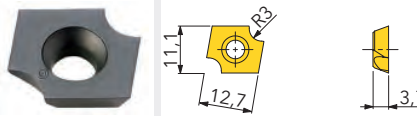
C BEEW120320R-CR



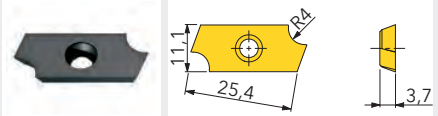
D BEEW120325R-CR



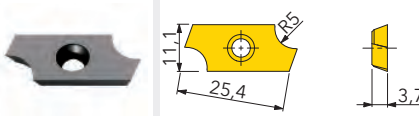
E BEEW120330R-CR



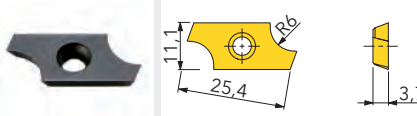
F FEEW250340R-CR



G FEEW250350R-CR



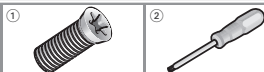
H FEEW250360R-CR



Designation	fz(min/max)	Design	Grade	IN2530									
BEEW120310R-CR	0,08/0,20	neutral geometry R1,0											
BEEW120316R-CR	0,08/0,20	neutral geometry R1,6											
BEEW120320R-CR	0,08/0,20	neutral geometry R2,0											
BEEW120325R-CR	0,08/0,20	neutral geometry R2,5											
BEEW120330R-CR	0,08/0,20	neutral geometry R3,0											
FEEW250340R-CR	0,08/0,20	neutral geometry R4,0											
FEEW250350R-CR	0,08/0,20	neutral geometry R5,0											
FEEW250360R-CR	0,08/0,20	neutral geometry R6,0											

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



WSP-Typ

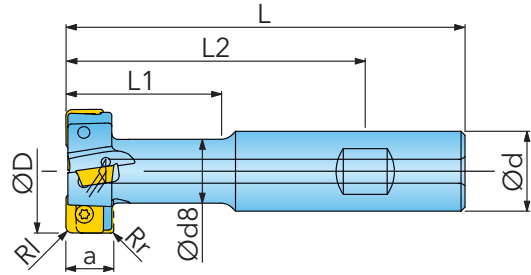
BEEW SM35-070-00 (3,0Nm) DS-T15S

FEEW SM40-093-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

FORM CUTTERS

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	L2	a	Z	Zeff			Related Insert
TS.025.001	25	16	13	85	31	61	11	2	1	✓	0,11	A
TS.031.001	31	20	16	100	39	75	12	4	2	✓	0,20	B
TS.039.001	38,5	25	19	110	49	78	16	4	2	✓	0,34	C D
TS.048.001	48	32	25	125	60	89	20	4	2	✓	0,63	E
TS.058.001	58	32	31	140	75	104	26	6	2	✓	0,90	E

A SDMT080305N

B SDES090416TN-002

C SDES090408TN

D SDES090425TN-002

E SDES130525TN-002

Designation	fz(min/max)	Design	Grade	IN2505	IN4030						
SDMT080305N	0,13/0,17	positive geometry R0,5									
SDES090416TN-002	0,10/0,15	neutral geometry, K-land 2xR0,8/2xR1,6									
SDES090408TN	0,10/0,15	neutral geometry, K-land 4xR0,8									
SDES090425TN-002	0,10/0,15	neutral geometry, K-land 2xR0,8/2xR2,5									
SDES130525TN-002	0,12/0,20	neutral geometry, K-land 2xR1,0/2xR2,5									

● = P ● = M ● = K ● = N ● = S ○ = H



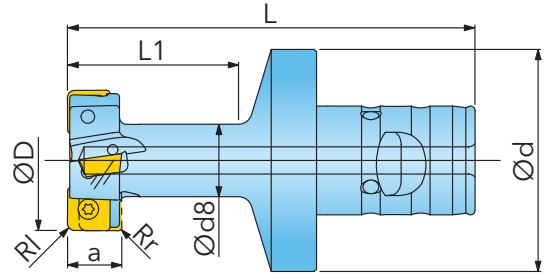
Diameter Range	Part
25	SM30-065-00 (2,0Nm) DS-T09S
31 - 38,5	SM30-075-R0 (2,0Nm) DS-T09S
48 - 58	SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

HIQUAD TSO_D03

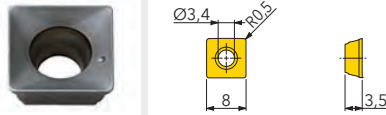
FORM CUTTERS

MODULAR MILLING ADAPTOR INNOFIT

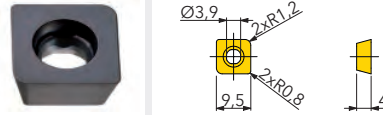


Designation	D	d	d8	L	L1	a	MOD	Z	Zeff			Related Insert
TS.025.002	25	49	13	45	31	11	40	2	1	✓	0,29	A
TS.031.002	31	49	16	55	38	12	40	4	2	✓	0,34	B
TS.039.002	38,5	49	19	65	48	16	40	4	2	✓	0,41	C D
TS.048.002	48	78	25	80	60	20	50	4	2	✓	1,13	E
TS.058.002	58	78	31	95	75	26	50	6	2	✓	1,42	E

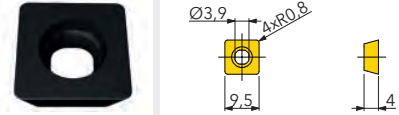
A SDMT080305N



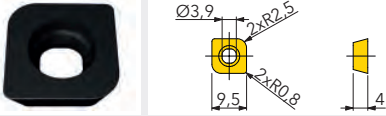
B SDES090416TN-002



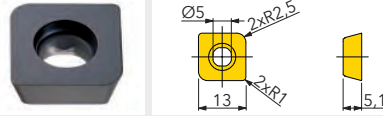
C SDES090408TN



D SDES090425TN-002



E SDES130525TN-002



Designation	fz(min/max)	Design	Grade							
			IN2505	IN4030						
SDMT080305N	0,13/0,17	positive geometry R0,5								
SDES090416TN-002	0,10/0,15	neutral geometry, K-land 2xR0,8/2xR1,6								
SDES090408TN	0,10/0,15	neutral geometry, K-land 4xR0,8								
SDES090425TN-002	0,10/0,15	neutral geometry, K-land 2xR0,8/2xR2,5								
SDES130525TN-002	0,12/0,20	neutral geometry, K-land 2xR1,0/2xR2,5								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



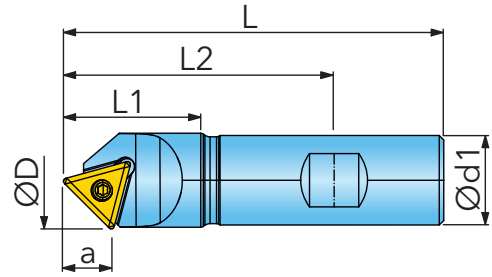
Diameter Range

25	SM30-065-00 (2,0Nm) DS-T09S
31 - 38,5	SM30-075-R0 (2,0Nm) DS-T09S
48 - 58	SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

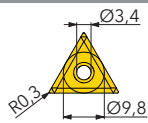
FORM CUTTERS

ADAPTION ACC. TO DIN 1835 B (WELDON)

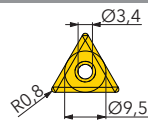


Designation	D	d1	L	L1	L2	a	Z	kg
FT.022.001	21,9	20	85	34	60	10,1	1	0,15

TFLT15T303N



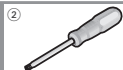
TFLT15T308N



Designation	fz(min/max)	Design	Grade	IN2530														
TFLT15T303N	0,03/0,10	positive chip breaker geometry R0,3																
TFLT15T308N	0,03/0,10	positive wiper geometry R0,8																

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



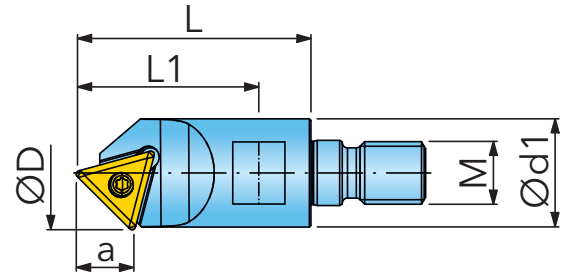
SM30-065-00 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

TRI GRAY FT10D03

FORM CUTTERS


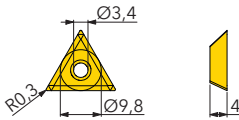

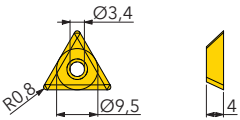


SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	kg
FT.022.002	21,9	21	45	10,1	M12	1	0,10

TRI GRAV FT10E01

FORM CUTTERS

TFLT15T303N		TFLT15T308N									
											
Designation	fz(min/max)	Design	Grade	IN2530							
TFLT15T303N	0,03/0,10	positive chip breaker geometry R0,3									
TFLT15T308N	0,03/0,10	positive wiper geometry R0,8									







● = P ● = M ● = K ● = N ● = S ○ = H



SPARE PARTS		
	SM30-065-00 (2,0Nm) DS-T09S	















① = Insert screw ② = Screw driver

MOLD AND DIE

	D	a	Description	Code	Page
	12 - 25	3	MOULDMAKER PRO6E01N	PRO6E01N	116
	16 - 30	4	MOULDMAKER PRO8E01N	PRO8E01N	117
	20 - 42	5	MOULDMAKER PR10E01N	PR10E01N	118
	24 - 42	6	MOULDMAKER PR12E01N	PR12E01N	119
	32	8	MOULDMAKER PR16E01N	PR16E01N	120
	52 - 66	5	MOULDMAKER PR10D10N	PR10D10N	121
	52 - 80	6	MOULDMAKER PR12D10N	PR12D10N	122
	52 - 160	8	MOULDMAKER PR16D10N	PR16D10N	123
	16	4	MOULDMAKER PLUS PRO8E01P	PRO8E01P	124
	20 - 42	5	MOULDMAKER PLUS PR10E01P	PR10E01P	125
	24 - 42	6	MOULDMAKER PLUS PR12E01P	PR12E01P	126
	32 - 42	8	MOULDMAKER PLUS PR16E01P	PR16E01P	127
	52	5	MOULDMAKER PLUS Copy Face Mill PR10D10P	PR10D10P	128
	52 - 80	6	MOULDMAKER PLUS PR12D10P	PR12D10P	129

Subject to printing error or technical changes.

MOLD AND DIE

	D	a	Description	Code	Page
	52 - 160	8	MOULDMAKER PLUS PR16D10P	PR16D10P	130
	66 - 160	10	MOULDMAKER PLUS PR20D10P	PR20D10P	131
	20 - 35	2,5	BLADEMAKER+ PR10E01BM+	PR10E01BM+	132
	25 - 35	3	BLADEMAKER+ PR12E01BM+	PR12E01BM+	133
	40 - 63	2,5	BLADEMAKER+ PR10D10BM+	PR10D10BM+	134
	40 - 80	3	BLADEMAKER+ PR12D10BM+	PR12D10BM+	135
	24 - 42	6	MOULDMAKER PRO PR12E01CC	PR12E01CC	136
	32 - 42	8	MOULDMAKER PRO PR16E01CC	PR16E01CC	137
	50 - 80	6	MOULDMAKER PRO PR12D10CC	PR12D10CC	138
	50 - 160	8	MOULDMAKER PRO PR16D10CC	PR16D10CC	139
	16 - 42	1	MOULDMAKER V KC06E01	KC06E01	140
	25 - 42	2	MOULDMAKER V KC11E01	KC11E01	141
	52 - 100	2	MOULDMAKER V KC11D10	KC11D10	142
	16 - 42	5 - 8	PLUNGE MASTER BSE01C 90°	BSE01C	143

Subject to printing error or technical changes.

MOLD AND DIE

	D	a	Description	Code	Page
	16 - 42	5 - 8	PLUNGE MASTER BSE01B 93,2°	BSE01B	144
	20 - 42	3,8	EBB 6 BW04E01	BW04E01	145
	50 - 160	-	L-PRO BL13D10	BL13D10	146
	50 - 160	11,9	HIPOS QUAD PSP13D10	PSP13D10	147
	10,6 - 32,4	1	HFD MINI KP05E01	KP05E01	148
	30,4 - 56,4	1	HFD MINI KP05D10	KP05D10	149
	7,4 - 33,4	0,8	TRI FEED PW06E01	PW06E01	150
	23,4 - 43,4	0,8	TRI FEED PW06D10	PW06D10	151
	21,5 - 28,5	1,5	HIFEED DEKA KP08E01	KP08E01	152
	36,5 - 66,4	1,5	HIFEED DEKA KP08D10	KP08D10	153
	12,9 - 29,8	1,5	HIFEED QUAD PS09E02	PS09E02	154
	37,8 - 72,8	1,5	HIFEED QUAD PS09D10	PS09D10	155
	11 - 21	2	HIFEED QUAD PS13E02	PS13E02	156
	29 - 79	2	HIFEED QUAD PS13D10	PS13D10	158

Subject to printing error or technical changes.

MOLD AND DIE

	D	a	Description	Code	Page
	48,6 - 128,6	3	HIFEED QUAD PS19D10	PS19D10	160
	2 - 16	4 - 16	SOLID CARBIDE 2 Flute Ball Nose 30° Helix - Short Length		161
	2 - 10	3 - 8	SOLID CARBIDE 2 Flute Ball Nose 30° Helix - Long Length		162
	3 - 20	8 - 50	SOLID CARBIDE HPC rougher & finisher unequally spaced		163
	5 - 20	5 - 20	SOLID CARBIDE 4-7 Flute Roughers - 45° Helix - 1xD		164
	5 - 20	10 - 40	SOLID CARBIDE 4-7 Flute Roughers - 45° Helix - 2xD		165
	6 - 20	12 - 40	SOLID CARBIDE 4-7 Flute Roughers - 45° Helix - 3xD		166
	8 - 16	12 - 24	SOLID CARBIDE 4-5 Flute Roughers - 45° Helix - 4xD		167
	6 - 25	14 - 52	SOLID CARBIDE 4 Flute roughing and finishing - 45 Helix		168
	2 - 20	7 - 38	SOLID CARBIDE 3 Flute Slot Drill 45° Helix - DIN 6535HA		169
	6 - 20	16 - 38	SOLID CARBIDE 3 Flute Slot Drill 45° Helix - DIN 6535HB		170
	6 - 20	24 - 60	SOLID CARBIDE 4-6 Flute End Mill 45° Helix - Long Length		171
	10 - 20	60 - 80	SOLID CARBIDE 4-6 Flute End Mill 45° Helix - Extra Long Length		172
	6 - 20	16 - 38	SOLID CARBIDE 6 Flute End Mill - 45° Helix - Medium Length (finishing)		173













Subject to printing error or technical changes.

MOLD AND DIE

	D	a	Description	Code	Page
	6 - 25	26 - 92	SOLID CARBIDE 6 Flute End Mill - 45° Helix - Long Length (finishing)		174
	6 - 20	9 - 17	SOLID CARBIDE 3 Flute End Mill 45° Helix short length (roughing)		175
	6 - 20	9 - 22	SOLID CARBIDE 3 Flute End Mill 45° Helix long length (roughing)		176
	4 - 20	12 - 38	SOLID CARBIDE 2 Flute Aluminium Slot Drill - 45° Helix - Medium Length		177
	5 - 20	14 - 38	SOLID CARBIDE 3 Flute End Mill 45° Helix with corner radius		178
	3 - 12	30 - 75	SOLID CARBIDE 4 Flute End Mill - 30° Helix - Extra Long Length		179
	6 - 20	10 - 26	EBOLINE High speed Cutter Z=4 short version		180
	6 - 20	13 - 41	EBOLINE High speed Cutter Z=4 long version		181
	6 - 20	19 - 48	EBOLINE High speed Cutter Z=4 very long version		182
	0,3 - 2	0,25 - 1,7	INROCKWELL High-precision ball nose end mill		184
	2 - 12	2,5 - 18	INBALLNOSE Ball nose end mill Z=3		186
	4 - 10	6 - 15	INBALLNOSE Ball nose end mill Z=3		187
	4 - 16	5 - 18	INRAPID HSC ball nose end mill Z=4		188
	1 - 8	2 - 10	INSLOT Tapered, robust ball nose end mill Z=2		190

Subject to printing error or technical changes.

MOLD AND DIE

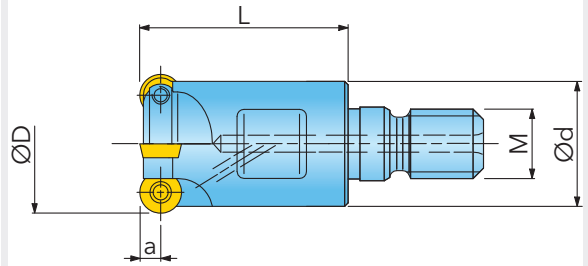
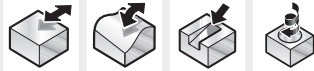
	D	a	Description	Code	Page
	2 - 12	2 - 6	INBOBLANT HSC end mill with corner radius Z=4		192
	2 - 12	2 - 6	INBOBLANT HSC end mill with corner radius Z=4		193
	4 - 12	6 - 18	INTURBO Hi feed endmill Z=4/2 (with reduced neck diameter)		194
	4 - 16	4 - 12	INBOBLANT High-speed end mill Z=3		195
	6 - 25	13 - 40	INNOVATIVE HPC end mill Z=4		196
	6 - 25	13 - 40	INNOVATIVE HPC end mill Z=5		197
	5 - 25	13 - 50	INNOTITAN HPC Titanium End Mill Z=4		198
	6 - 20	13 - 42	INNOTITAN HPC Titanium End Mill Z=5		200
	8 - 20	12 - 30	INNOVATIVEALU Serrated roughing end mill Z=3		201
	8 - 20	12 - 30	INNOVATIVEALU HPC end mill Z=3 (ALU)		202
	8 - 20	12 - 30	INNOVATIVEALU HPC end mill Z=4 (ALU)		203
	6 - 20	6 - 15	INBERAMIC HighSpeed Z=3		204

Subject to printing error or technical changes.



MOLD AND DIE

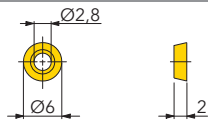
SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø			
PR.012.001	12	11,8	28	3	M6	2	6	10	✓	0,02
PR.012.002	12	13	28	3	M8	2	6	10	✓	0,02
PR.016.001	16	13	23	3	M8	3	6	8	✓	0,02
PR.020.001	20	18	30	3	M10	4	6	8	✓	0,06
PR.025.001	25	21	35	3	M12	5	6	5	✓	0,10

Neutral design

RHHW0602M0TN

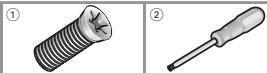


Designation	fz(min/max)	Design	Grade	IN2004	IN2005	IN2006				
RHHW0602M0TN	0,20/0,30	neutral geometry, K-land								

● = P ● = M ● = K ● = N ● = S ○ = H

MOLDDMAKER PR06E01N

SPARE PARTS

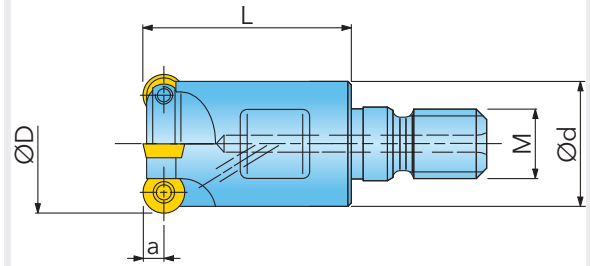


SM25-049-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø			
PR.016.002	16	13	23	4	M8	2	8	2	✓	0,02
PR.030.001	30	29	43	4	M16	5	8	7	✓	0,19
Neutral design										

RHHW0802MOTN	RHHT0802MOTN	RHHT0802MOTN-P

Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035		
RHHW0802MOTN	0,20/0,40	neutral geometry, K-land								
RHHT0802MOTN	0,10/0,20	positive geometry, K-land								
RHHT0802MOTN-P	0,10/0,30	titanium geometry, polished								
RHHT0802MOTN-P	0,10/0,30	non-ferrous geometry, polished								

● = P ● = M ● = K ● = N ● = S ○ = H

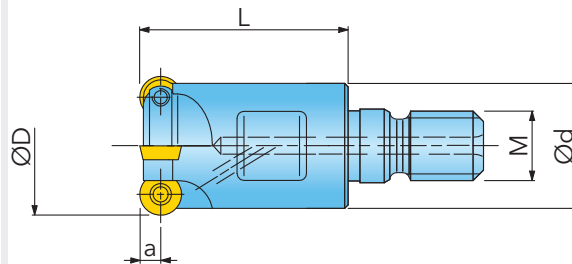
SPARE PARTS		
	SM30-053-00 (2,0Nm) DS-T09S	

① = Insert screw ② = Screw driver

MOLDDMAKER PR08E01N

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø			
PR.020.002 ¹⁾	20	18	30	5	M10	2	10	3,5	✓	0,05
PR.025.002	25	21	35	5	M12	2	10	2	✓	0,09
PR.025.003 ²⁾	25	21	35	5	M12	3	10	2	✓	0,09
PR.030.002 ¹⁾	30	29	43	5	M16	4	10	10	✓	0,19
PR.035.002	35	29	43	5	M16	4	10	7,5	✓	0,21
PR.042.002 ¹⁾	42	29	43	5	M16	5	10	5,5	✓	0,23
Neutral design										

¹⁾Insert screw SM40-070-00; ²⁾Only for finishing

RHKW1003MOTN	RHHW1003MOTN	RHHT1003MOTN
RHHT1003MOTN-P	RHHT1003M0FN-P	

Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1003MOTN	0,25/0,60	neutral roughing geometry									
RHHW1003MOTN	0,25/0,50	neutral geometry, K-land									
RHHT1003MOTN	0,15/0,40	positive geometry, K-land									
RHHT1003MOTN-P	0,10/0,20	titanium geometry, polished									
RHHT1003M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



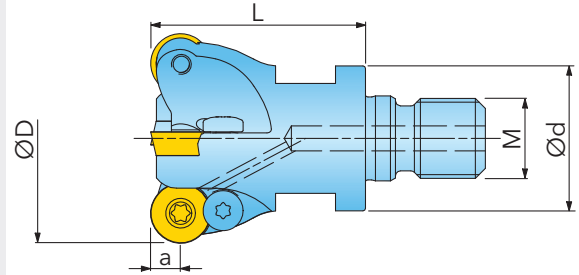
SM40-080-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

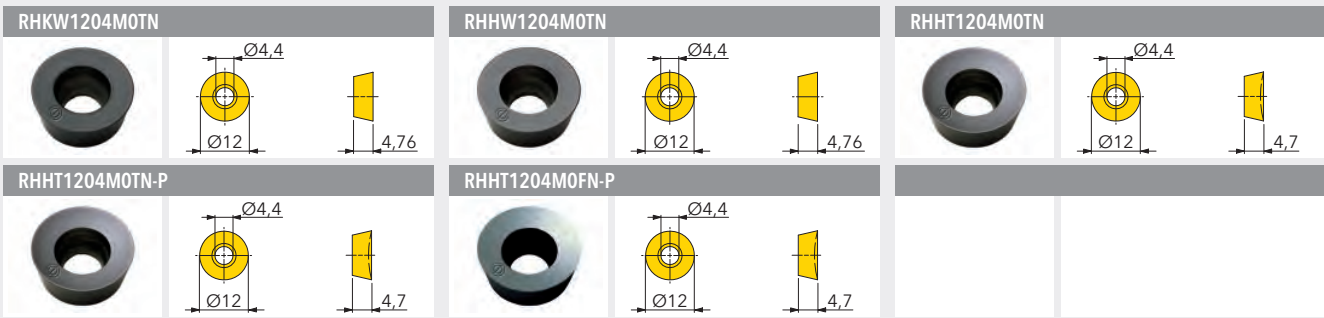
MOLDDMAKER PR10E01N

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø		IK	kg
PR.024.001	24	21	35	6	M12	2	12	3,5	✓	0,08
PR.032.001	32	29	43	6	M16	3	12	2	✓	0,18
PR.035.001	35	29	43	6	M16	3	12	2	✓	0,19
PR.042.001	42	29	43	6	M16	4	12	2	✓	0,25
Neutral design										



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1204M0TN	0,25/0,80	neutral roughing geometry			●	●		●	●	●	
RHHW1204M0TN	0,25/0,60	neutral geometry, K-land		●	●	●				●	
RHHT1204M0TN	0,25/0,50	positive geometry, K-land		●	●			●			●
RHHT1204M0TN-P	0,10/0,25	titanium geometry, polished				●					
RHHT1204M0FN-P	0,15/0,30	non-ferrous geometry, polished	●								

● = P ● = M ● = K ● = N ● = S ○ = H

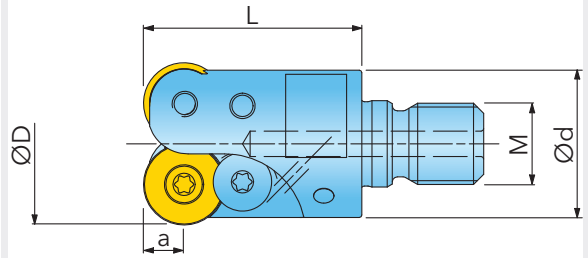
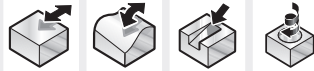
SPARE PARTS	①	②	③
	SM40-080-10 (4,5Nm) DS-T15S		SF035-01 (2,0Nm)

① = Insert screw ② = Screw driver ③ = Clamping screw

MOULDMAKER PR12E01N

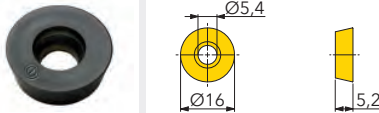
MOLD AND DIE

SCREW-IN TYPE ADAPTION

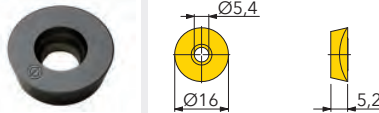


Designation	D	d1	L	a	M	Z	Insert Ø		IK	kg
PR.032.002	32	29	43	8	M16	2	16	2	✓	0,16
Neutral design										

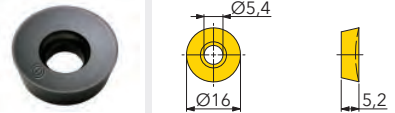
RHKW1605MOTN



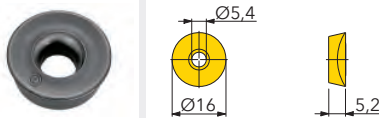
RHHW1605MOTN



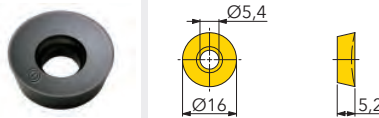
RHHT1605MOTN



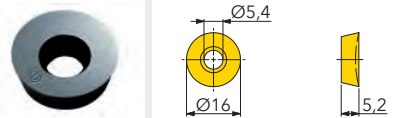
RHKT1605MOTN-PH2



RHHT1605MOTN-P



RHHT1605MOTN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2035	IN2505	IN4015	IN4030	IN7035
RHKW1605MOTN	0,30/1,00	neutral roughing geometry			●	●	●	●	●	●	●
RHHW1605MOTN	0,30/0,80	neutral geometry, K-land		●	●	●		●	●	●	
RHHT1605MOTN	0,25/0,50	positive geometry, K-land		●	●	●					●
RHKT1605MOTN-PH2	0,50/1,50	positive roughing geometry, neg. K-land			●				●	●	
RHHT1605MOTN-P	0,10/0,25	titanium geometry, polished				●					
RHHT1605MOTN-P	0,15/0,30	non-ferrous geometry, polished	●								

● = P ● = M ● = K ● = N ● = S ○ = H

MOLDDMAKER PR16E01N

SPARE PARTS

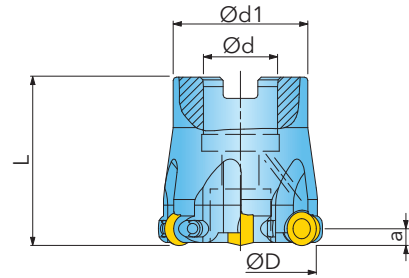


SM50-100-10 (6,0Nm) DS-T20T CL-5000

① = Insert screw ② = Screw driver ③ = Clamping disk

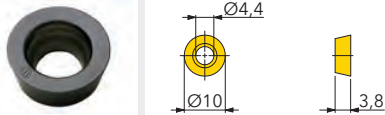
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

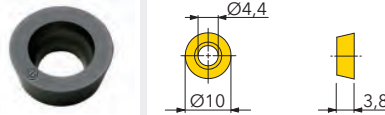


Designation	D	d	d1	L	a	Z	Insert \varnothing			
PR.052.002	52	22	40	50	5	6	10	4	✓	0,36
PR.066.001	66	27	48	50	5	7	10	3	✓	0,60
Neutral design										

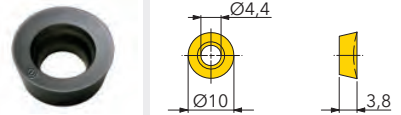
RHKW1003M0TN



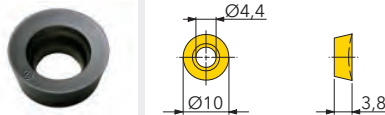
RHHW1003M0TN



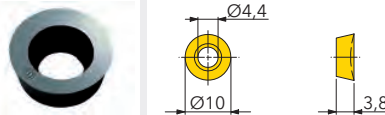
RHHT1003M0TN



RHHT1003M0TN-P



RHHT1003M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1003M0TN	0,25/0,60	neutral roughing geometry									
RHHW1003M0TN	0,25/0,50	neutral geometry, K-land									
RHHT1003M0TN	0,15/0,40	positive geometry, K-land									
RHHT1003M0TN-P	0,10/0,20	titanium geometry, polished									
RHHT1003M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



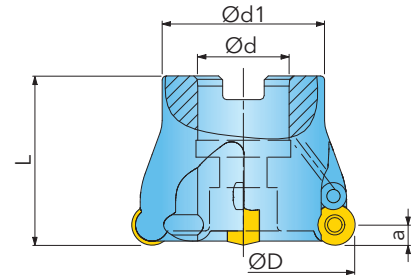
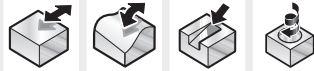
SM40-080-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

MOULDMAKER PR10D10N

MOLD AND DIE

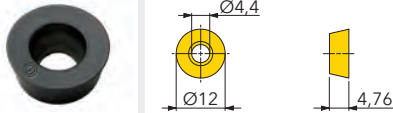
ADAPTION ACC. TO DIN 8030



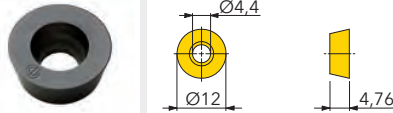
Designation	D	d	d1	L	a	Z	Insert \varnothing		
PR.052.003	52	22	40	50	6	5	12	4	✓ 0,32
PR.066.002	66	27	48	50	6	6	12	3	✓ 0,56
PR.080.002	80	27	60	50	6	7	12	2	✓ 0,98

Neutral design

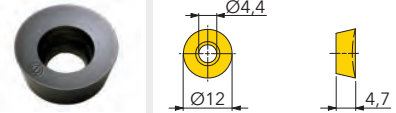
RHKW1204M0TN



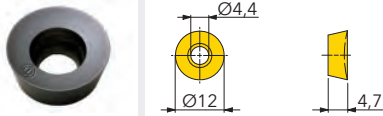
RHHW1204M0TN



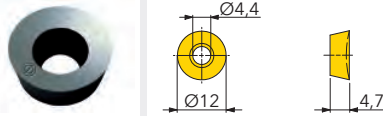
RHHT1204M0TN



RHHT1204M0TN-P



RHHT1204M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1204M0TN	0,25/0,80	neutral roughing geometry									
RHHW1204M0TN	0,25/0,60	neutral geometry, K-land									
RHHT1204M0TN	0,25/0,50	positive geometry, K-land									
RHHT1204M0TN-P	0,10/0,25	titanium geometry, polished									
RHHT1204M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



SM40-080-10 (4,5Nm) DS-T15S

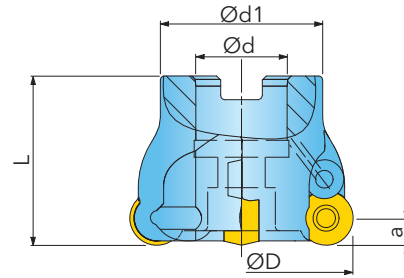
SF035-01 (2,0Nm)

① = Insert screw ② = Screw driver ③ = Clamping screw

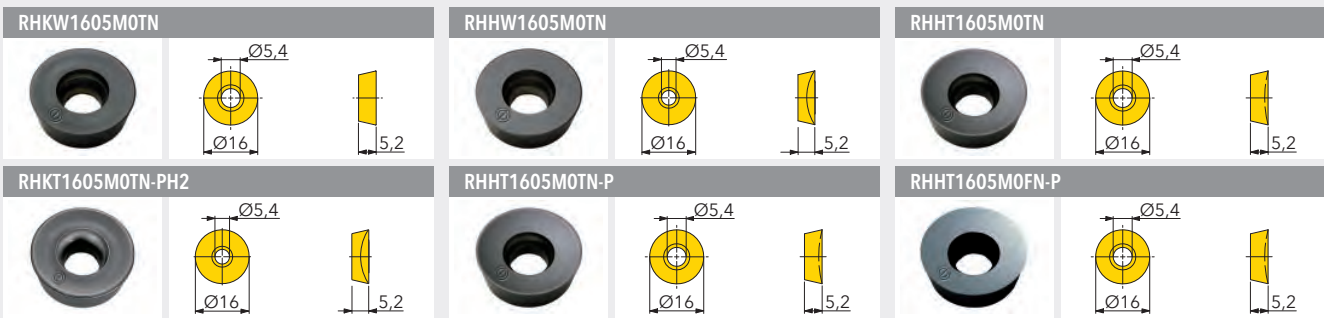
MOLDDMAKER PR12D10N

MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	Insert Ø		IK	kg
PR.052.004	52	22	40	50	8	4	16	2,5	✓	0,30
PR.066.003	66	27	48	50	8	5	16	3,5	✓	0,50
PR.080.003	80	27	60	50	8	6	16	2,5	✓	0,86
PR.100.002	100	32	70	55	8	7	16	2	✓	1,38
PR.125.002	125	40	90	55	8	8	16	1,5		2,44
PR.160.001	160	40	120	55	8	9	16	1		4,84
Neutral design										



Designation	fz(min/max)	Design	Grade									
				IN05S	IN2004	IN2005	IN2035	IN2505	IN4015	IN4030	IN7035	
RHKW1605MOTN	0,30/1,00	neutral roughing geometry										
RHHW1605MOTN	0,30/0,80	neutral geometry, K-land										
RHHT1605MOTN	0,25/0,50	positive geometry, K-land										
RHKT1605MOTN-PH2	0,50/1,50	positive roughing geometry, neg. K-land										
RHHT1605MOTN-P	0,10/0,25	titanium geometry, polished										
RHHT1605M0FN-P	0,15/0,30	non-ferrous geometry, polished										

● = P ● = M ● = K ● = N ● = S ○ = H

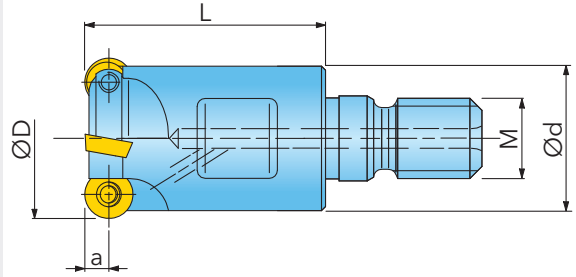
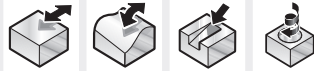
SPARE PARTS	①	②	③
	SM50-100-10 (6,0Nm) DS-T20T		CL-5000

① = Insert screw ② = Screw driver ③ = Clamping disk

MOULDMAKER PR16D10N

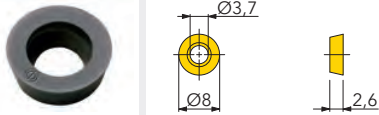
MOLD AND DIE

SCREW-IN TYPE ADAPTION

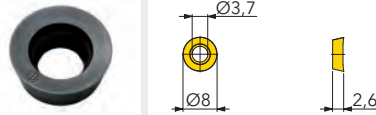


Designation	D	d1	L	a	M	Z	Insert Ø		
PR.016.008	16	13	23	4	M8	2	8	2	0,02
Positive design									

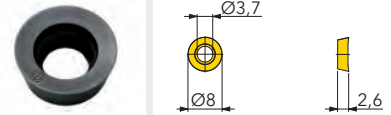
RHHW0802MOTN



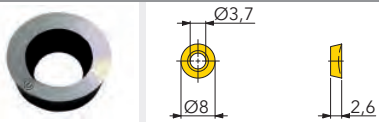
RHHT0802MOTN



RHHT0802MOTN-P



RHHT0802M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035
RHHW0802MOTN	0,20/0,40	neutral geometry, K-land						
RHHT0802MOTN	0,10/0,20	positive geometry, K-land						
RHHT0802MOTN-P	0,10/0,30	titanium geometry, polished						
RHHT0802M0FN-P	0,10/0,30	non-ferrous geometry, polished						

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



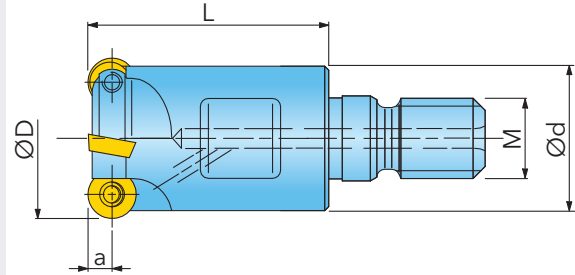
SM30-053-00 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

MOULDMAKER PLUS PR08E01P

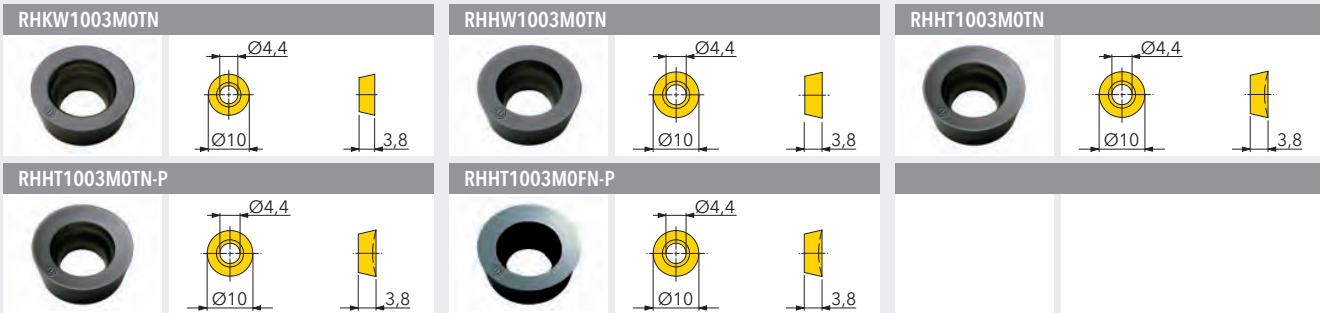
MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø		
PR.020.008	20	18	30	5	M10	2	10	3,5	✓ 0,05
PR.025.007	25	21	35	5	M12	3	10	2	✓ 0,09
PR.030.003	30	29	43	5	M16	3	10	10	✓ 0,19
PR.035.003	35	29	43	5	M16	4	10	7,5	✓ 0,21
PR.042.003	42	29	43	5	M16	5	10	5,5	✓ 0,23

Positive design



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
				RHKW1003M0TN	0,25/0,60	neutral roughing geometry					
RHHW1003M0TN	0,25/0,50	neutral geometry, K-land									
RHHT1003M0TN	0,15/0,40	positive geometry, K-land									
RHHT1003M0TN-P	0,10/0,20	titanium geometry, polished									
RHHT1003M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

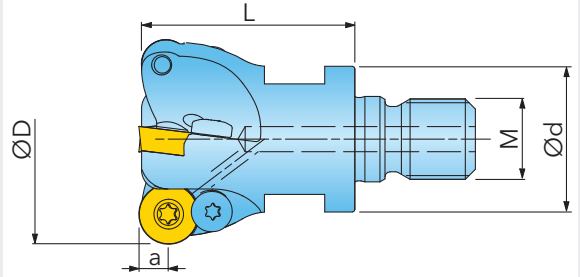
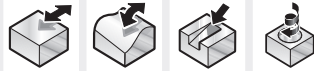
SPARE PARTS	
Diameter Range	
20	SM40-070-00 (4,5Nm) DS-T15S
25 - 42	SM40-080-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

MOULDMAKER PLUS PR10E01P

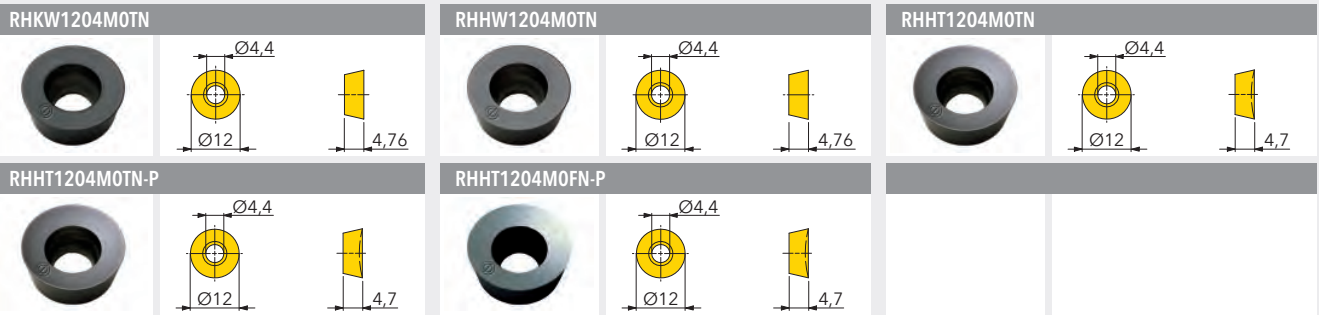
MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z	Insert Ø		IK	kg
PR.024.002	24	21	35	6	M12	2	12	3,5	✓	0,08
PR.032.003	32	29	43	6	M16	3	12	2	✓	0,18
PR.035.004	35	29	43	6	M16	3	12	2	✓	0,19
PR.040.004	40	29	43	6	M16	4	12	2,5	✓	0,25
PR.042.004	42	29	43	6	M16	4	12	2	✓	0,25

Positive design



Designation	fz(min/max)	Design	Grade	Material								
				IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035	
RHKW1204M0TN	0,25/0,80	neutral roughing geometry				●						
RHHW1204M0TN	0,25/0,60	neutral geometry, K-land				●	●					
RHHT1204M0TN	0,25/0,50	positive geometry, K-land				●						●
RHHT1204M0TN-P	0,10/0,25	titanium geometry, polished				●						
RHHT1204M0FN-P	0,15/0,30	non-ferrous geometry, polished	●									

● = P ● = M ● = K ● = N ● = S ○ = H

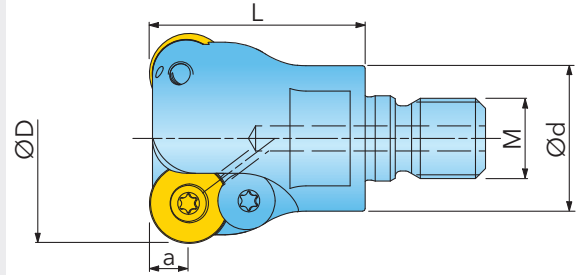
Spare Parts	①	②	③
	SM40-080-10 (4,5Nm)	DS-T15S	SF035-01 (2,0Nm)

① = Insert screw ② = Screw driver ③ = Clamping screw

MOULDMAKER PLUS PR12E01P

MOLD AND DIE

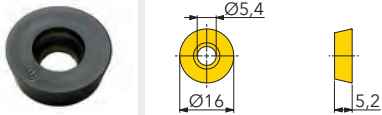
SCREW-IN TYPE ADAPTION



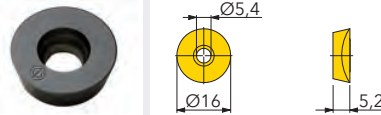
Designation	D	d1	L	a	M	Z	Insert Ø			
PR.032.004	32	29	43	8	M16	2	16	2	✓	0,16
PR.042.005	42	29	43	8	M16	3	16	2	✓	0,25

Positive design

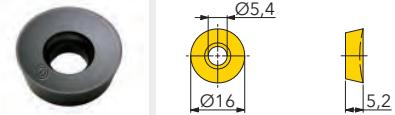
RHKW1605M0TN



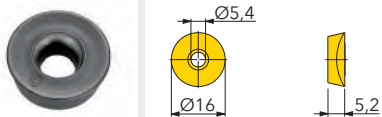
RHHW1605M0TN



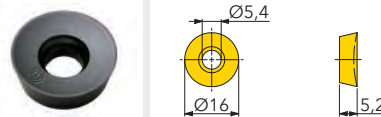
RHHT1605M0TN



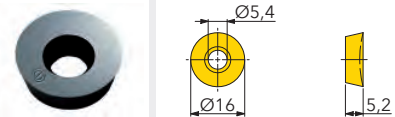
RHKT1605M0TN-PH2



RHHT1605M0TN-P



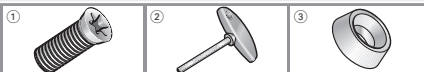
RHHT1605M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2035	IN2505	IN4015	IN4030	IN7035
RHKW1605M0TN	0,30/1,00	neutral roughing geometry									
RHHW1605M0TN	0,30/0,80	neutral geometry, K-land									
RHHT1605M0TN	0,25/0,50	positive geometry, K-land									
RHKT1605M0TN-PH2	0,50/1,50	positive roughing geometry, neg. K-land									
RHHT1605M0TN-P	0,10/0,25	titanium geometry, polished									
RHHT1605M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



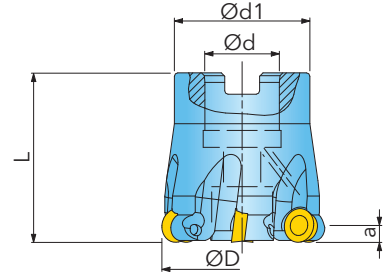
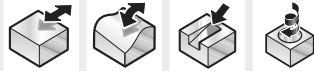
SM50-100-10 (6,0Nm) DS-T20T

CL-5000

① = Insert screw ② = Screw driver ③ = Clamping disk

MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	Insert \varnothing			
PR.052.005	52	22	40	50	5	6	10	4	✓	0,36
Positive design										

RHKW1003MOTN	RHHW1003MOTN	RHHT1003MOTN
RHHT1003MOTN-P	RHHT1003MOTN-P	

Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1003MOTN	0,25/0,60	neutral roughing geometry									
RHHW1003MOTN	0,25/0,50	neutral geometry, K-land									
RHHT1003MOTN	0,15/0,40	positive geometry, K-land									
RHHT1003MOTN-P	0,10/0,20	titanium geometry, polished									
RHHT1003MOTN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



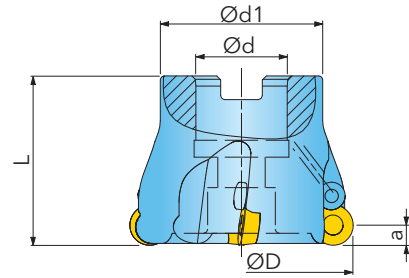
SM40-080-10 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

MOULDMAKER PLUS COPY FACE MILL PR10D10P

MOLD AND DIE

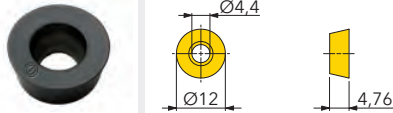
ADAPTION ACC. TO DIN 8030



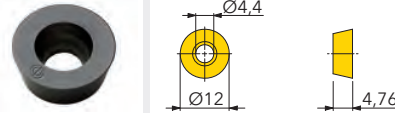
Designation	D	d	d1	L	a	Z	Insert Ø		
PR.052.001	52	22	40	50	6	5	12	4	✓ 0,33
PR.066.004	66	27	48	50	6	6	12	3	✓ 0,56
PR.080.004	80	27	60	50	6	7	12	2	✓ 1,00

Positive design

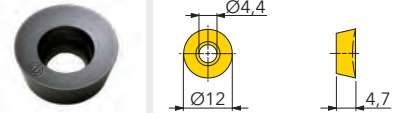
RHKW1204M0TN



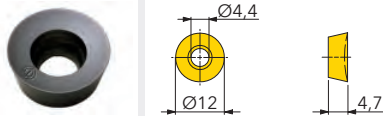
RHHW1204M0TN



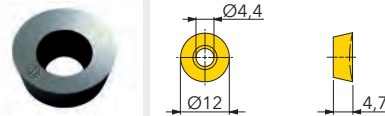
RHHT1204M0TN



RHHT1204M0TN-P



RHHT1204M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2006	IN2035	IN2505	IN4015	IN7035
RHKW1204M0TN	0,25/0,80	neutral roughing geometry									
RHHW1204M0TN	0,25/0,60	neutral geometry, K-land									
RHHT1204M0TN	0,25/0,50	positive geometry, K-land									
RHHT1204M0TN-P	0,10/0,25	titanium geometry, polished									
RHHT1204M0FN-P	0,15/0,30	non-ferrous geometry, polished									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



SM40-080-10 (4,5Nm) DS-T15S

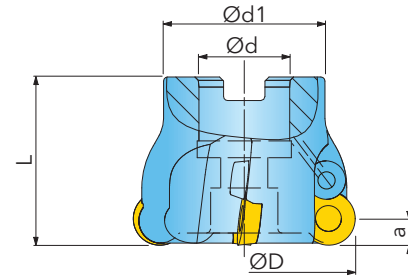
SF035-01 (2,0Nm)

① = Insert screw ② = Screw driver ③ = Clamping screw

MOULDMAKER PLUS PR12D10P

MOLD AND DIE

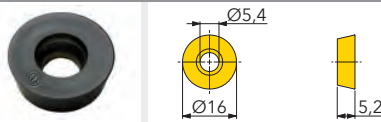
ADAPTION ACC. TO DIN 8030



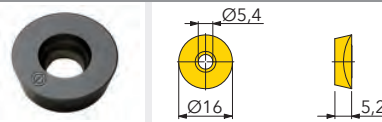
Designation	D	d	d1	L	a	Z	Insert Ø		IK	kg
PR.052.006	52	22	40	50	8	4	16	2,5	✓	0,30
PR.066.005	66	27	48	50	8	5	16	3,5	✓	0,51
PR.080.005	80	27	60	50	8	6	16	2,5	✓	1,00
PR.100.003	100	32	70	55	8	7	16	2	✓	1,45
PR.125.003	125	40	90	55	8	8	16	1,5		2,45
PR.160.002	160	40	120	55	8	9	16	1		4,53

Positive design

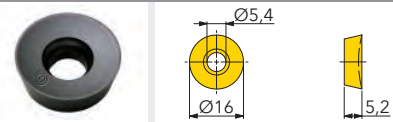
RHKW1605M0TN



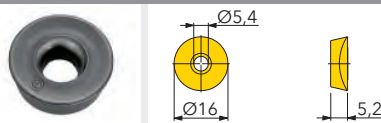
RHHW1605M0TN



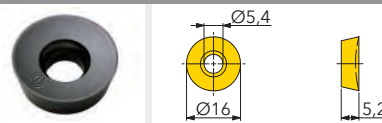
RHHT1605M0TN



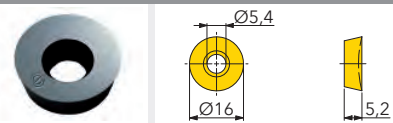
RHKT1605M0TN-PH2



RHHT1605M0TN-P



RHHT1605M0FN-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2004	IN2005	IN2035	IN2505	IN4015	IN4030	IN7035
RHKW1605M0TN	0,30/1,00	neutral roughing geometry			●	●	●	●	●	●	
RHHW1605M0TN	0,30/0,80	neutral geometry, K-land			●	●			●	●	
RHHT1605M0TN	0,25/0,50	positive geometry, K-land			●	●	●				●
RHKT1605M0TN-PH2	0,50/1,50	positive roughing geometry, neg. K-land				●			●	●	
RHHT1605M0TN-P	0,10/0,25	titanium geometry, polished				●					
RHHT1605M0FN-P	0,15/0,30	non-ferrous geometry, polished	●								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



SM50-100-10 (6,0Nm) DS-T20T

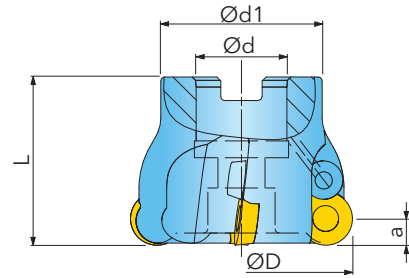
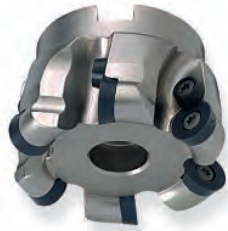
CL-5000

① = Insert screw ② = Screw driver ③ = Clamping disk

MOULDMAKER PLUS PR16D10P

MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	Insert Ø			
PR.066.006	66	27	48	50	10	5	20	2,5	✓	0,51
PR.080.006	80	27	60	50	10	6	20	5	✓	1,00
PR.100.004	100	32	70	55	10	7	20	3,5	✓	1,24
PR.125.004	125	40	90	55	10	8	20	2,5		2,00
PR.160.003	160	40	120	55	10	9	20	2		4,80

Positive design

RHKW2006MOTN			RHKT2006MOTN-PH2			RHKT2006MOTN-PH				
Designation	fz(min/max)	Design	Grade	IN2005	IN4015	IN4030	IN4040			
RHKW2006MOTN	0,40/1,00	neutral roughing geometry								
RHKT2006MOTN-PH2	0,50/1,50	positive roughing geometry, neg. K-land								
RHKT2006MOTN-PH	0,25/0,50	positive roughing geometry, K-land								

● = P ● = M ● = K ● = N ● = S ○ = H

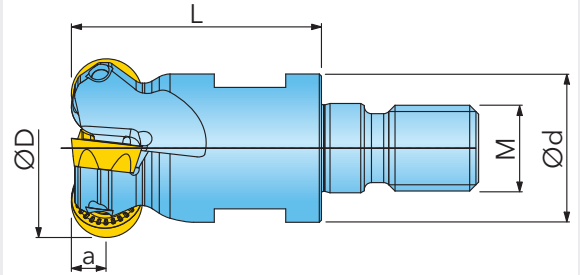
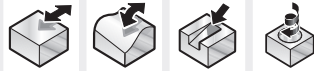
SPARE PARTS			
	SM50-100-10 (6,0Nm) DS-T20T		CL-5000

① = Insert screw ② = Screw driver ③ = Clamping disk

MOULDMAKER PLUS PR20D10P

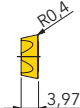
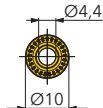
MOLD AND DIE

SCREW-IN TYPE ADAPTION

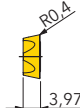
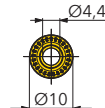


Designation	D	L	a	M	Z	Insert Ø			
PR.020.010	20	30	2,5	10	2	10	6,0	✓	0,06
PR.025.012	25	35	2,5	12	3	10	4,4	✓	0,10
PR.030.006	30	43	2,5	16	4	10	4,0	✓	0,19
PR.032.010	32	43	2,5	16	4	10	2,2	✓	0,20
PR.035.010	35	43	2,5	16	5	10	2,0	✓	0,22

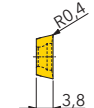
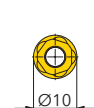
RPLX10T3M0N-HR



RPLX10T3M0TN-HR



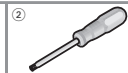
RPLX10T3M0TN-FL



Designation	fz(min/max)	Design	Grade							
			IN2505	IN2535	IN7035					
RPLX10T3M0N-HR	0,10/0,60	positive geometry								
RPLX10T3M0TN-HR	0,10/0,60	positive geometry, neg. K-land								
RPLX10T3M0TN-FL	0,10/0,60	positive geometry, K-land								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



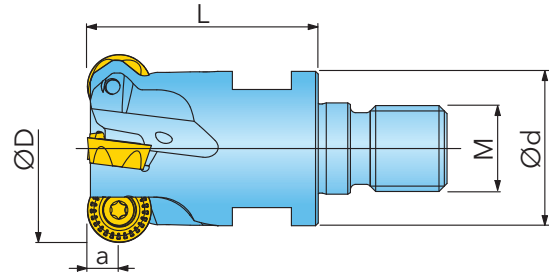
SM35-076-10 (3,0Nm) DS-T15S

① = Insert screw ② = Screw driver

BLADEMAKER+ PR10E01BM+

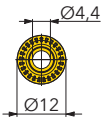
MOLD AND DIE

SCREW-IN TYPE ADAPTION

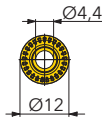


Designation	D	d1	L	a	M	Z	Insert Ø				
PR.025.011	25	21	35	3	12	2	12	6		✓	0,10
PR.032.009	32	29	43	3	16	3	12	3,9		✓	0,20
PR.035.009	35	29	43	3	16	4	12	2,6		✓	0,21

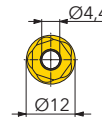
RPLX1204MON-HR1



RPLX1204MOTN-HR



RPLX1204MOTN-FL



Designation	fz(min/max)	Design	Grade	IN2505	IN2535	IN7035					
RPLX1204MON-HR1	0,20/0,75	positive geometry									
RPLX1204MOTN-HR	0,20/0,75	positive geometry, neg. K-land									
RPLX1204MOTN-FL	0,20/0,75	positive geometry, K-land									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



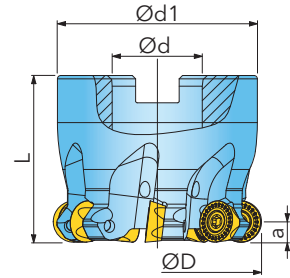
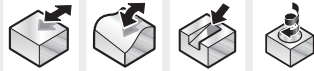
SO 350801 (3,0Nm) DS-T15S

① = Clamp screw ② = Screw driver

BLADEMAKER+ PR12E01BM+

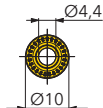
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

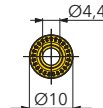


Designation	D	d	d1	L	a	Z	Insert Ø		
PR.040.012	40	16	38	40	2,5	6	10	5,6	✓ 0,25
PR.042.015	42	16	40	40	2,5	6	10	5,8	✓ 0,28
PR.050.010	50	22	48	40	2,5	7	10	5,0	✓ 0,38
PR.052.015	52	22	50	40	2,5	7	10	4,7	✓ 0,40
PR.063.008	63	22	61	40	2,5	8	10	3,6	✓ 0,70

RPLX10T3M0N-HR



RPLX10T3M0TN-HR



RPLX10T3M0TN-FL



Designation	fz(min/max)	Design	Grade					
			IN2505	IN2535	IN7035			
RPLX10T3M0N-HR	0,10/0,60	positive geometry						
RPLX10T3M0TN-HR	0,10/0,60	positive geometry, neg. K-land						
RPLX10T3M0TN-FL	0,10/0,60	positive geometry, K-land						

● = P ● = M ● = K ● = N ● = S ○ = H

BLADEMAKER+ PR10D10BM+

SPARE PARTS

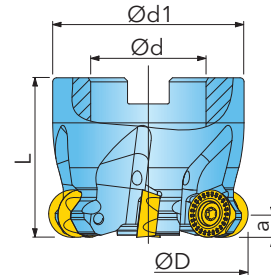


SM35-076-10 (3,0Nm) DS-T15S

① = Insert screw ② = Screw driver

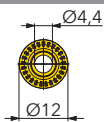
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

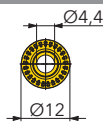


Designation	D	d	d1	L	a	Z	Insert Ø			
PR.040.009	40	16	38	40	3	4	12	2,4	✓	0,27
PR.040.010	40	16	38	40	3	5	12	2,4	✓	0,24
PR.042.012	42	16	40	40	3	4	12	4	✓	0,29
PR.042.013	42	16	40	40	3	5	12	4	✓	0,27
PR.050.007	50	22	48	40	3	5	12	5,6	✓	0,39
PR.050.008	50	22	48	40	3	6	12	5,6	✓	0,37
PR.052.012	52	22	50	40	3	5	12	5,3	✓	0,42
PR.052.013	52	22	50	40	3	6	12	5,3	✓	0,40
PR.063.006	63	22	61	40	3	6	12	4	✓	0,70
PR.063.007	63	22	61	40	3	7	12	4	✓	0,64
PR.066.011	66	27	64	50	3	6	12	3,7	✓	0,95
PR.066.012	66	27	64	50	3	7	12	3,7	✓	0,90
PR.080.010	80	27	78	50	3	8	12	2,9	✓	1,50
PR.080.011	80	27	78	50	3	9	12	2,9	✓	1,44

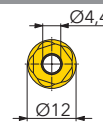
RPLX1204MON-HR1



RPLX1204MOTN-HR



RPLX1204MOTN-FL



Designation	fz(min/max)	Design	Grade			
				IN2505	IN2535	IN7035
RPLX1204MON-HR1	0,20/0,75	positive geometry				
RPLX1204MOTN-HR	0,20/0,75	positive geometry, neg. K-land				
RPLX1204MOTN-FL	0,20/0,75	positive geometry, K-land				

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



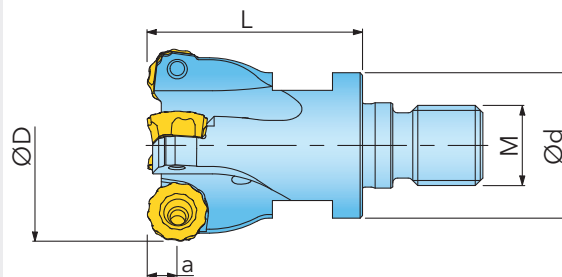
SO 350801 (3,0Nm) DS-T15S

① = Clamp screw ② = Screw driver

BLADEMAKER+ PR12D10BM+

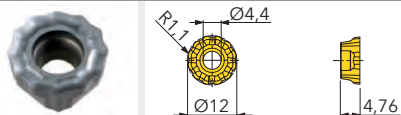
MOLD AND DIE

SCREW-IN TYPE ADAPTION

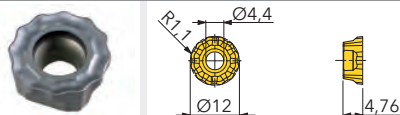


Designation	D	d1	L	a	M	Z			
PR.024.003	24	21	35	6	M12	2	1	✓	0,08
PR.032.006	32	29	43	6	M16	3	1,7	✓	0,18
PR.035.005	35	29	43	6	M16	3	2,5	✓	0,19
PR.040.003	40	29	43	6	M16	4	5,7	✓	0,24
PR.042.007	42	29	43	6	M16	4	5,3	✓	0,25

