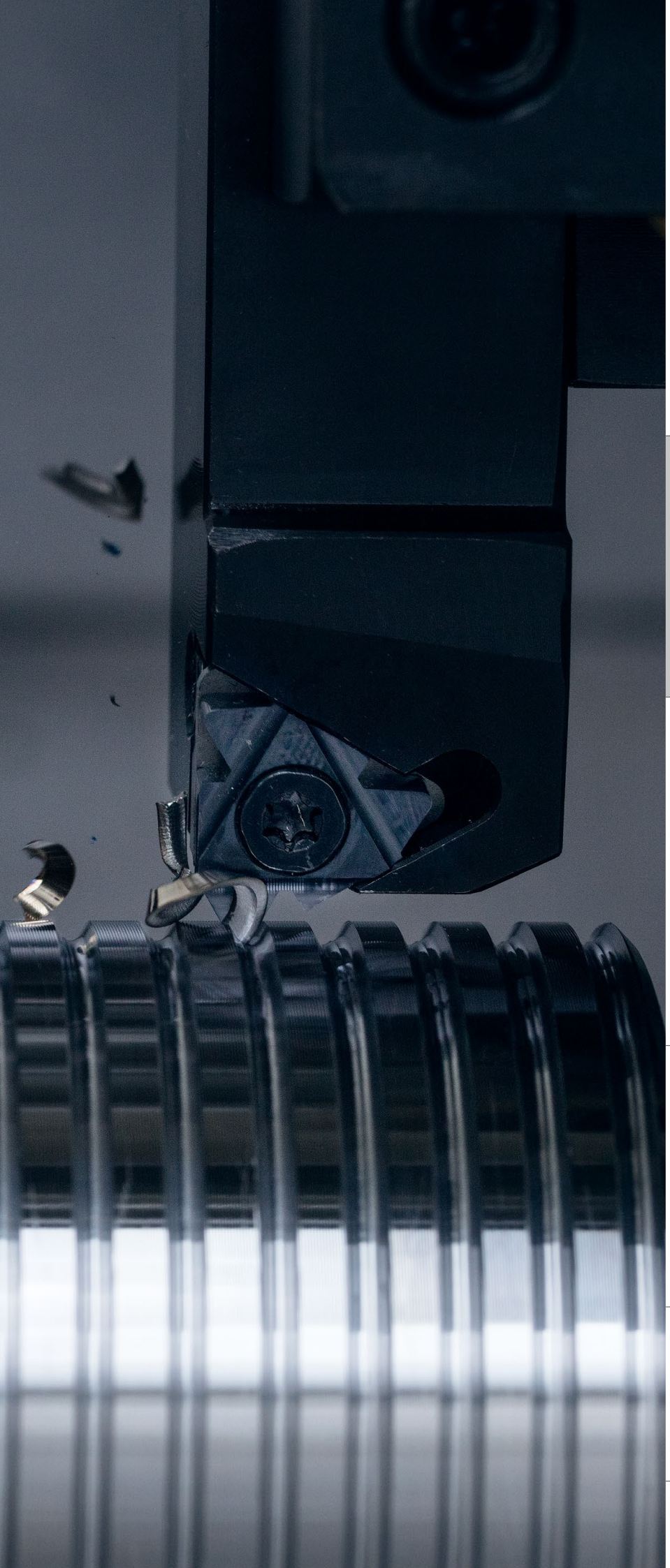

Solid drilling and bore machining

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 EcoCut
11 Grooving Tools
12 Miniature turning tools

Milling

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

Tool Clamping

16 Adapters
17 Accessories

18 Material examples and article no. index

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Product programme	4–38
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WNT Designation Key	45
Grade description and profile explanation	46

WNT \ Performance

Premium quality tools for high performance.

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

Toolfinder

TC threading system (external thread)

M	BSW
Full profile Partial profile	Full profile Partial profile

→ Chapter 11 – Grooving tools

TC threading system (internal thread)

M	BSW
Full profile Partial profile	Full profile Partial profile

→ Chapter 11 – Grooving tools

MiniCut

M	G	Tr
Full profile Partial profile	Partial profile	Partial profile

→ Chapter 12 – Miniature turning tools

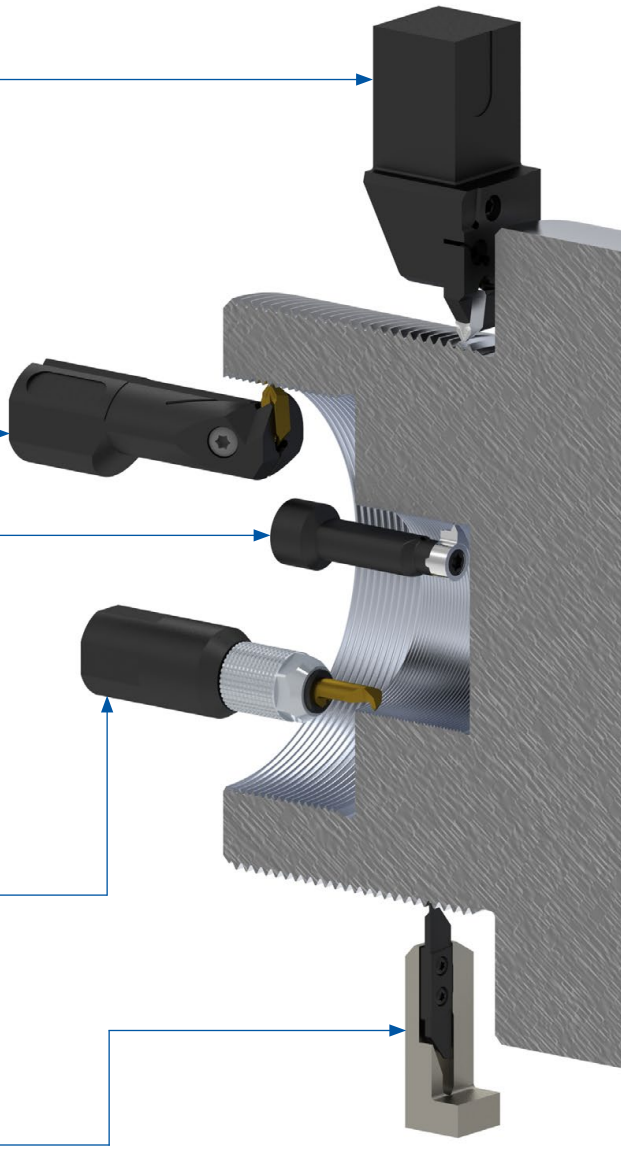
UltraMini

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

→ Chapter 12 – Miniature turning tools

VertiClamp/System 25

→ Sliding head tooling catalogue, Chapter 3 – Turning



Symbol explanation

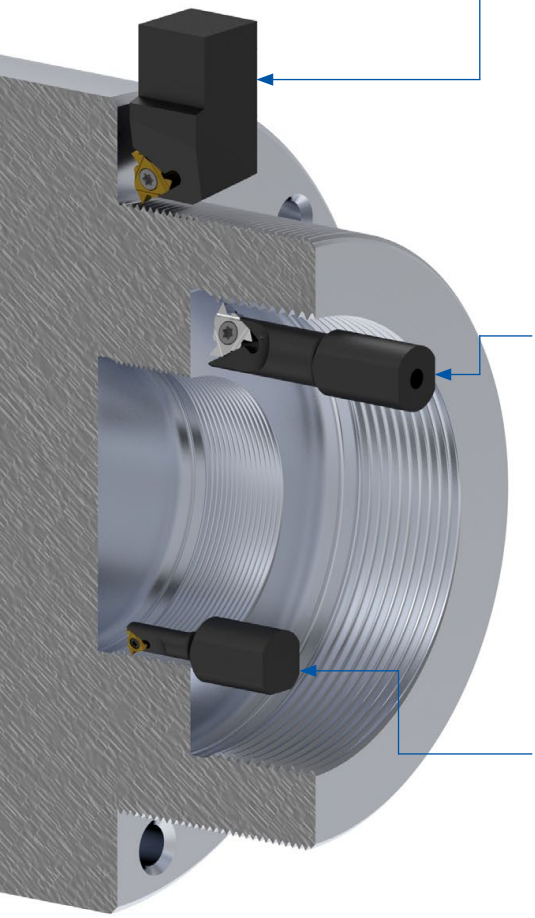
Flank angle

- 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)

● = **Main Application**
○ = Extended application

Threading

- **M** — ISO metric coarse thread DIN 13
- **MF** — ISO Metric fine thread DIN 13
- **MJ** — Metric thread for the aerospace industry DIN ISO 5855
- **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	MJ	BSW	UN	UNC	UNF	UNEF	NPT	Tr	Rd	Pg
4+5	9	11+12	15+16	15+16	15+16	15+16	19	21	23	25

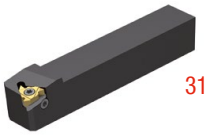
Partial profile

60°	55°
27	29

Multi-cutting edge

M
8

Suitable holder



31

Standard internal thread turning

Full profile

M	MJ	BSW	UN	UNC	UNF	UNEF	NPT	Tr	Rd	Pg
6+7	10	13+14	17+18	17+18	17+18	17+18	20	22	24	26

Partial profile

60°	55°
28	30

Suitable holder

32+33

Mini 06

Full profile

M	BSW
34	34

Partial profile

60°	55°
35	35

Mini 08

Full profile

M
36

Partial profile

60°	55°
36	37

Suitable holder

38

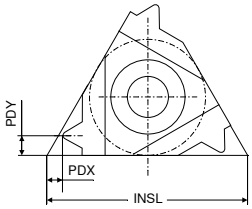
Information on the different thread profiles can be found on → **Page 46.**

Right hand external thread turning insert

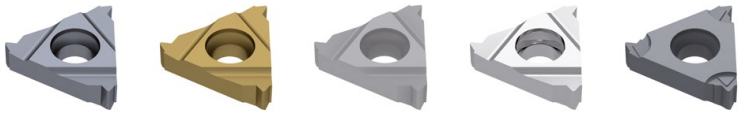
▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application

M | MF | 60°



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



Designation	TP	INSL	PDX	PDY	ER	ER	ER	ER	ER
	mm	mm	mm	mm	Article no. 71 220 ...	Article no. 71 220 ...	Article no. 71 220 ...	Article no. 71 220 ...	Article no. 71 220 ...
11 ER 0,35	0,35	11	0,8	0,4	204			604	
11 ER 0,4	0,40	11	0,7	0,4	206			606	
11 ER 0,45	0,45	11	0,7	0,4	208			608	
11 ER 0,5	0,50	11	0,6	0,6	209			609	
11 ER 0,6	0,60	11	0,6	0,6	210			610	
11 ER 0,7	0,70	11	0,6	0,6	211			611	
11 ER 0,75	0,75	11	0,6	0,6	212			612	
11 ER 0,8	0,80	11	0,6	0,6	213			613	
11 ER 1,0	1,00	11	0,7	0,7	214			614	
11 ER 1,25	1,25	11	0,8	0,9	216			616	
11 ER 1,5	1,50	11	0,8	1,0	218			618	
11 ER 1,75	1,75	11	0,8	1,1	220			620	
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	670	
22 ER 4,0	4,00	22	1,6	2,3	272	172	772	672	
22 ER 4,5	4,50	22	1,7	2,4	274	174	774	674	
22 ER 5,0	5,00	22	1,7	2,5	276	176	776	676	
22 ER 5,5	5,50	22	1,7	2,6		178			
22 ER 5,5	5,50	22	1,9	2,7	278			678	
22 EN 5,5	5,50	22	2,3	11,0	282 [1]			682 [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			680	
22 EN 6,0	6,00	22	2,6	11,0	284 [1]			684 [1]	

Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

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

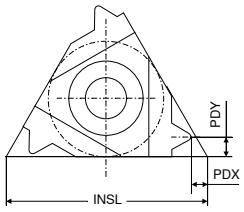
→ v_c Page 42

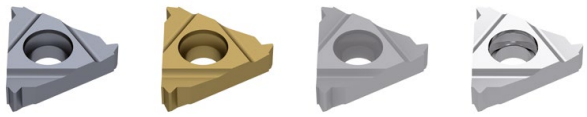
Left hand external thread turning insert

▲ Full profile

M | MF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20





Designation	TP	INSL	PDX	PDY	EL Article no. 71 222 ...	EL Article no. 71 222 ...	EL Article no. 71 222 ...	EL Article no. 71 222 ...
	mm	mm	mm	mm				
11 EL 0,35	0,35	11	0,8	0,4	**204**			**604**
11 EL 0,4	0,40	11	0,7	0,4	**206**			**606**
11 EL 0,45	0,45	11	0,7	0,4	**208**			**608**
11 EL 0,5	0,50	11	0,6	0,6	**209**			**609**
11 EL 0,6	0,60	11	0,6	0,6	**210**			**610**
11 EL 0,7	0,70	11	0,6	0,6	**211**			**611**
11 EL 0,75	0,75	11	0,6	0,6	**212**			**612**
11 EL 0,8	0,80	11	0,6	0,6	**213**			**613**
11 EL 1,0	1,00	11	0,7	0,7	**214**			**614**
11 EL 1,25	1,25	11	0,8	0,9	**216**			**616**
11 EL 1,5	1,50	11	0,8	1,0	**218**			**618**
11 EL 1,75	1,75	11	0,8	1,1	**220**			**620**
16 EL 0,35	0,35	16	0,8	0,4	**234**			**634**
16 EL 0,4	0,40	16	0,7	0,4	**236**			**636**
16 EL 0,45	0,45	16	0,7	0,4	**238**			**638**
16 EL 0,5	0,50	16	0,6	0,6	**240**			**640**
16 EL 0,7	0,70	16	0,6	0,6	**241**			**641**
16 EL 0,75	0,75	16	0,6	0,6	**242**			**642**
16 EL 0,8	0,80	16	0,6	0,6	**243**			**643**
16 EL 1,0	1,00	16	0,7	0,7	**244**	**144**	**744**	**644**
16 EL 1,25	1,25	16	0,8	0,9	**246**	**146**		**646**
16 EL 1,5	1,50	16	0,8	1,0	**248**	**148**	**748**	**648**
16 EL 1,75	1,75	16	0,9	1,2	**250**		**750**	**650**
16 EL 2,0	2,00	16	1,0	1,3	**252**	**152**		**652**
16 EL 2,5	2,50	16	1,1	1,5	**254**			**654**
16 EL 3,0	3,00	16	1,2	1,6	**256**	**156**		**656**
22 EL 3,5	3,50	22	1,6	2,3	**270**			**670**
22 EL 4,0	4,00	22	1,6	2,3	**272**			**672**
22 EL 4,5	4,50	22	1,7	2,4	**274**			**674**
22 EL 5,0	5,00	22	1,7	2,5	**276**			**676**
22 EL 5,5	5,50	22	1,9	2,7	**278**			**678**
22 EL 6,0	6,00	22	2,0	2,9	**280**			**680**

