

TPDC PLUS DRILL



High feed indexable drilling system, optimised for high precision, performance, chip control and reliability
Ø12.00 - 30.99.

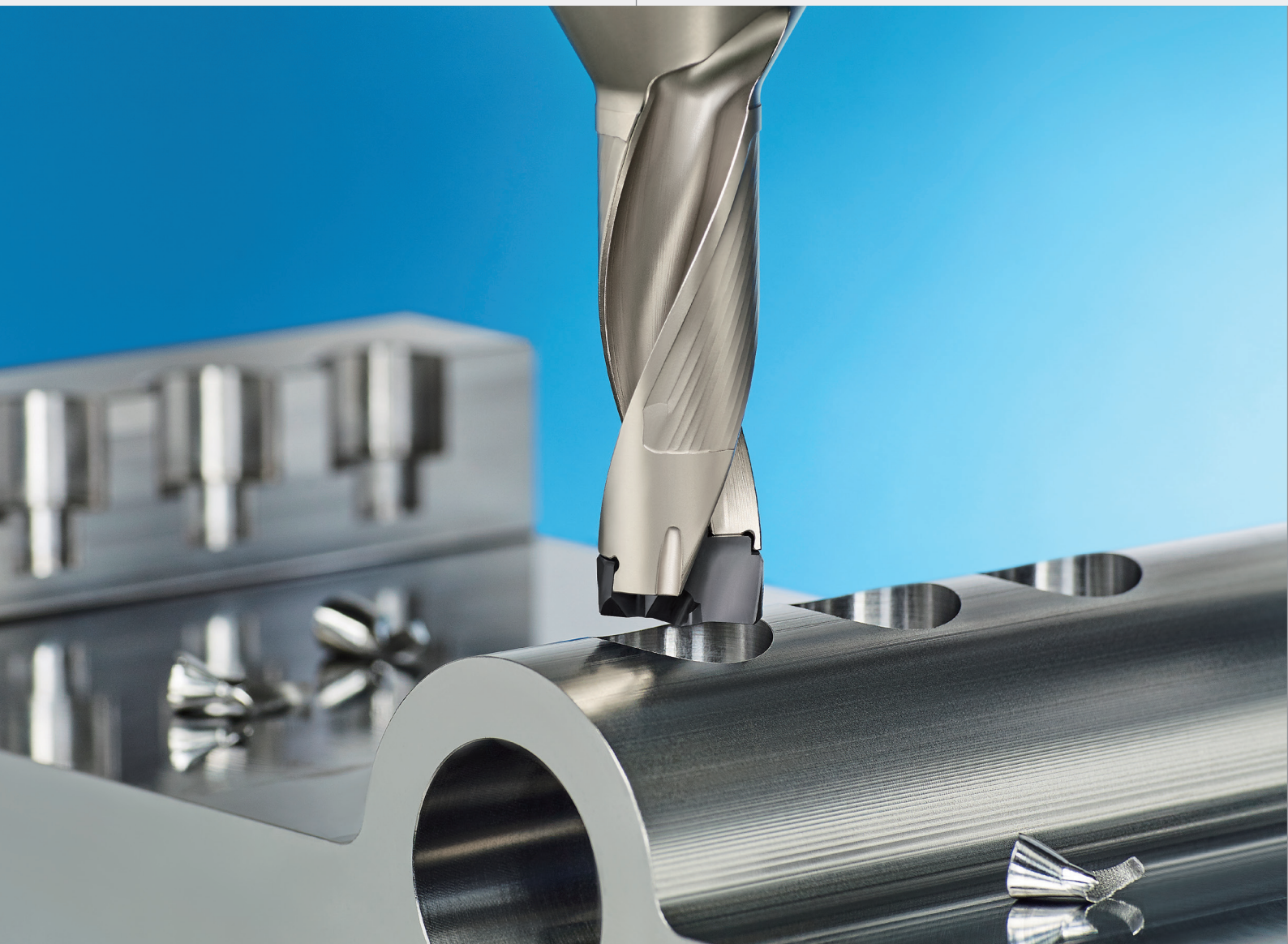
The Korloy TPDC drill can realise the same performance levels of high performance carbide drills with a replaceable solid carbide insert. The system provides low cutting load, excellent chip evacuation and highest levels of accuracy and tool life.