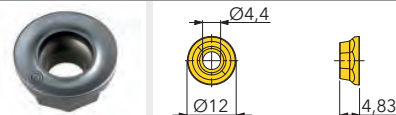
RCLT1204M0N-CC1



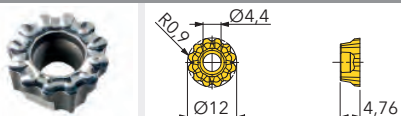
RCLT1204M0N-CC2



RCLT1204M0TN-PH2



RCLT1204M0N-CP



Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2035	IN4015	IN4030	IN4040
RCLT1204M0N-CC1	0,10/0,25	positive geometry R1,2							
RCLT1204M0N-CC2	0,15/0,30	positive geometry R1,1 K-land							
RCLT1204M0TN-PH2	0,20/0,70	positive geometry, K-land							
RCLT1204M0N-CP	0,10/0,25	non-ferrous geometry R0,9							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



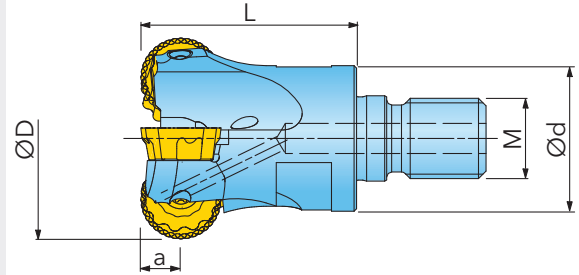
SM40-090-00 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

MOULDMAKER PRO PR12E01CC

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
PR.032.005	32	29	43	8	M16	2	0,5	✓	0,16
PR.040.002	40	29	43	8	M16	3	1,7	✓	0,23
PR.042.006	42	29	43	8	M16	3	1,7	✓	0,25

RCLT1606MON-CC	RCLT1606MON-CC1	RCLT1606MOTN-PH

RCLT1606MOTN-PH2	RCLT1606MON-CP

Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN4015	IN4030	IN4040			
RCLT1606MON-CC	0,10/0,25	positive steel geometry R1,2									
RCLT1606MON-CC1	0,10/0,30	positive steel geometry R1,6									
RCLT1606MOTN-PH	0,10/0,50	positive steel geometry									
RCLT1606MOTN-PH2	0,20/0,80	positive geometry, neg. K-land									
RCLT1606MON-CP	0,10/0,25	positive non-ferrous geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS		
	①	②

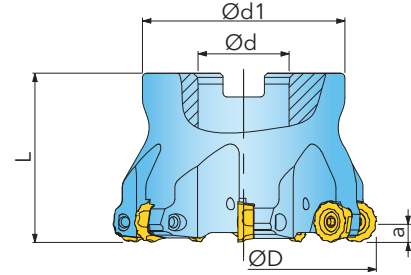
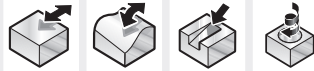
SM50-105-10 (6,0Nm) DS-T20T

① = Insert screw ② = Screw driver

MOULDMAKER PRO PR16E01CC

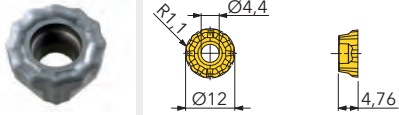
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

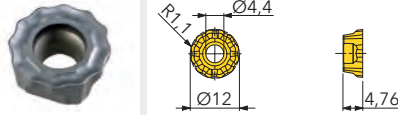


Designation	D	d	d1	L	a	Z			
PR.050.003	50	22	40	50	6	5	4	✓	0,31
PR.052.008	52	22	40	50	6	5	4,6	✓	0,32
PR.063.003	63	27	48	50	6	6	3	✓	0,55
PR.066.008	66	27	48	50	6	6	2,6	✓	0,56
PR.080.008	80	27	60	50	6	7	2,1	✓	0,98

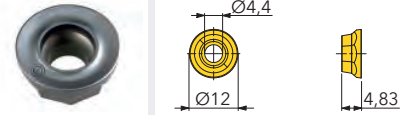
RCLT1204MON-CC1



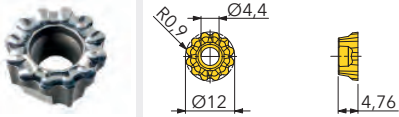
RCLT1204MON-CC2



RCLT1204M0TN-PH2



RCLT1204MON-CP



Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2035	IN4015	IN4030	IN4040
RCLT1204MON-CC1	0,10/0,25	positive geometry R1,2							
RCLT1204MON-CC2	0,15/0,30	positive geometry R1,1 K-land							
RCLT1204M0TN-PH2	0,20/0,70	positive geometry, K-land							
RCLT1204MON-CP	0,10/0,25	non-ferrous geometry R0,9							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



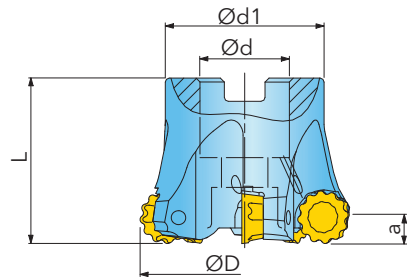
SM40-090-00 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

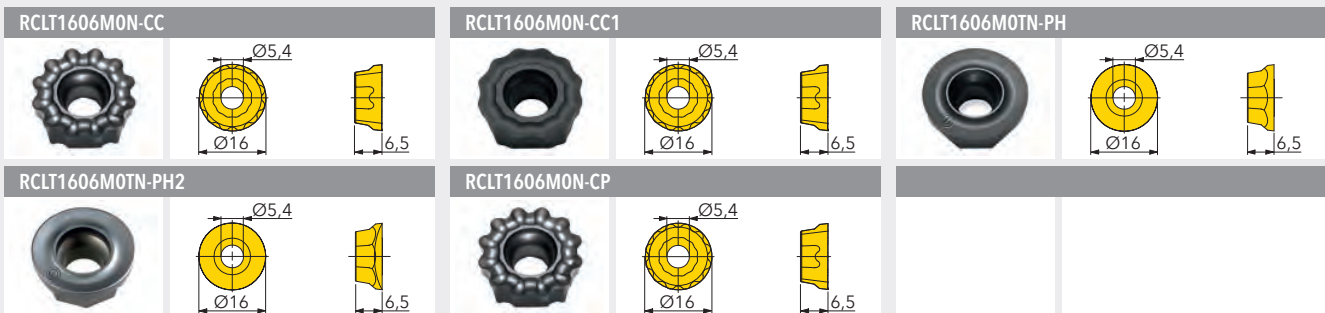
MOULDMAKER PRO PR12D10CC

MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z			
PR.050.002	50	22	40	50	8	4	7,6	✓	0,36
PR.052.007	52	22	40	50	8	4	7,8	✓	0,36
PR.063.002	63	27	48	50	8	5	6,1	✓	0,56
PR.066.007	66	27	48	50	8	5	5,8	✓	0,56
PR.080.007	80	27	60	50	8	6	4,2	✓	1,00
PR.100.005	100	32	70	55	8	7	3		1,38
PR.125.005	125	40	90	55	8	8	2,3		2,44
PR.160.004	160	40	120	55	8	9	2		4,67



Designation	fz(min/max)	Design	Grade										
				IN05S	IN2005	IN4015	IN4030	IN4040					
RCLT1606MON-CC	0,10/0,25	positive steel geometry R1,2											
RCLT1606MON-CC1	0,10/0,30	positive steel geometry R1,6											
RCLT1606MOTN-PH	0,10/0,50	positive steel geometry											
RCLT1606MOTN-PH2	0,20/0,80	positive geometry, neg. K-land											
RCLT1606MON-CP	0,10/0,25	positive non-ferrous geometry											

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



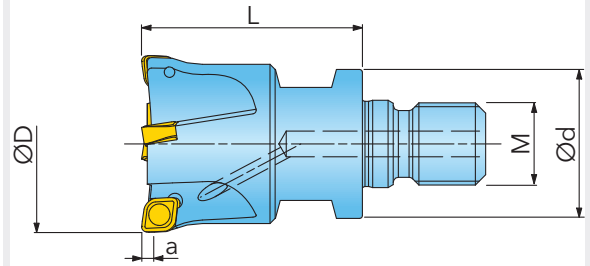
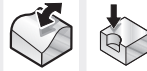
SM50-120-10 (6,0Nm) DS-T20T

① = Insert screw ② = Screw driver

MOULDMAKER PRO PR16D10CC

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
KC.016.001	16	13	23	1	M8	2	5	✓	0,02
KC.020.001	20	18	30	1	M10	3	4	✓	0,05
KC.025.001	25	21	35	1	M12	3	2	✓	0,10
KC.035.001	35	29	43	1	M16	4	1,5	✓	0,21
KC.042.001	42	29	43	1	M16	5	1	✓	0,23

CNHU060310N	CNHU060315N	CNHU060304N-001
CNHU060310N-001		

Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2006	IN2505	IN2530	IN80B
CNHU060310N ¹⁾	0,10/0,30	positive geometry R1,0							
CNHU060315N	0,10/0,30	positive geometry R1,5							
CNHU060304N-001	0,05/0,10	CBN insert R0,4							
CNHU060310N-001	0,05/0,12	CBN insert R1,0							

¹⁾ on request in IN3005 (diamond coating)

● = P ● = M ● = K ● = N ● = S ○ = H

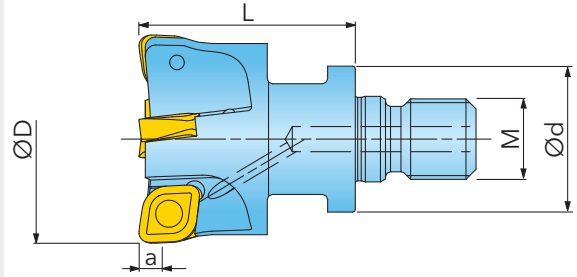
SPARE PARTS		
	SM25-075-20 (1,1Nm)	DS-T08S

① = Insert screw ② = Screw driver

MOLDDMAKER V KC06E01

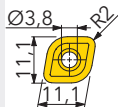
MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	a	M	Z			
KC.025.002	25	21	35	2	M12	2	3	✓	0,10
KC.035.002	35	29	43	2	M16	3	2	✓	0,21
KC.042.002	42	29	43	2	M16	4	1,5	✓	0,23

CNHU110420N



Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2006	IN2505	IN2530			
CNHU110420N	0,10/0,40	positive geometry R2,0									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



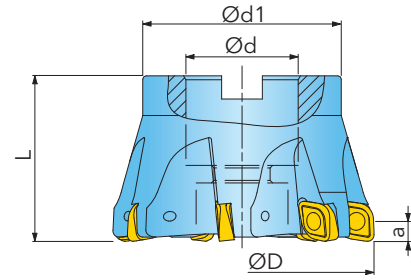
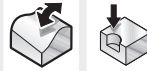
SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

MOULDMAKER V KC11E01

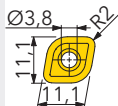
MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z		
KC.052.001	52	22	40	50	2	5	1	0,36
KC.066.001	66	27	48	50	2	6	0,8	0,60
KC.080.001	80	27	60	50	2	7	0,6	1,00
KC.085.001	85	27	60	50	2	7	0,6	1,20
KC.100.001	100	32	70	55	2	8	0,5	1,38

CNHU110420N



Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2006	IN2505	IN2530		
CNHU110420N	0,10/0,40	positive geometry R2,0								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



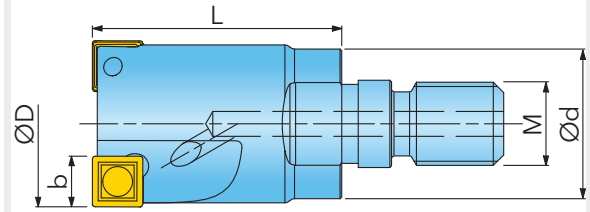
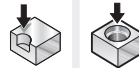
SM35-088-10 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

MOULDMAKER V KC11D10

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	b	M	Z	IK	kg	Related Insert
BS.016.013	16	13	23	5	M8	2	✓	0,02	A B C
BS.020.015	20	18	30	7	M10	2	✓	0,05	D E F
BS.025.017	25	21	35	8	M12	2	✓	0,11	G H I
BS.032.013	32	29	43	8	M16	3	✓	0,21	G H I
BS.042.011	42	29	43	8	M16	4	✓	0,23	G H I

A SHLT060204N-PH 	B SHGT060204-HP 	C SHLT060204N
D SPLT07T308N-PH 	E SDGT07T308-HP 	F SPLT07T308N
G SHLT090408N-PH1 	H SHGT090408-HP 	I SHLT090408N

Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT060204N-PH	0,06/0,20	positive geometry R0,4									
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4									
SHLT060204N	0,08/0,25	cast iron geometry R0,4									
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8									
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8									
SPLT07T308N	0,10/0,25	cast iron geometry R0,8									
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8									
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8									
SHLT090408N	0,12/0,25	cast iron geometry R0,8									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



Diameter Range

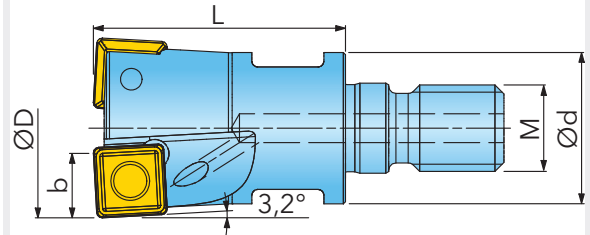
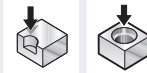
16	SM22-052-00 (0,8Nm) DS-T07S
20	SM25-064-00 (1,1Nm) DS-T08S
25 - 42	SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

PLUNGE MASTER BSE01C 90°

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	b	M	Z			Related Insert
BS.016.012	16	13	23	5	M8	2	✓	0,02	A B C
BS.020.014	20	18	30	7	M10	2	✓	0,05	D E F
BS.025.016	25	21	35	8	M12	2	✓	0,11	G H I
BS.032.012	32	29	43	8	M16	3	✓	0,21	G H I
BS.042.010	42	29	43	8	M16	4	✓	0,23	G H I

Backdraft 3,2°

A SHLT060204N-PH	B SHGT060204-HP	C SHLT060204N
D SPLT07T308N-PH	E SDGT07T308-HP	F SPLT07T308N
G SHLT090408N-PH1	H SHGT090408-HP	I SHLT090408N

Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT060204N-PH	0,06/0,20	positive geometry R0,4									
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4									
SHLT060204N	0,08/0,25	cast iron geometry R0,4									
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8									
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8									
SPLT07T308N	0,10/0,25	cast iron geometry R0,8									
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8									
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8									
SHLT090408N	0,12/0,25	cast iron geometry R0,8									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



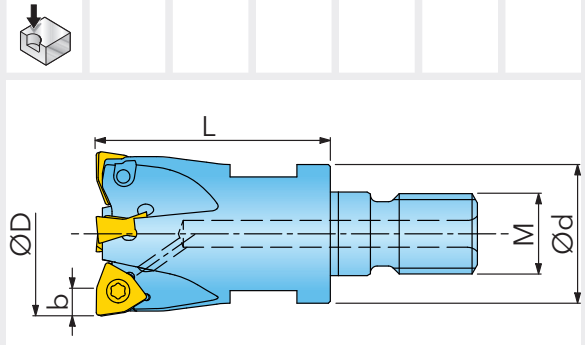
Diameter Range

16	SM22-052-00 (0,8Nm) DS-T07S
20	SM25-064-00 (1,1Nm) DS-T08S
25 - 42	SM35-088-60 (3,0Nm) DS-T10S

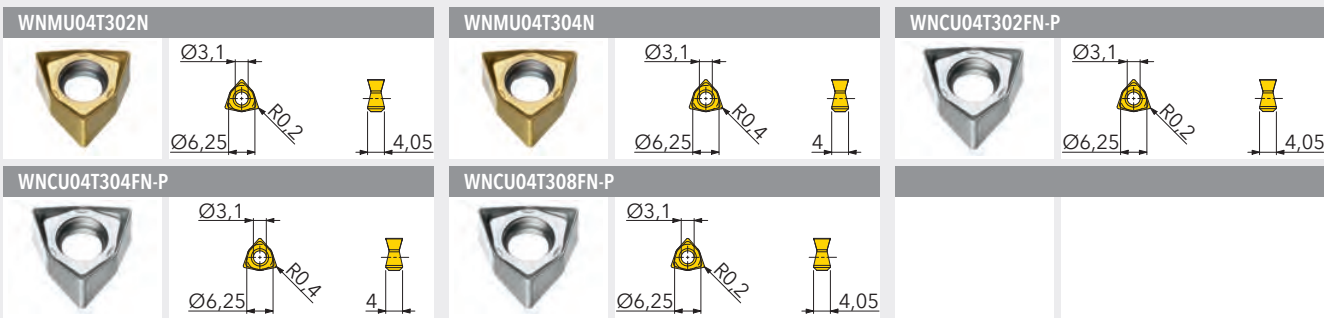
① = Insert screw ② = Screw driver

MOLD AND DIE

SCREW-IN TYPE ADAPTION



Designation	D	d1	L	b	M	Z		
BW.020.001	20	18	30	3,8	M10	3	✓	0,05
BW.025.001	25	21	35	3,8	M12	4	✓	0,10
BW.030.001	30	29	43	3,8	M16	5	✓	0,19
BW.032.001	32	29	43	3,8	M16	6	✓	0,20
BW.035.001	35	29	43	3,8	M16	6	✓	0,22
BW.040.001	40	29	43	3,8	M16	7	✓	0,25
BW.042.001	42	29	43	3,8	M16	7	✓	0,26



Designation	fz(min/max)	Design	Grade	IN10K	IN2035	IN2504	IN2505	IN2530	IN4030
				WNMU04T302N	0,07/0,18	positive geometry R0,2			
WNMU04T304N	0,07/0,18	positive geometry R0,4							
WNCU04T302FN-P	0,05/0,20	non-ferrous geometry R0,2							
WNCU04T304FN-P	0,05/0,20	non-ferrous geometry R0,4							
WNCU04T308FN-P	0,05/0,20	non-ferrous geometry R0,8							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

②

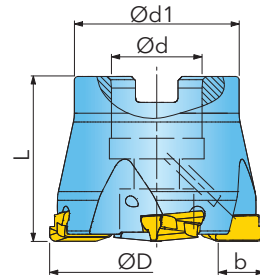
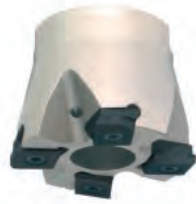
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

ECC 6 BW04E01

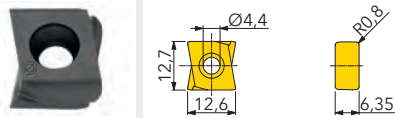
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

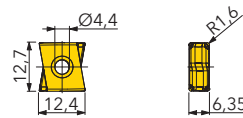


Designation	D	d	d1	LK	L	b	Z	IK	kg
BL.050.001	50	22	40	-	40	10	4	✓	0,30
BL.052.001	52	22	40	-	40	10	4	✓	0,30
BL.066.001	66	27	48	-	50	10	5	✓	0,60
BL.080.001	80	27	60	-	50	10	6	✓	1,00
BL.085.001	85	27	60	-	50	10	6	✓	1,15
BL.100.001	100	32	70	-	50	10	8	✓	1,50
BL.125.001	125	40	90	-	63	10	9		2,40
BL.160.001	160	40	120	66,7	63	10	12		4,60

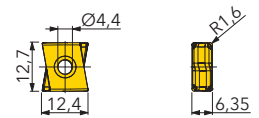
LNGQ 130608L



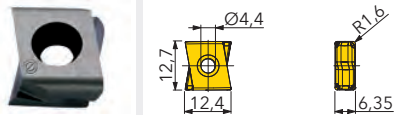
LNGQ130616L



LNGQ 130616LT



LNGQ130616FL-P



Designation	fz(min/max)	Design	Grade	IN05S	IN2005	IN2035	IN4030	IN4040		
LNGQ 130608L	0,10/0,20	positive geometry R0,8			●	●				
LNGQ130616L	0,12/0,25	positive geometry R1,6			●	●	●	●		
LNGQ 130616LT	0,15/0,25	positive geometry, K-land R1,6			●		●			
LNGQ130616FL-P	0,10/0,25	non-ferrous geometry, polished R1,6	●							

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



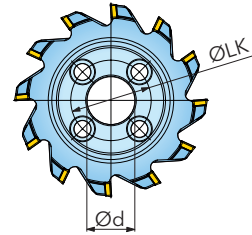
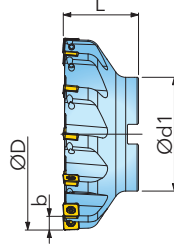
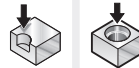
SM40-120-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

L-PRO BL13D10

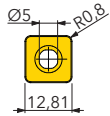
MOLD AND DIE

ADAPTION ACC. TO DIN 8030

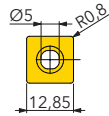


Designation	D	d	d1	LK	L	b	Z		
BS.050.007	50	22	40	-	40	11,9	4	✓	0,40
BS.052.002	52	22	40	-	40	11,9	4	✓	0,45
BS.066.001	66	27	48	-	50	11,9	5	✓	0,70
BS.080.001	80	27	60	-	50	11,9	6	✓	1,10
BS.085.001	85	27	60	-	50	11,9	6	✓	1,25
BS.100.001	100	32	70	-	50	11,9	8	✓	1,80
BS.125.001	125	40	80	-	63	11,9	9		2,60
BS.160.001	160	40	95	66,7	63	11,9	12		4,00

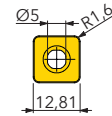
SDES130508N-PF



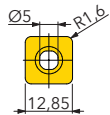
SDES130508N-PF1



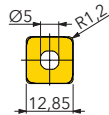
SDES130516N-PF



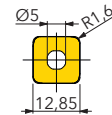
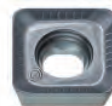
SDES130516N-PF1



SDMS130512R-PP



SDMS130516R-PP



Designation	fz(min/max)	Design	Grade	IN2505	IN4005	IN4015	IN4030	IN4035			
SDES130508N-PF	*/*	neutral geometry, K-land R0,8									
SDES130508N-PF1	*/*	neutral titanium geometry R0,8									
SDES130516N-PF	*/*	neutral geometry, K-land R1,6									
SDES130516N-PF1	*/*	neutral geometry, sharp R1,6									
SDMS130512R-PP	*/*	positive geometry, sharp R1,2									
SDMS130516R-PP	*/*	positive geometry, sharp R1,6									

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

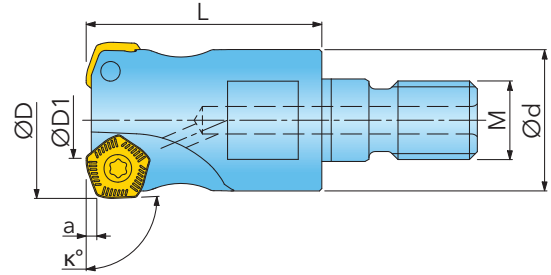


SM40-100-R0 (4,5Nm) DS-A00T

① = Insert screw ② = Screw driver

MOLD AND DIE

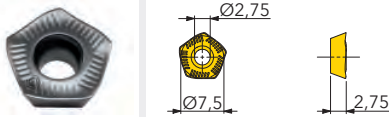
SCREW-IN TYPE ADAPTION



Designation	D	D1	d1	L	κ	a	M	Z			
KP.020.001	10,6	20	18	30	92	1	M10	2	9,6	✓	0,05
KP.025.001	15,4	25	21	35	92	1	M12	3	5,2	✓	0,09
KP.032.001	22,4	32	29	43	92	1	M16	5	3,4	✓	0,20
KP.035.002	25,4	35	29	43	92	1	M16	5	3,0	✓	0,21
KP.040.001	30,4	40	29	43	92	1	M16	5	2,5	✓	0,22
KP.042.002	32,4	42	29	43	92	1	M16	5	2,3	✓	0,24

Programming radius 2,5mm

PEMT0502ZCTR-HR



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN2530			
PEMT0502ZCTR-HR	0,50/1,50	positive geometry								

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



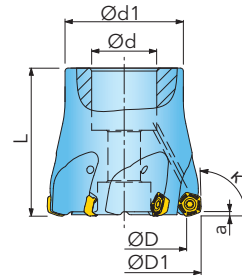
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

HFD-MINI KP05E01

MOLD AND DIE

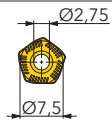
ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	Z			
KP.040.002	30,4	40	16	30	40	92	1	5	2,5	✓	0,16
KP.050.002	40,4	50	22	40	50	92	1	6	1,8	✓	0,37
KP.052.002	42,4	52	22	40	50	92	1	6	1,7	✓	0,38
KP.063.002	53,4	63	27	48	50	92	1	7	1,4	✓	0,58
KP.066.002	56,4	66	27	48	50	92	1	7	1,4	✓	0,61

Programming radius 2,5mm

PEMT0502ZCTR-HR



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN2530				
PEMT0502ZCTR-HR	0,50/1,50	positive geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



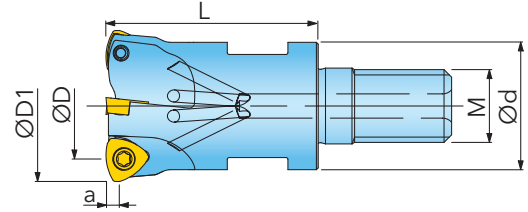
SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

HFD MINI KP05D10

MOLD AND DIE

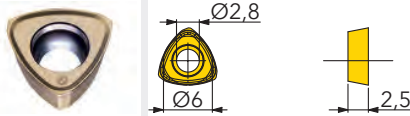
SCREW-IN TYPE ADAPTION



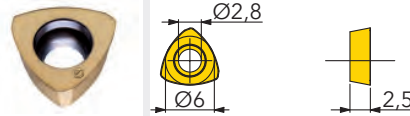
Designation	D	D1	d1	L	a	M	Z			
PW.016.001	7,4	16	13	25	0,8	8	2	14,4	✓	0,02
PW.020.001	11,4	20	18	30	0,8	10	3	5,9	✓	0,05
PW.025.001	16,4	25	21	35	0,8	12	4	5,3	✓	0,09
PW.030.001	21,4	30	29	43	0,8	16	5	3,5	✓	0,20
PW.032.001	23,4	32	29	43	0,8	16	5	3,1	✓	0,22
PW.035.001	26,4	35	29	43	0,8	16	6	2,2	✓	0,23
PW.040.001	31,4	40	29	43	0,8	16	6	2,1	✓	0,27
PW.042.001	33,4	42	29	43	0,8	16	7	1,6	✓	0,28

Programming radius 2mm

WCNT060205FR-FL



WCNW060205TR



Designation	fz(min/max)	Design	Grade	IN2504	IN2505	IN2530	IN4035				
WCNT060205FR-FL	0,50/1,00	positive geometry									
WCNW060205TR	0,60/1,10	neutral geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



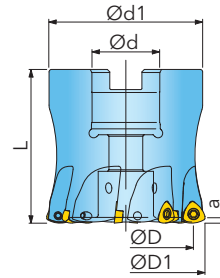
SM25-054-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

TRI FEED PW06E01

MOLD AND DIE

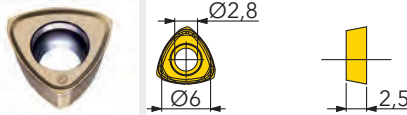
ADAPTION ACC. TO DIN 8030



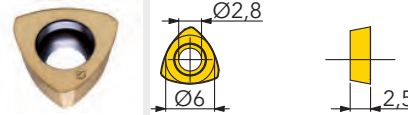
Designation	D	D1	d1	L	a	Z			
PW.032.002	23,4	32	30	40	0,8	5	3,1	✓	0,15
PW.035.002	26,4	35	30	40	0,8	6	2,2	✓	0,17
PW.040.002	31,4	40	38	40	0,8	6	2,1	✓	0,23
PW.042.002	33,4	42	38	40	0,8	7	1,6	✓	0,24
PW.050.001	41,4	50	45	50	0,8	8	1,3	✓	0,52
PW.052.001	43,4	52	40	50	0,8	8	1,2	✓	0,56

Programming radius 2mm

WCNT060205FR-FL



WCNW060205TR



Designation	fz(min/max)	Design	Grade	IN2504	IN2505	IN2530	IN4035				
WCNT060205FR-FL	0,50/1,00	positive geometry									
WCNW060205TR	0,60/1,10	neutral geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



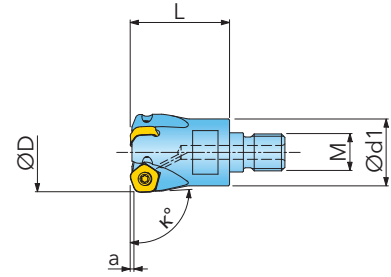
SM25-054-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

TRI FEED PW06D10

MOLD AND DIE

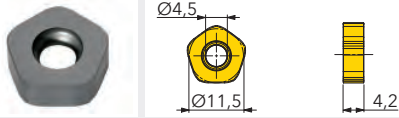
SCREW-IN TYPE ADAPTION



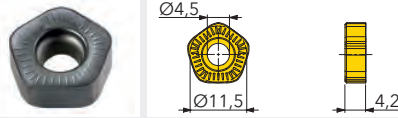
Designation	D	D1	d1	L	κ	a	M	Z			
KP.035.001	21,5	35	29	43	92	1,5	M16	3	0,1	✓	0,21
KP.042.001	28,5	42	29	43	92	1,5	M16	4	0,2	✓	0,24

Programming radius 4,5mm

PNCQ0804ZNTN



PNCT0804ZNN-HR



Designation	fz(min/max)	Design	Grade	IN2505	IN4005	IN4030					
PNCQ0804ZNTN	0,50/2,50	neutral geometry, K-land									
PNCT0804ZNN-HR	0,22/1,50	positive geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



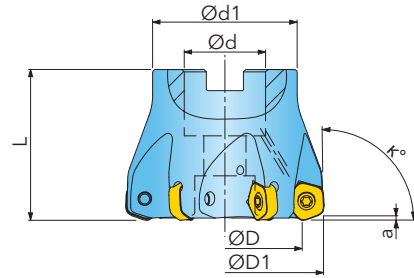
SM40-093-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

HIFEED DEKA KP08E01

MOLD AND DIE

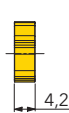
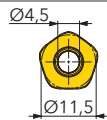
ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	Z			
KP.050.001	36,5	50	22	40	50	92	1,5	5	0,2	✓	0,37
KP.052.001	38,5	52	22	40	50	92	1,5	5	0,6	✓	0,40
KP.063.001	49,4	63	27	48	50	92	1,5	6	0,7	✓	0,58
KP.066.001	52,4	66	27	48	50	92	1,5	6	0,7	✓	0,65
KP.080.001	66,4	80	27	60	50	92	1,5	7	0,7	✓	1,10

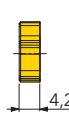
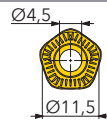
Programming radius 4,5mm

PNCQ0804ZNTN



4,2

PNCT0804ZNN-HR



4,2

Designation	fz(min/max)	Design	Grade	IN2505	IN4005	IN4030					
PNCQ0804ZNTN	0,50/2,50	neutral geometry, K-land									
PNCT0804ZNN-HR	0,22/1,50	positive geometry									

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



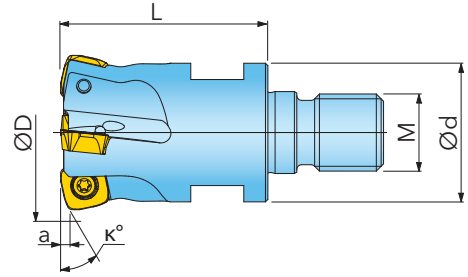
SM40-093-20 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

HIFEED DEKA KP08D10

MOLD AND DIE

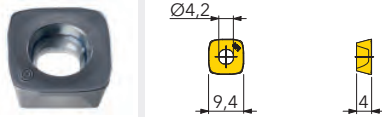
SCREW-IN TYPE ADAPTION



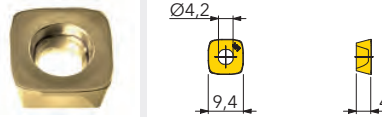
Designation	D	D1	d1	L	κ	a	M	Z			
PS.025.004	12,9	25	21	35	12	1,5	M12	3	5,5	✓	0,09
PS.030.001	17,9	30	29	43	12	1,5	M16	3	3,5	✓	0,15
PS.032.005	19,9	32	29	43	12	1,5	M16	4	3,3	✓	0,20
PS.035.003	22,9	35	29	43	12	1,5	M16	4	2,6	✓	0,22
PS.040.004	27,8	40	29	43	12	1,5	M16	5	2,2	✓	0,24
PS.042.004	29,8	42	29	43	12	1,5	M16	5	2,0	✓	0,26

Programming radius 2,5 mm

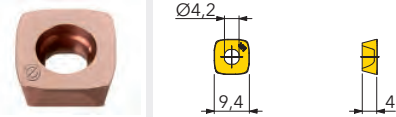
SDXS0904MPR-MR



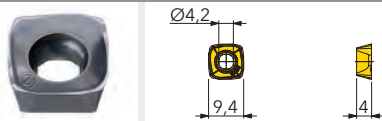
SDXS0904MPR-MRH



SDXS0904MPR-MR1



SDXS0904MPR-MM



Designation	fz(min/max)	Design	Grade	IN2504	IN2505	IN2530	IN4005	IN4030	IN4035	IN7035
SDXS0904MPR-MR	0,50/1,50	neutral geometry convex, chamfered								
SDXS0904MPR-MRH	0,50/1,50	neutral geometry convex, chamfered								
SDXS0904MPR-MR1	0,50/1,50	neutral geometry convex, sharp								
SDXS0904MPR-MM	0,50/1,50	positive geometry convex, chamfered								

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS



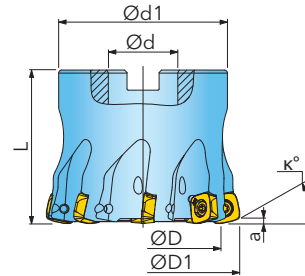
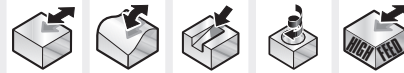
SM30-075-R0 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

HIFEED QUAD PS09E02

MOLD AND DIE

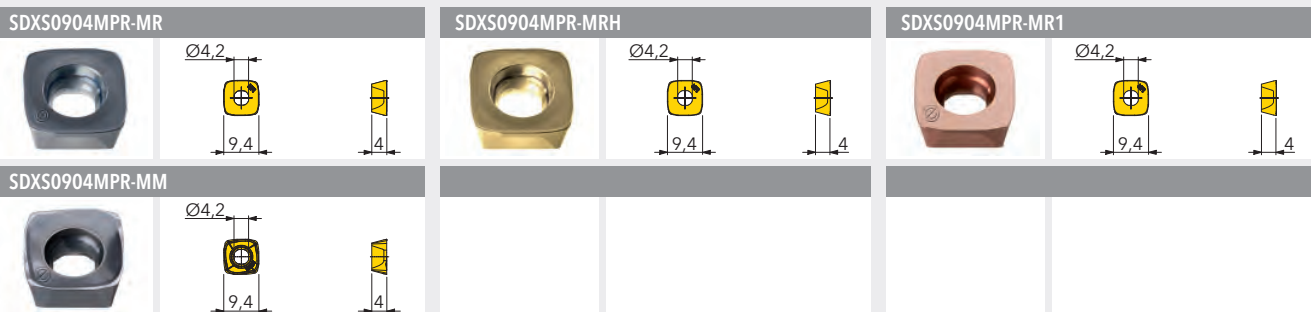
ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	L	κ	a	Z			
PS.050.007	37,8	50	22	45	50	12	1,5	6	1,5	✓	0,43
PS.050.008 ¹⁾	37,8	50	22	45	50	12	1,5	7	1,5	✓	0,43
PS.052.004	39,8	52	22	40	50	12	1,5	6	1,3	✓	0,46
PS.052.005 ¹⁾	39,8	52	22	40	50	12	1,5	7	1,3	✓	0,46
PS.063.008	50,8	63	22	55	50	12	1,5	7	1,1	✓	0,75
PS.063.009 ¹⁾	50,8	63	22	55	50	12	1,5	8	1,1	✓	0,75
PS.066.004	53,8	66	27	50	50	12	1,5	7	1,0	✓	0,80
PS.066.005 ¹⁾	53,8	66	27	50	50	12	1,5	8	1,0	✓	0,80
PS.080.013	67,8	80	27	70	50	12	1,5	7	0,6	✓	1,20
PS.080.014 ¹⁾	67,8	80	27	70	50	12	1,5	9	0,6	✓	1,20
PS.085.001	72,8	85	27	70	50	12	1,5	8	0,4	✓	1,27
PS.085.002 ¹⁾	72,8	85	27	70	50	12	1,5	10	0,4	✓	1,27

Programming radius 2,5 mm

¹⁾Narrow spacing



Designation	fz(min/max)	Design	Grade	IN2504	IN2505	IN2530	IN4005	IN4030	IN4035	IN7035
SDXS0904MPR-MR	0,50/1,50	neutral geometry convex, chamfered								
SDXS0904MPR-MRH	0,50/1,50	neutral geometry convex, chamfered								
SDXS0904MPR-MR1	0,50/1,50	neutral geometry convex, sharp								
SDXS0904MPR-MM	0,50/1,50	positive geometry convex, chamfered								

* fz-values see manual „Cutting Data for Milling & Boring Tools“

= P = M = K = N = S = H



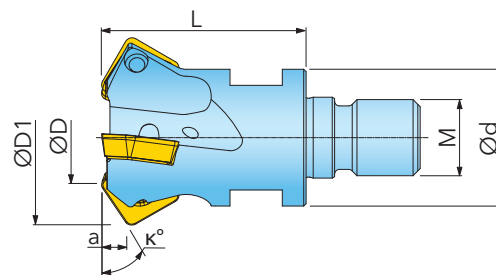
SM30-075-R0 (2,0Nm) DS-T09S

① = Insert screw ② = Screw driver

HIFEED QUAD PS09D10

MOLD AND DIE

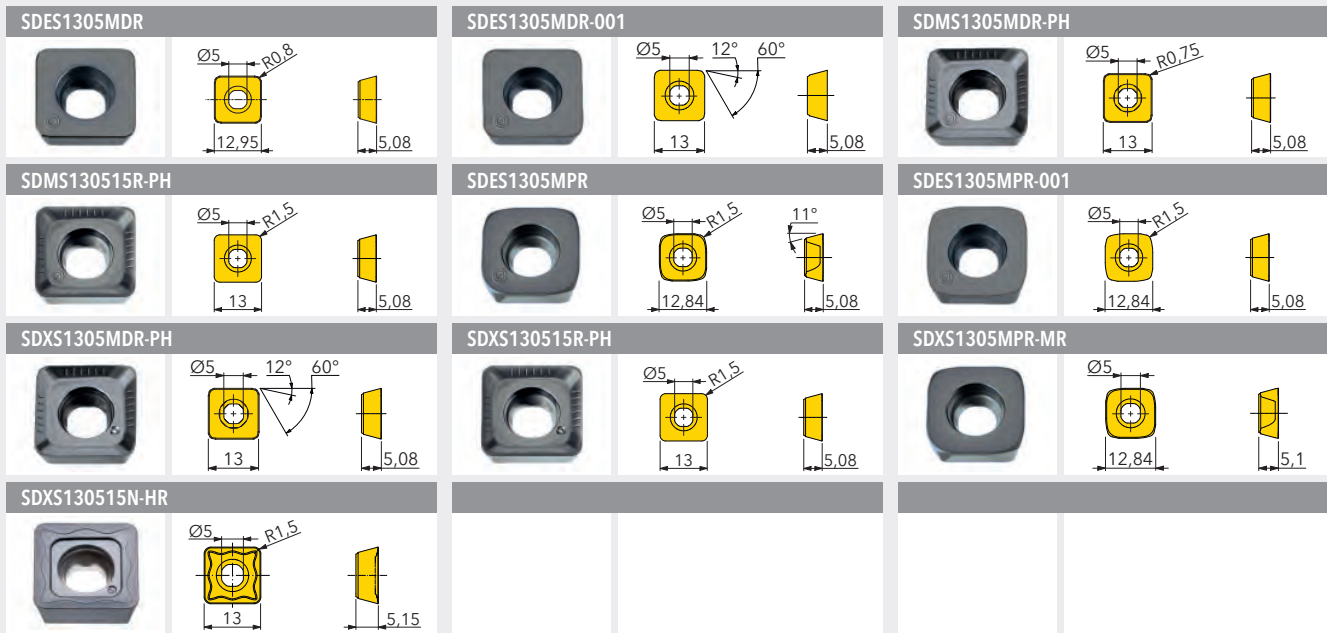
SCREW-IN TYPE ADAPTION



Designation	D	D1	d1	L	κ	a	M	Z			
PS.032.003	11	32	29	43	12	2	M16	2	10	✓	0,17
PS.035.001	14	35	29	43	12	2	M16	2	8	✓	0,17
PS.040.002	19	40	29	43	12	2	M16	3	5	✓	0,19
PS.042.002	21	42	29	43	12	2	M16	3	5	✓	0,20
PS.032.004	11	32	29	43	12	2	M16	2	10	✓	0,17
PS.035.002	14	35	29	43	12	2	M16	2	8	✓	0,17
PS.042.001	21	42	29	43	12	2	M16	3	5	✓	0,20

HIFEED QUAD PS13E02

MOLD AND DIE



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN4005	IN4030	IN4035		
SDES1305MDR	*/*	neutral geometry, chamfered				●					
SDES1305MDR-001	*/*	neutral geometry, sharp				●					
SDMS1305MDR-PH	*/*	positive geometry, chamfered				●	●	●	●		
SDMS130515R-PH	*/*	positive geometry, chamfered R1,5				●		●	●		
SDES1305MPR	*/*	neutral geometry convex, chamfered				●	●			●	
SDES1305MPR-001	*/*	neutral geometry convex, sharp				●	●	●	●		
SDXS1305MDR-PH	*/*	positive geometry, chamfered						●	●		
SDXS130515R-PH	*/*	positive geometry, chamfered R1,5						●	●		
SDXS1305MPR-MR	*/*	neutral geometry convex, chamfered			●		●	●			
SDXS130515N-HR	*/*	positive titanium geometry R1,5, K-land		●							

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

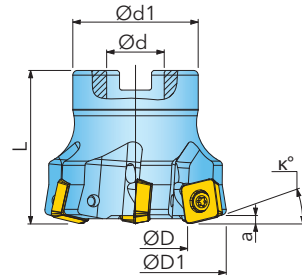
① ②

SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

MOLD AND DIE

ADAPTION ACC. TO DIN 8030

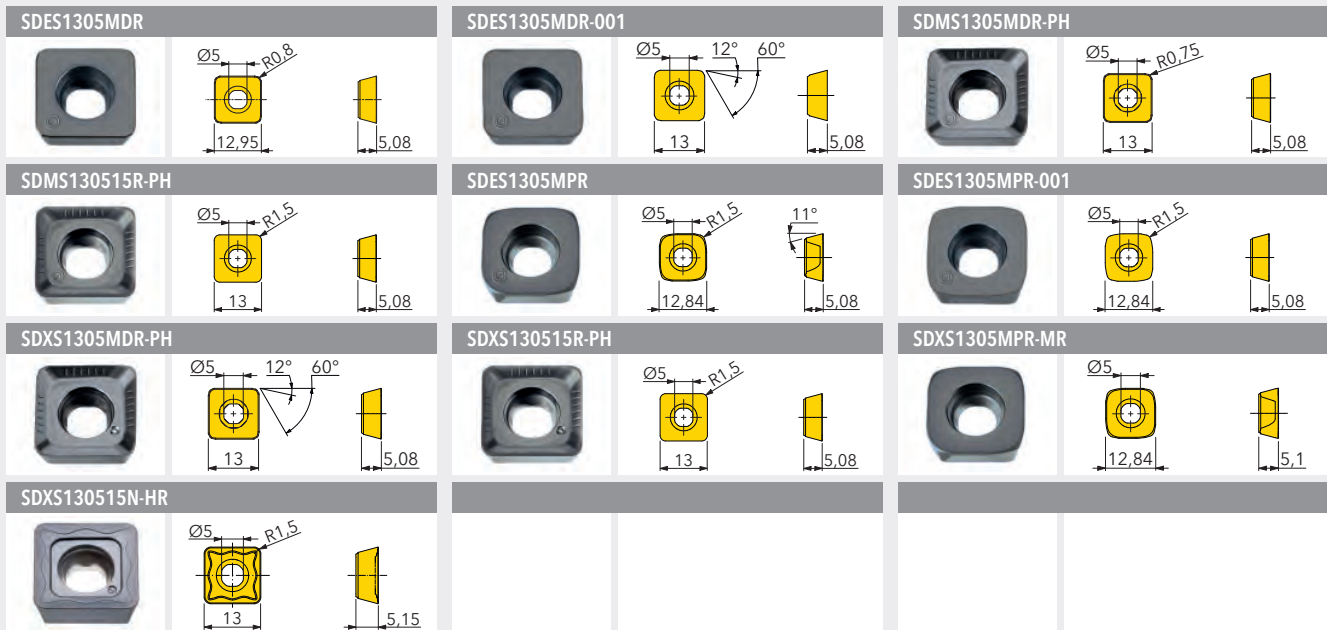


Designation	D	D1	d	d1	L	κ	a	Z			
PS.050.005	29	50	22	45	50	12	2	4	3,5	✓	0,34
PS.050.004 ¹⁾	29	50	22	45	50	12	2	5	3,5	✓	0,33
PS.052.002	31	52	22	40	50	12	2	4	3	✓	0,29
PS.052.001 ¹⁾	31	52	22	40	50	12	2	5	3	✓	0,28
PS.063.005	42	63	22	55	50	12	2	5	2,5	✓	0,57
PS.063.004 ¹⁾	42	63	22	55	50	12	2	6	2,5	✓	0,60
PS.066.002	45	66	27	48	50	12	2	5	2	✓	0,48
PS.066.001 ¹⁾	45	66	27	48	50	12	2	6	2	✓	0,50
PS.080.005	59	80	27	70	50	12	2	6	1	✓	0,97
PS.080.004 ¹⁾	59	80	27	70	50	12	2	8	1	✓	1,01
PS.100.005	79	100	32	85	55	12	2	7	0,5	✓	1,75
PS.100.004 ¹⁾	79	100	32	85	55	12	2	9	0,5	✓	1,74
PS.052.003 ¹⁾²⁾	31	52	22	40	50	12	2	5	3	✓	0,28
PS.066.003 ¹⁾²⁾	45	66	27	48	50	12	2	6	2	✓	0,50
PS.080.009 ¹⁾²⁾	59	80	27	70	50	12	2	8	1	✓	1,01
PS.100.008 ¹⁾²⁾	79	100	32	85	55	12	2	9	0,5	✓	1,74

¹⁾Narrow spacing; ²⁾for * MPR-Insert geometry is effective diameter (D)

HIFEED QUAD PS13D10

MOLD AND DIE



Designation	fz(min/max)	Design	Grade	IN2035	IN2504	IN2505	IN4005	IN4030	IN4035		
SDES1305MDR	*/*	neutral geometry, chamfered				●					
SDES1305MDR-001	*/*	neutral geometry, sharp				●					
SDMS1305MDR-PH	*/*	positive geometry, chamfered				●	●	●	●		
SDMS130515R-PH	*/*	positive geometry, chamfered R1,5				●		●	●		
SDES1305MPR	*/*	neutral geometry convex, chamfered				●	●			●	
SDES1305MPR-001	*/*	neutral geometry convex, sharp				●	●	●	●		
SDXS1305MDR-PH	*/*	positive geometry, chamfered						●	●		
SDXS130515R-PH	*/*	positive geometry, chamfered R1,5						●	●		
SDXS1305MPR-MR	*/*	neutral geometry convex, chamfered			●		●	●			
SDXS130515N-HR	*/*	positive titanium geometry R1,5, K-land		●							

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS

①

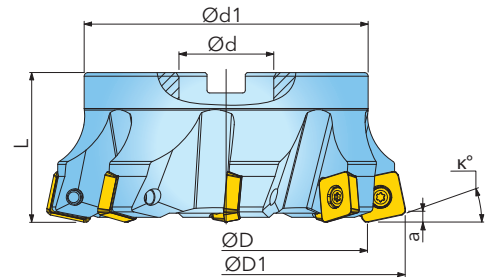
②

SM40-100-R0 (4,5Nm) DS-T15S

① = Insert screw ② = Screw driver

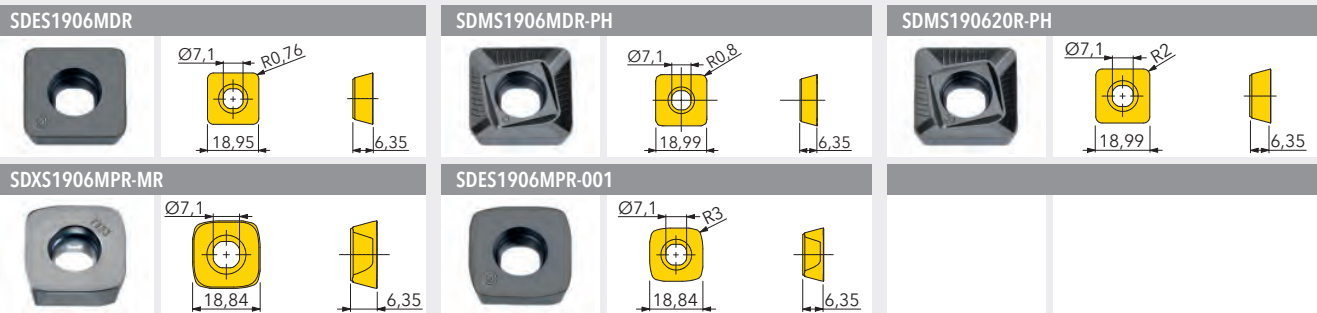
MOLD AND DIE

ADAPTION ACC. TO DIN 8030



Designation	D	D1	d	d1	LK	L	κ	a	Z			
PS.080.007	48,6	80	27	70	-	55	12	3	5	3,5	✓	1,01
PS.080.006 ¹⁾	48,6	80	27	70	-	55	12	3	6	3,5	✓	1,02
PS.100.007	68,6	100	32	85	-	55	12	3	6	2,5	✓	1,63
PS.100.006 ¹⁾	68,6	100	32	85	-	55	12	3	8	2,5	✓	1,62
PS.125.004	93,6	125	40	100	-	63	12	3	7	1,5	✓	2,84
PS.125.003 ¹⁾	93,6	125	40	100	-	63	12	3	9	1,5	✓	2,87
PS.160.004	128,6	160	40	130	66,7	63	12	3	8	1	✓	4,80
PS.160.003 ¹⁾	128,6	160	40	130	66,7	63	12	3	10	1	✓	4,82
PS.080.008 ¹⁾	48,6	80	27	70	-	55	12	3	6	3,5	✓	1,02
PS.100.009 ¹⁾	68,6	100	32	85	-	55	12	3	8	2,5	✓	1,62
PS.125.005 ¹⁾	93,6	125	40	100	-	63	12	3	9	1,5	✓	2,87
PS.160.005 ¹⁾	128,6	160	40	130	66,7	63	12	3	10	1,0	✓	4,82

¹⁾Narrow spacing



Designation	fz(min/max)	Design	Grade	IN2505	IN4005	IN4030	IN4035				
SDES1906MDR	*/*	neutral geometry, chamfered		●							
SDMS1906MDR-PH	*/*	positive geometry, chamfered		●	●	●	●				
SDMS190620R-PH	*/*	positive geometry, chamfered R2		●	●	●	●				
SDXS1906MPR-MR	*/*	neutral geometry convex, chamfered		●	●	●	●				
SDES1906MPR-001	*/*	neutral geometry convex, sharp		●	●	●	●				

* fz-values see manual „Cutting Data for Milling & Boring Tools“

● = P ● = M ● = K ● = N ● = S ○ = H



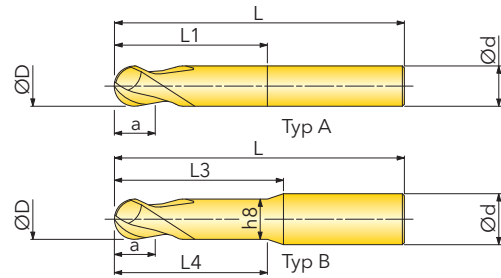
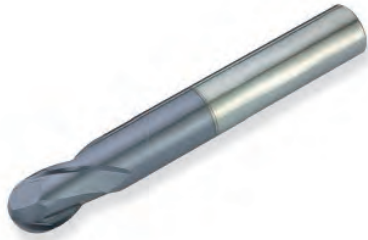
SM60-135-R0 (8,0Nm) DS-T25S

① = Insert screw ② = Screw driver

HIFEED QUAD PS19D10

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+		+	○



e8
h6



+ Preferred choice ○ Second choice

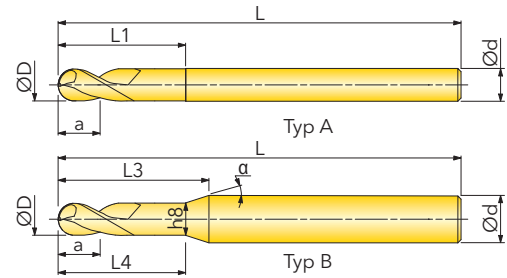
Designation	D	d	d8	L	L1	L3	L4	a	Typ	Z
45B02004T9RB380 ¹⁾	2	3	-	38	-	10	6	4	B	2
45B02003T7RB570 ¹⁾	2	6	1,8	57	-	20	8	3	B	2
45B03005T9RB380	3	3	-	38	-	-	-	5	A	2
45B03004T7RB570 ¹⁾	3	6	2,8	57	-	20	10	3,5	B	2
45B04007U0RB500	4	4	-	50	-	-	-	7	A	2
45B04004T7RB570 ¹⁾	4	6	3,8	57	-	20	12	4	B	2
45B04007T7RB570 ¹⁾	4	6	-	57	-	13	10	7	B	2
45B05008U1RB500	5	5	-	50	-	-	-	8	A	2
45B05005T7RB570 ¹⁾	5	6	4,7	57	-	20	14	5	B	2
45B05008T7RB570 ¹⁾	5	6	-	57	-	12	10	8	B	2
45B06006T7RB570	6	6	5,6	57	20	-	-	6	A	2
45B06008T7RB570	6	6	-	57	-	-	-	8	A	2
45B08007T0RB630	8	8	7,6	63	25	-	-	7	A	2
45B08011T0RB630	8	8	-	63	-	-	-	11	A	2
45B10008T1RB720	10	10	9,6	72	30	-	-	8	A	2
45B10013T1RB720	10	10	-	72	-	-	-	13	A	2
45B12014T2RB830	12	12	-	83	-	-	-	14	A	2
45B16016T3RB930	16	16	-	93	-	-	-	16	A	2

¹⁾ Conical type

SOLID CARBIDE 2 FLUTE BALL NOSE 30° HELIX - SHORT LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+		+	○



e8

h6



+ Preferred choice ○ Second choice

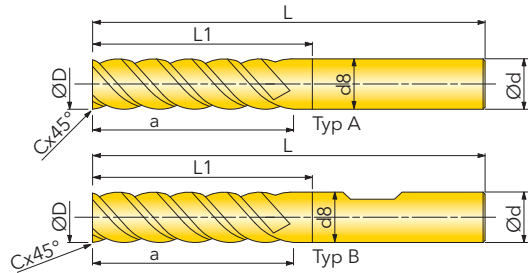
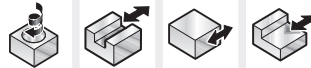
Designation	D	d	d8	L	L1	L3	L4	α	a	Typ	Z
45B02003T7RB800 ¹⁾	2	6	1,8	80	-	40	8	4	3	B	2
45B03004T7RB800 ¹⁾	3	6	2,8	80	-	40	12	3,5	3,5	B	2
45B04004T7RB800 ¹⁾	4	6	3,8	80	-	40	20	4	4	B	2
45B06006T7RB800	6	6	5,6	80	40	-	-	-	6	A	2
45B06006TORB100 ¹⁾	6	8	5,6	100	-	60	25	2	6	B	2
45B08007TORB100	8	8	7,6	100	60	-	-	-	7	A	2
45B08007T1RB120 ¹⁾	8	10	7,6	120	-	60	32	2,5	7	B	2
45B10008T1RB120	10	10	9,6	120	75	-	-	-	8	A	2

¹⁾Conical type

SOLID CARBIDE 2 FLUTE BALL NOSE 30° HELIX - LONG LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Grade

IN2005

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice ○ Second choice



e8

h6



Designation	D	d	d8	L	L1	a	C	Typ	Z
47C03008T7RQ010 ¹⁾	3	6	2,8	57	11	8	0,1	A	4
47C04010T7RQ010 ¹⁾	4	6	3,8	57	14	10	0,15	A	4
47C05012T7RQ010 ¹⁾	5	6	4,8	57	17	12	0,18	A	4
47C06014T7RQ020 ¹⁾	6	6	5,8	57	20	14	0,25	A	4
47C06014WERQ020 ²⁾	6	6	5,8	57	20	14	0,25	B	4
47C08018T0RQ030 ¹⁾	8	8	7,8	63	26	18	0,3	A	4
47C08018W0RQ030 ²⁾	8	8	7,8	63	26	18	0,3	B	4
47C10022T1RQ040 ¹⁾	10	10	9,8	72	32	22	0,4	A	4
47C10022W1RQ040 ²⁾	10	10	9,8	72	32	22	0,4	B	4
47C12026T2RQ050 ¹⁾	12	12	11,7	83	38	26	0,5	A	4
47C12026W2RQ050 ²⁾	12	12	11,7	83	38	26	0,5	B	4
47C16034T3RQ060 ¹⁾	16	16	15,7	100	50	34	0,6	A	4
47C16034W3RQ060 ²⁾	16	16	15,7	100	50	34	0,6	B	4
47C20042T4RQ060 ¹⁾	20	20	19,7	110	60	42	0,6	A	4
47C20042W4RQ060 ²⁾	20	20	19,7	110	60	42	0,6	B	4
47C25052T5RQ060 ¹⁾	25	25	24,6	121	65	52	0,6	A	4
47C25052W5RQ060 ²⁾	25	25	24,6	121	65	52	0,6	B	4
47C06015WERQ021 ²⁾	6	6	-	57	-	15	0,2	B	5
47C08020T0RQ021 ¹⁾	8	8	-	63	-	20	0,25	A	5
47C08020W0RQ021 ²⁾	8	8	-	63	-	20	0,25	B	5
47C10025T1RQ031 ¹⁾	10	10	-	72	-	25	0,3	A	5
47C10025W1RQ031 ²⁾	10	10	-	72	-	25	0,3	B	5
47C12030T2RQ041 ¹⁾	12	12	-	83	-	30	0,4	A	5
47C12030W2RQ041 ²⁾	12	12	-	83	-	30	0,4	B	5
47C16040T3RQ051 ¹⁾	16	16	-	100	-	40	0,5	A	5
47C16040W3RQ051 ²⁾	16	16	-	100	-	40	0,5	B	5
47C20050T4RQ051 ¹⁾	20	20	-	125	-	50	0,5	A	5
47C20050W4RQ051 ²⁾	20	20	-	125	-	50	0,5	B	5

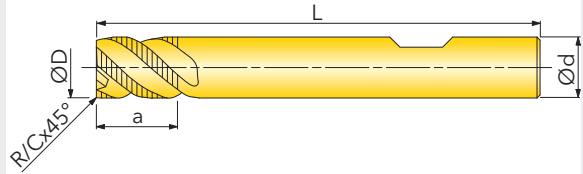
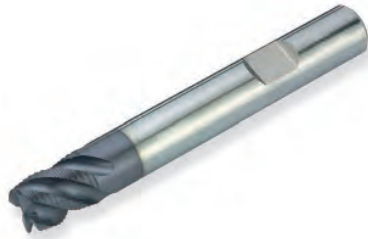
HPC rougher & finisher unequally spaced

¹⁾ DIN 6535 HA; ²⁾ DIN 6535 HB

SOLID CARBIDE HPC ROUGHER & FINISHER UNEQUALLY SPACED

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		e9				
IN2005	+	+	+		+	○		h6				

+ Preferred choice ○ Second choice

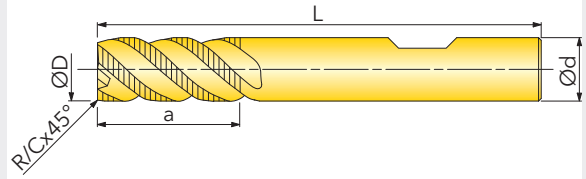
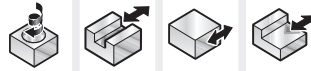
Designation	D	d	L	a	C	Z
47C05005WERN020	5	6	57	5	0,2	4
47C06006WERN030	6	6	57	6	0,25	4
47C08008WORN030	8	8	63	8	0,3	4
47C10010W1RN030	10	10	72	10	0,35	4
47C12012W2RN030	12	12	83	12	0,35	4
47C16016W3RN030 ¹⁾	16	16	92	16	0,35	5
48C20020W4RN030 ¹⁾	20	20	104	20	0,35	7

¹⁾ 5 or 7 flutes no center milling

SOLID CARBIDE 4-7 FLUTE ROUGHERS - 45° HELIX - 1XD

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+		+	○

+ Preferred choice ○ Second choice



e9

h6



Designation

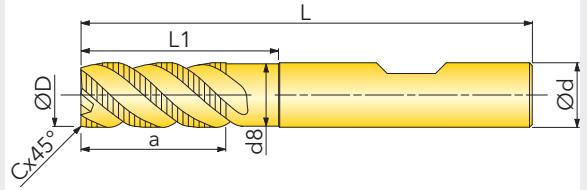
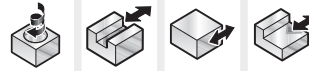
D	d	L	a	R	C	Z	
47C05010WERN020	5	6	57	10	-	0,2	4
47C06012WERN020	6	6	57	12	-	0,25	4
47C08016WORN030	8	8	63	16	-	0,3	4
47C10020W1RN030	10	10	72	20	-	0,35	4
47C12024W2RN030	12	12	83	24	-	0,35	4
47D12024W2RN120	12	12	83	24	1,2	-	4
47C16032W3RN030 ¹⁾	16	16	92	32	-	0,35	5
48C20040W4RN030 ¹⁾	20	20	104	40	-	0,35	7

