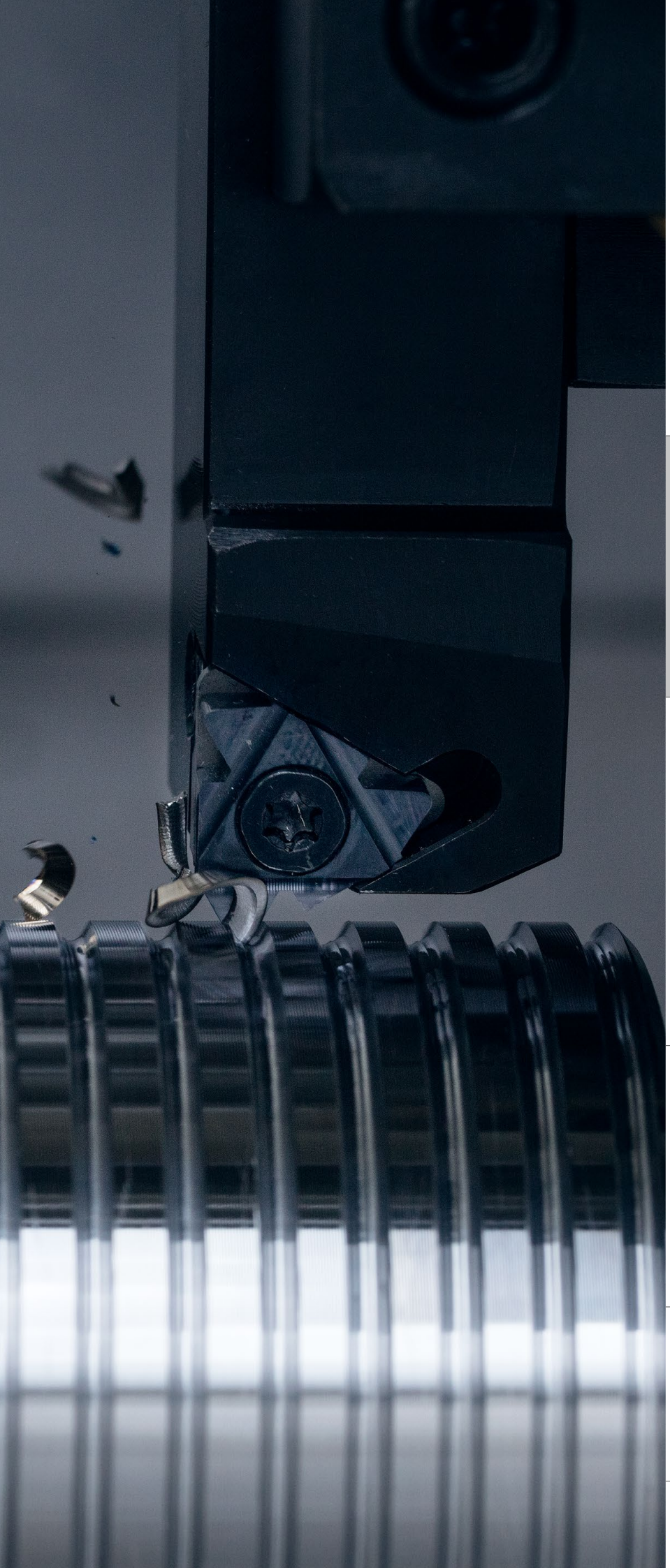


Table of contents

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

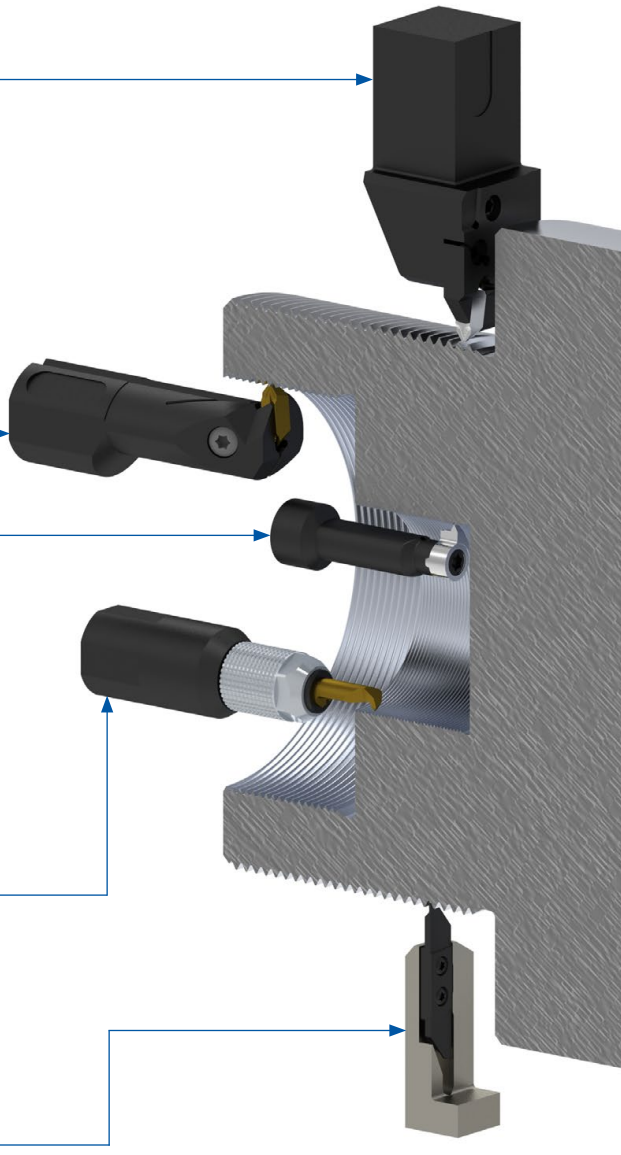
UltraMini

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

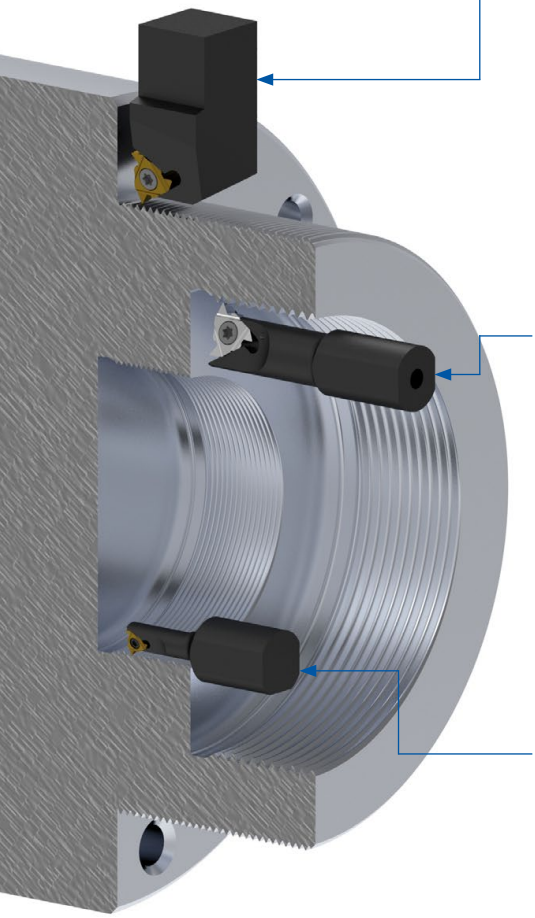
Flank angle

- 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

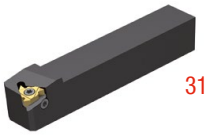
Partial profile

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.**

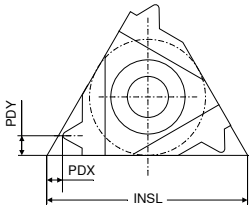
Right hand external thread turning insert

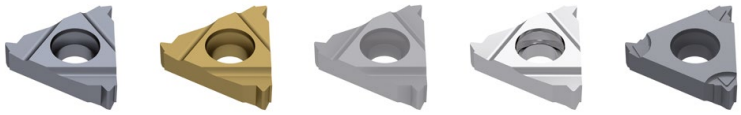
▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application

M | MF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TP	INSL	PDX	PDY	ER X3 Article no. 71 220 ...		ER X3 Article no. 71 220 ...		ER X3 Article no. 71 220 ...		ER Y1 Article no. 71 220 ...		ER X3 Article no. 71 220 ...	
	mm	mm	mm	mm	£		£		£		£		£	
11 ER 0,35	0.35	11	0.8	0.4	23.14	**204**					16.92	**604**		
11 ER 0,4	0.40	11	0.7	0.4	23.14	**206**					16.92	**606**		
11 ER 0,45	0.45	11	0.7	0.4	23.14	**208**					16.92	**608**		
11 ER 0,5	0.50	11	0.6	0.6	23.14	**209**					16.92	**609**		
11 ER 0,6	0.60	11	0.6	0.6	23.14	**210**					16.92	**610**		
11 ER 0,7	0.70	11	0.6	0.6	23.14	**211**					16.92	**611**		
11 ER 0,75	0.75	11	0.6	0.6	23.14	**212**					16.92	**612**		
11 ER 0,8	0.80	11	0.6	0.6	23.14	**213**					16.92	**613**		
11 ER 1,0	1.00	11	0.7	0.7	23.14	**214**					16.92	**614**		
11 ER 1,25	1.25	11	0.8	0.9	23.14	**216**					16.92	**616**		
11 ER 1,5	1.50	11	0.8	1.0	23.14	**218**					16.92	**618**		
11 ER 1,75	1.75	11	0.8	1.1	23.14	**220**					16.92	**620**		
16 ER 0,35	0.35	16	0.8	0.4	23.95	**234**			21.81	**734**	17.52	**634**		
16 ER 0,4	0.40	16	0.7	0.4	23.95	**236**			21.81	**736**	17.52	**636**		
16 ER 0,45	0.45	16	0.7	0.4	23.95	**238**					17.52	**638**		
16 ER 0,5	0.50	16	0.6	0.6	23.95	**240**	14.97	**140**	16.99	**740**	17.52	**640**	16.99	**940**
16 ER 0,7	0.70	16	0.6	0.6	23.95	**241**	16.57	**141**	17.54	**741**	17.52	**641**		
16 ER 0,75	0.75	16	0.6	0.6	23.95	**242**	15.56	**142**	16.99	**742**	17.52	**642**	16.99	**942**
16 ER 0,8	0.80	16	0.6	0.6	23.95	**243**	15.56	**143**	16.99	**743**	17.52	**643**	16.99	**943**
16 ER 1,0	1.00	16	0.7	0.7	23.95	**244**	14.53	**144**	16.57	**744**	17.05	**644**	16.57	**944**
16 ER 1,25	1.25	16	0.8	0.9	23.95	**246**	14.53	**146**	16.57	**746**	17.52	**646**	16.57	**946**
16 ER 1,5	1.50	16	0.8	1.0	23.95	**248**	14.53	**148**	16.57	**748**	17.05	**648**	16.57	**948**
16 ER 1,75	1.75	16	0.9	1.2	23.95	**250**	14.53	**150**	16.57	**750**	17.52	**650**		
16 ER 2,0	2.00	16	1.0	1.3	23.95	**252**	14.53	**152**	16.57	**752**	17.52	**652**	16.57	**952**
16 ER 2,5	2.50	16	1.1	1.5	23.95	**254**	14.53	**154**	16.57	**754**	17.52	**654**	16.57	**954**
16 ER 3,0	3.00	16	1.2	1.6	23.95	**256**	14.53	**156**	16.57	**756**	17.52	**656**	16.57	**956**
22 ER 3,5	3.50	22	1.6	2.3	33.08	**270**	22.68	**170**	24.95	**770**	28.79	**670**		
22 ER 4,0	4.00	22	1.6	2.3	33.08	**272**	23.66	**172**	26.31	**772**	28.79	**672**		
22 ER 4,5	4.50	22	1.7	2.4	33.08	**274**	25.52	**174**	27.79	**774**	28.79	**674**		
22 ER 5,0	5.00	22	1.7	2.5	33.08	**276**	25.52	**176**	27.79	**776**	28.79	**676**		
22 ER 5,5	5.50	22	1.7	2.6			25.52	**178**						
22 ER 5,5	5.50	22	1.9	2.7	33.08	**278**					28.79	**678**		
22 EN 5,5	5.50	22	2.3	11.0	33.08	**282** [1]					28.79	**682** [1]		
22 ER 6,0	6.00	22	1.9	2.7			25.52	**180**	27.79	**780**				
22 ER 6,0	6.00	22	2.0	2.9	33.08	**280**					28.79	**680**		
22 EN 6,0	6.00	22	2.6	11.0	33.08	**284** [1]					28.79	**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.

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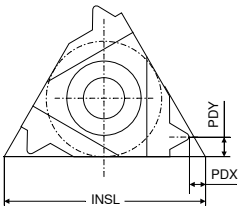
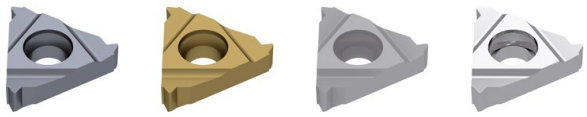
Left hand external thread turning insert

▲ Full profile

M | MF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20





Designation	TP	INSL	PDX	PDY	EL X3 Article no. 71 222 ...		EL X3 Article no. 71 222 ...		EL X3 Article no. 71 222 ...		EL Y1 Article no. 71 222 ...	
	mm	mm	mm	mm	£		£		£		£	
11 EL 0,35	0.35	11	0.8	0.4	23.14	**204**					16.92	**604**
11 EL 0,4	0.40	11	0.7	0.4	23.14	**206**					16.92	**606**
11 EL 0,45	0.45	11	0.7	0.4	23.14	**208**					16.92	**608**
11 EL 0,5	0.50	11	0.6	0.6	23.14	**209**					16.92	**609**
11 EL 0,6	0.60	11	0.6	0.6	23.14	**210**					16.92	**610**
11 EL 0,7	0.70	11	0.6	0.6	23.14	**211**					16.92	**611**
11 EL 0,75	0.75	11	0.6	0.6	23.14	**212**					16.92	**612**
11 EL 0,8	0.80	11	0.6	0.6	23.14	**213**					16.92	**613**
11 EL 1,0	1.00	11	0.7	0.7	23.14	**214**					16.92	**614**
11 EL 1,25	1.25	11	0.8	0.9	23.14	**216**					16.92	**616**
11 EL 1,5	1.50	11	0.8	1.0	23.14	**218**					16.92	**618**
11 EL 1,75	1.75	11	0.8	1.1	23.14	**220**					16.92	**620**
16 EL 0,35	0.35	16	0.8	0.4	23.95	**234**					17.52	**634**
16 EL 0,4	0.40	16	0.7	0.4	23.95	**236**					17.52	**636**
16 EL 0,45	0.45	16	0.7	0.4	23.95	**238**					17.52	**638**
16 EL 0,5	0.50	16	0.6	0.6	23.95	**240**					17.52	**640**
16 EL 0,7	0.70	16	0.6	0.6	23.95	**241**					17.52	**641**
16 EL 0,75	0.75	16	0.6	0.6	23.95	**242**					17.52	**642**
16 EL 0,8	0.80	16	0.6	0.6	23.95	**243**					17.52	**643**
16 EL 1,0	1.00	16	0.7	0.7	23.95	**244**	15.55	**144**	17.44	**744**	17.05	**644**
16 EL 1,25	1.25	16	0.8	0.9	23.95	**246**	16.54	**146**			17.52	**646**
16 EL 1,5	1.50	16	0.8	1.0	23.95	**248**	15.55	**148**	17.44	**748**	17.05	**648**
16 EL 1,75	1.75	16	0.9	1.2	23.95	**250**			20.35	**750**	17.52	**650**
16 EL 2,0	2.00	16	1.0	1.3	23.95	**252**	16.54	**152**			17.52	**652**
16 EL 2,5	2.50	16	1.1	1.5	23.95	**254**					17.52	**654**
16 EL 3,0	3.00	16	1.2	1.6	23.95	**256**	21.36	**156**			17.52	**656**
22 EL 3,5	3.50	22	1.6	2.3	33.08	**270**					28.79	**670**
22 EL 4,0	4.00	22	1.6	2.3	33.08	**272**					28.79	**672**
22 EL 4,5	4.50	22	1.7	2.4	33.08	**274**					28.79	**674**
22 EL 5,0	5.00	22	1.7	2.5	33.08	**276**					28.79	**676**
22 EL 5,5	5.50	22	1.9	2.7	33.08	**278**					28.79	**678**
22 EL 6,0	6.00	22	2.0	2.9	33.08	**280**					28.79	**680**

