

Taegu Holmaking



Taegu Holemaking CONTENTS

New	GOLD•RUSH	- Grades	085
New	DRILL•RUSH	- New head-changeable Drill	086
New	TOPDRILL	- New generation of indexable drill	090
Expansion	T-DRILL	- Large diameter 3.5xD	095
New	TOP^{DR}DRILL	- Deep hole drilling for conventional horizontal machining centres or lathes	098
New	T-GUN	- Exchangeable point gun drills	101
New	TOPCAP	- Grooving with the standard T-CAP holder	105



GOLD RUSH Grades

The ingenious solution that takes cutting tool materials to another level

Features

- Improved adhesion and insert chipping resistance
- Stable and extended tool life in continuous and interrupted cutting operations
- Reduced cutting friction and minimized built-up edge on exotic materials
- High quality surface finish on the work pieces

Gold Rush Grades for Holemaking Applications

TT9080 (PVD) General purpose

- Sub-micron grade with high hardness and toughness
- New Multi-layered coating for higher chipping resistance
- Special surface treatment for reduction of cutting friction & improvement of chipping resistance
- First choice for general application

TT9300 (CVD) Steel applications

- Excellent wear resistance by fine structure coating layer
- Excellent chipping resistance by special surface treatment
- Only for outer pocket



DRILL-RUSH

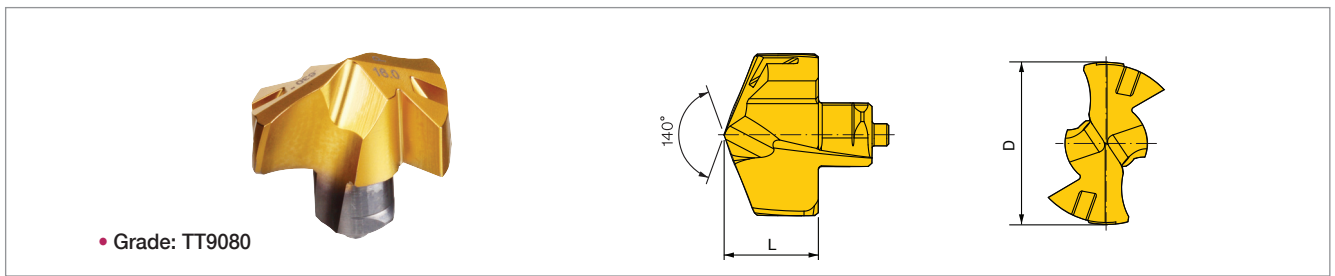
New Head-Changeable Drill

Features

- Quick Change System: The innovative clamping mechanism with special key enables head indexing on the machine with ease.
- Flexibility: A series of differently sized head diameters can be coupled with a drill body.
- Twisted Coolant Channel: Thanks to the twisted coolant structure, chip evacuation is improved.
- Smooth Chip Flow: Optimised & polished chip gullet guarantees excellent chip evacuation.
- Rigid connection: Innovative head clamping system with rigid connection improves performance and increases the number of head indexes.
- New Grade TT9080: New grade with multiple layer structure prolongs tool life.

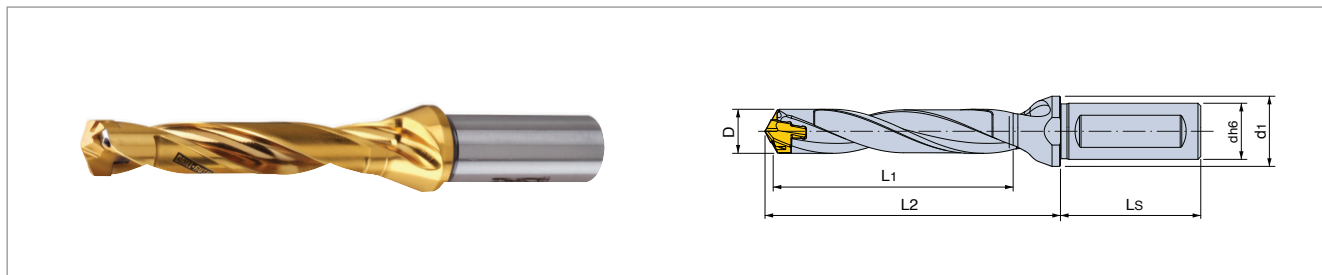


Insert Drill Head



Designation	D	L	Pocket Size	Designation	D	L	Pocket Size
TCD-100-P	10.0	6.2	10	TCD-150-P	15.0	8.7	15
TCD-101-P	10.1	6.2	10	TCD-151-P	15.1	8.7	15
TCD-102-P	10.2	6.2	10	TCD-152-P	15.2	8.7	15
TCD-103-P	10.3	6.2	10	TCD-153-P	15.3	8.7	15
TCD-104-P	10.4	6.2	10	TCD-154-P	15.4	8.7	15
TCD-105-P	10.5	6.2	10	TCD-155-P	15.5	8.7	15
TCD-106-P	10.6	6.2	10	TCD-156-P	15.6	8.7	15
TCD-107-P	10.7	6.2	10	TCD-157-P	15.7	8.7	15
TCD-108-P	10.8	6.2	10	TCD-158-P	15.8	8.7	15
TCD-109-P	10.9	6.2	10	TCD-159-P	15.9	8.7	15
TCD-110-P	11.0	6.6	11	TCD-160-P	16.0	9.3	16
TCD-111-P	11.1	6.6	11	TCD-161-P	16.1	9.3	16
TCD-112-P	11.2	6.6	11	TCD-162-P	16.2	9.3	16
TCD-113-P	11.3	6.6	11	TCD-163-P	16.3	9.3	16
TCD-114-P	11.4	6.6	11	TCD-164-P	16.4	9.3	16
TCD-115-P	11.5	6.6	11	TCD-165-P	16.5	9.3	16
TCD-116-P	11.6	6.6	11	TCD-166-P	16.6	9.3	16
TCD-117-P	11.7	6.6	11	TCD-167-P	16.7	9.3	16
TCD-118-P	11.8	6.6	11	TCD-168-P	16.8	9.3	16
TCD-119-P	11.9	6.6	11	TCD-169-P	16.9	9.3	16
TCD-120-P	12.0	7.0	12	TCD-170-P	17.0	9.9	17
TCD-121-P	12.1	7.0	12	TCD-171-P	17.1	9.9	17
TCD-122-P	12.2	7.0	12	TCD-172-P	17.2	9.9	17
TCD-123-P	12.3	7.0	12	TCD-173-P	17.3	9.9	17
TCD-124-P	12.4	7.0	12	TCD-174-P	17.4	9.9	17
TCD-125-P	12.5	7.0	12	TCD-175-P	17.5	9.9	17
TCD-126-P	12.6	7.0	12	TCD-176-P	17.6	9.9	17
TCD-127-P	12.7	7.0	12	TCD-177-P	17.7	9.9	17
TCD-128-P	12.8	7.0	12	TCD-178-P	17.8	9.9	17
TCD-129-P	12.9	7.0	12	TCD-179-P	17.9	9.9	17
TCD-130-P	13.0	7.6	13	TCD-180-P	18.0	10.5	18
TCD-131-P	13.1	7.6	13	TCD-181-P	18.1	10.5	18
TCD-132-P	13.2	7.6	13	TCD-182-P	18.2	10.5	18
TCD-133-P	13.3	7.6	13	TCD-183-P	18.3	10.5	18
TCD-134-P	13.4	7.6	13	TCD-184-P	18.4	10.5	18
TCD-135-P	13.5	7.6	13	TCD-185-P	18.5	10.5	18
TCD-136-P	13.6	7.6	13	TCD-186-P	18.6	10.5	18
TCD-137-P	13.7	7.6	13	TCD-187-P	18.7	10.5	18
TCD-138-P	13.8	7.6	13	TCD-188-P	18.8	10.5	18
TCD-139-P	13.9	7.6	13	TCD-189-P	18.9	10.5	18
TCD-140-P	14.0	8.1	14	TCD-190-P	19.0	11.0	19
TCD-141-P	14.1	8.1	14	TCD-191-P	19.1	11.0	19
TCD-142-P	14.2	8.1	14	TCD-192-P	19.2	11.0	19
TCD-143-P	14.3	8.1	14	TCD-193-P	19.3	11.0	19
TCD-144-P	14.4	8.1	14	TCD-194-P	19.4	11.0	19
TCD-145-P	14.5	8.1	14	TCD-195-P	19.5	11.0	19
TCD-146-P	14.6	8.1	14	TCD-196-P	19.6	11.0	19
TCD-147-P	14.7	8.1	14	TCD-197-P	19.7	11.0	19
TCD-148-P	14.8	8.1	14	TCD-198-P	19.8	11.0	19
TCD-149-P	14.9	8.1	14	TCD-199-P	19.9	11.0	19

Holder



3xD

Designation	D	L1	d	d1	L2	LS	Pocket Size	Key
TCD 100-104-16T3-3D	10.0-10.4	30	16	20	46.2	48	10	K TCD 10.0-19.9
TCD 105-109-16T3-3D	10.5-10.9	32	16	20	47.7	48	10	
TCD 110-114-16T3-3D	11.0-11.4	33	16	20	49.6	48	11	
TCD 115-119-16T3-3D	11.5-11.9	35	16	20	51.1	48	11	
TCD 120-124-16T3-3D	12.0-12.4	36	16	20	53.0	48	12	
TCD 125-129-16T3-3D	12.5-12.9	37	16	20	54.5	48	12	
TCD 130-134-16T3-3D	13.0-13.4	39	16	20	56.6	48	13	
TCD 135-139-16T3-3D	13.5-13.9	41	16	20	58.1	48	13	
TCD 140-144-16T3-3D	14.0-14.4	42	16	20	62.1	48	14	
TCD 145-149-16T3-3D	14.5-14.9	44	16	20	63.6	48	14	
TCD 150-159-20T3-3D	15.0-15.9	45	20	25	68.7	50	15	
TCD 160-169-20T3-3D	16.0-16.9	48	20	25	73.3	50	16	
TCD 170-179-20T3-3D	17.0-17.9	51	20	25	77.9	50	17	
TCD 180-189-25T2-3D	18.0-18.9	54	25	32	82.5	56	18	
TCD 190-199-25T2-3D	19.0-19.9	57	25	32	87.0	56	19	

