



UPDATED

TBTA-H Drill Head

Big improvements over the TBTA-C & TBTA-D drill heads

Drilling Range:

- .984"-2.559" (25mm - 65mm)

Thread Types:

- **STS** STS Outer four start thread
- **STS** STS Inner single start thread
- **DTS** DTS Outer four start thread

Insert Grades*:

- **P** IN6542
- **M** IN2005
- **K** IN1510
- **K S** IN2510

Chipbreakers:

- **G** Chipbreaker
(For general use)

Guide Pads*:

- CD** - Brazed Carbide pad
- CD-SA** - Solid Carbide pad - High Wear Resistance
- CD-SB** - Solid Carbide pad - High Toughness



Ingersoll is pleased to announce the next step in the evolution of the fixed pocket, indexable BTA drill head. The new TBTA-H series heads range in diameter from .984"-2.559" (25mm-65mm) and provide higher accuracy, improved straightness, better surface finish and longer tool life compared to the TBTA-C and TBTA-D series heads which will be phased out as stock is depleted.

Features & Benefits of the TBTA-H heads include:

Ground peripheral insert

- An 'H' class, peripheral ground insert mounted in the outboard station provides 50% tighter hole variation, providing IT10 accuracy (.0028" total tolerance).
- Superior surface finish (possible Ra 1.2 or less)
- Improved straightness (.001"/ft possible)
- Higher speed and feed capability

Larger chip mouth

- Wider chip mouth for maximum chip evacuation
- Improved conical shape to improve chip flow

Increased coolant flow

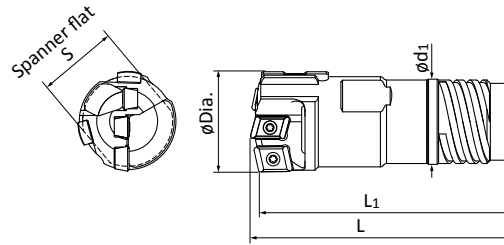
- Additional oil clearance allows smoother delivery of coolant to the cutting edges
- Ensures sufficient cooling of the guide pads

Hardened tool steel body

- Increases overall tool life of the head

*Guide Pads and Inserts must be purchased separately




REFERENCE ITEMS

Description	Dia. (in)	Drill Tube Size	L (in)	L1 (in)	d1 (in)	S
TBTA-HX.XXXSE4-22	.984 - 1.039	22	2.874	2.756	0.768	0.748
TBTA-HX.XXXSE4-24	1.040 - 1.129	24	2.874	2.756	0.827	0.827
TBTA-HX.XXXSE4-26	1.130 - 1.220	26	3.071	2.953	0.925	0.945
TBTA-HX.XXXSE4-28	1.221 - 1.311	28	3.071	2.953	1.004	1.024
TBTA-HX.XXXSE4-30	1.312 - 1.425	30	3.268	3.150	1.102	1.102
TBTA-HX.XXXSE4-33	1.426 - 1.559	33	3.661	3.543	1.181	1.181
TBTA-HX.XXXSE4-36	1.560 - 1.692	36	3.898	3.740	1.299	1.260
TBTA-HX.XXXSE4-39	1.693 - 1.850	39	4.094	3.937	1.417	1.417
TBTA-HX.XXXSE4-43	1.851 - 2.035	43	4.094	3.937	1.535	1.496
TBTA-HX.XXXSE4-47	2.036 - 2.212	47	4.488	4.331	1.693	1.811
TBTA-HX.XXXSE4-51	2.213 - 2.385	51	4.724	4.528	1.870	1.969
TBTA-HX.XXXSE4-56	2.386 - 2.559	56	4.724	4.528	2.008	2.126