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

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8

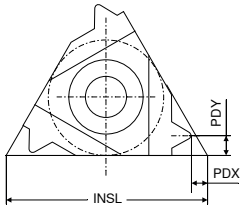
Right hand internal thread turning insert

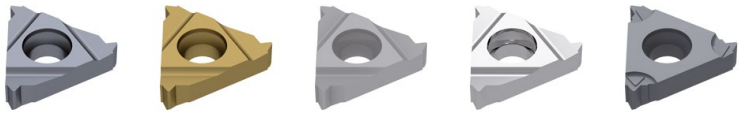
▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application

M | MF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TP	INSL	PDX	PDY	IR X3 Article no. 71 224 ...		IR X3 Article no. 71 224 ...		IR X3 Article no. 71 224 ...		IR Y1 Article no. 71 224 ...		IR X3 Article no. 71 224 ...	
	mm	mm	mm	mm	£		£		£		£		£	
11 IR 0,35	0.35	11	0.8	0.3	23.95	**204**					17.52	**604**		
11 IR 0,4	0.40	11	0.8	0.4	23.95	**206**					17.52	**606**		
11 IR 0,45	0.45	11	0.8	0.4	23.95	**208**					17.52	**608**		
11 IR 0,5	0.50	11	0.6	0.6	23.95	**210**					17.52	**610**		
11 IR 0,7	0.70	11	0.6	0.6	23.95	**211**					17.52	**611**		
11 IR 0,75	0.75	11	0.6	0.6	23.95	**212**					17.52	**612**	20.35	**912**
11 IR 0,8	0.80	11	0.6	0.6	23.95	**213**			24.86	**713**	17.52	**613**		
11 IR 1,0	1.00	11	0.6	0.6									16.57	**914**
11 IR 1,0	1.00	11	0.6	0.7	23.95	**214**	14.53	**114**	16.57	**714**	17.05	**614**		
11 IR 1,25	1.25	11	0.8	0.9	23.95	**216**					17.52	**616**		
11 IR 1,5	1.50	11	0.8	0.9									16.57	**918**
11 IR 1,5	1.50	11	0.8	1.0	23.95	**218**	14.53	**118**	16.57	**718**	17.05	**618**		
11 IR 1,75	1.75	11	0.9	1.1	23.95	**220**					17.52	**620**		
11 IR 2,0	2.00	11	0.8	0.9			14.53	**122**	16.57	**722**				
11 IR 2,0	2.00	11	0.9	1.1	23.95	**222**					17.52	**622**		
11 IR 2,5	2.50	11	0.8	1.2			16.54	**124**	17.97	**724**				
11 IR 2,5	2.50	11	0.9	1.1	23.95	**224**					17.52	**624**		
16 IR 0,35	0.35	16	0.8	0.4	23.95	**234**					17.52	**634**		
16 IR 0,4	0.40	16	0.7	0.4	23.95	**236**					17.52	**636**		
16 IR 0,45	0.45	16	0.7	0.4	23.95	**238**					17.52	**638**		
16 IR 0,5	0.50	16	0.6	0.6	23.95	**240**					17.52	**640**		
16 IR 0,7	0.70	16	0.6	0.6	23.95	**241**					17.52	**641**		
16 IR 0,75	0.75	16	0.6	0.6	23.95	**242**	18.25	**142**	20.35	**742**	17.52	**642**		
16 IR 0,8	0.80	16	0.6	0.6	23.95	**243**					17.52	**643**		
16 IR 1,0	1.00	16	0.6	0.7			14.53	**144**	16.57	**744**			16.57	**944**
16 IR 1,0	1.00	16	0.7	0.7	23.95	**244**					17.05	**644**		
16 IR 1,25	1.25	16	0.8	0.9	23.95	**246**			17.44	**746**	17.52	**646**	17.44	**946**
16 IR 1,5	1.50	16	0.8	1.0	23.95	**248**	14.53	**148**	16.57	**748**	17.05	**648**	16.57	**948**
16 IR 1,75	1.75	16	0.9	1.2	23.95	**250**			20.35	**750**	17.52	**650**		
16 IR 2,0	2.00	16	1.0	1.3	23.95	**252**	14.53	**152**	16.57	**752**	17.52	**652**	16.57	**952**
16 IR 2,5	2.50	16	1.1	1.5	23.95	**254**	14.53	**154**	16.57	**754**	17.52	**654**	16.57	**954**
16 IR 3,0	3.00	16	1.1	1.5	23.95	**256**	14.53	**156**	16.57	**756**	17.52	**656**	16.57	**956**
22 IR 3,5	3.50	22	1.6	2.3	33.08	**270**	23.66	**170**	26.31	**770**	28.79	**670**		
22 IR 4,0	4.00	22	1.6	2.3	33.08	**272**	23.66	**172**	26.31	**772**	28.79	**672**		
22 IR 4,5	4.50	22	1.6	2.4			25.52	**174**	27.79	**774**				
22 IR 4,5	4.50	22	1.7	2.4	33.08	**274**					28.79	**674**		
22 IR 5,0	5.00	22	1.6	2.3			25.52	**176**						
22 IR 5,0	5.00	22	1.7	2.5	33.08	**276**					28.79	**676**		
22 IR 5,5	5.50	22	1.6	2.3			28.78	**178**						
22 IR 5,5	5.50	22	1.9	2.7	33.08	**278**					28.79	**678**		
22 IN 5,5	5.50	22	2.3	11.0	33.08	**282** [1]					28.79	**682** [1]		
22 IR 6,0	6.00	22	1.6	2.4			25.52	**180**						
22 IR 6,0	6.00	22	2.0	2.9	33.08	**280**					28.79	**680**		
22 IN 6,0	6.00	22	2.6	11.0	33.08	**284** [1]					28.79	**684** [1]		

	CCN20	CWN1525	HCN2525	CWK20	CCN7525
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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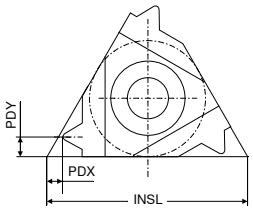
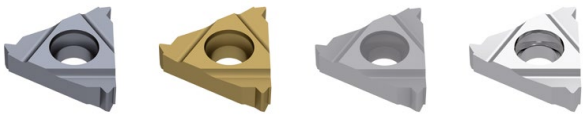
Left hand internal thread turning insert

▲ Full profile

M | MF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20





Designation	TP	INSL	PDX	PDY	IL X3 Article no. 71 226 ...		IL X3 Article no. 71 226 ...		IL X3 Article no. 71 226 ...		IL Y1 Article no. 71 226 ...	
	mm	mm	mm	mm	£		£		£		£	
11 IL 0,35	0.35	11	0.8	0.3	23.95	**204**					17.52	**604**
11 IL 0,4	0.40	11	0.8	0.4	23.95	**206**					17.52	**606**
11 IL 0,45	0.45	11	0.8	0.4	23.95	**208**					17.52	**608**
11 IL 0,5	0.50	11	0.6	0.6	23.95	**210**					17.52	**610**
11 IL 0,7	0.70	11	0.6	0.6	23.95	**211**					17.52	**611**
11 IL 0,75	0.75	11	0.6	0.6	23.95	**212**					17.52	**612**
11 IL 0,8	0.80	11	0.6	0.6	23.95	**213**					17.52	**613**
11 IL 1,0	1.00	11	0.6	0.7	23.95	**214**					17.05	**614**
11 IL 1,25	1.25	11	0.8	0.9	23.95	**216**					17.52	**616**
11 IL 1,5	1.50	11	0.8	1.0	23.95	**218**					17.05	**618**
11 IL 1,75	1.75	11	0.9	1.1	23.95	**220**					17.52	**620**
11 IL 2,0	2.00	11	0.9	1.1	23.95	**222**					17.52	**622**
11 IL 2,5	2.50	11	0.9	1.1	23.95	**224**					17.52	**624**
16 IL 0,35	0.35	16	0.8	0.4	23.95	**234**					17.52	**634**
16 IL 0,4	0.40	16	0.7	0.4	23.95	**236**					17.52	**636**
16 IL 0,45	0.45	16	0.7	0.4	23.95	**238**					17.52	**638**
16 IL 0,5	0.50	16	0.6	0.6	23.95	**240**					17.52	**640**
16 IL 0,7	0.70	16	0.6	0.6	23.95	**241**					17.52	**641**
16 IL 0,75	0.75	16	0.6	0.6	23.95	**242**					17.52	**642**
16 IL 0,8	0.80	16	0.6	0.6	23.95	**243**					17.52	**643**
16 IL 1,0	1.00	16	0.6	0.7			21.36	**144**				
16 IL 1,0	1.00	16	0.7	0.7	23.95	**244**					17.05	**644**
16 IL 1,25	1.25	16	0.8	0.9	23.95	**246**					17.52	**646**
16 IL 1,5	1.50	16	0.8	1.0	23.95	**248**	18.39	**148**	20.35	**748**	17.05	**648**
16 IL 1,75	1.75	16	0.9	1.2	23.95	**250**					17.52	**650**
16 IL 2,0	2.00	16	1.0	1.3	23.95	**252**	16.54	**152**			17.52	**652**
16 IL 2,5	2.50	16	1.1	1.5	23.95	**254**					17.52	**654**
16 IL 3,0	3.00	16	1.2	1.6	23.95	**256**					17.52	**656**
22 IL 3,5	3.50	22	1.6	2.3	33.08	**270**					28.79	**670**
22 IL 4,0	4.00	22	1.6	2.3	33.08	**272**					28.79	**672**
22 IL 4,5	4.50	22	1.7	2.4	33.08	**274**					28.79	**674**
22 IL 5,0	5.00	22	1.7	2.5	33.08	**276**					28.79	**676**
22 IL 5,5	5.50	22	1.9	2.7	33.08	**278**					28.79	**678**
22 IL 6,0	6.00	22	2.0	2.9	33.08	**280**					28.79	**680**

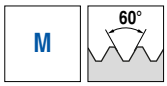
Steel	●	●	○	
Stainless steel	●	○	●	
Cast iron		●	○	●
Non ferrous metals	○	●	○	●
Heat resistant alloys			○	○

→ v_c Page 42

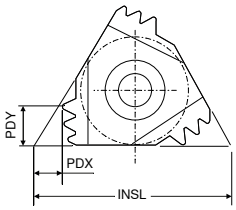
8

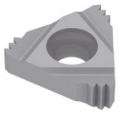
Right hand external thread turning insert

▲ Multi edge insert



HCN2525





Designation	TP	INSL	PDX	PDY	NT	ER X3 Article no. 71 221 ...	
	mm	mm	mm	mm		£	
16 ER 1,0 3M	1.0	16	1.7	2.5	3	35.06	**700**
16 ER 1,5 2M	1.5	16	1.5	2.3	2	34.43	**702**

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

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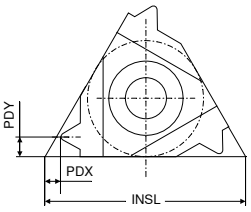
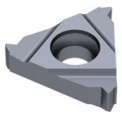
Right hand external thread turning insert

▲ Full profile

MJ | 60°

CCN20 | CWK20





Designation	TP	INSL	PDX	PDY	ER X3 Article no. 71 286 ...		ER Y1 Article no. 71 286 ...	
	mm	mm	mm	mm	£		£	
11 ER 1,0	1.00	11	0.7	0.8	31.80	**214**	25.51	**614**
11 ER 1,25	1.25	11	0.8	0.9	31.80	**216**	25.51	**616**
11 ER 1,5	1.50	11	0.8	1.0	31.80	**218**	25.51	**618**
11 ER 2,0	2.00	11	0.9	1.0	31.80	**222**	25.51	**622**
16 ER 1,0	1.00	16	0.7	0.8	31.80	**244**	25.51	**644**
16 ER 1,25	1.25	16	0.8	0.9	31.80	**246**	25.51	**646**
16 ER 1,5	1.50	16	0.8	1.0	31.80	**248**	25.51	**648**
16 ER 2,0	2.00	16	1.0	1.3	31.80	**252**	25.51	**652**

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

→ v_c Page 42

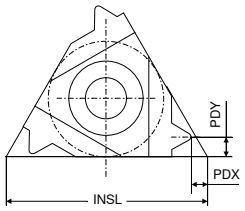
8

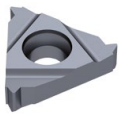
Left hand external thread turning insert

▲ Full profile

MJ | 60°

CCN20 | CWK20





Designation	TP	INSL	PDX	PDY	EL X3 Article no. 71 287 ...		EL Y1 Article no. 71 287 ...	
	mm	mm	mm	mm	£		£	
11 EL 1,0	1.00	11	0.7	0.8	31.80	**214**	25.51	**614**
11 EL 1,25	1.25	11	0.8	0.9	31.80	**216**	25.51	**616**
11 EL 1,5	1.50	11	0.8	1.0	31.80	**218**	25.51	**618**
11 EL 2,0	2.00	11	0.9	1.0	31.80	**222**	25.51	**622**
16 EL 1,0	1.00	16	0.7	0.8	31.80	**244**	25.51	**644**
16 EL 1,25	1.25	16	0.8	0.9	31.80	**246**	25.51	**646**
16 EL 1,5	1.50	16	0.8	1.0	31.80	**248**	25.51	**648**
16 EL 2,0	2.00	16	1.0	1.3	31.80	**252**	25.51	**652**

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

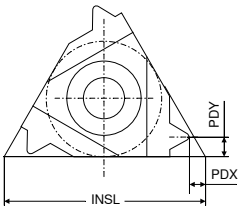
→ v_c Page 42

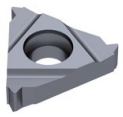
Right hand internal thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





