

GUHRING

NEW

HT 800 WP

The interchangeable insert drilling system

- for extreme process reliability
- from hole diameter 11.0 to 25.5 mm
- for drilling depths 3xD, 5xD, and 7xD with interchangeable inserts for steel, cast iron and aluminum

The new HT 800 WP interchangeable drilling system from Guhring - High-performance, cost-efficient holders for holes from 11.00 to 25.5 mm. Features include:

A Extended tool life

Thanks to special micro-machined cutting edges and an application-oriented surface finish the interchangeable inserts of the HT 800 WP drilling system are especially wear resistant. The holders of the HT 800 WP drilling system also possess a very high wear resistance, due to the optimized holder substrate and nickel plated surface. Incremental holder sizes in steps of 0.5 mm also lead to less wear on the holder body.

B Optimized chip flow

Thanks to their flute cross section the holders of the HT 800 WP drilling system ensure optimal chip evacuation from the hole, even with deeper drilling depths.

C Perfect coolant delivery

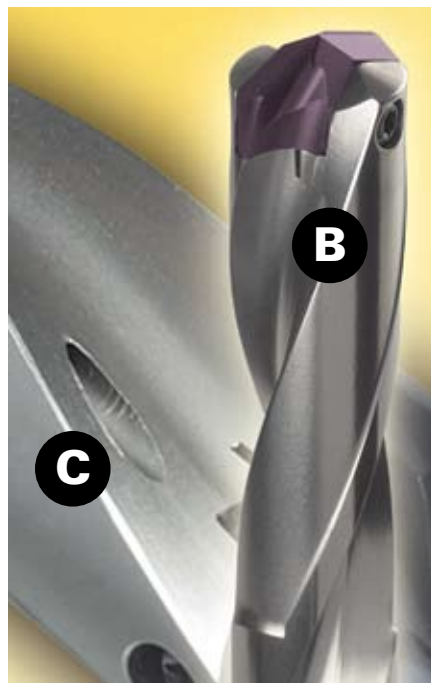
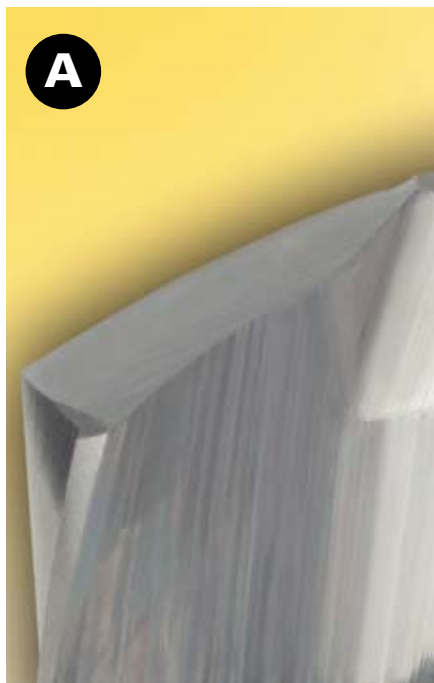
Perfect coolant delivery to the cutting surface is ensured by coolant ducts with maximum cross section, exiting in the flutes. This aids in both reducing the heat at the cutting edge as well as facilitating maximum chip evacuation.

D Highly accurate and rigid insert seat

The accurate insert seat enables insert changes in the machine in only a few simple steps with a standard Torx screw driver. Thanks to the optimized material for the HT 800 WP holders insert seat wear is much lower than with conventional tooling, allowing for more frequent insert changes without having to replace the holder. The clamping screws with screw lock ensure a secure holding of the interchangeable insert in the holder even with machines subject to high levels of vibrations.

Rigid holders

The close stepped diameter jumps of 0.5 mm with the holder sizes reduce wear, plus, through the better guidance of the tool in the hole they also increase the rigidity of the HT 800 WP drilling system. This allows for longer tool life as well as improved workpiece surfaces. All holders are offered with a metric or fractional inch size option.



HT 800 WP

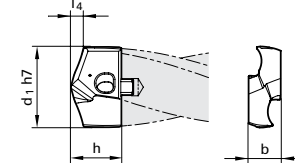
NEW Inserts

Interchangeable Insert Drills

DK 460 UF carbide, self-centering 140° SF point, RH cut

②

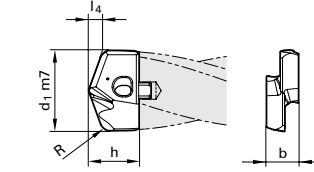
Series 4114



Application Materials:

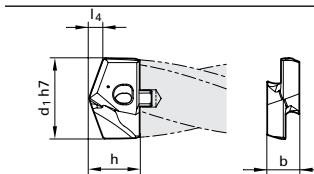
● Aluminum & Alloys

Series 4113



● Cast Iron

Series 4112



● General Steels/Brass

● Universal Steels

● Stainless Steels

● Hardened Materials

① Choose your diameter (metric or inch)

② Choose the appropriate insert for your workpiece material

③ Note the holder size for that insert diameter; select a holder (3xD, 5xD or 7xD) from the following page.

