February 2019
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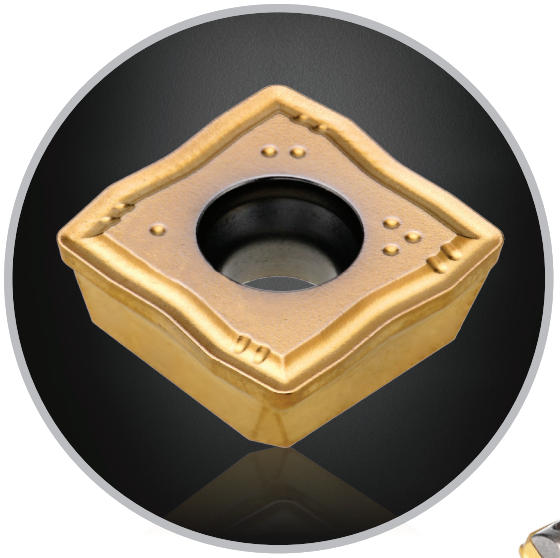
1/19

NEW PRODUCT NEWS

TOPDRILL

expansion

Drill Diameter and Insert Range Expansion



TaeguTec
Member IMC Group

KEY POINT

TaeguTec expands the range of drill diameters and inserts for the TOPDRILL Line.

TaeguTec's successful indexable **TOPDRILL line**, with its superior performance and high productivity in drilling operations, has been expanded by introducing 12.0-13.5 mm diameter range for the standard 2xD, 3xD, 4xD and 5xD holders.

Additionally, TaeguTec also added the SOMT 040204 DP indexable insert, which is designed for the 12.0-13.5 mm diameter range.

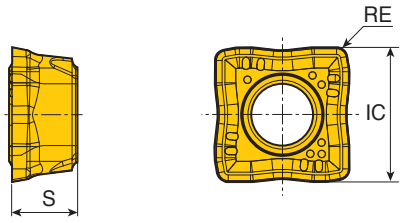
With TaeguTec's expansion of the **TOPDRILL line**, hole-making customers now have a wider range of options.

Features

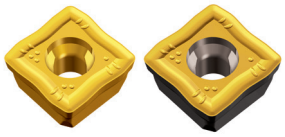
- Product line has been expanded to a wider diameter range

SOMT...DP

Insert



Designation	Dimension (mm)		
	IC	S	RE
04	4.4	2.38	0.4
05	4.9	2.38	0.4
06	5.7	2.38	0.4
07	6.8	2.80	0.6
08	7.9	3.97	0.6
09	9.2	3.97	0.8
11	11.0	3.97	0.8
13	12.8	4.40	0.8
15	15.0	4.80	1.0

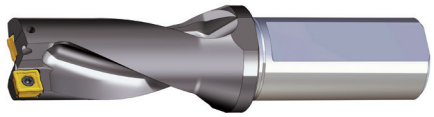
Insert	Designation	Coated		
		TT9080	TT8020	TT9300
	**SOMT 040204 DP** new	●	●	
	050204 DP	●	●	●
	060204 DP	●	●	●
	070306 DP	●	●	●
	08T306 DP	●	●	●
	09T308 DP	●	●	●
	11T308 DP	●	●	●
	130408 DP	●	●	●
	150510 DP	●	●	●

- TT9080: First choice for general purpose
- TT8020: For unstable conditions
- TT9300: For high-speed machining on steel applications (Peripheral ONLY)

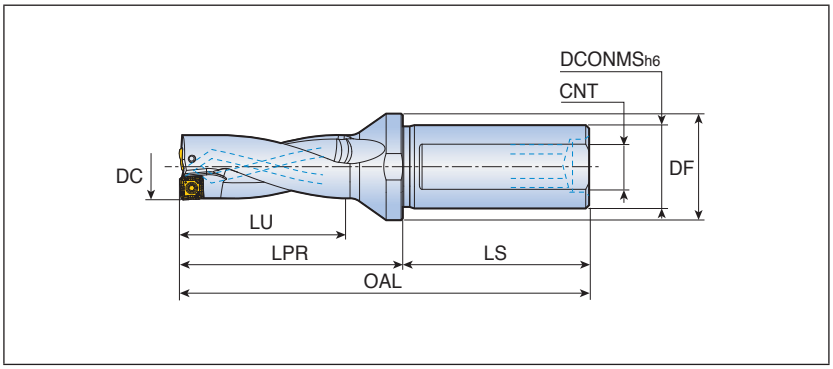
●:Standard item

TOP 2...-T2

Indexable drill holder



• Drilling depth: 2xdiameter

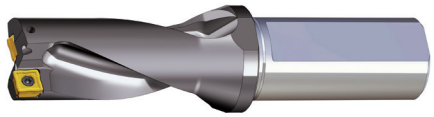


Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2120-20T2-04 new	12.0	20	25	24	44	50	M13X1.0	SOMT 04...DP
2125-20T2-04 new	12.5	20	25	26	46	50	M13X1.0	
2130-20T2-04 new	13.0	20	25	26	46	50	M13X1.0	
2135-20T2-04 new	13.5	20	25	28	46	50	M13X1.0	
2140-20T2-05	14.0	20	25	28	46	50	M13X1.0	SOMT 05...DA/DK/DL/DP
2145-20T2-05	14.5	20	25	30	49	50	M13X1.0	
2150-20T2-05	15.0	20	25	30	49	50	M13X1.0	
2155-20T2-05	15.5	20	25	32	52	50	M13X1.0	
2160-20T2-05	16.0	20	25	32	52	50	M13X1.0	
2165-25T2-06	16.5	25	32	34	54	56	M16X1.5	SOMT 06...DA/DK/DL/DP
2170-25T2-06	17.0	25	32	34	54	56	M16X1.5	
2175-25T2-06	17.5	25	32	36	57	56	M16X1.5	
2180-25T2-06	18.0	25	32	36	57	56	M16X1.5	
2185-25T2-06	18.5	25	32	38	59	56	M16X1.5	
2190-25T2-06	19.0	25	32	38	59	56	M16X1.5	
2195-25T2-07	19.5	25	32	40	63	56	M16X1.5	SOMT 07...DA/DK/DL/DP
2200-25T2-07	20.0	25	32	40	63	56	M16X1.5	
2205-25T2-07	20.5	25	32	42	65	56	M16X1.5	
2210-25T2-07	21.0	25	32	42	65	56	M16X1.5	
2215-25T2-07	21.5	25	32	44	67	56	M16X1.5	
2220-25T2-07	22.0	25	32	44	67	56	M16X1.5	
2225-25T2-08	22.5	25	32	46	68	56	M16X1.5	SOMT 08...DA/DK/DL/DP
2230-25T2-08	23.0	25	32	46	68	56	M16X1.5	
2230-32T2-08	23.0	32	40	46	68	60	M22X2.0	
2235-25T2-08	23.5	25	32	48	70	56	M16X1.5	
2235-32T2-08	23.5	32	40	48	70	60	M22X2.0	
2240-25T2-08	24.0	25	32	48	70	56	M16X1.5	
2240-32T2-08	24.0	32	40	48	70	60	M22X2.0	
2245-25T2-08	24.5	25	32	50	72	56	M16X1.5	
2245-32T2-08	24.5	32	40	50	72	60	M22X2.0	
2250-25T2-08	25.0	25	32	50	72	56	M16X1.5	
2250-32T2-08	25.0	32	40	50	72	60	M22X2.0	
2255-25T2-08	25.5	25	32	52	73	56	M16X1.5	
2255-32T2-08	25.5	32	40	52	73	60	M22X2.0	
2260-25T2-08	26.0	25	32	52	73	56	M16X1.5	
2260-32T2-08	26.0	32	40	52	73	60	M22X2.0	

