



SPEED UP
HIGH SPEED & FEED

DEEPTWIST

MODULAR DRILL BODIES FOR DEEP HOLE DRILLING
WITH GOLDTWIST DRILLING HEADS

HEAD CHANGEABLE GUNDRILL

- Unique changeable drilling head system
- Diameter range: $\varnothing 10\text{mm}$ - $\varnothing 25\text{mm}$
- Drill lengths over 12xD



■ DEEPTWIST HEAD CHANGEABLE GUNDRILL

■ Product Overview

As part of the new innovative **SFeed** products, Ingersoll is introducing the modular **DeepTwist** tool for deep hole drilling operations.

The modular **DeepTwist** "TD" part-hole drills in a stable design offer optimum performance, even with workpiece materials with a tensile strength over 1000 N/mm². The solid material design makes it possible to transmit high torsional forces.

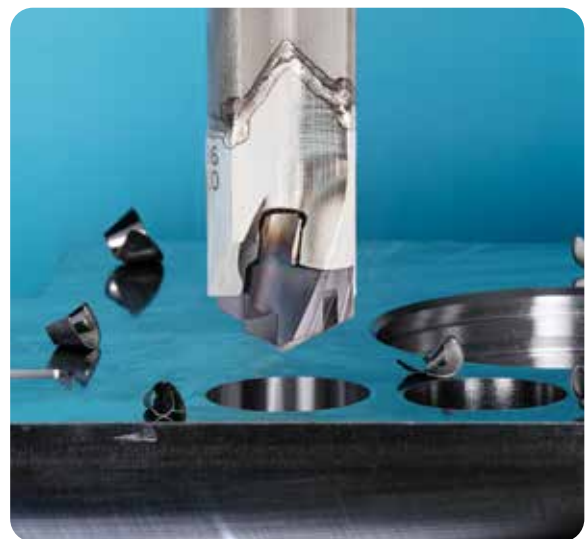
■ Technical Features

- Drill body with two straight flutes and internal coolant supply
- Use of standard **GoldTwist** boring heads
- Exchangeable clamping sleeves (threaded interface on the back)
- Can be used on lathes, machining centres as well as multitask machines
- Axial contact surface and fine thread for optimum concentricity

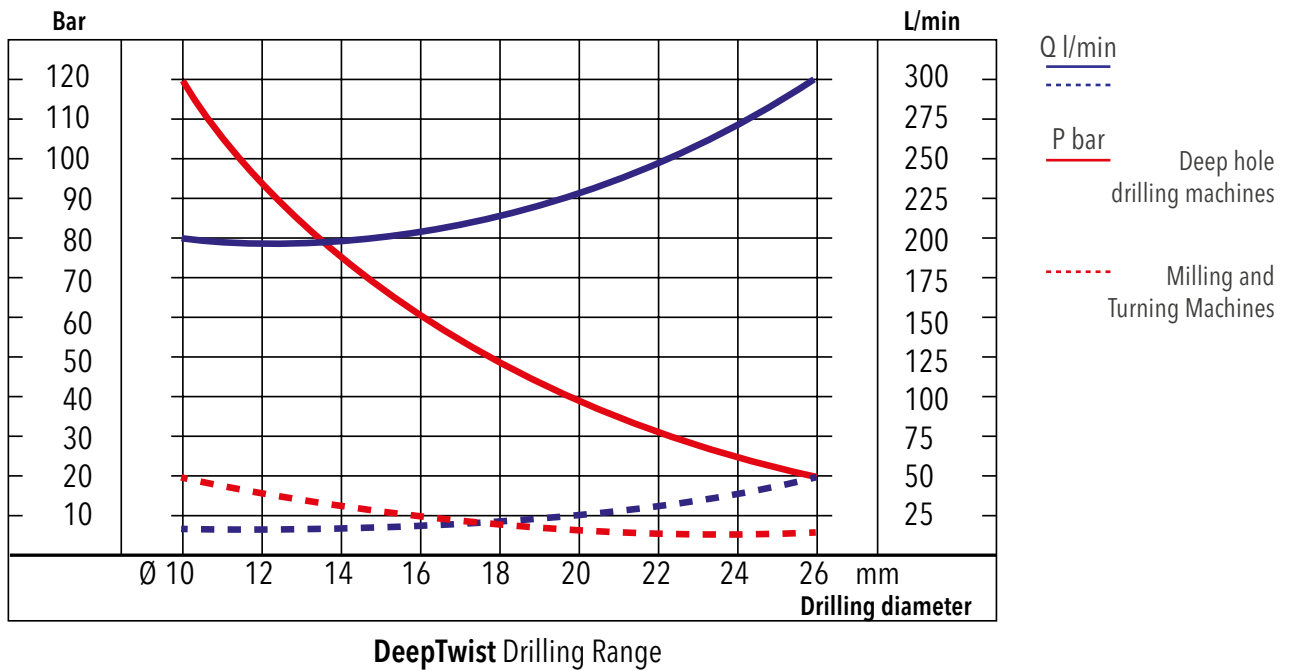


■ Advantages

- High machining speed due to two effective cutting edges (feed rate up to > 0.4 mm/rev)
- Maximum flexibility due to wide product variety of drill bodies and boring heads
- Significant savings in storage and logistics costs due to double modular design
- Special **DeepTwist** tools are available on request



Minimum Pressure and Coolant Flow Rate for DeepTwist



Gundrill: Lubrication and Cooling

The best performance is obtained by using oil. On equipment that uses water-soluble fluids (i.e. machining centers and CNC machines) a concentration between 10% and 15% is recommended.

