

HOLEMAKING

Featuring
TOPON adaption

Diameter Range

0.2362-0.8228"
6.0-20.9 mm

Body

2xD **NEW**
3xD - 1st generation
3xD - 2nd generation **NEW**
4xD **NEW**

Adaption

TopOn (M12)

Geometries

TPA - Steel
TMA - Stainless Steel
TKA - Cast Iron
TNA - Non-Ferrous
TPC (Self-Centering) -
Steel/Cast Iron

Grades

IN2505
IN05S

Materials

■ Steel
■ Stainless Steel
■ Cast Iron
■ Non-Ferrous

WINTWIST™



Modular Quick Change Drilling with TopOn (M12) Adaption

- » Accommodates a wide range of applications using the TopOn (M12) connection.
- » Simplified set-up for multi-spindle and Swiss-type machines.
- » Compatible with existing GoldTwist tips.
- » Coolant thru.



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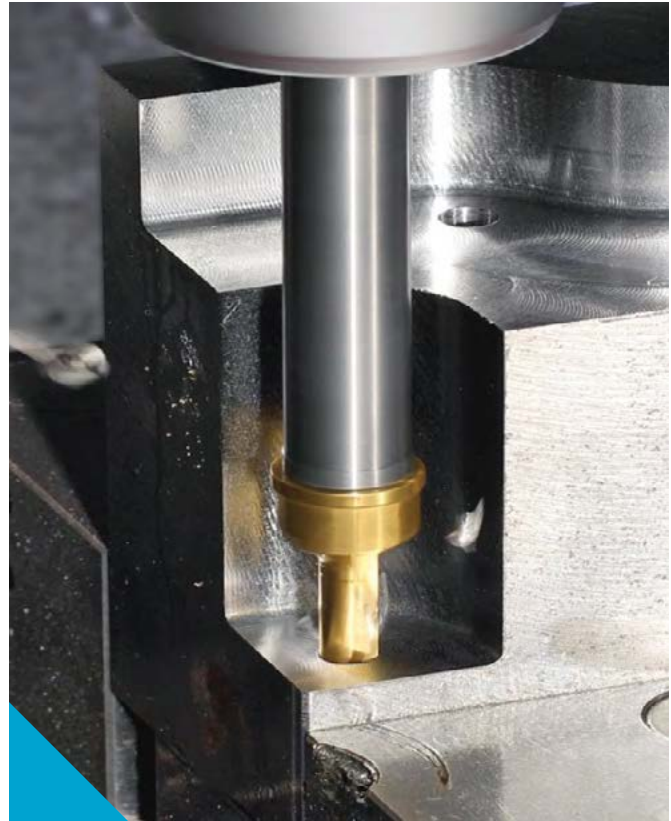
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Modular Qwik Change Drilling with TopOn Adaption

As multi-spindle and Swiss-type machines continue to be applied across the industry landscape, machining a variety of complex shapes requires the capability of mounting multiple tools in confined spaces. Additionally, tools need to be easy to mount and set. In response to these market demands, Ingersoll has introduced the modular **WinTwist** line, which utilizes existing GoldTwist tips and threaded TopOn connection.

Available in a wide variety of TopOn shanks, the modular **WinTwist** line enables simplified set-up and allows for ease of adapting to multi-spindle and Swiss-type machines. The threaded TopOn connection is available in a wide range of holders, including CAT, HSK, C-Adapters, steel and carbide straight shanks, ER collets, and Weldon shanks for multi-directional clamping. **WinTwist** with TopOn adaption also features a short overhang that greatly improves performance and productivity.



Features & Benefits

- Versatility - compatible with ALL existing TopOn (M12) holders.
- Modular design reduces set-up and tool change times.
- Shorter tool lengths allow for easy use on multi-spindle and Swiss-type machines.
- Positive stop insert pocket.
- Compatible with all GoldTwist **indexable tips**.
- Multiple diameters accommodated with a single body.
- Coolant thru.