¹⁾ 5 or 7 flutes no center milling

SOLID CARBIDE 4-7 FLUTE ROUGHERS - 45° HELIX - 2XD

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+		+	○



e9
h6



+ Preferred choice ○ Second choice

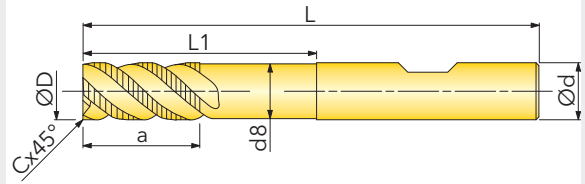
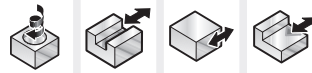
Designation	D	d	d8	L	L1	a	C	Z
47C06012WERN021	6	6	5,9	57	18	12	0,25	4
47C08016WORN031	8	8	7,8	63	24	16	0,3	4
47C10020W1RN031	10	10	9,8	72	30	20	0,35	4
47C12024W2RN031	12	12	11,7	83	36	24	0,35	4
47C16032W3RN031 ¹⁾	16	16	15,7	100	48	32	0,35	5
48C20040W4RN031 ¹⁾	20	20	19,7	110	60	40	0,35	7

¹⁾5 or 7 flutes no center milling

SOLID CARBIDE 4-7 FLUTE ROUGHERS - 45° HELIX - 3XD

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+		+	○

⊕ Preferred choice ○ Second choice



e9

h6



Designation

D d d8 L L1 a C Z

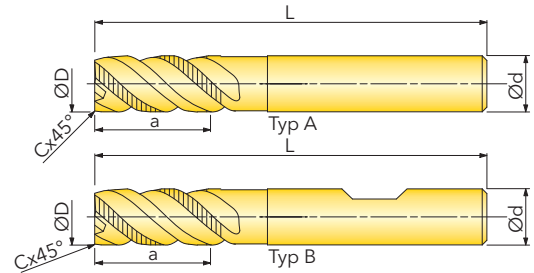
47C08012WORN030	8	8	7,8	68	32	12	0,3	4
47C10015W1RN030	10	10	9,8	80	40	15	0,35	4
47C12018W2RN030	12	12	11,7	100	48	18	0,35	4
47C16024W3RN030 ¹⁾	16	16	15,7	115	64	24	0,35	5

¹⁾ 5 flutes no center cutting

SOLID CARBIDE 4-5 FLUTE ROUGHERS - 45° HELIX - 4XD

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		e9						
IN2005	+	+	+		+	○		h6						

+ Preferred choice ○ Second choice

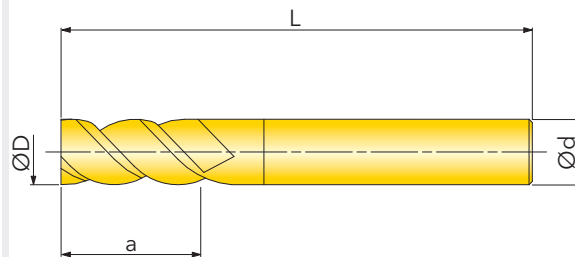
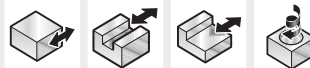
Designation	D	d	L	a	C	Typ	Z	Zs
47J06014T7RU570 ¹⁾	6	6	57	14	0,25	A	4	2
47J06014WERU570 ²⁾	6	6	57	14	0,25	B	4	2
47J08018TORU630 ¹⁾	8	8	63	18	0,3	A	4	2
47J08018WORU630 ²⁾	8	8	63	18	0,3	B	4	2
47J10022T1RU720 ¹⁾	10	10	72	22	0,3	A	4	2
47J10022W1RU720 ²⁾	10	10	72	22	0,3	B	4	2
47J12026T2RU830 ¹⁾	12	12	83	26	0,4	A	4	2
47J12026W2RU830 ²⁾	12	12	83	26	0,4	B	4	2
47J14030U8RU830 ¹⁾	14	14	83	30	0,4	A	4	2
47J14030WFRU830 ²⁾	14	14	83	30	0,4	B	4	2
47J16034T3RU920 ¹⁾	16	16	92	34	0,6	A	4	2
47J16034W3RU920 ²⁾	16	16	92	34	0,6	B	4	2
47J20042T4RU040 ¹⁾	20	20	104	42	0,6	A	4	2
47J20042W4RU040 ²⁾	20	20	104	42	0,6	B	4	2
47J25052T5RU210 ¹⁾	25	25	121	52	0,6	A	4	2
47J25052W5RU210 ²⁾	25	25	121	52	0,6	B	4	2

¹⁾DIN 6535 HA; ²⁾DIN 6535 HB

SOLID CARBIDE 4 FLUTE ROUGHING AND FINISHING - 45° HELIX

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice
 ○ Second choice



e8

h6



Designation

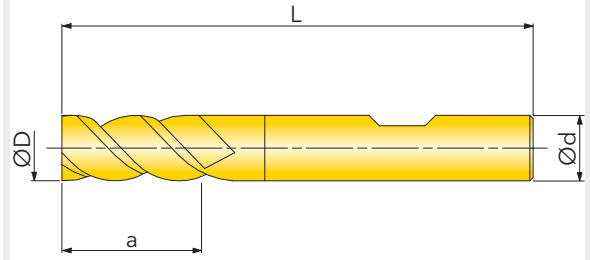
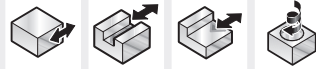
D d L a Z

46J02007T9RD380	2	3	38	7	3
46J02007T7RD500	2	6	57	7	3
46J03010T9RD380	3	3	38	10	3
46J03010T7RD500	3	6	57	10	3
46J04012U0RD500	4	4	50	12	3
46J04012T7RD500	4	6	57	12	3
46J05014U1RD500	5	5	50	14	3
46J05014T7RD500	5	6	57	14	3
46J06016T7RD500	6	6	57	16	3
46J07016UARD600	7	7	60	16	3
46J08020T0RD630	8	8	63	20	3
46J09020U9RD670	9	9	67	20	3
46J10022T1RD720	10	10	72	22	3
46J12025T2RD730	12	12	83	25	3
46J14025U8RD750	14	14	83	25	3
46J16032T3RD820	16	16	92	32	3
46J20038T4RD920	20	20	104	38	3

SOLID CARBIDE 3 FLUTE SLOT DRILL 45° HELIX - DIN 6535HA

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+		+	○



e8
h6



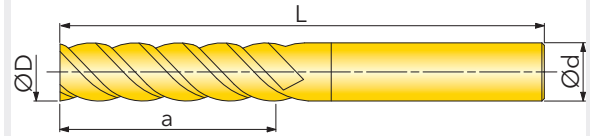
+ Preferred choice ○ Second choice

Designation	D	d	L	a	Z
46J06016WERD500	6	6	57	16	3
46J08020WORD630	8	8	63	20	3
46J10022W1RD720	10	10	72	22	3
46J12025W2RD830	12	12	83	25	3
46J16032W3RD920	16	16	92	32	3
46J20038W4RD100	20	20	104	38	3

SOLID CARBIDE 3 FLUTE SLOT DRILL 45° HELIX - DIN 6535HB

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice
 ○ Second choice



e8

h6



Designation

D d L a Z

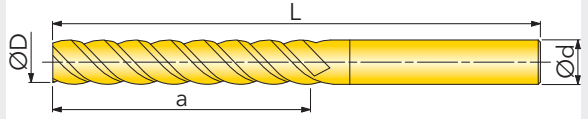
47J06024T7RD650	6	6	65	24	4
47J08032T0RD800	8	8	80	32	4
47J10040T1RD100	10	10	100	40	4
47J12048T2RD100	12	12	100	48	4
47J14050U8RD100	14	14	100	50	4
48J16056T3RD120 ¹⁾	16	16	115	56	6
48J20060T4RD130 ¹⁾	20	20	125	60	6

¹⁾ 6 flutes no center cutting

SOLID CARBIDE 4-6 FLUTE END MILL 45° HELIX - LONG LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		e8										
IN2005	+	+	+		+	○		h6										

+ Preferred choice ○ Second choice

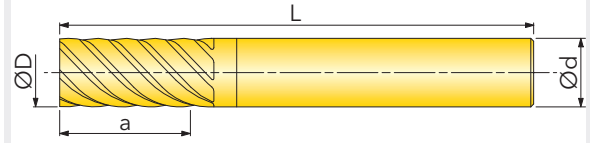
Designation	D	d	L	a	Z
47J10060T1RD110	10	10	110	60	4
47J12072T2RD150	12	12	150	72	4
48J16080T3RD150 ¹⁾	16	16	150	80	6
48J20080T4RD150 ¹⁾	20	20	150	80	6

¹⁾6 flutes no center cutting

SOLID CARBIDE 4-6 FLUTE END MILL 45° HELIX - EXTRA LONG LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice
 ○ Second choice



e8

h6



Designation

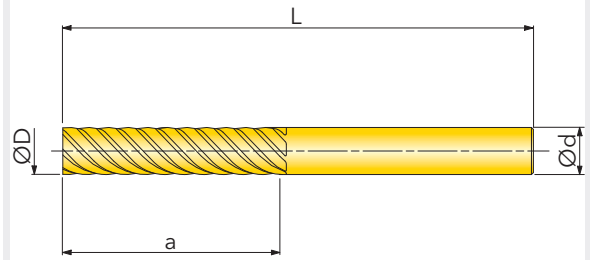
D d L a Z

48J06016T7RD570	6	6	57	16	6
48J08020T0RD630	8	8	63	20	6
48J10022T1RD720	10	10	72	22	6
48J12025T2RD830	12	12	83	25	6
48J16032T3RD920	16	16	92	32	6
48J20038T4RD100	20	20	104	38	6

SOLID CARBIDE 6 FLUTE END MILL - 45° HELIX - MEDIUM LENGTH (FINISHING)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		e8				
IN2006	+	+	+		+	+		h6				

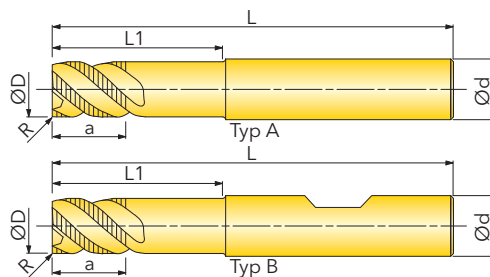
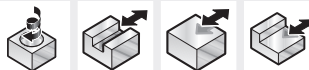
+ Preferred choice ○ Second choice

Designation	D	d	L	a	Z
48J06026T7RD700	6	6	70	26	6
48J08036T0RD900	8	8	90	36	6
48J10046T1RD100	10	10	100	46	6
48J12056T2RD110	12	12	110	56	6
48J16066T3RD130	16	16	130	66	6
48J20076T4RD140	20	20	140	76	6
48J25092T5RD180	25	25	180	92	6

SOLID CARBIDE 6 FLUTE END MILL - 45° HELIX - LONG LENGTH (FINISHING)

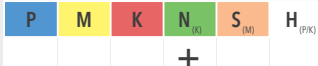
MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Grade

IN05S



+ Preferred choice ○ Second choice



h6

h6



Designation	D	d	L	L1	a	R	Typ	Z
46D06009T7RN020 ¹⁾	6	6	57	21	9	0,2	A	3
46D06009WERN020 ²⁾	6	6	57	21	9	0,2	B	3
46D08012TORN020 ¹⁾	8	8	63	27	12	0,2	A	3
46D08012WORN020 ²⁾	8	8	63	27	12	0,2	B	3
46D10012T1RN020 ¹⁾	10	10	72	31	12	0,2	A	3
46D10012W1RN020 ²⁾	10	10	72	31	12	0,2	B	3
46D12012T2RN020 ¹⁾	12	12	83	37	12	0,2	A	3
46D12012W2RN020 ²⁾	12	12	83	37	12	0,2	B	3
46D16014T3RN020 ¹⁾	16	16	92	43	14	0,2	A	3
46D16014W3RN020 ²⁾	16	16	92	43	14	0,2	B	3
46D20017T4RN020 ¹⁾	20	20	104	53	17	0,2	A	3

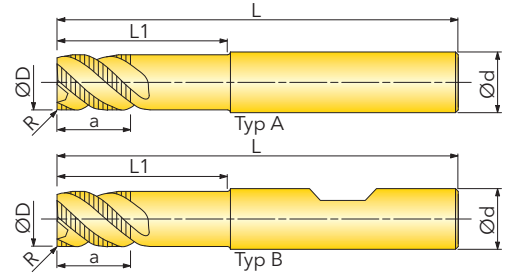
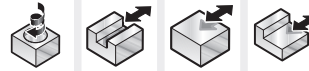
on request with diamond coating

¹⁾DIN 6535HA; ²⁾DIN 6535 HB

SOLID CARBIDE 3 FLUTE END MILL 45° HELIX SHORT LENGTH (ROUGHING)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		h6				
IN05S				+				h6				

+ Preferred choice ○ Second choice

Designation	D	d	L	L1	a	R	Typ	Z
46D06009T7RN021 ¹⁾	6	6	65	30	9	0,2	A	3
46D06009WERN021 ²⁾	6	6	65	30	9	0,2	B	3
46D08012TORNO21 ¹⁾	8	8	78	40	12	0,2	A	3
46D08012WORN021 ²⁾	8	8	78	40	12	0,2	B	3
46D10012T1RN021 ¹⁾	10	10	100	50	12	0,2	A	3
46D10012W1RN021 ²⁾	10	10	100	50	12	0,2	B	3
46D12014T2RN021	12	12	100	55	14	0,2	A	3
46D12014W2RN021	12	12	100	55	14	0,2	B	3
46D16018T3RN021	16	16	150	80	18	0,2	A	3
46D16018W3RN021	16	16	150	80	18	0,2	B	3
46D20022T4RN021	20	20	150	80	22	0,2	A	3
46D20022W4RN021	20	20	150	80	22	0,2	B	3

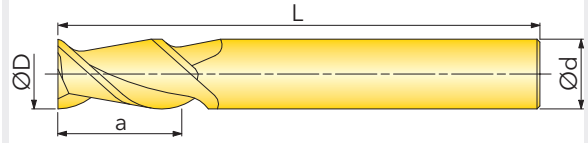
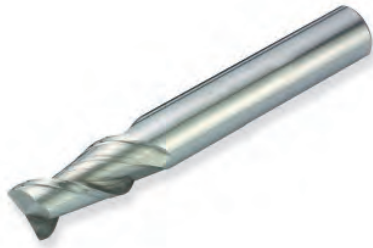
on request with diamond coating

¹⁾ DIN 6535HA; ²⁾ DIN 6535HB

SOLID CARBIDE 3 FLUTE END MILL 45° HELIX LONG LENGTH (ROUGHING)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN05S

P
 M
 K
 N_(K)
 S_(M)
 H_(PK)

Preferred choice
 Second choice



h6

h6



Designation

D d L a Z

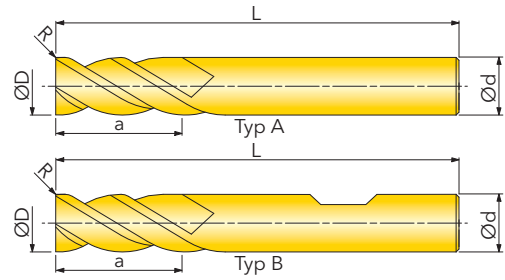
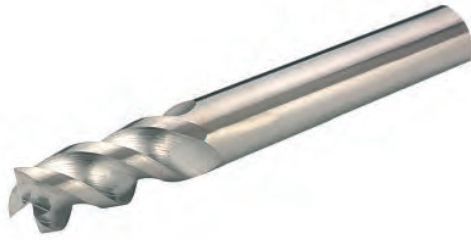
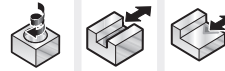
45J04012T7RD570	4	6	57	12	2
45J05014T7RD570	5	6	57	14	2
45J06016T7RD570	6	6	57	16	2
45J08020T0RD630	8	8	63	20	2
45J10022T1RD720	10	10	72	22	2
45J12025T2RD830	12	12	83	25	2
45J16032T3RD920	16	16	92	32	2
45J20038T4RD100	20	20	104	38	2

on request with diamond coating

SOLID CARBIDE 2 FLUTE ALUMINIUM SLOT DRILL - 45° HELIX - MEDIUM LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN05S				+		

	h6
	h6



+ Preferred choice ○ Second choice

Designation	D	d	L	a	R	Typ	Z
46D05014T7RD020 ¹⁾	5	6	57	14	0,2	A	3
46D05014WERD020 ²⁾	5	6	57	14	0,2	B	3
46D06016T7RD020 ¹⁾	6	6	57	16	0,2	A	3
46D06016WERD020 ²⁾	6	6	57	16	0,2	B	3
46D08020TOR020 ¹⁾	8	8	63	20	0,2	A	3
46D08020W0RD020 ²⁾	8	8	63	20	0,2	B	3
46D10022T1RD020 ¹⁾	10	10	72	22	0,2	A	3
46D10022W1RD020 ²⁾	10	10	72	22	0,2	B	3
46D12025T2RD020 ¹⁾	12	12	83	25	0,2	A	3
46D12025W2RD020 ²⁾	12	12	83	25	0,2	B	3
46D14030U8RD020 ¹⁾	14	14	83	30	0,2	A	3
46D14030WFRD020 ²⁾	14	14	83	30	0,2	B	3
46D16032T3RD020 ¹⁾	16	16	92	32	0,2	A	3
46D16032W3RD020 ²⁾	16	16	92	32	0,2	B	3
46D20038T4RD020 ¹⁾	20	20	104	38	0,2	A	3
46D20038W4RD020 ²⁾	20	20	104	38	0,2	B	3

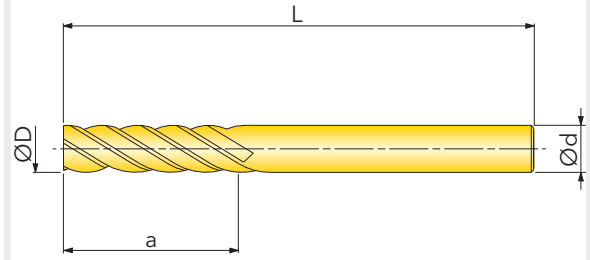
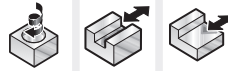
on request with diamond coating

¹⁾DIN 6535 HA; ²⁾DIN 6535 HB

SOLID CARBIDE 3 FLUTE END MILL 45° HELIX WITH CORNER RADIUS

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Grade

IN05S

P
 M
 K
 N_(K)
 S_(M)
 H_(PK)

Preferred choice
 Second choice

h10
 h6

λ = 30°

ALU



Designation

D d L a Z

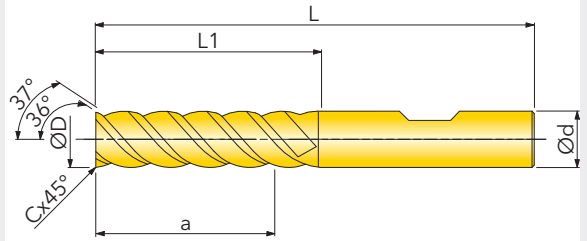
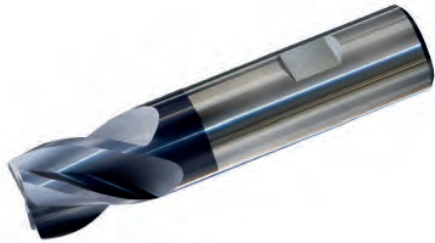
47J03030T9RB750	3	3	75	30	4
47J04030U0RB750	4	4	75	30	4
47J05040U1RB100	5	5	100	40	4
47J06050T7RB150	6	6	150	50	4
47J08050T0RB150	8	8	150	50	4
47J10060T1RB150	10	10	150	60	4
47J12075T2RB150	12	12	150	75	4

on request with diamond coating

SOLID CARBIDE 4 FLUTE END MILL - 30° HELIX - EXTRA LONG LENGTH

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade	P	M	K	N_(K)	S_(M)	H_(PK)		D	h10										
IN2005	+	○	+	○				d	h6										

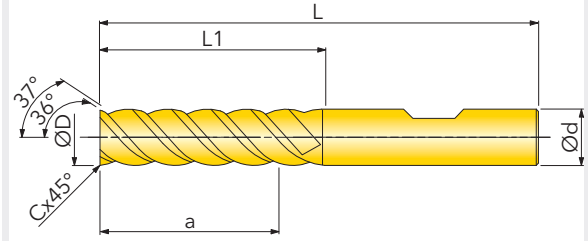
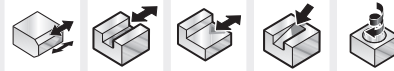
+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	L	L1	a	C	Z
47C06010WERQ012	6	6	54	20	10	0,12	4
47C08012W0RQ016	8	8	58	21	12	0,16	4
47C10014W1RQ020	10	10	66	24	14	0,20	4
47C12016W2RQ024	12	12	73	26	16	0,24	4
47C16022W3RQ032	16	16	82	32	22	0,32	4
47C20026W4RQ040	20	20	92	42	26	0,40	4

EGOLINE HIGH SPEED CUTTER Z=4 SHORT VERSION

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h10										
IN2005	+	○	+	○			▼▼▼	d	h6										

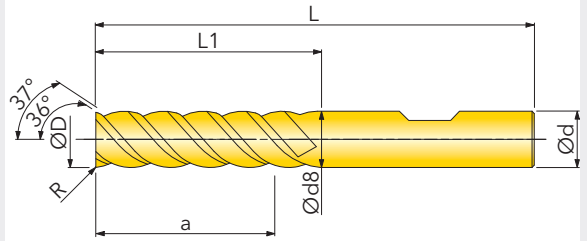
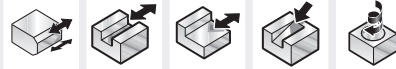
+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	L	L1	a	C	Z
47C06013WERQ012	6	6	57	23	13	0,12	4
47C08021WORQ016	8	8	63	30	21	0,16	4
47C10022W1RQ020	10	10	72	32	22	0,20	4
47C12026W2RQ024	12	12	83	36	26	0,24	4
47C16036W3RQ040	16	16	92	47	36	0,32	4
47C20041W4RQ040	20	20	104	56	41	0,40	4

ECCOLINE HIGH SPEED CUTTER Z=4 LONG VERSION

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HB



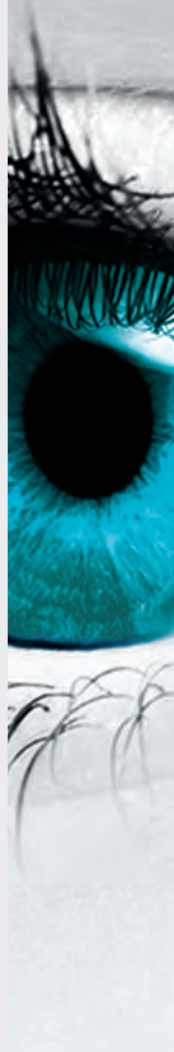
Grade	P	M	K	N_(K)	S_(M)	H_(PK)		D	h10										
IN2005	+	○	+	○			▼	d	h6										

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	L	L1	a	R	Z
47D06019WERT020	6	6	63	29	19	0,2	4
47D08023WORT050	8	8	76	33	23	0,5	4
47D10033W1RT050	10	10	81	43	33	0,5	4
47D12037W2RT050	12	12	94	47	37	0,5	4
47D16040W3RT100	16	16	109	56	40	1	4
47D20048W4RT100	20	20	120	64	48	1	4

EGOLINE HIGH SPEED CUTTER Z=4 VERY LONG VERSION

MOLD AND DIE

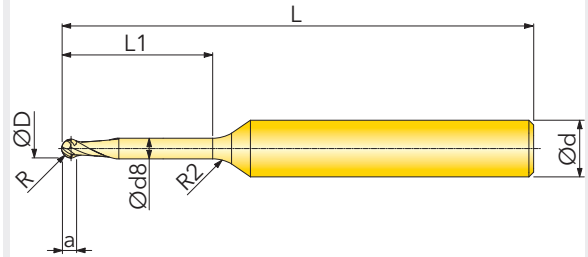
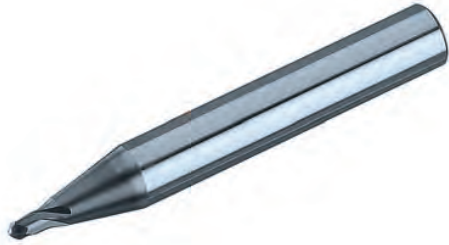


MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Relief-ground tool geometry and special flank relief guarantee highest precision.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.015									
IN2006	○					+	▽▽▽	R	± 0.005									
							▽▽▽	d	h5									

+ Preferred choice ○ Second choice ▽ Roughing ▽▽ Pre-finishing ▽▽▽ Finishing

Designation	D	d	d8	L	L1	a	R	R2	Z
INROC003.015.004Z2	0,3	4	0,27	45	0,45	0,25	0,15	2	2
INROC003.015.009Z2	0,3	4	0,27	45	0,9	0,25	0,15	2	2
INROC003.015.015Z2	0,3	4	0,27	45	1,5	0,25	0,15	2	2
INROC003.015.020Z2	0,3	4	0,27	45	2	0,25	0,15	2	2
INROC003.015.030Z2	0,3	4	0,27	45	3	0,25	0,15	2	2
INROC004.020.006Z2	0,4	4	0,37	45	0,6	0,3	0,2	2	2
INROC004.020.012Z2	0,4	4	0,37	45	1,2	0,3	0,2	2	2
INROC004.020.020Z2	0,4	4	0,37	45	2	0,3	0,2	2	2
INROC004.020.030Z2	0,4	4	0,37	45	3	0,3	0,2	2	2
INROC004.020.035Z2	0,4	4	0,37	45	3,5	0,3	0,2	2	2
INROC004.020.040Z2	0,4	4	0,37	45	4	0,3	0,2	2	2
INROC005.025.007Z2	0,5	4	0,47	45	0,75	0,35	0,25	2	2
INROC005.025.015Z2	0,5	4	0,47	45	1,5	0,35	0,25	2	2
INROC005.025.030Z2	0,5	4	0,47	45	3	0,35	0,25	2	2
INROC005.025.050Z2	0,5	4	0,47	45	5	0,35	0,25	2	2
INROC006.030.009Z2	0,6	4	0,57	45	0,9	0,4	0,3	4	2
INROC006.030.018Z2	0,6	4	0,57	45	1,8	0,4	0,3	4	2
INROC006.030.030Z2	0,6	4	0,57	45	3	0,4	0,3	4	2
INROC006.030.050Z2	0,6	4	0,57	45	5	0,4	0,3	4	2
INROC006.030.060Z2	0,6	4	0,57	45	6	0,4	0,3	4	2
INROC008.040.012Z2	0,8	4	0,77	45	1,2	0,5	0,4	4	2
INROC008.040.024Z2	0,8	4	0,77	45	2,4	0,5	0,4	4	2
INROC010.050.015Z2	1	6	0,96	45	1,5	0,8	0,5	4	2
INROC010.050.030Z2	1	6	0,96	45	3	0,8	0,5	4	2
INROC010.050.060Z2	1	6	0,96	45	6	0,8	0,5	4	2
INROC010.050.080Z2	1	6	0,96	50	8	0,8	0,5	4	2
INROC010.050.100Z2	1	6	0,96	50	10	0,8	0,5	4	2
INROC012.060.018Z2	1,2	6	1,15	45	1,8	1,1	0,6	4	2
INROC012.060.036Z2	1,2	6	1,15	45	3,6	1,1	0,6	4	2
INROC015.075.022Z2	1,5	6	1,44	45	2,25	1,35	0,75	4	2
INROC015.075.045Z2	1,5	6	1,44	45	4,5	1,35	0,75	4	2
INROC015.075.080Z2	1,5	6	1,44	45	8	1,35	0,75	4	2
INROC015.075.120Z2	1,5	6	1,44	50	12	1,35	0,75	4	2
INROC020.100.030Z2	2	6	1,92	45	3	1,7	1	4	2
INROC020.100.060Z2	2	6	1,92	45	6	1,7	1	4	2
INROC020.100.080Z2	2	6	1,92	45	8	1,7	1	4	2

INROCKWELL HIGH-PRECISION BALL NOSE END MILL

MOLD AND DIE

Designation	D	d	d8	L	L1	a	R	R2	Z
INROC020.100.120Z2	2	6	1,92	50	12	1,7	1	4	2
INROC020.100.160Z2	2	6	1,92	55	16	1,7	1	4	2
INROC020.100.200Z2	2	6	1,92	60	20	1,7	1	4	2



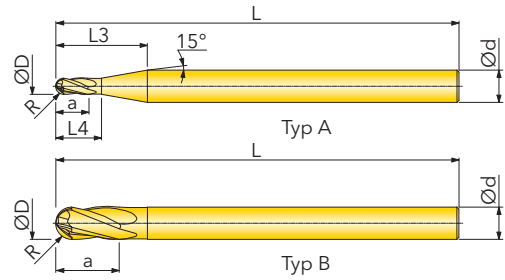
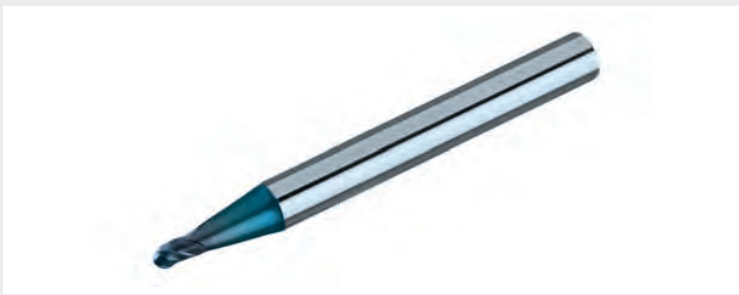
INROCKWELL HIGH-PRECISION BALL NOSE END MILL

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



3 flutes provide a high stock removal rate with the precision of a 2-flute tool. Pitch of the individual flutes ensures smooth, vibration-free machining.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02										
IN2006	+					+		R	± 0.01										
								d	h6										

Preferred choice
 Second choice
 ▼ Roughing
 ▼▼ Pre-finishing
 ▼▼▼ Finishing

Designation	D	d	L	L3	L4	α	a	R	Typ	Z
INBAL020.100.003Z3	2	3	38	7	3	7,1	2,5	1	A	3
INBAL020.100.004Z3	2	6	50	15,3	4	10	3	1	A	3
INBAL030.150.004Z3	3	6	57	15	4	7,7	3,5	1,5	A	3
INBAL030.150.005Z3	3	6	70	14	5,5	10	4,5	1,5	A	3
INBAL040.200.006Z3	4	6	57	15	6	6,3	5	2	A	3
INBAL040.200.007Z3	4	6	70	12,7	7	10	6	2	A	3
INBAL050.250.007Z3	5	6	57	15	7	3,5	6	2,5	A	3
INBAL050.250.008Z3	5	6	80	11,3	8,5	10	7,5	2,5	A	3
INBAL060.300.008Z3	6	6	57	-	-	-	8	3	B	3
INBAL060.300.009Z3	6	6	90	-	-	-	9	3	B	3
INBAL080.400.015Z3	8	8	55	-	-	-	15	4	B	3
INBAL080.400.010Z3	8	8	63	-	-	-	10	4	B	3
INBAL080.400.012Z3	8	8	100	-	-	-	12	4	B	3
INBAL100.500.014Z3	10	10	72	-	-	-	14	5	B	3
INBAL100.500.015Z3	10	10	100	-	-	-	15	5	B	3
INBAL120.600.016Z3	12	12	83	-	-	-	16	6	B	3
INBAL120.600.018Z3	12	12	110	-	-	-	18	6	B	3

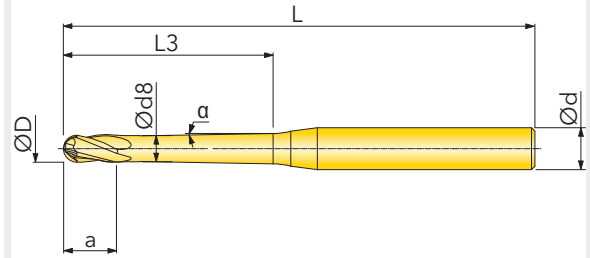
INBALLNOSE BALL NOSE END MILL Z=3

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



3 flutes provide a high stock removal rate with the precision of a 2-flute tool. Variable pitch of the individual flutes ensures smooth, vibration-free machining.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02										
IN2006	+					+		R	± 0.01										
								d	h6										

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L3	α	a	R	Z
INBAL040.200.030Z3K1	4	6	3,9	80	30	1	6	2	3
INBAL040.200.040Z3K1	4	6	3,9	90	40	1	6	2	3
INBAL040.200.050Z3K1	4	6	3,9	100	50	1	6	2	3
INBAL040.200.060Z3K1	4	6	3,9	100	60	1	6	2	3
INBAL050.250.040Z3K1	5	8	4,9	90	40	1	7,5	2,5	3
INBAL050.250.060Z3K1	5	8	4,9	110	60	1	7,5	2,5	3
INBAL060.300.050Z3K1	6	8	5,9	100	50	1	9	3	3
INBAL060.300.060Z3K1	6	8	5,9	110	60	1	9	3	3
INBAL060.300.070Z3K1	6	10	5,9	120	70	1	9	3	3
INBAL060.300.080Z3K1	6	10	5,9	130	80	1	9	3	3
INBAL080.400.060Z3K1	8	10	7,9	120	60	1	12	4	3
INBAL080.400.070Z3K1	8	10	7,9	130	70	1	12	4	3
INBAL080.400.080Z3K1	8	12	7,9	140	80	1	12	4	3
INBAL100.500.060Z3K1	10	12	9,9	130	60	1	15	5	3
INBAL100.500.075Z3K1	10	12	9,9	140	75	1	15	5	3

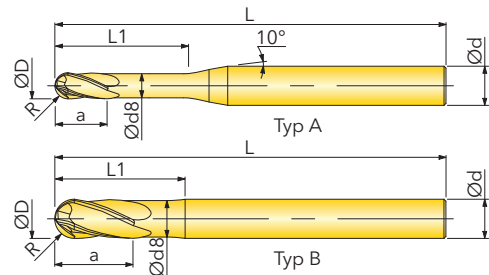
INBALLNOSE BALL NOSE END MILL Z=3

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



4 flutes for a high stock removal rate (general roughing operations up to 58 HRC). Short tool lengths make these ideal for HSC finishing operations too.



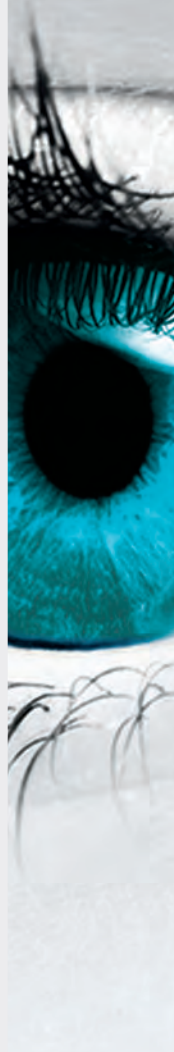
Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02			
IN2006	+	○	+		○	+		R	± 0.01			
								d	h6			

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L1	a	R	Typ	Z
INRAP040.200.012Z4	4	6	3,7	60	12	5	2	A	4
INRAP040.200.020Z4	4	6	3,7	60	20	5	2	A	4
INRAP060.300.020Z4	6	6	5,6	60	20	10	3	B	4
INRAP060.300.030Z4	6	6	5,6	80	30	10	3	B	4
INRAP080.400.026Z4	8	8	7,4	75	26	12	4	B	4
INRAP080.400.040Z4	8	8	7,4	100	40	12	4	B	4
INRAP100.500.028Z4	10	10	9,2	75	28	16	5	B	4
INRAP100.500.040Z4	10	10	9,2	100	40	16	5	B	4
INRAP120.600.030Z4	12	12	11	100	30	16	6	B	4
INRAP160.800.032Z4	16	16	15	100	32	18	8	B	4

INRAPID HSC BALL NOSE END MILL Z=4

MOLD AND DIE

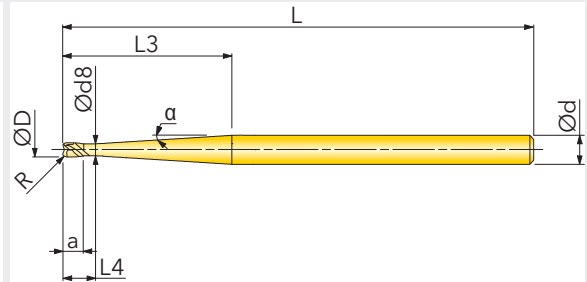


MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Ideal for milling ribs in die casting molds (general machining of steel up to 58 HRC). Long tool lengths for machining in high-tensile materials.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02									
IN2005	+	○	+		○	+		R	± 0.01									
								d	h6									

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L3	L4	α	a	R	Z
INSL0010.050.030Z2K15	1	6	0,95	75	30	6	1,5	2	0,5	2
INSL0010.050.039Z2K37	1	6	0,95	75	39	6	3,7	2	0,5	2
INSL0013.065.018Z2K15	1,3	6	1,2	57	18	6	1,5	2	0,65	2
INSL0013.065.026Z2K15	1,3	6	1,2	75	26	6	1,5	2	0,65	2
INSL0015.075.015Z2K04	1,5	6	1,4	60	15	8	0,4	2	0,75	2
INSL0015.075.015Z2K09	1,5	6	1,4	60	15	8	0,9	2	0,75	2
INSL0015.075.020Z2K04	1,5	6	1,4	60	20	8	0,4	2	0,75	2
INSL0015.075.020Z2K09	1,5	6	1,4	60	20	8	0,9	2	0,75	2
INSL0015.075.030Z2K15	1,5	6	1,4	70	30	8	1,5	2	0,75	2
INSL0015.075.050Z2K30	1,5	8	1,4	100	50	9	3	3	0,75	2
INSL0020.100.020Z2K04	2	6	1,9	60	20	8	0,4	2	1	2
INSL0020.100.020Z2K09	2	6	1,9	60	20	6	0,9	2	1	2
INSL0020.100.025Z2K04	2	6	1,9	70	25	8	0,4	2	1	2
INSL0020.100.025Z2K09	2	6	1,9	70	25	8	0,9	2	1	2
INSL0020.100.025Z2K15	2	6	1,9	75	25	6	1,5	2	1	2
INSL0020.100.032Z2K15	2	6	1,9	75	32	6	1,5	2	1	2
INSL0020.100.045Z2K09	2	6	1,95	85	45	9	0,9	3	1	2
INSL0020.100.045Z2K14	2	6	1,95	85	45	9	1,4	3	1	2
INSL0020.100.060Z2K09	2	6	1,95	100	60	9	0,9	3	1	2
INSL0020.100.060Z2K14	2	6	1,95	100	60	9	1,4	3	1	2
INSL0025.125.035Z2K15	2,5	6	2,4	75	35	12	1,5	4	1,25	2
INSL0025.125.040Z2K15	2,5	6	2,4	75	40	12	1,5	4	1,25	2
INSL0030.150.030Z2K15	3	6	2,9	75	30	6	1,5	2	1,5	2
INSL0030.150.040Z2K10	3	6	2,9	80	40	6	1	2	1,5	2
INSL0030.150.040Z2K15	3	6	2,9	85	40	6	1,5	2	1,5	2
INSL0030.150.040Z2K22	3	6	2,9	75	40	10	2,2	4	1,5	2
INSL0030.150.050Z2K10	3	8	2,9	100	50	6	1	2	1,5	2
INSL0030.150.050Z2K15	3	8	2,9	100	50	6	1,5	2	1,5	2
INSL0030.150.063Z2K14	3	6	2,9	100	63	10	1,4	4	1,5	2
INSL0030.150.065Z2K09	3	6	2,9	100	65	10	0,9	4	1,5	2
INSL0040.200.030Z2K10	4	6	3,9	70	30	22	1	7	2	2
INSL0040.200.030Z2K15	4	6	3,9	70	30	22	1,5	7	2	2
INSL0040.200.040Z2K10	4	6	3,9	85	40	12	1	6	2	2
INSL0040.200.040Z2K14	4	6	3,9	100	40	21	1,4	6	2	2
INSL0040.200.040Z2K15	4	6	3,9	85	40	12	1,5	6	2	2
INSL0040.200.045Z2K25	4	8	3,9	100	45	21	2,5	6	2	2

INSL0010.050.030Z2K15

MOLD AND DIE

Designation	D	d	d8	L	L3	L4	α	a	R	Z
INSLO040.200.060Z2K15	4	8	3,9	125	60	22	1,5	7	2	2
INSLO040.200.065Z2K09	4	6	3,9	100	65	12	0,9	6	2	2
INSLO050.250.040Z2K08	5	6	4,8	75	40	18	0,8	8	2,5	2
INSLO060.300.040Z2K15	6	8	5,8	85	40	21	1,5	6	3	2
INSLO060.300.064Z2K09	6	8	5,8	100	64	18	0,9	8	3	2
INSLO060.300.065Z2K10	6	10	5,8	125	65	33	1	8	3	2
INSLO060.300.065Z2K15	6	10	5,8	125	65	33	1,5	8	3	2
INSLO080.400.060Z2K09	8	10	7,8	120	60	30	0,9	10	4	2

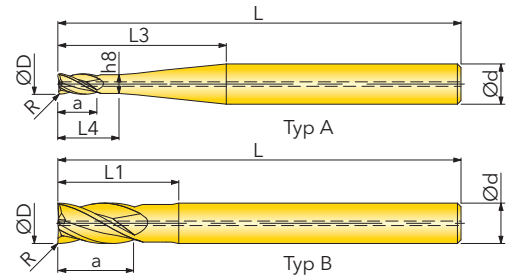
INSLOT TAPERED, ROBUST BALL NOSE END MILL Z=2

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



High stock removal rate with $z = 4$ and variable pitch (general machining of steel up to 54 HRC). Solid carbide end mill with through-the-tool coolant.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02						
IN2006	+		○			+		R	± 0.01						
								d	h6						

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L1	L3	L4	α	a	R	Typ	Z	
INCO020.050.006Z4K57	2	6	1,9	60	-	20	6	5,7	2	0,5	A	4	
INCO030.080.009Z4K43	3	6	2,8	60	-	20	9	4,3	2	0,8	A	4	
INCO040.100.012Z4	4	6	3,6	60	12	-	-	-	2	1	B	4	✓
INCO060.100.018Z4	6	6	5,6	60	18	-	-	-	3	1	B	4	✓
INCO060.150.018Z4	6	6	5,6	60	18	-	-	-	3	1,5	B	4	✓
INCO080.200.024Z4	8	8	7,6	65	24	-	-	-	4	2	B	4	✓
INCO100.100.030Z4	10	10	9,6	85	30	-	-	-	5	1	B	4	✓
INCO100.200.030Z4	10	10	9,6	85	30	-	-	-	5	2	B	4	✓
INCO120.200.040Z4	12	12	11,6	100	40	-	-	-	6	2	B	4	✓
INCO120.300.040Z4	12	12	11,6	100	40	-	-	-	6	3	B	4	✓

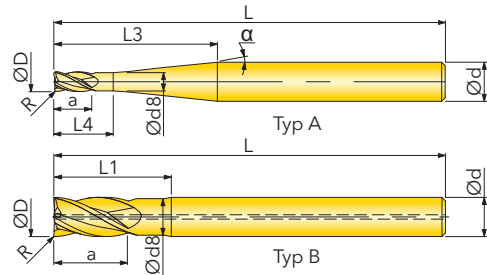
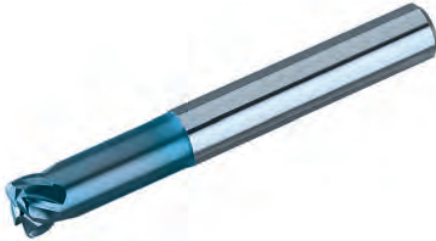
INGOOLANT HSC END MILL WITH CORNER RADIUS Z=4

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



High stock removal rate with $z = 4$ and variable pitch (general machining of steel up to 58 HRC). Solid carbide end mill with through-the-tool coolant for finish machining.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/ -0.015								
IN2006	+		○			+		R	± 0.01								
	+		○				▽	d	h6								

Preferred choice
 Second choice
 ▽ Roughing
 ▽▽ Pre-finishing
 ▽▽▽ Finishing

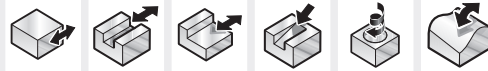
Designation	D	d	d8	L	L1	L3	L4	α	a	R	Typ	Z	
INCO0020.050.006Z4HQ	2	6	1,9	60	-	20	6	5,7	2	0,5	A	4	
INCO0030.080.009Z4HQ	3	6	2,8	60	-	20	9	4,3	2	0,8	A	4	
INCO0040.100.012Z4HQ	4	6	3,6	60	12	-	-	-	2	1	B	4	✓
INCO0060.100.018Z4HQ	6	6	5,6	60	18	-	-	-	3	1	B	4	✓
INCO0060.150.018Z4HQ	6	6	5,6	60	18	-	-	-	3	1,5	B	4	✓
INCO0080.100.024Z4HQ	8	8	7,6	65	24	-	-	-	4	1	B	4	✓
INCO0080.200.024Z4HQ	8	8	7,6	65	24	-	-	-	4	2	B	4	✓
INCO0100.100.030Z4HQ	10	10	9,6	75	30	-	-	-	5	1	B	4	✓
INCO0100.200.030Z4HQ	10	10	9,6	75	30	-	-	-	5	2	B	4	✓
INCO0120.100.035Z4HQ	12	12	11,6	84	35	-	-	-	6	1	B	4	✓
INCO0120.150.040Z4HQ	12	12	11,6	84	40	-	-	-	6	1,5	B	4	✓
INCO0120.300.040Z4HQ	12	12	11,6	100	40	-	-	-	6	3	B	4	✓

Stable version, small chip space.

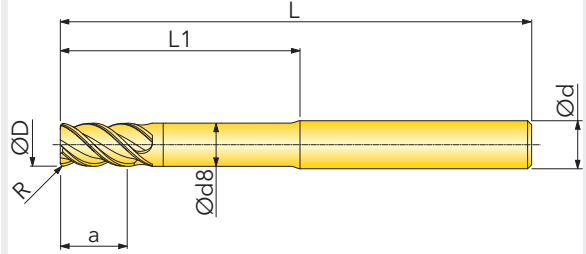
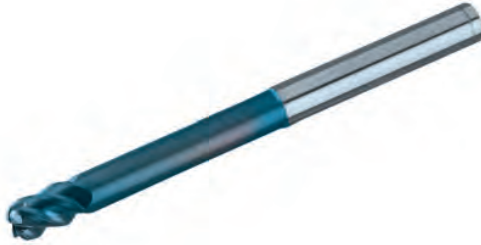
INGOOLANT HSC END MILL WITH CORNER RADIUS Z=4

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



High material removal rates even at worse conditions (for example in corner areas and long overhang). This is being realized with oval cutting edge geometry.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02						
IN2006	+		+			O		R	± 0.015						
								d	h6						

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L1	a	R	Z
INTUR040.100.020Z4	4	4	3,8	70	20	6	1	4
INTUR040.100.028Z4	4	4	3,8	70	28	6	1	4
INTUR060.050.035Z4	6	6	5,7	70	35	9	0,5	4
INTUR060.150.030Z4	6	6	5,7	75	30	9	1,5	4
INTUR060.150.042Z4	6	6	5,7	90	42	9	1,5	4
INTUR060.150.054Z4	6	6	5,7	100	54	9	1,5	4
INTUR080.200.040Z4	8	8	7,6	85	40	12	2	4
INTUR080.200.056Z4	8	8	7,6	100	56	12	2	4
INTUR080.200.072Z4	8	8	7,6	120	72	12	2	4
INTUR100.200.050Z4	10	10	9,5	100	50	15	2	4
INTUR100.200.070Z4	10	10	9,5	120	70	15	2	4
INTUR100.200.090Z4	10	10	9,5	140	90	15	2	4
INTUR120.200.060Z4	12	12	11,5	110	60	18	2	4
INTUR120.200.084Z4	12	12	11,5	135	84	18	2	4
INTUR120.200.108Z4	12	12	11,5	160	108	18	2	4

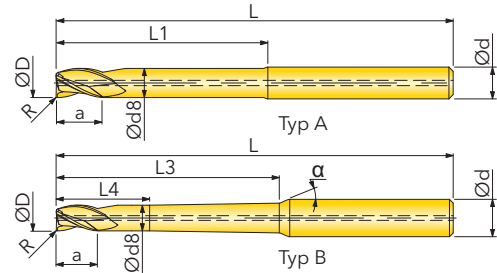
INTURBO HI FEED ENDMILL Z=4/2 (WITH REDUCED NECK DIAMETER)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



High stock removal rate on soft and tough materials such as titanium and nickel alloys. Solid carbide end mill with through-the-tool coolant.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0.02					
IN2005	+	○	○		○	+		d	h6					

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

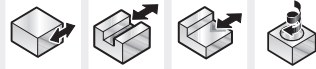
Designation	D	d	d8	L	L1	L3	L4	α	a	R	Typ	Z	
INCO0040.028.010Z3	4	6	3,6	60	10	-	-	-	4	0,28	A	3	✓
INCO0040.028.020Z3	4	6	3,6	60	20	-	-	-	4	0,28	A	3	✓
INCO0040.028.040Z3K17	4	6	3,6	80	-	40	12	1,7	4	0,28	B	3	✓
INCO0040.028.012Z3K14	4	6	3,6	100	-	64	12	1,4	4	0,28	B	3	✓
INCO0050.035.025Z3	5	6	4,5	60	25	-	-	-	6	0,35	A	3	✓
INCO0050.035.040Z3	5	6	4,5	75	40	-	-	-	6	0,35	A	3	✓
INCO0060.042.025Z3	6	6	5,5	60	25	-	-	-	6	0,42	A	3	✓
INCO0060.042.040Z3	6	6	5,5	75	40	-	-	-	6	0,42	A	3	✓
INCO0060.042.060Z3	6	6	5,5	100	60	-	-	-	6	0,42	A	3	✓
INCO0060.042.020Z3K24	6	8	5,6	85	-	40	20	2,4	6	0,42	B	3	✓
INCO0060.042.020Z3K16	6	8	5,5	100	-	65	20	1,6	6	0,42	B	3	✓
INCO0060.042.015Z3K24	6	10	5,8	120	-	65	15	1,5	6	0,42	B	3	✓
INCO0080.056.030Z3	8	8	7,5	65	30	-	-	-	8	0,56	A	3	✓
INCO0080.056.060Z3	8	8	7,5	100	60	-	-	-	8	0,56	A	3	✓
INCO0080.056.020Z3K20	8	10	7,6	100	-	45	20	2,0	8	0,56	B	3	✓
INCO0080.056.020Z3K16	8	10	7,6	120	-	65	20	1,6	8	0,56	B	3	✓
INCO0100.070.040Z3	10	10	9,6	75	40	-	-	-	8	0,7	A	3	✓
INCO0100.070.040Z3L	10	10	9,6	100	40	-	-	-	8	0,7	A	3	✓
INCO0100.110.040Z3	10	10	9,6	75	40	-	-	-	8	1,1	A	3	✓
INCO0120.080.050Z3	12	12	11,6	125	50	-	-	-	8	0,8	A	3	✓
INCO0120.110.040Z3	12	12	11,6	80	40	-	-	-	8	1,1	A	3	✓
INCO0140.170.040Z3	14	14	13,5	89	40	-	-	-	10	1,7	A	3	✓
INCO0160.190.045Z3	16	16	15,4	100	45	-	-	-	12	1,9	A	3	✓

R (Programming radius)

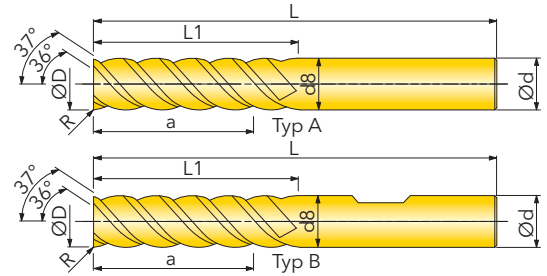
INGOOLANT HIGH-SPEED END MILL Z=3

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Ideal for roughing and finishing in a wide variety of materials. Variable pitch and variable helix angle.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h10			
IN2005	+	○	+		○	○	▽	R	± 0.05			
	+	○	+		○	○	▽▽	d	h6			

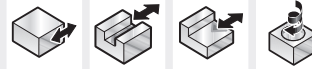
+ Preferred choice ○ Second choice ▽ Roughing ▽▽ Pre-finishing ▽▽▽ Finishing

Designation	D	d	d8	L	L1	a	R	Typ	Z
INNOV060.010.019Z4C	6	6	5,6	55	19	13	0,1	A	4
INNOV060.010.025Z4C	6	6	5,6	61	25	10	0,1	A	4
INNOV060.010.019Z4W	6	6	5,6	55	19	13	0,1	B	4
INNOV060.010.025Z4W	6	6	5,6	61	25	10	0,1	B	4
INNOV080.010.025Z4C	8	8	7,5	61	25	17	0,1	A	4
INNOV080.010.033Z4C	8	8	7,5	69	33	13	0,1	A	4
INNOV080.010.025Z4W	8	8	7,5	61	25	17	0,1	B	4
INNOV080.010.033Z4W	8	8	7,5	69	33	13	0,1	B	4
INNOV100.010.032Z4C	10	10	9,5	72	32	22	0,1	A	4
INNOV100.010.042Z4C	10	10	9,5	82	42	17	0,1	A	4
INNOV100.010.032Z4W	10	10	9,5	72	32	22	0,1	B	4
INNOV100.010.042Z4W	10	10	9,5	82	42	17	0,1	B	4
INNOV120.020.038Z4C	12	12	11,5	83	38	26	0,2	A	4
INNOV120.020.050Z4C	12	12	11,5	95	50	20	0,2	A	4
INNOV120.020.038Z4W	12	12	11,5	83	38	26	0,2	B	4
INNOV120.020.050Z4W	12	12	11,5	95	50	20	0,2	B	4
INNOV160.020.050Z4C	16	16	15,5	98	50	34	0,2	A	4
INNOV160.020.066Z4C	16	16	15,5	114	66	26	0,2	A	4
INNOV160.020.050Z4W	16	16	15,5	98	50	34	0,2	B	4
INNOV160.020.066Z4W	16	16	15,5	114	66	26	0,2	B	4
INNOV200.020.062Z4C	20	20	19,5	112	62	42	0,2	A	4
INNOV200.020.082Z4C	20	20	19,5	132	82	32	0,2	A	4
INNOV200.020.062Z4W	20	20	19,5	112	62	42	0,2	B	4
INNOV200.020.082Z4W	20	20	19,5	132	82	32	0,2	B	4
INNOV250.040.070Z4C	25	25	24,5	121	70	50	0,4	A	4
INNOV250.040.095Z4C	25	25	24,5	150	95	40	0,4	A	4
INNOV250.040.070Z4W	25	25	24,5	121	70	50	0,4	B	4
INNOV250.040.095Z4W	25	25	24,5	150	95	40	0,4	B	4

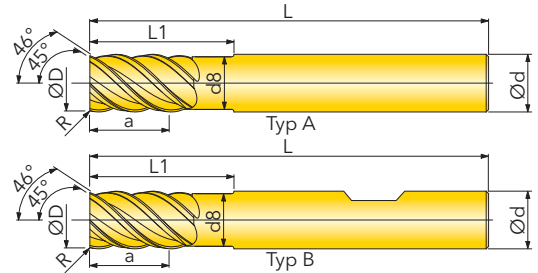
INNOVATIVE HPC END MILL Z=4

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Ideal for roughing and finishing in a wide variety of materials. Variable pitch and variable helix angle.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h10											
IN2005	+	○	+		○	○	▽	R	± 0.05											
	+	○	+		○	○	▽	d	h6											

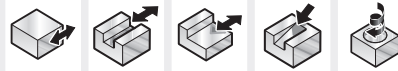
+ Preferred choice
 ○ Second choice
 ▽ Roughing
 ▽▽ Pre-finishing
 ▽▽▽ Finishing

Designation	D	d	d8	L	L1	a	R	Typ	Z
INNOV060.010.019Z5C	6	6	5,6	55	19	13	0,1	A	5
INNOV060.010.025Z5C	6	6	5,6	61	25	10	0,1	A	5
INNOV060.010.019Z5W	6	6	5,6	55	19	13	0,1	B	5
INNOV060.010.025Z5W	6	6	5,6	61	25	10	0,1	B	5
INNOV080.010.025Z5C	8	8	7,5	61	25	17	0,1	A	5
INNOV080.010.033Z5C	8	8	7,5	69	33	13	0,1	A	5
INNOV080.010.025Z5W	8	8	7,5	61	25	17	0,1	B	5
INNOV080.010.033Z5W	8	8	7,5	69	33	13	0,1	B	5
INNOV100.010.032Z5C	10	10	9,5	72	32	22	0,1	A	5
INNOV100.010.042Z5C	10	10	9,5	82	42	17	0,1	A	5
INNOV100.010.032Z5W	10	10	9,5	72	32	22	0,1	B	5
INNOV100.010.042Z5W	10	10	9,5	82	42	17	0,1	B	5
INNOV120.020.038Z5C	12	12	11,5	83	38	26	0,2	A	5
INNOV120.020.050Z5C	12	12	11,5	95	50	20	0,2	A	5
INNOV120.020.038Z5W	12	12	11,5	83	38	26	0,2	B	5
INNOV120.020.050Z5W	12	12	11,5	95	50	20	0,2	B	5
INNOV160.020.050Z5C	16	16	15,5	98	50	34	0,2	A	5
INNOV160.020.066Z5C	16	16	15,5	114	66	26	0,2	A	5
INNOV160.020.050Z5W	16	16	15,5	98	50	34	0,2	B	5
INNOV160.020.066Z5W	16	16	15,5	114	66	26	0,2	B	5
INNOV200.020.062Z5C	20	20	19,5	112	62	42	0,2	A	5
INNOV200.020.082Z5C	20	20	19,5	132	82	32	0,2	A	5
INNOV200.020.062Z5W	20	20	19,5	112	62	42	0,2	B	5
INNOV200.020.082Z5W	20	20	19,5	132	82	32	0,2	B	5
INNOV250.040.070Z5C	25	25	24,5	121	70	50	0,4	A	5
INNOV250.040.095Z5C	25	25	24,5	150	95	40	0,4	A	5
INNOV250.040.070Z5W	25	25	24,5	121	70	50	0,4	B	5
INNOV250.040.095Z5W	25	25	24,5	150	95	40	0,4	B	5

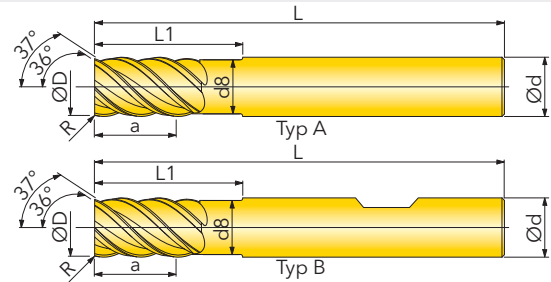
INNOVATIVE HPC END MILL Z=5

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Special developed HPC-geometry for rough and finish milling of stainless steel and titanium. Irregular division / unequal helix angle



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h10			
IN2005	○	+	○		+		▽	R	± 0.02			
	+						▽▽	d	h6			

Preferred choice
 Second choice
 ▽ Roughing
 ▽▽ Pre-finishing
 ▽▽▽ Finishing

Designation	D	d	d8	L	L1	a	R	Typ	Z
INNOT050.020.020Z4C	5	6	4,9	57	20	13	0,2	A	4
INNOT050.050.020Z4C	5	6	4,9	57	20	13	0,5	A	4
INNOT060.020.025Z4C	6	6	5,9	57	25	14	0,2	A	4
INNOT060.050.025Z4C	6	6	5,9	57	25	14	0,5	A	4
INNOT060.100.025Z4C	6	6	5,9	57	25	14	1	A	4
INNOT060.200.025Z4C	6	6	5,9	57	25	14	2	A	4
INNOT080.030.032Z4W	8	8	7,8	68	32	18	0,3	B	4
INNOT080.080.032Z4C	8	8	7,8	68	32	18	0,8	A	4
INNOT080.100.032Z4C	8	8	7,8	68	32	18	1	A	4
INNOT080.200.032Z4C	8	8	7,8	68	32	18	2	A	4
INNOT080.300.032Z4C	8	8	7,8	68	32	18	3	A	4
INNOT100.020.032Z4C	10	10	9,8	72	32	22	0,2	A	4
INNOT100.080.032Z4C	10	10	9,8	72	32	22	0,8	A	4
INNOT100.100.032Z4C	10	10	9,8	72	32	22	1	A	4
INNOT100.200.032Z4C	10	10	9,8	72	32	22	2	A	4
INNOT100.300.032Z4C	10	10	9,8	72	32	22	3	A	4
INNOT100.400.034Z4C	10	10	9,8	72	34	22	4	A	4
INNOT120.020.038Z4C	12	12	11,7	83	38	26	0,2	A	4
INNOT120.080.038Z4C	12	12	11,7	83	38	26	0,8	A	4
INNOT120.100.038Z4C	12	12	11,7	83	38	26	1	A	4
INNOT120.200.038Z4C	12	12	11,7	83	38	26	2	A	4
INNOT120.250.038Z4C	12	12	11,7	83	38	26	2,5	A	4
INNOT120.300.038Z4C	12	12	11,7	83	38	26	3	A	4
INNOT120.400.038Z4C	12	12	11,7	83	38	26	4	A	4
INNOT120.400.038Z4W	12	12	11,7	83	38	26	4	B	4
INNOT140.020.038Z4C	14	14	13,7	83	38	30	0,2	A	4
INNOT140.080.038Z4C	14	14	13,7	83	38	30	0,8	A	4
INNOT140.300.038Z4C	14	14	13,7	83	38	30	3	A	4
INNOT160.020.050Z4W	16	16	15,7	100	50	34	0,2	B	4
INNOT160.100.050Z4W	16	16	15,7	100	50	34	1	B	4
INNOT160.200.050Z4C	16	16	15,7	100	50	34	2	A	4
INNOT160.250.050Z4C	16	16	15,7	100	50	34	2,5	A	4
INNOT160.300.050Z4C	16	16	15,7	100	50	34	3	A	4
INNOT160.400.050Z4C	16	16	15,7	100	50	34	4	A	4
INNOT160.400.050Z4W	16	16	15,7	100	50	34	4	B	4
INNOT160.500.050Z4C	16	16	15,7	100	50	34	5	A	4

INNOTITAN HPC TITANIUM END MILL Z=4

MOLD AND DIE

Designation	D	d	d8	L	L1	a	R	Typ	Z
INNOT200.020.062Z4W	20	20	19,7	112	62	42	0,2	B	4
INNOT200.100.062Z4W	20	20	19,7	112	62	42	1	B	4
INNOT200.200.062Z4C	20	20	19,7	112	62	42	2	A	4
INNOT200.200.062Z4W	20	20	19,7	112	62	42	2	B	4 2
INNOT200.250.062Z4C	20	20	19,7	112	62	42	2,5	A	4 2
INNOT200.300.062Z4C	20	20	19,7	112	62	42	3	A	4 2
INNOT200.400.062Z4C	20	20	19,7	112	62	42	4	A	4 2
INNOT200.400.062Z4W	20	20	19,7	112	62	42	4	B	4 2
INNOT200.500.062Z4C	20	20	19,7	112	62	42	5	A	4
INNOT250.020.069Z4C	25	25	24,7	125	69	50	0,2	A	4
INNOT250.100.069Z4C	25	25	24,7	125	69	50	1	A	4
INNOT250.200.069Z4C	25	25	24,7	125	69	50	2	A	4
INNOT250.300.069Z4C	25	25	24,7	125	69	50	3	A	4
INNOT250.400.069Z4C	25	25	24,7	125	69	50	4	A	4
INNOT250.400.069Z4W	25	25	24,7	125	69	50	4	B	4
INNOT250.500.069Z4C	25	25	24,7	125	69	50	5	A	4

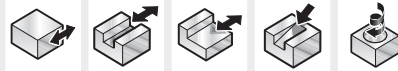
Shaft version in DIN6535HA/HB, different corner radii and tool lengths on request!