5xD

Designation	D	L1	d	d1	L2	LS	Pocket Size	Key
TCD 100-104-16T3-5D	10.0-10.4	50	16	20	66.2	48	10	K TCD 10.0-19.9
TCD 105-109-16T3-5D	10.5-10.9	53	16	20	68.7	48	10	
TCD 110-114-16T3-5D	11.0-11.4	55	16	20	71.6	48	11	
TCD 115-119-16T3-5D	11.5-11.9	58	16	20	74.1	48	11	
TCD 120-124-16T3-5D	12.0-12.4	60	16	20	77.0	48	12	
TCD 125-129-16T3-5D	12.5-12.9	62	16	20	79.5	48	12	
TCD 130-134-16T3-5D	13.0-13.4	65	16	20	82.6	48	13	
TCD 135-139-16T3-5D	13.5-13.9	68	16	20	85.1	48	13	
TCD 140-144-16T3-5D	14.0-14.4	70	16	20	90.2	48	14	
TCD 145-149-16T3-5D	14.5-14.9	73	16	20	92.7	48	14	
TCD 150-159-20T3-5D	15.0-15.9	75	20	25	98.7	50	15	
TCD 160-169-20T3-5D	16.0-16.9	80	20	25	105.3	50	16	
TCD 170-179-20T3-5D	17.0-17.9	85	20	25	111.9	50	17	
TCD 180-189-25T2-5D	18.0-18.9	90	25	32	118.5	56	18	
TCD 190-199-25T2-5D	19.0-19.9	95	25	32	125.0	56	19	

8xD

Designation	D	L1	d	d1	L2	LS	Pocket Size	Key
TCD 100-104-16T3-8D	10.0-10.4	80	16	20	96.2	48	10	K TCD 10.0-19.9
TCD 105-109-16T3-8D	10.5-10.9	84	16	20	100.2	48	10	
TCD 110-114-16T3-8D	11.0-11.4	88	16	20	104.6	48	11	
TCD 115-119-16T3-8D	11.5-11.9	92	16	20	108.6	48	11	
TCD 120-124-16T3-8D	12.0-12.4	96	16	20	113.0	48	12	
TCD 125-129-16T3-8D	12.5-12.9	100	16	20	117.0	48	12	
TCD 130-134-16T3-8D	13.0-13.4	104	16	20	121.6	48	13	
TCD 135-139-16T3-8D	13.5-13.9	108	16	20	125.6	48	13	
TCD 140-144-16T3-8D	14.0-14.4	112	16	20	132.1	48	14	
TCD 145-149-16T3-8D	14.5-14.9	116	16	20	136.2	48	14	
TCD 150-159-20T3-8D	15.0-15.9	120	20	25	143.7	50	15	
TCD 160-169-20T3-8D	16.0-16.9	128	20	25	153.3	50	16	
TCD 170-179-20T3-8D	17.0-17.9	136	20	25	162.9	50	17	
TCD 180-189-25T2-8D	18.0-18.9	144	25	32	172.5	56	18	
TCD 190-199-25T2-8D	19.0-19.9	152	25	32	182.0	56	19	

Recommended cutting condition

							DRILL-RUSH			
							Feed vs. Drill Diameter			
ISO	Material	Condition	Tensile Strength Rm [N/mm ²]	Hardness HB	Mtl. No.	V m/min	D=	D=	D=	D=
							10-11.9	12-13.9	14-15.9	16-19.9
							mm/rev			
P	Non-alloy steel and cast steel, free cutting steel	< 0,25 %C	Annealed	420	125	1	0.15 0.21 0.28	0.18 0.24 0.30	0.20 0.27 0.35	0.25 0.35 0.45
		>= 0,25 %C	Annealed	650	190	2				
		< 0,55 %C	Quenched and tempered	850	250	3				
		>= 0,55 %C	Annealed	750	220	4				
			Quenched and tempered	1000	300	5				
	Low alloy steel and cast steel (less than 5% alloying elements)	Annealed		600	200	6	0.14 0.21 0.28	0.16 0.24 0.32	0.18 0.26 0.35	0.23 0.31 0.40
				930	275	7				
			Quenched and tempered	1000	300	8				
				1200	350	9				
	High alloy steel, cast steel and tool steel	Annealed		680	200	10	0.12 0.17 0.22	0.15 0.20 0.25	0.18 0.23 0.28	0.20 0.25 0.30
		Quenched and tempered		1100	325	11				
M	Stainless steel and cast steel	Ferritic/martensitic		680	200	12	0.12	0.14	0.16	0.16
		Martensitic		820	240	13	0.15	0.17	0.20	0.21
		Austenitic		600	180	14	0.18	0.20	0.24	0.26
K	Cast iron nodular (GGG)	Ferritic/pearlitic			180	15	0.20 0.27 0.35	0.25 0.32 0.40	0.30 0.37 0.45	0.35 0.45 0.55
		Pearlitic			260	16				
	Grey cast iron (GG)	Ferritic		160	17					
		Pearlitic		250	18					
	Malleable cast iron	Ferritic		130	19					
Pearlitic			230	20						
N	Aluminum-wrought alloy	Not curable			60	21	0.25 0.32 0.40	0.30 0.37 0.45	0.35 0.42 0.50	0.40 0.50 0.60
		Cured			100					
	Aluminum-cast, alloyed	<=12% Si	Not curable		75	23				
		Cured		90	24					
	Copper alloys	>12% Si	High temperature		130	25				
		>1% Pb	Free cutting		110	26				
			Brass		90	27				
			Electrolitic copper		100	28				
	Non-metallic	Duroplastics, fiber plastics				29				
		Hard rubber				30				
S	High temp. alloys Fe based	Annealed			200	31	0.08 0.10 0.13	0.10 0.12 0.15	0.12 0.15 0.18	0.12 0.16 0.20
		Cured			280					
	Super alloys Ni or Co based	Annealed		250	33					
		Cured		350	34					
		Cast		320	35					
	Titanium, Ti alloys		Rm 400			36				
		Alpha+beta alloys cured	Rm 1050			37				
H	Hardened steel	Hardened			55 HRc	38	0.08 0.11 0.15	0.10 0.14 0.18	0.12 0.16 0.20	0.14 0.18 0.22
		Hardened			60 HRc					
	Chilled cast iron	Cast		400	40					
	Cast iron	Hardened		55 HRc	41					

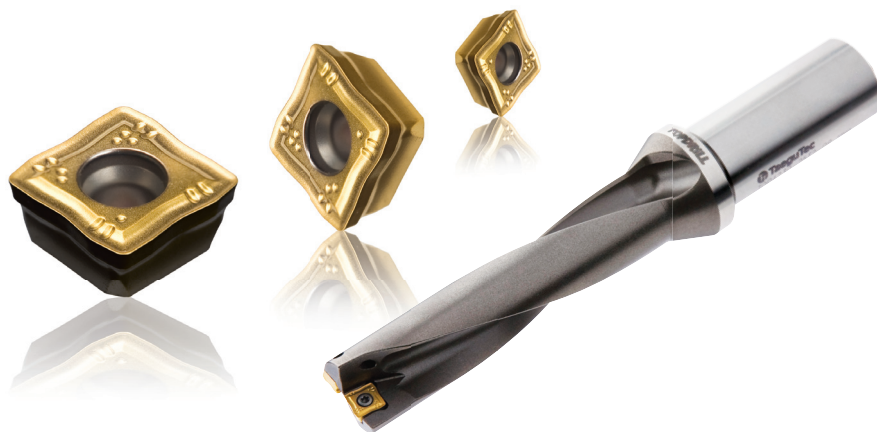
■ Recommended cutting data



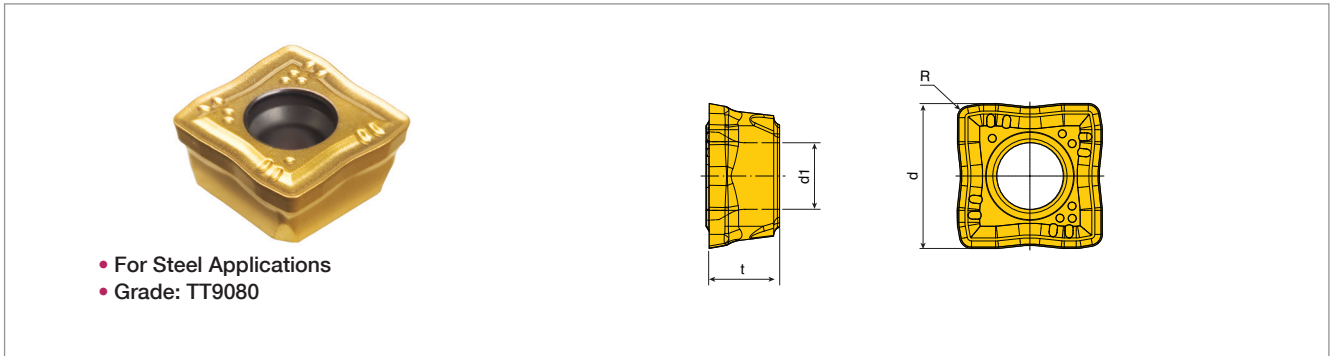
TOPDRILL New generation of indexable drill

Features

- 4 cornered economical insert design
- The same insert is applicable for both internal and external pockets
- Improved machinability due to ideally configured cutting edge
- Applicable to most materials including low carbon and mild steel
- Helix type coolant design enabling excellent chip evacuation and high precision hole making
- Enhanced insert durability with new grade (TT9080)

