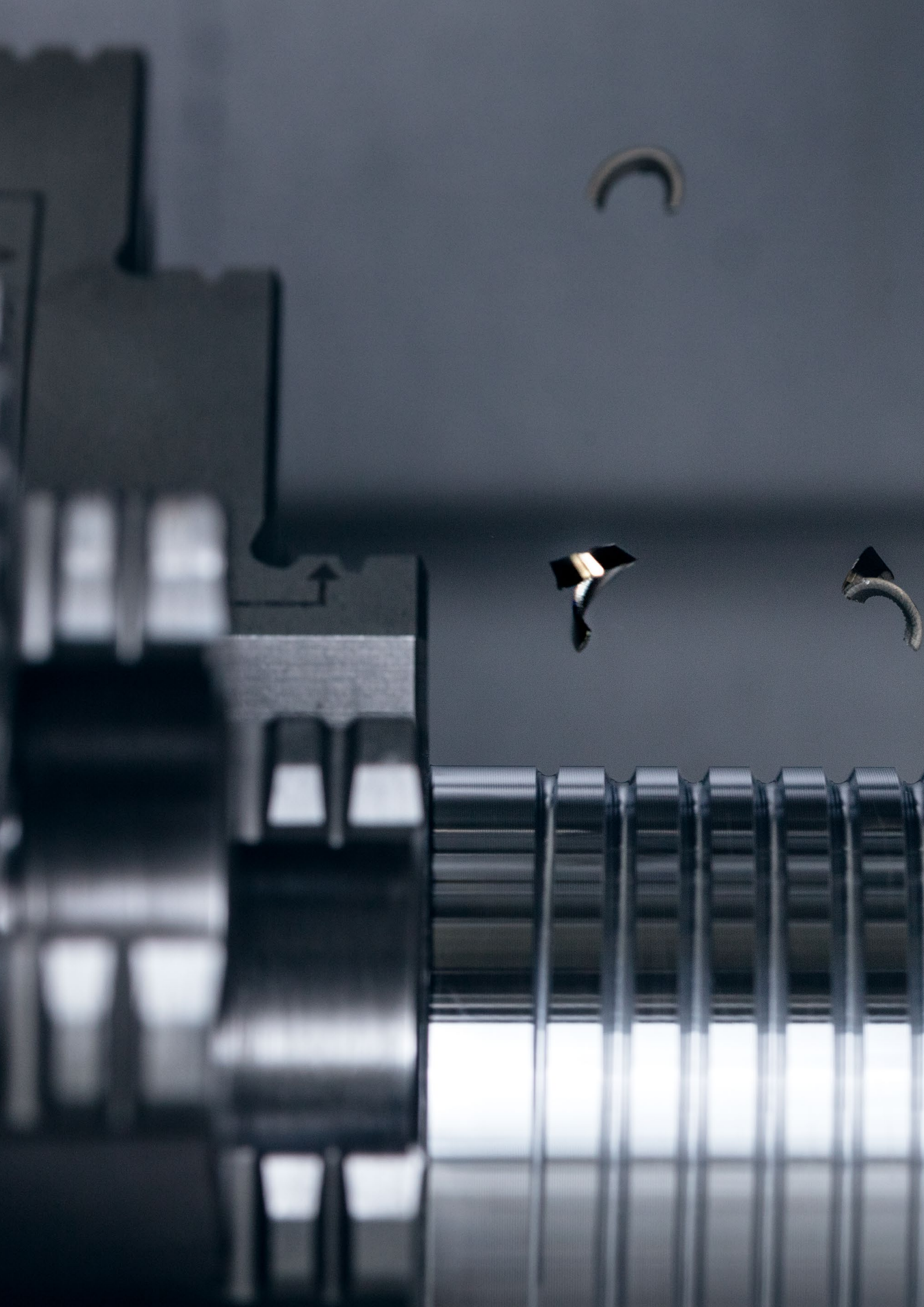
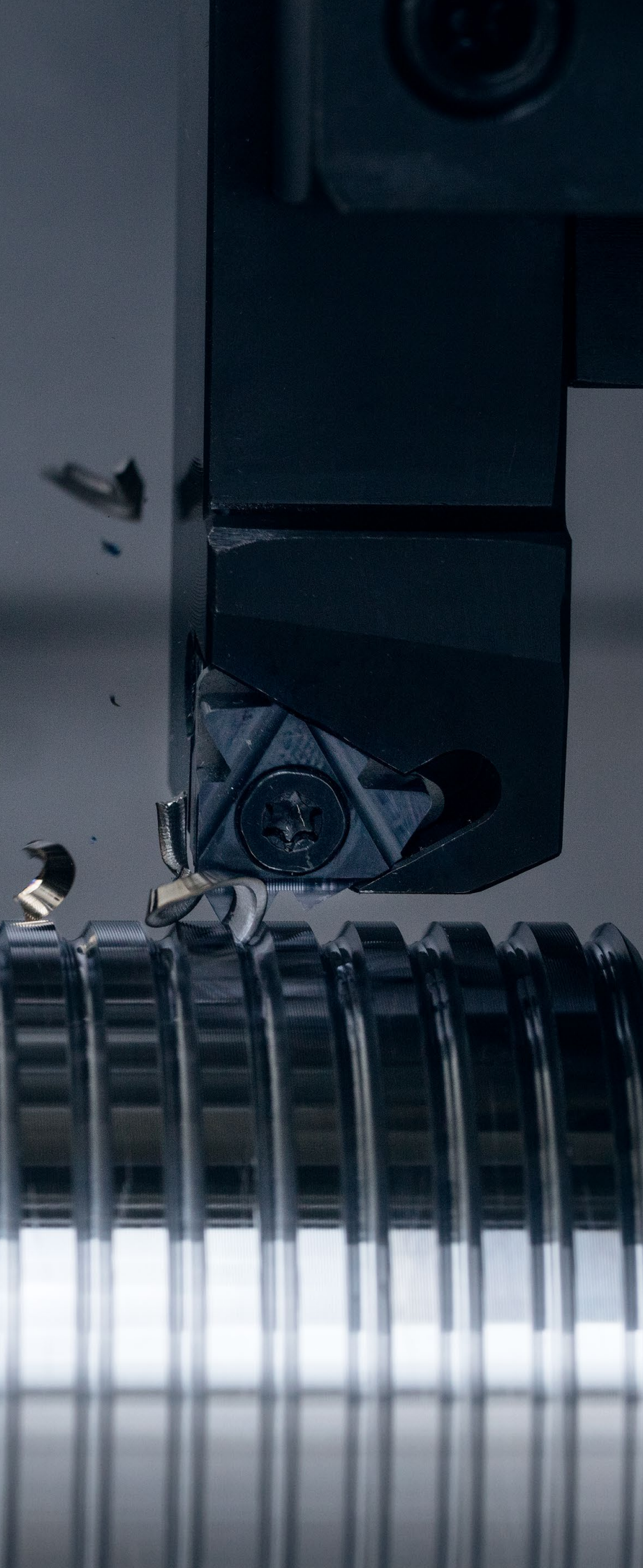






Solid drilling and bore machining

- 1 HSS drilling
- 2 Solid carbide drilling
- 3 Indexable insert drilling
- 4 Reaming and Countersinking
- 5 Spindle Tooling

Threading

- 6 Taps and thread formers
- 7 Circular and Thread Milling
- 8 Thread turning

Turning

- 9 Turning Tools
- 10 Multifunctional Tools – EcoCut and FreeTurn
- 11 Grooving Tools
- 12 Miniature turning tools

Milling

- 13 HSS Milling Cutters
- 14 Solid Carbide milling cutters
- 15 Milling tools with indexable inserts

Clamping technology

- 16 Adaptors and Accessories
- 17 Workpiece clamping

- 18 Material examples

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Product programme	6–42
Shims	43
Technical Information	
Cutting Data	44+45
Thread turning methods	46
Pitch angle	47
Designation Key	48+49
Troubleshooting	50
Grade description and profile explanation	51

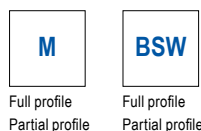
WNT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

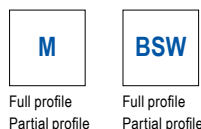
Toolfinder

TC threading system (external thread)



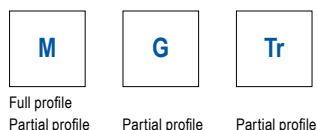
→ Chapter 11 – Grooving tools

TC threading system (internal thread)



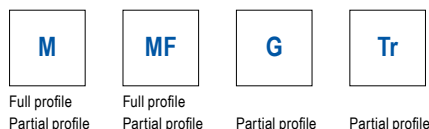
→ Chapter 11 – Grooving tools

MiniCut



→ Chapter 12 – Miniature turning tools

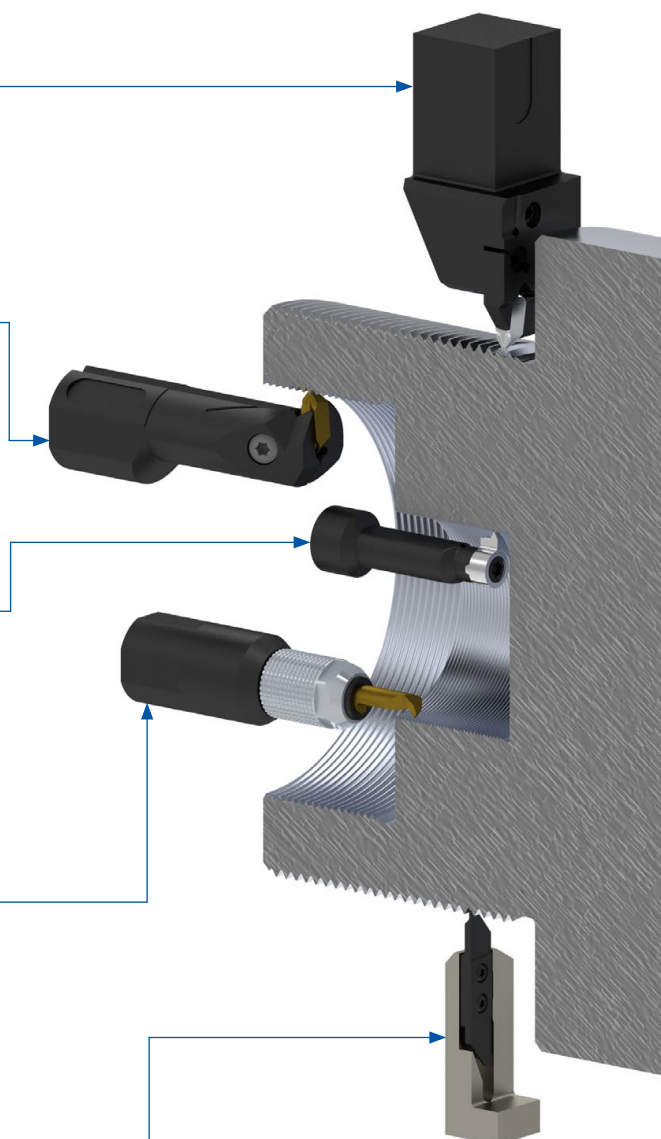
UltraMini



→ Chapter 12 – Miniature turning tools

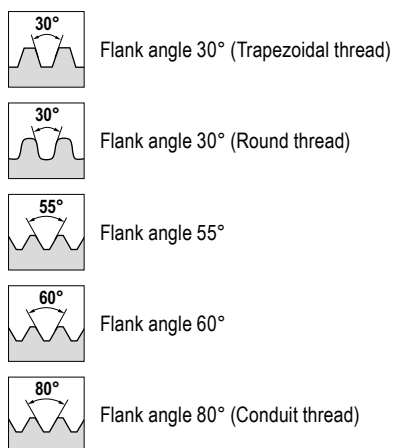
VertiClamp

→ Sliding head tooling catalogue



Symbol explanation

Flank angle



- TP / TPI = Pitch
 NT = Number of flutes
 ● = Main Application
 ○ = Extended application

Thread

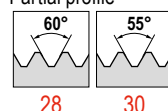
M	ISO metric coarse thread DIN 13	UNEF	American unified thread (extra fine) BS 1580 (ASME B 1.1)
MF	ISO Metric fine thread DIN 13	NPT	American pipe thread ANSI/ASME B 1.20.3
BSW	British Whitworth thread BS 84	Tr	Trapezoidal thread DIN 103
UN	American unified thread BS 1580 (ASME B 1.1)	Rd	Round Thread DIN 405
UNC	American unified thread (coarse) BS 1580 (ASME B 1.1)	Pg	Conduit Threads DIN 40430
UNF	American unified thread (fine) BS 1580 (ASME B 1.1)		

Standard external thread turning

Full profile

M	BSW	UN	UNC	UNF	UNEF	NPT	Tr	Rd	Pg
6+7	11+12	15+16	15+16	15+16	15+16	19	21	24	26

Partial profile



Multi-cutting edge



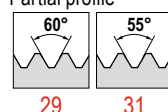
Suitable holders can be found on → page 32+33

Standard internal thread turning

Full profile

M	BSW	UN	UNC	UNF	UNEF	NPT	Tr	Rd	Pg
8+9	13+14	17+18	17+18	17+18	17+18	20	22	25	27

Partial profile



Suitable holders can be found on → page 34–36

Standard internal threading with our new exchangeable head system

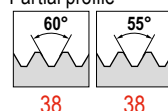
→ Chapter 9 – Turning Tools

Mini 06

Full profile

M	BSW
37	37

Partial profile

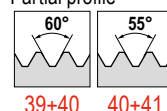


Mini 08

Full profile

M
39

Partial profile



Suitable holders can be found on
→ page 42

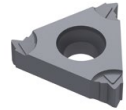
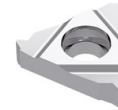
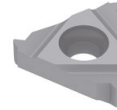
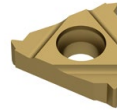
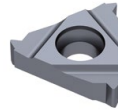
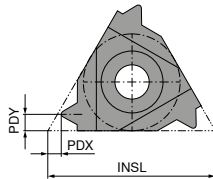


Information on the different thread profiles can be found on → Page 51.