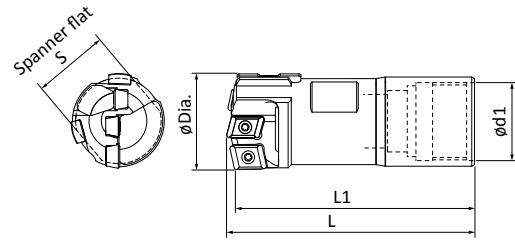
STOCKED ITEMS - INCH

Dia. (in)	Description
1.000	TBTA-H1.000SE4-22
1.024	TBTA-H1.024SE4-22
1.062	TBTA-H1.062SE4-24
1.114	TBTA-H1.114SE4-24
1.125	TBTA-H1.125SE4-24
1.193	TBTA-H1.193SE4-26
1.218	TBTA-H1.218SE4-28
1.235	TBTA-H1.235SE4-28
1.245	TBTA-H1.245SE4-28
1.250	TBTA-H1.250SE4-28
1.260	TBTA-H1.260SE4-28
1.312	TBTA-H1.312SE4-30
1.375	TBTA-H1.375SE4-30
1.378	TBTA-H1.378SE4-30
1.417	TBTA-H1.417SE4-30
1.437	TBTA-H1.437SE4-33
1.496	TBTA-H1.496SE4-33
1.500	TBTA-H1.500SE4-33
1.575	TBTA-H1.575SE4-36
1.594	TBTA-H1.594SE4-36
1.625	TBTA-H1.625SE4-36
1.7125	TBTA-H1.7125SE4-36

Dia. (in)	Description
1.725	TBTA-H1.725SE4-39
1.750	TBTA-H1.750SE4-39
1.812	TBTA-H1.812SE4-39
1.875	TBTA-H1.875SE4-43
1.905	TBTA-H1.905SE4-43
1.940	TBTA-H1.940SE4-43
1.945	TBTA-H1.945SE4-43
1.965	TBTA-H1.965SE4-43
1.985	TBTA-H1.985SE4-43
2.000	TBTA-H2.000SE4-43
2.125	TBTA-H2.125SE4-47
2.187	TBTA-H2.187SE4-47
2.250	TBTA-H2.250SE4-51
2.312	TBTA-H2.312SE4-51
2.335	TBTA-H2.335SE4-51
2.350	TBTA-H2.350SE4-51
2.375	TBTA-H2.375SE4-51
2.380	TBTA-H2.380SE4-51
2.405	TBTA-H2.405SE4-51A
2.441	TBTA-H2.441SE4-56A
2.500	TBTA-H2.500SE4-56A

STOCKED ITEMS - METRIC

Dia. (mm)	Description
25.00	TBTA-H.984SE4-22
28.00	TBTA-H1.102SE4-24
33.00	TBTA-H1.299SE4-28
44.00	TBTA-H1.732SE4-36
48.00	TBTA-H1.890SE4-43
49.00	TBTA-H1.929SE4-43
49.50	TBTA-H1.949SE4-43
50.00	TBTA-H1.969SE4-43
54.00	TBTA-H2.126SE4-47
58.00	TBTA-H2.283SE4-51
60.00	TBTA-H2.362SE4-51
65.00	TBTA-H2.559SE4-56A