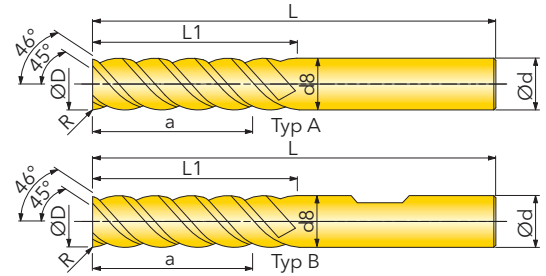
INNOTITAN HPC TITANIUM END MILL Z=4

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA / 6535 HB



Special developed HPC-geometry for rough and finish milling of stainless steel and titanium. Irregular division / unequal helix angle.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h10				
IN2005	+	+	○		+		▽	R	± 0.02	40°/40°	54 HRC		
	○	+	○		+		▽▽	d	h6				

Preferred choice
 Second choice
 ▽ Roughing
 ▽▽ Pre-finishing
 ▽▽▽ Finishing

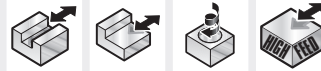
Designation	D	d	d8	L	L1	a	R	Typ	Z
INNOT060.010.019Z5C	6	6	5,6	55	19	13	0,1	A	5
INNOT060.100.019Z5C	6	6	5,6	55	19	13	1	A	5
INNOT080.010.025Z5C	8	8	7,5	61	25	17	0,1	A	5
INNOT080.100.025Z5C	8	8	7,5	61	25	17	1	A	5
INNOT100.010.033Z5C	10	10	9,5	72	33	22	0,1	A	5
INNOT100.100.033Z5C	10	10	9,5	72	33	22	1	A	5
INNOT100.200.033Z5C	10	10	9,5	72	33	22	2	A	5
INNOT120.020.038Z5C	12	12	11,5	83	38	26	0,2	A	5
INNOT120.100.038Z5C	12	12	11,5	83	38	26	1	A	5
INNOT120.200.038Z5C	12	12	11,5	83	38	26	2	A	5
INNOT120.250.038Z5C	12	12	11,5	83	38	26	2,5	A	5
INNOT120.400.038Z5C	12	12	11,5	83	38	26	4	A	5
INNOT160.020.050Z5C	16	16	15,5	98	50	34	0,2	A	5
INNOT160.020.050Z5W	16	16	15,5	98	50	34	0,2	B	5
INNOT160.100.050Z5W	16	16	15,5	98	50	34	1	B	5
INNOT160.200.050Z5W	16	16	15,5	98	50	34	2	B	5
INNOT160.250.050Z5C	16	16	15,5	98	50	34	2,5	A	5
INNOT160.400.050Z5W	16	16	15,5	98	50	34	4	B	5
INNOT200.020.062Z5C	20	20	19,5	112	62	42	0,2	A	5
INNOT200.020.062Z5W	20	20	19,5	112	62	42	0,2	B	5
INNOT200.100.062Z5W	20	20	19,5	112	62	42	1	B	5
INNOT200.200.062Z5W	20	20	19,5	112	62	42	2	B	5
INNOT200.250.062Z5C	20	20	19,5	112	62	42	2,5	A	5
INNOT200.400.062Z5W	20	20	19,5	112	62	42	4	B	5

Shaft version in DIN6535HA/HB , different corner radii and tool lengths on request!

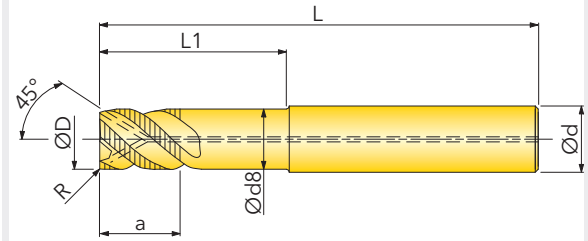
INNOTITAN HPC TITANIUM END MILL Z=5

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Special roughing end mill in serrated geometry for aluminum machining with internal coolant.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	e8								
IN1205				+				R	± 0.05								
								d	h6								

Preferred choice
 Second choice
 ▼ Roughing
 ▼▼ Pre-finishing
 ▼▼▼ Finishing

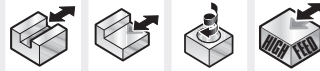
Designation	D	d	d8	L	L1	a	R	Z	
INNOV080.020.041Z3CCB	8	8	7,5	83	41	12	0,2	3	✓
INNOV080.200.041Z3CCB	8	8	7,5	83	41	12	2	3	✓
INNOV100.020.041Z3CCB	10	10	9,1	83	41	12	0,2	3	✓
INNOV100.200.041Z3CCB	10	10	9,1	83	41	12	2	3	✓
INNOV120.020.041Z3CCB	12	12	11	87	41	12	0,2	3	✓
INNOV120.200.041Z3CCB	12	12	11	87	41	12	2	3	✓
INNOV120.400.041Z3CCB	12	12	11	87	41	12	4	3	✓
INNOV160.200.047Z3CCB	16	16	15	97	47	14	2	3	✓
INNOV160.020.060Z3CCB	16	16	15	109	60	14	0,2	3	✓
INNOV160.200.060Z3CCB	16	16	15	109	60	14	2	3	✓
INNOV160.400.060Z3CCB	16	16	15	109	60	14	4	3	✓
INNOV200.020.060Z3CCB	20	20	18,8	111	60	17	0,2	3	✓
INNOV200.200.060Z3CCB	20	20	18,8	111	60	17	2	3	✓
INNOV200.400.060Z3CCB	20	20	18,8	111	60	17	4	3	✓
INNOV200.400.100Z3CCB	20	20	18,8	150	100	30	4	3	✓

Shaft version in DIN6535 B , different corner radii and tool lengths on request!.

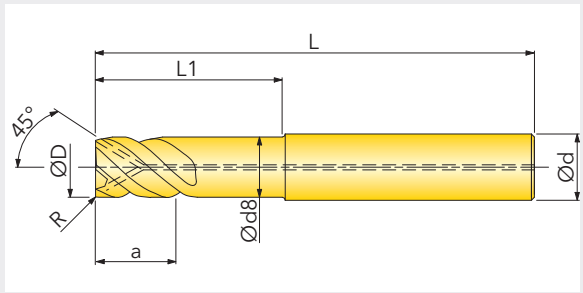
INNOVATIVE ALL SERRATED ROUGHING END MILL Z=3

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Special developed HPC-geometry for rough and finish milling of aluminum. Irregular division with internal coolant, reduced shaft diameter behind the effective cutting edge.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	h6	
IN05S				+			R	± 0.05		
							d	h6		

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

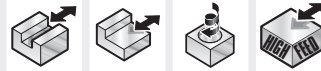
Designation	D	d	d8	L	L1	a	R	Z	IK
INNOV080.020.040Z3C	8	8	7,5	79	40	12	0,2	3	✓
INNOV080.200.041Z3C	8	8	7,5	79	41	12	2	3	✓
INNOV100.020.041Z3C	10	10	9,1	83	41	15	0,2	3	✓
INNOV100.200.041Z3C	10	10	9,1	83	41	15	2	3	✓
INNOV120.020.041Z3C	12	12	11,0	88	41	18	0,2	3	✓
INNOV120.200.041Z3C	12	12	11,0	88	41	18	2	3	✓
INNOV120.400.041Z3C	12	12	11,0	88	41	18	4	3	✓
INNOV160.050.060Z3C	16	16	15,0	109	60	40	0,5	3	✓
INNOV160.200.060Z3C	16	16	15,0	109	60	40	2	3	✓
INNOV160.400.060Z3C	16	16	15,0	109	60	40	4	3	✓
INNOV160.200.065Z3C	16	16	15,0	114	65	24	2	3	✓
INNOV160.200.080Z3C	16	16	15,0	128	80	24	2	3	✓
INNOV200.020.065Z3C	20	20	18,8	115	65	30	0,2	3	✓
INNOV200.200.060Z3C	20	20	18,8	110	60	30	2	3	✓
INNOV200.400.060Z3C	20	20	18,8	110	60	30	4	3	✓
INNOV200.020.100Z3C	20	20	18,8	150	100	30	0,2	3	✓
INNOV200.200.100Z3C	20	20	18,8	150	100	30	2	3	✓
INNOV200.400.100Z3C	20	20	18,8	150	100	30	4	3	✓

Shaft version in DIN6535 B, different corner radii and tool lengths on request!

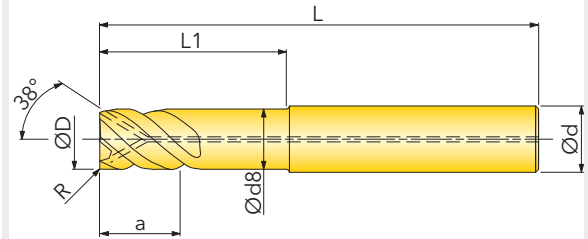
INNOVATIVE ALL HPC END MILL Z=3 (ALU)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



Special developed HPC-geometry for rough and finish milling aluminum. Irregular division with internal coolant, reduced shaft diameter behind the effective cutting edge.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	e8	
IN05S				+			R	± 0.05		
							d	h6		

+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L1	a	R	Z	
INNOV080.020.041Z4C	8	8	7,5	79	41	12	0,2	4	✓
INNOV080.200.040Z4C	8	8	7,5	79	40	12	2	4	✓
INNOV100.020.041Z4C	10	10	9,4	83	41	15	0,2	4	✓
INNOV100.200.041Z4C	10	10	9,4	83	41	15	2	4	✓
INNOV120.020.041Z4C	12	12	11,3	88	41	18	0,2	4	✓
INNOV120.200.041Z4C	12	12	11,3	88	41	18	2	4	✓
INNOV120.400.041Z4C	12	12	11,3	88	41	18	4	4	✓
INNOV160.050.040Z4C	16	16	15,2	109	60	40	0,5	4	✓
INNOV160.200.060Z4C	16	16	15,2	109	60	40	2	4	✓
INNOV160.400.060Z4C	16	16	15,2	109	60	40	4	4	✓
INNOV160.200.065Z4C	16	16	15,2	114	65	24	2	4	✓
INNOV160.200.080Z4C	16	16	15,2	128	80	24	2	4	✓
INNOV200.020.065Z4C	20	20	19,0	115	65	30	0,2	4	✓
INNOV200.200.060Z4C	20	20	19,0	110	60	30	2	4	✓
INNOV200.400.060Z4C	20	20	19,0	110	60	30	4	4	✓
INNOV200.020.100Z4C	20	20	19,0	150	100	30	0,2	4	✓
INNOV200.200.100Z4C	20	20	19,0	150	100	30	2	4	✓
INNOV200.400.100Z4C	20	20	19,0	150	100	30	4	4	✓

Shaft version in DIN6535 B , different corner radii and tool lengths on request!

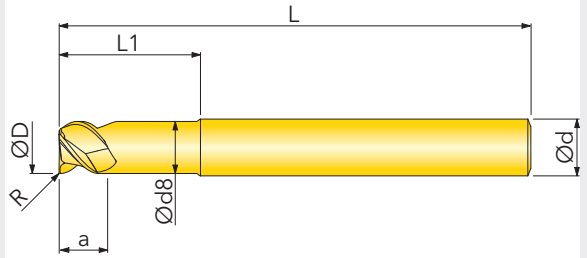
INNOVATIVE ALL HPC END MILL Z=4 (ALU)

MOLD AND DIE

ADAPTION ACC. TO DIN 6535 HA



High material removal for machining nickel-based alloys like Inconel.



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		D	0/-0,02
IN75N			+		+			d	h6

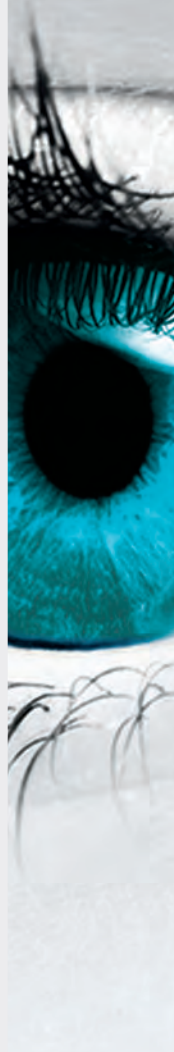
+ Preferred choice ○ Second choice ▼ Roughing ▼▼ Pre-finishing ▼▼▼ Finishing

Designation	D	d	d8	L	L1	a	R	Z
INCER060.042.015Z3	6	6	5,5	50	15	6	0,42	3
INCER080.056.020Z3	8	8	7,5	57	20	8	0,56	3
INCER100.070.025Z3	10	10	9,5	65	25	8	0,70	3
INCER120.110.030Z3	12	12	11,5	72	30	10	1,10	3
INCER160.190.035Z3	16	16	15,5	83	35	12	1,90	3
INCER200.250.040Z3	20	20	19,5	93	40	15	2,50	3

R (Programming radius)

INGRAMIC HIGHSPEED Z=3

MOLD AND DIE



DRILLS/THREAD MILLING

	D	a	Description	Code	Page
	13 - 29	2xD	QUAD DRILL PLUS Indexable drill 2D Ø13-Ø29		210
	30 - 50	2xD	QUAD DRILL PLUS Indexable drill 2D Ø30-Ø50		212
	12,5 - 27,5	3xD	QUAD DRILL PLUS Indexable drill 3D Ø12,5-Ø27,5		214
	28 - 50,5	3xD	QUAD DRILL PLUS Indexable drill 3D Ø28-Ø50,5		216
	51 - 60	3xD	QUAD DRILL PLUS Indexable drill 3D Ø51-Ø60		218
	13 - 29	4xD	QUAD DRILL PLUS Indexable drill 4D Ø13-Ø29		220
	30 - 50	4xD	QUAD DRILL PLUS Indexable drill 4D Ø30-Ø50		222
	13 - 27	5xD	QUAD DRILL PLUS Indexable drill 5D Ø13-Ø27		224
	28 - 50	5xD	QUAD DRILL PLUS Indexable drill 5D Ø28-Ø50		226
	51 - 80	2,5xD	QUAD DRILL PLUS Cartridge Indexable Drill 2,5D Ø51-Ø80		228
	51 - 80	3,5xD	QUAD DRILL PLUS Cartridge Indexable Drill 3,5D Ø51-Ø80		230
	16 - 40	1xD	QUAD DRILL PLUS BSD03A	BSD03A	232
	10 - 48	1xD	QUAD DRILL PLUS BSD03B	BSD03B	234
	15 - 48	1xD	QUAD DRILL PLUS BSE01A	BSE01A	236









Subject to printing error or technical changes.

DRILLS/THREAD MILLING

	D	a	Description	Code	Page
	9,5 - 9,9	12	RAPID THREAD End Mill Weldon Shank (a=12mm)		238
	9,9	12	RAPID THREAD End Mill Carbide Shank (a=12mm)		240
	12 - 20	14	RAPID THREAD End Mill Weldon Shank (a=14mm)		242
	13,2 - 15,2	14	RAPID THREAD End Mill Carbide Shank (a=14mm)		244
	18 - 30	21	RAPID THREAD End Mill Weldon Shank (a=21mm)		246
	21	21	RAPID THREAD End Mill Carbide Shank (a=21mm)		248
	63	21	RAPID THREAD Shell Mill (a=21mm)		250
	29 - 40	30	RAPID THREAD End Mill Weldon Shank (a=30mm)		252
	27	30	RAPID THREAD End Mill Carbide Shank (a=30mm)		254
	63 - 100	30	RAPID THREAD Shell Mill (a=30mm)		256
	48 - 50	40	RAPID THREAD End Mill Weldon Shank (a=40mm)		258
	80 - 100	40	RAPID THREAD Shell Mill (a=40mm)		260
	23	23	RAPID THREAD End Mill Weldon Shank (a=23mm)		262
	32	32	RAPID THREAD End Mill Weldon Shank (a=32mm)		264











Subject to printing error or technical changes.

DRILLS/THREAD MILLING

	D	a	Description	Code	Page
	45	37	RAPID THREAD End Mill Weldon Shank (a=37mm)		266
	63	38	RAPID THREAD Shell Mill (a=38mm)		268
	3,8 - 18	10,3 - 58,5	RAPID THREAD SC ISO-Threading with central internal Coolant		270
	3,2 - 19,5	6,8 - 42,9	RAPID THREAD SC UN-Threading with central internal Coolant		271
	7,8 - 16	14,1 - 38,1	RAPID THREAD SC BSP-Threading with central internal Coolant		272
	7,8 - 16	14,1 - 28,9	RAPID THREAD SC BSPT-Threading with central internal Coolant		273
	7,6 - 20	10,8 - 39,7	RAPID THREAD SC NPT-Threading with central internal Coolant		274
	4,8 - 15	10,5 - 33,8	RAPID THREAD SC ISO-Threading with internal Coolant in the flutes		275
	6 - 14,4	14,1 - 34,3	RAPID THREAD SC UN-Threading with internal Coolant in the flutes		276
	7,8 - 16	14,1 - 38,1	RAPID THREAD SC BSP-Threading with internal Coolant in the flutes		277
	7,6 - 10	10,8 - 16,2	RAPID THREAD SC NPT-Threading with internal Coolant in the flutes		278
	7,6 - 15,5	10,8 - 22,7	RAPID THREAD SC NPTF-Threading with internal Coolant in the flutes		279
	2,2 - 16	5,3 - 58,5	RAPID THREAD SC ISO-Threading internal		280
	10 - 12	16,5 - 21	RAPID THREAD SC ISO-Threading external		281

Subject to printing error or technical changes.

DRILLS/THREAD MILLING

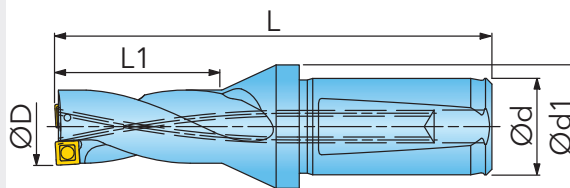
	D	a	Description	Code	Page
	4 - 16	11,3 - 42,9	RAPID THREAD SC UN-Threading internal		282
	6 - 20	9,5 - 47,3	RAPID THREAD SC BSP-Threading internal & external		283
	6 - 16	9,5 - 28,9	RAPID THREAD SC BSPT-Threading internal & external		284
	6 - 20	9,9 - 39,7	RAPID THREAD SC NPT-Threading internal & external		285
	6 - 12	9,9 - 20,9	RAPID THREAD SC NPTF-Threading internal & external		286
	1,05 - 15	-	RAPID THREAD SC ISO-Threading short internal (right version)		287
	1,15 - 11,4	-	RAPID THREAD SC UN-Threading short internal (right Version)		288
	1,55 - 11,8	-	RAPID THREAD SC ISO-Threading short internal (left version)		289
	3,15 - 11,8	-	RAPID THREAD SC ISO-Threading / Drilling short internal (left version)		290
	1,15 - 9,2	-	RAPID THREAD SC UN-Threading short internal (left version)		291

Subject to printing error or technical changes.



DRILLS/THREAD MILLING

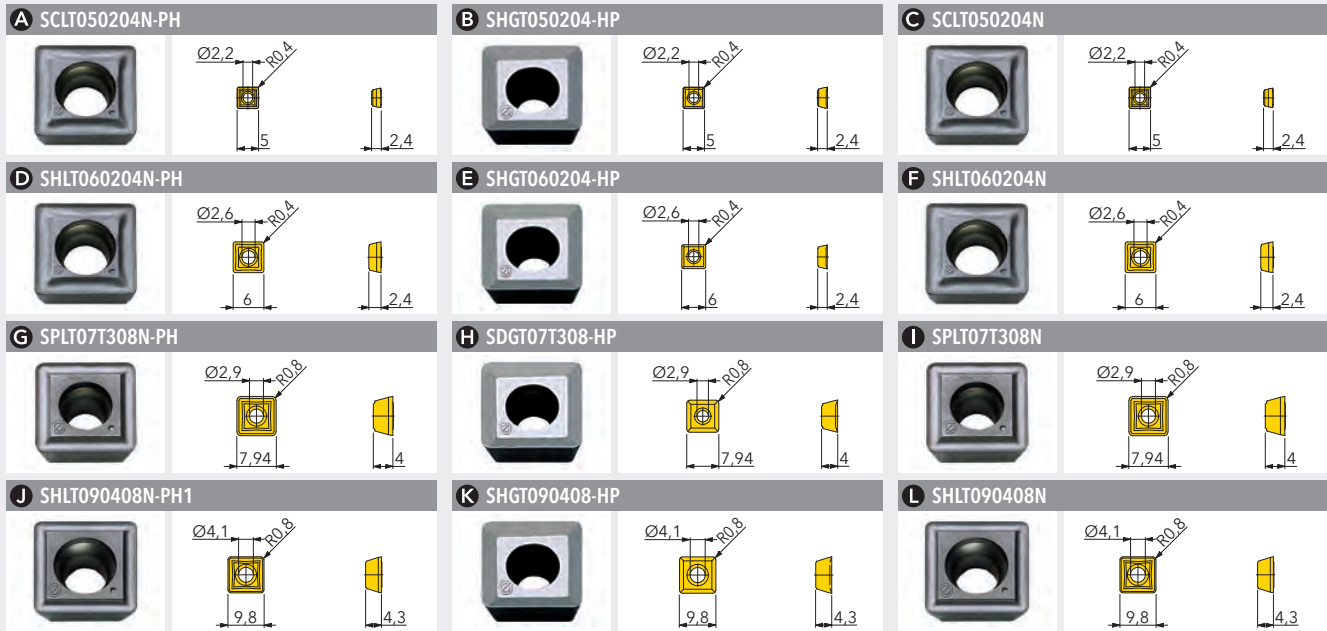
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Zeff	IK	kg	Related Insert
BS.013.002	13	20	25	44	26	2	1	✓	0,15	ABC
BS.014.002	14	20	25	46	28	2	1	✓	0,16	ABC
BS.015.004	15	20	25	49	30	2	1	✓	0,16	ABC
BS.016.005	16	25	32	52	32	2	1	✓	0,26	DEF
BS.017.003	17	25	32	54	34	2	1	✓	0,26	DEF
BS.018.005	18	25	32	57	36	2	1	✓	0,26	DEF
BS.019.004	19	25	32	59	38	2	1	✓	0,27	DEF
BS.020.007	20	25	32	63	40	2	1	✓	0,29	DEF
BS.021.003	21	25	32	65	42	2	1	✓	0,33	DEF
BS.022.007	22	25	32	67	44	2	1	✓	0,33	GHI
BS.023.008	23	25	45	71	46	2	1	✓	0,42	GHI
BS.024.009	24	25	45	74	48	2	1	✓	0,44	GHI
BS.025.012	25	25	45	77	50	2	1	✓	0,45	GHI
BS.026.008	26	25	45	79	52	2	1	✓	0,46	GHI
BS.027.008	27	25	45	81	54	2	1	✓	0,47	GHI
BS.028.006	28	25	45	84	56	2	1	✓	0,49	JKL
BS.029.007	29	32	45	86	58	2	1	✓	0,66	JKL



QUAD DRILL PLUS INDEXABLE DRILL 2D Ø13-Ø29

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SCLT050204N-PH	0,05/0,12	positive geometry R0,4			●		●				
SHGT050204-HP	0,05/0,12	non-ferrous geometry, polished R0,4	●								
SCLT050204N	0,05/0,12	cast iron geometry R0,4				●					
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4	●								
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8			●		●				
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8	●								
SPLT07T308N	0,10/0,25	cast iron geometry R0,8				●					
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					

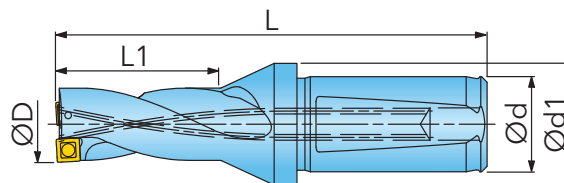
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Diameter Range	
13 - 15	SM20-043-00 (0,7Nm) DS-TP06S (TX-Plus)
16 - 21	SM22-052-00 (0,8Nm) DS-T07S
22 - 27	SM25-064-00 (1,1Nm) DS-T08S
28 - 29	SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

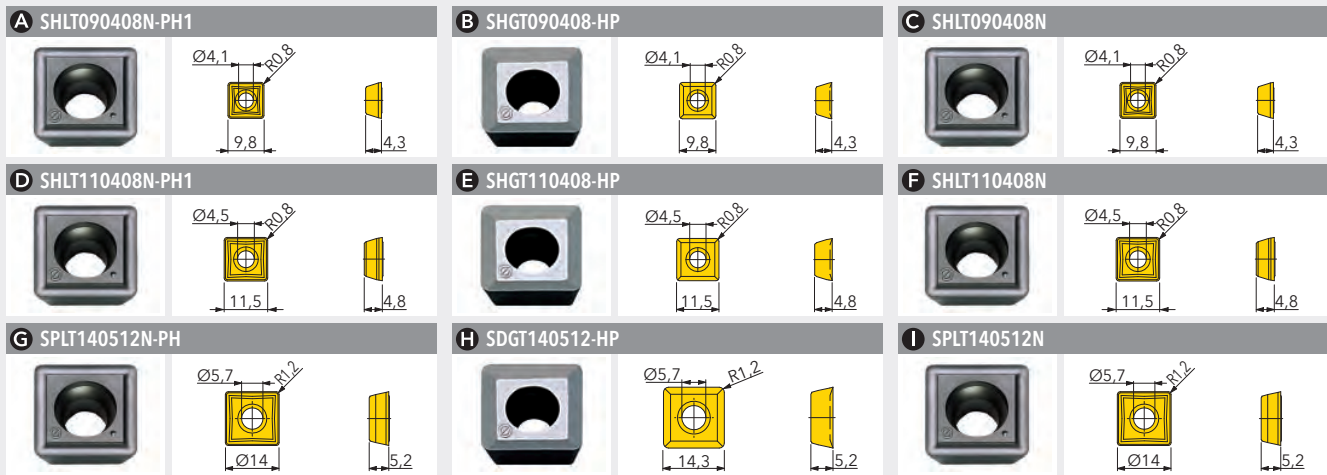
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.030.010	30	32	55	91	60	2	1	✓	0,78	ABC
BS.031.006	31	32	55	94	62	2	1	✓	0,81	ABC
BS.032.009	32	32	55	96	64	2	1	✓	0,84	ABC
BS.033.008	33	32	55	99	66	2	1	✓	0,87	ABC
BS.034.006	34	32	55	101	68	2	1	✓	0,89	DEF
BS.035.006	35	32	55	104	70	2	1	✓	0,92	DEF
BS.036.008	36	32	55	107	72	2	1	✓	0,96	DEF
BS.037.006	37	32	55	110	74	2	1	✓	0,97	DEF
BS.038.006	38	32	55	113	76	2	1	✓	1,00	DEF
BS.039.006	39	32	55	115	78	2	1	✓	1,05	DEF
BS.040.013	40	32	60	118	80	2	1	✓	1,10	DEF
BS.041.003	41	40	60	121	82	2	1	✓	1,48	DEF
BS.042.007	42	40	60	123	84	2	1	✓	1,50	GHI
BS.043.006	43	40	60	126	86	2	1	✓	1,55	GHI
BS.044.003	44	40	60	128	88	2	1	✓	1,60	GHI
BS.045.003	45	40	60	132	90	2	1	✓	1,66	GHI
BS.046.003	46	40	60	135	92	2	1	✓	1,71	GHI
BS.047.003	47	40	60	137	94	2	1	✓	1,76	GHI
BS.048.004	48	40	60	140	96	2	1	✓	1,84	GHI
BS.049.003	49	40	60	142	98	2	1	✓	1,86	GHI
BS.050.003	50	40	60	145	100	2	1	✓	1,93	GHI



QUAD DRILL PLUS INDEXABLE DRILL 2D Ø30-Ø50

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8		●							
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8		●							
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2		●							
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

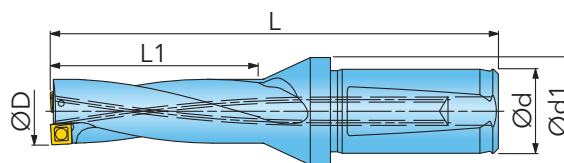
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Diameter Range	
30 - 33	SM35-088-60 (3,0Nm) DS-T10S
34 - 41	SM40-093-20 (4,5Nm) DS-T15S
42 - 50	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

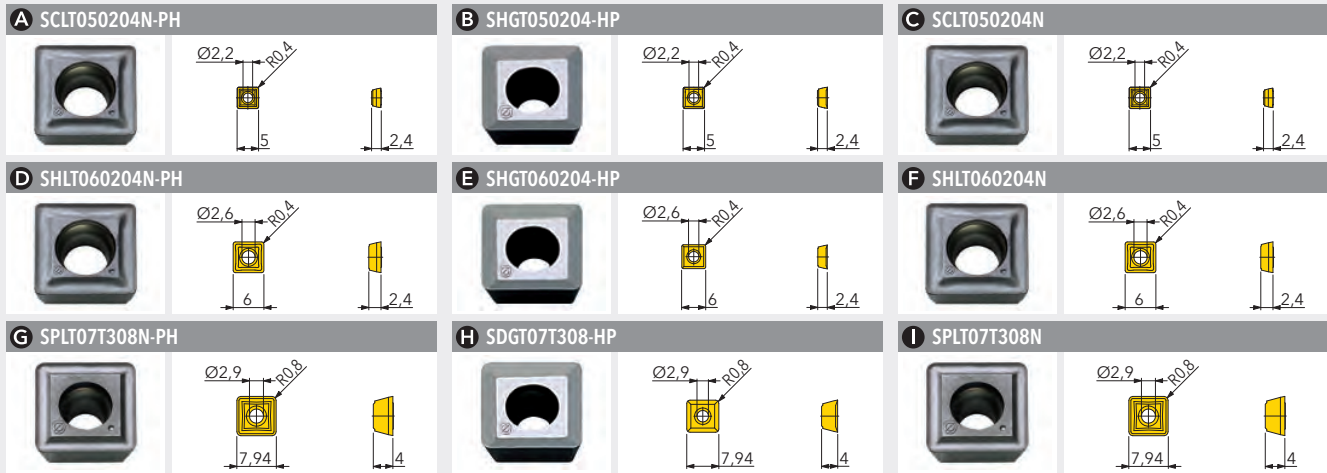
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.013.003	12,5	20	25	57	38	2	1	✓	0,16	ABC
BS.013.004	13	20	25	57	39	2	1	✓	0,16	ABC
BS.014.003	13,5	20	25	60	41	2	1	✓	0,16	ABC
BS.014.004	14	20	25	60	42	2	1	✓	0,17	ABC
BS.015.005	14,5	20	25	64	44	2	1	✓	0,17	ABC
BS.015.006	15	20	25	64	45	2	1	✓	0,17	ABC
BS.016.010	15,5	25	32	68	47	2	1	✓	0,29	DEF
BS.016.006	16	25	32	68	48	2	1	✓	0,30	DEF
BS.017.006	16,5	25	32	71	50	2	1	✓	0,30	DEF
BS.017.004	17	25	32	71	51	2	1	✓	0,30	DEF
BS.018.009	17,5	25	32	75	53	2	1	✓	0,31	DEF
BS.018.006	18	25	32	75	54	2	1	✓	0,32	DEF
BS.019.007	18,5	25	32	78	55	2	1	✓	0,32	DEF
BS.019.005	19	25	32	78	57	2	1	✓	0,32	DEF
BS.020.012	19,5	25	32	83	59	2	1	✓	0,33	DEF
BS.020.008	20	25	32	83	60	2	1	✓	0,34	DEF
BS.021.006	20,5	25	32	86	61	2	1	✓	0,35	DEF
BS.021.004	21	25	32	86	63	2	1	✓	0,36	DEF
BS.022.006	21,5	25	32	89	64	2	1	✓	0,37	DEF
BS.022.008	22	25	32	89	66	2	1	✓	0,37	GHI
BS.023.007	22,5	25	45	94	67	2	1	✓	0,42	GHI
BS.023.009	23	25	45	94	69	2	1	✓	0,45	GHI
BS.024.010	23,5	25	45	98	70	2	1	✓	0,47	GHI
BS.024.011	24	25	45	98	72	2	1	✓	0,48	GHI
BS.025.013	24,5	25	45	102	74	2	1	✓	0,49	GHI
BS.025.014	25	25	45	102	75	2	1	✓	0,50	GHI
BS.026.013	25,5	25	45	105	78	2	1	✓	0,51	GHI
BS.026.009	26	25	45	105	78	2	1	✓	0,52	GHI
BS.027.009	26,5	25	45	108	79	2	1	✓	0,52	GHI
BS.027.010	27	25	45	108	81	2	1	✓	0,53	GHI
BS.028.009	27,5	25	45	112	84	2	1	✓	0,54	GHI

QUAD DRILL PLUS INDEXABLE DRILL 3D Ø12,5-Ø27,5

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SCLT050204N-PH	0,05/0,12	positive geometry R0,4			●		●				
SHGT050204-HP	0,05/0,12	non-ferrous geometry, polished R0,4		●							
SCLT050204N	0,05/0,12	cast iron geometry R0,4				●					
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4		●							
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8			●		●				
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8		●							
SPLT07T308N	0,10/0,25	cast iron geometry R0,8				●					

● = P ● = M ● = K ● = N ● = S ○ = H



SPARE PARTS



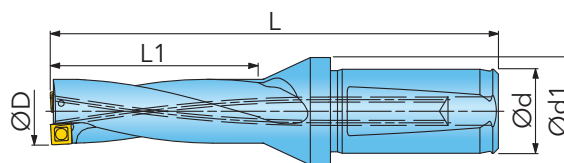
Diameter Range

12,5 - 15	SM20-043-00 (0,7Nm) DS-TP06S (TX-Plus)
15,5 - 21,5	SM22-052-00 (0,8Nm) DS-T07S
22 - 27,5	SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

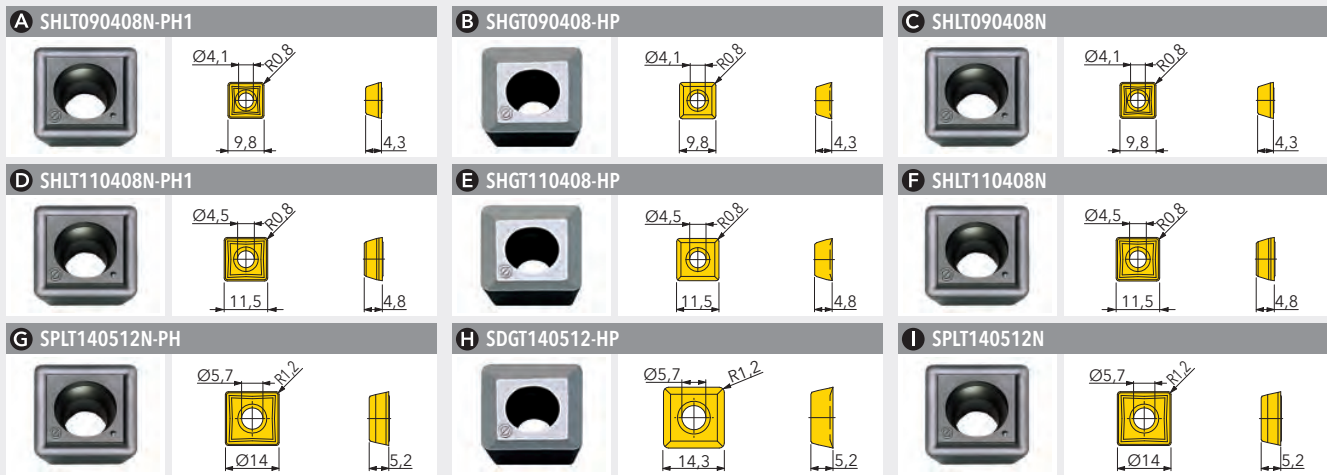
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.028.007	28	25	45	112	84	2	1	✓	0,56	ABC
BS.029.008	28,5	32	45	115	85	2	1	✓	0,72	ABC
BS.029.009	29	32	45	115	87	2	1	✓	0,75	ABC
BS.030.013	29,5	32	55	121	88	2	1	✓	0,84	ABC
BS.030.011	30	32	55	121	90	2	1	✓	0,87	ABC
BS.031.007	31	32	55	125	93	2	1	✓	0,90	ABC
BS.032.010	32	32	55	128	96	2	1	✓	0,93	ABC
BS.033.009	33	32	55	132	99	2	1	✓	0,97	ABC
BS.034.007	34	32	55	135	102	2	1	✓	1,01	DEF
BS.035.010	34,5	32	55	139	104	2	1	✓	1,04	DEF
BS.035.007	35	32	55	139	105	2	1	✓	1,05	DEF
BS.036.009	36	32	55	143	108	2	1	✓	1,10	DEF
BS.037.007	37	32	55	147	111	2	1	✓	1,11	DEF
BS.038.010	37,5	32	55	151	113	2	1	✓	1,14	DEF
BS.038.007	38	32	55	151	114	2	1	✓	1,17	DEF
BS.039.007	39	32	55	154	117	2	1	✓	1,23	DEF
BS.040.010	40	32	60	158	120	2	1	✓	1,31	DEF
BS.041.007	40,5	32	60	162	122	2	1	✓	1,39	DEF
BS.041.004	41	40	60	162	123	2	1	✓	1,48	DEF
BS.042.008	42	40	60	165	126	2	1	✓	1,62	GHI
BS.043.007	43	40	60	169	129	2	1	✓	1,78	GHI
BS.044.004	44	40	60	172	132	2	1	✓	1,83	GHI
BS.045.004	45	40	60	177	135	2	1	✓	1,92	GHI
BS.046.004	46	40	60	181	138	2	1	✓	1,99	GHI
BS.047.006	46,5	40	60	184	140	2	1	✓	1,96	GHI
BS.047.004	47	40	60	184	141	2	1	✓	2,05	GHI
BS.048.005	48	40	60	188	144	2	1	✓	2,11	GHI
BS.049.004	49	40	60	191	147	2	1	✓	2,16	GHI
BS.050.004	50	40	60	195	150	2	1	✓	2,26	GHI
BS.051.003	50,5	40	60	198	152	2	1	✓	2,31	GHI

QUAD DRILL PLUS INDEXABLE DRILL 3D Ø28-Ø50,5



DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8	●								
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2	●								
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

● = P ● = M ● = K ● = N ● = S ○ = H

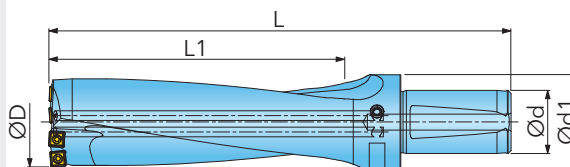


SPARE PARTS	
① 	② 
Diameter Range	
28 - 33	SM35-088-60 (3,0Nm) DS-T10S
34 - 41	SM40-093-20 (4,5Nm) DS-T15S
42 - 50,5	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

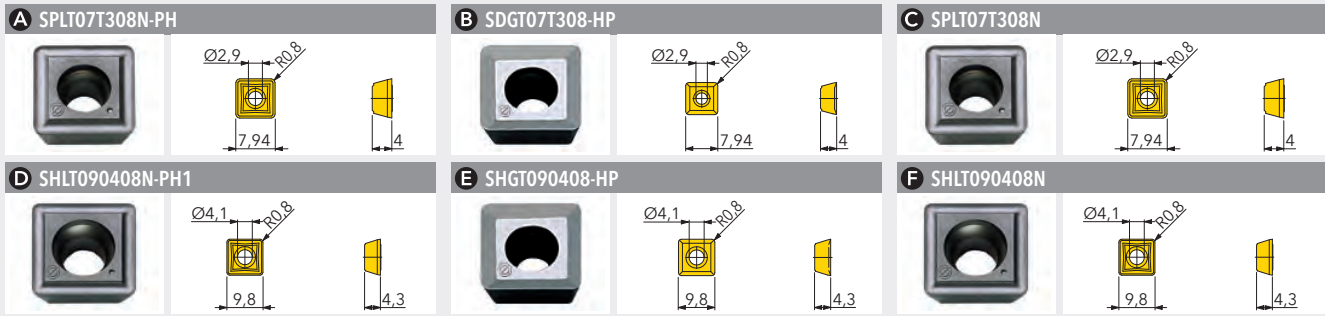
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}			Related Insert
BS.051.002	51	40	75	199	153	4	1	✓	2,25	A B C
BS.052.001	52	40	75	203	156	4	1	✓	2,35	A B C
BS.053.001	53	40	75	206	159	4	1	✓	2,45	A B C
BS.054.002	54	40	75	208	162	4	1	✓	2,55	A B C
BS.055.001	55	40	75	211	165	4	1	✓	2,65	A B C
BS.056.001	56	40	75	215	168	4	1	✓	2,75	D E F
BS.057.002	57	40	75	220	171	4	1	✓	2,85	D E F
BS.058.001	58	40	75	224	174	4	1	✓	2,95	D E F
BS.059.001	59	40	75	227	177	4	1	✓	3,07	D E F
BS.060.001	60	40	75	231	180	4	1	✓	3,15	D E F

QUAD DRILL PLUS INDEXABLE DRILL 3D Ø51 - Ø60

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8			●		●				
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8	●								
SPLT07T308N	0,10/0,25	cast iron geometry R0,8				●					
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					

● = P ● = M ● = K ● = N ● = S ○ = H

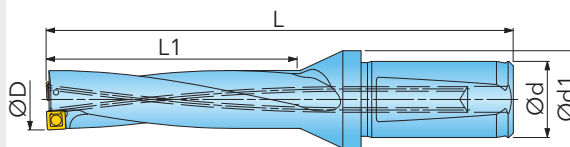


SPARE PARTS	
①	②
Diameter Range	
51 - 55	SM25-064-00 (1,1Nm) DS-T08S
56 - 60	SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

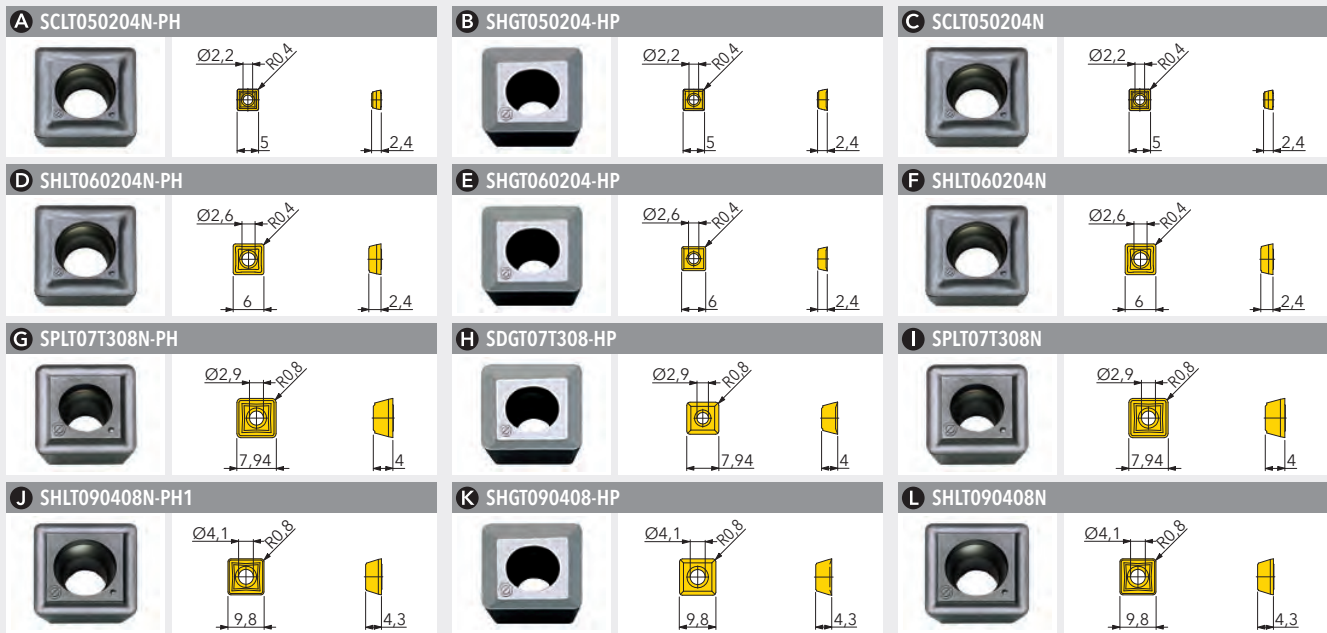
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.013.006	13	20	25	70	52	2	1	✓	0,17	A B C
BS.014.006	14	20	25	74	56	2	1	✓	0,18	A B C
BS.015.008	15	20	25	79	60	2	1	✓	0,18	A B C
BS.016.007	16	25	32	84	64	2	1	✓	0,28	D E F
BS.017.005	17	25	32	88	68	2	1	✓	0,32	D E F
BS.018.007	18	25	32	93	72	2	1	✓	0,34	D E F
BS.019.006	19	25	32	97	76	2	1	✓	0,35	D E F
BS.020.009	20	25	32	103	80	2	1	✓	0,37	D E F
BS.021.005	21	25	32	107	84	2	1	✓	0,39	D E F
BS.022.009	22	25	32	111	88	2	1	✓	0,40	G H I
BS.023.010	23	25	45	117	92	2	1	✓	0,48	G H I
BS.024.012	24	25	45	122	96	2	1	✓	0,52	G H I
BS.025.015	25	25	45	127	100	2	1	✓	0,54	G H I
BS.026.010	26	25	45	131	104	2	1	✓	0,57	G H I
BS.027.011	27	25	45	135	108	2	1	✓	0,59	G H I
BS.028.008	28	25	45	140	112	2	1	✓	0,62	J K L
BS.029.010	29	32	45	144	116	2	1	✓	0,80	J K L



QUAD DRILL PLUS INDEXABLE DRILL 4D Ø13 - Ø29

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SCLT050204N-PH	0,05/0,12	positive geometry R0,4			●		●				
SHGT050204-HP	0,05/0,12	non-ferrous geometry, polished R0,4	●								
SCLT050204N	0,05/0,12	cast iron geometry R0,4				●					
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4	●								
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8			●		●				
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8	●								
SPLT07T308N	0,10/0,25	cast iron geometry R0,8				●					
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					

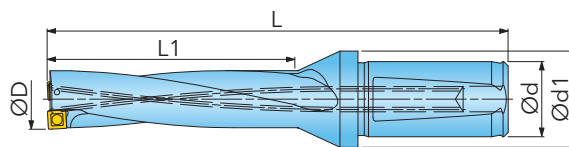
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Diameter Range	
13 - 15	SM20-043-00 (0,7Nm) DS-TP06S (TX-Plus)
16 - 21	SM22-052-00 (0,8Nm) DS-T07S
22 - 27	SM25-064-00 (1,1Nm) DS-T08S
28 - 29	SM35-088-60 (3,0Nm) DS-T10S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

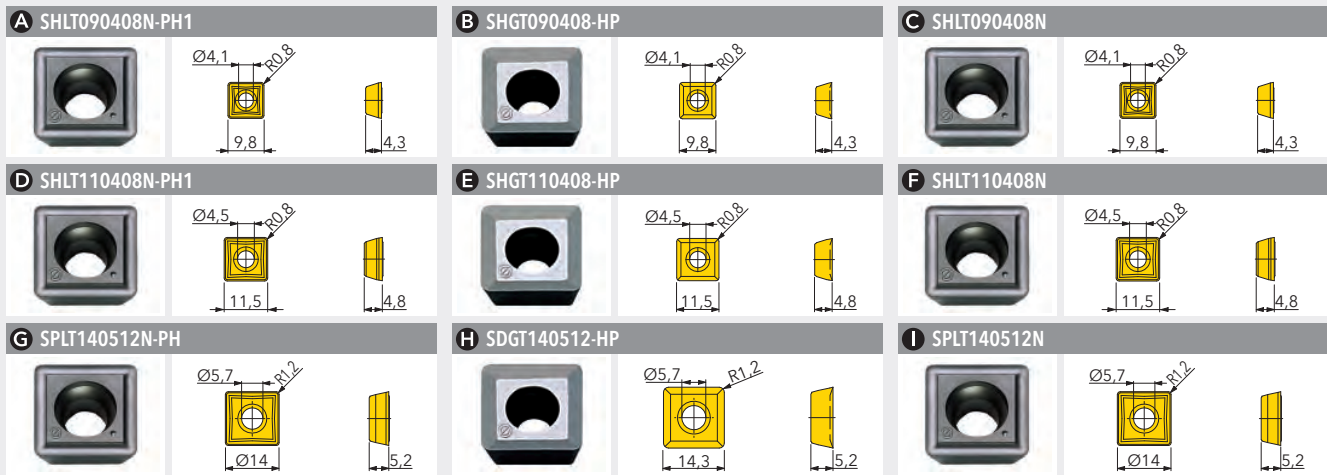
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.030.012	30	32	55	151	120	2	1	✓	0,94	ABC
BS.031.008	31	32	55	156	124	2	1	✓	0,97	ABC
BS.032.011	32	32	55	160	128	2	1	✓	1,04	ABC
BS.033.010	33	32	55	165	132	2	1	✓	1,09	ABC
BS.034.008	34	32	55	169	136	2	1	✓	1,13	DEF
BS.035.008	35	32	55	174	140	2	1	✓	1,17	DEF
BS.036.010	36	32	55	179	144	2	1	✓	1,23	DEF
BS.037.008	37	32	55	184	148	2	1	✓	1,29	DEF
BS.038.008	38	32	55	189	152	2	1	✓	1,34	DEF
BS.039.008	39	32	55	193	156	2	1	✓	1,41	DEF
BS.040.011	40	32	60	198	160	2	1	✓	1,50	DEF
BS.041.005	41	40	60	203	164	2	1	✓	1,86	DEF
BS.042.009	42	40	60	207	168	2	1	✓	1,94	GHI
BS.043.008	43	40	60	212	172	2	1	✓	2,02	GHI
BS.044.005	44	40	60	216	176	2	1	✓	2,10	GHI
BS.045.005	45	40	60	222	180	2	1	✓	2,19	GHI
BS.046.005	46	40	60	227	184	2	1	✓	2,30	GHI
BS.047.005	47	40	60	231	188	2	1	✓	2,37	GHI
BS.048.006	48	40	60	236	192	2	1	✓	2,47	GHI
BS.049.005	49	40	60	240	196	2	1	✓	2,59	GHI
BS.050.005	50	40	60	245	200	2	1	✓	2,64	GHI

QUAD DRILL PLUS INDEXABLE DRILL 4D Ø30-Ø50



DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8		●							
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8		●							
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2		●							
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

● = P ● = M ● = K ● = N ● = S ○ = H

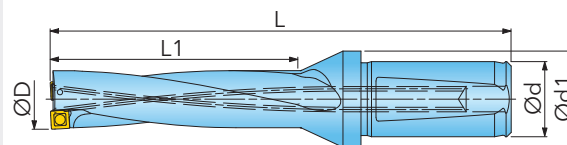


SPARE PARTS	
① 	② 
Diameter Range	
30 - 33	SM35-088-60 (3,0Nm) DS-T10S
34 - 41	SM40-093-20 (4,5Nm) DS-T15S
42 - 50	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

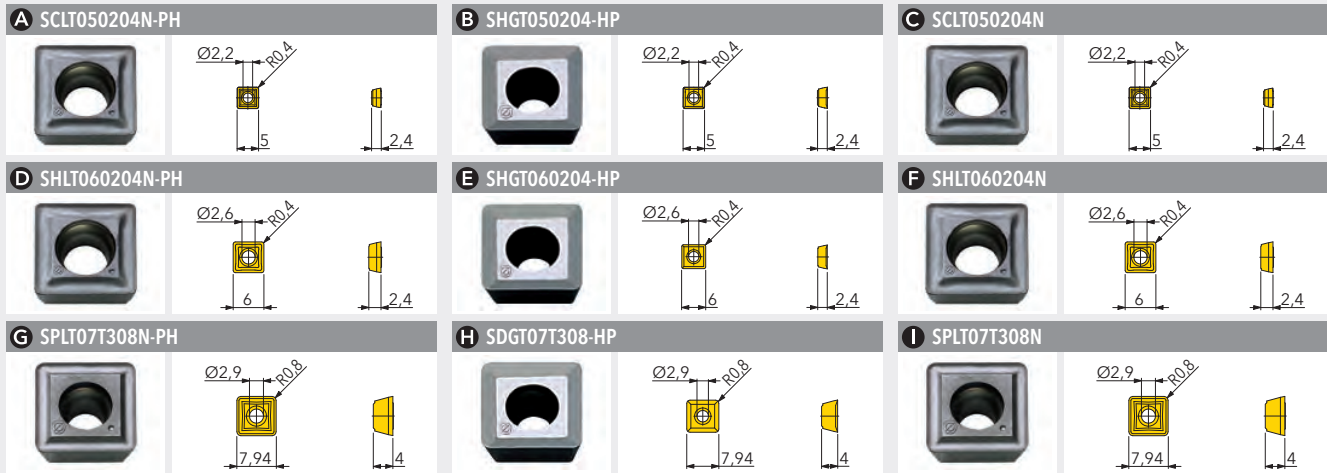
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.013.008	13	20	25	83	65	2	1	✓	0,26	A B C
BS.014.007	14	20	25	88	70	2	1	✓	0,28	A B C
BS.015.010	15	20	25	94	75	2	1	✓	0,30	A B C
BS.016.014	16	25	32	100	80	2	1	✓	0,32	D E F
BS.017.007	17	25	32	105	85	2	1	✓	0,34	D E F
BS.018.011	18	25	32	111	90	2	1	✓	0,36	D E F
BS.019.008	19	25	32	116	95	2	1	✓	0,38	D E F
BS.020.016	20	25	32	123	100	2	1	✓	0,40	D E F
BS.021.007	21	25	32	128	105	2	1	✓	0,42	D E F
BS.022.010	22	25	32	133	110	2	1	✓	0,44	G H I
BS.023.011	23	25	45	140	115	2	1	✓	0,51	G H I
BS.024.014	24	25	45	146	120	2	1	✓	0,56	G H I
BS.025.018	25	25	45	152	125	2	1	✓	0,59	G H I
BS.026.012	26	25	45	157	130	2	1	✓	0,62	G H I
BS.027.012	27	25	45	162	135	2	1	✓	0,65	G H I

QUAD DRILL PLUS INDEXABLE DRILL 5D Ø13 - Ø27

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SCLT050204N-PH	0,05/0,12	positive geometry R0,4			●		●				
SHGT050204-HP	0,05/0,12	non-ferrous geometry, polished R0,4		●							
SCLT050204N	0,05/0,12	cast iron geometry R0,4				●					
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4		●							
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8			●		●				
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8		●							
SPLT07T308N	0,10/0,25	cast iron geometry R0,8				●					

● = P ● = M ● = K ● = N ● = S ○ = H

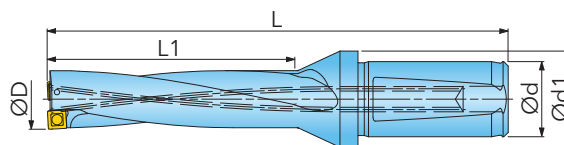


SPARE PARTS	
①	②
Diameter Range	
13 - 15	SM20-043-00 (0,7Nm) DS-TP06S (TX-Plus)
16 - 21	SM22-052-00 (0,8Nm) DS-T07S
22 - 27	SM25-064-00 (1,1Nm) DS-T08S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

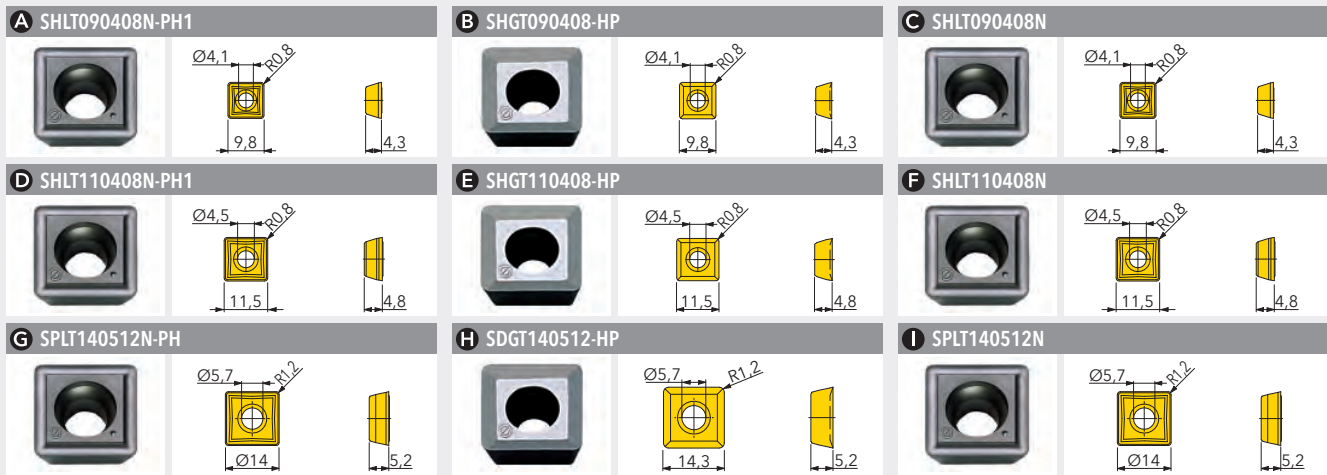
ADAPTION ACC. TO DIN 1835 E



Designation	D	d	d1	L	L1	Z	Z _{eff}	IK	kg	Related Insert
BS.028.010	28	25	45	168	140	2	1	✓	0,68	ABC
BS.029.011	29	32	45	173	145	2	1	✓	0,86	ABC
BS.030.015	30	32	55	181	150	2	1	✓	1,04	ABC
BS.031.009	31	32	55	187	155	2	1	✓	1,08	ABC
BS.032.014	32	32	55	192	160	2	1	✓	1,14	ABC
BS.033.012	33	32	55	198	165	2	1	✓	1,20	ABC
BS.034.009	34	32	55	203	170	2	1	✓	1,26	DEF
BS.035.009	35	32	55	209	175	2	1	✓	1,29	DEF
BS.036.012	36	32	55	215	180	2	1	✓	1,39	DEF
BS.037.009	37	32	55	221	185	2	1	✓	1,40	DEF
BS.038.009	38	32	55	227	190	2	1	✓	1,50	DEF
BS.039.009	39	32	55	232	195	2	1	✓	1,56	DEF
BS.040.014	40	32	60	238	200	2	1	✓	1,68	DEF
BS.041.006	41	40	60	244	205	2	1	✓	2,08	DEF
BS.050.006	50	50	75	297	250	2	1	✓	3,81	GHI

QUAD DRILL PLUS INDEXABLE DRILL 5D Ø28 - Ø50

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8	●								
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2	●								
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

● = P ● = M ● = K ● = N ● = S ○ = H

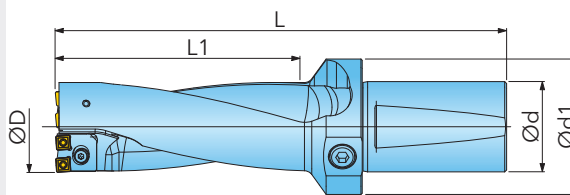


SPARE PARTS	
①	②
Diameter Range	
28 - 33	SM35-088-60 (3,0Nm) DS-T10S
34 - 41	SM40-093-20 (4,5Nm) DS-T15S
50	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 E

