

T-A[®] and GEN2 T-A[®]



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Features & Benefits

- Through coolant optimizes chip evacuation and improves tool performance
- Corner clip allows for effective heat dispersion and increased tool life
- Ground back location ensures accurate positioning
- Self-centering point eliminates center drilling



**ALLIED MACHINE
& ENGINEERING CORP**



T-A[®] and GEN2 T-A[®]

Reference Page

T-A Drill Insert

1	8	2	T	-	0031
Insert	Material	Series	Coating		Diameter
	3 = HSS 5 = Super Cobalt 8 = Premium Cobalt C1 = Carbide (K35) C2 = Carbide (K20) C3 = Carbide (K10) C5 = Carbide (P40)	Y 4 Z 5 0 6 1 7 2 8 3	H = AM200 [®] A = TiAlN N = TiCN T = TiN		Inch = 0017 Decimal = .515 Metric = 13

GEN2 T-A Drill Insert

4	5	3	H	-	0115
Insert	Material	Series	Coating		Diameter
	5 = Super Cobalt C1 = Carbide (K35) C2 = Carbide (K20)	Y 4 Z 5 0 6 1 7 2 8 3	H = AM200 A = TiAlN N = TiCN T = TiN		Inch = 0017 Decimal = .515 Metric = 13

T-A Holder

2	30	20	S	-	004	I
Holder	Length	Series	Flute		Shank Designator	Shank Code
	10 = Stub 20 = Short 30 = Intermediate 40 = Standard 50 = Extended 60 = Long 70 = XL 90 = 3XL	Y 2 Z 2.5 0 3 0.5 4 1 5 1.5 7	H = Helical S = Straight		002 = 2MT 175 = 1-3/4" 003 = 3MT 200 = 2" 004 = 4MT 300 = 3" 005 = 5MT 16 = 16mm 063 = 5/8" 20 = 20mm 075 = 3/4" 25 = 25mm 100 = 1" 32 = 32mm 125 = 1-1/4" 40 = 40mm 150 = 1-1/2" 50 = 50mm	I = Imperial Morse Taper M = Metric Morse Taper L = Lathe Shank F = Flanged Shank FM = Flanged Metric Shank

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



Standard Stocked Items

All orders are processed through Allied Machine's computerized Order Entry and Invoicing System. Please specify the correct catalog number as well as a full description of the desired item(s) so we can process your order accurately and efficiently. Incorrect item numbers and/or descriptions will cause unnecessary delays and possibly returns that are subject to a 10% restocking charge. Your assistance is critical if we are to achieve our goal of processing orders and shipping in stock items error free within 24 hours.

Non-Standard T-A Drill Insert Sizes and Special Geometries

Order a **Non-Standard Diameter** by substituting your required diameter in place of the Allied standard diameter.

Standard Item Number	132T-0101
Non-Standard Diameter Standard Geometry (Inch)	132T-1.0200 (Note: 4 decimal places)
Non-Standard Diameter Standard Geometry (Metric)	132T-34.20 (Note: 2 decimal places)

Order a **Special Geometry** by adding the **Special Geometry Code** at the end of the Allied standard item number (see page 195)

Standard Item Number	132T-0101
Standard Diameter Special Geometry (Inch)	132T-0101-SK

Order a **Non-Standard Diameter** with **Special Geometry** by replacing the standard diameter and adding the **Special Geometry Code**

Standard Item Number	132T-0101
Non-Standard Diameter Special Geometry (Inch)	132T-1.0200-SK (Note: 4 decimal places)

Combinations of Special Geometries on the same item need to be quoted by our Engineering Department. When labeling these items, we will use the following format:

Standard Geometry

Series: #2 T-A Diameter: 1.0200 Mat'l: CPM-4 TiN 132T-1.0200

SK2 Geometry

Series: #2 T-A Diameter: 1.0200 (SK) Mat'l: CPM-4 TiN 132T-1.0200-SK

Drill Insert Series	Holder Series
Y	Y
Z	Z
0	0 & 0.5
1	1 & 1.5
2	2 & 2.5
3	3
4	4
5 & 6	5
7 & 8	7

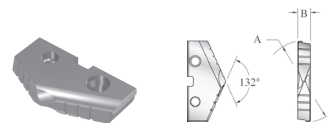
Holder Ordering Information

The chart at the right illustrates the correlation between the drill insert and holder series. We use a series designator in the header, at the top of each page of both the drill insert and holder sections of the catalog for your reference when ordering. Please refer to these series designators when placing your order. For example; series 2 drill inserts will fit in either a series 2 or 2.5 holder. Please note the limited drill range used in 0.5, 1.5 and 2.5 series holders.



T-A® and GEN2 T-A® HSS Drill Inserts

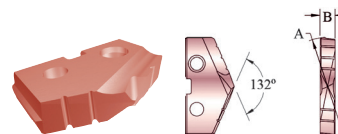
Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
Super Cobalt		0.3740	9,50	3/32"	15YT-9.5	○	15YA-9.5	○	15YN-9.5	○
	3/8"	0.3750	9,53		15YT-0012	○	15YA-0012	○	15YN-0012	○
	W	0.3860	9,80		15YT-.386	○	15YA-.386	○	15YN-.386	○
	25/64"	0.3906	9,92		15YT-.390	○	15YA-.390	○	15YN-.390	○
		0.3937	10,00		15YT-10	○	15YA-10	○	15YN-10	○
		0.4016	10,20		15YT-10.2	○	15YA-10.2	○	15YN-10.2	○
	13/32"	0.4063	10,32		15YT-0013	○	15YA-0013	○	15YN-0013	○
		0.4134	10,50		15YT-10.5	○	15YA-10.5	○	15YN-10.5	○
	27/64"	0.4219	10,72		15YT-.421	○	15YA-.421	○	15YN-.421	○
		0.4252	10,80		15YT-10.8	○	15YA-10.8	○	15YN-10.8	○
	0.4331	11,00	15YT-11	○	15YA-11	○	15YN-11	○		
Premium Cobalt		0.3740	9,50	3/32"	18YT-9.5	○	18YA-9.5	○	18YN-9.5	○
	3/8"	0.3750	9,53		18YT-0012	○	18YA-0012	○	18YN-0012	○
	W	0.3860	9,80		18YT-.386	○	18YA-.386	○	18YN-.386	○
	25/64"	0.3906	9,92		18YT-.390	○	18YA-.390	○	18YN-.390	○
		0.3937	10,00		18YT-10	○	18YA-10	○	18YN-10	○
		0.4016	10,20		18YT-10.2	○	18YA-10.2	○	18YN-10.2	○
	13/32"	0.4063	10,32		18YT-0013	○	18YA-0013	○	18YN-0013	○
		0.4134	10,50		18YT-10.5	○	18YA-10.5	○	18YN-10.5	○
	27/64"	0.4219	10,72		18YT-.421	○	18YA-.421	○	18YN-.421	○
		0.4252	10,80		18YT-10.8	○	18YA-10.8	○	18YN-10.8	○
	0.4331	11,00	18YT-11	○	18YA-11	○	18YN-11	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
Super Cobalt		0.3740	9,50	3/32"	45YH-9.5	○
	3/8"	0.3750	9,53		45YH-0012	○
	W	0.3860	9,80		45YH-.386	○
	25/64"	0.3906	9,92		45YH-.390	○
		0.3937	10,00		45YH-10	○
		0.4016	10,20		45YH-10.2	○
	13/32"	0.4063	10,32		45YH-0013	○
		0.4134	10,50		45YH-10.5	○
	27/64"	0.4219	10,72		45YH-.421	○
		0.4252	10,80		45YH-10.8	○
	0.4331	11,00	45YH-11	○		

Geometries available (see page 197 for details): -HE.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXNX-XXXX
AM200®	XXXH-XXXX

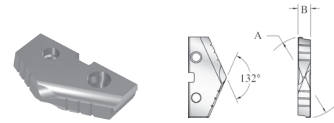
- ① Availability Codes
- Stocked
- ▲ Non-Stocked

T-A[®] Carbide Drill Inserts

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



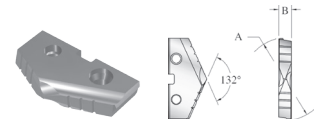
0.374" - 0.436 inch
9.5 - 11.07 mm



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	ⓘ	TiAlN	ⓘ
C2 (K20)		0.3740	9,50	3/32"	1C2YT-9.5	○	1C2YA-9.5	○
	3/8"	0.3750	9,53		1C2YT-0012	○	1C2YA-0012	○
	W	0.3860	9,80		1C2YT-.386	○	1C2YA-.386	○
	25/64"	0.3906	9,92		1C2YT-.390	○	1C2YA-.390	○
		0.3937	10,00		1C2YT-10	○	1C2YA-10	○
		0.4016	10,20		1C2YT-10.2	○	1C2YA-10.2	○
	13/32"	0.4063	10,32		1C2YT-0013	○	1C2YA-0013	○
		0.4134	10,50		1C2YT-10.5	○	1C2YA-10.5	○
	27/64"	0.4219	10,72		1C2YT-.421	○	1C2YA-.421	○
		0.4252	10,80		1C2YT-10.8	○	1C2YA-10.8	○
		0.4331	11,00		1C2YT-11	○	1C2YA-11	○
C5 (P40)		0.3740	9,50	3/32"	1C5YT-9.5	○	1C5YA-9.5	○
	3/8"	0.3750	9,53		1C5YT-0012	○	1C5YA-0012	○
	W	0.3860	9,80		1C5YT-.386	○	1C5YA-.386	○
	25/64"	0.3906	9,92		1C5YT-.390	○	1C5YA-.390	○
		0.3937	10,00		1C5YT-10	○	1C5YA-10	○
		0.4016	10,20		1C5YT-10.2	○	1C5YA-10.2	○
	13/32"	0.4063	10,32		1C5YT-0013	○	1C5YA-0013	○
		0.4134	10,50		1C5YT-10.5	○	1C5YA-10.5	○
	27/64"	0.4219	10,72		1C5YT-.421	○	1C5YA-.421	○
		0.4252	10,80		1C5YT-10.8	○	1C5YA-10.8	○
		0.4331	11,00		1C5YT-11	○	1C5YA-11	○

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



Cast Iron T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiAlN	ⓘ
C3 (K10)		0.3740	9,50	3/32"	1C3YA-9.5-CI	○
	3/8"	0.3750	9,53		1C3YA-0012-CI	○
	W	0.3860	9,80		1C3YA-.386-CI	○
	25/64"	0.3906	9,92		1C3YA-.390-CI	○
		0.3937	10,00		1C3YA-10-CI	○
		0.4016	10,20		1C3YA-10.2-CI	○
	13/32"	0.4063	10,32		1C3YA-0013-CI	○
		0.4134	10,50		1C3YA-10.5-CI	○
	27/64"	0.4219	10,72		1C3YA-.421-CI	○
		0.4252	10,80		1C3YA-10.8-CI	○
		0.4331	11,00		1C3YA-11-CI	○

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

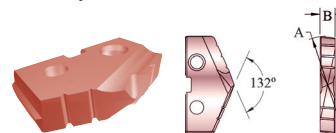
ASC 320

Special Tooling



GEN2 T-A® Carbide Drill Inserts

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
C2 (K20)		0.3740	9,50	3/32"	4C2YH-9.5	○
	3/8"	0.3750	9,53		4C2YH-0012	○
	W	0.3860	9,80		4C2YH-386	○
	25/64"	0.3906	9,92		4C2YH-390	○
		0.3937	10,00		4C2YH-10	○
		0.4016	10,20		4C2YH-10.2	○
	13/32"	0.4063	10,32		4C2YH-0013	○
		0.4134	10,50		4C2YH-10.5	○
	27/64"	0.4219	10,72		4C2YH-421	○
		0.4252	10,80		4C2YH-10.8	○
	0.4331	11,00	4C2YH-11	○		
C1 (K35)		0.3740	9,50	3/32"	4C1YH-9.5	○
	3/8"	0.3750	9,53		4C1YH-0012	○
	W	0.3860	9,80		4C1YH-386	○
	25/64"	0.3906	9,92		4C1YH-390	○
		0.3937	10,00		4C1YH-10	○
		0.4016	10,20		4C1YH-10.2	○
	13/32"	0.4063	10,32		4C1YH-0013	○
		0.4134	10,50		4C1YH-10.5	○
	27/64"	0.4219	10,72		4C1YH-421	○
		0.4252	10,80		4C1YH-10.8	○
	0.4331	11,00	4C1YH-11	○		

Geometries available (see page 197 for details): -HE.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

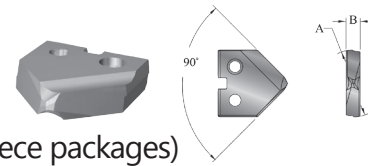
- ① Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] HSS Drill Inserts

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)

0.374 - 0.436 inch
9.5 - 11.07 mm

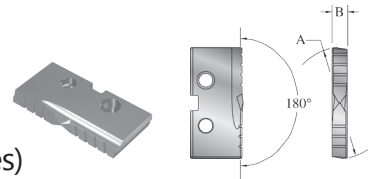


90° Spot and Chamfer T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt		0.3740	9,50	3/32"	15YT-9.5-SP	▲	15YA-9.5-SP	▲	15YN-9.5-SP	▲
	3/8"	0.3750	9,53		15YT-0012-SP	○	15YA-0012-SP	○	15YN-0012-SP	○
	W	0.3860	9,80		15YT-386-SP	▲	15YA-386-SP	▲	15YN-386-SP	▲
	25/64"	0.3906	9,92		15YT-390-SP	▲	15YA-390-SP	▲	15YN-390-SP	▲
		0.3937	10,00		15YT-10-SP	▲	15YA-10-SP	▲	15YN-10-SP	▲
		0.4016	10,20		15YT-10.2-SP	▲	15YA-10.2-SP	▲	15YN-10.2-SP	▲
	13/32"	0.4063	10,32		15YT-0013-SP	▲	15YA-0013-SP	▲	15YN-0013-SP	▲
		0.4134	10,50		15YT-10.5-SP	▲	15YA-10.5-SP	▲	15YN-10.5-SP	▲
	27/64"	0.4219	10,72		15YT-421-SP	▲	15YA-421-SP	▲	15YN-421-SP	▲
		0.4252	10,80		15YT-10.8-SP	▲	15YA-10.8-SP	▲	15YN-10.8-SP	▲
	0.4331	11,00	15YT-11-SP	○	15YA-11-SP	○	15YN-11-SP	○		

Geometries available (see page 197 for details): -SW.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
Super Cobalt		0.3740	9,50	3/32"	15YT-9.5-FB	○
	3/8"	0.3750	9,53		15YT-0012-FB	○
	W	0.3860	9,80		15YT-386-FB	○
	25/64"	0.3906	9,92		15YT-390-FB	○
		0.3937	10,00		15YT-10-FB	○
		0.4016	10,20		15YT-10.2-FB	○
	13/32"	0.4063	10,32		15YT-0013-FB	○
		0.4134	10,50		15YT-10.5-FB	○
	27/64"	0.4219	10,72		15YT-421-FB	○
		0.4252	10,80		15YT-10.8-FB	○
	0.4331	11,00	15YT-11-FB	○		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

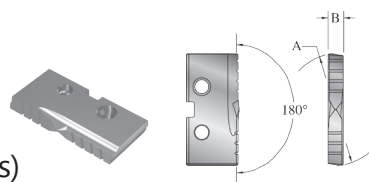
ASC 320

Special Tooling



T-A[®] Carbide Drill Inserts

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)

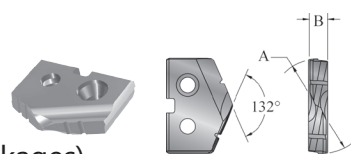


Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
C2 (K20)		0.3740	9,50	3/32"	1C2YT-9.5-FB	▲
	3/8"	0.3750	9,53		1C2YT-0012-FB	▲
	W	0.3860	9,80		1C2YT-.386-FB	▲
	25/64"	0.3906	9,92		1C2YT-.390-FB	▲
		0.3937	10,00		1C2YT-10-FB	▲
		0.4016	10,20		1C2YT-10.2-FB	▲
	13/32"	0.4063	10,32		1C2YT-0013-FB	▲
		0.4134	10,50		1C2YT-10.5-FB	▲
	27/64"	0.4219	10,72		1C2YT-.421-FB	▲
		0.4252	10,80		1C2YT-10.8-FB	▲
	0.4331	11,00	1C2YT-11-FB	▲		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



Diamond Coated T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		CVD Diamond	⓪
N2		0.3740	9,50	3/32"	1N2YD-9.5	▲
	3/8"	0.3750	9,53		1N2YD-0012	▲
	W	0.3860	9,80		1N2YD-.386	▲
	25/64"	0.3906	9,92		1N2YD-.390	▲
		0.3937	10,00		1N2YD-10	▲
		0.4016	10,20		1N2YD-10.2	▲
	13/32"	0.4063	10,32		1N2YD-0013	▲
		0.4134	10,50		1N2YD-10.5	▲
	27/64"	0.4219	10,72		1N2YD-.421	▲
		0.4252	10,80		1N2YD-10.8	▲
	0.4331	11,00	1N2YD-11	▲		

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

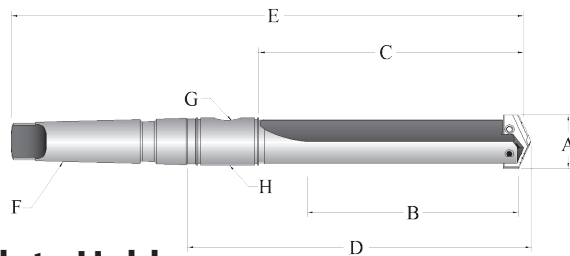
TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



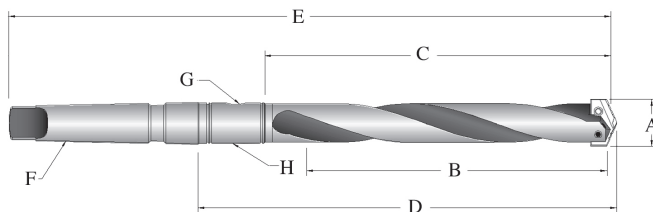
T-A[®] Holders

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



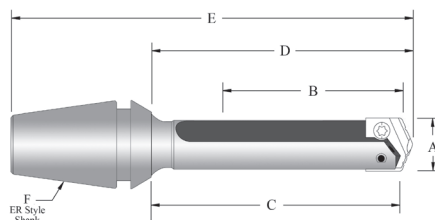
Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	220Y0S-002I	3/8" - 27/64"	1-1/4"	2-1/32"	3-15/32"	6-5/16"	#2	1/16"	2T-2SR
Standard	240Y0S-002I	3/8" - 27/64"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	2T-2SR
Extended	250Y0S-002I	3/8" - 27/64"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	220Y0S-002M	9,5 - 11,0	31,8	51,5	88,0	160,3	#2**	1/16"*	2T-2SRM



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Standard	240Y0H-002I	3/8" - 27/64"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	2T-2SR
Extended	250Y0H-002I	3/8" - 27/64"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	240Y0H-002M	9,5 - 11,0	60,3	80,2	116,7	188,9	#2**	1/16"*	2T-2SRM
Extended	250Y0H-002M	9,5 - 11,0	111,1	130,9	167,4	239,7	#2**	1/16"*	2T-2SRM



ER Collet Holders

Item Number	A	B	C	D	E	F	Collet Nut without Retaining Ring
	Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Collet Size	
210Y0S-16ER	3/8" - 27/64"	1-3/8"	1-29/32"	2"	3-5/64"	ER-16	ER-16N
210Y0S-20ER	3/8" - 27/64"	1-3/8"	1-29/32"	2"	3-15/64"	ER-20	ER-20N

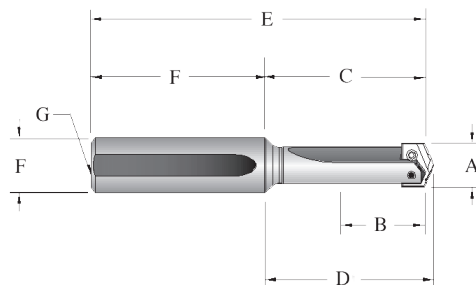
WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

0.374" - 0.436 Inch
9.5 - 11.07 mm
Revolution & Opening
APX
GEN3SYS & GEN3SYS XT
Original T-A & GEN2 T-A
AccuPort 43Z
ASC 320
Special Tooling



T-A® Holders

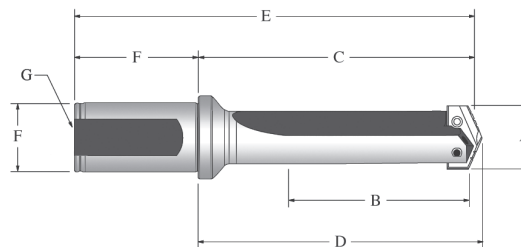
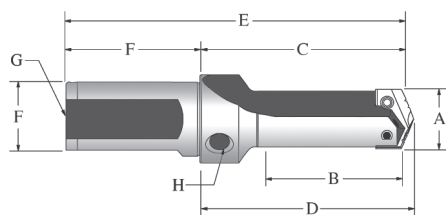
Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Short	220Y0S-075L	3/8" - 27/64"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"
Standard	240Y0S-075L	3/8" - 27/64"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"
Extended	250Y0S-075L	3/8" - 27/64"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"
XL	270Y0S-075L	3/8" - 27/64"	8-3/4"	9-17/32"	9-5/8"	11-29/32"	3/4"	2-3/8"	1/8"
3XL	290Y0S-075L	3/8" - 27/64"	11-7/16"	12-7/32"	12-5/16"	14-19/32"	3/4"	2-3/8"	1/8"

Stub Length Flanged Shank Holder



Flanged Shank Straight Flute Holders

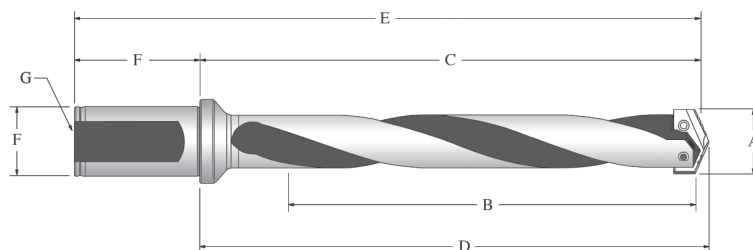
Length	Item Number	A	B	C	D	E	F		G		H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Rear	Side	Pipe Tap
Stub	210Y0S-063F	3/8" - 27/64"	3/4"	1-7/8"	1-31/32"	3-3/4"	5/8"	1-7/8"	1/16"	1/8"	
Short	220Y0S-075F	3/8" - 27/64"	1-1/4"	2-13/32"	2-1/2"	4-7/16"	3/4"	2-1/32"	1/8"	N/A	
Standard	240Y0S-075F	3/8" - 27/64"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"	N/A	
Extended	250Y0S-075F	3/8" - 27/64"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	210Y0S-16FM	9,5 - 11,0	19,1	47,6	50,0	95,6	16,0	48,0	1/16**	1/8"	
Short	220Y0S-20FM	9,5 - 11,0	31,8	61,1	63,5	111,1	20,0	50,0	1/8**	N/A	
XL	270Y0S-20FM	9,5 - 11,0	222	251,7	254,1	301,7	20,0	50,0	1/8**	N/A	
3XL	290Y0S-20FM	9,5 - 11,0	290	319,9	322,3	369,9	20,0	50,0	1/8**	N/A	

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



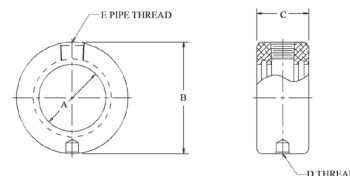
T-A® Holders

Y Series Range: 0.374"-0.436" (9,5mm-11,07mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A Drill Insert Range	B Drill Depth	C Body Length	D Tool Ref. Length	E Overall Length	F Shank		G Pipe Tap
							Dia	Length	
Standard	240Y0H-075F	3/8" - 27/64"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
Standard Plus	245Y0H-075F	3/8" - 27/64"	3-3/8"	4-35/64"	4-41/64"	6-43/64"	3/4"	2-1/32"	1/8"
Extended	250Y0H-075F	3/8" - 27/64"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	240Y0H-20FM	9,5 - 11,0	60,3	89,7	92,1	139,7	20,0	50,0	1/8**
Standard Plus	245Y0H-20FM	9,5 - 11,0	86,0	115,4	117,8	165,4	20,0	50,0	1/8**
Extended	250Y0H-20FM	9,5 - 11,0	111,1	140,5	142,9	190,5	20,0	50,0	1/8**



Rotary Coolant Adapter (RCA) and Accessories

	Item Number	A Inner Dia	B Outer Dia	C Length	D Thread for Driving Rod	E Pipe Tap	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
Inch	⚠ 2T-2SR	3/4"	1-3/4"	7/8"	5/16" - NC	1/8"	2T1-2SR	2T1-2OR-10
Metric	⚠ 2T-2SRM	19,05	44,45	22,23	M8 X 1,25	1/8**	2T1-2SR	2T1-2OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

⚠ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
Y	724-IP7-1	724N-IP7-1	8IP-7	8IP-7TL	8IP-7B	3/8" - 27/64"	7.4 in.-lbs	9,5 - 11,00	84 N-cm

Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

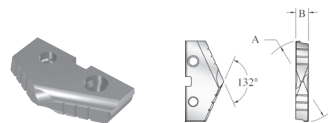
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

0.374" - 0.436 Inch
9.5 - 11.07 mm
Revolution & Opening
APX
GEN3SYS & GEN3SYS XT
Original T-A & GEN2 T-A
AccuPort 432
ASC 320
Special Tooling



T-A[®] and GEN2 T-A[®] HSS Drill Inserts

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)

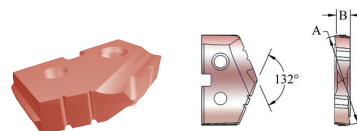


T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt	7/16"	0.4375	11,11	3/32"	15ZT-0014	⓪	15ZA-0014	⓪	15ZN-0014	⓪
		0.4528	11,50		15ZT-11.5	⓪	15ZA-11.5	⓪	15ZN-11.5	⓪
	29/64"	0.4531	11,51		15ZT-.453	⓪	15ZA-.453	⓪	15ZN-.453	⓪
	15/32"	0.4688	11,91		15ZT-0015	⓪	15ZA-0015	⓪	15ZN-0015	⓪
		0.4724	12,00		15ZT-12	⓪	15ZA-12	⓪	15ZN-12	⓪
	31/64"	0.4844	12,30		15ZT-.484	⓪	15ZA-.484	⓪	15ZN-.484	⓪
		0.4921	12,50		15ZT-12.5	⓪	15ZA-12.5	⓪	15ZN-12.5	⓪
1/2"	0.5000	12,70	15ZT-0016	⓪	15ZA-0016	⓪	15ZN-0016	⓪		
Premium Cobalt	7/16"	0.4375	11,11	3/32"	18ZT-0014	⓪	18ZA-0014	⓪	18ZN-0014	⓪
		0.4528	11,50		18ZT-11.5	⓪	18ZA-11.5	⓪	18ZN-11.5	⓪
	29/64"	0.4531	11,51		18ZT-.453	⓪	18ZA-.453	⓪	18ZN-.453	⓪
	15/32"	0.4688	11,91		18ZT-0015	⓪	18ZA-0015	⓪	18ZN-0015	⓪
		0.4724	12,00		18ZT-12	⓪	18ZA-12	⓪	18ZN-12	⓪
	31/64"	0.4844	12,30		18ZT-.484	⓪	18ZA-.484	⓪	18ZN-.484	⓪
		0.4921	12,50		18ZT-12.5	⓪	18ZA-12.5	⓪	18ZN-12.5	⓪
1/2"	0.5000	12,70	18ZT-0016	⓪	18ZA-0016	⓪	18ZN-0016	⓪		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

GEN2 T-A Drill Inserts (supplied in 2 piece packages)



Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200 [®]	⓪
Super Cobalt	7/16"	0.4375	11,11	3/32"	45ZH-0014	⓪
		0.4510	11,46		45ZH-451	⓪
		0.4528	11,50		45ZH-11.5	⓪
	29/64"	0.4531	11,51		45ZH-453	⓪
		15/32"	0.4688		11,91	45ZH-0015
	31/64"		0.4724		12,00	45ZH-12
		0.4844	12,30		45ZH-.484	⓪
		0.4921	12,50		45ZH-12.5	⓪
	1/2"	0.5000	12,70		45ZH-0016	⓪
		0.5060	12,85		45ZH-.506	⓪
	0.5100	12,95	45ZH-510	⓪		

Geometries available (see page 197 for details): -HE.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

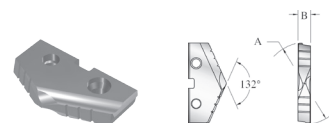
TiN	XXXX-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXX-XXXX
AM200 [®]	XXXX-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] Carbide Drill Inserts

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)

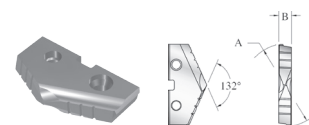


T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪
C2 (K20)	7/16"	0.4375	11,11	3/32"	1C2ZT-0014	⓪	1C2ZA-0014	⓪
		0.4528	11,50		1C2ZT-11.5	⓪	1C2ZA-11.5	⓪
	29/64"	0.4531	11,51		1C2ZT-.453	⓪	1C2ZA-.453	⓪
		0.4688	11,91		1C2ZT-0015	⓪	1C2ZA-0015	⓪
	31/64"	0.4724	12,00		1C2ZT-12	⓪	1C2ZA-12	⓪
		0.4833	12,30		1C2ZT-.484	⓪	1C2ZA-.484	⓪
	1/2"	0.4921	12,50		1C2ZT-12.5	⓪	1C2ZA-12.5	⓪
		0.5000	12,70		1C2ZT-0016	⓪	1C2ZA-0016	⓪
C5 (P40)	7/16"	0.4375	11,11	3/32"	1C5ZT-0014	⓪	1C5ZA-0014	⓪
		0.4528	11,50		1C5ZT-11.5	⓪	1C5ZA-11.5	⓪
	29/64"	0.4531	11,51		1C5ZT-.453	⓪	1C5ZA-.453	⓪
		0.4688	11,91		1C5ZT-0015	⓪	1C5ZA-0015	⓪
	31/64"	0.4724	12,00		1C5ZT-12	⓪	1C5ZA-12	⓪
		0.4833	12,30		1C5ZT-.484	⓪	1C5ZA-.484	⓪
	1/2"	0.4921	12,50		1C5ZT-12.5	⓪	1C5ZA-12.5	⓪
		0.5000	12,70		1C5ZT-0016	⓪	1C5ZA-0016	⓪

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Cast Iron T-A Drill Inserts (supplied in 2 piece packages)

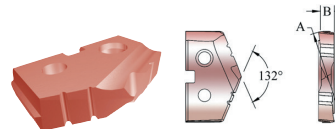


Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiAlN	⓪
C3 (K10)	7/16"	0.4375	11,11	3/32"	1C3ZA-0014-CI	⓪
		0.4528	11,50		1C3ZA-11.5-CI	⓪
	29/64"	0.4531	11,51		1C3ZA-.453-CI	⓪
		0.4688	11,91		1C3ZA-0015-CI	⓪
	31/64"	0.4724	12,00		1C3ZA-12-CI	⓪
		0.4833	12,30		1C3ZA-.484-CI	⓪
	1/2"	0.4921	12,50		1C3ZA-12.5-CI	⓪
		0.5000	12,70		1C3ZA-0016-CI	⓪



GEN2 T-A® Carbide Drill Inserts

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
C2 (K20)	7/16"	0.4375	11,11	3/32"	4C2ZH-0014	○
		0.4528	11,50		4C2ZH--11.5	○
	29/64"	0.4531	11,51		4C2ZH-.453	○
	15/32"	0.4688	11,91		4C2ZH-0015	○
		0.4724	12,00		4C2ZH-12	○
	31/64"	0.4844	12,30		4C2ZH-.484	○
		0.4921	12,50		4C2ZH-12.5	○
	1/2"	0.5000	12,70		4C2ZH-0016	○
C1 (K35)	7/16"	0.4375	11,11	3/32"	4C1ZH-0014	○
		0.4510	11,46		4C1ZH-.451	○
		0.4528	11,50		4C1ZH-11.5	○
	29/64"	0.4531	11,51		4C1ZH-.453	○
	15/32"	0.4688	11,91		4C1ZH-0015	○
		0.4724	12,00		4C1ZH-12	○
	31/64"	0.4844	12,30		4C1ZH-.484	○
		0.4921	12,50		4C1ZH-12.5	○
	1/2"	0.5000	12,70		4C1ZH-0016	○
		0.5060	12,85		4C1ZH-.506	○
		0.5100	12,95		4C1ZH-.510	○

Geometries available (see page 197 for details): -HE

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

- ① Availability Codes
- Stocked
- ▲ Non-Stocked

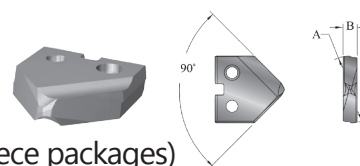
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



T-A[®] HSS Drill Inserts

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)



90° Spot and Chamfer T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt	7/16"	0.4375	11,11	3/32"	15ZT-0014-SP	▲	15ZA-0014-SP	▲	15ZN-0014-SP	▲
		0.4528	11,50		15ZT-11.5-SP	▲	15ZA-11.5-SP	▲	15ZN-11.5-SP	▲
	29/64"	0.4531	11,51		15ZT-.453-SP	▲	15ZA-.453-SP	▲	15ZN-.453-SP	▲
		0.4688	11,91		15ZT-0015-SP	▲	15ZA-0015-SP	▲	15ZN-0015-SP	▲
	31/64"	0.4724	12,00		15ZT-12-SP	▲	15ZA-12-SP	▲	15ZN-12-SP	▲
		0.4844	12,30		15ZT-.484-SP	▲	15ZA-.484-SP	▲	15ZN-.484-SP	▲
	1/2"	0.4921	12,50		15ZT-12.5-SP	▲	15ZA-12.5-SP	▲	15ZN-12.5-SP	▲
		0.5000	12,70		15ZT-0016-SP	○	15ZA-0016-SP	○	15ZN-0016-SP	○

Geometries available (see page 197 for details): -SW.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

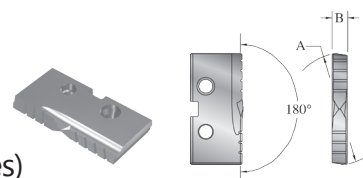
GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

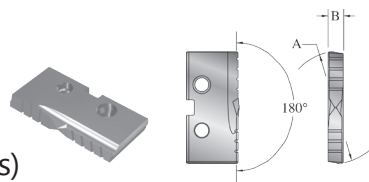
Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
Super Cobalt	7/16"	0.4375	11,11	3/32"	15ZT-0014-FB	○
		0.4528	11,50		15ZT-11.5-FB	○
	29/64"	0.4531	11,51		15ZT-.453-FB	○
		0.4688	11,91		15ZT-0015-FB	○
	31/64"	0.4724	12,00		15ZT-12-FB	○
		0.4844	12,30		15ZT-.484-FB	○
	1/2"	0.4921	12,50		15ZT-12.5-FB	○
		0.5000	12,70		15ZT-0016-FB	○

Geometries available (see page 197 for details): -FN.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



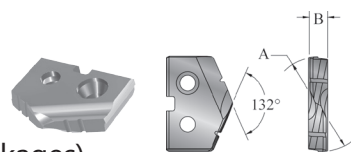
T-A[®] Carbide Drill Inserts

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
C2 (K20)	7/16"	0.4375	11,11	3/32"	1C2ZT-0014-FB	▲
		0.4528	11,50		1C2ZT-11.5-FB	▲
	29/64"	0.4531	11,51		1C2ZT-.453-FB	▲
	15/32"	0.4688	11,91		1C2ZT-0015-FB	▲
		0.4724	12,00		1C2ZT-12-FB	▲
	31/64"	0.4844	12,30		1C2ZT-.484-FB	▲
		0.4921	12,50		1C2ZT-12.5-FB	▲
	1/2"	0.5000	12,70		1C2ZT-0016-FB	▲



Diamond Coated T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		CVD Diamond	⓪
N2	7/16"	0.4375	11,11	3/32"	1N2ZD-0014	▲
		0.4528	11,50		1N2ZD-11.5	▲
	29/64"	0.4531	11,51		1N2ZD-.453	▲
	15/32"	0.4688	11,91		1N2ZD-0015	▲
		0.4724	12,00		1N2ZD-12	▲
	31/64"	0.4844	12,30		1N2ZD-.484	▲
		0.4921	12,50		1N2ZD-12.5	▲
	1/2"	0.5000	12,70		1N2ZD-0016	▲

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

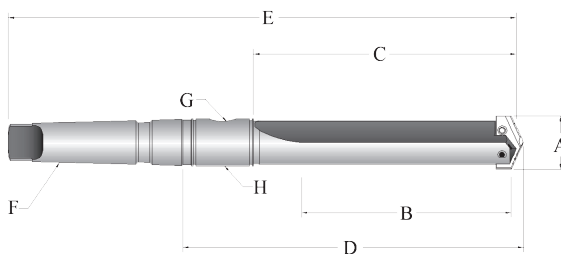
TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



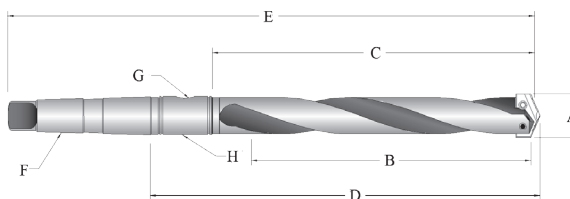
T-A® Holders

Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)



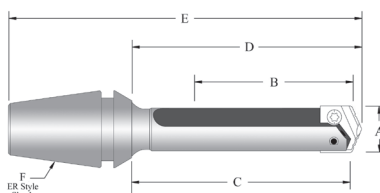
Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	220Z0S-002I	7/16" - 1/2"	1-1/4"	2-1/32"	3-15/32"	6-5/16"	#2	1/16"	2T-2SR
Standard	240Z0S-002I	7/16" - 1/2"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	2T-2SR
Extended	250Z0S-002I	7/16" - 1/2"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	220Z0S-002M	11,5 - 12,5	31,8	51,5	88,0	160,3	#2	1/16**	2T-2SRM



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Standard	240Z0H-002I	7/16" - 1/2"	2-3/8"	3-5/32"	4-19/32"	7-7/16"	#2	1/16"	2T-2SR
Extended	250Z0H-002I	7/16" - 1/2"	4-3/8"	5-5/32"	6-19/32"	9-7/16"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	240Z0H-002M	11,5 - 12,5	60,3	80,2	116,7	188,9	#2**	1/16**	2T-2SRM
Extended	250Z0H-002M	11,5 - 12,5	111,1	130,9	167,4	239,7	#2**	1/16**	2T-2SRM



ER Collet Holders

Item Number	A	B	C	D	E	F	Collet Nut without Retaining Ring
	Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Collet Size	
210Z0S-16ER	7/16" - 1/2"	1-3/8"	1-29/32"	2"	3-5/64"	ER-16	ER-16N
210Z0S-20ER	7/16" - 1/2"	1-3/8"	1-29/32"	2"	3-15/64"	ER-20	ER-20N

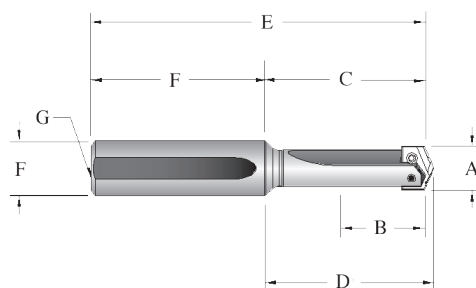
WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

Z 0.437" - 0.510 Inch 11,10 - 12,95 mm
 Revolution & Opening
 APX
 GEN3SYS & GEN3SYS XT
 Original T-A & GEN2 T-A
 AccuPort 432
 ASC 320
 Special Tooling



T-A[®] Holders

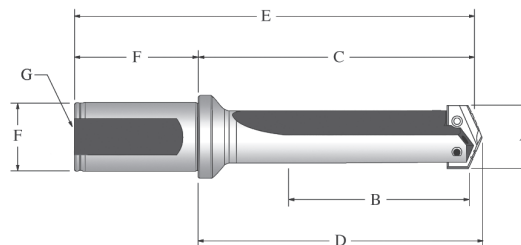
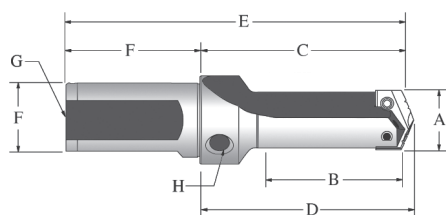
Z Series Range: 0.437"-0.510" (11,10mm-12,95mm)



Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Short	220Z0S-075L	7/16" - 1/2"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"
Standard	240Z0S-075L	7/16" - 1/2"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"
Extended	250Z0S-075L	7/16" - 1/2"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"
XL	270Z0S-075L	7/16" - 1/2"	8-3/4"	9-17/32"	9-5/8"	11-29/32"	3/4"	2-3/8"	1/8"
3XL	290Z0S-075L	7/16" - 1/2"	11-7/16"	12-7/32"	12-5/16"	14-19/32"	3/4"	2-3/8"	1/8"

Stub Length Flanged Shank Holder



Flanged Shank Straight Flute Holders

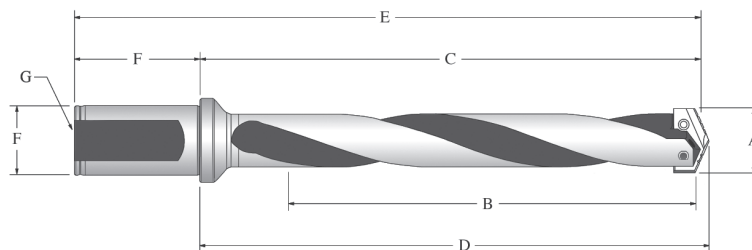
Length	Item Number	A	B	C	D	E	F		G		H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Rear	Side	Pipe Tap
Stub	210Z0S-063F	7/16" - 1/2"	3/4"	1-51/64"	1-57/64"	3-43/64"	5/8"	1-7/8"	1/16"	1/8"	
Short	220Z0S-075F	7/16" - 1/2"	1-1/4"	2-13/32"	2-1/2"	4-7/16"	3/4"	2-1/32"	1/8"	N/A	
Standard	240Z0S-075F	7/16" - 1/2"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"	N/A	
Extended	250Z0S-075F	7/16" - 1/2"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	210Z0S-16FM	11,5 - 12,5	19,1	45,6	48,0	104,6	16,0	48,0	1/16"	1/8"	
Short	220Z0S-20FM	11,5 - 12,5	31,8	61,1	63,5	111,1	20,0	50,0	1/8"	N/A	
XL	270Z0S-20FM	11,5 - 12,5	222,3	251,7	254,1	301,7	20,0	50,0	1/8"	N/A	
3XL	290Z0S-20FM	11,5 - 12,5	290,5	319,9	322,3	369,9	20,0	50,0	1/8"	N/A	

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



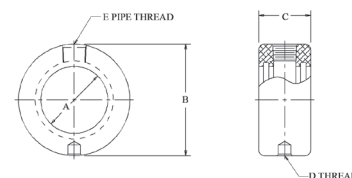
T-A® Holders

Z Series Range: 0.437" - 0.510" (11,10mm-12,95mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Standard	240Z0H-075F	7/16" - 1/2"	2-3/8"	3-17/32"	3-5/8"	5-9/16"	3/4"	2-1/32"	1/8"
Standard Plus	245Z0H-075F	7/16" - 1/2"	3-3/8"	4-35/64"	4-41/64"	6-43/64"	3/4"	2-1/32"	1/8"
Extended	250Z0H-075F	7/16" - 1/2"	4-3/8"	5-17/32"	5-5/8"	7-9/16"	3/4"	2-1/32"	1/8"
Long	260Z0H-075F	7/16" - 1/2"	7-1/16"	8-1/4"	8-11/32"	10-3/8"	3/4"	2-1/32"	1/8"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	240Z0H-20FM	11,5 - 12,5	60,3	89,7	92,1	139,7	20,0	50,0	1/8**
Standard Plus	245Z0H-20FM	11,5 - 12,8	86,0	115,4	117,8	165,4	20,0	50,0	1/8**
Extended	250Z0H-20FM	11,5 - 12,5	111,1	140,5	142,9	190,5	20,0	50,0	1/8**
Long	260Z0H-20FM	11,5 - 12,8	180,0	209,4	211,8	259,4	20,0	50,0	1/8**



Rotary Coolant Adapter (RCA) and Accessories

	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	4 2T-2SR	3/4"	1-3/4"	7/8"	5/16" - NC	1/8"	2T1-2SR	2T1-2OR-10
Metric	4 2T-2SRM	19,05	44,45	22,23	M8 X 1,25	1/8**	2T1-2SR	2T1-2OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

4 Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
Z	7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	7/16" - 1/2"	7.4 in.-lbs	11,5 - 12,5	84 N-cm

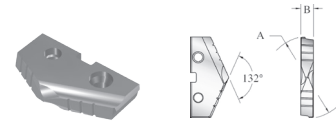
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® HSS Drill Inserts

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt		0.5118	13,00	1/8"	150T-13	⓪	150A-13	⓪	150N-13	⓪
	33/64"	0.5156	13,10		150T-.515	⓪	150A-.515	⓪	150N-.515	⓪
	17/32"	0.5313	13,49		150T-0017	⓪	150A-0017	⓪	150N-0017	⓪
		0.5315	13,50		150T-13.5	⓪	150A-13.5	⓪	150N-13.5	⓪
	35/64"	0.5469	13,89		150T-.546	⓪	150A-.546	⓪	150N-.546	⓪
		0.5512	14,00		150T-14	⓪	150A-14	⓪	150N-14	⓪
	9/16"	0.5625	14,29		150T-0018	⓪	150A-0018	⓪	150N-0018	⓪
		0.5709	14,50		150T-14.5	⓪	150A-14.5	⓪	150N-14.5	⓪
	37/64"	0.5781	14,68		150T-.578	⓪	150A-.578	⓪	150N-.578	⓪
		0.5906	15,00		150T-15	⓪	150A-15	⓪	150N-15	⓪
	19/32"	0.5938	15,08		150T-0019	⓪	150A-0019	⓪	150N-0019	⓪
	39/64"	0.6094	15,48		150T-.609*	⓪	150A-.609*	⓪	150N-.609*	⓪
		0.6102	15,50		150T-15.5*	⓪	150A-15.5*	⓪	150N-15.5*	⓪
	5/8"	0.6250	15,88		150T-0020*	⓪	150A-0020*	⓪	150N-0020*	⓪
		0.6299	16,00		150T-16*	⓪	150A-16*	⓪	150N-16*	⓪
	41/64"	0.6406	16,27		150T-.640*	⓪	150A-.640*	⓪	150N-.640*	⓪
		0.6496	16,50		150T-16.5*	⓪	150A-16.5*	⓪	150N-16.5*	⓪
	21/32"	0.6563	16,67		150T-0021*	⓪	150A-0021*	⓪	150N-0021*	⓪
		0.6693	17,00		150T-17*	⓪	150A-17*	⓪	150N-17*	⓪
	43/64"	0.6719	17,07		150T-.671*	⓪	150A-.671*	⓪	150N-.671*	⓪
11/16"	0.6875	17,46	150T-0022*	⓪	150A-0022*	⓪	150N-0022*	⓪		
	0.6890	17,50	150T-17.5*	⓪	150A-17.5*	⓪	150N-17.5*	⓪		
Premium Cobalt		0.5118	13,00	1/8"	180T-13	⓪	180A-13	⓪	180N-13	⓪
	33/64"	0.5156	13,10		180T-.515	⓪	180A-.515	⓪	180N-.515	⓪
	17/32"	0.5313	13,49		180T-0017	⓪	180A-0017	⓪	180N-0017	⓪
		0.5315	13,50		180T-13.5	⓪	180A-13.5	⓪	180N-13.5	⓪
	35/64"	0.5469	13,89		180T-.546	⓪	180A-.546	⓪	180N-.546	⓪
		0.5512	14,00		180T-14	⓪	180A-14	⓪	180N-14	⓪
	9/16"	0.5625	14,29		180T-0018	⓪	180A-0018	⓪	180N-0018	⓪
		0.5709	14,50		180T-14.5	⓪	180A-14.5	⓪	180N-14.5	⓪
	37/64"	0.5781	14,68		180T-.578	⓪	180A-.578	⓪	180N-.578	⓪
		0.5906	15,00		180T-15	⓪	180A-15	⓪	180N-15	⓪
	19/32"	0.5938	15,08		180T-0019	⓪	180A-0019	⓪	180N-0019	⓪
	39/64"	0.6094	15,48		180T-.609*	⓪	180A-.609*	⓪	180N-.609*	⓪
		0.6102	15,50		180T-15.5*	⓪	180A-15.5*	⓪	180N-15.5*	⓪
	5/8"	0.6250	15,88		180T-0020*	⓪	180A-0020*	⓪	180N-0020*	⓪
		0.6299	16,00		180T-16*	⓪	180A-16*	⓪	180N-16*	⓪
	41/64"	0.6406	16,27		180T-.640*	⓪	180A-.640*	⓪	180N-.640*	⓪
		0.6496	16,50		180T-16.5*	⓪	180A-16.5*	⓪	180N-16.5*	⓪
	21/32"	0.6563	16,67		180T-0021*	⓪	180A-0021*	⓪	180N-0021*	⓪
		0.6693	17,00		180T-17*	⓪	180A-17*	⓪	180N-17*	⓪
	43/64"	0.6719	17,07		180T-.671*	⓪	180A-.671*	⓪	180N-.671*	⓪
11/16"	0.6875	17,46	180T-0022*	⓪	180A-0022*	⓪	180N-0022*	⓪		
	0.6890	17,50	180T-17.5*	⓪	180A-17.5*	⓪	180N-17.5*	⓪		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 0.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

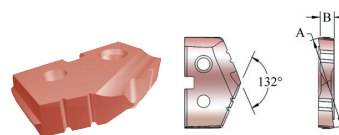
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



GEN2 T-A® HSS Drill Inserts

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
Super Cobalt		0.5118	13,00	1/8"	450H-13	○
	33/64"	0.5156	13,10		450H-.515	○
	17/32"	0.5313	13,49		450H-0017	○
		0.5315	13,50		450H-13.5	○
	35/64"	0.5469	13,89		450H-.546	○
		0.5512	14,00		450H-14	○
	9/16"	0.5625	14,29		450H-0018	○
		0.5709	14,50		450H-14.5	○
	37/64"	0.5781	14,68		450H-.578	○
		0.5906	15,00		450H-15	○
	19/32"	0.5938	15,08		450H-0019	○
	39/64"	0.6094	15,48		450H-.609*	○
		0.6102	15,50		450H-15.5*	○
	5/8"	0.6250	15,88		450H-0020*	○
		0.6299	16,00		450H-16*	○
	41/64"	0.6406	16,27		450H-.640*	○
		0.6496	16,50		450H-16.5*	○
	21/32"	0.6563	16,67		450H-0021*	○
		0.6693	17,00		450H-17*	○
	43/64"	0.6719	17,07		450H-.671*	○
11/16"	0.6875	17,46	450H-0022*	○		
	0.6890	17,50	450H-17.5*	○		

Geometries available (see page 197 for details): -HE
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 0.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

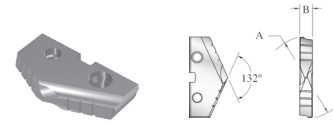
ASC 320

Special Tooling



T-A® Carbide Drill Inserts

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①
C2 (K20)		0.5118	13,00	1/8"	1C20T-13	○	1C20A-13	○
	33/64"	0.5156	13,10		1C20T-.515	○	1C20A-.515	○
	17/32"	0.5313	13,49		1C20T-0017	○	1C20A-0017	○
		0.5315	13,50		1C20T-13.5	○	1C20A-13.5	○
	35/64"	0.5469	13,89		1C20T-.546	○	1C20A-.546	○
		0.5512	14,00		1C20T-14	○	1C20A-14	○
	9/16"	0.5625	14,29		1C20T-0018	○	1C20A-0018	○
		0.5709	14,50		1C20T-14.5	○	1C20A-14.5	○
	37/64"	0.5781	14,68		1C20T-.578	○	1C20A-.578	○
		0.5906	15,00		1C20T-15	○	1C20A-15	○
	19/32"	0.5938	15,08		1C20T-0019	○	1C20A-0019	○
	39/64"	0.6094	15,48		1C20T-.609*	○	1C20A-.609*	○
		0.6102	15,50		1C20T-15.5*	○	1C20A-15.5*	○
	5/8"	0.6250	15,88		1C20T-0020*	○	1C20A-0020*	○
		0.6299	16,00		1C20T-16*	○	1C20A-16*	○
	41/64"	0.6406	16,27		1C20T-.640*	○	1C20A-.640*	○
		0.6496	16,50		1C20T-16.5*	○	1C20A-16.5*	○
	21/32"	0.6563	16,67		1C20T-0021*	○	1C20A-0021*	○
		0.6693	17,00		1C20T-17*	○	1C20A-17*	○
		0.6719	17,07		1C20T-.671*	○	1C20A-.671*	○
	0.6875	17,46	1C20T-0022*	○	1C20A-0022*	○		
	0.6890	17,50	1C20T-17.5*	○	1C20A-17.5*	○		
C5 (P40)		0.5118	13,00	1/8"	1C50T-13	○	1C50A-13	○
	33/64"	0.5156	13,10		1C50T-.515	○	1C50A-.515	○
	17/32"	0.5313	13,49		1C50T-0017	○	1C50A-0017	○
		0.5315	13,50		1C50T-13.5	○	1C50A-13.5	▲
	35/64"	0.5469	13,89		1C50T-.546	○	1C50A-.546	○
		0.5512	14,00		1C50T-14	○	1C50A-14	○
	9/16"	0.5625	14,29		1C50T-0018	○	1C50A-0018	○
		0.5709	14,50		1C50T-14.5	○	1C50A-14.5	○
	37/64"	0.5781	14,68		1C50T-.578	○	1C50A-.578	○
		0.5906	15,00		1C50T-15	○	1C50A-15	○
	19/32"	0.5938	15,08		1C50T-0019	○	1C50A-0019	○
	39/64"	0.6094	15,48		1C50T-.609*	○	1C50A-.609*	○
		0.6102	15,50		1C50T-15.5*	○	1C50A-15.5*	○
	5/8"	0.6250	15,88		1C50T-0020*	○	1C50A-0020*	○
		0.6265	15,91		1C50T-.6265*	▲	1C50A-.6265*	▲
		0.6299	16,00		1C50T-16*	○	1C50A-16*	○
	41/64"	0.6406	16,27		1C50T-.640*	○	1C50A-.640*	○
		0.6496	16,50		1C50T-16.5*	○	1C50A-16.5*	○
	21/32"	0.6563	16,67		1C50T-0021*	○	1C50A-0021*	○
		0.6693	17,00		1C50T-17*	○	1C50A-17*	○
	0.6719	17,07	1C50T-.671*	○	1C50A-.671*	○		
	0.6875	17,46	1C50T-0022*	○	1C50A-0022*	○		
	0.6890	17,50	1C50T-17.5*	○	1C50A-17.5*	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 0.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

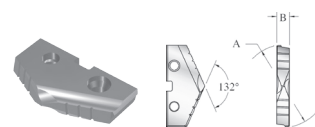
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- ① Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] Carbide Drill Inserts

0 Series Range: 0.511" - 0.695" (12,98mm - 17,65mm)



Cast Iron T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiAlN	①
C3 (K10)		0.5118	13,00	1/8"	1C30A-13-CI	○
	33/64"	0.5156	13,10		1C30A-515-CI	○
	17/32"	0.5313	13,49		1C30A-0017-CI	○
		0.5315	13,50		1C30A-13.5-CI	○
	35/64"	0.5469	13,89		1C30A-.546-CI	○
		0.5512	14,00		1C30A-14-CI	○
	9/16"	0.5625	14,29		1C30A-0018-CI	○
		0.5709	14,50		1C30A-14.5-CI	○
	37/64"	0.5781	14,68		1C30A-.578-CI	○
		0.5906	15,00		1C30A-15-CI	○
	19/32"	0.5938	15,08		1C30A-0019-CI	○
	39/64"	0.6094	15,48		1C30A-.609-CI*	○
		0.6102	15,50		1C30A-15.5-CI*	○
	5/8"	0.6250	15,88		1C30A-0020-CI*	○
		0.6299	16,00		1C30A-16-CI*	○
	41/64"	0.6406	16,27		1C30A-.640-CI*	○
		0.6496	16,50		1C30A-16.5-CI*	○
	21/32"	0.6563	16,67		1C30A-0021-CI*	○
		0.6693	17,00		1C30A-17-CI*	○
	43/64"	0.6719	17,07		1C30A-.671-CI*	○
11/16"	0.6875	17,46	1C30A-0022-CI*	○		
	0.6890	17,50	1C30A-17.5-CI*	○		

* Denotes inserts that will also fit 0.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

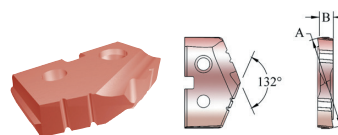
ASC 320

Special Tooling



GEN2 T-A® Carbide Drill Inserts

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
C2 (K20)		0.5118	13,00	1/8"	4C20H-13	○
	33/64"	0.5156	13,10		4C20H-.515	○
	17/32"	0.5313	13,49		4C20H-0017	○
		0.5315	13,50		4C20H-13.5	○
	35/64"	0.5469	13,89		4C20H-.546	○
		0.5512	14,00		4C20H-14	○
	9/16"	0.5625	14,29		4C20H-0018	○
		0.5709	14,50		4C20H-14.5	○
	37/64"	0.5781	14,68		4C20H-.578	○
		0.5906	15,00		4C20H-15	○
	19/32"	0.5938	15,08		4C20H-0019	○
	39/64"	0.6094	15,48		4C20H-.609*	○
		0.6102	15,50		4C20H-15.5*	○
	5/8"	0.6250	15,88		4C20H-0020*	○
		0.6299	16,00		4C20H-16*	○
	41/64"	0.6406	16,27		4C20H-.640*	○
		0.6496	16,50		4C20H-16.5*	○
	21/32"	0.6563	16,67		4C20H-0021*	○
		0.6693	17,00		4C20H-17*	○
43/64"	0.6719	17,07	4C20H-.671*	○		
11/16"	0.6875	17,46	4C20H-0022*	○		
	0.6890	17,50	4C20H-17.5*	○		
C1 (K35)		0.5118	13,00	1/8"	4C10H-13	○
	33/64"	0.5156	13,10		4C10H-.515	○
	17/32"	0.5313	13,49		4C10H-0017	○
		0.5315	13,50		4C10H-13.5	○
	35/64"	0.5469	13,89		4C10H-.546	○
		0.5512	14,00		4C10H-14	○
	9/16"	0.5625	14,29		4C10H-0018	○
		0.5709	14,50		4C10H-14.5	○
	37/64"	0.5781	14,68		4C10H-.578	○
		0.5906	15,00		4C10H-15	○
	19/32"	0.5938	15,08		4C10H-0019	○
	39/64"	0.6094	15,48		4C10H-.609*	○
		0.6102	15,50		4C10H-15.5*	○
	5/8"	0.6250	15,88		4C10H-0020*	○
		0.6299	16,00		4C10H-16*	○
	41/64"	0.6406	16,27		4C10H-.640*	○
		0.6496	16,50		4C10H-16.5*	○
	21/32"	0.6563	16,67		4C10H-0021*	○
		0.6693	17,00		4C10H-17*	○
43/64"	0.6719	17,07	4C10H-.671*	○		
11/16"	0.6875	17,46	4C10H-0022*	○		
	0.6890	17,50	4C10H-17.5*	○		

Geometries available (see page 197 for details): -HE

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 0.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

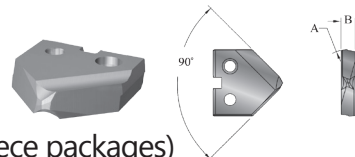
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- ① Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] HSS Drill Inserts

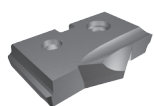
0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



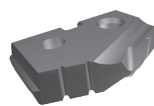
90° Spot and Chamfer T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt		0.5118	13,00	1/8"	150T-13-SP	▲	150A-13-SP	▲	150N-13-SP	▲
	33/64"	0.5156	13,10		150T-515-SP	▲	150A-515-SP	▲	150N-515-SP	▲
	17/32"	0.5313	13,49		150T-0017-SP	▲	150A-0017-SP	▲	150N-0017-SP	▲
		0.5315	13,50		150T-13.5-SP	▲	150A-13.5-SP	▲	150N-13.5-SP	▲
	35/64"	0.5469	13,89		150T-546-SP	▲	150A-546-SP	▲	150N-546-SP	▲
		0.5512	14,00		150T-14-SP	▲	150A-14-SP	▲	150N-14-SP	▲
	9/16"	0.5625	14,29		150T-0018-SP	▲	150A-0018-SP	▲	150N-0018-SP	▲
		0.5709	14,50		150T-14.5-SP	▲	150A-14.5-SP	▲	150N-14.5-SP	▲
	37/64"	0.5781	14,68		150T-578-SP	▲	150A-578-SP	▲	150N-578-SP	▲
		0.5906	15,00		150T-15-SP	▲	150A-15-SP	▲	150N-15-SP	▲
	19/32"	0.5938	15,08		150T-0019-SP	▲	150A-0019-SP	▲	150N-0019-SP	▲
	39/64"	0.6094	15,48		150T-609-SP*	▲	150A-609-SP*	▲	150N-609-SP*	▲
		0.6102	15,50		150T-15.5-SP*	▲	150A-15.5-SP*	▲	150N-15.5-SP*	▲
	5/8"	0.6250	15,88		150T-0020-SP*	⓪	150A-0020-SP*	⓪	150N-0020-SP*	⓪
		0.6299	16,00		150T-16-SP*	▲	150A-16-SP*	▲	150N-16-SP*	▲
	41/64"	0.6406	16,27		150T-640-SP*	▲	150A-640-SP*	▲	150N-640-SP*	▲
		0.6496	16,50		150T-16.5-SP*	▲	150A-16.5-SP*	▲	150N-16.5-SP*	▲
	21/32"	0.6563	16,67		150T-0021-SP*	▲	150A-0021-SP*	▲	150N-0021-SP*	▲
		0.6693	17,00		150T-17-SP*	▲	150A-17-SP*	▲	150N-17-SP*	▲
	43/64"	0.6719	17,07		150T-671-SP*	▲	150A-671-SP*	▲	150N-671-SP*	▲
11/16"	0.6875	17,46	150T-0022-SP*	▲	150A-0022-SP*	▲	150N-0022-SP*	▲		
	0.6890	17,50	150T-17.5-SP*	⓪	150A-17.5-SP*	⓪	150N-17.5-SP*	⓪		

Geometries available (see page 197 for details): -SW.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
* Denotes inserts that will also fit 0.5 series T-A Holders.



*Thin Wall



**Notch Point



**150° Structural Steel

Structural Steel T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		*Thin Wall TiAlN	⓪	**Notch Point TiAlN	⓪	150° Structural Steel TiAlN	⓪
Super Cobalt		0.5512	14,00	1/8"	150A-14-TW	⓪	150A-14-NP	⓪	150A-14-SS	⓪
	9/16"	0.5625	14,29		150A-0018-TW	⓪	150A-0018-NP	⓪	150A-0018-SS	⓪
	5/8"	0.6250	15,88		150A-0020-TW	⓪	150A-0020-NP	⓪	150A-0020-SS	⓪
		0.6299	16,00		150A-16-TW	⓪	150A-16-NP	⓪	150A-16-SS	⓪
	11/16"	0.6875	17,46		150A-0022-TW	⓪	150A-0022-NP	⓪	150A-0022-SS	⓪
						AM200[®]				
Super Cobalt		0.5512	14,00	1/8"	150H-14-TW	⓪	150H-14-NP	⓪	150H-14-SS	⓪
	9/16"	0.5625	14,29		150H-0018-TW	⓪	150H-0018-NP	⓪	150H-0018-SS	⓪
	5/8"	0.6250	15,88		150H-0020-TW	⓪	150H-0020-NP	⓪	150H-0020-SS	⓪
		0.6299	16,00		150H-16-TW	⓪	150H-16-NP	⓪	150H-16-SS	⓪
	11/16"	0.6875	17,46		150H-0022-TW	⓪	150H-0022-NP	⓪	150H-0022-SS	⓪

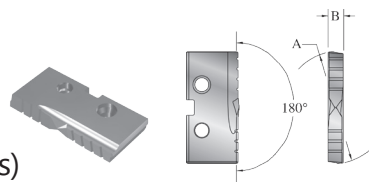
*Use Thin Wall Drill Inserts for material up to 7/16" thick.
**Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.

Revolution & Opening
APX
GEN3SYS & GEN3SYS XT
Original T-A & GEN2 T-A
AccuPort 432
ASC 320
Special Tooling



T-A[®] HSS Drill Inserts

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
Super Cobalt		0.5118	13,00	1/8"	150T-13-FB	○
	33/64"	0.5156	13,10		150T-.515-FB	○
	17/32"	0.5313	13,49		150T-0017-FB	○
		0.5315	13,50		150T-13.5-FB	○
		0.5512	14,00		150T-14-FB	○
	9/16"	0.5625	14,29		150T-0018-FB	○
		0.5709	14,50		150T-14.5-FB	○
	37/64"	0.5781	14,68		150T-.578-FB	○
		0.5906	15,00		150T-15-FB	○
	19/32"	0.5938	15,08		150T-0019-FB	○
		0.6102	15,50		150T-15.5-FB*	○
	5/8"	0.6250	15,88		150T-0020-FB*	○
		0.6299	16,00		150T-16-FB*	○
		0.6496	16,50		150T-16.5-FB*	○
	21/32"	0.6563	16,67		150T-0021-FB*	○
		0.6693	17,00		150T-17-FB*	○
	11/16"	0.6875	17,46		150T-0022-FB*	○
	0.6890	17,50	150T-17.5-FB*	○		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 0.5 series T-A Holders.

- Availability Codes
- Stocked
- ▲ Non-Stocked

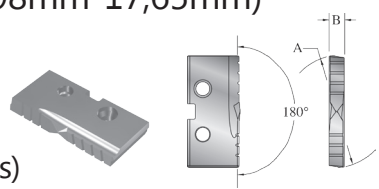
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX



T-A[®] Carbide Drill Inserts

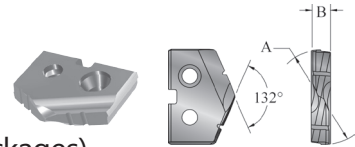
0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	Ø
C2 (K20)		0.5118	13,00	1/8"	1C20T-13-FB	▲
	33/64"	0.5156	13,10		1C20T-.515-FB	▲
	17/32"	0.5313	13,49		1C20T-0017-FB	▲
		0.5315	13,50		1C20T-13.5-FB	▲
	35/64"	0.5469	13,89		1C20T-.546-FB	▲
		0.5512	14,00		1C20T-14-FB	▲
	9/16"	0.5625	14,29		1C20T-0018-FB	▲
		0.5709	14,50		1C20T-14.5-FB	▲
	37/64"	0.5781	14,68		1C20T-.578-FB	▲
		0.5906	15,00		1C20T-15-FB	▲
	19/32"	0.5938	15,08		1C20T-0019-FB	▲
	39/64"	0.6094	15,48		1C20T-.609-FB*	▲
		0.6102	15,50		1C20T-15.5-FB*	▲
	5/8"	0.6250	15,88		1C20T-0020-FB*	▲
		0.6299	16,00		1C20T-16-FB*	▲
	41/64"	0.6406	16,27		1C20T-.640-FB*	▲
		0.6496	16,50		1C20T-16.5-FB*	▲
	21/32"	0.6563	16,67		1C20T-0021-FB*	▲
		0.6693	17,00		1C20T-17-FB*	▲
	43/64"	0.6719	17,07		1C20T-.671-FB*	▲
11/16"	0.6875	17,46	1C20T-0022-FB*	▲		
	0.6890	17,50	1C20T-17.5-FB*	▲		

Geometries available (see page 197 for details): -FN.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 0.5 series T-A Holders.



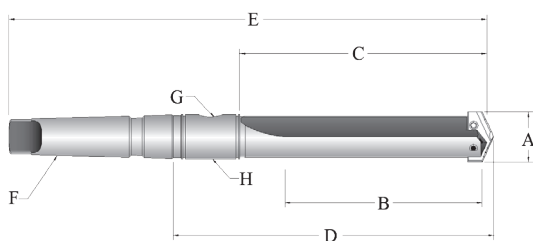
Diamond Coated T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		CVD Diamond	Ø
N2		0.5118	13,00	1/8"	1N20D-13	▲
	33/64"	0.5156	13,10		1N20D-.515	▲
	17/32"	0.5313	13,49		1N20D-0017	▲
		0.5315	13,50		1N20D-13.5	▲
	35/64"	0.5469	13,89		1N20D-.546	▲
		0.5512	14,00		1N20D-14	▲
	9/16"	0.5625	14,29		1N20D-0018	▲
		0.5709	14,50		1N20D-14.5	▲
	37/64"	0.5781	14,68		1N20D-.578	▲
		0.5906	15,00		1N20D-15	▲
	19/32"	0.5938	15,08		1N20D-0019	▲
	39/64"	0.6094	15,48		1N20D-.609	▲
		0.6102	15,50		1N20D-15.5	▲
	5/8"	0.6250	15,88		1N20D-0020	▲
		0.6299	16,00		1N20D-16	▲
	41/64"	0.6406	16,27		1N20D-.640	▲
		0.6496	16,50		1N20D-16.5	▲
	21/32"	0.6563	16,67		1N20D-0021	▲
		0.6693	17,00		1N20D-17	▲
	43/64"	0.6719	17,07		1N20D-.671	▲
11/16"	0.6875	17,46	1N20D-0022	▲		
	0.6890	17,50	1N20D-17.5	▲		



T-A® Holders

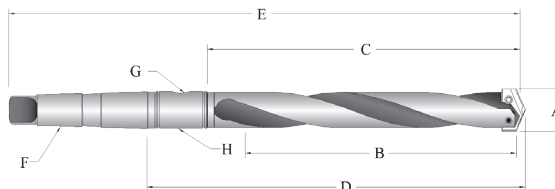
0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22000S-002I	33/64" - 11/16"	1-3/8"	2-3/16"	3-41/64"	6-15/32"	#2	1/16"	2T-2SR
Short	22005S-002I	39/64" - 11/16"	1-3/8"	2-3/16"	3-41/64"	6-15/32"	#2	1/16"	2T-2SR
Standard	24000S-002I	33/64" - 11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	2T-2SR
Standard	24005S-002I	39/64" - 11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	2T-2SR
Extended	25000S-002I	33/64" - 11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	2T-2SR
Extended	25005S-002I	39/64" - 11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22000S-002M	13,0 - 17,5	35,0	55,5	92,4	164,3	#2**	1/16**	2T-2SRM
Short	22005S-002M	15,5 - 17,5	35,0	55,5	92,4	164,3	#2**	1/16**	2T-2SRM

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Standard	24000H-002I	33/64" - 11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	2T-2SR
Standard	24005H-002I	39/64" - 11/16"	2-1/2"	3-5/16"	4-49/64"	7-19/32"	#2	1/16"	2T-2SR
Extended	25000H-002I	33/64" - 11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	2T-2SR
Extended	25005H-002I	39/64" - 11/16"	4-1/2"	5-5/16"	6-49/64"	9-19/32"	#2	1/16"	2T-2SR
Long	26000H-002I	33/64" - 11/16"	7"	7-13/16"	8-17/64"	12-3/32"	#2	1/16"	2T-2SR
Long	26005H-002I	39/64" - 11/16"	7"	7-13/16"	8-17/64"	12-3/32"	#2	1/16"	2T-2SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	24000H-002M	13,0 - 17,5	63,5	84,1	121,0	192,9	#2**	1/16**	2T-2SRM
Standard	24005H-002M	15,5 - 17,5	63,5	84,1	121,0	192,9	#2**	1/16**	2T-2SRM
Extended	25000H-002M	13,0 - 17,5	114,3	135,0	171,8	243,7	#2**	1/16**	2T-2SRM
Extended	25005H-002M	15,5 - 17,5	114,3	135,0	171,8	243,7	#2**	1/16**	2T-2SRM
Long	26000H-002M	13,0 - 17,5	177,8	198,5	235,3	307,2	#2**	1/16**	2T-2SRM
Long	26005H-002M	15,5 - 17,5	177,8	198,5	235,3	307,2	#2**	1/16**	2T-2SRM

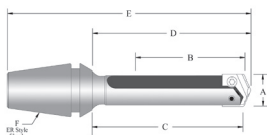
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



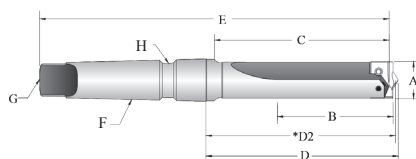
T-A® Holders

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



ER Collet Holders

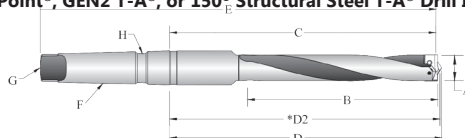
Item Number	A	B	C	D	E	F	Collet Nut without Retaining Ring
	Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Collet Size	
21000S-16ER	33/64" -11/16"	1-3/8"	1-57/64"	2"	3-5/64"	ER-16	ER-16N
21000S-20ER	33/64" -11/16"	1-3/8"	1-57/64"	2"	3-15/64"	ER-20	ER-20N



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	Coolant Inlet Style
Short	22000S-003IS036	9/16"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
Short	22005S-003IS040	5/8"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
Short	22005S-003IS044	11/16"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
METRIC (mm)										
Short	22000S-003IS036	14	35	56	64,7	63,1	154	#3	TTC	TSC
Short	22000S-003IS040	16	35	56	64,7	63,1	154	#3	TTC	TSC
Short	22000S-003IS044	17,5	35	56	64,7	63,1	154	#3	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	Coolant Inlet Style
Standard	24000H-003IS036	9/16"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Standard	24005H-003IS040	5/8"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Standard	24005H-003IS044	11/16"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Extended	25000H-003IS036	9/16"	6-1/2"	9-7/16"	9-51/64"	9-19/32"	13-5/64"	#3	TTC	TSC
Extended	25005H-003IS044	11/16"	6-1/2"	9-7/16"	9-51/64"	9-19/32"	13-5/64"	#3	TTC	TSC
METRIC (mm)										
Standard	24000H-003IS036	14	64	84	93,3	91,7	183	#3	TTC	TSC
Standard	24005H-003IS040	16	64	84	93,3	91,7	183	#3	TTC	TSC
Standard	24005H-003IS044	17,5	64	84	93,3	91,7	183	#3	TTC	TSC
Extended	25000H-003IS036	14	165	240	248,8	243,7	338	#3	TTC	TSC
Extended	25005H-003IS044	17,5	165	240	248,8	243,7	338	#3	TTC	TSC

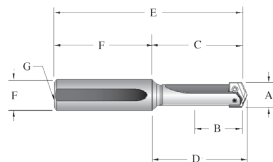
*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 198 for Structural Steel Guidelines & 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)

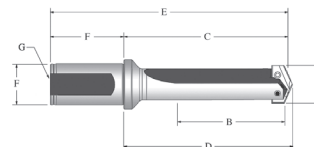
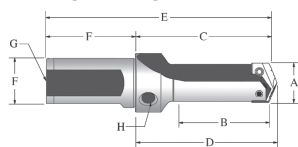


Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
								Dia	Length
Short	22000S-075L	33/64" - 11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"
Short	22005S-075L	39/64" - 11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"
Standard	24000S-075L	33/64" - 11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"
Standard	24005S-075L	39/64" - 11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"
Extended	25000S-075L	33/64" - 11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"
Extended	25005S-075L	39/64" - 11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"
Long	26000S-075L	33/64" - 11/16"	7"	7-13/16"	7-59/64"	10-3/16"	3/4"	2-3/8"	1/8"
Long	26005S-075L	39/64" - 11/16"	7"	7-13/16"	7-59/64"	10-3/16"	3/4"	2-3/8"	1/8"
XL	27000S-075L	33/64" - 11/16"	11-5/8"	12-7/16"	12-35/64"	14-13/16"	3/4"	2-3/8"	1/8"
3XL	29000S-075L	33/64" - 11/16"	15-1/4"	16-1/16"	16-11/64"	18-7/16"	3/4"	2-3/8"	1/8"

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

Stub Length Flanged Shank Holder



Flanged Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G		H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap		
								Dia	Length	Rear	Side
Stub	21000S-075F	33/64" - 11/16"	7/8"	1-7/8"	1-63/64"	3-29/32"	3/4"	2-1/32"	1/8"	1/8"	
Stub	21005S-075F	39/64" - 11/16"	7/8"	1-7/8"	1-63/64"	3-29/32"	3/4"	2-1/32"	1/8"	1/8"	
Short	22000S-075F	33/64" - 11/16"	1-3/8"	2-1/2"	2-39/64"	4-17/32"	3/4"	2-1/32"	1/8"	N/A	
Short	22005S-075F	39/64" - 11/16"	1-3/8"	2-1/2"	2-39/64"	4-17/32"	3/4"	2-1/32"	1/8"	N/A	
Standard	24000S-075F	33/64" - 11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"	N/A	
Standard	24005S-075F	39/64" - 11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"	N/A	
Extended	25000S-075F	33/64" - 11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"	N/A	
Extended	25005S-075F	39/64" - 11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	21000S-20FM	13,0 - 17,5	22,2	47,6	50,4	97,6	20,0	50,0	1/8**	1/8**	
Stub	21005S-20FM	15,5 - 17,5	22,2	47,6	50,4	97,6	20,0	50,0	1/8**	1/8**	
Short	22000S-20FM	13,0 - 17,5	34,9	63,5	66,3	113,5	20,0	50,0	1/8**	N/A	
Short	22005S-20FM	15,5 - 17,5	34,9	63,5	66,3	113,5	20,0	50,0	1/8**	N/A	
XL	27000S-20FM	13,0 - 17,5	295	323,9	326,7	373,9	20,0	50,0	1/8**	N/A	
3XL	29000S-20FM	13,0 - 17,5	387	416,0	418,8	466,0	20,0	50,0	1/8**	N/A	

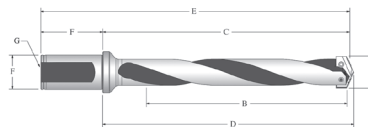
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

0 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A Drill Insert Range	B Drill Depth	C Body Length	D Tool Ref. Length	E Overall Length	F Shank		G Pipe Tap
							Dia	Length	
Standard	24000H-075F	33/64" - 11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
Standard	24005H-075F	39/64" - 11/16"	2-1/2"	3-5/8"	3-47/64"	5-21/32"	3/4"	2-1/32"	1/8"
Standard Plus	24500H-075F	33/64" - 11/16"	3-1/2"	4-5/8"	4-37/64"	6-39/64"	3/4"	2-1/32"	1/8"
⚠ Extended	25000H-075F	33/64" - 11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
⚠ Extended	25005H-075F	39/64" - 11/16"	4-1/2"	5-5/8"	5-47/64"	7-21/32"	3/4"	2-1/32"	1/8"
⚠ Long	26000H-075F	33/64" - 11/16"	7"	8-1/8"	8-15/64"	10-5/32"	3/4"	2-1/32"	1/8"
⚠ Long	26005H-075F	39/64" - 11/16"	7"	8-1/8"	8-15/64"	10-5/32"	3/4"	2-1/32"	1/8"
⚠ Long Plus	26500H-075F	33/64" - 11/16"	9-7/16"	10-37/64"	10-11/16"	12-23/32"	3/4"	2-1/32"	1/8"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	24000H-20FM	13,0 - 17,5	63,5	92,1	94,9	142,1	20,0	50,0	1/8**
Standard	24005H-20FM	15,5 - 17,5	63,5	92,1	94,9	142,1	20,0	50,0	1/8**
Standard Plus	24500H-20FM	13,0 - 17,5	89,0	117,6	120,4	167,6	20,0	50,0	1/8**
⚠ Extended	25000H-20FM	13,0 - 17,5	114,3	142,9	145,7	192,9	20,0	50,0	1/8**
⚠ Extended	25005H-20FM	15,5 - 17,5	114,3	142,9	145,7	192,9	20,0	50,0	1/8**
⚠ Long	26000H-20FM	13,0 - 17,5	177,8	206,4	209,1	256,4	20,0	50,0	1/8**
⚠ Long	26005H-20FM	15,5 - 17,5	177,8	206,4	209,1	256,4	20,0	50,0	1/8**
⚠ Long Plus	26500H-20FM	13,0 - 17,5	240,0	268,6	271,4	318,6	20,0	50,0	1/8**

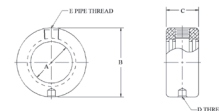
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

T-ACR 45 Chamfer Ring and Accessories



Item Number	Min. Drill Dia (Inch)	Max. Drill Dia (Inch)	Max. Chamfer Dia (Inch)	Chamfer Ring Dia	Chamfer Ring Length	Insert Number 2 Pieces	Insert Screw (10 pack)	TORX Plus Driver	Clamping Screw (10 pack)	TORX Plus Driver
T-ACR-45-0	0.5118	0.6890	0.814	1.200	0.676	T-ACRI-45-B-C5A	7255-IP8-1	8IP-8	7375-IP9-1	8IP-9

Rotary Coolant Adapter (RCA) and Accessories



Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	⚠ 2T-2SR	3/4"	1-3/4"	7/8"	5/16" - 18	1/8"	2T1-2SR	2T1-2OR-10
Metric	⚠ 2T-2SRM	19,05	44,45	22,23	M8 X 1,25	1/8**	2T1-2SR	2T1-2OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

⚠ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
0	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	33/64" - 11/16"	15.5 in.-lbs	13,0 - 17,5	175 N-cm
0.5	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	39/64" - 11/16"	15.5 in.-lbs	15,5 - 17,5	175 N-cm

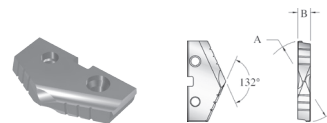
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® HSS Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
HSS	45/64"	0.7031	17,86	5/32"	131T-703	○	131A-703	○	131N-703	○
		0.7087	18,00		131T-18	○	131A-18	○	131N-18	○
	23/32"	0.7188	18,26		131T-0023	○	131A-0023	○	131N-0023	○
		0.7283	18,50		131T-18.5	○	131A-18.5	○	131N-18.5	○
	47/64"	0.7344	18,65		131T-.734	○	131A-.734	○	131N-.734	○
		0.7480	19,00		131T-19	○	131A-19	○	131N-19	○
	3/4"	0.7500	19,05		131T-0024	○	131A-0024	○	131N-0024	○
		0.7656	19,45		131T-.765	○	131A-.765	○	131N-.765	○
	49/64"	0.7677	19,50		131T-19.5	○	131A-19.5	○	131N-19.5	○
		0.7813	19,84		131T-0025	○	131A-0025	○	131N-0025	○
	51/64"	0.7874	20,00		131T-20	○	131A-20	○	131N-20	○
		0.7969	20,24		131T-.796	○	131A-.796	○	131N-.796	○
	13/16"	0.8071	20,50		131T-20.5	○	131A-20.5	○	131N-20.5	○
		0.8125	20,64		131T-0026	○	131A-0026	○	131N-0026	○
	27/32"	0.8268	21,00		131T-21	○	131A-21	○	131N-21	○
		0.8438	21,43		131T-0027	○	131A-0027	○	131N-0027	○
	55/64"	0.8594	21,83		131T-.859*	○	131A-.859*	○	131N-.859*	○
		0.8661	22,00		131T-22*	○	131A-22*	○	131N-22*	○
	7/8"	0.8750	22,23		131T-0028*	○	131A-0028*	○	131N-0028*	○
		0.8906	22,62		131T-.890*	○	131A-.890*	○	131N-.890*	○
57/64"	0.9055	23,00	131T-23*	○	131A-23*	○	131N-23*	○		
	0.9063	23,02	131T-0029*	○	131A-0029*	○	131N-0029*	○		
29/32"	0.9219	23,42	131T-.921*	○	131A-.921*	○	131N-.921*	○		
	0.9375	23,81	131T-0030*	○	131A-0030*	○	131N-0030*	○		
15/16"	0.9449	24,00	131T-24*	○	131A-24	○	131N-24*	○		
	0.7031	17,86	151T-703	○	151A-703	○	151N-703	○		
Super Cobalt	45/64"	0.7087	18,00	151T-18	○	151A-18	○	151N-18	○	
		0.7188	18,26	151T-0023	○	151A-0023	○	151N-0023	○	
	23/32"	0.7283	18,50	151T-18.5	○	151A-18.5	○	151N-18.5	○	
		0.7344	18,65	151T-.734	○	151A-.734	○	151N-.734	○	
	47/64"	0.7480	19,00	151T-19	○	151A-19	○	151N-19	○	
		0.7500	19,05	151T-0024	○	151A-0024	○	151N-0024	○	
	49/64"	0.7656	19,45	151T-.765	○	151A-.765	○	151N-.765	○	
		0.7677	19,50	151T-19.5	○	151A-19.5	○	151N-19.5	○	
	25/32"	0.7813	19,84	151T-0025	○	151A-0025	○	151N-0025	○	
		0.7874	20,00	151T-20	○	151A-20	○	151N-20	○	
	51/64"	0.7969	20,24	151T-.796	○	151A-.796	○	151N-.796	○	
		0.8071	20,50	151T-20.5	○	151A-20.5	○	151N-20.5	○	
	13/16"	0.8125	20,64	151T-0026	○	151A-0026	○	151N-0026	○	
		0.8268	21,00	151T-21	○	151A-21	○	151N-21	○	
	27/32"	0.8438	21,43	151T-0027	○	151A-0027	○	151N-0027	○	
		0.8594	21,83	151T-.859*	○	151A-.859*	○	151N-.859*	○	
	55/64"	0.8661	22,00	151T-22*	○	151A-22*	○	151N-22*	○	
		0.8750	22,23	151T-0028*	○	151A-0028*	○	151N-0028*	○	
	57/64"	0.8906	22,62	151T-.890*	○	151A-.890*	○	151N-.890*	○	
		0.9055	23,00	151T-23*	○	151A-23*	○	151N-23*	○	
29/32"	0.9063	23,02	151T-0029*	○	151A-0029*	○	151N-0029*	○		
	0.9219	23,42	151T-.921*	○	151A-.921*	○	151N-.921*	○		
15/16"	0.9375	23,81	151T-0030*	○	151A-0030*	○	151N-0030*	○		
	0.9449	24,00	151T-24*	○	151A-24*	○	151N-24*	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 1.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

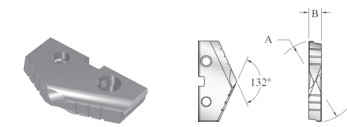
- ① Availability Codes
- Stocked
- ▲ Non-Stocked

Revolution & Opening
 APX
 GEN3SYS & GEN3SYS XT
 Original T-A & GEN2 T-A
 AccuPort 432
 ASC 320
 Special Tooling



T-A[®] HSS Drill Inserts

1 Series Range: 0.690" - 0.960" (17,53mm - 24,38mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
Premium Cobalt	45/64"	0.7031	17,86	5/32"	181T-703	○	181A-703	○	181N-703	○
		0.7087	18,00		181T-18	○	181A-18	○	181N-18	○
	23/32"	0.7188	18,26		181T-0023	○	181A-0023	○	181N-0023	○
		0.7283	18,50		181T-18.5	○	181A-18.5	○	181N-18.5	○
	47/64"	0.7344	18,65		181T-734	○	181A-734	○	181N-734	○
		0.7480	19,00		181T-19	○	181A-19	○	181N-19	○
	3/4"	0.7500	19,05		181T-0024	○	181A-0024	○	181N-0024	○
	49/64"	0.7656	19,45		181T-765	○	181A-765	○	181N-765	○
		0.7677	19,50		181T-19.5	○	181A-19.5	○	181N-19.5	○
	25/32"	0.7813	19,84		181T-0025	○	181A-0025	○	181N-0025	○
		0.7874	20,00		181T-20	○	181A-20	○	181N-20	○
	51/64"	0.7969	20,24		181T-796	○	181A-796	○	181N-796	○
		0.8071	20,50		181T-20.5	○	181A-20.5	○	181N-20.5	○
	13/16"	0.8125	20,64		181T-0026	○	181A-0026	○	181N-0026	○
		0.8268	21,00		181T-21	○	181A-21	○	181N-21	○
	27/32"	0.8438	21,43		181T-0027	○	181A-0027	○	181N-0027	○
	55/64"	0.8594	21,83		181T-859*	○	181A-859*	○	181N-859*	○
		0.8661	22,00		181T-22*	○	181A-22*	○	181N-22*	○
	7/8"	0.8750	22,23		181T-0028*	○	181A-0028*	○	181N-0028*	○
	57/64"	0.8906	22,62		181T-890*	○	181A-890*	○	181N-890*	○
		0.9055	23,00		181T-23*	○	181A-23*	○	181N-23*	○
	29/32"	0.9063	23,02		181T-0029*	○	181A-0029*	○	181N-0029*	○
	59/64"	0.9219	23,42		181T-921*	○	181A-921*	○	181N-921*	○
	15/16"	0.9375	23,81		181T-0030*	○	181A-0030*	○	181N-0030*	○
		0.9449	24,00		181T-24*	○	181A-24*	○	181N-24*	○

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 1.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

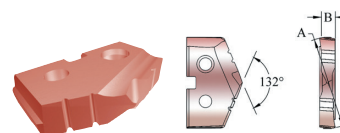
ASC 320

Special Tooling



GEN2 T-A® HSS Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	ⓘ
Super Cobalt	45/64"	0.7031	17.86	5/32"	451H-703	○
		0.7087	18.00		451H-18	○
	23/32"	0.7188	18.26		451H-0023	○
		0.7283	18.50		451H-18.5	○
	47/64"	0.7344	18.65		451H-734	○
		0.7480	19.00		451H-19	○
	3/4"	0.7500	19.05		451H-0024	○
	49/64"	0.7656	19.45		451H-765	○
		0.7677	19.50		451H-19.5	○
	25/32"	0.7813	19.84		451H-0025	○
		0.7874	20.00		451H-20	○
	51/64"	0.7969	20.24		451H-796	○
		0.8010	20.34		451H-801	○
		0.8071	20.50		451H-20.5	○
	13/16"	0.8125	20.64		451H-0026	○
		0.8268	21.00		451H-21	○
	27/32"	0.8438	21.43		451H-0027	○
		0.8465	21.50		451H-21.5	○
	55/64"	0.8564	21.83		451H-859*	○
		0.8661	22.00		451H-22*	○
	7/8"	0.8750	22.23		451H-0028*	○
		0.8858	22.50		451H-22.5*	○
	57/64"	0.8906	22.62		451H-890*	○
		0.9055	23.00		451H-23*	○
29/32"	0.9063	23.02	451H-0029*	○		
59/64"	0.9219	23.42	451H-921*	○		
	0.9252	23.50	451H-23.5*	○		
15/16"	0.9375	23.81	451H-0030*	○		
	0.9449	24.00	451H-24*	○		

Geometries available (see page 197 for details): -HE.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 1.5 series T-A Holders.

- ⓘ Availability Codes
- Stocked
- ▲ Non-Stocked

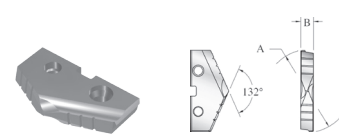
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



T-A[®] Carbide Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	Ø	TiAlN	Ø
C2 (K20)	45/64"	0.7031	17,86	5/32"	1C21T-.703	○	1C21A-.703	○
		0.7087	18,00		1C21T-18	○	1C21A-18	○
	23/32"	0.7188	18,26		1C21T-0023	○	1C21A-0023	○
		0.7283	18,50		1C21T-18.5	○	1C21A-18.5	○
	47/64"	0.7344	18,65		1C21T-.734	○	1C21A-.734	○
		0.7480	19,00		1C21T-19	○	1C21A-19	○
	3/4"	0.7500	19,05		1C21T-0024	○	1C21A-0024	○
	49/64"	0.7656	19,45		1C21T-.765	○	1C21A-.765	○
		0.7677	19,50		1C21T-19.5	○	1C21A-19.5	○
	25/32"	0.7813	19,84		1C21T-0025	○	1C21A-0025	○
		0.7874	20,00		1C21T-20	○	1C21A-20	○
	51/64"	0.7969	20,24		1C21T-.796	○	1C21A-.796	○
		0.8071	20,50		1C21T-20.5	○	1C21A-20.5	○
	13/16"	0.8125	20,64		1C21T-0026	○	1C21A-0026	○
		0.8268	21,00		1C21T-21	○	1C21A-21	○
	27/32"	0.8438	21,43		1C21T-0027	○	1C21A-0027	○
		0.8594	21,83		1C21T-.859*	○	1C21A-.859*	○
	55/64"	0.8661	22,00		1C21T-22*	○	1C21A-22*	○
		0.8750	22,23		1C21T-0028*	○	1C21A-0028*	○
	57/64"	0.8906	22,62		1C21T-.890*	○	1C21A-.890*	○
0.9055		23,00	1C21T-23*	○	1C21A-23*	○		
29/32"	0.9063	23,02	1C21T-0029*	○	1C21A-0029*	○		
	0.9219	23,42	1C21T-.921*	○	1C21A-.921*	○		
59/64"	0.9375	23,81	1C21T-0030*	○	1C21A-0030*	○		
	0.9449	24,00	1C21T-24*	○	1C21A-24*	○		
C5 (P40)	45/64"	0.7031	17,86	5/32"	1C51T-.703	○	1C51A-.703	○
		0.7087	18,00		1C51T-18	○	1C51A-18	○
	23/32"	0.7188	18,26		1C51T-0023	○	1C51A-0023	○
		0.7283	18,50		1C51T-18.5	○	1C51A-18.5	○
	47/64"	0.7344	18,65		1C51T-.734	○	1C51A-.734	○
		0.7480	19,00		1C51T-19	○	1C51A-19	○
	3/4"	0.7500	19,05		1C51T-0024	○	1C51A-0024	○
	49/64"	0.7656	19,45		1C51T-.765	○	1C51A-.765	○
		0.7677	19,50		1C51T-19.5	○	1C51A-19.5	○
	25/32"	0.7813	19,84		1C51T-0025	○	1C51A-0025	○
		0.7874	20,00		1C51T-20	○	1C51A-20	○
	51/64"	0.7969	20,24		1C51T-.796	○	1C51A-.796	○
		0.8071	20,50		1C51T-20.5	○	1C51A-20.5	○
	13/16"	0.8125	20,64		1C51T-0026	○	1C51A-0026	○
		0.8268	21,00		1C51T-21	○	1C51A-21	○
	27/32"	0.8438	21,43		1C51T-0027	○	1C51A-0027	○
		0.8594	21,83		1C51T-.859*	○	1C51A-.859*	○
	55/64"	0.8661	22,00		1C51T-22*	○	1C51A-22*	○
		0.8750	22,23		1C51T-0028*	○	1C51A-0028*	○
	57/64"	0.8906	22,62		1C51T-.890*	○	1C51A-.890*	○
0.9055		23,00	1C51T-23*	○	1C51A-23*	○		
29/32"	0.9063	23,02	1C51T-0029*	○	1C51A-0029*	○		
	0.9219	23,42	1C51T-.921*	○	1C51A-.921*	○		
59/64"	0.9375	23,81	1C51T-0030*	○	1C51A-0030*	○		
	0.9449	24,00	1C51T-24*	○	1C51A-24*	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 1.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

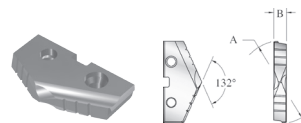
ASC 320

Special Tooling



T-A® Carbide Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Cast Iron T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiAlN	①
C3 (K10)	45/64"	0.7031	17,86	5/32"	1C31A-.703-CI	○
		0.7087	18,00		1C31A-18-CI	○
	23/32"	0.7188	18,26		1C31A-0023-CI	○
		0.7283	18,50		1C31A-18.5-CI	○
	47/64"	0.7344	18,65		1C31A-.734-CI	○
		0.7480	19,00		1C31A-19-CI	○
	3/4"	0.7500	19,05		1C31A-0024-CI	○
	49/64"	0.7656	19,45		1C31A-.765-CI	○
		0.7677	19,50		1C31A-19.5-CI	○
	25/32"	0.7813	19,84		1C31A-0025-CI	○
		0.7874	20,00		1C31A-20-CI	○
	51/64"	0.7969	20,24		1C31A-.796-CI	○
		0.8071	20,50		1C31A-20.5-CI	○
	13/16"	0.8125	20,64		1C31A-0026-CI	○
		0.8268	21,00		1C31A-21-CI	○
	27/32"	0.8438	21,43		1C31A-0027-CI	○
	55/64"	0.8594	21,83		1C31A-.859-CI*	○
		0.8661	22,00		1C31A-22-CI*	○
	7/8"	0.8750	22,23		1C31A-0028-CI*	○
	57/64"	0.8906	22,62		1C31A-.890-CI*	○
	0.9055	23,00	1C31A-23-CI*	○		
29/32"	0.9063	23,02	1C31A-0029-CI*	○		
59/64"	0.9219	23,42	1C31A-.921-CI*	○		
15/16"	0.9375	23,81	1C31A-0030-CI*	○		
	0.9449	24,00	1C31A-24-CI*	○		

* Denotes inserts that will also fit 1.5 series T-A Holders.

- ① Availability Codes
- Stocked
- ▲ Non-Stocked

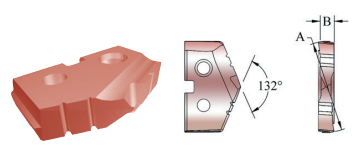
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



GEN2 T-A® Carbide Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
C2 (K20)	45/64"	0.7031	17,86	5/32"	4C21H-703	○
		0.7087	18,00		4C21H-18	○
	23/32"	0.7188	18,26		4C21H-0023	○
		0.7283	18,50		4C21H-18.5	○
	47/64"	0.7344	18,65		4C21H-734	○
		0.7480	19,00		4C21H-19	○
	3/4"	0.7500	19,05		4C21H-0024	○
	49/64"	0.7656	19,45		4C21H-765	○
		0.7677	19,50		4C21H-19.5	○
	25/32"	0.7813	19,84		4C21H-0025	○
		0.7874	20,00		4C21H-20	○
	51/64"	0.7969	20,24		4C21H-796	○
		0.8071	20,50		4C21H-20.5	○
	13/16"	0.8125	20,64		4C21H-0026	○
		0.8268	21,00		4C21H-21	○
	27/32"	0.8438	21,43		4C21H-0027	○
		0.8465	21,50		4C21H-21.5	○
	55/64"	0.8564	21,83		4C21H-859*	○
		0.8661	22,00		4C21H-22*	○
	7/8"	0.8750	22,23		4C21H-0028*	○
57/64"	0.8906	22,62	4C21H-890*	▲		
	0.9055	23,00	4C21H-23*	○		
29/32"	0.9063	23,02	4C21H-0029*	○		
	0.9219	23,42	4C21H-921*	○		
15/16"	0.9375	23,81	4C21H-0030*	○		
	0.9449	24,00	4C21H-24*	○		
C1 (K35)	45/64"	0.7031	17,86	5/32"	4C11H-703	○
		0.7087	18,00		4C11H-18	○
	23/32"	0.7188	18,26		4C11H-0023	○
		0.7283	18,50		4C11H-18.5	○
	47/64"	0.7344	18,65		4C11H-734	▲
		0.7480	19,00		4C11H-19	○
	3/4"	0.7500	19,05		4C11H-0024	○
	49/64"	0.7656	19,45		4C11H-765	○
		0.7677	19,50		4C11H-19.5	○
	25/32"	0.7813	19,84		4C11H-0025	○
		0.7874	20,00		4C11H-20	○
	51/64"	0.7969	20,24		4C11H-796	○
		0.8071	20,50		4C11H-20.5	○
	13/16"	0.8125	20,64		4C11H-0026	○
		0.8268	21,00		4C11H-21	○
	27/32"	0.8438	21,43		4C11H-0027	○
		0.8465	21,50		4C11H-21.5	○
	55/64"	0.8594	21,83		4C11H-859*	▲
		0.8661	22,00		4C11H-22*	○
	7/8"	0.8750	22,23		4C11H-0028*	○
57/64"	0.8906	22,62	4C11H-890*	○		
	0.9055	23,00	4C11H-23*	○		
29/32"	0.9063	23,02	4C11H-0029*	○		
	0.9219	23,42	4C11H-921*	○		
15/16"	0.9252	23,50	4C11H-23.5*	○		
	0.9375	23,81	4C11H-0030*	○		
	0.9449	24,00	4C11H-24*	○		

Geometries available (see page 197 for details): -HE
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 1.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

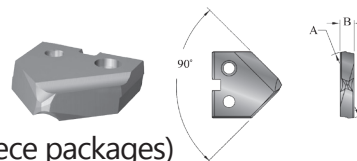
ASC 320

Special Tooling



T-A® HSS Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



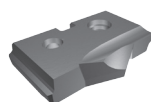
90° Spot and Chamfer T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⊙	TiAlN	⊙	TiCN	⊙
Super Cobalt	45/64"	0.7031	17,86	5/32"	151T-.703-SP	▲	151A-.703-SP	▲	151N-.703-SP	▲
		0.7087	18,00		151T-18-SP	▲	151A-18-SP	▲	151N-18-SP	▲
	23/32"	0.7188	18,26		151T-0023-SP	▲	151A-0023-SP	▲	151N-0023-SP	▲
		0.7283	18,50		151T-18.5-SP	▲	151A-18.5-SP	▲	151N-18.5-SP	▲
	47/64"	0.7344	18,65		151T-.734-SP	▲	151A-.734-SP	▲	151N-.734-SP	▲
		0.7480	19,00		151T-19-SP	▲	151A-19-SP	▲	151N-19-SP	▲
	3/4"	0.7500	19,05		151T-0024-SP	○	151A-0024-SP	○	151N-0024-SP	▲
		0.7656	19,45		151T-.765-SP	▲	151A-.765-SP	▲	151N-.765-SP	▲
	25/32"	0.7677	19,50		151T-19.5-SP	▲	151A-19.5-SP	▲	151N-19.5-SP	▲
		0.7813	19,84		151T-0025-SP	○	151A-0025-SP	▲	151N-0025-SP	▲
	51/64"	0.7874	20,00		151T-20-SP	▲	151A-20-SP	▲	151N-20-SP	▲
		0.7969	20,24		151T-.796-SP	▲	151A-.796-SP	▲	151N-.796-SP	▲
	13/16"	0.8071	20,50		151T-20.5-SP	▲	151A-20.5-SP	▲	151N-20.5-SP	▲
		0.8125	20,64		151T-0026-SP	▲	151A-0026-SP	▲	151N-0026-SP	▲
	27/32"	0.8268	21,00		151T-21-SP	▲	151A-21-SP	▲	151N-21-SP	▲
		0.8438	21,43		151T-0027-SP	▲	151A-0027-SP	▲	151N-0027-SP	▲
	55/64"	0.8594	21,83		151T-.859-SP*	▲	151A-.859-SP*	▲	151N-.859-SP*	▲
		0.8661	22,00		151T-22-SP*	▲	151A-22-SP*	▲	151N-22-SP*	▲
	7/8"	0.8750	22,23		151T-0028-SP*	○	151A-0028-SP*	○	151N-0028-SP*	○
		0.8858	22,50		151T-22.5-SP*	▲	151A-22.5-SP*	▲	151N-22.5-SP*	▲
	57/64"	0.8906	22,62		151T-.890-SP*	▲	151A-.890-SP*	▲	151N-.890-SP*	▲
		0.9055	23,00		151T-23-SP*	▲	151A-23-SP*	▲	151N-23-SP*	▲
	29/32"	0.9063	23,02		151T-0029-SP*	▲	151A-0029-SP*	▲	151N-0029-SP*	▲
		0.9219	23,42		151T-.921-SP*	▲	151A-.921-SP*	▲	151N-.921-SP*	▲
15/16"	0.9375	23,81	151T-0030-SP*	○	151A-0030-SP*	▲	151N-0030-SP*	▲		
	0.9449	24,00	151T-24-SP*	○	151A-24-SP*	○	151N-24-SP*	○		

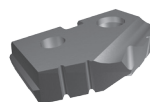
Geometries available (see page 197 for details): -SW.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

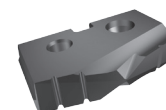
* Denotes inserts that will also fit 1.5 series T-A Holders.



*Thin Wall



**Notch Point®



**150° Structural Steel

Structural Steel T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		*Thin Wall TiAlN	⊙	**Notch Point TiAlN	⊙	150° Structural Steel TiAlN	⊙
Super Cobalt	13/16"	0.7087	18,00	5/32"	151A-18-TW	○	151A-18-NP	○	151A-18-SS	○
		0.8125	20,64		151A-0026-TW	○	151A-0026-NP	○	151A-0026-SS	○
	0.8661	22,00	151A-22-TW		○	151A-22-NP	○	151A-22-SS	○	
	0.8750	22,23	151A-0028-TW		○	151A-0028-NP	○	151A-0028-SS	○	
	0.9375	23,81	151A-0030-TW		○	151A-0030-NP	○	151A-0030-SS	○	
	0.9449	24,00	151A-24-TW		○	151A-24-NP	○	151A-24-SS	○	
Super Cobalt	13/16"	0.7087	18,00	5/32"	AM200®					
		0.8125	20,64		151H-18-TW	○	151H-18-NP	○	151H-18-SS	○
	0.8268	21,00	151H-0026-TW		○	151H-0026-NP	○	151H-0026-SS	○	
	0.8661	22,00	151H-21-TW		○	151H-21-NP	○	151H-21-SS	○	
	0.8750	22,23	151H-22-TW		○	151H-22-NP	○	151H-22-SS	○	
	0.9375	23,81	151H-0028-TW		○	151H-0028-NP	○	151H-0028-SS	○	
	0.9375	23,81	151H-0030-TW		○	151H-0030-NP	○	151H-0030-SS	○	
	0.9449	24,00	151H-24-TW		○	151H-24-NP	○	151H-24-SS	○	

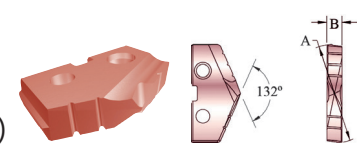
*Use Thin Wall Drill Inserts for material up to 7/16" thick.

**Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.



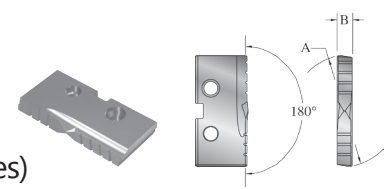
T-A[®] HSS Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Tube Sheet T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200 [®]	①
HSS		0.7580	19,25	5/32"	131H-.7580-IN	○
	49/64"	0.7656	19,45		131H-.765-IN	○
	25/32"	0.7813	19,85		131H-0025-IN	○
Super Cobalt		0.7580	19,25	5/32"	151H-.7580-IN	○
	49/64"	0.7656	19,45		151H-.765-IN	○
	25/32"	0.7813	19,85		151H-0025-IN	○



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	①
Super Cobalt	45/64"	0.7031	17,86	5/32"	151T-.703-FB	○
		0.7087	18,00		151T-18-FB	○
	23/32"	0.7188	18,26		151T-0023-FB	○
		0.7283	18,50		151T-18.5-FB	○
	47/64"	0.7344	18,65		151T-.734-FB	○
		0.7480	19,00		151T-.19-FB	○
	3/4"	0.7500	19,05		151T-0024-FB	○
	49/64"	0.7656	19,45		151T-.765-FB	○
		0.7677	19,50		151T-19.5-FB	○
	25/32"	0.7813	19,84		151T-0025-FB	○
		0.7874	20,00		151T-20-FB	○
		0.8071	20,50		151T-20.5-FB	○
	13/16"	0.8125	20,64		151T-0026-FB	○
		0.8268	21,00		151T-21-FB	○
	27/32"	0.8438	21,43		151T-0027-FB	○
		0.8661	22,00		151T-22-FB*	○
	7/8"	0.8750	22,23		151T-0028-FB*	○
		0.9055	23,00		151T-23-FB*	○
	29/32"	0.9063	23,02		151T-0029-FB*	○
	59/64"	0.9219	23,42		151T-.921-FB*	○
15/16"	0.9375	23,81	151T-0030-FB*	○		
	0.9449	24,00	151T-24-FB*	○		

Geometries available (see page 197 for details): -FN.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 1.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- ① Availability Codes
- Stocked
- ▲ Non-Stocked

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

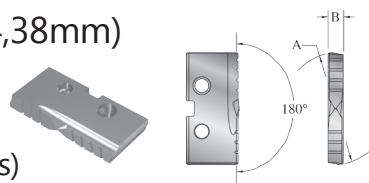
ASC 320

Special Tooling



T-A® Carbide Drill Inserts

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



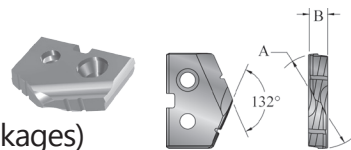
Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	Ø
C2 (K20)	45/64"	0.7031	17.86	5/32"	1C21T-703-FB	▲
		0.7087	18.00		1C21T-18-FB	▲
	23/32"	0.7188	18.26		1C21T-0023-FB	▲
		0.7283	18.50		1C21T-18.5-FB	▲
	47/64"	0.7344	18.65		1C21T-.734-FB	▲
		0.7480	19.00		1C21T-19-FB	▲
	3/4"	0.7500	19.05		1C21T-0024-FB	▲
	49/64"	0.7656	19.45		1C21T-.765-FB	▲
		0.7677	19.50		1C21T-19.5-FB	▲
	25/32"	0.7813	19.84		1C21T-0025-FB	▲
		0.7874	20.00		1C21T-20-FB	▲
		0.8071	20.50		1C21T-20.5-FB	▲
	13/16"	0.8125	20.64		1C21T-0026-FB	▲
		0.8268	21.00		1C21T-21-FB	▲
	27/32"	0.8438	21.43		1C21T-0027-FB	▲
		0.8661	22.00		1C21T-22-FB*	▲
	7/8"	0.8750	22.23		1C21T-0028-FB*	▲
		0.9055	23.00		1C21T-23-FB*	▲
	29/32"	0.9063	23.02		1C21T-0029-FB*	▲
	59/64"	0.9219	23.42		1C21T-.921-FB*	▲
15/16"	0.9375	23.81	1C21T-0030-FB*	▲		
	0.9449	24.00	1C21T-24-FB*	▲		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 1.5 series T-A Holders.



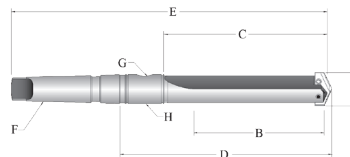
Diamond Coated T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		CVD Diamond	Ø
N2	45/64"	0.7031	17.86	5/32"	1N21D-.703	▲
		0.7087	18.00		1N21D-18	▲
	23/32"	0.7188	18.26		1N21D-0023	▲
		0.7283	18.50		1N21D-18.5	▲
	47/64"	0.7344	18.65		1N21D-.734	▲
		0.7480	19.00		1N21D-19	▲
	3/4"	0.7500	19.05		1N21D-0024	▲
	49/64"	0.7656	19.45		1N21D-.765	▲
		0.7677	19.50		1N21D-19.5	▲
	25/32"	0.7813	19.84		1N21D-0025	▲
		0.7874	20.00		1N21D-20	▲
	51/64"	0.7969	20.24		1N21D-.796	▲
		0.8071	20.50		1N21D-20.5	▲
	13/16"	0.8125	20.64		1N21D-0026	▲
		0.8268	21.00		1N21D-21	▲
	27/32"	0.8438	21.43		1N21D-0027	▲
	55/64"	0.8594	21.83		1N21D-.859	▲
		0.8661	22.00		1N21D-22	▲
	7/8"	0.8750	22.23		1N21D-0028	▲
		0.8858	22.50		1N21D-22.5	▲
57/64"	0.8906	22.62	1N21D-.890	▲		
	0.9055	23.00	1N21D-23	▲		
29/32"	0.9063	23.02	1N21D-0029	▲		
59/64"	0.9219	23.42	1N21D-.921	▲		
15/16"	0.9375	23.81	1N21D-0030	▲		
	0.9449	24.00	1N21D-24	▲		



T-A[®] Holders

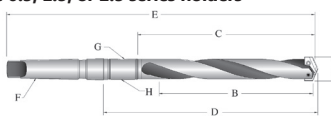
1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22010S-003I	45/64" - 15/16"	2-3/4"	3-7/8"	5-39/64"	9-5/32"	#3	1/8"	2T-3SR
Short	22010S-004I	45/64" - 15/16"	2-3/4"	3-7/8"	5-43/64"	10-5/32"	#4	1/8"	2T-3SR
Short	22015S-003I	55/64" - 15/16"	2-3/4"	3-7/8"	5-39/64"	9-5/32"	#3	1/8"	2T-3SR
Short	22015S-004I	55/64" - 15/16"	2-3/4"	3-7/8"	5-43/64"	10-5/32"	#4	1/8"	2T-3SR
Intermediate	23010S-003I	45/64" - 15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	2T-3SR
Intermediate	23015S-003I	55/64" - 15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	2T-3SR
Standard	24010S-003I	45/64" - 15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	2T-3SR
Standard	24010S-004I	45/64" - 15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	2T-3SR
Standard	24015S-003I	55/64" - 15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	2T-3SR
Standard	24015S-004I	55/64" - 15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	2T-3SR
Extended	25010S-003I	45/64" - 15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	2T-3SR
Extended	25015S-003I	55/64" - 15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	2T-3SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22010S-003M	18,0 - 24,0	69,8	98,4	142,5	232,5	#3**	1/8**	2T-3SRM
Short	22015S-003M	22,0 - 24,0	69,8	98,4	142,5	232,5	#3**	1/8**	2T-3SRM

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Intermediate	23010H-003I	45/64" - 15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	2T-3SR
Intermediate	23015H-003I	55/64" - 15/16"	4-3/4"	5-7/8"	7-39/64"	11-5/32"	#3	1/8"	2T-3SR
Standard	24010H-003I	45/64" - 15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	2T-3SR
Standard	24010H-004I	45/64" - 15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	2T-3SR
Standard	24015H-003I	55/64" - 15/16"	6-3/4"	7-7/8"	9-39/64"	13-5/32"	#3	1/8"	2T-3SR
Standard	24015H-004I	55/64" - 15/16"	6-3/4"	7-7/8"	9-43/64"	14-5/32"	#4	1/8"	2T-3SR
Extended	25010H-003I	45/64" - 15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	2T-3SR
Extended	25015H-003I	55/64" - 15/16"	10-3/4"	11-7/8"	13-39/64"	17-5/32"	#3	1/8"	2T-3SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Intermediate	23010H-003M	18,0 - 22,0	120,7	149,2	193,3	283,3	#3**	1/8"	2T-3SRM
Intermediate	23015H-003M	22,0 - 24,0	120,7	149,2	193,3	283,3	#3**	1/8"	2T-3SRM
Standard	24010H-003M	18,0 - 22,0	171,5	200,0	244,1	334,2	#3**	1/8"	2T-3SRM
Standard	24015H-003M	22,0 - 24,0	171,5	200,0	244,1	334,2	#3**	1/8"	2T-3SRM
Extended	25010H-003M	18,0 - 22,0	273,1	301,6	345,7	435,8	#3**	1/8**	2T-3SRM
Extended	25015H-003M	22,0 - 24,0	273,1	301,6	345,7	435,8	#3**	1/8**	2T-3SRM

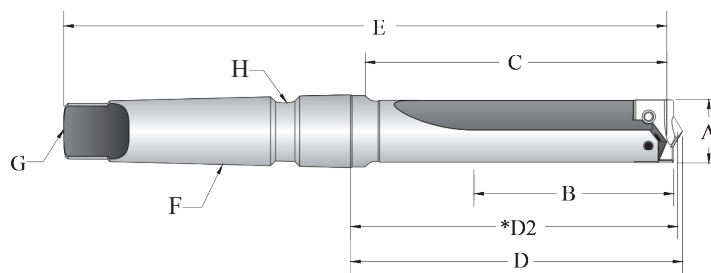
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Structural Steel Taper Shank Straight Flute Holders

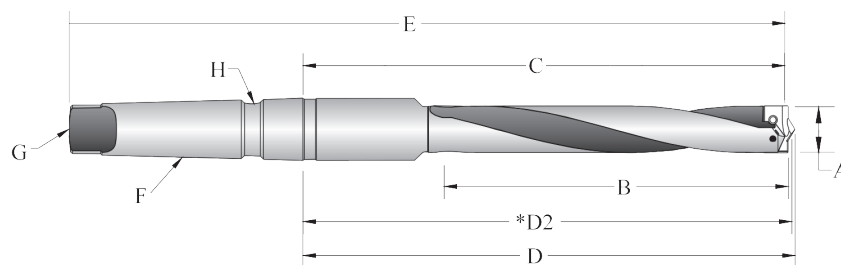
Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22010S-003IS045	18mm	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22010S-004IS045	18mm	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22010S-003IS052	13/16"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22010S-004IS052	13/16"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22015S-003IS056	7/8"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22015S-004IS056	7/8"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22015S-003IS060	15/16"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22015S-004IS060	15/16"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
METRIC (mm)										
Short	22010S-003IS045	18	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22010S-004IS045	18	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22010S-003IS052	21	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22010S-004IS052	21	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22015S-003IS056	22	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22015S-004IS056	22	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22015S-003IS060	24	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22015S-004IS060	24	70	98	109,9	108,3	222	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry



T-A® Holders

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24010H-003IS045	18mm	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24010H-004IS045	18mm	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24010H-003IS052	13/16"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24010H-004IS052	13/16"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24015H-003IS056	7/8"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24015H-004IS056	7/8"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24015H-003IS060	15/16"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24015H-004IS060	15/16"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
⚠ Extended	25010H-003IS045	18mm	6-1/2"	9-11/32"	9-47/64"	9-1/2"	13-7/32"	#3	TTC	TSC
⚠ Extended	25010H-003IS052	13/16"	6-1/2"	9-11/32"	9-47/64"	9-1/2"	13-7/32"	#3	TTC	TSC
⚠ Extended	25010H-004IS052	13/16"	6-1/2"	9-9/32"	9-47/64"	9-43/64"	14-5/32"	#4	TTC	TSC
⚠ Extended	25015H-003IS060	15/16"	6-1/2"	9-11/32"	9-47/64"	9-15/32"	13-7/32"	#3	TTC	TSC
⚠ Extended	25015H-004IS060	15/16"	6-1/2"	9-9/32"	9-47/64"	9-43/64"	14-5/32"	#4	TTC	TSC
⚠ Long	26010H-004IS052	13/16"	6-1/2"	15-25/32"	16-15/64"	16-11/64"	20-21/32"	#4	TTC	TSC
⚠ Long	26015H-004IS060	15/16"	6-1/2"	15-13/16"	16-17/64"	16-13/64"	20-11/16"	#4	TTC	TSC
METRIC (mm)										
Standard	24010H-003IS045	18	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24010H-004IS045	18	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24010H-003IS052	21	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24010H-004IS052	21	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24015H-003IS056	22	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24015H-004IS056	22	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24015H-003IS060	24	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24015H-004IS060	24	121	149	160,8	159,2	273	#4	TTC	TSC
⚠ Extended	25010H-003IS045	18	165	237	247,3	241,3	336	#3	TTC	TSC
⚠ Extended	25010H-003IS052	22	165	237	247,3	241,3	336	#3	TTC	TSC
⚠ Extended	25010H-004IS052	22	165	236	247,3	245,7	384	#4	TTC	TSC
⚠ Extended	25015H-003IS060	24	165	237	247,3	234,5	336	#3	TTC	TSC
⚠ Extended	25015H-004IS060	24	165	236	247,3	245,7	384	#4	TTC	TSC
⚠ Long	26010H-004IS052	22	165	401	412,4	410,8	525	#4	TTC	TSC
⚠ Long	26015H-004IS060	24	165	401	413,1	411,6	525	#4	TTC	TSC

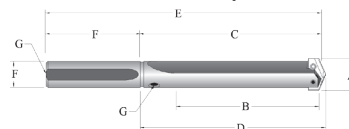
*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 198 for Structural Steel Guidelines & 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

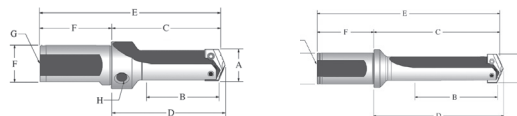
1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
							Dia	Length	
Short	22010S-075L	45/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"
Short	22010S-100L	45/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"
Short	22015S-075L	55/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"
Short	22015S-100L	55/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"
Intermediate	23010S-100L	45/64" - 15/16"	4-5/8"	5-7/8"	6-1/64"	8-7/8"	1"	3"	1/8"
Intermediate	23015S-100L	55/64" - 15/16"	4-5/8"	5-7/8"	6-1/64"	8-7/8"	1"	3"	1/8"
Standard	24010S-075L	45/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"
Standard	24010S-100L	45/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"
Standard	24015S-075L	55/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"
Standard	24015S-100L	55/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"
Extended	25010S-100L	45/64" - 15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"
Extended	25015S-100L	55/64" - 15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"
XL	27010S-100L	45/64" - 15/16"	18"	19-1/4"	19-25/64"	22-1/4"	1"	3"	1/8"
3XL	29010S-100L	45/64" - 15/16"	22-1/4"	23-1/2"	23-41/64"	26-1/2"	1"	3"	1/8"

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders



Flanged Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G		H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap		
							Dia	Length	Rear	Side	
Stub	21010S-100F	45/64" - 15/16"	1-7/8"	2-63/64"	3-1/8"	5-17/64"	1"	2-9/32"	1/8"	1/8"	
Stub	21015S-100F	55/64" - 15/16"	2-1/4"	3-31/64"	3-5/8"	5-49/64"	1"	2-9/32"	1/8"	1/8"	
Short	22010S-100F	45/64" - 15/16"	2-5/8"	4-7/32"	4-23/64"	6-1/2"	1"	2-9/32"	1/8"	N/A	
Short	22015S-100F	55/64" - 15/16"	2-5/8"	4-7/32"	4-23/64"	6-1/2"	1"	2-9/32"	1/8"	N/A	
Intermediate	23010S-100F	45/64" - 15/16"	4-5/8"	6-3/32"	6-15/64"	8-3/8"	1"	2-9/32"	1/8"	N/A	
Intermediate	23015S-100F	55/64" - 15/16"	4-5/8"	6-3/32"	6-15/64"	8-3/8"	1"	2-9/32"	1/8"	N/A	
Standard	24010S-100F	45/64" - 15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"	N/A	
Standard	24015S-100F	55/64" - 15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"	N/A	
Extended	25010S-100F	45/64" - 15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"	N/A	
Extended	25015S-100F	55/64" - 15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	21010S-25FM	18,0 - 24,0	47,6	75,8	79,4	131,8	25,0	56,0	1/8**	1/8**	
Stub	21015S-25FM	22,0 - 24,0	57,2	88,5	92,1	144,5	25,0	56,0	1/8**	1/8**	
Short	22010S-25FM	18,0 - 24,0	66,7	107,2	110,7	163,2	25,0	56,0	1/8**	N/A	
Short	22015S-25FM	22,0 - 24,0	66,7	107,2	110,7	163,2	25,0	56,0	1/8**	N/A	
XL	27010S-25FM	18,0 - 24,0	457	494,5	498,1	550,5	25,0	56,0	1/8**	N/A	
3XL	29010S-25FM	18,0 - 24,0	569	602,5	606,1	658,5	25,0	56,0	1/8**	N/A	

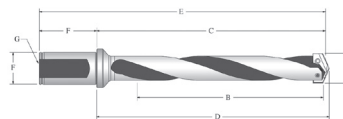
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

1 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
								Dia	Length
Intermediate	23010H-100F	45/64" -15/16"	4-5/8"	6-3/32"	6-15/64"	8-3/8"	1"	2-9/32"	1/8"
Intermediate	23015H-100F	55/64" -15/16"	4-5/8"	6-3/32"	6-15/64"	8-3/8"	1"	2-9/32"	1/8"
Standard	24010H-100F	45/64" -15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
Standard	24015H-100F	55/64" -15/16"	6-5/8"	8-3/32"	8-15/64"	10-3/8"	1"	2-9/32"	1/8"
Standard Plus	24510H-100F	45/64" -15/16"	8-5/8"	10-3/32"	10-15/64"	12-33/64"	1"	2-9/32"	1/8"
⚠ Extended	25010H-100F	45/64" -15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
⚠ Extended	25015H-100F	55/64" -15/16"	10-5/8"	12-3/32"	12-15/64"	14-3/8"	1"	2-9/32"	1/8"
⚠ Long	26010H-100F	45/64" -15/16"	14-3/8"	15-27/32"	15-63/64"	18-17/64"	1"	2-9/32"	1/8"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Intermediate	23010H-25FM	18,0 - 24,0	117,5	154,8	158,4	210,8	25,0	56,0	1/8**
Intermediate	23015H-25FM	22,0 - 24,0	117,5	154,8	158,4	210,8	25,0	56,0	1/8**
Standard	24010H-25FM	18,0 - 24,0	168,3	205,6	209,2	261,6	25,0	56,0	1/8**
Standard	24015H-25FM	22,0 - 24,0	168,3	205,6	209,2	261,6	25,0	56,0	1/8**
Standard Plus	24510H-25FM	18,0 - 24,0	219,0	256,3	259,9	312,3	25,0	56,0	1/8**
⚠ Extended	25010H-25FM	18,0 - 24,0	269,9	307,2	310,8	363,2	25,0	56,0	1/8**
⚠ Extended	25015H-25FM	22,0 - 24,0	269,9	307,2	310,8	363,2	25,0	56,0	1/8**
⚠ Long	26010H-25FM	18,0 - 24,0	365,0	402,3	405,9	458,3	25,0	56,0	1/8**

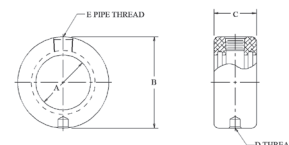
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

T-ACR 45 Chamfer Ring and Accessories



Item Number	Min. Drill Dia (Inch)	Max. Drill Dia (Inch)	Max. Chamfer Dia (Inch)	Chamfer Ring Dia	Chamfer Ring Length	Insert Number 2 Pieces	Insert Screw (10 pack)	TORX Plus Driver	Clamping Screw (10 pack)	TORX Plus Driver
T-ACR-45-1	0.690	0.854	1.047	1-3/8"	51/64"	T-ACRI-45-B-C5A	7255-IP8-1	8IP-8	7495-IP15-1	8IP-15
T-ACR-45-1.5	0.854	0.960	1.125	1-9/16"	57/64"					

Rotary Coolant Adapter (RCA) and Accessories



Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	⚠ 2T-3SR	1"	2-1/8"	1-1/8"	5/16" - 18	1/8"	2T1-3SR	2T1-3OR-10
Metric	⚠ 2T-3SRM	25,40	53,97	28,57	M8 X 1,25	1/8**	2T1-3SR	2T1-3OR-10

*Thread to BSP & ISO 7-1 / ** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers. / Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
1	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	45/64" - 15/16"	27.0 in.-lbs	18,0 - 24,0	305 N-cm
15	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	55/64" - 15/16"	27.0 in.-lbs	18,0 - 24,0	305 N-cm

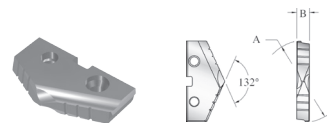
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® HSS Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
HSS	31/32"	0.9688	24,61	3/16"	132T-0031	○	132A-0031	○	132N-0031	○
	63/64"	0.9843	25,00		132T-25	○	132A-25	○	132N-25	○
	1"	1.0000	25,40		132T-0100	○	132A-0100	○	132N-0100	○
	1-1/64"	1.0156	25,80		132T-1.015	○	132A-1.015	○	132N-1.015	○
		1.0236	26,00		132T-26	○	132A-26	○	132N-26	○
	1-1/32"	1.0313	26,19		132T-0101	○	132A-0101	○	132N-0101	○
	1-3/64"	1.0469	26,59		132T-1.046	○	132A-1.046	○	132N-1.046	○
	1-1/16"	1.0625	26,99		132T-0102	○	132A-0102	○	132N-0102	○
		1.0630	27,00		132T-27	○	132A-27	○	132N-27	○
	1-3/32"	1.0938	27,78		132T-0103	○	132A-0103	○	132N-0103	○
		1.1024	28,00		132T-28	○	132A-28	○	132N-28	○
	1-7/64"	1.1094	28,18		132T-1.109	○	132A-1.109	○	132N-1.109	○
	1-1/8"	1.1250	28,58		132T-0104	○	132A-0104	○	132N-0104	○
		1.1417	29,00		132T-29	○	132A-29	○	132N-29	○
	1-5/32"	1.1563	29,37		132T-0105	○	132A-0105	○	132N-0105	○
		1.1811	30,00		132T-30	○	132A-30	○	132N-30	○
	1-3/16"	1.1875	30,16		132T-0106*	○	132A-0106*	○	132N-0106*	○
	1-7/32"	1.2188	30,96		132T-0107*	○	132A-0107*	○	132N-0107*	○
		1.2205	31,00		132T-31*	○	132A-31*	○	132N-31*	○
	1-1/4"	1.2500	31,75		132T-0108*	○	132A-0108*	○	132N-0108*	○
		1.2598	32,00		132T-32*	○	132A-32*	○	132N-32*	○
	1-9/32"	1.2813	32,54		132T-0109*	○	132A-0109*	○	132N-0109*	○
		1.2992	33,00		132T-33*	○	132A-33*	○	132N-33*	○
	1-5/16"	1.3125	33,34		132T-0110*	○	132A-0110*	○	132N-0110*	○
		1.3386	34,00		132T-34*	○	132A-34*	○	132N-34*	○
	1-11/32"	1.3438	34,13		132T-0111*	○	132A-0111*	○	132N-0111*	○
	1-3/8"	1.3750	34,93		132T-0112*	○	132A-0112*	○	132N-0112*	○
		1.3780	35,00		132T-35*	○	132A-35*	○	132N-35*	○
Super Cobalt	31/32"	0.9688	24,61	3/16"	152T-0031	○	152A-0031	○	152N-0031	○
	63/64"	0.9843	25,00		152T-25	○	152A-25	○	152N-25	○
	1"	1.0000	25,40		152T-0100	○	152A-0100	○	152N-0100	○
	1-1/64"	1.0156	25,80		152T-1.015	○	152A-1.015	○	152N-1.015	○
		1.0236	26,00		152T-26	○	152A-26	○	152N-26	○
	1-1/32"	1.0313	26,19		152T-0101	○	152A-0101	○	152N-0101	○
	1-3/64"	1.0469	26,59		152T-1.046	○	152A-1.046	○	152N-1.046	○
	1-1/16"	1.0625	26,99		152T-0102	○	152A-0102	○	152N-0102	○
		1.0630	27,00		152T-27	○	152A-27	○	152N-27	○
	1-3/32"	1.0938	27,78		152T-0103	○	152A-0103	○	152N-0103	○
		1.1024	28,00		152T-28	○	152A-28	○	152N-28	○
	1-7/64"	1.1094	28,18		152T-1.109	○	152A-1.109	○	152N-1.109	○
	1-1/8"	1.1250	28,58		152T-0104	○	152A-0104	○	152N-0104	○
		1.1417	29,00		152T-29	○	152A-29	○	152N-29	○
	1-5/32"	1.1563	29,37		152T-0105	○	152A-0105	○	152N-0105	○
		1.1811	30,00		152T-30	○	152A-30	○	152N-30	○
	1-3/16"	1.1875	30,16		152T-0106*	○	152A-0106*	○	152N-0106*	○
	1-7/32"	1.2188	30,96		152T-0107*	○	152A-0107*	○	152N-0107*	○
		1.2205	31,00		152T-31*	○	152A-31*	○	152N-31*	○
	1-1/4"	1.2500	31,75		152T-0108*	○	152A-0108*	○	152N-0108*	○
		1.2598	32,00		152T-32*	○	152A-32*	○	152N-32*	○
	1-9/32"	1.2813	32,54		152T-0109*	○	152A-0109*	○	152N-0109*	○
		1.2992	33,00		152T-33*	○	152A-33*	○	152N-33*	○
	1-5/16"	1.3125	33,34		152T-0110*	○	152A-0110*	○	152N-0110*	○
		1.3386	34,00		152T-34*	○	152A-34*	○	152N-34*	○
	1-11/32"	1.3438	34,13		152T-0111*	○	152A-0111*	○	152N-0111*	○
	1-3/8"	1.3750	34,93		152T-0112*	○	152A-0112*	○	152N-0112*	○
		1.3780	35,00		152T-35*	○	152A-35*	○	152N-35*	○

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 2.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

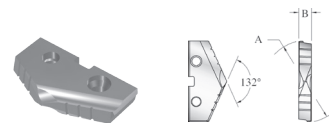
ASC 320

Special Tooling



T-A[®] HSS Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
Premium Cobalt	31/32"	0.9688	24,61	3/16"	182T-0031	○	182A-0031	○	182N-0031	○
	63/64"	0.9843	25,00		182T-25	○	182A-25	○	182N-25	○
	1"	1.0000	25,40		182T-0100	○	182A-0100	○	182N-0100	○
	1-1/64"	1.0156	25,80		182T-1.015	○	182A-1.015	○	182N-1.015	○
		1.0236	26,00		182T-26	○	182A-26	○	182N-26	○
	1-1/32"	1.0313	26,19		182T-0101	○	182A-0101	○	182N-0101	○
	1-3/64"	1.0469	26,59		182T-1.046	○	182A-1.046	○	182N-1.046	○
	1-1/16"	1.0625	26,99		182T-0102	○	182A-0102	○	182N-0102	○
		1.0630	27,00		182T-27	○	182A-27	○	182N-27	○
	1-3/32"	1.0938	27,78		182T-0103	○	182A-0103	○	182N-0103	○
		1.1024	28,00		182T-28	○	182A-28	○	182N-28	○
	1-7/64"	1.1094	28,18		182T-1.109	○	182A-1.109	○	182N-1.109	○
	1-1/8"	1.1250	28,58		182T-0104	○	182A-0104	○	182N-0104	○
		1.1417	29,00		182T-29	○	182A-29	○	182N-29	○
	1-5/32"	1.1563	29,37		182T-0105	○	182A-0105	○	182N-0105	○
		1.1811	30,00		182T-30	○	182A-30	○	182N-30	○
	1-3/16"	1.1875	30,16		182T-0106*	○	182A-0106*	○	182N-0106*	○
	1-7/32"	1.2188	30,96		182T-0107*	○	182A-0107*	○	182N-0107*	○
		1.2205	31,00		182T-31*	○	182A-31*	○	182N-31*	○
	1-1/4"	1.2500	31,75		182T-0108*	○	182A-0108*	○	182N-0108*	○
		1.2598	32,00		182T-32*	○	182A-32*	○	182N-32*	○
	1-9/32"	1.2813	32,54		182T-0109*	○	182A-0109*	○	182N-0109*	○
		1.2992	33,00		182T-33*	○	182A-33*	○	182N-33*	○
	1-5/16"	1.3125	33,34		182T-0110*	○	182A-0110*	○	182N-0110*	○
		1.3386	34,00		182T-34*	○	182A-34*	○	182N-34*	○
	1-11/32	1.3438	34,13		182T-0111*	○	182A-0111*	○	182N-0111*	○
	1-3/8"	1.3750	34,93		182T-0112*	○	182A-0112*	○	182N-0112*	○
		1.3780	35,00		182T-35*	○	182A-35*	○	182N-35*	○

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 2.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

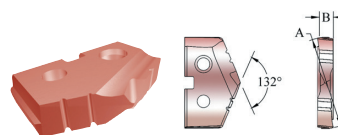
- ① Availability Codes
- Stocked
- ▲ Non-Stocked

Revolution & Opening
 APX
 GEN3SYS & GEN3SYS XT
 Original T-A & GEN2 T-A
 AccuPort 432
 ASC 320
 Special Tooling



GEN2 T-A® HSS Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	⓪
Super Cobalt		0.9646	24,50	3/16"	452H-24.5	⓪
	31/32"	0.9688	24,61		452H-0031	⓪
		0.9760	24,79		452H-.976	⓪
	63/64"	0.9843	25,00		452H-25	⓪
	1"	1.0000	25,40		452H-0100	⓪
		1.0039	25,50		452H-25.5	⓪
	1-1/64"	1.0156	25,80		452H-1.015	⓪
		1.0236	26,00		452H-26	⓪
	1-1/32"	1.0313	26,19		452H-0101	⓪
		1.0433	26,50		452H-26.5	⓪
	1-3/64"	1.0469	26,59		452H-1.046	⓪
	1-1/16"	1.0625	26,99		452H-0102	⓪
		1.0630	27,00		452H-27	⓪
		1.0827	27,50		452H-27.5	⓪
	1-3/32"	1.0938	27,78		452H-0103	⓪
		1.1024	28,00		452H-28	⓪
	1-7/64"	1.1094	28,18		452H-1.109	⓪
		1.1220	28,50		452H-28.5	⓪
	1-1/8"	1.1250	28,58		452H-0104	⓪
		1.1417	29,00		452H-29	⓪
	1-5/32"	1.1563	29,37		452H-0105	⓪
		1.1614	29,50		452H-29.5	⓪
		1.1811	30,00		452H-30	⓪
	1-3/16"	1.1875	30,16		452H-0106*	⓪
		1.2008	30,50		452H-30.5*	⓪
	1-7/32"	1.2188	30,96		452H-0107*	⓪
		1.2205	31,00		452H-31*	⓪
		1.2260	31,14		452H-1.226*	⓪
		1.2310	31,26		452H-1.231*	⓪
		1.2340	31,34		452H-1.234*	⓪
		1.2402	31,50		452H-31.5*	⓪
	1-1/4"	1.2500	31,75		452H-0108*	⓪
		1.2598	32,00		452H-32*	⓪
		1.2795	32,50		452H-32.5*	⓪
	1-9/32"	1.2813	32,54		452H-0109*	⓪
	1.2992	33,00	452H-33*	⓪		
1-5/16"	1.3125	33,34	452H-0110*	⓪		
	1.3189	33,50	452H-33.5*	⓪		
	1.3386	34,00	452H-34*	⓪		
1-11/32"	1.3438	34,13	452H-0111*	⓪		
	1.3582	34,50	452H-34.5*	⓪		
1-3/8"	1.3750	34,93	452H-0112*	⓪		
	1.3780	35,00	452H-35*	⓪		

Geometries available (see page 197 for details): -HE
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 2.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

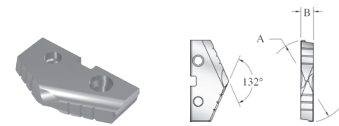
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	⊙	TiAlN	⊙
C2 (K20)	31/32"	0.9688	24,61	3/16"	1C22T-0031	⊙	1C22A-0031	⊙
	63/64"	0.9843	25,00		1C22T-25	⊙	1C22A-25	⊙
	1"	1.0000	25,40		1C22T-0100	⊙	1C22A-0100	⊙
		1.0236	26,00		1C22T-26	⊙	1C22A-26	⊙
	1-1/32"	1.0313	26,19		1C22T-0101	⊙	1C22A-0101	⊙
	1-3/64"	1.0469	26,59		1C22T-1.046	⊙	1C22A-1.046	⊙
	1-1/16"	1.0625	26,99		1C22T-0102	⊙	1C22A-0102	⊙
		1.0630	27,00		1C22T-27	⊙	1C22A-27	⊙
	1-3/32"	1.0938	27,78		1C22T-0103	⊙	1C22A-0103	⊙
		1.1024	28,00		1C22T-28	⊙	1C22A-28	⊙
	1-7/64"	1.1094	28,18		1C22T-1.109	⊙	1C22A-1.109	⊙
	1-1/8"	1.1250	28,58		1C22T-0104	⊙	1C22A-0104	⊙
		1.1417	29,00		1C22T-29	⊙	1C22A-29	⊙
	1-5/32"	1.1563	29,37		1C22T-0105	⊙	1C22A-0105	⊙
		1.1811	30,00		1C22T-30	⊙	1C22A-30	⊙
	1-3/16"	1.1875	30,16		1C22T-0106*	⊙	1C22A-0106*	⊙
		1.2188	30,96		1C22T-0107*	⊙	1C22A-0107*	⊙
	1-1/4"	1.2205	31,00		1C22T-31*	⊙	1C22A-31*	⊙
		1.2500	31,75		1C22T-0108*	⊙	1C22A-0108*	⊙
	1-9/32"	1.2598	32,00		1C22T-32*	⊙	1C22A-32*	⊙
		1.2813	32,54		1C22T-0109*	⊙	1C22A-0109*	⊙
	1-5/16"	1.2992	33,00		1C22T-33*	⊙	1C22A-33*	⊙
		1.3125	33,34		1C22T-0110*	⊙	1C22A-0110*	⊙
	1-11/32"	1.3386	34,00		1C22T-34*	⊙	1C22A-34*	⊙
1.3438		34,13	1C22T-0111*	⊙	1C22A-0111*	⊙		
1-3/8"	1.3750	34,93	1C22T-0112*	⊙	1C22A-0112*	⊙		
	1.3780	35,00	1C22T-35*	⊙	1C22A-35*	⊙		
C5 (P40)	31/32"	0.9688	24,61	3/16"	1C52T-0031	⊙	1C52A-0031	⊙
	63/64"	0.9843	25,00		1C52T-25	⊙	1C52A-25	⊙
	1"	1.0000	25,40		1C52T-0100	⊙	1C52A-0100	⊙
		1.0236	26,00		1C52T-26	⊙	1C52A-26	⊙
	1-1/32"	1.0313	26,19		1C52T-0101	⊙	1C52A-0101	⊙
	1-3/64"	1.0469	26,59		1C52T-1.046	⊙	1C52A-1.046	⊙
	1-1/16"	1.0625	26,99		1C52T-0102	⊙	1C52A-0102	⊙
		1.0630	27,00		1C52T-27	⊙	1C52A-27	⊙
	1-3/32"	1.0938	27,78		1C52T-0103	⊙	1C52A-0103	⊙
		1.1024	28,00		1C52T-28	⊙	1C52A-28	⊙
	1-7/64"	1.1094	28,18		1C52T-1.109	⊙	1C52A-1.109	⊙
	1-1/8"	1.1250	28,58		1C52T-0104	⊙	1C52A-0104	⊙
		1.1417	29,00		1C52T-29	⊙	1C52A-29	⊙
	1-5/32"	1.1563	29,37		1C52T-0105	⊙	1C52A-0105	⊙
		1.1811	30,00		1C52T-30	⊙	1C52A-30	⊙
	1-3/16"	1.1875	30,16		1C52T-0106*	⊙	1C52A-0106*	⊙
		1.2188	30,96		1C52T-0107*	⊙	1C52A-0107*	⊙
	1-1/4"	1.2205	31,00		1C52T-31*	⊙	1C52A-31*	⊙
		1.2500	31,75		1C52T-0108*	⊙	1C52A-0108*	⊙
	1-9/32"	1.2598	32,00		1C52T-32*	⊙	1C52A-32*	⊙
		1.2813	32,54		1C52T-0109*	⊙	1C52A-0109*	⊙
	1-5/16"	1.2992	33,00		1C52T-33*	⊙	1C52A-33*	⊙
		1.3125	33,34		1C52T-0110*	⊙	1C52A-0110*	⊙
	1-11/32"	1.3386	34,00		1C52T-34*	⊙	1C52A-34*	⊙
1.3438		34,13	1C52T-0111*	⊙	1C52A-0111*	⊙		
1-3/8"	1.3750	34,93	1C52T-0112*	⊙	1C52A-0112*	⊙		
	1.3780	35,00	1C52T-35*	⊙	1C52A-35*	⊙		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -CP, -NP, -IN, -RN, -CN, -NC, -WC, -AN, -TC.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 2.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

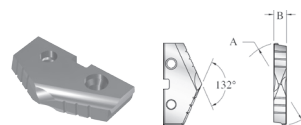
ASC 320

Special Tooling



T-A[®] Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Cast Iron T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiAlN	①
C3 (K10)	31/32"	0.9688	24,61	3/16"	1C32A-0031-CI	○
	63/64"	0.9843	25,00		1C32A-25-CI	○
	1"	1.0000	25,40		1C32A-0100-CI	○
		1.0236	26,00		1C32A-26-CI	○
	1-1/32"	1.0313	26,19		1C32A-0101-CI	○
	1-3/64"	1.0469	26,59		1C32A-1.046-CI	○
	1-1/16"	1.0625	26,99		1C32A-0102-CI	○
		1.0630	27,00		1C32A-27-CI	○
	1-3/32"	1.0938	27,78		1C32A-0103-CI	○
		1.1024	28,00		1C32A-28-CI	○
	1-7/64"	1.1094	28,18		1C32A-1.109-CI	○
	1-1/8"	1.1250	28,58		1C32A-0104-CI	○
		1.1417	29,00		1C32A-29-CI	○
	1-5/32"	1.1563	29,37		1C32A-0105-CI	○
		1.1811	30,00		1C32A-30-CI	○
	1-3/16"	1.1875	30,16		1C32A-0106-CI*	○
	1-7/32"	1.2188	30,96		1C32A-0107-CI*	○
		1.2205	31,00		1C32A-31-CI*	○
	1-1/4"	1.2500	31,75		1C32A-0108-CI*	○
		1.2598	32,00		1C32A-32-CI*	○
1-9/32"	1.2813	32,54	1C32A-0109-CI*	○		
	1.2992	33,00	1C32A-33-CI*	○		
1-5/16"	1.3125	33,34	1C32A-0110-CI*	○		
	1.3386	34,00	1C32A-34-CI*	○		
1-11/32"	1.3438	34,13	1C32A-0111-CI*	○		
1-3/8"	1.3750	34,93	1C32A-0112-CI*	○		
	1.3780	35,00	1C32A-35-CI*	○		

* Denotes inserts that will also fit 2.5 series T-A Holders.

Revolution & Opening
APX
GEN3SYS & GEN3SYS XT
Original T-A & GEN2 T-A
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Special Tooling

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

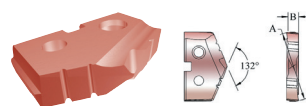
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- ① Availability Codes
- Stocked
- ▲ Non-Stocked



GEN2 T-A® Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



GEN2 T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	Ø
C2 (K20)		0.9646	24,50	3/16"	4C22H-24.5	○
	31/32"	0.9688	24,61		4C22H-0031	○
	63/64"	0.9843	25,00		4C22H-25	○
	1"	1.0000	25,40		4C22H-0100	○
		1.0150	25,78		4C22H-1.015	○
		1.0236	26,00		4C22H-26	○
	1-1/32"	1.0313	26,19		4C22H-0101	○
		1.0433	26,50		4C22H-26.5	○
	1-3/64"	1.0469	26,59		4C22H-1.046	○
	1-1/16"	1.0625	26,99		4C22H-0102	○
		1.0630	27,00		4C22H-27	○
	1-3/32"	1.0938	27,78		4C22H-0103	○
		1.1024	28,00		4C22H-28	○
	1-7/64"	1.1094	28,18		4C22H-1.109	○
	1-1/8"	1.1250	28,58		4C22H-0104	○
		1.1417	29,00		4C22H-29	○
	1-5/32"	1.1563	29,37		4C22H-0105	○
		1.1811	30,00		4C22H-30	○
	1-3/16"	1.1875	30,16		4C22H-0106*	○
	1-7/32"	1.2188	30,96		4C22H-0107*	○
		1.2205	31,00		4C22H-31*	○
		1.2310	31,26		4C22H-1.231*	○
	1-1/4"	1.2500	31,75		4C22H-0108*	○
		1.2598	32,00		4C22H-32*	○
		1.2795	32,50		4C22H-32.5*	○
	1-9/32"	1.2813	32,54		4C22H-0109*	○
		1.2992	33,00		4C22H-33*	○
	1-5/16"	1.3125	33,34		4C22H-0110*	○
	1.3386	34,00	4C22H-34*	○		
1-11/32"	1.3438	34,13	4C22H-0111*	○		
1-3/8"	1.3750	34,93	4C22H-0112*	○		
	1.3780	35,00	4C22H-35*	○		
C1 (K35)	31/32"	0.9688	24,61	3/16"	4C12H-0031	○
	63/64"	0.9843	25,00		4C12H-25	○
	1"	1.0000	25,40		4C12H-0100	○
	1-1/64"	1.0150	25,78		4C12H-1.015	○
		1.0236	26,00		4C12H-26	○
	1-1/32"	1.0313	26,19		4C12H-0101	○
	1-3/64"	1.0469	26,59		4C12H-1.046	○
	1-1/16"	1.0625	26,99		4C12H-0102	○
		1.0630	27,00		4C12H-27	○
	1-3/32"	1.0938	27,78		4C12H-0103	○
		1.1024	28,00		4C12H-28	○
	1-7/64"	1.1094	28,18		4C12H-1.109	○
	1-1/8"	1.1250	28,58		4C12H-0104	○
		1.1417	29,00		4C12H-29	○
	1-5/32"	1.1563	29,37		4C12H-0105	○
		1.1811	30,00		4C12H-30	○
	1-3/16"	1.1875	30,16		4C12H-0106*	○
	1-7/32"	1.2188	30,96		4C12H-0107*	○
		1.2205	31,00		4C12H-31*	○
		1.2310	31,26		4C12H-1.231*	○
	1-1/4"	1.2500	31,75		4C12H-0108*	○
		1.2598	32,00		4C12H-32*	○
	1-9/32"	1.2813	32,54		4C12H-0109*	○
		1.2992	33,00		4C12H-33*	○
	1-5/16"	1.3125	33,34		4C12H-0110*	○
		1.3386	34,00		4C12H-34*	○
	1-11/32"	1.3438	34,13		4C12H-0111*	○
	1-3/8"	1.3750	34,93		4C12H-0112*	○
	1.3780	35,00	4C12H-35*	○		

Geometries available (see page 197 for details): -HE. Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details. * Denotes inserts that will also fit 2.5 series T-A Holders.

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

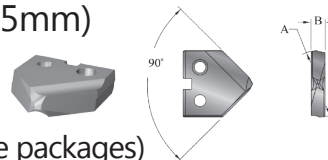
ASC 320

Special Tooling



T-A® Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



90° Spot and Chamfer T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①	TiCN	①
Super Cobalt	31/32"	0.9688	24,61	3/16"	152T-0031-SP	▲	152A-0031-SP	▲	152N-0031-SP	▲
	63/64"	0.9843	25,00		152T-25-SP	▲	152A-25-SP	▲	152N-25-SP	▲
	1"	1.0000	25,40		152T-0100-SP	○	152A-0100-SP	▲	152N-0100-SP	▲
	1-1/64"	1.0150	25,78		152T-1.015-SP	▲	152A-1.015-SP	▲	152N-1.015-SP	▲
		1.0236	26,00		152T-26-SP	▲	152A-26-SP	▲	152N-26-SP	▲
	1-1/32"	1.0313	26,19		152T-0101-SP	▲	152A-0101-SP	▲	152N-0101-SP	▲
	1-3/64"	1.0469	26,59		152T-1.046-SP	▲	152A-1.046-SP	▲	152N-1.046-SP	▲
	1-1/16"	1.0625	26,99		152T-0102-SP	○	152A-0102-SP	▲	152N-0102-SP	▲
		1.0630	27,00		152T-27-SP	▲	152A-27-SP	▲	152N-27-SP	▲
	1-3/32"	1.0938	27,78		152T-0103-SP	▲	152A-0103-SP	▲	152N-0103-SP	▲
		1.1024	28,00		152T-28-SP	▲	152A-28-SP	▲	152N-28-SP	▲
	1-7/64"	1.1094	28,18		152T-1.109-SP	▲	152A-1.109-SP	▲	152N-1.109-SP	▲
	1-1/8"	1.1250	28,58		152T-0104-SP	▲	152A-0104-SP	▲	152N-0104-SP	▲
		1.1417	29,00		152T-29-SP	▲	152A-29-SP	▲	152N-29-SP	▲
	1-5/32"	1.1563	29,37		152T-0105-SP	▲	152A-0105-SP	▲	152N-0105-SP	▲
		1.1811	30,00		152T-30-SP	▲	152A-30-SP	▲	152N-30-SP	▲
	1-3/16"	1.1875	30,16		152T-0106-SP*	▲	152A-0106-SP*	▲	152N-0106-SP*	▲
	1-7/32"	1.2188	30,96		152T-0107-SP*	▲	152A-0107-SP*	▲	152N-0107-SP*	▲
		1.2205	31,00		152T-31-SP*	▲	152A-31-SP*	▲	152N-31-SP*	▲
	1-1/4"	1.2500	31,75		152T-0108-SP*	○	152A-0108-SP*	○	152N-0108-SP*	○
		1.2598	32,00		152T-32-SP*	▲	152A-32-SP*	▲	152N-32-SP*	▲
	1-9/32"	1.2813	32,54		152T-0109-SP*	▲	152A-0109-SP*	▲	152N-0109-SP*	▲
		1.2992	33,00		152T-33-SP*	▲	152A-33-SP*	▲	152N-33-SP*	▲
	1-5/16"	1.3125	33,34		152T-0110-SP*	▲	152A-0110-SP*	▲	152N-0110-SP*	▲
		1.3386	34,00		152T-34-SP*	▲	152A-34-SP*	▲	152N-34-SP*	▲
	1-11/32"	1.3438	34,13		152T-0111-SP*	▲	152A-0111-SP*	▲	152N-0111-SP*	▲
	1-3/8"	1.3750	34,93		152T-0112-SP*	▲	152A-0112-SP*	▲	152N-0112-SP*	▲
		1.3780	35,00		152T-35-SP*	○	152A-35-SP*	○	152N-35-SP*	○

Geometries available (see page 197 for details): -SW. Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.* Denotes inserts that will also fit 2.5 series T-A Holders.



Structural Steel T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry						
	Fractional Equivalent	(inch)	(mm)		*Thin Wall TiAlN	①	**Notch Point TiAlN	①	150° Structural Steel TiAlN	①	
Super Cobalt	1"	1.0000	25,40	3/16"	152A-0100-TW	○	152A-0100-NP	○	152A-0100-SS	○	
		1.0236	26,00		152A-26-TW	○	152A-26-NP	○	152A-26-SS	○	
	1-1/16"	1.0625	26,99		152A-0102-TW	○	152A-0102-NP	○	152A-0102-SS	○	
		1.0630	27,00		152A-27-TW	○	152A-27-NP	○	152A-27-SS	○	
	1-1/8"	1.1250	28,58		152A-0104-TW	○	152A-0104-NP	○	152A-0104-SS	○	
		1-3/16"	1.1875		30,16	152A-0106-TW	○	152A-0106-NP	○	152A-0106-SS	○
	1-1/4"	1.2205	31,00		152A-31-TW	○	152A-31-NP	○	152A-31-SS	○	
		1.2500	31,75		152A-0108-TW	○	152A-0108-NP	○	152A-0108-SS	○	
	1-5/16"	1.2992	33,00		152A-33-TW	○	152A-33-NP	○	152A-33-SS	○	
		1.3125	33,34		152A-0110-TW	○	152A-0110-NP	○	152A-0110-SS	○	
	1-3/8"	1.3750	34,93		152A-0112-TW	○	152A-0112-NP	○	152A-0112-SS	○	
	Super Cobalt	1"	1.0000		25,40	3/16"	AM200®				
			1.0236		26,00		152H-0100-TW	○	152H-0100-NP	○	152H-0100-SS
1-1/16"		1.0625	26,99	152H-26-TW	○		152H-26-NP	○	152H-26-SS	○	
		1.0630	27,00	152H-0102-TW	○		152H-0102-NP	○	152H-0102-SS	○	
1-1/8"		1.1250	28,58	152H-27-TW	○		152H-27-NP	○	152H-27-SS	○	
		1-3/16"	1.1875	30,16	152H-0104-TW		○	152H-0104-NP	○	152H-0104-SS	○
1-1/4"		1.2205	31,00	152H-0106-TW	○		152H-0106-NP	○	152H-0106-SS	○	
		1.2500	31,75	152H-31-TW	○		152H-31-NP	○	152H-31-SS	○	
1-5/16"		1.2992	33,00	152H-0108-TW	○		152H-0108-NP	○	152H-0108-SS	○	
		1.3125	33,34	152H-33-TW	○		152H-33-NP	○	152H-33-SS	○	
1-3/8"		1.3750	34,93	152H-0110-TW	○		152H-0110-NP	○	152H-0110-SS	○	

*Use Thin Wall Drill Inserts for material up to 7/16" thick. **Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

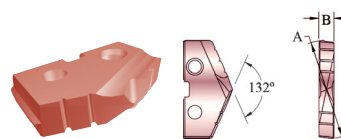
ASC 320

Special Tooling



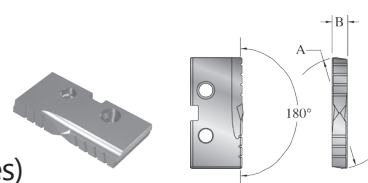
T-A[®] HSS Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Tube Sheet T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200 [®]	①
HSS		1.0080	25,60	3/16"	132H-1.0080-IN	○
	1-1/64"	1.0156	25,80		132H-1.015-IN	○
	1-1/32"	1.0313	26,19		132H-0101-IN	○
Super Cobalt		1.0080	25,60	3/16"	152H-.0080-IN	○
	1-1/64"	1.0156	25,80		152H-1.015-IN	○
	1-1/32"	1.0313	26,19		152H-0101-IN	○



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	①
Super Cobalt	31/32"	0.9688	24,61	3/16"	152T-0031-FB	○
	63/64"	0.9843	25,00		152T-25-FB	○
	1"	1.0000	25,40		152T-0100-FB	○
	1-1/64"	1.0156	25,80		152T-1.015-FB	○
		1.0236	26,00		152T-26-FB	○
	1-1/32"	1.0313	26,19		152T-0101-FB	○
	1-1/16"	1.0625	26,99		152T-0102-FB	○
		1.0630	27,00		152T-27-FB	○
	1-3/32"	1.0938	27,78		152T-0103-FB	○
		1.1024	28,00		152T-28-FB	○
	1-1/8"	1.1250	28,58		152T-0104-FB	○
		1.1417	29,00		152T-29-FB	○
	1-5/32"	1.1563	29,37		152T-0105-FB	○
		1.1811	30,00		152T-30-FB	○
	1-3/16"	1.1875	30,16		152T-0106-FB*	○
	1-7/32"	1.2188	30,96		152T-0107-FB*	○
		1.2205	31,00		152T-31-FB*	○
	1-1/4"	1.2500	31,75		152T-0108-FB*	○
		1.2598	32,00		152T-32-FB*	○
	1-9/32"	1.2813	32,54		152T-0109-FB*	○
		1.2992	33,00		152T-33-FB*	○
	1-5/16"	1.3125	33,34		152T-0110-FB*	○
		1.3386	34,00		152T-34-FB*	○
	1-11/32"	1.3438	34,13		152T-0111-FB*	○
1-3/8"	1.3750	34,93	152T-0112-FB*	○		
	1.3780	35,00	152T-35-FB*	○		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

* Denotes inserts that will also fit 2.5 series T-A Holders.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

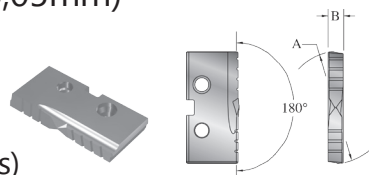
TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- ① Availability Codes
- Stocked
- ▲ Non-Stocked



T-A® Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Flat Bottom T-A Drill Inserts (supplied in 2 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
C2 (K20)	31/32"	0.9688	24,61	3/16"	1C22T-0031-FB	▲
	63/64"	0.9843	25,00		1C22T-25-FB	▲
	1"	1.0000	25,40		1C22T-0100-FB	▲
	1-1/64"	1.0156	25,80		1C22T-1.015-FB	▲
		1.0236	26,00		1C22T-26-FB	▲
	1-1/32"	1.0313	26,19		1C22T-0101-FB	▲
	1-1/16"	1.0625	26,99		1C22T-0102-FB	▲
		1.0630	27,00		1C22T-27-FB	▲
	1-3/32"	1.0938	27,78		1C22T-0103-FB	▲
		1.1024	28,00		1C22T-28-FB	▲
	1-1/8"	1.1250	28,58		1C22T-0104-FB	▲
		1.1417	29,00		1C22T-29-FB	▲
	1-5/32"	1.1563	29,37		1C22T-0105-FB	▲
		1.1811	30,00		1C22T-30-FB	▲
	1-3/16"	1.1875	30,16		1C22T-0106-FB*	▲
	1-7/32"	1.2188	30,96		1C22T-0107-FB*	▲
		1.2205	31,00		1C22T-31-FB*	▲
	1-1/4"	1.2500	31,75		1C22T-0108-FB*	▲
		1.2598	32,00		1C22T-32-FB*	▲
	1-9/32"	1.2813	32,54		1C22T-0109-FB*	▲
	1.2992	33,00	1C22T-33-FB*	▲		
1-5/16"	1.3125	33,34	1C22T-0110-FB*	▲		
	1.3386	34,00	1C22T-34-FB*	▲		
1-11/32"	1.3438	34,13	1C22T-0111-FB*	▲		
1-3/8"	1.3750	34,93	1C22T-0112-FB*	▲		
	1.3780	35,00	1C22T-35-FB*	▲		

Geometries available (see page 197 for details): -FN.
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.
 * Denotes inserts that will also fit 2.5 series T-A Holders.

- Availability Codes
- Stocked
- ▲ Non-Stocked

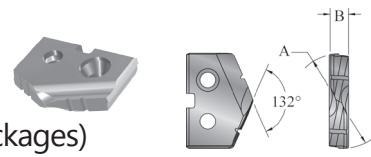
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



T-A[®] Carbide Drill Inserts

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Diamond Coated T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		CVD Diamond	Ⓢ
N2	31/32"	0.9688	24,61	3/16"	1N22D-0031	▲
	63/64"	0.9843	25,00		1N22D-25	▲
	1"	1.0000	25,40		1N22D-0100	▲
	1-1/64"	1.0156	25,80		1N22D-1.015	▲
		1.0236	26,00		1N22D-26	▲
	1-1/32"	1.0313	26,19		1N22D-0101	▲
	1-3/64"	1.0469	26,59		1N22D-1.046	▲
	1-1/16"	1.0625	26,99		1N22D-0102	▲
		1.0630	27,00		1N22D-27	▲
	1-3/32"	1.0938	27,78		1N22D-0103	▲
		1.1024	28,00		1N22D-28	▲
	1-7/64"	1.1094	28,18		1N22D-1.109	▲
	1-1/8"	1.1250	28,58		1N22D-0104	▲
		1.1417	29,00		1N22D-29	▲
	1-5/32"	1.1563	29,37		1N22D-0105	▲
		1.1811	30,00		1N22D-30	▲
	1-3/16"	1.1875	30,16		1N22D-0106*	▲
	1-7/32"	1.2188	30,96		1N22D-0107*	▲
		1.2205	31,00		1N22D-31*	▲
	1-1/4"	1.2500	31,75		1N22D-0108*	▲
		1.2598	32,00		1N22D-32*	▲
	1-9/32"	1.2813	32,54		1N22D-0109*	▲
		1.2992	33,00		1N22D-33*	▲
	1-5/16"	1.3125	33,34		1N22D-0110*	▲
	1.3386	34,00	1N22D-34*	▲		
1-11/32"	1.3438	34,13	1N22D-0111*	▲		
1-3/8"	1.3750	34,93	1N22D-0112*	▲		
	1.3780	35,00	1N22D-35*	▲		

* Denotes inserts that will also fit 2.5 series T-A Holders.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

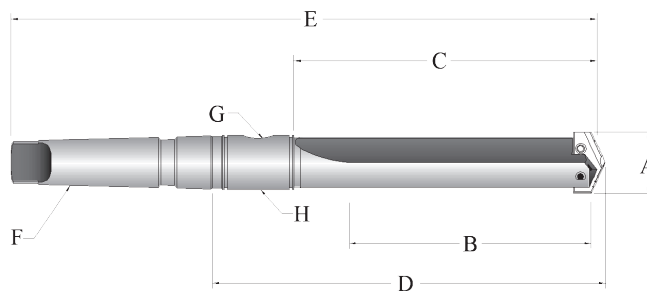
ASC 320

Special Tooling



T-A[®] Holders

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22020S-003I	31/32" - 1-3/8"	3-3/8"	4-1/2"	6-15/64"	9-25/32"	#3	1/8"	2T-3SR
Short	22020S-004I	31/32" - 1-3/8"	3-3/8"	4-1/2"	6-19/64"	10-25/32"	#4	1/8"	2T-3SR
Short	22025S-003I	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	6-15/64"	9-25/32"	#3	1/8"	2T-3SR
Short	22025S-004I	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	6-37/64"	11-1/16"	#4	1/4"	2T-4SR
Intermediate	23020S-004I	31/32" - 1-3/8"	5-3/8"	6-1/2"	8-19/64"	12-25/32"	#4	1/8"	2T-3SR
Intermediate	23025S-004I	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	8-37/64"	13-1/16"	#4	1/4"	2T-4SR
Standard	24020S-003I	31/32" - 1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	2T-3SR
Standard	24020S-004I	31/32" - 1-3/8"	7-3/8"	8-1/2"	10-19/64"	14-25/32"	#4	1/8"	2T-3SR
Standard	24025S-003I	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	2T-3SR
Standard	24025S-004I	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	10-37/64"	15-1/16"	#4	1/8"	2T-4SR
Extended	25020S-004I	31/32" - 1-3/8"	11-3/8"	12-1/2"	14-15/64"	18-25/32"	#4	1/4"	2T-3SR
Extended	25025S-004I	1-3/16" - 1-3/8"	11-3/8"	12-1/2"	14-37/64"	19-1/16"	#4	1/4"	2T-4SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22020S-004M	25,0 - 35,0	85,7	114,3	160,4	273,8	#4**	1/8"**	2T-3SRM
Short	22025S-004M	30,0 - 35,0	85,7	114,3	167,6	281,0	#4**	1/4"**	2T-4SRM

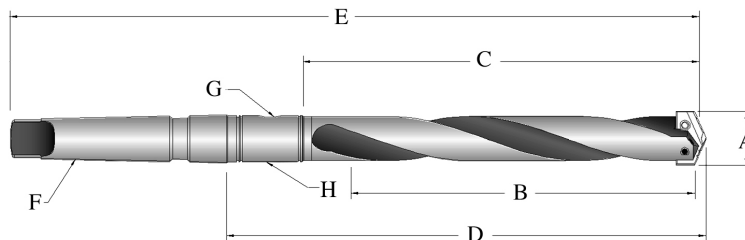
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A[®] Holders

2 Series Range: 0.961" - 1.380" (24,41mm - 35,05mm)



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Intermediate	23020H-004I	31/32" - 1-3/8"	5-3/8"	6-1/2"	8-19/64"	12-25/32"	#4	1/8"	2T-3SR
Intermediate	23025H-004I	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	8-37/64"	13-1/16"	#4	1/4"	2T-4SR
Standard	24020H-003I	31/32" - 1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	2T-3SR
Standard	24020H-004I	31/32" - 1-3/8"	7-3/8"	8-1/2"	10-19/64"	14-25/32"	#4	1/8"	2T-3SR
Standard	24025H-003I	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	10-15/64"	13-25/32"	#3	1/8"	2T-3SR
Standard	24025H-004I	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	10-37/64"	15-1/16"	#4	1/4"	2T-4SR
Extended	25020H-004I	31/32" - 1-3/8"	11-3/8"	12-1/2"	14-15/64"	18-25/32"	#4	1/8"	2T-3SR
Extended	25025H-004I	1-3/16" - 1-3/8"	11-3/8"	12-1/2"	14-37/64"	19-1/16"	#4	1/4"	2T-4SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Intermediate	23020H-004M	25,0 - 35,0	136,5	165,1	211,2	324,6	#4**	1/8**	2T-3SRM
Intermediate	23025H-004M	30,0 - 35,0	136,5	165,1	218,4	331,8	#4**	1/4**	2T-4SRM
Standard	24020H-004M	25,0 - 35,0	187,3	215,9	262,0	375,4	#4**	1/8**	2T-3SRM
Standard	24025H-004M	30,0 - 35,0	187,3	215,9	269,2	382,6	#4**	1/4**	2T-4SRM
Extended	25020H-004M	25,0 - 35,0	289,0	317,5	363,6	477,0	#4**	1/8**	2T-3SRM
Extended	25025H-004M	30,0 - 35,0	289,0	317,5	370,8	484,2	#4**	1/4**	2T-4SRM

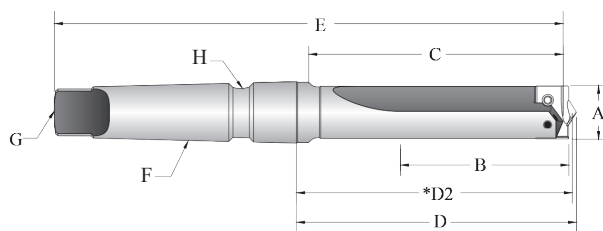
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A[®] Holders

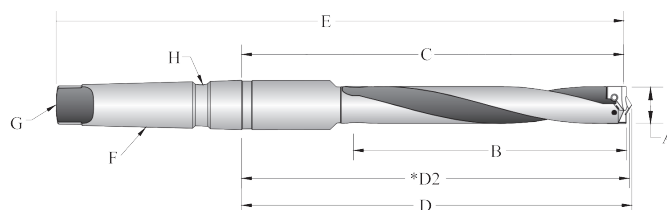
2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22020S-004IS100	1" - 1-3/8"	3-3/8"	4-1/2"	4-63/64"	4-57/64"	9-3/8"	#4	TTC	TSC
Short	22025S-004IS112	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-63/64"	4-57/64"	9-3/8"	#4	TTC	TSC
METRIC (mm)										
Short	22020S-004IS100	26	86	114	126,6	124,2	238	#4	TTC	TSC
Short	22025S-004IS112	31	86	114	126,6	124,2	238	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point[®], GEN2 T-A[®], or 150° Structural Steel T-A[®] Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24020H-004IS100	1" - 1-3/8"	5-3/8"	6-1/2"	6-63/64"	6-57/64"	11-3/8"	#4	TTC	TSC
Standard	24025H-004IS112	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	6-63/64"	6-57/64"	11-3/8"	#4	TTC	TSC
Extended	25020H-003IS100	1" - 1-3/8"	6-1/2"	9-11/32"	9-3/4"	9-29/64"	13-7/32"	#3	TTC	TSC
Extended	25020H-004IS100	1" - 1-3/8"	6-1/2"	9-7/32"	9-3/4"	9-43/64"	14-5/32"	#4	TTC	TSC
Long	26020H-004IS100	1" - 1-3/8"	6-1/2"	16"	16-15/32"	16-25/64"	20-7/8"	#4	TTC	TSC
METRIC (mm)										
Standard	24020H-004IS100	26	137	165	177,4	175,0	289	#4	TTC	TSC
Standard	24025H-004IS112	31	137	165	177,4	175,0	289	#4	TTC	TSC
Extended	25020H-003IS100	26	165	237	247,7	240,1	336	#3	TTC	TSC
Extended	25020H-004IS100	26	165	237	247,7	245,7	360	#4	TTC	TSC
Long	26020H-004IS100	26	165	406	418,3	416,3	530	#4	TTC	TSC

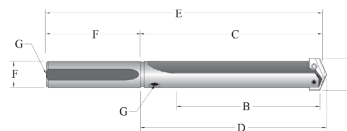
*If using Structural Steel Holder with Notch Point[®], GEN2 T-A[®], or 150° Structural Steel T-A[®] Drill Insert Geometry

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 198 for Structural Steel Guidelines & 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

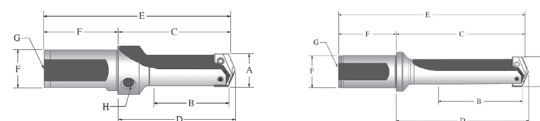
2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		
							Dia	Length	Pipe Tap
Short	22020S-100L	31/32" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"
Short	22020S-125L	31/32" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"
Short	22025S-100L	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"
Short	22025S-125L	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"
Intermediate	23020S-125L	31/32" - 1-3/8"	5-3/8"	6-1/2"	6-41/64"	10"	1-1/4"	3-1/2"	1/8"
Intermediate	23025S-125L	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	6-41/64"	10"	1-1/4"	3-1/2"	1/8"
Standard	24020S-100L	31/32" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"
Standard	24020S-125L	31/32" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"
Standard	24025S-100L	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"
Standard	24025S-125L	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"
⚠ Extended	25020S-125L	31/32" - 1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"
⚠ Extended	25025S-125L	1-3/16" - 1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"
⚠ XL	27020S-125L	31/32" - 1-3/8"	20-1/8"	21-1/4"	21-25/64"	24-3/4"	1-1/4"	3-1/2"	1/8"
⚠ 3XL	29020S-125L	31/32" - 1-3/8"	27-1/4"	28-3/8"	28-33/64"	31-7/8"	1-1/4"	3-1/2"	1/8"

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders



Flanged Shank Straight Flute Holders

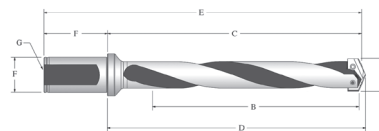
Length	Item Number	A	B	C	D	E	F		G		H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap		
							Dia	Length	Rear	Side	
Stub	21020S-125F	31/32" - 1-3/8"	2-1/4"	3-31/64"	3-5/8"	5-49/64"	1-1/4"	2-9/32"	1/4"	1/8"	
Stub	21025S-125F	1-3/16" - 1-3/8"	3-5/8"	4-55/64"	5"	7-9/64"	1-1/4"	2-9/32"	1/4"	1/8"	
Short	22020S-125F	31/32" - 1-3/8"	3-3/8"	5-1/16"	5-13/64"	7-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
Short	22025S-125F	1-3/16" - 1-3/8"	3-3/8"	5-1/16"	5-13/64"	7-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
Intermediate	23020S-125F	31/32" - 1-3/8"	5-3/8"	7-1/16"	7-13/64"	9-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
Intermediate	23025S-125F	1-3/16" - 1-3/8"	5-3/8"	7-1/16"	7-13/64"	9-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
Standard	24020S-125F	31/32" - 1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
Standard	24025S-125F	1-3/16" - 1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
⚠ Extended	25020S-125F	31/32" - 1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
⚠ Extended	25025S-125F	1-3/16" - 1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	21020S-32FM	25,0 - 35,0	57,2	88,5	92,1	148,5	32,0	60,0	1/4**	1/8**	
Stub	21025S-32FM	30,0 - 35,0	92,1	123,4	127,0	183,4	32,0	60,0	1/4**	1/8**	
Short	22020S-32FM	25,0 - 35,0	85,7	128,6	132,2	188,6	32,0	60,0	1/4**	N/A	
Short	22025S-32FM	30,0 - 35,0	85,7	128,6	132,2	188,6	32,0	60,0	1/4**	N/A	
⚠ XL	27020S-32FM	25,0 - 35,0	511	554,1	557,7	614,1	32,0	60,0	1/4**	N/A	
⚠ 3XL	29020S-32FM	25,0 - 35,0	692	735,1	738,7	795,1	32,0	60,0	1/4**	N/A	

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

2 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G		H	
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap		Rear	Side
							Dia	Length	Rear	Side		
Intermediate	23020H-125F	31/32" - 1-3/8"	5-3/8"	7-1/16"	7-13/64"	9-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
Intermediate	23025H-125F	1-3/16" - 1-3/8"	5-3/8"	7-1/16"	7-13/64"	9-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
Standard	24020H-125F	31/32" - 1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
Standard	24025H-125F	1-3/16" - 1-3/8"	7-3/8"	9-1/16"	9-13/64"	11-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
Standard Plus	24520H-125F	31/32" - 1-3/8"	9-3/8"	11-1/16"	11-13/64"	13-31/64"	1-1/4"	2-9/32"	1/4"	N/A		
⚠ Extended	25020H-125F	31/32" - 1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
⚠ Extended	25025H-125F	1-3/16" - 1-3/8"	11-3/8"	13-1/16"	13-13/64"	15-11/32"	1-1/4"	2-9/32"	1/4"	N/A		
⚠ Long	26020H-125F	31/32" - 1-3/8"	16-1/8"	17-53/64"	17-31/32"	20-1/4"	1-1/4"	2-9/32"	1/4"	N/A		
METRIC (mm) *Metric Thread to BSP & ISO 7-1												
Intermediate	23020H-32FM	25,0 - 35,0	136,5	179,4	183,0	239,4	32,0	60,0	1/4**	N/A		
Intermediate	23025H-32FM	30,0 - 35,0	136,5	179,4	183,0	239,4	32,0	60,0	1/4**	N/A		
Standard	24020H-32FM	25,0 - 35,0	187,3	230,2	233,8	290,2	32,0	60,0	1/4**	N/A		
Standard	24025H-32FM	30,0 - 35,0	187,3	230,2	233,8	290,2	32,0	60,0	1/4**	N/A		
Standard Plus	24520H-32FM	24,5 - 35,0	238,0	280,9	284,5	340,9	32,0	60,0	1/4**	N/A		
⚠ Extended	25020H-32FM	25,0 - 35,0	288,9	331,8	335,4	391,8	32,0	60,0	1/4**	N/A		
⚠ Extended	25025H-32FM	30,0 - 35,0	288,9	331,8	335,4	391,8	32,0	60,0	1/4**	N/A		
⚠ Long	26020H-32FM	24,5 - 35,0	410,0	452,9	456,5	512,9	32,0	60,0	1/4**	N/A		

NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

T-ACR 45 Chamfer Ring and Accessories

Item Number	Min. Drill Dia (Inch)	Max. Drill Dia (Inch)	Max. Chamfer Dia (Inch)	Chamfer Ring Dia	Chamfer Ring Length	Insert Number 2 Pieces	Insert Screw (10 pack)	TORX Plus Driver	Clamping Screw (10 pack)	TORX Plus Driver
T-ACR-45-2	0.9610	1.380	1.568	1-51/64"	1"	T-ACRI-45-B-C5A	7255-IP8-1	8IP-8	7514-IP20-1	8IP-20

Rotary Coolant Adapter (RCA) and Accessories

Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	⚠ 2T-3SR	1"	2-1/8"	1-1/8"	5/16" - NC	1/8"	2T1-3SR	2T1-3OR-10
	⚠ 2T-4SR	1-1/4"	2-1/2"	1-3/8"	3/8" - NC	1/4"	2T1-4SR	2T1-4OR-10
Metric	⚠ 2T-3SRM	25,40	53,97	28,57	M8 X 1,25	1/8**	2T1-3SR	2T1-3OR-10
	⚠ 2T-4SRM	31,75	63,50	34,92	M10 X 1,50	1/4**	2T1-4SR	2T1-4OR-10

*Thread to BSP & ISO 7-1 / ** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers. / ⚠ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
2	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	31/32" - 1-3/8"	61.0 in.-lbs	25,0 - 35,0	690 N-cm
2.5	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	1-3/16" - 1-3/8"	61.0 in.-lbs	30,0 - 35,0	690 N-cm

Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

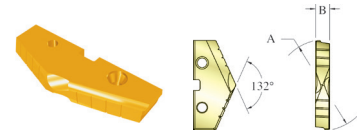
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

Original T-A® Drill Inserts

3 Series Range: 1.353" - 1.882" (34,36mm - 47,80mm)



1.353" - 1.882 inch
34,36 - 47,80 mm



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
Super Cobalt	1-13/32"	1.4063	35,72	1/4"	153T-0113	○
		1.4173	36,00		153T-36	○
	1-7/16"	1.4375	36,51		153T-0114	○
		1.4567	37,00		153T-37	○
	1-15/32"	1.4688	37,31		153T-0115	○
		1.4961	38,00		153T-38	○
	1-1/2"	1.5000	38,10		153T-0116	○
	1-17/32"	1.5313	38,89		153T-0117	○
		1.5354	39,00		153T-39	○
	1-9/16"	1.5625	39,69		153T-0118	○
		1.5748	40,00		153T-40	○
	1-19/32"	1.5938	40,48		153T-0119	○
		1.6142	41,00		153T-41	○
	1-5/8"	1.6250	41,28		153T-0120	○
		1.6535	42,00		153T-42	○
	1-21/32"	1.6563	42,07		153T-0121	○
	1-11/16"	1.6875	42,86		153T-0122	○
		1.6929	43,00		153T-43	○
	1-23/32"	1.7188	43,66		153T-0123	○
		1.7323	44,00		153T-44	○
	1-3/4"	1.7500	44,45		153T-0124	○
		1.7717	45,00		153T-45	○
	1-25/32"	1.7813	45,24		153T-0125	○
		1.8110	46,00		153T-46	○
1-13/16"	1.8125	46,04	153T-0126	○		
1-27/32"	1.8438	46,83	153T-0127	○		
	1.8504	47,00	153T-47	○		
1-7/8"	1.8750	47,63	153T-0128	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



GEN2 T-A® HSS Drill Inserts

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
HSS	1-13/32"	1.4063	35,72	1/4"	433T-0113	○
		1.4173	36,00		433T-36	○
	1-7/16"	1.4375	36,51		433T-0114	○
		1.4567	37,00		433T-37	○
	1-15/32"	1.4688	37,31		433T-0115	○
		1.4961	38,00		433T-38	○
	1-1/2"	1.5000	38,10		433T-0116	○
	1-17/32"	1.5313	38,89		433T-0117	○
		1.5354	39,00		433T-39	○
	1-9/16"	1.5625	39,69		433T-0118	○
		1.5748	40,00		433T-40	○
	1-19/32"	1.5938	40,48		433T-0119	○
		1.6142	41,00		433T-41	○
	1-5/8"	1.6250	41,28		433T-0120	○
		1.6535	42,00		433T-42	○
	1-21/32"	1.6563	42,07		433T-0121	○
	1-11/16"	1.6875	42,86		433T-0122	○
		1.6929	43,00		433T-43	○
	1-23/32"	1.7188	43,66		433T-0123	○
		1.7323	44,00		433T-44	○
	1-3/4"	1.7500	44,45		433T-0124	○
		1.7717	45,00		433T-45	○
	1-25/32"	1.7813	45,24		433T-0125	○
		1.8110	46,00		433T-46	○
1-13/16"	1.8125	46,04	433T-0126	○		
1-27/32"	1.8438	46,83	433T-0127	○		
	1.8504	47,00	433T-47	○		
1-7/8"	1.8750	47,63	433T-0128	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC, -HE.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

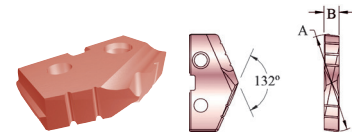
- Availability Codes
- Stocked
- ▲ Non-Stocked

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

GEN2 T-A® HSS Drill Inserts

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	⊙	AM200®	⊙
Super Cobalt	1-13/32"	1.4063	35,72	1/4"	453T-0113	⊙	453H-0113	⊙
		1.4173	36,00		453T-36	⊙	453H-36	⊙
	1-7/16"	1.4375	36,51		453T-0114	⊙	453H-0114	⊙
		1.4567	37,00		453T-37	⊙	453H-37	⊙
	1-15/32"	1.4688	37,31		453T-0115	⊙	453H-0115	⊙
		1.4961	38,00		453T-38	⊙	453H-38	⊙
	1-1/2"	1.5000	38,10		453T-0116	⊙	453H-0116	⊙
		1.5313	38,89		453T-0117	⊙	453H-0117	⊙
	1-17/32"	1.5354	39,00		453T-39	⊙	453H-39	⊙
		1.5470	39,29		453T-1.547	▲	453H-1.547	⊙
	1-9/16"	1.5625	39,69		453T-0118	⊙	453H-0118	⊙
		1.5748	40,00		453T-40	⊙	453H-40	⊙
	1-19/32"	1.5938	40,48		453T-0119	⊙	453H-0119	⊙
		1.6142	41,00		453T-41	⊙	453H-41	⊙
	1-5/8"	1.6250	41,28		453T-0120	⊙	453H-0120	⊙
		1.6535	42,00		453T-42	⊙	453H-42	⊙
	1-21/32"	1.6563	42,07		453T-0121	⊙	453H-0121	⊙
		1.6875	42,86		453T-0122	⊙	453H-0122	⊙
	1-11/16"	1.6929	43,00		453T-43	⊙	453H-43	⊙
		1.7188	43,66		453T-0123	⊙	453H-0123	⊙
	1-23/32"	1.7323	44,00		453T-44	⊙	453H-44	⊙
		1.7500	44,45		453T-0124	⊙	453H-0124	⊙
	1-3/4"	1.7717	45,00		453T-45	⊙	453H-45	⊙
		1.7813	45,24		453T-0125	⊙	453H-0125	⊙
1-25/32"	1.7913	45,50	453T-45.5	⊙	453H-45.5	⊙		
	1.7970	45,64	453T-1.797	▲	453H-1.797	⊙		
	1.8110	46,00	453T-46	⊙	453H-46	⊙		
	1.8125	46,04	453T-0126	⊙	453H-0126	⊙		
1-13/16"	1.8438	46,83	453T-0127	⊙	453H-0127	⊙		
	1.8504	47,00	453T-47	⊙	453H-47	⊙		
1-7/8"	1.8750	47,63	453T-0128	⊙	453H-0128	⊙		
	1-13/32"	1.4063	35,72	483T-0113	▲	483H-0113	▲	
1-7/16"	1.4173	36,00	483T-36	▲	483H-36	▲		
	1.4375	36,51	483T-0114	▲	483H-0114	▲		
	1.4567	37,00	483T-37	▲	483H-37	▲		
	1-15/32"	1.4688	37,31	483T-0115	▲	483H-0115	▲	
	1.4961	38,00	483T-38	▲	483H-38	▲		
	1-1/2"	1.5000	38,10	483T-0116	▲	483H-0116	▲	
1-17/32"	1.5313	38,89	483T-0117	▲	483H-0117	▲		
	1.5354	39,00	483T-39	▲	483H-39	▲		
1-9/16"	1.5625	39,69	483T-0118	▲	483H-0118	▲		
	1.5748	40,00	483T-40	▲	483H-40	▲		
1-19/32"	1.5938	40,48	483T-0119	▲	483H-0119	▲		
	1.6142	41,00	483T-41	▲	483H-41	▲		
1-5/8"	1.6250	41,28	483T-0120	▲	483H-0120	▲		
	1.6535	42,00	483T-42	▲	483H-42	▲		
1-21/32"	1.6563	42,07	483T-0121	▲	483H-0121	▲		
	1.6875	42,86	483T-0122	▲	483H-0122	▲		
1-11/16"	1.6929	43,00	483T-43	▲	483H-43	▲		
	1.7188	43,66	483T-0123	▲	483H-0123	▲		
1-23/32"	1.7323	44,00	483T-44	▲	483H-44	▲		
	1.7500	44,45	483T-0124	▲	483H-0124	▲		
1-3/4"	1.7717	45,00	483T-45	▲	483H-45	▲		
	1.7813	45,24	483T-0125	▲	483H-0125	▲		
1-25/32"	1.8110	46,00	483T-46	▲	483H-46	▲		
	1.8125	46,04	483T-0126	▲	483H-0126	▲		
1-13/16"	1.8438	46,83	483T-0127	▲	483H-0127	▲		
	1.8504	47,00	483T-47	▲	483H-47	▲		
1-7/8"	1.8750	47,63	483T-0128	▲	483H-0128	▲		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC, -HE.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

1.353" - 1.882" Inch
34,36 - 47,80 mm

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

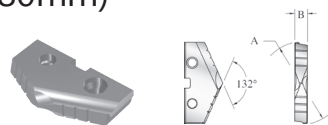
ASC 320

Special Tooling



T-A® Carbide Drill Inserts

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



T-A Drill Inserts (supplied in 1 piece packages)

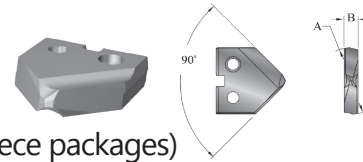
Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	①	TiAlN	①
C2 (K20)	1-13/32"	1.4063	35,72	1/4"	1C23T-0113	○	1C23A-0113	○
		1.4173	36,00		1C23T-36	○	1C23A-36	○
	1-7/16"	1.4375	36,51		1C23T-0114	○	1C23A-0114	○
		1.4567	37,00		1C23T-37	○	1C23A-37	○
	1-15/32"	1.4688	37,31		1C23T-0115	○	1C23A-0115	○
		1.4961	38,00		1C23T-38	○	1C23A-38	○
	1-1/2"	1.5000	38,10		1C23T-0116	○	1C23A-0116	○
		1-17/32"	1.5313		38,89	1C23T-0117	○	1C23A-0117
	1.5354		39,00		1C23T-39	○	1C23A-39	○
	1-9/16"	1.5625	39,69		1C23T-0118	○	1C23A-0118	○
		1.5748	40,00		1C23T-40	○	1C23A-40	○
	1-19/32"	1.5938	40,48		1C23T-0119	○	1C23A-0119	○
		1.6142	41,00		1C23T-41	○	1C23A-41	○
	1-5/8"	1.6250	41,28		1C23T-0120	○	1C23A-0120	○
		1.6535	42,00		1C23T-42	○	1C23A-42	○
	1-21/32"	1.6563	42,07		1C23T-0121	○	1C23A-0121	○
		1-11/16"	1.6875		42,86	1C23T-0122	○	1C23A-0122
	1.6929		43,00		1C23T-43	○	1C23A-43	○
	1-23/32"	1.7188	43,66		1C23T-0123	○	1C23A-0123	○
		1.7323	44,00		1C23T-44	○	1C23A-44	○
	1-3/4"	1.7500	44,45		1C23T-0124	○	1C23A-0124	○
		1.7717	45,00		1C23T-45	○	1C23A-45	○
	1-25/32"	1.7813	45,24		1C23T-0125	○	1C23A-0125	○
		1.8110	46,00		1C23T-46	○	1C23A-46	○
1-13/16"	1.8125	46,04	1C23T-0126	○	1C23A-0126	○		
	1-27/32"	1.8438	46,83	1C23T-0127	○	1C23A-0127	○	
1.8504		47,00	1C23T-47	○	1C23A-47	○		
1-7/8"	1.8750	47,63	1C23T-0128	○	1C23A-0128	○		
	1.4063	35,72	1C53T-0113	○	1C53A-0113	○		
1-13/32"	1.4173	36,00	1C53T-36	○	1C53A-36	○		
	1-7/16"	1.4375	36,51	1C53T-0114	○	1C53A-0114	○	
1.4567		37,00	1C53T-37	○	1C53A-37	○		
1-15/32"	1.4688	37,31	1C53T-0115	○	1C53A-0115	○		
	1.4961	38,00	1C53T-38	○	1C53A-38	○		
1-1/2"	1.5000	38,10	1C53T-0116	○	1C53A-0116	○		
	1-17/32"	1.5313	38,89	1C53T-0117	○	1C53A-0117	○	
1.5354		39,00	1C53T-39	○	1C53A-39	○		
1-9/16"	1.5470	39,29	1C53T-1.547	○	1C53A-1.547	○		
	1.5625	39,69	1C53T-0118	○	1C53A-0118	○		
1-19/32"	1.5748	40,00	1C53T-40	○	1C53A-40	○		
	1.5938	40,48	1C53T-0119	○	1C53A-0119	○		
1-5/8"	1.6142	41,00	1C53T-41	○	1C53A-41	○		
	1.6250	41,28	1C53T-0120	○	1C53A-0120	○		
1-21/32"	1.6535	42,00	1C53T-42	○	1C53A-42	○		
	1.6563	42,07	1C53T-0121	○	1C53A-0121	○		
1-11/16"	1.6875	42,86	1C53T-0122	○	1C53A-0122	○		
	1.6929	43,00	1C53T-43	○	1C53A-43	○		
1-23/32"	1.7188	43,66	1C53T-0123	○	1C53A-0123	○		
	1.7323	44,00	1C53T-44	○	1C53A-44	○		
1-3/4"	1.7500	44,45	1C53T-0124	○	1C53A-0124	○		
	1.7717	45,00	1C53T-45	○	1C53A-45	○		
1-25/32"	1.7813	45,24	1C53T-0125	○	1C53A-0125	○		
	1.7913	45,50	1C53T-45.5	○	1C53A-45.5	○		
1-13/16"	1.7970	45,64	1C53T-1.797	○	1C53A-1.797	○		
	1.8110	46,00	1C53T-46	○	1C53A-46	○		
1-27/32"	1.8125	46,04	1C53T-0126	○	1C53A-0126	○		
	1.8438	46,83	1C53T-0127	○	1C53A-0127	○		
1-7/8"	1.8504	47,00	1C53T-47	○	1C53A-47	○		
	1.8750	47,63	1C53T-0128	○	1C53A-0128	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NP, -IN, -RN, -CN, -NC, -WC. Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



T-A® HSS Drill Inserts

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)

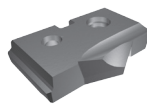


90° Spot and Chamfer T-A Drill Inserts (supplied in 1 piece packages)

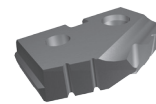
Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	TiAlN	⓪	TiCN	⓪
Super Cobalt	1-13/32"	1.4063	35,72	1/4"	153T-0113-SP	▲	153A-0113-SP	▲	153N-0113-SP	▲
		1.4173	36,00		153T-36-SP	▲	153A-36-SP	▲	153N-36-SP	▲
	1-7/16"	1.4375	36,51		153T-0114-SP	▲	153A-0114-SP	▲	153N-0114-SP	▲
		1.4567	37,00		153T-37-SP	▲	153A-37-SP	▲	153N-37-SP	▲
	1-15/32"	1.4688	37,31		153T-0115-SP	▲	153A-0115-SP	▲	153N-0115-SP	▲
		1.4961	38,00		153T-38-SP	▲	153A-38-SP	▲	153N-38-SP	▲
	1-1/2"	1.5000	38,10		153T-0116-SP	○	153A-0116-SP	○	153N-0116-SP	○
	1-17/32"	1.5313	38,89		153T-0117-SP	▲	153A-0117-SP	▲	153N-0117-SP	▲
		1.5354	39,00		153T-39-SP	▲	153A-39-SP	▲	153N-39-SP	▲
	1-9/16"	1.5625	39,69		153T-0118-SP	▲	153A-0118-SP	▲	153N-0118-SP	▲
		1.5748	40,00		153T-40-SP	▲	153A-40-SP	▲	153N-40-SP	▲
	1-19/32"	1.5938	40,48		153T-0119-SP	▲	153A-0119-SP	▲	153N-0119-SP	▲
		1.6142	41,00		153T-41-SP	▲	153A-41-SP	▲	153N-41-SP	▲
	1-5/8"	1.6250	41,28		153T-0120-SP	▲	153A-0120-SP	▲	153N-0120-SP	▲
		1.6535	42,00		153T-42-SP	▲	153A-42-SP	▲	153N-42-SP	▲
	1-21/32"	1.6563	42,07		153T-0121-SP	▲	153A-0121-SP	▲	153N-0121-SP	▲
	1-11/16"	1.6875	42,86		153T-0122-SP	▲	153A-0122-SP	▲	153N-0122-SP	▲
		1.6929	43,00		153T-43-SP	▲	153A-43-SP	▲	153N-43-SP	▲
	1-23/32"	1.7188	43,66		153T-0123-SP	▲	153A-0123-SP	▲	153N-0123-SP	▲
		1.7323	44,00		153T-44-SP	▲	153A-44-SP	▲	153N-44-SP	▲
	1-3/4"	1.7500	44,45		153T-0124-SP	▲	153A-0124-SP	▲	153N-0124-SP	▲
		1.7717	45,00		153T-45-SP	▲	153A-45-SP	▲	153N-45-SP	▲
	1-25/32"	1.7813	45,24		153T-0125-SP	▲	153A-0125-SP	▲	153N-0125-SP	▲
		1.8110	46,00		153T-46-SP	▲	153A-46-SP	▲	153N-46-SP	▲
	1-13/16"	1.8125	46,04		153T-0126-SP	▲	153A-0126-SP	▲	153N-0126-SP	▲
		1.8438	46,83		153T-0127-SP	▲	153A-0127-SP	▲	153N-0127-SP	▲
	1-7/8"	1.8504	47,00		153T-47-SP	▲	153A-47-SP	▲	153N-47-SP	▲
		1.8750	47,63		153T-0128-SP	○	153A-0128-SP	○	153N-0128-SP	○

Geometries available (see page 197 for details): -SW.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



*Thin Wall



**Notch Point®



**150° Structural Steel

Structural Steel T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		*Thin Wall TiAlN	⓪	**Notch Point TiAlN	⓪	150° Structural Steel TiAlN	⓪
Super Cobalt	1-7/16"	1.4375	36,51	1/4"	153A-0114-TW	○	153A-0114-NP	○	153A-0114-SS	○
		1.5000	38,10		153A-0116-TW	○	153A-0116-NP	○	153A-0116-SS	○
		1.5354	39,00		153A-39-TW	○	153A-39-NP	○	153A-39-SS	○
		1.5625	39,69		153A-0118-TW	○	153A-0118-NP	○	153A-0118-SS	○
					AM200					
Super Cobalt	1-7/16"	1.4375	36,51	1/4"	153H-0114-TW	○	153H-0114-NP	○	153H-0114-SS	○
		1.5000	38,10		153H-0116-TW	○	153H-0116-NP	○	153H-0116-SS	○
		1.5354	39,00		153H-39-TW	○	153H-39-NP	○	153H-39-SS	○
		1.5625	39,69		153H-0118-TW	○	153H-0118-NP	○	153H-0118-SS	○

*Use Thin Wall Drill Inserts for material up to 7/16" thick.

**Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

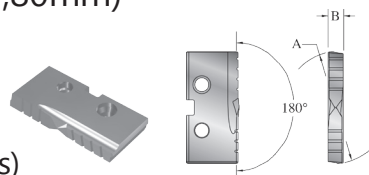
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



T-A[®] HSS Drill Inserts

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Flat Bottom T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
Super Cobalt	1-13/32"	1.4063	35,72	1/4"	153T-0113-FB	○
		1.4173	36,00		153T-36-FB	○
	1-7/16"	1.4375	36,51		153T-0114-FB	○
		1.4567	37,00		153T-37-FB	○
	1-15/32"	1.4688	37,31		153T-0115-FB	○
		1.4961	38,00		153T-38-FB	○
	1-1/2"	1.5000	38,10		153T-0116-FB	○
	1-17/32"	1.5313	38,89		153T-0117-FB	○
		1.5354	39,00		153T-39-FB	○
	1-9/16"	1.5625	39,69		153T-0118-FB	○
		1.5748	40,00		153T-40-FB	○
	1-19/32"	1.5938	40,48		153T-0119-FB	○
		1.6142	41,00		153T-41-FB	○
	1-5/8"	1.6250	41,28		153T-0120-FB	○
		1.6535	42,00		153T-42-FB	○
	1-21/32"	1.6563	42,07		153T-0121-FB	○
	1-11/16"	1.6875	42,86		153T-0122-FB	○
		1.6929	43,00		153T-43-FB	○
	1-23/32"	1.7188	43,66		153T-0123-FB	○
		1.7323	44,00		153T-44-FB	○
	1-3/4"	1.7500	44,45		153T-0124-FB	○
		1.7717	45,00		153T-45-FB	○
	1-25/32"	1.7813	45,24		153T-0125-FB	○
		1.8110	46,00		153T-46-FB	○
1-13/16"	1.8125	46,04	153T-0126-FB	○		
1-27/32"	1.8438	46,83	153T-0127-FB	○		
	1.8504	47,00	153T-47-FB	○		
1-7/8"	1.8750	47,63	153T-0128-FB	○		

Geometries available (see page 197 for details): -FN
 Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

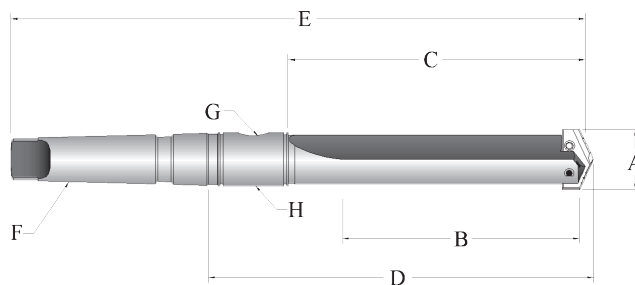
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked



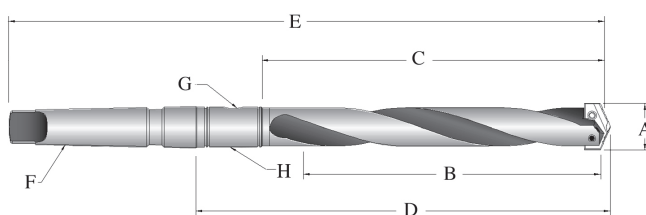
T-A® Holders

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22030S-004I	1-13/32" - 1-7/8"	4-3/4"	6"	8-1/8"	12-9/16"	#4	1/4"	2T-4SR
Short	22030S-005I	1-13/32" - 1-7/8"	4-3/4"	6"	8-1/8"	13-13/16"	#5	1/4"	2T-5SR
Intermediate	23030S-004I	1-13/32" - 1-7/8"	6-1/2"	7-3/4"	9-7/8"	14-5/16"	#4	1/4"	2T-4SR
Standard	24030S-004I	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	11-5/8"	16-1/16"	#4	1/4"	2T-4SR
Standard	24030S-005I	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	11-5/8"	17-5/16"	#5	1/4"	2T-5SR
Extended	25030S-004I	1-13/32" - 1-7/8"	13-3/4"	15"	17-1/8"	21-9/16"	#4	1/4"	2T-4SR
XL	27030S-004I	1-13/32" - 1-7/8"	22"	23-1/4"	25-3/8"	29-13/16"	#4	1/4"	2T-4SR
3XL	29030S-004I	1-13/32" - 1-7/8"	31"	32-1/4"	34-3/8"	38-13/16"	#4	1/4"	2T-4SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22030S-004M	36,0 - 47,0	120,6	152,4	206,4	319,1	#4**	1/4**	2T-4SRM
Extended	25030S-004M	36,0 - 47,0	349,3	381,0	435,0	547,7	#4**	1/4**	2T-4SRM
XL	27030S-004M	36,0 - 47,0	558,8	590,6	644,6	757,2	#4**	1/4**	2T-4SRM
3XL	29030S-004M	36,0 - 47,0	787,4	819,2	873,2	985,8	#4**	1/4**	2T-4SRM



Taper Shank Helical Flute Holders

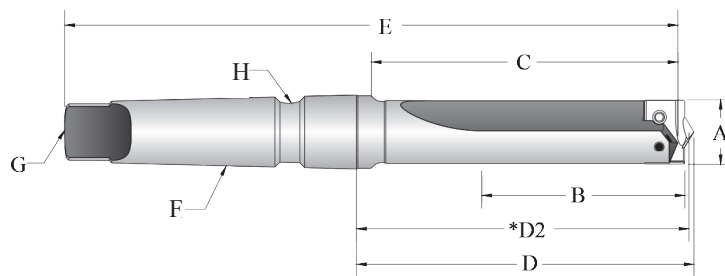
Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Intermediate	23030H-004M	36,0 - 47,0	165,1	196,9	250,9	363,6	#4**	1/4**	2T-4SRM
Standard	24030H-004M	36,0 - 47,0	209,5	241,3	295,3	408,0	#4**	1/4**	2T-4SRM

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A[®] Holders

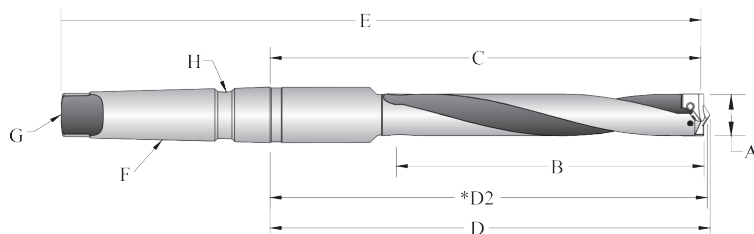
3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22030S-004IS126	1-13/32" - 1-7/8"	4-3/4"	6"	6-1/2"	6-7/16"	10-7/8"	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point[®], GEN2 T-A[®], or 150° Structural Steel T-A[®] Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

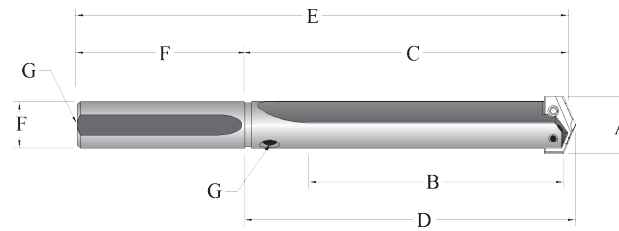
Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24030H-004IS126	1-13/32" - 1-7/8"	6-1/2"	7-3/4"	8-1/4"	8-3/16"	12-5/8"	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point[®], GEN2 T-A[®], or 150° Structural Steel T-A[®] Drill Insert Geometry



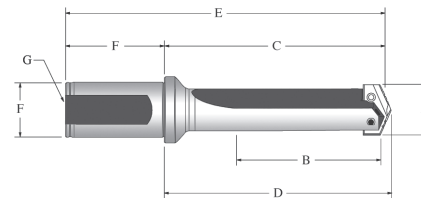
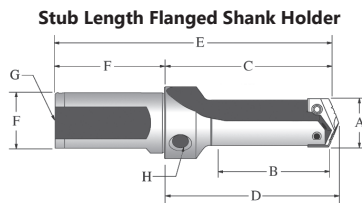
T-A[®] Holders

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Straight Shank Straight Flute Holders

Length	Item Number	A Drill Insert Range	B Drill Depth	C Body Length	D Tool Ref. Length	E Overall Length	F Shank		G Pipe Tap
							Dia	Length	
Short	22030S-125L	1-13/32" - 1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/4"	4"	1/4"
Short	22030S-150L	1-13/32" - 1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/2"	4"	1/4"
Intermediate	23030S-150L	1-13/32" - 1-7/8"	6-1/2"	7-3/4"	7-15/16"	11-3/4"	1-1/2"	4"	1/4"
Standard	24030S-125L	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/4"	4"	1/4"
Standard	24030S-150L	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/2"	4"	1/4"
Extended	25030S-125L	1-13/32" - 1-7/8"	13-3/4"	15"	15-3/16"	19"	1-1/4"	4"	1/4"
XL	27030S-150L	1-13/32" - 1-7/8"	22"	23-1/4"	23-7/16"	27-1/4"	1-1/2"	4"	1/4"
3XL	29030S-150L	1-13/32" - 1-7/8"	31"	32-1/4"	32-7/16"	36-1/4"	1-1/2"	4"	1/4"



Flanged Shank Straight Flute Holders

Length	Item Number	A Drill Insert Range	B Drill Depth	C Body Length	D Tool Ref. Length	E Overall Length	F Shank		G Pipe Tap		H
							Dia	Length	Rear	Side	
Stub	21030S-150F	1-13/32" - 1-7/8"	3"	4-59/64"	5-7/64"	7-39/64"	1-1/2"	2-11/16"	1/4"	1/4"	
Short	22030S-150F	1-13/32" - 1-7/8"	4-3/4"	6-13/16"	7"	9-1/2"	1-1/2"	2-11/16"	1/4"	N/A	
Intermediate	23030S-150F	1-13/32" - 1-7/8"	6-1/2"	8-9/16"	8-3/4"	11-1/4"	1-1/2"	2-11/16"	1/4"	N/A	
Standard	24030S-150F	1-13/32" - 1-7/8"	8-1/4"	10-5/16"	10-1/2"	13"	1-1/2"	2-11/16"	1/4"	N/A	
METRIC (mm) *Metric Thread to BSP & ISO 7-1											
Stub	21030S-40FM	36,0 - 47,0	76,2	125,0	129,8	195,0	40,0	70,0	1/4"	1/4"	
Short	22030S-40FM	36,0 - 47,0	120,7	173,0	177,8	243,0	40,0	70,0	1/4"	N/A	
Extended	25030S-40FM	36,0 - 47,0	349,3	401,6	406,4	471,6	40,0	70,0	1/4"	N/A	
XL	27030S-40FM	36,0 - 47,0	558,8	611,1	615,9	681,1	40,0	70,0	1/4"	N/A	
3XL	29030S-40FM	36,0 - 47,0	787,4	839,7	844,5	909,7	40,0	70,0	1/4"	N/A	

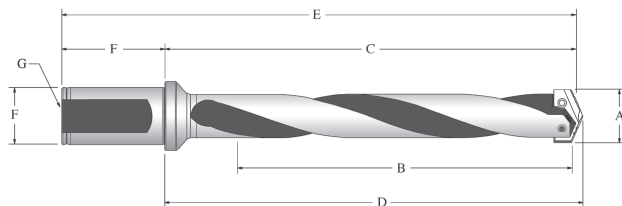
WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

1.353" - 1.882" Inch
34,36 - 47,80 mm
Revolution & Opening
APX
GEN3SYS & GEN3SYS XT
Original T-A & GEN2 T-A
AccuPort 432
ASC 320
Special Tooling



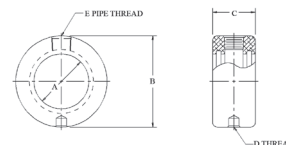
T-A® Holders

3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
							Dia	Length	Rear
Intermediate	23030H-150F	1-13/32" - 1-7/8"	6-1/2"	8-9/16"	8-3/4"	11-1/4"	1-1/2"	2-11/16"	1/4"
Standard	24030H-150F	1-13/32" - 1-7/8"	8-1/4"	10-5/16"	10-1/2"	13"	1-1/2"	2-11/16"	1/4"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Intermediate	23030H-40FM	36,0 - 47,0	165,1	217,5	222,3	287,5	40,0	70,0	1/4**
Standard	24030H-40FM	36,0 - 47,0	209,6	261,9	266,7	331,9	40,0	70,0	1/4**



Rotary Coolant Adapter (RCA) and Accessories

Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	⚠ 2T-4SR	1-1/4"	2-1/2"	1-3/8"	3/8" - NC	1/4"	2T1-4SR	2T1-4OR-10
	⚠ 2T-5SR	1-3/4"	3"	1-3/8"	3/8" - NC	1/4"	2T1-5SR	2T1-5OR-10
Metric	⚠ 2T-4SRM	31,75	63,50	34,92	M10 X 1,50	1/4**	2T1-4SR	2T1-4OR-10
	⚠ 2T-5SRM	44,45	76,20	34,92	M10 X 1,50	1/4**	2T1-5SR	2T1-5OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

⚠ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Inch		Metric	
				Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
3	7514-IP20-1	7514N-IP20-1	8IP-20	1-13/32" - 1-7/8"	121.3 in.-lbs	36,0 - 65,0	1370 N-cm

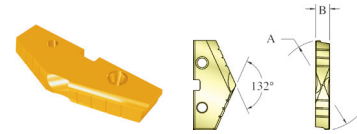
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

Original T-A® Drill Inserts

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



1.850 - 2.570 Inch
46.99 - 65.28 mm



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
Super Cobalt	1-29/32"	1.8898	48,00	5/16"	154T-48	○
		1.9063	48,42		154T-0129	○
		1.9291	49,00		154T-49	○
	1-15/16"	1.9375	49,21		154T-0130	○
		1.9685	50,00		154T-50	○
		1.9688	50,01		154T-0131	○
	2"	2.0000	50,80		154T-0200	○
		2.0079	51,00		154T-51	○
	2-1/32"	2.0313	51,59		154T-0201	○
	2-3/64"	2.0472	52,00		154T-52	○
	2-1/16"	2.0625	52,39		154T-0202	○
		2.0866	53,00		154T-53	○
	2-3/32"	2.0938	53,18		154T-0203	○
	2-1/8"	2.1250	53,98		154T-0204	○
		2.1260	54,00		154T-54	○
	2-5/32"	2.1563	54,77		154T-0205	○
		2.1654	55,00		154T-55	○
	2-3/16"	2.1875	55,56		154T-0206	○
		2.2047	56,00		154T-56	○
	2-7/32"	2.2188	56,36		154T-0207	○
		2.2441	57,00		154T-57	○
	2-1/4"	2.2500	57,15		154T-0208	○
	2-9/32"	2.2813	57,94		154T-0209	○
		2.2835	58,00		154T-58	○
	2-5/16"	2.3125	58,74		154T-0210	○
		2.3228	59,00		154T-59	○
	2-11/32"	2.3438	59,53		154T-0211	○
		2.3622	60,00		154T-60	○
	2-3/8"	2.3750	60,33		154T-0212	○
		2.4016	61,00		154T-61	○
	2-13/32"	2.4063	61,12		154T-0213	○
	2-7/16"	2.4375	61,91		154T-0214	○
2.4409		62,00	154T-62	○		
2-15/32"	2.4688	62,71	154T-0215	○		
	2.4803	63,00	154T-63	○		
2-1/2"	2.5000	63,50	154T-0216	○		
	2.5197	64,00	154T-64	○		
2-17/32"	2.5313	64,29	154T-0217	○		
	2.5591	65,00	154T-65	○		
2-9/16"	2.5625	65,09	154T-0218	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

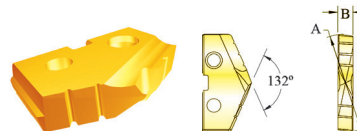
ASC 320

Special Tooling



GEN2 T-A® HSS Drill Inserts

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
HSS		1.8898	48,00	5/16"	434T-48	○
	1-29/32"	1.9063	48,42		434T-0129	○
		1.9291	49,00		434T-49	○
	1-15/16"	1.9375	49,21		434T-0130	○
		1.9685	50,00		434T-50	○
	1-31/32"	1.9688	50,01		434T-0131	○
	2"	2.0000	50,80		434T-0200	○
		2.0079	51,00		434T-51	○
	2-1/32"	2.0313	51,59		434T-0201	○
	2-3/64"	2.0472	52,00		434T-52	○
	2-1/16"	2.0625	52,39		434T-0202	○
		2.0866	53,00		434T-53	○
	2-3/32"	2.0938	53,18		434T-0203	○
	2-1/8"	2.1250	53,98		434T-0204	○
		2.1260	54,00		434T-54	○
	2-5/32"	2.1563	54,77		434T-0205	○
		2.1654	55,00		434T-55	○
	2-3/16"	2.1875	55,56		434T-0206	○
		2.2047	56,00		434T-56	○
	2-7/32"	2.2188	56,36		434T-0207	○
		2.2441	57,00		434T-57	○
	2-1/4"	2.2500	57,15		434T-0208	○
	2-9/32"	2.2813	57,94		434T-0209	○
		2.2835	58,00		434T-58	○
	2-5/16"	2.3125	58,74		434T-0210	○
		2.3228	59,00		434T-59	○
	2-11/32"	2.3438	59,53		434T-0211	○
		2.3622	60,00		434T-60	○
	2-3/8"	2.3750	60,33		434T-0212	○
		2.4016	61,00		434T-61	○
	2-13/32"	2.4063	61,12		434T-0213	○
	2-7/16"	2.4375	61,91		434T-0214	○
	2.4409	62,00	434T-62	○		
2-15/32"	2.4688	62,71	434T-0215	○		
	2.4803	63,00	434T-63	○		
2-1/2"	2.5000	63,50	434T-0216	○		
	2.5197	64,00	434T-64	○		
2-17/32"	2.5313	64,29	434T-0217	○		
	2.5591	65,00	434T-65	○		
2-9/16"	2.5625	65,09	434T-0218	○		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC, -HE.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked

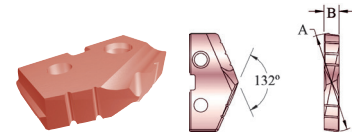
GEN2 T-A® HSS Drill Inserts

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



1.850 - 2.570 Inch
46.99 - 65.28 mm

GEN2 T-A Drill Inserts (supplied in 1 piece packages)



Material	A (Diameter)			B Thickness	Availability & Geometry			
	Fractional Equivalent	(inch)	(mm)		TiN	⓪	AM200®	⓪
Super Cobalt	1-29/32"	1.8898	48,00	5/16"	454T-48	⓪	454H-48	⓪
		1.9063	48,42		454T-0129	⓪	454H-0129	⓪
		1.9291	49,00		454T-49	⓪	454H-49	⓪
	1-15/16"	1.9375	49,21		454T-0130	⓪	454H-0130	⓪
		1.9685	50,00		454T-50	⓪	454H-50	⓪
	1-31/32"	1.9688	50,01		454T-0131	⓪	454H-0131	⓪
		2"	2.0000		50,80	454T-0200	⓪	454H-0200
	2"	2.0079	51,00		454T-51	⓪	454H-51	⓪
		2.0313	51,59		454T-0201	⓪	454H-0201	⓪
	2-1/32"	2.0472	52,00		454T-52	⓪	454H-52	⓪
	2-3/64"	2.0472	52,00		454T-0202	⓪	454H-0202	⓪
	2-1/16"	2.0625	52,39		454T-53	⓪	454H-53	⓪
	2-3/32"	2.0866	53,00		454T-0203	⓪	454H-0203	⓪
		2.0938	53,18		454T-0204	⓪	454H-0204	⓪
	2-1/8"	2.1250	53,98		454T-54	⓪	454H-54	⓪
	2-5/32"	2.1260	54,00		454T-0205	⓪	454H-0205	⓪
		2.1563	54,77		454T-55	⓪	454H-55	⓪
	2-3/16"	2.1654	55,00		454T-0206	⓪	454H-0206	⓪
		2.1875	55,56		454T-56	⓪	454H-56	⓪
	2-7/32"	2.2047	56,00		454T-0207	⓪	454H-0207	⓪
		2.2188	56,36		454T-57	⓪	454H-57	⓪
	2-1/4"	2.2441	57,00		454T-0208	⓪	454H-0208	⓪
		2.2500	57,15		454T-0209	⓪	454H-0209	⓪
	2-9/32"	2.2813	57,94		454T-58	⓪	454H-58	⓪
		2.2835	58,00		454T-0210	⓪	454H-0210	⓪
	2-5/16"	2.3125	58,74		454T-59	⓪	454H-59	⓪
		2.3228	59,00		454T-0211	⓪	454H-0211	⓪
	2-11/32"	2.3438	59,53		454T-60	⓪	454H-60	⓪
		2.3622	60,00		454T-0212	⓪	454H-0212	⓪
	2-3/8"	2.3750	60,33		454T-61	⓪	454H-61	⓪
		2.4016	61,00		454T-0213	⓪	454H-0213	⓪
	2-13/32"	2.4130	61,29		454T-2.413	⓪	454H-2.413	⓪
		2.4213	61,50		454T-61.5	⓪	454H-61.5	⓪
	2-7/16"	2.4375	61,91		454T-0214	⓪	454H-0214	⓪
2.4409		62,00	454T-62	⓪	454H-62	⓪		
2-15/32"	2.4688	62,71	454T-0215	⓪	454H-0215	⓪		
	2.4803	63,00	454T-63	⓪	454H-63	⓪		
2-1/2"	2.5000	63,50	454T-0216	⓪	454H-0216	⓪		
	2.5197	64,00	454T-64	⓪	454H-64	⓪		
2-17/32"	2.5313	64,29	454T-0217	⓪	454H-0217	⓪		
	2.5591	65,00	454T-65	⓪	454H-65	⓪		
2-9/16"	2.5625	65,09	454T-0218	⓪	454H-0218	⓪		

Geometries available (see page 197 for details): -CI, -SK, -CR, -HI, -HR, -BR, -NC, -WC, -HE.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

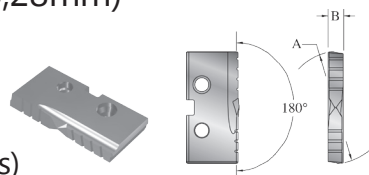
ASC 320

Special Tooling



T-A[®] HSS Drill Inserts

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



Flat Bottom T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
Super Cobalt		1.8898	48,00	5/16"	154T-48-FB	○
	1-29/32"	1.9063	48,42		154T-0129-FB	○
		1.9291	49,00		154T-49-FB	○
	1-15/16"	1.9375	49,21		154T-0130-FB	○
		1.9685	50,00		154T-50-FB	○
	1-31/32"	1.9688	50,01		154T-0131-FB	○
	2"	2.0000	50,80		154T-0200-FB	○
		2.0079	51,00		154T-51-FB	○
	2-1/32"	2.0313	51,59		154T-0201-FB	○
	2-3/64"	2.0472	52,00		154T-52-FB	○
	2-1/16"	2.0625	52,39		154T-0202-FB	○
		2.0866	53,00		154T-53-FB	○
	2-3/32"	2.0938	53,18		154T-0203-FB	○
	2-1/8"	2.1250	53,98		154T-0204-FB	○
		2.1260	54,00		154T-54-FB	○
	2-5/32"	2.1563	54,77		154T-0205-FB	○
		2.1654	55,00		154T-55-FB	○
	2-3/16"	2.1875	55,56		154T-0206-FB	○
		2.2047	56,00		154T-56-FB	○
	2-7/32"	2.2188	56,36		154T-0207-FB	○
		2.2441	57,00		154T-57-FB	○
	2-1/4"	2.2500	57,15		154T-0208-FB	○
	2-9/32"	2.2813	57,94		154T-0209-FB	○
		2.2835	58,00		154T-58-FB	○
	2-5/16"	2.3125	58,74		154T-0210-FB	○
		2.3228	59,00		154T-59-FB	○
	2-11/32"	2.3438	59,53		154T-0211-FB	○
		2.3622	60,00		154T-60-FB	○
	2-3/8"	2.3750	60,33		154T-0212-FB	○
		2.4016	61,00		154T-61-FB	○
	2-13/32"	2.4063	61,12		154T-0213-FB	○
	2-7/16"	2.4375	61,91		154T-0214-FB	○
	2.4409	62,00	154T-62-FB	○		
2-15/32"	2.4688	62,71	154T-0215-FB	○		
	2.4803	63,00	154T-63-FB	○		
2-1/2"	2.5000	63,50	154T-0216-FB	○		
	2.5197	64,00	154T-64-FB	○		
2-17/32"	2.5313	64,29	154T-0217-FB	○		
	2.5591	65,00	154T-65-FB	○		
2-9/16"	2.5625	65,09	154T-0218-FB	○		

Geometries available (see page 197 for details): -FN.

Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

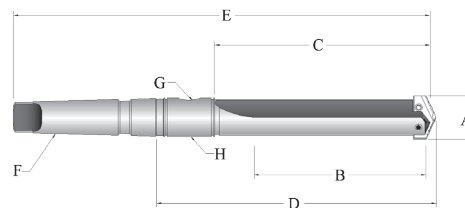
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TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200 [®]	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked



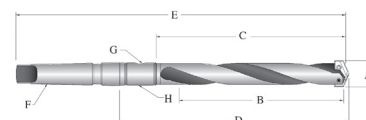
T-A[®] Holders

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



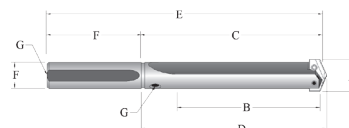
Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22040S-004I	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	8-5/8"	13-1/16"	#4	1/4"	2T-4SR
Short	22040S-005I	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	8-5/8"	14-5/16"	#5	1/4"	2T-5SR
Standard	24040S-004I	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	12-5/8"	17-1/16"	#4	1/4"	2T-4SR
Standard	24040S-005I	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	12-5/8"	18-5/16"	#5	1/4"	2T-5SR
⚠ Extended	25040S-005I	1-29/32" - 2-9/16"	16-5/8"	18"	20-1/8"	25-13/16"	#5	1/4"	2T-5SR
⚠ XL	27040S-005I	1-29/32" - 2-9/16"	24-5/8"	26"	28-1/8"	33-13/16"	#5	1/4"	2T-5SR
⚠ 3XL	29040S-005I	1-29/32" - 2-9/16"	34-5/8"	36"	38-1/8"	43-13/16"	#5	1/4"	2T-5SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22040S-005M	48,0 - 65,0	130,1	165,1	219,1	363,5	#5**	1/4"**	2T-5SRM
⚠ Extended	25040S-005M	48,0 - 65,0	422,3	457,2	511,2	655,6	#5**	1/4"**	2T-5SRM
⚠ XL	27040S-005M	48,0 - 65,0	625	660,4	714,4	858,8	#5**	1/4"**	2T-5SRM
⚠ 3XL	29040S-005M	48,0 - 65,0	879	914,4	968,4	1112,8	#5**	1/4"**	2T-5SRM



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	24040H-005M	48,0 - 65,0	231,8	266,7	320,7	465,1	#5**	1/4"**	2T-5SRM



Straight Shank Straight Flute Holders

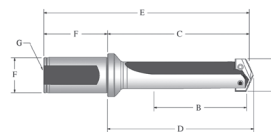
Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Short	22040S-150L	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-1/2"	4"	1/4"
Short	22040S-175L	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-3/4"	4"	1/4"
Standard	24040S-150L	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-1/2"	4"	1/4"
Standard	24040S-175L	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-3/4"	4"	1/4"
⚠ Extended	25040S-150L	1-29/32" - 2-9/16"	16-5/8"	18"	18-3/16"	22"	1-1/2"	4"	1/4"
⚠ XL	27040S-150L	1-29/32" - 2-9/16"	24-5/8"	26"	26-3/16"	30"	1-1/2"	4"	1/4"
⚠ 3XL	29040S-150L	1-29/32" - 2-9/16"	34-5/8"	36"	36-3/16"	40"	1-1/2"	4"	1/4"

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



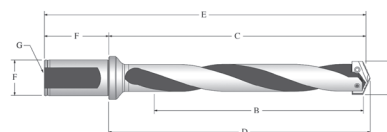
T-A® Holders

4 Series Range: 1.850"-2.570" (46,99mm-65,28mm)



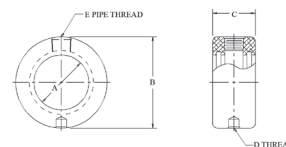
Flanged Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
							Dia	Length	Rear
Short	22040S-150F	1-29/32" - 2-9/16"	5-1/8"	7-1/6"	7-1/4"	9-3/4"	1-1/2"	2-11/16"	1/4"
Standard	24040S-150F	1-29/32" - 2-9/16"	9-1/8"	11-1/16"	11-1/4"	13-3/4"	1-1/2"	2-11/16"	1/4"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Short	22040S-40FM	48,0 - 65,0	130,2	179,4	184,0	249,4	40,0	70,0	1/4**
Extended	25040S-40FM	48,0 - 65,0	422,3	471,5	476,0	541,5	40,0	70,0	1/4**
XL	27040S-40FM	48,0 - 65,0	625	674,7	679,0	744,7	40,0	70,0	1/4**
3XL	29040S-40FM	48,0 - 65,0	879	928,7	933,0	998,7	40,0	70,0	1/4**



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
							Dia	Length	Rear
Standard	24040H-150F	1-29/32" - 2-9/16"	9-1/8"	11-1/16"	11-1/4"	13-3/4"	1-1/2"	2-11/16"	1/4"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	24040H-40FM	48,0 - 65,0	231,8	281,0	285,8	351,0	40,0	70,0	1/4**



Rotary Coolant Adapter (RCA) and Accessories

Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	2T-4SR	1-1/4"	2-1/2"	1-3/8"	3/8" - NC	1/4"	2T1-4SR	2T1-4OR-10
	2T-5SR	1-3/4"	3"	1-3/8"	3/8" - NC	1/4"	2T1-5SR	2T1-5OR-10
Metric	2T-4SRM	31,75	63,50	34,92	M10 X 1,50	1/4**	2T1-4SR	2T1-4OR-10
	2T-5SRM	44,45	76,20	34,92	M10 X 1,50	1/4**	2T1-5SR	2T1-5OR-10

*Thread to BSP & ISO 7-1 / ** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers. / Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Inch		Metric	
				Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
4	7514-IP20-1	7514N-IP20-1	8IP-20	1-29/32" - 2-9/16"	121.3 in.-lbs	36,0 - 65,0	1370 N-cm

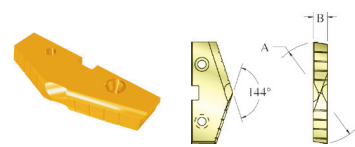
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



Original T-A® Drill Inserts

5 Series Range: 2.456" - 3.000" (62,38mm - 76,20mm)



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
HSS	2-1/2"	2.5000	63,50	7/16"	135T-0216	○
		2.5197	64,00		135T-64	○
	2-17/32"	2.5313	64,29		135T-0217	○
	2-9/16"	2.5625	65,09		135T-0218	○
	2-19/32"	2.5938	65,88		135T-0219	○
		2.5984	66,00		135T-66	○
	2-5/8"	2.6250	66,68		135T-0220	○
	2-21/32"	2.6563	67,47		135T-0221	○
		2.6772	68,00		135T-68	○
	2-11/16"	2.6875	68,26		135T-0222	○
	2-23/32"	2.7188	69,05		135T-0223	○
	2-3/4"	2.7500	69,85		135T-0224	○
		2.7559	70,00		135T-70	○
	2-25/32"	2.7813	70,64		135T-0225	○
	2-13/16"	2.8125	71,44		135T-0226	○
		2.8346	72,00		135T-72	○
	2-27/32"	2.8438	72,23		135T-0227	○
	2-7/8"	2.8750	73,03		135T-0228	○
	2-29/32"	2.9063	73,82		135T-0229	○
		2.9134	74,00		135T-74	○
	2.9375	74,41	135T-0230	○		
	2.9688	75,61	135T-0231	○		
	2.9921	76,00	135T-76	○		
	3"	3.0000	76,20	135T-0300	○	

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

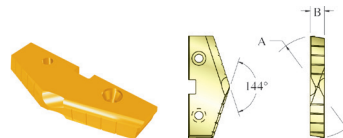
TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

- Availability Codes
- Stocked
- ▲ Non-Stocked



GEN2 T-A® HSS Drill Inserts

5 Series Range: 2.456" - 3.000" (62,38mm - 76,20mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	●
HSS	2-1/2"	2.5000	63,50	7/16"	435T-0216	○
		2.5197	64,00		435T-64	○
	2-17/32"	2.5313	64,29		435T-0217	○
	2-9/16"	2.5625	65,09		435T-0218	○
	2-19/32"	2.5938	65,88		435T-0219	○
		2.5984	66,00		435T-66	○
	2-5/8"	2.6250	66,68		435T-0220	○
	2-21/32"	2.6563	67,47		435T-0221	○
		2.6772	68,00		435T-68	○
	2-11/16"	2.6875	68,26		435T-0222	○
	2-23/32"	2.7188	69,05		435T-0223	○
	2-3/4"	2.7500	69,85		435T-0224	○
		2.7559	70,00		435T-70	○
	2-25/32"	2.7813	70,64		435T-0225	○
	2-13/16"	2.8125	71,44		435T-0226	○
		2.8346	72,00		435T-72	○
	2-27/32"	2.8438	72,23		435T-0227	○
	2-7/8"	2.8750	73,03		435T-0228	○
	2-29/32"	2.9063	73,82		435T-0229	○
		2.9134	74,00		435T-74	○
2-15/16"	2.9375	74,41	435T-0230	○		
2-31/32"	2.9688	75,61	435T-0231	○		
	2.9921	76,00	435T-76	○		
3"	3.0000	76,20	435T-0300	○		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

- Availability Codes
- Stocked
- ▲ Non-Stocked

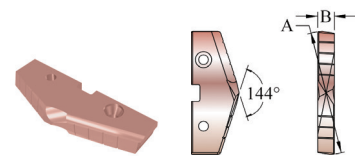
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXxA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



GEN2 T-A® HSS Drill Inserts

5 Series Range: 2.456" - 3.000" (62,38mm - 76,20mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	①
Super Cobalt	2-1/2"	2.5000	63,50	7/16"	455H-0216	○
		2.5197	64,00		455H-64	○
	2-17/32"	2.5313	64,29		455H-0217	○
	2-9/16"	2.5625	65,09		455H-0218	○
	2-19/32"	2.5938	65,88		455H-0219	○
		2.5984	66,00		455H-66	○
	2-5/8"	2.6250	66,68		455H-0220	○
	2-21/32"	2.6563	67,47		455H-0221	○
		2.6772	68,00		455H-68	○
	2-11/16"	2.6875	68,26		455H-0222	○
	2-23/32"	2.7188	69,05		455H-0223	○
	2-3/4"	2.7500	69,85		455H-0224	○
		2.7559	70,00		455H-70	○
	2-25/32"	2.7813	70,64		455H-0225	○
	2-13/16"	2.8125	71,44		455H-0226	○
		2.8346	72,00		455H-72	○
	2-27/32"	2.8439	72,23		455H-0227	○
	2-7/8"	2.8750	73,03		455H-0228	○
	2-29/32"	2.9063	73,82		455H-0229	○
		2.9134	74,00		455H-74	○
2-15/16"	2.9375	74,41	455H-0230	○		
2-31/32"	2.9688	75,61	455H-0231	○		
	2.9921	76,00	455H-76	○		
3"	3.0000	76,20	455H-0300	○		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

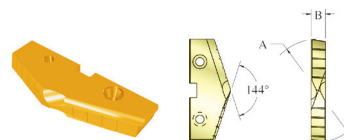
ASC 320

Special Tooling



Original T-A® Drill Inserts

6 Series Range: 3.001"-3.507" (76,22mm-89,08mm)
For use with 5 Series Holders



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
HSS	3-1/32"	3.0313	76,99	7/16"	136T-0301	⓪
	3-1/16"	3.0625	77,79		136T-0302	⓪
		3.0709	78,00		136T-78	⓪
	3-3/32"	3.0938	78,58		136T-0303	⓪
	3-1/8"	3.1250	79,38		136T-0304	⓪
		3.1496	80,00		136T-80	⓪
	3-5/32"	3.1563	80,17		136T-0305	⓪
	3-3/16"	3.1875	80,96		136T-0306	⓪
	3-7/32"	3.2188	81,76		136T-0307	⓪
		3.2283	82,00		136T-82	⓪
	3-1/4"	3.2500	82,55		136T-0308	⓪
	3-9/32"	3.2813	83,34		136T-0309	⓪
		3.3071	84,00		136T-84	⓪
	3-5/16"	3.3125	84,14		136T-0310	⓪
	3-11/32"	3.3438	84,93		136T-0311	⓪
	3-3/8"	3.3750	85,73		136T-0312	⓪
		3.3858	86,00		136T-86	⓪
	3-13/32"	3.4063	86,52		136T-0313	⓪
	3-7/16"	3.4375	87,31		136T-0314	⓪
		3.4646	88,00		136T-88	⓪
3-15/32"	3.4688	88,11	136T-0315	⓪		
3-1/2"	3.5000	88,90	136T-0316	⓪		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

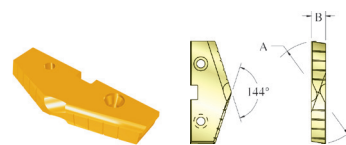
TiN	XXXT-XXXX
TiAlN	XXXX-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



GEN2 T-A® HSS Drill Inserts

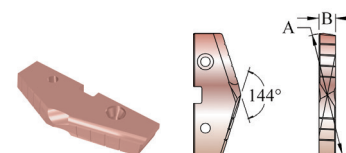
6 Series Range: 3.001"-3.507" (76,22mm-89,08mm)

For use with 5 Series Holders



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	Ø
HSS	3-1/32"	3.0313	76,99	7/16"	436T-0301	○
	3-1/16"	3.0625	77,79		436T-0302	○
		3.0709	78,00		436T-78	○
	3-3/32"	3.0938	78,58		436T-0303	○
	3-1/8"	3.1250	79,38		436T-0304	○
		3.1496	80,00		436T-80	○
	3-5/32"	3.1563	80,17		436T-0305	○
	3-3/16"	3.1875	80,96		436T-0306	○
	3-7/32"	3.2188	81,76		436T-0307	○
		3.2283	82,00		436T-82	○
	3-1/4"	3.2500	82,55		436T-0308	○
	3-9/32"	3.2813	83,34		436T-0309	○
		3.3071	84,00		436T-84	○
	3-5/16"	3.3125	84,14		436T-0310	○
	3-11/32"	3.3438	84,93		436T-0311	○
	3-3/8"	3.3750	85,73		436T-0312	○
		3.3858	86,00		436T-86	○
	3-13/32"	3.4063	86,52		436T-0313	○
	3-7/16"	3.4375	87,31		436T-0314	○
		3.4646	88,00		436T-88	○
3-15/32"	3.4688	88,11	436T-0315	○		
3-1/2"	3.5000	88,90	436T-0316	○		



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

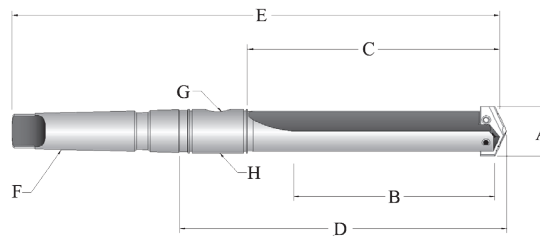
Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	Ø
Super Cobalt	3-1/32"	3.0313	76,99	7/16"	456H-0301	○
	3-1/16"	3.0625	77,79		456H-0302	○
		3.0709	78,00		456H-78	○
	3-3/32"	3.0938	78,58		456H-0303	○
	3-1/8"	3.1250	79,38		456H-0304	○
		3.1496	80,00		456H-80	○
	3-5/32"	3.1563	80,17		456H-0305	○
	3-3/16"	3.1875	80,96		456H-0306	○
	3-7/32"	3.2188	81,76		456H-0307	○
		3.2283	82,00		456H-82	○
	3-1/4"	3.2500	82,55		456H-0308	○
	3-9/32"	3.2813	83,34		456H-0309	○
		3.3071	84,00		456H-84	○
	3-5/16"	3.3125	84,14		456H-0310	○
	3-11/32"	3.3438	84,93		456H-0311	○
	3-3/8"	3.3750	85,73		456H-0312	○
		3.3858	86,00		456H-86	○
	3-13/32"	3.4063	86,52		456H-0313	○
	3-7/16"	3.4375	87,31		456H-0314	○
		3.4646	88,00		456H-88	○
3-15/32"	3.4688	88,11	456H-0315	○		
3-1/2"	3.5000	88,90	456H-0316	○		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



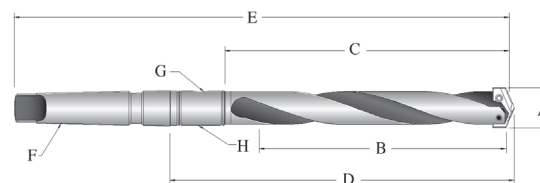
T-A® Holders

5 Series Range: 2.456" - 3.507" (62,38mm - 89,08mm)



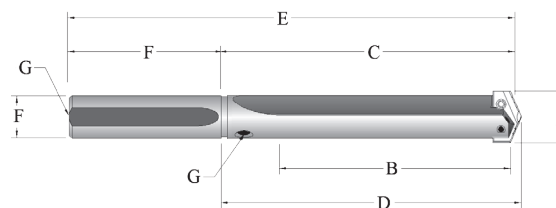
Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22050S-005I	2-1/2" - 3-1/2"	6-3/4"	8-1/2"	11-5/16"	16-15/16"	#5	1/2"	2T-6SR
Standard	24050S-005I	2-1/2" - 3-1/2"	10-3/4"	12-1/2"	15-5/16"	20-15/16"	#5	1/2"	2T-6SR
Extended	25050S-005I	2-1/2" - 3-1/2"	18-1/4"	20"	22-13/16"	28-7/16"	#5	1/2"	2T-6SR
XL	27050S-005I	2-1/2" - 3-1/2"	26"	27-3/4"	30-9/16"	36-3/16"	#5	1/2"	2T-6SR
3XL	29050S-005I	2-1/2" - 3-1/2"	35"	36-3/4"	39-9/16"	45-3/16"	#5	1/2"	2T-6SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22050S-005M	64,0 - 88,0	171,5	215,9	287,3	430,2	#5**	1/2"*	2T-6SRM
Extended	25050S-005M	64,0 - 88,0	463,6	508,0	579,4	722,3	#5**	1/2"*	2T-6SRM
XL	27050S-005M	64,0 - 88,0	660	704,8	776,2	919,1	#5**	1/2"*	2T-6SRM
3XL	29050S-005M	64,0 - 88,0	889	933,4	1004,8	1147,7	#5**	1/2"*	2T-6SRM



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	24050H-005M	64,0 - 88,0	273,1	317,5	388,9	531,8	#5**	1/2"*	2T-6SRM



Straight Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Short	22050S-200L	2-1/2" - 3-1/2"	6-3/4"	8-1/2"	8-3/4"	12-1/2"	2"	4"	1/2"
Standard	24050S-200L	2-1/2" - 3-1/2"	10-3/4"	12-1/2"	12-3/4"	16-1/2"	2"	4"	1/2"
Extended	25050S-200L	2-1/2" - 3-1/2"	18-1/4"	20"	20-1/4"	24"	2"	4"	1/2"
XL	27050S-200L	2-1/2" - 3-1/2"	26"	27-3/4"	28"	31-3/4"	2"	4"	1/2"
3XL	29050S-200L	2-1/2" - 3-1/2"	35"	36-3/4"	37"	40-3/4"	2"	4"	1/2"

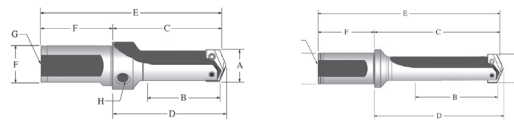
WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A[®] Holders

5 Series Range: 2.456" - 3.507" (62,38mm - 89,08mm)

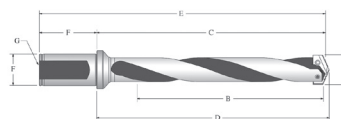
Flanged Shank Straight Flute Holders



Length	Item Number	A	B	C	D	E	F		G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia	Length	Rear	Side
Short	22050S-200F	2-1/2" - 3-1/2"	6-49/64"	8-1/2"	8-3/4"	13-1/4"	2"	4-1/2"	1/2"	N/A
Extended	25050S-200F	2-1/2" - 3-1/2"	18-17/64"	20"	20-1/4"	24-3/4"	2"	4-1/2"	1/2"	N/A
METRIC (mm) *Metric Thread to BSP & ISO 7-1										
Short	22050S-50FM	64,0 - 88,0	172	215,9	222,3	302,3	50	80	1/2"*	N/A
Extended	25050S-50FM	64,0 - 88,0	464	508	514,4	594,4	50	80	1/2"*	N/A

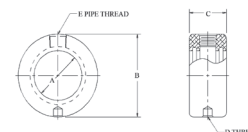
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders

Flanged Shank Helical Flute Holders



Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap
							Dia	Length	
Standard	24050H-200F	2-1/2" - 3-1/2"	10-3/4"	12-1/2"	12-3/4"	17-1/4"	2"	4-1/2"	1/2"
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	24050H-50FM	64,0 - 88,0	273	317,5	323,9	403,9	50	80	1/2"

Rotary Coolant Adapter (RCA) and Accessories



Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	2T-6SR	2-1/4"	3-3/4"	1-3/4"	1/2" - NC	1/2"	2T1-6SR	2T1-6OR-10
Metric	2T-6SRM	57,15	95,27	44,45	M12 X 1,75	1/2"*	2T1-6SR	2T1-6OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

▲ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Inch		Metric	
				Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
5	7619-IP25-1	N/A	8IP-25	2-1/2" - 4-1/2"	155.0 in.-lbs	64,0 - 114,0	1750 N-cm

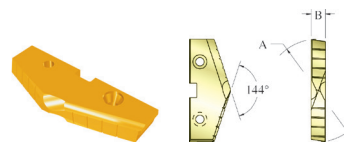
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



Original T-A® Drill Inserts

7 Series Range: 3.508"-4.000" (89,10mm-101,60mm)



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
HSS	3-17/32"	3.5313	89,96	7/16"	137T-0317	⓪
		3.5433	90,00		137T-90	⓪
	3-9/16"	3.5625	90,49		137T-0318	⓪
	3-19/32"	3.5938	91,28		137T-0319	⓪
		3.6221	92,00		137T-92	⓪
	3-5/8"	3.6250	92,08		137T-0320	⓪
	3-21/32"	3.6563	92,87		137T-0321	⓪
	3-11/16"	3.6875	93,66		137T-0322	⓪
		3.7008	94,00		137T-94	⓪
	3-23/32"	3.7188	94,46		137T-0323	⓪
	3-3/4"	3.7500	95,25		137T-0324	⓪
		3.7795	96,00		137T-96	⓪
	3-25/32"	3.7813	96,04		137T-0325	⓪
	3-13/16"	3.8125	96,84		137T-0326	⓪
	3-27/32"	3.8438	97,63		137T-0327	⓪
		3.8583	98,00		137T-98	⓪
	3-7/8"	3.8750	98,43		137T-0328	⓪
	3-29/32"	3.9063	99,22		137T-0329	⓪
		3.9370	100,00		137T-100	⓪
	3-15/16"	3.9375	100,01		137T-0330	⓪
3-31/32"	3.9688	100,81	137T-0331	⓪		
4"	4.0000	101,60	137T-0400	⓪		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked

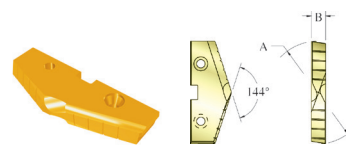
Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX



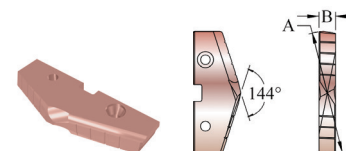
GEN2 T-A® HSS Drill Inserts

7 Series Range: 3.508"-4.000" (89,10mm-101,60mm)



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	Ø
HSS	3-17/32"	3.5313	89,69	7/16"	437T-0317	○
		3.5433	90,00		437T-90	○
	3-9/16"	3.5625	90,49		437T-0318	○
		3-19/32"	3.5938		91,28	437T-0319
	3-5/8"	3.6221	92,00		437T-92	○
		3.6250	92,08		437T-0320	○
	3-21/32"	3.6563	92,87		437T-0321	○
	3-11/16"	3.6875	93,66		437T-0322	○
	3-23/32"	3.7008	94,00		437T-94	○
		3.7188	94,46		437T-0323	○
	3-3/4"	3.7500	95,25		437T-0324	○
	3-25/32"	3.7795	96,00		437T-96	○
		3.7813	96,04		437T-0325	○
	3-13/16"	3.8125	96,84		437T-0326	○
	3-27/32"	3.8438	97,63		437T-0327	○
	3-7/8"	3.8583	98,00		437T-98	○
		3.8750	98,43		437T-0328	○
	3-29/32"	3.9063	99,22		437T-0329	○
	3-15/16"	3.9370	100,00		437T-100	○
		3.9375	100,01		437T-0330	○
3-31/32"	3.9688	100,81	437T-0331	○		
4"	4.0000	101,60	437T-0400	○		



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	Ø
Super Cobalt	3-17/32"	3.5313	89,69	7/16"	457H-0317	○
		3.5433	90,00		457H-90	○
	3-9/16"	3.5625	90,49		457H-0318	○
		3-19/32"	3.5938		91,28	457H-0319
	3-5/8"	3.6221	92,00		457H-92	○
		3.6250	92,08		457H-0320	○
	3-21/32"	3.6563	92,87		457H-0321	○
	3-11/16"	3.6875	93,66		457H-0322	○
	3-23/32"	3.7008	94,00		457H-94	○
		3.7188	94,46		457H-0323	○
	3-3/4"	3.7500	95,25		457H-0324	○
	3-25/32"	3.7795	96,00		457H-96	○
		3.7813	96,04		457H-0325	○
	3-13/16"	3.8125	96,84		457H-0326	○
	3-27/32"	3.8438	97,63		457H-0327	○
	3-7/8"	3.8583	98,00		457H-98	○
		3.8750	98,43		457H-0328	○
	3-29/32"	3.9063	99,22		457H-0329	○
	3-15/16"	3.9370	100,00		457H-100	○
		3.9375	100,01		457H-0330	○
3-31/32"	3.9688	100,81	457H-0331	○		
4"	4.0000	101,60	457H-0400	○		

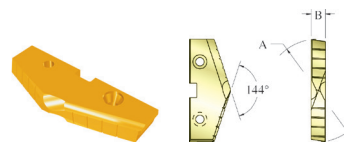
Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.



Original T-A® Drill Inserts

8 Series Range: 4.001"-4.507" (101,63mm-114,48mm)

For use with 7 Series Holders



T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⓪
HSS	4-1/64"	4.0157	102,00	7/16"	138T-102	⓪
	4-1/16"	4.0625	103,19		138T-0402	⓪
		4.0945	104,00		138T-104	⓪
	4-1/8"	4.1250	104,75		138T-0404	⓪
		4.1732	106,00		138T-106	⓪
	4-3/16"	4.1875	106,36		138T-0406	⓪
	4-1/4"	4.2500	107,95		138T-0408	⓪
		4.2520	108,00		138T-108	⓪
	4-5/16"	4.3125	109,54		138T-0410	⓪
		4.3307	110,00		138T-110	⓪
	4-3/8"	4.3750	111,13		138T-0412	⓪
		4.4094	112,00		138T-112	⓪
	4-7/16"	4.4375	112,71		138T-0414	⓪
		4.4882	114,00		138T-114	⓪
	4-1/2"	4.5000	114,30		138T-0416	⓪

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling

Can be supplied with other coatings as a non-stocked standard. Process fee applies. Example:

TiN	XXXT-XXXX
TiAlN	XXXA-XXXX
TiCN	XXXN-XXXX
AM200®	XXXH-XXXX

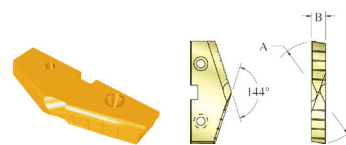
- ⓪ Availability Codes
- Stocked
- ▲ Non-Stocked



GEN2 T-A® HSS Drill Inserts

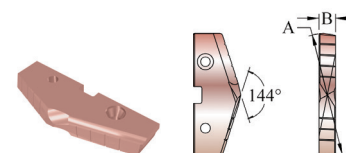
8 Series Range: 4.001"-4.507" (101,63mm-114,48mm)

For use with 7 Series Holders



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		TiN	⊙
HSS	4-1/64"	4.0157	102,00	7/16	438T-102	⊙
	4-1/16"	4.0625	103,19		438T-0402	⊙
	4-3/32"	4.0945	104,00		438T-104	⊙
	4-1/8"	4.1250	104,75		438T-0404	⊙
		4.1732	106,00		438T-106	⊙
	4-3/16"	4.1875	106,36		438T-0406	⊙
	4-1/4"	4.2500	107,95		438T-0408	⊙
		4.2520	108,00		438T-108	⊙
	4-5/16"	4.3125	109,54		438T-0410	⊙
		4.3307	110,00		438T-110	⊙
	4-3/8"	4.3750	111,13		438T-0412	⊙
		4.4094	112,00		438T-112	⊙
	4-7/16"	4.4375	112,71		438T-0414	⊙
		4.4882	114,00		438T-114	⊙
4-1/2"	4.5000	114,30	438T-0416	⊙		



GEN2 T-A Drill Inserts (supplied in 1 piece packages)

Material	A (Diameter)			B Thickness	Availability & Geometry	
	Fractional Equivalent	(inch)	(mm)		AM200®	⊙
Super Cobalt	4-1/64"	4.0157	102,00	7/16"	458H-102	⊙
	4-1/16"	4.0625	103,19		458H-0402	⊙
	4-3/32"	4.0945	104,00		458H-104	⊙
	4-1/8"	4.1250	104,75		458H-0404	⊙
		4.1732	106,00		458H-106	⊙
	4-3/16"	4.1875	106,36		458H-0406	⊙
	4-1/4"	4.2500	107,95		458H-0408	⊙
		4.2520	108,00		458H-108	⊙
	4-5/16"	4.3125	109,54		458H-0410	⊙
		4.3307	110,00		458H-110	⊙
	4-3/8"	4.3750	111,13		458H-0412	⊙
		4.4094	112,00		458H-112	⊙
	4-7/16"	4.4375	112,71		458H-0414	⊙
		4.4882	114,00		458H-114	⊙
4-1/2"	4.5000	114,30	458H-0416	⊙		

Geometries available (see page 197 for details): -SK, -CR, -HI, -HR, -BR, -NC, -WC.
Additional lead time and process fees apply. Please refer to the Drilling Product Price List for details.

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

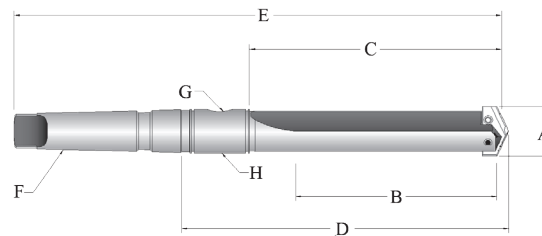
ASC 320

Special Tooling



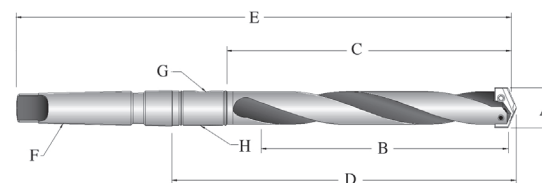
T-A[®] Holders

7 Series Range: 3.455"-4.507" (87,76mm-114,48mm)



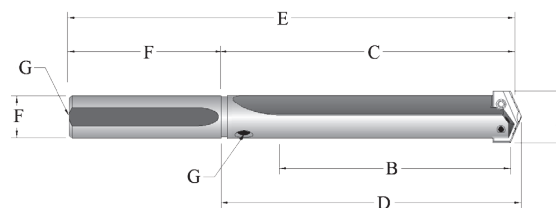
Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
Short	22070S-005I	3-17/32" - 4-1/2"	6-3/4"	8-7/8"	11-11/16"	17-5/16"	#5	1/2"	2T-6SR
Standard	24070S-005I	3-17/32" - 4-1/2"	10-3/4"	12-7/8"	15-11/16"	21-5/16"	#5	1/2"	2T-6SR
Extended	25070S-005I	3-17/32" - 4-1/2"	21-7/8"	24"	26-13/16"	32-7/16"	#5	1/2"	2T-6SR
XL	27070S-005I	3-17/32" - 4-1/2"	27"	29-1/8"	31-15/16"	37-9/16"	#5	1/2"	2T-6SR
3XL	29070S-005I	3-17/32" - 4-1/2"	37"	39-1/8"	41-5/16"	47-9/16"	#5	1/2"	2T-6SR
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Short	22070S-005M	90,0 - 114,0	171,5	225,4	296,8	439,7	#5**	1/2"*	2T-6SRM
Extended	25070S-005M	90,0 - 114,0	555,6	609,6	681,1	823,9	#5**	1/2"*	2T-6SRM
XL	27070S-005M	90,0 - 114,0	685	739,7	811,2	954,0	#5**	1/2"*	2T-6SRM
3XL	29070S-005M	90,0 - 114,0	939	993,7	1065,2	1208,0	#5**	1/2"*	2T-6SRM



Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	MT	Pipe Tap	RCA
METRIC (mm) *Metric Thread to BSP & ISO 7-1 **Per ISO 296 Type BEK									
Standard	24070H-005M	90,0 - 114,0	273,1	327,0	398,5	541,3	#5**	1/2"*	2T-6SRM



Straight Shank Straight Flute Holders

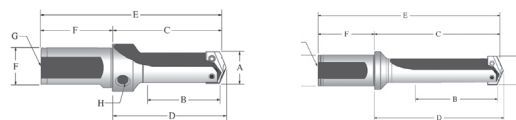
Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Short	22070S-300L	3-17/32" - 4-1/2"	6-3/4"	8-7/8"	9-1/8"	13-7/8"	3"	5"	1/2"
Standard	24070S-300L	3-17/32" - 4-1/2"	10-3/4"	12-7/8"	13-1/8"	17-7/8"	3"	5"	1/2"
Extended	25070S-300L	3-17/32" - 4-1/2"	21-7/8"	24"	24-1/4"	29"	3"	5"	1/2"
XL	27070S-300L	3-17/32" - 4-1/2"	27"	29-1/8"	29-3/8"	34-1/8"	3"	5"	1/2"
3XL	29070S-300L	3-17/32" - 4-1/2"	37"	39-1/8"	39-3/8"	44-1/8"	3"	5"	1/2"

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A® Holders

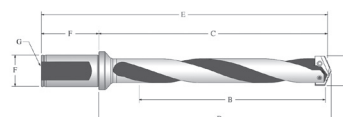
7 Series Range: 3.455"-4.507" (87,76mm-114,48mm)



Flanged Shank Straight Flute Holders

Length	Item Number	A	B	C	D	E	F		G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Shank		Pipe Tap	
							Dia	Length	Rear	Side
Short	22070S-200F	3-17/32" - 4-1/2"	6-49/64"	8-7/8"	9-1/8"	13-5/8"	2"	4-1/2"	1/2"	N/A
Extended	25070S-200F	3-17/32" - 4-1/2"	21-57/64"	23-57/64"	24-1/4"	27-3/4"	2"	4-1/2"	1/2"	N/A
METRIC (mm) *Metric Thread to BSP & ISO 7-1										
Short	22070S-50FM	90,0 - 114,0	172	225,4	231,8	311,8	50	80	1/2"*	N/A
Extended	25070S-50FM	90,0 - 114,0	556	606,9	616	696	50	80	1/2"*	N/A

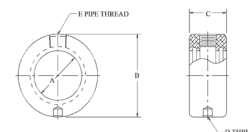
NOTE: Refer to page 198 for instructions on the recommended use of the 0.5, 1.5, or 2.5 series holders



Flanged Shank Helical Flute Holders

Length	Item Number	A	B	C	D	E	F		G
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Overall Length	Dia	Length	Pipe Tap
Standard	24070H-200F	3-17/32" - 4-1/2"	10-3/4"	12-7/8"	13-1/8"	17-5/8"	2"	4-1/2"	1/2"*
METRIC (mm) *Metric Thread to BSP & ISO 7-1									
Standard	24070H-50FM	90,0 - 114,0	273	327	333,4	413,4	50	80	1/2"*

Rotary Coolant Adapter (RCA) and Accessories



Length	Item Number	A	B	C	D	E	RCA O-Ring Kit Item Number **	RCA O-Ring Replacements 10 Pieces
		Inner Dia	Outer Dia	Length	Thread for Driving Rod	Pipe Tap		
Inch	4 2T-6SR	2-1/4"	3-3/4"	1-3/4"	1/2" - 13 UNC	1/2"	2T1-6SR	2T1-6OR-10
Metric	4 2T-6SRM	57,15	95,27	44,45	M12 X 1,75	1/2"*	2T1-6SR	2T1-6OR-10

* Thread to BSP & ISO 7-1

** RCA Repair Kit includes (2) O-rings, (2) snap rings and (2) thrust washers.

▲ Refer to page 200 for Proper RCA Assembly

Replacement TORX Plus Screws

Series	TORX Plus Screws (10 pack)	Nylon Locking TORX Plus Screws (10 pack)	TORX Plus Hand Driver	Inch		Metric	
				Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
7	7619-IP25-1	N/A	8IP-25	3-17/32" - 4-1/2"	155.0 in.-lbs	64,0 - 114,0	1750 N-cm

Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



T-A[®] HSS Drill Inserts

Recommended Speeds and Feeds - Inch

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♦.

Material	Hardness (BHN)	Grade	SPEED			FEED (IPR)						
			TiN SFM	TiAlN SFM	TiCN SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"	1-29/32" to 2-9/16"	2-19/32" to 4-1/2"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	200	280	260	0.007	0.010	0.013	0.016	0.020	0.023	0.028
	150-200	HSS	180	260	235	0.007	0.010	0.013	0.016	0.020	0.023	0.028
	200-250	HSS	160	240	210	0.006	0.010	0.013	0.016	0.020	0.023	0.028
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	170	250	220	0.006 ♦	0.009	0.012	0.015	0.019	0.023	0.027
	125-175	HSS	160	240	210	0.006 ♦	0.009	0.012	0.015	0.019	0.023	0.027
	175-225	HSS	150	225	195	0.005 ♦	0.008	0.010	0.014	0.018	0.021	0.024
	225-275	HSS	140	210	180	0.005 ♦	0.008	0.010	0.014	0.018	0.021	0.024
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HSS	160	240	210	0.006	0.009	0.012	0.015	0.019	0.023	0.027
	175-225	HSS	150	225	195	0.005	0.008	0.010	0.014	0.018	0.021	0.024
	225-275	HSS	140	210	180	0.005	0.008	0.010	0.014	0.018	0.021	0.024
	275-325	SC, PC	130	195	170	0.004	0.007	0.009	0.012	0.016	0.019	0.022
Alloy Steel 4140, 5140, 8640, etc.	125-175	HSS	150	210	195	0.006	0.008	0.010	0.014	0.017	0.019	0.022
	175-225	HSS	140	195	180	0.005	0.008	0.010	0.014	0.017	0.019	0.022
	225-275	HSS	130	180	170	0.005	0.007	0.010	0.014	0.017	0.019	0.022
	275-325	SC, PC	120	170	155	0.004	0.006	0.009	0.012	0.015	0.017	0.020
	325-375	SC, PC	110	155	145	0.003	0.006	0.009	0.012	0.015	0.017	0.020
High Strength Alloy 4340, 4330V, 300M, etc.	225-300	SC, PC	80	110	100	0.005 ♦	0.007	0.009	0.010	0.014	0.017	0.020
	300-350	SC, PC	60	85	80	0.004 ♦	0.007	0.009	0.010	0.014	0.017	0.020
	350-400	PC	50	70	65	0.003 ♦	0.006	0.008	0.009	0.012	0.015	0.018
Structural Steel A36, A285, A516, etc.	100-150	HSS	140	200	180	0.006 ♦	0.010	0.012	0.014	0.018	0.021	0.026
	150-250	HSS	120	170	155	0.005 ♦	0.009	0.010	0.012	0.016	0.019	0.024
	250-350	SC, PC	100	140	130	0.003 ♦	0.008	0.009	0.010	0.014	0.017	0.020
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150-200	SC	80	110	105	0.004	0.006	0.008	0.010	0.012	0.015	0.017
	200-250	SC, PC	60	90	85	0.004	0.006	0.008	0.010	0.012	0.015	0.017
	140-220	SC, PC	30	40	35	0.003 ♦	0.007	0.008	0.010	0.012	0.015	-
High Temp. Alloy Hastelloy B, Inconel 600, etc.	220-310	PC	25	35	30	0.003 ♦	0.006	0.007	0.008	0.010	0.012	-
	140-220	SC, PC	35	50	45	0.003 ♦	0.007	0.008	0.010	0.012	0.015	-
Titanium Alloy	220-310	PC	30	45	35	0.003 ♦	0.006	0.007	0.008	0.010	0.012	-
	185-275	SC, PC	75	105	95	0.006 ♦	0.008	0.009	0.010	0.014	0.016	0.020
Aerospace Alloy S82	275-350	SC, PC	60	90	80	0.005 ♦	0.007	0.008	0.008	0.012	0.014	0.018
	185-275	SC, PC	75	105	95	0.006 ♦	0.008	0.009	0.010	0.014	0.016	0.020
Stainless Steel 400 Series 416, 420, etc.	275-350	SC, PC	60	90	80	0.005 ♦	0.007	0.008	0.008	0.012	0.014	0.018
	135-185	SC, PC	75	105	95	0.003 ♦	0.007	0.008	0.010	0.014	0.016	0.020
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185-275	SC, PC	60	90	80	0.003 ♦	0.006	0.007	0.008	0.012	0.014	0.018
	135-185	SC, PC	60	80	70	0.003 ♦	0.007	0.008	0.010	0.014	0.016	0.020
Super Duplex Stainless Steel	185-275	SC, PC	50	65	60	0.003 ♦	0.006	0.007	0.008	0.012	0.014	0.018
	400	SC, PC	45	70	55	0.003 ♦	0.006	0.008	0.009	0.012	0.016	0.018
Wear Plate Hardox, AR400, T-1, etc.	500	PC	35	45	40	0.002 ♦	0.005	0.007	0.008	0.010	0.012	0.016
	600	N/A	-	-	-	-	-	-	-	-	-	-
	300-400	PC	50	95	70	0.003 ♦	0.006	0.008	0.009	0.012	0.016	0.018
Hardened Steel	400-500	PC	35	45	40	0.002 ♦	0.005	0.007	0.008	0.010	0.012	0.016
	120-150	HSS	170	250	220	0.007	0.012	0.016	0.020	0.024	0.027	0.030
Nodular, Grey, Ductile Cast Iron	150-200	HSS	150	225	195	0.006	0.011	0.014	0.018	0.022	0.025	0.028
	200-220	HSS	130	195	170	0.006	0.009	0.012	0.016	0.018	0.021	0.024
	220-260	SC, PC	110	165	145	0.005	0.007	0.009	0.012	0.014	0.017	0.020
	260-320	SC, PC	90	135	120	0.004	0.006	0.007	0.009	0.012	0.014	0.016
Cast Aluminum	30	HSS	600	850	750	0.008	0.013	0.016	0.020	0.022	0.025	0.025
	180	HSS	300	450	400	0.008	0.013	0.016	0.018	0.022	0.025	0.025
Wrought Aluminum	30	HSS	600	850	750	0.004	0.006	0.010	0.012	0.022	0.025	0.025
	180	HSS	300	450	400	0.008	0.013	0.016	0.018	0.022	0.025	0.025
Aluminum Bronze	100-200	SC	170	250	220	0.006	0.011	0.014	0.018	0.022	0.026	0.028
	200-250	SC	130	190	170	0.005	0.007	0.009	0.012	0.014	0.017	0.020
Brass	100	HSS	300	445	400	0.007	0.012	0.016	0.020	0.024	0.028	0.030
Copper	60	SC	130	165	150	0.002 ♦	0.003	0.006	0.008	0.012	0.014	0.016

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM

.008 • 0.90 = .007 IPR

T-A[®] Carbide Drill Inserts

Recommended Speeds and Feeds - Inch



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♦.

Material	Hardness (BHN)	Grade	SPEED			FEED (IPR)				
			TiN SFM	TiAlN SFM	TiCN SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	C5	320	420	375	0.008	0.012	0.015	0.018	0.021
	150-200	C5	280	360	325	0.007	0.011	0.014	0.016	0.019
	200-250	C5	260	340	295	0.006	0.010	0.013	0.015	0.017
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	C5	300	390	360	0.008 ♦	0.010	0.013	0.017	0.019
	125-175	C5	260	340	295	0.007 ♦	0.010	0.013	0.016	0.018
	175-225	C5	240	310	270	0.006 ♦	0.009	0.012	0.015	0.017
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	C5	210	270	245	0.005 ♦	0.009	0.012	0.015	0.017
	125-175	C5	260	340	295	0.007	0.010	0.013	0.016	0.018
	175-225	C5	240	310	275	0.006	0.009	0.012	0.015	0.017
Alloy Steel 4140, 5140, 8640, etc.	225-275	C5	210	270	235	0.006	0.009	0.012	0.015	0.017
	275-325	C5	180	230	205	0.005	0.008	0.011	0.014	0.016
	125-175	C5	250	325	285	0.007	0.010	0.013	0.016	0.018
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	C5	230	300	260	0.006	0.009	0.012	0.015	0.017
	225-300	C5	160	200	180	0.006 ♦	0.009	0.010	0.012	0.015
	300-350	C5	140	180	160	0.005 ♦	0.008	0.009	0.011	0.014
Structural Steel A36, A285, A516, etc.	350-400	C5	120	160	140	0.004 ♦	0.007	0.008	0.010	0.012
	100-150	C5	240	310	275	0.008 ♦	0.011	0.014	0.016	0.018
	150-250	C5	200	250	225	0.006 ♦	0.010	0.012	0.014	0.016
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	250-350	C5	180	230	205	0.005 ♦	0.009	0.011	0.012	0.014
	150-200	C5	160	220	190	0.004	0.007	0.009	0.011	0.013
	200-250	C5	120	170	145	0.004	0.007	0.009	0.011	0.013
High Temp. Alloy Hastelloy B, Inconel 600, etc.	140-220	C2	80	105	90	0.004 ♦	0.007	0.009	0.011	0.013
	220-310	C2	60	85	70	0.004 ♦	0.006	0.008	0.010	0.012
Titanium Alloy	140-220	C2	100	125	105	0.004 ♦	0.007	0.009	0.011	0.013
	220-310	C2	80	110	90	0.004 ♦	0.006	0.008	0.010	0.012
Aerospace Alloy 582	185-275	C2	160	210	185	0.007 ♦	0.006	0.011	0.014	0.016
	275-350	C2	120	160	140	0.006 ♦	0.008	0.010	0.012	0.014
Stainless Steel 400 Series 416, 420, etc.	185-275	C2	160	210	185	0.007 ♦	0.008	0.011	0.014	0.016
	275-350	C2	120	160	140	0.006 ♦	0.007	0.010	0.012	0.014
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	C2	160	210	185	0.005 ♦	0.007	0.009	0.010	0.012
	185-275	C2	120	160	140	0.004 ♦	0.006	0.008	0.009	0.010
Super Duplex Stainless Steel	135-185	C2	80	110	95	0.004 ♦	0.007	0.008	0.009	0.011
	185-275	C2	60	80	70	0.003 ♦	0.006	0.007	0.008	0.009
Wear Plate Hardox, AR400, T-1, etc.	400	C5	75	115	100	0.003 ♦	0.006	0.008	0.010	0.012
	500	C5	50	85	70	0.002 ♦	0.005	0.006	0.008	0.010
	600	C5	35	75	55	0.001 ♦	0.004	0.005	0.006	0.008
Hardened Steel	300-400	C5	110	140	130	0.004 ♦	0.006	0.009	0.011	0.013
	400-500	C5	65	85	75	0.003 ♦	0.005	0.008	0.009	0.011
Nodular, Grey, Ductile Cast Iron	120-150	C2,C3	320	460	415	0.008	0.012	0.015	0.019	0.023
	150-200	C2,C3	270	400	335	0.007	0.011	0.013	0.017	0.021
	200-220	C2,C3	240	360	305	0.006	0.009	0.012	0.015	0.018
	220-260	C2,C3	210	310	260	0.005	0.008	0.011	0.013	0.015
Cast Aluminum	260-320	C2,C3	180	270	225	0.005	0.007	0.010	0.011	0.013
	30	C2	1200	1500	1330	0.010	0.013	0.018	0.020	0.022
Wrought Aluminum	180	C2	800	1000	900	0.009	0.013	0.016	0.018	0.020
	30	C2	1200	1500	1330	0.004	0.006	0.010	0.012	0.014
Aluminum Bronze	180	C2	800	1000	900	0.008	0.013	0.014	0.018	0.020
	100-200	C2	275	360	325	0.005	0.008	0.010	0.014	0.017
Brass	200-250	C2	210	305	260	0.004	0.007	0.007	0.010	0.013
	100	C2	425	600	520	0.006	0.009	0.011	0.015	0.018
Copper	60	C2	260	390	325	0.002 ♦	0.003	0.004	0.006	0.010

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM

.008 • 0.90 = .007 IPR

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



GEN2 T-A[®] HSS Drill Inserts

Recommended Speeds and Feeds - Inch

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♦.

Material	Hardness (BHN)	Grade	SPEED				FEED (IPR)				
			TIN SFM	AM200 [®] SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"	1-29/32" to 2-9/16"	2-29/32" to 4-1/2"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	200	325	0.008	0.012	0.016	0.019	0.020	0.023	0.028
	150-200	HSS	180	300	0.007	0.011	0.015	0.017	0.020	0.023	0.028
	200-250	HSS	160	280	0.006	0.010	0.014	0.016	0.020	0.023	0.028
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	170	290	0.008 ♦	0.010	0.014	0.018	0.019	0.023	0.027
	125-175	HSS	160	275	0.007 ♦	0.010	0.014	0.017	0.019	0.023	0.027
	175-225	HSS	150	260	0.006 ♦	0.009	0.013	0.016	0.018	0.021	0.024
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	HSS	140	240	0.005 ♦	0.009	0.013	0.016	0.018	0.021	0.024
	125-175	HSS	160	275	0.007	0.010	0.014	0.017	0.019	0.023	0.027
	175-225	HSS	150	260	0.006	0.009	0.013	0.016	0.018	0.021	0.024
Alloy Steel 4140, 5140, 8640, etc.	225-275	HSS	140	240	0.006	0.009	0.013	0.016	0.018	0.021	0.024
	275-325	SC	130	225	0.005	0.008	0.012	0.015	0.016	0.019	0.022
	125-175	HSS	150	240	0.007	0.010	0.014	0.017	0.017	0.019	0.022
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	HSS	140	225	0.006	0.009	0.013	0.016	0.017	0.019	0.022
	225-275	HSS	130	210	0.006	0.009	0.013	0.016	0.017	0.019	0.022
	275-325	SC	120	195	0.005	0.008	0.012	0.015	0.015	0.017	0.020
Structural Steel A36, A285, A516, etc.	325-375	SC	110	180	0.004	0.007	0.011	0.014	0.015	0.017	0.020
	225-300	SC	80	125	0.006 ♦	0.009	0.011	0.013	0.014	0.017	0.020
	300-350	SC	60	100	0.005 ♦	0.008	0.010	0.012	0.014	0.017	0.020
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	350-400	SC	50	80	0.004 ♦	0.007	0.009	0.011	0.012	0.015	0.018
	100-150	HSS	140	235	0.008 ♦	0.011	0.015	0.017	0.018	0.021	0.026
	150-250	HSS	120	190	0.006 ♦	0.010	0.013	0.015	0.016	0.019	0.024
High Temp. Alloy Hastelloy B, Inconel 600, etc.	250-350	SC	100	160	0.005 ♦	0.009	0.012	0.013	0.014	0.017	0.020
	150-200	SC	80	125	0.004	0.007	0.010	0.012	0.012	0.015	0.017
	200-250	SC	60	105	0.004	0.007	0.010	0.012	0.012	0.015	0.017
Titanium Alloy	140-220	SC	30	45	0.004 ♦	0.007	0.009	0.011	0.012	0.015	0.017
	220-310	SC	25	40	0.004 ♦	0.006	0.008	0.010	0.010	0.012	0.014
Aerospace Alloy S82	140-220	SC	35	55	0.004 ♦	0.007	0.008	0.010	0.012	0.015	0.017
	220-310	SC	30	50	0.003 ♦	0.006	0.007	0.009	0.010	0.012	0.014
Stainless Steel 400 Series 416, 420, etc.	185-275	SC	75	110	0.006 ♦	0.008	0.009	0.011	0.014	0.016	0.020
	275-350	SC	60	100	0.005 ♦	0.007	0.008	0.010	0.012	0.014	0.018
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	SC	75	110	0.003 ♦	0.007	0.008	0.011	0.014	0.016	0.020
	185-275	SC	60	100	0.003 ♦	0.006	0.007	0.010	0.012	0.014	0.018
Super Duplex Stainless Steel	135-185	SC	60	85	0.003 ♦	0.007	0.008	0.011	0.014	0.016	0.020
	185-275	SC	50	70	0.003 ♦	0.006	0.007	0.010	0.012	0.014	0.018
Wear Plate Hardox, AR400, T-1, etc.	400	SC	45	70	0.003 ♦	0.006	0.008	0.009	0.012	0.016	0.018
	500	SC	35	45	0.002 ♦	0.005	0.007	0.008	0.010	0.012	0.016
	600	N/A	-	-	-	-	-	-	-	-	-
Hardened Steel	300-400	SC	50	95	0.004 ♦	0.006	0.009	0.011	0.012	0.016	0.018
	400-500	SC	35	45	0.002 ♦	0.005	0.007	0.009	0.010	0.012	0.016
Nodular, Grey, Ductile Cast Iron	120-150	HSS	170	290	0.008	0.012	0.016	0.020	0.024	0.027	0.030
	150-200	HSS	150	260	0.007	0.011	0.015	0.019	0.022	0.025	0.028
	200-220	HSS	130	225	0.006	0.009	0.013	0.017	0.018	0.021	0.024
	220-260	SC	110	190	0.005	0.008	0.011	0.014	0.014	0.017	0.020
Cast Aluminum	260-320	SC	90	155	0.005	0.007	0.010	0.012	0.012	0.014	0.016
	30	HSS	600	-	0.009	0.015	0.018	0.023	0.022	0.025	0.025
Wrought Aluminum	180	HSS	300	-	0.008	0.013	0.016	0.020	0.022	0.025	0.025
	30	HSS	600	900	0.005	0.013	0.016	0.020	0.022	0.025	0.025
Aluminum Bronze	180	HSS	300	650	0.005	0.007	0.012	0.014	0.022	0.025	0.025
	100-200	SC	170	270	0.006	0.009	0.012	0.015	0.017	0.019	0.021
Brass	200-250	SC	130	210	0.005	0.007	0.009	0.011	0.014	0.016	0.018
	100	HSS	300	470	0.007	0.011	0.013	0.018	0.019	0.021	0.023
Copper	60	SC	130	190	0.003 ♦	0.004	0.007	0.010	0.009	0.011	0.012

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM

.008 • 0.90 = .007 IPR

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GEN2 T-A® Carbide Drill Inserts

Recommended Speeds and Feeds - Inch



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ⚡.

Material	Hardness (BHN)	Grade	SPEED		FEED (IPR)		
			AM200® SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	C1	480	0.008	0.012	0.016	0.019
	150-200	C1	415	0.007	0.011	0.015	0.017
	200-250	C1	390	0.006	0.010	0.014	0.016
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	C1	450	0.008 ⚡	0.010	0.014	0.018
	125-175	C1	390	0.007 ⚡	0.010	0.014	0.017
	175-225	C1	355	0.006 ⚡	0.009	0.013	0.016
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	C1	310	0.005 ⚡	0.009	0.013	0.016
	125-175	C1	390	0.007	0.010	0.014	0.017
	175-225	C1	355	0.006	0.009	0.013	0.016
Alloy Steel 4140, 5140, 8640, etc.	225-275	C1	310	0.006	0.009	0.013	0.016
	275-325	C1	265	0.005	0.008	0.012	0.015
	125-175	C1	375	0.007	0.010	0.014	0.017
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	C1	345	0.006	0.009	0.013	0.016
	225-275	C1	310	0.006	0.009	0.013	0.016
	275-325	C1	285	0.005	0.008	0.012	0.015
Structural Steel A36, A285, A516, etc.	325-375	C1	255	0.004	0.007	0.011	0.014
	225-300	C1	230	0.006 ⚡	0.009	0.011	0.013
	300-350	C1	205	0.005 ⚡	0.008	0.010	0.012
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	350-400	C1	185	0.004 ⚡	0.007	0.009	0.011
	100-150	C1	355	0.008 ⚡	0.011	0.015	0.017
	150-250	C1	285	0.006 ⚡	0.010	0.013	0.015
High Temp. Alloy Hastelloy B, Inconel 600, etc.	250-350	C1	265	0.005 ⚡	0.009	0.012	0.013
	150-200	C1	255	0.007	0.007	0.010	0.012
	200-250	C1	195	0.007	0.007	0.010	0.012
Titanium Alloy	140-220	C2	120	0.004 ⚡	0.007	0.009	0.011
	220-310	C2	95	0.004 ⚡	0.006	0.008	0.010
Aerospace Alloy S82	140-220	C2	140	0.004 ⚡	0.007	0.008	0.011
	220-310	C2	110	0.003 ⚡	0.006	0.007	0.009
Stainless Steel 400 Series 416, 420, etc.	185-275	C2	240	0.005 ⚡	0.006	0.007	0.009
	275-350	C2	180	0.004 ⚡	0.005	0.006	0.008
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185-275	C2	240	0.007 ⚡	0.009	0.012	0.014
	135-185	C2	240	0.006 ⚡	0.007	0.009	0.012
Super Duplex Stainless Steel	185-275	C2	180	0.005 ⚡	0.006	0.008	0.009
	135-185	C2	125	0.004 ⚡	0.007	0.008	0.010
Wear Plate Hardox, AR400, T-1, etc.	400	C2	150	0.003 ⚡	0.005	0.008	0.010
	500	C2	120	0.002 ⚡	0.004	0.006	0.008
	600	C2	100	0.001 ⚡	0.003	0.005	0.006
Hardened Steel	300-400	C1	150	0.004 ⚡	0.006	0.009	0.011
	400-500	C1	120	0.003 ⚡	0.005	0.008	0.010
Nodular, Grey, Ductile Cast Iron	120-150	C2	500	0.008	0.012	0.015	0.019
	150-200	C2	480	0.007	0.011	0.013	0.017
	200-220	C2	430	0.006	0.009	0.012	0.015
	220-260	C2	370	0.005	0.008	0.011	0.013
	260-320	C2	335	0.005	0.007	0.010	0.011
Cast Aluminum	30	C2	975	0.009	0.015	0.018	0.023
	180	C2	730	0.008	0.013	0.016	0.020
Wrought Aluminum	30	C2	1385	0.005	0.013	0.016	0.020
	180	C2	975	0.005	0.007	0.012	0.014
Aluminum Bronze	100-200	C2	360	0.006	0.009	0.012	0.015
	200-250	C2	300	0.005	0.007	0.009	0.011
Brass	100	C2	650	0.007	0.011	0.013	0.018
Copper	60	C2	420	0.003 ⚡	0.004	0.007	0.010

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM

.008 • 0.90 = .007 IPR

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



Structural Steel T-A® Drill Inserts

Recommended Speeds and Feeds

NOTE: The below speed and feed recommendations are based on a rigid setup utilizing air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.

NOTE: If drilling dry without coolant, speed must be reduced significantly based on setup, drill depth, and material hardness. Up to 50% speed and feed reduction may be necessary in these types of applications. Contact our Application Engineering Team for assistance.

Super Cobalt Thin Wall Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		-TW TiAIN SFM (Mist Coolant)	-TW AM200® SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"
Structural Steel A36, A285, A516, etc.	100-150	110	125	0.012	0.018	0.019	0.020
	150-250	100	115	0.011	0.016	0.017	0.019
	250-350	90	105	0.010	0.014	0.016	0.018

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-TW TiAIN M/min (Mist Coolant)	-TW AM200® M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel A36, A285, A516, etc.	100-150	34	39	0.30	0.45	0.48	0.50
	150-250	31	35	0.28	0.40	0.43	0.48
	250-350	28	32	0.25	0.36	0.40	0.45

Super Cobalt Notch Point® and 150° Structural Steel Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		-NP & -SS TiAIN SFM (Mist Coolant)	-NP & -SS AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"
Structural Steel A36, A285, A516, etc.	100-150	110	125	0.010	0.012	0.014	0.018
	150-250	100	115	0.009	0.011	0.012	0.016
	250-350	90	105	0.008	0.010	0.011	0.014

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-NP & -SS TiAIN M/min (Mist Coolant)	-NP & -SS AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel A36, A285, A516, etc.	100-150	34	39	0.25	0.30	0.36	0.45
	150-250	31	35	0.23	0.28	0.30	0.40
	250-350	28	32	0.20	0.25	0.28	0.36

Super Cobalt GEN2 T-A® Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"	
Structural Steel A36, A285, A516, etc.	100-150	125	0.010	0.012	0.014	0.018	
	150-250	115	0.009	0.011	0.012	0.016	
	250-350	105	0.008	0.010	0.011	0.014	

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm	
Structural Steel A36, A285, A516, etc.	100-150	39	0.25	0.30	0.36	0.46	
	150-250	35	0.23	0.28	0.30	0.40	
	250-350	32	0.20	0.25	0.28	0.36	

C1 Carbide GEN2 T-A® Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"	
Structural Steel A36, A285, A516, etc.	100-150	165	0.008	0.011	0.015	0.017	
	150-250	155	0.006	0.010	0.013	0.015	
	250-350	140	0.005	0.009	0.012	0.013	

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm	
Structural Steel A36, A285, A516, etc.	100-150	50	0.20	0.28	0.38	0.43	
	150-250	47	0.15	0.25	0.33	0.38	
	250-350	43	0.13	0.23	0.30	0.33	

Flat Bottom T-A® HSS and Carbide Drill Inserts

Recommended Speeds and Feeds - Inch



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ⚠.

Material	Hardness (BHN)	Grade	SPEED				FEED (IPR)					Grade	SPEED				FEED (IPR)				
			TIN SFM	TiAIN SFM	TiCN SFM	AM200 SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"		1-29/32" to 2-9/16"	TIN SFM	TiAIN SFM	TiCN SFM	AM200 SFM	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	170	250	230	290	0.006	0.009	0.011	0.014	0.016	0.018	C2	270	380	325	425	0.007	0.010	0.013	0.015
	150-200	HSS	155	230	205	265	0.006	0.009	0.011	0.014	0.016	0.018	C2	240	320	280	375	0.006	0.009	0.012	0.014
	200-250	HSS	140	210	185	245	0.005	0.009	0.011	0.014	0.015	0.017	C2	220	300	260	350	0.005	0.009	0.011	0.013
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	150	220	195	255	0.005 ⚠	0.008	0.010	0.013	0.015	0.017	C2	260	345	315	410	0.007 ⚠	0.009	0.011	0.014
	125-175	HSS	140	210	185	245	0.005 ⚠	0.008	0.010	0.013	0.015	0.016	C2	220	300	260	350	0.006 ⚠	0.009	0.011	0.014
	175-225	HSS	130	195	175	225	0.004 ⚠	0.007	0.009	0.012	0.014	0.016	C2	200	280	235	320	0.005 ⚠	0.008	0.010	0.013
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HSS	140	210	185	245	0.005	0.008	0.010	0.013	0.015	0.018	C2	220	300	260	350	0.006	0.009	0.011	0.014
	175-225	HSS	130	195	175	225	0.004	0.007	0.009	0.012	0.014	0.017	C2	200	280	240	320	0.005	0.008	0.010	0.013
	225-275	HSS	120	185	155	215	0.004	0.007	0.009	0.012	0.014	0.015	C2	180	240	215	285	0.004	0.008	0.010	0.013
Alloy Steel 4140, 5140, 8640, etc.	125-175	HSS	130	185	175	215	0.005	0.007	0.009	0.012	0.013	0.016	C2	215	290	250	340	0.006	0.009	0.011	0.014
	175-225	HSS	120	175	155	205	0.004	0.007	0.009	0.012	0.013	0.016	C2	200	270	230	320	0.005	0.008	0.010	0.013
	225-275	HSS	110	155	145	180	0.004	0.006	0.009	0.012	0.013	0.016	C2	180	230	205	290	0.005	0.008	0.010	0.013
High Strength Alloy 4340, 4330V, 300M, etc.	225-300	SC	70	95	85	110	0.004 ⚠	0.006	0.008	0.009	0.010	0.012	C2	140	170	160	220	0.005 ⚠	0.008	0.009	0.010
	300-350	SC	50	75	70	90	0.003 ⚠	0.006	0.008	0.009	0.010	0.012	C2	120	160	140	190	0.004 ⚠	0.007	0.008	0.009
	350-400	SC	45	65	60	75	0.003 ⚠	0.005	0.007	0.008	0.009	0.011	C2	100	145	120	160	0.003 ⚠	0.006	0.007	0.009
Structural Steel A36, A285, A516, etc.	100-150	HSS	120	170	155	195	0.005 ⚠	0.009	0.010	0.012	0.015	0.017	C2	205	265	240	325	0.007 ⚠	0.009	0.012	0.014
	150-250	HSS	105	145	135	170	0.004 ⚠	0.008	0.009	0.010	0.013	0.016	C2	170	215	200	270	0.005 ⚠	0.009	0.010	0.012
	250-350	SC	85	120	110	140	0.004 ⚠	0.007	0.008	0.009	0.012	0.015	C2	155	200	180	240	0.004 ⚠	0.008	0.009	0.010
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150-200	SC	70	95	90	110	0.004	0.005	0.007	0.009	0.010	0.012	C2	140	190	160	220	0.003	0.006	0.008	0.009
	200-250	SC	50	80	75	95	0.004	0.005	0.007	0.009	0.009	0.011	C2	100	150	120	160	0.003	0.006	0.008	0.009
High Temp. Alloy Hastelloy B, Inconel 600, etc.	140-220	SC	25	35	30	40	0.003 ⚠	0.006	0.007	0.009	0.010	0.012	C2	70	90	80	110	0.003 ⚠	0.006	0.008	0.009
	220-310	SC	20	30	25	35	0.003 ⚠	0.005	0.006	0.007	0.008	0.010	C2	50	70	60	80	0.003 ⚠	0.005	0.007	0.009
Titanium Alloy	140-220	SC	35	45	40	50	0.003 ⚠	0.006	0.007	0.009	0.010	0.012	C2	85	110	90	130	0.003 ⚠	0.005	0.006	0.008
	220-310	SC	26	40	35	45	0.003 ⚠	0.005	0.006	0.007	0.008	0.010	C2	70	95	80	100	0.003 ⚠	0.004	0.005	0.007
Aerospace Alloy S82	185-275	SC	65	90	85	110	0.005 ⚠	0.007	0.008	0.010	0.012	0.015	C2	140	120	165	130	0.006 ⚠	0.006	0.010	0.012
	275-350	SC	50	80	70	90	0.004 ⚠	0.006	0.007	0.009	0.010	0.012	C2	110	90	125	105	0.005 ⚠	0.005	0.009	0.010
Stainless Steel 400 Series 416, 420, etc.	185-275	SC	65	90	85	110	0.005 ⚠	0.007	0.008	0.010	0.012	0.014	C2	140	180	165	210	0.006 ⚠	0.008	0.010	0.012
	275-350	SC	50	80	70	90	0.004 ⚠	0.006	0.007	0.009	0.010	0.011	C2	110	140	125	160	0.005 ⚠	0.007	0.009	0.010
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	SC	65	90	85	110	0.005 ⚠	0.007	0.008	0.010	0.012	0.014	C2	90	120	110	130	0.005 ⚠	0.007	0.008	0.010
	185-275	SC	50	80	70	90	0.004 ⚠	0.006	0.007	0.009	0.010	0.011	C2	70	90	80	105	0.004 ⚠	0.006	0.007	0.009
Super Duplex Stainless Steel	135-185	SC	65	90	85	110	0.005 ⚠	0.007	0.008	0.010	0.012	0.014	C2	70	95	85	110	0.004 ⚠	0.006	0.007	0.008
	185-275	SC	50	80	70	90	0.004 ⚠	0.006	0.007	0.009	0.010	0.011	C2	55	70	60	85	0.003 ⚠	0.005	0.006	0.007
Wear Plate Hardox, AR400, T-1, etc.	400	SC	-	-	-	-	-	-	-	-	-	-	C2	65	100	85	130	0.003 ⚠	0.004	0.006	0.008
	500	SC	-	-	-	-	-	-	-	-	-	-	C2	45	75	60	100	0.002 ⚠	0.003	0.005	0.006
	600	N/A	-	-	-	-	-	-	-	-	-	-	C2	35	65	45	80	0.001 ⚠	0.002	0.004	0.005
Hardened Steel	300-400	SC	45	65	60	80	0.003 ⚠	0.005	0.007	0.008	0.011	0.015	C2	100	125	110	135	0.004 ⚠	0.006	0.007	0.009
	400-500	SC	25	40	35	45	0.002 ⚠	0.004	0.006	0.007	0.009	0.011	C2	60	75	65	110	0.003 ⚠	0.005	0.006	0.007
Nodular, Grey, Ductile Cast Iron	120-150	HSS	150	220	195	255	0.006	0.010	0.014	0.017	0.019	0.020	C2	270	405	360	450	0.007	0.010	0.013	0.016
	150-200	HSS	130	195	175	225	0.005	0.009	0.012	0.016	0.018	0.019	C2	230	350	290	390	0.006	0.009	0.011	0.014
	200-220	HSS	110	175	150	205	0.005	0.008	0.010	0.014	0.016	0.017	C2	200	320	260	350	0.005	0.008	0.010	0.013
	220-260	SC	95	150	125	175	0.004	0.006	0.008	0.010	0.013	0.014	C2	180	270	220	300	0.004	0.007	0.009	0.011
Cast Aluminum	30	HSS	520	750	650	-	0.007	0.011	0.014	0.017	0.018	0.019	C2	520	750	650	-	0.009	0.013	0.016	0.017
	180	HSS	260	400	350	-	0.007	0.011	0.014	0.016	0.017	0.019	C2	260	400	350	-	0.008	0.012	0.014	0.015
Wrought Aluminum	30	HSS	520	750	650	850	0.007	0.011	0.014	0.017	0.018	0.019	C2	950	1200	1070	1270	0.005	0.007	0.009	0.010
	180	HSS	260	400	350	450	0.007	0.011	0.014	0.016	0.017	0.019	C2	630	800	715	850	0.004	0.006	0.008	0.009
Aluminum Bronze	100-200	SC	130	190	175	230	0.005	0.009	0.012	0.016	0.020	0.024	C2	240	310	280	340	0.004	0.006	0.008	0.011
	200-250	SC	95	150	125	165	0.004	0.006	0.008	0.010	0.012	0.015	C2	180	265	220	285	0.003	0.005	0.006	0.008
Brass	100	HSS	150	220	190	250	0.006	0.010	0.014	0.017	0.021	0.025	C2	370	520	450	600	0.005	0.006	0.008	0.012
Copper	60	SC	115	150	130	170	0.002 ⚠	0.003	0.006	0.008	0.010	0.014	C2	220	345	280	380	0.002 ⚠	0.002	0.003	0.005

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment				
Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM .008 • 0.90 = .007 IPR

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents



Diamond Coated T-A® Drill Inserts

Recommended Speeds and Feeds - Inch

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts..

Material	Grade	CARBIDE					
		SPEED	FEED (IPR)				
			CVD Diamond	3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"
Polymer Matrix Composites	Carbon (Hard)	N2	1000-1500	0.004-0.006	0.008-0.010	0.010-0.012	0.012-0.014
	Carbon Fiber						
	Carbon/Glass Fiber						
	Fiberglass						
	Graphite						
	Plastics	N2	250-1000	0.004-0.006	0.008-0.010	0.010-0.012	0.012-0.014
	Epoxy Resin						
	Bismaleimide Resin						
	Polyester Resin						
	Phenolic Resin						
Rubber							
Metal Matrix Composites	Aluminum	N2	1000	0.008	0.013	0.016	0.020
	Si <10%						
	10% < Si <15%	N2	850-1000	0.008	0.013	0.016	0.020
	15% < Si <20%						
	20% < Si <25%	N2	500-650	0.008	0.013	0.016	0.020
	25% < Si						
	Brass	N2	250-500	0.008	0.013	0.016	0.020
	Bronze						
	Copper	N2	100-250	0.004-0.006	0.008-0.010	0.010-0.012	0.012-0.014
	Copper Alloys						
	Lead Alloys						
	Magnesium Alloys						
	Precious Metals						
Ceramic Matrix Composites	Carbide (Green)	N2	50-250	0.004-0.006	0.008-0.010	0.010-0.012	0.012-0.014
	Ceramic (Green)						
	Ceramic (Pre-Sintered)						

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 200 SFM and 0.008 IPR for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 150 SFM and 0.007 IPR.

200 • .75 = 150 SFM

.008 • 0.90 = .007 IPR

T-A® Drill Inserts

Coolant Recommendations - Inch



IMPORTANT: The coolant pressure and flow rate recommendation below represents a good approximation to obtain optimum tool life and chip evacuation at Allied recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the TA drilling system will still function at reduced penetration rates. Contact our Application Engineering Department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Material	Pressure or Flow Rate	HSS							Carbide				
		3/8" to 1/2"	33/64" to 11/16"	23/32" to 1"	1" to 1-1/4"	1-1/4" to 2"	2" to 3"	3" to 4"	3/8" to 1/2"	33/64" to 11/16"	23/32" to 1"	1" to 1-3/8"	1-13/32" to 1-7/8"
Free Machining Steel 1118, 1215, 12L14, etc.	PSI	175-185	100-120	105-140	80-115	75-100	40-50	65-90	195	140	160	140	155
	GPM	2.5-2.6	2.8-3.0	4.4-5.2	7-8	12-14	30-33	38-44	2.6	3.3	5.5	9	18
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	PSI	165-170	75-90	75-95	60-80	55-75	30-40	50-65	180	105	105	110	115
	GPM	2.4-2.5	2.4-2.6	3.7-4.2	6-7	11-12	26-30	33-38	2.5	2.9	4.4	8	15
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	PSI	160-165	70-85	70-90	55-75	50-70	30-40	50-65	175	100	90	70	75
	GPM	2.3-2.4	2.3-2.6	3.7-4.2	5-6	10-12	26-30	33-38	2.5	2.8	4.1	7	13
Alloy Steel 4140, 5140, 8640, etc.	PSI	160-165	65-75	65-80	50-70	45-60	30-35	40-50	165	85	100	75	70
	GPM	2.3-2.4	2.2-2.4	3.5-3.9	5-6	10-11	26-28	30-33	2.4	2.6	4.3	6	12
High Strength Alloy 4340, 4330V, 300M, etc.	PSI	150-155	55-60	45-50	25-30	25-30	20-25	40-50	175	115	105	75	70
	GPM	2.3-2.4	2.1-2.2	2.9-3.1	4-5	7-8	21-23	23-26	2.4	2.3	3.2	5	8
Structural Steel A36, A285, A516, etc.	PSI	160-165	75-85	65-80	40-55	40-50	25-30	40-50	175	115	105	75	70
	GPM	2.3-2.4	2.4-2.6	3.5-3.9	5-6	9-10	23-26	30-33	2.5	3.0	4.4	6	12
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	PSI	150-155	55-60	45-50	25-30	25-30	20-25	25-30	155	60	55	40	35
	GPM	2.3-2.4	2.1-2.2	2.9-3.1	4-5	7-8	21-23	23-26	2.4	2.2	3.2	5	8
High Temp. Alloy Hastelloy B, Inconel 600, etc.	PSI	150-155	60-65	50-55	30-35	25-30	25-30	44	247	160	174	160	130
	GPM	2.3-2.4	2.2-2.3	3.1-3.2	4-5	7-8	23-26	33	3	4	6	9	16
Titanium Alloy	PSI	150-155	60-65	50-55	30-35	25-30	25-30	44	247	160	174	160	130
	GPM	2.3-2.4	2.2-2.3	3.1-3.2	4-5	7-8	23-26	33	3	4	6	9	16
Aerospace Alloy S82	PSI	150-155	60-65	50-55	30-35	25-30	25-30	44	247	160	174	160	130
	GPM	2.3-2.4	2.2-2.3	3.1-3.2	4-5	7-8	23-26	33	3	4	6	9	16
Stainless Steel 400 Series 416, 420, etc.	PSI	171	86	75	55	51	29	45	329	239	260	250	190
	GPM	3	3	4	6	10	26	31	3	4	7	12	20
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	PSI	171	86	75	55	51	29	45	329	239	260	250	190
	GPM	3	3	4	6	10	26	31	3	4	7	12	20
Super Duplex Stainless Steel	PSI	171	86	75	55	51	29	45	329	239	260	250	190
	GPM	3	3	4	6	10	26	31	3	4	7	12	20
Wear Plate Hardox, AR400, T-1, etc.	PSI	155	61	51	29	29	25	29	210	75	70	49	45
	GPM	2	2	3	5	8	23	26	3	2	4	5	10
Hardened Steel	PSI	155	61	51	29	29	25	29	210	75	70	49	45
	GPM	2	2	3	5	8	23	26	3	2	4	5	10
SG / Nodular Cast Iron	PSI	160	65	61	41	35	29	35	225	104	90	90	80
	GPM	2	2	3	5	9	26	28	3	3	4	7	13
Grey / White Iron	PSI	160	65	61	41	35	29	35	225	104	90	90	80
	GPM	2	2	3	5	9	26	28	3	3	4	7	13
Cast Aluminum	PSI	210	180	230	159	125	51	80	350	319	315	284	200
	GPM	3	4	6	9	16	33	42	4	5	8	12	20
Wrought Aluminum	PSI	210	180	230	159	125	51	80	350	319	315	284	200
	GPM	3	4	6	9	16	33	42	4	5	8	12	20
Aluminum Bronze	PSI	186	120	140	115	100	51	90	290	239	239	220	174
	GPM	2.5	3	5	8	14	33	44	3	4	7	11	19
Brass	PSI	159	65	61	41	35	29	35	350	319	315	284	200
	GPM	2	2	3	5	9	26	28	4	5	8	12	20
Copper	PSI	186	120	140	115	100	51	90	290	239	239	220	174
	GPM	2.5	3	5	8	14	33	44	3	4	7	11	19

Deep Hole Drilling Coolant Adjustment

Holder	Extended	Long	XL	3XL
Pressure & Flow	1.3	1.5	2	3

COOLANT RECOMMENDATION EXAMPLE: If the recommended pressure and flow is 150 PSI and 2.4 GPM for a standard length holder, the adjusted pressure and flow would be 450 PSI and 7.2 GPM respectively for the 3XL holder.

$$150 \bullet 3 = 450 \text{ PSI}$$

$$2.4 \bullet 3 = 7.2 \text{ GPM}$$

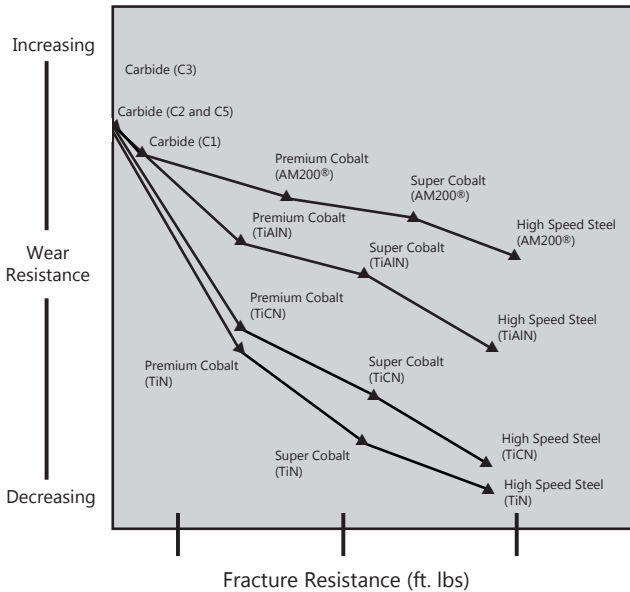


T-A[®] Drill Inserts

Technical Information - Inch

WEAR vs TOUGHNESS

When selecting a grade of cutting tool material for your application, both wear resistance and grade toughness should be considered. The higher the wear resistance a cutting tool material exhibits, the more likely chipping or fracture is to occur, thus requiring more RIGID machining conditions. On the other hand, to effectively machine some materials, cobalt or carbide grades of cutting tool material may be required. The graph below will aid you in the selection of a cutting tool material with the right combination of wear resistance and toughness to make your application both efficient and cost effective.



FORMULAS

$$1. \text{ RPM} = \frac{3.82 \cdot \text{SFM}}{\text{DIA}}$$

where:
 RPM = revolutions per minute (rev/min)
 SFM = surface feet per minute (ft/min)
 DIA = diameter of drill (in)

$$2. \text{ IPM} = \text{RPM} \cdot \text{IPR}$$

where:
 IPM = inches per minute (in/min)
 RPM = revolutions per minute (rev/min)
 IPR = feed rate (in/rev)

$$3. \text{ SFM} = \text{RPM} \cdot 0.262 \cdot \text{DIA}$$

where:
 SFM = speed (ft/min)
 RPM = revolutions per minute (rev/min)
 DIA = diameter of drill (in)

$$4. \text{ Thrust} = (133,650) \cdot (\text{IPR}) \cdot (\text{DIA}) \cdot (\text{K}_m)$$

where:
 Thrust = axial thrust (lbs)
 IPR = feed rate (in/rev)
 DIA = diameter of drill (in)
 K_m = specific cutting energy (lbs/in²)

$$5. \text{ Tool Power} = .6283 \cdot \text{IPR} \cdot \text{RPM} \cdot \text{K}_m \cdot \text{DIA}^2$$

where:
 Tool Power = tool power (HP)
 IPR = feed rate (in/rev)
 RPM = revolutions per minute (rev/min)
 K_m = specific cutting energy (lbs/in²)
 DIA = diameter of drill (in)

Type of Material	Km (lbs/in ²)
Plain Carbon and Alloy Steel	
85 - 200 BHN	0.79
200 - 275 BHN	0.94
275 - 375 BHN	1.00
375 - 425 BHN	1.15
High Temperature Alloys	1.44
Stainless Steel:	
135-275 BHN	0.94
30 - 45 RC	1.08
Copper Alloy	
20 - 80 RB	0.43
80 - 100 RB	0.72
Titanium Alloy	0.72
Aluminum Alloy	0.22
Magnesium Alloy	0.16
Cast Iron	
100 - 200 BHN	0.50
200 - 300 BHN	1.08

This table and equations are found in the **Machinery's Handbook**. Permission to simplify and print the equations is granted by the editor of the **Machinery's Handbook**.

TAP DRILL INFORMATION

American - Unified Inch Screw Thread

Tap Size	Tap Drill Size	Decimal Equivalent	*Theo % Thread	Prob. Mean Size	Prob. Hole Size	**Prob. % Thread
7/16 - 20	W	.3860	79%	.003"	.3890"	75%
	25/64"	.3906	72%	.003"	.3936"	68%
1/2 - 13	10.5mm	.4134	87%	.003"	.4164"	84%
	27/64"	.4219	78%	.003"	.4249"	75%
7/16 - 20	7/16"	.4375	63%	.003"	.4405"	60%
	29/64"	.4531	72%	.003"	.4561"	68%
9/16 - 12	15/32"	.4688	87%	.003"	.4718"	84%
	12.0mm	.4724	72%	.003"	.4874"	69%
31/64"	31/64"	.4844	83%	.003"	.4754"	80%
	1/2"	.5000"	87%	.003"	.5030"	82%
9/16 - 18	13.0mm	.5118"	70%	.003"	.5148"	66%
	31/64"	.5156"	65%	.003"	.5186"	61%
5/8 - 11	17/32"	.5313"	79%	.003"	.5343"	77%
5/8 - 12	35/64"	.5469"	72%	.003"	.5499"	69%
5/8 - 18	9/16"	.5625"	87%	.003"	.5655"	82%
	14.5mm	.5709"	75%	.003"	.5739"	75%
37/64"	.5781"	65%	.003"	.5811"	70%	
11/16 - 12	39/64"	.6094"	72%	.003"	.6124"	69%
	41/64"	.6406"	84%	.003"	.6436"	82%
3/4 - 10	16.5mm	.6496"	77%	.003"	.6526"	75%
	21/32"	.6563"	72%	.003"	.6593"	70%
3/4 - 12	43/64"	.6719"	72%	.003"	.6749"	69%
	11/16"	.6875"	77%	.003"	.6905"	73%
3/4 - 16	17.5mm	.6890"	75%	.003"	.6920"	71%
	49/64"	.7656"	76%	.003"	.7686"	74%
7/8 - 9	25/32"	.7813"	65%	.003"	.7843"	63%
7/8 - 14	51/64"	.7969"	84%	.003"	.7999"	81%
	13/16"	.8125"	67%	.003"	.8155"	64%
15/16 - 12	55/64"	.8594"	72%	.003"	.8624"	69%
15/16 - 20	57/64"	.8906"	72%	.003"	.8936"	68%
1 - 8	22.0mm	.8661"	82%	.003"	.8691"	81%
	7/8"	.8750"	77%	.003"	.8780"	75%
57/64"	.8906"	67%	.003"	.8936"	65%	
1 - 12	29/32"	.9063"	87%	.003"	.9093"	84%
	59/64"	.9219"	72%	.003"	.9249"	69%
1 - 14	15/16"	.9375"	67%	.003"	.9405"	64%
1-1/8 - 12	1-1/32"	1.0313"	87%	.003"	1.0343"	84%
	1-3/64"	1.0469"	72%	.003"	1.0499"	69%
1-1/4 - 7	1-7/64"	1.1094"	76%	.003"	1.1124"	74%

*Based on nominal tap drill diameter. **Based on .003" probable mean oversize. To calculate percentage of full thread for a given hole diameter:

$$\% \text{ Thread} = \# \text{ of Threads per Inch} \cdot \left(\frac{\text{Basic Major Diameter of thread (inch)} - \text{Drill Hole Size (inch)}}{.0130} \right)$$

Taper Pipe Thread (NPT)

Tap Size	Tap Drill Size	Decimal Equivalent	*Theo % Thread	Prob. Mean Size	Prob. Hole Size	**Prob. % Thread
1/4 - 18	7/16	.4375"	N/A	.003"	.4405"	N/A
3/8 - 18	9/16	.5625"	N/A	.003"	.5655"	N/A
1/2 - 14	45/64	.7031"	N/A	.003"	.7061"	N/A
3/4 - 14	29/32	.9063"	N/A	.003"	.9093"	N/A

The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special blade diameters may be required in order to meet a user specific percentage of thread requirements.

The .003" probable mean oversize hole condition is based on optimum cutting conditions. Probable % of full thread may vary based on less ideal cutting conditions.

T-A[®] HSS Drill Inserts

Recommended Speeds and Feeds - Metric



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♠.

Material	Hardness (BHN)	Grade	SPEED			FEED (mm/rev)						
			TiN M/min	TiAlN M/min	TiCN M/min	9,5 to 12,95	12,98 to 17,52	17,53 to 24,38	24,41 to 35,00	35,01 to 47,80	47,85 to 65,99	66,00 to 114,48
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	61	85	79	0,18	0,25	0,33	0,41	0,51	0,58	0,71
	150-200	HSS	55	79	72	0,18	0,25	0,33	0,41	0,51	0,58	0,71
	200-250	HSS	49	73	64	0,15	0,25	0,33	0,41	0,51	0,58	0,71
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	52	76	67	0,15 ♠	0,23	0,30	0,38	0,48	0,58	0,69
	125-175	HSS	49	73	64	0,15 ♠	0,23	0,30	0,38	0,48	0,58	0,69
	175-225	HSS	46	69	59	0,13 ♠	0,20	0,25	0,36	0,46	0,53	0,61
	225-275	HSS	43	64	55	0,13 ♠	0,20	0,25	0,36	0,46	0,53	0,61
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HSS	49	73	64	0,15	0,23	0,30	0,38	0,48	0,58	0,69
	175-225	HSS	46	69	59	0,13	0,20	0,25	0,36	0,46	0,53	0,61
	225-275	HSS	43	64	55	0,13	0,20	0,25	0,36	0,46	0,53	0,61
Alloy Steel 4140, 5140, 8640, etc.	275-325	SC, PC	40	59	52	0,10	0,18	0,23	0,30	0,41	0,48	0,56
	125-175	HSS	46	64	59	0,15	0,20	0,25	0,36	0,43	0,48	0,56
	175-225	HSS	43	59	55	0,13	0,20	0,25	0,36	0,43	0,48	0,56
	225-275	HSS	40	55	52	0,13	0,18	0,25	0,36	0,43	0,48	0,56
High Strength Alloy 4340, 4330V, 300M, etc.	275-325	SC, PC	37	52	47	0,10	0,15	0,23	0,30	0,38	0,43	0,51
	325-375	SC, PC	34	47	44	0,08	0,15	0,23	0,30	0,38	0,43	0,51
	225-300	SC, PC	24	34	30	0,13 ♠	0,18	0,23	0,25	0,36	0,43	0,51
Structural Steel A36, A285, A516, etc.	300-350	SC, PC	18	26	24	0,10 ♠	0,18	0,23	0,25	0,36	0,43	0,51
	350-400	PC	15	21	20	0,08 ♠	0,15	0,20	0,23	0,30	0,38	0,46
	100-150	HSS	43	61	55	0,15 ♠	0,25	0,30	0,36	0,46	0,53	0,66
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150-250	SC	24	34	32	0,10	0,15	0,20	0,25	0,30	0,38	0,43
	200-250	SC, PC	18	27	26	0,10	0,15	0,20	0,25	0,30	0,38	0,43
	140-220	SC, PC	9	12	11	0,08 ♠	0,18	0,20	0,25	0,30	0,38	-
High Temp. Alloy Hastelloy B, Inconel 600, etc.	220-310	PC	8	11	9	0,08 ♠	0,15	0,18	0,20	0,25	0,30	-
	140-220	SC, PC	11	15	14	0,08 ♠	0,18	0,20	0,25	0,30	0,38	-
Titanium Alloy	220-310	PC	9	14	11	0,08 ♠	0,15	0,18	0,20	0,25	0,30	-
	185-275	SC, PC	23	32	29	0,15 ♠	0,20	0,23	0,25	0,36	0,41	0,51
Aerospace Alloy S82	275-350	SC, PC	18	27	24	0,13 ♠	0,18	0,20	0,20	0,30	0,36	0,46
	185-275	SC, PC	23	32	29	0,15 ♠	0,20	0,23	0,25	0,36	0,41	0,51
Stainless Steel 400 Series 416, 420, etc.	275-350	SC, PC	18	27	24	0,13 ♠	0,18	0,20	0,20	0,30	0,36	0,46
	135-185	SC, PC	23	32	29	0,08 ♠	0,18	0,20	0,25	0,36	0,41	0,51
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185-275	SC, PC	18	27	24	0,08 ♠	0,15	0,18	0,20	0,30	0,36	0,46
	135-185	SC, PC	18	24	21	0,08 ♠	0,18	0,20	0,25	0,36	0,41	0,51
Super Duplex Stainless Steel	185-275	SC, PC	15	20	18	0,08 ♠	0,15	0,18	0,20	0,30	0,36	0,46
	400	SC, PC	14	21	17	0,08 ♠	0,15	0,20	0,23	0,30	0,41	0,46
Wear Plate Hardox, AR400, T-1, etc.	500	PC	11	14	12	0,05 ♠	0,13	0,18	0,20	0,25	0,30	0,41
	600	N/A	-	-	-	-	-	-	-	-	-	-
	300-400	PC	15	29	21	0,08 ♠	0,15	0,20	0,23	0,30	0,41	0,46
Hardened Steel	400-500	PC	11	14	12	0,05 ♠	0,13	0,18	0,20	0,25	0,30	0,41
	120-150	HSS	52	76	67	0,18	0,30	0,41	0,51	0,61	0,69	0,76
Nodular, Grey, Ductile Cast Iron	150-200	HSS	46	69	59	0,15	0,28	0,36	0,46	0,56	0,64	0,71
	200-220	HSS	40	59	52	0,15	0,23	0,30	0,41	0,46	0,53	0,61
	220-260	SC, PC	34	50	44	0,13	0,18	0,23	0,30	0,36	0,43	0,51
	260-320	SC, PC	27	41	37	0,10	0,15	0,18	0,23	0,30	0,36	0,41
Cast Aluminum	30	HSS	183	259	229	0,20	0,33	0,41	0,51	0,56	0,64	0,64
	180	HSS	91	137	122	0,20	0,33	0,41	0,46	0,56	0,64	0,64
Wrought Aluminum	30	HSS	183	259	229	0,10	0,15	0,25	0,30	0,56	0,64	0,64
	180	HSS	91	137	122	0,20	0,33	0,41	0,46	0,56	0,64	0,64
Aluminum Bronze	100-200	SC	52	76	67	0,15	0,28	0,36	0,46	0,56	0,66	0,71
	200-250	SC	40	58	52	0,13	0,18	0,23	0,30	0,36	0,43	0,51
Brass	100	HSS	91	136	122	0,18	0,30	0,41	0,51	0,61	0,71	0,76
Copper	60	SC	40	50	46	0,05 ♠	0,08	0,15	0,20	0,30	0,36	0,41

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 50 M/min and 0.20 mm/rev for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 37.5 M/min and 0.18 mm/rev.

50 • .75 = 37.5 M/min 0.20 • 0.90 = .18 mm/rev

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



T-A[®] Carbide Drill Inserts

Recommended Speeds and Feeds - Metric

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ⚡.

Material	Hardness (BHN)	Grade	SPEED			FEED (mm/rev)				
			TiN M/min	TiAlN M/min	TiCN M/min	9,5 to 12,95	12,98 to 17,52	17,53 to 24,38	24,41 to 35,00	35,01 to 47,80
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	C5	96	128	115	0,20	0,30	0,38	0,45	0,53
	150-200	C5	85	110	100	0,18	0,28	0,35	0,40	0,48
	200-250	C5	79	104	90	0,15	0,25	0,33	0,38	0,43
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	C5	91	119	110	0,20 ⚡	0,25	0,33	0,43	0,48
	125-175	C5	79	104	90	0,18 ⚡	0,25	0,33	0,40	0,45
	175-225	C5	73	95	82	0,15 ⚡	0,23	0,30	0,38	0,43
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	C5	64	83	75	0,13 ⚡	0,23	0,30	0,38	0,43
	125-175	C5	79	104	90	0,18	0,25	0,33	0,40	0,45
	175-225	C5	73	95	84	0,15	0,23	0,30	0,38	0,43
Alloy Steel 4140, 5140, 8640, etc.	225-275	C5	67	83	72	0,15	0,23	0,30	0,38	0,43
	275-325	C5	55	70	62	0,13	0,20	0,28	0,35	0,40
	125-175	C5	76	99	87	0,18	0,25	0,33	0,40	0,45
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	C5	70	92	80	0,15	0,23	0,30	0,38	0,43
	225-275	C5	64	83	72	0,15	0,23	0,30	0,38	0,43
	275-325	C5	61	76	68	0,13	0,20	0,28	0,35	0,40
Structural Steel A36, A285, A516, etc.	325-375	C5	52	67	60	0,10	0,18	0,25	0,33	0,38
	225-300	C5	49	61	55	0,15 ⚡	0,23	0,25	0,30	0,38
	300-350	C5	43	55	49	0,13 ⚡	0,20	0,23	0,28	0,35
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	350-400	C5	37	49	43	0,10 ⚡	0,18	0,20	0,25	0,30
	100-150	C5	73	95	84	0,20 ⚡	0,28	0,35	0,40	0,45
	150-250	C5	61	76	68	0,15 ⚡	0,25	0,30	0,35	0,40
High Temp. Alloy Hastelloy B, Inconel 600, etc.	250-350	C5	55	70	62	0,13 ⚡	0,23	0,28	0,30	0,35
	150-200	C5	49	67	58	0,10	0,18	0,23	0,28	0,33
	200-250	C5	37	52	45	0,10	0,18	0,23	0,28	0,33
Titanium Alloy	140-220	C2	24	32	28	0,10 ⚡	0,18	0,23	0,28	0,33
	220-310	C2	18	26	22	0,10 ⚡	0,15	0,20	0,25	0,30
Aerospace Alloy S82	140-220	C2	30	38	32	0,10 ⚡	0,18	0,23	0,28	0,33
	220-310	C2	24	33	28	0,10 ⚡	0,15	0,20	0,25	0,30
Stainless Steel 400 Series 416, 420, etc.	185-275	C2	49	64	57	0,17 ⚡	0,22	0,29	0,35	0,40
	275-350	C2	37	49	43	0,14 ⚡	0,19	0,27	0,30	0,35
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135-185	C2	49	64	57	0,13 ⚡	0,17	0,22	0,26	0,30
	185-275	C2	37	49	43	0,11 ⚡	0,14	0,20	0,22	0,25
Super Duplex Stainless Steel	185-275	C2	25	33	29	0,11 ⚡	0,15	0,19	0,23	0,27
	185-275	C2	19	25	22	0,09 ⚡	0,13	0,18	0,20	0,23
Wear Plate Hardox, AR400, T-1, etc.	400	C5	23	35	30	0,07	0,12	0,20	0,25	0,30
	500	C5	15	26	21	0,05	0,10	0,15	0,20	0,25
	600	C5	11	22	16	0,04	0,08	0,12	0,16	0,20
Hardened Steel	300-400	C5	34	43	39	0,10 ⚡	0,18	0,23	0,28	0,33
	400-500	C5	20	25	23	0,08 ⚡	0,15	0,20	0,23	0,28
Nodular, Grey, Ductile Cast Iron	120-150	C2, C3	98	141	127	0,20	0,30	0,38	0,48	0,58
	150-200	C2, C3	82	122	102	0,18	0,28	0,33	0,43	0,53
	200-220	C2, C3	73	110	93	0,15	0,23	0,30	0,38	0,45
	220-260	C2, C3	64	95	79	0,13	0,20	0,28	0,33	0,38
Cast Aluminum	260-320	C2, C3	55	83	69	0,13	0,18	0,25	0,28	0,33
	30	C2	366	460	410	0,25	0,38	0,45	0,50	0,55
Wrought Aluminum	180	C2	244	306	275	0,23	0,33	0,40	0,45	0,50
	30	C2	366	460	410	0,10	0,15	0,25	0,30	0,36
Aluminum Bronze	180	C2	244	306	275	0,20	0,28	0,36	0,45	0,50
	100-200	C2	85	110	100	0,13	0,20	0,25	0,36	0,42
Brass	200-250	C2	64	94	79	0,10	0,15	0,18	0,25	0,33
	100	C2	130	184	160	0,15	0,23	0,28	0,38	0,45
Copper	60	C2	80	120	100	0,05 ⚡	0,08	0,10	0,15	0,25

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 50 M/min and 0.20 mm/rev for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 37.5 M/min and 0.18 mm/rev.

50 • .75 = 37.5 M/min

0.20 • 0.90 = .18 mm/rev

GEN2 T-A® HSS Drill Inserts

Recommended Speeds and Feeds - Metric



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♦.

Material	Hardness (BHN)	Grade	SPEED		FEED (mm/rev)						
			TIN M/min	AM200® M/min	9,5 to 12,95	12,98 to 17,53	17,53 to 24,38	24,41 to 35,00	35,01 to 47,80	47,85 to 65,99	66,00 to 114,48
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	61	99	0,20	0,30	0,41	0,48	0,51	0,58	0,71
	150-200	HSS	55	91	0,18	0,28	0,38	0,43	0,51	0,58	0,71
	200-250	HSS	49	85	0,15	0,25	0,36	0,41	0,51	0,58	0,71
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	52	88	0,20 ♦	0,25	0,36	0,46	0,48	0,58	0,69
	125-175	HSS	49	83	0,18 ♦	0,25	0,36	0,43	0,48	0,58	0,69
	175-225	HSS	46	79	0,15 ♦	0,23	0,33	0,41	0,46	0,53	0,61
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	HSS	43	73	0,13 ♦	0,23	0,33	0,41	0,46	0,53	0,61
	125-175	HSS	49	83	0,18	0,25	0,36	0,43	0,48	0,58	0,69
	175-225	HSS	46	79	0,15	0,23	0,33	0,41	0,46	0,53	0,61
Alloy Steel 4140, 5140, 8640, etc.	225-275	HSS	43	73	0,15	0,23	0,33	0,41	0,46	0,53	0,61
	275-325	SC, PC	40	68	0,13	0,20	0,30	0,38	0,41	0,48	0,56
	125-175	HSS	46	73	0,18	0,25	0,36	0,43	0,43	0,48	0,56
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	HSS	43	68	0,15	0,23	0,33	0,41	0,43	0,48	0,56
	225-275	HSS	40	64	0,15	0,23	0,33	0,41	0,43	0,48	0,56
	275-325	SC, PC	37	59	0,13	0,20	0,30	0,38	0,38	0,43	0,51
Structural Steel A36, A285, A516, etc.	325-375	SC, PC	34	54	0,10	0,18	0,28	0,36	0,38	0,43	0,51
	225-300	SC, PC	24	38	0,15 ♦	0,23	0,28	0,33	0,36	0,43	0,51
	300-350	SC, PC	18	30	0,13 ♦	0,20	0,25	0,30	0,36	0,43	0,51
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	350-400	PC	15	24	0,10 ♦	0,18	0,23	0,28	0,30	0,41	0,46
	150-200	SC	24	38	0,10	0,18	0,25	0,30	0,30	0,38	0,43
	200-250	SC, PC	18	32	0,10	0,18	0,25	0,30	0,30	0,38	0,43
High Temp. Alloy Hastelloy B, Inconel 600, etc.	100-150	HSS	43	71	0,20 ♦	0,28	0,38	0,43	0,46	0,53	0,66
	150-250	HSS	37	57	0,15 ♦	0,25	0,33	0,38	0,41	0,48	0,61
Titanium Alloy	250-350	SC, PC	30	48	0,13 ♦	0,23	0,30	0,33	0,36	0,43	0,51
	140-220	SC, PC	9	13	0,10 ♦	0,18	0,23	0,28	0,30	0,38	-
Aerospace Alloy S82	220-310	PC	8	12	0,10 ♦	0,15	0,20	0,25	0,25	0,30	-
	140-220	SC, PC	11	16	0,10 ♦	0,18	0,21	0,27	0,30	0,38	-
Stainless Steel 400 Series 416, 420, etc.	220-310	PC	10	15	0,08 ♦	0,15	0,18	0,23	0,25	0,30	-
	185-275	SC, PC	23	35	0,15 ♦	0,20	0,23	0,28	0,36	0,41	0,51
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	275-350	SC, PC	18	31	0,13 ♦	0,18	0,20	0,25	0,30	0,36	0,46
	185-275	SC, PC	23	35	0,15 ♦	0,20	0,23	0,28	0,36	0,41	0,51
Super Duplex Stainless Steel	185-275	SC, PC	18	31	0,08 ♦	0,15	0,18	0,25	0,30	0,36	0,46
	135-185	SC, PC	23	35	0,08 ♦	0,18	0,20	0,28	0,36	0,41	0,51
Wear Plate Hardox, AR400, T-1, etc.	185-275	SC, PC	18	31	0,08 ♦	0,15	0,18	0,25	0,30	0,36	0,46
	400	SC, PC	14	21	0,08 ♦	0,15	0,20	0,23	0,30	0,41	0,46
	500	PC	10	14	0,05 ♦	0,12	0,18	0,20	0,25	0,30	0,40
Hardened Steel	600	N/A	-	-	-	-	-	-	-	-	-
	300-400	PC	15	29	0,10 ♦	0,15	0,23	0,27	0,30	0,41	0,46
Nodular, Grey, Ductile Cast Iron	400-500	PC	10	14	0,06 ♦	0,12	0,18	0,24	0,25	0,30	0,40
	120-150	HSS	52	84	0,20	0,30	0,41	0,51	0,61	0,69	0,76
	150-200	HSS	46	79	0,18	0,28	0,38	0,48	0,56	0,64	0,71
	200-220	HSS	40	68	0,15	0,23	0,33	0,43	0,46	0,53	0,61
	220-260	SC, PC	34	57	0,13	0,20	0,28	0,36	0,36	0,43	0,51
Cast Aluminum	260-320	SC, PC	27	47	0,13	0,18	0,25	0,28	0,28	0,36	0,41
	30	HSS	183	-	0,23	0,38	0,46	0,58	0,56	0,64	0,64
Wrought Aluminum	180	HSS	91	-	0,20	0,33	0,40	0,50	0,56	0,64	0,64
	30	HSS	183	280	0,12	0,18	0,30	0,35	0,56	0,64	0,64
Aluminum Bronze	180	HSS	91	200	0,12	0,18	0,30	0,35	0,56	0,64	0,64
	100-200	SC	52	82	0,15	0,24	0,30	0,38	0,43	0,48	0,53
Brass	200-250	SC	40	65	0,12	0,18	0,23	0,28	0,36	0,40	0,46
	100	HSS	91	144	0,18	0,27	0,33	0,45	0,47	0,53	0,58
Copper	60	SC	40	58	0,07 ♦	0,10	0,18	0,26	0,23	0,27	0,31

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 50 M/min and 0.20 mm/rev for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 37.5 M/min and 0.18 mm/rev.

50 • .75 = 37.5 M/min 0.20 • 0.90 = .18 mm/rev

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling



GEN2 T-A® Carbide Drill Inserts

Recommended Speeds and Feeds - Metric

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ⚡.

Material	Hardness (BHN)	Grade	SPEED		FEED (mm/rev)		
			AM200® M/min	9.50 to 12.95	12.98 to 17.53	17.54 to 24.38	24.41 to 35.00
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	C1	146	0.20	0.30	0.41	0.48
	150-200	C1	126	0.18	0.28	0.38	0.43
	200-250	C1	119	0.15	0.25	0.36	0.41
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	C1	137	0.20 ⚡	0.25	0.36	0.46
	125-175	C1	119	0.18 ⚡	0.25	0.36	0.43
	175-225	C1	108	0.15 ⚡	0.23	0.33	0.41
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225-275	C1	95	0.13 ⚡	0.23	0.33	0.41
	125-175	C1	119	0.18	0.25	0.36	0.43
	175-225	C1	108	0.15	0.23	0.33	0.41
Alloy Steel 4140, 5140, 8640, etc.	225-275	C1	95	0.15	0.23	0.33	0.41
	275-325	C1	80	0.13	0.20	0.30	0.38
	125-175	C1	115	0.18	0.25	0.36	0.43
High Strength Alloy 4340, 4330V, 300M, etc.	175-225	C1	105	0.15	0.23	0.33	0.43
	275-325	C1	87	0.13	0.20	0.30	0.38
	325-375	C1	78	0.10	0.18	0.28	0.36
Structural Steel A36, A285, A516, etc.	225-300	C1	70	0.15 ⚡	0.23	0.28	0.33
	300-350	C1	63	0.13 ⚡	0.20	0.25	0.30
	350-400	C1	56	0.10 ⚡	0.18	0.23	0.28
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	100-150	C1	108	0.20 ⚡	0.28	0.38	0.43
	150-200	C1	87	0.15 ⚡	0.25	0.33	0.38
	200-250	C1	80	0.13 ⚡	0.23	0.30	0.33
High Temp. Alloy Hastelloy B, Inconel 600, etc.	150-200	C1	78	0.10	0.18	0.25	0.30
	200-250	C1	59	0.10	0.18	0.25	0.30
Titanium Alloy	140-220	C2	37	0.10 ⚡	0.18	0.23	0.28
	220-310	C2	29	0.10 ⚡	0.15	0.20	0.25
Aerospace Alloy S82	140-220	C2	42	0.10 ⚡	0.18	0.21	0.27
	220-310	C2	33	0.08 ⚡	0.15	0.18	0.23
Stainless Steel 400 Series 416, 420, etc.	185-275	C2	73	0.12 ⚡	0.16	0.18	0.22
	275-350	C2	56	0.10 ⚡	0.14	0.16	0.19
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185-275	C2	73	0.18 ⚡	0.23	0.30	0.36
	275-350	C2	56	0.15 ⚡	0.20	0.28	0.30
Super Duplex Stainless Steel	135-185	C2	73	0.14 ⚡	0.18	0.24	0.29
	185-275	C2	56	0.12 ⚡	0.16	0.22	0.24
Wear Plate Hardox, AR400, T-1, etc.	135-185	C2	38	0.12 ⚡	0.17	0.22	0.26
	185-275	C2	30	0.10 ⚡	0.15	0.18	0.22
	400	C2	45	0.07 ⚡	0.12	0.20	0.25
Hardened Steel	500	C2	37	0.05 ⚡	0.10	0.15	0.20
	600	C2	30	0.04 ⚡	0.08	0.12	0.16
	300-400	C1	47	0.10 ⚡	0.18	0.23	0.27
Nodular, Grey, Ductile Cast Iron	400-500	C1	37	0.06 ⚡	0.12	0.18	0.24
	120-150	C2	152	0.20	0.30	0.38	0.48
	150-200	C2	146	0.18	0.28	0.33	0.43
	200-220	C2	131	0.15	0.23	0.30	0.38
	220-260	C2	113	0.13	0.20	0.28	0.33
Cast Aluminum	260-320	C2	102	0.13	0.18	0.25	0.28
	30	C2	300	0.23	0.38	0.46	0.58
Wrought Aluminum	180	C2	225	0.20	0.33	0.40	0.50
	30	C2	426	0.12	0.33	0.40	0.50
Aluminum Bronze	180	C2	300	0.12	0.18	0.30	0.35
	100-200	C2	110	0.15	0.24	0.30	0.38
Brass	200-250	C2	90	0.12	0.18	0.23	0.28
	100	C2	200	0.18	0.27	0.33	0.45
Copper	60	C2	130	0.07 ⚡	0.10	0.18	0.26

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 50 M/min and 0.20 mm/rev for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 37.5 M/min and 0.18 mm/rev.

50 • .75 = 37.5 M/min

0.20 • 0.90 = .18 mm/rev

Flat Bottom T-A[®] HSS and Carbide Drill Inserts

Recommended Speeds and Feeds - Metric



IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ♦.

Material	Hardness (BHN)	Grade	SPEED				FEED (mm/rev)						Grade	SPEED				FEED (mm/rev)			
			TIN M/min	TAIN M/min	TICN M/min	AM200 M/min	9.5 to 12.95	12.98 to 17.53	17.53 to 24.38	24.41 to 35.00	35.01 to 47.80	47.85 to 65.99		TIN M/min	TAIN M/min	TICN M/min	AM200 M/min	9.5 to 12.95	12.98 to 17.53	17.54 to 24.38	24.41 to 35.00
Free Machining Steel 1118, 1215, 12L14, etc.	100-150	HSS	52	76	70	88	0.15	0.23	0.28	0.35	0.41	0.46	C2	82	110	98	126	0.17	0.26	0.32	0.39
	150-200	HSS	47	70	62	81	0.15	0.23	0.28	0.35	0.41	0.46	C2	73	94	85	110	0.15	0.24	0.30	0.35
	200-250	HSS	43	64	56	74	0.13	0.23	0.28	0.35	0.38	0.43	C2	67	88	76	102	0.13	0.22	0.28	0.32
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85-125	HSS	46	67	59	77	0.13 ♦	0.20	0.25	0.33	0.38	0.43	C2	79	102	94	117	0.17 ♦	0.22	0.28	0.37
	125-175	HSS	43	64	56	74	0.13 ♦	0.20	0.25	0.33	0.38	0.41	C2	67	88	76	102	0.15 ♦	0.22	0.28	0.35
	175-225	HSS	40	59	53	68	0.10 ♦	0.18	0.23	0.30	0.36	0.41	C2	61	81	70	93	0.13 ♦	0.19	0.26	0.32
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125-175	HSS	43	64	56	74	0.13	0.20	0.25	0.33	0.38	0.46	C2	67	88	76	102	0.15	0.22	0.28	0.35
	175-225	HSS	40	59	53	68	0.10	0.18	0.23	0.30	0.36	0.43	C2	61	81	72	93	0.13	0.19	0.26	0.32
	225-275	HSS	37	56	47	65	0.10	0.18	0.23	0.30	0.36	0.43	C2	55	70	61	81	0.13	0.19	0.26	0.32
Alloy Steel 4140, 5140, 8640, etc.	125-175	HSS	40	56	53	65	0.13	0.18	0.23	0.30	0.33	0.41	C2	64	85	75	99	0.15	0.22	0.28	0.35
	175-225	HSS	37	53	47	61	0.10	0.18	0.23	0.30	0.33	0.41	C2	59	79	67	91	0.13	0.19	0.26	0.32
	225-275	HSS	34	47	44	54	0.10	0.15	0.23	0.30	0.33	0.41	C2	55	70	61	81	0.13	0.19	0.26	0.32
High Strength Alloy 4340, 4330V, 300M, etc.	125-175	HSS	40	56	53	65	0.13	0.18	0.23	0.30	0.33	0.41	C2	64	85	75	99	0.15	0.22	0.28	0.35
	175-225	HSS	37	53	47	61	0.10	0.18	0.23	0.30	0.33	0.41	C2	59	79	67	91	0.13	0.19	0.26	0.32
	225-275	HSS	34	47	44	54	0.10	0.15	0.23	0.30	0.33	0.41	C2	55	70	61	81	0.13	0.19	0.26	0.32
Structural Steel A36, A285, A516, etc.	100-150	HSS	36	52	47	60	0.13 ♦	0.23	0.25	0.30	0.38	0.43	C2	62	81	72	93	0.17 ♦	0.24	0.30	0.35
	150-250	HSS	32	44	41	51	0.10 ♦	0.20	0.23	0.25	0.33	0.41	C2	52	66	58	76	0.13 ♦	0.22	0.28	0.30
	250-350	SC	26	37	34	43	0.10 ♦	0.18	0.20	0.23	0.30	0.38	C2	47	61	53	70	0.11 ♦	0.19	0.25	0.26
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150-200	SC	21	29	27	33	0.10	0.13	0.18	0.23	0.25	0.30	C2	41	58	49	67	0.09	0.15	0.19	0.24
	200-250	SC	15	24	23	28	0.10	0.13	0.18	0.23	0.23	0.28	C2	30	44	37	50	0.09	0.15	0.19	0.24
	225-300	SC	21	29	26	33	0.10 ♦	0.15	0.20	0.23	0.25	0.30	C2	41	52	47	59	0.13 ♦	0.19	0.22	0.26
High Temp. Alloy Hastelloy B, Inconel 600, etc.	300-350	SC	15	23	21	27	0.08 ♦	0.15	0.20	0.23	0.25	0.30	C2	37	47	41	55	0.11 ♦	0.17	0.19	0.24
	350-400	SC	13	20	18	23	0.08 ♦	0.13	0.18	0.20	0.23	0.28	C2	30	41	37	47	0.09 ♦	0.15	0.17	0.22
	400-500	SC	13	20	18	24	0.08 ♦	0.13	0.18	0.20	0.27	0.38	C2	30	38	34	41	0.08 ♦	0.14	0.18	0.22
Titanium Alloy	100-150	HSS	36	52	47	60	0.13 ♦	0.23	0.25	0.30	0.38	0.43	C2	62	81	72	93	0.17 ♦	0.24	0.30	0.35
	150-250	HSS	32	44	41	51	0.10 ♦	0.20	0.23	0.25	0.33	0.41	C2	52	66	58	76	0.13 ♦	0.22	0.28	0.30
	250-350	SC	26	37	34	43	0.10 ♦	0.18	0.20	0.23	0.30	0.38	C2	47	61	53	70	0.11 ♦	0.19	0.25	0.26
Aerospace Alloy S82	140-220	SC	7	10	9	13	0.08 ♦	0.15	0.18	0.23	0.25	0.30	C2	21	27	23	32	0.09 ♦	0.15	0.19	0.24
	220-310	SC	6	9	7	10	0.08 ♦	0.13	0.15	0.18	0.20	0.25	C2	15	21	18	24	0.09 ♦	0.13	0.17	0.22
	310-400	SC	6	9	7	10	0.08 ♦	0.13	0.15	0.18	0.20	0.25	C2	15	21	18	24	0.09 ♦	0.13	0.17	0.22
Stainless Steel 400 Series 416, 420, etc.	140-220	SC	10	14	12	16	0.08 ♦	0.15	0.18	0.23	0.25	0.30	C2	26	33	28	40	0.08 ♦	0.14	0.17	0.20
	220-310	SC	8	12	11	14	0.08 ♦	0.13	0.15	0.18	0.20	0.25	C2	21	29	25	30	0.08 ♦	0.12	0.15	0.18
	310-400	SC	8	12	11	14	0.08 ♦	0.13	0.15	0.18	0.20	0.25	C2	21	29	25	30	0.08 ♦	0.12	0.15	0.18
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185-275	SC	20	27	26	34	0.13 ♦	0.18	0.20	0.25	0.30	0.38	C2	43	37	50	40	0.15 ♦	0.17	0.25	0.30
	275-350	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.30	C2	33	28	38	32	0.13 ♦	0.15	0.23	0.25
	350-400	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.28	C2	33	43	38	49	0.13 ♦	0.18	0.23	0.25
Super Duplex Stainless Steel	135-185	SC	20	27	26	34	0.13 ♦	0.18	0.20	0.25	0.30	0.36	C2	28	37	33	40	0.13 ♦	0.17	0.21	0.25
	185-275	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.28	C2	21	28	25	32	0.11 ♦	0.15	0.19	0.21
	275-350	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.28	C2	33	43	38	49	0.13 ♦	0.18	0.23	0.25
Wear Plate Hardox, AR400, T-1, etc.	135-185	SC	20	27	26	34	0.13 ♦	0.18	0.20	0.25	0.30	0.36	C2	22	29	26	33	0.10 ♦	0.14	0.17	0.20
	185-275	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.28	C2	17	22	19	26	0.08 ♦	0.12	0.15	0.17
	275-350	SC	15	24	21	28	0.10 ♦	0.15	0.18	0.23	0.25	0.28	C2	33	43	38	49	0.13 ♦	0.18	0.23	0.25
Cast Aluminum	400	SC	-	-	-	-	-	-	-	-	-	-	C2	20	31	26	39	0.06 ♦	0.10	0.16	0.20
	500	SC	-	-	-	-	-	-	-	-	-	-	C2	13	23	18	31	0.04 ♦	0.08	0.12	0.16
	600	N/A	-	-	-	-	-	-	-	-	-	-	C2	10	19	14	25	0.03 ♦	0.06	0.10	0.13
Nodular, Grey, Ductile Cast Iron	300-400	SC	13	20	18	24	0.08 ♦	0.13	0.18	0.20	0.27	0.38	C2	30	38	34	41	0.08 ♦	0.14	0.18	0.22
	400-500	SC	8	12	10	13	0.06 ♦	0.10	0.15	0.18	0.23	0.28	C2	18	22	20	33	0.06 ♦	0.12	0.16	0.18
	500-600	SC	8	12	10	13	0.06 ♦	0.10	0.15	0.18	0.23	0.28	C2	18	22	20	33	0.06 ♦	0.12	0.16	0.18
Wrought Aluminum	120-150	HSS	46	67	59	77	0.15	0.25	0.36	0.43	0.48	0.51	C2	82	120	108	137	0.17	0.26	0.32	0.41
	150-200	HSS	40	59	53	68	0.13	0.23	0.30	0.41	0.46	0.48	C2	70	104	87	119	0.15	0.24	0.28	0.38
	200-220	HSS	34	53	46	61	0.13	0.20	0.25	0.36	0.41	0.43	C2	61	94	79	108	0.13	0.19	0.26	0.32
Aluminum Bronze	220-260	SC	29	46	38	53	0.10	0.15	0.20	0.25	0.33	0.33	C2	55	81	67	93	0.11	0.17	0.24	0.28
	260-320	SC	24	37	32	43	0.10	0.13	0.15	0.20	0.25	0.25	C2	47	70	58	81	0.11	0.15	0.22	0.24
	320-400	SC	24	37	32	43	0.10	0.13	0.15	0.20	0.25	0.25	C2	47	70	58	81	0.11	0.15	0.22	0.24
Brass	30	HSS	160	228	198	-	0.18	0.28	0.36	0.43	0.46	0.48	C2	160	228	198	-	0.22	0.32	0.41	0.43
	180	HSS	79	122	107	-	0.18	0.28	0.36	0.41	0.43	0.48	C2	79	122	107	-	0.19	0.28	0.35	0.39
Copper	30	HSS	160	228	198	261	0.18	0.28	0.36	0.43	0.46	0.48	C2	292	368	328	390	0.12	0.18	0.23	0.



Diamond Coated T-A® Drill Inserts

Recommended Speeds and Feeds - Metric

IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team. See adjustment examples at bottom of Speed & Feed charts. Due to potential chip formation issues, contact our Application Engineering Team for assistance machining materials marked with a ❖.

Material		Grade	CARBIDE				
			SPEED	FEED (mm/rev)			
				CVD Diamond	9,5 to 12,5	13 to 17,5	18 to 24
Polymer Matrix Composites	Carbon (Hard)	N2	305-450	0,10-0,15	0,20-0,25	0,25-0,30	0,30-0,36
	Carbon Fiber						
	Carbon/Glass Fiber						
	Fiberglass						
	Graphite						
	Plastics	N2	76-305	0,10-0,15	0,20-0,25	0,25-0,30	0,30-0,36
	Epoxy Resin						
	Bismaleimide Resin						
	Polyester Resin						
	Phenolic Resin						
Rubber							
Metal Matrix Composites	Aluminum	N2	305	0,20	0,33	0,41	0,51
	Si <10%						
	10% < Si <15%	N2	259-305	0,20	0,33	0,41	0,51
	15% < Si <20%	N2	198-259	0,20	0,33	0,41	0,51
	20% < Si <25%	N2	152-198	0,20	0,33	0,41	0,51
	25% < Si	N2	61-152	0,20	0,33	0,41	0,51
	Brass	N2	76-152	0,20	0,33	0,41	0,51
	Bronze						
	Copper	N2	30-76	0,10-0,15	0,20-0,25	0,25-0,30	0,30-0,36
	Copper Alloys						
	Lead Alloys						
	Magnesium Alloys						
	Precious Metals						
Ceramic Matrix Composites	Carbide (Green)	N2	15-76	0,10-0,15	0,20-0,25	0,25-0,30	0,30-0,36
	Ceramic (Green)						
	Ceramic (Pre-Sintered)						

⚠ WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Refer to page 199 for Deep Hole Drilling Guidelines in this section of the catalog. Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Deep Hole Drilling Speed & Feed Adjustment

Holder	Extended	Long	XL	3XL
SPEED	⚠ 0.90	⚠ 0.85	⚠ 0.80	⚠ 0.75
FEED	-	⚠ 0.95	⚠ 0.90	⚠ 0.90

RECOMMENDED SPEED AND FEED EXAMPLE: If recommended speed and feed is 50 M/min and 0.20 mm/rev for a standard length holder, then the speed and feed using a 3XL holder in the same application would be 37.5 M/min and 0.18 mm/rev.

50 • .75 = 37.5 M/min 0.20 • 0.90 = .18 mm/rev

T-A® Drill Inserts

Coolant Recommendations - Metric



IMPORTANT: The coolant pressure and flow rate recommendation below represents a good approximation to obtain optimum tool life and chip evacuation at Allied recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the TA drilling system will still function at reduced penetration rates. Contact our Application Engineering Department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Material	Pressure or Flow Rate	HSS							Carbide				
		9,5 to 12,5	13 to 17	18 to 24	25 to 35	36 to 50	51 to 76	76 to 102	9,5 to 12,5	13 to 17	18 to 24	25 to 35	36 to 47
Free Machining Steel 1118, 1215, 12L14, etc.	BAR	12-13	7-8	7-10	6-8	5-7	4	5-6	17-20	17	15	15	20
	LPM	9,5-9,8	10,6-11,4	16,7-19,7	26,5-30,3	45,4-53,0	114-125	144-167	12,2	16,3	25,2	41,5	71,9
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	BAR	11-12	5-6	5-7	4-6	4-5	2-3	3-5	18	11	11	12	9
	LPM	9,1-9,5	9,1-9,8	14,0-15,9	22,7-26,5	41,6-45,4	98-114	125-144	11,4	13,3	20,6	36,5	62,0
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	BAR	11	5-6	5-6	4-5	3-5	2-3	3-5	17	10	10	10	8
	LPM	8,7-9,1	8,7-9,8	13,6-15,5	18,9-22,7	37,9-45,4	98-114	125-144	11,3	12,5	20,0	33,8	57,0
Alloy Steel 4140, 5140, 8640, etc.	BAR	11	5	5-6	3-5	3-4	2	3	17	9	10	8	7
	LPM	8,7-9,1	8,3-9,1	13,2-14,8	18,9-22,7	31,9-41,6	98-106	114-125	11,1	12,3	19,3	30,0	55,8
High Strength Alloy 4340, 4330V, 300M, etc.	BAR	10-11	4	3	2	2	1-2	2	15	5	4	3	3
	LPM	8,7-9,1	7,9-8,3	11,0-11,7	15,1-18,9	26,5-30,3	79-87	87-98	10,4	9,1	12,6	18,8	33,6
Structural Steel A36, A285, A516, etc.	BAR	11	5-6	5-6	3-4	3	2	3	16	9	8	7	5
	LPM	8,7-9,1	9,1-9,8	13,2-14,8	18,9-22,7	34,1-37,9	87-98	114-125	10,8	12,0	17,5	27,8	47,1
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	BAR	10-11	4	3	2	2	1-2	2	15	5	5	3	3
	LPM	8,7-9,1	7,9-8,3	11,0-11,7	15,1-18,9	26,5-30,3	79-87	87-98	10,4	9,1	13,6	19,7	36,5
High Temp. Alloy Hastelloy B, Inconel 600, etc.	BAR	10-11	4-5	3-4	2	2	2	3	17	11	12	11	9
	LPM	8,7-9,1	8,3-8,7	11,7-12,1	15,1-18,9	26,5-30,3	87-98	125	11,1	13,5	21,9	35,4	62,0
Titanium Alloy	BAR	10-11	4-5	3-4	2	2	2	3	17	11	12	11	9
	LPM	8,7-9,1	8,3-8,7	11,7-12,1	15,1-18,9	26,5-30,3	87-98	125	11,1	13,5	21,9	35,4	62,0
Aerospace Alloy S82	BAR	10-11	4-5	3-4	2	2	2	3	17	11	12	11	9
	LPM	8,7-9,1	8,3-8,7	11,7-12,1	15,1-18,9	26,5-30,3	87-98	125	11,1	13,5	21,9	35,4	62,0
Stainless Steel 400 Series 416, 420, etc.	BAR	11,8	5,9	5,2	3,8	3,5	2	3,1	22,7	16,5	17,9	17,2	13,1
	LPM	9,5	9,8	14	23	38	98	117	13	16,3	26,3	44,2	75
Stainless Steel 300 Series 304, 316, 17-4PH, etc.	BAR	11,8	5,9	5,2	3,8	3,5	2	3,1	22,7	16,5	17,9	17,2	13,1
	LPM	9,5	9,8	14	23	38	98	117	13	16,3	26,3	44,2	75
Super Duplex Stainless Steel	BAR	11,8	5,9	5,2	3,8	3,5	2	3,1	22,7	16,5	17,9	17,2	13,1
	LPM	9,5	9,8	14	23	38	98	117	13	16,3	26,3	44,2	75
Wear Plate Hardox, AR400, T-1, etc.	BAR	10,7	4,2	3,5	2	2	1,7	2	14,5	5,2	4,8	3,4	3,1
	LPM	9,1	8,3	11,7	19	30	87	98	10,4	9,1	13,6	19,7	36,5
Hardened Steel	BAR	10,7	4,2	3,5	2	2	1,7	2	14,5	5,2	4,8	3,4	3,1
	LPM	9,1	8,3	11,7	19	30	87	98	10,4	9,1	13,6	19,7	36,5
SG / Nodular Cast Iron	BAR	11	4,5	4,2	2,8	2,4	2	2,4	15,5	7,2	6,2	6,2	5,5
	LPM	9,1	8,7	12,5	19	34	98	106	10,7	10,8	15,4	26,5	48,7
Grey / White Iron	BAR	11	4,5	4,2	2,8	2,4	2	2,4	15,5	7,2	6,2	6,2	5,5
	LPM	9,1	8,7	12,5	19	34	98	106	10,7	10,8	15,4	26,5	48,7
Cast Aluminum	BAR	14,5	12,4	15,8	11	8,6	3,5	5,5	24,1	22	21,7	19,6	13,8
	LPM	10	14	23	34	61	125	159	13,4	18,8	29	47,2	77
Wrought Aluminum	BAR	14,5	12,4	15,8	11	8,6	3,5	5,5	24,1	22	21,7	19,6	13,8
	LPM	10	14	23	34	61	125	159	13,4	18,8	29	47,2	77
Aluminum Bronze	BAR	12,8	8,3	9,65	7,95	6,9	3,5	6,2	20	16,5	16,5	15,2	12
	LPM	9,6	11,4	19,7	30,3	53	125	167	12,2	16,3	25,2	41,5	71,9
Brass	BAR	11	4,5	4,2	2,8	2,4	2	2,4	24,1	22	21,7	19,6	13,8
	LPM	9,1	8,7	12,5	19	34	98	106	13,4	18,8	29	47,2	77
Copper	BAR	12,8	8,3	9,65	7,95	6,9	3,5	6,2	20	16,5	16,5	15,2	12
	LPM	9,6	11,4	19,7	30,3	53	125	167	12,2	16,3	25,2	41,5	71,9

Deep Hole Drilling Coolant Adjustment

Holder	Extended	Long	XL	3XL
Pressure & Flow	1.3	1.5	2	3

COOLANT RECOMMENDATION EXAMPLE: If the recommended pressure and flow is 12 bar and 22 LPM for a standard length holder, the adjusted pressure and flow would be 36 bar and 66 LPM respectively for the 3XL holder.

$$12 \cdot 3 = 36 \text{ bar}$$

$$22 \cdot 3 = 66 \text{ LPM}$$

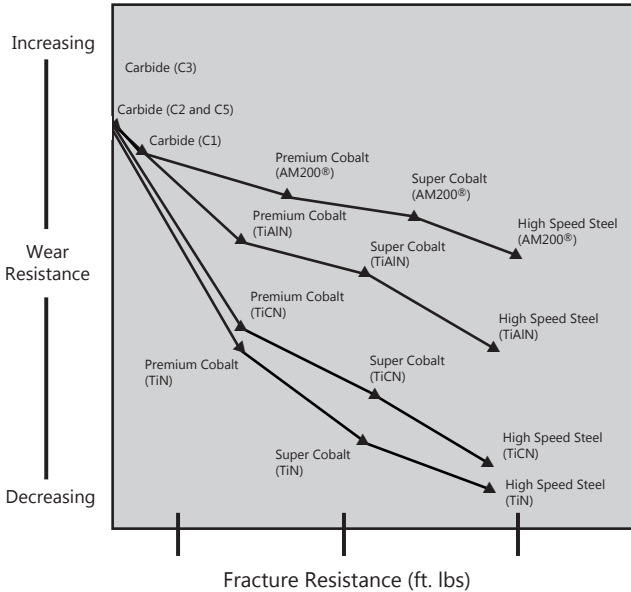


T-A[®] Drill Inserts

Technical Information - Metric

WEAR vs TOUGHNESS

When selecting a grade of cutting tool material for your application, both wear resistance and grade toughness should be considered. The higher the wear resistance a cutting tool material exhibits, the more likely chipping or fracture is to occur, thus requiring more RIGID machining conditions. On the other hand, to effectively machine some materials, cobalt or carbide grades of cutting tool material may be required. The graph below will aid you in the selection of a cutting tool material with the right combination of wear resistance and toughness to make your application both efficient and cost effective.



TAP DRILL INFORMATION

Metric Profile Screw Thread

Tap Size	Tap Drill Size	Decimal Equivalent	*Theo % Thread	Prob. Mean Size	Prob. Hole Size	**Prob. % Thread
12 X 1,75	10,2mm	.4016"	79%	0,075mm	10,28mm	76%
	13/32"	.4063"	74%	0,075mm	10,40mm	71%
12 X 1,25	27/64"	.4219"	79%	0,075mm	10,79mm	74%
	10,8mm	.4252"	74%	0,075mm	10,88mm	69%
14 X 2,0	15/32"	.4688"	81%	0,075mm	11,98mm	78%
	12,0mm	.4724"	77%	0,075mm	12,08mm	74%
14 X 1,5	12,5mm	.4921"	77%	0,075mm	12,58mm	73%
16 X 2,0	14,0mm	.5512"	77%	0,075mm	14,08mm	74%
16 X 1,5	14,5mm	.5709"	77%	0,075mm	14,58mm	73%
	37/64"	.5781"	68%	0,075mm	14,76mm	64%
18 X 2,5	15,5mm	.6102"	77%	0,075mm	15,58mm	75%
18 X 1,5	16,5mm	.6496"	77%	0,075mm	16,58mm	73%
	21/32"	.6563"	68%	0,075mm	16,75mm	64%
20 X 2,5	11/16"	.6875"	78%	0,075mm	17,54mm	76%
	17,5mm	.6890"	77%	0,075mm	17,58mm	74%
20 X 1,5	18,5mm	.7283"	77%	0,075mm	18,58mm	73%
	47/64"	.7344"	69%	0,075mm	18,66mm	65%
22 X 2,5	49/64"	.7656"	79%	0,075mm	19,52mm	76%
	19,5mm	.7677"	77%	0,075mm	19,58mm	75%
22 X 1,5	20,5mm	.8071"	77%	0,075mm	20,58mm	73%
	13/16"	.8125"	70%	0,075mm	20,71mm	66%
24 X 3	13/16"	.8125"	86%	0,075mm	20,71mm	84%
	21,0mm	.8268"	76%	0,075mm	21,08mm	75%
24 X 2	22,0mm	.8661"	77%	0,075mm	22,08mm	74%
	7/8"	.8750"	68%	0,075mm	22,30mm	65%
27 X 3	24,0mm	.9449"	77%	0,075mm	24,08mm	75%

*Based on nominal tap drill diameter. **Based on 0,075mm probable mean oversize. To calculate percentage of full thread for a given hole diameter:

$$\% \text{ Thread} = \frac{76,93}{\text{Pitch (mm)}} \cdot \left(\text{Basic Major Diameter of thread (mm)} - \text{Drill Hole Size (mm)} \right)$$

FORMULAS

$$1. \text{ RPM} = \frac{318,47 \cdot \text{M/min}}{\text{DIA}}$$

where:
 RPM = revolutions per minute (rev/min)
 M/min = speed (M/min)
 DIA = diameter of drill (mm)

$$2. \text{ mm/min} = \text{RPM} \cdot \text{mm/rev}$$

where:
 mm/min = mm per minute (mm/min)
 RPM = revolutions per minute (rev/min)
 mm/rev = feed rate (mm/rev)

$$3. \text{ M/min} = \text{RPM} \cdot 0,003 \cdot \text{DIA}$$

where:
 M/min = speed (M/min)
 RPM = revolutions per minute (rev/min)
 DIA = diameter of drill (mm)

$$4. \text{ Thrust} = (133,9) \cdot (\text{mm/rev}) \cdot (\text{DIA}) \cdot \text{Km}$$

where:
 Thrust = axial thrust in newtons (N)
 mm/rev = feed rate (mm/rev)
 DIA = diameter of drill (mm)
 K_m = specific cutting energy (kPa)

$$5. \text{ Tool Power} = \frac{(\text{mm/rev}) \cdot (\text{RPM}) \cdot (\text{Km}) \cdot (\text{DIA}^2)}{240442,4}$$

where:
 Tool Power = tool power (KW)
 mm/rev = feed rate (mm/rev)
 RPM = revolutions per minute (rev/min)
 K_m = specific cutting energy (kPa)
 DIA = diameter of drill (mm)

Type of Material	Km (kPa)
Plain Carbon and Alloy Steel	
85-200 BHN	5,45
200-275 BHN	6,48
275-375 BHN	6,89
375-425 BHN	7,93
High Temperature Alloys	9,93
Stainless Steel	
135-275 BHN	6,48
30-45 RC	7,45
Copper Alloy	
20-80 RB	2,96
80-100 RB	4,96
Titanium Alloy	4,96
Aluminum Alloy	1,52
Magnesium Alloy	1,10
Cast Iron	
100-200 BHN	3,45
200-300 BHN	7,45

This table and equations are found in the **Machinery's Handbook**. Permission to simplify and print the equations is granted by the editor of the **Machinery's Handbook**.

Taper Pipe Thread (BSP & ISO 7-1)

Tap Size	Tap Drill Size	Decimal Equivalent	*Theo % Thread	Prob. Mean Size	Prob. Hole Size	**Prob. % Thread
1/4 - 19	7/16"	.4325"	N/A	0,075mm	11,19mm	N/A
3/8 - 19	37/64"	.5781"	N/A	0,075mm	14,76mm	N/A
1/2 - 14	23/32"	.7188"	N/A	0,075mm	18,33mm	N/A
3/4 - 14	15/16"	.9375"	N/A	0,075mm	23,89mm	N/A

The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special blade diameters may be required in order to meet a user specific percentage of thread requirements.

The 0,075mm probable mean oversize hole condition is based on optimum cutting conditions. Probable % of full thread may vary based on less ideal cutting conditions.



Standard Geometry

Allied's Standard T-A® Geometry is an excellent choice for general purpose use. The design provides fast penetration rates that produce good hole size and finish. Standard Geometry combines highly efficient, stable cutting action to minimize power consumption. Recommended for use in most steels, cast irons, high temperature alloys and aluminum alloys. NC-No Chipbreakers / WC-Without Corner Clips. Available in the Y through 8 Series.

Grades: HSS, Super Cobalt, Premium Cobalt, Carbide inch (C2 and C5) metric (K20 and P40) / Sample Item Number: 132A-0112

Flat Bottom (FB) Geometry

Allied's Flat Bottom geometry is used to square the bottom of pre-existing, same diameter holes. While it produces a nearly true flat bottom, the tool creates a slight dimple at the center of the hole that is less than 0.010" (.25mm) deep. However, this style tool (when used with short length holders) may also be used to counter bore holes smaller than the tool diameter. The patented geometry provides efficient and stable cutting action. For a Flat Bottom Drill Insert without chipbreakers, please specify using -FN. Available in Super Cobalt in the Y through 4 series. Available in C2 Carbide in the Y through 2 series / Sample Item Number: 152T-0112-FB

Cast Iron (CI) Geometry

Allied's cast iron geometry is specifically designed for use in grey and white cast irons. This special geometry provides exceptional edge strength and tool life. Includes Allied's SK2 corner preparation. TiAlN coating is recommended. Available in the Y through 4 series.

Grades: Stocked in C3 Carbide with TiAlN coating / Sample Item Number: 1C32A-0112-CI

90° Spot and Chamfer (SP) Geometry

Allied's highly efficient 90° Spot and Chamfer Drill Insert geometry is combined with a center cutting web designed to improve stability and strength. The primary use is to spot and chamfer, eliminating the need for secondary chamfering operations. One tool will cover a wide application range by simply adjusting the depth. By listing the item number with a SW, the 90° Spot and Chamfer Drill Insert will be supplied with chipbreakers. Available in the Y through 3 Series.

Grades: Super Cobalt / Sample Item Number: 152A-0112-SP, 152T-0112-SW 90° Spot and Chamfer with chipbreakers.

SK2 (SK) Geometry

Allied's special corner preparation is designed to increase tool life by providing efficient, uniform heat dispersion at the insert corners. Ideal for all materials. Available in the Y through 8 Series. Sample Item Number: 132A-0112-SK

Corner Radius (CR) Geometry

Allied's special corner preparation is designed to increase tool life, improve surface finish, and minimize exit burrs. Provides excellent heat dispersion at the insert corners. Available in the Y through 8 series. Sample Item Number: 132A-0112-CR

High Impact (HI) Geometry

Allied's high impact geometry is specifically designed to enhance chip formation in materials with high elasticity/ductility, and poor chip forming characteristics. Includes Allied's SK2 corner preparation for increased tool life. Effective at improving chip formation in structural, cast, and forged steels, plus cast stainless steel and high temperature alloys, particularly in materials above 200 BHN. Available in the Y through 8 Series. Sample Item Number: 132A-0112-HI

High Rake (HR) Geometry

Allied's high rake geometry is specifically designed to improve chip formation in materials with very high elasticity, extremely poor chip forming characteristics, and low material hardness. This special geometry shortens chip length, improving chip control and evacuation from the hole. Includes Allied's SK2 corner preparation for increased tool life.

Recommended for use in most soft gummy steels, steel castings, and steel forgings under a material hardness of 200 BRN. Available in the Y through 8 Series. Sample Item Number: 132A-0112-HR.

Brass (BR) Geometry

Allied's brass geometry is specifically designed for efficient drilling in brass. Our specialized geometry and edge preparation provides excellent tool life and eliminates the tendency of the tool to self feed, as well as drill windup, in soft brass materials. Available in the Y through 2 Series. Sample Item Number: 132A-0112-BR

Aluminum (AN) Geometry

Allied's Aluminum Geometry is specifically designed to maximize tool life and chip formation capabilities in materials such as 6061 or wrought aluminums. The Aluminum Geometry also features Allied's exclusive Notch Point® Geometry for increased stability and lower drilling forces. Available in the Y through 2 series. Sample Item Number: 1C22T-0102-AN

Cam Point (CP) Geometry

Allied's special cam ground point geometry is designed to provide excellent self-centering characteristics. The helical cam ground point provides efficient chisel edge cutting action to produce outstanding drill stability. Recommended for use with standard and extended length T-A Holders on all materials, especially steels and cast irons, castings and forgings. Available in the Y through 2 series. Sample Item Number: 132A-0112-CP

Notch Point® (NP) Geometry

Allied's patented Notch Point geometry provides an excellent solution for reducing bell mouth and tool lead off. In addition, the Notch Point geometry significantly reduces thrust while providing improved chip control. This new geometry may be applied to all standard T-A drill inserts and provides excellent stability for deep hole drilling applications. This geometry can also be utilized in combination with other geometries including Cast Iron, High Rake and High Impact. (See sample item numbers below.) Available in the Y through 2 series, and is a standard feature on GEN2 T-A® 3 through 8 series drill inserts. Sample Item Number: 132A-0112-NP

Combination Geometry Item Numbers: Cast Iron Notch Point: 1C32A-0103-CN, High Rake Notch Point: 132A-0112-RN, High Impact Notch Point: 132A-0112-IN

Tiny Chip (TC) Geometry

Allied's Tiny Chip geometry is an excellent choice for applications that are running at lighter feed rates or require a more manageable chip. It may be beneficial in deep hole applications by providing better chip formation that is more readily evacuated. Recommended for use in low carbon steels, soft alloy steels, and other long chipping materials. Available in Y-2 series. Grades: HSS, SC, PC, C2, C5 carbide. Sample item number: 1C21A-0024-TC

Thin Wall (TW)

Allied's patent pending Thin Wall Geometry is designed for I-beam and steel plate applications less than 7/16" thick. The Thin Wall geometry provides better hole tolerance and improved hole roundness. Thin Wall inserts are made from Super Cobalt for excellent wear resistance and coated with TiAlN for improved tool life. Available in select diameters in the 0 through 3 series. Sample Item Number: 151A-0030-TW

Structural Steel 150° (SS) Geometry

Allied's 150° Structural Steel Geometry is designed for I-Beam and steel plate applications over 7/16" thick. The 150° Structural Steel Geometry provides reduced exit burrs, eliminating secondary operations. 150° Structural Steel Inserts feature patented Notch Point geometry for increased stability and lower drilling forces. These inserts are made from Super Cobalt for excellent wear resistance and coated with TiAlN for improved tool life. Available in select diameters in the 0 through 3 series.

High Efficiency (HE) Geometry

Allied's GEN2 T-A -HE Geometry is designed for improved chip formation in elastic materials like low carbon steels. -HE Geometry, combined with the other advanced features of the GEN2 T-A, allows for maximum performance and increased value. This Geometry is available on Y-4 Series GEN2 T-A Drill Inserts. Sample Item Number: 4C11H-0024-HE



T-A[®] Insert System Guidelines

T-A Insert System Guidelines for Use

- Select the shortest holder possible for the application.
- Use the 'T-A Technical Information' (180-196) section for guidance in selecting correct insert grades, along with speed and feed information.

These cutting parameters are starting conditions only and make no allowance for machine or component rigidity.

Factory Assistance is available at (800) 321-5537 or (330) 343-4283 outside the US and Canada.

- Ensure the T-A holder is held securely and is within 0.003" (0,08 mm) of centerline.
- The T-A insert should be installed in the slot of the holder using the TORX Plus screws provided which should be tightened to the values listed on the T-A Holder / Accessory pages. The holder slot should be clean from dirt or debris.
- Check that the insert outer diameter is a minimum 0.012" (0,30 mm) larger than the holder body diameter.
- When setting up new applications, check coolant flows adequately through the tool before beginning.
It is best practice to:
 - Drill a short hole 1 x diameter deep initially.
 - The chips produced should be short in length and material colored, not straw or blue.
 - Measure the hole produced to check that it is within the desired tolerance.
 - If all is correct, continue to machine the remainder of the hole.
 - Ensure the drilling process is quiet and smooth with no chip packing.

Spot and Chamfer Inserts - SP

Use cutting data as per standard T-A HSS Drill Inserts, in stub or short length holders. Speed should be calculated for the required spot or chamfer diameter.

Flat Bottom Inserts - FB

For cutting data, please refer to catalog pages 185 and 193. Please contact Allied Machine's Application Engineers for advice when attempting to drill from solid.

0.5, 1.5, and 2.5 Holders

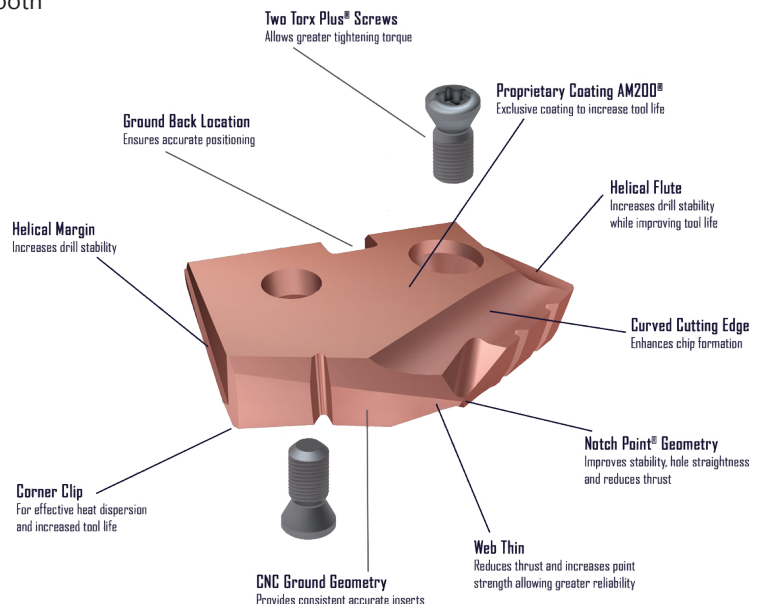
Allied Machine recommends the use of 0.5, 1.5, or 2.5 series holders when running carbide inserts towards the upper end of each series' drill range, as well as in tougher applications requiring more insert support and holder strength.

Extended and Long Structural Steel Holders

When utilizing structural Extended & Long Length holders in applications other than structural steel:

- Refer to Allied's standard speed and feed charts for recommended speeds and feeds, along with the associated reductions in speed and feed and Allied's Deep Hole Drilling Guidelines on the next page.

GEN2 T-A[®] pictured

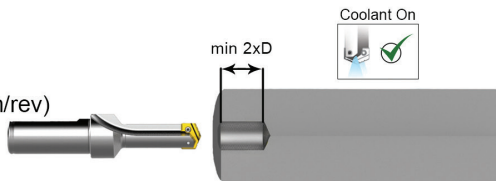




Deep Hole Drilling Guidelines

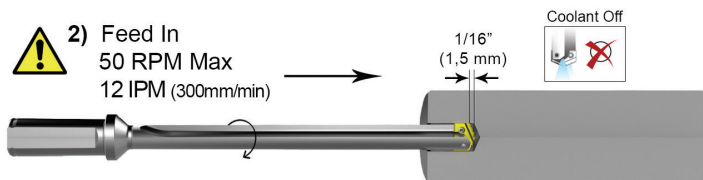
For use with Allied drills greater than 9xD (Depths to Diameter), including Extended, Long, XL, 3XL, and Special Length

- 1) Pilot Hole
100% RPM
100% IPR (mm/rev)



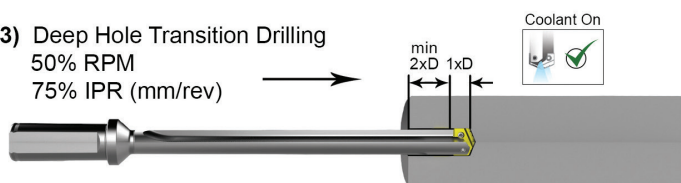
- Establish the pilot hole using the same diameter short drill to a depth of a 2xD minimum
- Utilize a pilot drill with the same or larger included point angle

- 2) Feed In
50 RPM Max
12 IPM (300mm/min)



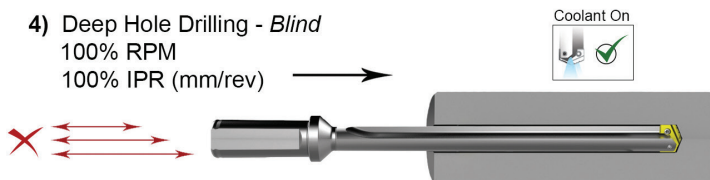
- Feed the longer drill within 1/16" (1,5 mm) short of the established pilot hole bottom at a **maximum of 50 RPM** and 12 IPM (300 mm/min) feed rate

- 3) Deep Hole Transition Drilling
50% RPM
75% IPR (mm/rev)



- Drill additional 1xD past bottom of pilot hole at 50% reduction of recommended speed and 25% reduction of recommended feed
- Minimum of 1 second dwell is required to meet full speed before feeding

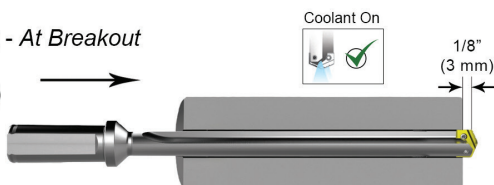
- 4) Deep Hole Drilling - Blind
100% RPM
100% IPR (mm/rev)



- Drill to full depth at recommended speed and feed for longer drills according to Allied speed and feed charts

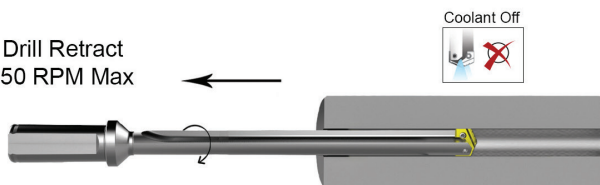
No peck cycle recommended

- 5) Deep Hole Drilling - At Breakout
50% RPM
75% IPR (mm/rev)



- ***For Through Holes Only***
- Reduce speed by 50% and feed by 25% prior to break out
- Do not break out more than 1/8" (3 mm) past the full diameter of drill

- 6) Drill Retract
50 RPM Max



- Reduce speed to a **maximum of 50 RPM** before retracting from hole

WARNING

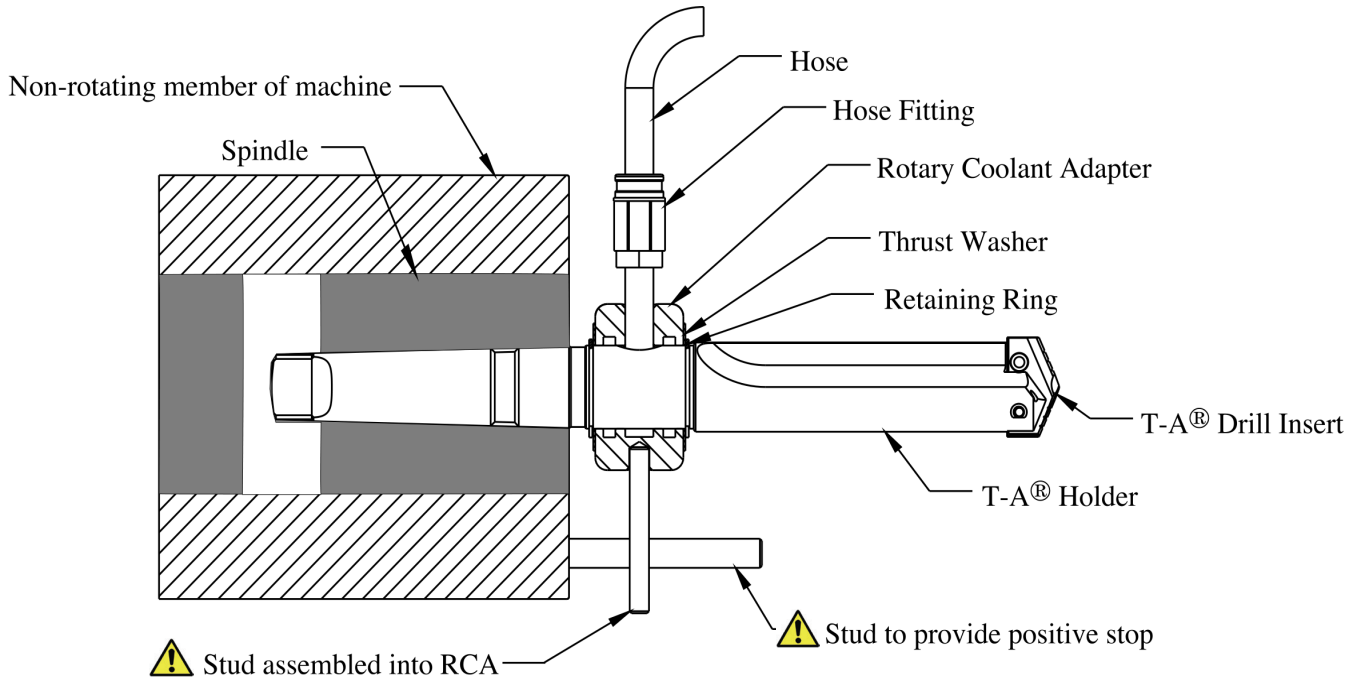
Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

Visit www.alliedmachine.com/deepholeguidelines.aspx for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.



RCA Reference



⚠ WARNING

RCA rotation during drilling can cause hose and/or hose fitting failure, machinery damage and/or serious injury. To prevent, use RCA and positive stop studs when drilling. Factory technical assistance is also available for your specific applications.

Max Recommended RCA Speed

RCA	Max Recommended RPM
2SR / 2SRM	3500
3SR / 3SRM	2500
4SR / 4SRM	2000
5SR / 5SRM	1500
6SR / 6SRM	1100
55SR	1100
60SR	900
65SR	700

NOTE: Max recommended pressure is 600 PSI (42 bar)

NOTE: Recommendations above are based on water and oil based coolants

T-A® and GEN2 T-A® Troubleshooting Guide



Setup Condition	Potential Problem																						Possible Solutions	
	Accelerated corner wear	Barber pole	Bell mouth hole	Blade chipping	Blue chips	Build up Edge (BUE)	Chatter	Chip packing	Chipping of blade point	Damaged or broken tools	Excessive margin wear	High Flank wear	Hole lead off	Hole out of position	Hole out of round	Notching of blade	Oversized hole	Poor hole finish	Poor tool life	Power spikes - Load meter	Retract spiral	Step burned on blade		
<p>⚠ Use of Standard, Extended, Long, XL, and 3XL holders</p> <p>See pg 199 for Deep Hole Drilling Guidelines</p>	1	2	3				7		9				13	14			17					21	<ul style="list-style-type: none"> Start with short holder and drill a minimum depth equal to 2x Diameter (Refer to 199 for detailed instructions) Spot hole with stub tool of same or greater included angle as T-A Drill Insert. Decrease feed a minimum of 50% until establishing full diameter. Use a special holder with wear pads or chrome bearing area to work with drill bushings. 	
Starting on an inclined surface							7		9	10	11		13		15							21	<ul style="list-style-type: none"> Spot face surface to provide a flat entry surface. Spot hole with stub tool of same or greater included angle as T-A Drill Insert. Decrease feed a minimum of 50% until establishing full diameter. Use a special holder with wear pads or chrome bearing area to work with drill bushings. 	
Worn or mis-aligned spindle (lathe, screw machine, chucker)	1		3				7		9	10	11		13				17	18				21	<ul style="list-style-type: none"> Align spindle and turret tailstock. Repair spindle. Spot hole with stub tool of same or greater included angle as T-A Drill Insert. 	
Use of low rigidity machine tools (radial drills, multi-spindle drill press, etc.)		2	3	4			7		9	10			13	14								21	<ul style="list-style-type: none"> Spot hole with stub tool of same or greater included angle as T-A Drill Insert. Reduce penetration rate to fall within the physical limits of the machine or setup (NOTICE: do not reduce feed below threshold of good chip formation.) Use a special holder with wear pads or chrome bearing area to work with drill bushings. Use tougher tool steel grades with high wear resistant coatings. 	
Poor work piece support		2		4			7			10	11				15			18				21	<ul style="list-style-type: none"> Provide additional support for the work piece. Reduce penetration rate to fall within the physical limits of the machine or setup (NOTICE: do not reduce feed below threshold of good chip formation.) Use tougher tool steel grades with high wear resistant coatings. 	
Flood coolant, low coolant pressure or low coolant volume	1				5	6		8		10		12					17	18	19	20		22	<ul style="list-style-type: none"> Run coolant through tool holder when drilling greater than one times diameter. Increase coolant pressure and volume through the tool holder. Reduce penetration rate to fall within the physical limits of the machine or setup (NOTICE: do not reduce feed below threshold of good chip formation.) Add a peck cycle to help clear chips. 	
Interrupted cuts. Entry or exit surfaces that are not perpendicular to the spindle. (draft angles, stepped surfaces, cross holes and cast or forged surfaces).				4			7		9	10	11		13	14	15		17	18	19					<ul style="list-style-type: none"> Pre-mill (spot face) entry or exit surface to remove interruption. Spot hole with stub tool of same or greater included angle as T-A Drill Insert. Decrease feed as much as 50% through entry or exit interruption. Use short holders in low impact entry cuts.
Material harder than expected or running tools beyond recommended speeds.	1				5	6				10		12							19			22	<ul style="list-style-type: none"> Reduce speed if a step is worn in the blade, calculate SFM at the worn diameter. Reduce this value by 10% and apply this new value to the original tool diameter. Increase coolant pressure and volume. Improve coolant condition by use of quality products and regular maintenance. Select a tool grade (premium, super cobalt, or carbide) or coating (TiAlN, TiCN, or AM200®) that is more wear and heat resistant. 	
Poor material microstructure or foreign particles: (forgings and castings that have not been normalized or annealed, poorly prepared steel, flame cut parts and sand castings)				4		6				10		12	13		16				19				<ul style="list-style-type: none"> Compare the performance of other tools for similar wear problems, which may indicate poor micro-structure. Anneal or normalize parts to improve micro-structure for machining. To improve tool life in materials with poor micro-structure try carbide grades. For hard spots or inclusions use the tougher tool steel grade with high wear resistant coatings (TiAlN, TiCN, AM200) Reduce Feeds (NOTICE: do not reduce feed below threshold of good chip formation.) 	
Poor Chip Control								8		10	11		13				17	18	19	20			<ul style="list-style-type: none"> Increase feed to recommended levels. Contact Allied Application Engineering Group for technical recommendations. Increase coolant pressure and volume. Improve coolant condition by use of quality products and regular maintenance. See page 197 for special purpose geometries. 	
Spot drilled holes with included angle less than that matching T-A or cored holes.	1			4			7						13		16				19				<ul style="list-style-type: none"> Spot hole with stub tool of same or greater included angle as T-A Drill Insert. Reduce Feeds (NOTICE: do not reduce feed below threshold of good chip formation.) If possible, drill from solid 	
Use of high wear resistant tool grades.				4						10													<ul style="list-style-type: none"> Use tougher grade of T-A (from carbide to cobalt to HSS). See wear versus toughness chart in this catalog. Increase rigidity of setup. 	

Revolution & Opening

APX

GEN3SYS & GEN3SYS XT

Original T-A & GEN2 T-A

AccuPort 432

ASC 320

Special Tooling