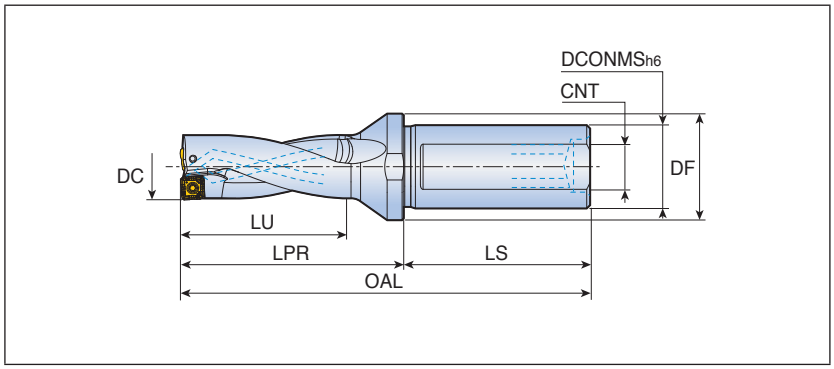
• OAL = LPR+LS

TOP 2...-T2

Indexable drill holder



• Drilling depth: 2xdiameter

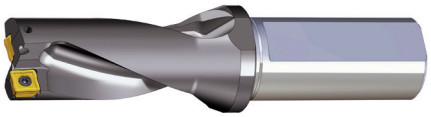


Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2265-32T2-09	26.5	32	40	54	77	60	M22X2.0	SOMT 09...DA/DK/DL/DP
2270-25T2-09	27.0	25	40	54	77	56	M16X1.5	
2270-32T2-09	27.0	32	40	54	77	60	M22X2.0	
2275-32T2-09	27.5	32	40	56	79	60	M22X2.0	SOMT 09...DA/DK/DL/DP
2280-25T2-09	28.0	25	40	56	79	56	M16X1.5	
2280-32T2-09	28.0	32	40	56	79	60	M22X2.0	
2285-32T2-09	28.5	32	40	58	81	60	M22X2.0	
2290-25T2-09	29.0	25	40	58	81	56	M16X1.5	
2290-32T2-09	29.0	32	40	58	81	60	M22X2.0	
2295-32T2-09	29.5	32	40	60	83	60	M22X2.0	
2300-32T2-09	30.0	32	40	60	83	60	M22X2.0	
2305-32T2-09	30.5	32	40	62	85	60	M22X2.0	
2310-32T2-09	31.0	32	40	62	85	60	M22X2.0	
2320-32T2-11	32.0	32	40	64	87	60	M22X2.0	SOMT 11...DA/DK/DL/DP
2320-40T2-11	32.0	40	50	64	87	70	M30X2.0	
2330-32T2-11	33.0	32	40	66	89	60	M22X2.0	
2330-40T2-11	33.0	40	50	66	89	70	M30X2.0	
2340-32T2-11	34.0	32	40	68	91	60	M22X2.0	
2340-40T2-11	34.0	40	50	68	91	70	M30X2.0	
2350-32T2-11	35.0	32	40	70	93	60	M22X2.0	
2350-40T2-11	35.0	40	50	70	93	70	M30X2.0	
2360-32T2-11	36.0	32	40	72	95	60	M22X2.0	
2360-40T2-11	36.0	40	50	72	95	70	M30X2.0	
2370-32T2-13	37.0	32	50	74	102	60	M22X2.0	SOMT 13...DA/DK/DL/DP
2370-40T2-13	37.0	40	50	74	102	70	M30X2.0	
2380-32T2-13	38.0	32	50	76	104	60	M22X2.0	
2380-40T2-13	38.0	40	50	76	104	70	M30X2.0	
2390-32T2-13	39.0	32	50	78	106	60	M22X2.0	
2390-40T2-13	39.0	40	50	78	106	70	M30X2.0	
2400-32T2-13	40.0	32	50	80	108	60	M22X2.0	
2400-40T2-13	40.0	40	50	80	108	70	M30X2.0	
2410-40T2-13	41.0	40	50	82	110	70	M30X2.0	
2420-40T2-13	42.0	40	50	84	112	70	M30X2.0	
2430-40T2-13	43.0	40	50	86	114	70	M30X2.0	

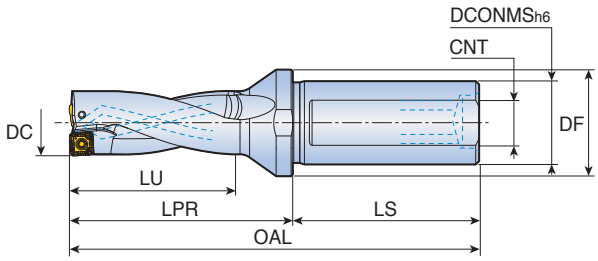
• OAL = LPR+LS

TOP 2...-T2

Indexable drill holder



• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2440-40T2-15	44.0	40	60	88	123	70	M30X2.0	SOMT 15...DA/DK/DL/DP
2450-40T2-15	45.0	40	60	90	125	70	M30X2.0	
2460-40T2-15	46.0	40	60	92	127	70	M30X2.0	
2470-40T2-15	47.0	40	60	94	129	70	M30X2.0	
2480-40T2-15	48.0	40	60	96	131	70	M30X2.0	
2490-40T2-15	49.0	40	60	98	133	70	M30X2.0	
2500-40T2-15	50.0	40	60	100	135	70	M30X2.0	

• OAL = LPR+LS

Spare parts

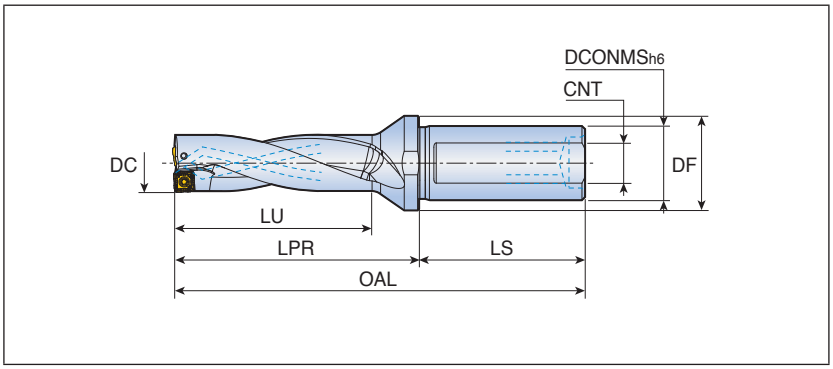
Designation	Screw	Wrench	Plug*	
TOP 2120 – 2135	TS 18041I/HG	TD 6P	SL 20M	
TOP 2140 - 2160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 2165 - 2220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 2225 - 2260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 2265 - 2360	TS 35088I	TD 10	SL 25M / SL 32M	
TOP 2370 - 2430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 2440 - 2550	TS 50115I	TD 20	SL 32M / SL 40M	