Designation	TP	INSL	PDX	PDY	IR X3 Article no. 71 284 ...		IR Y1 Article no. 71 284 ...	
	mm	mm	mm	mm	£		£	
11 IR 1,0	1.00	11	0.7	0.8	31.80	**214**	25.51	**614**
11 IR 1,25	1.25	11	0.8	0.9	31.80	**216**	25.51	**616**
11 IR 1,5	1.50	11	0.8	1.0	31.80	**218**	25.51	**618**
11 IR 2,0	2.00	11	0.9	1.0	31.80	**222**	25.51	**622**
16 IR 1,0	1.00	16	0.7	0.8	31.80	**244**	25.51	**644**
16 IR 1,25	1.25	16	0.8	0.9	31.80	**246**	25.51	**646**
16 IR 1,5	1.50	16	0.8	1.0	31.80	**248**	25.51	**648**
16 IR 2,0	2.00	16	1.0	1.3	31.80	**252**	25.51	**652**

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

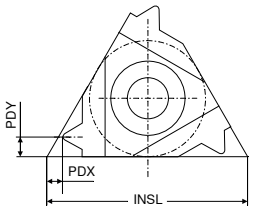
→ v_c Page 42

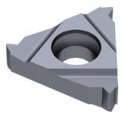
Left hand internal thread turning insert

▲ Full profile

MJ 60°

CCN20 CWK20





Designation	TP	INSL	PDX	PDY	IL X3 Article no. 71 285 ...		IL Y1 Article no. 71 285 ...	
	mm	mm	mm	mm	£		£	
11 IL 1,0	1.00	11	0.7	0.8	31.80	**214**	25.51	**614**
11 IL 1,25	1.25	11	0.8	0.9	31.80	**216**	25.51	**616**
11 IL 1,5	1.50	11	0.8	1.0	31.80	**218**	25.51	**618**
11 IL 2,0	2.00	11	0.9	1.0	31.80	**222**	25.51	**622**
16 IL 1,0	1.00	16	0.7	0.8	31.80	**244**	25.51	**644**
16 IL 1,25	1.25	16	0.8	0.9	31.80	**246**	25.51	**646**
16 IL 1,5	1.50	16	0.8	1.0	31.80	**248**	25.51	**648**
16 IL 2,0	2.00	16	1.0	1.3	31.80	**252**	25.51	**652**

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

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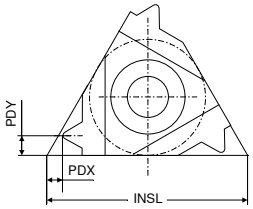
Right hand external thread turning insert

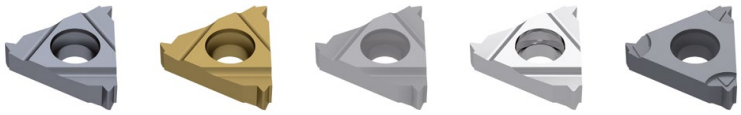
▲ Full profile

▲ CCN7525 grade with sintered chip breaker for universal application

BSW



CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525



Designation	TPI	INSL	PDX	PDY	ER X3 Article no. 71 228 ...		ER X3 Article no. 71 228 ...		ER X3 Article no. 71 228 ...		ER Y1 Article no. 71 228 ...		ER X3 Article no. 71 228 ...	
	1/"	mm	mm	mm	£		£		£		£		£	
11 ER 72	72.0	11	0.7	4.0	23.14	**202**					16.92	**602**		
11 ER 60	60.0	11	0.7	4.0	23.14	**204**					16.92	**604**		
11 ER 56	56.0	11	0.7	4.0	23.14	**206**					16.92	**606**		
11 ER 48	48.0	11	0.6	0.6	23.14	**208**					16.92	**608**		
11 ER 40	40.0	11	0.6	0.6	23.14	**210**					16.92	**610**		
11 ER 36	36.0	11	0.6	0.6	23.14	**212**					16.92	**612**		
11 ER 32	32.0	11	0.6	0.6	23.14	**214**					16.92	**614**		
11 ER 28	28.0	11	0.6	0.7	23.14	**216**					16.92	**616**		
11 ER 26	26.0	11	0.7	0.8	23.14	**218**					16.92	**618**		
11 ER 24	24.0	11	0.7	0.8	23.14	**220**					16.92	**620**		
11 ER 22	22.0	11	0.8	0.9	23.14	**222**					16.92	**622**		
11 ER 20	20.0	11	0.8	0.9	23.14	**224**					16.92	**624**		
11 ER 19	19.0	11	0.8	1.0	23.14	**226**					16.92	**626**		
11 ER 18	18.0	11	0.8	1.0	23.14	**228**					16.92	**628**		
11 ER 16	16.0	11	0.9	1.1	23.14	**230**					16.92	**630**		
11 ER 14	14.0	11	0.9	1.1	23.14	**232**					16.92	**632**		
16 ER 40	40.0	16	0.6	0.6	23.95	**240**					17.52	**640**		
16 ER 36	36.0	16	0.6	0.6	23.95	**242**					17.52	**642**		
16 ER 32	32.0	16	0.6	0.6	23.95	**244**					17.52	**644**		
16 ER 28	28.0	16	0.6	0.7	23.95	**246**	18.82	**146**	20.92	**746**	17.52	**646**		
16 ER 26	26.0	16	0.7	0.7					24.95	**748**				
16 ER 26	26.0	16	0.7	0.8	23.95	**248**					17.52	**648**		
16 ER 24	24.0	16	0.7	0.8	23.95	**250**					17.52	**650**		
16 ER 22	22.0	16	0.8	0.9	23.95	**252**					17.52	**652**		
16 ER 20	20.0	16	0.8	0.9	23.95	**254**			24.95	**754**	17.52	**654**		
16 ER 19	19.0	16	0.8	1.0	23.95	**256**	16.95	**156**	19.05	**756**	17.52	**656**	19.05	**956**
16 ER 18	18.0	16	0.8	1.0	23.95	**258**					17.52	**658**		
16 ER 16	16.0	16	0.9	1.1	23.95	**260**	20.67	**160**	22.80	**760**	17.52	**660**		
16 ER 14	14.0	16	1.0	1.2	23.95	**262**	16.95	**162**	19.05	**762**	17.52	**662**	19.05	**962**
16 ER 12	12.0	16	1.1	1.4	23.95	**264**	20.67	**164**	22.80	**764**	17.52	**664**		
16 ER 11	11.0	16	1.1	1.5	23.95	**266**	16.95	**166**	19.05	**766**	17.52	**666**	19.05	**966**
16 ER 10	10.0	16	1.1	1.5	23.95	**268**					17.52	**668**		
16 ER 9	9.0	16	1.2	1.7	23.95	**270**					17.52	**670**		
16 ER 8	8.0	16	1.2	1.5	23.95	**272**					17.52	**672**		
22 ER 7	7.0	22	1.6	2.3	33.08	**280**					28.79	**680**		
22 ER 6	6.0	22	1.6	2.3	33.08	**282**					28.79	**682**		
22 ER 5	5.0	22	1.7	2.4	33.08	**284**					28.79	**684**		
22 EN 4,5	4.5	22	2.3	11.0	33.08	**290** [1]					28.79	**690** [1]		
22 EN 4	4.0	22	1.8	11.0	33.08	**292** [1]					28.79	**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.

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8

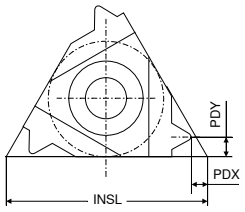
Left hand external thread turning insert

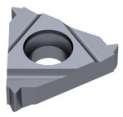
▲ Full profile

BSW

CCN20

CWK20





Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 229 ...		EL Y1 Article no. 71 229 ...	
	1/"	mm	mm	mm	£		£	
11 EL 72	72	11	0.7	4.0	23.14	**202**	16.92	**602**
11 EL 60	60	11	0.7	4.0	23.14	**204**	16.92	**604**
11 EL 56	56	11	0.7	4.0	23.14	**206**	16.92	**606**
11 EL 48	48	11	0.6	0.6	23.14	**208**	16.92	**608**
11 EL 40	40	11	0.6	0.6	23.14	**210**	16.92	**610**
11 EL 36	36	11	0.6	0.6	23.14	**212**	16.92	**612**
11 EL 32	32	11	0.6	0.6	23.14	**214**	16.92	**614**
11 EL 28	28	11	0.6	0.7	23.14	**216**	16.92	**616**
11 EL 26	26	11	0.7	0.8	23.14	**218**	16.92	**618**
11 EL 24	24	11	0.7	0.8	23.14	**220**	16.92	**620**
11 EL 22	22	11	0.8	0.9	23.14	**222**	16.92	**622**
11 EL 20	20	11	0.8	0.9	23.14	**224**	16.92	**624**
11 EL 19	19	11	0.8	1.0	23.14	**226**	16.92	**626**
11 EL 18	18	11	0.8	1.0	23.14	**228**	16.92	**628**
11 EL 16	16	11	0.9	1.1	23.14	**230**	16.92	**630**
11 EL 14	14	11	0.9	1.1	23.14	**232**	16.92	**632**
16 EL 40	40	16	0.6	0.6	23.95	**240**	17.52	**640**
16 EL 36	36	16	0.6	0.6	23.95	**242**	17.52	**642**
16 EL 32	32	16	0.6	0.6	23.95	**244**	17.52	**644**
16 EL 28	28	16	0.6	0.7	23.95	**246**	17.52	**646**
16 EL 26	26	16	0.7	0.8	23.95	**248**	17.52	**648**
16 EL 24	24	16	0.7	0.8	23.95	**250**	17.52	**650**
16 EL 22	22	16	0.8	0.9	23.95	**252**	17.52	**652**
16 EL 20	20	16	0.8	0.9	23.95	**254**	17.52	**654**
16 EL 19	19	16	0.8	1.0	23.95	**256**	17.52	**656**
16 EL 18	18	16	0.8	1.0	23.95	**258**	17.52	**658**
16 EL 16	16	16	0.9	1.1	23.95	**260**	17.52	**660**
16 EL 14	14	16	1.0	1.2	23.95	**262**	17.52	**662**
16 EL 12	12	16	1.1	1.4	23.95	**264**	17.52	**664**
16 EL 11	11	16	1.1	1.5	23.95	**266**	17.52	**666**
16 EL 10	10	16	1.1	1.5	23.95	**268**	17.52	**668**
16 EL 9	9	16	1.2	1.7	23.95	**270**	17.52	**670**
16 EL 8	8	16	1.2	1.5	23.95	**272**	17.52	**672**
22 EL 7	7	22	1.6	2.3	35.84	**280**	28.79	**680**
22 EL 6	6	22	1.6	2.3	35.84	**282**	28.79	**682**
22 EL 5	5	22	1.7	2.4	30.65	**284**	28.79	**684**

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

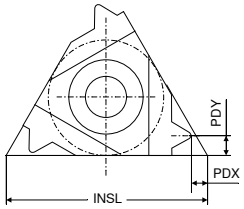
→ v_c Page 42

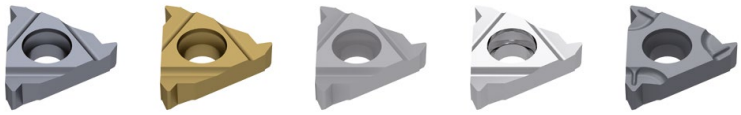
Right hand internal thread turning insert

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

BSW | 55°

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TPI	INSL	PDX	PDY	IR X3 Article no. 71 230 ...		IR X3 Article no. 71 230 ...		IR X3 Article no. 71 230 ...		IR Y1 Article no. 71 230 ...		IR X3 Article no. 71 230 ...	
	1/"	mm	mm	mm	£		£		£		£		£	
11 IR 48	48	11	0.6	0.6	23.95	**206**					17.52	**606**		
11 IR 40	40	11	0.6	0.6	23.95	**208**					17.52	**608**		
11 IR 36	36	11	0.6	0.6	23.95	**210**					17.52	**610**		
11 IR 32	32	11	0.6	0.6	23.95	**212**					17.52	**612**		
11 IR 28	28	11	0.6	0.7	23.95	**214**					17.52	**614**		
11 IR 26	26	11	0.7	0.8	23.95	**216**					17.52	**616**		
11 IR 24	24	11	0.7	0.8	23.95	**218**					17.52	**618**		
11 IR 22	22	11	0.8	0.9	23.95	**220**					17.52	**620**		
11 IR 20	20	11	0.8	0.9	23.95	**222**					17.52	**622**		
11 IR 19	19	11	0.8	0.9									19.91	**924**
11 IR 19	19	11	0.8	1.0	23.95	**224**	17.80	**124**	19.91	**724**	17.52	**624**		
11 IR 18	18	11	0.8	1.0	23.95	**226**					17.52	**626**		
11 IR 16	16	11	0.9	1.1	23.95	**228**					17.52	**628**		
11 IR 14	14	11	0.8	0.9									19.91	**930**
11 IR 14	14	11	0.9	1.1	23.95	**230**	17.80	**130**	19.91	**730**	17.52	**630**		
16 IR 40	40	16	0.6	0.6	23.95	**240**					17.52	**640**		
16 IR 36	36	16	0.6	0.6	23.95	**242**					17.52	**642**		
16 IR 32	32	16	0.6	0.6	23.95	**244**					17.52	**644**		
16 IR 28	28	16	0.6	0.7	23.95	**246**					17.52	**646**		
16 IR 26	26	16	0.7	0.8	23.95	**248**					17.52	**648**		
16 IR 24	24	16	0.7	0.8	23.95	**250**					17.52	**650**		
16 IR 22	22	16	0.8	0.9	23.95	**252**					17.52	**652**		
16 IR 20	20	16	0.8	0.9	23.95	**254**					17.52	**654**		
16 IR 19	19	16	0.8	1.0	23.95	**256**					17.52	**656**		
16 IR 18	18	16	0.8	1.0	23.95	**258**					17.52	**658**		
16 IR 16	16	16	0.9	1.1	23.95	**260**			24.95	**760**	17.52	**660**		
16 IR 14	14	16	1.0	1.2	23.95	**262**	16.95	**162**	19.05	**762**	17.52	**662**	19.05	**962**
16 IR 12	12	16	1.1	1.4	23.95	**264**					17.52	**664**		
16 IR 11	11	16	1.1	1.5	23.95	**266**	16.95	**166**	19.05	**766**	17.52	**666**	19.05	**966**
16 IR 10	10	16	1.1	1.5	23.95	**268**					17.52	**668**		
16 IR 9	9	16	1.2	1.7	23.95	**270**					17.52	**670**		
16 IR 8	8	16	1.2	1.5	23.95	**272**					17.52	**672**		
22 IR 7	7	22	1.6	2.3	33.08	**280**					28.79	**680**		
22 IR 6	6	22	1.6	2.3	33.08	**282**					28.79	**682**		
22 IR 5	5	22	1.7	2.4	33.08	**284**					28.79	**684**		

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

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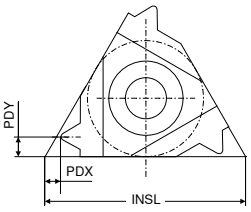
8

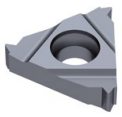
Left hand internal thread turning insert

