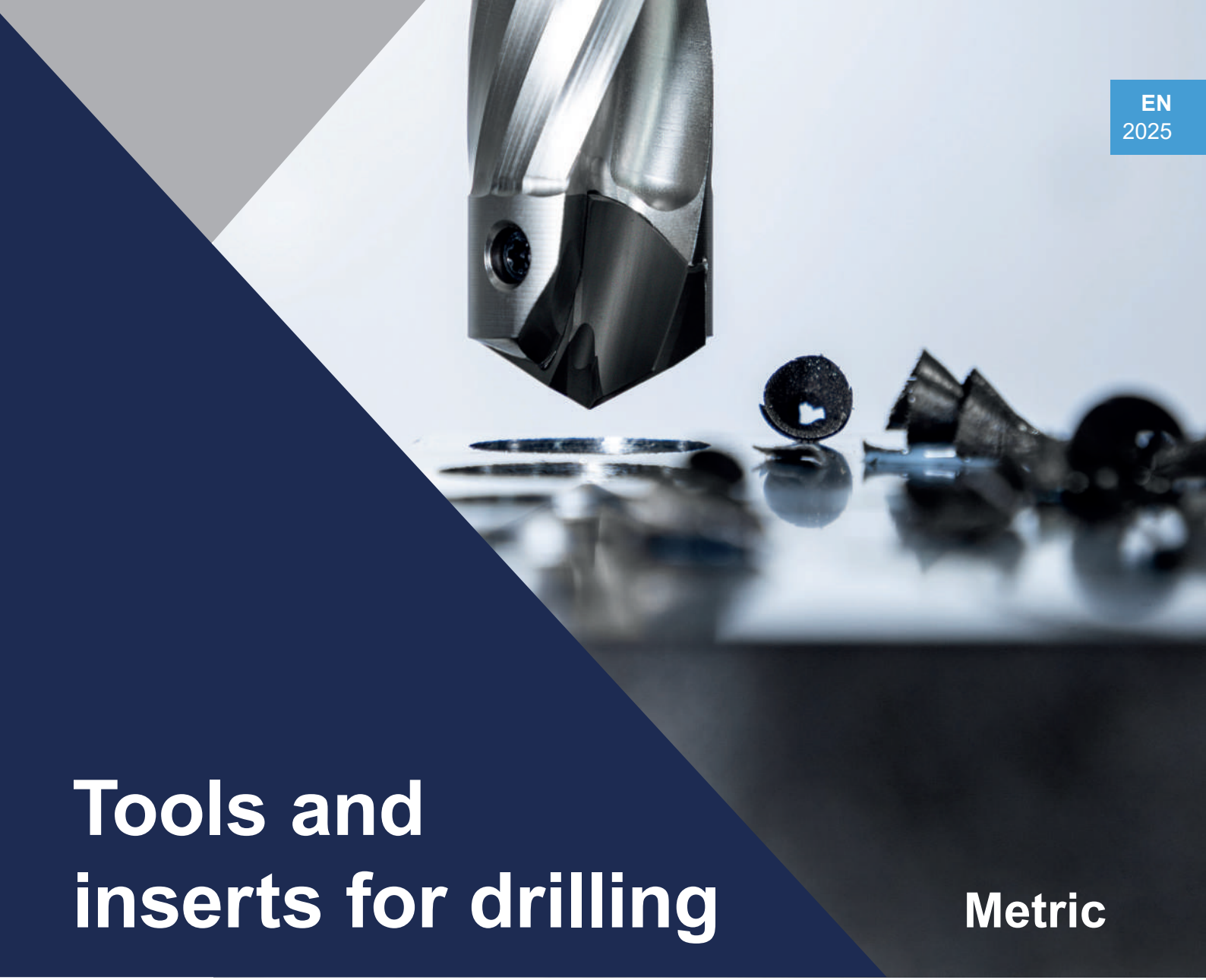
EN
2025



Tools and inserts for drilling

Metric

ELMEC is a engineering and manufacturing company of high performance cutting tools.

More than 50 years Mastering Precision

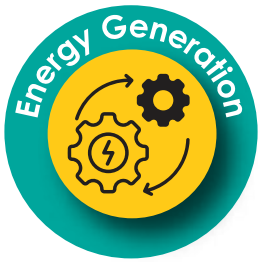
elmec.com.mx

ELMEC

For over 50 years, ELMEC has been a pioneer in developing specialized cutting tool solutions for the automotive, aerospace, construction and agriculture, oil and gas, energy generation and general manufacturing industries.

Our mission is to exceed our customers expectations on service, quality and performance in the manufacturing of tailored rotary cutting tools, made with the clear objective of increasing the productivity in the operation of your plants and making work more more efficient, reliable and accurate.

Industrial sectors



ELMEC is the Manufacturing Line First Responder

As the frontline personnel for manufacturing lines, ELMEC offers: experience, quick response an effective solutions.
Highly trained personnel and high technology equipment guarantee the quiality and precision in each of our products.
We are commited to continuing positioning ourselves as the #1 solution provider in solving our customers' needs.

Product lines:

- **Solid carbide cutting tools, for materials:**

- Forged steel - Titanium - Alloy steels
- Cast iron - Inconel - Stainless steels
- Nodular iron - Aluminum - Hardened steels

- **PCD cutting tools, for materials:**

- High "Si" content aluminu - Plastics
- Composites - GFRP (Fiberglass)
- Non-ferrous materials - CFRP (Carbon fiber)

- **Indexable Inserts.**

ELMEC is a privately owned mexican company located in Hidalgo, México. ELMEC has always differentiate as a supplier that excels in innovation, quality, service and support, values that serve as guidelines on our daily work.

Our values

Our product portfolio of Indexable Inserts

Milling

Drilling

Multicut

Turning

Grooving

Contents

Inserts and tools for indexable drilling in 3xD, 4xD and 5xD

Presentation:

▲ Ø14.0 mm to Ø44.0 mm

Your benefits:

Performance booster suitable for extreme machining:

▲drilling through stacks,

▲drilling into edges,

▲drilling into corner angles,

▲drilling into weld seams or ridged surfaces

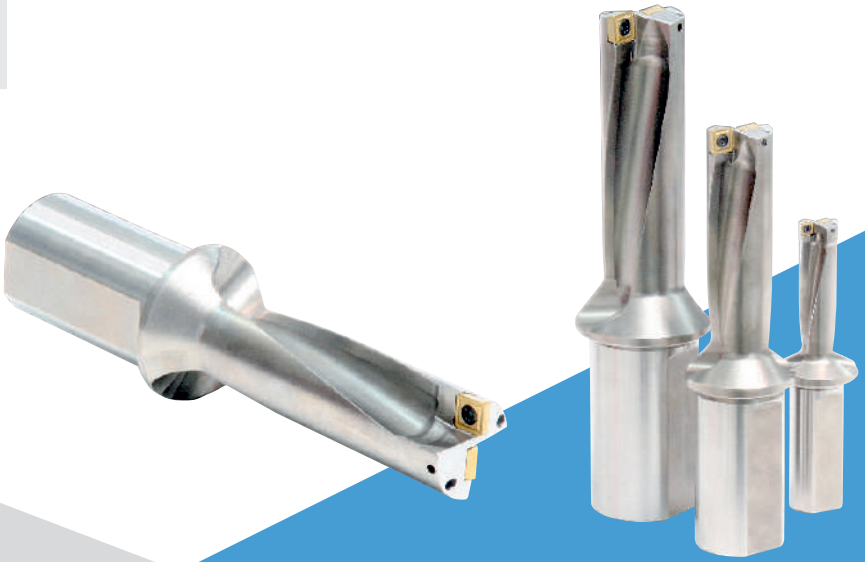
Costs savings:

▲Achieves an increase in cutting data and feed rates of up to 20 %

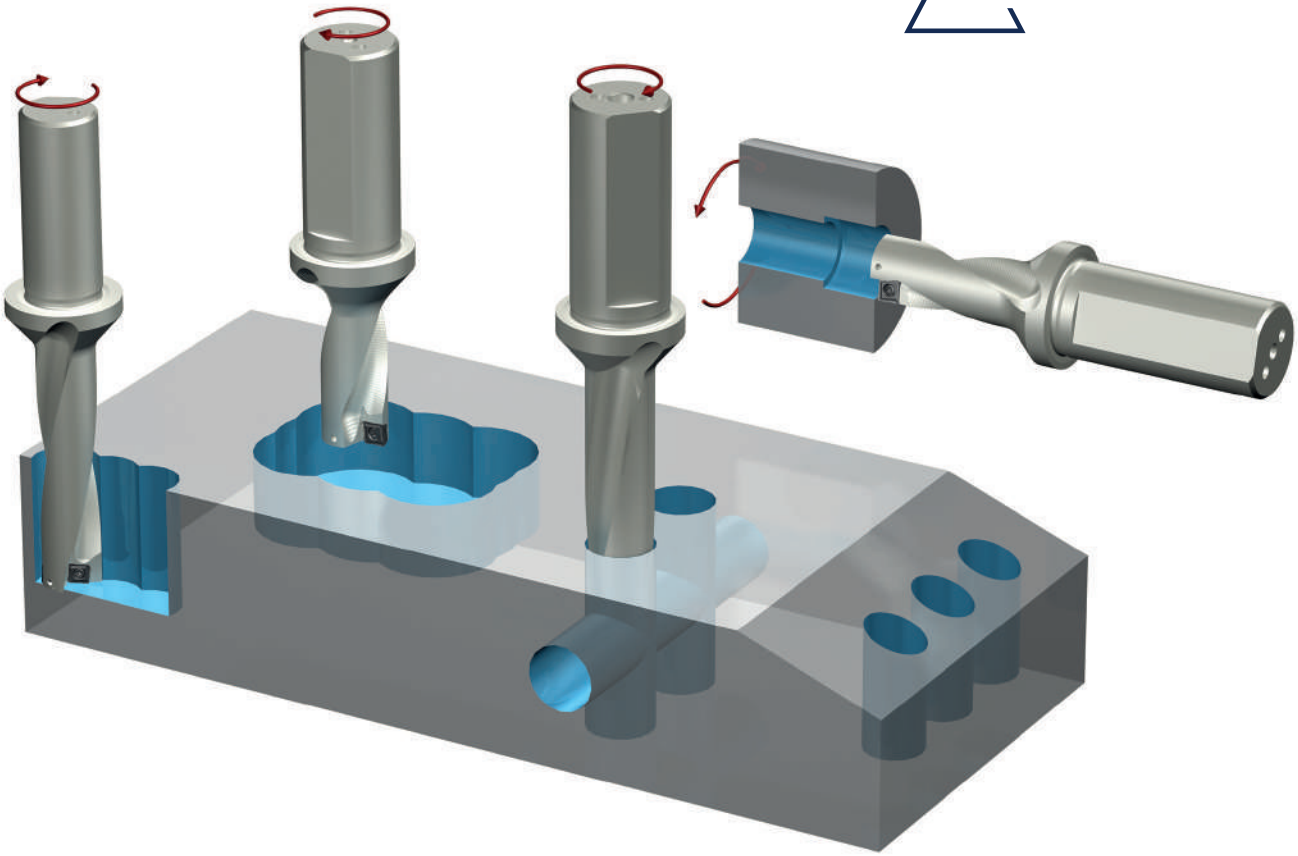
▲Optimum dimensional accuracy in the most difficult drilling conditions

▲A single tool combines key features such as real accuracy, top performance parameters and deep drilling depths.