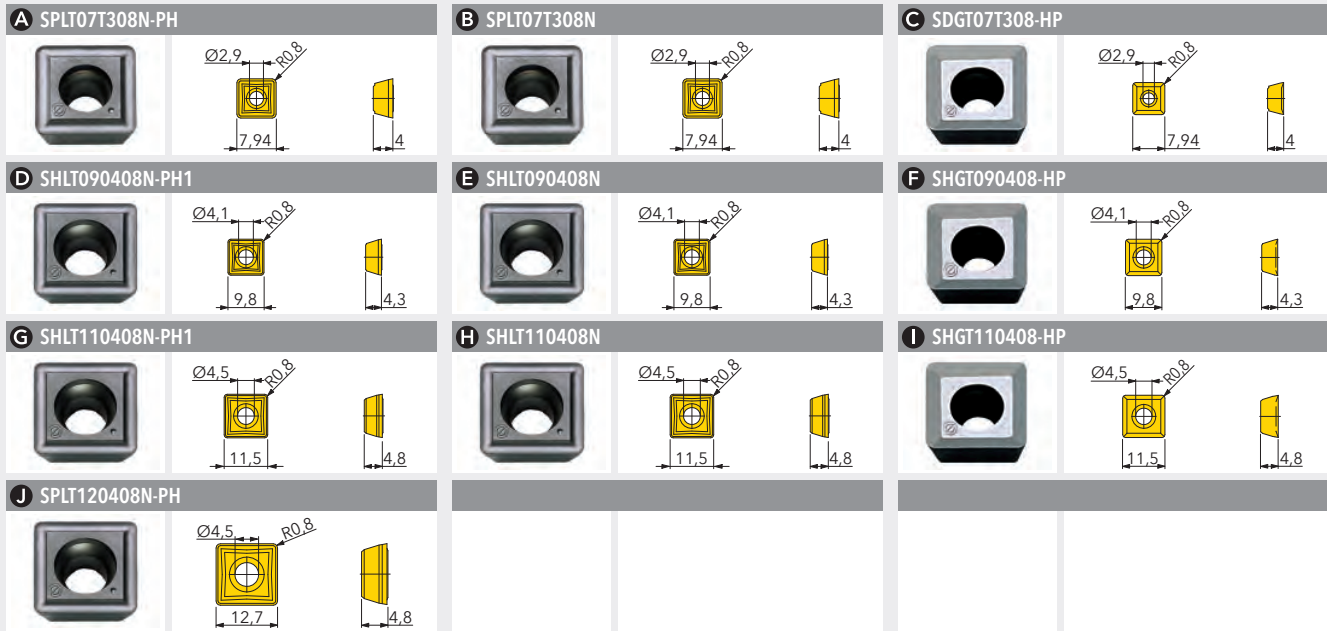


Designation	D	D min.	D max.	d	d1	L	L1	Z	Z _{eff}	Setting Plate	IK	kg	Related Insert
BS.051.004	51	51	53	50	75	170	133	4	1	-	✓	2,89	ABC
BS.051.004	52	51	53	50	75	170	133	4	1	PA-5108	✓	2,89	ABC
BS.051.004	53	51	53	50	75	170	133	4	1	PA-5109	✓	2,89	ABC
BS.054.003	54	54	56	50	75	180	140	4	1	-	✓	3,20	ABC
BS.054.003	55	54	56	50	75	180	140	4	1	PA-5108	✓	3,20	ABC
BS.054.003	56	54	56	50	75	180	140	4	1	PA-5109	✓	3,20	ABC
BS.057.003	57	57	62	50	75	201	155	4	1	-	✓	3,51	DEF
BS.057.003	58	57	62	50	75	201	155	4	1	PA-5110	✓	3,51	DEF
BS.057.003	59	57	62	50	75	201	155	4	1	PA-5111	✓	3,51	DEF
BS.057.003	60	57	62	50	75	201	155	4	1	PA-5112	✓	3,51	DEF
BS.057.003	61	57	62	50	75	201	155	4	1	PA-5113	✓	3,51	DEF
BS.057.003	62	57	62	50	75	201	155	4	1	PA-5114	✓	3,51	DEF
BS.063.002	63	63	66	50	75	215	165	4	1	-	✓	4,17	DEF
BS.063.002	64	63	66	50	75	215	165	4	1	PA-5110	✓	4,17	DEF
BS.063.002	65	63	66	50	75	215	165	4	1	PA-5111	✓	4,17	DEF
BS.063.002	66	63	66	50	75	215	165	4	1	PA-5112	✓	4,17	DEF
BS.067.002	67	67	73	50	75	240	183	4	1	-	✓	4,90	GHI
BS.067.002	68	67	73	50	75	240	183	4	1	PA-5115	✓	4,90	GHI
BS.067.002	69	67	73	50	75	240	183	4	1	PA-5116	✓	4,90	GHI
BS.067.002	70	67	73	50	75	240	183	4	1	PA-5117	✓	4,90	GHI
BS.067.002	71	67	73	50	75	240	183	4	1	PA-5118	✓	4,90	GHI
BS.067.002	72	67	73	50	75	240	183	4	1	PA-5119	✓	4,90	GHI
BS.067.002	73	67	73	50	75	240	183	4	1	PA-5120	✓	4,90	GHI
BS.074.001	74	74	80	50	75	250	200	4	1	-	✓	5,87	J
BS.074.001	75	74	80	50	75	250	200	4	1	PA-5115	✓	5,87	J
BS.074.001	76	74	80	50	75	250	200	4	1	PA-5116	✓	5,87	J
BS.074.001	77	74	80	50	75	250	200	4	1	PA-5117	✓	5,87	J
BS.074.001	78	74	80	50	75	250	200	4	1	PA-5118	✓	5,87	J
BS.074.001	79	74	80	50	75	250	200	4	1	PA-5119	✓	5,87	J
BS.074.001	80	74	80	50	75	250	200	4	1	PA-5120	✓	5,87	J

Included in delivery: body, cartridges and setting plates

QUAD DRILL PLUS CARTRIDGE INDEXABLE DRILL 2,5D Ø51 - Ø80

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8									
SPLT07T308N	0,10/0,25	cast iron geometry R0,8									
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8									
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8									
SHLT090408N	0,12/0,25	cast iron geometry R0,8									
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8									
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8									
SHLT110408N	0,16/0,28	cast iron geometry R0,8									
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8									
SPLT120408N-PH	0,08/0,28	positive geometry R0,8									

● = P ● = M ● = K ● = N ● = S ○ = H



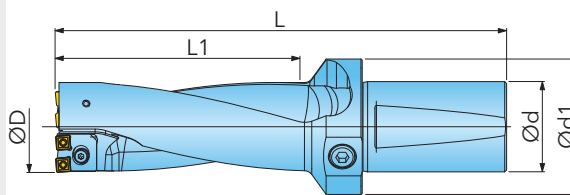
Diameter Range

51 - 53	55E212R01	55E192R01	SM25-064-00 (1,1Nm) DS-T08S	SH M4x0.7x16	MW 4.3X8
54 - 56	55E223R01	55E213R01	SM25-064-00 (1,1Nm) DS-T08S	SH M4x0.7x16	MW 4.3X8
57 - 62	55F243R02	55F233R01	SM35-088-60 (3,0Nm) DS-T10S	SH M5X0.8X16 (6,5Nm)	MW 5.5X10
63 - 66	55F263R01	55F243R03	SM35-088-60 (3,0Nm) DS-T10S	SH M5X0.8X16 (6,5Nm)	MW 5.5X10
67 - 73	55G294R01	55G264R01	SM40-093-20 (4,5Nm) DS-T15S	SH M6x1.0x20	MW 6.4X12
74 - 80	55H314R00	55H294R00	SM40-093-20 (4,5Nm) DS-T15S	SH M6x1.0x20	MW 6.4X12

① = Peripheral cartridge ② = Center cartridge ③ = Insert screw ④ = Screw driver ⑤ = Clamp screw ⑥ = Shim

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 E

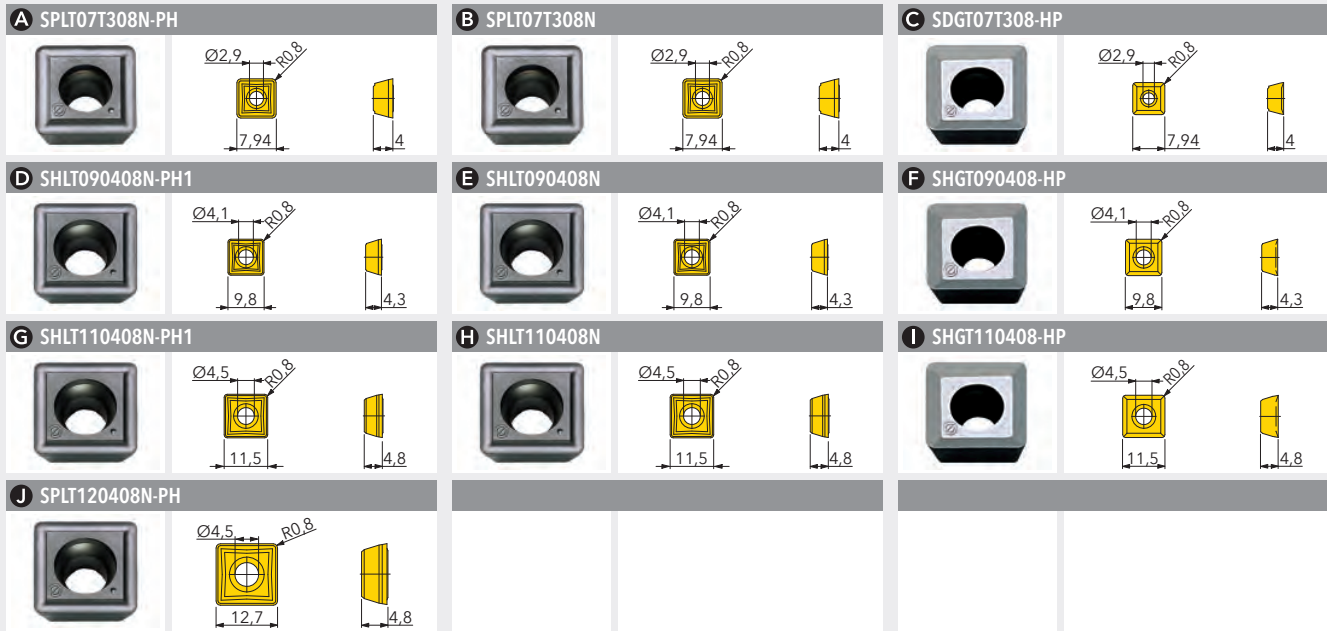


Designation	D	D min.	D max.	d	d1	L	L1	Z	Z _{eff}	Setting Plate			Related Insert
BS.051.005	51	51	53	50	75	223	186	4	1	-	✓	3,66	A B C
BS.051.005	52	51	53	50	75	223	186	4	1	PA-5108	✓	3,66	A B C
BS.051.005	53	51	53	50	75	223	186	4	1	PA-5109	✓	3,66	A B C
BS.054.004	54	54	56	50	75	236	196	4	1	-	✓	3,98	A B C
BS.054.004	55	54	56	50	75	236	196	4	1	PA-5108	✓	3,98	A B C
BS.054.004	56	54	56	50	75	236	196	4	1	PA-5109	✓	3,98	A B C
BS.057.004	57	57	62	50	75	263	217	4	1	-	✓	4,28	D E F
BS.057.004	58	57	62	50	75	263	217	4	1	PA-5110	✓	4,28	D E F
BS.057.004	59	57	62	50	75	263	217	4	1	PA-5111	✓	4,28	D E F
BS.057.004	60	57	62	50	75	263	217	4	1	PA-5112	✓	4,28	D E F
BS.057.004	61	57	62	50	75	263	217	4	1	PA-5113	✓	4,28	D E F
BS.057.004	62	57	62	50	75	263	217	4	1	PA-5114	✓	4,28	D E F
BS.063.003	63	63	66	50	75	281	231	4	1	-	✓	5,60	D E F
BS.063.003	64	63	66	50	75	281	231	4	1	PA-5110	✓	5,60	D E F
BS.063.003	65	63	66	50	75	281	231	4	1	PA-5111	✓	5,60	D E F
BS.063.003	66	63	66	50	75	281	231	4	1	PA-5112	✓	5,60	D E F
BS.067.003	67	67	73	50	75	313	256	4	1	-	✓	6,40	G H I
BS.067.003	68	67	73	50	75	313	256	4	1	PA-5115	✓	6,40	G H I
BS.067.003	69	67	73	50	75	313	256	4	1	PA-5116	✓	6,40	G H I
BS.067.003	70	67	73	50	75	313	256	4	1	PA-5117	✓	6,40	G H I
BS.067.003	71	67	73	50	75	313	256	4	1	PA-5118	✓	6,40	G H I
BS.067.003	72	67	73	50	75	313	256	4	1	PA-5119	✓	6,40	G H I
BS.067.003	73	67	73	50	75	313	256	4	1	PA-5120	✓	6,40	G H I
BS.074.002	74	74	80	50	75	330	280	4	1	-	✓	7,66	J
BS.074.002	75	74	80	50	75	330	280	4	1	PA-5115	✓	7,66	J
BS.074.002	76	74	80	50	75	330	280	4	1	PA-5116	✓	7,66	J
BS.074.002	77	74	80	50	75	330	280	4	1	PA-5117	✓	7,66	J
BS.074.002	78	74	80	50	75	330	280	4	1	PA-5118	✓	7,66	J
BS.074.002	79	74	80	50	75	330	280	4	1	PA-5119	✓	7,66	J
BS.074.002	80	74	80	50	75	330	280	4	1	PA-5120	✓	7,66	J

Included in delivery: body, cartridges and setting plates

QUAD DRILL PLUS CARTRIDGE INDEXABLE DRILL 3,5D Ø51 - Ø80

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8									
SPLT07T308N	0,10/0,25	cast iron geometry R0,8									
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8									
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8									
SHLT090408N	0,12/0,25	cast iron geometry R0,8									
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8									
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8									
SHLT110408N	0,16/0,28	cast iron geometry R0,8									
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8									
SPLT120408N-PH	0,08/0,28	positive geometry R0,8									

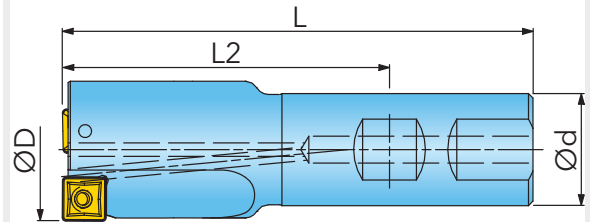
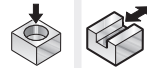
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS						
Diameter Range						
51 - 53	55E212R01	55E192R01	SM25-064-00 (1,1Nm)	DS-T08S	SH M4x0.7x16	MW 4.3X8
54 - 56	55E223R01	55E213R01	SM25-064-00 (1,1Nm)	DS-T08S	SH M4x0.7x16	MW 4.3X8
57 - 62	55F243R02	55F233R01	SM35-088-60 (3,0Nm)	DS-T10S	SH M5X0.8X16 (6,5Nm)	MW 5.5X10
63 - 66	55F263R01	55F243R03	SM35-088-60 (3,0Nm)	DS-T10S	SH M5X0.8X16 (6,5Nm)	MW 5.5X10
67 - 73	55G294R01	55G264R01	SM40-093-20 (4,5Nm)	DS-T15S	SH M6x1.0x20	MW 6.4X12
74 - 80	55H314R00	55H294R00	SM40-093-20 (4,5Nm)	DS-T15S	SH M6x1.0x20	MW 6.4X12

① = Peripheral cartridge ② = Center cartridge ③ = Insert screw ④ = Screw driver ⑤ = Clamp screw ⑥ = Shim

DRILLS/THREAD MILLING

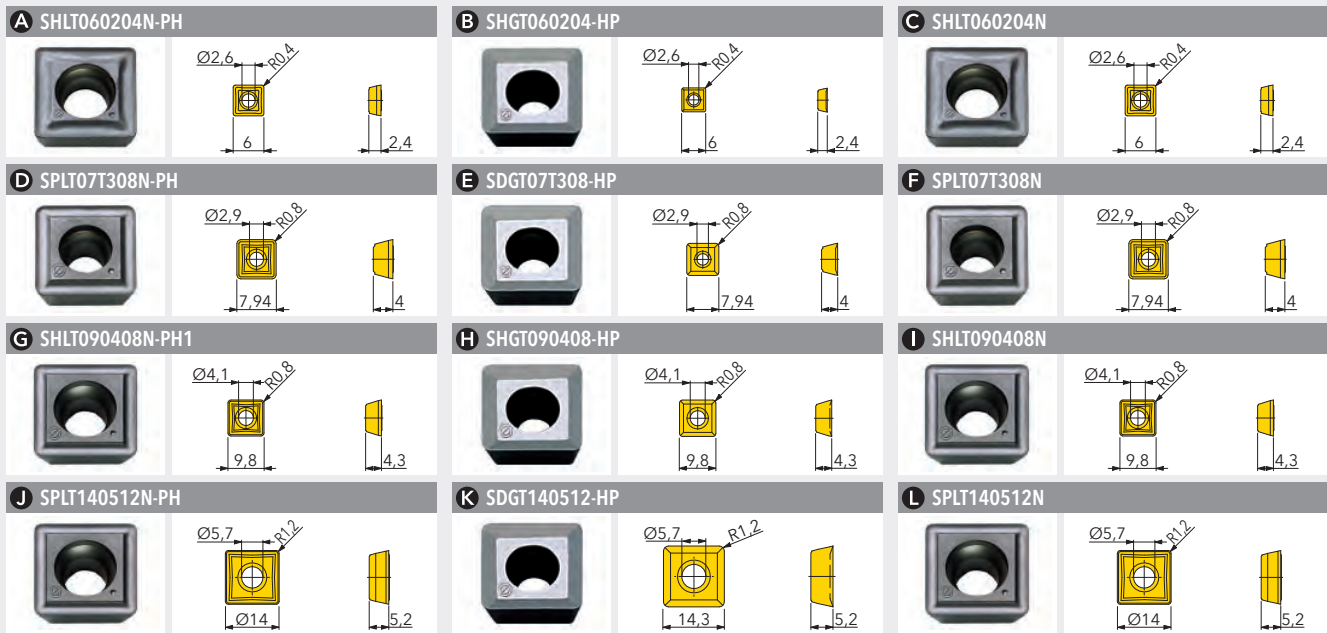
ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	L	L1	L2	a	Z	Zeff	IK	kg	Related Insert
BS.016.008	16	20	75	16	50	5,4	2	1	✓	0,14	A B C
BS.020.011	20	20	85	20	60	5,4	2	1	✓	0,16	A B C
BS.025.010	25	25	95	25	63	7,0	2	1	✓	0,28	D E F
BS.030.009	30	25	105	30	73	8,9	2	1	✓	0,35	G H I
BS.032.008	32	25	105	32	73	8,9	2	1	✓	0,37	G H I
BS.040.009	40	32	120	40	84	13,0	2	1	✓	0,68	J K L



QUAD DRILL PLUS BSD03A

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT060204N-PH	0,06/0,20	positive geometry R0,4									
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4									
SHLT060204N	0,08/0,25	cast iron geometry R0,4									
SPLT07T308N-PH	0,06/0,20	positive geometry R0,8									
SDGT07T308-HP	0,08/0,15	non-ferrous geometry, polished R0,8									
SPLT07T308N	0,10/0,25	cast iron geometry R0,8									
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8									
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8									
SHLT090408N	0,12/0,25	cast iron geometry R0,8									
SPLT140512N-PH	0,06/0,26	positive geometry R1,2									
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2									
SPLT140512N	0,18/0,30	cast iron geometry R1,2									

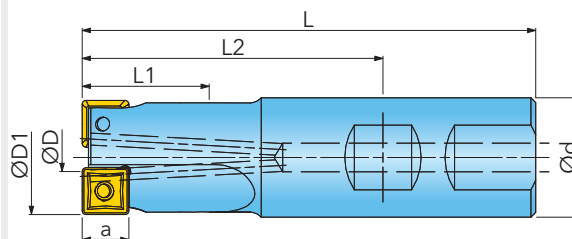
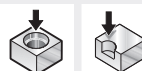
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Diameter Range	
16 - 20	SM22-052-00 (0,8Nm) DS-T07S
25	SM25-064-00 (1,1Nm) DS-T08S
30 - 32	SM35-088-60 (3,0Nm) DS-T10S
40	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	D1	d	L	L1	L2	a	Z			Related Insert
BS.010.001	10	4,5	12	70	10	47,5	4,5	1	✓	0,10	A B C
BS.011.001	11	4,5	12	70	11	47,5	4,5	1	✓	0,10	A B C
BS.013.007	13	4,5	16	75	13	51	4,5	2	✓	0,11	A B C
BS.015.002	15	4,5	20	75	15	50	5,4	2	✓	0,13	D E F
BS.018.008	18	7,5	20	75	18	50	5,4	2	✓	0,14	D E F
BS.020.010	20	9,5	20	85	20	60	5,4	2	✓	0,16	D E F
BS.024.007	24	6,5	25	95	24	63	7,0	2	✓	0,27	G H I
BS.026.007	26	5,0	25	100	26	68	10,5	2	✓	0,29	J K L
BS.030.008	30	9,0	25	105	30	73	10,5	2	✓	0,35	J K L
BS.033.007	33	12,0	25	105	33	73	10,5	2	✓	0,38	J K L
BS.036.007	36	15,0	32	110	36	74	10,5	3	✓	0,56	J K L
BS.040.008	40	14,5	32	120	40	84	13	3	✓	0,62	M N O
BS.048.007	48	22,0	40	130	48	90	13	3	✓	1,10	M N O

Diameter D1 corresponds with the minimum diameter of the through hole

QUAD DRILL PLUS BSD03B

SPARE PARTS



Diameter Range

10 - 13	SM20-043-00 (0,7Nm)	DS-TP06S (TX-Plus)
15 - 20	SM22-052-00 (0,8Nm)	DS-T07S
24	SM35-088-60 (3,0Nm)	DS-T10S
26 - 36	SM40-093-20 (4,5Nm)	DS-T15S
40 - 48	SM50-122-50 (7,5Nm)	DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

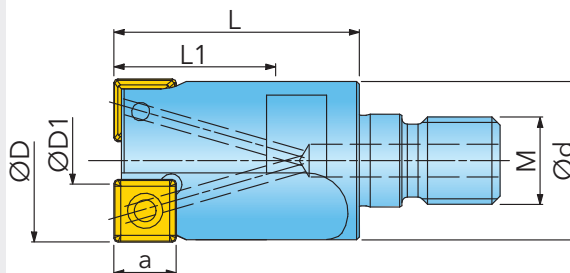
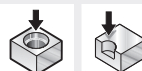


Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SCLT050204N-PH	0,05/0,12	positive geometry R0,4			●		●				
SHGT050204-HP	0,05/0,12	non-ferrous geometry, polished R0,4	●								
SCLT050204N	0,05/0,12	cast iron geometry R0,4				●					
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4	●								
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8	●								
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2	●								
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

SCREW-IN TYPE ADAPTION

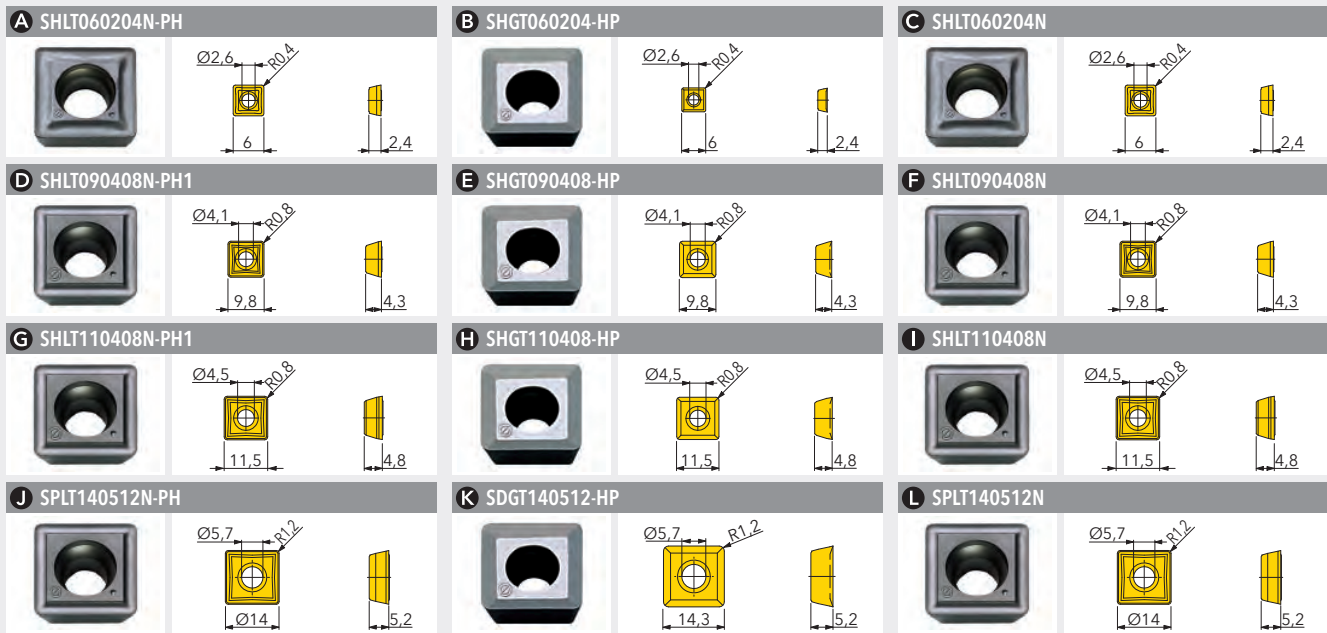


Designation	D	D1	d1	L	L1	a	M	Z	IK	kg	Related Insert
BS.015.009	15	4,5	13	30	15	4,5	M8	2	✓	0,03	A B C
BS.018.010	18	7,5	13	30	18	4,5	M8	2	✓	0,04	A B C
BS.020.013	20	9,5	18	35	20	4,5	M10	2	✓	0,06	A B C
BS.024.013	24	6,5	21	35	24	5,4	M12	2	✓	0,07	D E F
BS.026.011	26	5,0	21	40	26	7,0	M12	2	✓	0,08	G H I
BS.030.014	30	9,0	29	45	30	7,0	M16	2	✓	0,15	G H I
BS.033.011	33	12,0	29	50	33	7,0	M16	2	✓	0,20	G H I
BS.036.011	36	15,0	29	50	36	7,0	M16	2	✓	0,24	G H I
BS.040.012	40	14,5	29	60	40	10,5	M16	2	✓	0,30	J K L
BS.048.008	48	22,0	29	70	48	10,5	M16	2	✓	0,50	J K L

Diameter D1 corresponds with the minimum diameter of the through hole



QUAD DRILL PLUS BSE01A

DRILLS/THREAD MILLING



Designation	fz(min/max)	Design	Grade	IN10K	IN2005	IN2010	IN2530				
SHLT060204N-PH	0,06/0,20	positive geometry R0,4			●		●				
SHGT060204-HP	0,08/0,15	non-ferrous geometry, polished R0,4	●								
SHLT060204N	0,08/0,25	cast iron geometry R0,4				●					
SHLT090408N-PH1	0,07/0,22	positive geometry R0,8			●		●				
SHGT090408-HP	0,10/0,20	non-ferrous geometry, polished R0,8	●								
SHLT090408N	0,12/0,25	cast iron geometry R0,8				●					
SHLT110408N-PH1	0,08/0,23	positive geometry R0,8			●		●				
SHGT110408-HP	0,14/0,23	non-ferrous geometry, polished R0,8	●								
SHLT110408N	0,16/0,28	cast iron geometry R0,8				●					
SPLT140512N-PH	0,06/0,26	positive geometry R1,2			●		●				
SDGT140512-HP	0,15/0,26	non-ferrous geometry, polished R1,2	●								
SPLT140512N	0,18/0,30	cast iron geometry R1,2				●					

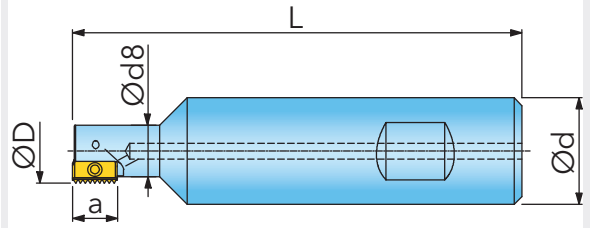
● = P ● = M ● = K ● = N ● = S ○ = H

SPARE PARTS	
① 	② 
Diameter Range	
15 - 20	SM22-052-00 (0,8Nm) DS-T07S
24	SM35-088-60 (3,0Nm) DS-T10S
26 - 36	SM40-093-20 (4,5Nm) DS-T15S
40 - 48	SM50-122-50 (7,5Nm) DS-T20S

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

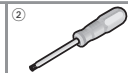
ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	a	Z		
12Y1H009035W4R00	9,5	20	7,5	85	14	12	1	✓	0,165
12Y1H010035W4R00	9,9	20	7,2	85	16	12	1	✓	0,175

RAPID-THREAD END MILL WELDON SHANK (A = 12MM)

SPARE PARTS

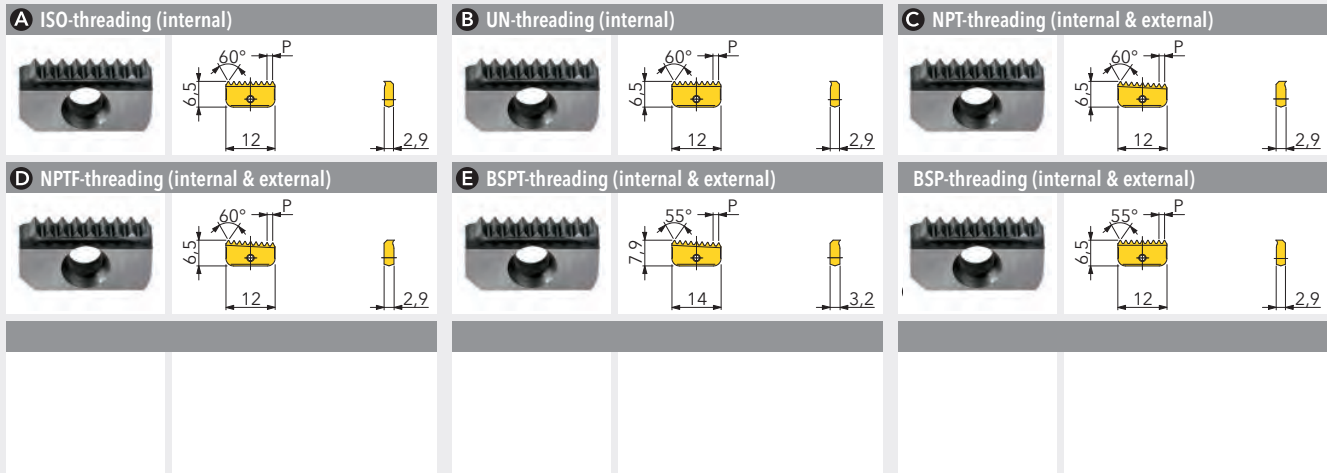


IS12 (1,3Nm)

IK12

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)				
LYEU12050IS-1		0,5	A	
LYEU12075IS-1		0,75	A	
LYEU12100IS-1		1	A	
LYEU12125IS-1		1,25	A	
LYEU12150IS-1		1,5	A	
UN-threading (internal)				
LYEU12320UN-1		32	B	
LYEU12280UN-1		28	B	
LYEU12240UN-1		24	B	
LYEU12200UN-1		20	B	

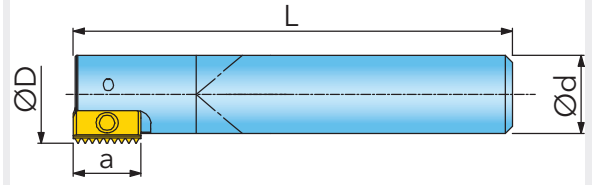
Designation	fz(min/max)	Pitch	Grade	IN2005
LYEU12180UN-1		18	B	
LYEU12160UN-1		16	B	
NPT-threading (internal & external)				
LYEU12180NT-1		18	C	
NPTF-threading (internal & external)				
LYEU12180NF-1		18	D	
BSPT-threading (internal & external)				
LYEU12190BT-1		19	E	
BSP-threading (internal & external)				
LYEU12190BW-1		19	F	

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 A



Designation

D d L a Z



12Y5H009089TOR00

9,9 8 125 12 1

0,095

RAPID-THREAD END MILL CARBIDE SHANK (A = 12MM)

SPARE PARTS



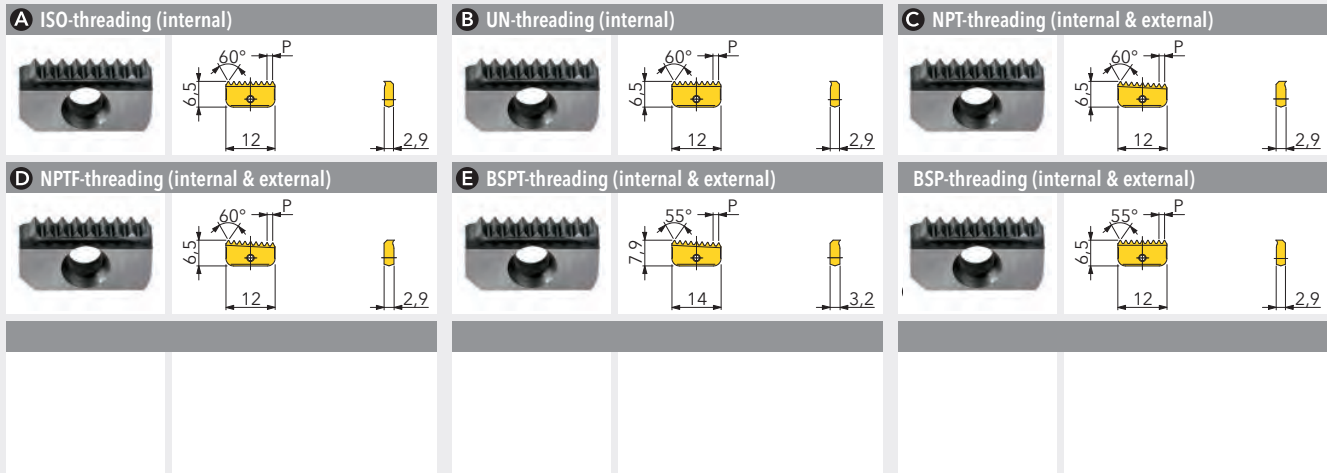
IS12 (1,3Nm)



IK12

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)				
LYEU12050IS-1		0,5	A	
LYEU12075IS-1		0,75	A	
LYEU12100IS-1		1	A	
LYEU12125IS-1		1,25	A	
LYEU12150IS-1		1,5	A	
UN-threading (internal)				
LYEU12320UN-1		32	B	
LYEU12280UN-1		28	B	
LYEU12240UN-1		24	B	
LYEU12200UN-1		20	B	

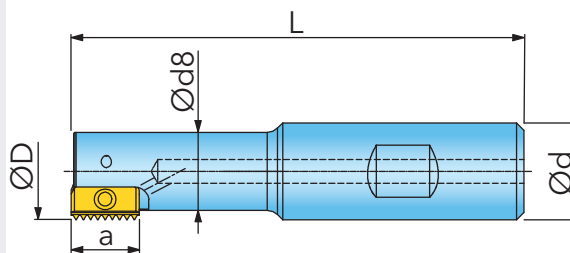
Designation	fz(min/max)	Pitch	Grade	IN2005
LYEU12180UN-1		18	B	
LYEU12160UN-1		16	B	
NPT-threading (internal & external)				
LYEU12180NT-1		18	C	
NPTF-threading (internal & external)				
LYEU12180NF-1		18	D	
BSPT-threading (internal & external)				
LYEU12190BT-1		19	E	
BSP-threading (internal & external)				
LYEU12190BW-1		19	F	

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	a	Z		
12Y1J012025W4R00	12	20	8,9	75	20	14	1	✓	0,135
12Y1J014035W4R00	14,5	20	11,2	85	25	14	1	✓	0,160
12Y1J017035W4R00	17	20	13,4	85	30	14	1	✓	0,160
12Y1J020043W4R00	20	20	16	93	41	14	2	✓	0,180

RAPID-THREAD END MILL WELDON SHANK (A = 14MM)

SPARE PARTS



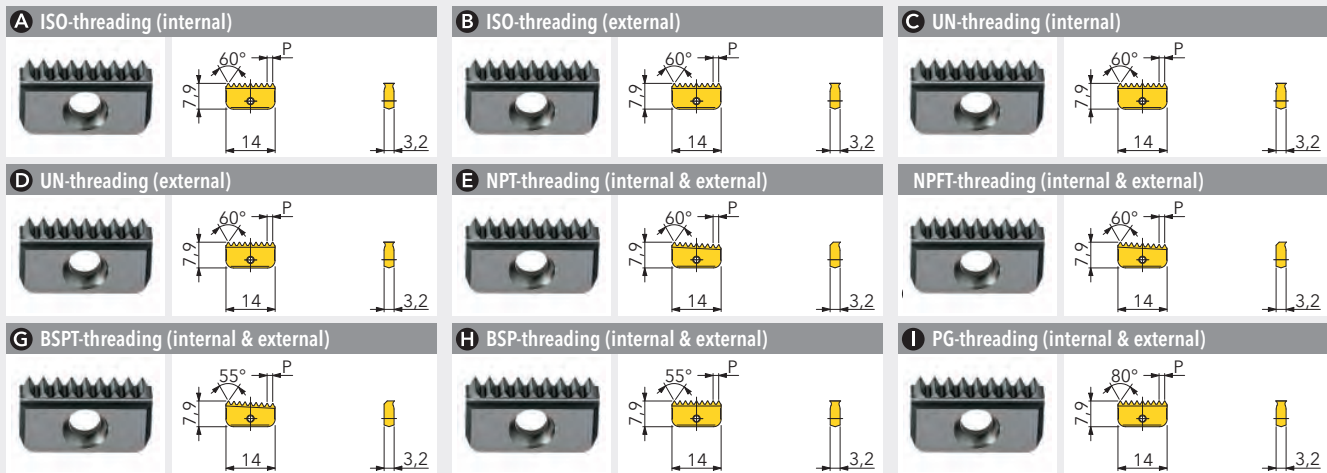
S11 (1,3Nm)



IK14

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

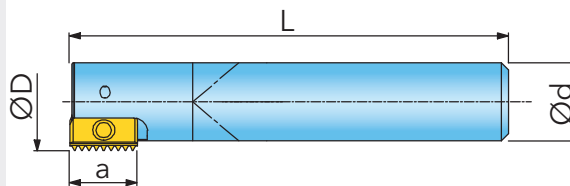
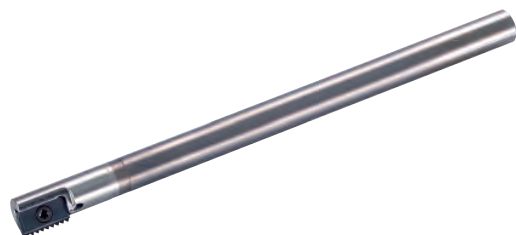


Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005				
ISO-threading (internal)							UN-threading (external)								
LYEU14050IS-1		0,5	A				LYEU14100UN-1		10	C					
LYEU14075IS-1		0,75	A				NPFT-threading (internal & external)								
LYEU14100IS-1		1	A				LYEU14320UN-X-1		32	D					
LYEU14125IS-1		1,25	A				LYEU14280UN-X-1		28	D					
LYEU14150IS-1		1,5	A				LYEU14240UN-X-1		24	D					
LYEU14175IS-1		1,75	A				LYEU14200UN-X-1		20	D					
LYEU14200IS-1		2	A				LYEU14180UN-X-1		18	D					
LYEU14250IS-1		2,5	A				LYEU14160UN-X-1		16	D					
ISO-threading (external)							LYEU14140UN-X-1		14	D					
LYEU14075IS-X-1		0,75	B				LYEU14120UN-X-1		12	D					
LYEU14100IS-X-1		1	B				NPT-threading (internal & external)								
LYEU14125IS-X-1		1,25	B				LYEU14180NT-1		18	E					
LYEU14150IS-X-1		1,5	B				LYEU14140NT-1		14	E					
LYEU14175IS-X-1		1,75	B				NPFT-threading (internal & external)								
LYEU14200IS-X-1		2	B				LYEU14180NF-1		18	F					
LYEU14250IS-X-1		2,5	B				LYEU14140NF-1		14	F					
UN-threading (internal)							BSPT-threading (internal & external)								
LYEU14320UN-1		32	C				LYEU14190BT-1		19	G					
LYEU14280UN-1		28	C				LYEU14140BT-1		14	G					
LYEU14270UN-1		27	C				BSP-threading (internal & external)								
LYEU14240UN-1		24	C				LYEU14240BW-1		24	H					
LYEU14200UN-1		20	C				LYEU14200BW-1		20	H					
LYEU14180UN-1		18	C				LYEU14190BW-1		19	H					
LYEU14160UN-1		16	C				LYEU14160BW-1		16	H					
LYEU14140UN-1		14	C				LYEU14140BW-1		14	H					
LYEU14120UN-1		12	C				PG-threading (internal & external)								
							LYEU14180PG-1		18	I					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 A



Designation	D	d	L	a	Z		
12Y5J013070T1R00	13,2	10	110	14	1	✓	0,092
12Y5J013110T1R00	13,2	10	150	14	1	✓	0,165
12Y5J015130T2R00	15,2	12	175	14	1	✓	0,260

RAPID-THREAD END MILL CARBIDE SHANK (A = 14MM)

SPARE PARTS



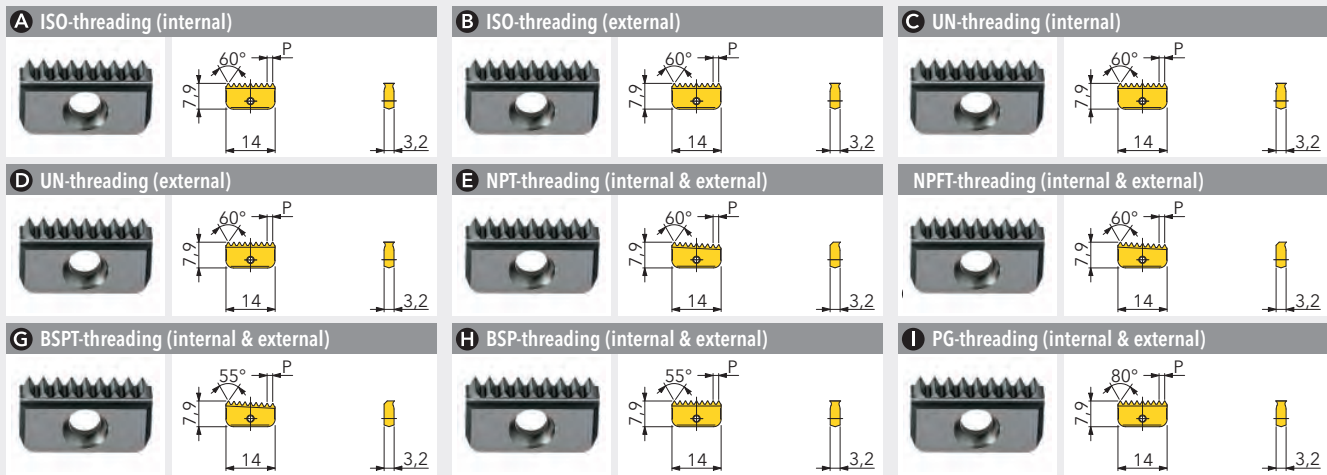
S11 (1,3Nm)



IK14

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

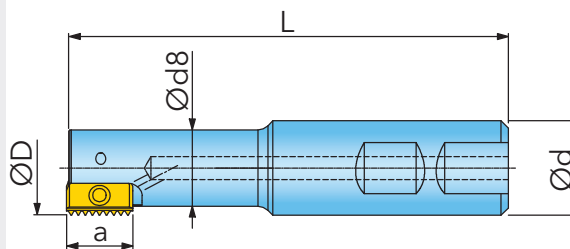


Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					UN-threading (external)				
LYEU14050IS-1		0,5	A	●	LYEU14100UN-1		10	C	●
LYEU14075IS-1		0,75	A	●	LYEU14320UN-X-1		32	D	●
LYEU14100IS-1		1	A	●	LYEU14280UN-X-1		28	D	●
LYEU14125IS-1		1,25	A	●	LYEU14240UN-X-1		24	D	●
LYEU14150IS-1		1,5	A	●	LYEU14200UN-X-1		20	D	●
LYEU14175IS-1		1,75	A	●	LYEU14180UN-X-1		18	D	●
LYEU14200IS-1		2	A	●	LYEU14160UN-X-1		16	D	●
LYEU14250IS-1		2,5	A	●	LYEU14140UN-X-1		14	D	●
ISO-threading (external)					NPT-threading (internal & external)				
LYEU14075IS-X-1		0,75	B	●	LYEU14180NT-1		18	E	●
LYEU14100IS-X-1		1	B	●	LYEU14140NT-1		14	E	●
LYEU14125IS-X-1		1,25	B	●	NPFT-threading (internal & external)				
LYEU14150IS-X-1		1,5	B	●	LYEU14180NF-1		18	F	●
LYEU14175IS-X-1		1,75	B	●	LYEU14140NF-1		14	F	●
LYEU14200IS-X-1		2	B	●	BSPT-threading (internal & external)				
LYEU14250IS-X-1		2,5	B	●	LYEU14190BT-1		19	G	●
UN-threading (internal)					BSP-threading (internal & external)				
LYEU14320UN-1		32	C	●	LYEU14240BW-1		24	H	●
LYEU14280UN-1		28	C	●	LYEU14200BW-1		20	H	●
LYEU14270UN-1		27	C	●	LYEU14190BW-1		19	H	●
LYEU14240UN-1		24	C	●	LYEU14160BW-1		16	H	●
LYEU14200UN-1		20	C	●	LYEU14140BW-1		14	H	●
LYEU14180UN-1		18	C	●	PG-threading (internal & external)				
LYEU14160UN-1		16	C	●	LYEU14180PG-1		18	I	●
LYEU14140UN-1		14	C	●					
LYEU14120UN-1		12	C	●					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	a	Z		
12Y1N018035W4R00 ¹⁾	18	20	14,4	85	30	21	1	✓	0,165
12Y1N021044W4R00	21	20	16,5	94	40	21	1	✓	0,185
12Y1N025075W4R00	25	20	-	125	-	21	1	✓	0,300
12Y1N030052W5R00	30	25	24	108	52	21	2	✓	0,370

¹⁾not with insert LYEU21350IS

RAPID-THREAD END MILL WELDON SHANK (A=21MM)

SPARE PARTS



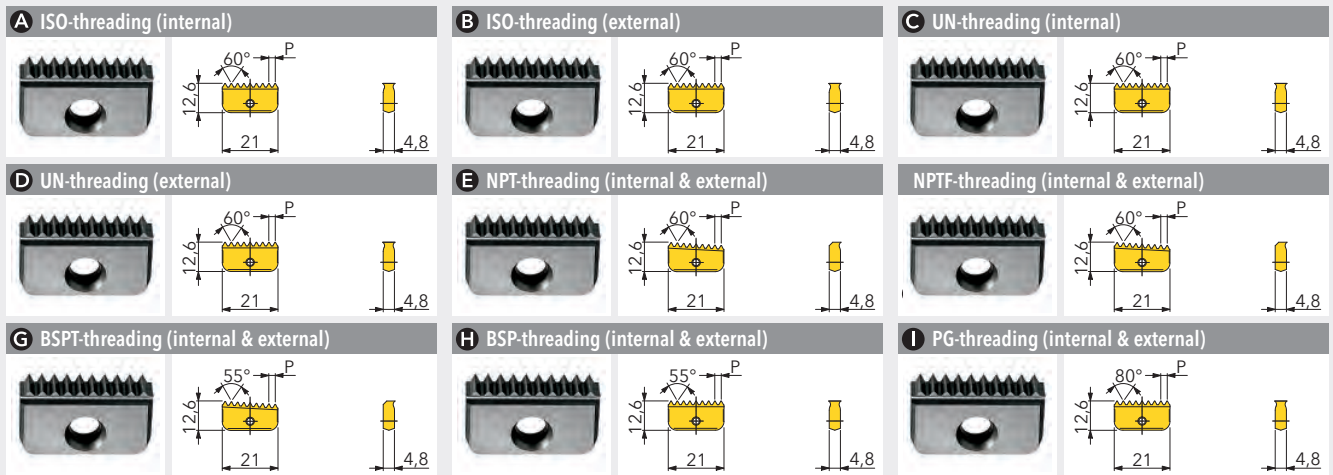
IS21 (5,2Nm)



IK21

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

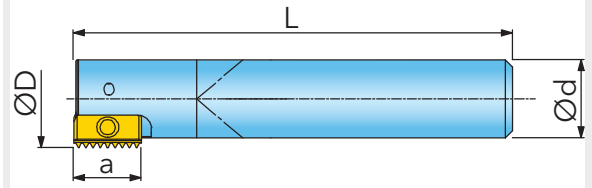


Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					UN-threading (internal)				
LYEU21100IS-1		1	A	●	LYEU21240UN-X-1		24	D	●
LYEU21150IS-1		1,5	A	●	LYEU21200UN-X-1		20	D	●
LYEU21175IS-1		1,75	A	●	LYEU21180UN-X-1		18	D	●
LYEU21200IS-1		2	A	●	LYEU21160UN-X-1		16	D	●
LYEU21250IS-1		2,5	A	●	LYEU21140UN-X-1		14	D	●
LYEU21300IS-1		3	A	●	LYEU21120UN-X-1		12	D	●
LYEU21350IS-1		3,5	A	●	LYEU21100UN-X-1		10	D	●
ISO-threading (external)					NPTF-threading (internal & external)				
LYEU21100IS-X-1		1	B	●	LYEU21140NT-1		14	E	●
LYEU21150IS-X-1		1,5	B	●	LYEU21115NT-1		11,5	E	●
LYEU21200IS-X-1		2	B	●	NPTF-threading (internal & external)				
LYEU21250IS-X-1		2,5	B	●	LYEU21140NF-1		14	F	●
LYEU21300IS-X-1		3	B	●	LYEU21115NF-1		11,5	F	●
UN-threading (internal)					BSP-threading (internal & external)				
LYEU21240UN-1		24	C	●	LYEU21140BT-1		14	G	●
LYEU21200UN-1		20	C	●	LYEU21110BT-1		11	G	●
LYEU21180UN-1		18	C	●	BSP-threading (internal & external)				
LYEU21160UN-1		16	C	●	LYEU21200BW-1		20	H	●
LYEU21140UN-1		14	C	●	LYEU21190BW-1		19	H	●
LYEU21120UN-1		12	C	●	LYEU21160BW		16	H	●
LYEU21100UN-1		10	C	●	LYEU21140BW-1		14	H	●
LYEU21080UN-1		8	C	●	LYEU21110BW-1		11	H	●
LYEU21070UN-1		7	C	●	PG-threading (internal & external)				
UN-threading (external)					LYEU21180PG-1		18	I	●
					LYEU21160PG-1		16	I	●

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 A



Designation	D	d	L	a	Z		
12Y5N021082T3R00	21	16	130	21	1	✓	0,278
12Y5N021152T3R00	21	16	200	21	1	✓	0,545

RAPID-THREAD END MILL CARBIDE SHANK (A=21MM)

SPARE PARTS



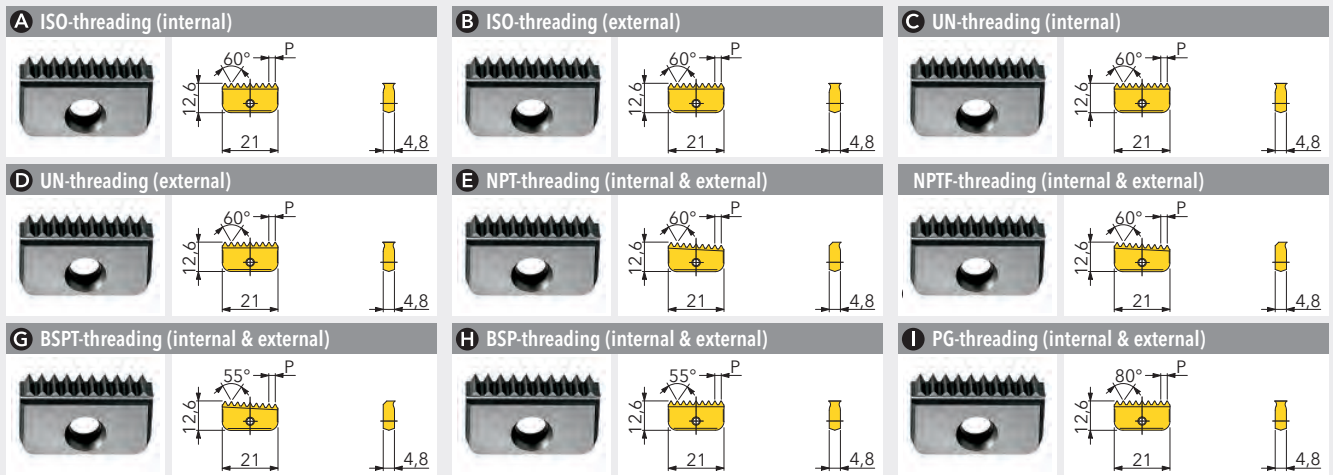
IS21 (5,2Nm)



IK21

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

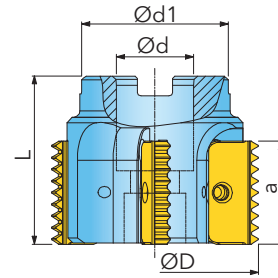


Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005				
ISO-threading (internal)							UN-threading (internal)								
LYEU21100IS-1		1	A				LYEU21240UN-X-1		24	D					
LYEU21150IS-1		1,5	A				LYEU21200UN-X-1		20	D					
LYEU21175IS-1		1,75	A				LYEU21180UN-X-1		18	D					
LYEU21200IS-1		2	A				LYEU21160UN-X-1		16	D					
LYEU21250IS-1		2,5	A				LYEU21140UN-X-1		14	D					
LYEU21300IS-1		3	A				LYEU21120UN-X-1		12	D					
LYEU21350IS-1		3,5	A				LYEU21100UN-X-1		10	D					
ISO-threading (external)							NPT-threading (internal & external)								
LYEU21100IS-X-1		1	B				LYEU21140NT-1		14	E					
LYEU21150IS-X-1		1,5	B				LYEU21115NT-1		11,5	E					
LYEU21200IS-X-1		2	B				NPTF-threading (internal & external)								
LYEU21250IS-X-1		2,5	B				LYEU21140NF-1		14	F					
LYEU21300IS-X-1		3	B				LYEU21115NF-1		11,5	F					
UN-threading (internal)							BSP-threading (internal & external)								
LYEU21240UN-1		24	C				LYEU21140BT-1		14	G					
LYEU21200UN-1		20	C				LYEU21110BT-1		11	G					
LYEU21180UN-1		18	C				BSP-threading (internal & external)								
LYEU21160UN-1		16	C				LYEU21200BW-1		20	H					
LYEU21140UN-1		14	C				LYEU21190BW-1		19	H					
LYEU21120UN-1		12	C				LYEU21160BW		16	H					
LYEU21100UN-1		10	C				LYEU21140BW-1		14	H					
LYEU21080UN-1		8	C				LYEU21110BW-1		11	H					
LYEU21070UN-1		7	C				PG-threading (internal & external)								
UN-threading (external)							LYEU21180PG-1		18	I					
							LYEU21160PG-1		16	I					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 8030



Designation

D d d1 L a Z



12Y1N063050F1R00

63 22 40 50 21 5

0,720

RAPID-THREAD SHELL MILL (A=21MM)

SPARE PARTS



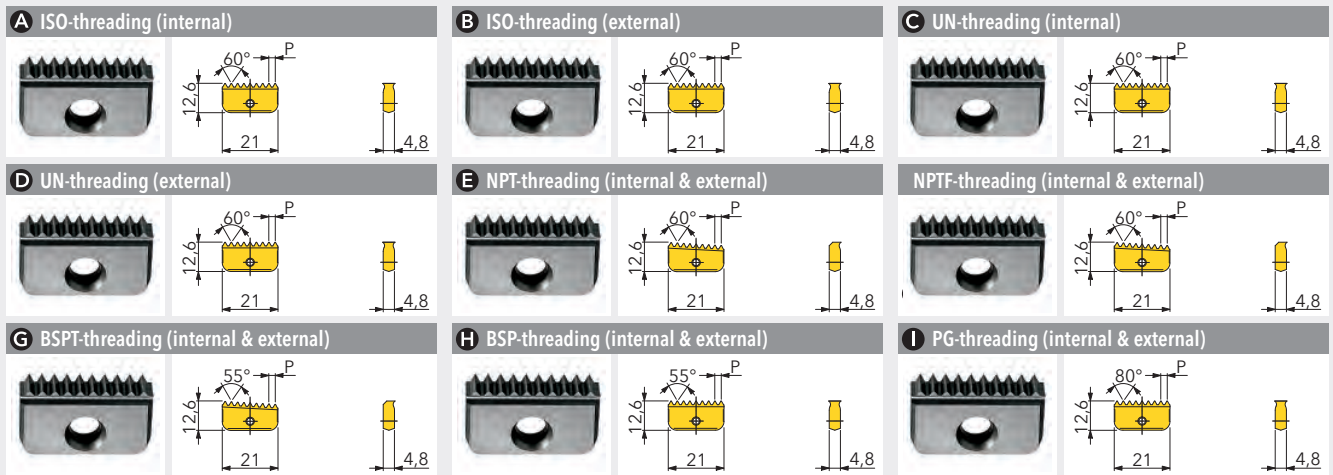
IS21 (5,2Nm)



IK21

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

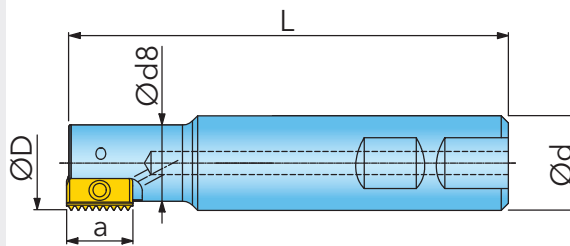


Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005				
ISO-threading (internal)							UN-threading (internal)								
LYEU21100IS-1		1	A				LYEU21240UN-X-1		24	D					
LYEU21150IS-1		1,5	A				LYEU21200UN-X-1		20	D					
LYEU21175IS-1		1,75	A				LYEU21180UN-X-1		18	D					
LYEU21200IS-1		2	A				LYEU21160UN-X-1		16	D					
LYEU21250IS-1		2,5	A				LYEU21140UN-X-1		14	D					
LYEU21300IS-1		3	A				LYEU21120UN-X-1		12	D					
LYEU21350IS-1		3,5	A				LYEU21100UN-X-1		10	D					
ISO-threading (external)							NPT-threading (internal & external)								
LYEU21100IS-X-1		1	B				LYEU21140NT-1		14	E					
LYEU21150IS-X-1		1,5	B				LYEU21115NT-1		11,5	E					
LYEU21200IS-X-1		2	B				NPTF-threading (internal & external)								
LYEU21250IS-X-1		2,5	B				LYEU21140NF-1		14	F					
LYEU21300IS-X-1		3	B				LYEU21115NF-1		11,5	F					
UN-threading (internal)							BSP-threading (internal & external)								
LYEU21240UN-1		24	C				LYEU21140BT-1		14	G					
LYEU21200UN-1		20	C				LYEU21110BT-1		11	G					
LYEU21180UN-1		18	C				BSP-threading (internal & external)								
LYEU21160UN-1		16	C				LYEU21200BW-1		20	H					
LYEU21140UN-1		14	C				LYEU21190BW-1		19	H					
LYEU21120UN-1		12	C				LYEU21160BW		16	H					
LYEU21100UN-1		10	C				LYEU21140BW-1		14	H					
LYEU21080UN-1		8	C				LYEU21110BW-1		11	H					
LYEU21070UN-1		7	C				PG-threading (internal & external)								
UN-threading (external)							LYEU21180PG-1		18	I					
							LYEU21160PG-1		16	I					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	a	Z		
12Y1S029054W5R00	29	25	23	110	50	30	1	✓	0,350
12Y1S031094W5R00	31	25	-	150	-	30	1	✓	0,520
12Y1S038090W6R00	38	32	-	150	-	30	1	✓	0,890
12Y1S040070W6R00	40	32	30	130	70	30	2	✓	0,690

RAPID-THREAD END MILL WELDON SHANK (A=30MM)

SPARE PARTS

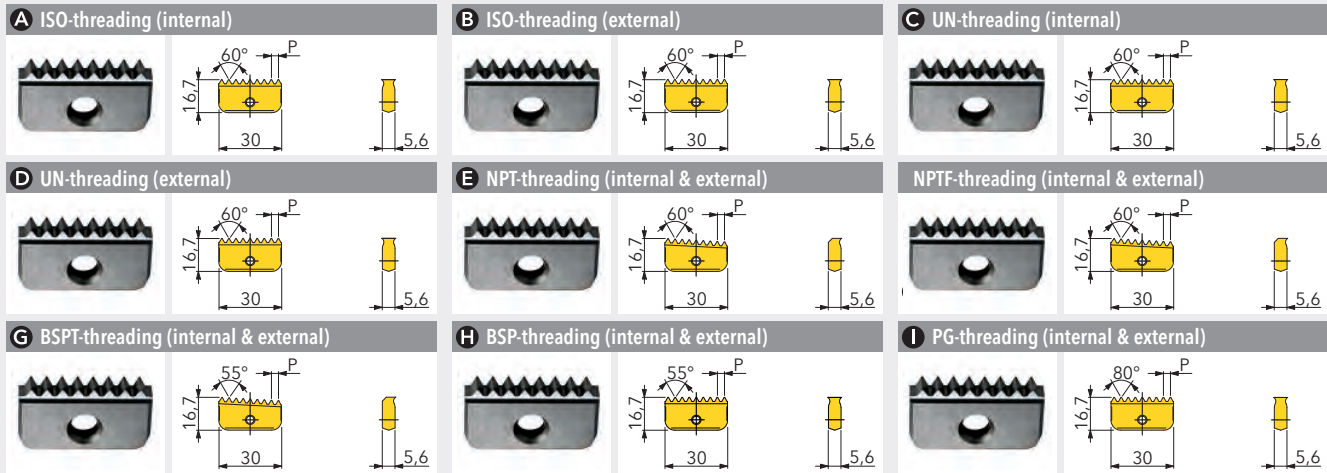


IS30 (10,0Nm)

IK30

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
-------------	-------------	-------	-------	--------	-------------	-------------	-------	-------	--------

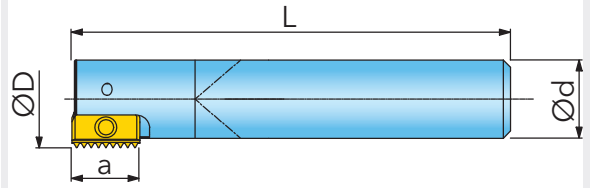
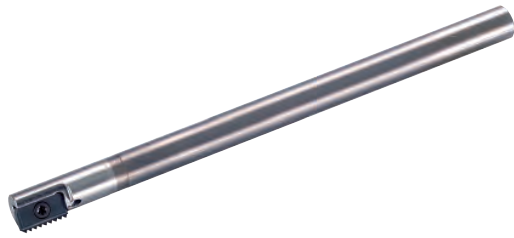
ISO-threading (internal)				
L YE U 30150IS-1	1,5	A	●●●●	
L YE U 30200IS-1	2	A	●●●●	
L YE U 30300IS-1	3	A	●●●●	
L YE U 30350IS-1	3,5	A	●●●●	
L YE U 30400IS-1	4	A	●●●●	
L YE U 30450IS-1	4,5	A	●●●●	
L YE U 30500IS-1	5	A	●●●●	
ISO-threading (external)				
L YE U 30150IS-X-1	1,5	B	●●●●	
L YE U 30200IS-X-1	2	B	●●●●	
L YE U 30300IS-X-1	3	B	●●●●	
L YE U 30350IS-X-1	3,5	B	●●●●	
L YE U 30400IS-X-1	4	B	●●●●	
UN-threading (internal)				
L YE U 30200UN-1	20	C	●●●●	
L YE U 30180UN-1	18	C	●●●●	
L YE U 30160UN-1	16	C	●●●●	
L YE U 30140UN-1	14	C	●●●●	
L YE U 30120UN-1	12	C	●●●●	
L YE U 30100UN-1	10	C	●●●●	
L YE U 30080UN-1	8	C	●●●●	
L YE U 30060UN-1	6	C	●●●●	