Steel	●	●	○	
Stainless steel	●	○	●	
Cast iron		●	○	●
Non ferrous metals	○	●	○	●
Heat resistant alloys			○	○

→ v_c Page 42

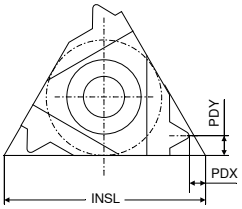
8

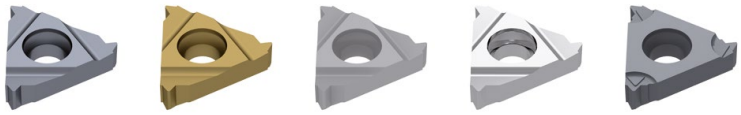
Right hand internal thread turning insert

- 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 Article no. 71 224 ...	IR Article no. 71 224 ...	IR Article no. 71 224 ...	IR Article no. 71 224 ...	IR Article no. 71 224 ...
	mm	mm	mm	mm					
11 IR 0,35	0,35	11	0,8	0,3	**204**			**604**	
11 IR 0,4	0,40	11	0,8	0,4	**206**			**606**	
11 IR 0,45	0,45	11	0,8	0,4	**208**			**608**	
11 IR 0,5	0,50	11	0,6	0,6	**210**			**610**	
11 IR 0,7	0,70	11	0,6	0,6	**211**			**611**	
11 IR 0,75	0,75	11	0,6	0,6	**212**			**612**	**912**
11 IR 0,8	0,80	11	0,6	0,6	**213**		**713**	**613**	
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**	**614**	
11 IR 1,25	1,25	11	0,8	0,9	**216**			**616**	
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**	**618**	
11 IR 1,75	1,75	11	0,9	1,1	**220**			**620**	
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**			**622**	
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**			**624**	
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**	**670**	
22 IR 4,0	4,00	22	1,6	2,3	**272**	**172**	**772**	**672**	
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**			**674**	
22 IR 5,0	5,00	22	1,6	2,3		**176**			
22 IR 5,0	5,00	22	1,7	2,5	**276**			**676**	
22 IR 5,5	5,50	22	1,6	2,3		**178**			
22 IR 5,5	5,50	22	1,9	2,7	**278**			**678**	
22 IN 5,5	5,50	22	2,3	11,0	**282** [1)]			**682** [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**			**680**	
22 IN 6,0	6,00	22	2,6	11,0	**284** [1)]			**684** [1)]	

Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

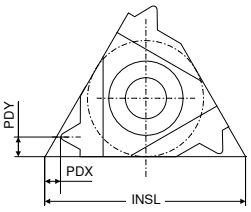
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 42

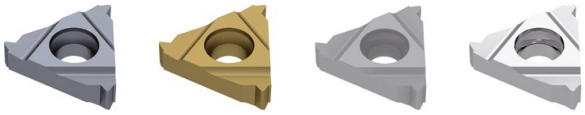
Left hand internal thread turning insert

▲ Full profile

M | MF | 60°



CCN20 | CWN1525 | HCN2525 | CWK20



Designation	TP	INSL	PDX	PDY	IL Article no. 71 226 ... CCN20	IL Article no. 71 226 ... CWN1525	IL Article no. 71 226 ... HCN2525	IL Article no. 71 226 ... CWK20
	mm	mm	mm	mm				
11 IL 0,35	0,35	11	0,8	0,3	**204**			**604**
11 IL 0,4	0,40	11	0,8	0,4	**206**			**606**
11 IL 0,45	0,45	11	0,8	0,4	**208**			**608**
11 IL 0,5	0,50	11	0,6	0,6	**210**			**610**
11 IL 0,7	0,70	11	0,6	0,6	**211**			**611**
11 IL 0,75	0,75	11	0,6	0,6	**212**			**612**
11 IL 0,8	0,80	11	0,6	0,6	**213**			**613**
11 IL 1,0	1,00	11	0,6	0,7	**214**			**614**
11 IL 1,25	1,25	11	0,8	0,9	**216**			**616**
11 IL 1,5	1,50	11	0,8	1,0	**218**			**618**
11 IL 1,75	1,75	11	0,9	1,1	**220**			**620**
11 IL 2,0	2,00	11	0,9	1,1	**222**			**622**
11 IL 2,5	2,50	11	0,9	1,1	**224**			**624**
16 IL 0,35	0,35	16	0,8	0,4	**234**			**634**
16 IL 0,4	0,40	16	0,7	0,4	**236**			**636**
16 IL 0,45	0,45	16	0,7	0,4	**238**			**638**
16 IL 0,5	0,50	16	0,6	0,6	**240**			**640**
16 IL 0,7	0,70	16	0,6	0,6	**241**			**641**
16 IL 0,75	0,75	16	0,6	0,6	**242**			**642**
16 IL 0,8	0,80	16	0,6	0,6	**243**			**643**
16 IL 1,0	1,00	16	0,6	0,7		**144**		
16 IL 1,0	1,00	16	0,7	0,7	**244**			**644**
16 IL 1,25	1,25	16	0,8	0,9	**246**			**646**
16 IL 1,5	1,50	16	0,8	1,0	**248**	**148**	**748**	**648**
16 IL 1,75	1,75	16	0,9	1,2	**250**			**650**
16 IL 2,0	2,00	16	1,0	1,3	**252**	**152**		**652**
16 IL 2,5	2,50	16	1,1	1,5	**254**			**654**
16 IL 3,0	3,00	16	1,2	1,6	**256**			**656**
22 IL 3,5	3,50	22	1,6	2,3	**270**			**670**
22 IL 4,0	4,00	22	1,6	2,3	**272**			**672**
22 IL 4,5	4,50	22	1,7	2,4	**274**			**674**
22 IL 5,0	5,00	22	1,7	2,5	**276**			**676**
22 IL 5,5	5,50	22	1,9	2,7	**278**			**678**
22 IL 6,0	6,00	22	2,0	2,9	**280**			**680**

Steel	●	●	○	
Stainless steel	●	○	●	
Cast iron		●	○	●
Non ferrous metals	○	●	○	●
Heat resistant alloys			○	○

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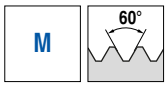
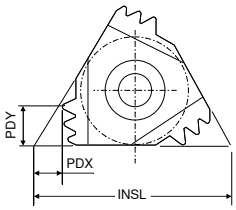
8

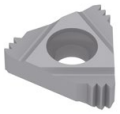
Right hand external thread turning insert

▲ Multi edge insert



HCN2525





Designation	TP	INSL	PDX	PDY	NT	ER Article no. 71 221 ...
	mm	mm	mm	mm		
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**

Steel	○
Stainless steel	●
Cast iron	○
Non ferrous metals	○
Heat resistant alloys	○

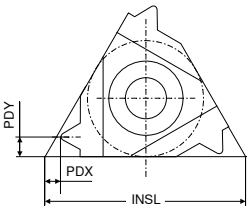
→ v_c Page 42

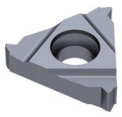
Right hand external thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





Designation	TP	INSL	PDX	PDY	ER Article no. 71 286 ...	ER Article no. 71 286 ...
	mm	mm	mm	mm		
11 ER 1,0	1,00	11	0,7	0,8	**214**	**614**
11 ER 1,25	1,25	11	0,8	0,9	**216**	**616**
11 ER 1,5	1,50	11	0,8	1,0	**218**	**618**
11 ER 2,0	2,00	11	0,9	1,0	**222**	**622**
16 ER 1,0	1,00	16	0,7	0,8	**244**	**644**
16 ER 1,25	1,25	16	0,8	0,9	**246**	**646**
16 ER 1,5	1,50	16	0,8	1,0	**248**	**648**
16 ER 2,0	2,00	16	1,0	1,3	**252**	**652**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

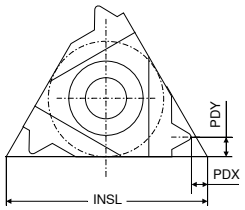
8

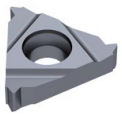
Left hand external thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





Designation	TP	INSL	PDX	PDY	EL Article no. 71 287 ...	EL Article no. 71 287 ...
	mm	mm	mm	mm		
11 EL 1,0	1,00	11	0,7	0,8	**214**	**614**
11 EL 1,25	1,25	11	0,8	0,9	**216**	**616**
11 EL 1,5	1,50	11	0,8	1,0	**218**	**618**
11 EL 2,0	2,00	11	0,9	1,0	**222**	**622**
16 EL 1,0	1,00	16	0,7	0,8	**244**	**644**
16 EL 1,25	1,25	16	0,8	0,9	**246**	**646**
16 EL 1,5	1,50	16	0,8	1,0	**248**	**648**
16 EL 2,0	2,00	16	1,0	1,3	**252**	**652**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

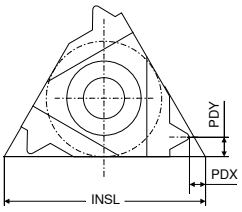
→ v_c Page 42

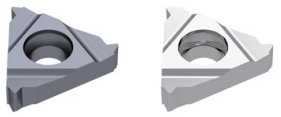
Right hand internal thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





Designation	TP mm	INSL mm	PDX mm	PDY mm	IR Article no. 71 284 ...	IR Article no. 71 284 ...
11 IR 1,0	1,00	11	0,7	0,8	**214**	**614**
11 IR 1,25	1,25	11	0,8	0,9	**216**	**616**
11 IR 1,5	1,50	11	0,8	1,0	**218**	**618**
11 IR 2,0	2,00	11	0,9	1,0	**222**	**622**
16 IR 1,0	1,00	16	0,7	0,8	**244**	**644**
16 IR 1,25	1,25	16	0,8	0,9	**246**	**646**
16 IR 1,5	1,50	16	0,8	1,0	**248**	**648**
16 IR 2,0	2,00	16	1,0	1,3	**252**	**652**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

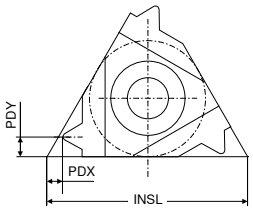
→ v_c Page 42

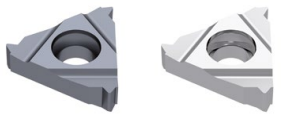
Left hand internal thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





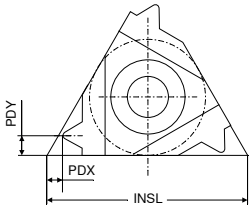
Designation	TP mm	INSL mm	PDX mm	PDY mm	IL Article no. 71 285 ...	IL Article no. 71 285 ...
11 IL 1,0	1,00	11	0,7	0,8	**214**	**614**
11 IL 1,25	1,25	11	0,8	0,9	**216**	**616**
11 IL 1,5	1,50	11	0,8	1,0	**218**	**618**
11 IL 2,0	2,00	11	0,9	1,0	**222**	**622**
16 IL 1,0	1,00	16	0,7	0,8	**244**	**644**
16 IL 1,25	1,25	16	0,8	0,9	**246**	**646**
16 IL 1,5	1,50	16	0,8	1,0	**248**	**648**
16 IL 2,0	2,00	16	1,0	1,3	**252**	**652**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

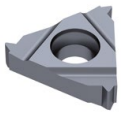
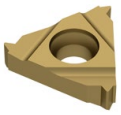
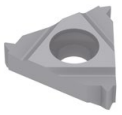
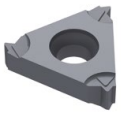
→ v_c Page 42