Right hand external thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



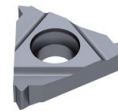
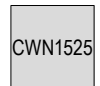
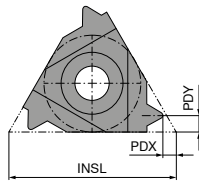
Designation	TP mm	INSL mm	PDX mm	PDY mm	ER				
					71 220 ...	71 220 ...	71 220 ...	71 220 ...	71 220 ...
11 ER 0,35	0,35	11	0,8	0,4	204				
11 ER 0,4	0,40	11	0,7	0,4	206				
11 ER 0,45	0,45	11	0,7	0,4	208				
11 ER 0,5	0,50	11	0,6	0,6	209				
11 ER 0,6	0,60	11	0,6	0,6	210				
11 ER 0,7	0,70	11	0,6	0,6	211				
11 ER 0,75	0,75	11	0,6	0,6	212				
11 ER 0,8	0,80	11	0,6	0,6	213				
11 ER 1,0	1,00	11	0,7	0,7	214				
11 ER 1,25	1,25	11	0,8	0,9	216				
11 ER 1,5	1,50	11	0,8	1,0	218				
11 ER 1,75	1,75	11	0,8	1,1	220				
16 ER 0,35	0,35	16	0,8	0,4	234		734	634	
16 ER 0,4	0,40	16	0,7	0,4	236		736	636	
16 ER 0,45	0,45	16	0,7	0,4	238			638	
16 ER 0,5	0,50	16	0,6	0,6	240	140	740	640	940
16 ER 0,7	0,70	16	0,6	0,6	241	141	741	641	
16 ER 0,75	0,75	16	0,6	0,6	242	142	742	642	942
16 ER 0,8	0,80	16	0,6	0,6	243	143	743	643	943
16 ER 1,0	1,00	16	0,7	0,7	244	144	744	644	944
16 ER 1,25	1,25	16	0,8	0,9	246	146	746	646	946
16 ER 1,5	1,50	16	0,8	1,0	248	148	748	648	948
16 ER 1,75	1,75	16	0,9	1,2	250	150	750	650	
16 ER 2,0	2,00	16	1,0	1,3	252	152	752	652	952
16 ER 2,5	2,50	16	1,1	1,5	254	154	754	654	954
16 ER 3,0	3,00	16	1,2	1,6	256	156	756	656	956
22 ER 3,5	3,50	22	1,6	2,3	270	170	770		
22 ER 4,0	4,00	22	1,6	2,3	272	172	772		
22 ER 4,5	4,50	22	1,7	2,4	274	174	774		
22 ER 5,0	5,00	22	1,7	2,5	276	176	776		
22 ER 5,5	5,50	22	1,7	2,6		178			
22 ER 5,5	5,50	22	1,9	2,7	278				
22 EN 5,5	5,50	22	2,3	11,0	282 ¹⁾				
22 ER 6,0	6,00	22	1,9	2,7		180	780		
22 ER 6,0	6,00	22	2,0	2,9	280				
22 EN 6,0	6,00	22	2,6	11,0	284 ¹⁾				
P					●	●	○	●	●
M					●	○	●	○	●
K					●	●	○	●	●
N						●	○	●	
S					○		○	○	●
H					○		○		○
O						○			

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand external thread turning insert

▲ Full profile



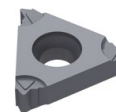
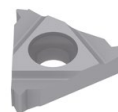
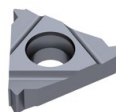
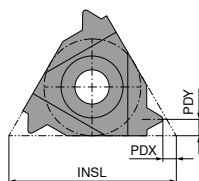
Designation	TP mm	INSL mm	PDX mm	PDY mm	EL	
					71 222 ...	71 222 ...
11 EL 0,35	0,35	11	0,8	0,4	204	
11 EL 0,4	0,40	11	0,7	0,4	206	
11 EL 0,45	0,45	11	0,7	0,4	208	
11 EL 0,5	0,50	11	0,6	0,6	209	
11 EL 0,6	0,60	11	0,6	0,6	210	
11 EL 0,7	0,70	11	0,6	0,6	211	
11 EL 0,75	0,75	11	0,6	0,6	212	
11 EL 0,8	0,80	11	0,6	0,6	213	
11 EL 1,0	1,00	11	0,7	0,7	214	
11 EL 1,25	1,25	11	0,8	0,9	216	
11 EL 1,5	1,50	11	0,8	1,0	218	
11 EL 1,75	1,75	11	0,8	1,1	220	
16 EL 0,35	0,35	16	0,8	0,4	234	
16 EL 0,4	0,40	16	0,7	0,4	236	
16 EL 0,45	0,45	16	0,7	0,4	238	
16 EL 0,5	0,50	16	0,6	0,6	240	
16 EL 0,7	0,70	16	0,6	0,6	241	
16 EL 0,75	0,75	16	0,6	0,6	242	
16 EL 0,8	0,80	16	0,6	0,6	243	
16 EL 1,0	1,00	16	0,7	0,7	244	144
16 EL 1,25	1,25	16	0,8	0,9	246	146
16 EL 1,5	1,50	16	0,8	1,0	248	148
16 EL 1,75	1,75	16	0,9	1,2	250	
16 EL 2,0	2,00	16	1,0	1,3	252	152
16 EL 2,5	2,50	16	1,1	1,5	254	
16 EL 3,0	3,00	16	1,2	1,6	256	156
22 EL 3,5	3,50	22	1,6	2,3	270	
22 EL 4,0	4,00	22	1,6	2,3	272	
22 EL 4,5	4,50	22	1,7	2,4	274	
22 EL 5,0	5,00	22	1,7	2,5	276	
22 EL 5,5	5,50	22	1,9	2,7	278	
22 EL 6,0	6,00	22	2,0	2,9	280	
P					●	●
M					●	○
K					●	●
N						●
S					○	
H					○	
O						○

→ v_c Page 45

Right hand internal thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



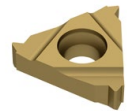
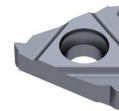
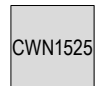
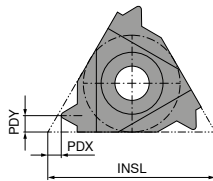
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR				
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11 IR 0,35	0,35	11	0,8	0,3	204				
11 IR 0,4	0,40	11	0,8	0,4	206				
11 IR 0,45	0,45	11	0,8	0,4	208				
11 IR 0,5	0,50	11	0,6	0,6	210				
11 IR 0,7	0,70	11	0,6	0,6	211				
11 IR 0,75	0,75	11	0,6	0,6	212				
11 IR 0,8	0,80	11	0,6	0,6	213		713		912
11 IR 1,0	1,00	11	0,6	0,6					914
11 IR 1,0	1,00	11	0,6	0,7	214	114	714		
11 IR 1,25	1,25	11	0,8	0,9	216				
11 IR 1,5	1,50	11	0,8	0,9					918
11 IR 1,5	1,50	11	0,8	1,0	218	118	718		
11 IR 1,75	1,75	11	0,9	1,1	220				
11 IR 2,0	2,00	11	0,8	0,9		122	722		
11 IR 2,0	2,00	11	0,9	1,1	222				
11 IR 2,5	2,50	11	0,8	1,2		124	724		
11 IR 2,5	2,50	11	0,9	1,1	224				
16 IR 0,35	0,35	16	0,8	0,4	234			634	
16 IR 0,4	0,40	16	0,7	0,4	236			636	
16 IR 0,45	0,45	16	0,7	0,4	238			638	
16 IR 0,5	0,50	16	0,6	0,6	240			640	
16 IR 0,7	0,70	16	0,6	0,6	241			641	
16 IR 0,75	0,75	16	0,6	0,6	242	142	742	642	
16 IR 0,8	0,80	16	0,6	0,6	243			643	
16 IR 1,0	1,00	16	0,6	0,7		144	744		944
16 IR 1,0	1,00	16	0,7	0,7	244			644	
16 IR 1,25	1,25	16	0,8	0,9	246		746	646	946
16 IR 1,5	1,50	16	0,8	1,0	248	148	748	648	948
16 IR 1,75	1,75	16	0,9	1,2	250		750	650	
16 IR 2,0	2,00	16	1,0	1,3	252	152	752	652	952
16 IR 2,5	2,50	16	1,1	1,5	254	154	754	654	954
16 IR 3,0	3,00	16	1,1	1,5	256	156	756	656	956
22 IR 3,5	3,50	22	1,6	2,3	270	170	770		
22 IR 4,0	4,00	22	1,6	2,3	272	172	772		
22 IR 4,5	4,50	22	1,6	2,4		174	774		
22 IR 4,5	4,50	22	1,7	2,4	274				
22 IR 5,0	5,00	22	1,6	2,3		176			
22 IR 5,0	5,00	22	1,7	2,5	276				
22 IR 5,5	5,50	22	1,6	2,3		178			
22 IR 5,5	5,50	22	1,9	2,7	278				
22 IN 5,5	5,50	22	2,3	11,0	282 ¹⁾				
22 IR 6,0	6,00	22	1,6	2,4		180			
22 IR 6,0	6,00	22	2,0	2,9	280				
22 IN 6,0	6,00	22	2,6	11,0	284 ¹⁾				
P					●	●	○		●
M					●	○	●	○	●
K					●	●	○	●	●
N						●	○	●	
S					○		○	○	●
H					○		○		○
O						○			

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand internal thread turning insert

▲ Full profile



Designation	TP mm	INSL mm	PDX mm	PDY mm	IL	
					71 226 ...	71 226 ...
11 IL 0,35	0,35	11	0,8	0,3	204	
11 IL 0,4	0,40	11	0,8	0,4	206	
11 IL 0,45	0,45	11	0,8	0,4	208	
11 IL 0,5	0,50	11	0,6	0,6	210	
11 IL 0,7	0,70	11	0,6	0,6	211	
11 IL 0,75	0,75	11	0,6	0,6	212	
11 IL 0,8	0,80	11	0,6	0,6	213	
11 IL 1,0	1,00	11	0,6	0,7	214	
11 IL 1,25	1,25	11	0,8	0,9	216	
11 IL 1,5	1,50	11	0,8	1,0	218	
11 IL 1,75	1,75	11	0,9	1,1	220	
11 IL 2,0	2,00	11	0,9	1,1	222	
11 IL 2,5	2,50	11	0,9	1,1	224	
16 IL 0,35	0,35	16	0,8	0,4	234	
16 IL 0,4	0,40	16	0,7	0,4	236	
16 IL 0,45	0,45	16	0,7	0,4	238	
16 IL 0,5	0,50	16	0,6	0,6	240	
16 IL 0,7	0,70	16	0,6	0,6	241	
16 IL 0,75	0,75	16	0,6	0,6	242	
16 IL 0,8	0,80	16	0,6	0,6	243	
16 IL 1,0	1,00	16	0,6	0,7		144
16 IL 1,0	1,00	16	0,7	0,7	244	
16 IL 1,25	1,25	16	0,8	0,9	246	
16 IL 1,5	1,50	16	0,8	1,0	248	148
16 IL 1,75	1,75	16	0,9	1,2	250	
16 IL 2,0	2,00	16	1,0	1,3	252	152
16 IL 2,5	2,50	16	1,1	1,5	254	
16 IL 3,0	3,00	16	1,2	1,6	256	
22 IL 3,5	3,50	22	1,6	2,3	270	
22 IL 4,0	4,00	22	1,6	2,3	272	
22 IL 4,5	4,50	22	1,7	2,4	274	
22 IL 5,0	5,00	22	1,7	2,5	276	
22 IL 5,5	5,50	22	1,9	2,7	278	
22 IL 6,0	6,00	22	2,0	2,9	280	
P					●	●
M					●	○
K					●	●
N						●
S					○	
H					○	
O						○

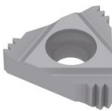
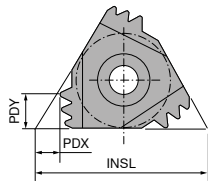
→ v_c Page 45

Right hand external thread turning insert

▲ Multi edge insert



HCN2525



ER
71 221 ...
700
702

Designation	TP mm	INSL mm	PDX mm	PDY mm	NT
16 ER 1,0 3M	1,0	16	1,7	2,5	3
16 ER 1,5 2M	1,5	16	1,5	2,3	2

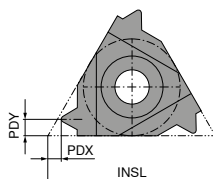
P	○
M	●
K	○
N	○
S	○
H	○
O	

→ v_c Page 45

Right hand external thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	ER 71 228 ...	ER 71 228 ...	ER 71 228 ...	ER 71 228 ...	ER 71 228 ...
11 ER 72	72,0	11	0,7	0,4	202				
11 ER 60	60,0	11	0,7	0,4	204				
11 ER 56	56,0	11	0,7	0,4	206				
11 ER 48	48,0	11	0,6	0,6	208				
11 ER 40	40,0	11	0,6	0,6	210				
11 ER 36	36,0	11	0,6	0,6	212				
11 ER 32	32,0	11	0,6	0,6	214				
11 ER 28	28,0	11	0,6	0,7	216				
11 ER 26	26,0	11	0,7	0,8	218				
11 ER 24	24,0	11	0,7	0,8	220				
11 ER 22	22,0	11	0,8	0,9	222				
11 ER 20	20,0	11	0,8	0,9	224				
11 ER 19	19,0	11	0,8	1,0	226				
11 ER 18	18,0	11	0,8	1,0	228				
11 ER 16	16,0	11	0,9	1,1	230				
11 ER 14	14,0	11	0,9	1,1	232				
16 ER 40	40,0	16	0,6	0,6	240			640	
16 ER 36	36,0	16	0,6	0,6	242			642	
16 ER 32	32,0	16	0,6	0,6	244			644	
16 ER 28	28,0	16	0,6	0,7	246	146	746	646	
16 ER 26	26,0	16	0,7	0,7			748		
16 ER 26	26,0	16	0,7	0,8	248			648	
16 ER 24	24,0	16	0,7	0,8	250			650	
16 ER 22	22,0	16	0,8	0,9	252			652	
16 ER 20	20,0	16	0,8	0,9	254		754	654	
16 ER 19	19,0	16	0,8	1,0	256	156	756	656	956
16 ER 18	18,0	16	0,8	1,0	258			658	
16 ER 16	16,0	16	0,9	1,1	260	160	760	660	
16 ER 14	14,0	16	1,0	1,2	262	162	762	662	962
16 ER 12	12,0	16	1,1	1,4	264	164	764	664	
16 ER 11	11,0	16	1,1	1,5	266	166	766	666	966
16 ER 10	10,0	16	1,1	1,5	268			668	
16 ER 9	9,0	16	1,2	1,7	270			670	
16 ER 8	8,0	16	1,2	1,5	272			672	
22 ER 7	7,0	22	1,6	2,3	280				
22 ER 6	6,0	22	1,6	2,3	282				
22 ER 5	5,0	22	1,7	2,4	284				
22 EN 4,5	4,5	22	2,3	11,0	290 ¹⁾				
22 EN 4	4,0	22	1,8	11,0	292 ¹⁾				
P					●	●	○		●
M					●	○	●	○	●
K					●	●	○	●	●
N						●	○	●	
S					○		○	○	●
H					○		○		○
O						○			

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

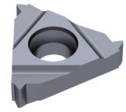
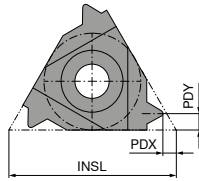
→ v_c Page 45

Left hand external thread turning insert

▲ Full profile



CCN20



EL

71 229 ...