UN-threading (external)				
L YE U 30200UN-X-1	20	D	●●●●	
L YE U 30180UN-X-1	18	D	●●●●	
L YE U 30160UN-X-1	16	D	●●●●	
L YE U 30140UN-X-1	14	D	●●●●	
L YE U 30120UN-X-1	12	D	●●●●	
L YE U 30100UN-X-1	10	D	●●●●	
L YE U 30080UN-X-1	8	D	●●●●	
L YE U 30060UN-X-1	6	D	●●●●	
NPT-threading (internal & external)				
L YE U 30115NT-1	11,5	E	●●●●	
L YE U 30080NT-1	8	E	●●●●	
NPTF-threading (internal & external)				
L YE U 30115NF-1	11,5	F	●●●●	
L YE U 30080NF-1	8	F	●●●●	
BSPT-threading (internal & external)				
L YE U 30110BT-1	11	G	●●●●	
BSP-threading (internal & external)				
L YE U 30160BW-1	16	H	●●●●	
L YE U 30140BW-1	14	H	●●●●	
L YE U 30110BW-1	11	H	●●●●	
PG-threading (internal & external)				
L YE U 30160PG-1	16	I	●●●●	

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 A



Designation

D d L a Z



12Y5S027220T4R00

27 20 270 30 1

✓ 1,075

RAPID-THREAD END MILL CARBIDE SHANK (A = 30MM)

SPARE PARTS



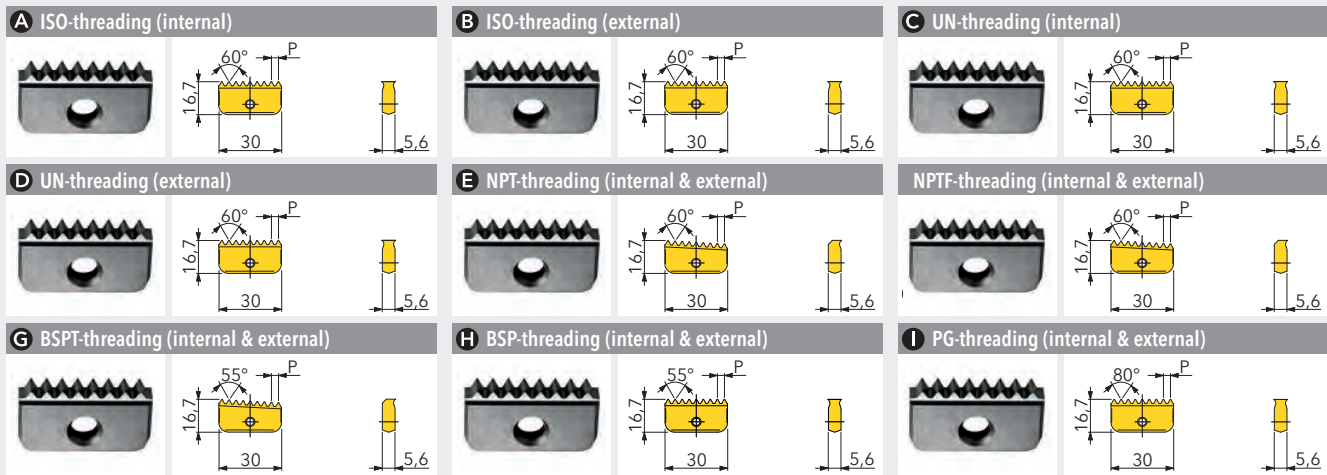
IS30 (10,0Nm)



IK30

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005		
-------------	-------------	-------	-------	--------	--	--	-------------	-------------	-------	-------	--------	--	--

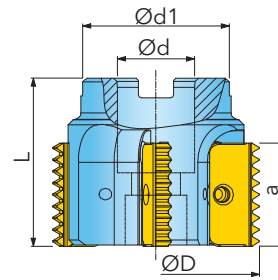
ISO-threading (internal)					
L YE U 30150IS-1	1,5	A	●●●●		
L YE U 30200IS-1	2	A	●●●●		
L YE U 30300IS-1	3	A	●●●●		
L YE U 30350IS-1	3,5	A	●●●●		
L YE U 30400IS-1	4	A	●●●●		
L YE U 30450IS-1	4,5	A	●●●●		
L YE U 30500IS-1	5	A	●●●●		
ISO-threading (external)					
L YE U 30150IS-X-1	1,5	B	●●●●		
L YE U 30200IS-X-1	2	B	●●●●		
L YE U 30300IS-X-1	3	B	●●●●		
L YE U 30350IS-X-1	3,5	B	●●●●		
L YE U 30400IS-X-1	4	B	●●●●		
UN-threading (internal)					
L YE U 30200UN-1	20	C	●●●●		
L YE U 30180UN-1	18	C	●●●●		
L YE U 30160UN-1	16	C	●●●●		
L YE U 30140UN-1	14	C	●●●●		
L YE U 30120UN-1	12	C	●●●●		
L YE U 30100UN-1	10	C	●●●●		
L YE U 30080UN-1	8	C	●●●●		
L YE U 30060UN-1	6	C	●●●●		

UN-threading (external)					
L YE U 30200UN-X-1	20	D	●●●●		
L YE U 30180UN-X-1	18	D	●●●●		
L YE U 30160UN-X-1	16	D	●●●●		
L YE U 30140UN-X-1	14	D	●●●●		
L YE U 30120UN-X-1	12	D	●●●●		
L YE U 30100UN-X-1	10	D	●●●●		
L YE U 30080UN-X-1	8	D	●●●●		
L YE U 30060UN-X-1	6	D	●●●●		
NPT-threading (internal & external)					
L YE U 30115NT-1	11,5	E	●●●●		
L YE U 30080NT-1	8	E	●●●●		
NPTF-threading (internal & external)					
L YE U 30115NF-1	11,5	F	●●●●		
L YE U 30080NF-1	8	F	●●●●		
BSPT-threading (internal & external)					
L YE U 30110BT-1	11	G	●●●●		
BSP-threading (internal & external)					
L YE U 30160BW-1	16	H	●●●●		
L YE U 30140BW-1	14	H	●●●●		
L YE U 30110BW-1	11	H	●●●●		
PG-threading (internal & external)					
L YE U 30160PG-1	16	I	●●●●		

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	kg
12Y1S063050F1R00	63	22	55	50	30	4	0,675
12Y1S080055F2R00	80	27	58	55	30	4	1,220
12Y1S100060F3R00	100	32	66	60	30	4	2,160

RAPID-THREAD SHELL MILL (A=30MM)

SPARE PARTS



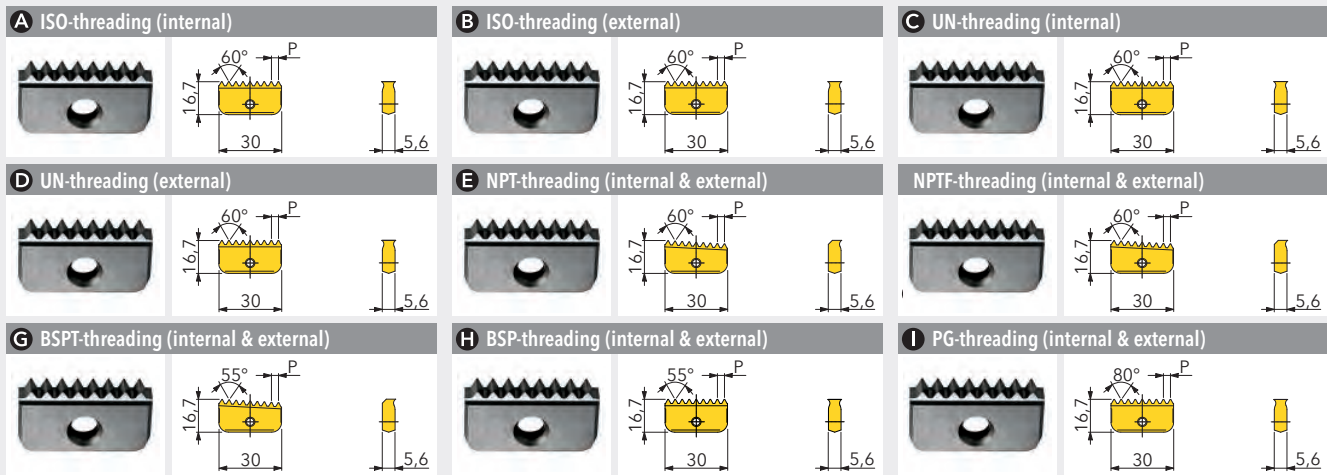
IS30 (10,0Nm)



IK30

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005			
-------------	-------------	-------	-------	--------	--	--	-------------	-------------	-------	-------	--------	--	--	--

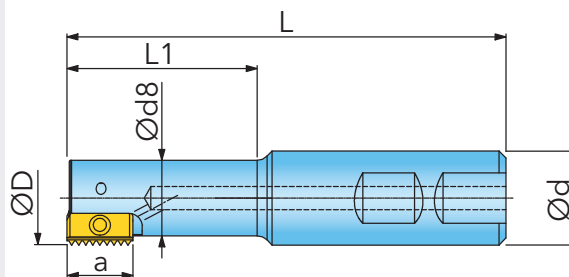
ISO-threading (internal)					
L YE U 30150IS-1	1,5	A	●●●●		
L YE U 30200IS-1	2	A	●●●●		
L YE U 30300IS-1	3	A	●●●●		
L YE U 30350IS-1	3,5	A	●●●●		
L YE U 30400IS-1	4	A	●●●●		
L YE U 30450IS-1	4,5	A	●●●●		
L YE U 30500IS-1	5	A	●●●●		
ISO-threading (external)					
L YE U 30150IS-X-1	1,5	B	●●●●		
L YE U 30200IS-X-1	2	B	●●●●		
L YE U 30300IS-X-1	3	B	●●●●		
L YE U 30350IS-X-1	3,5	B	●●●●		
L YE U 30400IS-X-1	4	B	●●●●		
UN-threading (internal)					
L YE U 30200UN-1	20	C	●●●●		
L YE U 30180UN-1	18	C	●●●●		
L YE U 30160UN-1	16	C	●●●●		
L YE U 30140UN-1	14	C	●●●●		
L YE U 30120UN-1	12	C	●●●●		
L YE U 30100UN-1	10	C	●●●●		
L YE U 30080UN-1	8	C	●●●●		
L YE U 30060UN-1	6	C	●●●●		

UN-threading (external)					
L YE U 30200UN-X-1	20	D	●●●●		
L YE U 30180UN-X-1	18	D	●●●●		
L YE U 30160UN-X-1	16	D	●●●●		
L YE U 30140UN-X-1	14	D	●●●●		
L YE U 30120UN-X-1	12	D	●●●●		
L YE U 30100UN-X-1	10	D	●●●●		
L YE U 30080UN-X-1	8	D	●●●●		
L YE U 30060UN-X-1	6	D	●●●●		
NPT-threading (internal & external)					
L YE U 30115NT-1	11,5	E	●●●●		
L YE U 30080NT-1	8	E	●●●●		
NPTF-threading (internal & external)					
L YE U 30115NF-1	11,5	F	●●●●		
L YE U 30080NF-1	8	F	●●●●		
BSPT-threading (internal & external)					
L YE U 30110BT-1	11	G	●●●●		
BSP-threading (internal & external)					
L YE U 30160BW-1	16	H	●●●●		
L YE U 30140BW-1	14	H	●●●●		
L YE U 30110BW-1	11	H	●●●●		
PG-threading (internal & external)					
L YE U 30160PG-1	16	I	●●●●		

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation	D	d	d8	L	L1	a	Z		
12Y1U048083W7R00	48	40	35	153	78	40	1	✓	1,200
12Y1U050083W7R00	50	40	38	153	78	40	2	✓	1,215

RAPID-THREAD END MILL WELDON SHANK (A=40MM)

SPARE PARTS



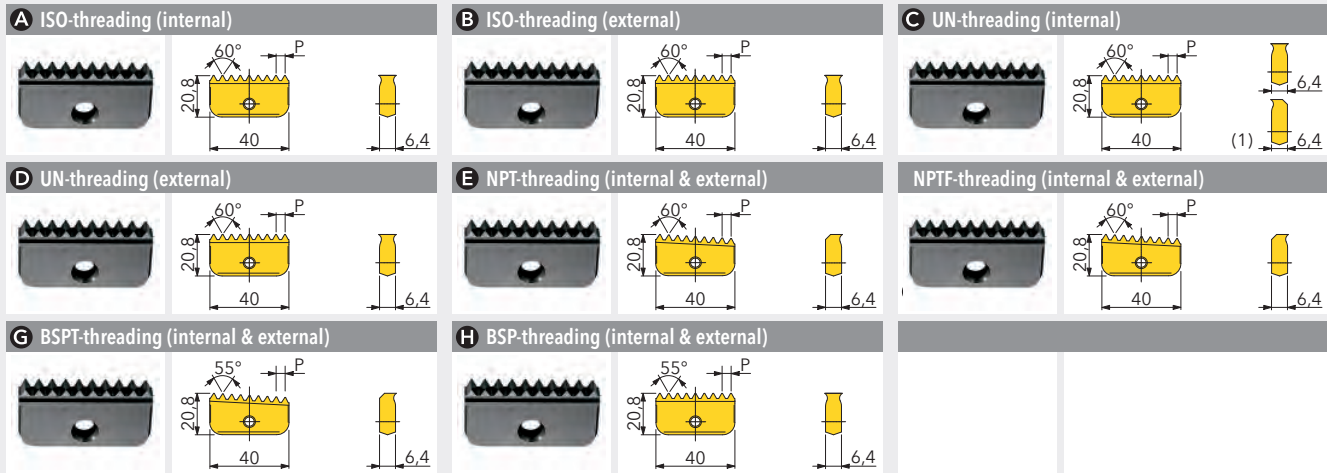
IS40 (10,0Nm)



IK40

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

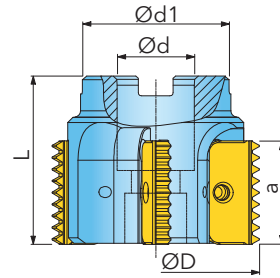


Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					UN-threading (external)				
LYEU40150IS-1	1,5	A	●	●	LYEU40160UN-X-1	16	D	●	●
LYEU40200IS-1	2	A	●	●	LYEU40140UN-X-1	14	D	●	●
LYEU40300IS-1	3	A	●	●	LYEU40120UN-X-1	12	D	●	●
LYEU40350IS-1	3,5	A	●	●	LYEU40100UN-X-1	10	D	●	●
LYEU40400IS-1	4	A	●	●	LYEU40080UN-X-1	8	D	●	●
LYEU40450IS-1	4,5	A	●	●	LYEU40060UN-X-1	6	D	●	●
LYEU40500IS-1	5	A	●	●	NPT-threading (internal & external)				
LYEU40550IS-1	5,5	A	●	●	LYEU40115NT-1	11,5	E	●	●
LYEU40600IS-1	6	A	●	●	LYEU40080NT-1	8	E	●	●
ISO-threading (external)					NPTF-threading (internal & external)				
LYEU40150IS-X-1	1,5	B	●	●	LYEU40115NF	11,5	F	●	●
LYEU40200IS-X-1	2	B	●	●	LYEU40080NF-1	8	F	●	●
LYEU40300IS-X-1	3	B	●	●	BSPT-threading (internal & external)				
LYEU40400IS-X-1	4	B	●	●	LYEU40110BT-1	11	G	●	●
LYEU40500IS-X-1	5	B	●	●	BSP-threading (internal & external)				
LYEU40600IS-X-1	6	B	●	●	LYEU40110BW-1	11	H	●	●
UN-threading (internal)					LYEU40080BW-1	8	H	●	●
LYEU40160UN-1	16	C	●	●					
LYEU40140UN-1	14	C	●	●					
LYEU40120UN-1	12	C	●	●					
LYEU40100UN-1	10	C	●	●					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 8030



Designation	D	d	d1	L	a	Z	kg
12Y1U080065F2R00	80	27	58	65	40	4	1,290
12Y1U100070F3R00	100	32	66	70	40	4	1,215

RAPID-THREAD SHELL MILL (A=40MM)

SPARE PARTS



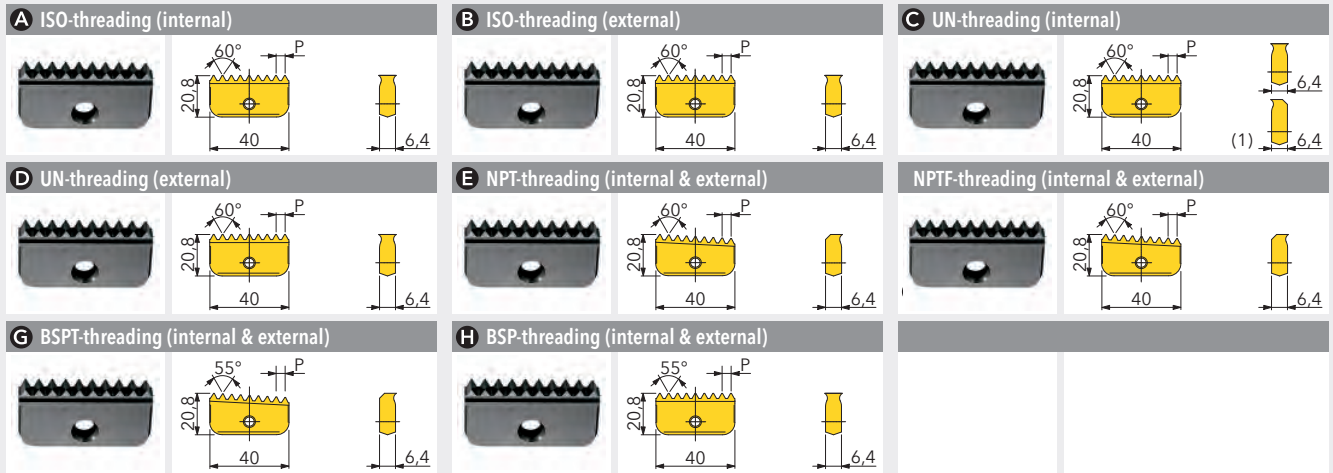
IS40 (10,0Nm)



IK40

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING

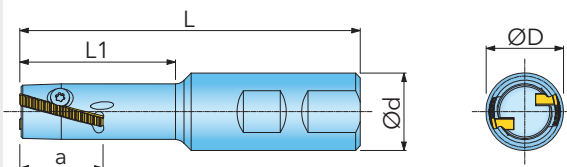


Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					UN-threading (external)				
LYEU40150IS-1	1,5	A	●	●	LYEU40160UN-X-1	16	D	●	●
LYEU40200IS-1	2	A	●	●	LYEU40140UN-X-1	14	D	●	●
LYEU40300IS-1	3	A	●	●	LYEU40120UN-X-1	12	D	●	●
LYEU40350IS-1	3,5	A	●	●	LYEU40100UN-X-1	10	D	●	●
LYEU40400IS-1	4	A	●	●	LYEU40080UN-X-1	8	D	●	●
LYEU40450IS-1	4,5	A	●	●	LYEU40060UN-X-1	6	D	●	●
LYEU40500IS-1	5	A	●	●	NPT-threading (internal & external)				
LYEU40550IS-1	5,5	A	●	●	LYEU40115NT-1	11,5	E	●	●
LYEU40600IS-1	6	A	●	●	LYEU40080NT-1	8	E	●	●
ISO-threading (external)					NPTF-threading (internal & external)				
LYEU40150IS-X-1	1,5	B	●	●	LYEU40115NF	11,5	F	●	●
LYEU40200IS-X-1	2	B	●	●	LYEU40080NF-1	8	F	●	●
LYEU40300IS-X-1	3	B	●	●	BSPT-threading (internal & external)				
LYEU40400IS-X-1	4	B	●	●	LYEU40110BT-1	11	G	●	●
LYEU40500IS-X-1	5	B	●	●	BSP-threading (internal & external)				
LYEU40600IS-X-1	6	B	●	●	LYEU40110BW-1	11	H	●	●
UN-threading (internal)					LYEU40080BW-1	8	H	●	●
LYEU40160UN-1	16	C	●	●					
LYEU40140UN-1	14	C	●	●					
LYEU40120UN-1	12	C	●	●					
LYEU40100UN-1	10	C	●	●					

● = P ● = M ● = K ● = N ● = S ○ = H

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation

D d L L1 a Z



22Y3Q023054W5R00

23 25 110 50 23 2

0,276

RAPID-THREAD END MILL WELDON SHANK (A=23MM)

SPARE PARTS



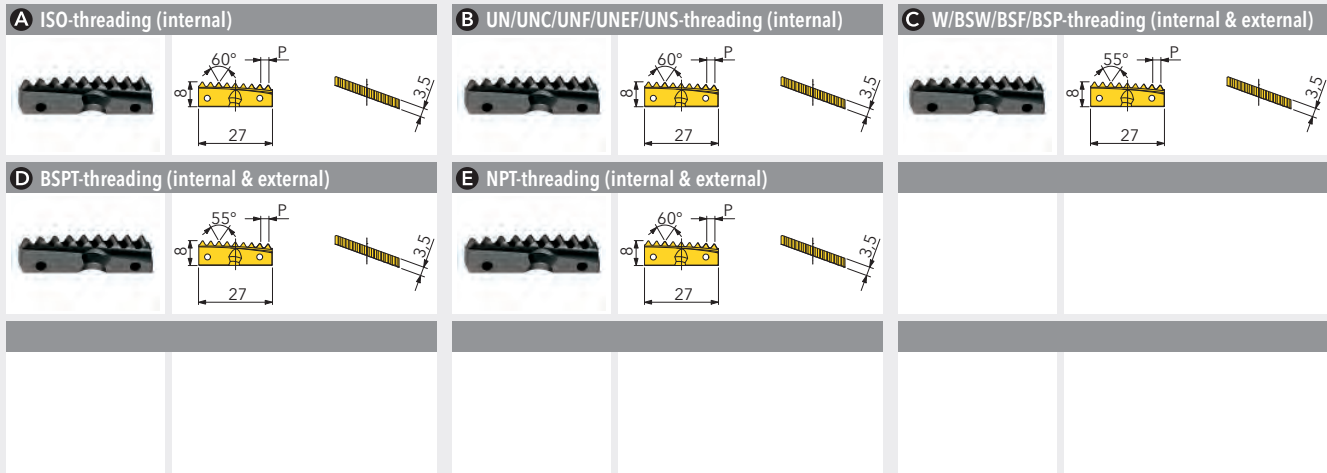
IS23 (5,2Nm)



IK21

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



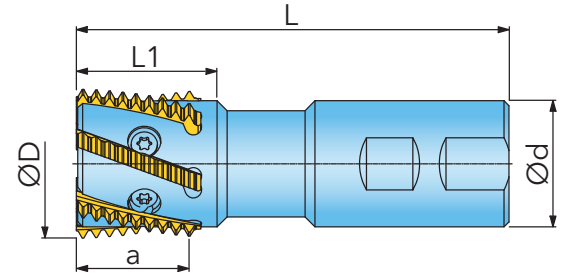
Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					W/BSW/BSF/BSP-threading (internal & external)				
LYER27100IS	1	A	●		LYER27120UN	12	B	●	
LYER27150IS	1,5	A	●		LYER27080UN	8	B	●	
LYER27200IS	2	A	●		BSPT-threading (internal & external)				
LYER27300IS	3	A	●		LYER27110BW	11	C	●	
UN/UNC/UNF/UNEF/UNS-threading (internal)					NPT-threading (internal & external)				
LYER27240UN	24	B	●		LYER27110BT	11	D	●	
LYER27160UN	16	B	●		LYER27115NT	11,5	E	●	

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



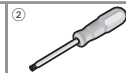
Designation	D	d	L	L1	a	Z	kg
22Y3R032070W6R00	32	32	130	60	32	5	0,611

RAPID-THREAD END MILL WELDON SHANK (A=32MM)

SPARE PARTS



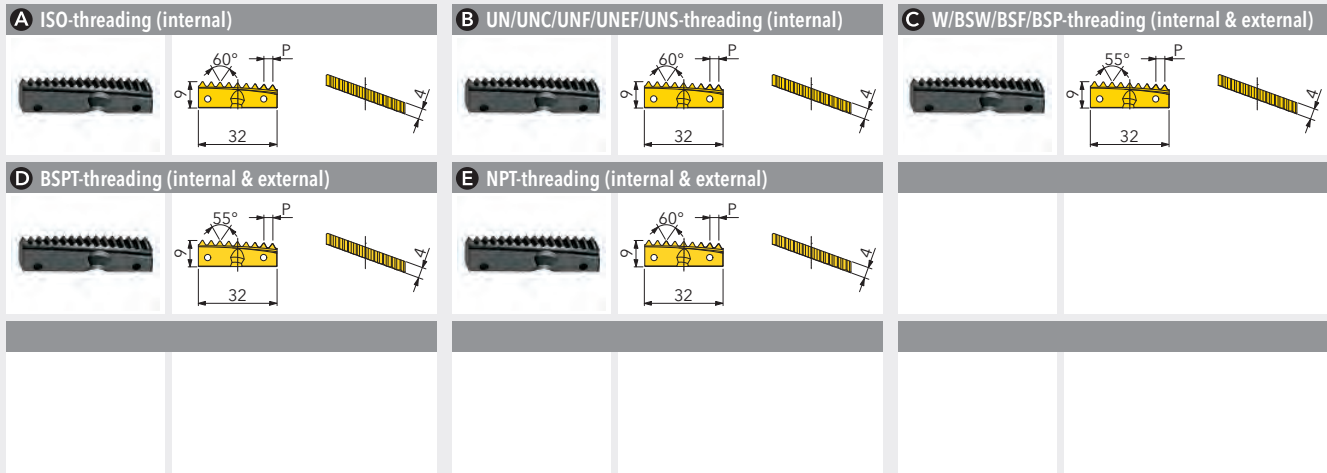
IS32 (10,0Nm)



IK22

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



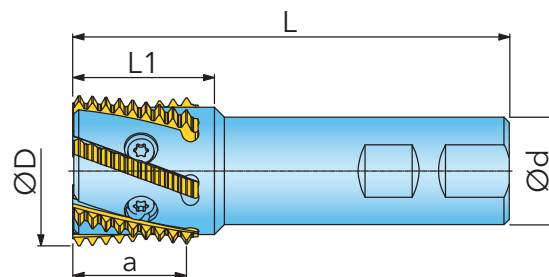
Designation	fz(min/max)	Pitch	Grade	IN2005			Designation	fz(min/max)	Pitch	Grade	IN2005		
ISO-threading (internal)						W/BSW/BSF/BSP-threading (internal & external)							
LYER32150IS		1,5	A			LYER32080UN	8		B				
LYER32200IS		2	A			LYER32060UN	6		B				
LYER32300IS		3	A			BSPT-threading (internal & external)							
LYER32400IS		4	A			LYER32110BW	11		C				
UN/UNC/UNF/UNEF/UNS-threading (internal)						NPT-threading (internal & external)							
LYER32160UN		16	B			LYER32110BT	11		D				
LYER32120UN		12	B			LYER32115NT	11,5		E				

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 B (WELDON)



Designation

D d L L1 a Z



22Y3S045070W6R00

45 32 130 40 37 6

0,880

RAPID-THREAD END MILL WELDON SHANK (A=37MM)

SPARE PARTS



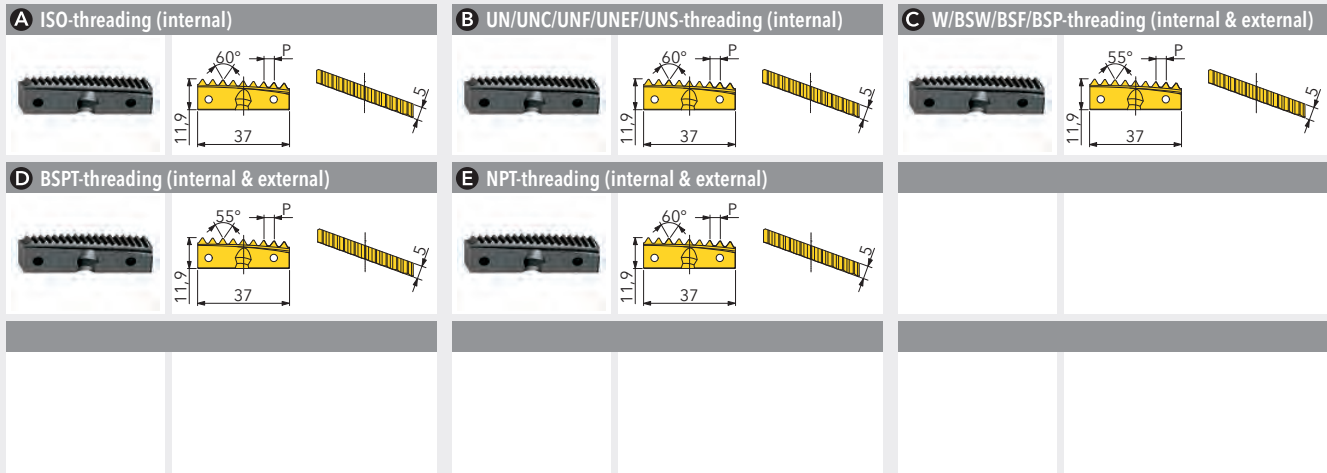
IS45 (10,0Nm)



IK40

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



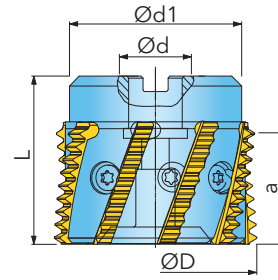
Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					W/BSW/BSF/BSP-threading (internal & external)				
LYER37150IS	1,5		A		LYER37080UN	8		B	
LYER37200IS	2		A		LYER37060UN	6		B	
LYER37300IS	3		A		BSPT-threading (internal & external)				
LYER37400IS	4		A		LYER37110BW	11		C	
UN/UNC/UNF/UNEF/UNS-threading (internal)					NPT-threading (internal & external)				
LYER37160UN	16		B		LYER37110BT	11		D	
LYER37120UN	12		B		LYER37115NT	11,5		E	

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 8030



Designation

D d d1 L a Z



22Y3T063050F1R00

63 22 55 50 38 9

2,240

RAPID-THREAD SHELL MILL (A=38MM)

SPARE PARTS

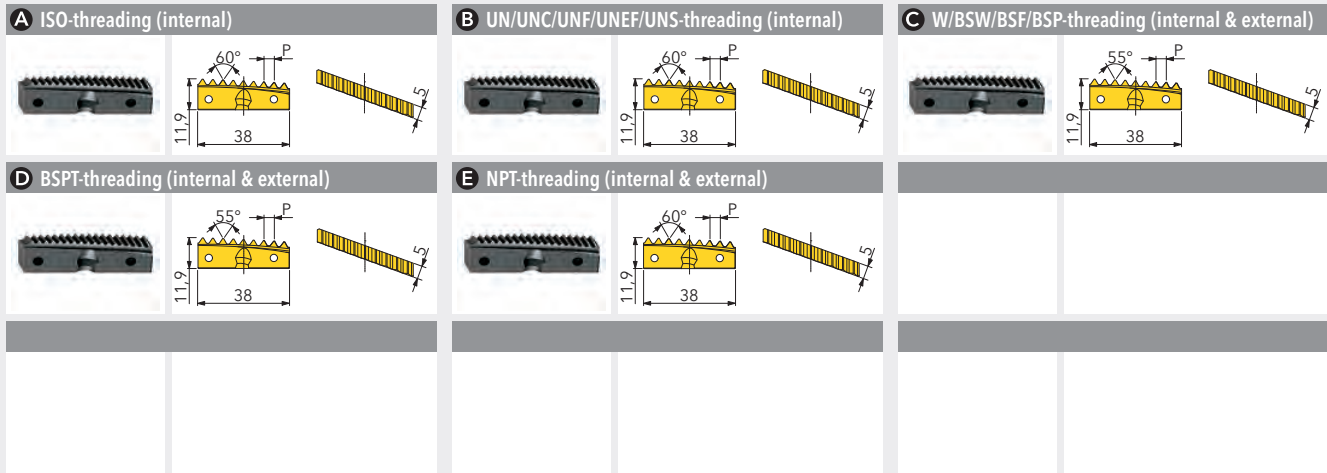


IS63 (10,0Nm)

IK40

① = Insert screw ② = Screw driver

DRILLS/THREAD MILLING



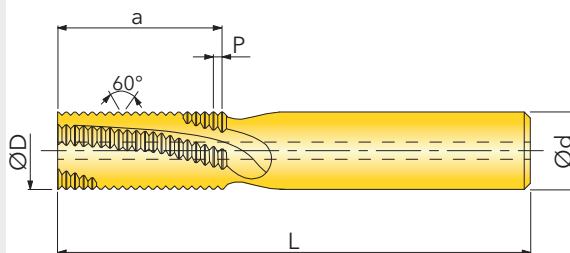
Designation	fz(min/max)	Pitch	Grade	IN2005	Designation	fz(min/max)	Pitch	Grade	IN2005
ISO-threading (internal)					W/BSW/BSF/BSP-threading (internal & external)				
LYER38150IS	1,5		A		LYER38080UN	8		B	
LYER38200IS	2		A		LYER38060UN	6		B	
LYER38300IS	3		A		BSPT-threading (internal & external)				
LYER38400IS	4		A		LYER38110BW	11		C	
UN/UNC/UNF/UNEF/UNS-threading (internal)					NPT-threading (internal & external)				
LYER38160UN	16		B		LYER38110BT	11		D	
LYER38120UN	12		B		LYER38115NT	11,5		E	

● = P ● = M ● = K ● = N ● = S ○ = H



DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

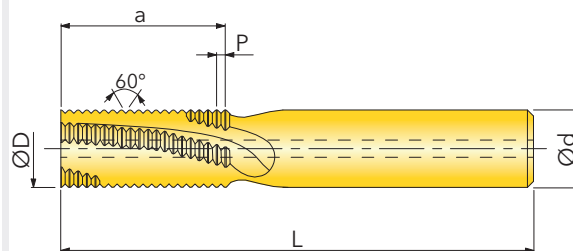
+ Preferred choice ○ Second choice

Designation	D	d	L	a	P	Std. pitch	Fine pitch. Ø	Z	
MTECB 06038C10 0.5ISO	3,8	6	58	10,3	0,5	-	≥ 5	3	✓
MTECB 06031C7 0.7ISO	3,1	6	58	7,4	0,7	M4	≥ 5	3	✓
MTECB 06045C10 0.75ISO	4,5	6	58	10,1	0,75	-	≥ 6	3	✓
MTECB 06038C9 0.8 ISO	3,8	6	58	9,2	0,8	M5	≥ 6	3	✓
MTECB 06046C10 1.0ISO	4,6	6	58	10,5	1	M6	≥ 7	3	✓
MTECB 06046C14 1.0ISO	4,6	6	58	14,5	1	M6	≥ 7	3	✓
MTECB 0606C12 1.0ISO	6	6	58	12,5	1	-	≥ 9	3	✓
MTECB 1010D24 1.0ISO	10	10	73	24,5	1	-	≥ 12	4	✓
MTECB 0808D16 1.0ISO	8	8	64	16,5	1	-	≥ 10	4	✓
MTECB 0606C14 1.25ISO	6	6	58	14,4	1,25	M8	≥ 10	3	✓
MTECB 0606C19 1.25ISO	6	6	58	19,4	1,25	M8	≥ 10	3	✓
MTECB 08078C17 1.5ISO	7,8	8	64	17	1,5	M10	≥ 12	3	✓
MTECB 08078C24 1.5ISO	7,8	8	64	24,8	1,5	M10	≥ 12	3	✓
MTECB 1010D21 1.5ISO	10	10	73	21,8	1,5	-	≥ 14	4	✓
MTECB 1212D26 1.5ISO	12	12	84	26,3	1,5	-	≥ 16	4	✓
MTECB 1616F33 1.5ISO	16	16	105	33,8	1,5	-	≥ 20	6	✓
MTECB 1009C20 1.75ISO	9	10	73	20,1	1,75	M12	≥ 12	3	✓
MTECB 1009C28 1.75ISO	9	10	73	28,9	1,75	M12	≥ 12	3	✓
MTECB 1010C27 2.0ISO	10	10	73	27	2	M14	≥ 15	3	✓
MTECB 12118D27 2.0ISO	11,8	12	84	27	2	M16	≥ 17	4	✓
MTECB 12118D39 2.0ISO	11,8	12	84	39	2	M16	≥ 17	4	✓
MTECB 1615E33 2.5ISO	15	16	105	33,8	2,5	M20	≥ 22	5	✓
MTECB 1615E48 2.5ISO	15	16	105	48,8	2,5	M20	≥ 22	5	✓
MTECB 2018D40 3.0ISO	18	20	105	40,5	3	M24	≥ 25	4	✓
MTECB 2018D58 3.0ISO	18	20	120	58,5	3	M24	≥ 25	4	✓

RAPID-THREAD SC ISO-THREADING WITH CENTRAL INTERNAL COOLANT

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 1835 A



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	



h6

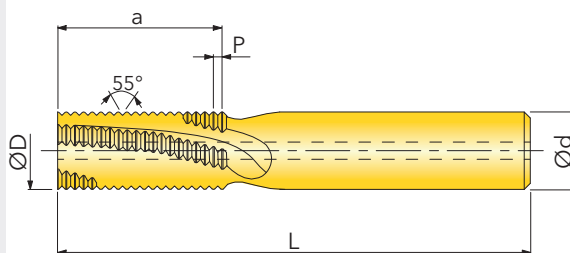
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	UNC	UNF	UNEF	Z	
MTECB 06032C6 32UN	3,2	6	58	6,8	32	8	10	12	3	✓
MTECB 0606C14 32UN	6	6	58	14,7	32	-	-	5/16	3	✓
MTECB 0605C11 28UN	5	6	58	11,3	28	-	1/4	-	3	✓
MTECB 08066C14 24UN	6,6	8	64	14,3	24	-	5/16	-	3	✓
MTECB 0808D21 24UN	8	8	64	20,6	24	-	3/8	9/16 - 5/8	4	✓
MTECB 0808C21 20UN	8	8	64	21	20	-	7/16	-	3	✓
MTECB 1010D22 20UN	10	10	73	22,3	20	-	1/2	-	4	✓
MTECB 06056C14 18UN	5,6	6	58	14,8	18	5/16	-	-	3	✓
MTECB 12113D26 18UN	11,3	12	84	26,1	18	-	9/16 - 5/8	1/8 - 1 5/8	4	✓
MTECB 08067C16 16UN	6,7	8	64	16,7	16	3/8	-	-	3	✓
MTECB 08077C20 14UN	7,7	8	64	20,9	14	7/16	-	-	3	✓
MTECB 10092C22 13UN	9,2	10	73	22,5	13	1/2	-	-	3	✓
MTECB 16144D34 10UN	14,4	16	105	34,3	10	3/4	-	-	4	✓
MTECB 1616C38 9UN	16	16	105	38,1	9	7/8	-	-	3	✓
MTECB 20195D42 8UN	19,5	20	105	42,9	8	1	-	-	4	✓

RAPID THREAD SC UN-THREADING WITH CENTRAL INTERNAL COOLANT

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

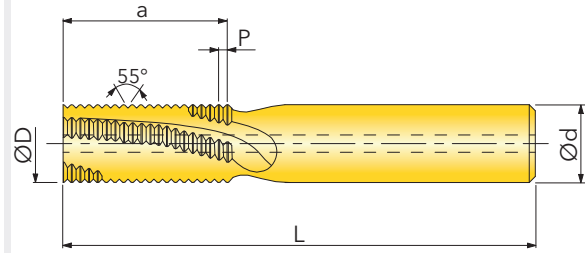
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	BSP	Z	
MTECB 08078C14 28W	7,8	8	64	14,1	28	G1/8	3	✓
MTECB 1010D16 19W	10	10	73	16,7	19	G1/4 - 3/8	4	✓
MTECB 1616E26 14W	16	16	105	26,3	14	G1/2 - 7/8	5	✓
MTECB 1616D38 11W	16	16	105	38,1	11	G ≥ 1	4	✓

RAPID-THREAD SC BSP-THREADING WITH CENTRAL INTERNAL COOLANT

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	

⊕ Preferred choice ○ Second choice



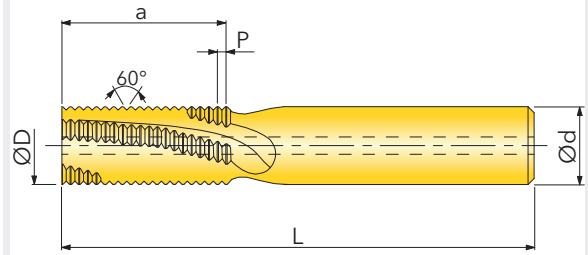
h6

Designation	D	d	L	a	TPI	BSPT	Z	
MTECB 08078C14 28BSPT	7,8	8	64	14,1	28	RC1/8	4	✓
MTECB 1010D16 19BSPT	10	10	73	16,7	19	RC1/4 - 3/8	4	✓
MTECB 1616E26 14BSPT	16	16	105	26,3	14	RC1/2 - 7/8	4	✓
MTECB 1616D28 11BSPT	16	16	105	28,9	11	RC1 - 2	4	✓

RAPID THREAD SC BSPT-THREADING WITH CENTRAL INTERNAL COOLANT

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

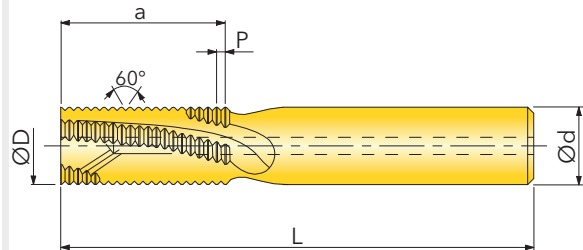
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	NPT	Z	
MTECB 08076C10 27NPT	7,6	8	64	10,8	27	1/8	3	✓
MTECB 1010D16 18NPT	10	10	73	16,2	18	1/4 - 3/8	4	✓
MTECB 16155D22 14NPT	15,5	16	105	22,7	14	1/2 - 3/4	4	✓
MTECB 2020D39 8NPT	20	20	105	39,7	8	≥ 2 1/2	4	✓

RAPID-THREAD SC NPT-THREADING WITH CENTRAL INTERNAL COOLANT

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	



h6

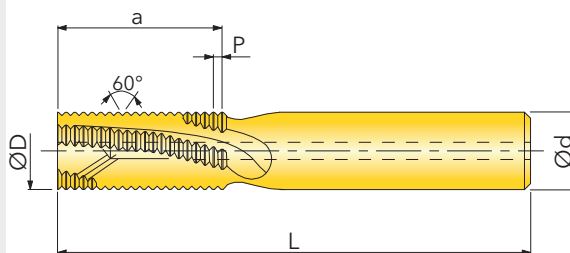
+ Preferred choice ○ Second choice

Designation	D	d	L	a	P	Std. pitch	Fine pitch. Ø	Z	
MTECZ 06048C10 1.0ISO	4,8	6	58	10,5	1	M6	≥ 7	3	✓
MTECZ 0606C12 1.0ISO	6	6	58	12,5	1	-	≥ 9	3	✓
MTECZ 0808D16 1.0ISO	8	8	64	16,5	1	-	≥ 10	4	✓
MTECZ 0606C14 1.25ISO	6	6	58	14,4	1,25	M8	≥ 10	3	✓
MTECZ 0606C19 1.25ISO	6	6	58	19,4	1,25	M8	≥ 10	3	✓
MTECZ 08078C17 1.5ISO	7,8	8	64	17	1,5	M10	≥ 12	3	✓
MTECZ 1010D21 1.5ISO	10	10	73	21,8	1,5	-	≥ 14	4	✓
MTECZ 1212D26 1.5ISO	12	12	84	26,3	1,5	-	≥ 16	4	✓
MTECZ 1616E33 1.5ISO	16	16	101	33,8	1,5	-	≥ 20	5	✓
MTECZ 1009C20 1.75ISO	9	10	73	20,1	1,75	M12	≥ 12	3	✓
MTECZ 1009C28 1.75ISO	9	10	73	28,9	1,75	M12	≥ 12	3	✓
MTECZ 1010C27 2.0ISO	10	10	73	27	2	M14	≥ 15	3	✓
MTECZ 12118D27 2.0ISO	11,8	12	84	27	2	M16	≥ 17	4	✓
MTECZ 1615E33 2.5ISO	15	16	101	33,8	2,5	M20	≥ 22	5	✓

RAPID-THREAD SC ISO-THREADING WITH INTERNAL COOLANT IN THE FLUTES

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

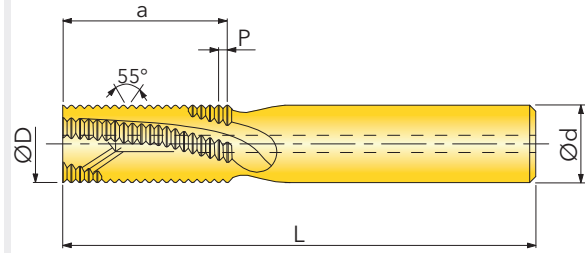
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	UNC	UNF	UNEF	Z	
MTECZ 0606C14 28UN	6	6	58	14,1	28	-	-	7/16 - 1/2	3	✓
MTECZ 0808C21 20UN	8	8	64	21	20	-	7/16	-	3	✓
MTECZ 1010D22 20UN	10	10	73	22,3	20	-	1/2	-	4	✓
MTECZ 1212E27 20UN	12	12	84	27,3	20	-	-	3/4 - 1	5	✓
MTECZ 06056C14 18UN	5,6	6	58	14,8	18	5/16	-	-	3	✓
MTECZ 12113D26 18UN	11,3	12	84	26,1	18	-	9/16 - 5/8	1/8 - 1 5/8	4	✓
MTECZ 08067C16 16UN	6,7	8	64	16,7	16	3/8	-	-	3	✓
MTECZ 1212D31 16UN	12	12	84	31	16	-	3/4	-	4	✓
MTECZ 08077C20 14UN	7,7	8	64	20,9	14	7/16	-	-	3	✓
MTECZ 1616E37 14UN	16	16	101	37,2	14	-	7/8	-	5	✓
MTECZ 10092C22 13UN	9,2	10	73	22,5	13	1/2	-	-	3	✓
MTECZ 12105C26 12UN	10,5	12	84	26,5	12	9/16	-	-	3	✓
MTECZ 12114C28 11UN	11,4	12	84	28,9	11	5/8	-	-	3	✓
MTECZ 16144D34 10UN	14,4	16	101	34,3	10	3/4	-	-	4	✓

RAPID-THREAD SC UN-THREADING WITH INTERNAL COOLANT IN THE FLUTES

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	

h6

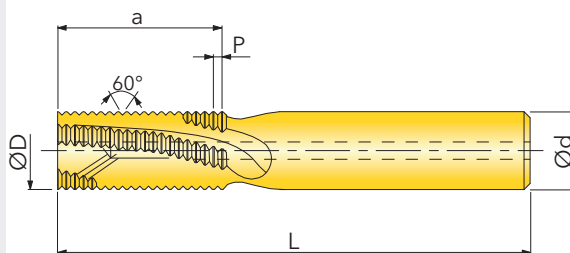
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	BSP	Z	
MTECZ 08078C14 28W	7,8	8	64	14,1	28	G1/8	3	✓
MTECZ 1010D16 19W	10	10	73	16,7	19	G1/4 - 3/8	4	✓
MTECZ 1616E26 14W	16	16	101	26,3	14	G1/2 - 7/8	5	✓
MTECZ 1616D38 11W	16	16	101	38,1	11	G ≥ 1	4	✓

RAPID THREAD - SC BSP-THREADING WITH INTERNAL COOLANT IN THE FLUTES

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

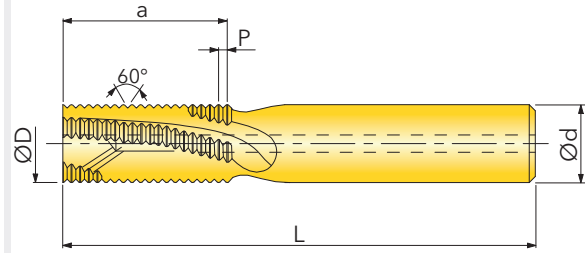
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	NPT	Z	
MTECZ 08076C10 27NPT	7,6	8	64	10,8	27	1/8	3	✓
MTECZ 1010D16 18NPT	10	10	73	16,2	18	1/4 - 3/8	4	✓

RAPID THREAD SC NPT-THREADING WITH INTERNAL COOLANT IN THE FLUTES

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		h6
IN2005	+	+	+	○	+			

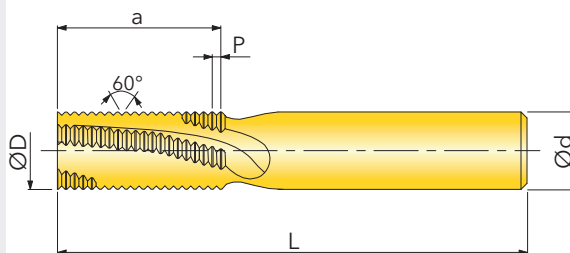
⊕ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	NPTF	Z	
MTECZ 08076C10 27NPTF	7,6	8	64	10,8	27	1/8	3	✓
MTECZ 1010D16 18NPTF	10	10	73	16,2	18	1/4 - 3/8	4	✓
MTECZ 16155D22 14NPTF	15,5	16	101	22,7	14	1/2 - 3/4	4	✓

RAPID THREAD - SC NPTF-THREADING WITH INTERNAL COOLANT IN THE FLUTES

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

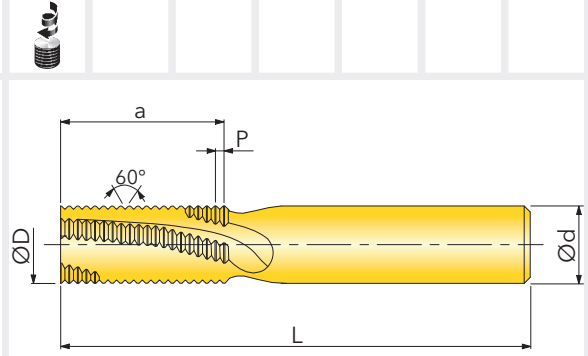
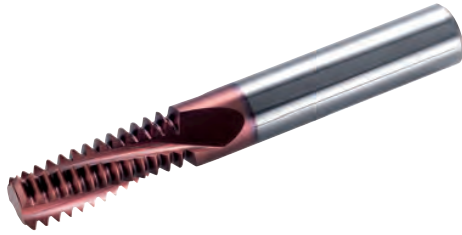
⊕ Preferred choice ○ Second choice

Designation	D	d	L	a	P	Std. pitch	Fine pitch. Ø	Z
MTEC 06022C5 0.5ISO	2,2	6	58	5,3	0,5	M3	≥ 4	3
MTEC 06038C10 0.5ISO	3,8	6	58	10,3	0,5	-	≥ 5	3
MTEC 06031C7 0.7ISO	3,1	6	58	7,4	0,7	M4	≥ 5	3
MTEC 06045C10 0.75ISO	4,5	6	58	10,1	0,75	-	≥ 6	3
MTEC 06036C9 0.8ISO	3,6	6	58	9,2	0,8	M5	≥ 6	3
MTEC 0604C10 1.0ISO	4	6	58	10,5	1	M6	≥ 7	3
MTEC 0604C14 1.0ISO	4	6	58	14,5	1	M6	≥ 7	3
MTEC 0606C12 1.0ISO	6	6	58	12,5	1	-	≥ 9	3
MTEC 0808D16 1.0ISO	8	8	64	16,5	1	-	≥ 10	4
MTEC 0605C14 1.25ISO	5	6	58	14,4	1,25	M8	≥ 10	3
MTEC 0605C19 1.25ISO	5	6	58	19,4	1,25	M8	≥ 10	3
MTEC 0807C17 1.5ISO	7	8	64	17,3	1,5	M10	≥ 12	3
MTEC 0807C24 1.5ISO	7	8	76	24,8	1,5	M10	≥ 12	3
MTEC 1010D21 1.5ISO	10	10	73	21,8	1,5	-	≥ 14	4
MTEC 1616F33 1.5ISO	16	16	105	33,8	1,5	-	≥ 20	6
MTEC 0808C20 1.75ISO	8	8	64	20,1	1,75	M12	≥ 14	3
MTEC 0808C28 1.75ISO	8	8	76	28,9	1,75	M12	≥ 14	3
MTEC 1010C27 2.0ISO	10	10	73	27	2	M16	≥ 17	3
MTEC 1010C39 2.0ISO	10	10	105	39	2	M16	≥ 17	3
MTEC 1212D27 2.0ISO	12	12	84	27	2	-	≥ 18	4
MTEC 2020F41 2.0ISO	20	20	105	41	2	-	≥ 26	6
MTEC 1414D33 2.5ISO	14	14	84	33,8	2,5	M20	≥ 22	4
MTEC 1414D48 2.5ISO	14	14	105	48,8	2,5	M20	≥ 22	4
MTEC 1616C40 3.0ISO	16	16	105	40,5	3	M24	≥ 25	3
MTEC 1616C58 3.0ISO	16	16	120	58,5	3	M24	≥ 25	3

RAPID-THREAD SC ISO-THREADING INTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

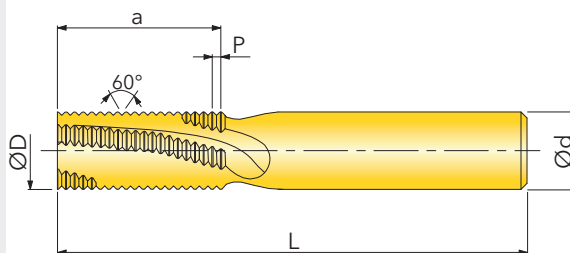
⊕ Preferred choice ○ Second choice

Designation	D	d	L	a	P	Z
MTEC E 1010D16 1.0ISO	10	10	73	16,5	1	4
MTEC E 1212E20 1.0ISO	12	12	84	20,5	1	5
MTEC E 1010D15 1.5ISO	10	10	73	15,8	1,5	4
MTEC E 1212D20 1.5ISO	12	12	84	20,3	1,5	4
MTEC E 1010C17 2.0ISO	10	10	73	17	2	3
MTEC E 1212D21 2.0ISO	12	12	84	21	2	4

RAPID THREAD SC ISO-THREADING EXTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+	○	+	

h6

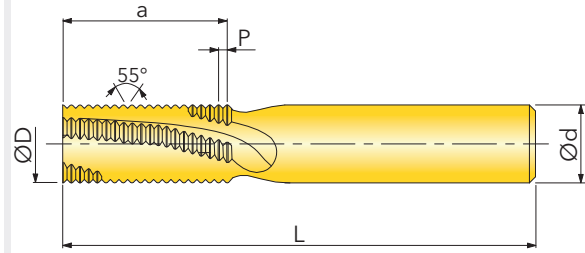
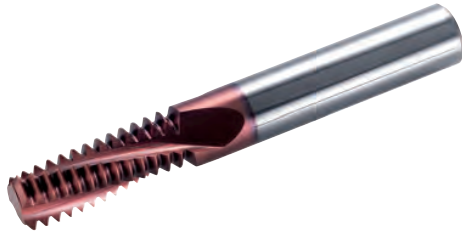
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	UNC	UNF	UNEF	Z
MTEC 0604C11 28UN	4	6	58	11,3	28	-	1/4	-	3
MTEC 0606C14 28UN	6	6	58	14,1	28	-	-	7/16 - 1/2	3
MTEC 0605C14 24UN	5	6	58	14,3	24	-	5/16	-	3
MTEC 0807C21 24UN	7	8	64	20,6	24	-	-	3/8 - 5/8	3
MTEC 06045C12 20UN	4,5	6	58	12,1	20	1/4	-	-	3
MTEC 0807C21 20UN	7	8	64	21	20	-	7/16 - 1/2	-	3
MTEC 1212E27 20UN	12	12	84	27,3	20	-	-	3/4 - 1	5
MTEC 0605C14 18UN	5	6	58	14,8	18	5/16	-	-	3
MTEC 1010D26 18UN	10	10	73	26,1	18	-	9/16 - 5/8	1/8 - 1 5/8	4
MTEC 0606C16 16UN	6	6	58	16,7	16	3/8	-	-	3
MTEC 1212D31 16UN	12	12	84	31	16	-	3/4	-	4
MTEC 0807C20 14UN	7	8	64	20,9	14	7/16	-	-	3
MTEC 1615E37 14UN	15	16	105	37,2	14	-	7/8	-	5
MTEC 0808C22 13UN	8	8	64	22,5	13	1/2	-	-	3
MTEC 1010C26 12UN	10	10	73	26,5	12	9/16	-	-	3
MTEC 1616E41 12UN	16	16	105	41,3	12	-	1 - 1 1/2	-	5
MTEC 1010C28 11UN	10	10	73	28,9	11	5/8	-	-	3
MTEC 1212C34 10UN	12	12	84	34,3	10	3/4	-	-	3
MTEC 1615C38 9UN	15	16	105	38,1	9	7/8	-	-	3
MTEC 1616C42 8UN	16	16	105	42,9	8	1	-	-	3

RAPID-THREAD SC UN-THREADING INTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	



h6

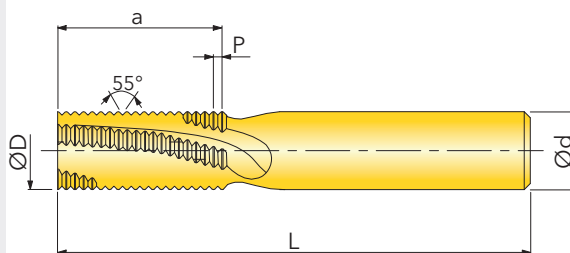
⊕ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	BSP	Z
MTEC 0606C9 28W	6	6	58	9,5	28	G1/8	3
MTEC 0808C14 19W	8	8	64	14	19	G1/4 - 3/8	3
MTEC 1212D19 14W	12	12	84	19	14	G1/2 - 7/8	4
MTEC 1212D26 14W	12	12	84	26,3	14	G1/2 - 7/8	4
MTEC 1212C24 11W	12	12	84	24,2	11	G1-1 1/2	3
MTEC 1616D38 11W	16	16	105	38,1	11	G1-3	4
MTEC 2020E47 11W	20	20	105	47,3	11	G ≥ 1	5

RAPID THREAD SC BSP-THREADING INTERNAL & EXTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		h6
IN2005	+	+	+	○	+			

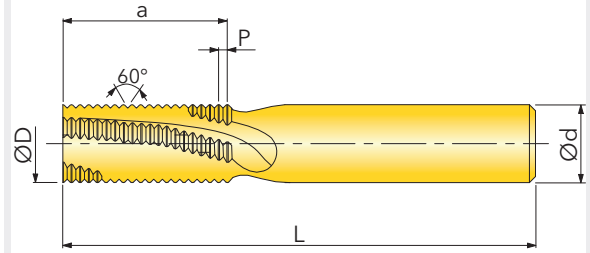
+ Preferred choice ○ Second choice

Designation	D	d	L	a	TPI	BSPT	Z
MTEC 0606C9 28BSPT	6	6	58	9,5	28	RC1/8	3
MTEC 0808C14 19BSPT	8	8	64	14	19	RC1/4 - 3/8	3
MTEC 1212D19 14BSPT	12	12	84	19,1	14	RC1/2 - 7/8	4
MTEC 1616D28 11BSPT	16	16	105	28,9	11	RC1 - 2	4

RAPID-THREAD SC BSPT-THREADING INTERNAL & EXTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+	○	+	

⊕ Preferred choice ○ Second choice



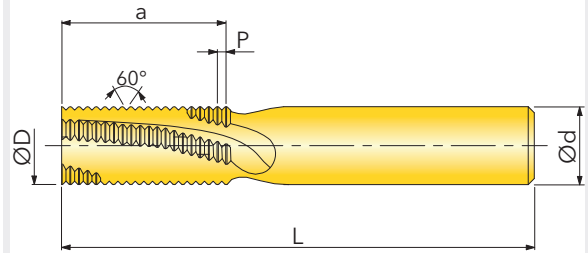
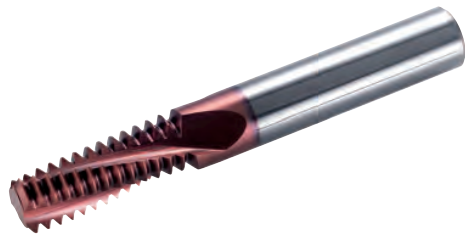
h6

Designation	D	d	L	a	TPI	NPT	Z
MTEC 0606C9 27NPT	6	6	58	9,9	27	1/8	3
MTEC 0808C14 18NPT	8	8	64	14,8	18	1/4 - 3/8	3
MTEC 1212D20 14NPT	12	12	84	20,9	14	1/2 - 3/4	4
MTEC 1616D27 11.5NPT	16	16	105	27,6	11,5	1 - 2	4
MTEC 2020D39 8NPT	20	20	105	39,7	8	≥ 2 1/2	4

RAPID THREAD - SC NPT-THREADING INTERNAL & EXTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P M K N_(K) S_(M) H_(PK)

+ + + ○ +

+ Preferred choice ○ Second choice



h6

Designation

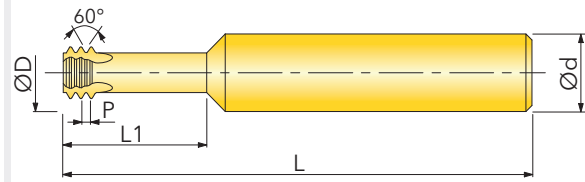
D d L a TPI NPTF Z

MTEC 0606C9 27NPTF	6	6	58	9,9	27	1/8	3
MTEC 0808C14 18NPTF	8	8	64	14,8	18	1/4 - 3/8	3
MTEC 1212D20 14NPTF	12	12	84	20,9	14	1/2 - 3/4	4

RAPID THREAD SC NPTF-THREADING INTERNAL & EXTERNAL

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2005

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice ○ Second choice

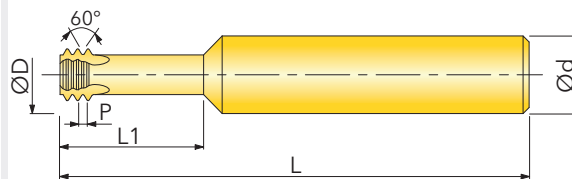
h6

Designation	D	d	L	L1	P	Std. pitch	Z
MTECS 03011C4 0.3ISO	1,05	3	39	4	0,3	M1,4	3
MTECS 03012C5 0.35ISO	1,2	3	39	5	0,35	M1,6	3
MTECS 06016C4 0.4ISO	1,55	6	58	4,5	0,4	M2	3
MTECS 03016C6 0.4ISO	1,55	3	39	6	0,4	M2	3
MTECS 06017C5 0.45ISO	1,65	6	58	5	0,45	M2,2	3
MTECS 0602C5 0.45ISO	1,95	6	58	5,5	0,45	M2,5	3
MTECS 0602C7 0.45ISO	1,95	6	58	7,5	0,45	M2,5	3
MTECS 06024C6 0.5ISO	2,35	6	58	6,5	0,5	M3	3
MTECS 06024C9 0.5ISO	2,35	6	58	9,5	0,5	M3	3
MTECS 06028C7 0.6ISO	2,75	6	58	7,5	0,6	M3,5	3
MTECS 06031C9 0.7ISO	3,1	6	58	9	0,7	M4	3
MTECS 06031C12 0.7ISO	3,1	6	58	12,5	0,7	M4	3
MTECS 06038C12 0.8ISO	3,8	6	58	12,5	0,8	M5	3
MTECS 06038C16 0.8ISO	3,8	6	58	16	0,8	M5	3
MTECS 06047C14 1.0ISO	4,65	6	58	14	1	M6	3
MTECS 06047C20 1.0ISO	4,65	6	58	20	1	M6	3
MTECS 0606C18 1.25ISO	5,95	6	58	18	1,25	M8	3
MTECS 0606C24 1.25ISO	5,95	6	58	24	1,25	M8	3
MTECS 08078C23 1.5ISO	7,8	8	64	23	1,5	M10	3
MTECS 1009C26 1.75ISO	9	10	73	26	1,75	M12	3
MTECS 12118D35 2.0ISO	11,8	12	84	35	2	M16	4
MTECS 1615E43 2.5ISO	15	16	105	43	2,5	M20	5