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
Designation	Article no. 71 228 ...	Article no. 71 228 ...	Article no. 71 228 ...	Article no. 71 228 ...	Article no. 71 228 ...
TPI 1/"					
INSL mm					
PDX mm					
PDY mm					
11 ER 72 — 72,0 — 11 — 0,7 — 4,0	202			602	
11 ER 60 — 60,0 — 11 — 0,7 — 4,0	204			604	
11 ER 56 — 56,0 — 11 — 0,7 — 4,0	206			606	
11 ER 48 — 48,0 — 11 — 0,6 — 0,6	208			608	
11 ER 40 — 40,0 — 11 — 0,6 — 0,6	210			610	
11 ER 36 — 36,0 — 11 — 0,6 — 0,6	212			612	
11 ER 32 — 32,0 — 11 — 0,6 — 0,6	214			614	
11 ER 28 — 28,0 — 11 — 0,6 — 0,7	216			616	
11 ER 26 — 26,0 — 11 — 0,7 — 0,8	218			618	
11 ER 24 — 24,0 — 11 — 0,7 — 0,8	220			620	
11 ER 22 — 22,0 — 11 — 0,8 — 0,9	222			622	
11 ER 20 — 20,0 — 11 — 0,8 — 0,9	224			624	
11 ER 19 — 19,0 — 11 — 0,8 — 1,0	226			626	
11 ER 18 — 18,0 — 11 — 0,8 — 1,0	228			628	
11 ER 16 — 16,0 — 11 — 0,9 — 1,1	230			630	
11 ER 14 — 14,0 — 11 — 0,9 — 1,1	232			632	
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			680	
22 ER 6 — 6,0 — 22 — 1,6 — 2,3	282			682	
22 ER 5 — 5,0 — 22 — 1,7 — 2,4	284			684	
22 EN 4,5 — 4,5 — 22 — 2,3 — 11,0	290 [1]			690 [1]	
22 EN 4 — 4,0 — 22 — 1,8 — 11,0	292 [1]			692 [1]	
Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

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

→ v_c Page 42

8

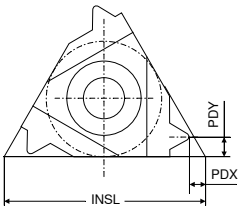
Left hand external thread turning insert

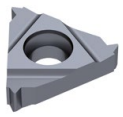
▲ Full profile

BSW

CCN20

CWK20





Designation	TPI	INSL	PDX	PDY	EL	EL
	1/"	mm	mm	mm	Article no. 71 229 ...	Article no. 71 229 ...
11 EL 72	72	11	0,7	4,0	202	602
11 EL 60	60	11	0,7	4,0	204	604
11 EL 56	56	11	0,7	4,0	206	606
11 EL 48	48	11	0,6	0,6	208	608
11 EL 40	40	11	0,6	0,6	210	610
11 EL 36	36	11	0,6	0,6	212	612
11 EL 32	32	11	0,6	0,6	214	614
11 EL 28	28	11	0,6	0,7	216	616
11 EL 26	26	11	0,7	0,8	218	618
11 EL 24	24	11	0,7	0,8	220	620
11 EL 22	22	11	0,8	0,9	222	622
11 EL 20	20	11	0,8	0,9	224	624
11 EL 19	19	11	0,8	1,0	226	626
11 EL 18	18	11	0,8	1,0	228	628
11 EL 16	16	11	0,9	1,1	230	630
11 EL 14	14	11	0,9	1,1	232	632
16 EL 40	40	16	0,6	0,6	240	640
16 EL 36	36	16	0,6	0,6	242	642
16 EL 32	32	16	0,6	0,6	244	644
16 EL 28	28	16	0,6	0,7	246	646
16 EL 26	26	16	0,7	0,8	248	648
16 EL 24	24	16	0,7	0,8	250	650
16 EL 22	22	16	0,8	0,9	252	652
16 EL 20	20	16	0,8	0,9	254	654
16 EL 19	19	16	0,8	1,0	256	656
16 EL 18	18	16	0,8	1,0	258	658
16 EL 16	16	16	0,9	1,1	260	660
16 EL 14	14	16	1,0	1,2	262	662
16 EL 12	12	16	1,1	1,4	264	664
16 EL 11	11	16	1,1	1,5	266	666
16 EL 10	10	16	1,1	1,5	268	668
16 EL 9	9	16	1,2	1,7	270	670
16 EL 8	8	16	1,2	1,5	272	672
22 EL 7	7	22	1,6	2,3	280	680
22 EL 6	6	22	1,6	2,3	282	682
22 EL 5	5	22	1,7	2,4	284	684

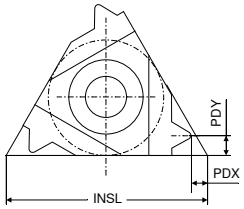
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

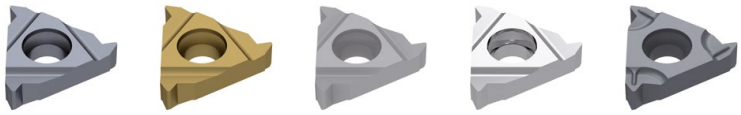
Right hand internal thread turning insert

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

BSW



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



Designation	TPI	INSL	PDX	PDY	IR Article no. 71 230 ...	IR Article no. 71 230 ...	IR Article no. 71 230 ...	IR Article no. 71 230 ...	IR Article no. 71 230 ...
	1/"	mm	mm	mm					
11 IR 48	48	11	0,6	0,6	**206**			**606**	
11 IR 40	40	11	0,6	0,6	**208**			**608**	
11 IR 36	36	11	0,6	0,6	**210**			**610**	
11 IR 32	32	11	0,6	0,6	**212**			**612**	
11 IR 28	28	11	0,6	0,7	**214**			**614**	
11 IR 26	26	11	0,7	0,8	**216**			**616**	
11 IR 24	24	11	0,7	0,8	**218**			**618**	
11 IR 22	22	11	0,8	0,9	**220**			**620**	
11 IR 20	20	11	0,8	0,9	**222**			**622**	
11 IR 19	19	11	0,8	0,9					**924**
11 IR 19	19	11	0,8	1,0	**224**	**124**	**724**	**624**	
11 IR 18	18	11	0,8	1,0	**226**			**626**	
11 IR 16	16	11	0,9	1,1	**228**			**628**	
11 IR 14	14	11	0,8	0,9					**930**
11 IR 14	14	11	0,9	1,1	**230**	**130**	**730**	**630**	
16 IR 40	40	16	0,6	0,6	**240**			**640**	
16 IR 36	36	16	0,6	0,6	**242**			**642**	
16 IR 32	32	16	0,6	0,6	**244**			**644**	
16 IR 28	28	16	0,6	0,7	**246**			**646**	
16 IR 26	26	16	0,7	0,8	**248**			**648**	
16 IR 24	24	16	0,7	0,8	**250**			**650**	
16 IR 22	22	16	0,8	0,9	**252**			**652**	
16 IR 20	20	16	0,8	0,9	**254**			**654**	
16 IR 19	19	16	0,8	1,0	**256**			**656**	
16 IR 18	18	16	0,8	1,0	**258**			**658**	
16 IR 16	16	16	0,9	1,1	**260**		**760**	**660**	
16 IR 14	14	16	1,0	1,2	**262**	**162**	**762**	**662**	**962**
16 IR 12	12	16	1,1	1,4	**264**			**664**	
16 IR 11	11	16	1,1	1,5	**266**	**166**	**766**	**666**	**966**
16 IR 10	10	16	1,1	1,5	**268**			**668**	
16 IR 9	9	16	1,2	1,7	**270**			**670**	
16 IR 8	8	16	1,2	1,5	**272**			**672**	
22 IR 7	7	22	1,6	2,3	**280**			**680**	
22 IR 6	6	22	1,6	2,3	**282**			**682**	
22 IR 5	5	22	1,7	2,4	**284**			**684**	

Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

→ v_c Page 42

8

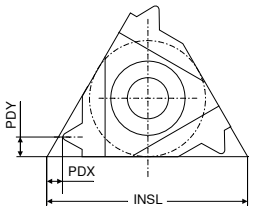
Left hand internal thread turning insert

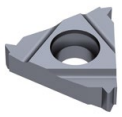
▲ Full profile

BSW

CCN20

CWK20





Designation	TPI	INSL	PDX	PDY	IL	IL
	1/"	mm	mm	mm	Article no. 71 231 ...	Article no. 71 231 ...
11 IL 48	48	11	0,6	0,6	206	606
11 IL 40	40	11	0,6	0,6	208	608
11 IL 36	36	11	0,6	0,6	210	610
11 IL 32	32	11	0,6	0,6	212	612
11 IL 28	28	11	0,6	0,7	214	614
11 IL 26	26	11	0,7	0,8	216	616
11 IL 24	24	11	0,7	0,8	218	618
11 IL 22	22	11	0,8	0,9	220	620
11 IL 20	20	11	0,8	0,9	222	622
11 IL 19	19	11	0,8	1,0	224	624
11 IL 18	18	11	0,8	1,0	226	626
11 IL 16	16	11	0,9	1,1	228	628
11 IL 14	14	11	0,9	1,1	230	630
16 IL 40	40	16	0,6	0,6	240	640
16 IL 36	36	16	0,6	0,6	242	642
16 IL 32	32	16	0,6	0,6	244	644
16 IL 28	28	16	0,6	0,7	246	646
16 IL 26	26	16	0,7	0,8	248	648
16 IL 24	24	16	0,7	0,8	250	650
16 IL 22	22	16	0,8	0,9	252	652
16 IL 20	20	16	0,8	0,9	254	654
16 IL 19	19	16	0,8	1,0	256	656
16 IL 18	18	16	0,8	1,0	258	658
16 IL 16	16	16	0,9	1,1	260	660
16 IL 14	14	16	1,0	1,2	262	662
16 IL 12	12	16	1,1	1,4	264	664
16 IL 11	11	16	1,1	1,5	266	666
16 IL 10	10	16	1,1	1,5	268	668
16 IL 9	9	16	1,2	1,7	270	670
16 IL 8	8	16	1,2	1,5	272	672
22 IL 7	7	22	1,6	2,3	280	680
22 IL 6	6	22	1,6	2,3	282	682
22 IL 5	5	22	1,7	2,4	284	684

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

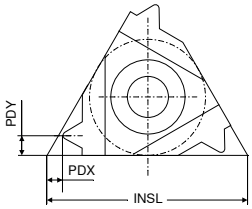
→ v_c Page 42

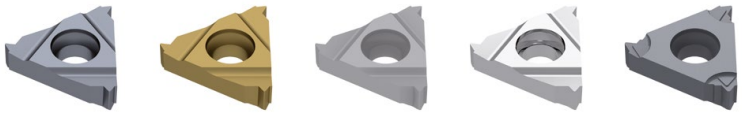
Right hand external thread turning insert

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

UN | UNC | UNF | UNEF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TPI	INSL	PDX	PDY	ER Article no. 71 264 ...	ER Article no. 71 264 ...	ER Article no. 71 264 ...	ER Article no. 71 264 ...	ER Article no. 71 264 ...
	1/"	mm	mm	mm					
11 ER 72	72,0	11	0,8	0,4	**202**			**602**	
11 ER 64	64,0	11	0,8	0,4	**204**			**604**	
11 ER 56	56,0	11	0,7	0,4	**206**			**606**	
11 ER 48	48,0	11	0,6	0,6	**208**			**608**	
11 ER 44	44,0	11	0,6	0,6	**210**			**610**	
11 ER 40	40,0	11	0,6	0,6	**212**			**612**	
11 ER 36	36,0	11	0,6	0,6	**214**			**614**	
11 ER 32	32,0	11	0,6	0,6	**216**			**616**	
11 ER 28	28,0	11	0,6	0,7	**218**			**618**	
11 ER 27	27,0	11	0,7	0,8	**220**			**620**	
11 ER 24	24,0	11	0,7	0,8	**222**			**622**	
11 ER 20	20,0	11	0,8	0,9	**224**			**624**	
11 ER 18	18,0	11	0,8	1,0	**226**			**626**	
11 ER 16	16,0	11	0,9	1,1	**228**			**628**	
11 ER 14	14,0	11	0,9	1,1	**230**			**630**	
16 ER 72	72,0	16	0,8	0,4	**232**			**632**	
16 ER 64	64,0	16	0,8	0,4	**234**			**634**	
16 ER 56	56,0	16	0,7	0,4	**236**			**636**	
16 ER 48	48,0	16	0,6	0,6	**238**			**638**	
16 ER 44	44,0	16	0,6	0,6	**240**			**640**	
16 ER 40	40,0	16	0,6	0,6	**242**			**642**	
16 ER 36	36,0	16	0,6	0,6	**244**			**644**	
16 ER 32	32,0	16	0,6	0,6	**246**		**746**	**646**	
16 ER 28	28,0	16	0,6	0,7	**248**		**748**	**648**	
16 ER 27	27,0	16	0,7	0,8	**250**			**650**	
16 ER 24	24,0	16	0,7	0,8	**252**	**152**	**752**	**652**	
16 ER 20	20,0	16	0,8	0,9	**254**	**154**	**754**	**654**	**954**
16 ER 18	18,0	16	0,8	1,0	**256**	**156**	**756**	**656**	
16 ER 16	16,0	16	0,9	1,1	**258**	**158**	**758**	**658**	**958**
16 ER 14	14,0	16	1,0	1,2	**260**	**160**	**760**	**660**	
16 ER 13	13,0	16	1,0	1,3	**262**			**662**	
16 ER 12	12,0	16	1,1	1,4	**264**	**164**	**764**	**664**	
16 ER 11,5	11,5	16	1,1	1,5	**266**			**666**	
16 ER 11	11,0	16	1,1	1,5	**268**	**168**		**668**	
16 ER 10	10,0	16	1,1	1,5	**270**			**670**	
16 ER 9	9,0	16	1,2	1,7	**272**			**672**	
16 ER 8	8,0	16	1,1	1,1					**974**
16 ER 8	8,0	16	1,1	1,5		**174**			
16 ER 8	8,0	16	1,2	1,6	**274**			**674**	
22 ER 7	7,0	22	1,6	2,3	**276**			**676**	
22 ER 6	6,0	22	1,6	2,3	**278**			**678**	
22 ER 5	5,0	22	1,7	2,5	**280**			**680**	
22 EN 4,5	4,5	22	2,0	11,0	**282** [1]			**682** [1]	
22 EN 4	4,0	22	2,0	11,0	**284** [1]			**684** [1]	

Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

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

→ v_c Page 42

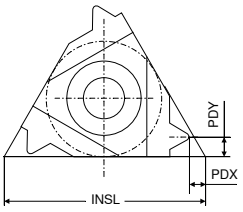
8

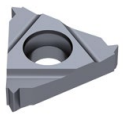
Left hand external thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	EL	EL
	1/"	mm	mm	mm	Article no. 71 266 ...	Article no. 71 266 ...
11 EL 72	72,0	11	0,8	0,4	202	602
11 EL 64	64,0	11	0,8	0,4	204	604
11 EL 56	56,0	11	0,7	0,4	206	606
11 EL 48	48,0	11	0,6	0,6	208	608
11 EL 44	44,0	11	0,6	0,6	210	610
11 EL 40	40,0	11	0,6	0,6	212	612
11 EL 36	36,0	11	0,6	0,6	214	614
11 EL 32	32,0	11	0,6	0,6	216	616
11 EL 28	28,0	11	0,6	0,7	218	618
11 EL 27	27,0	11	0,7	0,8	220	620
11 EL 24	24,0	11	0,7	0,8	222	622
11 EL 20	20,0	11	0,8	0,9	224	624
11 EL 18	18,0	11	0,8	1,0	226	626
11 EL 16	16,0	11	0,9	1,1	228	628
11 EL 14	14,0	11	0,9	1,1	230	630
16 EL 72	72,0	16	0,8	0,4	232	632
16 EL 64	64,0	16	0,8	0,4	234	634
16 EL 56	56,0	16	0,7	0,4	236	636
16 EL 48	48,0	16	0,6	0,6	238	638
16 EL 44	44,0	16	0,6	0,6	240	640
16 EL 40	40,0	16	0,6	0,6	242	642
16 EL 36	36,0	16	0,6	0,6	244	644
16 EL 32	32,0	16	0,6	0,6	246	646
16 EL 28	28,0	16	0,6	0,7	248	648
16 EL 27	27,0	16	0,7	0,8	250	650
16 EL 24	24,0	16	0,7	0,8	252	652
16 EL 20	20,0	16	0,8	0,9	254	654
16 EL 18	18,0	16	0,8	1,0	256	656
16 EL 16	16,0	16	0,9	1,1	258	658
16 EL 14	14,0	16	1,0	1,2	260	660
16 EL 13	13,0	16	1,0	1,3	262	662
16 EL 12	12,0	16	1,1	1,4	264	664
16 EL 11,5	11,5	16	1,1	1,5	266	666
16 EL 11	11,0	16	1,1	1,5	268	668
16 EL 10	10,0	16	1,1	1,5	270	670
16 EL 9	9,0	16	1,2	1,7	272	672
16 EL 8	8,0	16	1,2	1,6	274	674
22 EL 7	7,0	22	1,6	2,3	276	676
22 EL 6	6,0	22	1,6	2,3	278	678
22 EL 5	5,0	22	1,7	2,5	280	680

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

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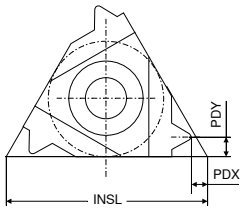
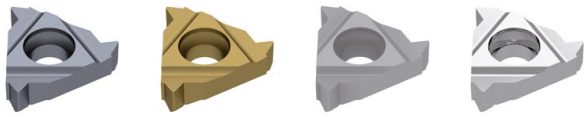
Right hand internal thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20





Designation	TPI	INSL	PDX	PDY	IR Article no. 71 268 ...	IR Article no. 71 268 ...	IR Article no. 71 268 ...	IR Article no. 71 268 ...
	1/"	mm	mm	mm				
11 IR 72	72,0	11	0,8	0,3	202			602
11 IR 64	64,0	11	0,8	0,4	204			604
11 IR 56	56,0	11	0,7	0,4	206			606
11 IR 48	48,0	11	0,6	0,6	208			608
11 IR 44	44,0	11	0,6	0,6	210			610
11 IR 40	40,0	11	0,6	0,6	212			612
11 IR 36	36,0	11	0,6	0,6	214			614
11 IR 32	32,0	11	0,6	0,6	216			616
11 IR 28	28,0	11	0,6	0,7	218			618
11 IR 27	27,0	11	0,7	0,8	220			620
11 IR 24	24,0	11	0,7	0,8	222			622
11 IR 20	20,0	11	0,8	0,9	224			624
11 IR 18	18,0	11	0,8	1,0	226			626
11 IR 16	16,0	11	0,9	1,1	228			628
11 IR 14	14,0	11	1,0	1,1	230			630
16 IR 72	72,0	16	0,8	0,3	232			632
16 IR 64	64,0	16	0,8	0,4	234			634
16 IR 56	56,0	16	0,7	0,4	236			636
16 IR 48	48,0	16	0,6	0,6	238			638
16 IR 44	44,0	16	0,6	0,6	240			640
16 IR 40	40,0	16	0,6	0,6	242			642
16 IR 36	36,0	16	0,6	0,6	244			644
16 IR 32	32,0	16	0,6	0,6	246			646
16 IR 28	28,0	16	0,6	0,7	248			648
16 IR 27	27,0	16	0,7	0,8	250			650
16 IR 24	24,0	16	0,7	0,8	252			652
16 IR 20	20,0	16	0,8	0,9	254			654
16 IR 18	18,0	16	0,8	1,0	256			656
16 IR 16	16,0	16	0,9	1,1	258			658
16 IR 14	14,0	16	1,0	1,2	260		760	660
16 IR 13	13,0	16	1,0	1,3	262			662
16 IR 12	12,0	16	1,1	1,4	264	164	764	664
16 IR 11,5	11,5	16	1,1	1,5	266			666
16 IR 11	11,0	16	1,1	1,5	268			668
16 IR 10	10,0	16	1,1	1,5	270			670
16 IR 9	9,0	16	1,2	1,7	272			672
16 IR 8	8,0	16	1,2	1,6	274			674
16 IR 8	8,0	16	1,1	1,5			774	
22 IR 7	7,0	22	1,6	2,3	276		776	676
22 IR 6	6,0	22	1,6	2,3	278			678
22 IR 5	5,0	22	1,7	2,5	280			680
22 IN 4,5	4,5	22	2,0	11,0	282 [1]			682 [1]
22 IN 4	4,0	22	2,0	11,0	284 [1]			684 [1]
Steel					●	●	○	
Stainless steel					●	○	●	
Cast iron						●	○	●
Non ferrous metals					○	●	○	●
Heat resistant alloys							○	○

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

→ v_c Page 42

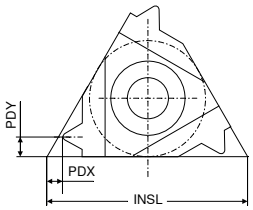
8

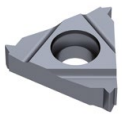
Left hand internal thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	IL Article no. 71 270 ...	IL Article no. 71 270 ...
	1/"	mm	mm	mm		
11 IL 72	72,0	11	0,8	0,3	**202**	**602**
11 IL 64	64,0	11	0,8	0,4	**204**	**604**
11 IL 56	56,0	11	0,7	0,4	**206**	**606**
11 IL 48	48,0	11	0,6	0,6	**208**	**608**
11 IL 44	44,0	11	0,6	0,6	**210**	**610**
11 IL 40	40,0	11	0,6	0,6	**212**	**612**
11 IL 36	36,0	11	0,6	0,6	**214**	**614**
11 IL 32	32,0	11	0,6	0,6	**216**	**616**
11 IL 28	28,0	11	0,6	0,7	**218**	**618**
11 IL 27	27,0	11	0,7	0,8	**220**	**620**
11 IL 24	24,0	11	0,7	0,8	**222**	**622**
11 IL 20	20,0	11	0,8	0,9	**224**	**624**
11 IL 18	18,0	11	0,8	1,0	**226**	**626**
11 IL 16	16,0	11	0,9	1,1	**228**	**628**
11 IL 14	14,0	11	0,9	1,1	**230**	**630**
16 IL 72	72,0	16	0,8	0,3	**232**	**632**
16 IL 64	64,0	16	0,8	0,4	**234**	**634**
16 IL 56	56,0	16	0,7	0,4	**236**	**636**
16 IL 48	48,0	16	0,6	0,6	**238**	**638**
16 IL 44	44,0	16	0,6	0,6	**240**	**640**
16 IL 40	40,0	16	0,6	0,6	**242**	**642**
16 IL 36	36,0	16	0,6	0,6	**244**	**644**
16 IL 32	32,0	16	0,6	0,6	**246**	**646**
16 IL 28	28,0	16	0,6	0,7	**248**	**648**
16 IL 27	27,0	16	0,7	0,8	**250**	**650**
16 IL 24	24,0	16	0,7	0,8	**252**	**652**
16 IL 20	20,0	16	0,8	0,9	**254**	**654**
16 IL 18	18,0	16	0,8	1,0	**256**	**656**
16 IL 16	16,0	16	0,9	1,1	**258**	**658**
16 IL 14	14,0	16	1,0	1,2	**260**	**660**
16 IL 13	13,0	16	1,0	1,3	**262**	**662**
16 IL 12	12,0	16	1,1	1,4	**264**	**664**
16 IL 11,5	11,5	16	1,1	1,5	**266**	**666**
16 IL 11	11,0	16	1,1	1,5	**268**	**668**
16 IL 10	10,0	16	1,1	1,5	**270**	**670**
16 IL 9	9,0	16	1,2	1,7	**272**	**672**
16 IL 8	8,0	16	1,2	1,6	**274**	**674**
22 IL 7	7,0	22	1,6	2,3	**276**	**676**
22 IL 6	6,0	22	1,6	2,3	**278**	**678**
22 IL 5	5,0	22	1,7	2,5	**280**	**680**

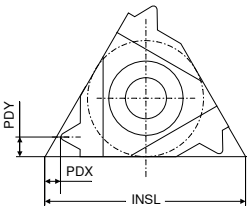
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

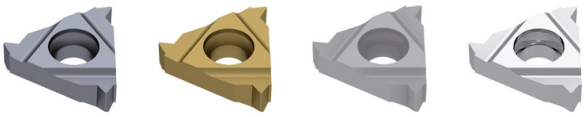
Right hand external thread turning insert

▲ Full profile

NPT 60°



CCN20 | CWN1525 | HCN2525 | CWK20



Designation	TPI	INSL	PDX	PDY	ER Article no. 71 256 ...	ER Article no. 71 256 ...	ER Article no. 71 256 ...	ER Article no. 71 256 ...
	1/"	mm	mm	mm				
16 ER 27	27,0	16	0,7	0,8	**240**			**640**
16 ER 18	18,0	16	0,8	1,0	**242**		**742**	**642**
16 ER 14	14,0	16	0,9	1,2	**244**	**144**	**744**	**644**
16 ER 11,5	11,5	16	1,1	1,5	**246**	**146**	**746**	**646**
16 ER 8	8,0	16	1,3	1,8	**248**			**648**
Steel					●	●	○	
Stainless steel					●	○	●	
Cast iron						●	○	●
Non ferrous metals					○	●	○	●
Heat resistant alloys							○	○

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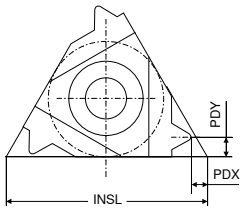
8

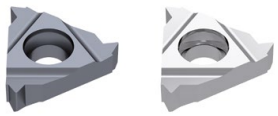
Left hand external thread turning insert

▲ Full profile

NPT 60°



CCN20 | CWK20



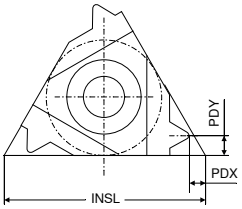
Designation	TPI	INSL	PDX	PDY	EL Article no. 71 258 ...	EL Article no. 71 258 ...
	1/"	mm	mm	mm		
16 EL 27	27,0	16	0,7	0,8	**240**	**640**
16 EL 18	18,0	16	0,8	1,0	**242**	**642**
16 EL 14	14,0	16	0,9	1,2	**244**	**644**
16 EL 11,5	11,5	16	1,1	1,5	**246**	**646**
16 EL 8	8,0	16	1,3	1,8	**248**	**648**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

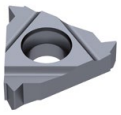
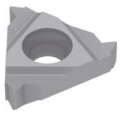
→ v_c Page 42

Right hand internal thread turning insert

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

NPT 60°



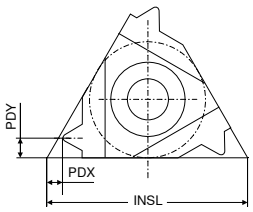
Designation	TPI	INSL	PDX	PDY	CCN20	HCN2525	CWK20	CCN7525
					IR	IR	IR	IR
					Article no. 71 260 ...	Article no. 71 260 ...	Article no. 71 260 ...	Article no. 71 260 ...
	1/"	mm	mm	mm				
11 IR 27	27,0	11	0,7	0,8	**210**		**610**	
11 IR 18	18,0	11	0,8	1,0	**212**		**612**	
11 IR 14	14,0	11	0,9	1,1	**214**		**614**	
16 IR 27	27,0	16	0,7	0,8	**240**		**640**	
16 IR 18	18,0	16	0,8	1,0	**242**		**642**	
16 IR 14	14,0	16	0,9	1,2	**244**	**744**	**644**	**944**
16 IR 11,5	11,5	16	1,1	1,5	**246**		**646**	**946**
16 IR 8	8,0	16	1,3	1,8	**248**		**648**	
Steel					●	○		●
Stainless steel					●	●		●
Cast iron						○	●	●
Non ferrous metals					○	○	●	○
Heat resistant alloys						○	○	●