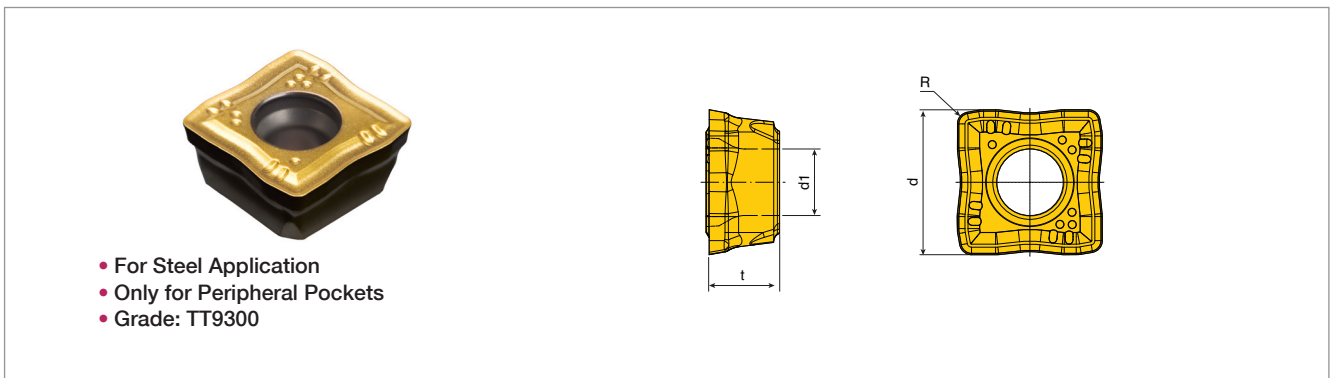


Insert



- For Steel Applications
- Grade: TT9080

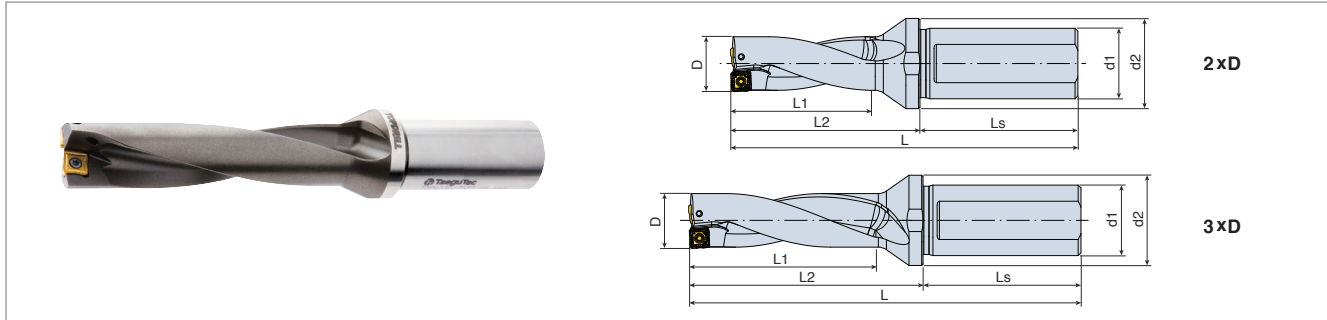
Designation	Dimension (mm)				Drill Range
	d	t	R	d1	
SOMT 050204 DP	4.9	2.38	0.4	2.25	14.0 - 16.4
SOMT 060204 DP	5.7	2.38	0.4	2.60	16.5 - 19.4
SOMT 070306 DP	6.8	2.80	0.6	2.60	19.5 - 22.4
SOMT 08T306 DP	7.9	3.97	0.6	2.85	22.5 - 26.4



- For Steel Application
- Only for Peripheral Pockets
- Grade: TT9300

Designation	Dimension (mm)				Drill Range
	d	t	R	d1	
SOMT 050204 DP	4.9	2.38	0.4	2.25	14.0 - 16.4
SOMT 060204 DP	5.7	2.38	0.4	2.60	16.5 - 19.4
SOMT 070306 DP	6.8	2.80	0.6	2.60	19.5 - 22.4
SOMT 08T306 DP	7.9	3.97	0.6	2.85	22.5 - 26.4

Holder



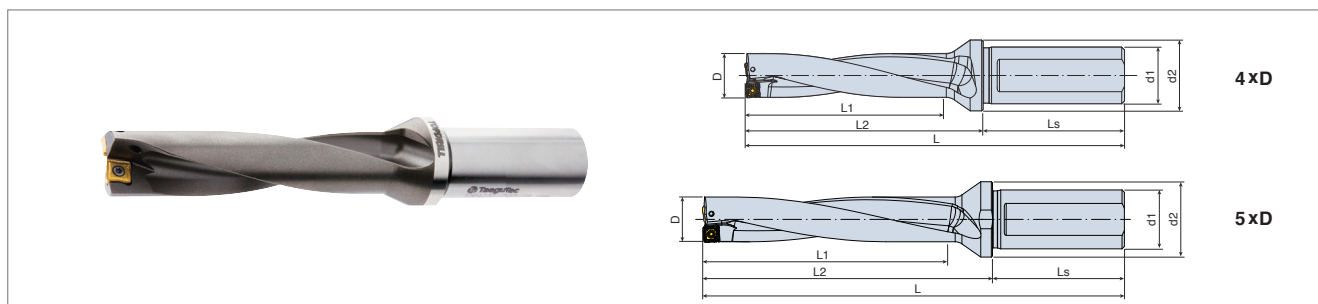
2xD

Designation	Dimension (mm)							INSERT	Spare parts		Torque (N.cm)
	D	d1	d2	L	L1	L2	Ls		Screw	Torx	
TOP 2140-20T2-05	14.0	20	25	96	28	46	50	SOMT 050204 DP	TS 20043I/HG-P	TD 6P	50-70
TOP 2145-20T2-05	14.5	20	25	99	30	49	50				
TOP 2150-20T2-05	15.0	20	25	99	30	49	50				
TOP 2155-20T2-05	15.5	20	25	102	32	52	50				
TOP 2160-20T2-05	16.0	20	25	102	32	52	50				
TOP 2165-25T2-06	16.5	25	32	110	34	54	56	SOMT 060204 DP	TS 22052I/HG-P	TD 7P	80-100
TOP 2170-25T2-06	17.0	25	32	110	34	54	56				
TOP 2175-25T2-06	17.5	25	32	113	36	57	56				
TOP 2180-25T2-06	18.0	25	32	113	36	57	56				
TOP 2185-25T2-06	18.5	25	32	115	38	59	56				
TOP 2190-25T2-06	19.0	25	32	115	38	59	56	SOMT 070306 DP	TS 22052I/HG-P	TD 7P	100-120
TOP 2195-25T2-07	19.5	25	32	119	40	63	56				
TOP 2200-25T2-07	20.0	25	32	119	40	63	56				
TOP 2205-25T2-07	20.5	25	32	121	42	65	56				
TOP 2210-25T2-07	21.0	25	32	121	42	65	56				
TOP 2215-25T2-07	21.5	25	32	123	44	67	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 2220-25T2-07	22.0	25	32	123	44	67	56				
TOP 2225-25T2-08	22.5	25	32	124	46	68	56				
TOP 2230-25T2-08	23.0	25	32	124	46	68	56				
TOP 2235-25T2-08	23.5	25	32	126	48	70	56				
TOP 2240-25T2-08	24.0	25	32	126	48	70	56				
TOP 2245-25T2-08	24.5	25	32	128	50	72	56				
TOP 2250-25T2-08	25.0	25	32	128	50	72	56				
TOP 2255-25T2-08	25.5	25	32	129	52	73	56				
TOP 2260-25T2-08	26.0	25	32	129	52	73	56				

3xD

Designation	Dimension (mm)							INSERT	Spare parts		Torque (N.cm)
	D	d1	d2	L	L1	L2	Ls		Screw	Torx	
TOP 3140-20T2-05	14.0	20	25	110	42	60	50	SOMT 050204 DP	SOMT 050204 DP	TD 6P	50-70
TOP 3145-20T2-05	14.5	20	25	114	45	64	50				
TOP 3150-20T2-05	15.0	20	25	114	45	64	50				
TOP 3155-20T2-05	15.5	20	25	118	48	68	50				
TOP 3160-20T2-05	16.0	20	25	118	48	68	50				
TOP 3165-25T2-06	16.5	25	32	127	51	71	56	SOMT 060204 DP	SOMT 060204 DP	TD 7P	80-100
TOP 3170-25T2-06	17.0	25	32	127	51	71	56				
TOP 3175-25T2-06	17.5	25	32	131	54	75	56				
TOP 3180-25T2-06	18.0	25	32	131	54	75	56				
TOP 3185-25T2-06	18.5	25	32	134	57	78	56				
TOP 3190-25T2-06	19.0	25	32	134	57	78	56	SOMT 070306 DP	SOMT 070306 DP	TD 7P	100-120
TOP 3195-25T2-07	19.5	25	32	139	60	83	56				
TOP 3200-25T2-07	20.0	25	32	139	60	83	56				
TOP 3205-25T2-07	20.5	25	32	142	63	86	56				
TOP 3210-25T2-07	21.0	25	32	142	63	86	56				
TOP 3215-25T2-07	21.5	25	32	145	66	89	56	SOMT 08T306 DP	SOMT 08T306 DP	TD 7	100-120
TOP 3220-25T2-07	22.0	25	32	145	66	89	56				
TOP 3225-25T2-08	22.5	25	32	147	69	91	56				
TOP 3230-25T2-08	23.0	25	32	147	69	91	56				
TOP 3235-25T2-08	23.5	25	32	150	72	94	56				
TOP 3240-25T2-08	24.0	25	32	150	72	94	56				
TOP 3245-25T2-08	24.5	25	32	153	75	97	56				
TOP 3250-25T2-08	25.0	25	32	153	75	97	56				
TOP 3255-25T2-08	25.5	25	32	155	78	99	56				
TOP 3260-25T2-08	26.0	25	32	155	78	99	56				