▲Cost reductions in stocking and ease of handling due to identical internal and external indexable inserts

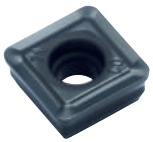


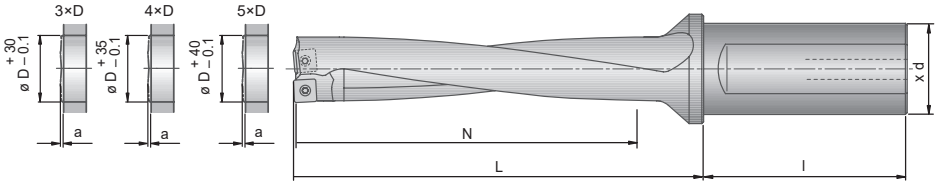
APPLICATIONS



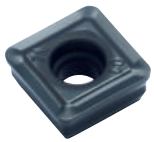
Range 3xD:
∅14.0 mm –∅19.5 mm

Tools	∅ [mm]	Designation	∅d×l [mm]	N [mm]	L [mm]	Material number
	14.0	IDCD.3D.1400.R.20.05	20x50	42	55	12547000
	14.5	IDCD.3D.1450.R.20.05	20x50	45	59	12547014
	15.0	IDCD.3D.1500.R.20.05	20x50	45	59	12547020
	15.5	IDCD.3D.1550.R.20.05	20x50	48	64	12547027
	16.0	IDCD.3D.1600.R.20.05	20x50	48	64	12547037
	16.5	IDCD.3D.1650.R.20.05	20x50	51	68	12547045

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 050204-HCD CTPP425	…**-HCD**	P	12421657
	SOLT 050204-CCD CTPK415	…**-CCD**	K	12421662
	SOLT 050204-SCD CTPP440	…**-SCD**	M	12421661
	SOLT 050204-HCD CTPP440	…**-HCD**	S	12421660

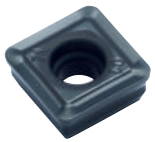


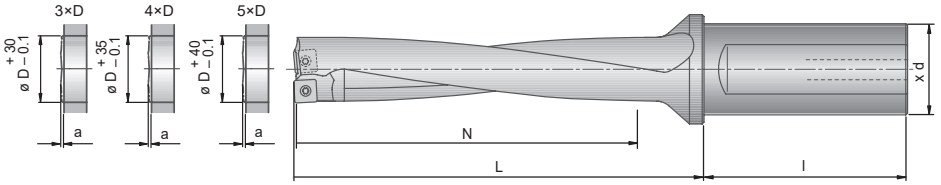
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	17.0	IDCD.3D.1700.R.20.06	20x50	51	68	12549422
	17.5	IDCD.3D.1750.R.25.06	25x56	51	71	12549474
	18.0	IDCD.3D.1800.R.25.06	25x56	54	71	12549483
	18.5	IDCD.3D.1850.R.25.06	25x56	55.5	75	12549504
	19.0	IDCD.3D.1900.R.25.06	25x56	57	75	12549509
	19.5	IDCD.3D.1950.R.25.06	25x56	60	78	12549514

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 06T206-HCD CTPP425	…**-HCD**	P	12421690
	SOLT 06T206-CCD CTPK415	…**-CCD**	K	12421699
	SOLT 06T206-SCD CTPP440	…**-SCD**	M	12421695
	SOLT 06T206-HCD CTPP440	…**-HCD**	S	12421693

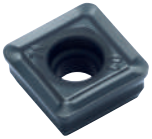
Range 3xD:
∅ 20.0 mm – ∅ 28.0 mm

Tools	∅ [mm]	Designation	∅d×l [mm]	N [mm]	L [mm]	Material number
	20.0	IDCD.3D.2000.R.25.07	25x56	60	78	12553501
	20.5	IDCD.3D.2050.R.25.07	25x56	61.5	82	12553502
	21.0	IDCD.3D.2100.R.25.07	25x56	66	85	12553503
	21.5	IDCD.3D.2150.R.25.07	25x56	66	85	12553504
	22.0	IDCD.3D.2200.R.25.07	25x56	66	85	12553506
	22.5	IDCD.3D.2250.R.25.07	25x56	69	89	12553507
	23.0	IDCD.3D.2300.R.25.07	25x56	69	89	12553508

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 070308-HCD CTPP425	…**-HCD**	P	12421701
	SOLT 070308-CCD CTPK415	…**-CCD**	K	12421711
	SOLT 070308-SCD CTPP440	…**-SCD**	M	12421704
	SOLT 070308-HCD CTPP440	…**-HCD**	S	12421702

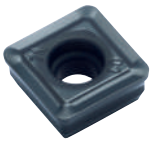


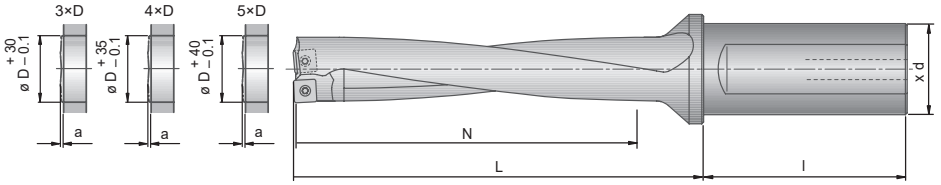
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	23.5	IDCD.3D.2350.R.32.08	32x60	72	92	12553510
	24.0	IDCD.3D.2400.R.32.08	32x60	72	92	12553511
	24.5	IDCD.3D.2450.R.32.08	32x60	75	96	12553512
	25.0	IDCD.3D.2500.R.32.08	32x60	78	96	12553513
	25.5	IDCD.3D.2550.R.32.08	32x60	78	99	12553515
	26.0	IDCD.3D.2600.R.32.08	32x60	81	99	12553516
	26.5	IDCD.3D.2650.R.32.08	32x60	81	103	12553517
	27.0	IDCD.3D.2700.R.32.08	32x60	81	103	12553519
	27.5	IDCD.3D.2750.R.32.08	32x60	84	106	12553520
	28.0	IDCD.3D.2800.R.32.08	32x60	84	106	12553521

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 080308-HCD CTPP425	…**-HCD**	P	12421717
	SOLT 080308-CCD CTPK415	…**-CCD**	K	12421752
	SOLT 080308-SCD CTPP440	…**-SCD**	M	12421750
	SOLT 080308-HCD CTPP440	…**-HCD**	S	12421720

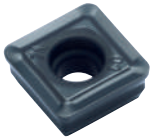
Range 3xD:
∅28.5 mm – ∅38.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	28.5	IDCD.3D.2850.R.32.10	32x60	87	110	12553522
	29.0	IDCD.3D.2900.R.32.10	32x60	87	110	12553523
	29.5	IDCD.3D.2950.R.32.10	32x60	90	113	12553524
	30.0	IDCD.3D.3000.R.32.10	32x60	90	113	12553525
	30.5	IDCD.3D.3050.R.40.10	40x68	93	117	12553534
	31.0	IDCD.3D.3100.R.40.10	40x68	93	117	12553535
	31.5	IDCD.3D.3150.R.40.10	40x68	96	120	12553536
	32.0	IDCD.3D.3200.R.40.10	40x68	96	120	12553537
	32.5	IDCD.3D.3250.R.40.10	40x68	99	124	12553538
	33.0	IDCD.3D.3300.R.40.10	40x68	99	124	12553539

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 10T308-HCD CTPP425	…**-HCD**	P	12421756
	SOLT 10T308-CCD CTPK415	…**-CCD**	K	12421772
	SOLT 10T308-SCD CTPP440	…**-SCD**	M	12421771
	SOLT 10T308-HCD CTPP440	…**-HCD**	S	12421757

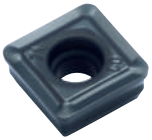


Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	33.5	IDCD.3D.3350.R.40.11	40x68	102	127	12555817
	34.0	IDCD.3D.3400.R.40.11	40x68	102	127	12555823
	34.5	IDCD.3D.3450.R.40.11	40x68	102	131	12555824
	35.0	IDCD.3D.3500.R.40.11	40x68	105	131	12555825
	35.5	IDCD.3D.3550.R.40.11	40x68	105	134	12555827
	36.0	IDCD.3D.3600.R.40.11	40x68	108	134	12555828
	36.5	IDCD.3D.3650.R.40.11	40x68	108	138	12555829
	37.0	IDCD.3D.3700.R.40.11	40x68	111	138	12555830
	37.5	IDCD.3D.3750.R.40.11	40x68	111	141	12555831
	38.0	IDCD.3D.3800.R.40.11	40x68	114	141	12555832

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 110408-HCD CTPP425	…**-HCD**	P	12421773
	SOLT 110408-CCD CTPK415	…**-CCD**	K	12421777
	SOLT 110408-SCD CTPP440	…**-SCD**	M	12421776
	SOLT 110408-HCD CTPP440	…**-HCD**	S	12421775

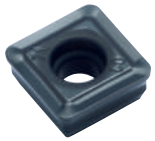
Range 3xD:
∅ 38.5 mm – ∅ 44.0 mm

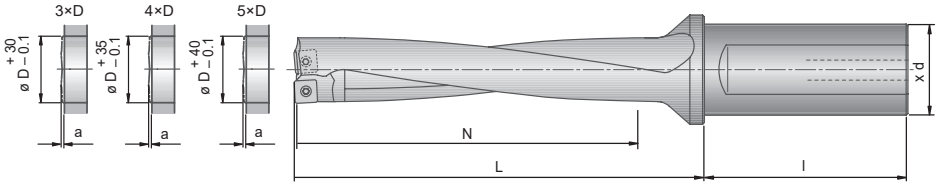
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	38.5	IDCD.3D.3850.R.40.13	40x68	117	145	12555833
	39.0	IDCD.3D.3900.R.40.13	40x68	117	145	12555835
	39.5	IDCD.3D.3950.R.40.13	40x68	120	148	12555836
	40.0	IDCD.3D.4000.R.40.13	40x68	120	148	12555837
	40.5	IDCD.3D.4050.R.40.13	40x68	123	152	12555838
	41.0	IDCD.3D.4100.R.40.13	40x68	123	152	12555839
	41.5	IDCD.3D.4150.R.40.13	40x68	126	155	12555840
	42.0	IDCD.3D.4200.R.40.13	40x68	126	155	12555842
	42.5	IDCD.3D.4250.R.40.13	40x68	129	159	12555843
	43.0	IDCD.3D.4300.R.40.13	40x68	129	159	12555844
	43.5	IDCD.3D.4350.R.40.13	40x68	132	162	12555845
	44.0	IDCD.3D.4400.R.40.13	40x68	132	162	12555847

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 130508-HCD CTPP425	…**-HCD**	P	12421779
	SOLT 130508-CCD CTPK415	…**-CCD**	K	12421783
	SOLT 130508-SCD CTPP440	…**-SCD**	M	12421782
	SOLT 130508-HCD CTPP440	…**-HCD**	S	12421780

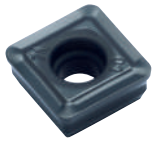
Range 4xD:
∅ 14.0 mm – ∅ 19.5 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	14.0	IDCD.4D.1400.R.20.05	20x50	56	69	12556124
	14.5	IDCD.4D.1450.R.20.05	20x50	60	74	12556129
	15.0	IDCD.4D.1500.R.20.05	20x50	60	74	12556136
	15.5	IDCD.4D.1550.R.20.05	20x50	64	80	12556139
	16.0	IDCD.4D.1600.R.20.05	20x50	64	80	12556145
	16.5	IDCD.4D.1650.R.20.05	20x50	68	85	12556151

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 050204-HCD CTPP425	…**-HCD**	P	12421657
	SOLT 050204-CCD CTPK415	…**-CCD**	K	12421662
	SOLT 050204-SCD CTPP440	…**-SCD**	M	12421661
	SOLT 050204-HCD CTPP440	…**-HCD**	S	12421660

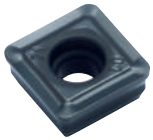


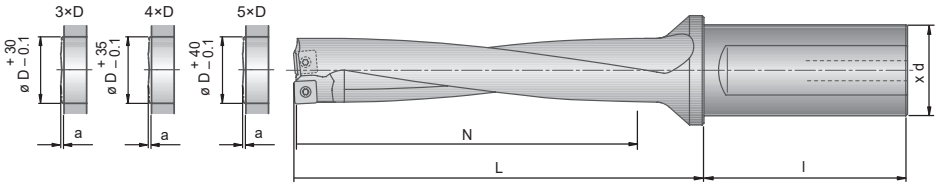
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	17.0	IDCD.4D.1700.R.20.06	20x50	68	85	12556158
	17.5	IDCD.4D.1750.R.25.06	25x56	72	89	12556162
	18.0	IDCD.4D.1800.R.25.06	25x56	72	89	12556166
	18.5	IDCD.4D.1850.R.25.06	25x56	76	94	12556169
	19.0	IDCD.4D.1900.R.25.06	25x56	76	94	12556170
	19.5	IDCD.4D.1950.R.25.06	25x56	80	98	12556212