• *: Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm : SL 25M

TOP 3...-T2

Indexable drill holder

• Drilling depth: 3xdiameter



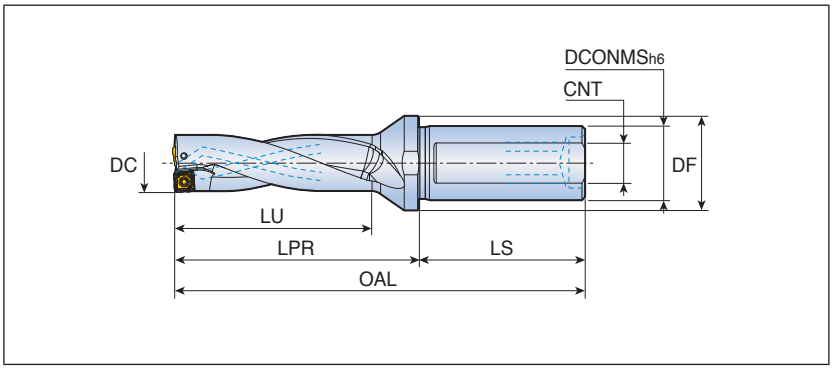
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3120-20T2-04 new	12.0	20	25	36	56	50	M13X1.0	SOMT 04...DP
3125-20T2-04 new	12.5	20	25	39	59	50	M13X1.0	
3130-20T2-04 new	13.0	20	25	39	59	50	M13X1.0	
3135-20T2-04 new	13.5	20	25	42	60	50	M13X1.0	
3140-20T2-05	14.0	20	25	42	60	50	M13X1.0	SOMT 05...DA/DK/DL/DP
3145-20T2-05	14.5	20	25	45	64	50	M13X1.0	
3150-20T2-05	15.0	20	25	45	64	50	M13X1.0	
3155-20T2-05	15.5	20	25	48	68	50	M13X1.0	
3160-20T2-05	16.0	20	25	48	68	50	M13X1.0	
3165-25T2-06	16.5	25	32	51	71	56	M16X1.5	SOMT 06...DA/DK/DL/DP
3167-25T2-06 *	16.7	25	32	51	71	56	M16X1.5	
3170-25T2-06	17.0	25	32	51	71	56	M16X1.5	
3175-25T2-06	17.5	25	32	54	75	56	M16X1.5	
3180-25T2-06	18.0	25	32	54	75	56	M16X1.5	
3185-25T2-06	18.5	25	32	57	78	56	M16X1.5	
3190-25T2-06	19.0	25	32	57	78	56	M16X1.5	
3195-25T2-07	19.5	25	32	60	83	56	M16X1.5	SOMT 07...DA/DK/DL/DP
3200-25T2-07	20.0	25	32	60	83	56	M16X1.5	
3205-25T2-07	20.5	25	32	63	86	56	M16X1.5	
3210-25T2-07	21.0	25	32	63	86	56	M16X1.5	
3215-25T2-07	21.5	25	32	66	89	56	M16X1.5	
3220-25T2-07	22.0	25	32	66	89	56	M16X1.5	
3222-25T2-07 *	22.2	25	32	66	89	56	M16X1.5	
3225-25T2-08	22.5	25	32	69	91	56	M16X1.5	SOMT 08...DA/DK/DL/DP
3230-25T2-08	23.0	25	32	69	91	56	M16X1.5	
3230-32T2-08	23.0	32	40	69	91	60	M22X2.0	
3235-25T2-08	23.5	25	32	72	94	56	M16X1.5	
3235-32T2-08	23.5	32	40	72	94	60	M22X2.0	
3240-25T2-08	24.0	25	32	72	94	56	M16X1.5	
3240-32T2-08	24.0	32	40	72	94	60	M22X2.0	
3245-25T2-08	24.5	25	32	75	97	56	M16X1.5	
3245-32T2-08	24.5	32	40	75	97	60	M22X2.0	
3250-25T2-08	25.0	25	32	75	97	56	M16X1.5	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 3...-T2

Indexable drill holder

• Drilling depth: 3xdiameter



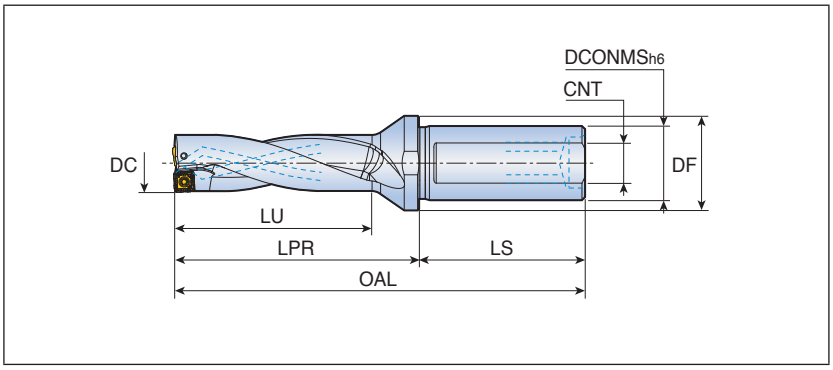
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3250-32T2-08	25.0	32	40	75	97	60	M22X2.0	SOMT 08...DA/DK/DL/DP
3254-25T2-08 *	25.4	25	32	75	97	56	M16X1.5	
3255-25T2-08	25.5	25	32	78	99	56	M16X1.5	
3255-32T2-08	25.5	32	40	78	99	60	M22X2.0	
3260-25T2-08	26.0	25	32	78	99	56	M16X1.5	
3260-32T2-08	26.0	32	32	78	99	60	M22X2.0	
3265-25T2-09	26.5	25	40	81	104	56	M16X1.5	SOMT 09...DA/DK/DL/DP
3265-32T2-09	26.5	32	40	81	104	60	M22X2.0	
3270-25T2-09	27.0	25	40	81	104	56	M16X1.5	
3270-32T2-09	27.0	32	40	81	104	60	M22X2.0	
3275-25T2-09	27.5	25	40	84	107	56	M16X1.5	
3275-32T2-09	27.5	32	40	84	107	60	M22X2.0	
3280-25T2-09	28.0	25	40	84	107	56	M16X1.5	
3280-32T2-09	28.0	32	40	84	107	60	M22X2.0	
3285-25T2-09	28.5	25	40	87	110	56	M16X1.5	
3285-32T2-09	28.5	32	40	87	110	60	M22X2.0	
3290-25T2-09	29.0	25	40	87	110	56	M16X1.5	
3290-32T2-09	29.0	32	40	87	110	60	M22X2.0	
3295-32T2-09	29.5	32	40	90	113	60	M22X2.0	
3300-32T2-09	30.0	32	40	90	113	60	M22X2.0	
3305-32T2-09	30.5	32	40	93	116	60	M22X2.0	
3310-32T2-09	31.0	32	40	93	116	60	M22X2.0	
3320-32T2-11	32.0	32	40	96	119	60	M22X2.0	SOMT 11...DA/DK/DL/DP
3320-40T2-11	32.0	40	50	96	119	70	M30X2.0	
3330-32T2-11	33.0	32	40	99	122	60	M22X2.0	
3330-40T2-11	33.0	40	50	99	122	70	M30X2.0	
3340-32T2-11	34.0	32	40	102	125	60	M22X2.0	
3340-40T2-11	34.0	40	50	102	125	70	M30X2.0	
3350-32T2-11	35.0	32	40	105	128	60	M22X2.0	
3350-40T2-11	35.0	40	50	105	128	70	M30X2.0	
3360-32T2-11	36.0	32	40	108	131	60	M22X2.0	
3360-40T2-11	36.0	40	50	108	131	70	M30X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 3...-T2

