

Innovation



Precision part-off and grooving

Maximum productivity and high precision



EN



Application - customer benefits

Industries

- Bearing industry
- Automotive industry
- General mechanical engineering
- Aerospace
- Medical systems

Materials

- Steel in general
- Stainless steels
- Super alloys

Typical components

- Bearings
- Small gear components
- Screws for medical applications
- Small precision components
- Synchronizer rings



Product advantages

Maximum precision of the cutting edge when mounted



Can be clamped from either above or below, easy handling



Flexible parting and grooving widths possible

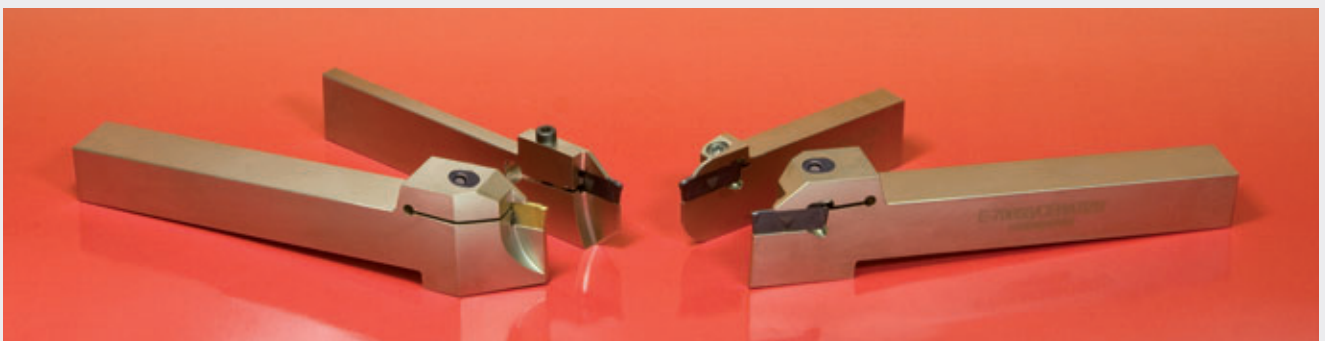


YOUR benefits

Close tolerances on the work piece
Fewer non-conforming parts
Very good repeatability and process security

Easy mounting in overhead position
Reduced machine downtime

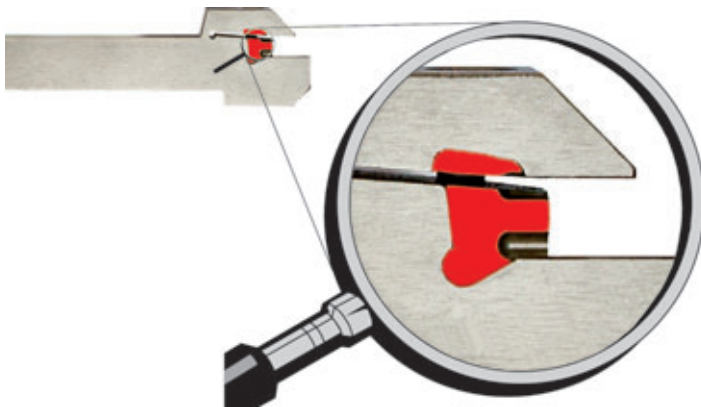
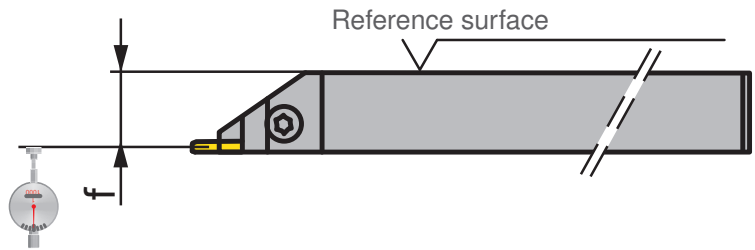
Less material wastage





Tolerances on the work piece

- Improved dimensional accuracy in high volume production
- In multiple part-off operations close tolerances on the work piece