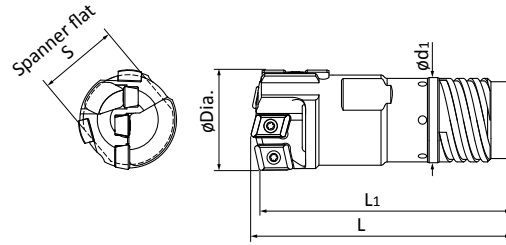

REFERENCE ITEMS

Description	Dia. (in)	Drill Tube Size	L (in)	L1 (in)	d1 (in)	S
TBTA-HX.XXXSI1-22	.984 - 1.062	22	2.874	2.756	0.787	0.748
TBTA-HX.XXXSI1-24	1.063 - 1.141	24	2.874	2.756	0.866	0.827
TBTA-HX.XXXSI1-24	1.142 - 1.181	24	2.874	2.756	0.866	0.945
TBTA-HX.XXXSI1-26	1.182 - 1.259	26	3.071	2.953	0.945	0.945
TBTA-HX.XXXSI1-28	1.260 - 1.338	28	3.071	2.953	1.024	1.024
TBTA-HX.XXXSI1-30	1.339 - 1.456	30	3.661	3.543	1.063	1.102
TBTA-HX.XXXSI1-33	1.457 - 1.574	33	3.858	3.740	1.181	1.181
TBTA-HX.XXXSI1-36	1.575 - 1.732	36	4.094	3.937	1.299	1.260
TBTA-HX.XXXSI1-39	1.733 - 1.850	39	4.291	4.134	1.457	1.417
TBTA-HX.XXXSI1-43	1.851 - 2.047	43	4.291	4.134	1.614	1.496
TBTA-HX.XXXSI1-47	2.048 - 2.244	47	4.488	4.331	1.732	1.811
TBTA-HX.XXXSI1-51	2.245 - 2.401	51	4.724	4.528	1.929	1.811
TBTA-HX.XXXSI1-56	2.402 - 2.559	56	4.724	4.528	2.087	2.126

STOCKED ITEMS

Dia. (mm)	Description
25.00	TBTA-H1.984SI1-22
27.00	TBTA-H1.063SI1-24
28.50	TBTA-H1.122SI1-24
29.00	TBTA-H1.142SI1-24
30.00	TBTA-H1.181SI1-26
31.70	TBTA-H1.248SI1-26
32.00	TBTA-H1.260SI1-28
34.70	TBTA-H1.366SI1-30
35.00	TBTA-H1.378SI1-30
37.00	TBTA-H1.457SI1-33
37.70	TBTA-H1.484SI1-33
40.00	TBTA-H1.575SI1-36
44.00	TBTA-H1.732SI1-39
45.00	TBTA-H1.772SI1-39
47.00	TBTA-H1.850SI1-43

Dia. (mm)	Description
50.00	TBTA-H1.969SI1-43
52.00	TBTA-H2.047SI1-43
55.00	TBTA-H2.165SI1-47
56.00	TBTA-H2.205SI1-47
60.00	TBTA-H2.362SI1-51
65.00	TBTA-H2.559SI1-56A

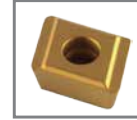
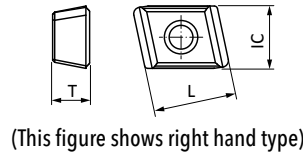
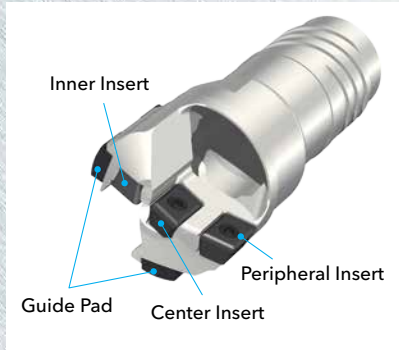


Description	Dia. (in)	Drill Tube Size	L (in)	L1 (in)	d1 (in)	S
TBTA-HX.XXXDE4-23.5	.984 - 1.039	23.5	2.874	2.756	0.827	0.748
TBTA-HX.XXXDE4-26	1.040 - 1.129	26	3.071	2.953	0.925	0.827
TBTA-HX.XXXDE4-28	1.130 - 1.220	28	3.071	2.953	1.004	0.945
TBTA-HX.XXXDE4-30.5	1.221 - 1.311	30.5	3.268	3.150	1.102	1.024
TBTA-HX.XXXDE4-33	1.312 - 1.425	33	3.661	3.543	1.181	1.102
TBTA-HX.XXXDE4-35.5	1.426 - 1.559	35.5	3.898	3.740	1.299	1.181
TBTA-HX.XXXDE4-39	1.560 - 1.692	39	4.094	3.937	1.417	1.260
TBTA-HX.XXXDE4-42.5	1.693 - 1.850	42.5	4.094	3.937	1.535	1.417
TBTA-HX.XXXDE4-46.5	1.851 - 2.035	46.5	4.488	4.331	1.693	1.496
TBTA-HX.XXXDE4-51	2.036 - 2.213	51	4.724	4.528	1.870	1.811
TBTA-HX.XXXDE4-55.5	2.214 - 2.385	55.5	4.724	4.528	2.008	1.969
TBTA-HX.XXXDE4-55.5	2.386 - 2.559	55.5	4.724	4.528	2.008	2.126