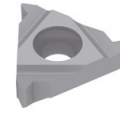
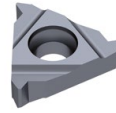
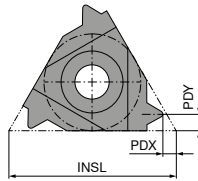
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 EL 72	72	11	0,7	0,4	202
11 EL 60	60	11	0,7	0,4	204
11 EL 56	56	11	0,7	0,4	206
11 EL 48	48	11	0,6	0,6	208
11 EL 40	40	11	0,6	0,6	210
11 EL 36	36	11	0,6	0,6	212
11 EL 32	32	11	0,6	0,6	214
11 EL 28	28	11	0,6	0,7	216
11 EL 26	26	11	0,7	0,8	218
11 EL 24	24	11	0,7	0,8	220
11 EL 22	22	11	0,8	0,9	222
11 EL 20	20	11	0,8	0,9	224
11 EL 19	19	11	0,8	1,0	226
11 EL 18	18	11	0,8	1,0	228
11 EL 16	16	11	0,9	1,1	230
11 EL 14	14	11	0,9	1,1	232
16 EL 40	40	16	0,6	0,6	240
16 EL 36	36	16	0,6	0,6	242
16 EL 32	32	16	0,6	0,6	244
16 EL 28	28	16	0,6	0,7	246
16 EL 26	26	16	0,7	0,8	248
16 EL 24	24	16	0,7	0,8	250
16 EL 22	22	16	0,8	0,9	252
16 EL 20	20	16	0,8	0,9	254
16 EL 19	19	16	0,8	1,0	256
16 EL 18	18	16	0,8	1,0	258
16 EL 16	16	16	0,9	1,1	260
16 EL 14	14	16	1,0	1,2	262
16 EL 12	12	16	1,1	1,4	264
16 EL 11	11	16	1,1	1,5	266
16 EL 10	10	16	1,1	1,5	268
16 EL 9	9	16	1,2	1,7	270
16 EL 8	8	16	1,2	1,5	272
22 EL 7	7	22	1,6	2,3	280
22 EL 6	6	22	1,6	2,3	282
22 EL 5	5	22	1,7	2,4	284
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand internal thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR			
					71 230 ...	71 230 ...	71 230 ...	71 230 ...
11 IR 48	48	11	0,6	0,6	206			
11 IR 40	40	11	0,6	0,6	208			
11 IR 36	36	11	0,6	0,6	210			
11 IR 32	32	11	0,6	0,6	212			
11 IR 28	28	11	0,6	0,7	214			
11 IR 26	26	11	0,7	0,8	216			
11 IR 24	24	11	0,7	0,8	218			
11 IR 22	22	11	0,8	0,9	220			
11 IR 20	20	11	0,8	0,9	222			
11 IR 19	19	11	0,8	1,0	224			
11 IR 19	19	11	0,8	0,9		124		
11 IR 18	18	11	0,8	1,0	226			
11 IR 16	16	11	0,9	1,1	228			
11 IR 14	14	11	0,9	1,1	230			
11 IR 14	14	11	0,8	0,9		130		
							724	
								924
16 IR 40	40	16	0,6	0,6	240			
16 IR 36	36	16	0,6	0,6	242			
16 IR 32	32	16	0,6	0,6	244			
16 IR 28	28	16	0,6	0,7	246			
16 IR 26	26	16	0,7	0,8	248			
16 IR 24	24	16	0,7	0,8	250			
16 IR 22	22	16	0,8	0,9	252			
16 IR 20	20	16	0,8	0,9	254			
16 IR 19	19	16	0,8	1,0	256			
16 IR 18	18	16	0,8	1,0	258			
16 IR 16	16	16	0,9	1,1	260			
16 IR 14	14	16	1,0	1,2	262		760	
16 IR 12	12	16	1,1	1,4	264		762	
16 IR 11	11	16	1,1	1,5	266		766	
16 IR 10	10	16	1,1	1,5	268			
16 IR 9	9	16	1,2	1,7	270			
16 IR 8	8	16	1,2	1,5	272			
						162		962
						166		966
22 IR 7	7	22	1,6	2,3	280			
22 IR 6	6	22	1,6	2,3	282			
22 IR 5	5	22	1,7	2,4	284			
P					●	●	○	●
M					●	○	●	●
K					●	●	○	●
N						●	○	
S					○		○	●
H					○		○	○
O						○		

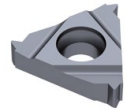
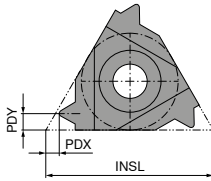
→ v_c Page 45

Left hand internal thread turning insert

▲ Full profile



CCN20

IL
71 231 ...

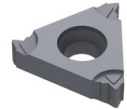
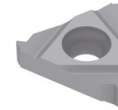
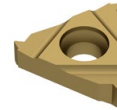
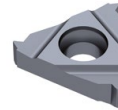
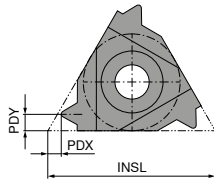
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 IL 48	48	11	0,6	0,6	206
11 IL 40	40	11	0,6	0,6	208
11 IL 36	36	11	0,6	0,6	210
11 IL 32	32	11	0,6	0,6	212
11 IL 28	28	11	0,6	0,7	214
11 IL 26	26	11	0,7	0,8	216
11 IL 24	24	11	0,7	0,8	218
11 IL 22	22	11	0,8	0,9	220
11 IL 20	20	11	0,8	0,9	222
11 IL 19	19	11	0,8	1,0	224
11 IL 18	18	11	0,8	1,0	226
11 IL 16	16	11	0,9	1,1	228
11 IL 14	14	11	0,9	1,1	230
16 IL 40	40	16	0,6	0,6	240
16 IL 36	36	16	0,6	0,6	242
16 IL 32	32	16	0,6	0,6	244
16 IL 28	28	16	0,6	0,7	246
16 IL 26	26	16	0,7	0,8	248
16 IL 24	24	16	0,7	0,8	250
16 IL 22	22	16	0,8	0,9	252
16 IL 20	20	16	0,8	0,9	254
16 IL 19	19	16	0,8	1,0	256
16 IL 18	18	16	0,8	1,0	258
16 IL 16	16	16	0,9	1,1	260
16 IL 14	14	16	1,0	1,2	262
16 IL 12	12	16	1,1	1,4	264
16 IL 11	11	16	1,1	1,5	266
16 IL 10	10	16	1,1	1,5	268
16 IL 9	9	16	1,2	1,7	270
16 IL 8	8	16	1,2	1,5	272
22 IL 7	7	22	1,6	2,3	280
22 IL 6	6	22	1,6	2,3	282
22 IL 5	5	22	1,7	2,4	284
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand external thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	ER 71 264 ...	ER 71 264 ...	ER 71 264 ...	ER 71 264 ...
11 ER 72	72,0	11	0,8	0,4	202			
11 ER 64	64,0	11	0,8	0,4	204			
11 ER 56	56,0	11	0,7	0,4	206			
11 ER 48	48,0	11	0,6	0,6	208			
11 ER 44	44,0	11	0,6	0,6	210			
11 ER 40	40,0	11	0,6	0,6	212			
11 ER 36	36,0	11	0,6	0,6	214			
11 ER 32	32,0	11	0,6	0,6	216			
11 ER 28	28,0	11	0,6	0,7	218			
11 ER 27	27,0	11	0,7	0,8	220			
11 ER 24	24,0	11	0,7	0,8	222			
11 ER 20	20,0	11	0,8	0,9	224			
11 ER 18	18,0	11	0,8	1,0	226			
11 ER 16	16,0	11	0,9	1,1	228			
11 ER 14	14,0	11	0,9	1,1	230			
16 ER 72	72,0	16	0,8	0,4	232			
16 ER 64	64,0	16	0,8	0,4	234			
16 ER 56	56,0	16	0,7	0,4	236			
16 ER 48	48,0	16	0,6	0,6	238			
16 ER 44	44,0	16	0,6	0,6	240			
16 ER 40	40,0	16	0,6	0,6	242			
16 ER 36	36,0	16	0,6	0,6	244			
16 ER 32	32,0	16	0,6	0,6	246			
16 ER 28	28,0	16	0,6	0,7	248		746	
16 ER 27	27,0	16	0,7	0,8	250		748	
16 ER 24	24,0	16	0,7	0,8	252			
16 ER 20	20,0	16	0,8	0,9	254	152	752	
16 ER 18	18,0	16	0,8	1,0	256	154	754	954
16 ER 16	16,0	16	0,9	1,1	258	156	756	
16 ER 14	14,0	16	1,0	1,2	259	158	758	958
16 ER 13	13,0	16	1,0	1,3	260	160	760	
16 ER 12	12,0	16	1,1	1,4	262			
16 ER 11,5	11,5	16	1,1	1,5	264	164	764	
16 ER 11	11,0	16	1,1	1,5	266			
16 ER 10	10,0	16	1,1	1,5	268	168		
16 ER 9	9,0	16	1,2	1,7	270			
16 ER 8	8,0	16	1,2	1,6	272			
16 ER 8	8,0	16	1,1	1,1	274			
16 ER 8	8,0	16	1,1	1,5		174		974
22 ER 7	7,0	22	1,6	2,3	276			
22 ER 6	6,0	22	1,6	2,3	278			
22 ER 5	5,0	22	1,7	2,5	280			
22 EN 4,5	4,5	22	2,0	11,0	282 ¹⁾			
22 EN 4	4,0	22	2,0	11,0	284 ¹⁾			
P					●	●	○	●
M					●	○	●	●
K					●	●	○	●
N						●	○	
S					○		○	●
H					○		○	○
O						○		

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

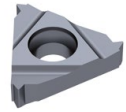
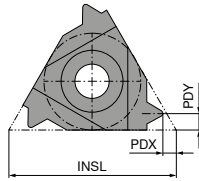
→ v_c Page 45

Left hand external thread turning insert

▲ Full profile



CCN20



EL

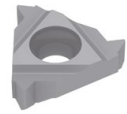
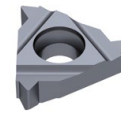
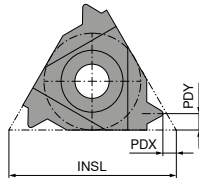
71 266 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 EL 72	72,0	11	0,8	0,4	202
11 EL 64	64,0	11	0,8	0,4	204
11 EL 56	56,0	11	0,7	0,4	206
11 EL 48	48,0	11	0,6	0,6	208
11 EL 44	44,0	11	0,6	0,6	210
11 EL 40	40,0	11	0,6	0,6	212
11 EL 36	36,0	11	0,6	0,6	214
11 EL 32	32,0	11	0,6	0,6	216
11 EL 28	28,0	11	0,6	0,7	218
11 EL 27	27,0	11	0,7	0,8	220
11 EL 24	24,0	11	0,7	0,8	222
11 EL 20	20,0	11	0,8	0,9	224
11 EL 18	18,0	11	0,8	1,0	226
11 EL 16	16,0	11	0,9	1,1	228
11 EL 14	14,0	11	0,9	1,1	230
16 EL 72	72,0	16	0,8	0,4	232
16 EL 64	64,0	16	0,8	0,4	234
16 EL 56	56,0	16	0,7	0,4	236
16 EL 48	48,0	16	0,6	0,6	238
16 EL 44	44,0	16	0,6	0,6	240
16 EL 40	40,0	16	0,6	0,6	242
16 EL 36	36,0	16	0,6	0,6	244
16 EL 32	32,0	16	0,6	0,6	246
16 EL 28	28,0	16	0,6	0,7	248
16 EL 27	27,0	16	0,7	0,8	250
16 EL 24	24,0	16	0,7	0,8	252
16 EL 20	20,0	16	0,8	0,9	254
16 EL 18	18,0	16	0,8	1,0	256
16 EL 16	16,0	16	0,9	1,1	258
16 EL 14	14,0	16	1,0	1,2	260
16 EL 13	13,0	16	1,0	1,3	262
16 EL 12	12,0	16	1,1	1,4	264
16 EL 11,5	11,5	16	1,1	1,5	266
16 EL 11	11,0	16	1,1	1,5	268
16 EL 10	10,0	16	1,1	1,5	270
16 EL 9	9,0	16	1,2	1,7	272
16 EL 8	8,0	16	1,2	1,6	274
22 EL 7	7,0	22	1,6	2,3	276
22 EL 6	6,0	22	1,6	2,3	278
22 EL 5	5,0	22	1,7	2,5	280
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand internal thread turning insert