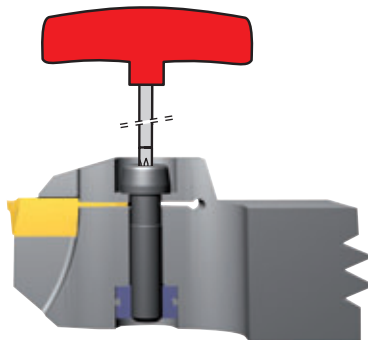


Easy handling

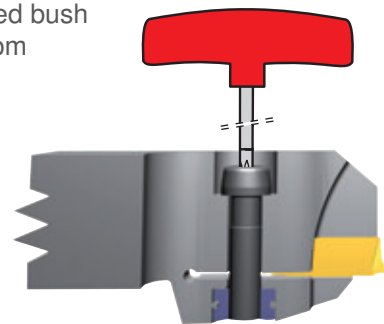
- Lateral support when changing the cutting insert
- Precise position of the cutting insert in the seat

Can be clamped from either above or below

- Threaded bush on top



- Threaded bush on bottom



Stable design

- Laterally reinforced parting and grooving edge
- Strong insert support even in smaller shank sizes



Cutting insert

- Chip control with high feed rates
- Consistent cutting properties with varying parting widths
- Left-hand, right-hand and neutral version
- Burr-free part-off thanks to left-hand/right-hand angled cutting edge
- Parting and grooving

Parting and grooving widths

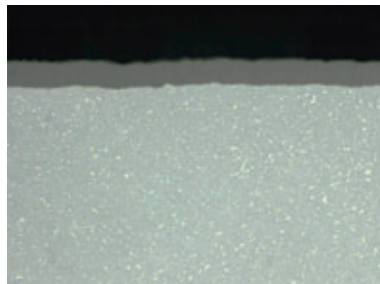
- Standard cutting widths 1.00 mm, 1.50 mm, 2.00 mm
- Customer specific cutting widths with steps of 0.1 mm from 0.85 mm to 2.2 mm upon request



Grade

CTP1340

HC-P40
HC-M35
HC-K35



Composition:

Co 9.0%; WC balance

Grain size:

0.7 - 1 μm

Hardness:

HV 1590

Layer system:

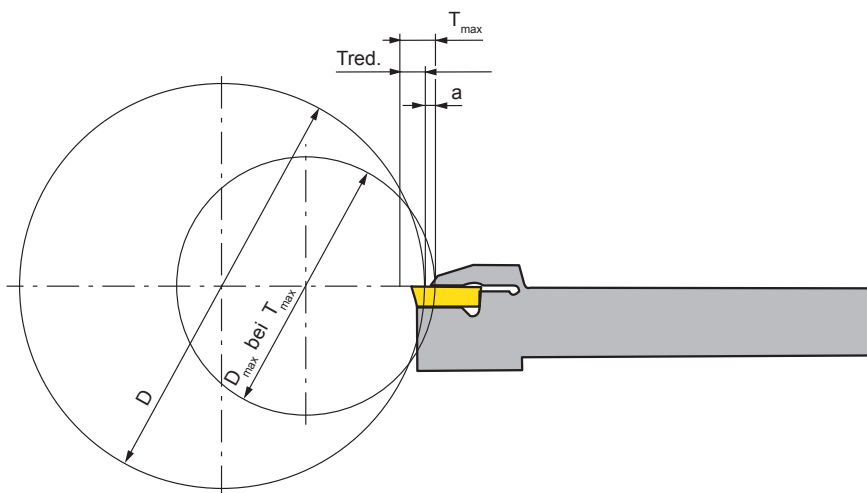
PVD

TiAlN; 4 μm

Maximum cutting depth depending on work piece diameter

Assembly size	T_{max}	Reduction of the depth of cut a (mm)																
		0	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0
E16... PX20-1	5	52	57	64	74	88	108	144	214	428	∞							
E16... PX20-2 PX20-3	10	52	55	58	62	68	74	83	93	108	128	159	211	316	630	∞		
E20... PX20-1	5	62	68	77	89	106	131	174	259	518	∞							
E20... PX20-2 Px20-3	11	62	66	72	79	88	99	115	136	170	225	337	672	∞				

Maximum work piece diameter (D_{max}) in case of full depth of cut (T_{max}) in mm