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 06T206-HCD CTPP425	…**-HCD**	P	12421690
	SOLT 06T206-CCD CTPK415	…**-CCD**	K	12421699
	SOLT 06T206-SCD CTPP440	…**-SCD**	M	12421695
	SOLT 06T206-HCD CTPP440	…**-HCD**	S	12421693

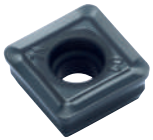
Range 4xD:
∅ 20.0 mm – ∅ 28.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	20.0	IDCD.4D.2000.R.25.07	25x56	80	98	12556817
	20.5	IDCD.4D.2050.R.25.07	25x56	84	103	12556819
	21.0	IDCD.4D.2100.R.25.07	25x56	84	103	12556823
	21.5	IDCD.4D.2150.R.25.07	25x56	88	107	12556824
	22.0	IDCD.4D.2200.R.25.07	25x56	88	107	12556825
	22.5	IDCD.4D.2250.R.25.07	25x56	92	112	12556826
	23.0	IDCD.4D.2300.R.25.07	25x56	92	112	12556828

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 070308-HCD CTPP425	…**-HCD**	P	12421701
	SOLT 070308-CCD CTPK415	…**-CCD**	K	12421711
	SOLT 070308-SCD CTPP440	…**-SCD**	M	12421704
	SOLT 070308-HCD CTPP440	…**-HCD**	S	12421702

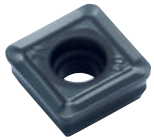


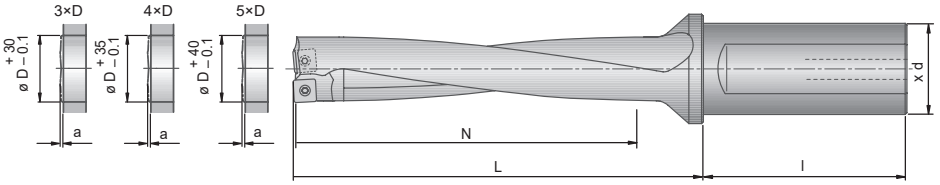
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	23.5	IDCD.4D.2350.R.32.08	32x60	96	116	12556830
	24.0	IDCD.4D.2400.R.32.08	32x60	96	116	12556833
	24.5	IDCD.4D.2450.R.32.08	32x60	100	121	12556835
	25.0	IDCD.4D.2500.R.32.08	32x60	100	121	12556837
	25.5	IDCD.4D.2550.R.32.08	32x60	104	125	12556839
	26.0	IDCD.4D.2600.R.32.08	32x60	104	125	12556841
	26.5	IDCD.4D.2650.R.32.08	32x60	108	130	12556845
	27.0	IDCD.4D.2700.R.32.08	32x60	108	130	12556846
	27.5	IDCD.4D.2750.R.32.08	32x60	112	134	12556847
	28.0	IDCD.4D.2800.R.32.08	32x60	112	134	12556848

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 080308-HCD CTPP425	…**-HCD**	P	12421717
	SOLT 080308-CCD CTPK415	…**-CCD**	K	12421752
	SOLT 080308-SCD CTPP440	…**-SCD**	M	12421750
	SOLT 080308-HCD CTPP440	…**-HCD**	S	12421720

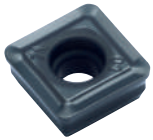
Range 4xD:
∅ 28.5 mm – ∅ 38.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	28.5	IDCD.4D.2850.R.32.10	32x60	116	139	12556883
	29.0	IDCD.4D.2900.R.32.10	32x60	116	139	12556884
	29.5	IDCD.4D.2950.R.32.10	32x60	120	143	12556887
	30.0	IDCD.4D.3000.R.32.10	32x60	120	143	12556889
	30.5	IDCD.4D.3050.R.40.10	40x68	124	148	12556892
	31.0	IDCD.4D.3100.R.40.10	40x68	124	148	12556895
	31.5	IDCD.4D.3150.R.40.10	40x68	128	152	12556898
	32.0	IDCD.4D.3200.R.40.10	40x68	128	152	12556902
	32.5	IDCD.4D.3250.R.40.10	40x68	132	157	12556904
	33.0	IDCD.4D.3300.R.40.10	40x68	132	157	12556905

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 10T308-HCD CTPP425	…**-HCD**	P	12421756
	SOLT 10T308-CCD CTPK415	…**-CCD**	K	12421772
	SOLT 10T308-SCD CTPP440	…**-SCD**	M	12421771
	SOLT 10T308-HCD CTPP440	…**-HCD**	S	12421757

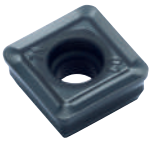


Tools	∅ [mm]	Designation	∅d×l [mm]	N [mm]	L [mm]	Material number
	33.5	IDCD.4D.3350.R.40.11	40x68	136	161	12556934
	34.0	IDCD.4D.3400.R.40.11	40x68	136	161	12556935
	34.5	IDCD.4D.3450.R.40.11	40x68	140	166	12556942
	35.0	IDCD.4D.3500.R.40.11	40x68	140	166	12556945
	35.5	IDCD.4D.3550.R.40.11	40x68	144	170	12556946
	36.0	IDCD.4D.3600.R.40.11	40x68	144	170	12556947
	36.5	IDCD.4D.3650.R.40.11	40x68	148	175	12557457
	37.0	IDCD.4D.3700.R.40.11	40x68	148	175	12557458
	37.5	IDCD.4D.3750.R.40.11	40x68	152	179	12557459
	38.0	IDCD.4D.3800.R.40.11	40x68	152	179	12557460

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 110408-HCD CTPP425	…**-HCD**	P	12421773
	SOLT 110408-CCD CTPK415	…**-CCD**	K	12421777
	SOLT 110408-SCD CTPP440	…**-SCD**	M	12421776
	SOLT 110408-HCD CTPP440	…**-HCD**	S	12421775

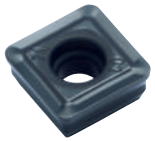
Range 4xD:
∅ 38.5 mm – ∅ 44.0 mm

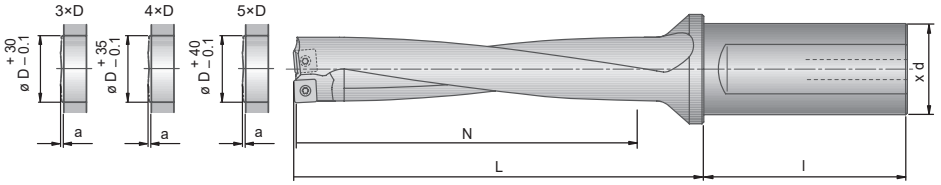
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	38.5	IDCD.4D.3850.R.40.13	40x68	156	184	12557462
	39.0	IDCD.4D.3900.R.40.13	40x68	156	184	12557464
	39.5	IDCD.4D.3950.R.40.13	40x68	160	188	12557467
	40.0	IDCD.4D.4000.R.40.13	40x68	160	188	12557470
	40.5	IDCD.4D.4050.R.40.13	40x68	164	193	12557472
	41.0	IDCD.4D.4100.R.40.13	40x68	164	193	12557473
	41.5	IDCD.4D.4150.R.40.13	40x68	168	197	12557475
	42.0	IDCD.4D.4200.R.40.13	40x68	168	197	12557476
	42.5	IDCD.4D.4250.R.40.13	40x68	172	202	12557477
	43.0	IDCD.4D.4300.R.40.13	40x68	172	202	12557478
	43.5	IDCD.4D.4350.R.40.13	40x68	176	206	12557480
	44.0	IDCD.4D.4400.R.40.13	40x68	176	206	12557492

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 130508-HCD CTPP425	…**-HCD**	P	12421779
	SOLT 130508-CCD CTPK415	…**-CCD**	K	12421783
	SOLT 130508-SCD CTPP440	…**-SCD**	M	12421782
	SOLT 130508-HCD CTPP440	…**-HCD**	S	12421780

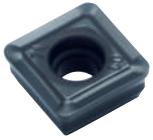
Range 5xD:
∅ 14.0 mm – ∅ 19.5 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	14.0	IDCD.5D.1400.R.20.05	20x50	70	83	12568585
	14.5	IDCD.5D.1450.R.20.05	20x50	75	89	12568588
	15.0	IDCD.5D.1500.R.20.05	20x50	75	89	12568591
	15.5	IDCD.5D.1550.R.20.05	20x50	80	96	12568594
	16.0	IDCD.5D.1600.R.20.05	20x50	80	96	12568596
	16.5	IDCD.5D.1650.R.20.05	20x50	85	102	12568599

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 050204-HCD CTPP425	…**-HCD**	P	12421657
	SOLT 050204-CCD CTPK415	…**-CCD**	K	12421662
	SOLT 050204-SCD CTPP440	…**-SCD**	M	12421661
	SOLT 050204-HCD CTPP440	…**-HCD**	S	12421660

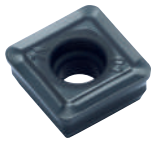


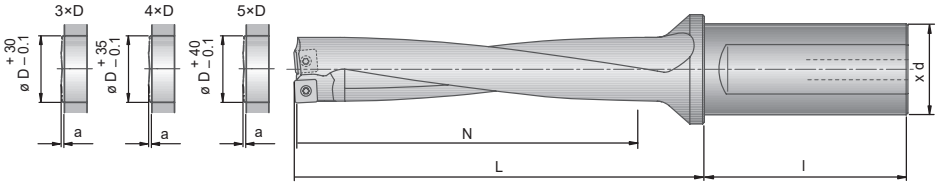
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	17.0	IDCD.5D.1700.R.20.06	20x50	85	102	12568601
	17.5	IDCD.5D.1750.R.25.06	25x56	90	107	12568603
	18.0	IDCD.5D.1800.R.25.06	25x56	90	107	12568605
	18.5	IDCD.5D.1850.R.25.06	25x56	95	113	12568608
	19.0	IDCD.5D.1900.R.25.06	25x56	95	113	12568614
	19.5	IDCD.5D.1950.R.25.06	25x56	100	118	12568616

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 06T206-HCD CTPP425	…**-HCD**	P	12421690
	SOLT 06T206-CCD CTPK415	…**-CCD**	K	12421699
	SOLT 06T206-SCD CTPP440	…**-SCD**	M	12421695
	SOLT 06T206-HCD CTPP440	…**-HCD**	S	12421693

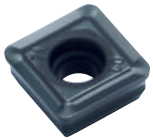
Range 5xD:
∅ 20.0 mm – ∅ 28.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	20.0	IDCD.5D.2000.R.25.07	25x56	100	118	12568649
	20.5	IDCD.5D.2050.R.25.07	25x56	105	124	12568716
	21.0	IDCD.5D.2100.R.25.07	25x56	105	124	12568738
	21.5	IDCD.5D.2150.R.25.07	25x56	110	129	12568741
	22.0	IDCD.5D.2200.R.25.07	25x56	110	129	12568747
	22.5	IDCD.5D.2250.R.25.07	25x56	115	135	12568749
	23.0	IDCD.5D.2300.R.25.07	25x56	115	135	12568753

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 070308-HCD CTPP425	…**-HCD**	**P**	12421701
	SOLT 070308-CCD CTPK415	…**-CCD**	**K**	12421711
	SOLT 070308-SCD CTPP440	…**-SCD**	**M**	12421704
	SOLT 070308-HCD CTPP440	…**-HCD**	**S**	12421702