M12 TopOn Mounting Lineup



Thread type: M12

**VIEW ALL
M12 TOPON
HOLDERS »**

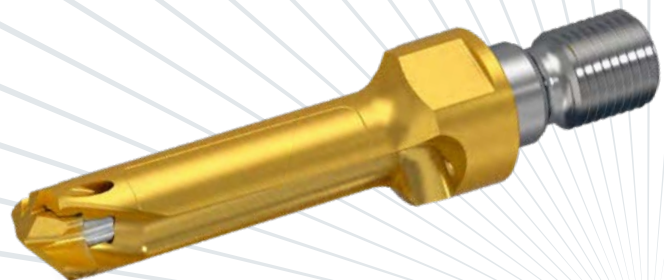
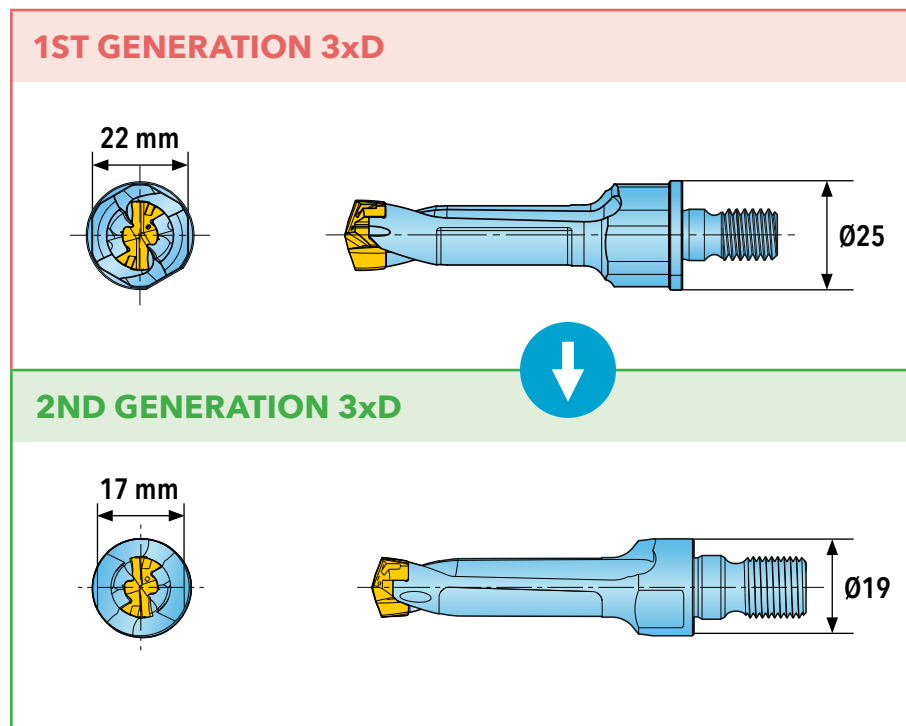
Click, tap, or scan

2xD, 4xD Expansion and 3xD Design Change NEW

TOPON ONLY

Ingersoll Cutting Tools has recently expanded the WinTwist (TopOn) replaceable tip drill line to include 2xD and 4xD options. With this expansion, **the existing 3xD bodies will include a design change**, reducing the flange diameter along with a redesigned flute that allows for a longer drilling depth.

Redesigned bodies will be made available as old 3xD stock depletes.