Features

- ▶ One step clamp system without clamping screw.
- ▶ High helix angle and flute polishing.
- ▶ Helical shaped coolant hole system.
- ▶ Polished flutes.
- ▶ Excellent anti chipping & wear resistance.
- ▶ Steel and Inox geometry inserts.

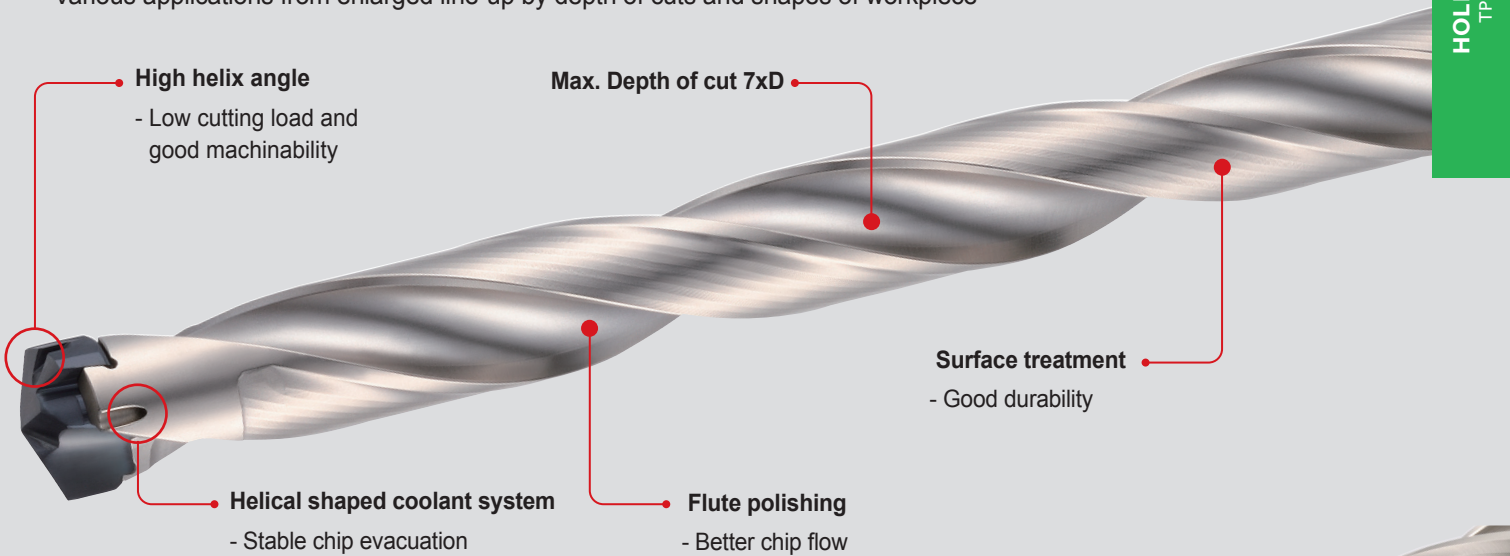
Benefits

- ▶ Increased stability and shortened setting time.
- ▶ Reduced cutting load and enhanced chip evacuation.
- ▶ Excellent cooling and stable chip evacuation.
- ▶ Better chip evacuation.
- ▶ Easy to change inserts.
- ▶ Reduced setting time.
- ▶ Low cutting loads.



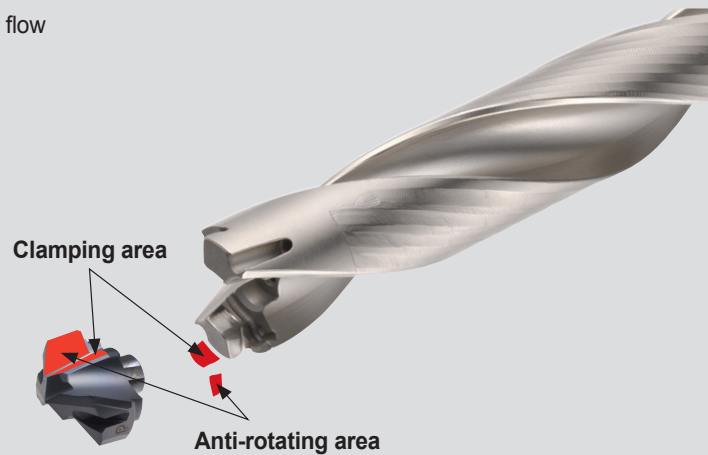
HOLDER FEATURES

- One step clamp system - Increased stability and shortened setting time
- Helical shaped coolant system - Excellent cooling and stable chip evacuation
- High helix angle and flute polishing - Reduced cutting load and enhanced chip evacuation
- Various applications from enlarged line-up by depth of cuts and shapes of workpiece