Holder



4xD

Designation	Dimension (mm)							INSERT	Spare parts		Torque (N.cm)
	D	d1	d2	L	L1	L2	Ls		Screw	Torx	
TOP 4140-20T2-05	14.0	20	25	124	56	74	50	SOMT 050204 DP	TS 20043I/HG-P	TD 6P	50-70
TOP 4145-20T2-05	14.5	20	25	129	60	79	50				
TOP 4150-20T2-05	15.0	20	25	129	60	79	50				
TOP 4155-20T2-05	15.5	20	25	134	64	84	50	SOMT 060204 DP	TS 22052I/HG-P	TD 7P	80-100
TOP 4160-20T2-05	16.0	20	25	134	64	84	50				
TOP 4165-25T2-06	16.5	25	32	144	68	88	56				
TOP 4170-25T2-06	17.0	25	32	144	68	88	56	SOMT 070306 DP	TS 22052I/HG-P	TD 7P	100-120
TOP 4175-25T2-06	17.5	25	32	149	72	93	56				
TOP 4180-25T2-06	18.0	25	32	149	72	93	56				
TOP 4185-25T2-06	18.5	25	32	153	76	97	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 4190-25T2-06	19.0	25	32	153	76	97	56				
TOP 4195-25T2-07	19.5	25	32	159	80	103	56				
TOP 4200-25T2-07	20.0	25	32	159	80	103	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 4205-25T2-07	20.5	25	32	163	84	107	56				
TOP 4210-25T2-07	21.0	25	32	163	84	107	56				
TOP 4215-25T2-07	21.5	25	32	167	88	111	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 4220-25T2-07	22.0	25	32	167	88	111	56				
TOP 4225-25T2-08	22.5	25	32	170	92	114	56				
TOP 4230-25T2-08	23.0	25	32	170	92	114	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 4235-25T2-08	23.5	25	32	174	96	118	56				
TOP 4240-25T2-08	24.0	25	32	174	96	118	56				
TOP 4245-25T2-08	24.5	25	32	178	100	122	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 4250-25T2-08	25.0	25	32	178	100	122	56				
TOP 4255-25T2-08	25.5	25	32	181	104	125	56				
TOP 4260-25T2-08	26.0	25	32	181	104	125	56				

5xD

Designation	Dimension (mm)							INSERT	Spare parts		Torque (N.cm)
	D	d1	d2	L	L1	L2	Ls		Screw	Torx	
TOP 5140-20T2-05	14.0	20	25	138	70	88	50	SOMT 050204 DP	TS 20043I/HG-P	TD 6P	50-70
TOP 5145-20T2-05	14.5	20	25	144	75	94	50				
TOP 5150-20T2-05	15.0	20	25	144	75	94	50				
TOP 5155-20T2-05	15.5	20	25	150	80	100	50	SOMT 060204 DP	TS 22052I/HG-P	TD 7P	80-100
TOP 5160-20T2-05	16.0	20	25	150	80	100	50				
TOP 5165-25T2-06	16.5	25	32	161	85	105	56				
TOP 5170-25T2-06	17.0	25	32	161	85	105	56	SOMT 070306 DP	TS 22052I/HG-P	TD 7P	100-120
TOP 5175-25T2-06	17.5	25	32	167	90	111	56				
TOP 5180-25T2-06	18.0	25	32	167	90	111	56				
TOP 5185-25T2-06	18.5	25	32	172	95	116	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 5190-25T2-06	19.0	25	32	172	95	116	56				
TOP 5195-25T2-07	19.5	25	32	179	100	123	56				
TOP 5200-25T2-07	20.0	25	32	179	100	123	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 5205-25T2-07	20.5	25	32	184	105	128	56				
TOP 5210-25T2-07	21.0	25	32	184	105	128	56				
TOP 5215-25T2-07	21.5	25	32	189	110	133	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 5220-25T2-07	22.0	25	32	189	110	133	56				
TOP 5225-25T2-08	22.5	25	32	193	115	137	56				
TOP 5230-25T2-08	23.0	25	32	193	115	137	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 5235-25T2-08	23.5	25	32	198	120	142	56				
TOP 5240-25T2-08	24.0	25	32	198	120	142	56				
TOP 5245-25T2-08	24.5	25	32	203	125	147	56	SOMT 08T306 DP	SO 25065I	TD 7	100-120
TOP 5250-25T2-08	25.0	25	32	203	125	147	56				
TOP 5255-25T2-08	25.5	25	32	207	130	151	56				
TOP 5260-25T2-08	26.0	25	32	207	130	151	56				

Recommended Cutting Condition

ISO	Material	Condition	Tensile Strength [N/mm ²]	Hardness HB	Material Group No	Cutting Speed	Feed vs. Drill Diameter mm/rev				Feed vs. Drill Diameter mm/rev													
							Drill length 2,3,4xD				Drill length 5xD													
							Vc m/min	SOMT 05 Ø14-Ø16	SOMT 06 Ø17-Ø19	SOMT 07 Ø20-Ø22	SOMT 08 Ø23-Ø26	SOMT 05 Ø14-Ø16	SOMT 06 Ø17-Ø19	SOMT 07 Ø20-Ø22	SOMT 08 Ø23-Ø26									
P	Non-alloy steel,	<0.25%C Annealed	420	125	1	220-350	0.04-0.06	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.05	0.04-0.05	0.04-0.06	0.04-0.06										
		>=0.25%C Annealed	650	190	2	180-280	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.12	0.06-0.08	0.06-0.08	0.06-0.1	0.06-0.1										
	cast steel, free cutting steel	<0.55%C Quenched and tempered	850	250	3	140-240	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.12										
		>=0.55%C Annealed	750	220	4																			
	Low alloy steel and cast steel (less than 5% of alloying elements)	Quenched and tempered		1000	300	5	140-240	0.06-0.16	0.06-0.16	0.08-0.2	0.08-0.2	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16									
			Annealed	600	200	6																		
		Quenched and tempered		930	275	7																		
				1000	300	8																		
				1200	350	9																		
	High alloy steel, cast steel and tool steel.	Annealed	680	200	10	140-200	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.06-0.1	0.06-0.1	0.08-0.12	0.08-0.12										
Quenched and tempered		1100	325	11	100-160	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.06-0.1	0.06-0.1	0.08-0.12	0.08-0.12											
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	150-250	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.12										
		Martensitic	820	240	13																			
		Austenitic	600	180	14																			
K	Cast iron nodular (GGG)	Ferritic/pearlitic		180	15	160-260	0.08-0.18	0.08-0.18	0.1-0.2	0.1-0.2	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16										
		Pearlitic		260	16																			
	Gray cast iron (GG)	Ferritic		160	17																			
		Pearlitic		250	18																			
Malleable cast iron	Ferritic		130	19	120-220	0.08-0.14	0.08-0.14	0.1-0.16	0.1-0.16	0.08-0.12	0.08-0.14	0.08-0.16	0.08-0.16											
	Pearlitic		230	20																				
N	Aluminum-wrought alloy	Not curable		60	21	200-350	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16										
		Cured		100	22																			
	Aluminum-cast, alloyed	<=12% Si Not cureable		75	23																			
		Cured		90	24																			
		>12% Si High temp.		130	25																			
	Copper alloys	>1% Pb Free cutting		110	26										150-250	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	
		Brass		90	27																			
		Electrolytic copper		100	28																			
Non-metallic	Duroplastics, fiber plastics				29	150-250	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16										
	Hard rubber				30																			
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08									
			Cured		280	32																		
		Ni or Co based	Annealed		250	33																		
			Cured		350	34																		
	Titanium, Ti alloys	Cast			320	35										50-80	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09
		Alpha+beta alloys cured			RM1050	37																		
H	Hardened steel	Hardened		55HRc	38	30-60	0.05-0.09	0.05-0.09	0.05-0.1	0.05-0.1	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09										
		Hardened		60HRc	39																			
	Chilled cast iron	Cast		400	40																			
	Cast iron nodular (GGG)	Hardened		55HRc	41																			



T-DRILL Large Diameter 3.5xD

Features

TaeguTec has now added an additional large diameter T-DRILL range to its standardized range to serve versatile market demands and accommodate large hole diameter drilling.

The existing large diameter T-DRILL has a standardized drill body that enables 2.5xD machining from 51mm through to 80mm diameter. The newly added T-DRILL can machine up to diameter 3.5xD.

Designed as a convenient cartridge type drill, end users can place a setting plate on an exterior cartridge, so that the one drill body can machine a series of different size hole diameters. In addition, the same inserts can be used in the inner or outer pocket. This in turn lowers the customers' stock level and costs.

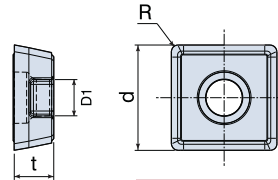
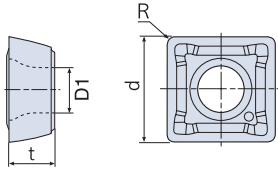


Insert

SPMG □□□□□DG



- For general purpose



SPMG 120408 DG

Designation	Dimension (mm)				Drill range	Grade		
	d	t	R	ØD1		TT9030	TT8020	TT7400
SPMG 07T308 DG	7.94	3.97	0.8	2.85	22.0-27.5	○	○	○
SPMG 090408 DG	9.80	4.3	0.8	4.05	28.0-33.0	○	○	○
SPMG 110408 DG	11.50	4.8	0.8	4.45	34.0-41.0	○	○	○
SPMG 120408 DG	12.70	4.76	0.8	4.37	74.0-80.0	○		

- TT9030: General purpose
- TT8020: For use on unstable surface or stacked plates
- TT7400: Use TT7400 grade as a peripheral insert for carbon steel and alloy steel.

Spare parts for cartridges

Cartridge	Cartridge clamping screw	Washer	Setting plate screw
TDR 07CA-P1-T	SH M4X0.7X16	MW 4.3X8	TS 20043I/HG-P
TDR 07CA-C1-T	SH M4X0.7X16	MW 4.3X8	-
TDR 07CA-P2-T	SH M4X0.7X16	MW 4.3X8	TS 20043I/HG-P
TDR 07CA-C2-T	SH M4X0.7X16	MW 4.3X8	-
TDR 09CA-P1-T	SH M5X0.8X16	MW 5.5X10	SO 30055I
TDR 09CA-C1-T	SH M5X0.8X16	MW 5.5X10	-
TDR 09CA-P2-T	SH M5X0.8X16	MW 5.5X10	SO 30055I
TDR 09CA-C2-T	SH M5X0.8X16	MW 5.5X10	-
TDR 11CA-P1-T	SH M6X1X20	MW 6.4X12	SO 30055I
TDR 11CA-C1-T	SH M6X1X20	MW 6.4X12	-
TDR 12CA-P2-T	SH M6X1X20	MW 6.4X12	SO 30055I
TDR 12CA-C2-T	SH M6X1X20	MW 6.4X12	-