▲ Full profile

BSW 55°

CCN20 CWK20





Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 231 ... £		IL Y1 Article no. 71 231 ... £	
	1/"	mm	mm	mm				
11 IL 48	48	11	0.6	0.6	23.95	206	17.52	606
11 IL 40	40	11	0.6	0.6	23.95	208	17.52	608
11 IL 36	36	11	0.6	0.6	23.95	210	17.52	610
11 IL 32	32	11	0.6	0.6	23.95	212	17.52	612
11 IL 28	28	11	0.6	0.7	23.95	214	17.52	614
11 IL 26	26	11	0.7	0.8	23.95	216	17.52	616
11 IL 24	24	11	0.7	0.8	23.95	218	17.52	618
11 IL 22	22	11	0.8	0.9	23.95	220	17.52	620
11 IL 20	20	11	0.8	0.9	23.95	222	17.52	622
11 IL 19	19	11	0.8	1.0	23.95	224	17.52	624
11 IL 18	18	11	0.8	1.0	23.95	226	17.52	626
11 IL 16	16	11	0.9	1.1	23.95	228	17.52	628
11 IL 14	14	11	0.9	1.1	23.95	230	17.52	630
16 IL 40	40	16	0.6	0.6	23.95	240	17.52	640
16 IL 36	36	16	0.6	0.6	23.95	242	17.52	642
16 IL 32	32	16	0.6	0.6	23.95	244	17.52	644
16 IL 28	28	16	0.6	0.7	23.95	246	17.52	646
16 IL 26	26	16	0.7	0.8	23.95	248	17.52	648
16 IL 24	24	16	0.7	0.8	23.95	250	17.52	650
16 IL 22	22	16	0.8	0.9	23.95	252	17.52	652
16 IL 20	20	16	0.8	0.9	23.95	254	17.52	654
16 IL 19	19	16	0.8	1.0	23.95	256	17.52	656
16 IL 18	18	16	0.8	1.0	23.95	258	17.52	658
16 IL 16	16	16	0.9	1.1	23.95	260	17.52	660
16 IL 14	14	16	1.0	1.2	23.95	262	17.52	662
16 IL 12	12	16	1.1	1.4	23.95	264	17.52	664
16 IL 11	11	16	1.1	1.5	23.95	266	17.52	666
16 IL 10	10	16	1.1	1.5	23.95	268	17.52	668
16 IL 9	9	16	1.2	1.7	23.95	270	17.52	670
16 IL 8	8	16	1.2	1.5	23.95	272	17.52	672
22 IL 7	7	22	1.6	2.3	33.08	280	28.79	680
22 IL 6	6	22	1.6	2.3	33.08	282	28.79	682
22 IL 5	5	22	1.7	2.4	33.08	284	28.79	684

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

→ v_c Page 42

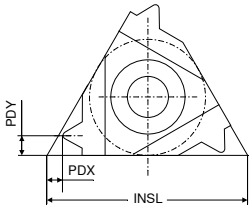
Right hand external thread turning insert

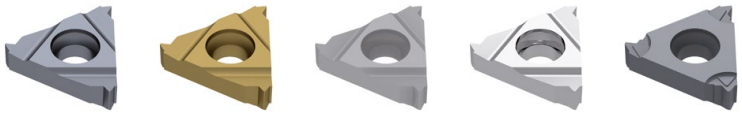
▲ Full profile

▲ 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 X3 Article no. 71 264 ...		ER X3 Article no. 71 264 ...		ER X3 Article no. 71 264 ...		ER Y1 Article no. 71 264 ...		ER X3 Article no. 71 264 ...	
	1/"	mm	mm	mm	£		£		£		£		£	
11 ER 72	72.0	11	0.8	0.4	23.14	**202**					16.92	**602**		
11 ER 64	64.0	11	0.8	0.4	23.14	**204**					16.92	**604**		
11 ER 56	56.0	11	0.7	0.4	23.14	**206**					16.92	**606**		
11 ER 48	48.0	11	0.6	0.6	23.14	**208**					16.92	**608**		
11 ER 44	44.0	11	0.6	0.6	23.14	**210**					16.92	**610**		
11 ER 40	40.0	11	0.6	0.6	23.14	**212**					16.92	**612**		
11 ER 36	36.0	11	0.6	0.6	23.14	**214**					16.92	**614**		
11 ER 32	32.0	11	0.6	0.6	23.14	**216**					16.92	**616**		
11 ER 28	28.0	11	0.6	0.7	23.14	**218**					16.92	**618**		
11 ER 27	27.0	11	0.7	0.8	23.14	**220**					16.92	**620**		
11 ER 24	24.0	11	0.7	0.8	23.14	**222**					16.92	**622**		
11 ER 20	20.0	11	0.8	0.9	23.14	**224**					16.92	**624**		
11 ER 18	18.0	11	0.8	1.0	23.14	**226**					16.92	**626**		
11 ER 16	16.0	11	0.9	1.1	23.14	**228**					16.92	**628**		
11 ER 14	14.0	11	0.9	1.1	23.14	**230**					16.92	**630**		
16 ER 72	72.0	16	0.8	0.4	23.95	**232**					17.52	**632**		
16 ER 64	64.0	16	0.8	0.4	23.95	**234**					17.52	**634**		
16 ER 56	56.0	16	0.7	0.4	23.95	**236**					17.52	**636**		
16 ER 48	48.0	16	0.6	0.6	23.95	**238**					17.52	**638**		
16 ER 44	44.0	16	0.6	0.6	23.95	**240**					17.52	**640**		
16 ER 40	40.0	16	0.6	0.6	23.95	**242**					17.52	**642**		
16 ER 36	36.0	16	0.6	0.6	23.95	**244**					17.52	**644**		
16 ER 32	32.0	16	0.6	0.6	23.95	**246**			24.41	**746**	17.52	**646**		
16 ER 28	28.0	16	0.6	0.7	23.95	**248**			22.80	**748**	17.52	**648**		
16 ER 27	27.0	16	0.7	0.8	23.95	**250**					17.52	**650**		
16 ER 24	24.0	16	0.7	0.8	23.95	**252**	18.82	**152**	20.92	**752**	17.52	**652**		
16 ER 20	20.0	16	0.8	0.9	23.95	**254**	17.80	**154**	19.91	**754**	17.52	**654**	19.91	**954**
16 ER 18	18.0	16	0.8	1.0	23.95	**256**	18.82	**156**	20.92	**756**	17.52	**656**		
16 ER 16	16.0	16	0.9	1.1	23.95	**258**	17.80	**158**	19.91	**758**	17.52	**658**	19.91	**958**
16 ER 14	14.0	16	1.0	1.2	23.95	**260**	18.82	**160**	20.92	**760**	17.52	**660**		
16 ER 13	13.0	16	1.0	1.3	23.95	**262**					17.52	**662**		
16 ER 12	12.0	16	1.1	1.4	23.95	**264**	18.82	**164**	20.92	**764**	17.52	**664**		
16 ER 11,5	11.5	16	1.1	1.5	23.95	**266**					17.52	**666**		
16 ER 11	11.0	16	1.1	1.5	23.95	**268**	23.23	**168**			17.52	**668**		
16 ER 10	10.0	16	1.1	1.5	23.95	**270**					17.52	**670**		
16 ER 9	9.0	16	1.2	1.7	23.95	**272**					17.52	**672**		
16 ER 8	8.0	16	1.1	1.1									24.95	**974**
16 ER 8	8.0	16	1.1	1.5			23.23	**174**						
16 ER 8	8.0	16	1.2	1.6	23.95	**274**					17.52	**674**		
22 ER 7	7.0	22	1.6	2.3	33.08	**276**					28.79	**676**		
22 ER 6	6.0	22	1.6	2.3	33.08	**278**					28.79	**678**		
22 ER 5	5.0	22	1.7	2.5	33.08	**280**					28.79	**680**		
22 EN 4,5	4.5	22	2.0	11.0	33.08	**282** [1]					28.79	**682** [1]		
22 EN 4	4.0	22	2.0	11.0	33.08	**284** [1]					28.79	**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.

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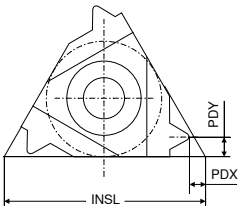
8

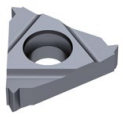
Left hand external thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 266 ...		EL Y1 Article no. 71 266 ...	
	1/"	mm	mm	mm	£		£	
11 EL 72	72.0	11	0.8	0.4	23.14	**202**	16.92	**602**
11 EL 64	64.0	11	0.8	0.4	23.14	**204**	16.92	**604**
11 EL 56	56.0	11	0.7	0.4	23.14	**206**	16.92	**606**
11 EL 48	48.0	11	0.6	0.6	23.14	**208**	16.92	**608**
11 EL 44	44.0	11	0.6	0.6	23.14	**210**	16.92	**610**
11 EL 40	40.0	11	0.6	0.6	23.14	**212**	16.92	**612**
11 EL 36	36.0	11	0.6	0.6	23.14	**214**	16.92	**614**
11 EL 32	32.0	11	0.6	0.6	23.14	**216**	16.92	**616**
11 EL 28	28.0	11	0.6	0.7	23.14	**218**	16.92	**618**
11 EL 27	27.0	11	0.7	0.8	23.14	**220**	16.92	**620**
11 EL 24	24.0	11	0.7	0.8	23.14	**222**	16.92	**622**
11 EL 20	20.0	11	0.8	0.9	23.14	**224**	16.92	**624**
11 EL 18	18.0	11	0.8	1.0	23.14	**226**	16.92	**626**
11 EL 16	16.0	11	0.9	1.1	23.14	**228**	16.92	**628**
11 EL 14	14.0	11	0.9	1.1	23.14	**230**	16.92	**630**
16 EL 72	72.0	16	0.8	0.4	23.95	**232**	17.52	**632**
16 EL 64	64.0	16	0.8	0.4	23.95	**234**	17.52	**634**
16 EL 56	56.0	16	0.7	0.4	23.95	**236**	17.52	**636**
16 EL 48	48.0	16	0.6	0.6	23.95	**238**	17.52	**638**
16 EL 44	44.0	16	0.6	0.6	23.95	**240**	17.52	**640**
16 EL 40	40.0	16	0.6	0.6	23.95	**242**	17.52	**642**
16 EL 36	36.0	16	0.6	0.6	23.95	**244**	17.52	**644**
16 EL 32	32.0	16	0.6	0.6	23.95	**246**	17.52	**646**
16 EL 28	28.0	16	0.6	0.7	23.95	**248**	17.52	**648**
16 EL 27	27.0	16	0.7	0.8	23.95	**250**	17.52	**650**
16 EL 24	24.0	16	0.7	0.8	23.95	**252**	17.52	**652**
16 EL 20	20.0	16	0.8	0.9	23.95	**254**	17.52	**654**
16 EL 18	18.0	16	0.8	1.0	23.95	**256**	17.52	**656**
16 EL 16	16.0	16	0.9	1.1	23.95	**258**	17.52	**658**
16 EL 14	14.0	16	1.0	1.2	23.95	**260**	17.52	**660**
16 EL 13	13.0	16	1.0	1.3	23.95	**262**	17.52	**662**
16 EL 12	12.0	16	1.1	1.4	23.95	**264**	17.52	**664**
16 EL 11,5	11.5	16	1.1	1.5	23.95	**266**	17.52	**666**
16 EL 11	11.0	16	1.1	1.5	23.95	**268**	17.52	**668**
16 EL 10	10.0	16	1.1	1.5	23.95	**270**	17.52	**670**
16 EL 9	9.0	16	1.2	1.7	23.95	**272**	17.52	**672**
16 EL 8	8.0	16	1.2	1.6	23.95	**274**	17.52	**674**
22 EL 7	7.0	22	1.6	2.3	33.08	**276**	28.79	**676**
22 EL 6	6.0	22	1.6	2.3	33.08	**278**	28.79	**678**
22 EL 5	5.0	22	1.7	2.5	33.08	**280**	28.79	**680**

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

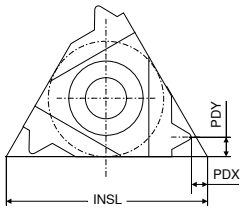
→ v_c Page 42

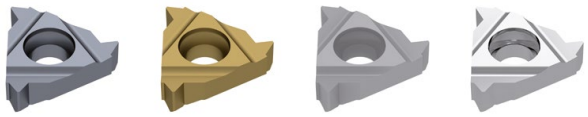
Right hand internal thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWN1525 | HCN2525 | CWK20





Designation	TPI	INSL	PDX	PDY	IR X3 Article no. 71 268 ...		IR X3 Article no. 71 268 ...		IR X3 Article no. 71 268 ...		IR Y1 Article no. 71 268 ...	
	1/"	mm	mm	mm	£		£		£		£	
11 IR 72	72.0	11	0.8	0.3	23.95	202					17.52	602
11 IR 64	64.0	11	0.8	0.4	23.95	204					17.52	604
11 IR 56	56.0	11	0.7	0.4	23.95	206					17.52	606
11 IR 48	48.0	11	0.6	0.6	23.95	208					17.52	608
11 IR 44	44.0	11	0.6	0.6	23.95	210					17.52	610
11 IR 40	40.0	11	0.6	0.6	23.95	212					17.52	612
11 IR 36	36.0	11	0.6	0.6	23.95	214					17.52	614
11 IR 32	32.0	11	0.6	0.6	23.95	216					17.52	616
11 IR 28	28.0	11	0.6	0.7	23.95	218					17.52	618
11 IR 27	27.0	11	0.7	0.8	23.95	220					17.52	620
11 IR 24	24.0	11	0.7	0.8	23.95	222					17.52	622
11 IR 20	20.0	11	0.8	0.9	23.95	224					17.52	624
11 IR 18	18.0	11	0.8	1.0	23.95	226					17.52	626
11 IR 16	16.0	11	0.9	1.1	23.95	228					17.52	628
11 IR 14	14.0	11	1.0	1.1	23.95	230					17.52	630
16 IR 72	72.0	16	0.8	0.3	23.95	232					17.52	632
16 IR 64	64.0	16	0.8	0.4	23.95	234					17.52	634
16 IR 56	56.0	16	0.7	0.4	23.95	236					17.52	636
16 IR 48	48.0	16	0.6	0.6	23.95	238					17.52	638
16 IR 44	44.0	16	0.6	0.6	23.95	240					17.52	640
16 IR 40	40.0	16	0.6	0.6	23.95	242					17.52	642
16 IR 36	36.0	16	0.6	0.6	23.95	244					17.52	644
16 IR 32	32.0	16	0.6	0.6	23.95	246					17.52	646
16 IR 28	28.0	16	0.6	0.7	23.95	248					17.52	648
16 IR 27	27.0	16	0.7	0.8	23.95	250					17.52	650
16 IR 24	24.0	16	0.7	0.8	23.95	252					17.52	652
16 IR 20	20.0	16	0.8	0.9	23.95	254					17.52	654
16 IR 18	18.0	16	0.8	1.0	23.95	256					17.52	656
16 IR 16	16.0	16	0.9	1.1	23.95	258					17.52	658
16 IR 14	14.0	16	1.0	1.2	23.95	260			24.95	760	17.52	660
16 IR 13	13.0	16	1.0	1.3	23.95	262					17.52	662
16 IR 12	12.0	16	1.1	1.4	23.95	264	18.82	164	20.92	764	17.52	664
16 IR 11,5	11.5	16	1.1	1.5	23.95	266					17.52	666
16 IR 11	11.0	16	1.1	1.5	23.95	268					17.52	668
16 IR 10	10.0	16	1.1	1.5	23.95	270					17.52	670
16 IR 9	9.0	16	1.2	1.7	23.95	272					17.52	672
16 IR 8	8.0	16	1.2	1.6	23.95	274					17.52	674
16 IR 8	8.0	16	1.1	1.5					24.95	774		
22 IR 7	7.0	22	1.6	2.3	33.08	276			32.66	776	28.79	676
22 IR 6	6.0	22	1.6	2.3	33.08	278					28.79	678
22 IR 5	5.0	22	1.7	2.5	33.08	280					28.79	680
22 IN 4,5	4.5	22	2.0	11.0	33.08	282 [1]					28.79	682 [1]
22 IN 4	4.0	22	2.0	11.0	33.08	284 [1]					28.79	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.