RAPID THREAD SC ISO-THREADING SHORT INTERNAL (RIGHT VERSION)

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)		h6
IN2005	+	+	+	○	+			

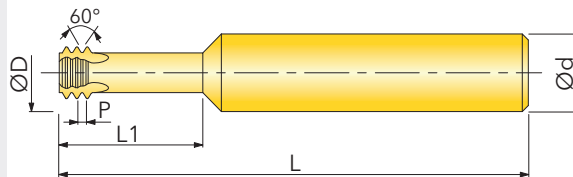
+ Preferred choice ○ Second choice

Designation	D	d	L	L1	TPI	UNC	UNF	Z
MTECS 06012C4 80UN	1,15	6	58	4	80	-	0	3
MTECS 06019C5 48UN	1,9	6	58	5,2	48	3	4	3
MTECS 06021C6 40UN	2,1	6	58	6,3	40	4	-	3
MTECS 06024C9 40UN	2,45	6	58	9,6	40	5	6	3
MTECS 06033C9 36UN	3,3	6	58	9	36	-	8	3
MTECS 06025C7 32UN	2,55	6	58	7,1	32	6	-	3
MTECS 06032C9 32UN	3,2	6	58	9,5	32	8	-	3
MTECS 06032C12 32UN	3,2	6	58	12,5	32	8	-	3
MTECS 06037C10 32UN	3,7	6	58	10,5	32	-	10	3
MTECS 06037C15 32UN	3,7	6	58	15	32	-	10	3
MTECS 0605C14 28UN	5	6	58	14,5	28	-	1/4	3
MTECS 0605C19 28UN	5	6	58	19	28	-	1/4	3
MTECS 06035C10 24UN	3,5	6	58	10,6	24	10;12	-	3
MTECS 08066C17 24UN	6,6	8	64	17	24	-	5/16 3/8	3
MTECS 08066C24 24UN	6,6	8	64	24	24	-	5/16 3/8	3
MTECS 06047C14 20UN	4,75	6	58	14	20	1/4	-	3
MTECS 0808C25 20UN	8	8	64	25	20	-	7/16	3
MTECS 06047C19 20UN	4,75	6	58	19	20	1/4	-	3
MTECS 0606C17 18UN	6	6	58	17	18	5/16	-	3
MTECS 0606C23 18UN	6	6	58	23	18	5/16	-	3
MTECS 08067C22 16UN	6,7	8	64	22	16	3/8	-	3
MTECS 08077C25 14UN	7,7	8	64	25	14	7/16	-	3
MTECS 10092C27 13UN	9,2	10	73	27,5	13	1/2	-	3
MTECS 12114C34 11UN	11,4	12	84	34,5	11	5/8	-	3

RAPID-THREAD SC UN-THREADING SHORT INTERNAL (RIGHT VERSION)

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2006

P	M	K	N _(K)	S _(M)	H _(PK)
+	+	+		+	+



h6



⊕ Preferred choice ○ Second choice

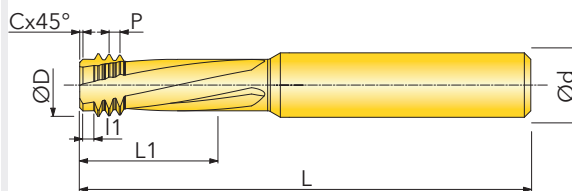
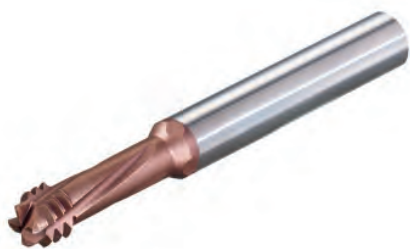
Designation	D	d	L	L1	P	Std. pitch	Z
MTECSH 06016C4 0.4ISO	1,55	6	58	4,5	0,4	M2	3
MTECSH 06017C5 0.45ISO	1,65	6	58	5	0,45	M2,2	3
MTECSH 0602C5 0.45ISO	1,95	6	58	5,5	0,45	M2,5	3
MTECSH 0602C7 0.45ISO	1,95	6	58	7,5	0,45	M2,5	3
MTECSH 06024C6 0.5ISO	2,35	6	58	6,5	0,5	M3	3
MTECSH 06024C9 0.5ISO	2,35	6	58	9,5	0,5	M3	3
MTECSH 06028C7 0.6ISO	2,75	6	58	7,5	0,6	M3,5	3
MTECSH 06031C9 0.7ISO	3,1	6	58	9	0,7	M4	3
MTECSH 06031C12 0.7ISO	3,1	6	58	12,5	0,7	M4	3
MTECSH 06038C12 0.8ISO	3,8	6	58	12,5	0,8	M5	3
MTECSH 06038C16 0.8ISO	3,8	6	58	16	0,8	M5	3
MTECSH 06047C14 1.0ISO	4,65	6	58	14	1	M6	3
MTECSH 06047C20 1.0ISO	4,65	6	58	20	1	M6	3
MTECSH 0606C18 1.25ISO	5,95	6	58	18	1,25	M8	3
MTECSH 0606C24 1.25ISO	5,95	6	58	24	1,25	M8	3
MTECSH 08078C23 1.5ISO	7,8	8	64	23	1,5	M10	3
MTECSH 1009C26 1.75ISO	9	10	73	26	1,75	M12	3
MTECSH 12118D35 2.0ISO	11,8	12	84	35	2	M16	4

for hard milling

RAPID THREAD SC ISO-THREADING SHORT INTERNAL (LEFT VERSION)

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade	P	M	K	N _(K)	S _(M)	H _(PK)
IN2005	+	+	+		+	○

h6



+ Preferred choice ○ Second choice

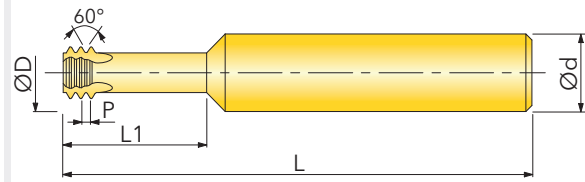
Designation	D	d	L	L1	l1	C	P	Std. pitch	Z	
MTECD 06032C11 0.7ISO	3,15	6	58	11,6	0,7	0,2	0,70	M4	3	
MTECD 0604C14 0.8ISO	4,0	6	58	14,4	0,8	0,3	0,80	M5	3	
MTECD 08047C14 1.0ISO	4,7	8	64	14,0	1,0	0,4	1,00	M6-M9	3	✓
MTECD 08061D18 1.25ISO	6,1	8	64	18,0	1,3	0,5	1,25	M8-M12	4	✓
MTECD 08078D23 1.5ISO	7,8	8	64	23,0	1,5	0,6	1,50	M10-M15	4	✓
MTECD 1009D26 1.75ISO	9,0	10	73	26,0	1,8	0,6	1,75	M12	4	✓
MTECD 12118D35 2.0ISO	11,8	12	84	35,0	2,0	0,6	2,00	M16-M23	4	✓

for hard milling

RAPID THREAD SC ISO-THREADING / DRILLING SHORT INTERNAL (LEFT VERSION)

DRILLS/THREAD MILLING

ADAPTION ACC. TO DIN 6535 HA



Grade

IN2006

P
M
K
N_(K)
S_(M)
H_(PK)

+ Preferred choice ○ Second choice



h6



Designation	D	d	L	L1	TPI	UNC	UNF	Z
MTECSH 06012C4 80UN	1,15	6	58	4	80	-	0	3
MTECSH 06019C5 48UN	1,9	6	58	5,2	48	3	4	3
MTECSH 06021C6 40UN	2,1	6	58	6,3	40	4	-	3
MTECSH 06024C7 40UN	2,45	6	58	7	40	5	6	3
MTECSH 06033C9 36UN	3,3	6	58	9	36	-	8	3
MTECSH 06032C9 32UN	3,2	6	58	9,5	32	8	-	3
MTECSH 06032C12 32UN	3,2	6	58	12,5	32	8	-	3
MTECSH 06037C10 32UN	3,7	6	58	10,5	32	-	10	3
MTECSH 06037C15 32UN	3,7	6	58	15	32	-	10	3
MTECSH 06042C11 28UN	4,2	6	58	11	28	-	12	3
MTECSH 0605C14 28UN	5	6	58	14,5	28	-	1/4	3
MTECSH 0605C19 28UN	5	6	58	19	28	-	1/4	3
MTECSH 06035C10 24UN	3,5	6	58	10,6	24	10;12	-	3
MTECSH 08066C17 24UN	6,6	8	64	17	24	-	5/16	3
MTECSH 08066C24 24UN	6,6	8	64	24	24	-	5/16	3
MTECSH 06047C19 20UN	4,75	6	58	19	20	1/4	-	3
MTECSH 0606C17 18UN	6	6	58	17	18	5/16	-	3
MTECSH 1212D35 18UN	12	12	84	35	18	-	5/8	4
MTECSH 0606C23 18UN	6	6	58	23	18	5/16	-	3
MTECSH 08067C22 16UN	6,7	8	64	22	16	3/8	-	3
MTECSH 10092C27 13UN	9,2	10	73	27,5	13	1/2	-	3

for hard milling

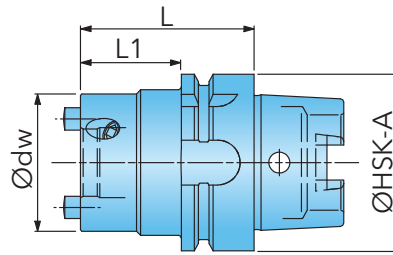
RAPID THREAD SC UN-THREADING SHORT INTERNAL (LEFT VERSION)



TOOL HOLDERS AND ADAPTORS

	Adaptions	Code	Page
	HSKA50..A100-Modular 40/50	INNOFIT	294
	DIN69871 A40...A50-Modular 40/50	INNOFIT	295
	MAS-BT40...50-Modular 40/50	INNOFIT	296
	DIN2080 A40...A50-Modular 40/50	INNOFIT	297
	Modular 40/50 (Extension)	INNOFIT	298
	Modular 50/40 (Reducer)	INNOFIT	299
	Modular 40/50 Shell Typ	INNOFIT	300
	Screw-In Type	INNOFIT	301
	Steel Extension Cylindrical/Conical (Screw Type)		302
	Heavy Metal Extension - cylindrical		303
	Solid Carbide Extension - Cylindrical (Screw Type)		304
	Extension with vibration Damping (Srew Type)		305
	Heavy Metal Extension - tapered		306
	Carbide Extension - Conical (Screw Type)		307

Subject to printing error or technical changes.

TOOL HOLDERS AND ADAPTORS



Designation	MOD1	dw	L	L1	MOD	HSK-A		
HSKA50Z4SA060	40	49	60	34	40	50	✓	0,67
HSKA63Z4SA062	40	49	62	35	40	63	✓	1,04
HSKA63Z4SB062	40	61	62	38	40	63	✓	1,19
HSKA80Z4SA068	40	49	68	42	40	80	✓	1,54
HSKA80Z5SA080	50	78	80	54	50	80	✓	2,41
HSKA100Z4SA080	40	49	80	42	40	100	✓	2,80
HSKA100Z4SB080	40	61	80	50	50	100	✓	2,97
HSKA100Z5SA080	50	78	80	50	50	100	✓	3,50

INNOFIT HSKA50..A100-MODULAR 40/50

SPARE PARTS

①



②



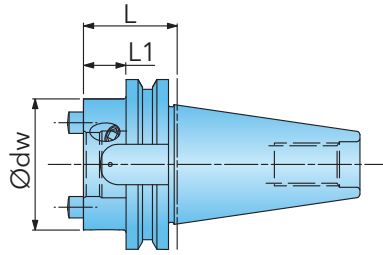
age



300

300

① = Screw ② = Wrench

TOOL HOLDERS AND ADAPTORS



Designation	MOD1	dw	L	L1	MOD	SK		
69871A40Z4SA035	40	49	35	15	40	40	✓	0,90
69871A50Z4SA035	40	49	35	13	40	50	✓	2,71
69871A50Z4SB035	40	61	35	15	50	50	✓	2,85
69871A50Z5SA035	50	78	35	15	50	50	✓	2,80

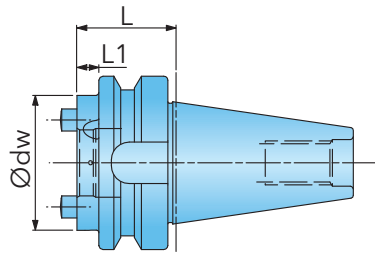




INNOFIT DIN69871 A40...A50-MODULAR 40/50

SPARE PARTS		
age	300	300

① = Screw ② = Wrench

TOOL HOLDERS AND ADAPTORS



Designation	MOD1	dw	L	L1	MOD	BT		
BT40Z4SA035	40	49	35	7	40	40	✓	0,95
BT50Z4SA045	40	49	45	6	40	50	✓	3,57
BT50Z5SA045	50	78	45	6	50	50	✓	3,42

INNOFIT MAS-BT40...50-MODULAR 40/50

SPARE PARTS

①



300

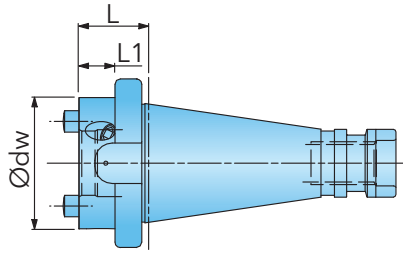
②





300

① = Screw ② = Wrench

TOOL HOLDERS AND ADAPTORS



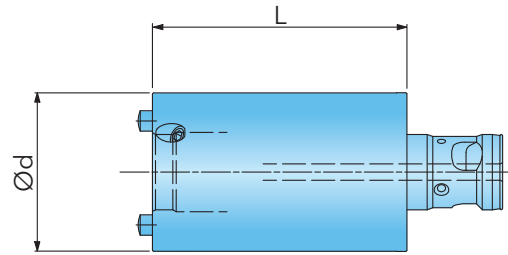
Designation	MOD1	dw	L	L1	MOD	SK		
2080A40Z4SA025	40	49	25	12	40	40	✓	0,82
2080A50Z4SA035	40	49	35	19	40	50	✓	2,78
2080A50Z5SA035	50	78	35	19	40	50	✓	2,95



SPARE PARTS		
age	300	300

① = Screw ② = Wrench

INNOFIT DIN2080 A40...A50-MODULAR 40/50

TOOL HOLDERS AND ADAPTORS



Designation	MOD1	d	L	MOD		
Z4Z4SA050	40	49	50	40	✓	0,68
Z4Z4SA075	40	49	75	40	✓	1,04
Z4Z4SA100	40	49	100	40	✓	1,39
Z4Z4SB050	40	61	50	40	✓	1,05
Z4Z4SB075	40	61	75	40	✓	1,61
Z4Z4SB100	40	61	100	40	✓	2,17
Z4Z4SB125	40	61	125	40	✓	2,73
Z5Z5SA075	50	78	75	50	✓	2,65
Z5Z5SA100	50	78	100	50	✓	3,57
Z5Z5SA125	50	78	125	50	✓	4,29
Z4Z4SA050-01	40	61	50	40	✓	0,85

INNOFIT MODULAR 40/50 (EXTENSION)

SPARE PARTS

①



②



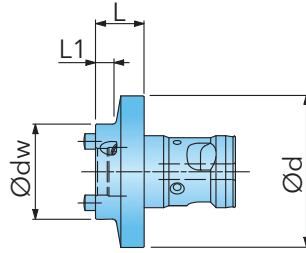
Page



300

Z3

① = Screw ② = Wrench

TOOL HOLDERS AND ADAPTORS



Designation	MOD1	d	dw	L	L1	MOD		
Z5Z4SA025	40	78	49	25	9	50	✓	0,85
Z5Z4SA050	40	78	49	50	34	50	✓	1,20
Z5Z4SA075	40	78	49	75	59	50	✓	1,55
Z5Z4SA100	40	78	49	100	84	50	✓	1,88
Z5Z4SB025	40	78	61	25	9	50	✓	0,92
Z5Z4SB050	40	78	61	50	34	50	✓	1,48
Z5Z4SB075	40	78	61	75	59	50	✓	2,04
Z5Z4SB100	40	78	61	100	84	50	✓	2,60

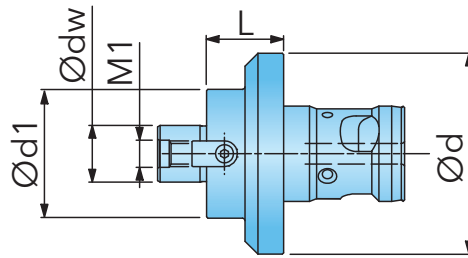


INNOFIT MODULAR 50/40 (REDUCER)

SPARE PARTS		
age	300	300

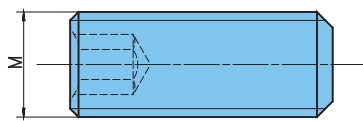
① = Screw ② = Wrench

TOOL HOLDERS AND ADAPTORS

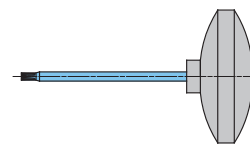


Designation	d	dw	d1	L	M1	MOD	IK	kg
Z4SM16SA023	49	16	36	23	M8	40	✓	0,38
Z4SM22SA016	49	22	49	16	M10	40	✓	0,39
Z4SM27SA020	49	27	60	20	M12	40	✓	0,60
Z4SM16SB023	61	16	61	16	M8	40	✓	0,42
Z4SM22SB016	61	22	61	16	M10	40	✓	0,46
Z4SM27SB020	61	27	61	20	M12	40	✓	0,57
Z5SM22SA030	78	22	50	30	M10	50	✓	1,14
Z5SM27SA030	78	27	60	30	M12	50	✓	1,26
Z5SM32SA030	78	32	78	30	M16	50	✓	1,57
Z5SM40SA030	78	40	88	30	M20	50	✓	1,94

SPARE PARTS



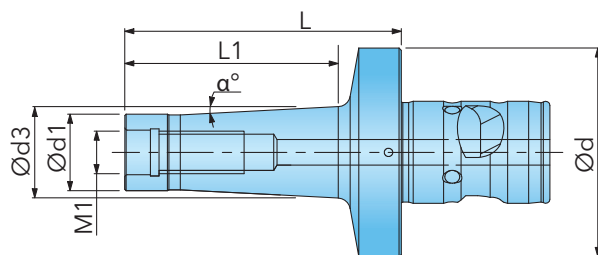
DIN 913



Item no.	for MOD	M
Screw		
SA080-21 (17Nm)	40	8x1
SA100-45 (27Nm)	50	10x1
Wrench		
DS-H04T	40	
DS-H05T	50	

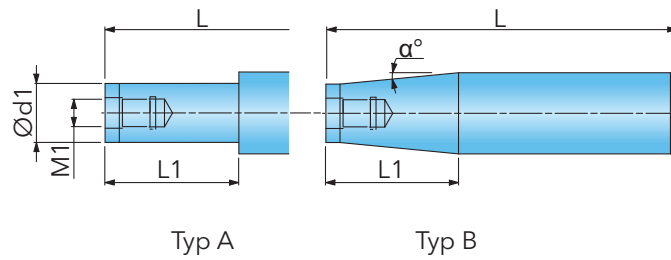
INNOFIT MODULAR 40/50 SHELL TYP



TOOL HOLDERS AND ADAPTORS



Designation	d	d1	d3	L	L1	α	M1	MOD	IK	kg
Z4MOD08SK065	49	13	17	65	50	3	M8	40	✓	0,32
Z4MOD08SK115	49	13	22	115	100	3	M8	40	✓	0,43
Z4MOD08SK165	49	13	27	165	150	3	M8	40	✓	0,61
Z4MOD10SK065	49	18	22	65	50	3	M10	40	✓	0,36
Z4MOD10SK115	49	18	27	115	100	3	M10	40	✓	0,54
Z4MOD10SK165	49	18	32	165	150	3	M10	40	✓	0,80
Z4MOD12SK065	49	21	25	65	50	3	M12	40	✓	0,40
Z4MOD12SK115	49	21	30	115	100	3	M12	40	✓	0,63
Z4MOD12SK165	49	21	36	165	150	3	M12	40	✓	0,95
Z4MOD08SF065	61	13	17	65	50	3	M8	40	✓	0,41
Z4MOD08SF115	61	13	22	115	100	3	M8	40	✓	0,51
Z4MOD08SF165	61	13	27	165	150	3	M8	40	✓	0,69
Z4MOD10SF065	61	18	22	65	50	3	M10	40	✓	0,45
Z4MOD10SF115	61	18	27	115	100	3	M10	40	✓	0,63
Z4MOD10SF165	61	18	32	165	150	3	M10	40	✓	0,88
Z4MOD12SF065	61	21	25	65	50	3	M12	40	✓	0,49
Z4MOD12SF115	61	21	30	115	100	3	M12	40	✓	0,71
Z4MOD12SF165	61	21	36	165	150	3	M12	40	✓	1,03
Z4MOD16SF065	61	29	33	65	50	3	M16	40	✓	0,60
Z4MOD16SF115	61	29	38	115	100	3	M16	40	✓	0,98
Z4MOD16SF165	61	29	43	165	150	3	M16	40	✓	1,50
Z4MOD16SB070	61	29	29	70	50	-	M16	40	✓	0,62
Z4MOD16SB095	61	29	29	95	75	-	M16	40	✓	0,74
Z4MOD16SB120	61	29	29	120	100	-	M16	40	✓	0,86

TOOL HOLDERS AND ADAPTORS

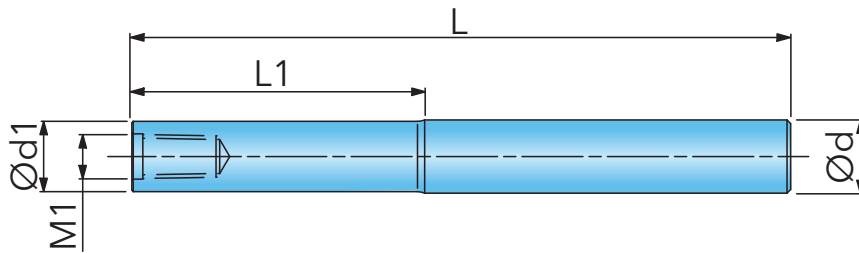


Designation	d	d1	L	L1	α	M1	Typ		
SM06-L60-C10 ¹⁾	10	9,8	60	20	-	M6	A	✓	0,05
SM06-L105-C12 ²⁾	12	9,8	105	60	1,2	M6	B	✓	0,09
SM06-L125-C16 ²⁾	16	9,8	125	60	3,3	M6	B	✓	0,10
SM08-L73-C16 ¹⁾	16	13	73	25	-	M8	A	✓	0,11
SM08-L128-C16 ²⁾	16	13	128	80	0,9	M8	B	✓	0,18
SM08-L170-C20 ²⁾	20	13	170	67	3,3	M8	B	✓	0,35
SM10-L80-C20 ¹⁾	20	18	80	30	-	M10	A	✓	0,18
SM10-L130-C20 ²⁾	20	18	130	80	0,6	M10	B	✓	0,27
SM10-L200-C25 ²⁾	25	19	200	57	3,3	M10	B	✓	0,45
SM12-L86-C25 ²⁾	25	21	86	30	5,1	M12	B	✓	0,20
SM12-L200-C32 ²⁾	32	21	200	78	4,4	M12	B	✓	0,60
SM16-L95-C32 ²⁾	32	29	95	35	1,7	M16	B	✓	0,54
SM16-L230-C32 ²⁾	32	29	230	50	1,8	M16	B	✓	0,60

¹⁾Cylindrical; ²⁾Conical

STEEL EXTENSION CYLINDRICAL/CONICAL (SCREW TYPE)

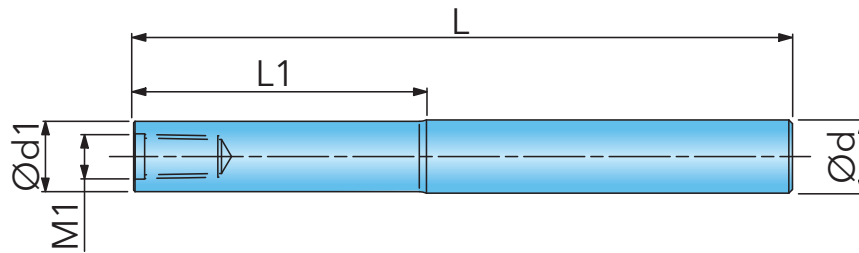
TOOL HOLDERS AND ADAPTORS



Designation	d	d1	L	L1	M1	kg
S016MOD08HA040	16	13	88	40	M8	0,240
S016MOD08HA060	16	13	108	60	M8	0,030
S016MOD08HA080	16	13	128	80	M8	0,331
S016MOD08HA100	16	13	148	100	M8	0,377

HEAVY METAL EXTENSION - CYLINDRICAL

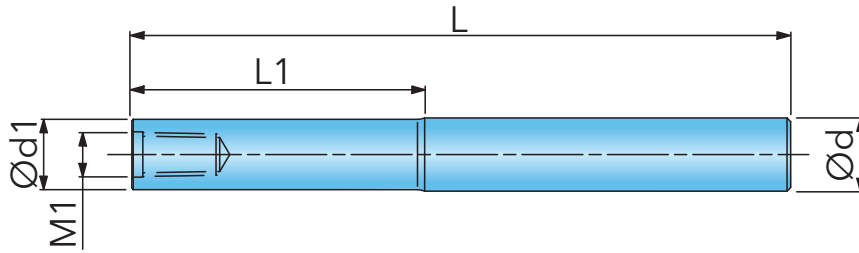
TOOL HOLDERS AND ADAPTORS



Designation	d	d1	L	L1	M1	✓	kg
S010MOD06CA024	10	-	80	-	M6	✓	0,079
S010MOD06CA031	10	9,8	80	31	M6	✓	0,078
S010MOD06CA060	10	9,8	110	60	M6	✓	0,175
S010MOD06CA080	10	9,8	130	80	M6	✓	0,130
S010MOD06CA100	10	9,8	150	100	M6	✓	0,154
S012MOD06CA030	12	-	80	-	M6	✓	0,118
S012MOD06CA031	12	11	80	31	M6	✓	0,108
S012MOD06CA100-03	12	11	150	100	M6	✓	0,217
S012MOD06CA040	12	11,8	88	40	M6	✓	
S012MOD06CA060	12	11,8	108	60	M6	✓	
S012MOD06CA080	12	11,8	128	80	M6	✓	
S012MOD06CA100	12	11,8	148	100	M6	✓	
S014MOD08CA024	14	-	80	-	M8	✓	0,154
S016MOD08CA055	16	14,4	120	55	M8	✓	0,299
S016MOD08CA135	16	14,4	200	135	M8	✓	0,528
S018MOD10CA040	18	-	200	-	M10	✓	0,669
S019MOD10CA040	19	18	200	135	M10	✓	0,736
S020MOD10CA055	20	18	120	55	M10	✓	0,469
S020MOD10CA135	20	18	200	135	M10	✓	0,761
S025MOD12CA060	25	22,5	125	60	M12	✓	0,733
S025MOD12CA080	25	22,5	145	80	M12	✓	0,847
S025MOD12CA100	25	22,5	165	100	M12	✓	0,965
S025MOD12CA157	25	22,5	250	157	M12	✓	1,624
S025MOD12CA207	25	22,5	300	207	M12	✓	1,920
S032MOD16CA207	32	28,6	300	207	M16	✓	2,314

SOLID CARBIDE EXTENSION - CYLINDRICAL (SCREW TYPE)

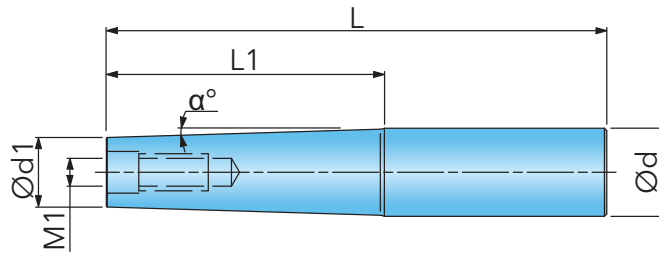
TOOL HOLDERS AND ADAPTORS



Designation	d	d1	L	L1	M1	✓	kg
S012MOD06VA020	12	11	70	20	M6	✓	0,064
S012MOD06VA070	12	11	120	70	M6	✓	0,111
S016MOD08VA006	16	14,5	70	6	M8	✓	0,115
S016MOD08VA056	16	14,5	120	56	M8	✓	0,183
S020MOD10VA006	20	18	64	6	M10	✓	0,169
S020MOD10VA024	20	18	89	24	M10	✓	0,245
S020MOD10VA070	20	18	130	70	M10	✓	0,335
S020MOD10VA125	20	18	180	125	M10	✓	0,463
S025MOD12VA015	25	22,6	81	15	M12	✓	0,343
S025MOD12VA045	25	22,6	111	45	M12	✓	0,320
S025MOD12VA110	25	22,6	180	110	M12	✓	0,746
S025MOD12VA155	25	22,6	220	155	M12	✓	0,922
S032MOD16VA014	32	29,4	103	14	M16	✓	0,763
S032MOD16VA090	32	29,4	160	90	M16	✓	1,150
S032MOD16VA108	32	29,4	200	108	M16	✓	1,363
S032MOD16VA159	32	29,4	250	159	M16	✓	1,760
S032MOD16VA207	32	30	300	207	M16	✓	2,312

EXTENSION WITH VIBRATION DAMPING (SREW TYPE)

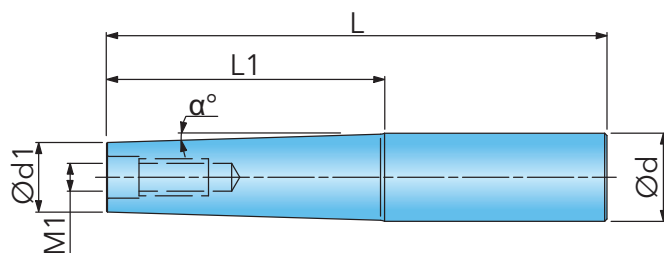
TOOL HOLDERS AND ADAPTORS




Designation	d	d1	L	L1	α	M1	IK	kg
S016MOD08HK040	16	13	88	40	2	M8	✓	0,261
S016MOD08HK060	16	13	108	60	1,4	M8	✓	0,318
S016MOD08HK080	16	13	128	80	1	M8	✓	0,372
S016MOD08HK100	16	13	148	100	0,8	M8	✓	0,437
S016MOD08HK120	16	13	168	120	0,7	M8	✓	0,491
S020MOD10HK040	20	18	90	40	1,4	M10	✓	0,431
S020MOD10HK060	20	18	110	60	0,9	M10	✓	0,535
S020MOD10HK080	20	18	130	80	0,7	M10	✓	0,634
S020MOD10HK100	20	18	150	100	0,55	M10	✓	0,730
S020MOD10HK120	20	18	170	120	0,45	M10	✓	0,833

HEAVY METAL EXTENSION - TAPERED

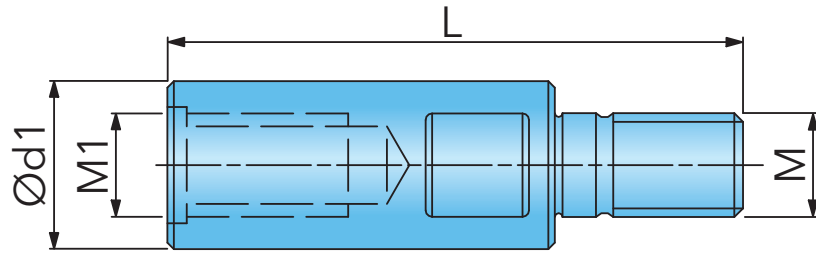
TOOL HOLDERS AND ADAPTORS



Designation	d	d1	L	L1	α	M1	
S016MOD08CK040	16	13	88	40	1,9	M8	✓
S016MOD08CK060	16	13	108	60	1,3	M8	✓
S016MOD08CK080	16	13	128	80	0,95	M8	✓
S016MOD08CK100	16	13	148	100	0,8	M8	✓
S016MOD08CK120	16	13	168	120	0,65	M8	✓
S020MOD10CK040	20	18	90	40	1,2	M10	✓
S020MOD10CK060	20	18	110	60	0,8	M10	✓
S020MOD10CK080	20	18	130	80	0,6	M10	✓
S020MOD10CK100	20	18	150	100	0,5	M10	✓
S020MOD10CK120	20	18	170	120	0,4	M10	✓

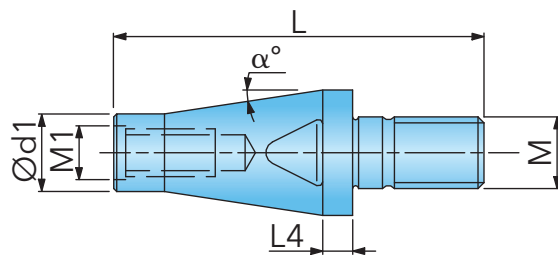
CARBIDE EXTENSION - CONICAL (SCREW TYPE)



TOOL HOLDERS AND ADAPTORS



Designation	d1	L	M	M1	IK	kg
CABM06M06-C	9,8	25	M6	M6	✓	0,020
CABM08M08-C	13	30	M8	M8	✓	0,028
CABM10M10-C	18	35	M10	M10	✓	0,064
CABM12M12-C	21	40	M12	M12	✓	0,100
CABM16M16-C	29	40	M16	M16	✓	0,192

TOOL HOLDERS AND ADAPTORS



Designation	d1	d2	L	L4	α	M	M1		
CABM06M08	9,7	13	30	4	5,7	M8	M6	✓	0,08
CABM08M10	13	18	40	5	5,2	M10	M8	✓	0,08
CABM10M12	18	21	45	7	2,5	M12	M10	✓	0,10
CABM12M16	21	29	50	6	6,3	M16	M12	✓	0,20

REDUCER (SCREW TYPE)



Designation	Page
12Y1H009035W4R00	238
12Y1H010035W4R00	238
12Y1J012025W4R00	242
12Y1J014035W4R00	242
12Y1J017035W4R00	242
12Y1J020043W4R00	242
12Y1N018035W4R00	246
12Y1N021044W4R00	246
12Y1N025075W4R00	246
12Y1N030052W5R00	246
12Y1N063050F1R00	250
12Y1S029054W5R00	252
12Y1S031094W5R00	252
12Y1S038090W6R00	252
12Y1S040070W6R00	252
12Y1S063050F1R00	256
12Y1S080055F2R00	256
12Y1S100060F3R00	256
12Y1U048083W7R00	258
12Y1U050083W7R00	258
12Y1U080065F2R00	260
12Y1U100070F3R00	260
12Y5H009089T0R00	240
12Y5J013070T1R00	244
12Y5J013110T1R00	244
12Y5J015130T2R00	244
12Y5N021082T3R00	248
12Y5N021152T3R00	248
12Y5S027220T4R00	254
2080A40Z4SA025	297
2080A50Z4SA035	297
2080A50Z5SA035	297
22Y3Q023054W5R00	262
22Y3R032070W6R00	264
22Y3S045070W6R00	266
22Y3T063050F1R00	268
2K0410-02	92
45B02003T7RB570	161
45B02003T7RB800	162
45B02004T9RB380	161
45B03004T7RB570	161
45B03004T7RB800	162
45B03005T9RB380	161
45B04004T7RB570	161
45B04004T7RB800	162
45B04007T7RB570	161
45B04007U0RB500	161
45B05005T7RB570	161
45B05008T7RB570	161
45B05008U1RB500	161
45B06006TORB100	162
45B06006T7RB570	161

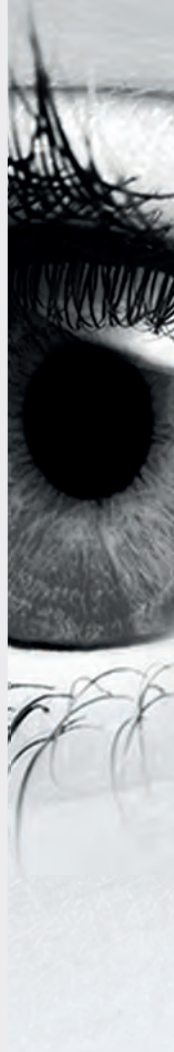
Designation	Page
45B06006T7RB800	162
45B06008T7RB570	161
45B08007TORB100	162
45B08007TORB630	161
45B08007T1RB120	162
45B08011TORB630	161
45B10008T1RB120	162
45B10008T1RB720	161
45B10013T1RB720	161
45B12014T2RB830	161
45B16016T3RB930	161
45J04012T7RD570	177
45J05014T7RD570	177
45J06016T7RD570	177
45J08020TORB630	177
45J10022T1RD720	177
45J12025T2RD830	177
45J16032T3RD920	177
45J20038T4RD100	177
46D05014T7RD020	178
46D05014W0RD020	178
46D06009T7RN020	175
46D06009T7RN021	176
46D06009WERN020	175
46D06009WERN021	176
46D06016T7RD020	178
46D06016W0RD020	178
46D08012TORN020	175
46D08012TORN021	176
46D08012W0RN020	175
46D08012W0RN021	176
46D08020TORB020	178
46D08020W0RD020	178
46D10012T1RN020	175
46D10012T1RN021	176
46D10012W1RN020	175
46D10012W1RN021	176
46D10022T1RD020	178
46D10022W1RD020	178
46D12012T2RN020	175
46D12012W2RN020	175
46D12014T2RN021	176
46D12014W2RN021	176
46D12025T2RD020	178
46D12025W2RD020	178
46D14030U8RD020	178
46D14030WFRD020	178
46D16014T3RN020	175
46D16014W3RN020	175
46D16018T3RN021	176
46D16018W3RN021	176
46D16032T3RD020	178

Designation	Page
46D16032W3RD020	178
46D20017T4RN020	175
46D20022T4RN021	176
46D20022W4RN021	176
46D20038T4RD020	178
46D20038W4RD020	178
46J02007T7RD500	169
46J02007T9RD380	169
46J03010T7RD500	169
46J03010T9RD380	169
46J04012T7RD500	169
46J04012U0RD500	169
46J05014T7RD500	169
46J05014U1RD500	169
46J06016T7RD500	169
46J06016W0RD500	170
46J07016UARD600	169
46J08020TORB630	169
46J08020W0RD630	170
46J09020U9RD670	169
46J10022T1RD720	169
46J10022W1RD720	170
46J12025T2RD730	169
46J12025W2RD830	170
46J14025U8RD750	169
46J16032T3RD820	169
46J16032W3RD920	170
46J20038T4RD920	169
46J20038W4RD100	170
47C03008T7RQ010	163
47C04010T7RQ010	163
47C05005WERN020	164
47C05010WERN020	165
47C05012T7RQ010	163
47C06006WERN030	164
47C06010WERN012	180
47C06012WERN020	165
47C06012WERN021	166
47C06013WERN012	181
47C06014T7RQ020	163
47C06014WERN020	163
47C06015WERN021	163
47C08008W0RN030	164
47C08012W0RN030	167
47C08012W0RQ016	180
47C08016W0RN030	165
47C08016W0RN031	166
47C08018TORQ030	163
47C08018W0RQ030	163
47C08020TORQ021	163
47C08020W0RQ021	163
47C08021W0RQ016	181

Designation	Page
47C10010W1RN030	164
47C10014W1RQ020	180
47C10015W1RN030	167
47C10020W1RN030	165
47C10020W1RN031	166
47C10022T1RQ040	163
47C10022W1RQ020	181
47C10022W1RQ040	163
47C10025T1RQ031	163
47C10025W1RQ031	163
47C12012W2RN030	164
47C12016W2RQ024	180
47C12018W2RN030	167
47C12024W2RN030	165
47C12024W2RN031	166
47C12026T2RQ050	163
47C12026W2RQ024	181
47C12026W2RQ050	163
47C12030T2RQ041	163
47C12030W2RQ041	163
47C16016W3RN030	164
47C16022W3RQ032	180
47C16024W3RN030	167
47C16032W3RN030	165
47C16032W3RN031	166
47C16034T3RQ060	163
47C16034W3RQ060	163
47C16036W3RQ040	181
47C16040T3RQ051	163
47C16040W3RQ051	163
47C20026W4RQ040	180
47C20041W4RQ040	181
47C20042T4RQ060	163
47C20042W4RQ060	163
47C20050T4RQ051	163
47C20050W4RQ051	163
47C25052T5RQ060	163
47C25052W5RQ060	163
47D06019WERT020	182
47D08023WORT050	182
47D10033W1RT050	182
47D12024W2RN120	165
47D12037W2RT050	182
47D16040W3RT100	182
47D20048W4RT100	182
47J03030T9RB750	179
47J04030U0RB750	179
47J05040U1RB100	179
47J06014T7RU570	168
47J06014WERU570	168
47J06024T7RD650	171
47J06050T7RB150	179

Designation	Page
47J08018TORU630	168
47J08018W0RU630	168
47J08032TOR800	171
47J08050TORB150	179
47J10022T1RU720	168
47J10022W1RU720	168
47J10040T1RD100	171
47J10060T1RB150	179
47J10060T1RD110	172
47J12026T2RU830	168
47J12026W2RU830	168
47J12048T2RD100	171
47J12072T2RD150	172
47J12075T2RB150	179
47J14030U8RU830	168
47J14030WFRU830	168
47J14050U8RD100	171
47J16034T3RU920	168
47J16034W3RU920	168
47J20042T4RU040	168
47J20042W4RU040	168
47J25052T5RU210	168
47J25052W5RU210	168
48C20020W4RN030	164
48C20040W4RN030	165
48C20040W4RN031	166
48J06016T7RD570	173
48J06026T7RD700	174
48J08020TOR630	173
48J08036TOR900	174
48J10022T1RD720	173
48J10046T1RD100	174
48J12025T2RD830	173
48J12056T2RD110	174
48J16032T3RD920	173
48J16056T3RD120	171
48J16066T3RD130	174
48J16080T3RD150	172
48J20038T4RD100	173
48J20060T4RD130	171
48J20076T4RD140	174
48J20080T4RD150	172
48J25092T5RD180	174
4VV101L00	92
4VV101R00	92
4VV121L00	93
4VV121R00	93
55E192R01	229
55E212R01	229
55E213R01	229
55E223R01	229
55F233R01	229

Designation	Page
55F243R02	229
55F243R03	229
55F263R01	229
55G264R01	229
55G294R01	229
55H294R00	229
55H314R00	229
69871A40Z4SA035	295
69871A50Z4SA035	295
69871A50Z4SB035	295
69871A50Z5SA035	295
AOCT060204FR-P	16
AOMT060202R	16
AOMT060202R-DT1	16
AOMT060204R	16
AOMT060208R	16
AOMT060216R	16
BEEW120310R-CR	103
BEEW120316R-CR	103
BEEW120320R-CR	103
BEEW120325R-CR	103
BEEW120330R-CR	103
BEHW250308R	99
BEHW250308R-P	99
BL.050.001	146
BL.052.001	146
BL.066.001	146
BL.080.001	146
BL.085.001	146
BL.100.001	146
BL.125.001	146
BL.160.001	146
BOCT090304FR-P	21
BOCT090308FR-P	21
BOCT130404FR-P	25
BOCT130408FR-P	25
BODT09T304R	21
BODT09T304R-001	21
BODT09T308R	21
BODT09T308R-001	21
BODT09T320R-001	21
BODT130404R	25
BODT130404R-001	25
BODT130408R	25
BODT130408R-001	25
BOMT09T304R	21
BOMT09T304R-DT1	21
BOMT09T304R-DT2	21
BOMT09T308R	21
BOMT09T316R	21
BOMT09T320R	21
BOMT09T331R	21





Designation	Page
BOMT130404R	25
BOMT130404R-DT2	25
BOMT130408R	25
BOMT130416R	25
BOMT130420R	25
BOMT130424R	25
BOMT130431R	25
BOMT130440R	25
BS.010.001	234
BS.011.001	234
BS.013.002	210
BS.013.003	214
BS.013.004	214
BS.013.006	220
BS.013.007	234
BS.013.008	224
BS.014.002	210
BS.014.003	214
BS.014.004	214
BS.014.006	220
BS.014.007	224
BS.015.002	234
BS.015.004	210
BS.015.005	214
BS.015.006	214
BS.015.008	220
BS.015.009	236
BS.015.010	224
BS.016.005	210
BS.016.006	214
BS.016.007	220
BS.016.008	232
BS.016.010	214
BS.016.012	144
BS.016.013	143
BS.016.014	224
BS.017.003	210
BS.017.004	214
BS.017.005	220
BS.017.006	214
BS.017.007	224
BS.018.005	210
BS.018.006	214
BS.018.007	220
BS.018.008	234
BS.018.009	214
BS.018.010	236
BS.018.011	224
BS.019.004	210
BS.019.005	214
BS.019.006	220
BS.019.007	214

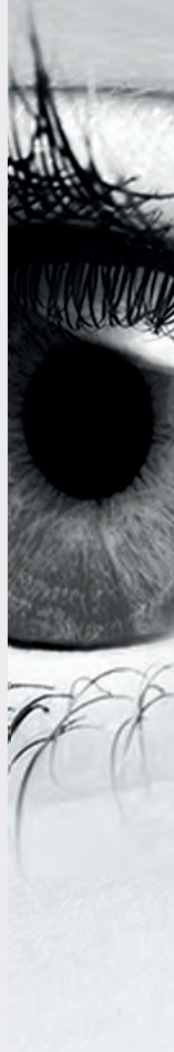
Designation	Page
BS.019.008	224
BS.020.007	210
BS.020.008	214
BS.020.009	220
BS.020.010	234
BS.020.011	232
BS.020.012	214
BS.020.013	236
BS.020.014	144
BS.020.015	143
BS.020.016	224
BS.021.003	210
BS.021.004	214
BS.021.005	220
BS.021.006	214
BS.021.007	224
BS.022.006	214
BS.022.007	210
BS.022.008	214
BS.022.009	220
BS.022.010	224
BS.023.007	214
BS.023.008	210
BS.023.009	214
BS.023.010	220
BS.023.011	224
BS.024.007	234
BS.024.009	210
BS.024.010	214
BS.024.011	214
BS.024.012	220
BS.024.013	236
BS.024.014	224
BS.025.010	232
BS.025.012	210
BS.025.013	214
BS.025.014	214
BS.025.015	220
BS.025.016	144
BS.025.017	143
BS.025.018	224
BS.026.007	234
BS.026.008	210
BS.026.009	214
BS.026.010	220
BS.026.011	236
BS.026.012	224
BS.026.013	214
BS.027.008	210
BS.027.009	214
BS.027.010	214
BS.027.011	220

Designation	Page
BS.027.012	224
BS.028.006	210
BS.028.007	216
BS.028.008	220
BS.028.009	214
BS.028.010	226
BS.029.007	210
BS.029.008	216
BS.029.009	216
BS.029.010	220
BS.029.011	226
BS.030.008	234
BS.030.009	232
BS.030.010	212
BS.030.011	216
BS.030.012	222
BS.030.013	216
BS.030.014	236
BS.030.015	226
BS.031.006	212
BS.031.007	216
BS.031.008	222
BS.031.009	226
BS.032.008	232
BS.032.009	212
BS.032.010	216
BS.032.011	222
BS.032.012	144
BS.032.013	143
BS.032.014	226
BS.032.015	73
BS.033.007	234
BS.033.008	212
BS.033.009	216
BS.033.010	222
BS.033.011	236
BS.033.012	226
BS.034.006	212
BS.034.007	216
BS.034.008	222
BS.034.009	226
BS.035.006	212
BS.035.007	216
BS.035.008	222
BS.035.009	226
BS.035.010	216
BS.035.011	73
BS.036.007	234
BS.036.008	212
BS.036.009	216
BS.036.010	222
BS.036.011	236

Designation	Page
BS.036.012	226
BS.037.006	212
BS.037.007	216
BS.037.008	222
BS.037.009	226
BS.038.006	212
BS.038.007	216
BS.038.008	222
BS.038.009	226
BS.038.010	216
BS.039.006	212
BS.039.007	216
BS.039.008	222
BS.039.009	226
BS.040.008	234
BS.040.009	232
BS.040.010	216
BS.040.011	222
BS.040.012	236
BS.040.013	212
BS.040.014	226
BS.040.015	73
BS.041.003	212
BS.041.004	216
BS.041.005	222
BS.041.006	226
BS.041.007	216
BS.042.007	212
BS.042.008	216
BS.042.009	222
BS.042.010	144
BS.042.011	143
BS.042.012	73
BS.043.006	212
BS.043.007	216
BS.043.008	222
BS.044.003	212
BS.044.004	216
BS.044.005	222
BS.045.003	212
BS.045.004	216
BS.045.005	222
BS.046.003	212
BS.046.004	216
BS.046.005	222
BS.047.003	212
BS.047.004	216
BS.047.005	222
BS.047.006	216
BS.048.004	212
BS.048.005	216
BS.048.006	222

Designation	Page
BS.048.007	234
BS.048.008	236
BS.049.003	212
BS.049.004	216
BS.049.005	222
BS.050.003	212
BS.050.004	216
BS.050.005	222
BS.050.006	226
BS.050.007	147
BS.051.002	218
BS.051.003	216
BS.051.004	228
BS.051.005	230
BS.052.001	218
BS.052.002	147
BS.053.001	218
BS.054.002	218
BS.054.003	228
BS.054.004	230
BS.055.001	218
BS.056.001	218
BS.057.002	218
BS.057.003	228
BS.057.004	230
BS.058.001	218
BS.059.001	218
BS.060.001	218
BS.063.002	228
BS.063.003	230
BS.066.001	147
BS.067.002	228
BS.067.003	230
BS.074.001	228
BS.074.002	230
BS.080.001	147
BS.085.001	147
BS.100.001	147
BS.125.001	147
BS.160.001	147
BT40Z4SA035	296
BT50Z4SA045	296
BT50Z5SA045	296
BW.020.001	145
BW.025.001	145
BW.030.001	145
BW.032.001	145
BW.035.001	145
BW.040.001	145
BW.042.001	145
CABM06M06-C	308
CABM06M08	309

Designation	Page
CABM08M08-C	308
CABM08M10	309
CABM10M10-C	308
CABM10M12	309
CABM12M12-C	308
CABM12M16	309
CABM16M16-C	308
CL-5000	120
CNHU060304N-001	140
CNHU060310N	140
CNHU060310N-001	140
CNHU060315N	140
CNHU110420N	141
DF.075.1.6B	80
DF.075.2.2B	80
DF.100.1.6B	80
DF.100.2.2B	80
DF.100.2.4F	81
DF.100.3.1F	81
DF.100.4.1F	81
DF.125.1.6B	80
DF.125.2.2B	80
DF.125.2.4F	81
DF.125.3.1F	81
DF.125.4.1F	81
DF.160.2.4F	81
DF.160.3.1F	81
DF.160.4.1F	81
DI.050.001	86
DI.050.002	86
DI.050.003	86
DI.050.004	86
DI.063.009	88
DI.063.010	88
DI.063.011	88
DI.063.012	88
DI.063.013	90
DI.063.014	90
DI.063.015	90
DI.063.016	90
DI.080.009	88
DI.080.010	88
DI.080.011	88
DI.080.012	88
DI.080.013	90
DI.080.014	90
DI.080.015	90
DI.080.016	90
DI.100.009	88
DI.100.010	88
DI.100.011	88
DI.100.012	88





Designation	Page
DI.100.013	90
DI.100.014	90
DI.100.015	90
DI.100.016	90
DI.100.017	92
DI.100.018	93
DI.125.008	88
DI.125.009	88
DI.125.010	88
DI.125.011	90
DI.125.012	90
DI.125.013	90
DI.125.014	90
DI.125.015	92
DI.125.016	93
DI.160.008	88
DI.160.009	88
DI.160.010	88
DI.160.011	90
DI.160.012	90
DI.160.013	90
DI.160.014	90
DI.160.015	92
DI.160.016	93
DI.200.006	92
DI.200.007	93
DI.250.001	92
DI.250.002	93
DI.315.001	92
DI.315.002	93
DR-0031	81
DR-0032	80
DS.063.004	84
DS.063.005	84
DS.063.006	84
DS.063.010	82
DS.063.011	82
DS.063.012	82
DS.063.014	84
DS.063.017	84
DS.063.018	84
DS.063.021	84
DS.063.022	84
DS.080.004	84
DS.080.005	84
DS.080.006	84
DS.080.010	82
DS.080.011	82
DS.080.012	82
DS.080.014	84
DS.080.017	84
DS.080.018	84

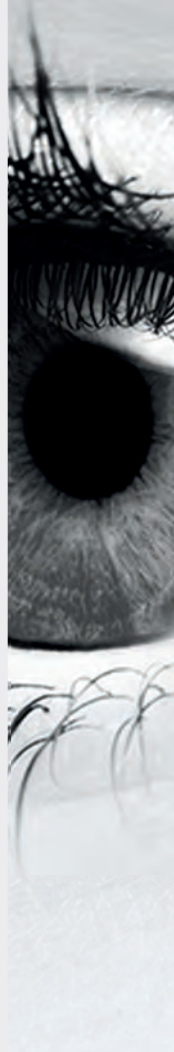
Designation	Page
DS.080.021	84
DS.080.022	84
DS.100.008	84
DS.100.009	84
DS.100.010	84
DS.100.011	84
DS.100.012	82
DS.100.013	82
DS.100.014	82
DS.100.017	84
DS.100.018	84
DS.100.021	84
DS.100.022	84
DS.125.008	84
DS.125.009	84
DS.125.010	84
DS.125.011	84
DS.125.012	82
DS.125.013	82
DS.125.014	82
DS.125.017	84
DS.125.018	84
DS.125.021	84
DS.125.022	84
DS.125.023	84
DS.140.001	84
DS.160.008	82
DS.160.009	82
DS.160.010	82
DS.160.011	84
DS.160.012	84
DS.160.015	84
DS.160.016	84
DS.160.019	84
DS.160.020	84
DS.200.006	82
DS.200.007	82
DS.200.008	82
DS-A00T	71
DS-T05F	51
DS-T06F	86
DS-T07S	143
DS-T08S	20
DS-T09S	58
DS-T10S	24
DS-T15S	33
DS-T20S	213
DS-T20T	65
DS-T25S	73
DS-TP06S (TX-Plus)	16
EA.032.003	50
EA.035.002	50

Designation	Page
EA.040.005	50
EB.032.001	52
EB.032.002	51
EB.032.003	52
EB.035.001	54
EB.035.002	52
EB.040.002	54
EB.040.003	54
EB.040.004	52
EB.040.005	51
EB.040.006	52
EB.040.007	54
EB.040.008	54
EB.050.002	54
EB.050.003	52
EB.050.004	51
EB.050.005	52
EB.050.006	54
EB.050.007	52
EB.052.001	54
EB.063.002	54
EB.063.003	52
EB.063.004	51
EB.063.005	52
EB.063.006	54
EB.066.001	54
EB.080.002	54
EB.080.003	51
EB.080.004	54
EB.080.005	52
EB.085.001	54
EB.100.002	54
EB.100.003	54
EB.100.004	51
EB.100.005	52
EB.125.002	54
EB.125.003	54
ES.040.001	58
ES.050.002	58
ES.050.004	60
ES.050.007	59
ES.050.008	61
ES.063.002	58
ES.063.003	58
ES.063.005	60
ES.063.008	59
ES.063.009	61
ES.063.010	61
ES.080.003	58
ES.080.004	58
ES.080.007	60
ES.080.010	59

Designation	Page
ES.080.011	61
ES.080.012	61
ES.100.004	60
ES.100.006	59
ES.100.007	61
ES.125.004	59
ES.125.005	61
ES.125.006	61
ES.160.004	59
ES.160.005	61
ES.160.006	61
EW.032.001	56
EW.040.002	57
EW.040.003	56
EW.040.004	56
EW.040.005	56
EW.040.006	56
EW.050.003	57
EW.050.004	57
EW.050.005	56
EW.050.006	56
EW.063.003	57
EW.063.004	57
EW.063.005	56
EW.063.006	56
EW.080.003	57
EW.080.004	57
EW.100.003	57
EW.100.004	57
EW.125.003	57
EW.125.004	57
FA.008.001	96
FA.008.002	96
FA.008.003	96
FB.020.006	97
FB.020.007	97
FB.020.008	97
FB.020.009	97
FB.020.010	97
FB.025.001	103
FB.025.002	104
FB.045.001	99
FB.045.002	99
FB.045.003	99
FB.045.004	99
FB.045.005	99
FB.045.006	98
FB.045.007	98
FB.045.008	98
FB.045.009	98
FB.045.010	98
FEEW250340R-CR	103

Designation	Page
FEEW250350R-CR	103
FEEW250360R-CR	103
FF.025.001	103
FF.025.002	104
FS.006.001	101
FS.006.002	101
FS.006.003	101
FS.016.001	101
FS.017.001	100
FS.020.001	102
FT.022.001	107
FT.022.002	108
GCXF071601N	80
GCXF082202N	80
GCXF092402N	81
GCXF113102N	81
GCXF114103N	81
HSKA100Z4SA080	294
HSKA100Z4SB080	294
HSKA100Z5SA080	294
HSKA50Z4SA060	294
HSKA63Z4SA062	294
HSKA63Z4SB062	294
HSKA80Z4SA068	294
HSKA80Z5SA080	294
IA.016.001	36
IA.016.002	37
IA.019.001	36
IA.020.003	36
IA.020.004	37
IA.022.001	36
IA.025.003	36
IA.025.004	37
IB.025.001	38
IB.025.002	40
IB.028.001	40
IB.032.003	42
IB.032.004	44
IB.032.005	38
IB.032.006	40
IB.032.007	38
IB.032.008	40
IB.040.008	42
IB.040.009	46
IB.040.010	44
IB.040.011	44
IB.040.012	44
IB.040.013	44
IB.040.014	40
IB.040.015	42
IB.040.016	46
IB.040.017	44

Designation	Page
IB.040.018	44
IB.040.019	44
IB.040.020	44
IB.040.021	44
IB.040.024	44
IB.050.008	46
IB.050.009	44
IB.050.010	44
IB.050.012	46
IB.063.006	46
IB.063.007	44
IB.063.008	44
IB.063.009	44
IB.080.003	46
IB.080.004	46
IEE211-001	87
IEE211-001-P	87
IEE311-001	87
IEE311-001-P	87
IEE311-002	87
IEE311-002-P	87
IEE311-004	87
IEE312-001	87
IEE312-001-P	87
IEE312-002	87
IEE312-002-P	87
IEE312-004	87
IK12	238
IK14	242
IK21	246
IK22	264
IK30	252
IK40	258
INBAL020.100.003Z3	186
INBAL020.100.004Z3	186
INBAL030.150.004Z3	186
INBAL030.150.005Z3	186
INBAL040.200.006Z3	186
INBAL040.200.007Z3	186
INBAL040.200.030Z3K1	187
INBAL040.200.040Z3K1	187
INBAL040.200.050Z3K1	187
INBAL040.200.060Z3K1	187
INBAL050.250.007Z3	186
INBAL050.250.008Z3	186
INBAL050.250.040Z3K1	187
INBAL050.250.060Z3K1	187
INBAL060.300.008Z3	186
INBAL060.300.009Z3	186
INBAL060.300.050Z3K1	187
INBAL060.300.060Z3K1	187
INBAL060.300.070Z3K1	187





Designation	Page
INBAL060.300.080Z3K1	187
INBAL080.400.010Z3	186
INBAL080.400.012Z3	186
INBAL080.400.015Z3	186
INBAL080.400.060Z3K1	187
INBAL080.400.070Z3K1	187
INBAL080.400.080Z3K1	187
INBAL100.500.014Z3	186
INBAL100.500.015Z3	186
INBAL100.500.060Z3K1	187
INBAL100.500.075Z3K1	187
INBAL120.600.016Z3	186
INBAL120.600.018Z3	186
INCER060.042.015Z3	204
INCER080.056.020Z3	204
INCER100.070.025Z3	204
INCER120.110.030Z3	204
INCER160.190.035Z3	204
INCER200.250.040Z3	204
INCOO020.050.006Z4HQ	193
INCOO020.050.006Z4K57	192
INCOO030.080.009Z4HQ	193
INCOO030.080.009Z4K43	192
INCOO040.028.010Z3	195
INCOO040.028.012Z3K14	195
INCOO040.028.020Z3	195
INCOO040.028.040Z3K17	195
INCOO040.100.012Z4	192
INCOO040.100.012Z4HQ	193
INCOO050.035.025Z3	195
INCOO050.035.040Z3	195
INCOO060.042.015Z3K24	195
INCOO060.042.020Z3K16	195
INCOO060.042.020Z3K24	195
INCOO060.042.025Z3	195
INCOO060.042.040Z3	195
INCOO060.042.060Z3	195
INCOO060.100.018Z4	192
INCOO060.100.018Z4HQ	193
INCOO060.150.018Z4	192
INCOO060.150.018Z4HQ	193
INCOO080.056.020Z3K16	195
INCOO080.056.020Z3K20	195
INCOO080.056.030Z3	195
INCOO080.056.060Z3	195
INCOO080.100.024Z4HQ	193
INCOO080.200.024Z4	192
INCOO080.200.024Z4HQ	193
INCOO100.070.040Z3	195
INCOO100.070.040Z3L	195
INCOO100.100.030Z4	192
INCOO100.100.030Z4HQ	193