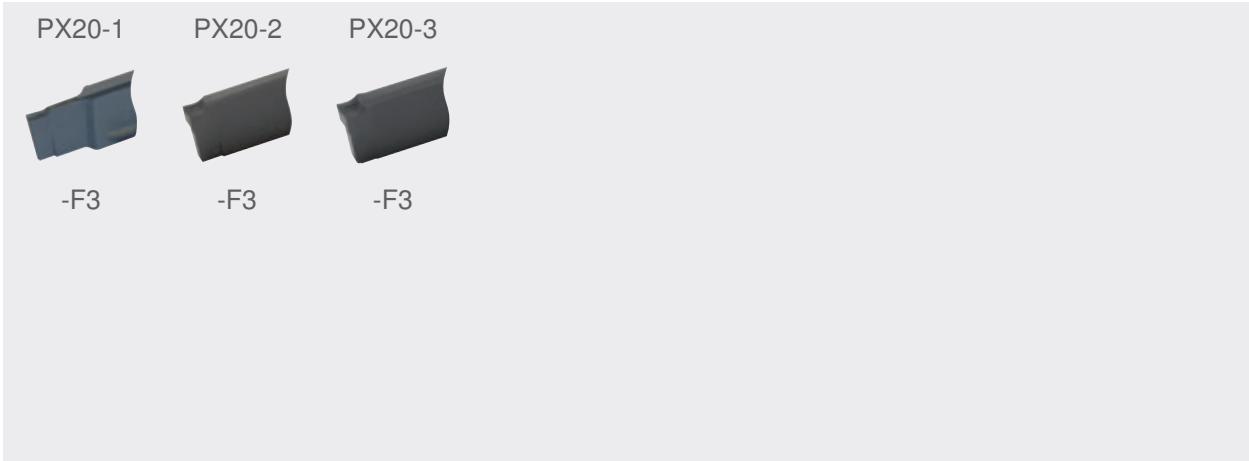
- T_{max} = maximum depth of cut
- D_{max} = maximum work piece diameter with full depth of cut T_{max} ($a = 0$)
- a = reduction of the depth of cut

For further applications see our main catalogue
 'MSS - The modular parting, grooving and threading system', No. 148





Program



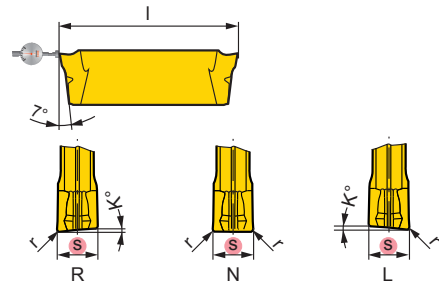
s [mm]	Type, description	R M F	L N R	CTP1340					r [mm]	K [°]	l [mm]
1,00	PX20-1E1.00L05-F3	F	L	●					0,08	5	20,0
	PX20-1E1.00N0.10-F3	F	N	●					0,10		20,0
	PX20-1E1.00R05-F3	F	R	●					0,08	5	20,0
1,50	PX20-2E1.50L05-F3	F	L	●					0,08	5	20,3
	PX20-2E1.50N0.10-F3	F	N	●					0,10		20,3
	PX20-2E1.50R05-F3	F	R	●					0,08	5	20,3
2,00	PX20-3E2.00L05-F3	F	L	●					0,08	5	20,3
	PX20-3E2.00N0.15-F3	F	N	●					0,15		20,3
	PX20-3E2.00R05-F3	F	R	●					0,08	5	20,3



Steel	●			
Stainless	●			
Cast iron				
Non ferrous metals	○			
Heat resistant	○			
Hard materials				

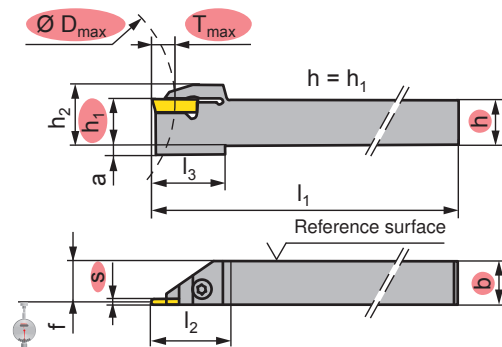
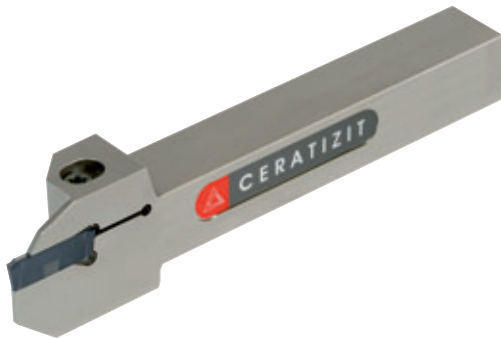
- Main application
- Extended application
- International CERATIZIT range, for present availability see price list