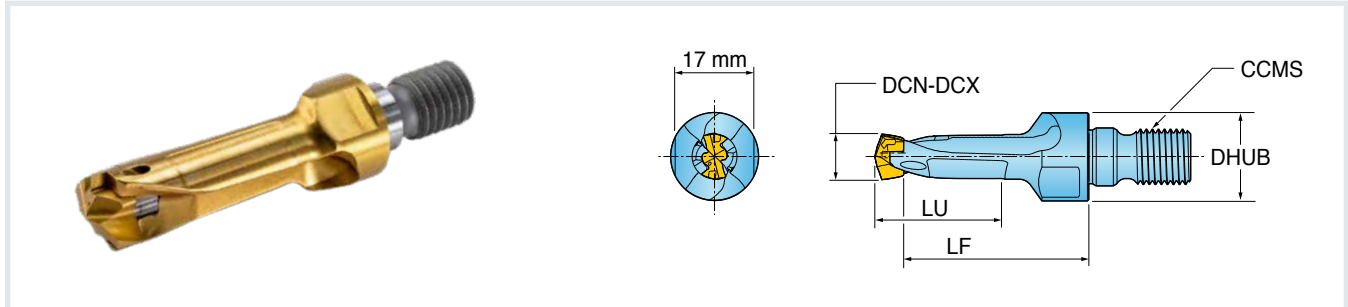


Drilling Coolant



2xD • Series TD_X7 NEW

TOPON

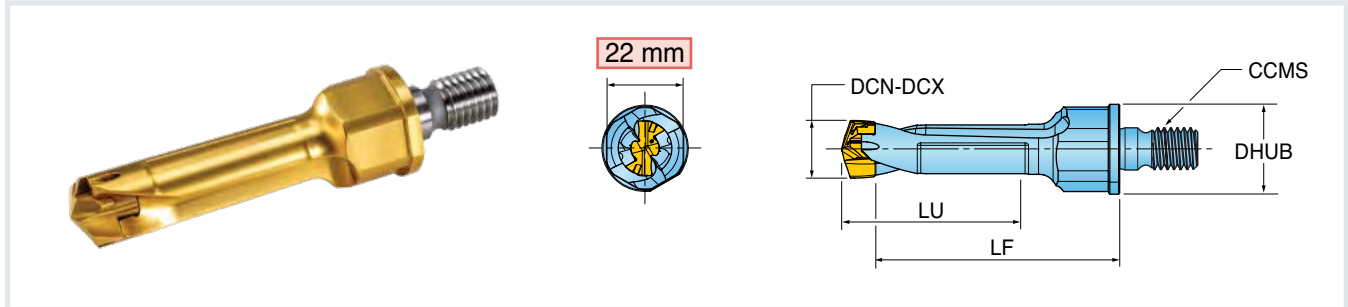


Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	CCMS Conn. Code Machine Side	DHUB Hub Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)						
TD1000012X7R00	0.3937 (10.00 mm)	0.4094 (10.40 mm)	10	1.130	1.575	M12	19.00	KTD10.0-19.9
TD1050021X7R00	0.4134 (10.50 mm)	0.4291 (10.90 mm)	10.5	1.170	1.614	M12	19.00	KTD10.0-19.9
TD1100022X7R00	0.4331 (11.00 mm)	0.4488 (11.40 mm)	11	1.224	1.653	M12	19.00	KTD10.0-19.9
TD1150023X7R00	0.4528 (11.50 mm)	0.4685 (11.90 mm)	11.5	1.264	1.693	M12	19.00	KTD10.0-19.9
TD1200024X7R00	0.4724 (12.00 mm)	0.4882 (12.40 mm)	12	1.319	1.732	M12	19.00	KTD10.0-19.9
TD1250025X7R00	0.4921 (12.50 mm)	0.5079 (12.90 mm)	12.5	1.358	1.771	M12	19.00	KTD10.0-19.9
TD1300026X7R00	0.5118 (13.00 mm)	0.5276 (13.40 mm)	13	1.421	1.811	M12	19.00	KTD10.0-19.9
TD1350027X7R00	0.5315 (13.50 mm)	0.5472 (13.90 mm)	13.5	1.461	1.851	M12	19.00	KTD10.0-19.9
TD1400028X7R00	0.5512 (14.00 mm)	0.5570 (14.50 mm)	14	1.524	1.892	M12	19.00	KTD10.0-19.9
TD1450029X7R00	0.5709 (14.50 mm)	0.5866 (14.90 mm)	14.5	1.563	1.931	M12	19.00	KTD10.0-19.9
TD1500030X7R00	0.5906 (15.00 mm)	0.6260 (15.90 mm)	15	1.622	1.967	M12	19.00	KTD10.0-19.9



3xD • Series TD_X7

TOPON - 1ST GENERATION » Available until stock is depleted. See next page for GEN 2.