①

③

Dia	Dia	h	b	l5	Series	Series	Series	Holder
fract.	mm	mm	mm	mm	4114	4113	4112	Size
					bright	FIREX	nano-FIREX	(see next pg)
	11.00	7.5	4.5	2.1	•	•	•	110
	11.20	7.5	4.5	2.1	•	•	•	
29/64	11.50	7.5	4.5	2.1	•	•	•	
	11.51	7.5	4.5	2.1	•	•	•	115
	11.70	7.5	4.5	2.1	•	•	•	
	11.80	7.5	4.5	2.1	•	•	•	
15/32	11.91	7.5	4.5	2.2	•	•	•	
	12.00	7.8	5.0	2.2	•	•	•	
	12.10	7.8	5.0	2.2	•	•	•	120
	12.20	7.8	5.0	2.2	•	•	•	
31/64	12.30	7.8	5.0	2.2	•	•	•	
	12.50	7.8	5.0	2.3	•	•	•	
	12.60	7.8	5.0	2.3	•	•	•	
1/2	12.70	7.8	5.0	2.3	•	•	•	125
	12.80	7.8	5.0	2.3	•	•	•	
	12.90	7.8	5.0	2.3	•	•	•	
	13.00	8.6	5.5	2.4	•	•	•	
33/64	13.10	8.6	5.5	2.4	•	•	•	130
	13.49	8.6	5.5	2.4	•	•	•	
	13.50	8.6	5.5	2.4	•	•	•	
	13.60	8.6	5.5	2.4	•	•	•	
	13.70	8.6	5.5	2.4	•	•	•	135
	13.80	8.6	5.5	2.5	•	•	•	
35/64	13.89	8.6	5.5	2.5	•	•	•	
	14.00	9.7	6.0	2.5	•	•	•	
	14.10	9.7	6.0	2.5	•	•	•	
9/16	14.29	9.7	6.0	2.6	•	•	•	140
	14.40	9.7	6.0	2.6	•	•	•	
	14.50	9.7	6.0	2.6	•	•	•	
	14.60	9.7	6.0	2.7	•	•	•	
37/64	14.68	9.7	6.0	2.7	•	•	•	145
	14.70	9.7	6.0	2.7	•	•	•	
	14.80	9.7	6.0	2.7	•	•	•	
	15.00	9.9	6.0	2.7	•	•	•	
19/32	15.08	9.9	6.0	2.7	•	•	•	
	15.10	9.9	6.0	2.7	•	•	•	
	15.20	9.9	6.0	2.8	•	•	•	
	15.30	9.9	6.0	2.8	•	•	•	150
39/64	15.48	9.9	6.0	2.8	•	•	•	
	15.50	9.9	6.0	2.8	•	•	•	
	15.60	9.9	6.0	2.9	•	•	•	
	15.70	9.9	6.0	2.9	•	•	•	155
	15.80	9.9	6.0	2.9	•	•	•	
5/8	15.87	9.9	6.0	2.9	•	•	•	
	16.00	11.1	7.0	2.9	•	•	•	
41/64	16.27	11.1	7.0	3.0	•	•	•	160