▲ Full profile



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR	
					71 268 ...	71 268 ...
11 IR 72	72,0	11	0,8	0,3	202	
11 IR 64	64,0	11	0,8	0,4	204	
11 IR 56	56,0	11	0,7	0,4	206	
11 IR 48	48,0	11	0,6	0,6	208	
11 IR 44	44,0	11	0,6	0,6	210	
11 IR 40	40,0	11	0,6	0,6	212	
11 IR 36	36,0	11	0,6	0,6	214	
11 IR 32	32,0	11	0,6	0,6	216	
11 IR 28	28,0	11	0,6	0,7	218	
11 IR 27	27,0	11	0,7	0,8	220	
11 IR 24	24,0	11	0,7	0,8	222	
11 IR 20	20,0	11	0,8	0,9	224	
11 IR 18	18,0	11	0,8	1,0	226	
11 IR 16	16,0	11	0,9	1,1	228	
11 IR 14	14,0	11	1,0	1,1	230	
16 IR 72	72,0	16	0,8	0,3	232	
16 IR 64	64,0	16	0,8	0,4	234	
16 IR 56	56,0	16	0,7	0,4	236	
16 IR 48	48,0	16	0,6	0,6	238	
16 IR 44	44,0	16	0,6	0,6	240	
16 IR 40	40,0	16	0,6	0,6	242	
16 IR 36	36,0	16	0,6	0,6	244	
16 IR 32	32,0	16	0,6	0,6	246	
16 IR 28	28,0	16	0,6	0,7	248	
16 IR 27	27,0	16	0,7	0,8	250	
16 IR 24	24,0	16	0,7	0,8	252	
16 IR 20	20,0	16	0,8	0,9	254	
16 IR 18	18,0	16	0,8	1,0	256	
16 IR 16	16,0	16	0,9	1,1	258	
16 IR 14	14,0	16	1,0	1,2	260	760
16 IR 13	13,0	16	1,0	1,3	262	
16 IR 12	12,0	16	1,1	1,4	264	764
16 IR 11,5	11,5	16	1,1	1,5	266	
16 IR 11	11,0	16	1,1	1,5	268	
16 IR 10	10,0	16	1,1	1,5	270	
16 IR 9	9,0	16	1,2	1,7	272	
16 IR 8	8,0	16	1,2	1,6	274	
16 IR 8	8,0	16	1,1	1,5		774
22 IR 7	7,0	22	1,6	2,3	276	776
22 IR 6	6,0	22	1,6	2,3	278	
22 IR 5	5,0	22	1,7	2,5	280	
22 IN 4,5	4,5	22	2,0	11,0	282 ¹⁾	
22 IN 4	4,0	22	2,0	11,0	284 ¹⁾	
P					●	○
M					●	●
K					●	○
N						○
S					○	○
H					○	○
O						

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

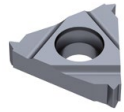
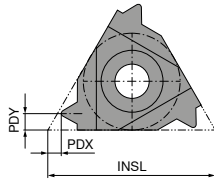
→ v_c Page 45

Left hand internal thread turning insert

▲ Full profile



CCN20

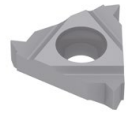
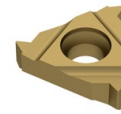
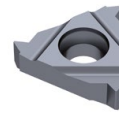
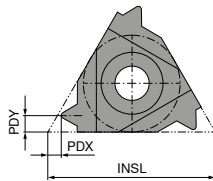
IL
71 270 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 IL 72	72,0	11	0,8	0,3	202
11 IL 64	64,0	11	0,8	0,4	204
11 IL 56	56,0	11	0,7	0,4	206
11 IL 48	48,0	11	0,6	0,6	208
11 IL 44	44,0	11	0,6	0,6	210
11 IL 40	40,0	11	0,6	0,6	212
11 IL 36	36,0	11	0,6	0,6	214
11 IL 32	32,0	11	0,6	0,6	216
11 IL 28	28,0	11	0,6	0,7	218
11 IL 27	27,0	11	0,7	0,8	220
11 IL 24	24,0	11	0,7	0,8	222
11 IL 20	20,0	11	0,8	0,9	224
11 IL 18	18,0	11	0,8	1,0	226
11 IL 16	16,0	11	0,9	1,1	228
11 IL 14	14,0	11	0,9	1,1	230
16 IL 72	72,0	16	0,8	0,3	232
16 IL 64	64,0	16	0,8	0,4	234
16 IL 56	56,0	16	0,7	0,4	236
16 IL 48	48,0	16	0,6	0,6	238
16 IL 44	44,0	16	0,6	0,6	240
16 IL 40	40,0	16	0,6	0,6	242
16 IL 36	36,0	16	0,6	0,6	244
16 IL 32	32,0	16	0,6	0,6	246
16 IL 28	28,0	16	0,6	0,7	248
16 IL 27	27,0	16	0,7	0,8	250
16 IL 24	24,0	16	0,7	0,8	252
16 IL 20	20,0	16	0,8	0,9	254
16 IL 18	18,0	16	0,8	1,0	256
16 IL 16	16,0	16	0,9	1,1	258
16 IL 14	14,0	16	1,0	1,2	260
16 IL 13	13,0	16	1,0	1,3	262
16 IL 12	12,0	16	1,1	1,4	264
16 IL 11,5	11,5	16	1,1	1,5	266
16 IL 11	11,0	16	1,1	1,5	268
16 IL 10	10,0	16	1,1	1,5	270
16 IL 9	9,0	16	1,2	1,7	272
16 IL 8	8,0	16	1,2	1,6	274
22 IL 7	7,0	22	1,6	2,3	276
22 IL 6	6,0	22	1,6	2,3	278
22 IL 5	5,0	22	1,7	2,5	280
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand external thread turning insert

▲ Full profile



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
16 ER 27	27,0	16	0,7	0,8
16 ER 18	18,0	16	0,8	1,0
16 ER 14	14,0	16	0,9	1,2
16 ER 11,5	11,5	16	1,1	1,5
16 ER 8	8,0	16	1,3	1,8

ER	ER	ER
71 256 ...	71 256 ...	71 256 ...
240		
242		
244	144	742
246	146	744
248		746

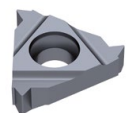
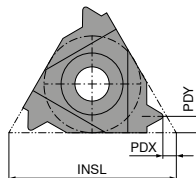
P	●	●	○
M	●	○	●
K	●	●	○
N		●	○
S	○	○	○
H	○		○
O		○	

→ v_c Page 45

8

Left hand external thread turning insert

▲ Full profile



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
16 EL 27	27,0	16	0,7	0,8
16 EL 18	18,0	16	0,8	1,0
16 EL 14	14,0	16	0,9	1,2
16 EL 11,5	11,5	16	1,1	1,5
16 EL 8	8,0	16	1,3	1,8

EL
71 258 ...
240
242
244
246
248

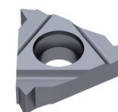
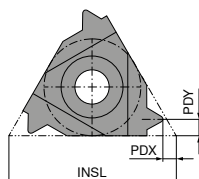
P	●
M	●
K	●
N	
S	○
H	○
O	

→ v_c Page 45

Right hand internal thread turning insert

▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
11 IR 27	27,0	11	0,7	0,8
11 IR 18	18,0	11	0,8	1,0
11 IR 14	14,0	11	0,9	1,1
16 IR 27	27,0	16	0,7	0,8
16 IR 18	18,0	16	0,8	1,0
16 IR 14	14,0	16	0,9	1,2
16 IR 11,5	11,5	16	1,1	1,5
16 IR 8	8,0	16	1,3	1,8

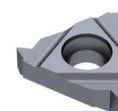
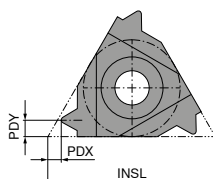
IR	IR
71 260 ...	71 260 ...
210	
212	
214	
240	
242	
244	944
246	946
248	

P	●	●
M	●	●
K	●	●
N		
S	○	●
H	○	○
O		

→ v_c Page 45

Left hand internal thread turning insert

▲ Full profile



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
11 IL 27	27,0	11	0,7	0,8
11 IL 18	18,0	11	0,8	1,0
11 IL 14	14,0	11	0,9	1,1
16 IL 27	27,0	16	0,7	0,8
16 IL 18	18,0	16	0,8	1,0
16 IL 14	14,0	16	0,9	1,2
16 IL 11,5	11,5	16	1,1	1,5
16 IL 8	8,0	16	1,3	1,8

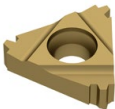
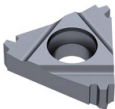
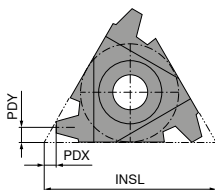
IL
71 262 ...
210
212
214
240
242
244
246
248

P	●
M	●
K	●
N	
S	○
H	○
O	

→ v_c Page 45

Right hand external thread turning insert

- ▲ Full profile
- ▲ Trapezoidal thread DIN 103



Designation	TP mm	INSL mm	PDX mm	PDY mm	ER		ER	
					71 232 ...		71 232 ...	
16 ER 1,5	1,5	16	1,0	1,1	240			
16 ER 2,0	2,0	16	1,1	1,3	242			
16 ER 2,0	2,0	16	1,0	1,3			142	
16 ER 3,0	3,0	16	1,3	1,5	244		144	
22 ER 4,0	4,0	22	1,8	1,9			170	
22 ER 4,0	4,0	22	1,7	1,9	270			
22 ER 5,0	5,0	22	2,0	2,4			172	
22 ER 5,0	5,0	22	2,1	2,5	272			
22 ER 6,0	6,0	22	2,3	2,7	274 ¹⁾			
22 EN 6,0	6,0	22	2,0	11,0	276 ²⁾			
22 EN 7,0	7,0	22	2,3	11,0	278 ²⁾			
P					●		●	
M					●		○	
K					●		●	
N							●	
S					○			
H					○			
O							○	

- 1) Requires special holder or an independently modified standard holder
- 2) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

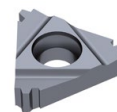
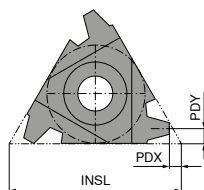
Left hand external thread turning insert

▲ Full profile

▲ Trapezoidal thread DIN 103



CCN20



EL

71 234 ...

Designation	TP mm	INSL mm	PDX mm	PDY mm
16 EL 1,5	1,5	16	1,0	1,1
16 EL 2,0	2,0	16	1,1	1,3
16 EL 3,0	3,0	16	1,3	1,5
22 EL 4,0	4,0	22	1,7	1,9
22 EL 5,0	5,0	22	2,1	2,5
22 EL 6,0	6,0	22	2,3	2,7

240
242
244

270
272
274 ¹⁾

P	●
M	●
K	●
N	●
S	○
H	○
O	○

1) Requires special holder or an independently modified standard holder

→ v_c Page 45

Right hand internal thread turning insert

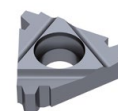
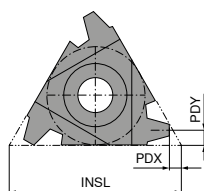
▲ Full profile

▲ Trapezoidal thread DIN 103



CCN20

CWN1525



IR

71 236 ...

IR

71 236 ...

Designation	TP mm	INSL mm	PDX mm	PDY mm
11 IR 1,5	1,5	11	0,815	0,9
16 IR 1,5	1,5	16	1,000	1,1
16 IR 2,0	2,0	16	1,100	1,3
16 IR 3,0	3,0	16	1,300	1,5
22 IR 4,0	4,0	22	1,800	1,9
22 IR 4,0	4,0	22	1,700	1,9
22 IR 5,0	5,0	22	2,000	2,4
22 IR 5,0	5,0	22	2,100	2,5
22 IR 6,0	6,0	22	2,300	2,7
22 IN 6,0	6,0	22	2,000	11,0
22 IN 7,0	7,0	22	2,300	11,0

210
240
242
244

270
272
274 ¹⁾
276 ²⁾
278 ²⁾

144
170
172

P	●	●
M	●	○
K	●	●
N	●	●
S	○	○
H	○	○
O	○	○

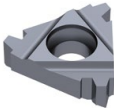
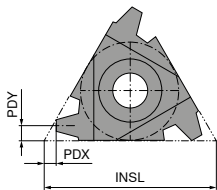
1) Requires special holder or an independently modified standard holder

2) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand internal thread turning insert

▲ Full profile



					IL
					71 238 ...
Designation	TP mm	INSL mm	PDX mm	PDY mm	
11 IL 1,5	1,5	11	0,8	0,9	210
16 IL 1,5	1,5	16	1,0	1,1	240
16 IL 2,0	2,0	16	1,1	1,3	242
16 IL 3,0	3,0	16	1,3	1,5	244
22 IL 4,0	4,0	22	1,7	1,9	270
22 IL 5,0	5,0	22	2,1	2,5	272
22 IL 6,0	6,0	22	2,3	2,7	274 ¹⁾
P					●
M					●
K					●
N					●
S					○
H					○
O					○

1) Requires special holder or an independently modified standard holder

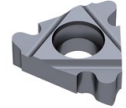
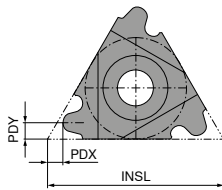
Right hand external thread turning insert

▲ Full profile

▲ Round thread DIN 405



CCN20



ER

71 248 ...