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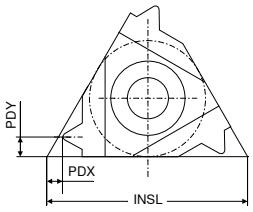
8

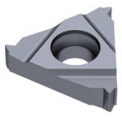
Left hand internal thread turning insert

▲ Full profile

UN | UNC | UNF | UNEF | 60°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 270 ...		IL Y1 Article no. 71 270 ...	
	1/"	mm	mm	mm	£		£	
11 IL 72	72.0	11	0.8	0.3	23.95	**202**	17.52	**602**
11 IL 64	64.0	11	0.8	0.4	23.95	**204**	17.52	**604**
11 IL 56	56.0	11	0.7	0.4	23.95	**206**	17.52	**606**
11 IL 48	48.0	11	0.6	0.6	23.95	**208**	17.52	**608**
11 IL 44	44.0	11	0.6	0.6	23.95	**210**	17.52	**610**
11 IL 40	40.0	11	0.6	0.6	23.95	**212**	17.52	**612**
11 IL 36	36.0	11	0.6	0.6	23.95	**214**	17.52	**614**
11 IL 32	32.0	11	0.6	0.6	23.95	**216**	17.52	**616**
11 IL 28	28.0	11	0.6	0.7	23.95	**218**	17.52	**618**
11 IL 27	27.0	11	0.7	0.8	23.95	**220**	17.52	**620**
11 IL 24	24.0	11	0.7	0.8	23.95	**222**	17.52	**622**
11 IL 20	20.0	11	0.8	0.9	23.95	**224**	17.52	**624**
11 IL 18	18.0	11	0.8	1.0	23.95	**226**	17.52	**626**
11 IL 16	16.0	11	0.9	1.1	23.95	**228**	17.52	**628**
11 IL 14	14.0	11	0.9	1.1	23.95	**230**	17.52	**630**
16 IL 72	72.0	16	0.8	0.3	33.22	**232**	17.52	**632**
16 IL 64	64.0	16	0.8	0.4	23.95	**234**	17.52	**634**
16 IL 56	56.0	16	0.7	0.4	23.95	**236**	17.52	**636**
16 IL 48	48.0	16	0.6	0.6	23.95	**238**	17.52	**638**
16 IL 44	44.0	16	0.6	0.6	23.95	**240**	17.52	**640**
16 IL 40	40.0	16	0.6	0.6	23.95	**242**	17.52	**642**
16 IL 36	36.0	16	0.6	0.6	23.95	**244**	17.52	**644**
16 IL 32	32.0	16	0.6	0.6	23.95	**246**	17.52	**646**
16 IL 28	28.0	16	0.6	0.7	23.95	**248**	17.52	**648**
16 IL 27	27.0	16	0.7	0.8	23.95	**250**	17.52	**650**
16 IL 24	24.0	16	0.7	0.8	23.95	**252**	17.52	**652**
16 IL 20	20.0	16	0.8	0.9	23.95	**254**	17.52	**654**
16 IL 18	18.0	16	0.8	1.0	23.95	**256**	17.52	**656**
16 IL 16	16.0	16	0.9	1.1	23.95	**258**	17.52	**658**
16 IL 14	14.0	16	1.0	1.2	23.95	**260**	17.52	**660**
16 IL 13	13.0	16	1.0	1.3	23.95	**262**	17.52	**662**
16 IL 12	12.0	16	1.1	1.4	23.95	**264**	17.52	**664**
16 IL 11,5	11.5	16	1.1	1.5	23.95	**266**	17.52	**666**
16 IL 11	11.0	16	1.1	1.5	23.95	**268**	17.52	**668**
16 IL 10	10.0	16	1.1	1.5	23.95	**270**	17.52	**670**
16 IL 9	9.0	16	1.2	1.7	23.95	**272**	17.52	**672**
16 IL 8	8.0	16	1.2	1.6	23.95	**274**	17.52	**674**
22 IL 7	7.0	22	1.6	2.3	33.08	**276**	28.79	**676**
22 IL 6	6.0	22	1.6	2.3	33.08	**278**	28.79	**678**
22 IL 5	5.0	22	1.7	2.5	33.08	**280**	28.79	**680**

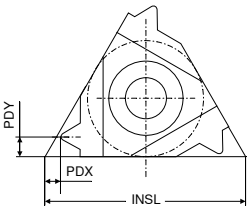
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

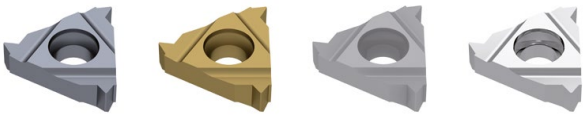
Right hand external thread turning insert

▲ Full profile

NPT 60°



CCN20 | CWN1525 | HCN2525 | CWK20



Designation	TPI	INSL	PDX	PDY	ER X3 Article no. 71 256 ...		ER X3 Article no. 71 256 ...		ER X3 Article no. 71 256 ...		ER Y1 Article no. 71 256 ...	
	1/"	mm	mm	mm	£		£		£		£	
16 ER 27	27.0	16	0.7	0.8	26.43	**240**					21.17	**640**
16 ER 18	18.0	16	0.8	1.0	26.43	**242**			24.66	**742**	21.17	**642**
16 ER 14	14.0	16	0.9	1.2	26.43	**244**	20.67	**144**	22.68	**744**	21.17	**644**
16 ER 11,5	11.5	16	1.1	1.5	26.43	**246**	22.51	**146**	24.66	**746**	21.17	**646**
16 ER 8	8.0	16	1.3	1.8	26.43	**248**					21.17	**648**

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

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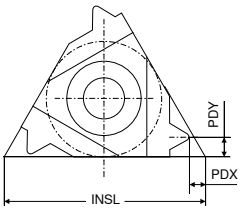
8

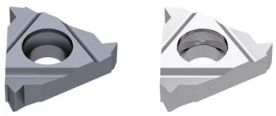
Left hand external thread turning insert

▲ Full profile

NPT 60°



CCN20 | CWK20



Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 258 ...		EL Y1 Article no. 71 258 ...	
	1/"	mm	mm	mm	£		£	
16 EL 27	27.0	16	0.7	0.8	26.43	**240**	21.17	**640**
16 EL 18	18.0	16	0.8	1.0	26.43	**242**	21.17	**642**
16 EL 14	14.0	16	0.9	1.2	26.43	**244**	21.17	**644**
16 EL 11,5	11.5	16	1.1	1.5	26.43	**246**	21.17	**646**
16 EL 8	8.0	16	1.3	1.8	26.43	**248**	21.17	**648**

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

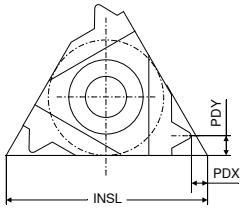
→ v_c Page 42

Right hand internal thread turning insert

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

NPT 60°

CCN20 | HCN2525 | CWK20 | CCN7525



Designation	TPI	INSL	PDX	PDY	IR X3 Article no. 71 260 ...		IR X3 Article no. 71 260 ...		IR Y1 Article no. 71 260 ...		IR X3 Article no. 71 260 ...	
	1/"	mm	mm	mm	£		£		£		£	
11 IR 27	27.0	11	0.7	0.8	26.43	**210**			21.17	**610**		
11 IR 18	18.0	11	0.8	1.0	26.43	**212**			21.17	**612**		
11 IR 14	14.0	11	0.9	1.1	26.43	**214**			21.17	**614**		
16 IR 27	27.0	16	0.7	0.8	26.43	**240**			21.17	**640**		
16 IR 18	18.0	16	0.8	1.0	26.43	**242**			21.17	**642**		
16 IR 14	14.0	16	0.9	1.2	26.43	**244**	26.08	**744**	21.17	**644**	26.08	**944**
16 IR 11,5	11.5	16	1.1	1.5	26.43	**246**			21.17	**646**	29.22	**946**
16 IR 8	8.0	16	1.3	1.8	26.43	**248**			21.17	**648**		

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

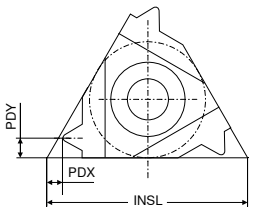
→ v_c Page 42

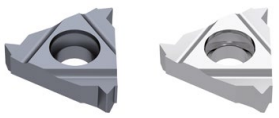
Left hand internal thread turning insert

▲ Full profile

NPT 60°

CCN20 | CWK20





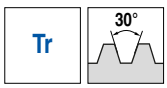
Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 262 ...		IL Y1 Article no. 71 262 ...	
	1/"	mm	mm	mm	£		£	
11 IL 27	27.0	11	0.7	0.8	26.43	**210**	21.17	**610**
11 IL 18	18.0	11	0.8	1.0	26.43	**212**	21.17	**612**
11 IL 14	14.0	11	0.9	1.1	26.43	**214**	21.17	**614**
16 IL 27	27.0	16	0.7	0.8	26.43	**240**	21.17	**640**
16 IL 18	18.0	16	0.8	1.0	26.43	**242**	21.17	**642**
16 IL 14	14.0	16	0.9	1.2	26.43	**244**	21.17	**644**
16 IL 11,5	11.5	16	1.1	1.5	26.43	**246**	21.17	**646**
16 IL 8	8.0	16	1.3	1.8	26.43	**248**	21.17	**648**

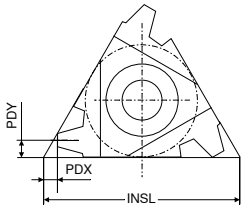
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

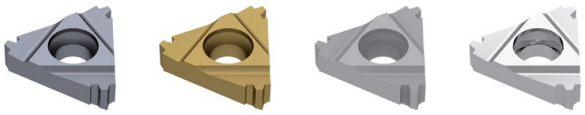
Right hand external thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103





CCN20 | CWN1525 | HCN2525 | CWK20



Designation	TP	INSL	PDX	PDY	ER X3 Article no. 71 232 ...		ER X3 Article no. 71 232 ...		ER X3 Article no. 71 232 ...		ER Y1 Article no. 71 232 ...	
	mm	mm	mm	mm	£		£		£		£	
16 ER 1,5	1.5	16	1.0	1.1	26.43	**240**					21.17	**640**
16 ER 2,0	2.0	16	1.1	1.3	26.43	**242**					21.17	**642**
16 ER 2,0	2.0	16	1.0	1.3			22.25	**142**	24.95	**742**		
16 ER 3,0	3.0	16	1.3	1.5	26.43	**244**	21.78	**144**			21.17	**644**
22 ER 4,0	4.0	22	1.7	1.9	37.78	**270**					33.27	**670**
22 ER 4,0	4.0	22	1.8	1.9			30.51	**170**	34.58	**770**		
22 ER 5,0	5.0	22	2.0	2.4			33.86	**172**				
22 ER 5,0	5.0	22	2.1	2.5	37.78	**272**					33.27	**672**
22 ER 6,0	6.0	22	2.3	2.7	37.78	**274**					33.27	**674**
22 EN 6,0	6.0	22	2.0	11.0	37.78	**276** 1)					33.27	**676** 1)
22 EN 7,0	7.0	22	2.3	11.0	37.78	**278** 1)					33.27	**678** 1)

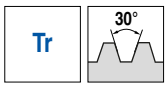
Steel	●	●	○	
Stainless steel	●	○	●	
Cast iron		●	○	●
Non ferrous metals	○	●	○	●
Heat resistant alloys			○	○

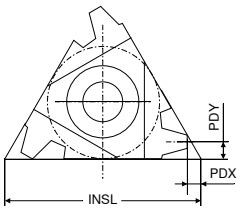
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 42

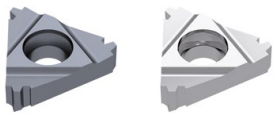
Left hand external thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103





CCN20 | CWK20



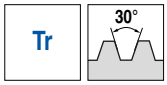
Designation	TP	INSL	PDX	PDY	EL X3 Article no. 71 234 ...		EL Y1 Article no. 71 234 ...	
	mm	mm	mm	mm	£		£	
16 EL 1,5	1.5	16	1.0	1.1	26.43	**240**	21.17	**640**
16 EL 2,0	2.0	16	1.1	1.3	26.43	**242**	21.17	**642**
16 EL 3,0	3.0	16	1.3	1.5	26.43	**244**	21.17	**644**
22 EL 4,0	4.0	22	1.7	1.9	37.78	**270**	33.27	**670**
22 EL 5,0	5.0	22	2.1	2.5	37.78	**272**	33.27	**672**
22 EL 6,0	6.0	22	2.3	2.7	37.78	**274**	33.27	**674**

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

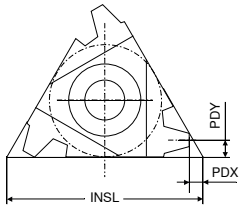
→ v_c Page 42

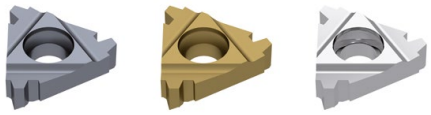
Right hand internal thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103



CCN20 | CWN1525 | CWK20





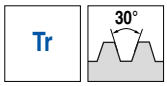
Designation	TP mm	INSL mm	PDX mm	PDY mm	IR X3 Article no. 71 236 ...	£	IR X3 Article no. 71 236 ...	£	IR Y1 Article no. 71 236 ...	£
11 IR 1,5	1.5	11	0.8	0.9	26.43	**210**			21.17	**610**
16 IR 1,5	1.5	16	1.0	1.1	26.43	**240**			21.17	**640**
16 IR 2,0	2.0	16	1.1	1.3	26.43	**242**			21.17	**642**
16 IR 3,0	3.0	16	1.3	1.5	26.43	**244**	24.70	**144**	21.17	**644**
22 IR 4,0	4.0	22	1.8	1.9			34.51	**170**		
22 IR 4,0	4.0	22	1.7	1.9	37.78	**270**			33.27	**670**
22 IR 5,0	5.0	22	2.0	2.4			36.46	**172**		
22 IR 5,0	5.0	22	2.1	2.5	37.78	**272**			33.27	**672**
22 IR 6,0	6.0	22	2.3	2.7	37.78	**274**			33.27	**674**
22 IN 6,0	6.0	22	2.0	11.0	37.78	**276** 1)			33.27	**676** 1)
22 IN 7,0	7.0	22	2.3	11.0	37.78	**278** 1)			33.27	**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.