Guidelines for optimal Gundrill Performance:

- Adequate coolant pressure and flow:**
It is recommended to use a strong coolant flow for efficient chip flushing and cooling to the cutting edge
- Filtration:** It is recommended to use a filter under 20µm.
Note: Improper filtration may result in interrupted flow of the lubrication oil. This creates a sticky surface on the guiding pads which leads to premature wear of the tool and overloading the coolant pump and spindle seals.
- Temperature of the coolant:** The coolant temperature should be between 20° and 22°C.
Note: Above 50°C the viscosity of the coolant is reduced by 50% and becomes ineffective.

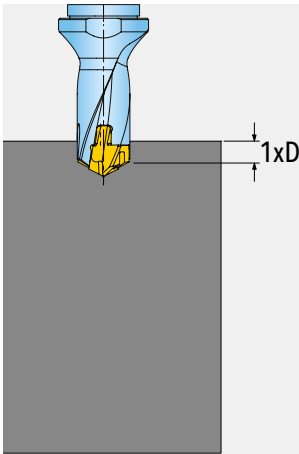
User Guide

Recommended procedure for drilling on the machining or turning center up to 400mm drilling depth

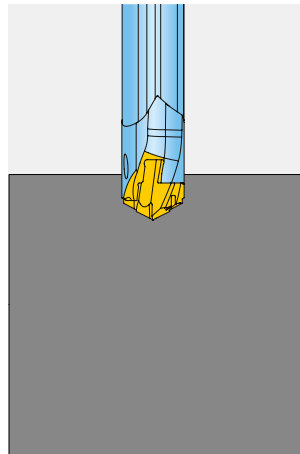
For drilling depths > 400mm to 800mm, first drill with a 400mm drill according to recommended procedure point 1.) to 4.), then drill with the drill for up to 800mm drilling depth according to recommended procedure from point 2.).

Notes:

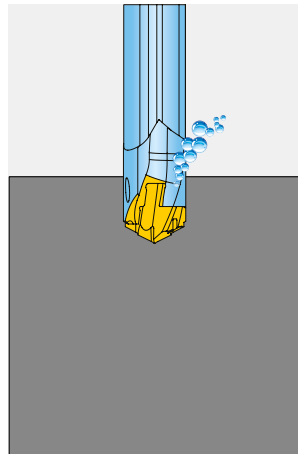
- For through holes, exit the hole max. 2 - 3 mm above the cutting edge corner
- Reduce the speed after emergence to n max. 50 rpm
- Switch off the coolant
- Drive out of the hole in clockwise rotation with v_f max 500 - 3000 mm/min



1. Drill a pilot hole 0.5xD deep with a short drill in the same diameter as for the **DeepTwist** drill

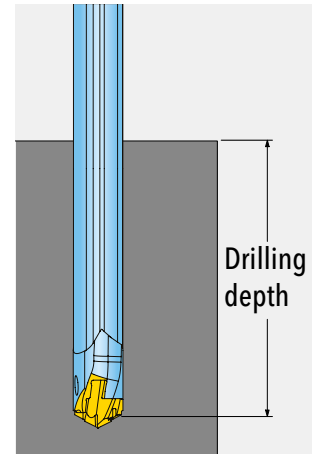


2. Enter the pre-hole at slow speed, feed, and 50 rpm until 1-2 mm before reaching the bottom.



3. Activate the cooling system and increase rotation speed to recommended drilling speed, maintain for 2-3 seconds, then continue at recommended drilling feed.

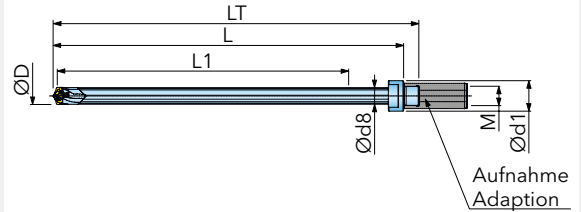
No pecking is required.
Apply maximum possible coolant flow rate.



4. Continuous drilling at recommended cutting values

DEEPTWIST HEAD CHANGEABLE GUNDRILL Ø10-25,9

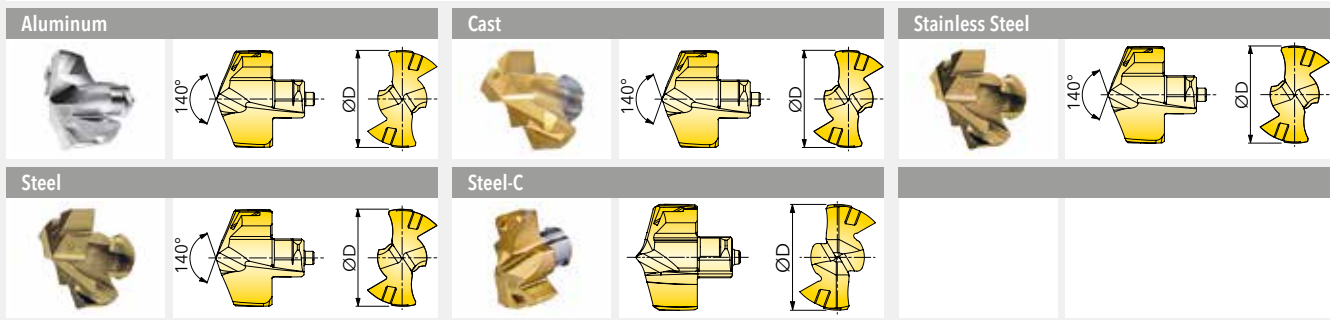
MODULAR DEEPTWIST ADAPTION



Designation	D	D min.	D max.	d1	d8	LT	L	L1	H	f	M	Z	Key	IK	kg
TD1000200MTR00	10,0	10,0	10,4	24	9,6	285,5	274	200	10	10	M16x1	2	KTD10.0-19.9	✓	0,140
TD1000400MTR00	10,0	10,0	10,4	24	9,6	485,5	474	400	10	10	M16x1	2	KTD10.0-19.9	✓	0,175
TD1050200MTR00	10,5	10,5	10,9	24	10,1	285,5	274	200	10	10	M16x1	2	KTD10.0-19.9	✓	0,140
TD1050400MTR00	10,5	10,5	10,9	24	10,1	485,5	474	400	10	10	M16x1	2	KTD10.0-19.9	✓	0,185
TD1100200MTR00	11,0	11,0	11,4	24	10,6	286,5	275	200	10	10	M16x1	2	KTD10.0-19.9	✓	0,140
TD1100400MTR00	11,0	11,0	11,4	24	10,6	485,5	474	400	10	10	M16x1	2	KTD10.0-19.9	✓	0,200
TD1150200MTR00	11,5	11,5	11,9	24	11,1	286,5	275	200	10	10	M16x1	2	KTD10.0-19.9	✓	0,150
TD1150400MTR00	11,5	11,5	11,9	24	11,1	485,5	474	400	10	10	M16x1	2	KTD10.0-19.9	✓	0,220
TD1200200MTR00	12,0	12,0	12,4	24	11,6	286,5	275	200	10	12	M16x1	2	KTD10.0-19.9	✓	0,160
TD1200400MTR00	12,0	12,0	12,4	24	11,6	486,5	475	400	10	10	M16x1	2	KTD10.0-19.9	✓	0,240
TD1250200MTR00	12,5	12,5	12,9	24	12,1	286,5	275	200	12	12	M16x1	2	KTD10.0-19.9	✓	0,170
TD1250400MTR00	12,5	12,5	12,9	24	12,1	486,5	475	400	12	12	M16x1	2	KTD10.0-19.9	✓	0,260
TD1300200MTR00	13,0	13,0	13,4	24	12,6	287,5	276	200	12	13	M16x1	2	KTD10.0-19.9	✓	0,180
TD1300250MTR00	13,0	13,0	13,4	24	12,6	337,5	326	250	12	13	M16x1	2	KTD10.0-19.9	✓	0,190
TD1300400MTR00	13,0	13,0	13,4	24	12,6	487,5	476	400	12	13	M16x1	2	KTD10.0-19.9	✓	0,270
TD1350200MTR00	13,5	13,5	13,9	24	13,1	287,5	276	200	12	13	M16x1	2	KTD10.0-19.9	✓	0,190
TD1350250MTR00	13,5	13,5	13,9	24	13,1	337,5	326	250	12	13	M16x1	2	KTD10.0-19.9	✓	0,210
TD1350400MTR00	13,5	13,5	13,9	24	13,1	487,5	476	400	12	13	M16x1	2	KTD10.0-19.9	✓	0,290
TD1400200MTR00	14,0	14,0	14,4	24	13,6	287,5	276	200	12	14	M16x1	2	KTD10.0-19.9	✓	0,210
TD1400250MTR00	14,0	14,0	14,4	24	13,6	337,5	326	250	12	14	M16x1	2	KTD10.0-19.9	✓	0,230
TD1400400MTR00	14,0	14,0	14,4	24	13,6	487,5	476	400	12	14	M16x1	2	KTD10.0-19.9	✓	0,310
TD1450200MTR00	14,5	14,5	14,9	24	14,1	287,5	276	200	12	14	M16x1	2	KTD10.0-19.9	✓	0,220
TD1450250MTR00	14,5	14,5	14,9	24	14,1	337,5	326	250	12	14	M16x1	2	KTD10.0-19.9	✓	0,235
TD1450400MTR00	14,5	14,5	14,9	24	14,1	487,5	476	400	12	14	M16x1	2	KTD10.0-19.9	✓	0,330
TD1500400MTR00	15,0	15,0	15,9	24	14,6	495,5	484	400	12	15	M16x1	2	KTD10.0-19.9	✓	0,350
TD1600400MUR00	16,0	16,0	16,9	34	15,4	495,5	484	400	12	16	M20x1	2	KTD10.0-19.9	✓	0,410
TD1700400MUR00	17,0	17,0	17,9	34	16,4	496,5	485	400	12	16	M20x1	2	KTD10.0-19.9	✓	0,490
TD1800400MUR00	18,0	18,0	18,9	34	17,4	497,5	486	400	12	16	M20x1	2	KTD10.0-19.9	✓	0,510
TD1900400MUR00	19,0	19,0	19,9	34	18,4	497,5	486	400	12	19	M20x1	2	KTD10.0-19.9	✓	0,540
TD2000400MUR00	20,0	20,0	20,9	34	19,4	498,5	487	400	12	20	M20x1	2	KTD20.0-26.9	✓	0,580
TD2100400MUR00	21,0	21,0	21,9	34	20,4	514,5	503	400	21	22	M20x1	2	KTD20.0-26.9	✓	0,630
TD2200400MUR00	22,0	22,0	22,9	34	21,4	515,5	504	400	21	22	M20x1	2	KTD20.0-26.9	✓	0,700
TD2300400MUR00	23,0	23,0	23,9	34	22,4	515,5	504	400	21	22	M20x1	2	KTD20.0-26.9	✓	0,780
TD2400400MUR00	24,0	24,0	24,9	34	23,4	516,5	505	400	21	22	M20x1	2	KTD20.0-26.9	✓	0,895
TD2500400MUR00	25,0	25,0	25,9	34	24,4	517,5	506	400	21	25	M20x1	2	KTD20.0-26.9	✓	1,215

GOLD TWIST BORING HEADS

BORING HEADS FOR DEEPTWIST



D	Designation					Grade
	Aluminum	Cast	Stainless Steel	Steel	Steel-C	
10,0	TNA1000R01					IN 05S
10,0		TKA1000R01	TMA1000R01	TPA1000R01	TPC1000R01	IN 2505
10,1		TKA1010R01	TMA1010R01	TPA1010R01		IN 2505
10,2	TNA1020R01					IN 05S
10,2		TKA1020R01	TMA1020R01	TPA1020R01	TPC1020R01	IN 2505
10,3		TKA1030R01	TMA1030R01	TPA1030R01		IN 2505
10,4		TKA1040R01	TMA1040R01	TPA1040R01		IN 2505
10,5	TNA1050R01					IN 05S
10,5		TKA1050R01	TMA1050R01	TPA1050R01	TPC1050R01	IN 2505
10,6		TKA1060R01	TMA1060R01	TPA1060R01		IN 2505
10,7		TKA1070R01	TMA1070R01	TPA1070R01		IN 2505
10,8		TKA1080R01	TMA1080R01	TPA1080R01		IN 2505
10,9		TKA1090R01	TMA1090R01	TPA1090R01		IN 2505
11,0	TNA1100R01					IN 05S
11,0		TKA1100R01	TMA1100R01	TPA1100R01	TPC1100R01	IN 2505
11,1		TKA1110R01	TMA1110R01	TPA1110R01		IN 2505
11,2		TKA1120R01	TMA1120R01	TPA1120R01		IN 2505
11,3		TKA1130R01	TMA1130R01	TPA1130R01		IN 2505
11,4		TKA1140R01	TMA1140R01	TPA1140R01		IN 2505
11,5	TNA1150R01					IN 05S
11,5		TKA1150R01	TMA1150R01	TPA1150R01	TPC1150R01	IN 2505
11,6		TKA1160R01	TMA1160R01	TPA1160R01		IN 2505
11,7		TKA1170R01	TMA1170R01	TPA1170R01		IN 2505
11,8		TKA1180R01	TMA1180R01	TPA1180R01		IN 2505
11,9		TKA1190R01	TMA1190R01	TPA1190R01		IN 2505
12,0	TNA1200R01					IN 05S
12,0		TKA1200R01	TMA1200R01	TPA1200R01	TPC1200R01	IN 2505
12,1		TKA1210R01	TMA1210R01	TPA1210R01		IN 2505
12,2		TKA1220R01	TMA1220R01	TPA1220R01		IN 2505
12,3		TKA1230R01	TMA1230R01	TPA1230R01		IN 2505
12,4		TKA1240R01	TMA1240R01	TPA1240R01		IN 2505
12,5	TNA1250R01					IN 05S
12,5		TKA1250R01	TMA1250R01	TPA1250R01	TPC1250R01	IN 2505
12,6		TKA1260R01	TMA1260R01	TPA1260R01		IN 2505
12,7		TKA1270R01	TMA1270R01	TPA1270R01	TPC1270R01	IN 2505
12,8		TKA1280R01	TMA1280R01	TPA1280R01		IN 2505
12,9		TKA1290R01	TMA1290R01	TPA1290R01		IN 2505
13,0	TNA1300R01					IN 05S
13,0		TKA1300R01	TMA1300R01	TPA1300R01	TPC1300R01	IN 2505
13,1		TKA1310R01	TMA1310R01	TPA1310R01		IN 2505

GOLD TWIST BORING HEADS

BORING HEADS FOR DEEPTWIST

D	Designation					Grade
	Aluminum	Cast	Stainless Steel	Steel	Steel-C	
13,2		TKA1320R01	TMA1320R01	TPA1320R01		IN 2505
13,3		TKA1330R01	TMA1330R01	TPA1330R01		IN 2505
13,4		TKA1340R01	TMA1340R01	TPA1340R01		IN 2505
13,5	TNA1350R01					IN 05S
13,5		TKA1350R01	TMA1350R01	TPA1350R01	TPC1350R01	IN 2505
13,6		TKA1360R01	TMA1360R01	TPA1360R01		IN 2505
13,7		TKA1370R01	TMA1370R01	TPA1370R01		IN 2505
13,8		TKA1380R01	TMA1380R01	TPA1380R01		IN 2505
13,9		TKA1390R01	TMA1390R01	TPA1390R01		IN 2505
14,0	TNA1400R01					IN 05S
14,0		TKA1400R01	TMA1400R01	TPA1400R01	TPC1400R01	IN 2505
14,1		TKA1410R01	TMA1410R01	TPA1410R01		IN 2505
14,2		TKA1420R01	TMA1420R01	TPA1420R01		IN 2505
14,3		TKA1430R01	TMA1430R01	TPA1430R01		IN 2505
14,4		TKA1440R01	TMA1440R01	TPA1440R01		IN 2505
14,5	TNA1450R01					IN 05S
14,5		TKA1450R01	TMA1450R01	TPA1450R01	TPC1450R01	IN 2505
14,6		TKA1460R01	TMA1460R01	TPA1460R01		IN 2505
14,7		TKA1470R01	TMA1470R01	TPA1470R01		IN 2505
14,8		TKA1480R01	TMA1480R01	TPA1480R01		IN 2505
14,9		TKA1490R01	TMA1490R01	TPA1490R01		IN 2505
15,0	TNA1500R01					IN 05S
15,0		TKA1500R01	TMA1500R01	TPA1500R01	TPC1500R01	IN 2505
15,1		TKA1510R01	TMA1510R01	TPA1510R01		IN 2505
15,2		TKA1520R01	TMA1520R01	TPA1520R01		IN 2505
15,3		TKA1530R01	TMA1530R01	TPA1530R01		IN 2505
15,4		TKA1540R01	TMA1540R01	TPA1540R01		IN 2505
15,5	TNA1550R01					IN 05S
15,5		TKA1550R01	TMA1550R01	TPA1550R01	TPC1550R01	IN 2505
15,6		TKA1560R01	TMA1560R01	TPA1560R01		IN 2505
15,7		TKA1570R01	TMA1570R01	TPA1570R01		IN 2505
15,8		TKA1580R01	TMA1580R01	TPA1580R01		IN 2505
15,9		TKA1590R01	TMA1590R01	TPA1590R01		IN 2505
16,0	TNA1600R01					IN 05S
16,0		TKA1600R01	TMA1600R01	TPA1600R01	TPC1600R01	IN 2505
16,1		TKA1610R01	TMA1610R01	TPA1610R01		IN 2505
16,2		TKA1620R01	TMA1620R01	TPA1620R01		IN 2505
16,3		TKA1630R01	TMA1630R01	TPA1630R01		IN 2505
16,4		TKA1640R01	TMA1640R01	TPA1640R01		IN 2505
16,5	TNA1650R01					IN 05S
16,5		TKA1650R01	TMA1650R01	TPA1650R01	TPC1650R01	IN 2505
16,6		TKA1660R01	TMA1660R01	TPA1660R01		IN 2505
16,7		TKA1670R01	TMA1670R01	TPA1670R01		IN 2505
16,8		TKA1680R01	TMA1680R01	TPA1680R01		IN 2505
16,9		TKA1690R01	TMA1690R01	TPA1690R01		IN 2505
17,0	TNA1700R01					IN 05S
17,0		TKA1700R01	TMA1700R01	TPA1700R01	TPC1700R01	IN 2505
17,1		TKA1710R01	TMA1710R01	TPA1710R01		IN 2505
17,2		TKA1720R01	TMA1720R01	TPA1720R01		IN 2505
17,3		TKA1730R01	TMA1730R01	TPA1730R01		IN 2505

BORING HEADS FOR DEEPTWIST

D	Designation					Grade
	Aluminum	Cast	Stainless Steel	Steel	Steel-C	
17,4		TKA1740R01	TMA1740R01	TPA1740R01		IN 2505
17,5	TNA1750R01					IN 05S
17,5		TKA1750R01	TMA1750R01	TPA1750R01	TPC1750R01	IN 2505
17,6		TKA1760R01	TMA1760R01	TPA1760R01		IN 2505
17,7		TKA1770R01	TMA1770R01	TPA1770R01		IN 2505
17,8		TKA1780R01	TMA1780R01	TPA1780R01		IN 2505
17,9		TKA1790R01	TMA1790R01	TPA1790R01		IN 2505
18,0	TNA1800R01					IN 05S
18,0		TKA1800R01	TMA1800R01	TPA1800R01	TPC1800R01	IN 2505
18,1		TKA1810R01	TMA1810R01	TPA1810R01		IN 2505
18,2		TKA1820R01	TMA1820R01	TPA1820R01		IN 2505
18,3		TKA1830R01	TMA1830R01	TPA1830R01		IN 2505
18,4		TKA1840R01	TMA1840R01	TPA1840R01		IN 2505
18,5	TNA1850R01					IN 05S
18,5		TKA1850R01	TMA1850R01	TPA1850R01	TPC1850R01	IN 2505
18,6		TKA1860R01	TMA1860R01	TPA1860R01		IN 2505
18,7		TKA1870R01	TMA1870R01	TPA1870R01		IN 2505
18,8		TKA1880R01	TMA1880R01	TPA1880R01		IN 2505
18,9		TKA1890R01	TMA1890R01	TPA1890R01		IN 2505
19,0	TNA1900R01					IN 05S
19,0		TKA1900R01	TMA1900R01	TPA1900R01	TPC1900R01	IN 2505
19,1		TKA1910R01	TMA1910R01	TPA1910R01		IN 2505
19,2		TKA1920R01	TMA1920R01	TPA1920R01		IN 2505
19,3		TKA1930R01	TMA1930R01	TPA1930R01		IN 2505
19,4		TKA1940R01	TMA1940R01	TPA1940R01		IN 2505
19,5	TNA1950R01					IN 05S
19,5		TKA1950R01	TMA1950R01	TPA1950R01	TPC1950R01	IN 2505
19,6		TKA1960R01	TMA1960R01	TPA1960R01		IN 2505
19,7		TKA1970R01	TMA1970R01	TPA1970R01		IN 2505
19,8		TKA1980R01	TMA1980R01	TPA1980R01		IN 2505
19,9		TKA1990R01	TMA1990R01	TPA1990R01		IN 2505
20,0	TNA2000R01					IN 05S
20,0		TKA2000R01	TMA2000R01	TPA2000R01	TPC2000R01	IN 2505
20,1		TKA2010R01	TMA2010R01	TPA2010R01		IN 2505
20,2		TKA2020R01	TMA2020R01	TPA2020R01		IN 2505
20,3		TKA2030R01	TMA2030R01	TPA2030R01		IN 2505
20,4		TKA2040R01	TMA2040R01	TPA2040R01		IN 2505
20,5	TNA2050R01					IN 05S
20,5		TKA2050R01	TMA2050R01	TPA2050R01	TPC2050R01	IN 2505
20,6		TKA2060R01	TMA2060R01	TPA2060R01		IN 2505
20,7		TKA2070R01	TMA2070R01	TPA2070R01		IN 2505
20,8		TKA2080R01	TMA2080R01	TPA2080R01		IN 2505
20,9		TKA2090R01	TMA2090R01	TPA2090R01		IN 2505
21,0	TNA2100R01					IN 05S
21,0		TKA2100R01	TMA2100R01	TPA2100R01	TPC2100R01	IN 2505
21,1		TKA2110R01	TMA2110R01	TPA2110R01		IN 2505
21,2		TKA2120R01	TMA2120R01	TPA2120R01		IN 2505
21,3		TKA2130R01	TMA2130R01	TPA2130R01		IN 2505
21,4		TKA2140R01	TMA2140R01	TPA2140R01		IN 2505
21,5	TNA2150R01					IN 05S

BORING HEADS FOR DEEPTWIST

D	Designation					Grade
	Aluminum	Cast	Stainless Steel	Steel	Steel-C	
21,5		TKA2150R01	TMA2150R01	TPA2150R01	TPC2150R01	IN 2505
21,6		TKA2160R01	TMA2160R01	TPA2160R01		IN 2505
21,7		TKA2170R01	TMA2170R01	TPA2170R01		IN 2505
21,8		TKA2180R01	TMA2180R01	TPA2180R01		IN 2505
21,9		TKA2190R01	TMA2190R01	TPA2190R01		IN 2505
22,0	TNA2200R01					IN 05S
22,0		TKA2200R01	TMA2200R01	TPA2200R01	TPC2200R01	IN 2505
22,1		TKA2210R01	TMA2210R01	TPA2210R01		IN 2505
22,2		TKA2220R01	TMA2220R01	TPA2220R01		IN 2505
22,3		TKA2230R01	TMA2230R01	TPA2230R01		IN 2505
22,4		TKA2240R01	TMA2240R01	TPA2240R01		IN 2505
22,5	TNA2250R01					IN 05S
22,5		TKA2250R01	TMA2250R01	TPA2250R01	TPC2250R01	IN 2505
22,6		TKA2260R01	TMA2260R01	TPA2260R01		IN 2505
22,7		TKA2270R01	TMA2270R01	TPA2270R01		IN 2505
22,8		TKA2280R01	TMA2280R01	TPA2280R01		IN 2505
22,9		TKA2290R01	TMA2290R01	TPA2290R01		IN 2505
23,0	TNA2300R01					IN 05S
23,0		TKA2300R01	TMA2300R01	TPA2300R01	TPC2300R01	IN 2505
23,1		TKA2310R01	TMA2310R01	TPA2310R01		IN 2505
23,2		TKA2320R01	TMA2320R01	TPA2320R01		IN 2505
23,3		TKA2330R01	TMA2330R01	TPA2330R01		IN 2505
23,4		TKA2340R01	TMA2340R01	TPA2340R01		IN 2505
23,5	TNA2350R01					IN 05S
23,5		TKA2350R01	TMA2350R01	TPA2350R01	TPC2350R01	IN 2505
23,6		TKA2360R01	TMA2360R01	TPA2360R01		IN 2505
23,7		TKA2370R01	TMA2370R01	TPA2370R01		IN 2505
23,8		TKA2380R01	TMA2380R01	TPA2380R01		IN 2505
23,9		TKA2390R01	TMA2390R01	TPA2390R01		IN 2505
24,0	TNA2400R01					IN 05S
24,0		TKA2400R01	TMA2400R01	TPA2400R01	TPC2400R01	IN 2505
24,1		TKA2410R01	TMA2410R01	TPA2410R01		IN 2505
24,2		TKA2420R01	TMA2420R01	TPA2420R01		IN 2505
24,3		TKA2430R01	TMA2430R01	TPA2430R01		IN 2505
24,4		TKA2440R01	TMA2440R01	TPA2440R01		IN 2505
24,5	TNA2450R01					IN 05S
24,5		TKA2450R01	TMA2450R01	TPA2450R01	TPC2450R01	IN 2505
24,6		TKA2460R01	TMA2460R01	TPA2460R01		IN 2505
24,7		TKA2470R01	TMA2470R01	TPA2470R01		IN 2505
24,8		TKA2480R01	TMA2480R01	TPA2480R01		IN 2505
24,9		TKA2490R01	TMA2490R01	TPA2490R01		IN 2505
25,0	TNA2500R01					IN 05S
25,0		TKA2500R01	TMA2500R01	TPA2500R01	TPC2500R01	IN 2505
25,1		TKA2510R01	TMA2510R01	TPA2510R01		IN 2505
25,2		TKA2520R01	TMA2520R01	TPA2520R01		IN 2505
25,3		TKA2530R01	TMA2530R01	TPA2530R01		IN 2505
25,4		TKA2540R01	TMA2540R01	TPA2540R01		IN 2505
25,5	TNA2550R01					IN 05S
25,5		TKA2550R01	TMA2550R01	TPA2550R01	TPC2550R01	IN 2505
25,6		TKA2560R01	TMA2560R01	TPA2560R01		IN 2505

GOLD TWIST BORING HEADS

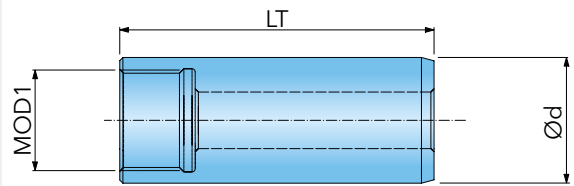
BORING HEADS FOR DEEPTWIST

D	Designation					Grade
	Aluminum	Cast	Stainless Steel	Steel	Steel-C	
25,7		TKA2570R01	TMA2570R01	TPA2570R01		IN 2505
25,8		TKA2580R01	TMA2580R01	TPA2580R01		IN 2505
25,9		TKA2590R01	TMA2590R01	TPA2590R01	TPC2590R01	IN 2505

DEEPTWIST SHANKS WITH THREADED CONNECTION



cylindrical shank



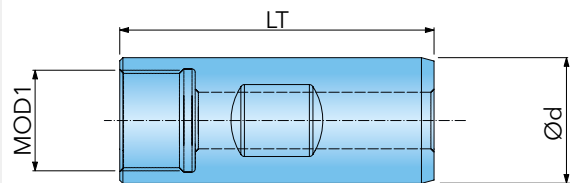
Modular

Designation	MOD1	d	LT		
GDV10-MF16X1-M-C20	M16x1	20	50	✓	0,11
GDV11-MF20X1-M-C25	M20x1	25	56	✓	0,21
GDV12-MF20X1-M-C32	M20x1	32	60	✓	0,34
GDV13-MF20X1-M-C40	M20x1	40	70	✓	0,65

DEEPTWIST SHANKS WITH THREADED CONNECTION WELDON



DIN 1835 B



Modular

Designation	MOD1	d	LT		
GDV22-MF16X1-M-W20	M16x1	20	50	✓	0,10
GDV23-MF20X1-M-W25	M20x1	25	56	✓	0,20
GDV24-MF20X1-M-W32	M20x1	32	60	✓	0,33
GDV25-MF20X1-M-W40	M20x1	40	70	✓	0,,63

Recommended Cutting Data

Material	Condition	Tensile Strength (N/mm ²)	Hardness HB	Material No.	Cutting speed V _c [m/min]	Feed f _u [mm]				
						Ø10-Ø11,9	Ø12-Ø13,9	Ø14-Ø15,9	Ø16-Ø19,9	Ø20-Ø25,9
P Non-alloy steel and cast steel, free cutting steel	< 0,25% C Annealed	420	125	1	80-140	0,15-0,21	0,18-0,24	0,20-0,27	0,25-0,35	0,25-0,35
	≥ 0,25% C Annealed	650	190	2	80-130	0,15-0,21	0,18-0,24	0,20-0,27	0,25-0,35	0,25-0,35
	< 0,55% C Heat treated	850	250	3	80-120	0,15-0,21	0,18-0,24	0,20-0,27	0,25-0,35	0,25-0,35
	≥ 0,55% C Annealed	750	220	4	70-110	0,15-0,21	0,18-0,24	0,20-0,27	0,25-0,35	0,25-0,35
	Heat treated	1000	300	5	50-90	0,15-0,21	0,18-0,24	0,20-0,27	0,25-0,35	0,25-0,35
	Annealed	600	200	6	80-120	0,14-0,21	0,16-0,24	0,18-0,26	0,23-0,31	0,25-0,35
	Heat treated	930	275	7	70-110	0,14-0,21	0,16-0,24	0,18-0,26	0,23-0,31	0,25-0,35
	Heat treated	1000	300	8	50-90	0,14-0,21	0,16-0,24	0,18-0,26	0,23-0,31	0,25-0,35
	Heat treated	1200	350	9	40-70	0,14-0,21	0,16-0,24	0,18-0,26	0,23-0,31	0,25-0,35
	High alloyed steel, cast steel, and tool steel	Annealed	680	200	10	50-90	0,12-0,17	0,15-0,20	0,18-0,23	0,20-0,25
Heat treated	1100	325	11	40-80	0,12-0,17	0,15-0,20	0,18-0,23	0,20-0,25	0,22-0,27	
M Stainless steel and cast steel	Ferritic/ martensitic	680	200	12	40-70	0,12-0,15	0,14-0,17	0,16-0,20	0,16-0,21	0,18-0,24
	Martensitic	820	240	13	40-70	0,12-0,15	0,14-0,17	0,16-0,20	0,16-0,21	0,18-0,24
K Cast iron nodular GG	Ferritic	-	160	15	90-160	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
	Pearlitic	-	250	16	80-140	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
	Ferritic	-	130	17	90-180	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
	Pearlitic	-	230	18	80-140	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
Malleable cast iron	Ferritic	-	180	19	90-160	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
	Pearlitic	-	260	20	80-140	0,20-0,27	0,25-0,32	0,30-0,37	0,35-0,45	0,35-0,47
N Aluminum wrought alloy	Not cureable	-	60	21	90-220	0,25-0,32	0,30-0,37	0,35-0,42	0,40-0,50	0,45-0,57
	Hardened	-	100	22	90-220	0,25-0,32	0,30-0,37	0,35-0,42	0,40-0,50	0,45-0,57
	> 12% Si Not cureable	-	75	23	90-220	0,25-0,32	0,30-0,37	0,35-0,42	0,40-0,50	0,45-0,57
	Hardened	-	90	24	90-220	0,25-0,32	0,30-0,37	0,35-0,42	0,40-0,50	0,45-0,57
	> 12% Si High temperature resistant	-	130	25	80-160	0,25-0,32	0,30-0,37	0,35-0,42	0,40-0,50	0,45-0,57

For the 400mm long tools please reduce the cutting speed by 20%.

Ingersoll Cutting Tools

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DEEPTWIST