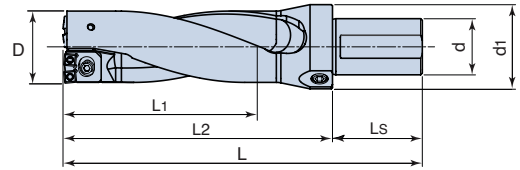


Holder

TDR 35□□-□□-50T2-□□CA-T



- Drilling depth: 3.5X Diameter



Designation	Dimension (mm)							Insert	Spare Parts				Torque (N.cm)
	D	d	d1	L1	L2	Ls	L		Screw	Cartridge for Peripheral	Cartridge for Center	Setting Plate	
TDR 3551-53-50T2-07CA-T	51	50	75	186	223	80	303	SPMG 07T308	TS 25064I	TDR 07CA-P1-T	TDR 07CA-C1-T	-	100-130
	52	50	75	186	223	80	303		TS 25064I	TDR 07CA-P1-T	TDR 07CA-C1-T	TDP-0701	100-130
	53	50	75	186	223	80	303		TS 25064I	TDR 07CA-P1-T	TDR 07CA-C1-T	TDP-0702	100-130
TDR 3554-56-50T2-07CA-T	54	50	75	196	236	80	316	SPMG 07T308	TS 25064I	TDR 07CA-P2-T	TDR 07CA-C2-T	-	100-130
	55	50	75	196	236	80	316		TS 25064I	TDR 07CA-P2-T	TDR 07CA-C2-T	TDP-0701	100-130
	56	50	75	196	236	80	316		TS 25064I	TDR 07CA-P2-T	TDR 07CA-C2-T	TDP-0702	100-130
TDR 3557-62-50T2-09CA-T	57	50	75	217	263	80	343	SPMG 090408	TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	-	300-340
	58	50	75	217	263	80	343		TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	TDP-0901	300-340
	59	50	75	217	263	80	343		TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	TDP-0902	300-340
	60	50	75	217	263	80	343		TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	TDP-0903	300-340
	61	50	75	217	263	80	343		TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	TDP-0904	300-340
	62	50	75	217	263	80	343		TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T	TDP-0905	300-340
TDR 3563-66-50T2-09CA-T	63	50	75	231	281	80	361	SPMG 090408	TS 35088I	TDR 09CA-P2-T	TDR 09CA-C2-T	-	300-340
	64	50	75	231	281	80	361		TS 35088I	TDR 09CA-P2-T	TDR 09CA-C2-T	TDP-0901	300-340
	65	50	75	231	281	80	361		TS 35088I	TDR 09CA-P2-T	TDR 09CA-C2-T	TDP-0902	300-340
	66	50	75	231	281	80	361		TS 35088I	TDR 09CA-P2-T	TDR 09CA-C2-T	TDP-0903	300-340
TDR 3567-73-50T2-11CA-T	67	50	75	256	313	80	393	SPMG 110408	TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	-	450-520
	68	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1101	450-520
	69	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1102	450-520
	70	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1103	450-520
	71	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1104	450-520
	72	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1105	450-520
	73	50	75	256	313	80	393		TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T	TDP-1106	450-520
TDR 3574-80-50T2-12CA-T	74	50	75	280	330	80	410	SPMG 120408 DG	TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	-	450-520
	75	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1101	450-520
	76	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1102	450-520
	77	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1103	450-520
	78	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1104	450-520
	79	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1105	450-520
	80	50	75	280	330	80	410		TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T	TDP-1106	450-520

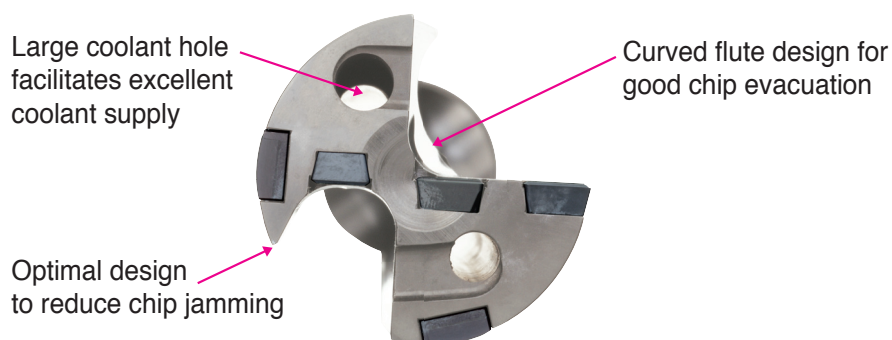


TOPDRILL ^{DEEP} Deep hole drilling for conventional horizontal machining centres or lathes

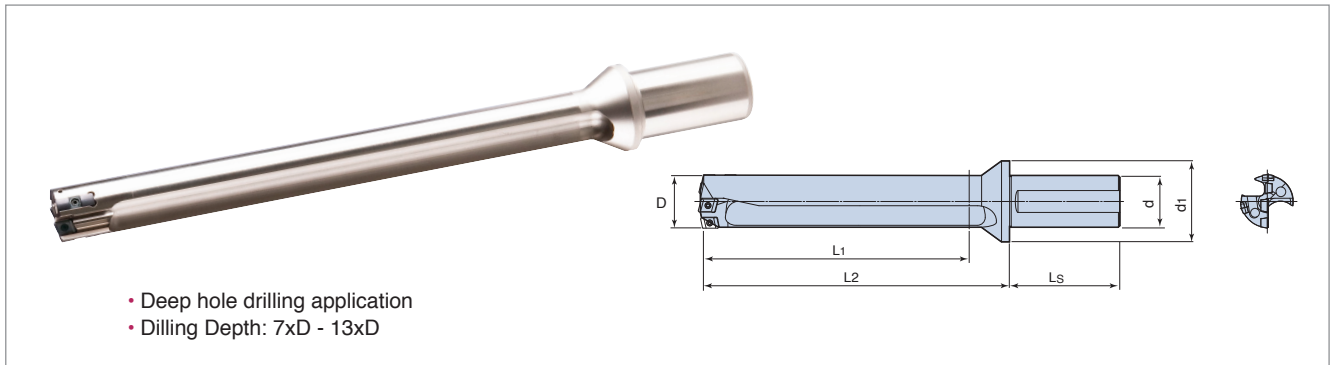
New Solution for Deep Hole Drilling

Features

- Direct mounting system improves user friendliness
- Further cost saving possible thanks to indexable inserts
- Unique design eliminates chip jamming
- The curved flute design improves chip evacuation
- New solution for drilling over 5XD



Holder

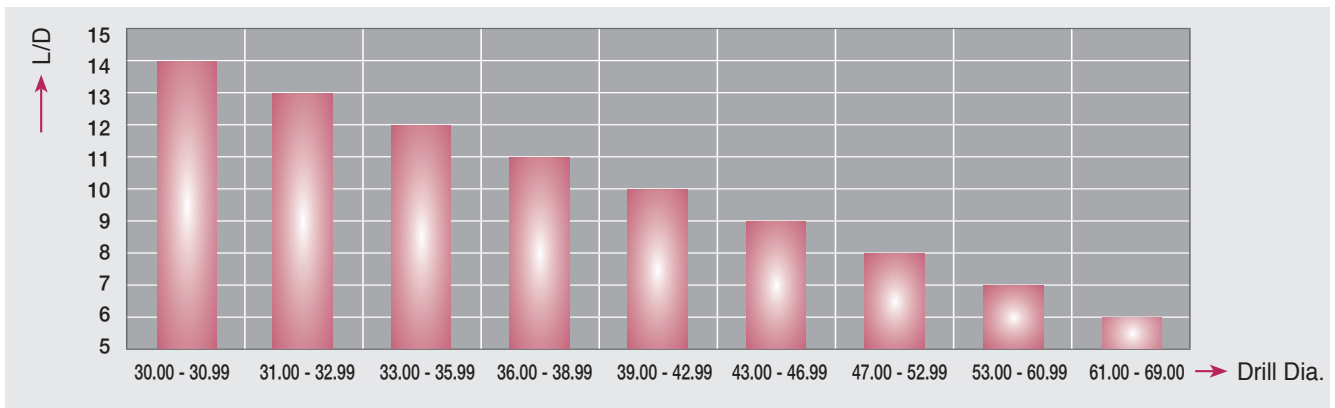


- Deep hole drilling application
- Drilling Depth: 7xD - 13xD

Designation	Dimension (mm)						
	D	L1	L2	Ls	d	d1	L/D
HFD 300-32T2-14D	30	420	449	60	32	40	14
HFD 310-32T2-13D	31	420	449	60	32	40	13
HFD 320-40T2-13D	32	420	449	70	40	50	13
HFD 330-40T2-12D	33	420	449	70	40	50	12
HFD 340-40T2-12D	34	420	450	70	40	50	12
HFD 350-40T2-12D	35	420	450	70	40	50	12
HFD 360-40T2-11D	36	420	450	70	40	50	11
HFD 370-40T2-11D	37	420	453	70	40	50	11
HFD 380-40T2-11D	38	420	453	70	40	50	11
HFD 390-40T2-10D	39	420	453	70	40	50	10
HFD 400-40T2-10D	40	420	454	70	40	50	10
HFD 410-40T2-10D	41	420	454	70	40	50	10
HFD 420-40T2-10D	42	420	454	70	40	50	10
HFD 430-40T2-9D	43	420	456	70	40	50	9
HFD 440-40T2-9D	44	420	456	70	40	50	9
HFD 450-40T2-9D	45	420	456	70	40	50	9
HFD 460-40T2-9D	46	420	459	70	40	50	9
HFD 470-40T2-8D	47	420	459	70	40	50	8
HFD 480-40T2-8D	48	420	459	70	40	50	8
HFD 490-40T2-8D	49	420	461	70	40	50	8
HFD 500-40T2-8D	50	420	461	70	40	50	8
HFD 510-40T2-8D	51	420	461	70	40	50	8
HFD 520-40T2-8D	52	420	464	70	40	-	8
HFD 530-40T2-7D	53	420	464	70	40	-	7
HFD 540-40T2-7D	54	420	464	70	40	-	7
HFD 550-40T2-7D	55	420	464	70	40	-	7
HFD 560-40T2-7D	56	420	464	70	40	-	7
HFD 570-40T2-7D	57	420	464	70	40	-	7
HFD 580-40T2-7D	58	420	470	70	40	-	7
HFD 590-40T2-7D	59	420	470	70	40	-	7
HFD 600-40T2-7D	60	420	470	70	40	-	7
HFD 610-40T2-6D	61	420	470	70	40	-	6
HFD 620-40T2-6D	62	420	470	70	40	-	6
HFD 630-40T2-6D	63	420	470	70	40	-	6
HFD 640-40T2-6D	64	420	473	70	40	-	6
HFD 650-40T2-6D	65	420	473	70	40	-	6
HFD 660-40T2-6D	66	420	473	70	40	-	6
HFD 670-40T2-6D	67	420	473	70	40	-	6
HFD 680-40T2-6D	68	420	473	70	40	-	6
HFD 690-40T2-6D	69	420	473	70	40	-	6