Dia	Dia	h	b	l5	Series	Series	Series	Holder
fract.	mm	mm	mm	mm	4114	4113	4112	Size
					bright	FIREX	nano-FIREX	(see next pg)
	16.50	11.1	7.0	3.0	•	•	•	165
21/32	16.67	11.1	7.0	3.0	•	•	•	
	17.00	11.1	7.0	3.1	•	•	•	
43/64	17.07	11.1	7.0	3.1	•	•	•	170
	17.46	11.1	7.0	3.1	•	•	•	
11/16	17.50	11.1	7.0	3.2	•	•	•	
	17.60	11.1	7.0	3.2	•	•	•	175
45/64	17.86	11.1	7.0	3.3	•	•	•	
	18.00	12.5	8.0	3.3	•	•	•	
23/32	18.26	12.5	8.0	3.3	•	•	•	180
	18.50	12.5	8.0	3.4	•	•	•	
47/64	18.65	12.5	8.0	3.4	•	•	•	185
	19.00	12.5	8.0	3.5	•	•	•	
3/4	19.05	12.5	8.0	3.5	•	•	•	190
49/64	19.45	12.5	8.0	3.5	•	•	•	
	19.50	12.5	8.0	3.5	•	•	•	
	19.60	12.5	8.0	3.6	•	•	•	195
25/32	19.84	12.5	8.0	3.6	•	•	•	
	20.00	13.8	9.0	3.6	•	•	•	
51/64	20.24	13.8	9.0	3.6	•	•	•	200
	20.50	13.8	9.0	3.7	•	•	•	
13/16	20.64	13.8	9.0	3.8	•	•	•	205
	21.00	13.8	9.0	3.8	•	•	•	
53/64	21.03	13.8	9.0	3.8	•	•	•	210
	21.10	13.8	9.0	3.9	•	•	•	
27/32	21.43	13.8	9.0	3.9	•	•	•	
	21.50	13.8	9.0	3.9	•	•	•	215
55/64	21.83	13.8	9.0	4.0	•	•	•	
	22.00	15.2	10.0	4.0	•	•	•	
7/8	22.22	15.2	10.0	4.0	•	•	•	220
	22.50	15.2	10.0	4.1	•	•	•	
57/64	22.62	15.2	10.0	4.1	•	•	•	225
	23.00	15.2	10.0	4.2	•	•	•	
29/32	23.02	15.2	10.0	4.2	•	•	•	230
59/64	23.42	15.2	10.0	4.3	•	•	•	
	23.50	15.2	10.0	4.3	•	•	•	
15/16	23.81	15.2	10.0	4.3	•	•	•	235
	24.00	15.7	11.0	4.4	•	•	•	
	24.10	15.7	11.0	4.4	•	•	•	240
61/64	24.21	15.7	11.0	4.4	•	•	•	
	24.50	15.7	11.0	4.5	•	•	•	
31/32	24.61	15.7	11.0	4.5	•	•	•	245
	25.00	15.7	11.0	4.5	•	•	•	
1	25.40	15.7	11.0	4.6	•	•	•	250
	25.50	15.7	11.0	4.6	•	•	•	255