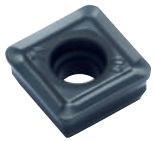


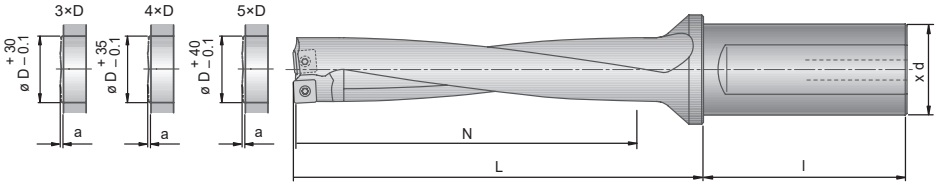
Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	23.5	IDCD.5D.2350.R.32.08	32x60	120	140	12568771
	24.0	IDCD.5D.2400.R.32.08	32x60	125	140	12568772
	24.5	IDCD.5D.2450.R.32.08	32x60	125	146	12568775
	25.0	IDCD.5D.2500.R.32.08	32x60	130	146	12568776
	25.5	IDCD.5D.2550.R.32.08	32x60	130	151	12568777
	26.0	IDCD.5D.2600.R.32.08	32x60	135	151	12568778
	26.5	IDCD.5D.2650.R.32.08	32x60	135	157	12568779
	27.0	IDCD.5D.2700.R.32.08	32x60	135	157	12568780
	27.5	IDCD.5D.2750.R.32.08	32x60	140	162	12568781
	28.0	IDCD.5D.2800.R.32.08	32x60	140	162	12568782

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 080308-HCD CTPP425	…**-HCD**	P	12421717
	SOLT 080308-CCD CTPK415	…**-CCD**	K	12421752
	SOLT 080308-SCD CTPP440	…**-SCD**	M	12421750
	SOLT 080308-HCD CTPP440	…**-HCD**	S	12421720

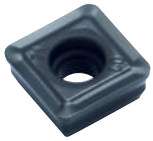
Range 5xD:
∅ 28.5 mm – ∅ 38.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	28.5	IDCD.5D.2850.R.32.10	32x60	145	168	12568783
	29.0	IDCD.5D.2900.R.32.10	32x60	145	168	12568784
	29.5	IDCD.5D.2950.R.32.10	32x60	150	173	12568786
	30.0	IDCD.5D.3000.R.32.10	32x60	150	173	12568787
	30.5	IDCD.5D.3050.R.40.10	40x68	155	179	12568788
	31.0	IDCD.5D.3100.R.40.10	40x68	155	179	12568789
	31.5	IDCD.5D.3150.R.40.10	40x68	160	184	12568790
	32.0	IDCD.5D.3200.R.40.10	40x68	160	184	12568793
	32.5	IDCD.5D.3250.R.40.10	40x68	165	190	12568795
	33.0	IDCD.5D.3300.R.40.10	40x68	165	190	12568797

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 10T308-HCD CTPP425	…**-HCD**	P	12421756
	SOLT 10T308-CCD CTPK415	…**-CCD**	K	12421772
	SOLT 10T308-SCD CTPP440	…**-SCD**	M	12421771
	SOLT 10T308-HCD CTPP440	…**-HCD**	S	12421757

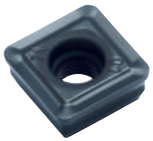


Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	33.5	IDCD.5D.3350.R.40.11	40x68	170	195	12568830
	34.0	IDCD.5D.3400.R.40.11	40x68	170	195	12568831
	34.5	IDCD.5D.3450.R.40.11	40x68	175	201	12568832
	35.0	IDCD.5D.3500.R.40.11	40x68	175	206	12568833
	35.5	IDCD.5D.3550.R.40.11	40x68	180	206	12568834
	36.0	IDCD.5D.3600.R.40.11	40x68	180	212	12568835
	36.5	IDCD.5D.3650.R.40.11	40x68	185	212	12568836
	37.0	IDCD.5D.3700.R.40.11	40x68	185	212	12568837
	37.5	IDCD.5D.3750.R.40.11	40x68	190	217	12568838
	38.0	IDCD.5D.3800.R.40.11	40x68	190	217	12568839

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 110408-HCD CTPP425	…**-HCD**	P	12421773
	SOLT 110408-CCD CTPK415	…**-CCD**	K	12421777
	SOLT 110408-SCD CTPP440	…**-SCD**	M	12421776
	SOLT 110408-HCD CTPP440	…**-HCD**	S	12421775

Range 5xD:
∅ 38.5 mm – ∅ 44.0 mm

Tools	∅ [mm]	Designation	∅ d×l [mm]	N [mm]	L [mm]	Material number
	38.5	IDCD.5D.3850.R.40.13	40x68	195	223	12568848
	39.0	IDCD.5D.3900.R.40.13	40x68	195	223	12568853
	39.5	IDCD.5D.3950.R.40.13	40x68	200	228	12568856
	40.0	IDCD.5D.4000.R.40.13	40x68	200	228	12568857
	40.5	IDCD.5D.4050.R.40.13	40x68	205	234	12568859
	41.0	IDCD.5D.4100.R.40.13	40x68	205	234	12568861
	41.5	IDCD.5D.4150.R.40.13	40x68	210	239	12568863
	42.0	IDCD.5D.4200.R.40.13	40x68	210	239	12568868
	42.5	IDCD.5D.4250.R.40.13	40x68	215	245	12568875
	43.0	IDCD.5D.4300.R.40.13	40x68	215	245	12568879
	43.5	IDCD.5D.4350.R.40.13	40x68	220	250	12568880
	44.0	IDCD.5D.4400.R.40.13	40x68	220	250	12568882

Inserts	Designation	Chipbreaker	Material group	Material number
	SOLT 130508-HCD CTPP425	…**-HCD**	P	12421779
	SOLT 130508-CCD CTPK415	…**-CCD**	K	12421783
	SOLT 130508-SCD CTPP440	…**-SCD**	M	12421782
	SOLT 130508-HCD CTPP440	…**-HCD**	S	12421780

Our team of experts at your service

Technical information

Guideline values for solid drilling

Cutting speed v_c (m/min)

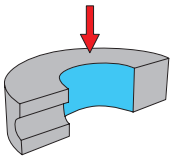
Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Geometry	CTPP425 (M/Min) min	CTPP425 (M/Min) opt.	CTPP425 (M/Min) max	CTPP440 (M/Min) min	CTPP440 (M/Min) opt.	CTPP440 (M/Min) max	CTPK415 (M/Min) min	CTPK415 (M/Min) opt.	CTPK415 (M/Min) max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	_HCD	200	260	320	–	–	–	–	–	–
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	_HCD	250	270	300	–	–	–	–	–	–
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	_HCD	200	260	320	–	–	–	–	–	–
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	_HCD	140	180	220	–	–	–	–	–	–
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	_HCD	120	160	200	–	–	–	–	–	–
P	4.1			HSS		_HCD	50	70	90	–	–	–	–	–	–
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	_HCD	–	–	–	20	40	60	–	–	–
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	_HCD	–	–	–	40	60	60	–	–	–
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	_SCD	–	–	–	140	180	220	–	–	–
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	_SCD	–	–	–	120	160	200	–	–	–
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	_SCD	–	–	–	120	160	200	–	–	–
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	_CCD	–	–	–	–	–	–	160	240	320
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	_CCD	–	–	–	–	–	–	100	140	180
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	_CCD	–	–	–	–	–	–	120	160	200
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	_CCD	–	–	–	–	–	–	100	140	180
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	_CCD	–	–	–	–	–	–	90	120	150
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	_CCD	–	–	–	–	–	–	90	120	150
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	_CCD	–	–	–	–	–	–	70	100	130

Cutting values shown are relating to the basic recommendations for cutting materials given.

Feed f (mm/rev)

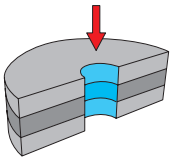
Ø 14 – 16.5 f (mm/rev)	Ø 17 – 19.5 f (mm/rev)	Ø 20 – 23 f (mm/rev)	Ø 23.5 – 28 f (mm/rev)	Ø 28.5 – 33 f (mm/rev)	Ø 33.5 – 38 f (mm/rev)	Ø 38.5 – 44 f (mm/rev)
0.04 – 0.1	0.08 – 0.1	0.06 – 0.12	0.06 – 0.12	0.06 – 0.12	0.06 – 0.12	0.06 – 0.12
0.04 – 0.14	0.1 – 0.15	0.11 – 0.16	0.11 – 0.16	0.11 – 0.13	0.11 – 0.16	0.11 – 0.16
0.06 – 0.16	0.1 – 0.16	0.13 – 0.18	0.13 – 0.2	0.15 – 0.2	0.15 – 0.2	0.15 – 0.2
0.06 – 0.16	0.11 – 0.16	0.13 – 0.22	0.14 – 0.22	0.14 – 0.22	0.14 – 0.22	0.14 – 0.22
0.06 – 0.15	0.1 – 0.15	0.12 – 0.22	0.14 – 0.22	0.14 – 0.22	0.14 – 0.22	0.14 – 0.22
0.04 – 0.1	0.04 – 0.1	0.05 – 0.1	0.06 – 0.12	0.07 – 0.13	0.07 – 0.14	0.08 – 0.15
0.04 – 0.08	0.04 – 0.08	0.05 – 0.9	0.06 – 0.10	0.07 – 0.11	0.07 – 0.11	0.08 – 0.12
0.04 – 0.1	0.04 – 0.1	0.05 – 0.1	0.06 – 0.12	0.07 – 0.13	0.07 – 0.14	0.08 – 0.15
0.06 – 0.12	0.08 – 0.12	0.1 – 0.18	0.12 – 0.18	0.1 – 0.18	0.1 – 0.18	0.1 – 0.18
0.06 – 0.12	0.08 – 0.12	0.1 – 0.18	0.12 – 0.18	0.12 – 0.18	0.12 –0.18	0.12 – 0.18
0.06 – 0.1	0.06 – 0.16	0.09 – 0.16	0.1 – 0.16	0.1 – 0.16	0.1 – 0.16	0.1 – 0.16
0.08 – 0.18	0.1 – 0.18	0.14 – 0.25	0.18 – 0.3	0.2 – 0.3	0.2 – 0.3	0.2 – 0.3
0.08 – 0.16	0.1 – 0.16	0.12 – 0.23	0.16 – 0.28	0.18 – 0.28	0.18 – 0.28	0.18 – 0.28
0.08 – 0.18	0.12 – 0.18	0.14 – 0.25	0.18 – 0.3	0.2 – 0.3	0.2 – 0.3	0.2 – 0.3
0.08 – 0.18	0.12 – 0.18	0.14 – 0.25	0.18 – 0.3	0.2 – 0.3	0.2 – 0.3	0.2 – 0.3
0.08 – 0.18	0.12 – 0.18	0.14 – 0.25	0.18 – 0.3	0.2 – 0.3	0.2– 0.3	0.2 – 0.3
0.08 – 0.16	0.1 – 0.16	0.12 – 0.23	0.16 – 0.28	0.18 – 0.28	0.18 – 0.28	0.18 – 0.28
0.08 – 0.15	0.09 – 0.15	0.11 – 0.22	0.15 – 0.27	0.17 – 0.27	0.17 – 0.27	0.17 – 0.27

Applications



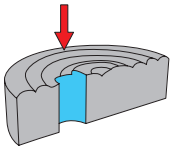
Producing a transverse through hole

Reduce the feed when the drill enters the transverse hole. With transverse bores you should drill from both sides if possible.
Reduce feed rate between 30 and 60% (depending on the proportion of hole to transverse hole).



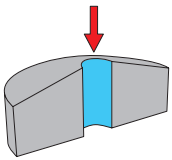
Stack drilling

When stack drilling ensure that there is either no gap or the maximum gap possible. Good work piece clamping is required.



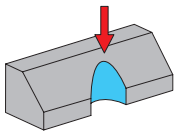
Drilling on an uneven surface

Depending on the surface quality, reduce the feed rate when drilling.



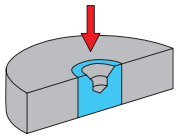
Drilling of a convex surface

When the drill enters the convex work piece surface, the central insert cuts first.



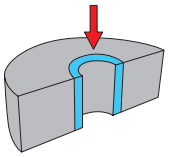
Drilling on inclined surfaces

When the drill enters or exits at an angle to the work piece surface, reduce the feed rate by 30 to 60%.