Indexable drill holder

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3370-32T2-13	37.0	32	50	111	139	60	M22X2.0	SOMT 13...DA/DK/DL/DP
3370-40T2-13	37.0	40	50	111	139	70	M30X2.0	
3380-32T2-13	38.0	32	50	114	142	60	M22X2.0	
3380-40T2-13	38.0	40	50	114	142	70	M30X2.0	
3390-32T2-13	39.0	32	50	117	145	60	M22X2.0	
3390-40T2-13	39.0	40	50	117	145	70	M30X2.0	
3400-32T2-13	40.0	32	50	120	148	60	M22X2.0	
3400-40T2-13	40.0	40	50	120	148	70	M30X2.0	
3410-40T2-13	41.0	40	50	123	151	70	M30X2.0	
3420-40T2-13	42.0	40	50	126	154	70	M30X2.0	
3430-40T2-13	43.0	40	50	129	157	70	M30X2.0	
3440-40T2-15	44.0	40	60	132	167	70	M30X2.0	SOMT 15...DA/DK/DL/DP
3450-40T2-15	45.0	40	60	135	170	70	M30X2.0	
3460-40T2-15	46.0	40	60	138	173	70	M30X2.0	
3470-40T2-15	47.0	40	60	141	176	70	M30X2.0	
3480-40T2-15	48.0	40	60	144	179	70	M30X2.0	
3490-40T2-15	49.0	40	60	147	182	70	M30X2.0	
3500-40T2-15	50.0	40	60	150	185	70	M30X2.0	

• OAL = LPR+LS

Spare parts

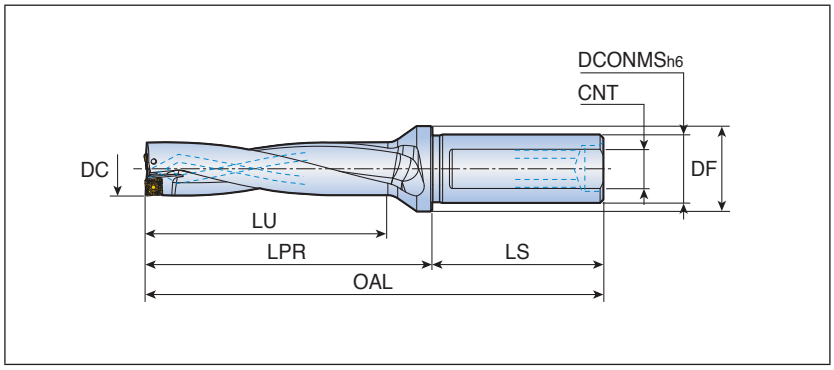
Designation	Screw	Wrench	Plug*	
				
TOP 3120 – 3135	TS 18041I/HG	TD 6P	SL 20M	
TOP 3140 - 3160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 3165 - 3220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 3225 - 3260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 3265 - 3360	TS 35088I	TD 10	SL 25M / SL 32M	
TOP 3370 - 3430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 3440 - 3500	TS 50115I	TD 20	SL 32M / SL 40M	

• *: Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm : SL 25M

TOP 4...-T2

Indexable drill holder

• Drilling depth: 4xdiameter



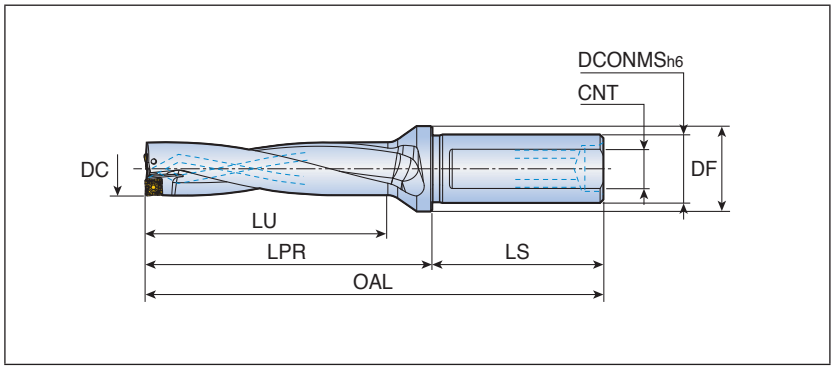
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4120-20T2-04 new	12.0	20	25	48	68	50	M13X1.0	SOMT 04...DP
4125-20T2-04 new	12.5	20	25	52	72	50	M13X1.0	
4130-20T2-04 new	13.0	20	25	52	72	50	M13X1.0	
4135-20T2-04 new	13.5	20	25	56	74	50	M13X1.0	
4140-20T2-05	14.0	20	25	56	74	50	M13X1.0	SOMT 05...DA/DK/DL/DP
4145-20T2-05	14.5	25	32	60	79	50	M13X1.0	
4150-20T2-05	15.0	25	32	60	79	50	M13X1.0	
4155-20T2-05	15.5	25	32	64	84	50	M13X1.0	
4160-20T2-05	16.0	25	32	64	84	50	M13X1.0	
4165-25T2-06	16.5	25	32	68	88	56	M16X1.5	SOMT 06...DA/DK/DL/DP
4170-25T2-06	17.0	25	32	68	88	56	M16X1.5	
4175-25T2-06	17.5	25	32	72	93	56	M16X1.5	
4180-25T2-06	18.0	25	32	72	93	56	M16X1.5	
4185-25T2-06	18.5	25	32	76	97	56	M16X1.5	
4190-25T2-06	19.0	25	32	76	97	56	M16X1.5	
4195-25T2-07	19.5	25	32	80	103	56	M16X1.5	SOMT 07...DA/DK/DL/DP
4200-25T2-07	20.0	25	32	80	103	56	M16X1.5	
4205-25T2-07	20.5	25	32	84	107	56	M16X1.5	
4210-25T2-07	21.0	25	32	84	107	56	M16X1.5	
4215-25T2-07	21.5	32	40	88	111	56	M16X1.5	
4220-25T2-07	22.0	25	32	88	111	56	M16X1.5	
4225-25T2-08	22.5	32	40	92	114	56	M16X1.5	SOMT 08...DA/DK/DL/DP
4230-25T2-08	23.0	25	32	92	114	56	M16X1.5	
4230-32T2-08	23.0	32	40	92	114	60	M22X2.0	
4235-25T2-08	23.5	25	32	96	118	56	M16X1.5	
4235-25T2-08	23.5	32	40	96	118	60	M22X2.0	
4240-25T2-08	24.0	25	32	96	118	56	M16X1.5	
4240-32T2-08	24.0	32	40	96	118	60	M22X2.0	
4245-25T2-08	24.5	25	32	100	122	56	M16X1.5	
4245-32T2-08	24.5	25	32	100	122	60	M22X2.0	
4250-25T2-08	25.0	32	40	100	122	56	M16X1.5	
4250-32T2-08	25.0	32	40	100	122	60	M22X2.0	
4254-25T2-08 *	25.4	25	32	100	122	56	M16X1.5	
4255-25T2-08	25.5	25	32	104	125	56	M16X1.5	
4255-32T2-08	25.5	32	40	104	125	60	M22X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 4...-T2