Ordering example: 10 pieces PX20-1E1.00L05-F3 CTP1340



Repeatability (x) see below

Tolerances [mm]			
	x	s	r
-F3	±0,02	±0,02	±0,05







Type, description	LNR	h [mm]	b [mm]	s [mm]	T _{max} [mm]	D _{max} [mm]	h ₂ [mm]	l ₁ [mm]	l ₂ [mm]	l ₃ [mm]	f [mm]	a [mm]	
E16R0005-1616K-PX20-1	R	16	16	1,0	5	52	23,0	125	31	32,0	15,00	4,0	PX20-1..
E16R0010-1616K-PX20-2				1,5	10						15,40		PX20-2..
E16R0010-1616K-PX20-3				2,0	10						15,20		PX20-3..
E16L0005-1616K-PX20-1	L	16	16	1,0	5	52	23,0	125	31	32,0	15,00	4,0	PX20-1..
E16L0010-1616K-PX20-2				1,5	10						15,40		PX20-2..
E16L0010-1616K-PX20-3				2,0	10						15,20		PX20-3..
E20R0005-2020L-PX20-1	R	20	20	1,0	5	62	27,0	140	34		19,00		PX20-1..
E20R0011-2020L-PX20-2				1,5	11						19,40		PX20-2..
E20R0011-2020L-PX20-3				2,0	11						19,20		PX20-3..
E20L0005-2020L-PX20-1	L	20	20	1,0	5	62	27,0	140	34		19,00		PX20-1..
E20L0011-2020L-PX20-2				1,5	11						19,40		PX20-2..
E20L0011-2020L-PX20-3				2,0	11						19,20		PX20-3..

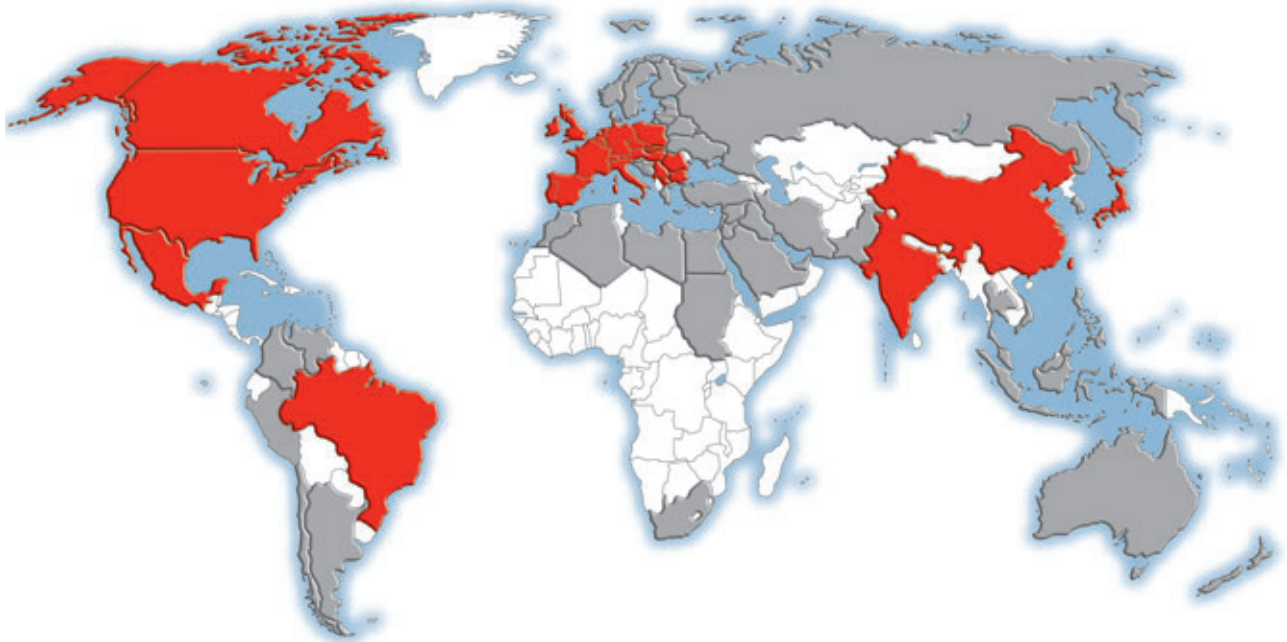
Ordering example: 1 piece E16R0005-1616K-PX20-1



Repeatability (dimension f) measured on reference surface of the master insert = ± 0.05 mm

 h [mm]			
16	7897218/M4,0X18/T20	7897207/TORX T20 T	10008867/GS-M4.0
20	10001938/M5,0X20/T25	7883304/TORX T25 T	10008868/GS-M5.0

CERATIZIT worldwide



- CERATIZIT worldwide production sites and support centres
- CERATIZIT worldwide distribution partner network



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