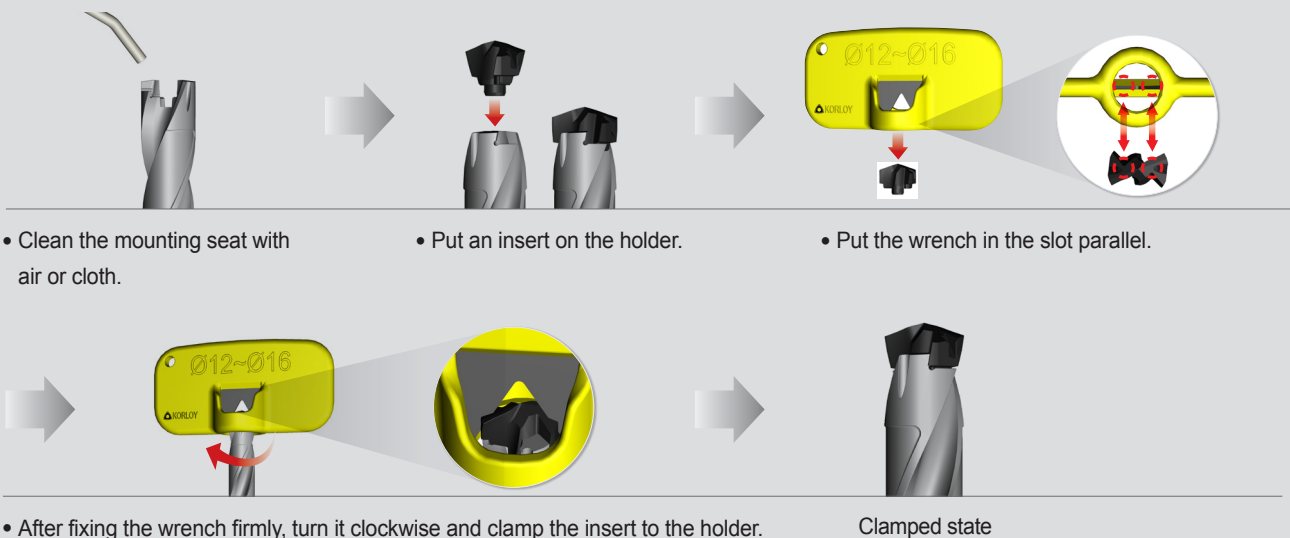
Holder structure

- Clamping area - Clamping insert and holder
- Anti-rotating area - Performing as a stopper
- Clamping and anti-rotating area make an acute angle to prevent insert rotation while machining.



STEPS FOR CORRECT INSERT CLAMPING

- Using the insert with slot on the top



• Clean the mounting seat with air or cloth.

• Put an insert on the holder.

• Put the wrench in the slot parallel.

• After fixing the wrench firmly, turn it clockwise and clamp the insert to the holder.

Clamped state

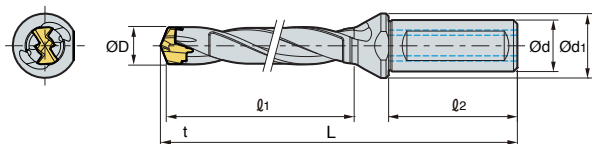
TPDC PLUS DRILL Ø12.00 - 19.70mm

High Performance Exchangeable Insert Drilling Tools



TPDC PLUS DRILL HOLDERS

- ▶ One step clamping system
- ▶ Through coolant



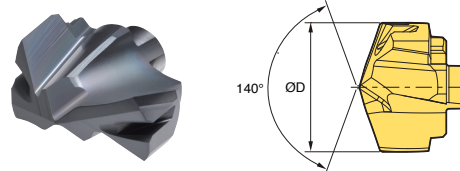
TPDC PLUS DRILL INSERTS

STEEL (CP) GEOMETRY

- ▶ PC5335 coated with high strength geometry
- ▶ For steel and cast iron drilling