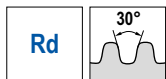
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
16 ER 10	10	16	1,1	1,2	240
16 ER 8	8	16	1,4	1,3	242
16 ER 6	6	16	1,5	1,7	246
22 ER 6	6	22	1,5	1,7	270
22 ER 4	4	22	2,2	2,3	272
P					●
M					●
K					●
N					○
S					○
H					○
O					○

→ v_c Page 45

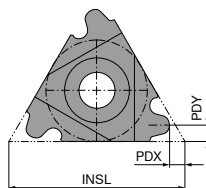
Left hand external thread turning insert

▲ Full profile

▲ Round thread DIN 405



CCN20



EL

71 250 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
16 EL 10	10	16	1,1	1,2	240
16 EL 8	8	16	1,4	1,3	242
16 EL 6	6	16	1,5	1,7	246
22 EL 6	6	22	1,5	1,7	270
22 EL 4	4	22	2,2	2,3	272
P					●
M					●
K					●
N					○
S					○
H					○
O					○

→ v_c Page 45

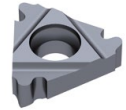
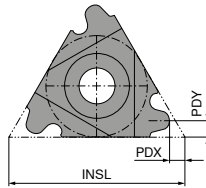
Right hand internal thread turning insert

▲ Full profile

▲ Round thread DIN 405



CCN20

IR
71 252 ...

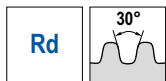
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
16 IR 10	10	16	1,1	1,2	240
16 IR 8	8	16	1,4	1,4	242
16 IR 6	6	16	1,4	1,5	246
22 IR 6	6	22	1,5	1,7	270
22 IR 4	4	22	2,2	2,3	272
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

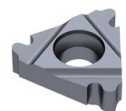
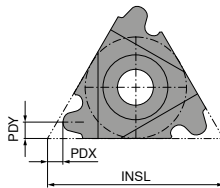
Left hand internal thread turning insert

▲ Full profile

▲ Round thread DIN 405



CCN20

IL
71 254 ...

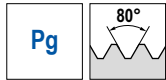
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
16 IL 10	10	16	1,1	1,2	240
16 IL 8	8	16	1,4	1,4	242
16 IL 6	6	16	1,4	1,5	246
22 IL 6	6	22	1,5	1,7	270
22 IL 4	4	22	2,2	2,3	272
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

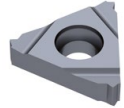
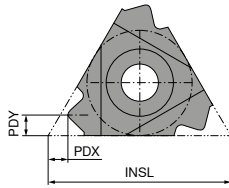
Right hand external thread turning insert

▲ Full profile

▲ Conduit thread DIN 40430



CCN20

ER
71 240 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
16 ER 20	20	16	0,8	0,8
16 ER 18	18	16	0,8	0,9
16 ER 16	16	16	0,8	1,0

240

242

244

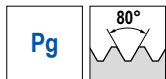
P	●
M	●
K	●
N	
S	○
H	○
O	

→ v_c Page 45

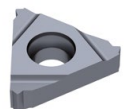
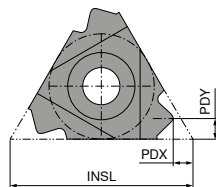
Left hand external thread turning insert

▲ Full profile

▲ Conduit thread DIN 40430



CCN20

EL
71 242 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
16 EL 20	20	16	0,8	0,8
16 EL 18	18	16	0,8	0,9
16 EL 16	16	16	0,8	1,0

240

242

244

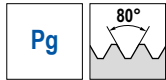
P	●
M	●
K	●
N	
S	○
H	○
O	

→ v_c Page 45

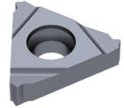
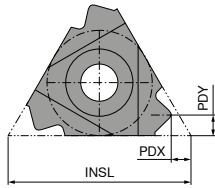
Right hand internal thread turning insert

▲ Full profile

▲ Conduit thread DIN 40430



CCN20

IR
71 244 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 IR 18	18	11	0,8	0,9	238
16 IR 18	18	16	0,8	0,9	242
16 IR 16	16	16	0,8	1,0	244
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

8

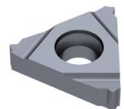
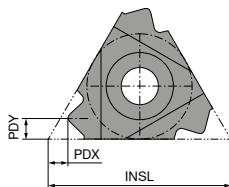
Left hand internal thread turning insert

▲ Full profile

▲ Conduit thread DIN 40430



CCN20

IL
71 246 ...

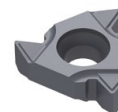
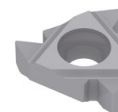
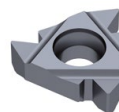
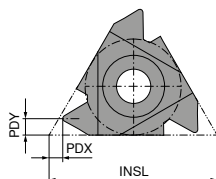
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 IL 18	18	11	0,8	0,9	238
16 IL 18	18	16	0,8	0,9	242
16 IL 16	16	16	0,8	1,0	244
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand external thread turning insert

▲ Partial profile

▲ CCN7525 grade with sintered chip breaker for universal application



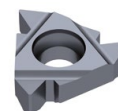
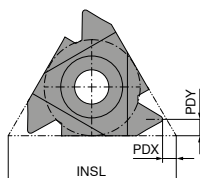
Designation	TP mm	INS mm	PDX mm	PDY mm	ER 71 206 ...	ER 71 206 ...	ER 71 206 ...	ER 71 206 ...
16 ER A60	0,5 - 1,5	16	0,8	0,9	240	140	740	940
16 ER AG60	0,5 - 3	16	1,2	1,7	244	144	744	944
16 ER G60	1,75 - 3	16	1,2	1,7	242	142	742	942
22 EN U60	5,5 - 8	22	0,9	11,0	272 ¹⁾			
22 ER N60	3,5 - 5	22	1,7	2,5	270	170		
P					●	●	○	●
M					●	○	●	●
K					●	○	○	●
N						●	○	
S					○		○	●
H					○		○	○
O						○		

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand external thread turning insert

▲ Partial profile



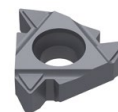
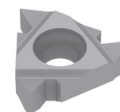
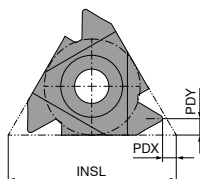
Designation	TP mm	INS mm	PDX mm	PDY mm	EL 71 208 ...
16 EL A60	0,5 - 1,5	16	0,8	0,9	240
16 EL AG60	0,5 - 3	16	1,2	1,7	244
16 EL G60	1,75 - 3	16	1,2	1,7	242
22 EL N60	3,5 - 5	22	1,7	2,5	270
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand internal thread turning insert

▲ Partial profile

▲ CCN7525 grade with sintered chip breaker for universal application



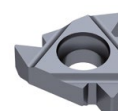
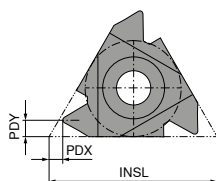
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR 71 210 ...	IR 71 210 ...	IR 71 210 ...	IR 71 210 ...
11 IR A60	0,5 - 1,5	11	0,8	0,9	210	110		
16 IR A60	0,5 - 1,5	16	0,8	0,9	240	140		
16 IR AG60	0,5 - 3	16	1,2	1,7	244	144	744	944
16 IR G60	1,75 - 3	16	1,2	1,7	242	142		
22 IN U60	5,5 - 8	22	0,9	11,0	272 ¹⁾			
22 IR N60	3,5 - 5	22	1,7	2,5	270	170		
P					●	●	○	●
M					●	○	●	●
K					●	●	○	●
N						●	○	
S					○		○	●
H					○		○	○
O						○		

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand internal thread turning insert

▲ Partial profile



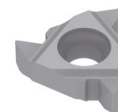
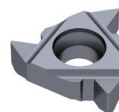
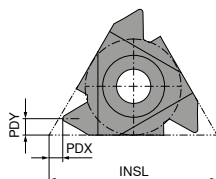
Designation	TP mm	INSL mm	PDX mm	PDY mm	IL 71 212 ...
11 IL A60	0,5 - 1,5	11	0,8	0,9	210
16 IL A60	0,5 - 1,5	16	0,8	0,9	240
16 IL AG60	0,5 - 3	16	1,2	1,7	244
16 IL G60	1,75 - 3	16	1,2	1,7	242
22 IL N60	3,5 - 5	22	1,7	2,5	270
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand external thread turning insert

▲ Partial profile

▲ CCN7525 grade with sintered chip breaker for universal application



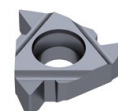
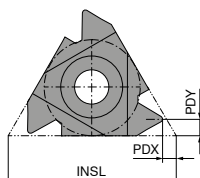
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	ER 71 200 ...	ER 71 200 ...	ER 71 200 ...	ER 71 200 ...
16 ER A55	48 - 16	16	0,8	0,9	240	140	740	940
16 ER AG55	48 - 8	16	1,2	1,7	244	144	744	944
16 ER G55	14 - 8	16	1,2	1,7	242	142	742	942
22 ER N55	7 - 5	22	1,7	2,5	270	170	770	
22 EN U55	4,5 - 3,25	22	0,9	11,0	272 ¹⁾			
P					●	●	○	●
M					●	○	●	●
K					●	○	○	●
N						●	○	
S					○		○	●
H					○		○	○
O						○		

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand external thread turning insert

▲ Partial profile



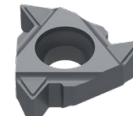
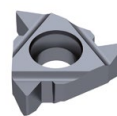
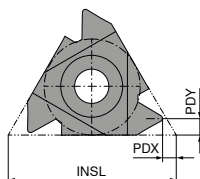
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	EL 71 202 ...
16 EL A55	48 - 16	16	0,8	0,9	240
16 EL AG55	48 - 8	16	1,2	1,7	244
16 EL G55	14 - 8	16	1,2	1,7	242
22 EL N55	7 - 5	22	1,7	2,5	270
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand internal thread turning insert

▲ Partial profile

▲ CCN7525 grade with sintered chip breaker for universal application



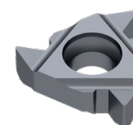
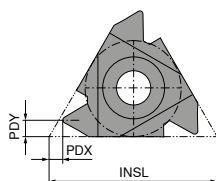
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 204 ...	IR 71 204 ...	IR 71 204 ...
11 IR A55	48 - 16	11	0,8	0,9	210		
16 IR A55	48 - 16	16	0,8	0,9	240		
16 IR AG55	48 - 8	16	1,2	1,7	244		
16 IR G55	14 - 8	16	1,2	1,7	242	142	942
22 IN U55	4,5 - 3,25	22	0,9	11,0	272 ¹⁾		
22 IR N55	7 - 5	22	1,7	2,5	270		
P					●	●	●
M					●	○	●
K					●	●	●
N						●	
S					○		●
H					○		○
O						○	

1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand internal thread turning insert

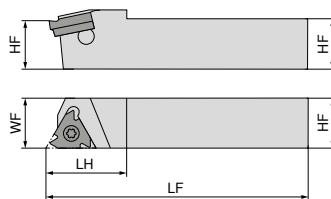
▲ Partial profile



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IL 71 203 ...
11 IL A55	48 - 16	11	0,8	0,9	210
16 IL A55	48 - 16	16	0,8	0,9	240
16 IL AG55	48 - 8	16	1,2	1,7	244
16 IL G55	14 - 8	16	1,2	1,7	242
22 IL N55	7 - 5	22	1,7	2,5	270
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

▲ Tool Holder with Approach Angle $\beta = 1,5^\circ$



Left-hand	Right-hand
71 281 ...	71 280 ...
908 ²⁾	908 ²⁾
910 ²⁾	910 ²⁾
912 ²⁾	912 ²⁾
012	012
016	016
020	020
025	025
032	032
125	125
	132
	232 ¹⁾

ISO designation	HF mm	WF mm	LF mm	LH mm	Insert	torque moment Nm			
SE R/L 08 08 H11	8	11	100	16	11 ..	1,3		908 ²⁾	908 ²⁾
SE R/L 10 10 H11	10	12	100	18	11 ..	1,3		910 ²⁾	910 ²⁾
SE R/L 12 12 K11	12	12	125	20	11 ..	1,3		912 ²⁾	912 ²⁾
SE R/L 12 12 F16	12	16	80	22	16 ..	3,5		012	012
SE R/L 16 16 H16	16	16	100	25	16 ..	3,5		016	016
SE R/L 20 20 K16	20	20	125	30	16 ..	3,5		020	020
SE R/L 25 25 M16	25	25	150	30	16 ..	3,5		025	025
SE R/L 32 32 P16	32	32	170	30	16 ..	3,5		032	032
SE R/L 25 25 M22	25	25	150	32	22 ..	10		125	125
SE R 32 32 P22	32	32	170	34	22 ..	10			132
SE R 32 32 P22U	32	21	170	32	22 .N	10			232 ¹⁾

2) without shim

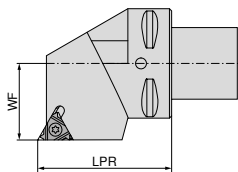


71 950 ...			71 950 ...		71 950 ...	80 950 ...		71 950 ...	
Spare parts for Article no.									
71 280 908 / 71 281 908						T08		110	230
71 280 910 / 71 281 910						T08		110	230
71 280 912 / 71 281 912						T08		110	230
71 280 012	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231	
71 281 012	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231	
71 280 016	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231	
71 281 016	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231	
71 280 020	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231	
71 281 020	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231	
71 280 025	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231	
71 281 025	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231	
71 280 032	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231	
71 281 032	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231	
71 280 125			ER 22 / IL 22	137	235	T20	114	232	
71 281 125			EL 22 / IR 22	145	235	T20	114	232	
71 280 132			ER 22 / IL 22	137	235	T20	114	232	
71 280 232			ER 22U / IL 22U	153	235	T20	114	232	