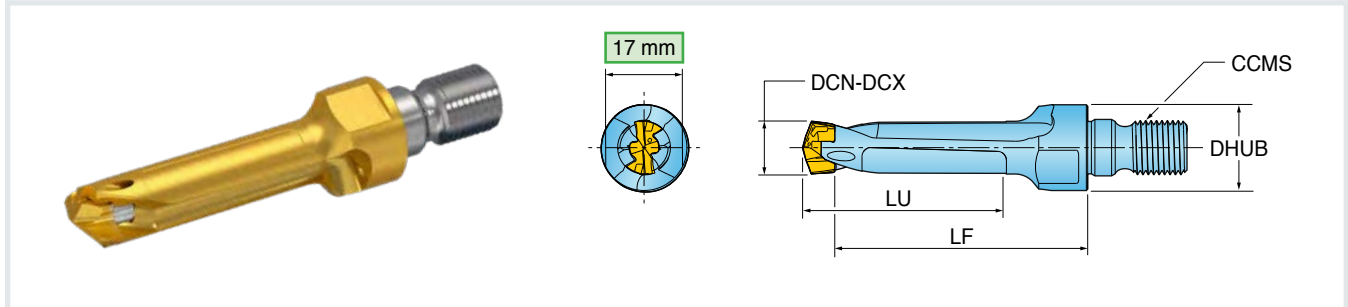


Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length (1st Gen)	LU Usable Length (2nd Gen)	LF Funct. Length	CCMS Conn. Code Machine Side	DHUB Hub. Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)							
TD0600018X7R00	0.2362 (6.00 mm)	0.2520 (6.40 mm)	6	0.748	1.004	1.496	M12	25.00	KTD6.0-9.9
TD0650020X7R00	0.2559 (6.50 mm)	0.2716 (6.90 mm)	6.5	0.815	1.071	1.575	M12	25.00	KTD6.0-9.9
TD0700021X7R00	0.2756 (7.00 mm)	0.2913 (7.40 mm)	7	0.866	1.220	1.614	M12	25.00	KTD6.0-9.9
TD0750023X7R00	0.2953 (7.50 mm)	0.3110 (7.90 mm)	7.5	0.929	1.185	1.693	M12	25.00	KTD6.0-9.9
TD0800024X7R00	0.3150 (8.00 mm)	0.3307 (8.40 mm)	8	0.992	1.248	1.731	M12	25.00	KTD6.0-9.9
TD0850026X7R00	0.3346 (8.50 mm)	0.3504 (8.90 mm)	8.5	1.055	1.311	1.771	M12	25.00	KTD6.0-9.9
TD0900027X7R00	0.3543 (9.00 mm)	0.3701 (9.40 mm)	9	1.157	1.374	1.850	M12	25.00	KTD6.0-9.9
TD0950029X7R00	0.3750 (9.50 mm)	0.3898 (9.80 mm)	9.5	1.177	1.433	1.929	M12	25.00	KTD6.0-9.9
TD1000030X7R00	0.3937 (10.00 mm)	0.4094 (10.40 mm)	10	1.240	1.496	1.968	M12	25.00	KTD10.0-19.9
TD1050032X7R00	0.4134 (10.50 mm)	0.4291 (10.90 mm)	10.5	1.303	1.559	2.047	M12	25.00	KTD10.0-19.9
TD1100033X7R00	0.4331 (11.00 mm)	0.4488 (11.40 mm)	11	1.366	1.622	2.086	M12	25.00	KTD10.0-19.9
TD1150035X7R00	0.4528 (11.50 mm)	0.4685 (11.90 mm)	11.5	1.429	1.685	2.165	M12	25.00	KTD10.0-19.9
TD1200036X7R00	0.4724 (12.00 mm)	0.4882 (12.40 mm)	12	1.488	1.774	2.204	M12	25.00	KTD10.0-19.9
TD1250038X7R00	0.4921 (12.50 mm)	0.5079 (12.90 mm)	12.5	1.551	1.807	2.243	M12	25.00	KTD10.0-19.9
TD1300039X7R00	0.5118 (13.00 mm)	0.5276 (13.40 mm)	13	1.614	1.870	2.323	M12	25.00	KTD10.0-19.9
TD1350041X7R00	0.5315 (13.50 mm)	0.5472 (13.90 mm)	13.5	1.677	1.933	2.401	M12	25.00	KTD10.0-19.9
TD1400042X7R00	0.5512 (14.00 mm)	0.5570 (14.50 mm)	14	1.736	1.992	2.442	M12	25.00	KTD10.0-19.9
TD1450044X7R00	0.5709 (14.50 mm)	0.5866 (14.90 mm)	14.5	1.799	2.055	2.521	M12	25.00	KTD10.0-19.9
TD1500045X7R00	0.5906 (15.00 mm)	0.6260 (15.90 mm)	15	1.862	2.118	2.557	M12	25.00	KTD10.0-19.9
TD1600048X7R00	0.6299 (16.00 mm)	0.6654 (16.90 mm)	16	1.984	2.240	2.677	M12	25.00	KTD10.0-19.9
TD1700051X7R00	0.6693 (17.00 mm)	0.7047 (17.90 mm)	17	2.110	2.366	2.795	M12	25.00	KTD10.0-19.9
TD1800054X7R00	0.7087 (18.00 mm)	0.7441 (18.90 mm)	18	2.232	2.488	2.913	M12	25.00	KTD10.0-19.9
TD1900057X7R00	0.7480 (19.00 mm)	0.7835 (19.90 mm)	19	2.358	2.614	3.031	M12	25.00	KTD10.0-19.9
TD2000060X7R00	0.7874 (20.00 mm)	0.8228 (20.90 mm)	20	2.480	2.736	3.149	M12	25.00	KTD20.0-D26.9



