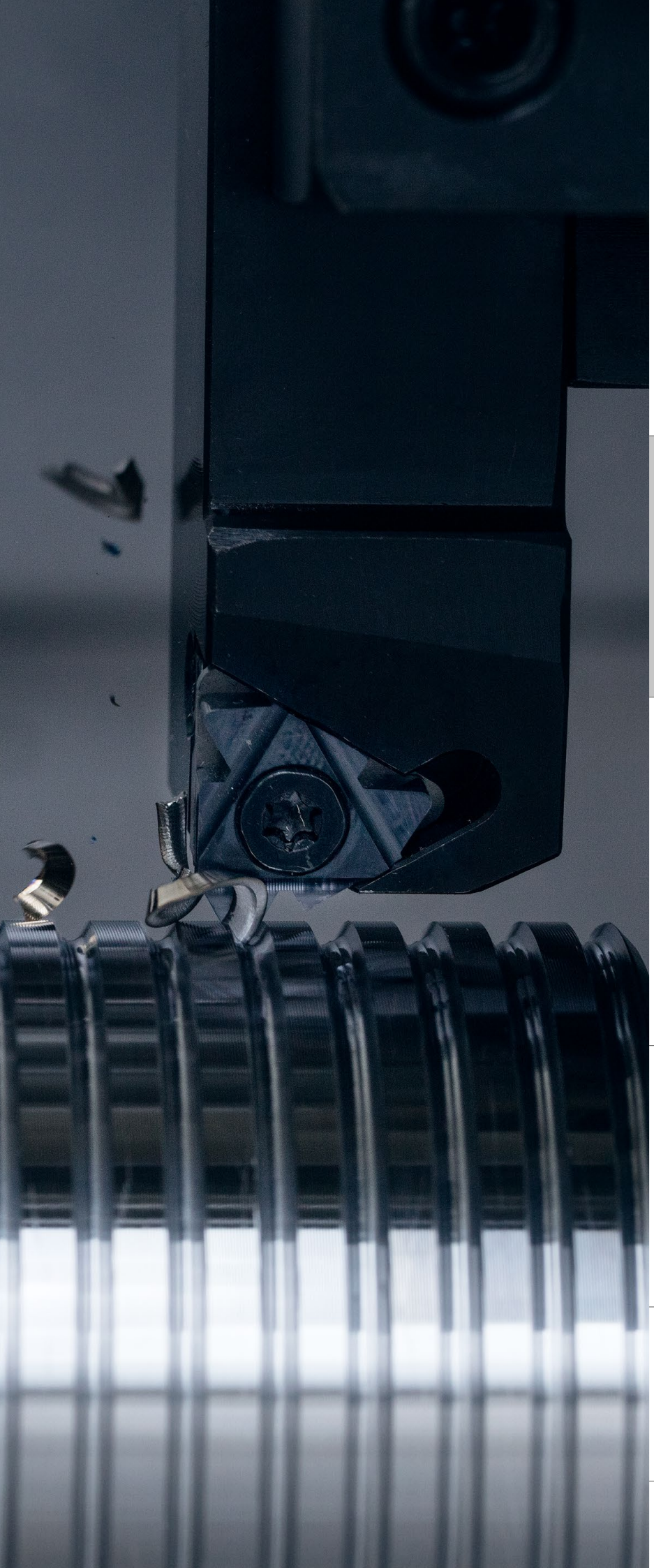

Solid drilling and bore machining

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 and article no. Index

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Shims	43
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Cutting Data	44+45
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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

MiniCut

M	G	Tr
Full profile Partial profile	Partial profile	Partial profile

→ **Chapter 12 – Miniature turning tools**

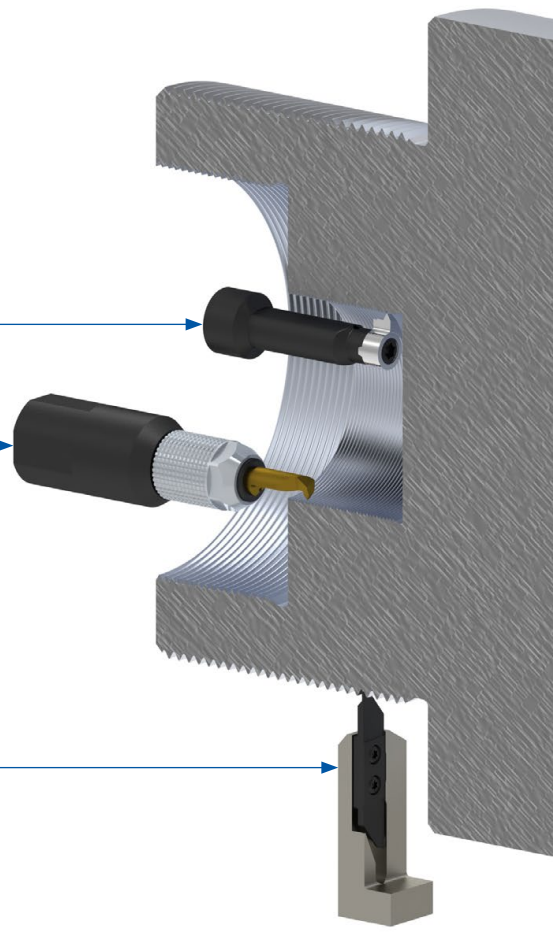
UltraMini

M	MF	G	Tr
Full profile Partial profile	Full profile Partial profile	Partial profile	Partial profile

→ **Chapter 12 – Miniature turning tools**

VertiClamp

→ **Sliding head tooling catalogue**



Symbol explanation

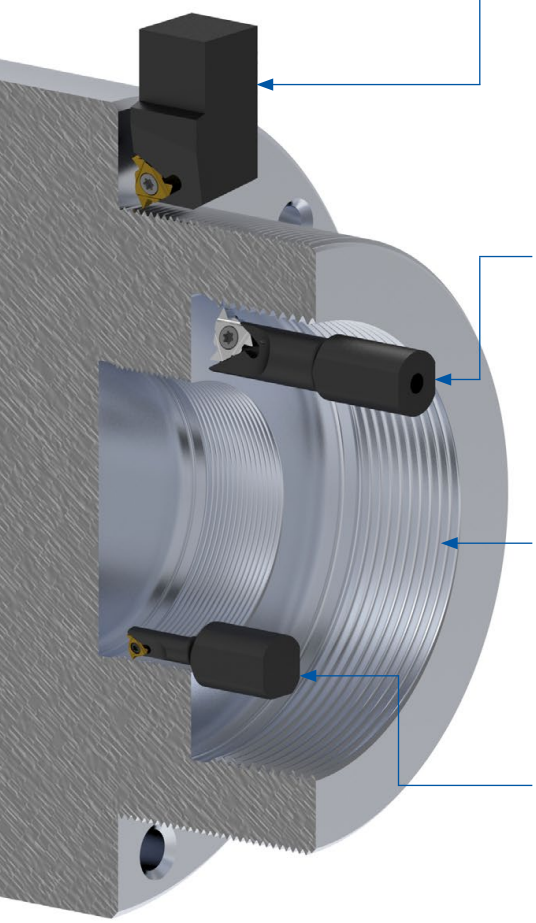
Flank angle

- 30° — Flank angle 30° (Trapezoidal thread)
- 30° — Flank angle 30° (Round thread)
- 55° — Flank angle 55°
- 60° — Flank angle 60°
- 80° — Flank angle 80° (Conduit thread)