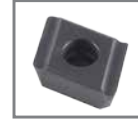
STOCKED ITEMS

Dia. (mm)	Description
25.00	TBTA-H.98DSE4-23.5
25.40	TBTA-H1.000DE4-23.5
27.00	TBTA-H1.063DE4-26
30.00	TBTA-H1.181DE4-28
32.00	TBTA-H1.260DE4-30.5
37.00	TBTA-H1.457DE4-35.5
38.10	TBTA-H1.500DE4-35.5
42.00	TBTA-H1.654DE4-39
45.00	TBTA-H1.772DE4-2.5
50.00	TBTA-H1.969DE4-2.5

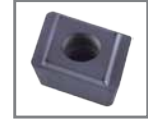
TBTA-H DRILL HEAD INSERTS



IN6542



IN2005



IN1510

Dia (in)	Insert			Guide Pad
	Outer	Inner	Center	
.984 - 1.102	NPHT06003R	NPMT05503R	NPMT05503L	PAD-GO-06
1.103 - 1.181	NPHT06003R	NPMT05503R	NPMT06504L	PAD-GO-06
1.182 - 1.377	NPHT07504R	NPMT06504R	NPMT06504L	PAD-GO-07
1.378 - 1.496	NPHT07504R	NPMT06504R	NPMT0804L	PAD-GO-07
1.497 - 1.535	NPHT09004R	NPMT06504R	NPMT0804L	PAD-GO-07
1.536 - 1.614	NPHT09004R	NPMT06504R	NPMT0804L	PAD-GO-08
1.615 - 1.732	NPHT09004R	NPMT0804R	NPMT0804L	PAD-GO-08
1.733 - 1.771	NPHT09004R	NPMT0804R	NPMT09504L	PAD-GO-08
1.772 - 1.850	NPHT09004R	NPMT0804R	NPMT09504L	PAD-GO-10
1.851 - 2.007	NPHT11004R	NPMT0804R	NPMT09504L	PAD-GO-10
2.008 - 2.125	NPHT11004R	NPMT09504R	NPMT09504L	PAD-GO-10
2.126 - 2.244	NPHT11004R	NPMT09504R	NPMT12504L	PAD-GO-10
2.245 - 2.362	NPHT11004R	NPMT09504R	NPMT12504L	PAD-GO-12
2.363 - 2.519	NPHT13004R	NPMT09504R	NPMT12504L	PAD-GO-12
2.520 - 2.559	NPHT13004R	NPMT12504R	NPMT12504L	PAD-GO-12

Chipbreaker	Description	Dimensions (in)			Grade			
		IC	L	t	IN6542	IN2005	IN1510	IN2510
G	Center	NPMT05503LG	0.217	0.315	0.118	•	•	+
		NPMT06504LG	0.256	0.394	0.157	•	•	+
		NPMT08004LG	0.315	0.394	0.157	•	•	+
		NPMT09504LG	0.374	0.394	0.157	•	•	+
		NPMT12504LG	0.492	0.394	0.157	•	•	+
	Inner	NPMT05503RG	0.217	0.315	0.118	•	•	+
		NPMT06504RG	0.256	0.394	0.157	•	•	+
		NPMT08004RG	0.315	0.394	0.157	•	•	+
		NPMT09504RG	0.374	0.394	0.157	•	•	+
		NPMT12504RG	0.492	0.394	0.157	•	•	+
	Peripheral	NPHT06003RG	0.236	0.315	0.118	•	•	+
		NPHT07504RG	0.295	0.394	0.157	•	•	+
		NPHT09004RG	0.354	0.394	0.157	•	•	+
		NPHT11004RG	0.433	0.394	0.157	•	•	+
		NPHT13004RG	0.512	0.394	0.157	•	•	+

Ordering Example: NPMT05503LG IN2005 10pcs

•: Standard stock item
+: Coming soon

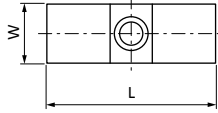
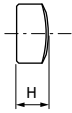
TBTA-H DRILL HEAD GUIDE PADS