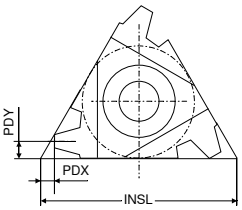
→ v_c Page 42

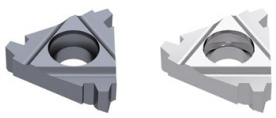
Left hand internal thread turning insert

▲ Full profile
▲ Trapezoidal thread DIN 103



CCN20 | CWK20



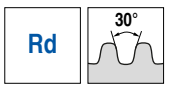


Designation	TP mm	INSL mm	PDX mm	PDY mm	IL X3 Article no. 71 238 ...	£	IL Y1 Article no. 71 238 ...	£
11 IL 1,5	1.5	11	0.8	0.9	26.43	**210**	21.17	**610**
16 IL 1,5	1.5	16	1.0	1.1	26.43	**240**	21.17	**640**
16 IL 2,0	2.0	16	1.1	1.3	26.43	**242**	21.17	**642**
16 IL 3,0	3.0	16	1.3	1.5	26.43	**244**	21.17	**644**
22 IL 4,0	4.0	22	1.7	1.9	37.78	**270**	33.27	**670**
22 IL 5,0	5.0	22	2.1	2.5	37.78	**272**	33.27	**672**
22 IL 6,0	6.0	22	2.3	2.7	37.78	**274**	33.27	**674**
Steel					●			
Stainless steel					●			
Cast iron							●	
Non ferrous metals					○		●	
Heat resistant alloys							○	

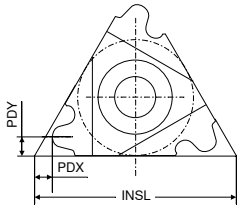
→ v_c Page 42

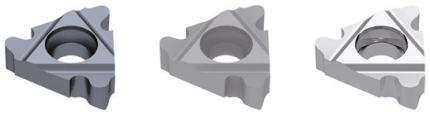
Right hand external thread turning insert

▲ Full profile
▲ Round thread DIN 405



CCN20 | HCN2525 | CWK20





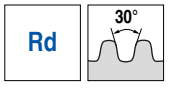
Designation	TPI	INSL	PDX	PDY	ER X3 Article no. 71 248 ...		ER X3 Article no. 71 248 ...		ER Y1 Article no. 71 248 ...	
	1/"	mm	mm	mm	£		£		£	
16 ER 10	10	16	1.1	1.2	26.43	**240**			21.17	**640**
16 ER 8	8	16	1.4	1.3	26.43	**242**			21.17	**642**
16 ER 6	6	16	1.5	1.7	26.43	**246**	27.18	**746**	21.17	**646**
22 ER 6	6	22	1.5	1.7	37.78	**270**			34.35	**670**
22 ER 4	4	22	2.2	2.3	37.78	**272**			34.35	**672**

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

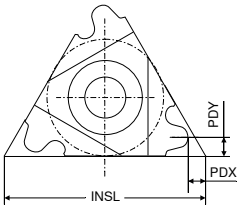
→ v_c Page 42

Left hand external thread turning insert

▲ Full profile
▲ Round thread DIN 405



CCN20 | CWK20



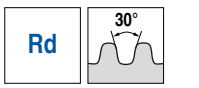
Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 250 ...		EL Y1 Article no. 71 250 ...	
	1/"	mm	mm	mm	£		£	
16 EL 10	10	16	1.1	1.2	26.43	**240**	21.17	**640**
16 EL 8	8	16	1.4	1.3	26.43	**242**	21.17	**642**
16 EL 6	6	16	1.5	1.7	26.43	**246**	21.17	**646**
22 EL 6	6	22	1.5	1.7	37.78	**270**	34.35	**670**
22 EL 4	4	22	2.2	2.3	37.78	**272**	34.35	**672**

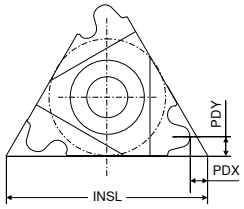
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

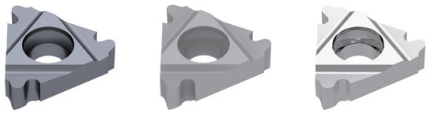
Right hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405





CCN20 | HCN2525 | CWK20



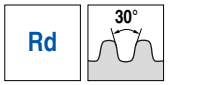
Designation	TPI	INSL	PDX	PDY	IR X3 Article no. 71 252 ...		IR X3 Article no. 71 252 ...		IR Y1 Article no. 71 252 ...	
	1/"	mm	mm	mm	£		£		£	
16 IR 10	10	16	1.1	1.2	26.43	**240**			21.17	**640**
16 IR 8	8	16	1.4	1.4	26.43	**242**			21.17	**642**
16 IR 6	6	16	1.4	1.5	26.43	**246**	29.35	**746**	21.17	**646**
22 IR 6	6	22	1.5	1.7	37.78	**270**			34.35	**670**
22 IR 4	4	22	2.2	2.3	37.78	**272**			34.35	**672**

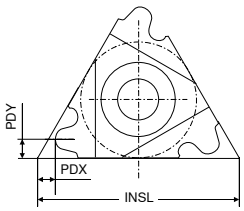
Steel	●	○	
Stainless steel	●	●	
Cast iron		○	●
Non ferrous metals	○	○	●
Heat resistant alloys		○	○

→ v_c Page 42

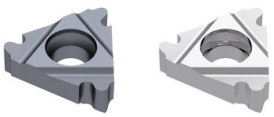
Left hand internal thread turning insert

▲ Full profile
▲ Round thread DIN 405





CCN20 | CWK20



Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 254 ...		IL Y1 Article no. 71 254 ...	
	1/"	mm	mm	mm	£		£	
16 IL 10	10	16	1.1	1.2	26.43	**240**	21.17	**640**
16 IL 8	8	16	1.4	1.4	26.43	**242**	21.17	**642**
16 IL 6	6	16	1.4	1.5	26.43	**246**	21.17	**646**
22 IL 6	6	22	1.5	1.7	37.78	**270**	34.35	**670**
22 IL 4	4	22	2.2	2.3	37.78	**272**	34.35	**672**

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

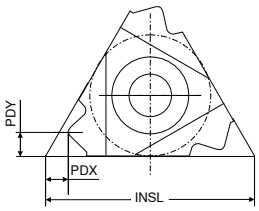
→ v_c Page 42

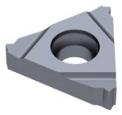
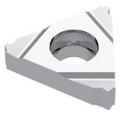
Right hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20



Designation	TPI	INSL	PDX	PDY	ER X3 Article no. 71 240 ...		ER Y1 Article no. 71 240 ...	
	1/"	mm	mm	mm	£		£	
16 ER 20	20	16	0.8	0.8	26.43	**240**	21.17	**640**
16 ER 18	18	16	0.8	0.9	26.43	**242**	21.17	**642**
16 ER 16	16	16	0.8	1.0	26.43	**244**	21.17	**644**

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

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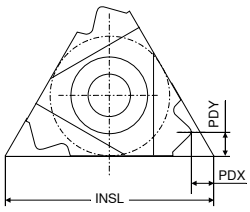
8

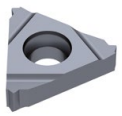
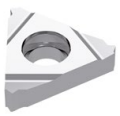
Left hand external thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20



Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 242 ...		EL Y1 Article no. 71 242 ...	
	1/"	mm	mm	mm	£		£	
16 EL 20	20	16	0.8	0.8	26.43	**240**	21.17	**640**
16 EL 18	18	16	0.8	0.9	26.43	**242**	21.17	**642**
16 EL 16	16	16	0.8	1.0	26.43	**244**	21.17	**644**

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

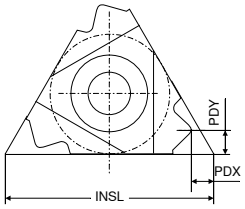
→ v_c Page 42

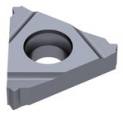
Right hand internal thread turning insert

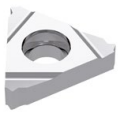
▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20







Designation	TPI	INSL	PDX	PDY	IR X3 Article no. 71 244 ...	£	IR Y1 Article no. 71 244 ...	£
	1/"	mm	mm	mm				
11 IR 18	18	11	0.8	0.9	26.43	**238**	21.17	**638**
16 IR 18	18	16	0.8	0.9	26.43	**242**	21.17	**642**
16 IR 16	16	16	0.8	1.0	26.43	**244**	21.17	**644**

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

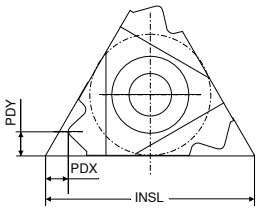
→ v_c Page 42

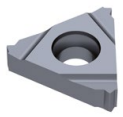
Left hand internal thread turning insert

▲ Full profile
▲ Conduit thread DIN 40430

Pg | 80°

CCN20 | CWK20





Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 246 ...	£	IL Y1 Article no. 71 246 ...	£
	1/"	mm	mm	mm				
11 IL 18	18	11	0.8	0.9	26.43	**238**	21.17	**638**
16 IL 18	18	16	0.8	0.9	26.43	**242**	21.17	**642**
16 IL 16	16	16	0.8	1.0	26.43	**244**	21.17	**644**

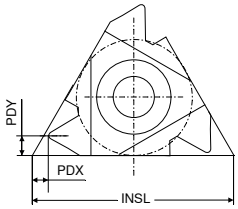
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

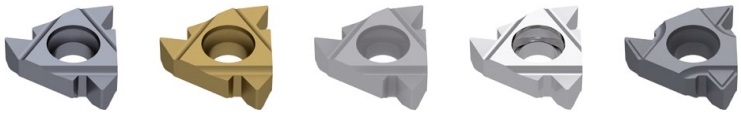
→ v_c Page 42

Right hand external thread turning insert

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

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TP	INSL	PDX	PDY	ER X3 Article no. 71 206 ... £		ER X3 Article no. 71 206 ... £		ER X3 Article no. 71 206 ... £		ER Y1 Article no. 71 206 ... £		ER X3 Article no. 71 206 ... £	
	mm	mm	mm	mm										
16 ER A60	0,5 - 1,5	16	0.8	0.9	23.95	**240**	16.39	**140**	17.80	**740**	17.52	**640**	17.80	**940**
16 ER G60	1,75 - 3	16	1.2	1.7	23.95	**242**	17.54	**142**	19.47	**742**	17.52	**642**	19.47	**942**
16 ER AG60	0,5 - 3	16	1.2	1.7	23.95	**244**	15.99	**144**	17.25	**744**	17.52	**644**	17.25	**944**
22 ER N60	3,5 - 5	22	1.7	2.5	33.08	**270**	29.78	**170**			28.79	**670**		
22 EN U60	5,5 - 8	22	0.9	11.0	33.08	**272** [1]					28.79	**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.

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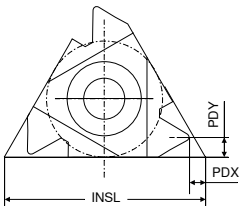
Left hand external thread turning insert

▲ Partial profile

CCN20 | CWK20



Designation	TP	INSL	PDX	PDY	EL X3 Article no. 71 208 ... £		EL Y1 Article no. 71 208 ... £	
	mm	mm	mm	mm				
16 EL A60	0,5 - 1,5	16	0.8	0.9	23.95	**240**	17.52	**640**
16 EL G60	1,75 - 3	16	1.2	1.7	23.95	**242**	17.52	**642**
16 EL AG60	0,5 - 3	16	1.2	1.7	23.95	**244**	17.52	**644**
22 EL N60	3,5 - 5	22	1.7	2.5	33.08	**270**	28.79	**670**

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

→ v_c Page 42

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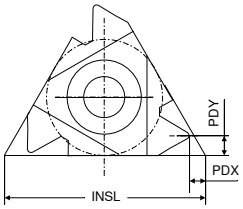
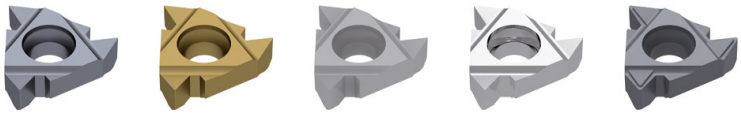
Right hand internal thread turning insert

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

CCN20 | CWN1525 | HCN2525 | CWK20 | CCN7525





Designation	TP	INSL	PDX	PDY	IR X3 Article no. 71 210 ... £		IR X3 Article no. 71 210 ... £		IR X3 Article no. 71 210 ... £		IR Y1 Article no. 71 210 ... £		IR X3 Article no. 71 210 ... £	
	mm	mm	mm	mm										
11 IR A60	0,5 - 1,5	11	0.8	0.9	23.95	**210**	16.54	**110**			17.52	**610**		
16 IR A60	0,5 - 1,5	16	0.8	0.9	23.95	**240**	21.67	**140**			17.52	**640**		
16 IR G60	1,75 - 3	16	1.2	1.7	23.95	**242**	17.54	**142**			17.52	**642**		
16 IR AG60	0,5 - 3	16	1.2	1.7	23.95	**244**	16.99	**144**	18.25	**744**	17.52	**644**	18.25	**944**
22 IR N60	3,5 - 5	22	1.7	2.5	33.08	**270**	28.61	**170**			28.79	**670**		
22 IN U60	5,5 - 8	22	0.9	11.0	33.08	**272** [1]					28.79	**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.

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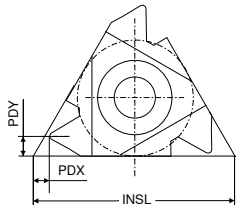
Left hand internal thread turning insert

▲ Partial profile

CCN20 | CWK20



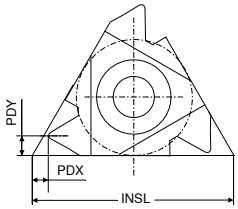
Designation	TP	INSL	PDX	PDY	IL X3 Article no. 71 212 ... £		IL Y1 Article no. 71 212 ... £	
	mm	mm	mm	mm				
11 IL A60	0,5 - 1,5	11	0.8	0.9	23.95	**210**	17.52	**610**
16 IL A60	0,5 - 1,5	16	0.8	0.9	23.95	**240**	17.52	**640**
16 IL G60	1,75 - 3	16	1.2	1.7	23.95	**242**	17.52	**642**
16 IL AG60	0,5 - 3	16	1.2	1.7	23.95	**244**	17.52	**644**
22 IL N60	3,5 - 5	22	1.7	2.5	33.08	**270**	27.54	**670**
Steel					●			
Stainless steel					●			
Cast iron							●	
Non ferrous metals					○		●	
Heat resistant alloys							○	

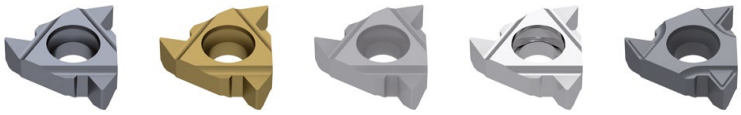
→ v_c Page 42

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 X3 Article no. 71 200 ... £		ER X3 Article no. 71 200 ... £		ER X3 Article no. 71 200 ... £		ER Y1 Article no. 71 200 ... £		ER X3 Article no. 71 200 ... £	
	1/"	mm	mm	mm										
16 ER A55	48 - 16	16	0.8	0.9	23.95	**240**	19.39	**140**	20.67	**740**	17.52	**640**	20.67	**940**
16 ER AG55	48 - 8	16	1.2	1.7	23.95	**244**	17.54	**144**	19.47	**744**	17.52	**644**	19.47	**944**
16 ER G55	14 - 8	16	1.2	1.7	23.95	**242**	19.39	**142**	21.36	**742**	17.52	**642**	21.36	**942**
22 ER N55	7 - 5	22	1.7	2.5	33.08	**270**	34.51	**170**	37.36	**770**	28.79	**670**		
22 EN U55	4,5 - 3,25	22	0.9	11.0	33.08	**272** 1)					28.79	**672** 1)		