Shims for correction of helix angle see page → **Page 43.**

▲ Tool Holder with Approach Angle $\beta = 1,5^\circ$



Illustrations show right-hand versions

						Left-hand	Right-hand
						84 191 ...	84 190 ...
ISO designation	Adapter	LPR mm	WF mm	Insert	torque moment Nm		
PSC40 SE R/L 27050-16.IK	PSC 40	50	27	16 ..	3,5	412	412
PSC40 SE R/L 27050-22.IK	PSC 40	50	27	22 ..	10	422	422
PSC50 SE R/L 35060-16.IK	PSC 50	60	35	16 ..	3,5	512	512
PSC50 SE R/L 35060-22.IK	PSC 50	60	35	22 ..	10	522	522
PSC63 SE R/L 45065-16.IK	PSC 63	65	45	16 ..	3,5	612	612
PSC63 SE R/L 45065-22.IK	PSC 63	65	45	22 ..	10	622	622
PSC80 SE R/L 55080-22.IK	PSC 80	80	55	22 ..	10	822	822



Multi tooth shim



Shim



Screw-U



Key D



Clamping screw

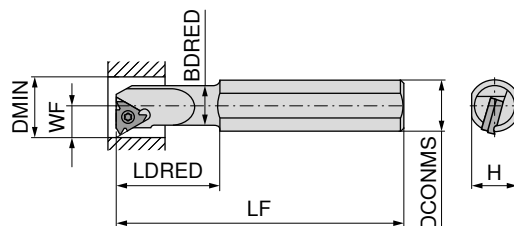
		71 950 ...		71 950 ...		71 950 ...		80 950 ...		71 950 ...	
Spare parts for Article no.											
84 190 412	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231			
84 191 412	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231			
84 190 422			ER 22 / IL 22	137	235	T20	114	232			
84 191 422			EL 22 / IR 22	145	235	T20	114	232			
84 190 512	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231			
84 191 512	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231			
84 190 522			ER 22 / IL 22	137	235	T20	114	232			
84 191 522			EL 22 / IR 22	145	235	T20	114	232			
84 190 612	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231			
84 191 612	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231			
84 190 622			ER 22 / IL 22	137	235	T20	114	232			
84 191 622			EL 22 / IR 22	145	235	T20	114	232			
84 190 822			ER 22 / IL 22	137	235	T20	114	232			
84 191 822			EL 22 / IR 22	145	235	T20	114	232			



Shims for correction of helix angle see page → **Page 43.**

Standard Internal Thread Turning Holder

▲ Tool Holder with Approach Angle $\beta = 1,5^\circ$



Illustrations show right-hand versions



ISO designation	H mm	LF mm	LDRED mm	DCONMS mm	BDRED mm	WF mm	DMIN mm	Insert	torque moment Nm	Left-hand 71 283 ...	Right-hand 71 282 ...
SI R 0010 H11	9,0	100	25	10	9,5	7,4	12	11 ..	1,3		
SI R/L 0010 K11	14,0	125	25	16	10,0	7,4	12	11 ..	1,3	010 ¹⁾	010 ¹⁾
SI R 0013 L11	14,0	140	32	16	12,0	8,9	15	11 ..	1,3		013 ¹⁾
SI R/L 0013 M16	14,0	150	32	16	13,0	10,2	16	16 ..	3,5	015 ¹⁾	015 ¹⁾
SI R/L 0016 P16	18,0	170	40	20	15,0	11,7	19	16 ..	3,5	016 ¹⁾	016 ¹⁾
SI R/L 0020 P16	18,0	170	40	20	19,5	13,7	24	16 ..	3,5	020	020
SI R 0025 R16	22,6	200	40	25	24,5	16,2	29	16 ..	3,5		026
SI R/L 0032 S16	28,8	250	50	32	31,5	19,7	36	16 ..	3,5	032	032
SI R 0040 T16	36,0	300	50	40	39,5	23,7	44	16 ..	3,5		040
SI R 0020 P22	18,0	170	40	20	19,5	15,6	24	22 ..	10		120 ¹⁾
SI R/L 0025 R22	22,6	200	40	25	24,5	18,1	29	22 ..	10	126	126
SI R 0032 S22	28,8	250	50	32	31,5	21,6	38	22 ..	10		132
SI R 0040 T22	36,0	300	60	40	39,5	25,6	46	22 ..	10		140
SI R 0032 S22U	28,8	250	60	32	31,5	24,4	38	22 ..N	10		133 ²⁾

1) without shim

2) Neutral insert indicated by marking (N)



Multi tooth shim



Shim



Screw-U



Key D



Clamping screw

Spare parts for Article no.

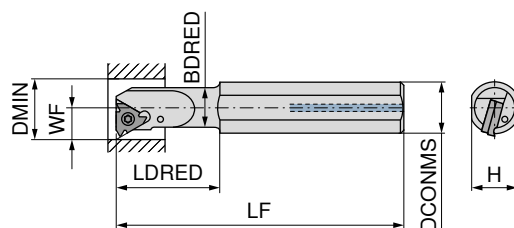
	71 950 ...	71 950 ...	71 950 ...	80 950 ...	71 950 ...
71 282 011				T08	110
71 282 010 / 71 283 010				T08	110
71 282 013				T08	110
71 282 015 / 71 283 015				T10	112
71 282 016 / 71 283 016				T10	112
71 282 020	EL 16 / IR 16	108	EL 16 / IR 16	129	234
71 283 020	ER 16 / IL 16	101	ER 16 / IL 16	121	234
71 282 026	EL 16 / IR 16	108	EL 16 / IR 16	129	234
71 282 032	EL 16 / IR 16	108	EL 16 / IR 16	129	234
71 283 032	ER 16 / IL 16	101	ER 16 / IL 16	121	234
71 282 040	EL 16 / IR 16	108	EL 16 / IR 16	129	234
71 282 120				234	T20
71 282 126				235	T20
71 283 126				235	T20
71 282 132				235	T20
71 282 140				235	T20
71 282 133				235	T20



Shims for correction of helix angle see page → Page 43.

Standard Internal Thread Turning Holder with thro' coolant

▲ Tool Holder with Approach Angle $\beta = 1,5^\circ$



Illustrations show right-hand versions



ISO designation	H mm	LF mm	LDRED mm	DCONMS mm	BDRED mm	WF mm	DMIN mm	Insert	torque moment Nm	Left-hand 71 283 ...	Right-hand 71 282 ...
SI R 0010 M11CB	9,0	150	25	10	9,5	7,4	12	11 ..	1,3		510 ²⁾
SI R 0012 P11CB	11,0	170	30	12	11,5	8,4	15	11 ..	1,3		512 ²⁾
SI R/L 0010 K11B	14,0	125	25	16	10,0	7,4	12	11 ..	1,3	310	310
SI R/L 0013 M16B	14,0	150	32	16	13,0	10,2	16	16 ..	3,5	315	315
SI R 0016 P16B	18,0	170	40	20	16,0	11,7	19	16 ..	3,5		316
SI R 0020 P16B	18,0	170	40	20	19,5	13,7	24	16 ..	3,5		320 ¹⁾
SI R/L 0032 S16B	28,8	250	50	32	31,5	19,7	36	16 ..	3,5	332 ¹⁾	332 ¹⁾

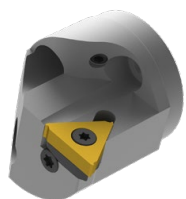
1) with shim seat

2) Carbide version

								
	71 950 ...	71 950 ...	71 950 ...	80 950 ...	71 950 ...			
Spare parts for Article no.								
71 282 510				T08	110	230		
71 282 512				T08	110	230		
71 282 310 / 71 283 310				T08	110	230		
71 282 315 / 71 283 315				T10	112	236		
71 282 316				T10	112	236		
71 282 320	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231
71 282 332	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231
71 283 332	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231



Shims for correction of helix angle see page → Page 43.



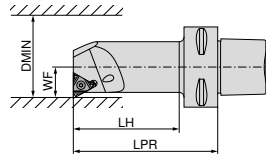
Have you seen our new exchangeable head system?

Use our standard thread turning inserts with the new exchangeable head system.

Further information and products can be found in the → Chapter 9 – Turning Tools

Internal threading holder

▲ Tool Holder with Approach Angle $\beta = 1,5^\circ$



Illustrations show right-hand versions

ISO designation	Adapter	WF mm	LPR mm	LH mm	DMIN mm	Insert	torque moment Nm	Left-hand	Right-hand
								84 197 ...	84 196 ...
PSC40 SI R/L 12060-16.IK	PSC 40	12	60	37	20	16 ..	3,5	410	410
PSC40 SI R/L 14060-16.IK	PSC 40	14	60	38	25	16 ..	3,5	412	412
PSC40 SI R/L 17070-16.IK	PSC 40	17	70	48	32	16 ..	3,5	414	414
PSC40 SI R/L 22090-16.IK	PSC 40	22	90	69	40	16 ..	3,5	416	416
PSC40 SI R/L 27080-16.IK	PSC 40	27	80	60	50	16 ..	3,5	418	418
PSC40 SI R/L 15065-22.IK	PSC 40	15	65	42	25	22 ..	10	420	420
PSC40 SI R/L 19070-22.IK	PSC 40	19	70	48	32	22 ..	10	422	422
PSC40 SI R/L 22090-22.IK	PSC 40	22	90	69	40	22 ..	10	424	424
PSC40 SI R/L 27080-22.IK	PSC 40	27	80	60	50	22 ..	10	426	426
PSC50 SI R/L 12060-16.IK	PSC 50	12	60	35	20	16 ..	3,5	510	510
PSC50 SI R/L 14060-16.IK	PSC 50	14	60	36	25	16 ..	3,5	512	512
PSC50 SI R/L 17070-16.IK	PSC 50	17	70	47	32	16 ..	3,5	514	514
PSC50 SI R/L 22090-16.IK	PSC 50	22	90	68	40	16 ..	3,5	516	516
PSC50 SI R/L 27105-16.IK	PSC 50	27	105	84	50	16 ..	3,5	518	518
PSC50 SI R/L 15065-22.IK	PSC 50	15	65	41	25	22 ..	10	520	520
PSC50 SI R/L 19070-22.IK	PSC 50	19	70	47	32	22 ..	10	522	522
PSC50 SI R/L 22090-22.IK	PSC 50	22	90	68	40	22 ..	10	524	524
PSC50 SI R/L 27105-22.IK	PSC 50	27	105	84	50	22 ..	10	526	526
PSC63 SI R/L 14070-16.IK	PSC 63	14	70	42	25	16 ..	3,5	610	610
PSC63 SI R/L 17075-16.IK	PSC 63	17	75	48	32	16 ..	3,5	612	612
PSC63 SI R/L 22090-16.IK	PSC 63	22	90	64	40	16 ..	3,5	614	614
PSC63 SI R/L 27105-16.IK	PSC 63	27	105	80	50	16 ..	3,5	616	616
PSC63 SI R/L 19075-22.IK	PSC 63	19	75	48	32	22 ..	10	620	620
PSC63 SI R/L 22090-22.IK	PSC 63	22	90	64	40	22 ..	10	622	622
PSC63 SI R/L 27105-22.IK	PSC 63	27	105	80	50	22 ..	10	624	624



Multi tooth shim



Shim



Screw-U



Key D



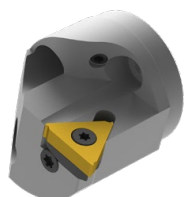
Clamping screw

Spare parts

Insert	Version								
16 ..	Right-hand	EL 16 / IR 16	108	EL 16 / IR 16	129	234	T10	112	231
16 ..	Left-hand	ER 16 / IL 16	101	ER 16 / IL 16	121	234	T10	112	231
22 ..	Left-hand			ER 22 / IL 22	137	235	T20	114	232
22 ..	Right-hand			EL 22 / IR 22	145	235	T20	114	232



Shims for correction of helix angle see page → Page 43.



Have you seen our new exchangeable head system?

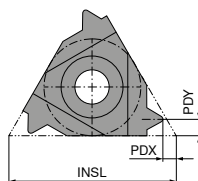
Use our standard thread turning inserts with the new exchangeable head system.