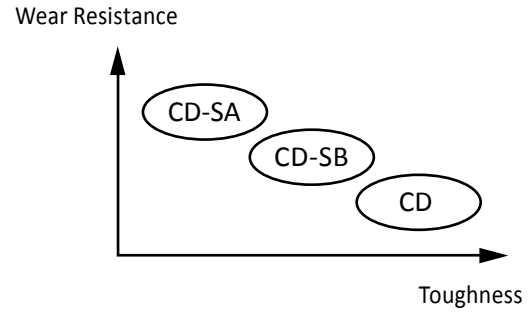
Solid Carbide



Brazed Guide Pad



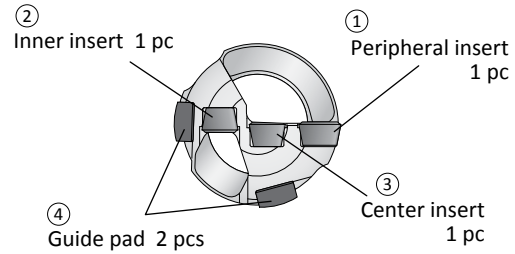
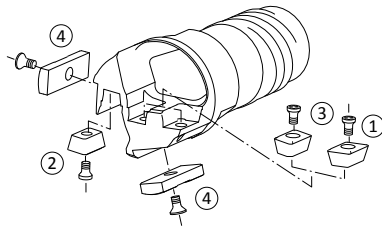
GRADE APPLICATION



Type	Designation	W (in)	H (in)	L (in)	Screw
Brazed Guide Pad	PAD-GO-06CD	0.236	0.118	0.787	CSTB2.2S
	PAD-GO-07CD	0.276	0.138	0.787	CSTB3S
	PAD-GO-08CD-FB	0.315	0.177	0.984	CSTB3S
	PAD-GO-10CD	0.394	0.177	1.181	CSTB3.5
	PAD-GO-12CD	0.472	0.216	1.378	CSTB3.5
Solid Carbide Guide Pad	PAD-GO-06CD-SA	0.236	0.118	0.787	CSTB2.2S
	PAD-GO-07CD-SA	0.276	0.138	0.787	CSTB3S
	PAD-GO-08CD-SA-FB	0.315	0.177	0.984	CSTB3S
	PAD-GO-10CD-SA	0.394	0.177	1.181	CSTB3.5
	PAD-GO-12CD-SA	0.472	0.216	1.378	CSTB3.5
Solid Carbide Guide Pad	PAD-GO-06CD-SB	0.236	0.118	0.787	CSTB2.2S
	PAD-GO-07CD-SB	0.276	0.138	0.787	CSTB3S
	PAD-GO-08CD-SB-FB	0.315	0.177	0.984	CSTB3S
	PAD-GO-10CD-SB	0.394	0.177	1.181	CSTB3.5
	PAD-GO-12CD-SB	0.472	0.216	1.378	CSTB3.5

Ordering Example: PAD-GO-08CD-SA 10pcs

TBTA-H DRILL



Parts		.984 - 1.102	1.103 - 1.181	1.182 - 1.377	1.378 - 1.496	1.497 - 1.535
Inserts	Outer	NPHT06003R	NPHT06003R	NPHT07504R	NPHT07504R	NPHT09004R
	Insert Screw	CSTB2.2	CSTB2.2	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-7D	T-7D	T-8D	T-8D	T-8D
	Inner	NPMT05503R	NPMT05503R	NPMT06504R	NPMT06504R	NPMT06504R
	Insert Screw	CSTB2.2	CSTB2.2	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-7D	T-7D	T-8D	T-8D	T-8D
	Center	NPMT05503L	NPMT06504L	NPMT06504L	NPMT08004L	NPMT08004L
	Insert Screw	CSTB2.2	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-7D	T-8D	T-8D	T-8D	T-8D
Pads	Guide Pad	PAD-GO-06	PAD-GO-06	PAD-GO-07	PAD-GO-07	PAD-GO-07
	Screw	CSTB2.2S	CSTB2.2S	CSTB3S	CSTB3S	CSTB3S
	Wrench	T-7D	T-7D	T-9D	T-9D	T-9D