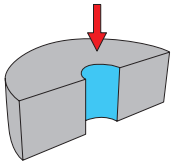
Spot drilling in a central hole

When spot drilling in a bead or central hole, reduce the feed rate by up to 50%.



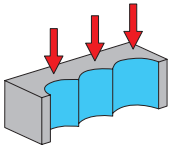
Reboring

Possible.



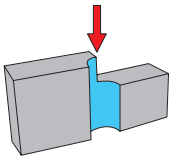
Drilling into solid material

Possible.



Chain drilling

It is important to ensure a symmetrical distribution. Reduce the feed rate to 50% in case of cut interruption. Use tough insert types and a corner radius for optimal results.

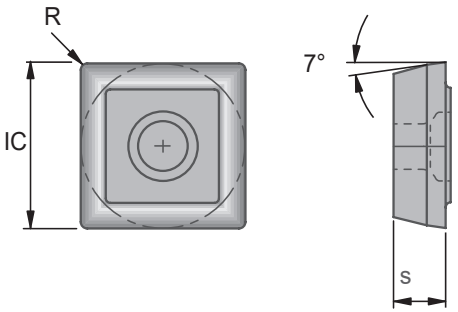


Drilling on a stepped surface

Due to the undefined drilling surface, pre-machining is required (face countersinking, face milling).

SOLT inserts

Geometry:



Grades and materials:

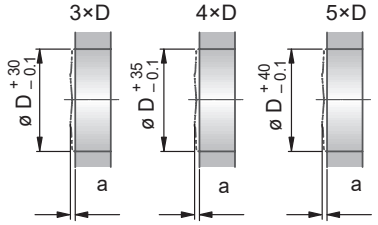
Material group		Grade
P	Steel	CTPP425
M	Stainless steel	CTPP440
K	Cast iron	CTPK415
S	Super alloys	CTPP440

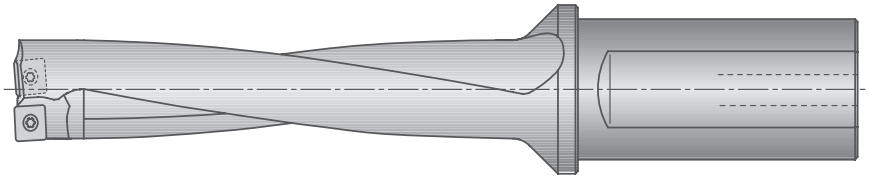
Spare parts screws:

Insert	Clamping screw description	Material	Key size	Recommended Torque	IC [mm]	s [mm]	R [mm]
SOLT 050204	S/M2x4,3-6IP	14227551	T06IP	0.52 Nm	5.0	2.1	0.4
SOLT 06T206	S/M2,2x5,5-6IP	14227550	T06IP	1.01 Nm	5.8	2.5	0.6
SOLT 070308	S/M2,5x6,3-8IP	14227549	T08IP	1.28 Nm	6.9	3.0	0.8
SOLT 080308	S3070-8IP	14227552	T08IP	2.25 Nm	8.4	3.5	0.8
SOLT 10T308	S3575-15IP	14227553	T15IP	2.8 Nm	10.3	4.0	0.8
SOLT 110408	S3585-15IP	14227554	T15IP	2.9 Nm	11.1	4.4	0.8
SOLT 130508	S45100-20IP	14227555	T20IP	6.25 Nm	13.3	5.0	0.8

Indexable insert drill

Geometry:

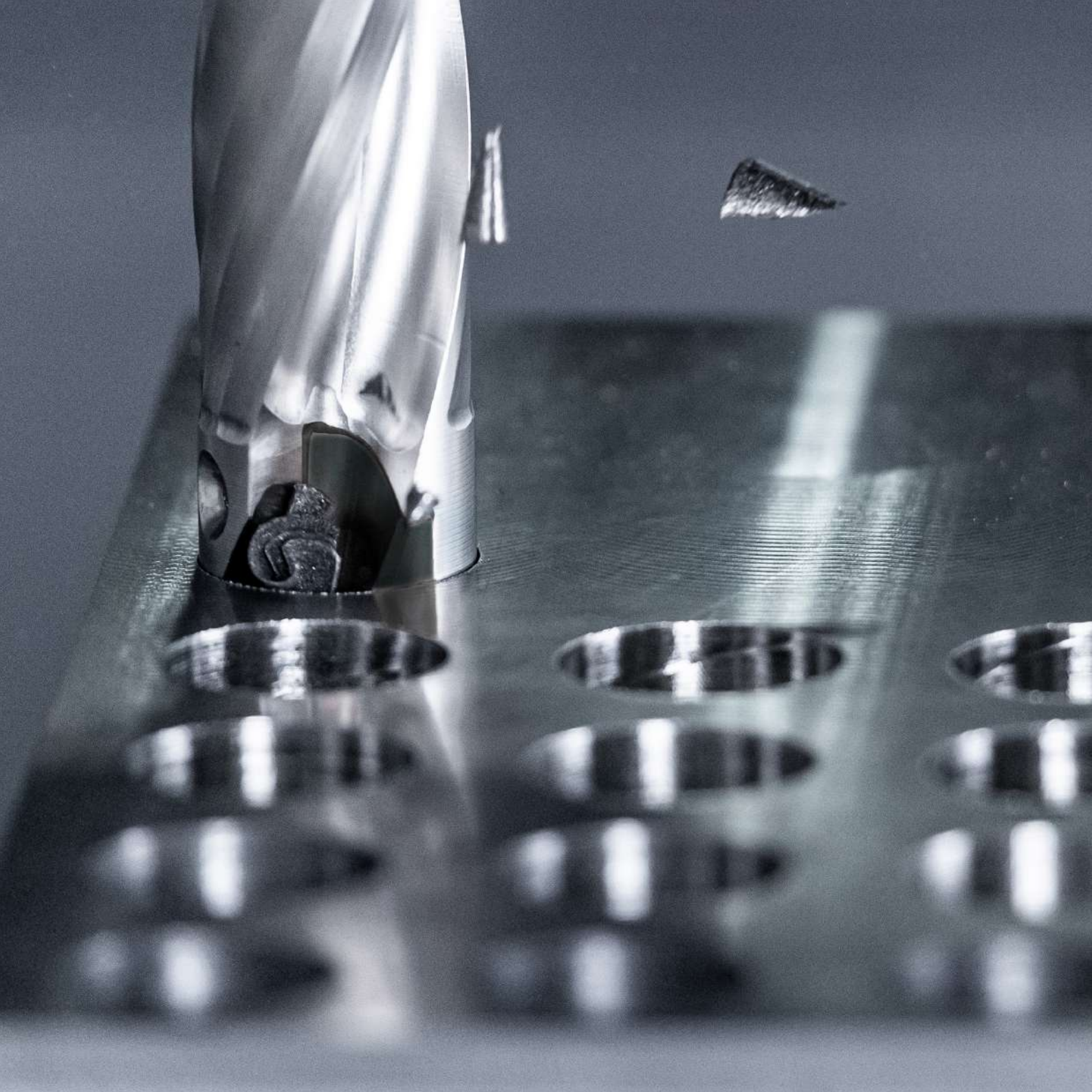




Ø [mm]		Radius [mm]	a [mm]
14.0	IC5.0 Ø14.0- Ø16.50	R0.4	1.5
14.5			
15.0			
15.5			
16.0			
16.5			
17.0	IC5.8 Ø16.60- Ø19.50	R0.6	1.7
17.5			
18.0			
18.5			
19.0			
19.5			
20.0	IC6.9 Ø19.60- Ø23.00	R0.8	1.9
20.5			
21.0			
21.5			
22.0			
22.5			
23.0			

Ø [mm]		Radius [mm]	a [mm]
23.5	IC8.4 Ø23.10- Ø28.00	R0.8	2.3
24.0			
24.5			
25.0			
25.5			
26.0	IC8.4 Ø23.10- Ø28.00	R0.8	2.3
26.5			
27.0			
27.5			
28.0			
28.5	IC10.3 Ø28.10- Ø33.00	R0.8	2.7
29.0			
29.5			
30.0			
30.5			
31.0			
31.5			
32.0			
32.5			
33.0			

Ø [mm]		Radius [mm]	a [mm]
33.5	IC11.1 Ø33.10- Ø38.00	R0.8	2.9
34.0			
34.5			
35.0			
35.5			
36.0	IC11.1 Ø33.10- Ø38.00	R0.8	2.9
36.5			
37.0			
37.5			
38.0			
38.5	IC13.3 Ø38.10- Ø44.00	R0.8	3.1
39.0			
39.5			
40.0			
40.5			
41.0			
41.5			
42.0			
42.5			
43.0			
43.5			
44.0			



Spade drill in 3xD and 5xD

NEW

Presentation:

▲ Ø14.0 mm to Ø30.0 mm

Your benefits:

▲Easy handling

▲Increase your productivity thanks to interchangeable insert

▲Precise and stable insert seat, clamping via Torx Plus screw

Costs savings:

▲Sustainable and economical

▲Increase your productivity thanks to reducing your tool change time up to 20%

▲High feed possibility up to 0.5 mm/rev in steel

Range 3xD:
∅ 14.0 mm – ∅ 30.0 mm

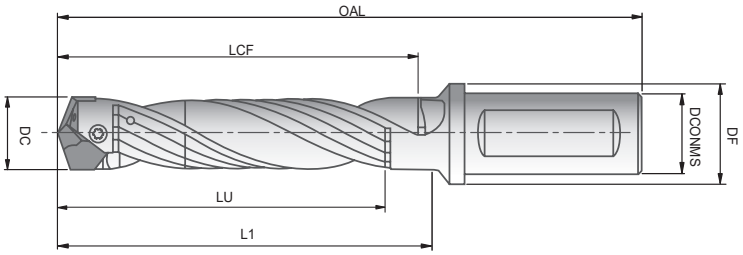
NEW

Tools	∅ [mm]	Designation	Material number
	14.0	DSCD.3D.1400.R.16.00	14738935
	14.5	DSCD.3D.1450.R.16.00	14738936
	15.0	DSCD.3D.1500.R.20.00	14738937
	15.5	DSCD.3D.1550.R.20.00	14738938
	16.0	DSCD.3D.1600.R.20.00	14738939
	16.5	DSCD.3D.1650.R.20.00	14738940
	17.0	DSCD.3D.1700.R.20.00	14738941
	17.5	DSCD.3D.1750.R.20.00	14738942
	18.0	DSCD.3D.1800.R.20.00	14738943
	18.5	DSCD.3D.1850.R.20.00	14738944
	19.0	DSCD.3D.1900.R.25.00	14738945
	19.5	DSCD.3D.1950.R.25.00	14738946
	20.0	DSCD.3D.2000.R.25.00	14738947
	20.5	DSCD.3D.2050.R.25.00	14738948
	21.0	DSCD.3D.2100.R.25.00	14738949
	21.5	DSCD.3D.2150.R.25.00	14738950

Inserts	Designation	Material number
	Spade.14,00.CTPP450	14968329
	Spade.14,50.CTPP450	14968333
	Spade.15,00.CTPP450	14968334
	Spade.15,50.CTPP450	14968336
	Spade.16,00.CTPP450	14968338
	Spade.16,50.CTPP450	14968340
	Spade.17,00.CTPP450	14968342
	Spade.17,50.CTPP450	14968343
	Spade.18,00.CTPP450	14968346
	Spade.18,50.CTPP450	14968348
	Spade.19,00.CTPP450	14968349
	Spade.19,50.CTPP450	14968351
	Spade.20,00.CTPP450	14968352
	Spade.20,50.CTPP450	14968353
	Spade.21,00.CTPP450	14968354
	Spade.21,50.CTPP450	14968355

Spare parts screws:

Spade Size ∅ [mm]	Clamping screw description	Material	Key size	Recommended Torque
14,00–15,99	M2,2x13-8IP	13057585	T08IP	0.9 Nm
16,00–17,99	M2,5x15-8IP	13057586	T08-IP	1.2 Nm
18,00–21,99	M3,0x17-10IP	13057587	T10-IP	2.2 Nm