- Available on request

Drilling depth depends on diameter



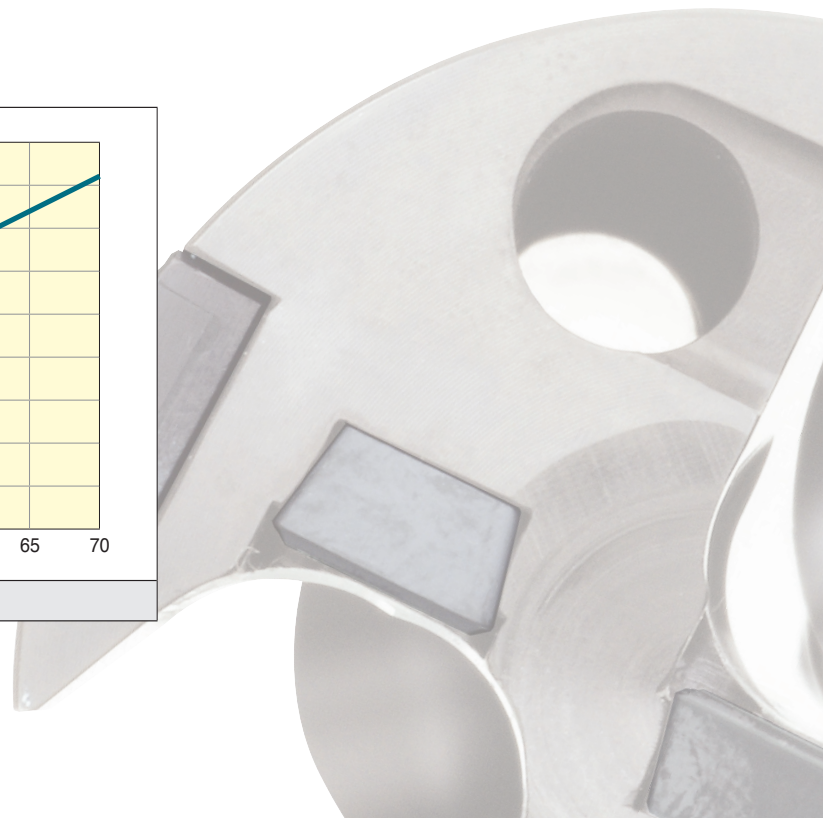
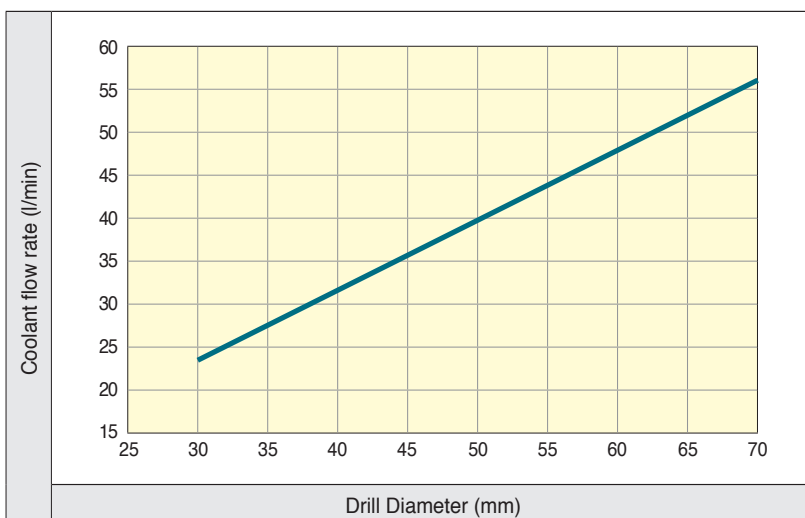
Insert & Guide pad

Tool Dia. [mm]	Insert			Guide PAD
	Outer	Inner	Center	
30.00 – 33.00	NPMT 06504 R2	NPMT 06504 R2	NPMT 06504 L2	PAD-GO07CD
33.01 – 36.00	NPMT 06504 R2	NPMT 06504 R2	NPMT 0804 L2	PAD-GO07CD
36.01 – 39.00	NPMT 0804 R2	NPMT 06504 R2	NPMT 0804 L2	PAD-GO07CD
39.01 – 42.00	NPMT 0804 R2	NPMT 0804 R2	NPMT 0804 L2	PAD-GO08CD
42.01 – 45.00	NPMT 0804 R2	NPMT 0804 R2	NPMT 09504 L2	PAD-GO08CD
45.01 – 48.00	NPMT 09504 R2	NPMT 0804 R2	NPMT 09504 L2	PAD-GO10CD
48.01 – 51.00	NPMT 09504 R2	NPMT 09504 R2	NPMT 09504 L2	PAD-GO10CD
51.01 – 57.00	NPMT 09504 R2	NPMT 09504 R2	NPMT 12504 L2	PAD-GO10CD
57.01 – 63.00	NPMT 12504 R2	NPMT 09504 R2	NPMT 12504 L2	PAD-GO12CD
63.01 – 69.00	NPMT 12504 R2	NPMT 12504 R2	NPMT 12504 L2	PAD-GO12CD

Pilot hole size

Tool Dia. [mm]	Pilot hole tolerance	Pilot hole depth (mm)
30.00 – 39.00	H8	Min. 10.0
39.01 – 45.00	H8	Min. 12.5
45.01 – 57.00	H8	Min. 15.0
57.01 – 69.00	H8	Min. 17.5

Coolant Volume





T-GUN

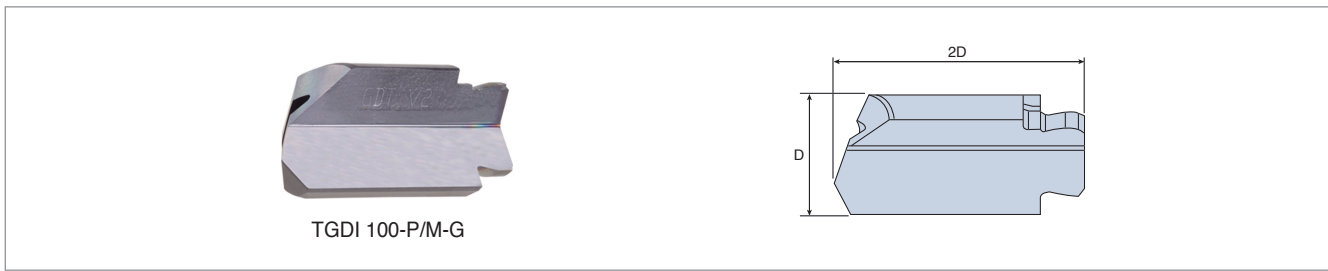
Exchangeable point gun drills

Newly Evolved Deep Hole Drilling

Features

- No setup time
- Correct chipformer for each material
- Carbide grades - coated and uncoated
- Drilling precision of IT7 to IT9 tolerance can be achieved
- Excellent straightness and concentricity - comparable to using brazed drills
- Maintains high hole precision center alignment
- Surface roughness of 0.4-1.6 Ra is easily obtained
- Re-boring operation is often unnecessary
- Minimum 15 times indexing of insert is possible
- It is possible to regrind and recoat the drilling head up to 10 times and still achieve excellent repeatability

Insert



TGDI 100-P/M-G

Designation	Diameter	Clamping Key	Grade
TGDI 100-P/M-G	10.0	K GDT-100	UF10
TGDI 105-P/M-G	10.5		
TGDI 110-P/M-G	11.0	K GDT-110	
TGDI 115-P/M-G	11.5		
TGDI 120-P/M-G	12.0	K GDT-120	
TGDI 125-P/M-G	12.5		
TGDI 130-P/M-G	13.0	K GDT-130	
TGDI 135-P/M-G	13.5		
TGDI 140-P/M-G	14.0	K GDT-140	
TGDI 145-P/M-G	14.5		
TGDI 150-P/M-G	15.0	K GDT-150	
TGDI 155-P/M-G	15.5		
TGDI 160-P/M-G	16.0	K GDT-160	

* Special diameter is available on request.

* For special gundrills, special geometries will be applied to match specific application

T-GUN Standard Insert Designation: TGDI □□□ - □ - □ - TT □□□□

Drill Diameter
Head profile
Grade

Head Geometry

Head geometry

- TGDI ###-P-#-UF10

: for use on carbon and alloy steel, cast iron and aluminum (ISO P,K,N)
Uncoated insert (optional TT9030 TiAlN coating)



- TGDI ###-M-#-UF10

: for use on stainless steel and high temperature alloys (ISO M, S).
Uncoated insert



USER GUIDE

Drill Penetration Instructions

1 Rotate the drill counter-clockwise prior and during hole penetration

2 Stop the drill rotation and start the coolant

3 Rotate the drill clockwise prior to drilling operation

User Guide

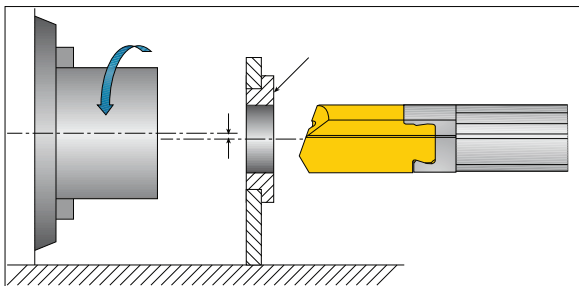
1 Drilling a prehole (drill diameter +0.02 mm)

2 Gundrill penetration through the prehole (depth $2 \times D_{min}$)

X Never try to penetrate the workpiece by using a gundrill

A shallow prehole can't lead the unbalanced gundrill

When using a gundrill on a lathe, a short solid carbide centering drill should be used prior to the gundrill. Once the gundrill enters the pre-drilled hole, it is self-guided.



The maximum misalignment between the drill bushing and the workpiece center line should not exceed 0.02 mm.