3xD • Series TD_X7 NEW

TOPON - 2ND GENERATION » Available after 1ST GENERATION stock is depleted.



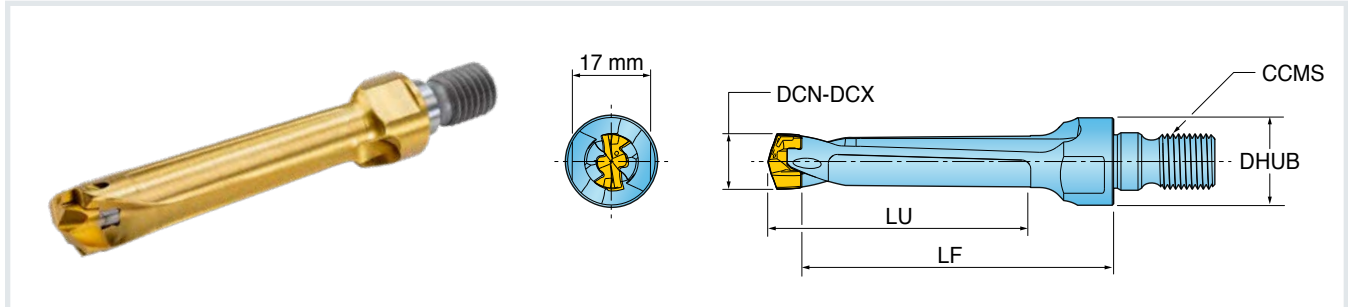
Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length (2nd Gen)	LF Functional Length	CCMS Conn. Code Machine Side	DHUB Hub Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)						
TD0600018X7R00	0.2362 (6.00 mm)	0.2520 (6.40 mm)	6	1.004	1.496	M12	19.00	KTD6.0-9.9
TD0650020X7R00	0.2559 (6.50 mm)	0.2716 (6.90 mm)	6.5	1.071	1.575	M12	19.00	KTD6.0-9.9
TD0700021X7R00	0.2756 (7.00 mm)	0.2913 (7.40 mm)	7	1.220	1.614	M12	19.00	KTD6.0-9.9
TD0750023X7R00	0.2953 (7.50 mm)	0.3110 (7.90 mm)	7.5	1.185	1.693	M12	19.00	KTD6.0-9.9
TD0800024X7R00	0.3150 (8.00 mm)	0.3307 (8.40 mm)	8	1.248	1.731	M12	19.00	KTD6.0-9.9
TD0850026X7R00	0.3346 (8.50 mm)	0.3504 (8.90 mm)	8.5	1.311	1.771	M12	19.00	KTD6.0-9.9
TD0900027X7R00	0.3543 (9.00 mm)	0.3701 (9.40 mm)	9	1.374	1.850	M12	19.00	KTD6.0-9.9
TD0950029X7R00	0.3750 (9.50 mm)	0.3898 (9.80 mm)	9.5	1.433	1.929	M12	19.00	KTD6.0-9.9
TD1000030X7R00	0.3937 (10.00 mm)	0.4094 (10.40 mm)	10	1.496	1.968	M12	19.00	KTD10.0-19.9
TD1050032X7R00	0.4134 (10.50 mm)	0.4291 (10.90 mm)	10.5	1.559	2.047	M12	19.00	KTD10.0-19.9
TD1100033X7R00	0.4331 (11.00 mm)	0.4488 (11.40 mm)	11	1.622	2.086	M12	19.00	KTD10.0-19.9
TD1150035X7R00	0.4528 (11.50 mm)	0.4685 (11.90 mm)	11.5	1.685	2.165	M12	19.00	KTD10.0-19.9
TD1200036X7R00	0.4724 (12.00 mm)	0.4882 (12.40 mm)	12	1.774	2.204	M12	19.00	KTD10.0-19.9
TD1250038X7R00	0.4921 (12.50 mm)	0.5079 (12.90 mm)	12.5	1.807	2.243	M12	19.00	KTD10.0-19.9
TD1300039X7R00	0.5118 (13.00 mm)	0.5276 (13.40 mm)	13	1.870	2.323	M12	19.00	KTD10.0-19.9
TD1350041X7R00	0.5315 (13.50 mm)	0.5472 (13.90 mm)	13.5	1.933	2.401	M12	19.00	KTD10.0-19.9
TD1400042X7R00	0.5512 (14.00 mm)	0.5570 (14.50 mm)	14	1.992	2.442	M12	19.00	KTD10.0-19.9
TD1450044X7R00	0.5709 (14.50 mm)	0.5866 (14.90 mm)	14.5	2.055	2.521	M12	19.00	KTD10.0-19.9
TD1500045X7R00	0.5906 (15.00 mm)	0.6260 (15.90 mm)	15	2.118	2.557	M12	19.00	KTD10.0-19.9
TD1600048X7R00	0.6299 (16.00 mm)	0.6654 (16.90 mm)	16	2.240	2.677	M12	19.00	KTD10.0-19.9
TD1700051X7R00	0.6693 (17.00 mm)	0.7047 (17.90 mm)	17	2.366	2.795	M12	19.00	KTD10.0-19.9
TD1800054X7R00	0.7087 (18.00 mm)	0.7441 (18.90 mm)	18	2.488	2.913	M12	19.00	KTD10.0-19.9
TD1900057X7R00	0.7480 (19.00 mm)	0.7835 (19.90 mm)	19	2.614	3.031	M12	19.00	KTD10.0-19.9
TD2000060X7R00	0.7874 (20.00 mm)	0.8228 (20.90 mm)	20	2.736	3.149	M12	19.00	KTD20.0-D26.9