Indexable drill holder

• Drilling depth: 4xdiameter



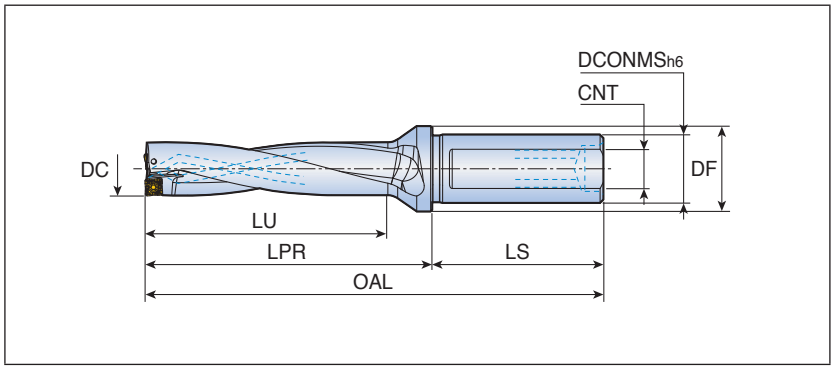
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4260-25T2-08	26.0	25	32	104	125	56	M16X1.5	SOMT 08...DA/DK/DL/DP
4260-32T2-08	26.0	32	40	104	125	60	M22X2.0	
4265-25T2-09	26.5	25	40	108	131	56	M16X1.5	SOMT 09...DA/DK/DL/DP
4265-32T2-09	26.5	32	40	108	131	60	M22X2.0	
4270-25T2-09	27.0	25	40	108	131	56	M16X1.5	
4270-32T2-09	27.0	32	40	108	131	60	M22X2.0	
4275-25T2-09	27.5	25	40	112	135	56	M16X1.5	
4275-32T2-09	27.5	32	40	112	135	60	M22X2.0	
4280-25T2-09	28.0	25	40	112	135	56	M16X1.5	
4280-32T2-09	28.0	32	40	112	135	60	M22X2.0	
4285-25T2-09	28.5	25	40	116	139	56	M16X1.5	
4285-32T2-09	28.5	32	40	116	139	60	M22X2.0	
4286-32T2-09 *	28.6	32	40	116	139	60	M22X2.0	
4290-25T2-09	29.0	25	40	116	139	56	M16X1.5	
4290-32T2-09	29.0	32	40	116	139	60	M22X2.0	
4295-32T2-09	29.5	32	40	120	143	60	M22X2.0	
4300-32T2-09	30.0	32	40	120	143	60	M22X2.0	
4305-32T2-09	30.5	32	40	124	147	60	M22X2.0	
4310-32T2-09	31.0	32	40	124	147	60	M22X2.0	
4318-32T2-11 *	31.8	32	40	128	151	60	M22X2.0	SOMT 11...DA/DK/DL/DP
4320-32T2-11	32.0	32	40	128	151	60	M22X2.0	
4320-40T2-11	32.0	40	50	128	151	70	M30X2.0	
4330-32T2-11	33.0	32	40	132	155	60	M22X2.0	
4330-40T2-11	33.0	40	50	132	155	70	M30X2.0	
4340-32T2-11	34.0	32	40	136	159	60	M22X2.0	
4340-40T2-11	34.0	40	50	136	159	70	M30X2.0	
4349-40T2-11 *	34.9	40	50	140	163	70	M30X2.0	
4350-32T2-11	35.0	32	40	140	163	60	M22X2.0	
4350-40T2-11	35.0	40	50	140	163	70	M30X2.0	
4360-32T2-11	36.0	32	40	144	167	60	M22X2.0	
4360-40T2-11	36.0	40	50	144	167	70	M30X2.0	
4370-32T2-13	37.0	32	50	148	176	60	M22X2.0	SOMT 13...DA/DK/DL/DP
4370-40T2-13	37.0	40	50	148	176	70	M30X2.0	
4371-40T2-13 *	37.1	40	50	148	176	70	M30X2.0	
4380-32T2-13	38.0	32	50	152	180	60	M22X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 4...-T2

Indexable drill holder

• Drilling depth: 4xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4380-40T2-13	38.0	40	50	152	180	70	M30X2.0	SOMT 13...DA/DK/DL/DP
4381-40T2-13 *	38.1	40	50	152	180	70	M30X2.0	
4390-32T2-13	39.0	32	50	156	184	60	M22X2.0	
4390-40T2-13	39.0	40	50	156	184	70	M30X2.0	
4400-32T2-13	40.0	32	50	160	188	60	M22X2.0	
4400-40T2-13	40.0	40	50	160	188	70	M30X2.0	
4410-40T2-13	41.0	40	50	164	192	70	M30X2.0	
4413-40T2-13 *	41.3	40	50	164	192	70	M30X2.0	
4420-40T2-13	42.0	40	50	168	196	70	M30X2.0	
4429-40T2-13 *	42.9	40	50	172	200	70	M30X2.0	
4430-40T2-13	43.0	40	50	172	200	70	M30X2.0	
4440-40T2-15	44.0	40	60	176	211	70	M30X2.0	SOMT 15...DA/DK/DL/DP
4445-40T2-15 *	44.5	40	60	180	215	70	M30X2.0	
4450-40T2-15	45.0	40	60	180	215	70	M30X2.0	
4460-40T2-15	46.0	40	60	184	219	70	M30X2.0	
4470-40T2-15	47.0	40	60	188	223	70	M30X2.0	
4476-40T2-15 *	47.6	40	60	192	227	70	M30X2.0	
4480-40T2-15	48.0	40	60	192	227	70	M30X2.0	
4490-40T2-15	49.0	40	60	196	231	70	M30X2.0	
4500-40T2-15	50.0	40	60	200	235	70	M30X2.0	
4508-40T2-15 *	50.8	40	60	204	239	70	M30X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