Further information and products can be found in the → Chapter 9 – Turning Tools

Right hand internal thread turning insert – Mini size 06

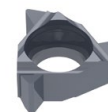
▲ Full profile

▲ Thread production from diameter 6 mm



CCN1525

CCN2520



Designation	TP mm	PDX mm	PDY mm	INSL mm
06 IR 0,5	0,50	0,9	0,5	6
06 IR 0,75	0,75	0,8	0,5	6
06 IR 1,0	1,00	0,7	0,6	6
06 IR 1,25	1,25	0,6	0,6	6

IR	IR
71 271 ...	71 224 ...
110	35700
112	36100
114	36500
116	36700

P	●	○
M	●	●
K	●	○
N	○	○
S	○	●
H	○	○
O	○	○

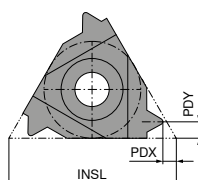
→ v_c Page 45

8

Right hand internal thread turning insert – Mini size 06

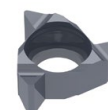
▲ Full profile

▲ Thread production from diameter 6 mm



CCN1525

CCN2520



Designation	TPI 1/"	PDX mm	PDY mm	INSL mm	IR	IR
06 IR 26	26	0,7	0,6	6	71 230 ...	71 230 ...
06 IR 22	22	0,6	0,6	6	13500	33500
06 IR 20	20	0,6	0,7	6	13100	33100
06 IR 18	18	0,6	0,7	6	12900	32900
					12500	32500

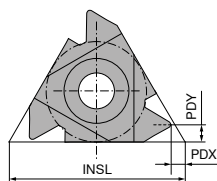
P	●	○
M	●	●
K	●	○
N	○	○
S	○	●
H	○	○
O	○	○

→ v_c Page 45

Right hand internal thread turning insert – Mini size 06

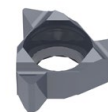
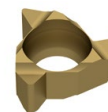
▲ Partial profile

▲ Thread production from diameter 6 mm



CCN1525

CCN2520



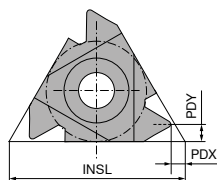
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR 71 274 ...	IR 71 272 ...
06 IR A60	0,5 - 1,25	6	0,6	0,6	210	30000
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

→ v_c Page 45

Right hand internal thread turning insert – Mini size 06

▲ Partial profile

▲ Thread production from diameter 6 mm



CCN1525

CCN2520



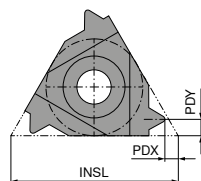
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 272 ...	IR 71 272 ...
06 IR A55	48 - 20	6	0,5	0,6	10100	30100
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

→ v_c Page 45

Right hand internal thread turning insert – Mini size 08

▲ Full profile

▲ Thread production from diameter 8 mm



CCN1525

CCN2520



Designation	TP mm	PDX mm	PDY mm	INSL mm	IR 71 224 ...	IR 71 224 ...
08 IR 0,5	0,50	0,6	0,5	8	14300	34300
08 IR 0,75	0,75	0,6	0,5	8	13700	33700
08 IR 1,0	1,00	0,6	0,6	8	13300	33300
08 IR 1,25	1,25	0,6	0,7	8	13100	33100
08 IR 1,5	1,50	0,6	0,7	8	12900	32900
08 IR 1,75	1,75	0,6	0,8	8	12700	32700
08 IN 2,0	2,00	0,9	4,0	8	12500 ¹⁾	32500 ¹⁾
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

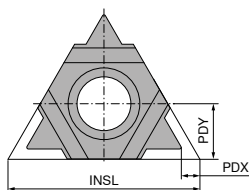
1) Neutral version (N)

→ v_c Page 45

Right hand internal thread turning insert – Mini size 08

▲ Partial profile

▲ Thread production from diameter 8 mm



CCN1525

CCN2520



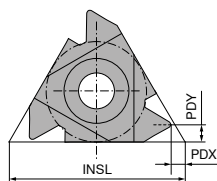
Designation	TP mm	INSL mm	PDX mm	PDY mm	IN 71 273 ...	IN 71 273 ...
08 IN M60	1,75 - 2,0	8	0,8	4	10800	30800
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

→ v_c Page 45

Right hand internal thread turning insert – Mini size 08

▲ Partial profile

▲ Thread production from diameter 8 mm



CCN1525

CCN2520



Designation	TP mm	PDX mm	PDY mm	INSL mm
08 IR A60	0,5 - 1,25	0,6	0,6	8
08 IR A60	0,5 - 1,5	0,6	0,7	8

IR	IR
71 272 ...	71 272 ...
10600	30600

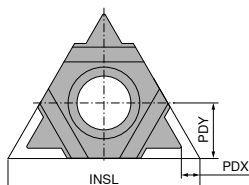
P	●	○
M	●	●
K	●	○
N	○	○
S	○	●
H	○	○
O	○	○

→ v_c Page 45

Right hand internal thread turning insert – Mini size 08

▲ Partial profile

▲ Thread production from diameter 8 mm



CCN1525

CCN2520



Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
08 IN M55	14 - 11	8	0,9	4

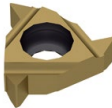
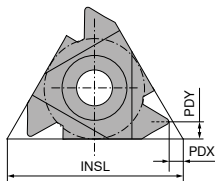
IN	IN
71 273 ...	71 273 ...
10900	30900

P	●	○
M	●	●
K	●	○
N	○	○
S	○	●
H	○	○
O	○	○

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Right hand internal thread turning insert – Mini size 08

- ▲ Partial profile
- ▲ Thread production from diameter 8 mm

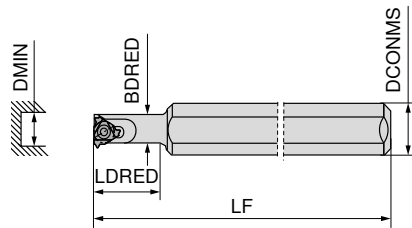


IR	IR
71 272 ...	71 272 ...
10700	30700

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm
08 IR A55	48 - 16	8	0,6	0,7
P				
M				
K				
N				
S				
H				
O				

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Right Hand Internal Thread Holder – Mini size 06

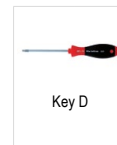


Right-hand

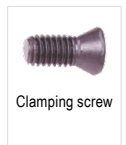
71 282 ...

ISO designation	LF mm	LDRED mm	DCONMS mm	BDRED mm	DMIN mm	Insert	torque moment Nm	
SI R 0005 H06	100	12	12	5,1	6	06 ..	0,6	00500
SI R 0005 H06 C	100	26	6	5,1	6	06 ..	0,6	10500 ¹⁾

1) Solid Carbide Shank with Thro' Coolant



Key D



Clamping screw

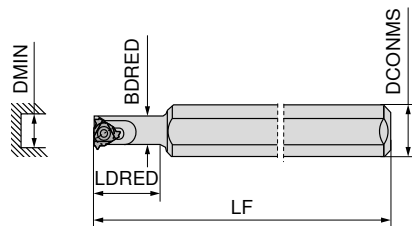
80 950 ...

71 950 ...

Spare parts
for Article no.

71 282 00500	T06	108	23800
71 282 10500	T06	108	23800

Right Hand Internal Thread Holder – Mini size 08



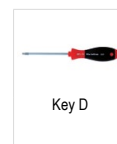
Right-hand

71 282 ...

ISO designation	LF mm	LDRED mm	DCONMS mm	BDRED mm	DMIN mm	Insert	torque moment Nm	
SI R 0007 K08	125	18	16	6,6	7,8	08 ..	0,6	00700
SI R 0008 K08U	125	21	16	7,3	9,0	08 .N	0,6	00800 ¹⁾
SI R 0007 K08CB	125	31	8	6,6	7,8	08 ..	0,6	10700 ²⁾

1) Neutral insert indicated by marking (N)

2) Solid Carbide Shank with Thro' Coolant



Key D



Clamping screw

80 950 ...

71 950 ...

Spare parts
for Article no.

71 282 00700	T06	108	23900
71 282 00800	T06	108	23900
71 282 10700	T06	108	23900

Shims for Standard Threading Inserts

- ▲ Use the formula on → **page 47** to calculate the required correction angle α ($\pm$).
 ▲ Then find the corresponding correction plate below.

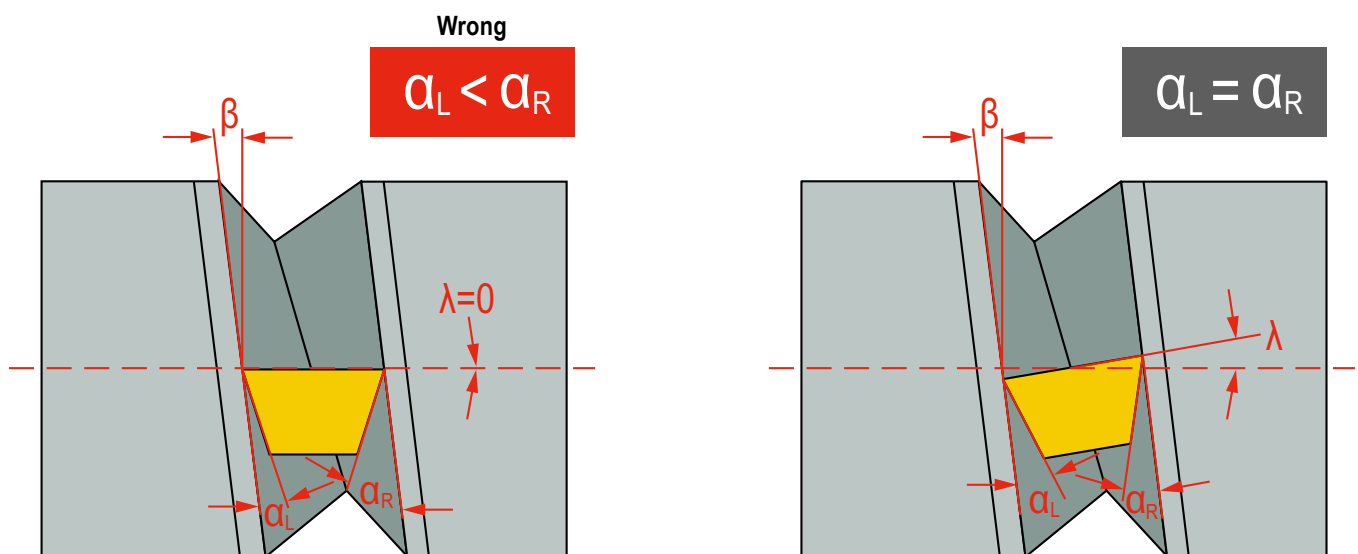


Pitch-angle β	Correction angle α	AE 16 ER 16 / IL 16	AI 16 EL 16 / IR 16	AE 22 ER 22 / IL 22	AI 22 EL 22 / IR 22	AE 22 U ER 22 / IL 22	AI 22 U EL 22 / IR 22	AE 16 M ER 16 / IL 16	AI 16 M EL 16 / IR 16
		71 950 ...	71 950 ...	71 950 ...	71 950 ...	71 950 ...	71 950 ...	71 950 ...	71 950 ...
+ 4,5°	+ 3°	118	126	134	142	150 ¹⁾	158 ¹⁾		
+ 3,5°	+ 2°	119	127	135	143	151 ¹⁾	159 ¹⁾		
+ 2,5°	+ 1°	120	128	136	144	152 ¹⁾	160 ¹⁾		
+ 1,5°	0°	121	129	137	145	153 ¹⁾	161 ¹⁾	101	108
+ 0,5°	- 1°	122	130	138	146	154 ¹⁾	162 ¹⁾		
0°	- 1,5°	123	131	139	147				
- 0,5°	- 2°	124	132	140	148	156 ¹⁾	164 ¹⁾		
- 1,5°	- 3°	125	133	141	149	157 ¹⁾	165 ¹⁾		

1) Neutral version for tool holder identified by (U).

Flank clearance angle and effective approach angle

The angle of inclination λ of the cutting edges, in concert with the thread approach angle β ensures an equal rake angle and side clearance angle on both thread flanks.



α = Side clearance angle

λ = Pitch angle

β = An effective angle of inclination is achieved by using a suitable insert seat

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm ² / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm ² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm ² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm ² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm ² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm ² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm ² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm ² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm ² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm ² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm ² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm ² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm ² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm ² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm ² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm ² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm ² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm ² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm ² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm ² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm ² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm ² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm ² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm ² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm ² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm ² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm ² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm ² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm ² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm ² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm ² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm ² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm ² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm ² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm ² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm ²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm ² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm ² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm ²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm ²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm ²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm ²				
		O.3.1	Graphite						

* Tensile strength

Cutting data standard values

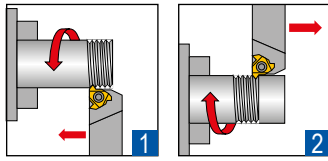
Index	CCN1525	CCN2520	CWN1525	HCN2525	CCN7525	CCN20	CWK20
	Mini	Mini					
	v_c (m/min)						
P.1.1	80	120	120	120	120	120	
P.1.2	80	120	120	120	120	120	
P.1.3	80	120	120	120	120	120	
P.1.4	80	80	80	90	80	80	
P.1.5	70	80	80	90	80	80	
P.2.1	50	80	80	90	80	80	
P.2.2	50	80	80	90	80	80	
P.2.3	50	80	80	90	80	80	
P.2.4	50	80	80	90	80	80	
P.3.1	50	50	60	70	50	50	
P.3.2	50	50	60	70	50	50	
P.3.3	50	50	60	70	50	50	
P.4.1	50	50	60	70	50	50	
P.4.2	50	50	60	70	50	50	
M.1.1	40	90	60	110	90	60	40
M.2.1	40	90	60	110	90	60	40
M.3.1	40	90	60	110	90	60	40
K.1.1	60	120	90	140	120	120	80
K.1.2	60	120	90	140	120	120	80
K.2.1	60	100	80	120	100	100	70
K.2.2	60	100	80	120	100	100	70
K.3.1	50	100	80	110	100	100	70
K.3.2	50	100	80	110	100	100	70
N.1.1	500		600	700			150
N.1.2	300		600	700			150
N.2.1	120		250	280			120
N.2.2	120		250	280			120
N.2.3	120		250	280			120
N.3.1	110		150	190			100
N.3.2	150		150	190			100
N.3.3	150		150	190			100
N.4.1	300		300	220			150
S.1.1		25		20	25	20	20
S.1.2		25		20	25	20	20
S.2.1		25		20	25	20	20
S.2.2		25		20	25	20	20
S.2.3		25		20	25	20	20
S.3.1		35		30	35	30	30
S.3.2		35		30	35	30	30
S.3.3		35		30	35	30	30
H.1.1		35		30	35	30	
H.1.2		35		30	35	30	
H.1.3		35		30	35	30	
H.1.4		35		30	35	30	
H.2.1		25		20	25	20	
H.3.1		25		20	25	20	
O.1.1	150		200				
O.1.2	150		200				
O.2.1	150		200				
O.2.2	150		200				
O.3.1	150		200				



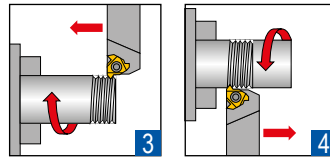
The cutting data depends extremely on the external conditions, the material and machine type.
The indicated values are possible values which have to be increased or reduced according to the application conditions.