Tools	∅ [mm]	Designation	Material number
	22.0	DSCD.3D.2200.R.25.00	14738951
	22.5	DSCD.3D.2250.R.25.00	14738952
	23.0	DSCD.3D.2300.R.25.00	14738953
	23.5	DSCD.3D.2350.R.25.00	14738954
	24.0	DSCD.3D.2400.R.32.00	14738955
	24.5	DSCD.3D.2450.R.32.00	14738956
	25.0	DSCD.3D.2500.R.32.00	14738957
	25.5	DSCD.3D.2550.R.32.00	14738958
	26.0	DSCD.3D.2600.R.32.00	14738959
	26.5	DSCD.3D.2650.R.32.00	14738960
	27.0	DSCD.3D.2700.R.32.00	14738961
	27.5	DSCD.3D.2750.R.32.00	14738962
	28.0	DSCD.3D.2800.R.32.00	14738963
	28.5	DSCD.3D.2850.R.32.00	14738964
	29.0	DSCD.3D.2900.R.32.00	14738965
	29.5-30.0	DSCD.3D.2950.R.32.00	14738966

Inserts	Designation	Material number
	Spade.22,00.CTPP450	14968356
	Spade.22,50.CTPP450	14968357
	Spade.23,00.CTPP450	14968358
	Spade.23,50.CTPP450	14968359
	Spade.24,00.CTPP450	14968361
	Spade.24,50.CTPP450	14968365
	Spade.25,00.CTPP450	14968366
	Spade.25,50.CTPP450	14968367
	Spade.26,00.CTPP450	14968368
	Spade.26,50.CTPP450	14968369
	Spade.27,00.CTPP450	14968370
	Spade.27,50.CTPP450	14968371
	Spade.28,00.CTPP450	14968376
	Spade.28,50.CTPP450	14968378
	Spade.29,00.CTPP450	14968380
	Spade.29,50.CTPP450	14968382
	Spade.30,00.CTPP450	14968384

Spare parts screws:

Spade Size ∅ [mm]	Clamping screw description	Material	Key size	Recommended Torque
22,00–23,99	M3,5x21-10IP	13057588	T10-IP	3.2 Nm
24,00–25,99	M4,0x23-15IP	13057589	T15-IP	5.0 Nm
26,00–30,00	M4,5x25-20IP	13057590	T20-IP	6.0 Nm

Range 5xD:
∅ 14.0 mm – ∅ 30.0 mm

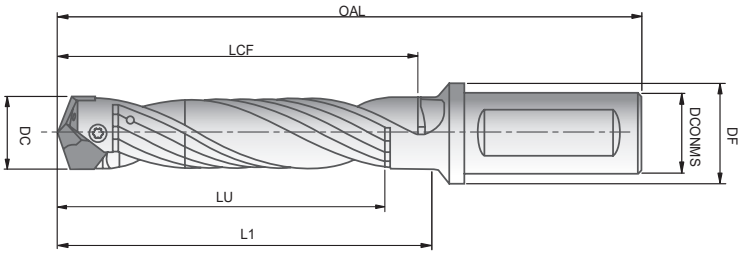
NEW

Tools	∅ [mm]	Designation	Material number
	14.0	DSCD.5D.1400.R.16.00	14738903
	14.5	DSCD.5D.1450.R.16.00	14738904
	15.0	DSCD.5D.1500.R.20.00	14738905
	15.5	DSCD.5D.1550.R.20.00	14738906
	16.0	DSCD.5D.1600.R.20.00	14738907
	16.5	DSCD.5D.1650.R.20.00	14738908
	17.0	DSCD.5D.1700.R.20.00	14738909
	17.5	DSCD.5D.1750.R.20.00	14738910
	18.0	DSCD.5D.1800.R.20.00	14738911
	18.5	DSCD.5D.1850.R.20.00	14738912
	19.0	DSCD.5D.1900.R.25.00	14738913
	19.5	DSCD.5D.1950.R.25.00	14738914
	20.0	DSCD.5D.2000.R.25.00	14738915
	20.5	DSCD.5D.2050.R.25.00	14738916
	21.0	DSCD.5D.2100.R.25.00	14738917
	21.5	DSCD.5D.2150.R.25.00	14738918

Inserts	Designation	Material number
	Spade.14,00.CTPP450	14968329
	Spade.14,50.CTPP450	14968333
	Spade.15,00.CTPP450	14968334
	Spade.15,50.CTPP450	14968336
	Spade.16,00.CTPP450	14968338
	Spade.16,50.CTPP450	14968340
	Spade.17,00.CTPP450	14968342
	Spade.17,50.CTPP450	14968343
	Spade.18,00.CTPP450	14968346
	Spade.18,50.CTPP450	14968348
	Spade.19,00.CTPP450	14968349
	Spade.19,50.CTPP450	14968351
	Spade.20,00.CTPP450	14968352
	Spade.20,50.CTPP450	14968353
	Spade.21,00.CTPP450	14968354
	Spade.21,50.CTPP450	14968355

Spare parts screws:

Spade Size ∅ [mm]	Clamping screw description	Material	Key size	Recommended Torque
14,00–15,99	M2,2x13-8IP	13057585	T08IP	0.9 Nm
16,00–17,99	M2,5x15-8IP	13057586	T08-IP	1.2 Nm
18,00–21,99	M3,0x17-10IP	13057587	T10-IP	2.2 Nm



Tools	∅ [mm]	Designation	Material number
	22.0	DSCD.5D.2200.R.25.00	14738919
	22.5	DSCD.5D.2250.R.25.00	14738920
	23.0	DSCD.5D.2300.R.25.00	14738921
	23.5	DSCD.5D.2350.R.25.00	14738922
	24.0	DSCD.5D.2400.R.32.00	14738923
	24.5	DSCD.5D.2450.R.32.00	14738924
	25.0	DSCD.5D.2500.R.32.00	14738925
	25.5	DSCD.5D.2550.R.32.00	14738926
	26.0	DSCD.5D.2600.R.32.00	14738927
	26.5	DSCD.5D.2650.R.32.00	14738928
	27.0	DSCD.5D.2700.R.32.00	14738929
	27.5	DSCD.5D.2750.R.32.00	14738930
	28.0	DSCD.5D.2800.R.32.00	14738931
	28.5	DSCD.5D.2850.R.32.00	14738932
	29.0	DSCD.5D.2900.R.32.00	14738933
	29.5-30.0	DSCD.5D.2950.R.32.00	14738934

Inserts	Designation	Material number
	Spade.22,00.CTPP450	14968356
	Spade.22,50.CTPP450	14968357
	Spade.23,00.CTPP450	14968358
	Spade.23,50.CTPP450	14968359
	Spade.24,00.CTPP450	14968361
	Spade.24,50.CTPP450	14968365
	Spade.25,00.CTPP450	14968366
	Spade.25,50.CTPP450	14968367
	Spade.26,00.CTPP450	14968368
	Spade.26,50.CTPP450	14968369
	Spade.27,00.CTPP450	14968370
	Spade.27,50.CTPP450	14968371
	Spade.28,00.CTPP450	14968376
	Spade.28,50.CTPP450	14968378
	Spade.29,00.CTPP450	14968380
	Spade.29,50.CTPP450	14968382
	Spade.30,00.CTPP450	14968384

Spare parts screws:

Spade Size ∅ [mm]	Clamping screw description	Material	Key size	Recommended Torque
22,00–23,99	M3,5x21-10IP	13057588	T10-IP	3.2 Nm
24,00–25,99	M4,0x23-15IP	13057589	T15-IP	5.0 Nm
26,00–30,00	M4,5x25-20IP	13057590	T20-IP	6.0 Nm

Technical information

Recommended cutting speed

Material group		Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	Geometry	CTPP450 (M/Min) min	CTPP450 (M/Min) opt.	CTPP450 (M/Min) max	CTPK450 (M/Min) min	CTPK450 (M/Min) opt.	CTPK450 (M/Min) max	CTPM450 (M/Min) min	CTPM450 (M/Min) opt.	CTPM450 (M/Min) max
P	1.0	≤ 500		non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	_HCD	80	100	120						
P	2.0	500-900		non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	_HCD	80	100	120						
P	2.1	< 500		lead alloys	1.0718 (11SMnPb30)	_HCD	90	100	130						
P	3.0	> 900		low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	_HCD	70	90	110						
P	4.0	> 900		high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	_HCD	40	50	60						
P	4.1			HSS		_HCD	40	50	60						
S	5.0		250	special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	_HCD	–	–	–						
S	5.1	400		titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	_HCD	–	–	–						
M	6.0	≤ 600		stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	_SCD	–	–	–				coming soon		
M	6.1	< 900		stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	_SCD	–	–	–						
M	7.0	> 900		stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	_SCD	–	–	–						
K	8.0		180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	_CCD	–	–	–	coming soon					
K	8.1		250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)	_CCD	–	–	–						
K	9.0	≤ 600	130	spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	_CCD	–	–	–						
K	9.1		230	spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GJS-55) 0.8055 (GTW-55)	_CCD	–	–	–						
K	10.0	> 600	250	spheroidal graphite cast iron, perlitic malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	_CCD	–	–	–						
K	10.1		200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	_CCD	–	–	–						
K	10.2		300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2	_CCD	–	–	–						

Cutting values shown are relating to the basic recommendations for cutting materials given.

Recommended feed rate			
Ø 14 – 16 f (mm/rev)	Ø 16 – 20 f (mm/rev)	Ø 20 – 25 f (mm/rev)	Ø 25 – 30 f (mm/rev)
0.22	0.25	0.28	0.32
0.25	0.28	0.32	0.35
0.25	0.28	0.32	0.35
0.22	0.24	0.26	0.30
0.17	0.19	0.21	0.23
0.17	0.19	0.21	0.23
–	–	–	–
–	–	–	–
–	–	–	–
–	–	–	–
–	–	–	–
–	–	–	–
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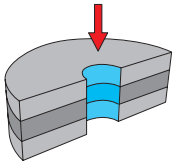
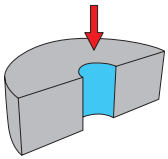
–	–	–	–

Applications



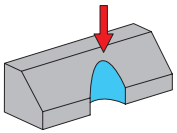
Stack drilling

When stack drilling ensure that there is either no gap or the maximum gap possible. Good work piece clamping is required.



Drilling into solid material

Possible.

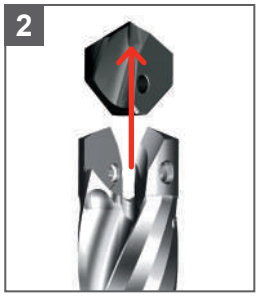


Drilling on inclined surfaces

When drilling into angled surfaces <3°, reduce the feed by approx. 50%. For an angled drill entrance >3°, prior spot facing is required.

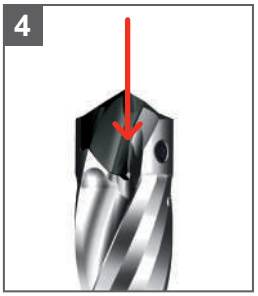
Assembly of the indexable insert

Loosen the clamping screw anti-clockwise using a TORX PLUS® screwdriver (screwdriver not included in the scope of supply).

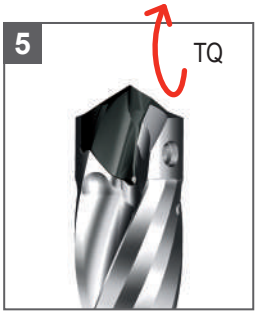


Remove the indexable insert from the insert seat.

Clean the insert seat and screw thread with compressed air.

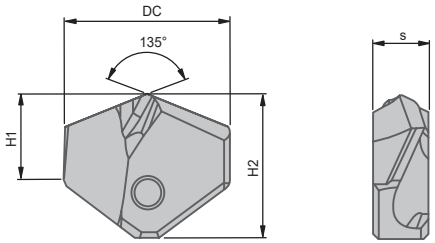


Insert the new indexable insert in the insert seat.