Drilling Coolant



4xD • Series TD_X7 **NEW**

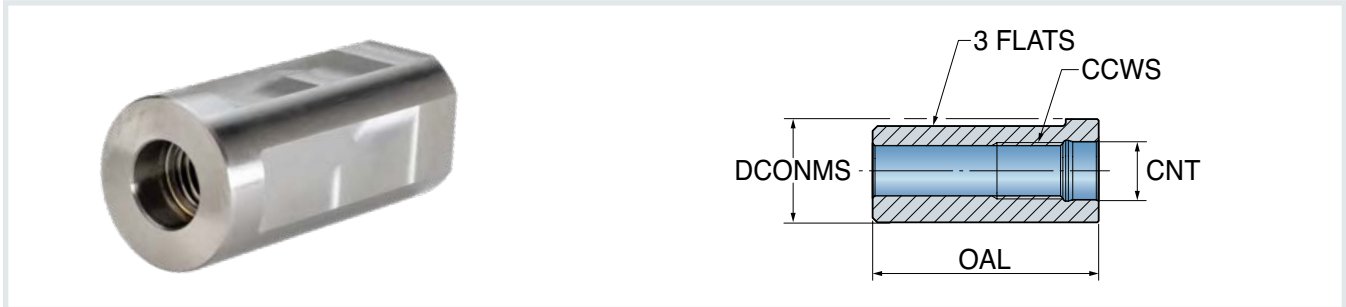
TOPON



Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	CCMS Conn. Code Machine Side	DHUB Hub Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)						
TD1000040X7R00	0.3937 (10.00 mm)	0.4094 (10.40 mm)	10	1.917	2.366	M12	19.00	KTD10.0-19.9
TD1050042X7R00	0.4134 (10.50 mm)	0.4291 (10.90 mm)	10.5	1.996	2.441	M12	19.00	KTD10.0-19.9
TD1100044X7R00	0.4331 (11.00 mm)	0.4488 (11.40 mm)	11	2.091	2.52	M12	19.00	KTD10.0-19.9
TD1150046X7R00	0.4528 (11.50 mm)	0.4685 (11.90 mm)	11.5	2.169	2.598	M12	19.00	KTD10.0-19.9
TD1200048X7R00	0.4724 (12.00 mm)	0.4882 (12.40 mm)	12	2.264	2.677	M12	19.00	KTD10.0-19.9
TD1250050X7R00	0.4921 (12.50 mm)	0.5079 (12.90 mm)	12.5	2.343	2.756	M12	19.00	KTD10.0-19.9
TD1300052X7R00	0.5118 (13.00 mm)	0.5276 (13.40 mm)	13	2.445	2.835	M12	19.00	KTD10.0-19.9
TD1350054X7R00	0.5315 (13.50 mm)	0.5472 (13.90 mm)	13.5	2.524	2.914	M12	19.00	KTD10.0-19.9
TD1400056X7R00	0.5512 (14.00 mm)	0.5570 (14.50 mm)	14	2.626	2.994	M12	19.00	KTD10.0-19.9
TD1450058X7R00	0.5709 (14.50 mm)	0.5866 (14.90 mm)	14.5	2.705	3.073	M12	19.00	KTD10.0-19.9
TD1500060X7R00	0.5906 (15.00 mm)	0.6260 (15.90 mm)	15	2.803	3.148	M12	19.00	KTD10.0-19.9

Series TSL_X7

SHANK SLEEVE



Part Number	CCWS Conn. Code Workpiece Side	DCONMS Conn. Dia. Machine Side	OAL Overall Length	CNT Coolant Entry Thread Size
INCH				
TSL19.05-X7	M12	0.750	1.42	5/16 UNF
TSL25.4-X7	M12	1.000	2.13	G 1/8
METRIC				
TSL16-X7	M12	16.00 mm	1.42	5/16 UNF
TSL20-X7	M12	20.00 mm	1.42	G 1/8
TSL22-X7	M12	22.00 mm	1.89	G 1/8
TSL25-X7	M12	25.00 mm	2.13	G 1/8

Operating Guidelines

ISO	Material	Condition	Tensile Strength (N/mm2)	Hardness HB	Material Group No.	Cutting Speed Vc (SFM)	Drill Diameter mm (inch)						
							6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9			
							(.236-.311)	(.315-.390)	(.394-.469)	(.472-.547)			
							Feed Rate - IPR (inches/rev)						
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	260-460	.003-.005	.005-.008	.006-.011	.007-.012		
		≥0.25%C	Annealed	650	190	2	260-430						