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

Thread

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



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

60°	55°
28	30

Multi-cutting edge

M
10

Suitable holders can be found on → page 32+33

Standard internal thread turning

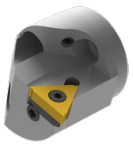
Full profile

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

60°	55°
29	31

Suitable holders can be found on → page 34–36



Internal threading with MaxiChange – our exchangeable head system

→ Chapter 9 – Turning Tools

Mini 06

Full profile

M	BSW
37	37

Partial profile

60°	55°
38	38

Mini 08

Full profile

M
39

Partial profile

60°	55°
39+40	40+41

Suitable holders can be found on → page 42

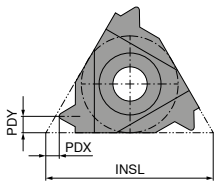
Information on the different thread profiles can be found on → **Page 51.**

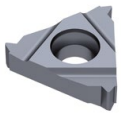
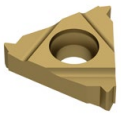
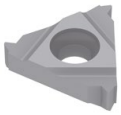
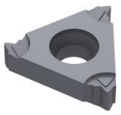
8

Right hand external thread turning insert

▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

M | MF | 60°



CCN20	CWN1525	HCN2525	CWK20	CCN7525
				

Designation	TP	INSL	PDX	PDY	ER 71 220 ...		ER 71 220 ...		ER 71 220 ...		ER 71 220 ...		ER 71 220 ...	
	mm	mm	mm	mm										
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.

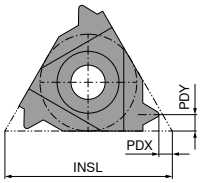
→ v_c Page 45

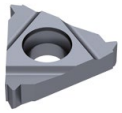
Left hand external thread turning insert

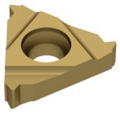
▲ Full profile

M | MF | 60°

CCN20 | CWN1525







Designation	TP mm	INSL mm	PDX mm	PDY mm	EL 71 222 ...	EL 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		○

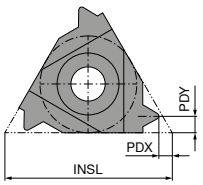
→ v_c Page 45

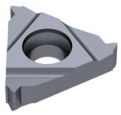
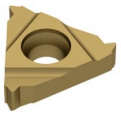
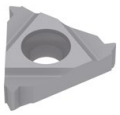
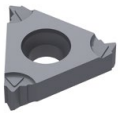
8

Right hand internal thread turning insert

▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

M | MF | 60°



CCN20	CWN1525	HCN2525	CWK20	CCN7525
				

Designation	TP	INSL	PDX	PDY	IR 71 224 ...	IR 71 224 ...	IR 71 224 ...	IR 71 224 ...	IR 71 224 ...
	mm	mm	mm	mm					
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**				**912**
11 IR 0,8	0,80	11	0,6	0,6	**213**		**713**		
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.

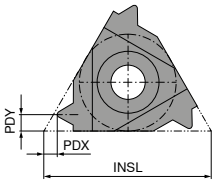
→ v_c Page 45

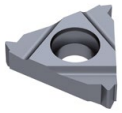
Left hand internal thread turning insert

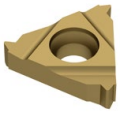
▲ Full profile

M | MF | 60°

CCN20 | CWN1525







Designation	TP mm	INSL mm	PDX mm	PDY mm	IL 71 226 ...	IL 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**	

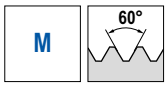
P	●	●
M	●	○
K	●	●
N		●
S	○	
H	○	
O		○

→ v_c Page 45

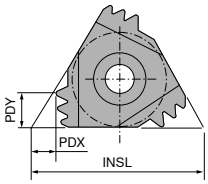
8

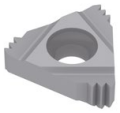
Right hand external thread turning insert

▲ Multi edge insert



HCN2525





Designation	TP mm	INSL mm	PDX mm	PDY mm	NT	ER 71 221 ...
16 ER 1,0 3M	1,0	16	1,7	2,5	3	**700**
16 ER 1,5 2M	1,5	16	1,5	2,3	2	**702**

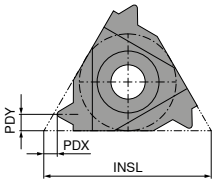
P	○
M	●
K	○
N	○
S	○
H	○
O	

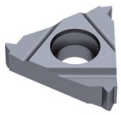
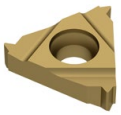
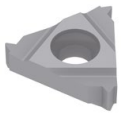
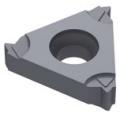
→ v_c Page 45

Right hand external thread turning insert

▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

BSW | 55°



	CCN20	CWN1525	HCN2525	CWK20	CCN7525
					
	ER	ER	ER	ER	ER
	71 228 ...	71 228 ...	71 228 ...	71 228 ...	71 228 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm									
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.

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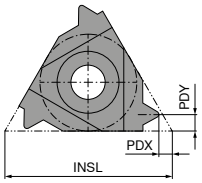
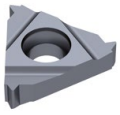
8

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**

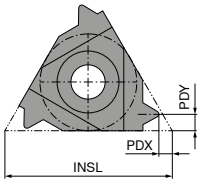
P	●
M	●
K	●
N	
S	○
H	○
O	

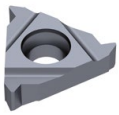
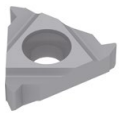
→ v_c Page 45

Right hand internal thread turning insert

▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

BSW | 55°



	CCN20	CWN1525	HCN2525	CCN7525
				
	IR	IR	IR	IR
	71 230 ...	71 230 ...	71 230 ...	71 230 ...

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm							
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		124		724		
11 IR 19	19	11	0,8	0,9							924
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		130		730		
11 IR 14	14	11	0,8	0,9							930
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				760		
16 IR 14	14	16	1,0	1,2	262		162		762		962
16 IR 12	12	16	1,1	1,4	264						
16 IR 11	11	16	1,1	1,5	266		166		766		966
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						
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							○				

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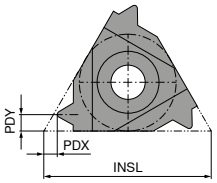
8

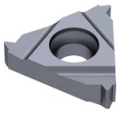
Left hand internal thread turning insert

▲ Full profile

BSW

CCN20





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IL 71 231 ...
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**

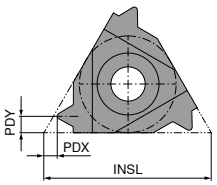
P	●
M	●
K	●
N	
S	○
H	○
O	

→ v_c Page 45

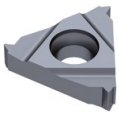
Right hand external thread turning insert

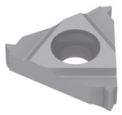
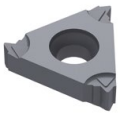
▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