Insert clamping screw from correct side and tighten clockwise with the specified torque. Observe the change interval of the clamping screw!

Spade geometry



Grades and materials:

Material group		Grade
P	Steel	CTPP450

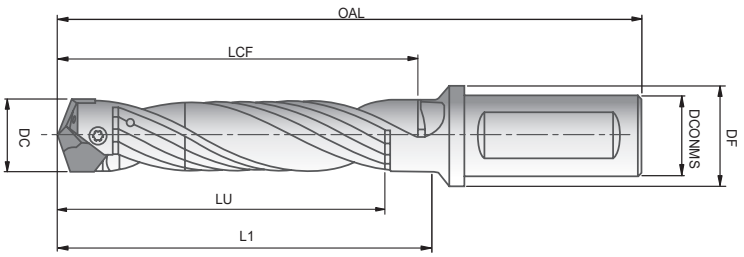
Spare parts screws:

Insert	Material	DC [mm]	H2 [mm]	s [mm]	H1 [mm]
Spade.14,00.CTPP450	14968329	14	12.8	5.1	7.73
Spade.14,50.CTPP450	14968333	14.5	13.1	5.1	7.84
Spade.15,00.CTPP450	14968334	15	13.4	5.1	7.95
Spade.15,50.CTPP450	14968336	15.5	13.7	5.1	8.05
Spade.16,00.CTPP450	14968338	16	14.4	5.9	9.06
Spade.16,50.CTPP450	14968340	16.5	14.7	5.9	9.17
Spade.17,00.CTPP450	14968342	17	15	5.9	9.28
Spade.17,50.CTPP450	14968343	17.5	15.3	5.9	9.39
Spade.18,00.CTPP450	14968346	18	16.3	6.6	10.19
Spade.18,50.CTPP450	14968348	18.5	16.6	6.6	10.3

Spare parts screws:

Insert	Material	DC [mm]	H2 [mm]	s [mm]	H1 [mm]
Spade.19,00.CTPP450	14968349	19	16.9	6.6	10.41
Spade.19,50.CTPP450	14968351	19.5	17.2	6.6	10.52
Spade.20,00.CTPP450	14968352	20	18.2	7.3	11.33
Spade.20,50.CTPP450	14968353	20.5	18.5	7.3	11.43
Spade.21,00.CTPP450	14968354	21	18.8	7.3	11.54
Spade.21,50.CTPP450	14968355	21.5	19.1	7.3	11.65
Spade.22,00.CTPP450	14968356	22	20.2	8	12.56
Spade.22,50.CTPP450	14968357	22.5	20.5	8	12.67
Spade.23,00.CTPP450	14968358	23	20.8	8	12.78
Spade.23,50.CTPP450	14968359	23.5	21.1	8	12.88
Spade.24,00.CTPP450	14968361	24	22.1	8.7	13.69
Spade.24,50.CTPP450	14968365	24.5	22.4	8.7	13.8
Spade.25,00.CTPP450	14968366	25	22.7	8.7	13.91
Spade.25,50.CTPP450	14968367	25.5	23	8.7	14.02
Spade.26,00.CTPP450	14968368	26	24.1	9.5	14.92
Spade.26,50.CTPP450	14968369	26.5	24.4	9.5	15.03
Spade.27,00.CTPP450	14968370	27	24.7	9.5	15.14
Spade.27,50.CTPP450	14968371	27.5	25	9.5	15.25
Spade.28,00.CTPP450	14968376	28	25.3	9.5	15.36
Spade.28,50.CTPP450	14968378	28.5	25.6	9.5	15.47
Spade.29,00.CTPP450	14968380	29	25.9	9.5	15.57
Spade.29,50.CTPP450	14968382	29.5	26.2	9.5	15.68
Spade.30,00.CTPP450	14968384	30	26.2	9.5	15.49

Spade drill geometry

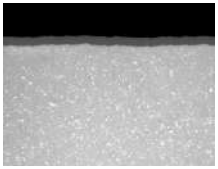


Designation	Material	DC	DCONMS	OAL	LU	LCF	DF	L1
DSCD.5D.1400.R.16.00	14738903	14,00-14,49	16	137.9	72.5	79.8	20	81.5
DSCD.5D.1450.R.16.00	14738904	14,50-14,99	16	141	75	82.5	20	84.8
DSCD.5D.1500.R.20.00	14738905	15,00-15,49	20	146.1	77.5	85.3	25	85.7
DSCD.5D.1550.R.20.00	14738906	15,50-15,99	20	149.2	80	88.0	25	89
DSCD.5D.1600.R.20.00	14738907	16,00-16,49	20	152.3	82.5	90.8	25	92.4
DSCD.5D.1650.R.20.00	14738908	16,50-16,99	20	155.4	85	93.5	25	95.7
DSCD.5D.1700.R.20.00	14738909	17,00-17,49	20	158.5	87.5	96.3	25	99.1
DSCD.5D.1750.R.20.00	14738910	17,50-17,99	20	161.6	90	99.0	25	102.4
DSCD.5D.1800.R.20.00	14738911	18,00-18,49	20	164.7	92.5	101.8	25	105.8
DSCD.5D.1850.R.20.00	14738912	18,50-18,99	20	167.8	95	104.5	25	109.1
DSCD.5D.1900.R.25.00	14738913	19,00-19,49	25	176.9	97.5	107.3	30	110
DSCD.5D.1950.R.25.00	14738914	19,50-19,99	25	180	100	110.0	30	113.3
DSCD.5D.2000.R.25.00	14738915	20,00-20,49	25	183.1	102.5	112.8	30	116.7
DSCD.5D.2050.R.25.00	14738916	20,50-20,99	25	186.2	105	115.5	30	120
DSCD.5D.2100.R.25.00	14738917	21,00-21,49	25	189.3	107.5	118.3	30	123.4
DSCD.5D.2150.R.25.00	14738918	21,50-21,99	25	192.4	110	121.0	30	126.7
DSCD.5D.2200.R.25.00	14738919	22,00-22,49	25	195.5	112.5	123.8	30	130.1
DSCD.5D.2250.R.25.00	14738920	22,50-22,99	25	198.6	115	126.5	30	133.4
DSCD.5D.2300.R.25.00	14738921	23,00-23,49	25	201.7	117.5	129.3	30	136.8
DSCD.5D.2350.R.25.00	14738922	23,50-23,99	25	204.8	120	132.0	30	140.1
DSCD.5D.2400.R.32.00	14738923	24,00-24,49	32	211.9	122.5	134.8	39	139
DSCD.5D.2450.R.32.00	14738924	24,50-24,99	32	215	125	137.5	39	142.3
DSCD.5D.2500.R.32.00	14738925	25,00-25,49	32	218.1	127.5	140.3	39	145.7
DSCD.5D.2550.R.32.00	14738926	25,50-25,99	32	221.2	130	143.0	39	149
DSCD.5D.2600.R.32.00	14738927	26,00-26,49	32	224.3	132.5	145.8	39	152.4

Designation	Material	DC	DCONMS	OAL	LU	LCF	DF	L1
DSCD.5D.2650.R.32.00	14738928	26,50-26,99	32	227.4	135	148.5	39	155.7
DSCD.5D.2700.R.32.00	14738929	27,00-27,49	32	230.5	137.5	151.3	39	159.1
DSCD.5D.2750.R.32.00	14738930	27,50-27,99	32	233.6	140	154.0	39	162.4
DSCD.5D.2800.R.32.00	14738931	28,00-28,49	32	236.7	142.5	156.8	39	165.8
DSCD.5D.2850.R.32.00	14738932	28,50-28,99	32	239.8	145	159.5	39	169.1
DSCD.5D.2900.R.32.00	14738933	29,00-29,49	32	242.9	147.5	162.3	39	172.5
DSCD.5D.2950.R.32.00	14738934	29,50-30,00	32	246	150	165.0	39	175.8
DSCD.3D.1400.R.16.00	14738935	14,00-14,49	16	108.9	43.5	50.8	20	52.5
DSCD.3D.1450.R.16.00	14738936	14,50-14,99	16	111	45	52.5	20	54.8
DSCD.3D.1500.R.20.00	14738937	15,00-15,49	20	115.1	46.5	54.3	25	54.7
DSCD.3D.1550.R.20.00	14738938	15,50-15,99	20	117.2	48	56.0	25	57
DSCD.3D.1600.R.20.00	14738939	16,00-16,49	20	119.3	49.5	57.8	25	59.4
DSCD.3D.1650.R.20.00	14738940	16,50-16,99	20	121.4	51	59.5	25	61.7
DSCD.3D.1700.R.20.00	14738941	17,00-17,49	20	123.5	52.5	61.3	25	64.1
DSCD.3D.1750.R.20.00	14738942	17,50-17,99	20	125.6	54	63.0	25	66.4
DSCD.3D.1800.R.20.00	14738943	18,00-18,49	20	127.7	55.5	64.8	25	68.8
DSCD.3D.1850.R.20.00	14738944	18,50-18,99	20	129.8	57	66.5	25	71.1
DSCD.3D.1900.R.25.00	14738945	19,00-19,49	25	137.9	58.5	68.3	30	71
DSCD.3D.1950.R.25.00	14738946	19,50-19,99	25	140	60	70.0	30	73.3
DSCD.3D.2000.R.25.00	14738947	20,00-20,49	25	142.1	61.5	71.8	30	75.7
DSCD.3D.2050.R.25.00	14738948	20,50-20,99	25	144.2	63	73.5	30	78
DSCD.3D.2100.R.25.00	14738949	21,00-21,49	25	146.3	64.5	75.3	30	80.4
DSCD.3D.2150.R.25.00	14738950	21,50-21,99	25	148.4	66	77.0	30	82.7
DSCD.3D.2200.R.25.00	14738951	22,00-22,49	25	150.5	67.5	78.8	30	85.1
DSCD.3D.2250.R.25.00	14738952	22,50-22,99	25	152.6	69	80.5	30	87.4
DSCD.3D.2300.R.25.00	14738953	23,00-23,49	25	154.7	70.5	82.3	30	89.8
DSCD.3D.2350.R.25.00	14738954	23,50-23,99	25	156.8	72	84.0	30	92.1
DSCD.3D.2400.R.32.00	14738955	24,00-24,49	32	162.9	73.5	85.8	39	90
DSCD.3D.2450.R.32.00	14738956	24,50-24,99	32	165	75	87.5	39	92.3
DSCD.3D.2500.R.32.00	14738957	25,00-25,49	32	167.1	76.5	89.3	39	94.7
DSCD.3D.2550.R.32.00	14738958	25,50-25,99	32	169.2	78	91.0	39	97
DSCD.3D.2600.R.32.00	14738959	26,00-26,49	32	171.3	79.5	92.8	39	99.4
DSCD.3D.2650.R.32.00	14738960	26,50-26,99	32	173.4	81	94.5	39	101.7
DSCD.3D.2700.R.32.00	14738961	27,00-27,49	32	175.5	82.5	96.3	39	104.1
DSCD.3D.2750.R.32.00	14738962	27,50-27,99	32	177.6	84	98.0	39	106.4
DSCD.3D.2800.R.32.00	14738963	28,00-28,49	32	179.7	85.5	99.8	39	108.8
DSCD.3D.2850.R.32.00	14738964	28,50-28,99	32	181.8	87	101.5	39	111.1
DSCD.3D.2900.R.32.00	14738965	29,00-29,49	32	183.9	88.5	103.3	39	113.5
DSCD.3D.2950.R.32.00	14738966	29,50-30,00	32	186	90	105.0	39	115.8

Grade overview

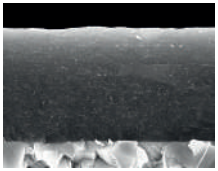
CTPP425 **HC-P25 I HC-M25**



Specification:
Composition: Co 9.0%; mixed carbides 4.0%; WC balance | Grain size: fine/medium | Hardness: HV_{30} 1510 |
Coating specification: PVD TiAlN/TiN

Recommended application:
Particularly suitable for the machining of steels.