Designation	Page
INCOO100.110.040Z3	195
INCOO100.200.030Z4	192
INCOO100.200.030Z4HQ	193
INCOO120.080.050Z3	195
INCOO120.100.035Z4HQ	193
INCOO120.110.040Z3	195
INCOO120.150.040Z4HQ	193
INCOO120.200.040Z4	192
INCOO120.300.040Z4	192
INCOO120.300.040Z4HQ	193
INCOO140.170.040Z3	195
INCOO160.190.045Z3	195
INNOT050.020.020Z4C	198
INNOT050.050.020Z4C	198
INNOT060.010.019Z5C	200
INNOT060.020.025Z4C	198
INNOT060.050.025Z4C	198
INNOT060.100.019Z5C	200
INNOT060.100.025Z4C	198
INNOT060.200.025Z4C	198
INNOT080.010.025Z5C	200
INNOT080.030.032Z4W	198
INNOT080.080.032Z4C	198
INNOT080.100.025Z5C	200
INNOT080.100.032Z4C	198
INNOT080.200.032Z4C	198
INNOT080.300.032Z4C	198
INNOT100.010.033Z5C	200
INNOT100.020.032Z4C	198
INNOT100.080.032Z4C	198
INNOT100.100.032Z4C	198
INNOT100.100.033Z5C	200
INNOT100.200.032Z4C	198
INNOT100.200.033Z5C	200
INNOT100.300.032Z4C	198
INNOT100.400.034Z4C	198
INNOT120.020.038Z4C	198
INNOT120.020.038Z5C	200
INNOT120.080.038Z4C	198
INNOT120.100.038Z4C	198
INNOT120.100.038Z5C	200
INNOT120.200.038Z4C	198
INNOT120.200.038Z5C	200
INNOT120.250.038Z4C	198
INNOT120.250.038Z5C	200
INNOT120.300.038Z4C	198
INNOT120.400.038Z4C	198
INNOT120.400.038Z4W	198
INNOT120.400.038Z5C	200
INNOT140.020.038Z4C	198
INNOT140.080.038Z4C	198
INNOT140.300.038Z4C	198

Designation	Page
INNOT160.020.050Z4W	198
INNOT160.020.050Z5C	200
INNOT160.020.050Z5W	200
INNOT160.100.050Z4W	198
INNOT160.100.050Z5W	200
INNOT160.200.050Z4C	198
INNOT160.200.050Z5W	200
INNOT160.250.050Z4C	198
INNOT160.250.050Z5C	200
INNOT160.300.050Z4C	198
INNOT160.400.050Z4C	198
INNOT160.400.050Z4W	198
INNOT160.400.050Z5W	200
INNOT160.500.050Z4C	198
INNOT200.020.062Z4W	199
INNOT200.020.062Z5C	200
INNOT200.020.062Z5W	200
INNOT200.100.062Z4W	199
INNOT200.100.062Z5W	200
INNOT200.200.062Z4C	199
INNOT200.200.062Z4W	199
INNOT200.200.062Z5W	200
INNOT200.250.062Z4C	199
INNOT200.250.062Z5C	200
INNOT200.300.062Z4C	199
INNOT200.400.062Z4C	199
INNOT200.400.062Z4W	199
INNOT200.400.062Z5W	200
INNOT200.500.062Z4C	199
INNOT250.020.069Z4C	199
INNOT250.100.069Z4C	199
INNOT250.200.069Z4C	199
INNOT250.300.069Z4C	199
INNOT250.400.069Z4C	199
INNOT250.400.069Z4W	199
INNOT250.500.069Z4C	199
INNOV060.010.019Z4C	196
INNOV060.010.019Z4W	196
INNOV060.010.019Z5C	197
INNOV060.010.019Z5W	197
INNOV060.010.025Z4C	196
INNOV060.010.025Z4W	196
INNOV060.010.025Z5C	197
INNOV060.010.025Z5W	197
INNOV080.010.025Z4C	196
INNOV080.010.025Z4W	196
INNOV080.010.025Z5C	197
INNOV080.010.025Z5W	197
INNOV080.010.033Z4C	196
INNOV080.010.033Z4W	196
INNOV080.010.033Z5C	197
INNOV080.010.033Z5W	197

Designation	Page
INNOV080.020.040Z3C	202
INNOV080.020.041Z3CCB	201
INNOV080.020.041Z4C	203
INNOV080.200.040Z4C	203
INNOV080.200.041Z3C	202
INNOV080.200.041Z3CCB	201
INNOV100.010.032Z4C	196
INNOV100.010.032Z4W	196
INNOV100.010.032Z5C	197
INNOV100.010.032Z5W	197
INNOV100.010.042Z4C	196
INNOV100.010.042Z4W	196
INNOV100.010.042Z5C	197
INNOV100.010.042Z5W	197
INNOV100.020.041Z3C	202
INNOV100.020.041Z3CCB	201
INNOV100.020.041Z4C	203
INNOV100.200.041Z3C	202
INNOV100.200.041Z3CCB	201
INNOV100.200.041Z4C	203
INNOV120.020.038Z4C	196
INNOV120.020.038Z4W	196
INNOV120.020.038Z5C	197
INNOV120.020.038Z5W	197
INNOV120.020.041Z3C	202
INNOV120.020.041Z3CCB	201
INNOV120.020.041Z4C	203
INNOV120.020.050Z4C	196
INNOV120.020.050Z4W	196
INNOV120.020.050Z5C	197
INNOV120.020.050Z5W	197
INNOV120.200.041Z3C	202
INNOV120.200.041Z3CCB	201
INNOV120.200.041Z4C	203
INNOV120.400.041Z3C	202
INNOV120.400.041Z3CCB	201
INNOV120.400.041Z4C	203
INNOV160.020.050Z4C	196
INNOV160.020.050Z4W	196
INNOV160.020.050Z5C	197
INNOV160.020.050Z5W	197
INNOV160.020.060Z3CCB	201
INNOV160.020.066Z4C	196
INNOV160.020.066Z4W	196
INNOV160.020.066Z5C	197
INNOV160.020.066Z5W	197
INNOV160.050.040Z4C	203
INNOV160.050.060Z3C	202
INNOV160.200.047Z3CCB	201
INNOV160.200.060Z3C	202
INNOV160.200.060Z3CCB	201
INNOV160.200.060Z4C	203

Designation	Page
INNOV160.200.065Z3C	202
INNOV160.200.065Z4C	203
INNOV160.200.080Z3C	202
INNOV160.200.080Z4C	203
INNOV160.400.060Z3C	202
INNOV160.400.060Z3CCB	201
INNOV160.400.060Z4C	203
INNOV200.020.060Z3CCB	201
INNOV200.020.062Z4C	196
INNOV200.020.062Z4W	196
INNOV200.020.062Z5C	197
INNOV200.020.062Z5W	197
INNOV200.020.065Z3C	202
INNOV200.020.065Z4C	203
INNOV200.020.082Z4C	196
INNOV200.020.082Z4W	196
INNOV200.020.082Z5C	197
INNOV200.020.082Z5W	197
INNOV200.020.100Z3C	202
INNOV200.020.100Z4C	203
INNOV200.200.060Z3C	202
INNOV200.200.060Z3CCB	201
INNOV200.200.060Z4C	203
INNOV200.200.100Z3C	202
INNOV200.200.100Z4C	203
INNOV200.400.060Z3C	202
INNOV200.400.060Z3CCB	201
INNOV200.400.060Z4C	203
INNOV200.400.100Z3C	202
INNOV200.400.100Z3CCB	201
INNOV200.400.100Z4C	203
INNOV250.040.070Z4C	196
INNOV250.040.070Z4W	196
INNOV250.040.070Z5C	197
INNOV250.040.070Z5W	197
INNOV250.040.095Z4C	196
INNOV250.040.095Z4W	196
INNOV250.040.095Z5C	197
INNOV250.040.095Z5W	197
INRAP040.200.012Z4	188
INRAP040.200.020Z4	188
INRAP060.300.020Z4	188
INRAP060.300.030Z4	188
INRAP080.400.026Z4	188
INRAP080.400.040Z4	188
INRAP100.500.028Z4	188
INRAP100.500.040Z4	188
INRAP120.600.030Z4	188
INRAP160.800.032Z4	188
INROC003.015.004Z2	184
INROC003.015.009Z2	184
INROC003.015.015Z2	184

Designation	Page
INROC003.015.020Z2	184
INROC003.015.030Z2	184
INROC004.020.006Z2	184
INROC004.020.012Z2	184
INROC004.020.020Z2	184
INROC004.020.030Z2	184
INROC004.020.035Z2	184
INROC004.020.040Z2	184
INROC005.025.007Z2	184
INROC005.025.015Z2	184
INROC005.025.030Z2	184
INROC005.025.050Z2	184
INROC006.030.009Z2	184
INROC006.030.018Z2	184
INROC006.030.030Z2	184
INROC006.030.050Z2	184
INROC006.030.060Z2	184
INROC008.040.012Z2	184
INROC008.040.024Z2	184
INROC010.050.015Z2	184
INROC010.050.030Z2	184
INROC010.050.060Z2	184
INROC010.050.080Z2	184
INROC010.050.100Z2	184
INROC012.060.018Z2	184
INROC012.060.036Z2	184
INROC015.075.022Z2	184
INROC015.075.045Z2	184
INROC015.075.080Z2	184
INROC015.075.120Z2	184
INROC020.100.030Z2	184
INROC020.100.060Z2	184
INROC020.100.080Z2	184
INROC020.100.120Z2	185
INROC020.100.160Z2	185
INROC020.100.200Z2	185
INSL0010.050.030Z2K15	190
INSL0010.050.039Z2K37	190
INSL0013.065.018Z2K15	190
INSL0013.065.026Z2K15	190
INSL0015.075.015Z2K04	190
INSL0015.075.015Z2K09	190
INSL0015.075.020Z2K04	190
INSL0015.075.020Z2K09	190
INSL0015.075.030Z2K15	190
INSL0015.075.050Z2K30	190
INSL0020.100.020Z2K04	190
INSL0020.100.020Z2K09	190
INSL0020.100.025Z2K04	190
INSL0020.100.025Z2K09	190
INSL0020.100.025Z2K15	190
INSL0020.100.032Z2K15	190





Designation	Page
INSLO020.100.045Z2K09	190
INSLO020.100.045Z2K14	190
INSLO020.100.060Z2K09	190
INSLO020.100.060Z2K14	190
INSLO025.125.035Z2K15	190
INSLO025.125.040Z2K15	190
INSLO030.150.030Z2K15	190
INSLO030.150.040Z2K10	190
INSLO030.150.040Z2K15	190
INSLO030.150.040Z2K22	190
INSLO030.150.050Z2K10	190
INSLO030.150.050Z2K15	190
INSLO030.150.063Z2K14	190
INSLO030.150.065Z2K09	190
INSLO040.200.030Z2K10	190
INSLO040.200.030Z2K15	190
INSLO040.200.040Z2K10	190
INSLO040.200.040Z2K14	190
INSLO040.200.040Z2K15	190
INSLO040.200.045Z2K25	190
INSLO040.200.060Z2K15	191
INSLO040.200.065Z2K09	191
INSLO050.250.040Z2K08	191
INSLO060.300.040Z2K15	191
INSLO060.300.064Z2K09	191
INSLO060.300.065Z2K10	191
INSLO060.300.065Z2K15	191
INSLO080.400.060Z2K09	191
INTUR040.100.020Z4	194
INTUR040.100.028Z4	194
INTUR060.050.035Z4	194
INTUR060.150.030Z4	194
INTUR060.150.042Z4	194
INTUR060.150.054Z4	194
INTUR080.200.040Z4	194
INTUR080.200.056Z4	194
INTUR080.200.072Z4	194
INTUR100.200.050Z4	194
INTUR100.200.070Z4	194
INTUR100.200.090Z4	194
INTUR120.200.060Z4	194
INTUR120.200.084Z4	194
INTUR120.200.108Z4	194
IS12	238
IS21	246
IS23	262
IS30	252
IS32	264
IS40	258
IS45	266
IS63	268
IXE412-001	87

Designation	Page
IXE412-001-P	87
IXE412-002	87
IXE412-002-P	87
IXE412-003	87
IXE412-004	87
IXE413-001	91
IXE413-001-P	91
IXE413-002	91
IXE413-002-P	91
IXE413-003	91
IXE413-004	91
IXE414-001	91
IXE414-001-P	91
IXE414-002	91
IXE414-002-P	91
IXE414-003	91
IXE414-004	91
IXH415-G01	92
IXH415-G01-P	92
IXH415-G02	92
IXH415-G03	92
IXH415-G04	92
IXH416-G01	93
IXH416-G01-P	93
IXH416-G02	93
IXH416-G03	93
IXH416-G04	93
KC.016.001	140
KC.020.001	140
KC.025.001	140
KC.025.002	141
KC.035.001	140
KC.035.002	141
KC.042.001	140
KC.042.002	141
KC.052.001	142
KC.066.001	142
KC.080.001	142
KC.085.001	142
KC.100.001	142
KP.020.001	148
KP.025.001	148
KP.032.001	148
KP.035.001	152
KP.035.002	148
KP.040.001	148
KP.040.002	149
KP.042.001	152
KP.042.002	148
KP.050.001	153
KP.050.002	149
KP.052.001	153

Designation	Page
KP.052.002	149
KP.063.001	153
KP.063.002	149
KP.066.001	153
KP.066.002	149
KP.080.001	153
LNGQ 130608L	146
LNGQ 130616LT	146
LNGQ130616FL-P	146
LNGQ130616L	146
LYER27080UN	263
LYER27100IS	263
LYER27110BT	263
LYER27110BW	263
LYER27115NT	263
LYER27120UN	263
LYER27150IS	263
LYER27160UN	263
LYER27200IS	263
LYER27240UN	263
LYER27300IS	263
LYER32060UN	265
LYER32080UN	265
LYER32110BT	265
LYER32110BW	265
LYER32115NT	265
LYER32120UN	265
LYER32150IS	265
LYER32160UN	265
LYER32200IS	265
LYER32300IS	265
LYER32400IS	265
LYER37060UN	267
LYER37080UN	267
LYER37110BT	267
LYER37110BW	267
LYER37115NT	267
LYER37120UN	267
LYER37150IS	267
LYER37160UN	267
LYER37200IS	267
LYER37300IS	267
LYER37400IS	267
LYER38060UN	269
LYER38080UN	269
LYER38110BT	269
LYER38110BW	269
LYER38115NT	269
LYER38120UN	269
LYER38150IS	269
LYER38160UN	269
LYER38200IS	269

Designation	Page
LYER38300IS	269
LYER38400IS	269
LYEU12050IS-1	239
LYEU12075IS-1	239
LYEU12100IS-1	239
LYEU12125IS-1	239
LYEU12150IS-1	239
LYEU12160UN-1	239
LYEU12180NF-1	239
LYEU12180NT-1	239
LYEU12180UN-1	239
LYEU12190BT-1	239
LYEU12190BW-1	239
LYEU12200UN-1	239
LYEU12240UN-1	239
LYEU12280UN-1	239
LYEU12320UN-1	239
LYEU14050IS-1	243
LYEU14075IS-1	243
LYEU14075IS-X-1	243
LYEU14100IS-1	243
LYEU14100IS-X-1	243
LYEU14100UN-1	243
LYEU14120UN-1	243
LYEU14120UN-X-1	243
LYEU14125IS-1	243
LYEU14125IS-X-1	243
LYEU14140BT-1	243
LYEU14140BW-1	243
LYEU14140NF-1	243
LYEU14140NT-1	243
LYEU14140UN-1	243
LYEU14140UN-X-1	243
LYEU14150IS-1	243
LYEU14150IS-X-1	243
LYEU14160BW-1	243
LYEU14160UN-1	243
LYEU14160UN-X-1	243
LYEU14175IS-1	243
LYEU14175IS-X-1	243
LYEU14180NF-1	243
LYEU14180NT-1	243
LYEU14180PG-1	243
LYEU14180UN-1	243
LYEU14180UN-X-1	243
LYEU14190BT-1	243
LYEU14190BW-1	243
LYEU14200BW-1	243
LYEU14200IS-1	243
LYEU14200IS-X-1	243
LYEU14200UN-1	243
LYEU14200UN-X-1	243

Designation	Page
LYEU14240BW-1	243
LYEU14240UN-1	243
LYEU14240UN-X-1	243
LYEU14250IS-1	243
LYEU14250IS-X-1	243
LYEU14270UN-1	243
LYEU14280UN-1	243
LYEU14280UN-X-1	243
LYEU14320UN-1	243
LYEU14320UN-X-1	243
LYEU21070UN-1	247
LYEU21080UN-1	247
LYEU21100IS-1	247
LYEU21100IS-X-1	247
LYEU21100UN-1	247
LYEU21100UN-X-1	247
LYEU21110BT-1	247
LYEU21110BW-1	247
LYEU21115NF-1	247
LYEU21115NT-1	247
LYEU21120UN-1	247
LYEU21120UN-X-1	247
LYEU21140BT-1	247
LYEU21140BW-1	247
LYEU21140NF-1	247
LYEU21140NT-1	247
LYEU21140UN-1	247
LYEU21140UN-X-1	247
LYEU21150IS-1	247
LYEU21150IS-X-1	247
LYEU21160BW	247
LYEU21160PG-1	247
LYEU21160UN-1	247
LYEU21160UN-X-1	247
LYEU21175IS-1	247
LYEU21180PG-1	247
LYEU21180UN-1	247
LYEU21180UN-X-1	247
LYEU21190BW-1	247
LYEU21200BW-1	247
LYEU21200IS-1	247
LYEU21200IS-X-1	247
LYEU21200UN-1	247
LYEU21200UN-X-1	247
LYEU21240UN-1	247
LYEU21240UN-X-1	247
LYEU21250IS-1	247
LYEU21250IS-X-1	247
LYEU21300IS-1	247
LYEU21300IS-X-1	247
LYEU21350IS-1	247
LYEU30060UN-1	253

Designation	Page
LYEU30060UN-X-1	253
LYEU30080NF-1	253
LYEU30080NT-1	253
LYEU30080UN-1	253
LYEU30080UN-X-1	253
LYEU30100UN-1	253
LYEU30100UN-X-1	253
LYEU30110BT-1	253
LYEU30110BW-1	253
LYEU30115NF-1	253
LYEU30115NT-1	253
LYEU30120UN-1	253
LYEU30120UN-X-1	253
LYEU30140BW-1	253
LYEU30140UN-1	253
LYEU30140UN-X-1	253
LYEU30150IS-1	253
LYEU30150IS-X-1	253
LYEU30160BW-1	253
LYEU30160PG-1	253
LYEU30160UN-1	253
LYEU30160UN-X-1	253
LYEU30180UN-1	253
LYEU30180UN-X-1	253
LYEU30200IS-1	253
LYEU30200IS-X-1	253
LYEU30200UN-1	253
LYEU30200UN-X-1	253
LYEU30300IS-1	253
LYEU30300IS-X-1	253
LYEU30350IS-1	253
LYEU30350IS-X-1	253
LYEU30400IS-1	253
LYEU30400IS-X-1	253
LYEU30450IS-1	253
LYEU30500IS-1	253
LYEU40040UN-1	259
LYEU40045UN-1	259
LYEU40060UN-1	259
LYEU40060UN-X-1	259
LYEU40080BW-1	259
LYEU40080NF-1	259
LYEU40080NT-1	259
LYEU40080UN-1	259
LYEU40080UN-X-1	259
LYEU40100UN-1	259
LYEU40100UN-X-1	259
LYEU40110BT-1	259
LYEU40110BW-1	259
LYEU40115NF	259
LYEU40115NT-1	259
LYEU40120UN-1	259





Designation	Page
LYEU40120UN-X-1	259
LYEU40140UN-1	259
LYEU40140UN-X-1	259
LYEU40150IS-1	259
LYEU40150IS-X-1	259
LYEU40160UN-1	259
LYEU40160UN-X-1	259
LYEU40200IS-1	259
LYEU40200IS-X-1	259
LYEU40300IS-1	259
LYEU40300IS-X-1	259
LYEU40350IS-1	259
LYEU40400IS-1	259
LYEU40400IS-X-1	259
LYEU40450IS-1	259
LYEU40500IS-1	259
LYEU40500IS-X-1	259
LYEU40550IS-1	259
LYEU40600IS-1	259
LYEU40600IS-X-1	259
MTEC 06022C5 0.5ISO	280
MTEC 06031C7 0.7ISO	280
MTEC 06036C9 0.8ISO	280
MTEC 06038C10 0.5ISO	280
MTEC 06045C10 0.75ISO	280
MTEC 06045C12 20UN	282
MTEC 0604C10 1.0ISO	280
MTEC 0604C11 28UN	282
MTEC 0604C14 1.0ISO	280
MTEC 0605C14 1.25ISO	280
MTEC 0605C14 18UN	282
MTEC 0605C14 24UN	282
MTEC 0605C19 1.25ISO	280
MTEC 0606C12 1.0ISO	280
MTEC 0606C14 28UN	282
MTEC 0606C16 16UN	282
MTEC 0606C9 27NPT	285
MTEC 0606C9 27NPTF	286
MTEC 0606C9 28BSPT	284
MTEC 0606C9 28W	283
MTEC 0807C17 1.5ISO	280
MTEC 0807C20 14UN	282
MTEC 0807C21 20UN	282
MTEC 0807C21 24UN	282
MTEC 0807C24 1.5ISO	280
MTEC 0808C14 18NPT	285
MTEC 0808C14 18NPTF	286
MTEC 0808C14 19BSPT	284
MTEC 0808C14 19W	283
MTEC 0808C20 1.75ISO	280
MTEC 0808C22 13UN	282
MTEC 0808C28 1.75ISO	280

Designation	Page
MTEC 0808D16 1.0ISO	280
MTEC 1010C26 12UN	282
MTEC 1010C27 2.0ISO	280
MTEC 1010C28 11UN	282
MTEC 1010C39 2.0ISO	280
MTEC 1010D21 1.5ISO	280
MTEC 1010D26 18UN	282
MTEC 1212C24 11W	283
MTEC 1212C34 10UN	282
MTEC 1212D19 14BSPT	284
MTEC 1212D19 14W	283
MTEC 1212D20 14NPT	285
MTEC 1212D20 14NPTF	286
MTEC 1212D26 14W	283
MTEC 1212D27 2.0ISO	280
MTEC 1212D31 16UN	282
MTEC 1212E27 20UN	282
MTEC 1414D33 2.5ISO	280
MTEC 1414D48 2.5ISO	280
MTEC 1615C38 9UN	282
MTEC 1615E37 14UN	282
MTEC 1616C40 3.0ISO	280
MTEC 1616C42 8UN	282
MTEC 1616C58 3.0ISO	280
MTEC 1616D27 11.5NPT	285
MTEC 1616D28 11BSPT	284
MTEC 1616D38 11W	283
MTEC 1616E41 12UN	282
MTEC 1616F33 1.5ISO	280
MTEC 2020D39 8NPT	285
MTEC 2020E47 11W	283
MTEC 2020F41 2.0ISO	280
MTEC E 1010C17 2.0ISO	281
MTEC E 1010D15 1.5ISO	281
MTEC E 1010D16 1.0ISO	281
MTEC E 1212D20 1.5ISO	281
MTEC E 1212D21 2.0ISO	281
MTEC E 1212E20 1.0ISO	281
MTECB 06031C7 0.7ISO	270
MTECB 06032C6 32UN	271
MTECB 06038C10 0.5ISO	270
MTECB 06038C9 0.8 ISO	270
MTECB 06045C10 0.75ISO	270
MTECB 06046C10 1.0ISO	270
MTECB 06046C14 1.0ISO	270
MTECB 06056C14 18UN	271
MTECB 0605C11 28UN	271
MTECB 0606C12 1.0ISO	270
MTECB 0606C14 1.25ISO	270
MTECB 0606C14 32UN	271
MTECB 0606C19 1.25ISO	270
MTECB 08066C14 24UN	271

Designation	Page
MTECB 08067C16 16UN	271
MTECB 08076C10 27NPT	274
MTECB 08077C20 14UN	271
MTECB 08078C14 28BSPT	273
MTECB 08078C14 28W	272
MTECB 08078C17 1.5ISO	270
MTECB 08078C24 1.5ISO	270
MTECB 0808C21 20UN	271
MTECB 0808D16 1.0ISO	270
MTECB 0808D21 24UN	271
MTECB 10092C22 13UN	271
MTECB 1009C20 1.75ISO	270
MTECB 1009C28 1.75ISO	270
MTECB 1010C27 2.0ISO	270
MTECB 1010D16 18NPT	274
MTECB 1010D16 19BSPT	273
MTECB 1010D16 19W	272
MTECB 1010D21 1.5ISO	270
MTECB 1010D22 20UN	271
MTECB 1010D24 1.0ISO	270
MTECB 12113D26 18UN	271
MTECB 12118D27 2.0ISO	270
MTECB 12118D39 2.0ISO	270
MTECB 1212D26 1.5ISO	270
MTECB 16144D34 10UN	271
MTECB 16155D22 14NPT	274
MTECB 1615E33 2.5ISO	270
MTECB 1615E48 2.5ISO	270
MTECB 1616C38 9UN	271
MTECB 1616D28 11BSPT	273
MTECB 1616D38 11W	272
MTECB 1616E26 14BSPT	273
MTECB 1616E26 14W	272
MTECB 1616F33 1.5ISO	270
MTECB 2018D40 3.0ISO	270
MTECB 2018D58 3.0ISO	270
MTECB 20195D42 8UN	271
MTECB 2020D39 8NPT	274
MTECD 06032C11 0.7ISO	290
MTECD 0604C14 0.8ISO	290
MTECD 08047C14 1.0ISO	290
MTECD 08061D18 1.25ISO	290
MTECD 08078D23 1.5ISO	290
MTECD 1009D26 1.75ISO	290
MTECD 12118D35 2.0ISO	290
MTECS 03011C4 0.3ISO	287
MTECS 03012C5 0.35ISO	287
MTECS 03016C6 0.4ISO	287
MTECS 06012C4 80UN	288
MTECS 06016C4 0.4ISO	287
MTECS 06017C5 0.45ISO	287
MTECS 06019C5 48UN	288

Designation	Page
MTECS 06021C6 40UN	288
MTECS 06024C6 0.5ISO	287
MTECS 06024C9 0.5ISO	287
MTECS 06024C9 40UN	288
MTECS 06025C7 32UN	288
MTECS 06028C7 0.6ISO	287
MTECS 0602C5 0.45ISO	287
MTECS 0602C7 0.45ISO	287
MTECS 06031C12 0.7ISO	287
MTECS 06031C9 0.7ISO	287
MTECS 06032C12 32UN	288
MTECS 06032C9 32UN	288
MTECS 06033C9 36UN	288
MTECS 06035C10 24UN	288
MTECS 06037C10 32UN	288
MTECS 06037C15 32UN	288
MTECS 06038C12 0.8ISO	287
MTECS 06038C16 0.8ISO	287
MTECS 06047C14 1.0ISO	287
MTECS 06047C14 20UN	288
MTECS 06047C19 20UN	288
MTECS 06047C20 1.0ISO	287
MTECS 0605C14 28UN	288
MTECS 0605C19 28UN	288
MTECS 0606C17 18UN	288
MTECS 0606C18 1.25ISO	287
MTECS 0606C23 18UN	288
MTECS 0606C24 1.25ISO	287
MTECS 08066C17 24UN	288
MTECS 08066C24 24UN	288
MTECS 08067C22 16UN	288
MTECS 08077C25 14UN	288
MTECS 08078C23 1.5ISO	287
MTECS 0808C25 20UN	288
MTECS 10092C27 13UN	288
MTECS 1009C26 1.75ISO	287
MTECS 12114C34 11UN	288
MTECS 12118D35 2.0ISO	287
MTECS 1615E43 2.5ISO	287
MTECSH 06012C4 80UN	291
MTECSH 06016C4 0.4ISO	289
MTECSH 06017C5 0.45ISO	289
MTECSH 06019C5 48UN	291
MTECSH 06021C6 40UN	291
MTECSH 06024C6 0.5ISO	289
MTECSH 06024C7 40UN	291
MTECSH 06024C9 0.5ISO	289
MTECSH 06028C7 0.6ISO	289
MTECSH 0602C5 0.45ISO	289
MTECSH 0602C7 0.45ISO	289
MTECSH 06031C12 0.7ISO	289
MTECSH 06031C9 0.7ISO	289

Designation	Page
MTECSH 06032C12 32UN	291
MTECSH 06032C9 32UN	291
MTECSH 06033C9 36UN	291
MTECSH 06035C10 24UN	291
MTECSH 06037C10 32UN	291
MTECSH 06037C15 32UN	291
MTECSH 06038C12 0.8ISO	289
MTECSH 06038C16 0.8ISO	289
MTECSH 06042C11 28UN	291
MTECSH 06047C14 1.0ISO	289
MTECSH 06047C19 20UN	291
MTECSH 06047C20 1.0ISO	289
MTECSH 0605C14 28UN	291
MTECSH 0605C19 28UN	291
MTECSH 0606C17 18UN	291
MTECSH 0606C18 1.25ISO	289
MTECSH 0606C23 18UN	291
MTECSH 0606C24 1.25ISO	289
MTECSH 08066C17 24UN	291
MTECSH 08066C24 24UN	291
MTECSH 08067C22 16UN	291
MTECSH 08078C23 1.5ISO	289
MTECSH 10092C27 13UN	291
MTECSH 1009C26 1.75ISO	289
MTECSH 12118D35 2.0ISO	289
MTECSH 1212D35 18UN	291
MTECZ 06048C10 1.0ISO	275
MTECZ 06056C14 18UN	276
MTECZ 0606C12 1.0ISO	275
MTECZ 0606C14 1.25ISO	275
MTECZ 0606C14 28UN	276
MTECZ 0606C19 1.25ISO	275
MTECZ 08067C16 16UN	276
MTECZ 08076C10 27NPT	278
MTECZ 08076C10 27NPTF	279
MTECZ 08077C20 14UN	276
MTECZ 08078C14 28W	277
MTECZ 08078C17 1.5ISO	275
MTECZ 0808C21 20UN	276
MTECZ 0808D16 1.0ISO	275
MTECZ 10092C22 13UN	276
MTECZ 1009C20 1.75ISO	275
MTECZ 1009C28 1.75ISO	275
MTECZ 1010C27 2.0ISO	275
MTECZ 1010D16 18NPT	278
MTECZ 1010D16 18NPTF	279
MTECZ 1010D16 19W	277
MTECZ 1010D21 1.5ISO	275
MTECZ 1010D22 20UN	276
MTECZ 12105C26 12UN	276
MTECZ 12113D26 18UN	276
MTECZ 12114C28 11UN	276

Designation	Page
MTECZ 12118D27 2.0ISO	275
MTECZ 1212D26 1.5ISO	275
MTECZ 1212D31 16UN	276
MTECZ 1212E27 20UN	276
MTECZ 16144D34 10UN	276
MTECZ 16155D22 14NPTF	279
MTECZ 1615E33 2.5ISO	275
MTECZ 1616D38 11W	277
MTECZ 1616E26 14W	277
MTECZ 1616E33 1.5ISO	275
MTECZ 1616E37 14UN	276
MW 4.3X8	229
MW 5.5X10	229
MW 6.4X12	229
OFCT05T3AFFN-P	67
OFCT05T3AFTN-HR	67
OFCT05T3TIN	67
OFCT0705AFFN-P	69
OFCT0705AFFR-W	69
OFCT0705AFTN-HR	69
OFMT05T3AFN-HR	67
OFMT0705AFR-HR	69
OFMT0705AFTN	69
OFMW05T3AFTN	67
OFMW0705AFTN	69
ONCQ0906ANN	65
ONCU050520TN	64
ONCU0505ANEN	64
ONCU0505ANFN-P	64
ONCU0505ANN	64
ONCU0505ANTN-HR	64
ONCU0505ANTN-W	64
ONCU090612FN-P	65
ONCU090612TN-HR	65
ONCU090612TN-W	65
ONCU090630TN	65
ONCU0906ANFN-WE	65
ONCU0906ANTN-HR	65
ONCU0906ANTN-W	65
PAR5092	51
PEMT0502ZCTR-HR	148
PNCQ0804GNTN	70
PNCQ0804ZNTN	152
PNCT0804ZNN-HR	152
PNCU0805GNFR-HS	70
PNCU0805GNFR-P	70
PNCU0805GNR	70
PNCU0805GNTR	70
PNCU0805GNTR-W	70
PO.032.001	68
PO.032.002	67
PO.040.001	68





Designation	Page
PO.040.002	67
PO.040.003	64
PO.040.004	68
PO.050.001	69
PO.050.002	68
PO.050.003	64
PO.050.004	64
PO.050.005	68
PO.050.006	69
PO.063.001	69
PO.063.002	68
PO.063.003	64
PO.063.004	64
PO.063.005	65
PO.063.007	68
PO.063.008	69
PO.080.001	69
PO.080.002	68
PO.080.003	64
PO.080.004	64
PO.080.005	65
PO.080.006	66
PO.080.013	68
PO.080.014	69
PO.100.001	69
PO.100.002	68
PO.100.003	64
PO.100.004	64
PO.100.005	65
PO.100.006	66
PO.100.013	68
PO.100.014	69
PO.125.001	69
PO.125.002	68
PO.125.003	64
PO.125.004	64
PO.125.005	65
PO.125.006	66
PO.125.013	68
PO.125.014	69
PO.160.001	69
PO.160.002	64
PO.160.003	64
PO.160.004	65
PO.160.005	66
PO.160.013	69
PO.200.001	65
PO.200.005	66
PO.250.001	65
PO.250.005	66
PO.315.001	65
PO.315.005	66

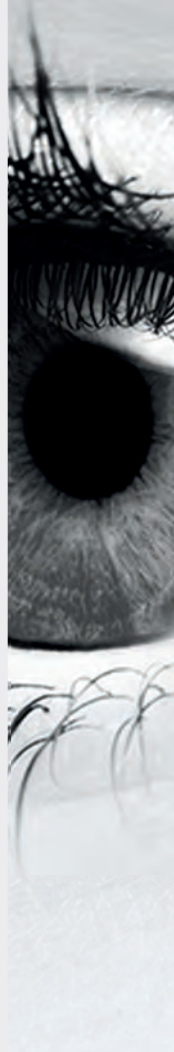
Designation	Page
PP.040.001	70
PP.050.001	70
PP.050.002	70
PP.063.001	70
PP.063.002	70
PP.080.001	70
PP.080.002	70
PP.100.001	70
PP.100.002	70
PP.125.001	70
PP.125.002	70
PP.160.001	70
PP.160.002	70
PR.012.001	116
PR.012.002	116
PR.016.001	116
PR.016.002	117
PR.016.008	124
PR.020.001	116
PR.020.002	118
PR.020.008	125
PR.020.010	132
PR.024.001	119
PR.024.002	126
PR.024.003	136
PR.025.001	116
PR.025.002	118
PR.025.003	118
PR.025.007	125
PR.025.011	133
PR.025.012	132
PR.030.001	117
PR.030.002	118
PR.030.003	125
PR.030.006	132
PR.032.001	119
PR.032.002	120
PR.032.003	126
PR.032.004	127
PR.032.005	137
PR.032.006	136
PR.032.009	133
PR.032.010	132
PR.035.001	119
PR.035.002	118
PR.035.003	125
PR.035.004	126
PR.035.005	136
PR.035.009	133
PR.035.010	132
PR.040.002	137
PR.040.003	136

Designation	Page
PR.040.004	126
PR.040.009	135
PR.040.010	135
PR.040.012	134
PR.042.001	119
PR.042.002	118
PR.042.003	125
PR.042.004	126
PR.042.005	127
PR.042.006	137
PR.042.007	136
PR.042.012	135
PR.042.013	135
PR.042.015	134
PR.050.002	139
PR.050.003	138
PR.050.007	135
PR.050.008	135
PR.050.010	134
PR.052.001	129
PR.052.002	121
PR.052.003	122
PR.052.004	123
PR.052.005	128
PR.052.006	130
PR.052.007	139
PR.052.008	138
PR.052.012	135
PR.052.013	135
PR.052.015	134
PR.063.002	139
PR.063.003	138
PR.063.006	135
PR.063.007	135
PR.063.008	134
PR.066.001	121
PR.066.002	122
PR.066.003	123
PR.066.004	129
PR.066.005	130
PR.066.006	131
PR.066.007	139
PR.066.008	138
PR.066.011	135
PR.066.012	135
PR.080.002	122
PR.080.003	123
PR.080.004	129
PR.080.005	130
PR.080.006	131
PR.080.007	139
PR.080.008	138

Designation	Page
PR.080.010	135
PR.080.011	135
PR.100.002	123
PR.100.003	130
PR.100.004	131
PR.100.005	139
PR.125.002	123
PR.125.003	130
PR.125.004	131
PR.125.005	139
PR.160.001	123
PR.160.002	130
PR.160.003	131
PR.160.004	139
PS.025.004	154
PS.030.001	154
PS.032.003	156
PS.032.004	156
PS.032.005	154
PS.035.001	156
PS.035.002	156
PS.035.003	154
PS.040.002	156
PS.040.003	71
PS.040.004	154
PS.042.001	156
PS.042.002	156
PS.042.003	71
PS.042.004	154
PS.050.004	158
PS.050.005	72
PS.050.006	72
PS.050.007	155
PS.050.008	155
PS.050.011	74
PS.050.012	74
PS.052.001	158
PS.052.002	158
PS.052.003	158
PS.052.004	155
PS.052.005	155
PS.063.004	158
PS.063.005	158
PS.063.006	72
PS.063.007	72
PS.063.008	155
PS.063.009	155
PS.063.010	74
PS.063.011	74
PS.066.001	158
PS.066.002	158
PS.066.003	158

Designation	Page
PS.066.004	155
PS.066.005	155
PS.080.004	158
PS.080.005	158
PS.080.006	160
PS.080.007	160
PS.080.008	160
PS.080.009	158
PS.080.010	72
PS.080.011	72
PS.080.013	155
PS.080.014	155
PS.080.015	74
PS.080.016	74
PS.085.001	155
PS.085.002	155
PS.100.004	158
PS.100.005	158
PS.100.006	160
PS.100.007	160
PS.100.008	158
PS.100.009	160
PS.100.010	72
PS.100.011	72
PS.100.013	74
PS.100.014	74
PS.125.003	160
PS.125.004	160
PS.125.005	160
PS.125.007	74
PS.125.008	74
PS.160.003	160
PS.160.004	160
PS.160.005	160
PT.030.001	75
PT.035.001	75
PT.040.001	75
PT.042.001	75
PT.050.001	76
PT.050.002	76
PT.063.001	76
PT.063.002	76
PT.080.001	76
PT.080.002	76
PT.100.001	76
PT.100.002	76
PT.125.001	76
PT.125.002	76
PW.016.001	150
PW.020.001	150
PW.025.001	150
PW.030.001	150

Designation	Page
PW.032.001	150
PW.032.002	151
PW.035.001	150
PW.035.002	151
PW.040.001	150
PW.040.002	151
PW.042.001	150
PW.042.002	151
PW.050.001	151
PW.052.001	151
RCLT1204M0N-CC1	136
RCLT1204M0N-CC2	136
RCLT1204M0N-CP	136
RCLT1204M0TN-PH2	136
RCLT1606M0N-CC	137
RCLT1606M0N-CC1	137
RCLT1606M0N-CP	137
RCLT1606M0TN-PH	137
RCLT1606M0TN-PH2	137
RHHT0802M0FN-P	117
RHHT0802M0TN	117
RHHT0802M0TN-P	117
RHHT1003M0FN-P	118
RHHT1003M0TN	118
RHHT1003M0TN-P	118
RHHT1204M0FN-P	119
RHHT1204M0TN	119
RHHT1204M0TN-P	119
RHHT1605M0FN-P	120
RHHT1605M0TN	120
RHHT1605M0TN-P	120
RHHW0602M0TN	116
RHHW0802M0TN	117
RHHW1003M0TN	118
RHHW1204M0TN	119
RHHW1605M0TN	120
RHKT1605M0TN-PH2	120
RHKT2006M0TN-PH	131
RHKT2006M0TN-PH2	131
RHKW1003M0TN	118
RHKW1204M0TN	119
RHKW1605M0TN	120
RHKW2006M0TN	131
RPLX10T3M0N-HR	132
RPLX10T3M0TN-FL	132
RPLX10T3M0TN-HR	132
RPLX1204M0N-HR1	133
RPLX1204M0TN-FL	133
RPLX1204M0TN-HR	133
S010MOD06CA024	304
S010MOD06CA031	304
S010MOD06CA060	304





Designation	Page
S010MOD06CA080	304
S010MOD06CA100	304
S012MOD06CA030	304
S012MOD06CA031	304
S012MOD06CA040	304
S012MOD06CA060	304
S012MOD06CA080	304
S012MOD06CA100	304
S012MOD06CA100-03	304
S012MOD06VA020	305
S012MOD06VA070	305
S014MOD08CA024	304
S016MOD08CA055	304
S016MOD08CA135	304
S016MOD08CK040	307
S016MOD08CK060	307
S016MOD08CK080	307
S016MOD08CK100	307
S016MOD08CK120	307
S016MOD08HA040	303
S016MOD08HA060	303
S016MOD08HA080	303
S016MOD08HA100	303
S016MOD08HK040	306
S016MOD08HK060	306
S016MOD08HK080	306
S016MOD08HK100	306
S016MOD08HK120	306
S016MOD08VA006	305
S016MOD08VA056	305
S018MOD10CA040	304
S019MOD10CA040	304
S020MOD10CA055	304
S020MOD10CA135	304
S020MOD10CK040	307
S020MOD10CK060	307
S020MOD10CK080	307
S020MOD10CK100	307
S020MOD10CK120	307
S020MOD10HK040	306
S020MOD10HK060	306
S020MOD10HK080	306
S020MOD10HK100	306
S020MOD10HK120	306
S020MOD10VA006	305
S020MOD10VA024	305
S020MOD10VA070	305
S020MOD10VA125	305
S025MOD12CA060	304
S025MOD12CA080	304
S025MOD12CA100	304
S025MOD12CA157	304

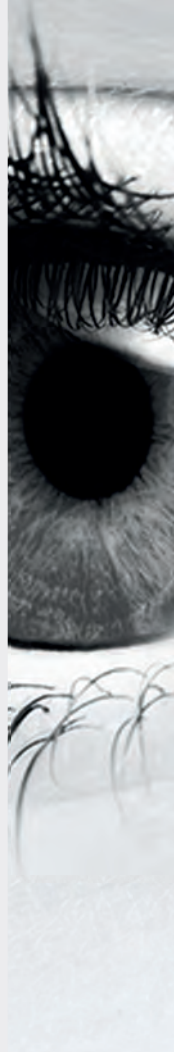
Designation	Page
S025MOD12CA207	304
S025MOD12VA015	305
S025MOD12VA045	305
S025MOD12VA110	305
S025MOD12VA155	305
S032MOD16CA207	304
S032MOD16VA014	305
S032MOD16VA090	305
S032MOD16VA108	305
S032MOD16VA159	305
S032MOD16VA207	305
S11	242
SA.010.004	17
SA.010.005	17
SA.010.006	16
SA.010.009	18
SA.012.005	17
SA.012.006	17
SA.012.007	16
SA.012.008	18
SA.014.004	17
SA.014.005	17
SA.015.002	18
SA.016.008	17
SA.016.009	16
SA.016.010	18
SA.020.014	17
SA.020.015	16
SA.020.016	18
SA.025.014	17
SA.025.015	16
SA.025.016	18
SA.030.001	18
SA.032.018	18
SA.035.002	18
SB.012.001	20
SB.012.002	22
SB.015.001	22
SB.016.001	20
SB.016.003	22
SB.020.001	24
SB.020.002	26
SB.020.005	20
SB.020.006	20
SB.020.009	22
SB.020.010	20
SB.020.011	22
SB.025.005	24
SB.025.006	26
SB.025.009	20
SB.025.010	20
SB.025.013	22

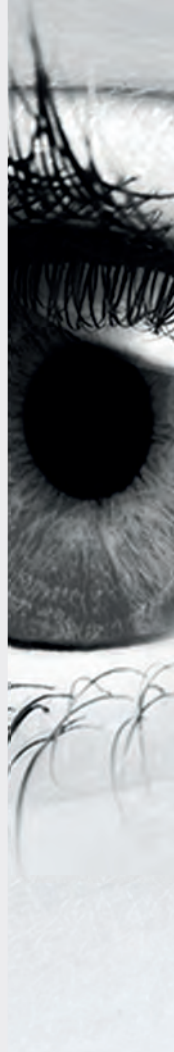
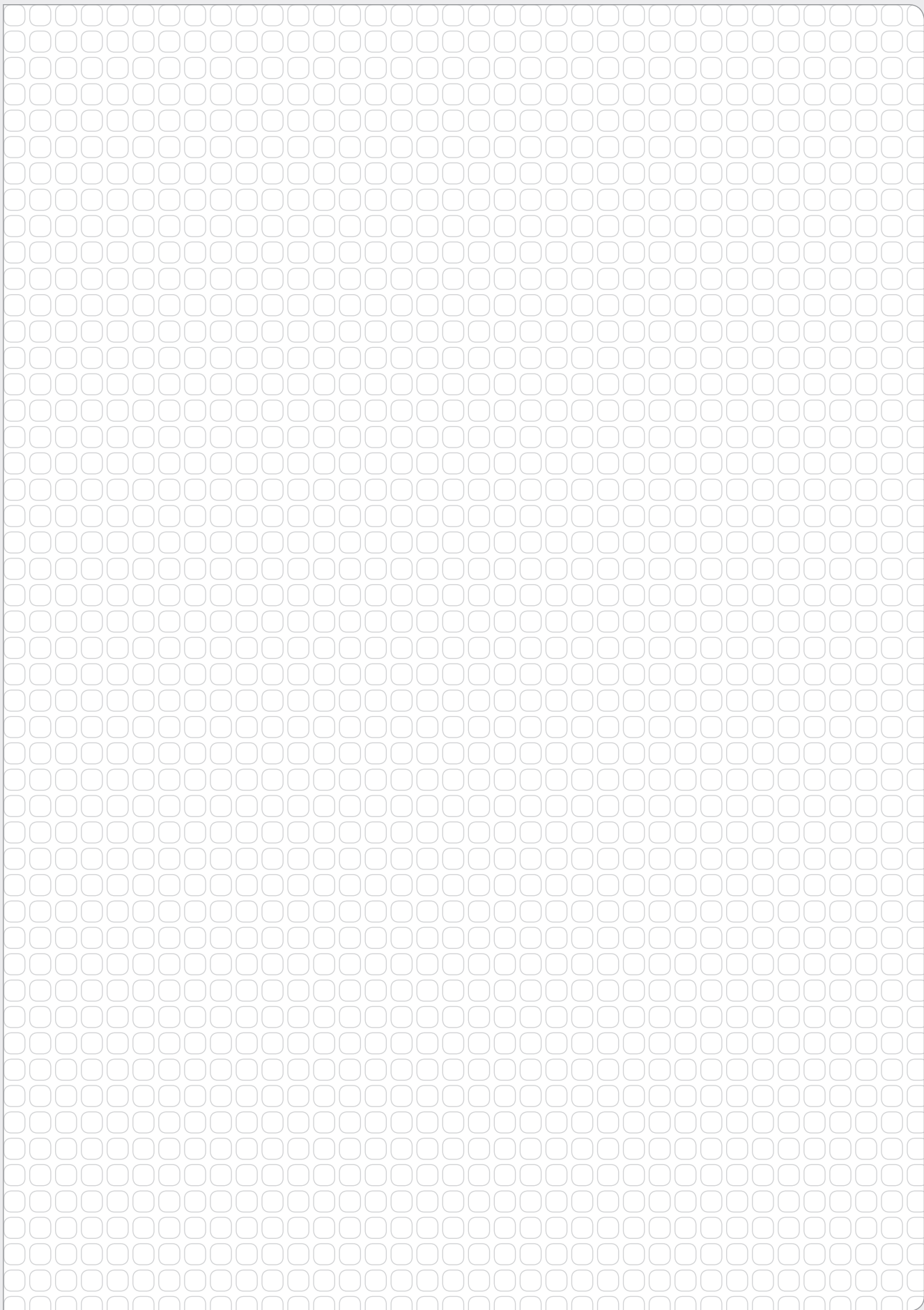
Designation	Page
SB.025.014	20
SB.025.015	24
SB.025.016	26
SB.032.005	24
SB.032.006	26
SB.032.007	24
SB.032.011	22
SB.032.012	22
SB.035.001	26
SB.035.002	22
SB.040.001	26
SB.040.002	26
SB025-00	51
SB040-07	92
SC080-01	92
SCLT050204N	211
SCLT050204N-PH	211
SDCT050204FN-P	100
SDCT080305FN-P	58
SDE-31-201	85
SDE-31-202	85
SDE-42-201	85
SDE-42-202	85
SDE-42-203	85
SDE-43-201	85
SDE-44-201	85
SDE-44-202	85
SDE-45-201	85
SDES090408TN	105
SDES090416TN-002ää	105
SDES090425TN-002	105
SDES130508N-PF	147
SDES130508N-PF1	147
SDES130515N	59
SDES130515N-001	59
SDES130516N-PF	71
SDES130516N-PF1	71
SDES130525TN-002	105
SDES130532R-001	59
SDES130540R-001	59
SDES1305MDR	157
SDES1305MDR-001	157
SDES1305MPR	71
SDES1305MPR-001	71
SDES190620N	73
SDES190620N-001	73
SDES1906MDR	160
SDES1906MPR-001	73
SDES1906ZPR-PF	73
SDGT07T308-HP	143
SDGT140512-HP	213
SDMS130512R-PP	147

Designation	Page
SDMS130515R-PH	59
SDMS130516R-PP	71
SDMS1305MDR-PH	157
SDMS190620R-PH	73
SDMS1906MDR-PH	160
SDMS1906ZPR-PP	73
SDMT050204N	100
SDMT080305N	58
SDMW080305TN	58
SDMW080305TN-W	58
SDXS0904MPR-MM	154
SDXS0904MPR-MR	154
SDXS0904MPR-MR1	154
SDXS0904MPR-MRH	154
SDXS130515N-HR	59
SDXS130515R-PH	59
SDXS1305MDR-PH	157
SDXS1305MPR-MR	71
SDXS1906MPR-MR	73
SF035-01	119
SGM-44R001	61
SGM-44R100	74
SH M4x0.7x16	229
SH M5X0.8X16	229
SH M6x1.0x20	229
SHET110502FR-P	33
SHET110505FR-P	33
SHET110508FR-P	33
SHET110516FR-P	33
SHET110524FN-P	33
SHET110532FN-P	33
SHET110540FN-P	33
SHGT050204-HP	211
SHGT060204-HP	143
SHGT090408-HP	143
SHGT110408-HP	213
SHLT060204N	143
SHLT060204N-PH	143
SHLT090408N	143
SHLT090408N-PH1	143
SHLT110408N	213
SHLT110408N-PH1	213
SM06-L105-C12	302
SM06-L125-C16	302
SM06-L60-C10	302
SM08-L128-C16	302
SM08-L170-C20	302
SM08-L73-C16	302
SM10-L130-C20	302
SM10-L200-C25	302
SM10-L80-C20	302
SM12-L200-C32	302

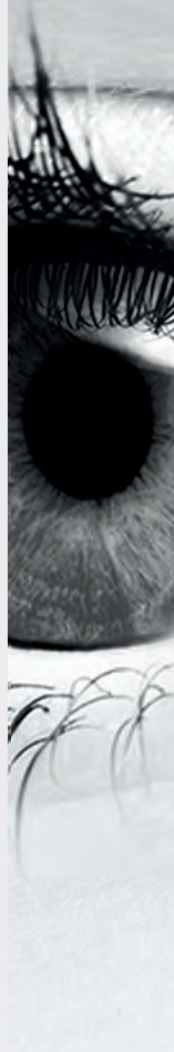
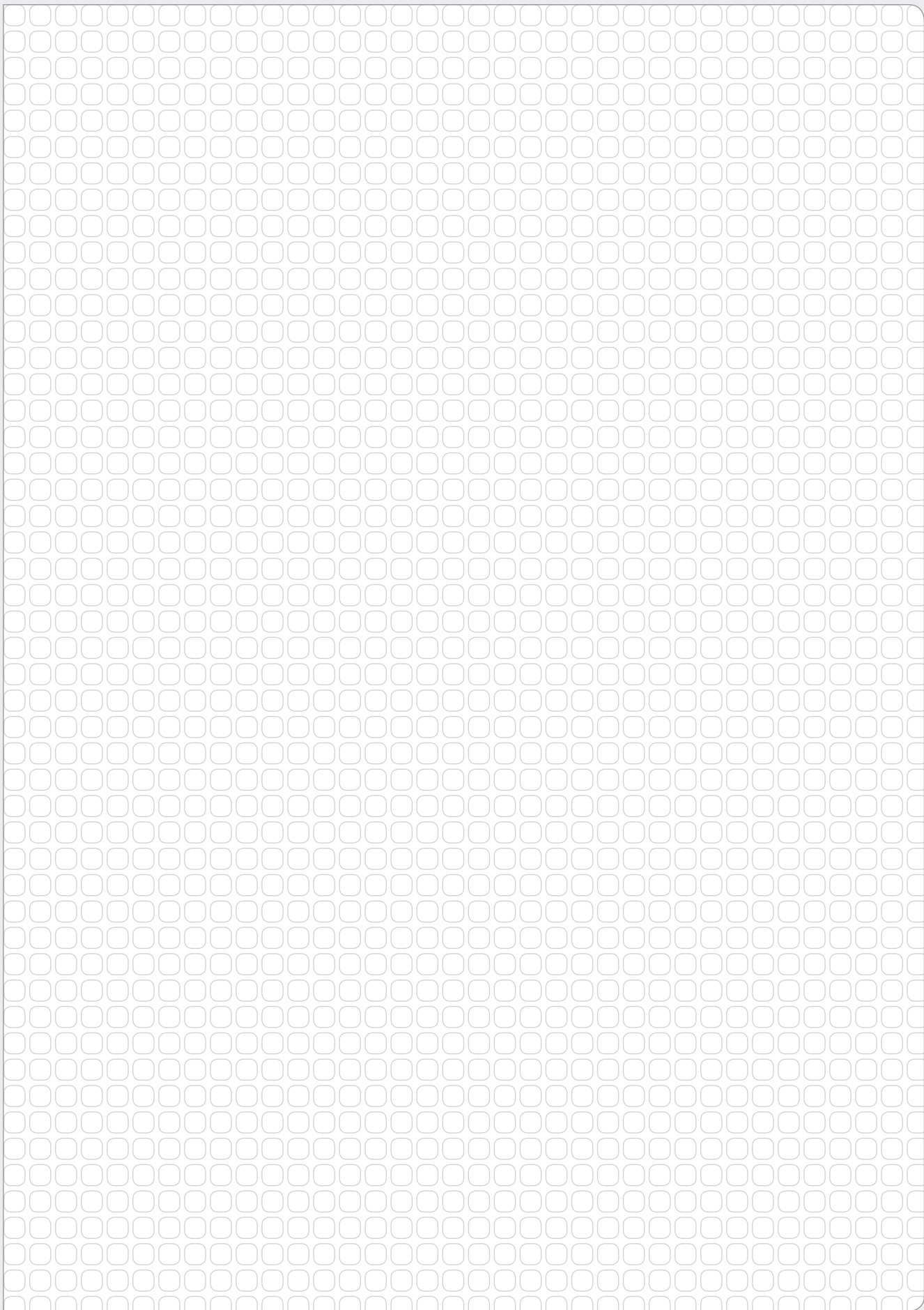
Designation	Page
SM12-L86-C25	302
SM16-L230-C32	302
SM16-L95-C32	302
SM18-041-00	16
SM20-043-00	100
SM22-052-00	143
SM25-024-80	86
SM25-049-00	116
SM25-054-00	20
SM25-064-00	20
SM25-075-20	140
SM30-053-00	117
SM30-065-00	58
SM30-075-R0	105
SM35-034-50	85
SM35-042-50	85
SM35-070-00	103
SM35-076-10	132
SM35-088-10	24
SM35-088-60	30
SM35-089-00	99
SM40-050-50	85
SM40-060-50	85
SM40-070-00	125
SM40-070-50	91
SM40-080-10	67
SM40-080-50	85
SM40-090-00	92
SM40-093-20	33
SM40-100-10	64
SM40-100-R0	59
SM40-106-50	85
SM40-110-00	93
SM40-120-20	61
SM50-100-10	120
SM50-105-10	137
SM50-120-10	139
SM50-122-50	213
SM50-130-R0	65
SM60-135-R0	73
SO 35080I	133
SPLT07T308N	143
SPLT07T308N-PH	143
SPLT120408N-PH	229
SPLT140512N	213
SPLT140512N-PH	213
SS.025.006	32
SS.032.006	32
SS.040.002	32
SW.016.001	28
SW.016.002	29
SW.020.001	28

Designation	Page
SW.020.002	29
SW.025.001	30
SW.025.002	31
SW.025.003	28
SW.025.004	29
SW.032.001	30
SW.032.002	31
SW.032.003	28
SW.032.004	29
SW.035.001	29
SW.040.001	30
SW.040.002	31
SW.040.003	29
TCHW110204R-W	75
TFLT15T303N	107
TFLT15T308N	107
TS.025.001	105
TS.025.002	106
TS.031.001	105
TS.031.002	106
TS.039.001	105
TS.039.002	106
TS.048.001	105
TS.048.002	106
TS.058.001	105
TS.058.002	106
UOMT0602TR	16
WCNT060205FR-FL	150
WCNW060205TR	150
WNCU04T302FN-P	28
WNCU04T304FN-P	28
WNCU04T308FN-P	28
WNCU060604FN-P	30
WNCU060608FN-P	30
WNCU060616FN-P	30
WNMU04T302N	28
WNMU04T304N	28
WNMU060604N	30
WNMU060608N	30
Z4MOD08SF065	301
Z4MOD08SF115	301
Z4MOD08SF165	301
Z4MOD08SK065	301
Z4MOD08SK115	301
Z4MOD08SK165	301
Z4MOD10SF065	301
Z4MOD10SF115	301
Z4MOD10SF165	301
Z4MOD10SK065	301
Z4MOD10SK115	301
Z4MOD10SK165	301
Z4MOD12SF065	301

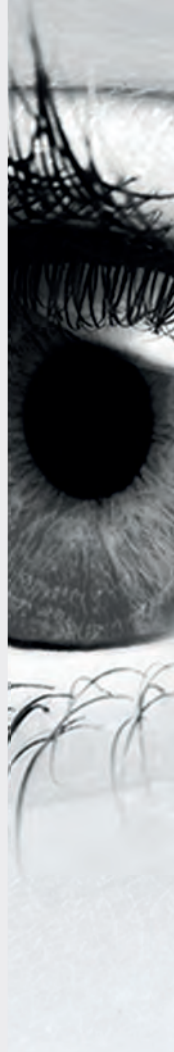
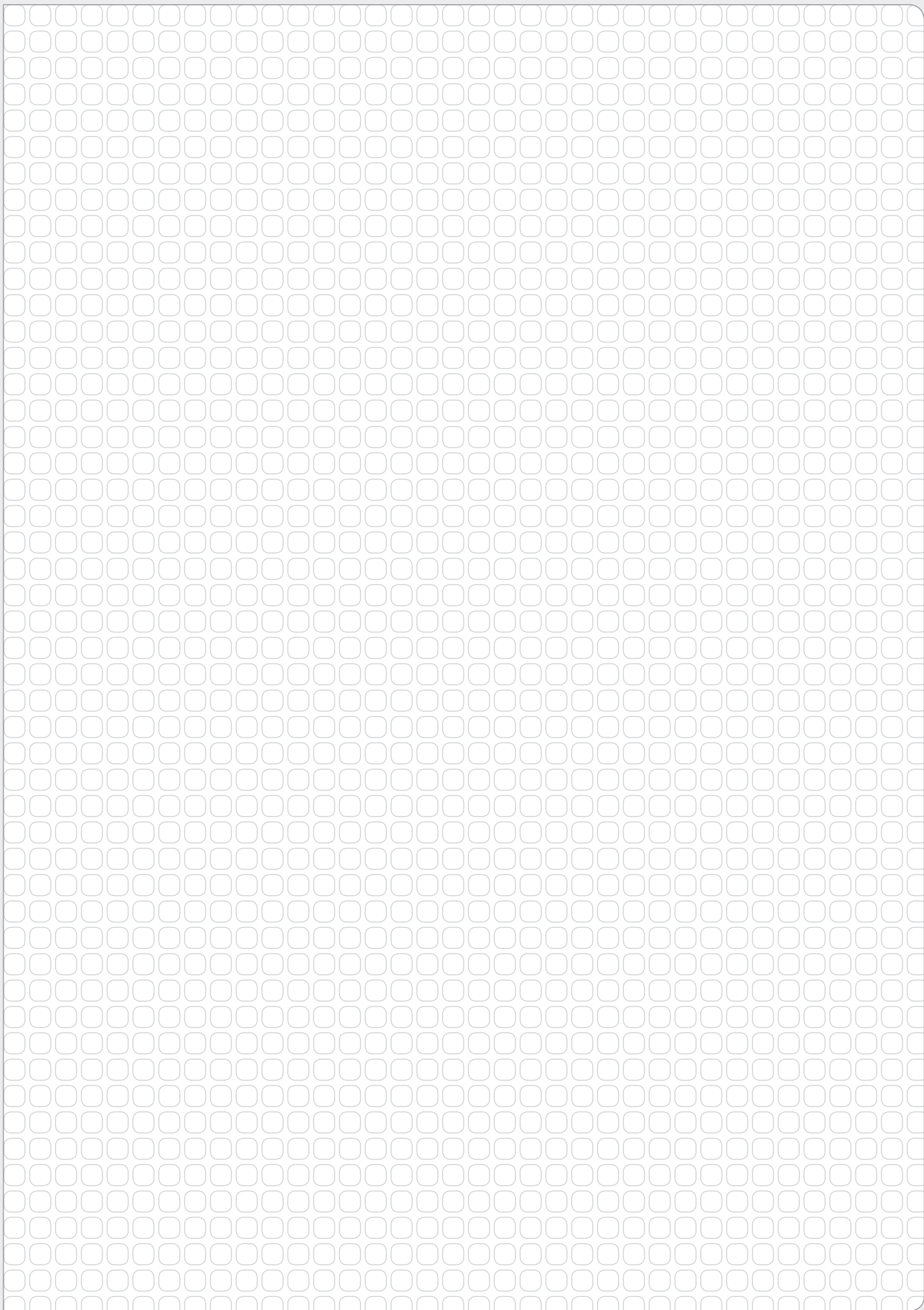




NOTES



NOTES



NOTES

INNOTOOL

INNOTOOL, which stands for „Innovative Tooling“, is a market leader in indexable milling products.

The high shear geometry design of cutter body and inserts ensures that Innotool performs very well on low powered machines and often the cutting data can be increased considerably due to the soft cutting action.

The range of standard tooling has increased to now also contain a full range of tools for die & mould machining, as well as a range of indexable insert short hole drills.

In addition to the complete range of standard end mills, square shoulder mills, helical end mills, side and face mills and die and mould tooling, INNOTOOL can offer an excellent and fast service for special solutions.

We look forward to being of service.





INNOTOOL

INNOVATIVE CUTTING TOOLS

Florianstraße 13-17

71665 Vaihingen-Horrheim, Germany

Tel.: +49 (0)7042-8316-0

Fax: +49 (0)7042-8316-26

E-Mail: info@innotool.de

www.innotool.de