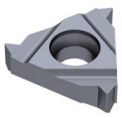
→ v_c Page 42

Left hand internal thread turning insert

▲ Full profile

NPT 60°



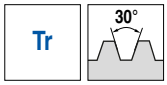


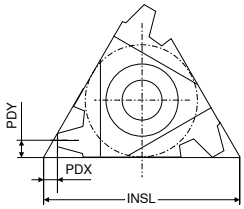
Designation	TPI	INSL	PDX	PDY	CCN20	CWK20
					IL	IL
					Article no. 71 262 ...	Article no. 71 262 ...
	1/"	mm	mm	mm		
11 IL 27	27,0	11	0,7	0,8	**210**	**610**
11 IL 18	18,0	11	0,8	1,0	**212**	**612**
11 IL 14	14,0	11	0,9	1,1	**214**	**614**
16 IL 27	27,0	16	0,7	0,8	**240**	**640**
16 IL 18	18,0	16	0,8	1,0	**242**	**642**
16 IL 14	14,0	16	0,9	1,2	**244**	**644**
16 IL 11,5	11,5	16	1,1	1,5	**246**	**646**
16 IL 8	8,0	16	1,3	1,8	**248**	**648**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

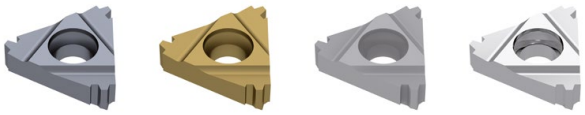
→ v_c Page 42

Right hand external thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103







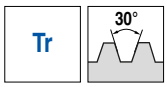
Designation	TP mm	INSL mm	PDX mm	PDY mm	ER Article no. 71 232 ...	ER Article no. 71 232 ...	ER Article no. 71 232 ...	ER Article no. 71 232 ...
16 ER 1,5	1,5	16	1,0	1,1	**240**			**640**
16 ER 2,0	2,0	16	1,1	1,3	**242**			**642**
16 ER 2,0	2,0	16	1,0	1,3		**142**	**742**	
16 ER 3,0	3,0	16	1,3	1,5	**244**	**144**		**644**
22 ER 4,0	4,0	22	1,7	1,9	**270**			**670**
22 ER 4,0	4,0	22	1,8	1,9		**170**	**770**	
22 ER 5,0	5,0	22	2,0	2,4		**172**		
22 ER 5,0	5,0	22	2,1	2,5	**272**			**672**
22 ER 6,0	6,0	22	2,3	2,7	**274**			**674**
22 EN 6,0	6,0	22	2,0	11,0	**276** 1)			**676** 1)
22 EN 7,0	7,0	22	2,3	11,0	**278** 1)			**678** 1)
Steel					●	●	○	
Stainless steel					●	○	●	
Cast iron						●	○	●
Non ferrous metals					○	●	○	●
Heat resistant alloys							○	○

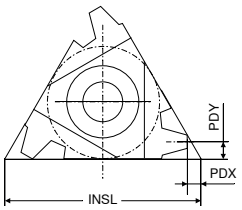
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

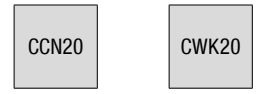
→ v_c Page 42

Left hand external thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103







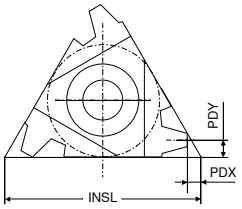
Designation	TP mm	INSL mm	PDX mm	PDY mm	EL Article no. 71 234 ...	EL Article no. 71 234 ...
16 EL 1,5	1,5	16	1,0	1,1	**240**	**640**
16 EL 2,0	2,0	16	1,1	1,3	**242**	**642**
16 EL 3,0	3,0	16	1,3	1,5	**244**	**644**
22 EL 4,0	4,0	22	1,7	1,9	**270**	**670**
22 EL 5,0	5,0	22	2,1	2,5	**272**	**672**
22 EL 6,0	6,0	22	2,3	2,7	**274**	**674**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

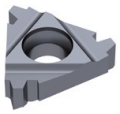
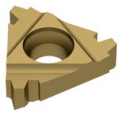
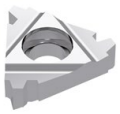
→ v_c Page 42

Right hand internal thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103

Tr | 30°



Designation	TP mm	INSL mm	PDX mm	PDY mm	CCN20 IR Article no. 71 236 ...	CWN1525 IR Article no. 71 236 ...	CWK20 IR Article no. 71 236 ...
11 IR 1,5	1,5	11	0,8	0,9	**210**		**610**
16 IR 1,5	1,5	16	1,0	1,1	**240**		**640**
16 IR 2,0	2,0	16	1,1	1,3	**242**		**642**
16 IR 3,0	3,0	16	1,3	1,5	**244**	**144**	**644**
22 IR 4,0	4,0	22	1,8	1,9		**170**	
22 IR 4,0	4,0	22	1,7	1,9	**270**		**670**
22 IR 5,0	5,0	22	2,0	2,4		**172**	
22 IR 5,0	5,0	22	2,1	2,5	**272**		**672**
22 IR 6,0	6,0	22	2,3	2,7	**274**		**674**
22 IN 6,0	6,0	22	2,0	11,0	**276** [1]		**676** [1]
22 IN 7,0	7,0	22	2,3	11,0	**278** [1]		**678** [1]
Steel					●	●	
Stainless steel					●	○	
Cast iron						●	●
Non ferrous metals					○	●	●
Heat resistant alloys							○

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

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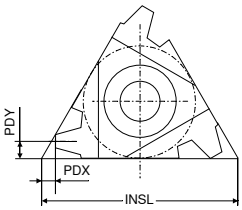
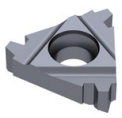
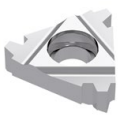
Left hand internal thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103

Tr | 30°



Designation	TP mm	INSL mm	PDX mm	PDY mm	CCN20 IL Article no. 71 238 ...	CWK20 IL Article no. 71 238 ...
11 IL 1,5	1,5	11	0,8	0,9	**210**	**610**
16 IL 1,5	1,5	16	1,0	1,1	**240**	**640**
16 IL 2,0	2,0	16	1,1	1,3	**242**	**642**
16 IL 3,0	3,0	16	1,3	1,5	**244**	**644**
22 IL 4,0	4,0	22	1,7	1,9	**270**	**670**
22 IL 5,0	5,0	22	2,1	2,5	**272**	**672**
22 IL 6,0	6,0	22	2,3	2,7	**274**	**674**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

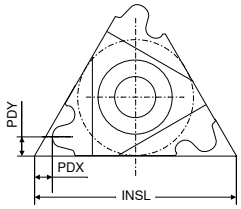
→ v_c Page 42

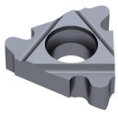
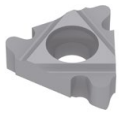
Right hand external thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

CCN20 | HCN2525 | CWK20



Designation	TPI	INSL	PDX	PDY	ER	ER	ER
	1/"	mm	mm	mm	Article no. 71 248 ...	Article no. 71 248 ...	Article no. 71 248 ...
16 ER 10	10	16	1,1	1,2	**240**		**640**
16 ER 8	8	16	1,4	1,3	**242**		**642**
16 ER 6	6	16	1,5	1,7	**246**	**746**	**646**
22 ER 6	6	22	1,5	1,7	**270**		**670**
22 ER 4	4	22	2,2	2,3	**272**		**672**

Steel	●	○	
Stainless steel	●	●	
Cast iron		○	●
Non ferrous metals	○	○	●
Heat resistant alloys		○	○

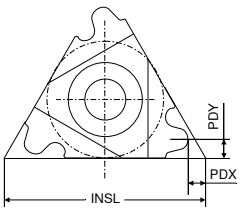
→ v_c Page 42

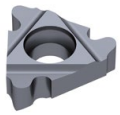
Left hand external thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	EL	EL
	1/"	mm	mm	mm	Article no. 71 250 ...	Article no. 71 250 ...
16 EL 10	10	16	1,1	1,2	**240**	**640**
16 EL 8	8	16	1,4	1,3	**242**	**642**
16 EL 6	6	16	1,5	1,7	**246**	**646**
22 EL 6	6	22	1,5	1,7	**270**	**670**
22 EL 4	4	22	2,2	2,3	**272**	**672**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

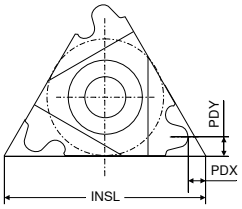
8

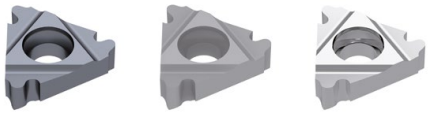
Right hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

CCN20 | HCN2525 | CWK20





Designation	TPI	INSL	PDX	PDY	IR	IR	IR
					Article no. 71 252 ...	Article no. 71 252 ...	Article no. 71 252 ...
	1/"	mm	mm	mm			
16 IR 10	10	16	1,1	1,2	**240**		**640**
16 IR 8	8	16	1,4	1,4	**242**		**642**
16 IR 6	6	16	1,4	1,5	**246**	**746**	**646**
22 IR 6	6	22	1,5	1,7	**270**		**670**
22 IR 4	4	22	2,2	2,3	**272**		**672**

Steel	●	○	
Stainless steel	●	●	
Cast iron		○	●
Non ferrous metals	○	○	●
Heat resistant alloys		○	○

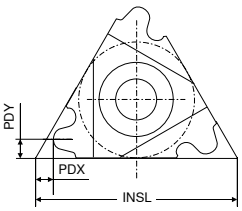
→ v_c Page 42

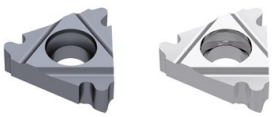
Left hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405

Rd | 30°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	IL	IL
					Article no. 71 254 ...	Article no. 71 254 ...
	1/"	mm	mm	mm		
16 IL 10	10	16	1,1	1,2	**240**	**640**
16 IL 8	8	16	1,4	1,4	**242**	**642**
16 IL 6	6	16	1,4	1,5	**246**	**646**
22 IL 6	6	22	1,5	1,7	**270**	**670**
22 IL 4	4	22	2,2	2,3	**272**	**672**

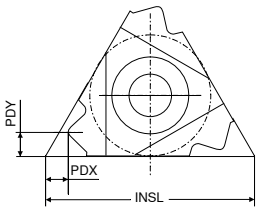
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

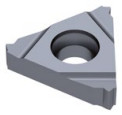
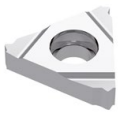
Right hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°



CCN20 | CWK20

Designation	TPI	INSL	PDX	PDY	ER	ER
	1/"	mm	mm	mm	Article no. 71 240 ...	Article no. 71 240 ...
16 ER 20	20	16	0,8	0,8	**240**	**640**
16 ER 18	18	16	0,8	0,9	**242**	**642**
16 ER 16	16	16	0,8	1,0	**244**	**644**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

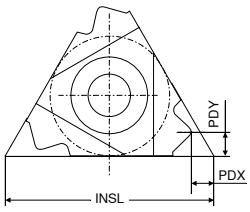
→ v_c Page 42

8

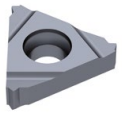
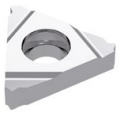
Left hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°



CCN20 | CWK20

Designation	TPI	INSL	PDX	PDY	EL	EL
	1/"	mm	mm	mm	Article no. 71 242 ...	Article no. 71 242 ...
16 EL 20	20	16	0,8	0,8	**240**	**640**
16 EL 18	18	16	0,8	0,9	**242**	**642**
16 EL 16	16	16	0,8	1,0	**244**	**644**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

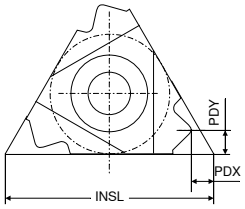
→ v_c Page 42

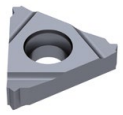
Right hand internal thread turning insert

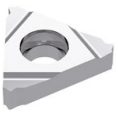
▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20







Designation	TPI	INSL	PDX	PDY	IR	IR
	1/"	mm	mm	mm	Article no. 71 244 ...	Article no. 71 244 ...
11 IR 18	18	11	0,8	0,9	**238**	**638**
16 IR 18	18	16	0,8	0,9	**242**	**642**
16 IR 16	16	16	0,8	1,0	**244**	**644**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

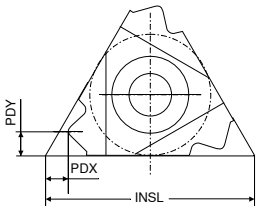
→ v_c Page 42

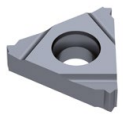
Left hand internal thread turning insert

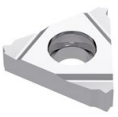
▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20







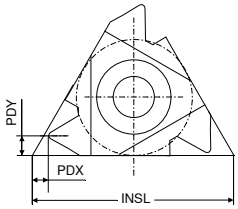
Designation	TPI	INSL	PDX	PDY	IL	IL
	1/"	mm	mm	mm	Article no. 71 246 ...	Article no. 71 246 ...
11 IL 18	18	11	0,8	0,9	**238**	**638**
16 IL 18	18	16	0,8	0,9	**242**	**642**
16 IL 16	16	16	0,8	1,0	**244**	**644**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