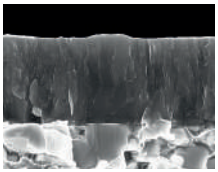
CTPP440 **HC-M40 I HC-P40**



Specification:
Composition: Co 9.0%; mixed carbides 0.7%; others 0.7%; WC balance |
Grain size: submicron | Hardness: HV_{30} 1590 | Coating specification: PVD TiAlN

Recommended application:
The first choice for the machining of austenitic steels as well as heat-resistant alloys.

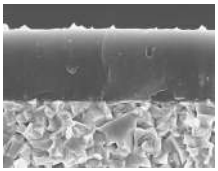
CTPK415 **HC-K15**



Specification:
Composition: Co 6.0%; WC balance; mixed carbides 2.0% ; Grain size: fine |
Hardness: HV_{30} 1630

Recommended application:
Suitable for cast iron machining.

CTPP450 **HC-P40**



Specification:
Composition: Co 11.0%; others 0.8%; WC balance |
Grain size: submicron | Hardness: HV_{30} 1500 | Coating specification: PVD TiAlXYN

Recommended application:
Drill grade for steel and stainless steel with a tough and wear resistant substrate combined with a heat resistant PVD coating.

ELMEC designation system: Insert

Insert shape

A	85°
B	82°
K	55°
H	120°
L	90°
O	135°
P	108°
C	80°
D	55°
E	75°
M	86°
V	35°
R	
S	90°
T	60°
W	80°
X Z	Special shapes

Clearance angle

	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special version

Tolerances

	d [± mm]	m [± mm]	s [± mm]	d=6.35/9.52	d=12.7	d=15.8/19.05
A	0.025	0.005	0.025	●	●	●
C	0.025	0.013	0.025	●	●	●
E	0.025	0.025	0.025	●	●	●
F	0.013	0.005	0.025	●	●	●
G	0.025	0.025	0.13	●	●	●
H	0.013	0.013	0.025	●	●	●
	0.05	0.005	0.025	●		
J	0.08	0.005	0.025		●	
	0.10	0.005	0.025			●
	0.05	0.013	0.025	●		
K	0.08	0.013	0.02		●	
	0.10	0.013	0.02			●
	0.05	0.08	0.13	●		
M	0.08	0.13	0.13		●	
	0.10	0.15	0.13			●
	0.05	0.08	0.025	●		
N	0.08	0.13	0.025		●	
	0.10	0.15	0.025			●
	0.08	0.13	0.13	●		
U	0.13	0.20	0.13		●	
	0.18	0.27	0.13			●

Insert thickness

Index	s [mm]
02	2.1
T2	2.5
03	3.0
T3	3.5
04	4.0
05	5.0

S	O	L	T	-	05	02	08	-	CCD

Form of top surface

A	
F	
G	
M	
N	
Q	
R	
T	
U	
W	
X	Special shapes

Insert size

Type	Index	[mm]
S	05	5.0
	06	5.8
	07	6.9
	08	8.4
	10	10.3
	11.1	11.6
	13	13.3

Corner radius

Index	r [mm]
05	0.4
06	0.6
07	0.8
08	0.8
10	0.8
12	0.8
13	0.8

Chipformer

HCD	Steel machining
SCD	Stainless Steel machining
CCD	Cast Iron machining

Note: Not applicable for spade drill

	-	CT	P	K	4	15

Main application (machining method)

1	Turning
2	Milling
3	Parting and grooving
4	Drilling
5	Threading
6	Others
7	Universal grade for a variety of applications

Application range

For example:

05
10
15
25
35 ISO P35
.
.

Cutting material

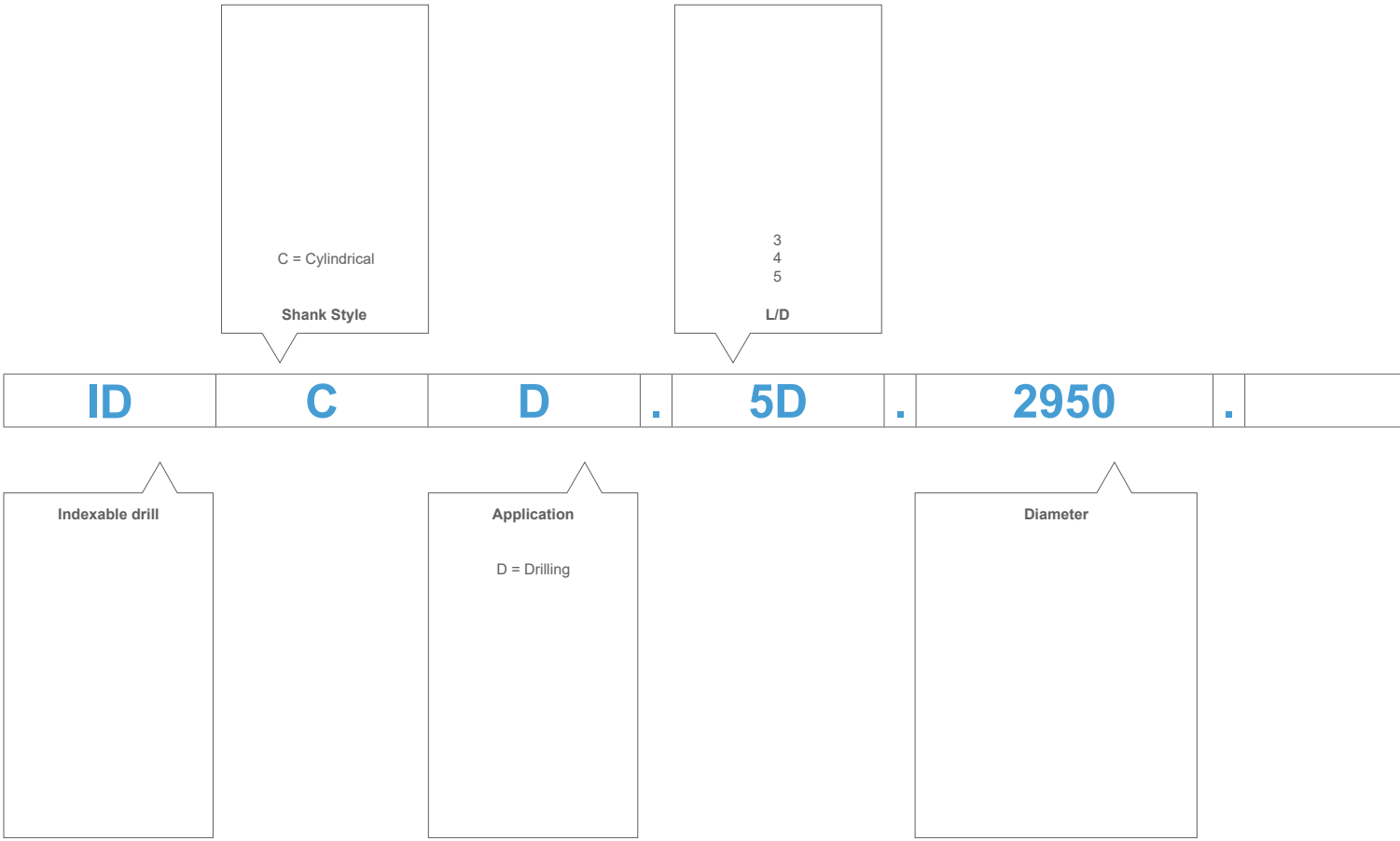
- **W** Uncoated carbide
- **C** CVD coated carbide
- **P** PVD coated carbide
- **T** Uncoated cermet
- **E** Coated cermet
- **N** Uncoated silicon nitride
- **M** Coated silicon nitride
- **S** Mixed ceramic
- **K** Whisker ceramic
- **I** Sialon
- **D** PCD
- **B** CBN
- **L** CBN coated
- **H** Sintered HSS

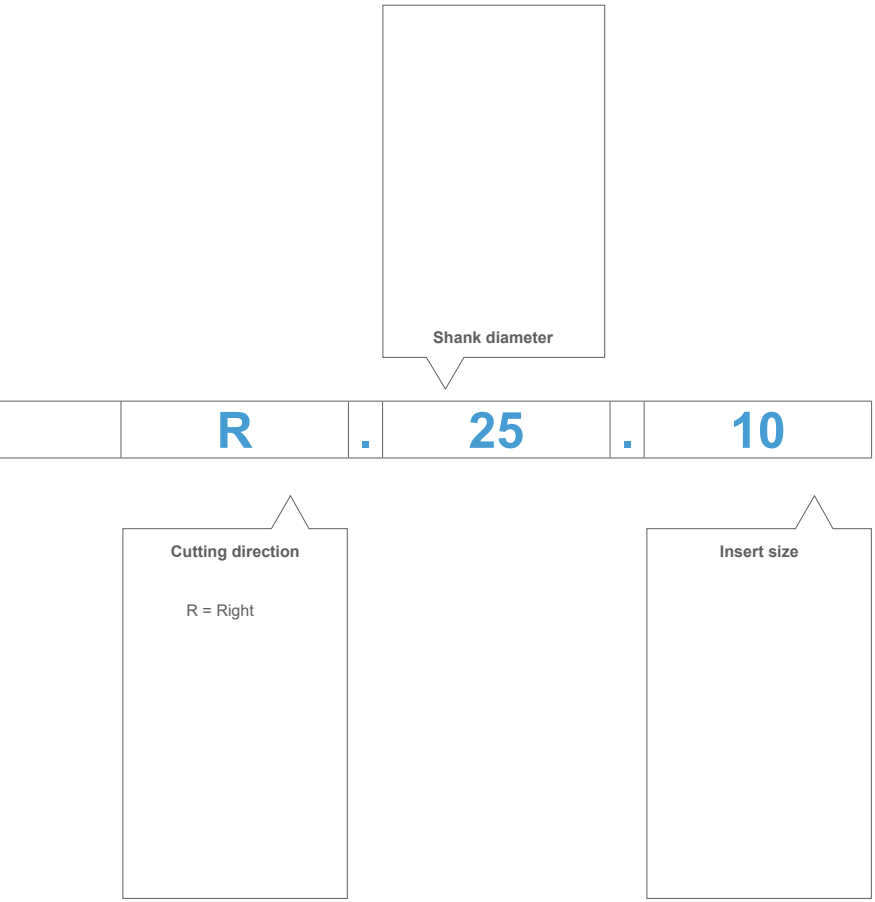
Main application (material)

Variant 2: ISO letter

- **P** Steel
- **M** Stainless steel
- **K** Cast iron
- **N** Light and non ferrous metals, non metals
- **S** Heat resistant alloys, titanium
- **H** Hard materials
- **X** Universal grade for a variety of applications

ELMEC Designation system: Tool holder




Shank diameter
R . 25 . 10
Cutting direction
R = Right
Insert size

Production

The carbide formula for success

ELMEC has the metallurgical competence that allows it to control the entire process chain of carbide production: from raw materials production and powder preparation to formin g, sintering and finishing, we can make the right adjustments at any time and adapt the material properties to your individual requirements, and with a dedicated production line for private label and toolmakers customers, and with a dedicated production line for private label and toolmakers customers.

Composite materials with valuable properties
Cemented carbides are composite materials consisting of a hard component and a comparatively soft binder metal, such as cobalt. The performance characteristics of carbide are determined by hardness, transverse rupture strength and fracture toughness. With regard to their application, important parameters for the optimisation of the characteristics here are the cobalt content and the grain size of the metal binder phase. The tungsten carbide grains have an average size of 0.5 up to several micrometres (µm). The cobalt fills the gaps between the carbide grains. On the one hand, when extremely high toughness is required, the cobalt content can amount up to 30%. On the other, the cobalt content is reduced and the grain size decreased to the submicron range (for example 0.3 µm), in order to guarantee maximum wear resistance.

ELMEC produces far more than 100 different carbide grades particularly for wear parts and cutting tools, thus offering a customised solution for every one of your applications.

Passion for cemented carbide

From the ore to the ready-to-use-tool

Mineral extraction > Preparation and mixing of the raw materials > Forming / pressing > Sintering

Surface treatment > Quality assurance > Dispatch > Recycling

Notes

Notes

Notes

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