



Tool material

Surface

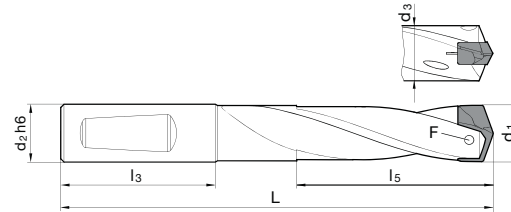


P	Steel
M	Stainless steel
K	Cast iron
N	Aluminum
S	Titanium alloys
H	Hardened steel

●=Optimal

○=Limited

nickel-plated • especially high wear resistance • optimized flute design • optimized coolant duct exit • clamping screws art. no. 4071 included • screwdriver art. no. 1612 included



d1 mm	d2 h6 mm	d2 h6 frac.	d3 mm	L mm	l3 mm	l5 mm	F	Code no.	EDP #
11.00 - 11.49	12.000		10.70	124.00	45.00	59.60	4071 2.200	11.000	9041080110000
11.00 - 11.49	12.700	1/2	10.70	124.00	45.00	59.60	4071 2.200	11.005	9041080110050
11.50 - 11.99	12.000		11.20	127.00	45.00	62.10	4071 2.200	11.500	9041080115000
11.50 - 11.99	12.700	1/2	11.20	127.00	45.00	62.10	4071 2.200	11.505	9041080115050
12.00 - 12.49	12.000		11.70	131.00	45.00	64.70	4071 2.201	12.000	9041080120000
12.00 - 12.49	12.700	1/2	11.70	131.00	45.00	64.70	4071 2.201	12.005	9041080120050
12.50 - 12.99	14.000		12.20	134.00	45.00	67.30	4071 2.201	12.500	9041080125000
12.50 - 12.99	15.875	5/8	12.20	134.00	45.00	67.30	4071 2.201	12.505	9041080125050
13.00 - 13.49	14.000		12.70	137.00	45.00	69.90	4071 2.500	13.000	9041080130000
13.00 - 13.49	15.875	5/8	12.70	137.00	45.00	69.90	4071 2.500	13.005	9041080130050
13.50 - 13.99	14.000		13.20	141.00	45.00	72.60	4071 2.500	13.500	9041080135000
13.50 - 13.99	15.875	5/8	13.20	141.00	45.00	72.60	4071 2.500	13.505	9041080135050
14.00 - 14.49	14.000		13.70	144.00	45.00	75.20	4071 3.000	14.000	9041080140000
14.00 - 14.49	15.875	5/8	13.70	144.00	45.00	75.20	4071 3.000	14.005	9041080140050
14.50 - 14.99	16.000		14.20	150.00	48.00	77.80	4071 3.000	14.500	9041080145000
14.50 - 14.99	15.875	5/8	14.20	150.00	48.00	77.80	4071 3.000	14.505	9041080145050
15.00 - 15.49	16.000		14.70	154.00	48.00	80.30	4071 3.001	15.000	9041080150000
15.00 - 15.49	15.875	5/8	14.70	154.00	48.00	80.30	4071 3.001	15.005	9041080150050
15.50 - 15.99	16.000		15.20	157.00	48.00	82.90	4071 3.001	15.500	9041080155000
15.50 - 15.99	15.875	5/8	15.20	157.00	48.00	82.90	4071 3.001	15.505	9041080155050
16.00 - 16.49	16.000		15.70	160.00	48.00	85.90	4071 3.500	16.000	9041080160000
16.00 - 16.49	15.875	5/8	15.70	160.00	48.00	85.90	4071 3.500	16.005	9041080160050
16.50 - 16.99	18.000		16.20	164.00	48.00	88.10	4071 3.500	16.500	9041080165000
16.50 - 16.99	19.050	3/4	16.20	164.00	48.00	88.10	4071 3.500	16.505	9041080165050
17.00 - 17.49	18.000		16.70	167.00	48.00	90.80	4071 3.500	17.000	9041080170000
17.00 - 17.49	19.050	3/4	16.70	167.00	48.00	90.80	4071 3.500	17.005	9041080170050
17.50 - 17.99	18.000		17.20	170.00	48.00	93.40	4071 3.500	17.500	9041080175000
17.50 - 17.99	19.050	3/4	17.20	170.00	48.00	93.40	4071 3.500	17.505	9041080175050
18.00 - 18.49	18.000		17.70	174.00	48.00	95.90	4071 4.000	18.000	9041080180000
18.00 - 18.49	19.050	3/4	17.70	174.00	48.00	95.90	4071 4.000	18.005	9041080180050
18.50 - 18.99	20.000		18.20	179.00	50.00	98.50	4071 4.000	18.500	9041080185000
18.50 - 18.99	19.050	3/4	18.20	179.00	50.00	98.50	4071 4.000	18.505	9041080185050
19.00 - 19.49	20.000		18.70	182.00	50.00	101.10	4071 4.000	19.000	9041080190000
19.00 - 19.49	19.050	3/4	18.70	182.00	50.00	101.10	4071 4.000	19.005	9041080190050
19.50 - 19.99	20.000		19.20	186.00	50.00	103.70	4071 4.000	19.500	9041080195000
19.50 - 19.99	19.050	3/4	19.20	186.00	50.00	103.70	4071 4.000	19.505	9041080195050
20.00 - 20.49	20.000		19.70	189.00	50.00	106.30	4071 4.500	20.000	9041080200000
20.00 - 20.49	19.050	3/4	19.70	189.00	50.00	106.30	4071 4.500	20.005	9041080200050
20.50 - 20.99	25.000		20.20	201.00	56.00	109.00	4071 4.500	20.500	9041080205000
20.50 - 20.99	25.400	1	20.20	201.00	56.00	109.00	4071 4.500	20.505	9041080205050
21.00 - 21.49	25.000		20.70	204.00	56.00	111.60	4071 4.500	21.000	9041080210000
21.00 - 21.49	25.400	1	20.70	204.00	56.00	111.60	4071 4.500	21.005	9041080210050
21.50 - 21.99	25.000		21.20	207.00	56.00	114.10	4071 4.500	21.500	9041080215000

d1 mm	d2 h6 mm	d2 h6 frac.	d3 mm	L mm	I3 mm	I5 mm	F	Code no.	EDP #
21.50 - 21.99	25.400	1	21.20	207.00	56.00	114.10	4071 4.500	21.505	9041080215050
22.00 - 22.49	25.000		21.70	210.00	56.00	116.70	4071 5.000	22.000	9041080220000
22.00 - 22.49	25.400	1	21.70	210.00	56.00	116.70	4071 5.000	22.005	9041080220050
22.50 - 22.99	25.000		22.20	214.00	56.00	119.30	4071 5.000	22.500	9041080225000
22.50 - 22.99	25.400	1	22.20	214.00	56.00	119.30	4071 5.000	22.505	9041080225050
23.00 - 23.49	25.000		22.70	217.00	56.00	121.90	4071 5.000	23.000	9041080230000
23.00 - 23.49	25.400	1	22.70	217.00	56.00	121.90	4071 5.000	23.005	9041080230050
23.50 - 23.99	25.000		23.20	221.00	56.00	124.50	4071 5.000	23.500	9041080235000
23.50 - 23.99	25.400	1	23.20	221.00	56.00	124.50	4071 5.000	23.505	9041080235050
24.00 - 24.49	25.000		23.70	224.00	56.00	127.10	4071 5.001	24.000	9041080240000
24.00 - 24.49	25.400	1	23.70	224.00	56.00	127.10	4071 5.001	24.005	9041080240050
24.50 - 24.99	25.000		24.20	227.00	56.00	129.70	4071 5.001	24.500	9041080245000
24.50 - 24.99	25.400	1	24.20	227.00	56.00	129.70	4071 5.001	24.505	9041080245050
25.00 - 25.49	25.000		24.70	231.00	56.00	132.30	4071 5.001	25.000	9041080250000
25.00 - 25.49	25.400	1	24.70	231.00	56.00	132.30	4071 5.001	25.005	9041080250050
25.50 - 25.99	32.000		25.20	239.00	60.00	134.90	4071 5.001	25.500	9041080255000
25.50 - 25.99	31.750	1 1/4	25.20	239.00	60.00	134.90	4071 5.001	25.505	9041080255050
26.00 - 26.49	32.000		25.70	244.00	60.00	137.00	4071 5.003	26.000	9041080260000
26.00 - 26.49	31.750	1 1/4	25.70	244.00	60.00	137.00	4071 5.003	26.005	9041080260050
26.50 - 26.99	32.000		26.20	247.00	60.00	140.00	4071 5.003	26.500	9041080265000
26.50 - 26.99	31.750	1 1/4	26.20	247.00	60.00	140.00	4071 5.003	26.505	9041080265050
27.00 - 27.49	32.000		26.70	251.00	60.00	142.00	4071 5.003	27.000	9041080270000
27.00 - 27.49	31.750	1 1/4	26.70	251.00	60.00	142.00	4071 5.003	27.005	9041080270050
27.50 - 27.99	32.000		27.20	254.00	60.00	144.80	4071 5.003	27.500	9041080275000
27.50 - 27.99	31.750	1 1/4	27.20	254.00	60.00	144.80	4071 5.003	27.505	9041080275050
28.00 - 28.49	32.000		27.70	257.00	60.00	147.40	4071 5.003	28.000	9041080280000
28.00 - 28.49	31.750	1 1/4	27.70	257.00	60.00	147.40	4071 5.003	28.005	9041080280050
28.50 - 28.99	32.000		28.20	260.00	60.00	150.40	4071 5.003	28.500	9041080285000
28.50 - 28.99	31.750	1 1/4	28.20	260.00	60.00	150.40	4071 5.003	28.505	9041080285050
29.00 - 29.49	32.000		28.70	264.00	60.00	153.50	4071 5.003	29.000	9041080290000
29.00 - 29.49	31.750	1 1/4	28.70	264.00	60.00	153.50	4071 5.003	29.005	9041080290050
29.50 - 29.99	32.000		29.20	267.00	60.00	155.10	4071 5.003	29.500	9041080295000
29.50 - 29.99	31.750	1 1/4	29.20	267.00	60.00	155.10	4071 5.003	29.505	9041080295050
30.00 - 30.49	32.000		29.70	271.00	60.00	157.60	4071 6.000	30.000	9041080300000
30.00 - 30.49	31.750	1 1/4	29.70	271.00	60.00	157.60	4071 6.000	30.005	9041080300050
30.50 - 30.99	32.000		30.20	274.00	60.00	160.20	4071 6.000	30.500	9041080305000
30.50 - 30.99	31.750	1 1/4	30.20	274.00	60.00	160.20	4071 6.000	30.505	9041080305050
31.00 - 31.49	32.000		30.70	277.00	60.00	162.80	4071 6.000	31.000	9041080310000
31.00 - 31.49	31.750	1 1/4	30.70	277.00	60.00	162.80	4071 6.000	31.005	9041080310050
31.50 - 31.99	32.000		31.20	280.00	60.00	165.40	4071 6.000	31.500	9041080315000
31.50 - 31.99	31.750	1 1/4	31.20	280.00	60.00	165.40	4071 6.000	31.505	9041080315050
32.00 - 32.99	32.000		31.70	287.00	60.00	170.60	4071 6.001	32.000	9041080320000
32.00 - 32.99	31.750	1 1/4	31.70	287.00	60.00	170.60	4071 6.001	32.005	9041080320050
33.00 - 33.99	32.000		32.70	294.00	60.00	175.80	4071 6.001	33.000	9041080330000
33.00 - 33.99	31.750	1 1/4	32.70	294.00	60.00	175.80	4071 6.001	33.005	9041080330050
34.00 - 34.99	32.000		33.70	300.00	60.00	181.00	4071 6.001	34.000	9041080340000
34.00 - 34.99	31.750	1 1/4	33.70	300.00	60.00	181.00	4071 6.001	34.005	9041080340050
35.00 - 35.99	32.000		34.70	307.00	60.00	186.20	4071 6.001	35.000	9041080350000
35.00 - 35.99	31.750	1 1/4	34.70	307.00	60.00	186.20	4071 6.001	35.005	9041080350050
36.00 - 36.99	32.000		35.70	314.00	60.00	191.30	4071 6.002	36.000	9041080360000
36.00 - 36.99	31.750	1 1/4	35.70	314.00	60.00	191.30	4071 6.002	36.005	9041080360050
37.00 - 37.99	32.000		36.70	321.00	60.00	196.50	4071 6.002	37.000	9041080370000
37.00 - 37.99	31.750	1 1/4	36.70	321.00	60.00	196.50	4071 6.002	37.005	9041080370050
38.00 - 38.99	32.000		37.70	327.00	60.00	201.70	4071 6.002	38.000	9041080380000
38.00 - 38.99	31.750	1 1/4	37.70	327.00	60.00	201.70	4071 6.002	38.005	9041080380050
39.00 - 40.00	32.000		38.70	334.00	60.00	206.90	4071 6.002	39.000	9041080390000
39.00 - 40.00	31.750	1 1/4	38.70	334.00	60.00	206.90	4071 6.002	39.005	9041080390050

The ideal insert for any material and application



Series # 4112



Series # 4113



Series # 4115



Series # 4114



Series # 4229

for pilot drilling



Series # 4111

HT 800 WP

The ideal body holder for any drilling depth and application

Series #	4105	4106	4107	4108	4109	4110
Drilling depth	1 x D	1,5 x D	3 x D	5 x D	7 x D	10 x D
Diameter	11.0 - 40.00	11.0 - 40.00	11.0 - 40.00	11.0 - 40.00	11.0 - 31.99	11.0 - 31.99
Shank	DIN 6535-HE	DIN 6535-HE	DIN 6535-HE	DIN 6535-HE	DIN 6535-HE	DIN 6535-HE
pilot drilling/ 45° countersinking						
     						

The series 4105 pilot drill body incorporates countersink inserts making it possible to machine a 45° chamfer while drilling the pilot hole.

HT 800 WP Replaceable Tip Drilling System

With the HT 800 WP interchangeable drilling system Guhring provides high-performance and cost-efficient drill bodies for hole diameters ranging from 11.00 to 40.0 mm.

The HT 800 WP drilling system is ideal for the production of large, highly accurate holes in various materials, making it suitable for energy, automotive, steel construction, and general machining industries.

EXTENDED TOOL LIFE

- interchangeable inserts perfectly adapted to the field of application regarding tool material, geometry and coating
- optimal machining results in steel, stainless steel, cast iron or aluminum

OPTIMAL CHIP EVACUATION

- special flute cross-section
- ultra-smooth surface finish

RIGID BODIES

- minimal diameter variances between body and insert reduce wear
- improved workpiece surfaces
- improved guidance of the tool increases the rigidity
- longer tool life

HIGHLY ACCURATE AND RIGID INSERT SEAT

- insert change possible in the machine
- holder remains clamped
- tool change and re-setting not required
- increased process reliability and reduced setup time

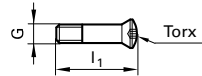
IDEAL COOLING LUBRICATION

- coolant ducts with maximum cross section
- exit from flute directly to cutting edge



HT 800 WP spare parts & accessories

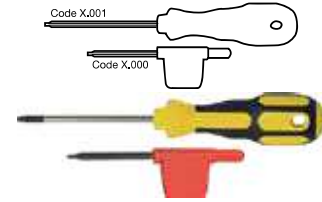
Clamping screws for HT 800 inserts



Series 4071

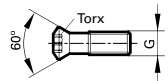
For body size	Size	OAL	with Torx	EDP No.
110/115	M2.2	9.50	T7	9040710022000
120/125	M2.2	10.50	T7	9040710022010
130/135	M2.5	11.40	T8	9040710025000
140/145	M3	12.10	T9	9040710030000
150/155	M3	13.10	T9	9040710030010
160 - 175	M3.5	14.25	T10	9040710035000
180 - 195	M4	16.00	T15	9040710040000
200 - 215	M4.5	18.00	T15	9040710045000
220 - 235	M5	19.75	T20	9040710050000
240 - 255	M5	21.75	T20	9040710050010
260 - 295	M5	23.40	T20	9040710050030
300 - 315	M6	27.00	T25	9040710060000
320 - 350	M6	28.50	T25	9040710060010
360 - 390	M6	32.50	T25	9040710060020

Screw driver Series 1612



For body size	for Torx	EDP No.
Pilot Body 110 - 140	T6	9016120060000
Pilot Body 160 - 280	T7	9016120070000
110 - 125	T7	9016120070010
130/135	T8	9016120080010
140 - 155	T9	9016120090010
160 - 175	T10	9016120100010
Pilot Body 300 - 360	T15	9016120150000
180 - 215	T15	9016120150010
220-295	T20	9016120200010
300 - 390	T25	9016120250000

Clamping screws for chamfering inserts



Series 6128

For body size	Size	OAL	with Torx	EDP No.
110 - 140	M2.0	5.5	T6	9061280020000
160 - 240	M2.5	5.3	T7	9061280025000
300 - 360	M4.0	9.5	T15	9061280040000

Torx Bits

Series 4917



for Torx	Drive	l1 mm	EDP No.
T7	1/4"	25	9049170070000
T8	1/4"	25	9049170080000
T9	1/4"	25	9049170090000
T10	1/4"	25	9049170100000
T15	1/4"	25	9049170150000
T20	1/4"	25	9049170200000
T25	1/4"	25	9049170250000

Torque wrench

Series 4915



Type	Drive	l1 mm	Tightening torque (Nm)	EDP No.
A	1/4"	160.00	0.8 - 2	9049150020000
A	1/4"	160.00	2 - 8	9049150080000
A	1/4"	200.00	5 - 14	9049150140000

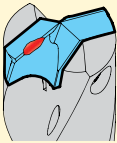
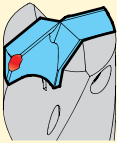
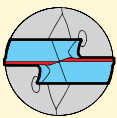
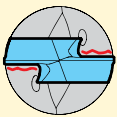
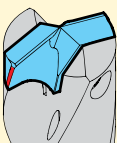
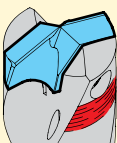
Torque values for clamping screws

Diameter range (mm)	11.0 - 12.99	13.0 - 13.99	14.0 - 15.99	16.0 - 17.99	18.0 - 19.99	20.0 - 21.99	22.0 - 29.99	30.0 - 40.00
Thread	M2.2	M2.5	M3	M3.5	M4	M4.5	M5	M6
Torx size	T7	T8	T9	T10	T15	T15	T20	T25
Tightening torque [Nm]	0.80	1.00	1.70	2.70	4.00	6.0	8.00	14.0

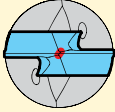
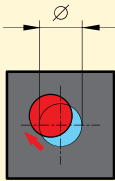
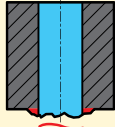
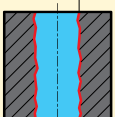
The information above applies to screws containing thread locker (Loctite). Guhring HT800 drill tip insert screws are supplied containing thread locker.

Bodies are supplied with clamping screw, series 4071, and screwdriver, series 1612.

12 tips to help diagnose problems

Problem	Cause	Remedy
1 Cutting edge build up 	- low cutting speed - excessive honing of cutting lip - bright finish cutting lip	- increase cutting speed - reduce cutting lip honing - have tool coated
2 Crumbling of outer corners 	- non-rigid conditions, insufficient workpiece clamping - deviation from concentricity too large - interrupted cut	- rigid clamping of workpiece - check and correct concentricity if possible - reduce feed
3 Heavy wear at flank 	- cutting speed too high - feed too low - clearance angle too small	- reduce cutting speed - increase feed - increase clearance angle
4 Crumbling on cutting lips 	- non-rigid conditions, insufficient workpiece clamping - interrupted cut - max. wear values exceeded - incorrect tool type	- rigid clamping of workpiece - reduce feed - reduce tool change intervals - apply suitable tool
5 Land wear 	- non-rigid conditions, insufficient workpiece clamping - deviation from concentricity too large - back taper too small - incorrect coolant (oil), coolant too weak	- rigid clamping of workpiece - check and correct concentricity if possible - increase back taper - increase strength of coolant or use neat oil
6 Scoring on tool body 	- non-rigid conditions, insufficient workpiece clamping - deviation from concentricity too large - interrupted cut - abrasive workpiece material	- rigid clamping of workpiece - check and correct concentricity if possible - reduce feed - increase strength of coolant or use neat oil

12 tips to help diagnose problems

Problem	Cause	Remedy
7 Heavy chisel edge wear 	- cutting speed too low - feed too high - excessive honing of cutting lip	- increase cutting speed - reduce feed - reduce cutting lip honing
8 Crumbling at intersection, web thinning and cutting lip 	- clearance angle too small - excessive honing of cutting lip - incorrect tool type	- increase clearance angle - reduce cutting lip honing - apply suitable tool
9 Plastic deformation of outer corner 	- cutting speed too high - insufficient coolant volume - incorrect or no honing at corner	- reduce cutting speed - increase volume/pressure - correct honing
10 Misalignment 	- non-rigid conditions, insufficient workpiece clamping - deviation from concentricity too large - spotting area not flat - chisel edge too large	- rigid clamping of workpiece - check and correct concentricity if possible - use milling cutter (2-fluted) for spotting - reduce chisel edge
11 Heavy burring on break-through 	- feed too high - max. wear values exceeded - excessive honing of cutting lip	- reduce feed - reduce tool change intervals - reduce cutting lip honing
12 Unsatisfactory surface quality 	- non-rigid conditions, insufficient workpiece clamping - deviation from concentricity too large - insufficient coolant volume	- rigid clamping of workpiece - check and correct concentricity if possible - increase volume/pressure