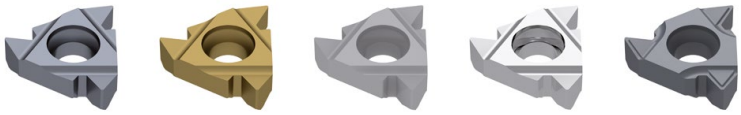
→ v_c Page 42

Right hand external thread turning insert

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



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



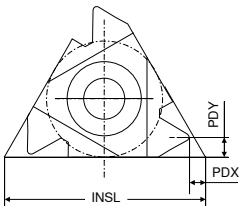
Designation	TP mm	INSL mm	PDX mm	PDY mm	ER Article no. 71 206 ...	ER Article no. 71 206 ...	ER Article no. 71 206 ...	ER Article no. 71 206 ...	ER Article no. 71 206 ...
16 ER A60	0,5 - 1,5	16	0,8	0,9	**240**	**140**	**740**	**640**	**940**
16 ER G60	1,75 - 3	16	1,2	1,7	**242**	**142**	**742**	**642**	**942**
16 ER AG60	0,5 - 3	16	1,2	1,7	**244**	**144**	**744**	**644**	**944**
22 ER N60	3,5 - 5	22	1,7	2,5	**270**	**170**		**670**	
22 EN U60	5,5 - 8	22	0,9	11,0	**272** 1)			**672** 1)	
Steel					●	●	○		●
Stainless steel					●	○	●		●
Cast iron						●	○	●	●
Non ferrous metals					○	●	○	●	○
Heat resistant alloys							○	○	●

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

→ v_c Page 42

Left hand external thread turning insert

▲ Partial profile



CCN20 | CWK20

Designation	TP mm	INSL mm	PDX mm	PDY mm	EL Article no. 71 208 ...	EL Article no. 71 208 ...
16 EL A60	0,5 - 1,5	16	0,8	0,9	**240**	**640**
16 EL G60	1,75 - 3	16	1,2	1,7	**242**	**642**
16 EL AG60	0,5 - 3	16	1,2	1,7	**244**	**644**
22 EL N60	3,5 - 5	22	1,7	2,5	**270**	**670**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

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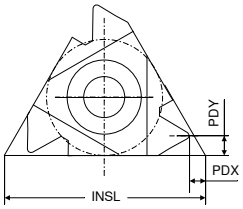
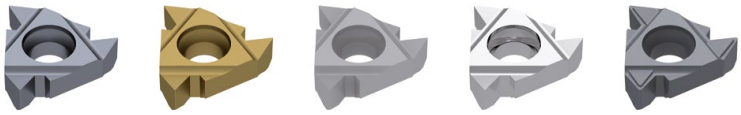
Right hand internal thread turning insert

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



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



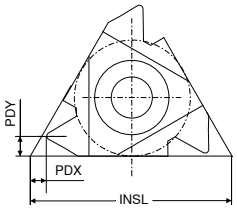
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR Article no. 71 210 ...	IR Article no. 71 210 ...	IR Article no. 71 210 ...	IR Article no. 71 210 ...	IR Article no. 71 210 ...
11 IR A60	0,5 - 1,5	11	0,8	0,9	**210**	**110**		**610**	
16 IR A60	0,5 - 1,5	16	0,8	0,9	**240**	**140**		**640**	
16 IR G60	1,75 - 3	16	1,2	1,7	**242**	**142**		**642**	
16 IR AG60	0,5 - 3	16	1,2	1,7	**244**	**144**	**744**	**644**	**944**
22 IR N60	3,5 - 5	22	1,7	2,5	**270**	**170**		**670**	
22 IN U60	5,5 - 8	22	0,9	11,0	**272** [1]			**672** [1]	
Steel					●	●	○		●
Stainless steel					●	○	●		●
Cast iron						●	○	●	●
Non ferrous metals					○	●	○	●	○
Heat resistant alloys							○	○	●

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

→ v_c Page 42

Left hand internal thread turning insert

▲ Partial profile



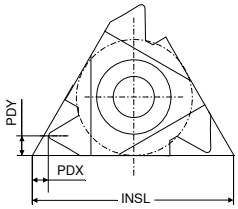
CCN20 | CWK20

Designation	TP mm	INSL mm	PDX mm	PDY mm	IL Article no. 71 212 ...	IL Article no. 71 212 ...
11 IL A60	0,5 - 1,5	11	0,8	0,9	**210**	**610**
16 IL A60	0,5 - 1,5	16	0,8	0,9	**240**	**640**
16 IL G60	1,75 - 3	16	1,2	1,7	**242**	**642**
16 IL AG60	0,5 - 3	16	1,2	1,7	**244**	**644**
22 IL N60	3,5 - 5	22	1,7	2,5	**270**	**670**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

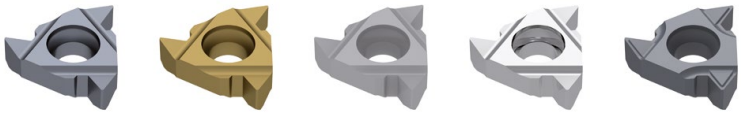
→ v_c Page 42

Right hand external thread turning insert

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



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



Designation	TPI	INSL	PDX	PDY	ER Article no. 71 200 ...	ER Article no. 71 200 ...	ER Article no. 71 200 ...	ER Article no. 71 200 ...	ER Article no. 71 200 ...
	1/"	mm	mm	mm					
16 ER A55	48 - 16	16	0,8	0,9	**240**	**140**	**740**	**640**	**940**
16 ER AG55	48 - 8	16	1,2	1,7	**244**	**144**	**744**	**644**	**944**
16 ER G55	14 - 8	16	1,2	1,7	**242**	**142**	**742**	**642**	**942**
22 ER N55	7 - 5	22	1,7	2,5	**270**	**170**	**770**	**670**	
22 EN U55	4,5 - 3,25	22	0,9	11,0	**272** [1]			**672** [1]	

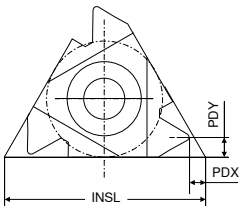
Steel	●	●	○		●
Stainless steel	●	○	●		●
Cast iron		●	○	●	●
Non ferrous metals	○	●	○	●	○
Heat resistant alloys			○	○	●

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

→ v_c Page 42

Left hand external thread turning insert

▲ Partial profile



CCN20 | CWK20

Designation	TPI	INSL	PDX	PDY	EL Article no. 71 202 ...	EL Article no. 71 202 ...
	1/"	mm	mm	mm		
16 EL A55	48 - 16	16	0,8	0,9	**240**	**640**
16 EL AG55	48 - 8	16	1,2	1,7	**244**	**644**
16 EL G55	14 - 8	16	1,2	1,7	**242**	**642**
22 EL N55	7 - 5	22	1,7	2,5	**270**	**670**

Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

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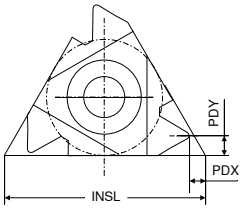
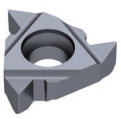
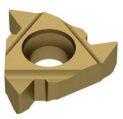
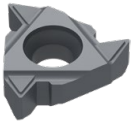
Right hand internal thread turning insert

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



CCN20 | CWN1525 | CWK20 | CCN7525



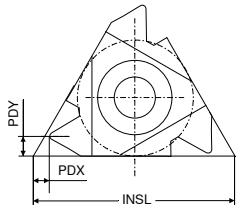
Designation	TPI	INSL	PDX	PDY	IR Article no. 71 204 ...	IR Article no. 71 204 ...	IR Article no. 71 204 ...	IR Article no. 71 204 ...
	1/"	mm	mm	mm				
11 IR A55	48 - 16	11	0,8	0,9	**210**		**610**	
16 IR A55	48 - 16	16	0,8	0,9	**240**		**640**	
16 IR AG55	48 - 8	16	1,2	1,7	**244**		**644**	
16 IR G55	14 - 8	16	1,2	1,7	**242**	**142**	**642**	**942**
22 IR N55	7 - 5	22	1,7	2,5	**270**		**670**	
22 IN U55	4,5 - 3,25	22	0,9	11,0	**272** [1]		**672** [1]	
Steel					●	●		●
Stainless steel					●	○		●
Cast iron						●	●	●
Non ferrous metals					○	●	●	○
Heat resistant alloys							○	●

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

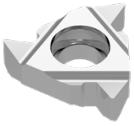
→ v_c Page 42

Left hand internal thread turning insert

▲ Partial profile



CCN20 | CWK20

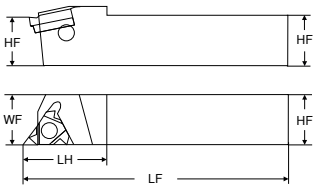


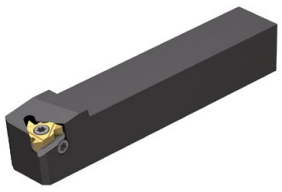
Designation	TPI	INSL	PDX	PDY	IL Article no. 71 203 ...	IL Article no. 71 203 ...
	1/"	mm	mm	mm		
11 IL A55	48 - 16	11	0,8	0,9	**210**	**610**
16 IL A55	48 - 16	16	0,8	0,9	**240**	**640**
16 IL AG55	48 - 8	16	1,2	1,7	**244**	**644**
16 IL G55	14 - 8	16	1,2	1,7	**242**	**642**
22 IL N55	7 - 5	22	1,7	2,5	**270**	**670**
Steel					●	
Stainless steel					●	
Cast iron						●
Non ferrous metals					○	●
Heat resistant alloys						○

→ v_c Page 42

Standard External Thread Turning Holder

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





Illustrations show right-hand versions

Designation	HF mm	WF mm	LF mm	LH mm	Insert	Left-hand Article no. 71 281 ...	Right-hand Article no. 71 280 ...
SE R/L 08 08 H11	8	11	100	16	11 ..	908 [2]	908 [2]
SE R/L 10 10 H11	10	12	100	18	11 ..	910 [2]	910 [2]
SE R/L 12 12 K11	12	12	125	20	11 ..	912 [2]	912 [2]
SE R/L 12 12 F16	12	16	80	22	16 ..	012	012
SE R/L 16 16 H16	16	16	100	25	16 ..	016	016
SE R/L 20 20 K16	20	20	125	30	16 ..	020	020
SE R/L 25 25 M16	25	25	150	30	16 ..	025	025
SE R/L 32 32 P16	32	32	170	30	16 ..	032	032
SE R/L 25 25 M22	25	25	150	32	22 ..	125	125
SE R 32 32 P22	32	32	170	34	22 ..		132
SE R 32 32 P22U	32	21	170	32	22 .N		232 [1]

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

Multi tooth shim

Shim

Screw-U

Key D

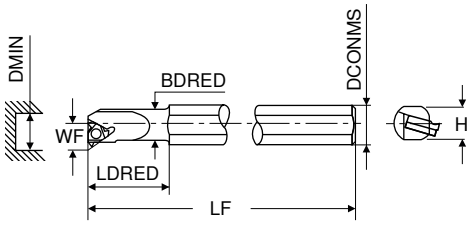
Clamping screw

Spare parts for Article no.		Multi tooth shim Article no. 71 950 ...		Shim Article no. 71 950 ...	Screw-U Article no. 71 950 ...		Key D Article no. 80 950 ...	Clamping screw Article no. 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	110	ER 22 / IL 22	137	235	T20	114	232
71 281 125	EL 22 / IR 22	115	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 39.**

Standard Internal Thread Turning Holder

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



Illustrations show right-hand versions

Designation	H	LF	LDRED	DCONMS	BDRED	WF	DMIN	Insert	Left-hand Article no. 71 283 ...	Right-hand Article no. 71 282 ...
	mm	mm	mm	mm	mm	mm	mm			
SI R 0010 H11	9,0	100	25	10	9,5	7,4	12	11 ..		**011** [1]
SI R/L 0010 K11	14,0	125	25	16	10,0	7,4	12	11 ..	**010** [1]	**010** [1]
SI R 0013 L11	14,0	140	32	16	12,0	8,9	15	11 ..		**013** [1]
SI R/L 0013 M16	14,0	150	32	16	13,0	10,2	16	16 ..	**015** [1]	**015** [1]
SI R/L 0016 P16	18,0	170	40	20	15,0	11,7	19	16 ..	**016** [1]	**016** [1]
SI R/L 0020 P16	18,0	170	40	20	19,5	13,7	24	16 ..	**020**	**020**
SI R 0025 R16	22,6	200	40	25	24,5	16,2	29	16 ..		**026**
SI R/L 0032 S16	28,8	250	50	32	31,5	19,7	36	16 ..	**032**	**032**
SI R 0040 T16	36,0	300	50	40	39,5	23,7	44	16 ..		**040**
SI R 0020 P22	18,0	170	40	20	19,5	15,6	24	22 ..		**120** [1]
SI R/L 0025 R22	22,6	200	40	25	24,5	18,1	29	22 ..	**126**	**126**
SI R 0032 S22	28,8	250	50	32	31,5	21,6	38	22 ..		**132**
SI R 0040 T22	36,0	300	60	40	39,5	25,6	46	22 ..		**140**
SI R 0032 S22U	28,8	250	60	32	31,5	24,4	38	22 .N		**133** [2]