UN | UNC | UNF | UNEF | 60°



CCN20 | CWN1525 | HCN2525 | CCN7525



Designation	TPI	INSL	PDX	PDY	ER 71 264 ...		ER 71 264 ...		ER 71 264 ...		ER 71 264 ...	
	1/"	mm	mm	mm								
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**				**746**			
16 ER 28	28,0	16	0,6	0,7	**248**				**748**			
16 ER 27	27,0	16	0,7	0,8	**250**							
16 ER 24	24,0	16	0,7	0,8	**252**		**152**		**752**			
16 ER 20	20,0	16	0,8	0,9	**254**		**154**		**754**		**954**	
16 ER 18	18,0	16	0,8	1,0	**256**		**156**		**756**			
16 ER 16	16,0	16	0,9	1,1	**258**		**158**		**758**		**958**	
16 ER 14	14,0	16	1,0	1,2	**260**		**160**		**760**			
16 ER 13	13,0	16	1,0	1,3	**262**							
16 ER 12	12,0	16	1,1	1,4	**264**		**164**		**764**			
16 ER 11,5	11,5	16	1,1	1,5	**266**							
16 ER 11	11,0	16	1,1	1,5	**268**		**168**					
16 ER 10	10,0	16	1,1	1,5	**270**							
16 ER 9	9,0	16	1,2	1,7	**272**							
16 ER 8	8,0	16	1,2	1,6	**274**							
16 ER 8	8,0	16	1,1	1,1							**974**	
16 ER 8	8,0	16	1,1	1,5			**174**					
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

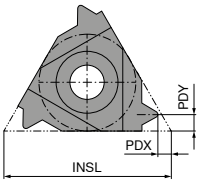
8

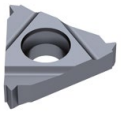
Left hand external thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

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	

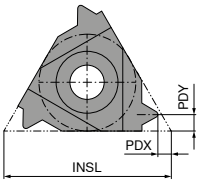
→ v_c Page 45

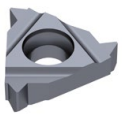
Right hand internal thread turning insert

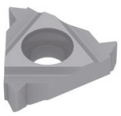
▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | HCN2525







Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 268 ...	IR 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

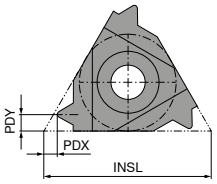
8

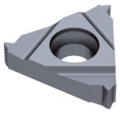
Left hand internal thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IL 71 270 ...
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

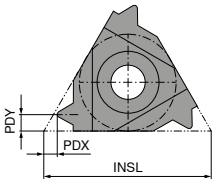
P	●
M	●
K	●
N	
S	○
H	○
O	

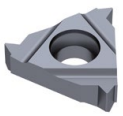
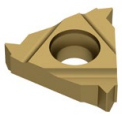
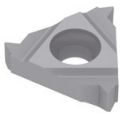
→ v_c Page 45

Right hand external thread turning insert

▲ Full profile

NPT 60°



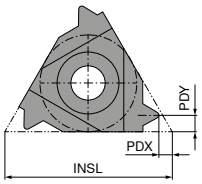
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	CCN20 ER 71 256 ...	CWN1525 ER 71 256 ...	HCN2525 ER 71 256 ...
16 ER 27	27,0	16	0,7	0,8	**240**		
16 ER 18	18,0	16	0,8	1,0	**242**		**742**
16 ER 14	14,0	16	0,9	1,2	**244**	**144**	**744**
16 ER 11,5	11,5	16	1,1	1,5	**246**	**146**	**746**
16 ER 8	8,0	16	1,3	1,8	**248**		
P					●	●	○
M					●	○	●
K					●	●	○
N						●	○
S					○		○
H					○		○
O						○	

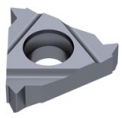
→ v_c Page 45

Left hand external thread turning insert

▲ Full profile

NPT 60°





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	CCN20 EL 71 258 ...
16 EL 27	27,0	16	0,7	0,8	**240**
16 EL 18	18,0	16	0,8	1,0	**242**
16 EL 14	14,0	16	0,9	1,2	**244**
16 EL 11,5	11,5	16	1,1	1,5	**246**
16 EL 8	8,0	16	1,3	1,8	**248**
P					●
M					●
K					●
N					
S					○
H					○
O					

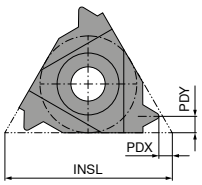
→ v_c Page 45

8

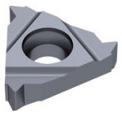
Right hand internal thread turning insert

▲ Full profile
▲ CCN7525 grade with sintered chip breaker for universal application

NPT 60°



CCN20 CCN7525



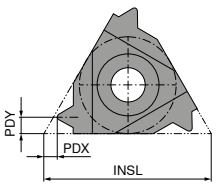

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 260 ...	IR 71 260 ...
11 IR 27	27,0	11	0,7	0,8	210	
11 IR 18	18,0	11	0,8	1,0	212	
11 IR 14	14,0	11	0,9	1,1	214	
16 IR 27	27,0	16	0,7	0,8	240	
16 IR 18	18,0	16	0,8	1,0	242	
16 IR 14	14,0	16	0,9	1,2	244	944
16 IR 11,5	11,5	16	1,1	1,5	246	946
16 IR 8	8,0	16	1,3	1,8	248	
P					●	●
M					●	●
K					●	●
N						
S					○	●
H					○	○
O						

→ v_c Page 45

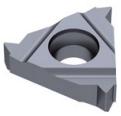
Left hand internal thread turning insert

▲ Full profile

NPT 60°



CCN20

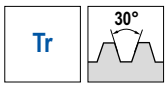


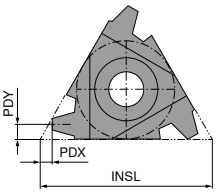
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IL 71 262 ...
11 IL 27	27,0	11	0,7	0,8	210
11 IL 18	18,0	11	0,8	1,0	212
11 IL 14	14,0	11	0,9	1,1	214
16 IL 27	27,0	16	0,7	0,8	240
16 IL 18	18,0	16	0,8	1,0	242
16 IL 14	14,0	16	0,9	1,2	244
16 IL 11,5	11,5	16	1,1	1,5	246
16 IL 8	8,0	16	1,3	1,8	248
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

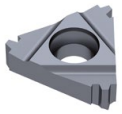
Right hand external thread turning insert

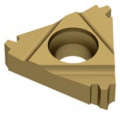
▲ Full profile
▲ Trapezoidal thread DIN 103





CCN20 | CWN1525





Designation	TP mm	INSL mm	PDX mm	PDY mm	ER 71 232 ...	ER 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.