Parts		1.536 - 1.614	1.615 - 1.732	1.733 - 1.771	1.772 - 1.850	1.851 - 2.007
Inserts	Outer	NPHT09004R	NPHT09004R	NPHT09004R	NPHT09004R	NPHT11004R
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
	Inner	NPMT06504R	NPMT08004R	NPMT08004R	NPMT08004R	NPMT08004R
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
	Center	NPMT08004L	NPMT08004L	NPMT09504L	NPMT09504L	NPMT09504L
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
Pads	Guide Pad	PAD-GO-08	PAD-GO-08	PAD-GO-08	PAD-GO-10	PAD-GO-10
	Screw	CSTB3S	CSTB3S	CSTB3S	CSTB3.5	CSTB3.5
	Wrench	T-9D	T-9D	T-9D	T-15D	T-15D

Parts		2.008 - 2.125	2.126 - 2.244	2.245 - 2.362	2.363 - 2.519	2.520 - 2.559
Inserts	Outer	NPHT11004R	NPHT11004R	NPHT11004R	NPHT13004R	NPHT13004R
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
	Inner	NPMT09504R	NPMT09504R	NPMT09504R	NPMT09504R	NPMT12504R
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
	Center	NPMT09504L	NPMT12504L	NPMT12504L	NPMT12504L	NPMT12504L
	Insert Screw	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5	CSTB2.5
	Wrench	T-8D	T-8D	T-8D	T-8D	T-8D
Pads	Guide Pad	PAD-GO-10	PAD-GO-10	PAD-GO-12	PAD-GO-12	PAD-GO-12
	Screw	CSTB3.5	CSTB3.5	CSTB3.5	CSTB3.5	CSTB3.5
	Wrench	T-15D	T-15D	T-15D	T-15D	T-15D

OPERATING PARAMETERS

ISO	Material	Condition	Hardness (HB)	Cutting Speed SFM	Feed Rate f_n (in/rev)	
					Drill Dia. (in)	
					.984 - 1.693	1.694 - 2.559
P	Carbon steel High carbon Cutting steel	0.1 - 0.25 %C Non-hardened	125	230 - 426	0.004 - 0.012	0.005 - 0.014
		0.25 - 0.25 %C Non-hardened	190	230 - 426	0.004 - 0.012	0.005 - 0.014
		0.25 - 0.25 %C Hardened/Tempered	250	230 - 426	0.004 - 0.012	0.005 - 0.014
		0.55 - 0.80 %C Non-hardened	220	230 - 426	0.004 - 0.012	0.005 - 0.014
		0.55 - 0.80 %C Hardened/Tempered	300	230 - 426	0.004 - 0.012	0.005 - 0.014
	Low alloyed (alloying element < 5%)	Non-hardened	200	230 - 394	0.004 - 0.012	0.005 - 0.014
		Hardened and tempered	275	197 - 394	0.004 - 0.012	0.005 - 0.014
			300	197 - 394	0.004 - 0.012	0.005 - 0.014
			350	197 - 394	0.004 - 0.012	0.005 - 0.014
	High alloyed Cast iron tool steel	Non-hardened	200	230 - 394	0.004 - 0.012	0.005 - 0.014
		Hardened and tempered	325	230 - 394	0.004 - 0.012	0.005 - 0.014
M	Stainless steel	Ferritic	200	230 - 394	0.004 - 0.012	0.005 - 0.014
		Martensite	240	230 - 394	0.004 - 0.012	0.005 - 0.014
		Austenite	180	230 - 394	0.004 - 0.012	0.005 - 0.014
K	Nodular cast iron	Ferritic/Pearlitic	180	164 - 360	0.004 - 0.010	0.005 - 0.014
		Pearlitic	260	164 - 360	0.004 - 0.010	0.005 - 0.014
	Gray cast iron	Low tensile strength	160	197 - 360	0.004 - 0.010	0.005 - 0.014
		High tensile strength	250	197 - 360	0.004 - 0.010	0.005 - 0.014
	Malleable cast iron	Ferritic	130	230 - 360	0.004 - 0.010	0.005 - 0.014
		Pearlitic	230	230 - 360	0.004 - 0.010	0.005 - 0.014
N	Aluminum alloy Forging	Non-aged	60	213 - 427	0.004 - 0.010	0.005 - 0.014
		Soluted, Aged	100	213 - 427	0.003 - 0.009	0.005 - 0.011
	Aluminum alloy Casting	Non-aged	75	213 - 427	0.003 - 0.009	0.005 - 0.011
		Soluted, Aged	90	213 - 427	0.003 - 0.009	0.005 - 0.011
		High silicon	130	213 - 427	0.003 - 0.009	0.005 - 0.011
	Copper alloy	Free cutting copper	110	213 - 427	0.003 - 0.009	0.005 - 0.011
		Brass, Red brass	90	213 - 427	0.003 - 0.009	0.005 - 0.011
		Electrolytic copper	100	213 - 427	0.003 - 0.009	0.005 - 0.011
S	Heat resistant super alloy	Fe base	Non-aged	200	66 - 164	0.003 - 0.009
			Soluted, Aged	280	66 - 164	0.003 - 0.009
		Ni / Co base	Non-aged	250	66 - 164	0.003 - 0.009
			Soluted, Aged	350	66 - 164	0.003 - 0.009
			Casted	320	66 - 164	0.003 - 0.009
	Titanium alloy		Rm400	66 - 164	0.003 - 0.009	0.005 - 0.011
			Rm1050	66 - 164	0.003 - 0.009	0.005 - 0.011