General Sketch	Profile G (Universal)	Profile A	Profile B	Profile C
<p>All cross section profile parameters such as: P, La and α must be precisely matched to the workpiece material properties.</p>	<p>Standard form for most material types, particularly for materials with a tendency to shrink. Recommended for high precision bore tolerance and straightness. Maintains precise exit hole size. Recommended when extra burnishing is required.</p>	<p>Suitable for cast iron (usually coated) and aluminum alloys. Can be used for cross drilling, angular entry or exit and for interrupted cut. Large coolant gaps between pads.</p>	<p>Excellent size control, for high precision hole tolerance. Used for cast iron and aluminum alloys.</p>	<p>Used for angled entry or exit. Large back taper, for shrinking materials such as some kinds of alloys and stainless steel. Large coolant gaps between pads.</p>
	<p>Profile D</p> <p>Suitable for cast iron only. Very effective in grey cast iron (usually coated).</p>	<p>Profile E</p> <p>General use, for alloys and stainless steel. This profile eliminates the problem of the tool sticking in the hole after the outer corner dulls. Especially suitable for crank shaft and other forged materials. Recommended for accurate hole straightness.</p>	<p>Profile H</p> <p>Recommended for all nonferrous and cast iron materials up to 5 mm diameter. Sometimes used for wood and plastic with larger back taper.</p>	<p>Profile I</p> <p>Used for aluminum and brass for best hole finish. For intersecting holes and interrupted cut or when extra outer diameter support and burnishing is required.</p>

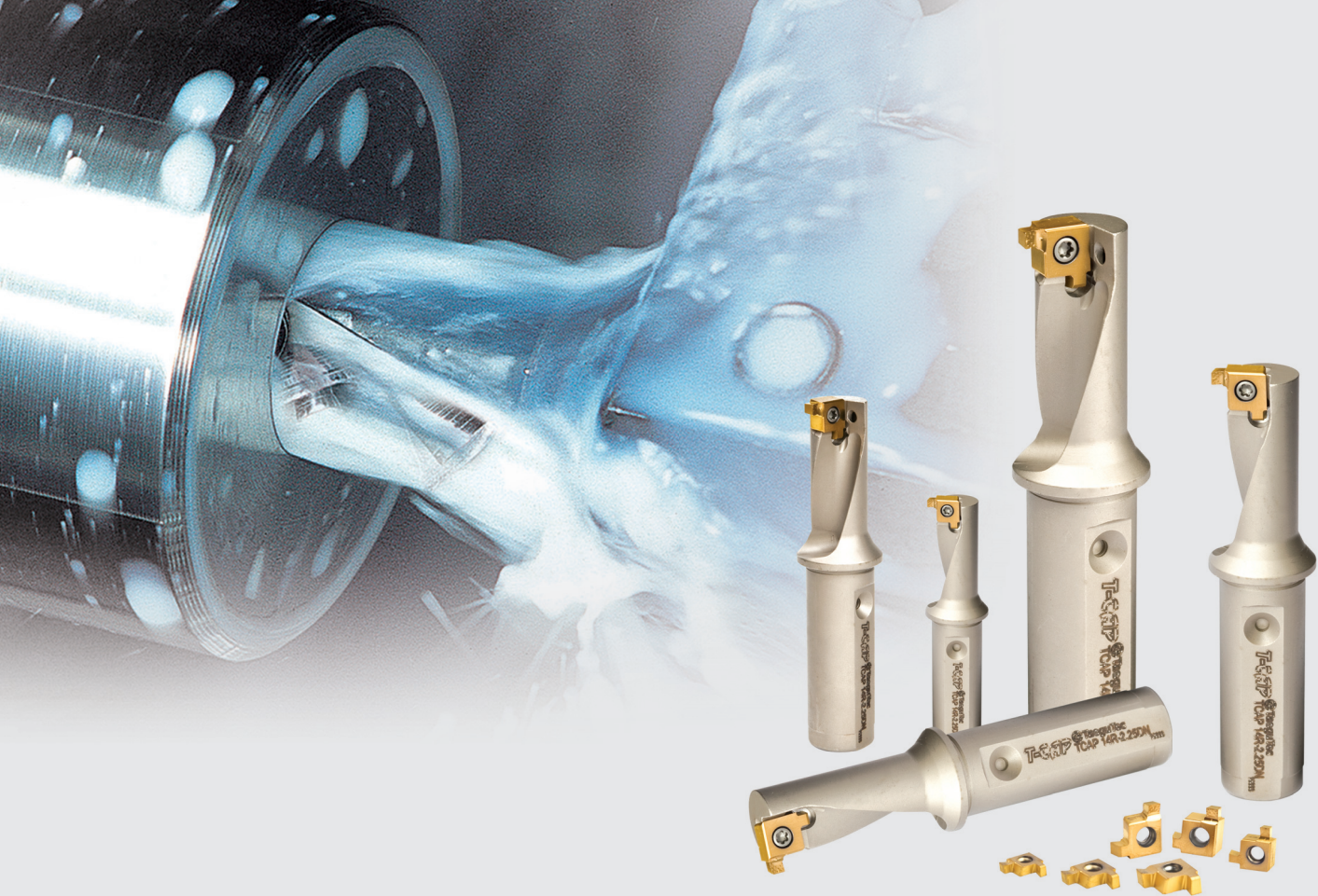
USER GUIDE

Recommended cutting condition

ISO	Material	Condition	Tensile Strength Rm [N/mm ²]	Hardness HB	Material Group No	Cutting Speed vc m/min	Feed vs. mm/rev Drill Diameter mm					
							10.00-11.69	11.7-13.19	13.2-16.19			
P	Non-alloy steel and cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1	70-110	0.03-0.05	0.035-0.06	0.04-0.07		
		0.25 -0.25 %C	Annealed	650	190	2	80-110					
		0.25 -0.25 %C	Quenched and tempered	850	250	3	70-110					
		0.55 -0.80 %C	Annealed	750	220	4	70-110					
		0.55 -0.80 %C	Quenched and tempered	1000	300	5	70-90					
	Low alloy steel and cast steel (less than 5% alloying elements)	Quenched and tempered	Annealed	600	200	6	80-110	0.03-0.05	0.035-0.06	0.04-0.07		
				930	275	7	70-110					
				1000	300	8	60-90					
				1200	350	9	50-80					
	High alloy steel, cast steel and tool steel	Quenched and tempered	Annealed	680	200	10	50-70	0.025-0.04	0.03-0.045	0.035-0.05		
				1100	325	11	40-70					
M	Stainless steel and cast steel	Ferritic/martensitic	680	200	12	40-80	0.025-0.04	0.03-0.045	0.035-0.05			
		Martensitic	820	240	13							
		Austenitic	600	180	14							
K	Cast iron nodular (GGG)	Ferritic/pearlitic		180	15	70-100	0.04-0.1	0.05-0.12	0.06-0.14			
		Pearlitic		260	16							
	Grey cast iron (GG)	Ferritic		160	17	80-110						
		Pearlitic		250	18							
	Malleable cast iron	Ferritic		130	19	90-115						
		Pearlitic		230	20							
N	Aluminum-wrought alloy	Not curable		60	21	80-160	0.03-0.17	0.03-0.18	0.035-0.19			
		Cured		100	22							
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23						
			Cured		90	24						
		>12% Si	High temperature		130	25				80-120		
	Copper alloys	>1% Pb	Free cutting		110	26				80-180		
			Brass		90	27						
			Electrolitic copper		100	28						
	Non-metallic		Duroplastics, fiber plastics			29				0.02-0.13	0.03-0.16	0.04-0.18
			Hard rubber			30						
S	High temp. alloys Fe based	Annealed		200	31	25-60	0.025-0.03	0.03-0.035	0.03-0.04			
		Cured		280	32							
	Super alloys Ni or Co based	Annealed		250	33							
		Cured		350	34							
		Cast		320	35							
	Titanium, Ti alloys		Rm 400		36							
		Alpha+beta alloys cured	Rm 1050		37							
H	Hardened steel	Hardened		55 HRc	38	20-50	0.025-0.03	0.03-0.035	0.03-0.04			
		Hardened		60 HRc	39							
	Chilled cast iron	Cast		400	40							
	Cast iron	Hardened		55 HRc	41							

■ Steel
 ■ Stainless Steel
 ■ Cast Iron
 ■ Nonferrous
 ■ High Temp. Alloys
 ■ Hardened Steel

Material Group No : According to VDI 3323 Standard



TOPCAP

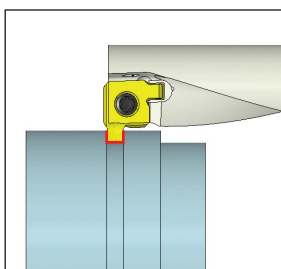
Grooving with the new standard TOPCAP holder

Multifunctional TOPCAP tool has been upgraded with a new grooving feature

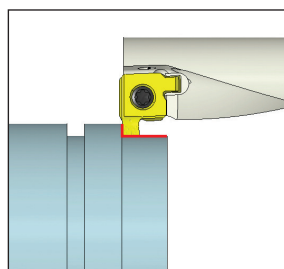
Features

- Can use same holder for Grooving insert
- Cutter design can protect the opposite cutting edge
- Smooth chip evacuation with internal coolant system
- Cost saving – Can use two kinds of inserts for the same holder

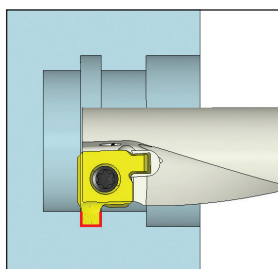
Application



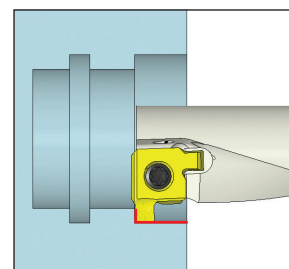
External Groove



External Turning




Internal Groove



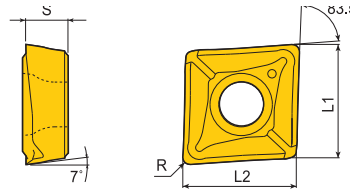
Internal Turning


Insert

XCMT □□□□□ TC

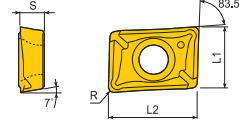


- For General Purpose
- Grade: TT9080, TT8020



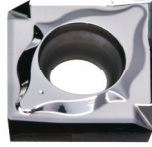


Right Hand Shown
(XCMT 0401)