		<0.55%C	Quenched and tempered	850	250	3	260-400						
		≥0.55%C	Annealed	750	220	4	230-360						
		Quenched and tempered	1000	300	5	165-300							
	Low alloy steel and cast steel (less than 5% of alloying elements)	Quenched and tempered	Annealed	600	200	6	230-400	.003-.006	.005-.010	.005-.011	.006-.012		
			930	275	7	230-360							
			1000	300	8	165-300							
			1200	350	9	130-230							
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	165-300	.003-.005	.005-.008	.005-.008	.006-.010			
		Quenched and tempered	1100	325	11	130-260							
M	Stainless steel and cast steel	Ferritic/martensitic	680	200	12	130-230	.003-.004	.004-.006	.005-.007	.005-.008			
		Martensitic	820	240	13	130-230							
		Austenitic	600	180	14	100-230							
K	Grey cast iron (GG)	Ferritic/pearlitic	-	160	15	300-530	.005-.007	.006-.012	.008-.014	.010-.016			
		Pearlitic	-	250	16	260-460							
	Cast iron nodular (GGG)	Ferritic	-	180	17	300-595							
		Pearlitic	-	260	18	260-460							
	Malleable cast iron	Ferritic	-	130	19	300-530							
		Pearlitic	-	230	20	260-460							
N	Aluminum-wrought alloy	Not curable	-	60	21	300-725	.006-.012	.008-.014	.010-.016	.012-.018			
		Cured	-	100	22	300-725							
	Alum.- cast, alloyed	≤12% Si	Not curable	-	75	23					300-725		
		Cured	-	90	24	300-725							
	Copper alloys	>12% Si	High temperature	-	130	25					265-525		
		>1% Pb	Free cutting	-	110	26					300-725		
		Brass	-	90	27	300-725							
	Non-metallic	Electrolytic copper	-	100	28	300-725							
		Duroplastics, fiber plastics	-	-	29	-					-	-	-
S	High temp. alloys	Fe based	Annealed	-	200	31	100-200	.002-.003	.002-.004	.003-.005	.004-.006		
			Cured	-	280	32	70-165						
		Ni or Co based	Annealed	-	250	33	70-165						
			Cured	-	350	34	70-165						
			Cast	-	320	35	70-165						
	Titanium and Ti alloys	-	Rm 400	-	36	70-165							
		Alpa+beta alloys cured	Rm 1050	-	37	70-165							
H	Hardened steel	Hardened	-	55HRC	38	70-165	.002-.003	.002-.005	.003-.006	.004-.007			
		Hardened	-	60HRC	39	70-165							
	Chilled cast iron	Cast	-	400	40	-					-	-	-
	Cast iron nodular (GGG)	Hardened	-	55HRC	41	-					-	-	-