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

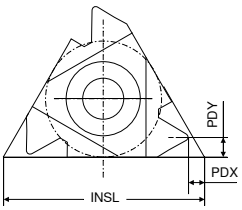
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

→ v_c Page 42

Left hand external thread turning insert

▲ Partial profile

CCN20 | CWK20



Designation	TPI	INSL	PDX	PDY	EL X3 Article no. 71 202 ... £		EL Y1 Article no. 71 202 ... £	
	1/"	mm	mm	mm				
16 EL A55	48 - 16	16	0.8	0.9	23.95	**240**	17.52	**640**
16 EL AG55	48 - 8	16	1.2	1.7	23.95	**244**	17.52	**644**
16 EL G55	14 - 8	16	1.2	1.7	23.95	**242**	17.52	**642**
22 EL N55	7 - 5	22	1.7	2.5	33.08	**270**	28.79	**670**

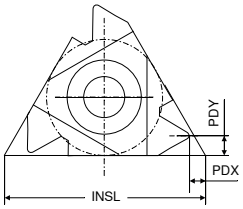
Steel	●	
Stainless steel	●	
Cast iron		●
Non ferrous metals	○	●
Heat resistant alloys		○

→ v_c Page 42

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 X3 Article no. 71 204 ...		IR X3 Article no. 71 204 ...		IR Y1 Article no. 71 204 ...		IR X3 Article no. 71 204 ...	
	1/"	mm	mm	mm	£		£		£		£	
11 IR A55	48 - 16	11	0.8	0.9	23.95	**210**			17.52	**610**		
16 IR A55	48 - 16	16	0.8	0.9	23.95	**240**			17.52	**640**		
16 IR AG55	48 - 8	16	1.2	1.7	23.95	**244**			17.52	**644**		
16 IR G55	14 - 8	16	1.2	1.7	23.95	**242**	19.39	**142**	17.52	**642**	21.36	**942**
22 IR N55	7 - 5	22	1.7	2.5	33.08	**270**			28.79	**670**		
22 IN U55	4,5 - 3,25	22	0.9	11.0	33.08	**272** [1]			28.79	**672** [1]		
Steel					●		●					●
Stainless steel					●		○					●
Cast iron							●		●			●
Non ferrous metals					○		●		●			○
Heat resistant alloys									○			●

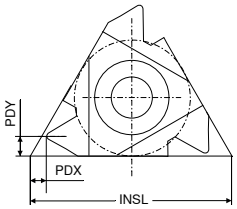
1) Neutral version (N) – for right and left hand thread applications. Neutral Toolholder marked (U) is required.

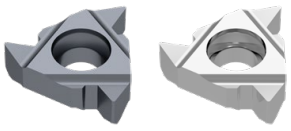
→ v_c Page 42

Left hand internal thread turning insert

▲ Partial profile

CCN20 | CWK20



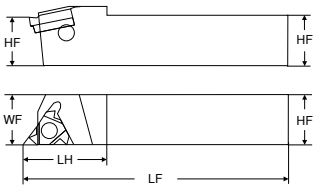


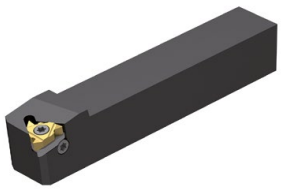
Designation	TPI	INSL	PDX	PDY	IL X3 Article no. 71 203 ...		IL Y1 Article no. 71 203 ...	
	1/"	mm	mm	mm	£		£	
11 IL A55	48 - 16	11	0.8	0.9	22.14	**210**	17.52	**610**
16 IL A55	48 - 16	16	0.8	0.9	22.14	**240**	17.52	**640**
16 IL AG55	48 - 8	16	1.2	1.7	22.14	**244**	17.52	**644**
16 IL G55	14 - 8	16	1.2	1.7	22.14	**242**	17.52	**642**
22 IL N55	7 - 5	22	1.7	2.5	31.14	**270**	28.79	**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 Y2 Article no. 71 281 ... £		Right-hand Y2 Article no. 71 280 ... £	
SE R/L 08 08 H11	8	11	100	16	11 ..	106.74	**908** [2]	106.74	**908** [2]
SE R/L 10 10 H11	10	12	100	18	11 ..	106.74	**910** [2]	106.74	**910** [2]
SE R/L 12 12 K11	12	12	125	20	11 ..	106.74	**912** [2]	106.74	**912** [2]
SE R/L 12 12 F16	12	16	80	22	16 ..	106.74	**012**	106.74	**012**
SE R/L 16 16 H16	16	16	100	25	16 ..	131.39	**016**	131.39	**016**
SE R/L 20 20 K16	20	20	125	30	16 ..	131.39	**020**	131.39	**020**
SE R/L 25 25 M16	25	25	150	30	16 ..	149.95	**025**	149.95	**025**
SE R/L 32 32 P16	32	32	170	30	16 ..	164.80	**032**	164.80	**032**
SE R/L 25 25 M22	25	25	150	32	22 ..	164.80	**125**	164.80	**125**
SE R 32 32 P22	32	32	170	34	22 ..			172.22	**132**
SE R 32 32 P22U	32	21	170	32	22 .N			172.22	**232** [1]

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

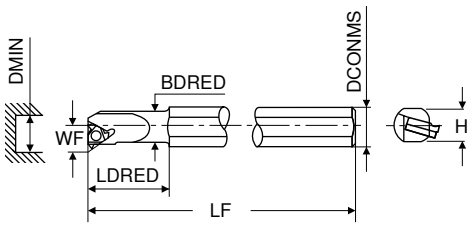
8

Spare parts for Article no.		Y2 Multi tooth shim Article no. 71 950 ... £			Y2 Shim Article no. 71 950 ... £		Y2 Screw-U Article no. 71 950 ... £			Y7 Key D Article no. 80 950 ... £		Y2 Clamping screw Article no. 71 950 ... £	
71 280 908 / 71 281 908									T08	10.30	**110**	2.03	**230**
71 280 910 / 71 281 910									T08	10.30	**110**	2.03	**230**
71 280 912 / 71 281 912									T08	10.30	**110**	2.03	**230**
71 280 012	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 281 012	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 280 016	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 281 016	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 280 020	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 281 020	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 280 025	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 281 025	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 280 032	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 281 032	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 280 125	ER 22 / IL 22	23.66	**110**	ER 22 / IL 22	22.25	**137**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 281 125	EL 22 / IR 22	23.66	**115**	EL 22 / IR 22	22.25	**145**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 280 132				ER 22 / IL 22	22.25	**137**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 280 232				ER 22U / IL 22U	22.25	**153**	2.44	**235**	T20	13.11	**114**	2.44	**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 Y2 Article no. 71 283 ... £		Right-hand Y2 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 ..			149.95	**011** [1]
SI R/L 0010 K11	14.0	125	25	16	10.0	7.4	12	11 ..	115.05	**010** [1]	115.05	**010** [1]
SI R 0013 L11	14.0	140	32	16	12.0	8.9	15	11 ..			123.23	**013** [1]
SI R/L 0013 M16	14.0	150	32	16	13.0	10.2	16	16 ..	125.30	**015** [1]	125.30	**015** [1]
SI R/L 0016 P16	18.0	170	40	20	15.0	11.7	19	16 ..	125.30	**016** [1]	125.30	**016** [1]
SI R/L 0020 P16	18.0	170	40	20	19.5	13.7	24	16 ..	147.72	**020**	147.72	**020**
SI R 0025 R16	22.6	200	40	25	24.5	16.2	29	16 ..			179.64	**026**
SI R/L 0032 S16	28.8	250	50	32	31.5	19.7	36	16 ..	193.00	**032**	193.00	**032**
SI R 0040 T16	36.0	300	50	40	39.5	23.7	44	16 ..			286.53	**040**
SI R 0020 P22	18.0	170	40	20	19.5	15.6	24	22 ..			139.71	**120** [1]
SI R/L 0025 R22	22.6	200	40	25	24.5	18.1	29	22 ..	161.82	**126**	179.64	**126**
SI R 0032 S22	28.8	250	50	32	31.5	21.6	38	22 ..			198.93	**132**
SI R 0040 T22	36.0	300	60	40	39.5	25.6	46	22 ..			293.95	**140**
SI R 0032 S22U	28.8	250	60	32	31.5	24.4	38	22 .N			175.79	**133** [2]

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


Multi tooth shim


Shim


Screw-U


Key D

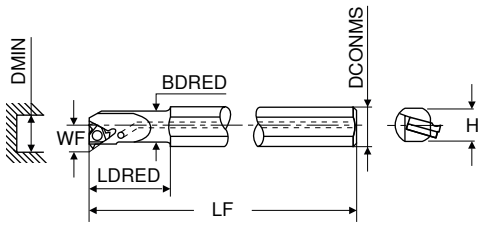

Clamping screw

Spare parts for Article no.		Y2 Article no. 71 950 ... £			Y2 Article no. 71 950 ... £		Y2 Article no. 71 950 ... £			Y7 Article no. 80 950 ... £		Y2 Article no. 71 950 ... £	
71 282 011									T08	10.30	**110**	2.03	**230**
71 282 010 / 71 283 010									T08	10.30	**110**	2.03	**230**
71 282 013									T08	10.30	**110**	2.03	**230**
71 282 015 / 71 283 015									T10	12.05	**112**	2.24	**236**
71 282 016 / 71 283 016									T10	12.05	**112**	2.24	**236**
71 282 020	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 283 020	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 282 026	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 282 032	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 283 032	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 282 040	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 282 120							1.97	**234**	T20	13.11	**114**	2.40	**237**
71 282 126	EL 22 / IR 22	23.66	**115**	EL 22 / IR 22	22.25	**145**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 283 126	ER 22 / IL 22	23.66	**110**	ER 22 / IL 22	22.25	**137**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 282 132	EL 22 / IR 22	23.66	**115**	EL 22 / IR 22	22.25	**145**	2.44	**235**	T20	13.11	**114**	2.44	**232**
71 282 140	EL 22 / IR 22	23.66	**115**	EL 22 / IR 22	22.25	**145**	2.44	**235**	T20	13.11	**114**	2.44	**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 Y2 Article no. 71 283 ...		Right-hand Y2 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 ..			470.61	**510** [2]
SI R 0012 P11CB	11.0	170	30	12	11.5	8.4	15	11 ..			500.31	**512** [2]
SI R/L 0010 K11B	14.0	125	25	16	10.0	7.4	12	11 ..	137.77	**310**	137.77	**310**
SI R/L 0013 M16B	14.0	150	32	16	13.0	10.2	16	16 ..	149.95	**315**	149.95	**315**
SI R 0016 P16B	18.0	170	40	20	16.0	11.7	19	16 ..			149.95	**316**
SI R 0020 P16B	18.0	170	40	20	19.5	13.7	24	16 ..			176.65	**320** [1]
SI R/L 0032 S16B	28.8	250	50	32	31.5	19.7	36	16 ..	218.23	**332** [1]	218.23	**332** [1]

1) with shim seat
2) Carbide version

Spare parts		Y2 Multi tooth shim Article no. 71 950 ...			Y2 Shim Article no. 71 950 ...		Y2 Screw-U Article no. 71 950 ...			Y7 Key D Article no. 80 950 ...		Y2 Clamping screw Article no. 71 950 ...	
for Article no.		£			£		£			£		£	
71 282 510									T08	10.30	**110**	2.03	**230**
71 282 512									T08	10.30	**110**	2.03	**230**
71 282 310 / 71 283 310									T08	10.30	**110**	2.03	**230**
71 282 315 / 71 283 315									T10	12.05	**112**	2.24	**236**
71 282 316									T10	12.05	**112**	2.24	**236**
71 282 320	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 282 332	EL 16 / IR 16	17.17	**108**	EL 16 / IR 16	13.96	**129**	1.97	**234**	T10	12.05	**112**	1.45	**231**
71 283 332	ER 16 / IL 16	17.17	**101**	ER 16 / IL 16	13.96	**121**	1.97	**234**	T10	12.05	**112**	1.45	**231**

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

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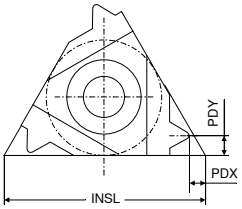
Right hand internal thread turning insert – Mini size 06

▲ Full profile
▲ Thread production from diameter 6mm

M | 60°



CWS80 | CCN1525 | CWN30

Designation	TP	PDX	PDY	INSL	HSS IR Y1 Article no. 71 276 ...		IR X3 Article no. 71 271 ...		IR Y1 Article no. 71 276 ...	
	mm	mm	mm	mm	£		£		£	
06 IR 0,5	0.50	0.9	0.5	6	26.57	**710**	22.80	**110**	26.57	**310**
06 IR 0,75	0.75	0.8	0.5	6	26.57	**712**	22.80	**112**	26.57	**312**
06 IR 1,0	1.00	0.7	0.6	6	25.01	**714**	22.80	**114**	25.01	**314**
06 IR 1,25	1.25	0.6	0.6	6	26.57	**716**	22.80	**116**	26.57	**316**

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

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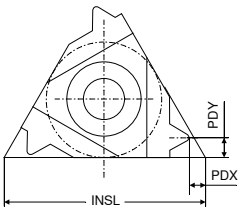
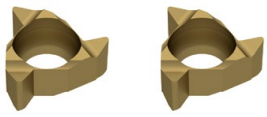
Right hand internal thread turning insert – Mini size 06

▲ Full profile
▲ Thread production from diameter 6mm

BSW | 55°



CWS80 | CWN30



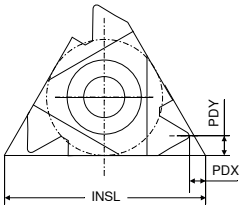
Designation	TPI	PDX	PDY	INSL	HSS IR Y1 Article no. 71 278 ...		IR Y1 Article no. 71 278 ...	
	1/"	mm	mm	mm	£		£	
06 IR 26	26	0.6	0.6	6	26.57	**716**	26.57	**316**
06 IR 22	22	0.6	0.6	6	26.57	**720**	26.57	**320**
06 IR 20	20	0.6	0.6	6	26.57	**722**	26.57	**322**
06 IR 19	19	0.6	0.6	6	26.57	**724**	26.57	**324**
06 IR 18	18	0.6	0.6	6	26.57	**726**	26.57	**326**

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

→ v_c Page 42

Right hand internal thread turning insert – Mini size 06

▲ Partial profile
▲ Thread production from diameter 6mm



CWS80 | CCN1525 | CWN30



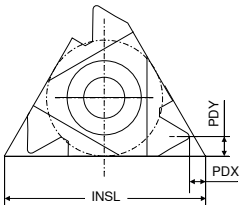
Designation	TP	INSL	PDX	PDY	HSS IR Y1 Article no. 71 272 ... £		IR X3 Article no. 71 274 ... £		IR Y1 Article no. 71 272 ... £	
	mm	mm	mm	mm						
06 IR A60	0,5 - 1,25	6	0.6	0.6	26.57	**710**	22.80	**210**	26.57	**310**
Steel						○		●		●
Stainless steel						●		●		●
Cast iron						○		●		○
Non ferrous metals						○		○		○
Heat resistant alloys										○