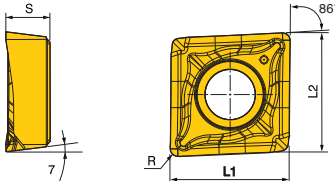



Designation	Dimension (mm)			
	L1	L2	S	R
XCMT 040104R TC	4.4	6.4	1.70	0.4
XCMT 040104L TC	4.4	6.4	1.70	0.4
XCMT 050204 TC	5.6	5.6	2.10	0.4
XCMT 060204 TC	6.4	6.4	2.38	0.4
XCMT 070304 TC	7.5	7.5	3.18	0.4
XCMT 080304 TC	8.4	8.4	3.18	0.4
XCMT 10T304 TC	10.5	10.5	3.97	0.4
XCMT 10T308 TC	10.5	10.5	3.97	0.8
XCMT 130404 TC	13.4	13.4	4.76	0.4
XCMT 130408 TC	13.4	13.4	4.76	0.8
XCMT 170508 TC	17.4	17.4	5.56	0.8

XCGT □□□□□ TA

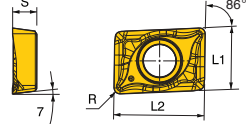


- For Aluminum Alloy
- Grade: K10






Right Hand Shown
(XCGT 0401)

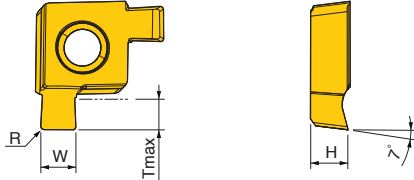


Designation	Dimension (mm)			
	L1	L2	S	R
XCGT 040104R TA	4.4	6.4	1.70	0.4
XCGT 040104L TA	4.4	6.4	1.70	0.4
XCGT 050204 TA	5.6	5.6	2.10	0.4
XCGT 060204 TA	6.4	6.4	2.38	0.4
XCGT 070304 TA	7.5	7.5	3.18	0.4
XCGT 080304 TA	8.4	8.4	3.18	0.4
XCGT 10T304 TA	10.5	10.5	3.97	0.4
XCGT 130404 TA	13.4	13.4	4.76	0.4
XCGT 170508 TA	17.5	17.5	5.56	0.8

XCMT □□R-□□□□□ GV

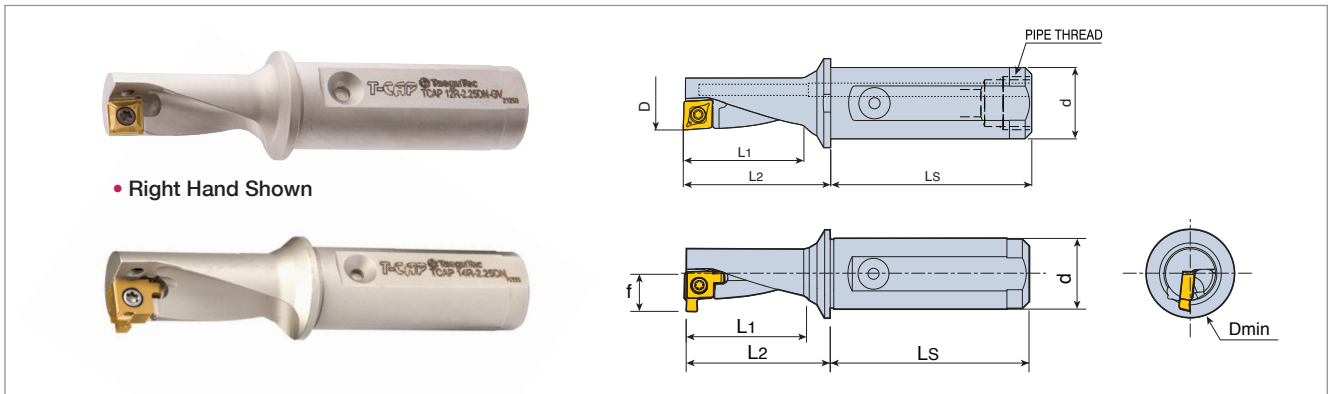


- For Grooving
- Grade: TT9080



Designation	Dimension (mm)			
	W	Tmax	R	H
XCMT 05R-200020 GV	2.0	1.8	0.2	2.28
XCMT 06R-200020 GV	2.0	2.0	0.2	2.65
XCMT 07R-250020 GV	2.5	2.0	0.2	3.41
XCMT 08R-250020 GV	2.5	2.5	0.2	3.50
XCMT 10R-300030 GV	3.0	3.0	0.3	4.34
XCMT 13R-350030 GV	3.5	3.5	0.3	5.18
XCMT 17R-400040 GV	4.0	4.0	0.4	6.00

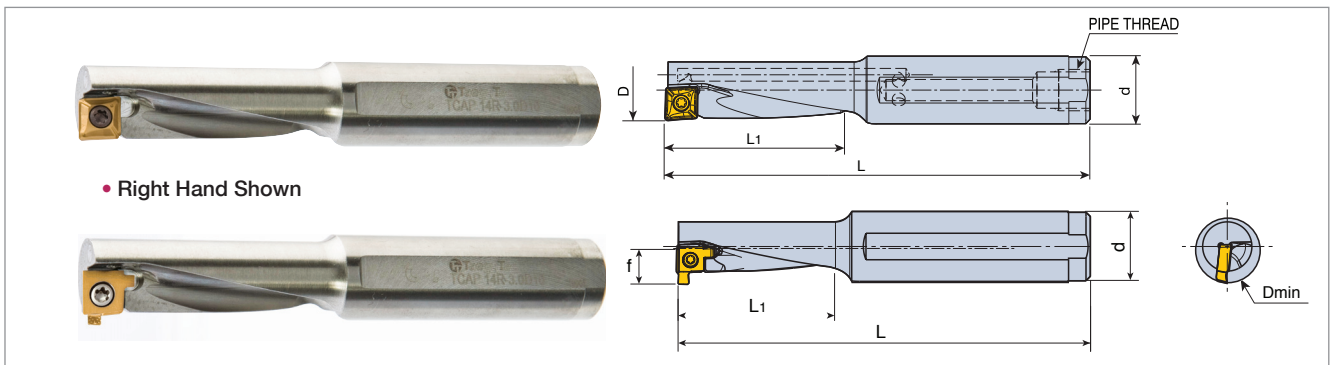
Holder - 2.25XD



Designation	Dimension (mm)							Insert		Pipe Thread
	f	D	d	L1	L2	LS	Dmin	For Drilling, Boring, Turning	For Grooving	
TCAP 08R/L-2.25DN	-	8	12	18.0	22.0	38	-	XCMT 040104 □ □	-	G 1/16
TCAP 10R/L-2.25DN-GV	7.1	10	12	22.5	27.5	42	12.5	XCMT 050204 □ □	XCMT 05R-200020 GV	G 1/16
TCAP 12R/L-2.25DN-GV	8.5	12	16	27.0	33.0	45	15.0	XCMT 060204 □ □	XCMT 06R-200020 GV	G 1/8
TCAP 14R/L-2.25DN-GV	9.5	14	16	31.5	38.5	45	17.0	XCMT 070304 □ □	XCMT 07R-250020 GV	G 1/8
TCAP 16R/L-2.25DN-GV	11.1	16	20	36.0	44.0	50	19.5	XCMT 080304 □ □	XCMT 08R-250020 GV	G 1/8
TCAP 20R/L-2.25DN-GV	13.2	20	25	45.0	55.0	56	24.0	XCMT 10T304 □ □	XCMT 10R-300030 GV	G 1/8
TCAP 25R/L-2.25DN-GV	16.5	25	32	56.5	69.0	61	29.5	XCMT 130404 □ □	XCMT 13R-350030 GV	G 1/8
TCAP 32R/L-2.25DN-GV	20.5	32	40	72.0	86.0	74	36.5	XCMT 170508 □ □	XCMT 17R-400040 GV	G 1/8

• Grooving for left-handed holder will be available on 2011.

Holder - 3.0XD



Designation	Dimension (mm)							Insert		Pipe Thread
	f	D	d	L1	L	Dmin	For Drilling, Boring, Turning	For Grooving		
TCAP 08R/L-3.0DN	-	8	12	24.0	80	-	XCMT 040104 □ □	-	G 1/16	
TCAP 10R/L-3.0DN-GV	7.1	-	12	22.5	85	12.0	XCMT 050204 □ □	XCMT 05R-200020 GV	G 1/16	
TCAP 12R/L-3.0DN-GV	8.5	-	16	27.0	95	14.5	XCMT 060204 □ □	XCMT 06R-200020 GV	G 1/8	
TCAP 14R/L-3.0DN-GV	9.5	-	16	31.5	100	16.5	XCMT 070304 □ □	XCMT 07R-250020 GV	G 1/8	
TCAP 16R/L-3.0DN-GV	11.1	-	20	36.0	110	19.0	XCMT 080304 □ □	XCMT 08R-250020 GV	G 1/8	
TCAP 20R/L-3.0DN-GV	13.2	-	25	45.0	130	23.5	XCMT 10T304 □ □	XCMT 10R-300030 GV	G 1/8	
TCAP 25R/L-3.0DN-GV	16.5	-	32	46.5	150	29.0	XCMT 130404 □ □	XCMT 13R-350030 GV	G 1/8	
TCAP 32R/L-3.0DN-GV	20.5	-	40	72.0	185	36.5	XCMT 170508 □ □	XCMT 17R-400040 GV	G 1/8	

• Grooving for left-handed holder will be available on 2011.

Spare part

Designation	Screw	Wrench
TCAP 08	SO 18034I/HG-P	T 6P
TCAP 10	TS 20038I/HG-P	T 6P
TCAP 12	TS 22052I/HG-P	T 7P
TCAP 14	TS 25064I/HG-P	T 8P
TCAP 16	SO 30100I/HG-P	TD 9P
TCAP 20	TS 35088I/HG-P	TD10P
TCAP 25	TS 45A100I/HG	TD 20
TCAP 32	TS 45A100I/HG	TD 20

Recommended Cutting Conditions