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

Multi tooth shim

Shim

Screw-U

Key D

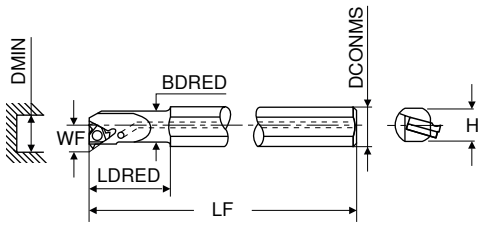
Clamping screw

Spare parts for Article no.		Article no. 71 950 ...		Article no. 71 950 ...	Article no. 71 950 ...		Article no. 80 950 ...	Article no. 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	115	EL 22 / IR 22	145	235	T20	114	232
71 283 126	ER 22 / IL 22	110	ER 22 / IL 22	137	235	T20	114	232
71 282 132	EL 22 / IR 22	115	EL 22 / IR 22	145	235	T20	114	232
71 282 140	EL 22 / IR 22	115	EL 22 / IR 22	145	235	T20	114	232

Shims for correction of helix angle see page → **Page 39.**

Standard Internal Thread Turning Holder with thro' coolant

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



Illustrations show right-hand versions

Designation	H	LF	LDRED	DCONMS	BDRED	WF	DMIN	Insert	Left-hand Article no. 71 283 ...	Right-hand Article no. 71 282 ...
	mm	mm	mm	mm	mm	mm	mm			
SI R 0010 M11CB	9,0	150	25	10	9,5	7,4	12	11 ..		**510** [2]
SI R 0012 P11CB	11,0	170	30	12	11,5	8,4	15	11 ..		**512** [2]
SI R/L 0010 K11B	14,0	125	25	16	10,0	7,4	12	11 ..	**310**	**310**
SI R/L 0013 M16B	14,0	150	32	16	13,0	10,2	16	16 ..	**315**	**315**
SI R 0016 P16B	18,0	170	40	20	16,0	11,7	19	16 ..		**316**
SI R 0020 P16B	18,0	170	40	20	19,5	13,7	24	16 ..		**320** [1]
SI R/L 0032 S16B	28,8	250	50	32	31,5	19,7	36	16 ..	**332** [1]	**332** [1]

1) with shim seat
2) Carbide version

Multi tooth shim

Shim

Screw-U

Key D

Clamping screw

Spare parts for Article no.		Multi tooth shim Article no. 71 950 ...		Shim Article no. 71 950 ...		Screw-U Article no. 71 950 ...		Key D Article no. 80 950 ...		Clamping screw Article no. 71 950 ...
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 39.**

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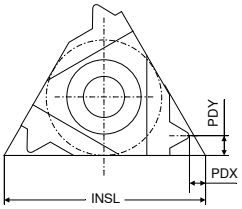
Right hand internal thread turning insert – Mini size 06

▲ Full profile
▲ Thread production from diameter 6mm

M | 60°



CWS80 | CCN1525 | CWN30

Designation	TP	PDX	PDY	INSL	HSS IR	IR	IR
	mm	mm	mm	mm	Article no. 71 276 ...	Article no. 71 271 ...	Article no. 71 276 ...
06 IR 0,5	0,50	0,9	0,5	6	**710**	**110**	**310**
06 IR 0,75	0,75	0,8	0,5	6	**712**	**112**	**312**
06 IR 1,0	1,00	0,7	0,6	6	**714**	**114**	**314**
06 IR 1,25	1,25	0,6	0,6	6	**716**	**116**	**316**

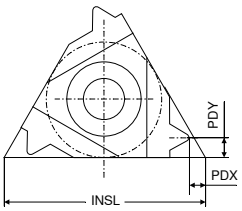
Steel	○	●	●
Stainless steel	●	●	●
Cast iron	○	●	○
Non ferrous metals	○	○	○
Heat resistant alloys			○

→ v_c Page 42

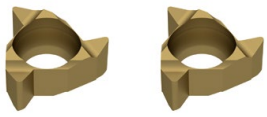
Right hand internal thread turning insert – Mini size 06

▲ Full profile
▲ Thread production from diameter 6mm

BSW | 55°



CWS80 | CWN30



Designation	TPI	PDX	PDY	INSL	HSS IR	IR
	1/"	mm	mm	mm	Article no. 71 278 ...	Article no. 71 278 ...
06 IR 26	26	0,6	0,6	6	**716**	**316**
06 IR 22	22	0,6	0,6	6	**720**	**320**
06 IR 20	20	0,6	0,6	6	**722**	**322**
06 IR 19	19	0,6	0,6	6	**724**	**324**
06 IR 18	18	0,6	0,6	6	**726**	**326**

Steel	○	●
Stainless steel	●	●
Cast iron	○	○
Non ferrous metals	○	○
Heat resistant alloys		○

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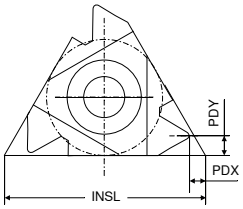
Right hand internal thread turning insert – Mini size 06

▲ Partial profile
▲ Thread production from diameter 6mm



CWS80 | CCN1525 | CWN30

Designation	TP	INSL	PDX	PDY	HSS IR	IR	IR
	mm	mm	mm	mm	Article no. 71 272 ...	Article no. 71 274 ...	Article no. 71 272 ...
06 IR A60	0,5 - 1,25	6	0,6	0,6	**710**	**210**	**310**
Steel					○	●	●
Stainless steel					●	●	●
Cast iron					○	●	○
Non ferrous metals					○	○	○
Heat resistant alloys							○

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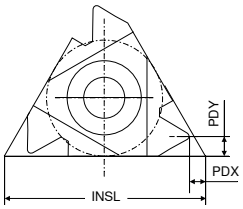
8

Right hand internal thread turning insert – Mini size 06

▲ Partial profile
▲ Thread production from diameter 6mm



CWS80 | CWN30

Designation	TPI	INSL	PDX	PDY	HSS IR	IR
	1/"	mm	mm	mm	Article no. 71 274 ...	Article no. 71 274 ...
06 IR A55	48 - 20	6	0,5	0,6	**710**	**310**
Steel					○	●
Stainless steel					●	●
Cast iron					○	○
Non ferrous metals					○	○
Heat resistant alloys						○

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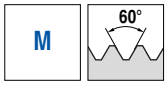
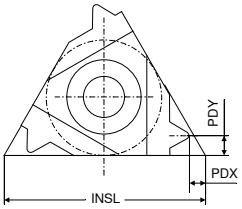
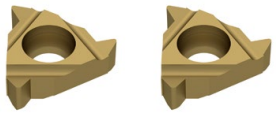
Right hand internal thread turning insert – Mini size 08

▲ Full profile
▲ Thread production from diameter 8mm



CWS80 CWN30





Designation	TP	PDX	PDY	INSL	HSS IR	IR
	mm	mm	mm	mm	Article no. 71 277 ...	Article no. 71 277 ...
08 IR 0,5	0,50	0,6	0,5	8	**710**	**310**
08 IR 0,75	0,75	0,6	0,5	8	**712**	**312**
08 IR 1,0	1,00	0,6	0,6	8	**714**	**314**
08 IR 1,25	1,25	0,6	0,7	8	**716**	**316**
08 IR 1,5	1,50	0,6	0,7	8	**718**	**318**
08 IR 1,75	1,75	0,6	0,8	8	**720**	**320**
08 IN 2,0	2,00	1,0	4,0	8	**784** 1)	**384** 1)
Steel					○	●
Stainless steel					●	●
Cast iron					○	○
Non ferrous metals					○	○
Heat resistant alloys						○

1) Neutral version (N)

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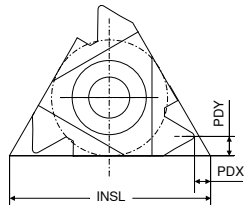
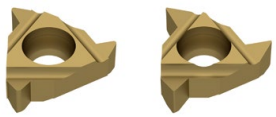
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8mm

CWS80 CWN30





Designation	TP	PDX	PDY	INSL	HSS IR	IR
	mm	mm	mm	mm	Article no. 71 273 ...	Article no. 71 273 ...
08 IR A60	0,5 - 1,5	0,6	0,7	8	**710**	**310**
08 IN M60	1,75 - 2,0	0,8	4,0	8	**772** 1)	**372** 1)
Steel					○	●
Stainless steel					●	●
Cast iron					○	○
Non ferrous metals					○	○
Heat resistant alloys						○

1) Neutral version (N)

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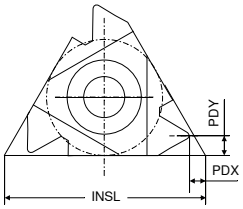
Right hand internal thread turning insert – Mini size 08

- Partial profile
- Thread production from diameter 8mm



CWS80

CWN30

Designation	TPI	INSL	PDX	PDY	HSS IR	IR
	1/"	mm	mm	mm	Article no. 71 275 ...	Article no. 71 275 ...
08 IR A55	48 - 16	8	0,6	0,7	**710**	**310**
08 IN M55	14 - 11	8	0,9	4,0	**772** [1]	**372** [1]

Steel	○	●
Stainless steel	●	●
Cast iron	○	○
Non ferrous metals	○	○
Heat resistant alloys		○

1) Neutral version (N)

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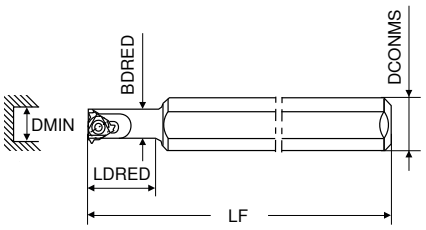
Right Hand Internal Thread Holder – Mini size 06



Designation	LF	LDRED	DCONMS	BDRED	DMIN	Insert	Right-hand Article no. 71 294 ...
	mm	mm	mm	mm	mm		
SI R 0005 H06	100	12	12	5,2	6	06 ..	**005**
SI R 0005 H06 C	100	25	6	5,2	6	06 ..	**105** [1]

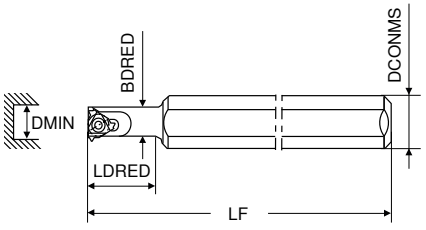
1) Solid Carbide Shank with Thro' Coolant

Key D

Clamping screw

Spare parts for Article no.		Article no. 80 950 ...	Article no. 71 950 ...
71 294 005	T06	**108**	**029**
71 294 105	T06	**108**	**029**

Right Hand Internal Thread Holder – Mini size 08



Designation	LF	LDRED	DCONMS	BDRED	DMIN	Insert	Right-hand Article no. 71 295 ...
	mm	mm	mm	mm	mm		
SI R 0007 K08	125	18	16	6,7	7,8	08 ..	**007**
SI R 0007 K08U	125	21	16	7,5	9,0	08 .N	**008** [1]
SI R 0007 K08C	125	30	8	6,5	7,8	08 ..	**107** [2]

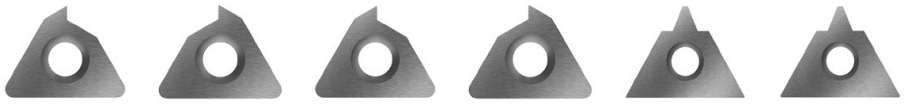
1) Neutral insert indicated by marking (N)
2) Solid Carbide Shank with Thro' Coolant

Key D

Clamping screw

Spare parts for Article no.		Article no. 80 950 ...	Article no. 71 950 ...
71 295 007	T06	**108**	**033**
71 295 008	T06	**108**	**033**
71 295 107	T06	**108**	**033**

Shims for Standard Threading Inserts



Pitch-angle β	AE 16 ER 16 / IL 16 Article no. 71 950 ...	AI 16 EL 16 / IR 16 Article no. 71 950 ...	AE 22 ER 22 / IL 22 Article no. 71 950 ...	AI 22 EL 22 / IR 22 Article no. 71 950 ...	AE 22 U ER 22 / IL 22 Article no. 71 950 ...	AI 22 U EL 22 / IR 22 Article no. 71 950 ...
+ 4,5°	118	126	134	142	150 [1]	158 [1]
+ 3,5°	119	127	135	143	151 [1]	159 [1]
+ 2,5°	120	128	136	144	152 [1]	160 [1]
+ 1,5°	121	129	137	145	153 [1]	161 [1]
+ 0,5°	122	130	138	146	154 [1]	162 [1]
0°	123	131	139	147		
- 0,5°	124	132	140	148	156 [1]	164 [1]
- 1,5°	125	133	141	149	157 [1]	165 [1]

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

Shims for Multi-Tooth Threading Inserts

Pitch-angle β	AE 16 M ER 16 / IL 16 Article no. 71 950 ...	AI 16 M EL 16 / IR 16 Article no. 71 950 ...	AE 22 M ER 22 / IL 22 Article no. 71 950 ...	AI 22 M EL 22 / IR 22 Article no. 71 950 ...
+ 1,5°	101	108	110	115

8

Pitch angle

Important Information about Standard Shims

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

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

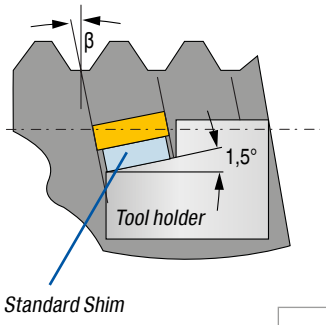
- the profile will be distorted.
- insufficient clearance angle.
- the tool life of the insert is greatly reduced.