INOX (CM) GEOMETRY

- ▶ PC3030N coated with hard and smooth surface
- ▶ For stainless steel drilling



HOLDERS								
ØD Range	Ød	Drill Depth	Ød1	l1	l2	L	ORDER CODE	PRICE
12.0-12.2	16	3xD	36	48	99		TPDC3D-12016-36	£130.20
		5xD	60	48	123		TPDC5D-12016-60	£153.86
		8xD	96	48	159		TPDC8D-12016-96	£184.64
12.5-12.6	16	3xD	38	48	101		TPDC3D-12516-38	£130.20
		5xD	63	48	126		TPDC5D-12516-63	£153.86
		8xD	100	48	163		TPDC8D-12516-100	£184.64
13.0-13.0	16	3xD	39	48	103		TPDC3D-13016-39	£130.20
		5xD	65	48	129		TPDC5D-13016-65	£153.86
		8xD	104	48	168		TPDC8D-13016-104	£184.64
13.5-13.5	16	3xD	41	48	105		TPDC3D-13516-41	£130.20
		5xD	68	48	132		TPDC5D-13516-68	£153.86
		8xD	108	48	173		TPDC8D-13516-108	£184.64
14.0-14.3	16	3xD	42	48	106		TPDC3D-14016-42	£130.20
		5xD	70	48	134		TPDC5D-14016-70	£153.86
		8xD	112	48	176		TPDC8D-14016-112	£184.64
14.5-14.5	16	3xD	44	48	107		TPDC3D-14516-44	£136.09
		5xD	73	48	136		TPDC5D-14516-73	£163.72
		8xD	116	48	180		TPDC8D-14516-116	£196.46
15.0-15.5	20	3xD	45	50	113		TPDC3D-15020-45	£136.09
		5xD	75	50	143		TPDC5D-15020-75	£163.72
		8xD	120	50	188		TPDC8D-15020-120	£196.46
16.0-16.7	20	3xD	48	50	117		TPDC3D-16020-48	£136.09
		5xD	80	50	149		TPDC5D-16020-80	£163.72
		8xD	128	50	197		TPDC8D-16020-128	£196.46
17.0-17.7	20	3xD	51	50	120		TPDC3D-17020-51	£136.09
		5xD	85	50	154		TPDC5D-17020-85	£163.72
		8xD	136	50	205		TPDC8D-17020-136	£196.46
18.0-18.7	25	3xD	54	56	132		TPDC3D-18025-54	£149.90
		5xD	90	56	168		TPDC5D-18025-90	£179.49
		8xD	144	56	222		TPDC8D-18025-144	£215.40
19.0-19.7	25	3xD	57	56	135		TPDC3D-19025-57	£149.90
		5xD	95	56	173		TPDC5D-19025-95	£179.49
		8xD	152	56	230		TPDC8D-19025-152	£215.40

INSERTS			
ØD mm	STEEL (CP)	INOX (CM)	PRICE
12.0	TPD1200CP PC5335	TPD1200CM PC330N	£62.67
12.2	TPD1220CP PC5335	-	£62.67
12.5	TPD1250CP PC5335	-	£62.67
12.6	TPD1260CP PC5335	-	£62.67
13.0	TPD1300CP PC5335	TPD1300CM PC330N	£62.67
13.5	TPD1350CP PC5335	-	£62.67
14.0	TPD1400CP PC5335	TPD1400CM PC330N	£62.67
14.2	TPD1420CP PC5335	-	£62.67
14.3	TPD1430CP PC5335	-	£62.67
14.5	TPD1450CP PC5335	-	£62.67
15.0	TPD1500CP PC5335	TPD1500CM PC330N	£65.42
15.5	TPD1550CP PC5335	-	£65.42
16.0	TPD1600CP PC5335	TPD1600CM PC330N	£65.42
16.3	TPD1630CP PC5335	-	£65.42
16.5	TPD1650CP PC5335	-	£65.42
16.7	TPD1670CP PC5335	-	£65.42
17	TPD1700CP PC5335	TPD1700CM PC330N	£65.42
17.5	TPD1750CP PC5335	TPD1750CM PC330N	£65.42
17.7	TPD1770CP PC5335	-	£65.42
18.0	TPD1800CP PC5335	TPD1800CM PC330N	£70.86
18.1	TPD1810CP PC5335	-	£70.86
18.5	TPD1850CP PC5335	-	£70.86
18.6	TPD1860CP PC5335	-	£70.86
18.7	TPD1870CP PC5335	-	£70.86
19.0	TPD1900CP PC5335	-	£70.86
19.2	TPD1920CP PC5335	-	£70.86
19.5	TPD1950CP PC5335	TPD1950CM PC330N	£70.86
19.7	TPD1970CP PC5335	TPD1970CM PC330N	£70.86