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases.

Operating Guidelines (continued)

ISO	Material	Condition	Tensile Strength (N/mm ²)	Hardness HB	Material Group No.	Cutting Speed Vc (SFM)	Drill Diameter mm (inch)					
							14.0-15.9	16.0-19.9	20.0-25.9			
							(.551-.626)	(.630-.783)	(.787-1.019)			
							Feed Rate - IPR (inches/rev)					
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	260-460	.008-.014	.010-.018	.010-.018		
		≥0.25%C	Annealed	650	190	2	260-430					
		<0.55%C	Quenched and tempered	850	250	3	260-400					
		≥0.55%C	Annealed	750	220	4	230-360					
			Quenched and tempered	1000	300	5	165-300					
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed		600	200	6	230-400	.007-.014	.009-.016	.010-.018		
			Quenched and tempered		930	275	7				230-360	
					1000	300	8				165-300	
					1200	350	9				130-230	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	165-300	.007-.011	.008-.012	.009-.013			
		Quenched and tempered	1100	325	11	130-260						
M	Stainless steel and cast steel	Ferritic/martensitic	680	200	12	130-230	.006-.009	.006-.010	.007-.012			
		Martensitic	820	240	13	130-230						
		Austenitic	600	180	14	100-230						
K	Grey cast iron (GG)	Ferritic/pearlitic	-	160	15	300-530	.012-.018	.014-.022	.014-.024			
		Pearlitic	-	250	16	260-460						
	Cast iron nodular (GGG)	Ferritic	-	180	17	300-595						
		Pearlitic	-	260	18	260-460						
	Malleable cast iron	Ferritic	-	130	19	300-530						
		Pearlitic	-	230	20	260-460						
N	Aluminum-wrought alloy	Not curable	-	60	21	300-725	.014-.020	.016-.024	.018-.028			
		Cured	-	100	22	300-725						
	Alum.-cast, alloyed	≤12% Si	Not curable	-	75	23				300-725		
			Cured	-	90	24				300-725		
	Copper alloys	>12% Si	High temperature	-	130	25				265-525		
		>1% Pb	Free cutting	-	110	26				300-725		
			Brass	-	90	27				300-725		
			Electrolitic copper	-	100	28				300-725		
	Non-metallic	Duroplastics, fiber plastics	-	-	29	-				-	-	-
		Hard rubber	-	-	30	-				-	-	-
S	High temp. alloys	Fe based	Annealed	-	200	31	100-200	.005-.007	.005-.008	.006-.009		
			Cured	-	280	32	70-165					
		Ni or Co based	Annealed	-	250	33	70-165					
			Cured	-	350	34	70-165					
			Cast	-	320	35	70-165					
	Titanium and Ti alloys	-	Rm 400	-	36	70-165						
		Alpa+bata alloys cured	Rm 1050	-	37	70-165						
H	Hardened steel	Hardened	-	55HRC	38	70-165	.005-.008	.006-.009	.006-.010			
		Hardened	-	60HRC	39	70-165						
	Chilled cast iron	Cast	-	400	40	-				-	-	
	Cast iron nodular (GGG)	Hardened	-	55HRC	41	-				-	-	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases.