

HOLEMAKING

Featuring
TOPON adaption

Diameter Range

0.2362-0.8228"
6.0-20.9 mm

Body

2xD **NEW**

3xD

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

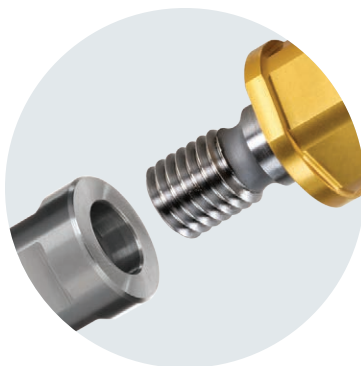
Steel

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.



See it in
action! »



WINSPEED™
ADVANCED MACHINING

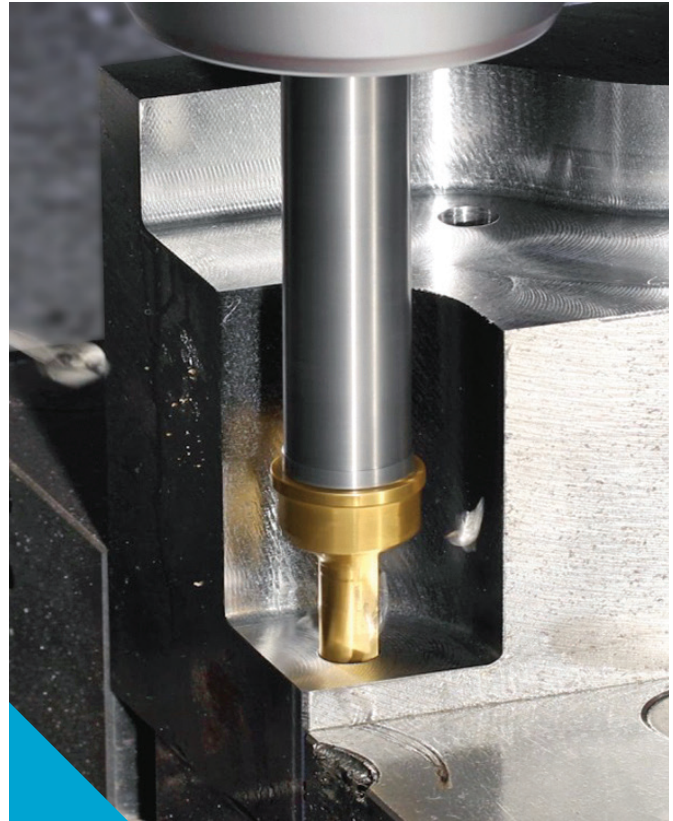
ingersoll-imc.com



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.

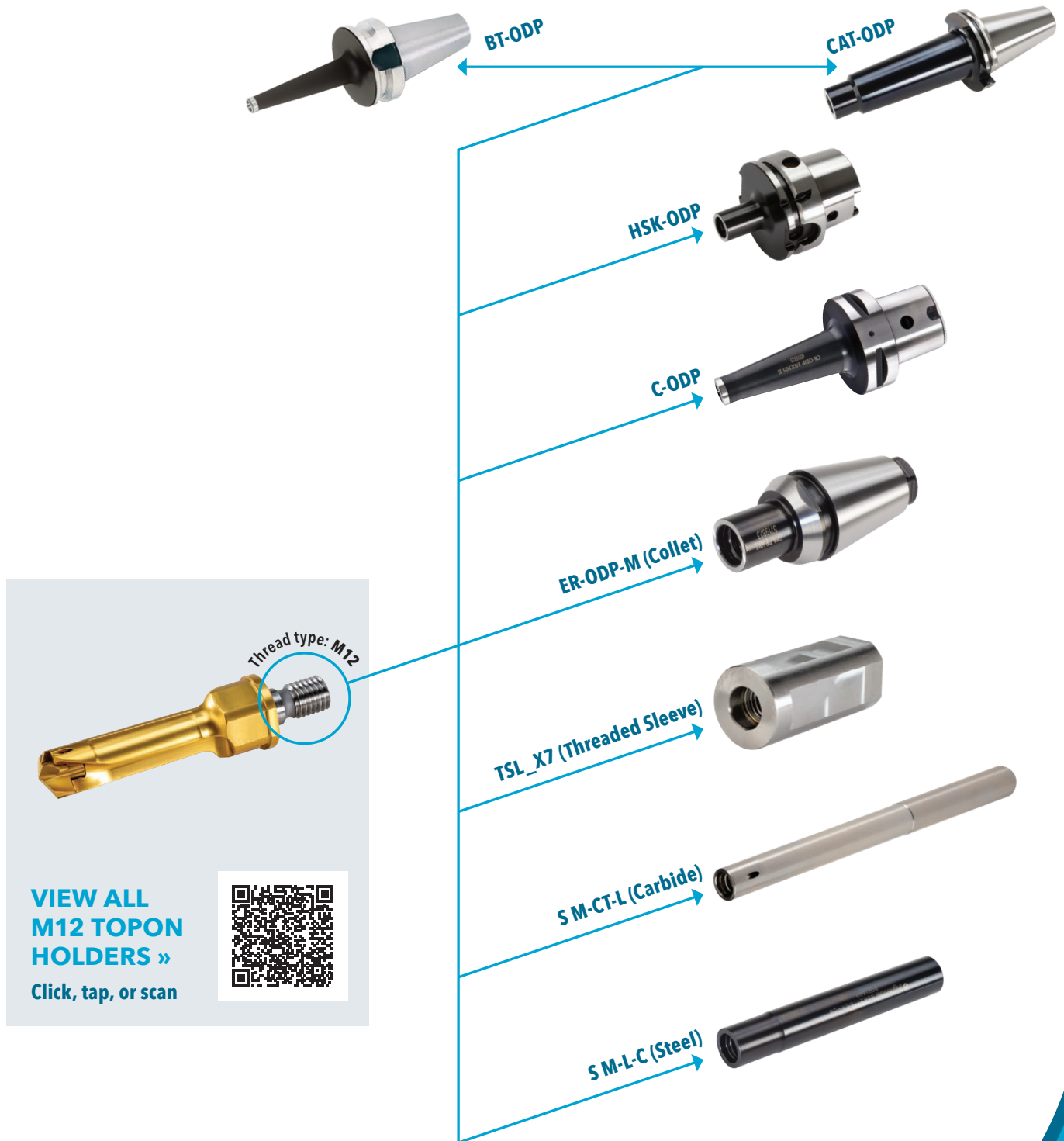
Available in a wide variety of TopOn shanks, the modular **WinTwist** line enables simplified set-up and allows for ease of adapting to multi-spindle and Swiss-type machines. The threaded TopOn connection is available in a wide range of holders, including CAT, HSK, C-Adapters, steel and carbide straight 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

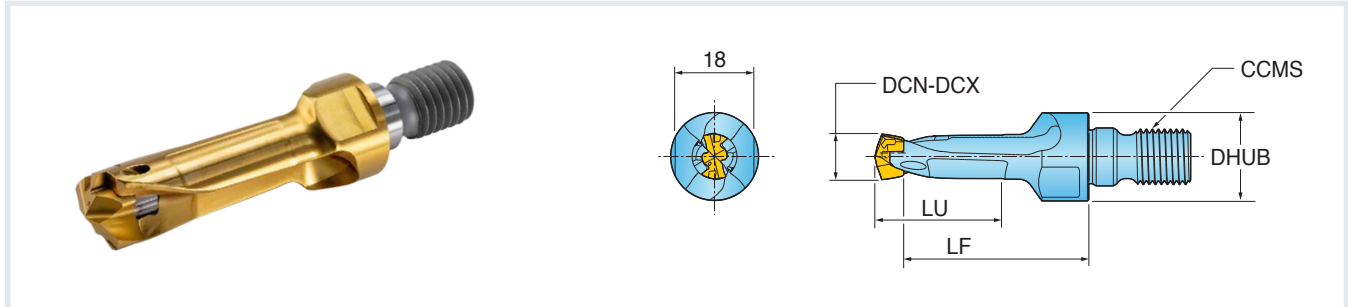


Drilling Coolant



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

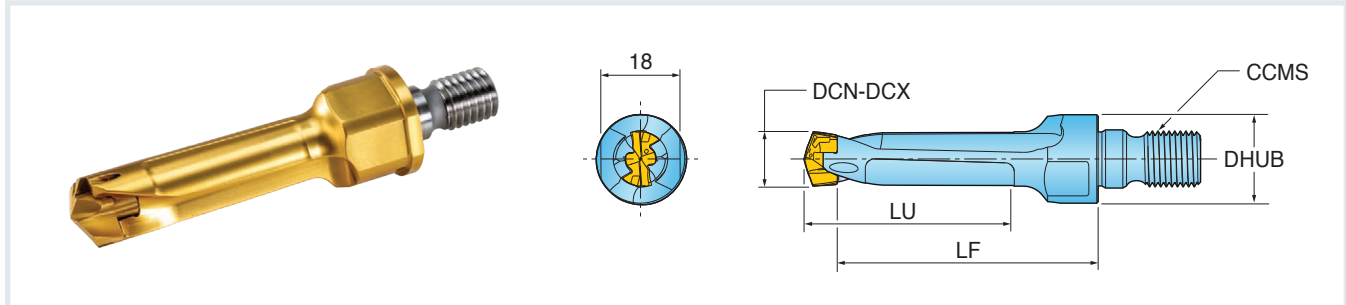
Drilling

Coolant



3xD • Series TD_X7

TOPON



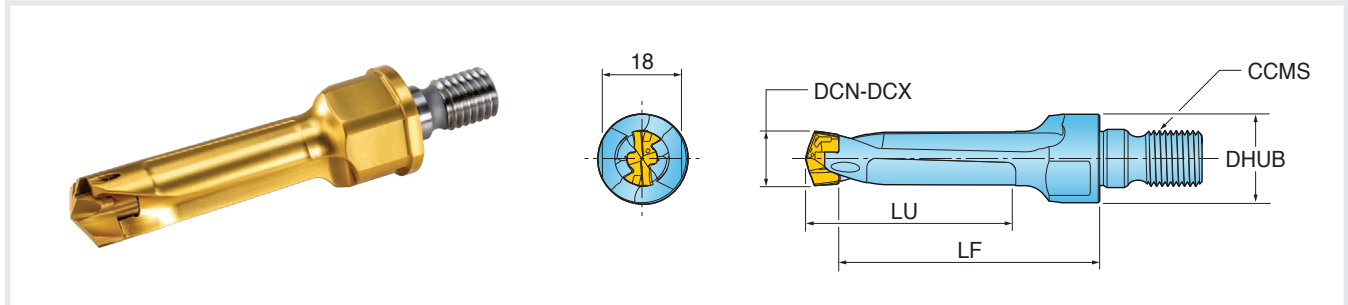
Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	CCMS Conn. Code Machine Side	DHUB Hub Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)						
TD0600018X7R00	0.2362 (6.00 mm)	0.2520 (6.40 mm)	6	0.7480	1.496	M12	25.00	KTD6.0-9.9
TD0650020X7R00	0.2559 (6.50 mm)	0.2716 (6.90 mm)	6.5	0.8149	1.575	M12	25.00	KTD6.0-9.9
TD0700021X7R00	0.2756 (7.00 mm)	0.2913 (7.40 mm)	7	0.8661	1.614	M12	25.00	KTD6.0-9.9
TD0750023X7R00	0.2953 (7.50 mm)	0.3110 (7.90 mm)	7.5	0.9291	1.693	M12	25.00	KTD6.0-9.9
TD0800024X7R00	0.3150 (8.00 mm)	0.3307 (8.40 mm)	8	0.9921	1.731	M12	25.00	KTD6.0-9.9
TD0850026X7R00	0.3346 (8.50 mm)	0.3504 (8.90 mm)	8.5	1.0551	1.771	M12	25.00	KTD6.0-9.9
TD0900027X7R00	0.3543 (9.00 mm)	0.3701 (9.40 mm)	9	1.1574	1.85	M12	25.00	KTD6.0-9.9
TD0950029X7R00	0.3750 (9.50 mm)	0.3898 (9.80 mm)	9.5	1.1771	1.929	M12	25.00	KTD6.0-9.9
TD1000030X7R00	0.3937 (10.00 mm)	0.4094 (10.40 mm)	10	1.2401	1.968	M12	25.00	KTD10.0-19.9
TD1050032X7R00	0.4134 (10.50 mm)	0.4291 (10.90 mm)	10.5	1.3031	2.047	M12	25.00	KTD10.0-19.9
TD1100033X7R00	0.4331 (11.00 mm)	0.4488 (11.40 mm)	11	1.3661	2.086	M12	25.00	KTD10.0-19.9
TD1150035X7R00	0.4528 (11.50 mm)	0.4685 (11.90 mm)	11.5	1.4291	2.165	M12	25.00	KTD10.0-19.9

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3xD • Series TD_X7 (continued)

TOPON



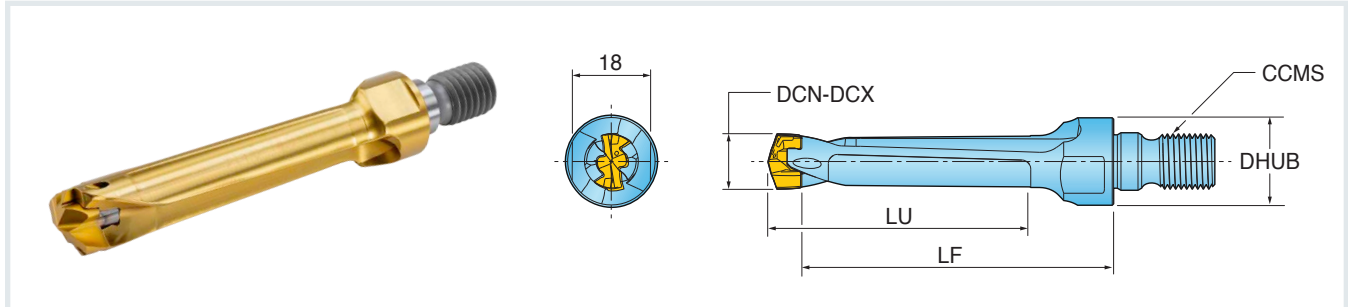
Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	CCMS Conn. Code Machine Side	DHUB Hub Dia. (metric)	Clamping Key
	INCH (MM)	INCH (MM)						
TD1200036X7R00	0.4724 (12.00 mm)	0.4882 (12.40 mm)	12	1.4881	2.204	M12	25.00	KTD10.0-19.9
TD1250038X7R00	0.4921 (12.50 mm)	0.5079 (12.90 mm)	12.5	1.5511	2.243	M12	25.00	KTD10.0-19.9
TD1300039X7R00	0.5118 (13.00 mm)	0.5276 (13.40 mm)	13	1.6141	2.323	M12	25.00	KTD10.0-19.9
TD1350041X7R00	0.5315 (13.50 mm)	0.5472 (13.90 mm)	13.5	1.6771	2.401	M12	25.00	KTD10.0-19.9
TD1400042X7R00	0.5512 (14.00 mm)	0.5570 (14.50 mm)	14	1.7362	2.442	M12	25.00	KTD10.0-19.9
TD1450044X7R00	0.5709 (14.50 mm)	0.5866 (14.90 mm)	14.5	1.7992	2.521	M12	25.00	KTD10.0-19.9
TD1500045X7R00	0.5906 (15.00 mm)	0.6260 (15.90 mm)	15	1.8622	2.557	M12	25.00	KTD10.0-19.9
TD1600048X7R00	0.6299 (16.00 mm)	0.6654 (16.90 mm)	16	1.9842	2.677	M12	25.00	KTD10.0-19.9
TD1700051X7R00	0.6693 (17.00 mm)	0.7047 (17.90 mm)	17	2.1102	2.795	M12	25.00	KTD10.0-19.9
TD1800054X7R00	0.7087 (18.00 mm)	0.7441 (18.90 mm)	18	2.2322	2.913	M12	25.00	KTD10.0-19.9
TD1900057X7R00	0.7480 (19.00 mm)	0.7835 (19.90 mm)	19	2.3582	3.031	M12	25.00	KTD10.0-19.9
TD2000060X7R00	0.7874 (20.00 mm)	0.8228 (20.90 mm)	20	2.4803	3.149	M12	25.00	KTD20.0-D26.9

Drilling Coolant



4xD • Series TD_X7 NEW

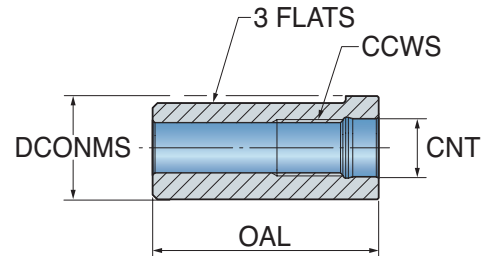
TOPON



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			
		>12% Si	High temperature	-	130	25					265-525			
	Copper alloys	>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	.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	.002-.005					.003-.006	.004-.007	
		Alpa+bata 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/mm2)	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						
		>12% Si	High temperature	-	130	25	265-525						
	Copper alloys	>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	.005-.008	.006-.009	.006-.010			
			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.