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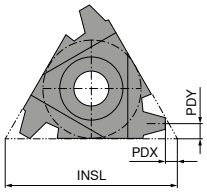
8

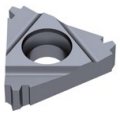
Left hand external thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103

Tr | 30°

CCN20





Designation	TP mm	INSL mm	PDX mm	PDY mm	EL 71 234 ...
16 EL 1,5	1,5	16	1,0	1,1	240
16 EL 2,0	2,0	16	1,1	1,3	242
16 EL 3,0	3,0	16	1,3	1,5	244
22 EL 4,0	4,0	22	1,7	1,9	270
22 EL 5,0	5,0	22	2,1	2,5	272
22 EL 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

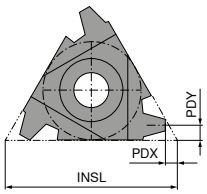
→ v_c Page 45

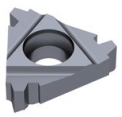
Right hand internal thread turning insert

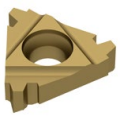
▲ Full profile
▲ Trapezoidal thread DIN 103

Tr | 30°

CCN20 | CWN1525







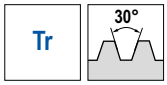
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR 71 236 ...	IR 71 236 ...
11 IR 1,5	1,5	11	0,815	0,9	210	
16 IR 1,5	1,5	16	1,000	1,1	240	
16 IR 2,0	2,0	16	1,100	1,3	242	
16 IR 3,0	3,0	16	1,300	1,5	244	144
22 IR 4,0	4,0	22	1,800	1,9		170
22 IR 4,0	4,0	22	1,700	1,9	270	
22 IR 5,0	5,0	22	2,000	2,4		172
22 IR 5,0	5,0	22	2,100	2,5	272	
22 IR 6,0	6,0	22	2,300	2,7	274 1)	
22 IN 6,0	6,0	22	2,000	11,0	276 2)	
22 IN 7,0	7,0	22	2,300	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.

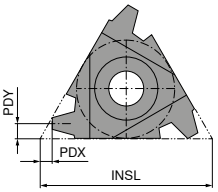
→ v_c Page 45

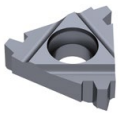
Left hand internal thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103



CCN20





Designation	TP mm	INSL mm	PDX mm	PDY mm	IL 71 238 ...
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					

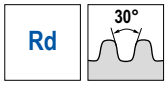
1) Requires special holder or an independently modified standard holder

→ v_c Page 45

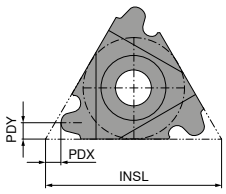
8

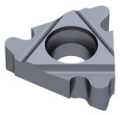
Right hand external thread turning insert

▲ Full profile
▲ Round thread DIN 405



CCN20





ER
71 248 ...

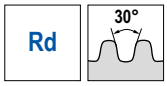
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
16 ER 10	10	16	1,1	1,2	**240**
16 ER 8	8	16	1,4	1,3	**242**
16 ER 6	6	16	1,5	1,7	**246**
22 ER 6	6	22	1,5	1,7	**270**
22 ER 4	4	22	2,2	2,3	**272**

P	●
M	●
K	●
N	
S	○
H	○
O	

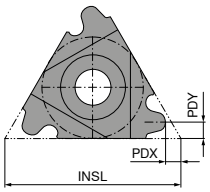
→ v_c Page 45

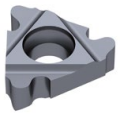
Left hand external thread turning insert

▲ 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	

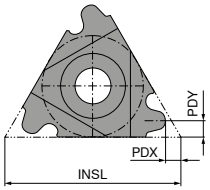
→ v_c Page 45

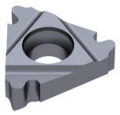
Right hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

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	

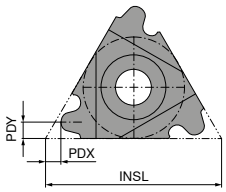
→ v_c Page 45

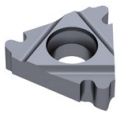
Left hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

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	

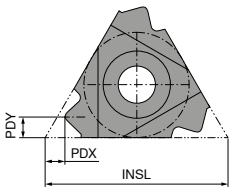
→ v_c Page 45

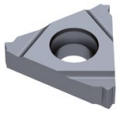
Right hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	ER 71 240 ...
16 ER 20	20	16	0,8	0,8	**240**
16 ER 18	18	16	0,8	0,9	**242**
16 ER 16	16	16	0,8	1,0	**244**

P	●
M	●
K	●
N	
S	○
H	○
O	

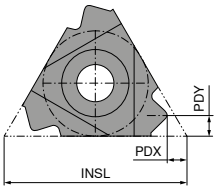
→ v_c Page 45

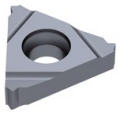
Left hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	EL 71 242 ...
16 EL 20	20	16	0,8	0,8	**240**
16 EL 18	18	16	0,8	0,9	**242**
16 EL 16	16	16	0,8	1,0	**244**

P	●
M	●
K	●
N	
S	○
H	○
O	

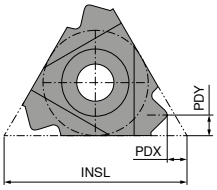
→ v_c Page 45

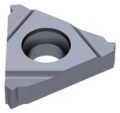
Right hand internal thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

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	

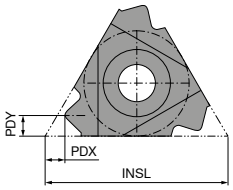
→ v_c Page 45

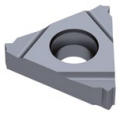
Left hand internal thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20





IL
71 246 ...

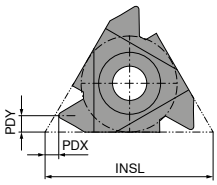
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	
11 IL 18	18	11	0,8	0,9	**238**
16 IL 18	18	16	0,8	0,9	**242**
16 IL 16	16	16	0,8	1,0	**244**

P	●
M	●
K	●
N	
S	○
H	○
O	

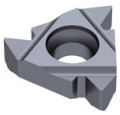
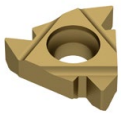
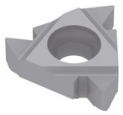
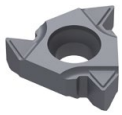
→ v_c Page 45

Right hand external thread turning insert

▲ Partial profile
▲ CCN7525 grade with sintered chip breaker for universal application



CCN20 | CWN1525 | HCN2525 | CCN7525

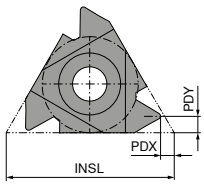
Designation	TP mm	INSL mm	PDX mm	PDY mm	ER 71 206 ...	ER 71 206 ...	ER 71 206 ...	ER 71 206 ...
16 ER A60	0,5 - 1,5	16	0,8	0,9	**240**	**140**	**740**	**940**
16 ER AG60	0,5 - 3	16	1,2	1,7	**244**	**144**	**744**	**944**
16 ER G60	1,75 - 3	16	1,2	1,7	**242**	**142**	**742**	**942**
22 EN U60	5,5 - 8	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.

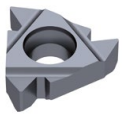
→ v_c Page 45

Left hand external thread turning insert

▲ Partial profile



CCN20

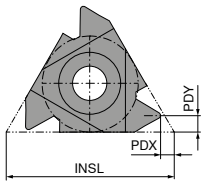


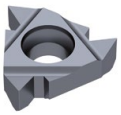
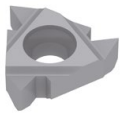
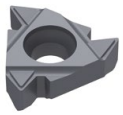
Designation	TP mm	INSL mm	PDX mm	PDY mm	EL 71 208 ...
16 EL A60	0,5 - 1,5	16	0,8	0,9	**240**
16 EL AG60	0,5 - 3	16	1,2	1,7	**244**
16 EL G60	1,75 - 3	16	1,2	1,7	**242**
22 EL N60	3,5 - 5	22	1,7	2,5	**270**
P					●
M					●
K					●
N					
S					○
H					○
O					

→ v_c Page 45

Right hand internal thread turning insert

▲ Partial profile
▲ CCN7525 grade with sintered chip breaker for universal application



	CCN20	CWN1525	HCN2525	CCN7525
				
	IR	IR	IR	IR
	71 210 ...	71 210 ...	71 210 ...	71 210 ...

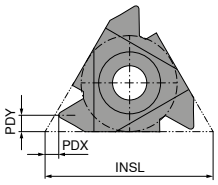
Designation	TP mm	INSL mm	PDX mm	PDY mm							
11 IR A60	0,5 - 1,5	11	0,8	0,9	**210**		**110**				
16 IR A60	0,5 - 1,5	16	0,8	0,9	**240**		**140**				
16 IR AG60	0,5 - 3	16	1,2	1,7	**244**		**144**		**744**		**944**
16 IR G60	1,75 - 3	16	1,2	1,7	**242**		**142**				
22 IN U60	5,5 - 8	22	0,9	11,0	**272**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

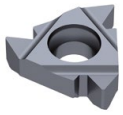
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 45

Left hand internal thread turning insert

▲ Partial profile



	CCN20
	
	IL
	71 212 ...

Designation	TP mm	INSL mm	PDX mm	PDY mm	
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					

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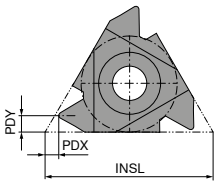
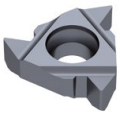
8

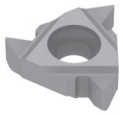
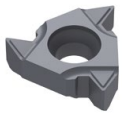
Right hand external thread turning insert

▲ Partial profile
▲ CCN7525 grade with sintered chip breaker for universal application



CCN20 | CWN1525 | HCN2525 | CCN7525



Designation	TPI	INSL	PDX	PDY	ER 71 200 ...	ER 71 200 ...	ER 71 200 ...	ER 71 200 ...
	1/"	mm	mm	mm				
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.

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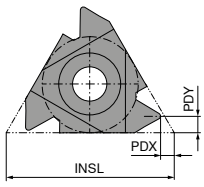
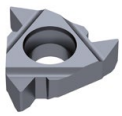
Left hand external thread turning insert

▲ Partial profile



CCN20



Designation	TPI	INSL	PDX	PDY	EL 71 202 ...
	1/"	mm	mm	mm	
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					

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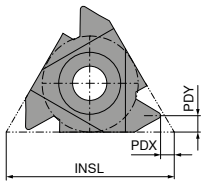
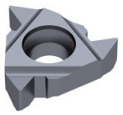
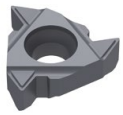
Right hand internal thread turning insert

▲ Partial profile
▲ CCN7525 grade with sintered chip breaker for universal application



CCN20 | CWN1525 | CCN7525





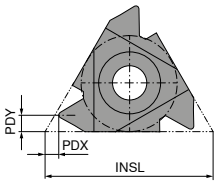
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 204 ...	IR 71 204 ...	IR 71 204 ...
11 IR A55	48 - 16	11	0,8	0,9	**210**		
16 IR A55	48 - 16	16	0,8	0,9	**240**		
16 IR AG55	48 - 8	16	1,2	1,7	**244**		
16 IR G55	14 - 8	16	1,2	1,7	**242**	**142**	**942**
22 IN U55	4,5 - 3,25	22	0,9	11,0	**272** [1)]		
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.

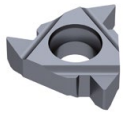
→ v_c Page 45

Left hand internal thread turning insert

▲ Partial profile



CCN20



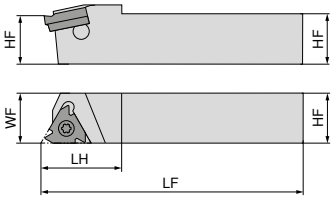
Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IL 71 203 ...
11 IL A55	48 - 16	11	0,8	0,9	**210**
16 IL A55	48 - 16	16	0,8	0,9	**240**
16 IL AG55	48 - 8	16	1,2	1,7	**244**
16 IL G55	14 - 8	16	1,2	1,7	**242**
22 IL N55	7 - 5	22	1,7	2,5	**270**
P					●
M					●
K					●
N					
S					○
H					○
O					

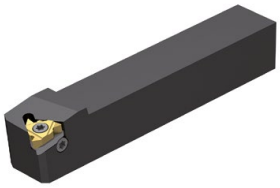
→ v_c Page 45

8

Standard External Thread Turning Holder

▲ Tool Holder with Approach Angle ß = 1,5°





Illustrations show right-hand versions

ISO designation	HF mm	WF mm	LF mm	LH mm	Insert	torque moment Nm	Left-hand 71 281 ...	Right-hand 71 280 ...
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]

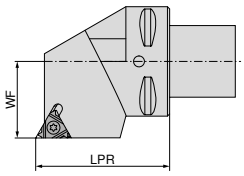
1) Neutral insert indicated by marking (N)
2) without shim

Spare parts for Article no.	Multi tooth shim 71 950 ...		Shim 71 950 ...		Screw-U 71 950 ...		Key D 80 950 ...		Clamping screw 71 950 ...	
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.**

External threading holder

▲ Tool Holder with Approach Angle ß = 1,5°



Illustrations show right-hand versions

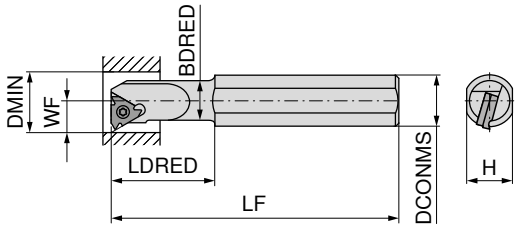
ISO designation	Adapter	LPR mm	WF mm	Insert	torque moment Nm	Left-hand 84 191 ...	Right-hand 84 190 ...
PSC40 SE R/L 27050-16.IK	PSC 40	50	27	16 ..	3,5	**412**	**412**
PSC40 SE R/L 27050-22.IK	PSC 40	50	27	22 ..	10	**422**	**422**
PSC50 SE R/L 35060-16.IK	PSC 50	60	35	16 ..	3,5	**512**	**512**
PSC50 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**

Spare parts for Article no.	Multi tooth shim 71 950 ...		Shim 71 950 ...		Screw-U 71 950 ...		Key D 80 950 ...		Clamping screw 71 950 ...	
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 ß = 1,5°



Illustrations show right-hand versions

ISO designation	H	LF	LDRED	DCONMS	BDRED	WF	DMIN	Insert	torque moment	Left-hand	Right-hand
	mm	mm	mm	mm	mm	mm	mm		Nm	71 283 ...	71 282 ...
SI R 0010 H11	9,0	100	25	10	9,5	7,4	12	11 ..	1,3		**011** [1]
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

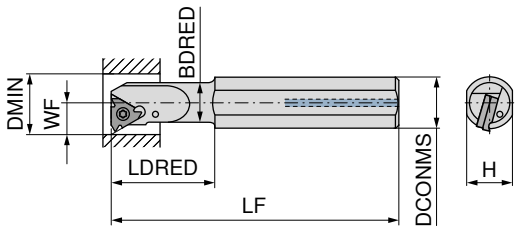

Clamping screw

Spare parts for Article no.		71 950 ...		71 950 ...		71 950 ...		80 950 ...		71 950 ...
71 282 011							T08	**110**		**230**
71 282 010 / 71 283 010							T08	**110**		**230**
71 282 013							T08	**110**		**230**
71 282 015 / 71 283 015							T10	**112**		**236**
71 282 016 / 71 283 016							T10	**112**		**236**
71 282 020	EL 16 / IR 16	**108**	EL 16 / IR 16	**129**		**234**	T10	**112**		**231**
71 283 020	ER 16 / IL 16	**101**	ER 16 / IL 16	**121**		**234**	T10	**112**		**231**
71 282 026	EL 16 / IR 16	**108**	EL 16 / IR 16	**129**		**234**	T10	**112**		**231**
71 282 032	EL 16 / IR 16	**108**	EL 16 / IR 16	**129**		**234**	T10	**112**		**231**
71 283 032	ER 16 / IL 16	**101**	ER 16 / IL 16	**121**		**234**	T10	**112**		**231**
71 282 040	EL 16 / IR 16	**108**	EL 16 / IR 16	**129**		**234**	T10	**112**		**231**
71 282 120						**234**	T20	**114**		**237**
71 282 126			EL 22 / IR 22	**145**		**235**	T20	**114**		**232**
71 283 126			ER 22 / IL 22	**137**		**235**	T20	**114**		**232**
71 282 132			EL 22 / IR 22	**145**		**235**	T20	**114**		**232**
71 282 140			EL 22 / IR 22	**145**		**235**	T20	**114**		**232**
71 282 133			AL 22U / IR 22U	**161**		**235**	T20	**114**		**232**

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

Standard Internal Thread Turning Holder with thro' coolant

▲ Tool Holder with Approach Angle ß = 1,5°



Illustrations show right-hand versions

									Left-hand	Right-hand
									71 283 ...	71 282 ...
ISO designation	H	LF	LDRED	DCONMS	BDRED	WF	DMIN	Insert	torque moment	
	mm	mm	mm	mm	mm	mm	mm		Nm	
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
SI R/L 0013 M16B	14,0	150	32	16	13,0	10,2	16	16 ..	3,5	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]

1) with shim seat
2) Carbide version


Multi tooth shim


Shim

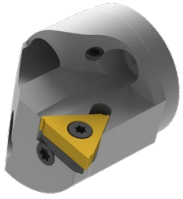

Screw-U

Key D


Clamping screw

			71 950 ...			71 950 ...		71 950 ...		80 950 ...		71 950 ...
Spare parts for Article no.												
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.**



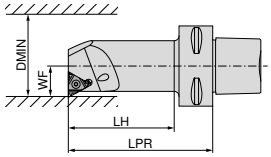
Do you already know our MaxiChange exchangeable head system?

Use our thread turning inserts with the MaxiChange exchangeable head system.

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

Internal threading holder

▲ Tool Holder with Approach Angle ß = 1,5°



Illustrations show right-hand versions

ISO designation	Adapter	WF mm	LPR mm	LH mm	DMIN mm	Insert	torque moment Nm	Left-hand 84 197 ...	Right-hand 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

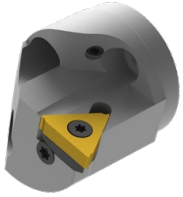

Screw-U


Key D


Clamping screw

Spare parts Insert			71 950 ...		71 950 ...		71 950 ...		80 950 ...		71 950 ...
16 ..	right	EL 16 / IR 16	**108**	EL 16 / IR 16	**129**	**234**	T10	**112**	**231**
16 ..	left	ER 16 / IL 16	**101**	ER 16 / IL 16	**121**	**234**	T10	**112**	**231**
22 ..	left			ER 22 / IL 22	**137**	**235**	T20	**114**	**232**
22 ..	right			EL 22 / IR 22	**145**	**235**	T20	**114**	**232**

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



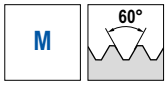
Do you already know our MaxiChange exchangeable head system?

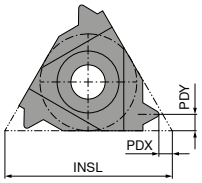
Use our thread turning inserts with the MaxiChange exchangeable head system.

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	IR 71 271 ...	IR 71 224 ...
06 IR 0,5	0,50	0,9	0,5	6	**110**	**35700**
06 IR 0,75	0,75	0,8	0,5	6	**112**	**36100**
06 IR 1,0	1,00	0,7	0,6	6	**114**	**36500**
06 IR 1,25	1,25	0,6	0,6	6	**116**	**36700**
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

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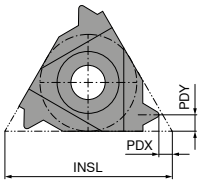
8

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 71 230 ...	IR 71 230 ...
06 IR 26	26	0,7	0,6	6	**13500**	**33500**
06 IR 22	22	0,6	0,6	6	**13100**	**33100**
06 IR 20	20	0,6	0,7	6	**12900**	**32900**
06 IR 18	18	0,6	0,7	6	**12500**	**32500**
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

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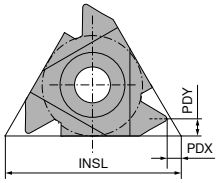
Right hand internal thread turning insert – Mini size 06

▲ 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					○	

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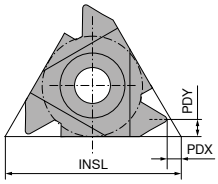
Right hand internal thread turning insert – Mini size 06

▲ 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					○	

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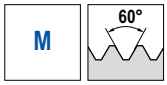
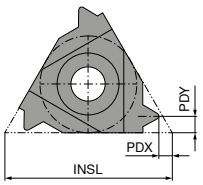
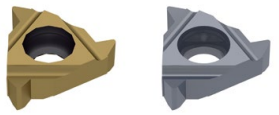
Right hand internal thread turning insert – Mini size 08

▲ 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)

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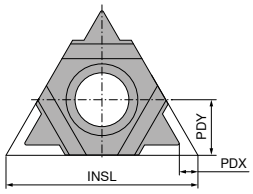
Right hand internal thread turning insert – Mini size 08

▲ 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					○	

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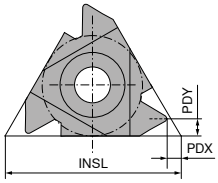
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8 mm



CCN1525 | CCN2520

Designation	TP mm	PDX mm	PDY mm	INSL mm	IR 71 272 ...	IR 71 272 ...
08 IR A60	0,5 - 1,25	0,6	0,6	8	**10600**	
08 IR A60	0,5 - 1,5	0,6	0,7	8		**30600**
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

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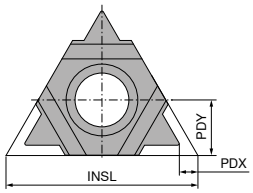
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8 mm



CCN1525 | CCN2520

Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IN 71 273 ...	IN 71 273 ...
08 IN M55	14 - 11	8	0,9	4	**10900**	
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

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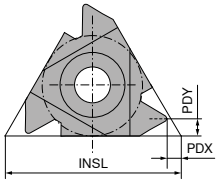
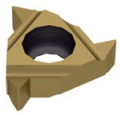
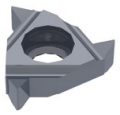
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8 mm



CCN1525 | CCN2520





Designation	TPI 1/"	INSL mm	PDX mm	PDY mm	IR 71 272 ...	IR 71 272 ...
08 IR A55	48 - 16	8	0,6	0,7	**10700**	**30700**
P					●	○
M					●	●
K					●	○
N					○	
S						●
H						○
O					○	

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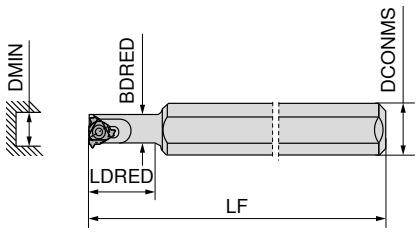
Right Hand Internal Thread Holder – Mini size 06



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

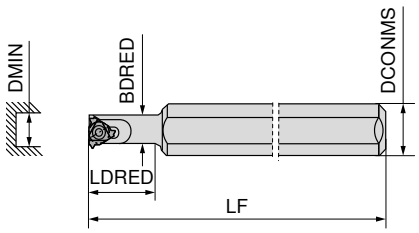
Key D

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

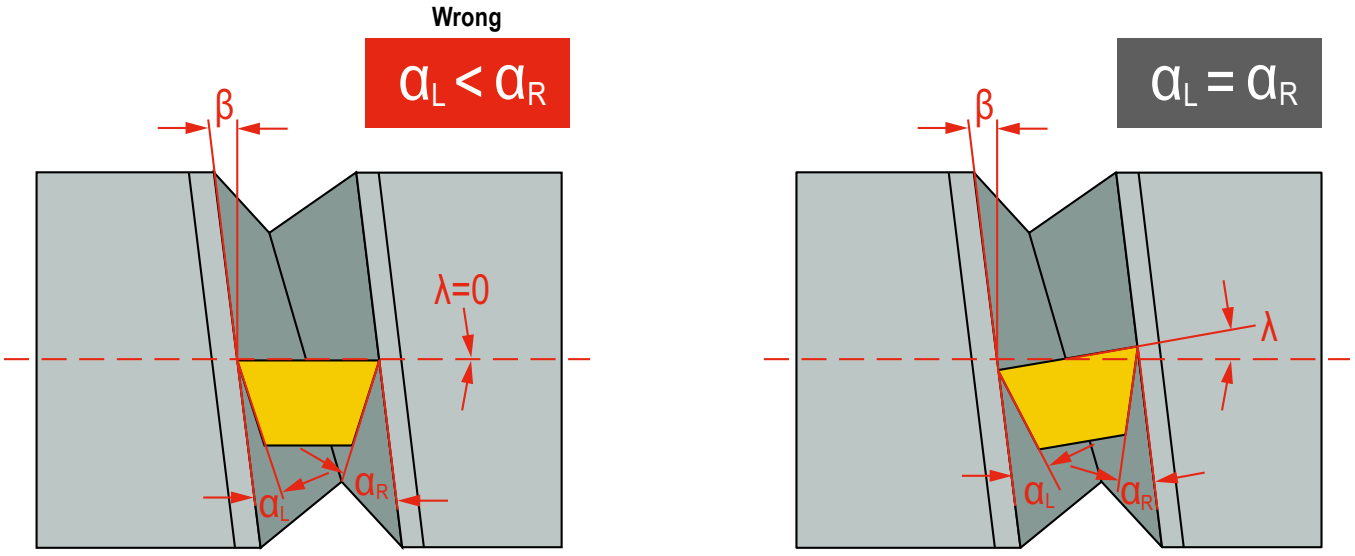
▲ Use the formula on **page 47** to calculate the required correction angle α (±).
▲ Then find the corresponding correction plate below.

Pitch-angle β	Correction angle α	AE 16 ER 16 / IL 16 71 950 ...	AI 16 EL 16 / IR 16 71 950 ...	AE 22 ER 22 / IL 22 71 950 ...	AI 22 EL 22 / IR 22 71 950 ...	AE 22 U ER 22 / IL 22 71 950 ...	AI 22 U EL 22 / IR 22 71 950 ...	AE 16 M ER 16 / IL 16 71 950 ...	AI 16 M EL 16 / IR 16 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/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 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/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 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/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 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/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 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/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

Cutting data standard values

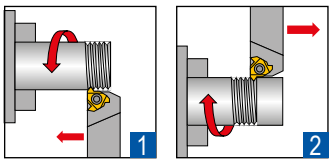
Index	CCN1525 Mini	CCN2520 Mini	CWN1525	HCN2525	CCN7525	CCN20	CWK20
	v_c (m/min)						
P.1.1	**80**	120	**120**	120	**120**	**120**	
P.1.2	**80**	120	**120**	120	**120**	**120**	
P.1.3	**80**	120	**120**	120	**120**	**120**	
P.1.4	**80**	80	**80**	90	**80**	**80**	
P.1.5	**70**	80	**80**	90	**80**	**80**	
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.

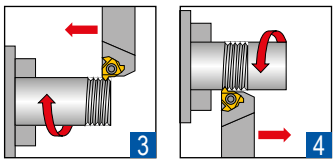
8

Thread turning methods

External right-hand thread

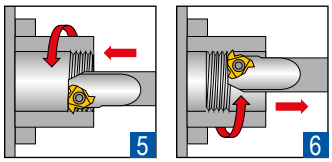


External left-hand thread

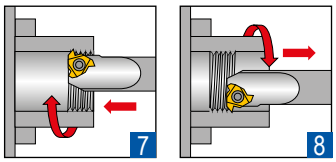


The machining examples 2, 4, 6 and 8 require negative shims!
These shims can be found on → **Page 43.**

Internal right-hand thread

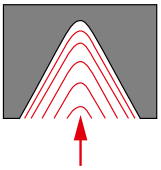


Internal left-hand thread



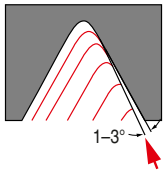
Thread infeed methods

Radial Infeed



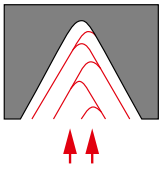
- for pitches less than 1.5 mm
- for short chipping materials
- for machining hardened materials
- simple and quick method

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

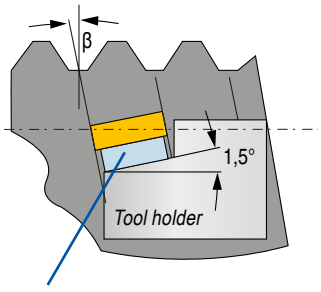
Calculating the helix angle β:

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

For trapezium:

$$\frac{15 \times TP}{DMIN}$$

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



Example calculation

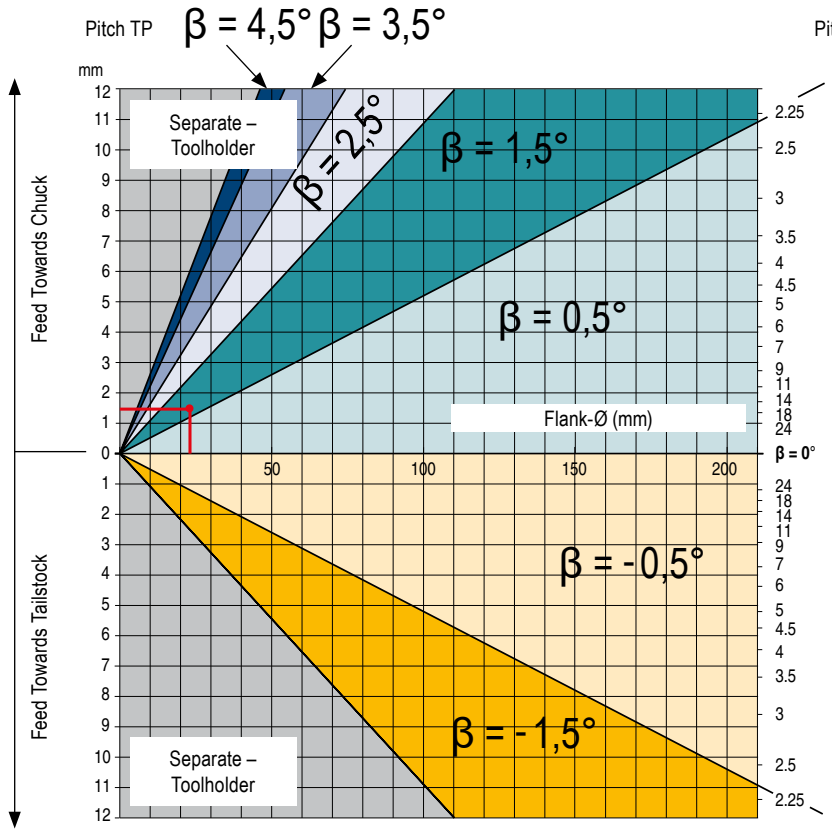
External thread M24 x 1.5
Feed towards chuck
DMIN = Nominal Ø: M24 = 24 mm
TP = Pitch: 1.5 mm

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

β = 1,25°

Method 2: Diagram

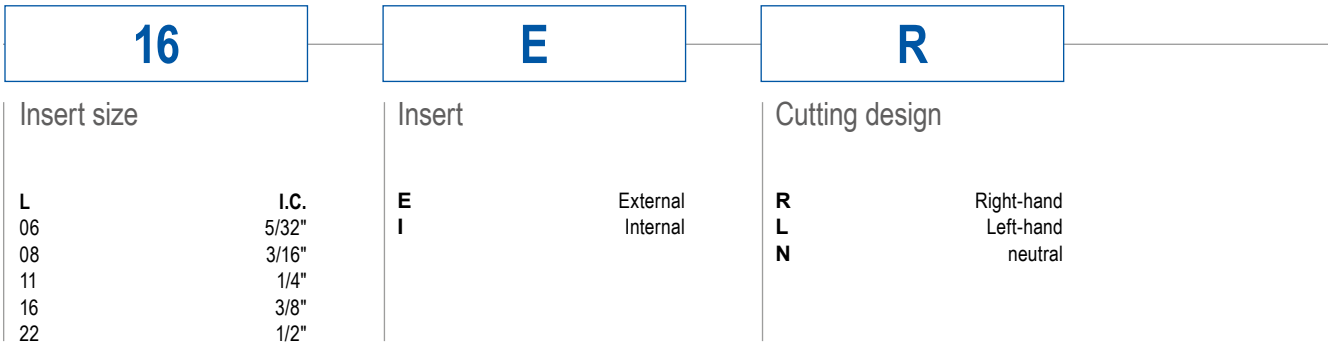
From the flank Ø in the diagram, a line is drawn vertically upwards until it intersects with the line of the pitch of the thread to be produced. In the color-coded region in which it is now, a horizontal line to the edge of the chart indicates the appropriate factor.



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°

8

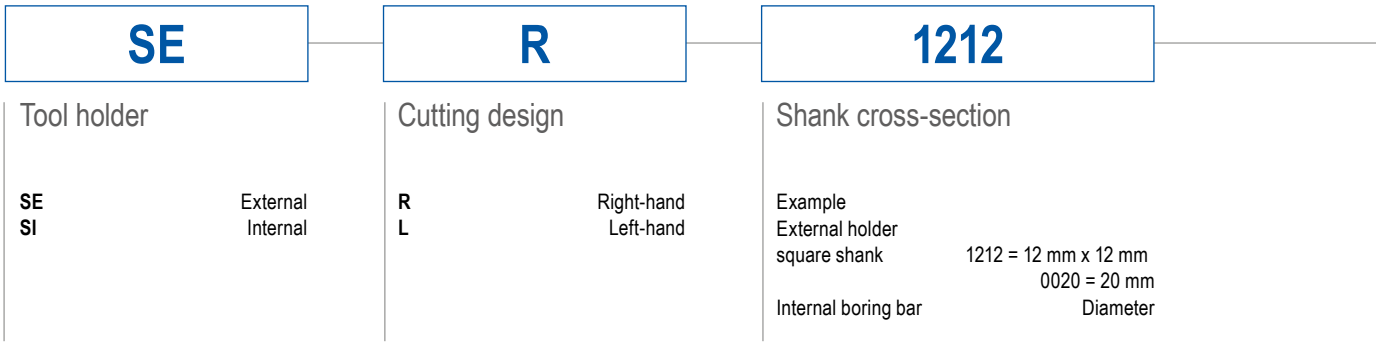
Designation key – indexable inserts



Example

16 ER AG 60
ER16 right hand – external insert with a pitch of 0.5-3.0 mm

Designation key – holders



Example

SE R 1212 F 16
Right 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

8

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

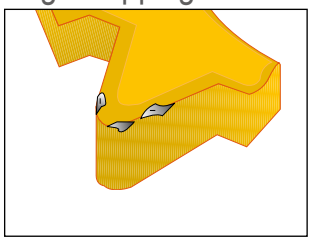
L	I.C.
06	5/32"
08	3/16"
11	1/4"
16	3/8"
22	1/2"

Properties

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

Troubleshooting

Edge chipping



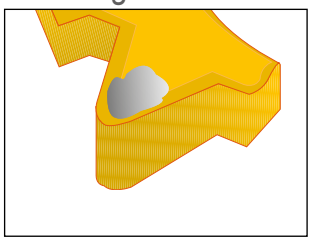
Cause

- Common in stainless materials
- Incorrect grade

Remedy

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

Cratering



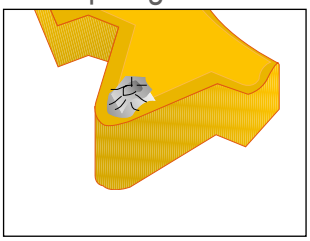
Cause

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

Remedy

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

Built-up edge



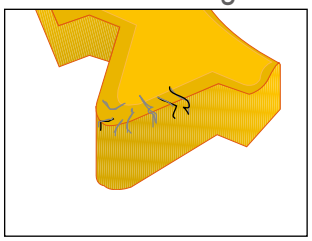
Cause

- Cutting speed too low
- Incorrect grade

Remedy

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

Thermal cracking



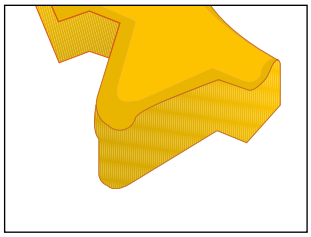
Cause

- Insufficient coolant
- Cutting speed too high
- Incorrect grade

Remedy

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

Plastic deformation



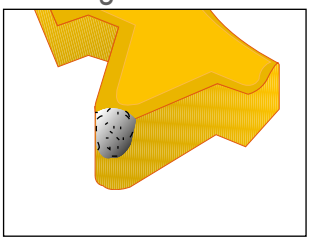
Cause

- 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

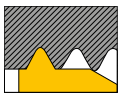
Stainless steel

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