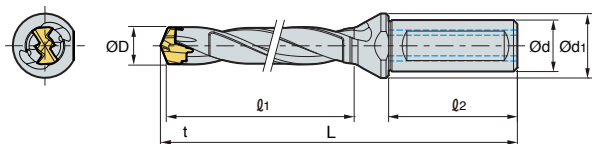
TPDC PLUS DRILL Ø20.00 - 30.90mm

High Performance Exchangeable Insert Drilling Tools



TPDC PLUS DRILL HOLDERS

- ▶ One step clamping system
- ▶ Through coolant



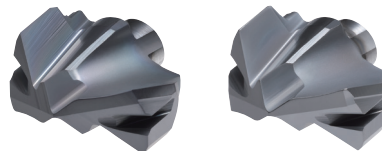
TPDC PLUS DRILL INSERTS

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INOX (CM) GEOMETRY

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HOLDERS								
ØD Range	Ød	Drill Depth	Ød1	l1	l2	L	ORDER CODE	PRICE
20.0-20.5	25	3xD	33	60	56	138	TPDC3D-20025-60	£149.90
		5xD	33	100	56	178	TPDC5D-20025-100	£179.49
		8xD	33	160	56	238	TPDC8D-20025-160	£215.40
21.0-21.5	25	3xD	33	63	56	141	TPDC3D-21025-63	£164.92
		5xD	33	105	56	183	TPDC5D-21025-105	£197.45
		8xD	33	168	56	246	TPDC8D-21025-168	£236.95
22.0-22.7	25	3xD	33	66	56	145	TPDC3D-22025-66	£164.92
		5xD	33	110	56	189	TPDC5D-22025-110	£197.45
		8xD	33	176	56	255	TPDC8D-22025-176	£236.95
23.0-23.5	25	3xD	33	69	56	149	TPDC3D-23025-69	£181.41
		5xD	33	115	56	195	TPDC5D-23025-115	£217.20
		8xD	33	184	56	264	TPDC8D-23025-184	£260.64
24.0-24.9	32	3xD	43	72	60	159	TPDC3D-24032-72	£181.41
		5xD	43	120	60	207	TPDC5D-24032-120	£217.20
		8xD	43	192	60	279	TPDC8D-24032-192	£260.64
25.0-25.9	32	3xD	43	75	60	162	TPDC3D-25032-75	£199.54
		5xD	43	125	60	212	TPDC5D-25032-125	£238.93
		8xD	43	200	60	287	TPDC8D-25032-200	£286.71
26.0-26.9	32	3xD	43	78	60	173	TPDC3D-26032-78	£198.90
		5xD	43	130	60	225	TPDC5D-26032-130	£261.84
		8xD	43	208	60	303	TPDC8D-26032-208	£286.71
27.0-27.9	32	3xD	43	81	60	176	TPDC3D-27032-81	£218.68
		5xD	43	135	60	230	TPDC5D-27032-135	£261.84
		8xD	43	216	60	311	TPDC8D-27032-216	£314.21
28.0-28.9	32	3xD	43	84	60	180	TPDC3D-28032-84	£240.56
		5xD	43	140	60	236	TPDC5D-28032-140	£261.84
		8xD	43	224	60	320	TPDC8D-28032-224	£314.21
29.0-29.9	32	3xD	43	87	60	185	TPDC3D-29032-87	£240.56
		5xD	43	145	60	243	TPDC5D-29032-145	£288.03
		8xD	43	232	60	330	TPDC8D-29032-232	£345.62
30.0-30.9	32	3xD	43	90	60	188	TPDC3D-30032-90	£240.56
		5xD	43	150	60	248	TPDC5D-30032-150	£288.03
		8xD	43	240	60	338	TPDC8D-30032-240	£345.62