Method 1: Calculation

Calculating the helix angle β:

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

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



Example calculation

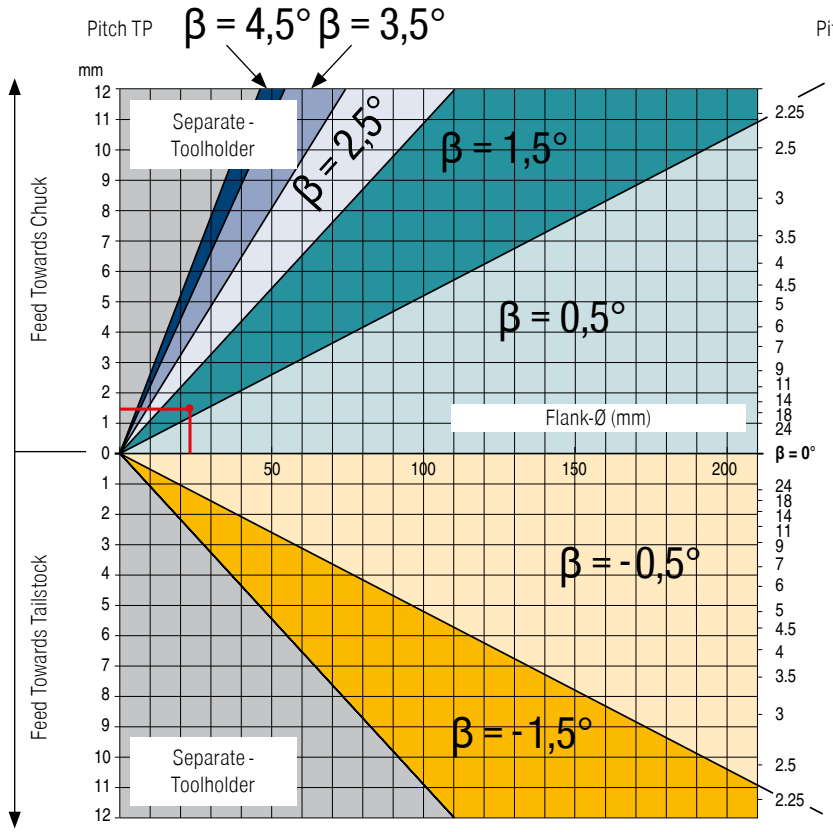
External thread M24 x 1.5
Feed towards chuck
DMIN = Nominal Ø: M24 = 24 mm
TP = Pitch: 1.5 mm

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

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	Shim
0,0°–0,99°	0,5°
1,0°–1,99°	1,5°
2,0°–2,99°	2,5°
3,0°–3,99°	3,5°
4,0°–4,99°	4,5°
0,0°–(-0,99°)	-0,5°
-1,0°–(-1,99°)	-1,5°

Material examples referring to the cutting data tables

	Index	Material	Strength N/mm² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	<1100 N/mm²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm²	3.2315	A- G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm²	2.1247	Cub2 (Berylium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-Al11 Fe5 Ni5)		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe -Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

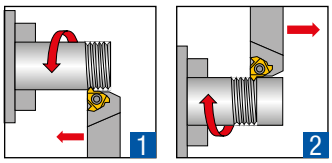
Cutting data appoximate values

	Mini CWN30	Mini CWS80	Mini CCN1525	CWN1525	HCN2525	CCN7525	CCN20	CWK20
Index	v_c in m/min							
1.1	**20–100**	30–50	**80–100**	**120–140**	190–210	**150–170**	**120–180**	
1.2	**20–100**	30–50	**80–100**	**120–140**	190–210	**150–170**	**140–200**	
1.3	**20–100**	30–50	**80–100**	**120–140**	190–210	**150–170**	**110–180**	
1.4	**20–80**	25–40	**60–80**	**70–90**	120–140	**90–110**	**100–155**	
1.5	**20–80**	25–40	**90–110**	**100–120**	160–180	**130–150**	**110–180**	
1.6	**20–80**	25–40	**90–110**	**100–120**	160–180	**130–150**	**100–155**	
1.7	**20–100**	30–50	**50–60**	**50–70**	70–90	**60–80**	**110–180**	
1.8	**20–80**	25–40	**50–60**	**50–70**	70–90	**60–80**	**80–135**	
1.9	**20–100**	25–40	**60–80**	**90–100**	120–140	**100–120**		
1.10	**20–80**	25–40	**50–60**	**50–60**	60–80	**50–70**		
1.11	**20–80**	25–40	**50–60**	**50–60**	60–80	**50–70**		
1.12	**20–80**	25–40	**50–60**	**50–60**	60–80	**50–70**	**80–135**	
1.13		25–40	**50–60**	**50–60**	60–80	**50–70**		
1.14			**50–60**	**50–60**	60–80	**50–70**		
1.15			**50–60**	**50–60**	60–80	**50–70**		
1.16			**50–60**	**50–60**	60–80	**50–70**		
2.1	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**70–120**	
2.2	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**70–120**	
2.3	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**60–95**	
2.4	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**60–95**	
2.5	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**40–90**	
2.6	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**70–100**	
2.7	**20–70**	**10–25**	**40–50**	50–70	**140–160**	**90–110**	**70–100**	
3.1	40–90	20–40	**60–80**	**90–110**	140–150	**120–130**		**70–100**
3.2	40–90	20–40	**60–80**	**90–110**	140–150	**120–130**		**70–100**
3.3	40–90	20–40	**60–80**	**90–110**	140–150	**120–130**		**70–100**
3.4	40–90	20–40	**60–80**	**90–110**	140–150	**120–130**		**70–100**
3.5	40–90	20–40	**50–70**	**80–100**	120–130	**100–110**		**70–100**
3.6	40–90	20–40	**50–70**	**80–100**	120–130	**100–110**		**70–100**
3.7	40–90	20–40	**50–70**	**80–100**	120–130	**100–110**		**70–100**
3.8	40–90	20–40	**50–70**	**80–100**	120–130	**100–110**		**70–100**
4.1	80–180	40–100	550–570	**600–650**	800–900			**100–250**
4.2	80–180	40–100	300–330	**480–520**	800–900			**100–250**
4.3	60–150		300–330	**480–520**	800–900			**100–250**
4.4	60–130		300–330	**480–520**	800–900			**100–250**
4.5	40–120		300–330	**480–520**	800–900			**100–250**
4.6	80–150	40–80	120–150	**200–220**	300–320		80–200	**100–250**
4.7	80–150	40–80	110–130	**180–200**	280–300		80–200	**100–250**
4.8	80–150	40–80	110–130	**160–180**	250–280		80–200	**100–250**
4.9	80–150	40–80	110–130	**160–180**	250–280		80–200	**100–250**
4.10	80–150	40–80	100–120	**150–170**	220–250		80–200	**100–250**
4.11	80–150	40–80	100–120	**180–200**	230–240		80–200	**100–250**
4.12	80–150		100–120	**180–200**	230–240		80–200	**100–250**
4.13			180–200	**250–300**				
4.14			180–200	**250–300**				
4.15			180–200	**250–300**				
4.16			60–80	**80–100**	120–150			**100–250**
4.17			60–80	**80–100**	120–150	100–120		**100–250**
4.18			60–80	**80–100**	120–150			**100–250**
4.19			60–80	**80–100**	120–150			**100–250**
5.1					45–55	**30–40**		
5.2					45–55	**30–40**		20–30
5.3					45–55	**30–40**		20–30
5.4					45–55	**30–40**		20–30
5.5					35–40	**25**		20–30
5.6					35–40	**25–35**		20–30
5.7					35–40	**25–35**		
5.8					35–40	**25–35**		
5.9	20–90				40–50	**35–45**		25–50
5.10	20–90				40–50	**35–45**		20–30
5.11	20–90				40–50	**35–45**		20–30
6.1					50–60	45–55	40–60	
6.2					45–55		40–60	
6.3					40–45			
6.4					35–45			
6.5								

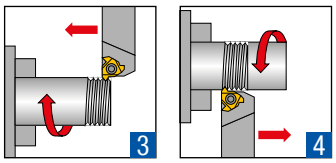
The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Thread turning methods

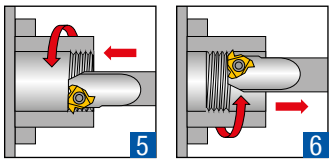
External right-hand thread



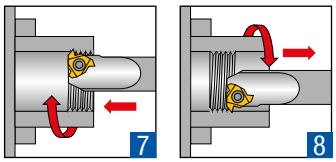
External left-hand thread



Internal right-hand thread



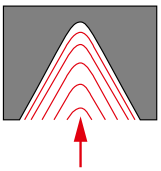
Internal left-hand thread



The machining examples 2, 4, 6 and 8 require negative shims!
These shims can be found on → **Page 39.**

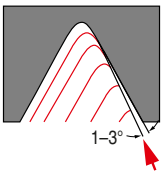
Thread infeed methods

Radial Infeed



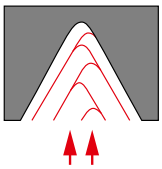
- for pitches less than 1.5 mm
- for short chipping materials
- for machining hardened materials
- simple and quick method

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

8

Recommended number of cuts and cutting depths

Standard Threading Inserts

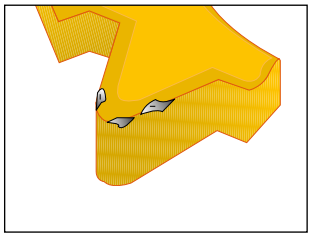
Pitch	**mm**	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	8,00
	TPI	48	32	24	20	16	14	12	10	8	7	6	5.5	5	4.5	4	3
Number of passes		4-6	4-7	4-8	5-9	6-10	7-12	7-12	8-14	9-16	10-18	11-18	11-19	12-20	12-20	12-20	15-24
Number of passes	**(CCN7525)**	3-4	3-4	3-5	4-6	5-6	6-8	6-8	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	Edges	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

Troubleshooting

Edge chipping



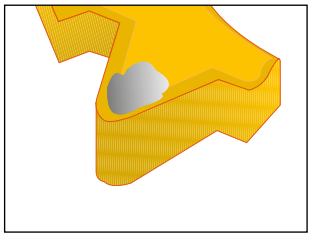
Cause

- Common in stainless materials
- Incorrect grade

Corrective measures

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

Cratering



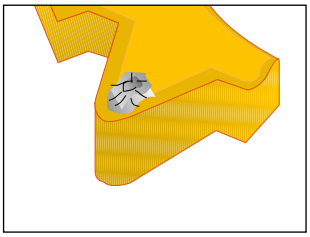
Cause

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

Remedy

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

Built-up edge



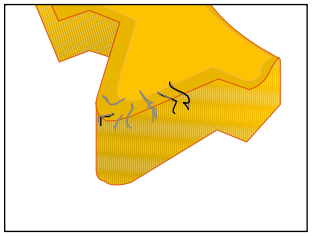
Cause

- Cutting speed too low
- Incorrect grade

Remedy

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

Thermal cracking



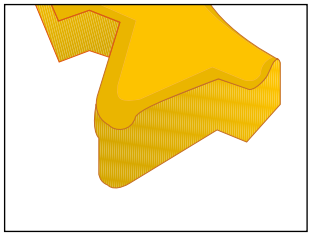
Cause

- Insufficient coolant
- Cutting speed too high
- Incorrect grade

Remedy

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

Plastic deformation



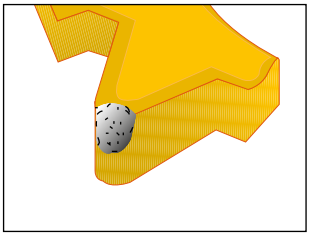
Cause

- 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

WNT Designation Key

Inserts

16	E	R	AG 60	

Insert size

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

Insert

E	External
I	Internal

Cutting design

R	Right-hand
L	Left-hand
N	Neutral

Pitch

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 teeth

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

Example

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

Tool holder

SE	R	1212	F	16	

Tool holder

SE	External
SI	Internal

Cutting design

R	Right-hand
L	Left-hand

Shank cross-section

Example	
External holder square shank	1212 = 12 mm x 12 mm
Internal boring bar	0020 = 20 mm Diameter

Overall length

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

Insert size

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

Properties

B	Diameter
C	With thro' coolant
U	With carbide shank

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 16 mm threading insert

Grade description

Universal

CCN7525
- Carbide, TiAlN-coated
- ISO | **P25** | **M25** | **K25** | N25 | **S25**
- The universal carbide grade with sintered chip breaker for medium to high cutting speeds

CWN30
- Carbide, TiN-coated
- ISO | **P30** | **M30**
- The coated carbide grade for machining steels and stainless steels at low cutting speeds

CCN1525
- Carbide, TiN-coated
- ISO | **P25** | **M25**
- The coated carbide grade for machining steels and stainless steels at low cutting speeds

Non-ferrous metals

CWK20
- Carbide, uncoated
- ISO | **N10** | **S10** | K10
- The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

Steel

CCN20
- Carbide, TiAlN-coated
- ISO | **P20** | **M20**
- The all-round carbide grade for machining steels at low cutting speeds

CWN1525
- Carbide, TiN-coated
- ISO | **P25** | M25 | **K25** | **N25**
- The universal carbide grade for machining steels and non-ferrous metals at low cutting speeds

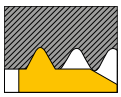
Stainless steel

HCN2525
- Carbide, TiAlN-coated
- ISO | P25 | **M25** | K25 | N25 | S25
- The coated carbide grade for machining stainless steels at high cutting speeds
- Also suitable for exotic materials

CWS80
- HSS, TiN-coated
- ISO | P | **M** | K | N
- The coated HSS grade for stainless machining at low cutting speeds
- Also suitable for exotic materials

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