→ v_c Page 42

8

Right hand internal thread turning insert – Mini size 06

▲ Partial profile
▲ Thread production from diameter 6mm



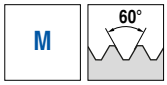
CWS80 | CWN30

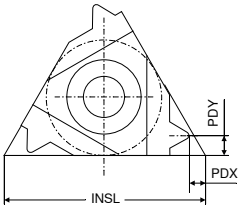

Designation	TPI	INSL	PDX	PDY	HSS IR Y1 Article no. 71 274 ... £		IR Y1 Article no. 71 274 ... £	
	1/"	mm	mm	mm				
06 IR A55	48 - 20	6	0.5	0.6	26.57	**710**	26.57	**310**
Steel						○		●
Stainless steel						●		●
Cast iron						○		○
Non ferrous metals						○		○
Heat resistant alloys								○

→ v_c Page 42

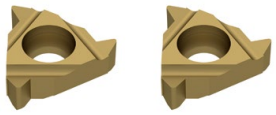
Right hand internal thread turning insert – Mini size 08

▲ Full profile
▲ Thread production from diameter 8mm





CWS80 CWN30



Designation	TP	PDX	PDY	INSL	HSS IR Y1 Article no. 71 277 ...		IR Y1 Article no. 71 277 ...	
	mm	mm	mm	mm	£		£	
08 IR 0,5	0.50	0.6	0.5	8	26.57	**710**	26.57	**310**
08 IR 0,75	0.75	0.6	0.5	8	26.57	**712**	26.57	**312**
08 IR 1,0	1.00	0.6	0.6	8	25.01	**714**	25.01	**314**
08 IR 1,25	1.25	0.6	0.7	8	26.57	**716**	26.57	**316**
08 IR 1,5	1.50	0.6	0.7	8	25.01	**718**	25.01	**318**
08 IR 1,75	1.75	0.6	0.8	8	26.57	**720**	26.57	**320**
08 IN 2,0	2.00	1.0	4.0	8	31.80	**784** 1)	31.80	**384** 1)

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

1) Neutral version (N)

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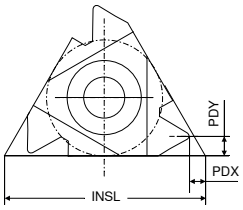
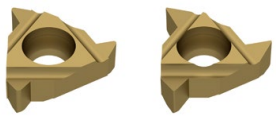
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8mm



CWS80 CWN30



Designation	TP	PDX	PDY	INSL	HSS IR Y1 Article no. 71 273 ...		IR Y1 Article no. 71 273 ...	
	mm	mm	mm	mm	£		£	
08 IR A60	0,5 - 1,5	0.6	0.7	8	26.57	**710**	26.57	**310**
08 IN M60	1,75 - 2,0	0.8	4.0	8	31.80	**772** 1)	31.80	**372** 1)

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

1) Neutral version (N)

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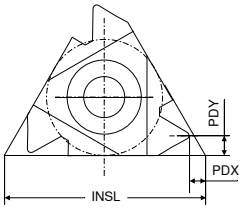
Right hand internal thread turning insert – Mini size 08

▲ Partial profile
▲ Thread production from diameter 8mm

CWS80 CWN30



Designation	TPI	INSL	PDX	PDY	HSS IR Y1 Article no. 71 275 ...		IR Y1 Article no. 71 275 ...	
	1/"	mm	mm	mm	£		£	
08 IR A55	48 - 16	8	0.6	0.7	26.57	**710**	26.57	**310**
08 IN M55	14 - 11	8	0.9	4.0	31.80	**772** 1)	31.80	**372** 1)
Steel						○		●
Stainless steel						●		●
Cast iron						○		○
Non ferrous metals						○		○
Heat resistant alloys								○

1) Neutral version (N)

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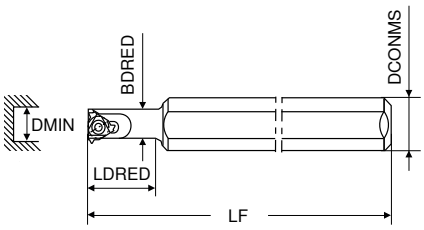
Right Hand Internal Thread Holder – Mini size 06



Designation	LF	LDRED	DCONMS	BDRED	DMIN	Insert	Right-hand Y2 Article no. 71 294 ...	
	mm	mm	mm	mm	mm		£	
SI R 0005 H06	100	12	12	5.2	6	06 ..	190.68	**005**
SI R 0005 H06 C	100	25	6	5.2	6	06 ..	339.97	**105** 1)

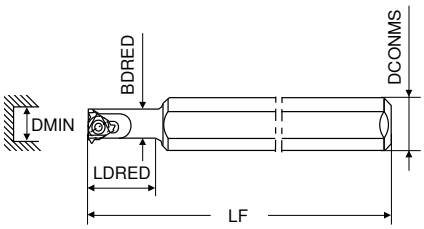
1) Solid Carbide Shank with Thro' Coolant


Key D


Clamping screw

Spare parts for Article no.		Y7 Article no. 80 950 ...		Y2 Article no. 71 950 ...	
		£		£	
71 294 005	T06	11.15	**108**	3.29	**029**
71 294 105	T06	11.15	**108**	3.29	**029**

Right Hand Internal Thread Holder – Mini size 08



Designation	LF	LDRED	DCONMS	BDRED	DMIN	Insert	Right-hand Y2 Article no. 71 295 ...	
	mm	mm	mm	mm	mm		£	
SI R 0007 K08	125	18	16	6.7	7.8	08 ..	190.68	**007**
SI R 0007 K08U	125	21	16	7.5	9.0	08 .N	217.01	**008** 1)
SI R 0007 K08C	125	30	8	6.5	7.8	08 ..	385.83	**107** 2)

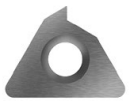
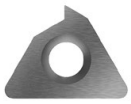
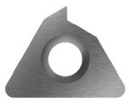
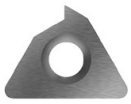
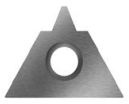
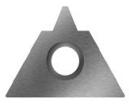
1) Neutral insert indicated by marking (N)
2) Solid Carbide Shank with Thro' Coolant


Key D


Clamping screw

Spare parts for Article no.		Y7 Article no. 80 950 ...		Y2 Article no. 71 950 ...	
		£		£	
71 295 007	T06	11.15	**108**	3.29	**033**
71 295 008	T06	11.15	**108**	3.29	**033**
71 295 107	T06	11.15	**108**	3.29	**033**

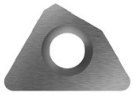
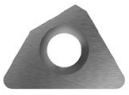
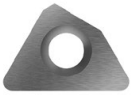
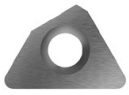
Shims for Standard Threading Inserts

Pitch-angle β	AE 16 ER 16 / IL 16 Y2 Article no. 71 950 ...		AI 16 EL 16 / IR 16 Y2 Article no. 71 950 ...		AE 22 ER 22 / IL 22 Y2 Article no. 71 950 ...		AI 22 EL 22 / IR 22 Y2 Article no. 71 950 ...		AE 22 U ER 22 / IL 22 Y2 Article no. 71 950 ...		AI 22 U EL 22 / IR 22 Y2 Article no. 71 950 ...	
	£		£		£		£		£		£	
+ 4,5°	13.55	118	13.55	126	21.59	134	21.59	142	22.25	150 [1]	22.25	158 [1]
+ 3,5°	13.55	119	13.55	127	21.59	135	21.59	143	22.25	151 [1]	22.25	159 [1]
+ 2,5°	13.55	120	13.55	128	21.59	136	21.59	144	22.25	152 [1]	22.25	160 [1]
+ 1,5°	13.96	121	13.96	129	22.25	137	22.25	145	22.25	153 [1]	22.25	161 [1]
+ 0,5°	13.55	122	13.55	130	21.59	138	21.59	146	22.25	154 [1]	22.25	162 [1]
0°	13.55	123	13.55	131	21.59	139	21.59	147				
- 0,5°	13.55	124	13.55	132	21.59	140	21.59	148	22.25	156 [1]	22.25	164 [1]
- 1,5°	13.55	125	13.55	133	21.59	141	21.59	149	22.25	157 [1]	22.25	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 Y2 Article no. 71 950 ...		AI 16 M EL 16 / IR 16 Y2 Article no. 71 950 ...		AE 22 M ER 22 / IL 22 Y2 Article no. 71 950 ...		AI 22 M EL 22 / IR 22 Y2 Article no. 71 950 ...	
	£		£		£		£	
+ 1,5°	17.17	101	17.17	108	23.66	110	23.66	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

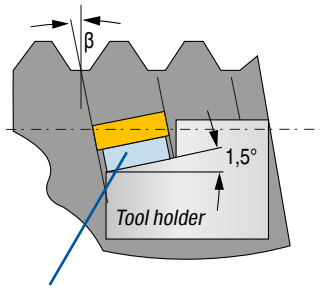
- the profile will be distorted.
- insufficient clearance angle.
- the tool life of the insert is greatly reduced.

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

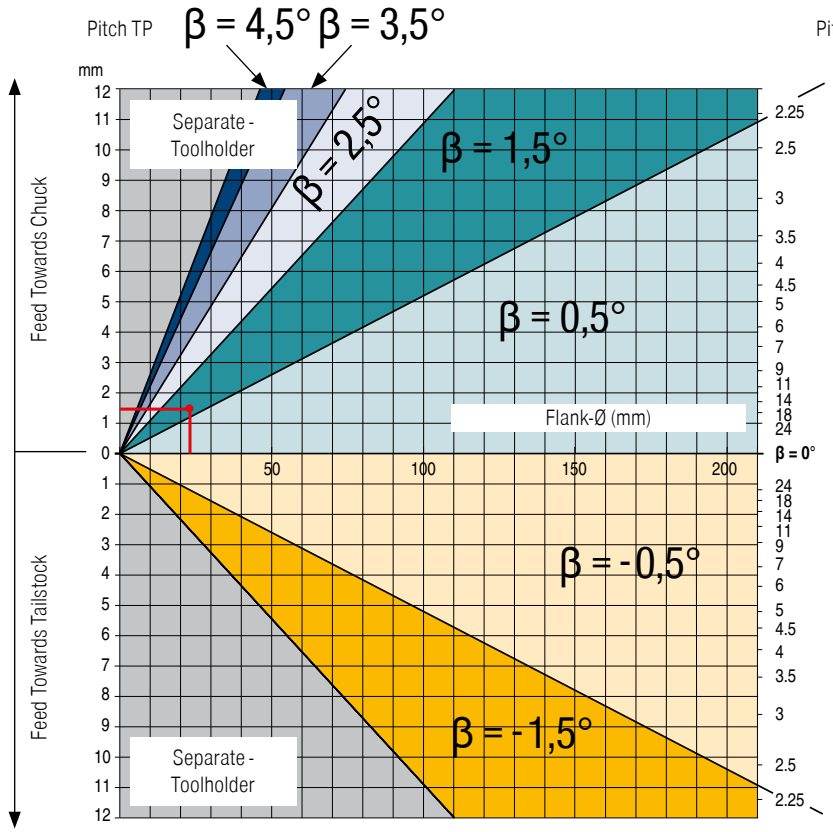
External thread M24 x 1.5
Feed towards chuck
DMIN = Nominal Ø: M24 = 24 mm
TP = Pitch: 1.5 mm

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

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						

8

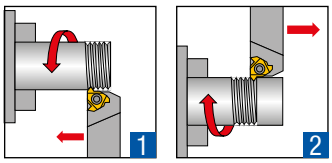
Cutting data appoximate values

	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								

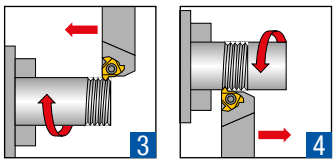
The cutting data depends extremely on the external conditions, the material and machine type. The indicated values are possible values which have to be increased or reduced according to the application conditions.

Thread turning methods

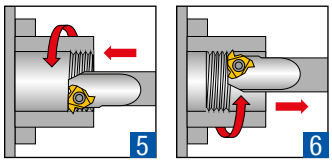
External right-hand thread



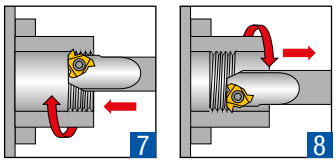
External left-hand thread



Internal right-hand thread



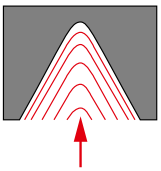
Internal left-hand thread



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

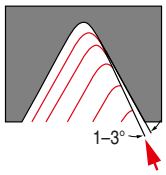
Thread infeed methods

Radial Infeed



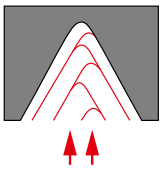
- for pitches less than 1.5 mm
- for short chipping materials
- for machining hardened materials
- simple and quick method

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

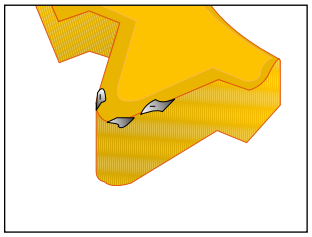
Pitch	**mm**	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	8,00
	TPI	48	32	24	20	16	14	12	10	8	7	6	5.5	5	4.5	4	3
Number of passes		4-6	4-7	4-8	5-9	6-10	7-12	7-12	8-14	9-16	10-18	11-18	11-19	12-20	12-20	12-20	15-24
Number of passes	**(CCN7525)**	3-4	3-4	3-5	4-6	5-6	6-8	6-8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



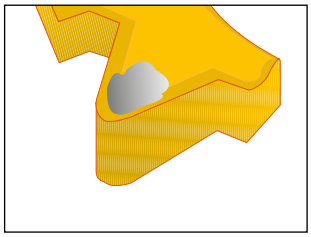
Cause

- 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



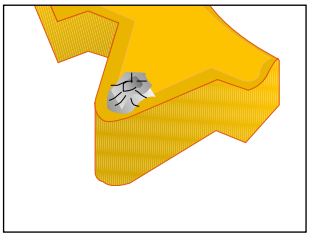
Cause

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

Remedy

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

Built-up edge



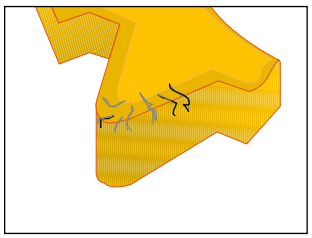
Cause

- Cutting speed too low
- Incorrect grade

Remedy

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

Thermal cracking



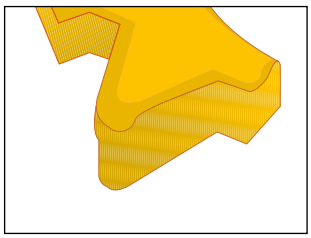
Cause

- Insufficient coolant
- Cutting speed too high
- Incorrect grade

Remedy

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

Plastic deformation



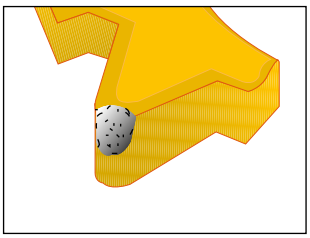
Cause

- 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

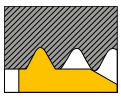
Stainless steel

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