INSERTS			
ØD mm	STEEL (CP)	INOX (CM)	PRICE
20	TPD2000CP PC5335	TPD2000CM PC330N	£70.86
20.5	TPD2050CP PC5335	-	£70.86
21	TPD2100CP PC5335	TPD2100CM PC330N	£70.86
21.5	TPD2150CP PC5335	-	£70.86
22	TPD2200CP PC5335	TPD2200CM PC330N	£70.86
22.5	TPD2250CP PC5335	-	£70.86
22.6	TPD2260CP PC5335	-	£70.86
22.7	TPD2270CP PC5335	-	£70.86
23	TPD2300CP PC5335	-	£81.78
23.5	TPD2350CP PC5335	-	£81.78
24	TPD2400CP PC5335	-	£81.78
24.5	TPD2450CP PC5335	-	£81.78
25	TPD2500CP PC5335	TPD2500CM PC330N	£87.19
25.3	TPD2530CP PC5335	-	£87.19
25.5	TPD2550CP PC5335	-	£87.19
25.8	TPD2580CP PC5335	-	£87.19
25.9	TPD2590CP PC5335	-	£87.19
26	TPD2600CP PC5335	TPD2600CM PC330N	£95.37
26.5	TPD2650CP PC5335	-	£95.37
27	TPD2700CP PC5335	-	£95.37
28	TPD2800CP PC5335	-	£95.37
28.5	TPD2850CP PC5335	-	£95.37
29	TPD2900CP PC5335	-	£95.37
29.5	TPD2950CP PC5335	-	£95.37
30	TPD3000CP PC5335	-	£100.83
30.5	TPD3050CP PC5335	-	£100.83

TPDC DRILLS

CUTTING DATA

For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

3xD Drilling

Workpiece			Insert	Grade	vc (m/min)	Aspect ratio (L/D) = 1.5D, 3D Feed rate (mm/rev) per drill dia. (mm)		
ISO	Workpiece	HB				Ø12.00-Ø17.99	Ø18.00-Ø25.99	Ø26.00-Ø30.99
P Carbon steel	Low carbon steel	80-120	CP	PC5335	120 (90-140)	0.25-0.35	0.30-0.40	0.35-0.45
	High carbon steel	180-280	CP	PC5335	110 (80-130)	0.25-0.35	0.30-0.40	0.30-0.45
P Alloy steel	Low alloy steel	140-260	CP	PC5335	120 (90-140)	0.28-0.40	0.33-0.43	0.38-0.48
	Low alloy heat-treated steel	200-400	CP	PC5335	80 (60-100)	0.28-0.40	0.33-0.43	0.30-0.48
	High alloy steel	260-320	CP	PC5335	75 (60-90)	0.20-0.35	0.22-0.40	0.25-0.45
	High alloy heat-treated steel	300-450	CP	PC5335	65 (50-80)	0.20-0.35	0.22-0.40	0.22-0.45
M Stainless steel	Austenitic	135-275	CM	PC330N	65 (50-80)	0.05-0.15	0.10-0.20	0.15-0.25
	Ferritic, martensitic	135-275	CM	PC330N	75 (60-90)	0.10-0.20	0.15-0.30	0.20-0.35
K Cast iron	Gray cast iron	150-230	CP	PC5335	130 (90-140)	0.35-0.45	0.40-0.50	0.45-0.55
	Ductile cast iron	160-260	CP	PC5335	120 (80-130)	0.30-0.40	0.30-0.45	0.40-0.50

In interrupted machining, reduce the feed to 0.1-0.15 machining around the interrupted part.

In stainless steel machining, start with low feed machining then, gradually get the cutting conditions higher and set the optimal cutting conditions.