Spare parts

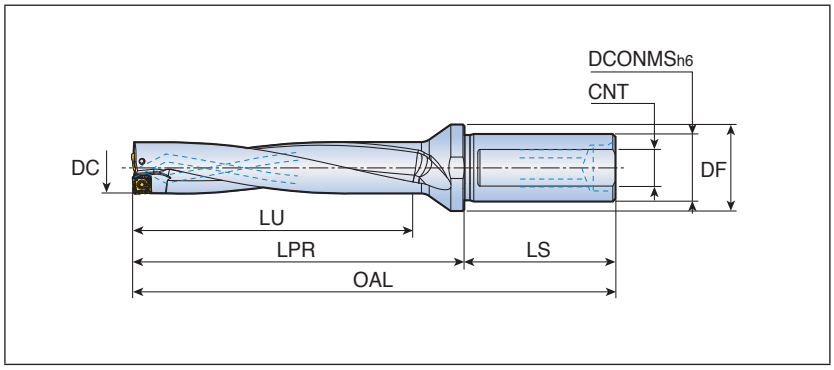
Designation	Screw	Wrench	Plug*	
				
TOP 4120 – 4135	TS 18041I/HG	TD 6P	SL 20M	
TOP 4140 - 4160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 4165 - 4220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 4225 - 4260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 4265 - 4360	TS 35088I	TD 10	SL 25M / SL 32M	
TOP 4370 - 4430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 4440 - 4508	TS 50115I	TD 20	SL 32M / SL 40M	

• *: Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm : SL 25M

TOP 5...-T2

Indexable drill holder

• Drilling depth: 5xdiameter



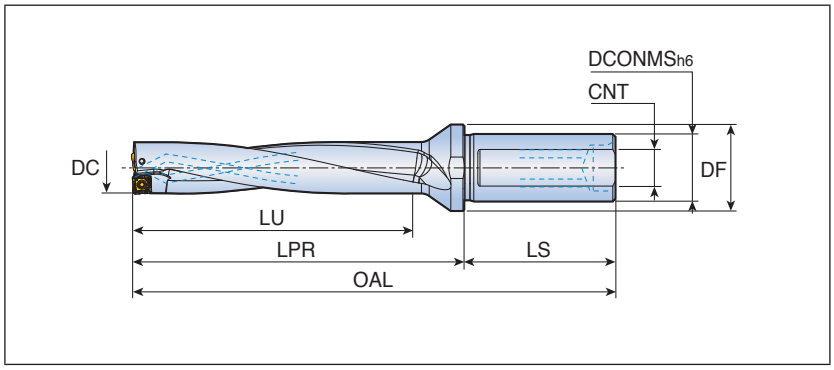
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 5120-20T2-04 new	12.0	20	25	60	80	50	M13X1.0	SOMT 04...DP
5125-20T2-04 new	12.5	20	25	65	85	50	M13X1.0	
5130-20T2-04 new	13.0	20	25	65	85	50	M13X1.0	
5135-20T2-04 new	13.5	20	25	70	88	50	M13X1.0	
5140-20T2-05	14.0	20	25	70	88	50	M13X1.0	SOMT 05...DA/DK/DL/DP
5145-20T2-05	14.5	20	25	75	94	50	M13X1.0	
5150-20T2-05	15.0	20	25	75	94	50	M13X1.0	
5155-20T2-05	15.5	20	25	80	100	50	M13X1.0	
5160-20T2-05	16.0	20	25	80	100	50	M13X1.0	
5165-25T2-06	16.5	25	32	85	105	56	M16X1.5	SOMT 06...DA/DK/DL/DP
5170-25T2-06	17.0	25	32	85	105	56	M16X1.5	
5175-25T2-06	17.5	25	32	90	111	56	M16X1.5	
5180-25T2-06	18.0	25	32	90	111	56	M16X1.5	
5185-25T2-06	18.5	25	32	95	116	56	M16X1.5	
5190-25T2-06	19.0	25	32	95	116	56	M16X1.5	
5195-25T2-07	19.5	25	32	100	123	56	M16X1.5	SOMT 07...DA/DK/DL/DP
5200-25T2-07	20.0	25	32	100	123	56	M16X1.5	
5205-25T2-07	20.5	25	32	105	128	56	M16X1.5	
5210-25T2-07	21.0	25	32	105	128	56	M16X1.5	
5215-25T2-07	21.5	25	32	110	133	56	M16X1.5	
5220-25T2-07	22.0	25	32	110	133	56	M16X1.5	
5222-25T2-07 *	22.2	25	32	110	133	56	M16X1.5	
5225-25T2-08	22.5	25	32	115	137	56	M16X1.5	SOMT 08...DA/DK/DL/DP
5230-25T2-08	23.0	25	32	115	137	56	M16X1.5	
5230-32T2-08	23.0	32	40	115	137	60	M22X2.0	
5235-25T2-08	23.5	25	32	120	142	56	M16X1.5	
5235-32T2-08	23.5	32	40	120	142	60	M22X2.0	
5240-25T2-08	24.0	25	32	120	142	56	M16X1.5	
5240-32T2-08	24.0	32	40	120	142	60	M22X2.0	
5245-25T2-08	24.5	25	32	125	147	56	M16X1.5	
5245-32T2-08	24.5	32	40	125	147	60	M22X2.0	
5250-25T2-08	25.0	25	32	125	147	56	M16X1.5	
5250-32T2-08	25.0	32	40	125	147	60	M22X2.0	
5255-25T2-08	25.5	25	32	130	151	56	M16X1.5	
5255-32T2-08	25.5	32	40	130	151	60	M22X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 5...-T2