Thread turning methods

External right-hand thread

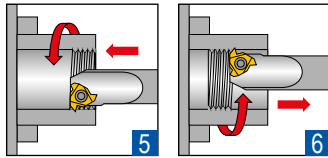


External left-hand thread

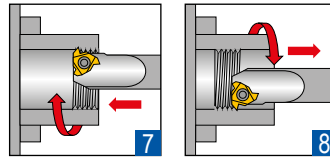


i The machining examples 2, 4, 6 and 8 require negative shims! These shims can be found on → **Page 43**.

Internal right-hand thread

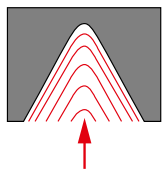


Internal left-hand thread



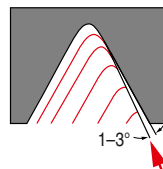
Thread infeed methods

Radial Infeed



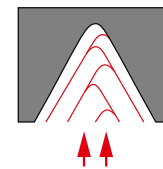
- ▲ for pitches less than 1.5 mm
- ▲ for short chipping materials
- ▲ for machining hardened materials
- ▲ simple and quick method

Flank infeed



- ▲ for pitches larger than 1.5 mm
- ▲ with radial penetration the effective cutting edge length is too large, which may lead to chattering
- ▲ with trapezoidal and ACME threads, chip flow on three sides can be problematic

Alternating infeed



- ▲ with large pitches
- ▲ for long chipping materials
- ▲ uniform wear of the cutting edges
- ▲ complicated programming process

Recommended number of cuts and cutting depths

Standard Threading Inserts

Pitch (TP/TPI)	mm	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	8,00
	TPI	48	32	24	20	16	14	12	10	8	7	6	5,5	5	4,5	4	3
Number of passes		4-6	4-7	4-8	5-9	6-10	7-12	7-12	8-14	9-16	10-18	11-18	11-19	12-20	12-20	12-20	15-24
Number of passes	(CCN7525)	3-4	3-4	3-5	4-6	5-6	6-8	6-8	8-10								
Number of passes	Mini Inserts	6-9	6-11	6-12	8-14	9-15	11-18	11-18									

Multi edge thread turning insert

Standard	Insert	Insert size		Pitch (TP)	Number of flutes (NT)	Designation	Passes	Cutting depth per pass		
		IC	L mm					1	2	3
ISO external	M	3/8"	16	1,0 mm	3	3 ER 1.0 ISO 3M	2	0,38	0,25	
ISO external	M	3/8"	16	1,5 mm	2	3 ER 1.5 ISO 2M	3	0,42	0,30	0,20

Pitch angle

Important Information about Standard Shims

- ▲ the pitch angle should be determined through calculation or by using the chart below.
- ▲ the standard threading holder is supplied with a 1.5° inclined insert seat and a shim without angular correction.
Hence the Tool holders are delivered with an angle of inclination β of 1.5°.

Without the appropriate correction of the helix angle, the following may occur

- ▲ the profile will be distorted.
- ▲ insufficient clearance angle.
- ▲ the tool life of the insert is greatly reduced.



Method 1: Calculation

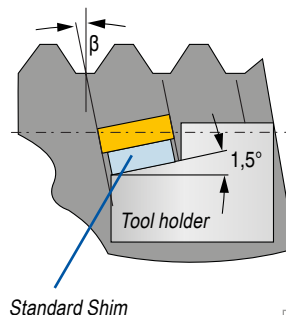
Calculating the helix angle β :

$$\beta = \frac{20 \times TP}{DMIN}$$

20 = constant
 β = Helix angle (°)
 TP = Pitch (mm)
 DMIN = Nominal diameter (mm)

For trapezium:

$$\frac{30 \times TP}{2 \times DMIN}$$



Example calculation

External thread M24 x 1.5

Feed towards chuck

DMIN = Nominal Ø: M24 = 24 mm

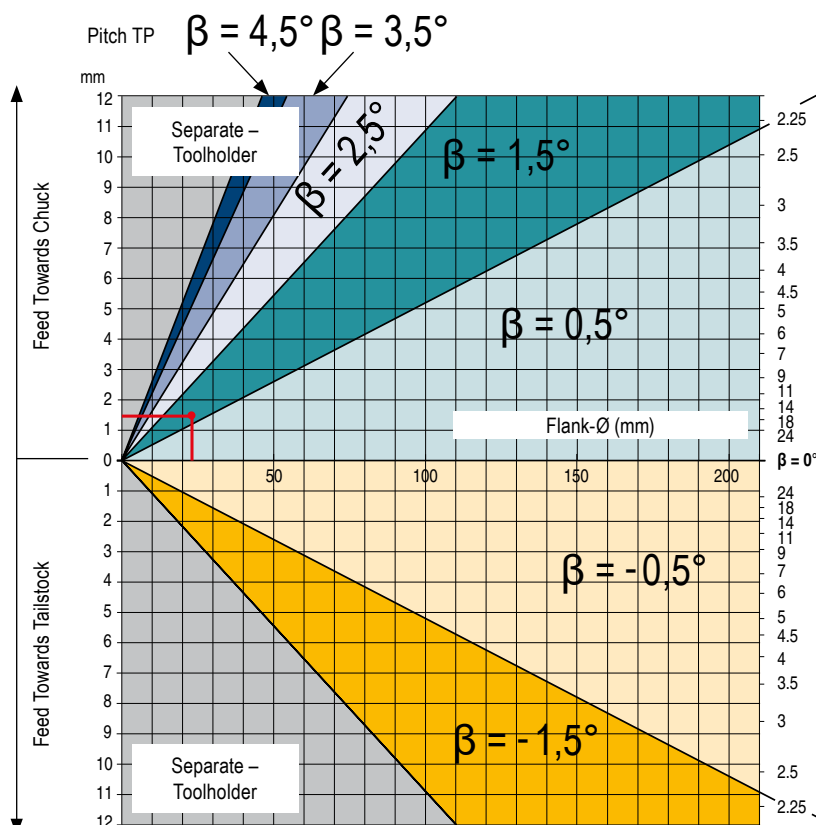
TP = Pitch: 1.5 mm

$$\beta = \frac{20 \times 1,5 \text{ mm}}{24 \text{ mm}}$$

$$\beta = 1,25^\circ$$

Method 2: Diagram

From the flank Ø in the diagram, a line is drawn vertically upwards until it intersects with the line of the pitch of the thread to be produced. In the color-coded region in which it is now, a horizontal line to the edge of the chart indicates the appropriate factor.



calculated pitch angle β value	Correction angle α
0,0°–0,49°	-1,5°
0,5°–0,99°	-1°
1,0°–1,99°	0°
2,0°–2,99°	+1°
3,0°–3,99°	+2°
4,0°–4,99°	+3°
0,0°–(-0,49°)	-2°
-0,5°–(-1,5°)	-3°

Designation key – indexable inserts

16		E	R
Insert size		Insert	Cutting design
L	I.C.	E	R
06	5/32"	I	L
08	3/16"		N
11	1/4"		
16	3/8"		
22	1/2"		
		External Internal	Right-hand Left-hand neutral



Example

16 ER AG 60

ER16 right hand – external insert with a pitch of 0.5–3.0 mm

Designation key – holders

SE		R	1212
Tool holder		Cutting design	Shank cross-section
SE	External	R	Example
SI	Internal	L	External holder
			square shank
			1212 = 12 mm x 12 mm
			0020 = 20 mm
			Diameter
			Internal boring bar



Example

SE R 1212 F 16Right hand holder with 12 x 12 mm square shank,
overall length of 80 mm, only suitable for an ER16 threading insert

AG 60

Pitch (TP/TPI)

Full profile	mm	G/Z
	0,35	72-4

Partial profile	mm	G/Z
A	0,5-1,5	48-16
AG	0,5-3,0	48-8
M	1,7-2,0	14-11
G	1,75-3,0	14-8
N	3,5-5,0	7-5
U	5,5-8,0	4,5-3,5

Flank angle
55°
60°

Number of flutes (NT)

2M	Multi-tooth insert with 2 teeth
3M	Multi-tooth insert with 3 teeth

F

Overall length

	mm
F	80
H	100
K	125
L	140
M	150
P	170
R	200
S	250
T	300

16

Insert size

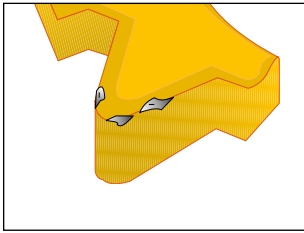
L	I.C.
06	5/32"
08	3/16"
11	1/4"
16	3/8"
22	1/2"

Properties

B	with thro' coolant
C	with carbide shank
U	neutral holder

Troubleshooting

Edge chipping



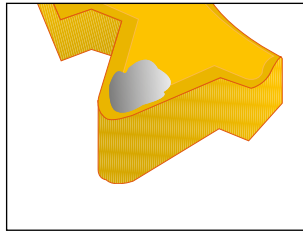
Cause

- ▲ Common in stainless materials
- ▲ Incorrect grade

Remedy

- ▲ Minimize tool overhang length
- ▲ Check that the insert is clamped
- ▲ Minimize vibration
- ▲ Use a tougher grade

Cratering



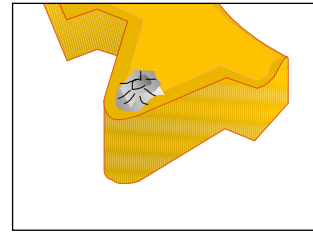
Cause

- ▲ Common in stainless materials
- ▲ Cutting speed too high
- ▲ Incorrect grade

Remedy

- ▲ Apply coolant
- ▲ Reduce depth of cut
- ▲ Use a harder grade

Built-up edge



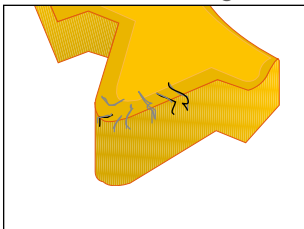
Cause

- ▲ Cutting speed too low
- ▲ Incorrect grade

Remedy

- ▲ Apply coolant
- ▲ Increase cutting speed
- ▲ Use a tougher grade

Thermal cracking



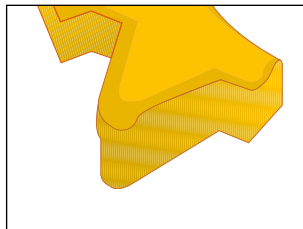
Cause

- ▲ Insufficient coolant
- ▲ Cutting speed too high
- ▲ Incorrect grade

Remedy

- ▲ Apply coolant
- ▲ Reduce cutting speed
- ▲ Use a tougher grade

Plastic deformation



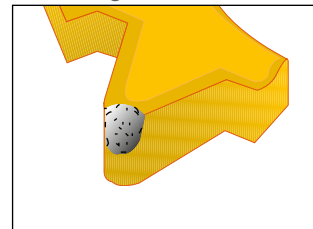
Cause

- ▲ Infeed too large
- ▲ Insufficient coolant
- ▲ Cutting speed too high
- ▲ Incorrect grade

Remedy

- ▲ Apply coolant
- ▲ Reduce depth of cut
- ▲ Reduce cutting speed
- ▲ Use a harder grade

Breakage



Cause

- ▲ Infeed too large
- ▲ Insufficient coolant
- ▲ Plastic deformation
- ▲ Instability
- ▲ Helix angle not appropriate
- ▲ Incorrect grade

Remedy

- ▲ Reduce depth of cut
- ▲ Check machine and tool stability
- ▲ Reduce cutting speed
- ▲ Check helix angle
- ▲ Use a tougher grade

Grade description

Universal

CCN7525

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P25** | **M25** | **K25** | **S25** | H25
- ▲ The universal carbide grade with sintered chip breaker for medium to high cutting speeds

CCN2520

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P25** | **M25** | **K25** | **S25** | H25
- ▲ The coated carbide grade for the machining of stainless steels at medium to high cutting speeds

CCN1525

- ▲ Carbide, TiN-coated
- ▲ ISO | **P25** | **M25** | **K25** | N25 | O25
- ▲ The coated carbide grade for machining steels and stainless steels at low cutting speeds

Non-ferrous metals

CWK20

- ▲ Carbide, uncoated
- ▲ ISO | M10 | **K10** | **N10** | S10
- ▲ The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

Steel

CCN20

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P20** | **M20** | **K20** | S20 | H20
- ▲ The all-round carbide grade for machining steels at low cutting speeds

CWN1525

- ▲ Carbide, TiN-coated
- ▲ ISO | **P25** | M25 | **K25** | **N25** | O25
- ▲ The universal carbide grade for machining steels and non-ferrous metals at low cutting speeds

Stainless steel

HCN2525

- ▲ Carbide, TiAlN-coated
- ▲ ISO | P25 | **M25** | K25 | N25 | S25 | H25
- ▲ The coated carbide grade for machining stainless steels at high cutting speeds
- ▲ Also suitable for exotic materials

8

Profile Type Description

Full profile



- ▲ Thread diameter must not be turned to final thread size
- ▲ a minimum infeed of 0.07 mm is necessary
- ▲ Insert can only be used only for a specific pitch

- Advantages:**
- ▲ High-quality thread
 - ▲ No burr formation
 - ▲ No rework
 - ▲ In part longer service life

Partial profile



- ▲ Core diameter must be premachined to the finished size
- ▲ A minimum infeed of 0.07 mm is required

- Advantages:**
- ▲ One threading insert can be used to machine several pitches
 - ▲ Threading insert can be used for any application
 - ▲ Reduced stock requirements

Multi-Tooth Thread Turning Insert



- ▲ Thread diameter must not be turned to final thread size
- ▲ a minimum infeed of 0.07 mm is necessary
- ▲ Insert can only be used only for a specific pitch

- Advantages:**
- ▲ Fewer passes required
 - ▲ Thread production in less time

Attention: ▲ Check there is sufficient thread run-out

Mini Thread Turning Insert



- ▲ From a min. core hole diameter of Ø 6 mm or Ø 8 mm

- Advantages:**
- ▲ Special cutting materials for low cutting speeds
 - ▲ 3 cutting edges for miniature applications