OPERATING PARAMETERS

	Grade	ISO Area							
		5	10	15	20	25	30	35	40
P	IN2005								
	IN6542								
	IN1510								
M	IN2005								
	IN1510								
K	IN2510								
	IN2005								
	IN1510								
S	IN2510								
	IN1510								
	IN2005								
	IN6542								
N	IN2005								

CASE STUDIES

Success Case 1 Spindle

High Productivity

• Drilling time reduced by 50%!

High Accuracy

• Hole straightness improved by 30%!

Drilling Time



Hole Straightness



Hole Straightness

Competitor	.010" / 59.06"
TBTA-H	Less than .0073 / 59.06"

Component	Spindle
Material	Alloyed steel
Application	Solid drilling
Machine	BTA machine
Coolant	Oil based
Tool diameter	1.268"
Drilling length	59.06"

	TBTA-H	Competitor
Chip Breaker	G	General
Grade (peripheral)	IN2005	ISO P
Cutting Speed Vc	226 SFM	207 SFM
Feed per Revolution fn	.007 in/rev	.004 in/rev

Success Case 2 Shaft

Economic

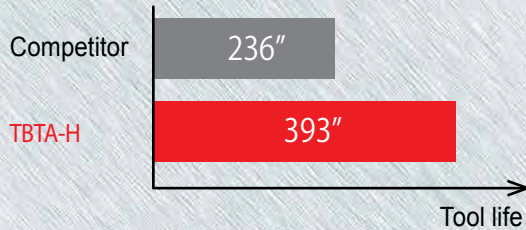
• Longer tool life!

High Accuracy

• Hole straightness improved by 80%!



■ Tool Life (Peripheral insert)



■ Hole Straightness



Hole Straightness

Competitor	.059" / 39.37"
TBTA-H	Less than .012" / 39.37"

■ Component	Shaft
■ Material	Alloyed steel
■ Application	Solid drilling
■ Machine	BTA machine
■ Coolant	Oil based
■ Tool diameter	2.352"
■ Drilling length	39.37"

	TBTA-H	Competitor
Chip Breaker	G	General
Grade (peripheral)	IN2005	ISO P
Cutting Speed Vc	184 SFM	184 SFM
Feed per Revolution fn	.0063 in/rev	.0063 in/rev