Indexable drill holder

• Drilling depth: 5xdiameter



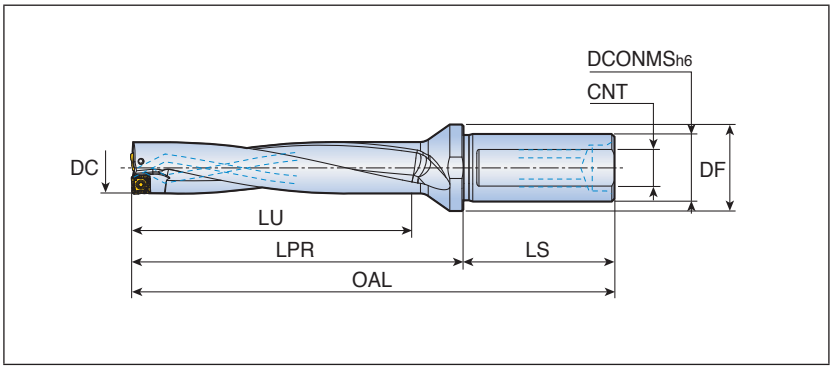
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 5260-25T2-08	26.0	25	32	130	151	56	M16X1.5	SOMT 08...DA/DK/DL/DP
5260-32T2-08	26.0	32	40	130	151	60	M22X2.0	
5265-32T2-09	26.5	32	40	135	158	60	M22X2.0	SOMT 09...DA/DK/DL/DP
5270-25T2-09	27.0	25	40	135	158	56	M16X1.5	
5270-32T2-09	27.0	32	40	135	158	60	M22X2.0	
5275-32T2-09	27.5	32	40	140	163	60	M22X2.0	
5280-25T2-09	28.0	25	40	140	163	56	M16X1.5	
5280-32T2-09	28.0	32	40	140	163	60	M22X2.0	
5282-32T2-09 *	28.2	32	40	140	163	60	M22X2.0	
5285-32T2-09	28.5	32	40	145	168	60	M22X2.0	
5290-25T2-09	29.0	25	40	145	168	56	M16X1.5	
5290-32T2-09	29.0	32	40	145	168	60	M22X2.0	
5295-32T2-09	29.5	32	40	150	173	60	M22X2.0	
5300-32T2-09	30.0	32	40	150	173	60	M22X2.0	
5305-32T2-09	30.5	32	40	155	178	60	M22X2.0	
5310-32T2-09	31.0	32	40	155	178	60	M22X2.0	
5320-32T2-11	32.0	32	40	160	183	60	M22X2.0	SOMT 11...DA/DK/DL/DP
5320-40T2-11	32.0	40	50	160	183	70	M30X2.0	
5330-32T2-11	33.0	32	40	165	188	60	M22X2.0	
5330-40T2-11	33.0	40	50	165	188	70	M30X2.0	
5340-32T2-11	34.0	32	40	170	193	60	M22X2.0	
5340-40T2-11	34.0	40	50	170	193	70	M30X2.0	
5350-32T2-11	35.0	32	40	175	198	60	M22X2.0	
5350-40T2-11	35.0	40	50	175	198	70	M30X2.0	
5360-32T2-11	36.0	32	40	180	203	60	M22X2.0	
5360-40T2-11	36.0	40	50	180	203	70	M30X2.0	
5370-32T2-13	37.0	32	50	185	213	60	M22X2.0	SOMT 13...DA/DK/DL/DP
5370-40T2-13	37.0	40	50	185	213	70	M30X2.0	
5380-32T2-13	38.0	32	50	190	218	60	M22X2.0	
5380-40T2-13	38.0	40	50	190	218	70	M30X2.0	
5390-32T2-13	39.0	32	50	195	223	60	M22X2.0	
5390-40T2-13	39.0	40	50	195	223	70	M30X2.0	
5400-32T2-13	40.0	32	50	200	228	60	M22X2.0	
5400-40T2-13	40.0	40	50	200	228	70	M30X2.0	
5410-40T2-13	41.0	40	50	205	233	70	M30X2.0	

• '*'Marked items are for inch sized holes.
• OAL = LPR+LS

TOP 5...-T2

Indexable drill holder

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 5420-40T2-13	42.0	40	50	210	238	70	M30X2.0	SOMT 13...DA/DK/DL/DP
5430-40T2-13	43.0	40	50	215	243	70	M30X2.0	
5440-40T2-15	44.0	40	60	220	255	70	M30X2.0	SOMT 15...DA/DK/DL/DP
5450-40T2-15	45.0	40	60	225	260	70	M30X2.0	
5460-40T2-15	46.0	40	60	230	265	70	M30X2.0	
5470-40T2-15	47.0	40	60	235	270	70	M30X2.0	
5480-40T2-15	48.0	40	60	240	275	70	M30X2.0	
5490-40T2-15	49.0	40	60	245	280	70	M30X2.0	
5500-40T2-15	50.0	40	60	250	285	70	M30X2.0	

• OAL = LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
				
TOP 5120 – 5135	TS 18041I/HG	TD 6P	SL 20M	
TOP 5140 - 5160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 5165 - 5220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 5225 - 5260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 5265 - 5360	TS 35088I	TD 10	SL 25M / SL 32M	
TOP 5370 - 5430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 5440 - 5500	TS 50115I	TD 20	SL 32M / SL 40M	

• *: Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm : SL 25M

Recommended Cutting Conditions

Machining data for TOPDRILL 2,3,4xD

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter Drill length 2,3,4xD				
								SOMT 04 Ø12 - Ø13.5	SOMT 05 Ø14 - Ø16	SOMT 06 Ø17 - Ø19	SOMT 07 Ø20 - Ø22	SOMT 08 Ø23 - Ø26
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350	0.04-0.06	0.04-0.06	0.04-0.06	0.04-0.08	0.04-0.08
		>=0.25%C	Annealed	650	190	2	180-280	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
		<0.55%C	Quenched and tempered	850	250	3	140-240	0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16
		>=0.55%C	Annealed	750	220	4	140-240	0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16
			Quenched and tempered	1000	300	5	140-240	0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240	0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20
			Quenched and tempered	930	275	7	100-180	0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20
				1000	300	8	100-180	0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20
				1200	350	9	100-180	0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
			Quenched and tempered	1100	325	11	100-160	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16
			Martensitic	820	240	13	150-250	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16
			Austenitic	600	180	14	150-250	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16
K	Gray cast iron (GG)		Ferritic		160	15	160-260	0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20
			Pearlitic		250	16	160-260	0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20
	Cast iron nodular (GGG)		Ferritic		180	17	160-260	0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20
			Pearlitic		260	18	160-260	0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20
	Malleable cast iron		Ferritic		130	19	120-220	0.08-0.14	0.08-0.14	0.08-0.14	0.10-0.16	0.10-0.16
			Pearlitic		230	20	120-220	0.08-0.14	0.08-0.14	0.08-0.14	0.10-0.16	0.10-0.16
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Cured		100	22	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Cured		90	24	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
		>12% Si	High temp.		130	25	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Copper alloys	>1% Pb	Free cutting		110	26	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Brass		90	27	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Electrolitic copper		100	28	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Non-metallic		Duroplastics, fiber plastics			29	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Hard rubber			30	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
			Cured		280	32	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
		Ni or Co based	Annealed		250	33	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
			Cured		350	34	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
			Cast		320	35	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
	Titanium,Ti alloys			Rm 400		36	50-80	0.06-0.09	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
			Alpha+beta alloys cured	Rm 1050		37	50-80	0.06-0.09	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
H	Hardened steel		Hardened		55HRC	38	30-60	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10
			Hardened		60HRC	39	30-60	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10
	Chilled cast iron		Cast		400	40	30-60	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10
	Cast iron nodular		Hardened		55HRC	41	30-60	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TOPDRILL 2,3,4xD