To order: Series number + dia (mm), example 4112 18.26

HT 800 WP

Interchangeable Insert Drills

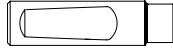
NEW Bodies

HSS, coolant-fed, full-helix flute, nickel treated

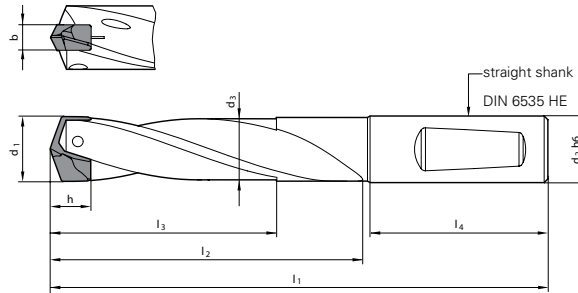


Coolant Through

Shank Dia. = h6 tolerance range



Reinforced Straight Shank w/
Whistle Notch



③

Holder Size	Order No.	d1 Insert Range mm	d2 mm	d2 in	d3 mm	l4 mm	Series 4107 (3xD)			Series 4108 (5xD)			Series 4109 (7xD)		
							l1 mm	l2 mm	l3 mm	l1 mm	l2 mm	l3 mm	l1 mm	l2 mm	l3 mm
110	11.000	11.00-11.49	12.00		10.70	45.00	101.00	54.00	36.60	124.00	77.00	59.60	147.00	100.00	82.60
110	11.005	11.00-11.49	12.70	1/2	10.70	45.00									
115	11.500	11.50-11.99	12.00		11.20	45.00	103.00	56.00	38.10	127.00	80.00	62.10	151.00	104.00	86.10
115	11.505	11.50-11.99	12.70	1/2	11.20	45.00									
120	12.000	12.00-12.49	12.00		11.70	45.00	106.00	59.00	39.70	131.00	84.00	64.70	156.00	109.00	89.70
120	12.005	12.00-12.49	12.70	1/2	11.70	45.00									
125	12.500	12.50-12.99	14.00		12.20	45.00	108.00	61.00	41.30	134.00	87.00	67.30	160.00	113.00	93.30
125	12.505	12.50-12.99	15.875	5/8	12.20	45.00									
130	13.000	13.00-13.49	14.00		12.70	45.00	110.00	63.00	42.90	137.00	90.00	69.90	164.00	117.00	96.90
130	13.005	13.00-13.49	15.875	5/8	12.70	45.00									
135	13.500	13.50-13.99	14.00		13.20	45.00	113.00	66.00	44.60	141.00	94.00	72.60	169.00	122.00	100.60
135	13.505	13.50-13.99	15.875	5/8	13.20	45.00									
140	14.000	14.00-14.49	14.00		13.70	45.00	115.00	68.00	46.20	144.00	97.00	75.20	173.00	126.00	104.20
140	14.005	14.00-14.49	15.875	5/8	13.70	45.00									
145	14.500	14.50-14.99	16.00		14.20	48.00	120.00	70.00	47.80	150.00	100.00	77.80	180.00	130.00	107.80
145	14.505	14.50-14.99	15.875	5/8	14.20	48.00									
150	15.000	15.00-15.49	16.00		14.70	48.00	123.00	73.00	49.30	154.00	104.00	80.30	185.00	135.00	111.30
150	15.005	15.00-15.49	15.875	5/8	14.70	48.00									
155	15.500	15.50-15.99	16.00		15.20	48.00	125.00	75.00	50.90	157.00	107.00	82.90	189.00	139.00	114.90
155	15.505	15.50-15.99	15.875	5/8	15.20	48.00									
160	16.000	16.00-16.49	16.00		15.70	48.00	127.00	77.00	52.90	160.00	110.00	85.90	193.00	143.00	118.90
160	16.005	16.00-16.49	15.875	5/8	15.70	48.00									
165	16.500	16.50-16.99	18.00		16.20	48.00	130.00	80.00	54.10	164.00	114.00	88.10	198.00	148.00	122.10
165	16.505	16.50-16.99	19.05	3/4	16.20	48.00									
170	17.000	17.00-17.49	18.00		16.70	48.00	132.00	82.00	55.80	167.00	117.00	90.80	202.00	152.00	125.80
170	17.005	17.00-17.49	19.05	3/4	16.70	48.00									
175	17.500	17.50-17.99	18.00		17.20	48.00	134.00	84.00	57.40	170.00	120.00	93.40	206.00	156.00	129.40
175	17.505	17.50-17.99	19.05	3/4	17.20	48.00									
180	18.000	18.00-18.49	18.00		17.70	48.00	137.00	87.00	58.90	174.00	124.00	95.90	211.00	161.00	132.90
180	18.005	18.00-18.49	19.05	3/4	17.70	48.00									

To order: Series number + order No., example 4108 24.500

Drill bodies, continued

Refer to Guhring's full-line drill catalog or visit www.guhring.com for information on torque wrenches and insert screws for HT 800 WP.



Bodies, continued

Holder Size	Order No.	d1 Insert Range mm	Series 4107 (3xD)				Series 4108 (5xD)			Series 4109 (7xD)					
			d2 mm	d2 in	d3 mm	l4 mm	l1 mm	l2 mm	l3 mm	l1 mm	l2 mm	l3 mm			
185	18.500	18.50-18.99	20.00		18.20	50.00	141.00	89.00	60.50	179.00	127.00	98.50	217.00	165.00	136.50
185	18.505	18.50-18.99	19.05	3/4	18.20	50.00									
190	19.000	19.00-19.49	20.00		18.70	50.00	143.00	91.00	62.10	182.00	130.00	101.10	221.00	169.00	140.10
190	19.005	19.00-19.49	19.05	3/4	18.70	50.00									
195	19.500	19.50-19.99	20.00		19.20	50.00	146.00	94.00	63.70	186.00	134.00	103.70	226.00	174.00	143.70
195	19.505	19.50-19.99	19.05	3/4	19.20	50.00									
200	20.000	20.00-20.49	20.00		19.70	50.00	148.00	96.00	65.30	189.00	137.00	106.30	230.00	178.00	147.30
200	20.005	20.00-20.49	19.05	3/4	19.70	50.00									
205	20.500	20.50-20.99	25.00		20.20	56.00	159.00	99.00	67.00	201.00	141.00	109.00	243.00	183.00	151.00
205	20.505	20.50-20.99	25.40	1.0"	20.20	56.00									
210	21.000	21.00-21.49	25.00		20.70	56.00	161.00	101.00	68.60	204.00	144.00	111.60	247.00	187.00	154.60
210	21.005	21.00-21.49	25.40	1.0"	20.70	56.00									
215	21.500	21.50-21.99	25.00		21.20	56.00	163.00	103.00	70.10	207.00	147.00	114.10	251.00	191.00	158.10
215	21.505	21.50-21.99	25.40	1.0"	21.20	56.00									
220	22.000	22.00-22.49	25.00		21.70	56.00	165.00	105.00	71.70	210.00	150.00	116.70	255.00	195.00	161.70
220	22.005	22.00-22.49	25.40	1.0"	21.70	56.00									
225	22.500	22.50-22.99	25.00		22.20	56.00	168.00	108.00	73.30	214.00	154.00	119.30	260.00	200.00	165.30
225	22.505	22.50-22.99	25.40	1.0"	22.20	56.00									
230	23.000	23.00-23.49	25.00		22.70	56.00	170.00	110.00	74.90	217.00	157.00	121.90	264.00	204.00	168.90
230	23.005	23.00-23.49	25.40	1.0"	22.70	56.00									
235	23.500	23.50-23.99	25.00		23.20	56.00	173.00	113.00	76.50	221.00	161.00	124.50	269.00	209.00	172.50
235	23.505	23.50-23.99	25.40	1.0"	23.20	56.00									
240	24.000	24.00-24.49	25.00		23.70	56.00	175.00	115.00	78.10	224.00	164.00	127.10	273.00	213.00	176.10
240	24.005	24.00-24.49	25.40	1.0"	23.70	56.00									
245	24.500	24.50-24.99	25.00		24.20	56.00	177.00	117.00	79.70	227.00	167.00	129.70	277.00	217.00	179.70
245	24.505	24.50-24.99	25.40	1.0"	24.20	56.00									
250	25.000	25.00-25.49	25.00		24.70	56.00	180.00	120.00	81.30	231.00	171.00	132.30	282.00	222.00	183.30
250	25.005	25.00-25.49	25.40	1.0"	24.70	56.00									
255	25.500	25.50-25.99	32.00		25.20	60.00	187.00	122.00	82.90	239.00	174.00	134.90	291.00	226.00	186.90
255	25.505	25.50-25.99	31.75		25.20	60.00									

To order: Series number + order No., example 4108 24.500

HT 800 WP - Operating Parameters

Series # 4112 insert with # 4107 body (3xD)

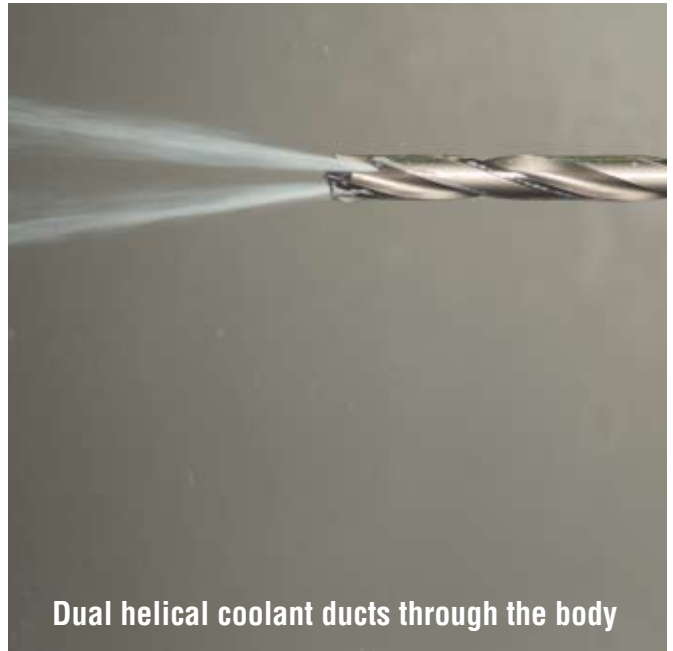
Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Common structural steels	≤100 Bhn	425	0.010	0.012	0.016	0.020
	>100-260 Bhn	360	0.008	0.010	0.012	0.016
Free-cutting steels	≤24 Rc	425	0.012	0.016	0.020	0.025
	>24-30 Rc	360	0.010	0.012	0.016	0.020
Unalloyed heat-treatable steels	≤16 Rc	425	0.010	0.012	0.016	0.020
	16-24 Rc	410	0.010	0.012	0.016	0.020
	24-30 Rc	360	0.008	0.010	0.012	0.016
Alloyed heat-treatable steels	24-30 Rc	360	0.010	0.012	0.016	0.020
	>30-38 Rc	295	0.008	0.010	0.012	0.016
Unalloyed case hardened steels	<230 Bhn	425	0.012	0.016	0.020	0.025
Alloyed case hardened steels	24-30 Rc	360	0.010	0.012	0.016	0.020
	>30-38 Rc	230	0.006	0.008	0.010	0.012
Nitriding steels	≥24-30 Rc	345	0.008	0.010	0.012	0.016
	>30-38 Rc	230	0.006	0.008	0.010	0.012
Tool steels	≤24 Rc	195	0.008	0.010	0.012	0.016
	>24-30 Rc	180	0.006	0.008	0.010	0.012
High speed steels	>14-30 Rc	180	0.005	0.006	0.010	0.010
Spring steels	<330 Bhn	165	0.004	0.005	0.016	0.008
Stainless steels, sulphured	≤24 Rc	180	0.005	0.006	0.010	0.010
	austenitic	130	0.005	0.006	0.010	0.010
	martensitic	115	0.005	0.006	0.010	0.010
Hardened steels	≤40-48 Rc	80	0.004	0.005	0.016	0.008
	>48-60 Rc	•	•	•	•	•
Special alloys	<38 Rc	80	0.004	0.005	0.016	0.008
Ti and Ti-alloys	≤24 Rc	130	0.005	0.006	0.010	0.010
	>24-38 Rc	115	0.004	0.005	0.016	0.008



Steels

Series # 4112 insert with #4108 body (5xD)

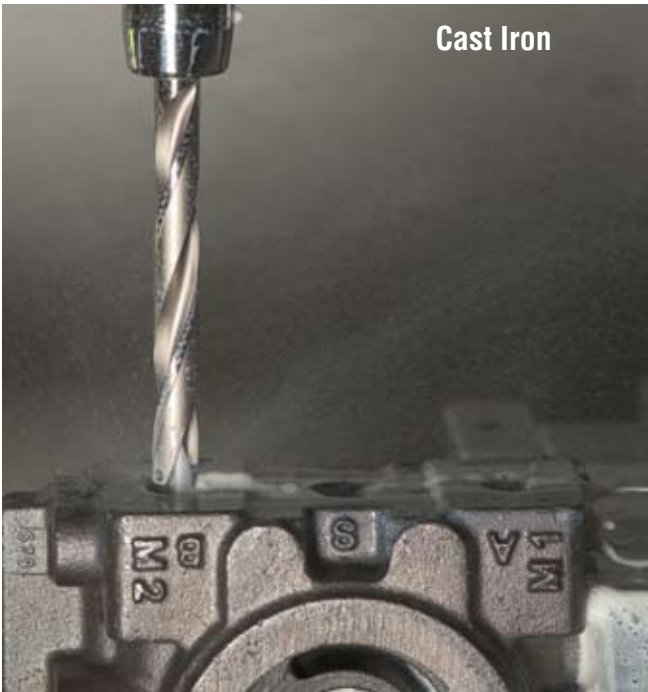
Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Common structural steels	≤100 Bhn	410	0.010	0.012	0.016	0.020
	>100-260 Bhn	345	0.008	0.010	0.012	0.016
Free-cutting steels	≤24 Rc	410	0.012	0.016	0.020	0.025
	>24-30 Rc	345	0.010	0.012	0.016	0.020
Unalloyed heat-treatable steels	≤16 Rc	410	0.010	0.012	0.016	0.020
	16-24 Rc	395	0.010	0.012	0.016	0.020
	24-30 Rc	345	0.008	0.010	0.012	0.016
Alloyed heat-treatable steels	24-30 Rc	345	0.010	0.012	0.016	0.020
	>30-38 Rc	280	0.008	0.010	0.012	0.016
Unalloyed case hardened steels	<230 Bhn	410	0.012	0.016	0.020	0.025
Alloyed case hardened steels	24-30 Rc	345	0.010	0.012	0.016	0.020
	>30-38 Rc	230	0.006	0.008	0.010	0.012
Nitriding steels	≥24-30 Rc	345	0.008	0.010	0.012	0.016
	>30-38 Rc	230	0.006	0.008	0.010	0.012
Tool steels	≤24 Rc	180	0.008	0.010	0.012	0.016
	>24-30 Rc	165	0.006	0.008	0.010	0.012
High speed steels	>14-30 Rc	180	0.005	0.006	0.010	0.010
Spring steels	<330 Bhn	165	0.004	0.005	0.016	0.008
Stainless steels, sulphured	≤24 Rc	180	0.005	0.006	0.010	0.010
	austenitic	130	0.005	0.006	0.010	0.010
	martensitic	115	0.005	0.006	0.010	0.010
Hardened steels	≤40-48 Rc	80	0.004	0.005	0.016	0.008
	>48-60 Rc	•	•	•	•	•
Special alloys	<38 Rc	80	0.004	0.005	0.016	0.008
Ti and Ti-alloys	≤24 Rc	130	0.005	0.006	0.010	0.010
	>24-38 Rc	115	0.004	0.005	0.016	0.008



Dual helical coolant ducts through the body

Series # 4112 insert with # 4109 body (7xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Common structural steels	≤100 Bhn	395	0.008	0.010	0.012	0.016
	>100-260 Bhn	345	0.006	0.008	0.010	0.012
Free-cutting steels	≤24 Rc	395	0.010	0.012	0.016	0.020
	>24-30 Rc	345	0.008	0.010	0.012	0.016
Unalloyed heat-treatable steels	≤16 Rc	395	0.008	0.010	0.012	0.016
	16-24 Rc	360	0.008	0.010	0.012	0.016
	24-30 Rc	330	0.006	0.008	0.010	0.012
Alloyed heat-treatable steels	24-30 Rc	330	0.008	0.010	0.012	0.016
	>30-38 Rc	280	0.006	0.008	0.010	0.012
Unalloyed case hardened steels	<230 Bhn	395	0.010	0.012	0.016	0.020
Alloyed case hardened steels	24-30 Rc	330	0.008	0.010	0.012	0.016
	>30-38 Rc	230	0.006	0.008	0.010	0.012
Nitriding steels	≥24-30 Rc	345	0.006	0.008	0.010	0.012
	>30-38 Rc	230	0.005	0.006	0.008	0.010
Tool steels	≤24 Rc	180	0.006	0.008	0.010	0.012
	>24-30 Rc	165	0.005	0.006	0.008	0.010
High speed steels	>14-30 Rc	180	0.004	0.005	0.006	0.008
Spring steels	<330 Bhn	165	0.004	0.005	0.006	0.008
Stainless steels, sulphured	≤24 Rc	180	0.004	0.005	0.006	0.008
	austenitic	130	0.004	0.005	0.006	0.008
	martensitic	115	0.004	0.005	0.006	0.008
Hardened steels	≤40-48 Rc	80	0.003	0.004	0.005	0.006
	>48-60 Rc	0	•	•	•	•
Special alloys	<38 Rc	80	0.003	0.004	0.005	0.006
Ti and Ti-alloys	≤24 Rc	•	•	•	•	•
	>24-38 Rc	•	•	•	•	•



Cast Iron

Series # 4113 insert with # 4107 body (3xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Cast iron	≤240 Bhn	330	0.010	0.012	0.016	0.020
	<300 Bhn	295	0.010	0.012	0.016	0.020
Spheroidal graphite iron and malleable cast iron	≤240 Bhn	395	0.012	0.016	0.020	0.025
	<300 Bhn	330	0.010	0.012	0.016	0.020
Chilled cast iron	<350 Bhn	295	0.010	0.012	0.016	0.020

Series # 4113 insert with #4108 body (5xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Cast iron	≤240 Bhn	330	0.010	0.012	0.016	0.020
	<300 Bhn	295	0.010	0.012	0.016	0.020
Spheroidal graphite iron and malleable cast iron	≤240 Bhn	395	0.012	0.016	0.020	0.025
	<300 Bhn	330	0.010	0.012	0.016	0.020
Chilled cast iron	<350 Bhn	295	0.010	0.012	0.016	0.020

Series # 4113 insert with #4109 body (7xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Cast iron	≤240 Bhn	260	0.010	0.012	0.016	0.020
	<300 Bhn	230	0.010	0.012	0.016	0.020
Spheroidal graphite iron and malleable cast iron	≤240 Bhn	330	0.012	0.016	0.020	0.025
	<300 Bhn	260	0.010	0.012	0.016	0.020
Chilled cast iron	<350 Bhn	230	0.010	0.012	0.016	0.020



Aluminum

Series # 4114 insert with #4107 body (3xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Aluminium and Al-alloys	<120 Bhn	1000	0.012	0.016	0.020	0.025
Al wrought alloys	<150 Bhn	1000	0.012	0.016	0.020	0.025
Al cast alloys ≤ 10 % Si	≤200 Bhn	845	0.012	0.016	0.020	0.025
> 10 % Si	<200 Bhn	710	0.012	0.016	0.020	0.025
Magnesium alloys	<150 Bhn	900	0.012	0.016	0.020	0.025
Copper, low-alloyed	<120 Bhn	400	0.010	0.012	0.016	0.020
Brass, short-chipping	≤200 Bhn	1050	0.012	0.016	0.020	0.025
long-chipping	<200 Bhn	710	0.010	0.012	0.016	0.020
Bronze, short-chipping	≤200 Bhn	410	0.010	0.012	0.016	0.020
	>200-260 Bhn	345	0.008	0.010	0.012	0.016

Series # 4114 insert with #4108 body (5xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Aluminium and Al-alloys	<120 Bhn	590	0.012	0.016	0.020	0.025
Al wrought alloys	<150 Bhn	590	0.012	0.016	0.020	0.025
Al cast alloys ≤ 10 % Si	≤200 Bhn	460	0.012	0.016	0.020	0.025
> 10 % Si	<200 Bhn	360	0.012	0.016	0.020	0.025
Magnesium alloys	<150 Bhn	590	0.012	0.016	0.020	0.025
Copper, low-alloyed	<120 Bhn	230	0.010	0.012	0.016	0.020
Brass, short-chipping	≤200 Bhn	590	0.012	0.016	0.020	0.025
long-chipping	<200 Bhn	395	0.010	0.012	0.016	0.020
Bronze, short-chipping	≤200 Bhn	195	0.010	0.012	0.016	0.020
	>200-260 Bhn	130	0.008	0.010	0.012	0.016

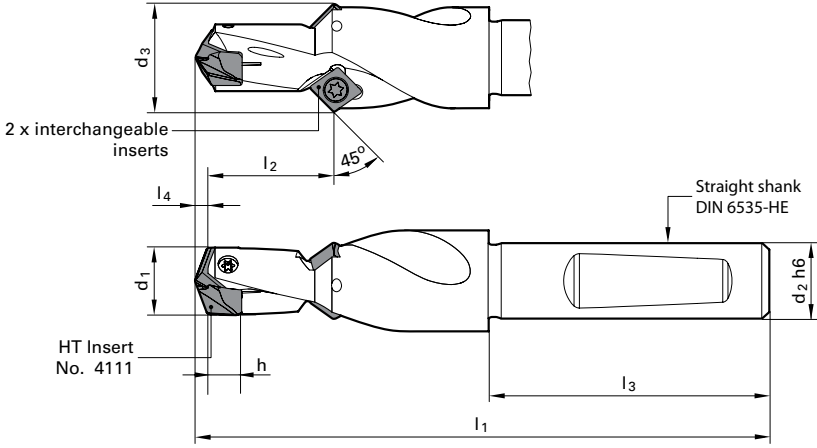
Series # 4114 insert with #4109 body (7xD)

Material group	Hardness	SFM	Feed Rate (IPR)			
			1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm
Aluminium and Al-alloys	<120 Bhn	590	0.010	0.012	0.016	0.020
Al wrought alloys	<150 Bhn	590	0.010	0.012	0.016	0.020
Al cast alloys ≤ 10 % Si	≤200 Bhn	460	0.010	0.012	0.016	0.020
> 10 % Si	<200 Bhn	360	0.010	0.012	0.016	0.020
Magnesium alloys	<150 Bhn	590	0.010	0.012	0.016	0.020
Copper, low-alloyed	<120 Bhn	230	0.008	0.010	0.012	0.016
Brass, short-chipping	≤200 Bhn	590	0.010	0.012	0.016	0.020
long-chipping	<200 Bhn	395	0.008	0.010	0.012	0.016
Bronze, short-chipping	≤200 Bhn	195	0.008	0.010	0.012	0.016
	>200-260 Bhn	130	0.006	0.008	0.010	0.012

Available in Fall 2010:

COMING SOON

HT 800 WP Interchangeable Insert Holders 1 x D for pilot drilling and countersinking (Series 4105)



COMING SOON

Series 4111 HT 800 WP Insert with 150° point geometry for pilot drilling



COMING SOON

Expanded HT 800 WP size range - up to 40mm (1.57") in diameter



COMING SOON

HT 800 WP Interchangeable Insert Holders 1.5 x D (Series 4106) and 10 x D (Series 4110)



Guhring continues to expand its insertable carbide drill offering with the addition of new styles and sizes. Starting in the Fall of 2010 the HT 800 WP stocked standard offering will expand to include an extra length (10xD) holder, along with a pilot drill holder and insert with a countersink pocket option. The size range of our holders will also increase to 40.0mm diameter for applications up to 1-1/2" in size. In addition, Guhring will offer special design options for quote.

GUHRING

The Tool Company

Guhring, Inc.
P.O. Box 643, Brookfield, WI 53008-0643

Shipping Address
1445 Commerce Avenue
Brookfield, WI 53045
Tel (262) 784-6730 (800) 776-6170
Fax (262) 784-9096

www.guhring.com

West Coast Distribution Center
17902 Georgetown Lane
Huntington Beach, CA 92647

Guhring Corporation
20 Steckle Place, Unit #14
Kitchener, ON N2E 2C3
Tel (519) 748-9664 (800) 463-5555
Fax (519) 748-2954

01-5010