5xD Drilling

Workpiece			Insert	Grade	vc (m/min)	Aspect ratio (L/D) = 5D Feed rate (mm/rev) per drill dia. (mm)		
ISO	Workpiece	HB				Ø12.00-Ø17.99	Ø18.00-Ø25.99	Ø26.00-Ø30.99
P Carbon steel	Low carbon steel	80-120	CP	PC5335	110 (80-140)	0.15-0.30	0.20-0.35	0.25-0.40
	High carbon steel	180-280	CP	PC5335	100 (70-130)	0.15-0.30	0.20-0.35	0.25-0.40
P Alloy steel	Low alloy steel	140-260	CP	PC5335	110 (80-140)	0.18-0.35	0.23-0.38	0.28-0.43
	Low alloy heat-treated steel	200-400	CP	PC5335	75 (50-100)	0.18-0.35	0.23-0.38	0.28-0.43
	High alloy steel	260-320	CP	PC5335	70 (50-90)	0.18-0.30	0.20-0.35	0.25-0.40
	High alloy heat-treated steel	300-450	CP	PC5335	60 (40-80)	0.18-0.30	0.20-0.35	0.22-0.40
M Stainless steel	Austenitic	135-275	CM	PC330N	60 (40-80)	0.05-0.15	0.10-0.20	0.15-0.25
	Ferritic, martensitic	135-275	CM	PC330N	70 (50-90)	0.10-0.20	0.15-0.30	0.20-0.35
K Cast iron	Gray cast iron	150-230	CP	PC5335	120 (80-140)	0.25-0.40	0.30-0.45	0.35-0.50
	Ductile cast iron	160-260	CP	PC5335	110 (70-130)	0.20-0.35	0.25-0.40	0.30-0.45

In interrupted machining, reduce the feed to 0.1-0.15 machining around the interrupted part.

In stainless steel machining, start with low feed machining then, gradually get the cutting conditions higher and set the optimal cutting conditions.

TPDC DRILLS

CUTTING DATA

For General Machining and Drilling Large Diameters with Longer Tool Life and High Productivity

8D Drilling

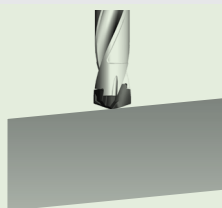
Workpiece			Insert	Grade	vc (m/min)	Aspect ratio (L/D) = 8D Feed rate (mm/rev) per drill dia. (mm)		
ISO	Workpiece	HB				Ø12.00-Ø17.99	Ø18.00-Ø25.99	Ø26.00-Ø30.99
P Carbon steel	Low carbon steel	80-120	CP	PC5335	100 (70-130)	0.12-0.25	0.17-0.30	0.22-0.35
	High carbon steel	180-280	CP	PC5335	90 (60-120)	0.12-0.25	0.17-0.30	0.22-0.35
P Alloy steel	Low alloy steel	140-260	CP	PC5335	100 (70-130)	0.15-0.30	0.20-0.33	0.25-0.38
	Low alloy heat-treated steel	200-400	CP	PC5335	65 (40-90)	0.15-0.30	0.20-0.33	0.25-0.38
	High alloy steel	260-320	CP	PC5335	60 (40-80)	0.15-0.25	0.17-0.30	0.22-0.35
	High alloy heat-treated steel	300-450	CP	PC5335	50 (30-70)	0.15-0.25	0.17-0.30	0.22-0.35
M Stainless steel	Austenitic	135-275	CM	PC330N	50 (30-70)	0.05-0.10	0.05-0.15	0.10-0.20
	Ferritic, martensitic	135-275	CM	PC330N	60 (40-80)	0.05-0.15	0.10-0.25	0.15-0.30
K Cast iron	Gray cast iron	150-230	CP	PC5335	110 (70-130)	0.22-0.35	0.27-0.40	0.32-0.45
	Ductile cast iron	160-260	CP	PC5335	100 (60-120)	0.17-0.30	0.22-0.35	0.27-0.40

In interrupted machining, reduce the feed to 0.1-0.15 machining around the interrupted part.

In stainless steel machining, start with low feed machining then, gradually get the cutting conditions higher and set the optimal cutting conditions.

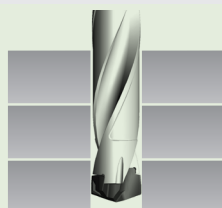
PRECAUTIONS FOR USE

Angled surface drilling



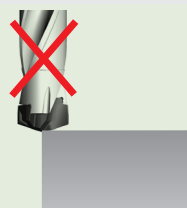
- The approach angle between drill and the workpiece at the beginning and the end should be less than 6°.
- Reduce the feed (fn) to 30-50% than general cutting conditions at the beginning and the end of angled surface.

Stacked plates drilling



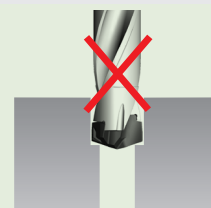
- Gap between the plates could make wrong chip evacuation causing fracture of the drill.
- Place stacked plates without any gap between each.

Plunging



- Irregular cutting resistance in plunging could cause fracture and deformation of the drill.

Boring



- Boring is not recommended due to wear and chipping in the corner of the insert.