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter Drill length 2,3,4xD			
								SOMT 09 Ø27 - Ø31	SOMT 11 Ø32 - Ø36	SOMT 13 Ø37 - Ø43	SOMT 15 Ø44 - Ø50
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12
		>=0.25%C	Annealed	650	190	2	180-280	0.08-0.14	0.08-0.14	0.08-0.16	0.10-0.16
		<0.55%C	Quenched and tempered	850	250	3	140-240	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
		>=0.55%C	Annealed	750	220	4	140-240	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
			Quenched and tempered	1000	300	5	140-240	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240	0.08-0.20	0.10-0.22	0.10-0.22	0.10-0.24
			Quenched and tempered	930	275	7	100-180	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
				1000	300	8	100-180	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
				1200	350	9	100-180	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
			Quenched and tempered	1100	325	11	100-160	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
			Martensitic	820	240	13	150-250	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
			Austenitic	600	180	14	150-250	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
K	Gray cast iron (GG)		Ferritic		160	15	160-260	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
			Pearlitic		250	16	160-260	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
	Cast iron nodular (GGG)		Ferritic		180	17	160-260	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
			Pearlitic		260	18	160-260	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
	Malleable cast iron		Ferritic		130	19	120-220	0.10-0.16	0.10-0.18	0.10-0.18	0.10-0.18
			Pearlitic		230	20	120-220	0.10-0.16	0.10-0.18	0.10-0.18	0.10-0.18
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
			Cured		100	22	200-350	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
			Cured		90	24	200-350	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
		>12% Si	High temp.		130	25	200-350	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
	Copper alloys	>1% Pb	Free cutting		110	26	150-250	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
			Brass		90	27	150-250	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
			Electrolitic copper		100	28	150-250	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
	Non-metallic		Duroplastics, fiber plastics			29	150-250	0.10-0.17	0.10-0.17	0.10-0.18	0.10-0.18
			Hard rubber			30	150-250	0.10-0.17	0.10-0.17	0.10-0.18	0.10-0.18
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Cured		280	32	30-60	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
		Ni or Co based	Annealed		250	33	30-60	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Cured		350	34	30-60	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Cast		320	35	30-60	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
	Titanium,Ti alloys			Rm 400		36	50-80	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
			Alpha+beta alloys cured	Rm 1050		37	50-80	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
H	Hardened steel		Hardened		55HRC	38	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
			Hardened		60HRC	39	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
	Chilled cast iron		Cast		400	40	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
	Cast iron nodular		Hardened		55HRC	41	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TOPDRILL 5xD

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter Drill length 5xD				
								SOMT 04 Ø12 - Ø13.5	SOMT 05 Ø14 - Ø16	SOMT 06 Ø17 - Ø19	SOMT 07 Ø20 - Ø22	SOMT 08 Ø23 - Ø26
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350	0.04-0.05	0.04-0.05	0.04-0.05	0.04-0.05	0.04-0.06
		>=0.25%C	Annealed	650	190	2	180-280	0.06-0.08	0.06-0.08	0.06-0.08	0.06-0.10	0.06-0.10
		<0.55%C	Quenched and tempered	850	250	3	140-240	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
		>=0.55%C	Annealed	750	220	4	140-240	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Quenched and tempered	1000	300	5	140-240	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
			Quenched and tempered	930	275	7	100-180	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
				1000	300	8	100-180	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
				1200	350	9	100-180	0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200	0.06-0.10	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12
			Quenched and tempered	1100	325	11	100-160	0.06-0.10	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Martensitic	820	240	13	150-250	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
			Austenitic	600	180	14	150-250	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
K	Gray cast iron (GG)		Ferritic		160	15	160-260	0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16
			Pearlitic		250	16	160-260	0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16
	Cast iron nodular (GGG)		Ferritic		180	17	160-260	0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16
			Pearlitic		260	18	160-260	0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16
	Malleable cast iron		Ferritic		130	19	120-220	0.08-0.12	0.08-0.12	0.08-0.14	0.08-0.16	0.08-0.16
			Pearlitic		230	20	120-220	0.08-0.12	0.08-0.12	0.08-0.14	0.08-0.16	0.08-0.16
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Cured		100	22	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Cured		90	24	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
		>12% Si	High temp.		130	25	200-350	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Copper alloys	>1% Pb	Free cutting		110	26	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Brass		90	27	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Electrolitic copper		100	28	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
	Non-metallic		Duroplastics, fiber plastics			29	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
			Hard rubber			30	150-250	0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08
			Cured		280	32	30-60	0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08
		Ni or Co based	Annealed		250	33	30-60	0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08
			Cured		350	34	30-60	0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08
			Cast		320	35	30-60	0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08
	Titanium,Ti alloys			Rm 400		36	50-80	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09
			Alpha+beta alloys cured	Rm 1050		37	50-80	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09
H	Hardened steel		Hardened		55HRC	38	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
			Hardened		60HRC	39	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
	Chilled cast iron		Cast		400	40	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09
	Cast iron nodular		Hardened		55HRC	41	30-60	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TOPDRILL 5xD

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter Drill length 5xD			
								SOMT 09 Ø27 - Ø31	SOMT 09 Ø27 - Ø31	SOMT 13 Ø37 - Ø43	SOMT 15 Ø44 - Ø50
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350	0.06-0.08	0.06-0.08	0.08-0.10	0.08-0.10
		>=0.25%C	Annealed	650	190	2	180-280	0.08-0.12	0.08-0.12	0.08-0.14	0.10-0.14
		<0.55%C	Quenched and tempered	850	250	3	140-240	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
		>=0.55%C	Annealed	750	220	4	140-240	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
			Quenched and tempered	1000	300	5	140-240	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
			Quenched and tempered	930	275	7	100-180	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
				1000	300	8	100-180	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
				1200	350	9	100-180	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
			Quenched and tempered	1100	325	11	100-160	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
			Martensitic	820	240	13	150-250	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
			Austenitic	600	180	14	150-250	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
K	Gray cast iron (GG)		Ferritic		160	15	160-260	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
			Pearlitic		250	16	160-260	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
	Cast iron nodular (GGG)		Ferritic		180	17	160-260	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
			Pearlitic		260	18	160-260	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
	Malleable cast iron		Ferritic		130	19	120-220	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16
			Pearlitic		230	20	120-220	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
			Cured		100	22	200-350	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
			Cured		90	24	200-350	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
		>12% Si	High temp.		130	25	200-350	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
	Copper alloys	>1% Pb	Free cutting		110	26	150-250	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
			Brass		90	27	150-250	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
			Electrolitic copper		100	28	150-250	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
	Non-metallic		Duroplastics, fiber plastics			29	150-250	0.10-0.16	0.10-0.16	0.10-0.17	0.10-0.17
			Hard rubber			30	150-250	0.10-0.16	0.10-0.16	0.10-0.17	0.10-0.17
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
			Cured		280	32	30-60	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
		Ni or Co based	Annealed		250	33	30-60	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
			Cured		350	34	30-60	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
			Cast		320	35	30-60	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
	Titanium,Ti alloys			Rm 400		36	50-80	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
			Alpha+beta alloys cured	Rm 1050		37	50-80	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
H	Hardened steel		Hardened		55HRC	38	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
			Hardened		60HRC	39	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
	Chilled cast iron		Cast		400	40	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
	Cast iron nodular		Hardened		55HRC	41	30-60	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel