ALLIED MACHINE & ENGINEERING | WOHLHAUPTER®

Holemaking Solutions for Today's Manufacturing

Boring

Reaming

Burnishing

Threading

Specials

T-A Pro®

▶ *DRILLING*

High Penetration Replaceable Insert Drilling System

FEBAMETAL

SECTION A25

T-A Pro® Drilling System

T-A Pro®

High Penetration Replaceable Insert Drilling System

- **Diameter Range:** 9.50 mm - 47.80 mm (0.3739" - 1.8820")

The best just got *better*.

After 35 years of spade drilling success with our iconic T-A® (Throw Away) insert, the best just got better. Our team of engineers developed technology that takes The "go-to" solution for general purpose holemaking to a performance level previously unachievable by a spade insert.

The T-A Pro combines material-specific insert geometries, a redesigned drill body,and a proprietary through coolant system to allow penetration rates, which run at speeds faster than other high performance drills.

Excellent chip control	Improves hole quality and surface finish	Provides maximum durability and stability

Applicable Industries

Aerospace | Agriculture | Automotive | Firearms | General Machining | Oil & Gas | Renewable Energy

Your safety and the safety of others is very important. This catalogue contains important safety messages. Always read and follow all safety precautions.

This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalogue, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalogue. Safety messages follow these words.

⚠ WARNING

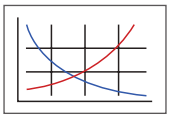
WARNING (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury.

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

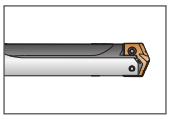
NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit www.alliedmachine.com for the most up-to-date information and procedures.

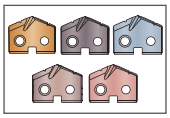
Reference Icons
The following icons will appear throughout the catalogue to help you navigate between products.



Recommended Cutting Data
Speed and feed recommendations for optimum and safe boring



T-A Pro Holders
Refers to the range of holders that connect with the corresponding inserts



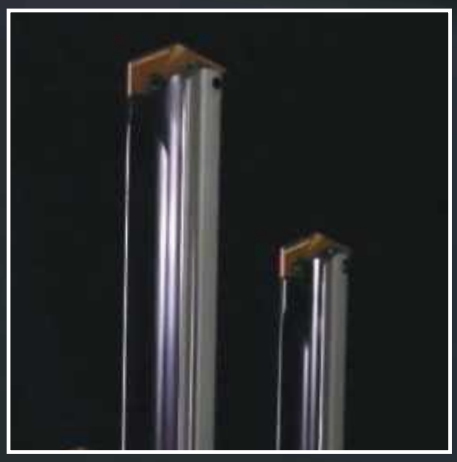
T-A Pro Carbide Inserts
Refers to ISO-material special coated carbide inserts and HSS inserts that connect with the corresponding holders

Through Coolant Option
Indicates that the product is through coolant

Series	Diameter Range	
	Metric (mm)	Imperial (inch)
Y	9.50 mm - 11.09 mm	0.3739" - 0.4368"
Z	11.10 mm - 12.69 mm	0.4369" - 0.4998"
0	12.70 mm - 17.64 mm	0.4999" - 0.6946"
1	17.65 mm - 24.37 mm	0.6947" - 0.9596"
2	24.38 mm - 35.04 mm	0.9597" - 1.3797"
3	35.05 mm - 47.80 mm	1.3798" - 1.8820"

T-A Pro® Drilling System Contents

T-A Pro®



NEW HOLDER DESIGN

Optimised flute design for ***increased*** chip evacuation

NEW INSERT DESIGN

ISO-specific geometries with a new point design to ***simplify*** your insert choices

NEW COOLANT DESIGN

Proprietary coolant outlet configuration provides ***superior*** performance **even in low coolant applications 15 BAR (200PSI)**

www.alliedmachine.com | +44 (0) 1384 400 900 | enquiries.eu@alliedmachine.com

Competitive Test Results

T-A Pro®

TEST RESULTS

Project Profile:	Competitive Testing in 4340 Steel
Tooling Solution:	T-A Pro: Steel (P) Geometry with T-A Pro Holder

The Parameters:

- Hole Diameter = 14.30 mm (0.5625")
- Depth of Cut = 50.80 mm (2")
- Coolant = 20 BAR (300 PSI)
- Speed = 2546 RPM
- Feed = 420 mm/min (16.55 IPR)

The Results:

When run at the listed parameters, here is how the three different tooling solutions performed:

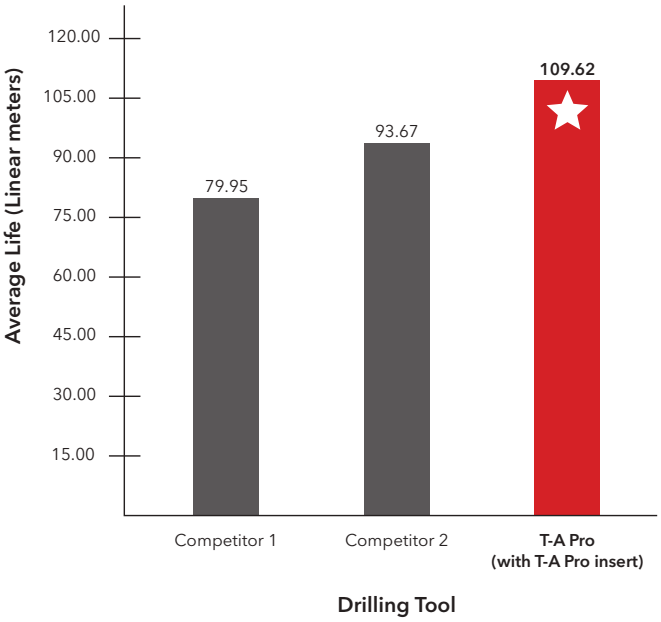
Competitor 1 = 79.95 total linear meters

Competitor 2 = 93.67 total linear meters

T-A Pro = **109.62** total linear meters

Average Tool Life

Test Results Drilling in 4340 Steel



Case Study

The Gift that Keeps Giving.

Not everything in life has to be a give and take. Our customer who machines fluid end frac blocks was previously having to reduce cutting parameters to achieve good chip formation and produce a successful part.

Needing better chip formation with a reduced cycle time, the customer tested Allied's ***T-A Pro drill***. Using the "M" ISO-specific stainless steel insert geometry – developed for improved chip formation while minimising exit burr – they were able to increase their speed and feed while maintaining ideal chip formation.

On top of the reduced cycle time, the T-A Pro had an increased tool life, lowering the cost per hole by 58.82%. The success of the T-A Pro in this application is just another example of why it is more than just a good drill.

If you are looking for a solution that just keeps giving, ***give us a call and we will help you find the right solution.***

Product:	T-A Pro drill
Objective:	Reduce cycle time
Industry:	Oil & Gas / Petrochemical
Part:	Fluid end frac block
Material:	15-5 PH stainless steel
Hole Ø:	44.45 mm (1.75")
Hole Depth:	508.00 mm (20.00")
Tolerance:	+/- 0.127 mm (0.005")
Required Surface Finish:	3.2 µm (125 Ra µin)

Measure	Competitor Drill	T-A Pro Drill
RPM	480	545
Speed Rate	67.06 m/min *(220 SFM)*	76.20 m/min *(250 SFM)*
Feed Rate	0.13 mm/rev *(0.005 IPR)*	0.20 mm/rev *(0.008 IPR)*
Penetration Rate	60.96 mm/min *(2.4 IPM)*	111.76 mm/min *(4.4 IPM)*
Total Part Cycle Time	500 sec	272 sec
Tool Life	30 holes	60 holes
T-A Pro offered *58.82%* cost per hole savings over the competitor tooling.		

- T-A Pro holder
  Item No. HTA3D15-40FM
- T-A Pro insert
  M geometry (stainless steel)
  Item No. TAM3-44.45

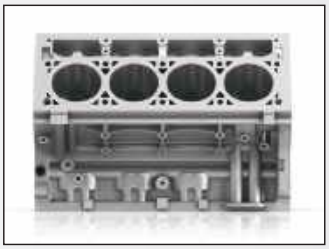
45.60% cycle time decrease

The ISO-specific AM460 coated T-A Pro insert provided:

- ✓ Increased tool life.
- ✓ Decreased cycle time.
- ✓ Decreased cost per hole.
- ✓ Increased penetration rate.

Case Study

Need a solution with better tool life?



Our customer was machining engine block parts from ductile cast iron in a production cell. The replaceable tip drill they were using wasn't providing the results they needed, so they began searching for a tooling solution that would decrease machine downtime and increase productivity.

The customer tested the **T-A Pro® high penetration replaceable insert drill** using the "K" (cast iron) geometry insert with Allied's multilayer TiAlN coating that provides increased abrasion resistance and tool life. The T-A Pro performed better than the customer had hoped.

Using the T-A Pro not only provided substantial tool life improvements, but it also increased the penetration rate by 30%. The previous tooling had a tool life of 1700 holes, but the T-A Pro increased that life to 3400 holes. This allowed the customer to increase their productivity.

In conclusion: Our customer was able to achieve £50k in tool savings per year with massive improvements in throughput. The advantage of the T-A Pro allowed our customer to achieve their tooling goals.

Product: T-A Pro
Objectives: (1) Decrease machine downtime
(2) Increase productivity
Industry: Automotive
Part: Engine block
Material: Ductile cast iron
Hole Ø: 16.00 mm (0.6299")
Hole Depth: 241.00 mm (9.50")

Measure	Competitor Replaceable Insert Drill	T-A Pro Drill
RPM	1819 RPM	2092 RPM
Speed	91 m/min *(300 SFM)*	105 m/min *(345 SFM)*
Feed Rate	0.20 mm/rev *(0.008 IPR)*	0.23 mm/rev *(0.0092 IPR)*
Penetration Rate	369.57 mm/min *(14.55 IPM)*	488.95 mm/min *(19.25 IPM)*
Cycle Time	39 seconds	29 seconds
Tool Life	1700 holes	3400 holes

- T-A Pro Drill holder
  15xD length
  Item No. HTA0C15-20FM
- T- A Pro Drill inserts
  K geometry
  (cast iron)
  Item No. TAK0-16.00

The cast iron TiAlN coated T-A Pro insert provided:

- ✓ Doubled tool life.
- ✓ Decreased machine downtime.
- ✓ Increased productivity.
- ✓ 30% increased penetration rate.
- ✓ Increased tool savings per year.

Insert Comparison and Assembly Information

		 T-A Pro® Inserts	 GEN2 T-A® Inserts	 T-A® Inserts
Recommended for increased productivity		✓		
ISO-specific geometry/coating combination		✓		
Connects with T-A Pro holders		✓	✓	✓
Connects with T-A holders		✓	✓	✓

Step 1:
Align the flats on the T-A Pro insert with the flats on the ears of the holder.

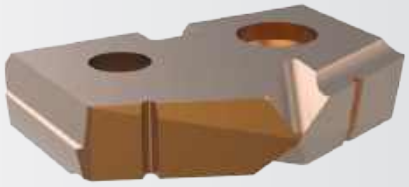
Step 2:
Slide the insert into the precision ground locating pocket on the holder. The insert should not be turned, rotated, or twisted for locking purposes. The holder pocket and locating pads on the insert assure optimum fit and repeatability.

Step 3:
Apply a generous amount of E-Z Break® (provided in the packaging) onto the supplied TORX® Plus screws.

Tighten the TORX Plus screws to the recommended torque value specified in the catalogue by series. A preset TORX driver is available to assure that the proper torque is applied.

T-A Pro Drilling System Information

T-A Pro Drill Inserts

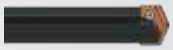


Advanced Design Capabilities

The advanced T-A Pro insert combines a coating and geometry specifically designed to achieve optimal results in ISO material drilling applications. With quick connectivity to existing T-A drill insert holders, the T-A Pro insert can be interchanged with previous T-A inserts with ease, resulting in minimal setup times so you can immediately increase your productivity.

T-A Pro inserts connect with:

T-A Pro holders



T-A holders

Carbide Geometries

P - Steels

- Designed to provide increased penetration rates and tool life in steel applications
- Superior geometry and edge provides excellent chip control
- Allied's multilayer AM300® coating increases heat resistance and improves tool life

K - Cast Irons

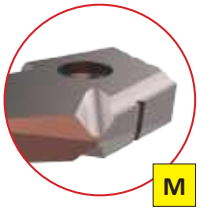
- Uniquely designed for cast/nodular iron applications
- Geometry developed for maximum tool life, reduced exit burr and improved hole finish
- The multilayer TiAlN coating provides increased abrasion resistance and tool life

N - Nonferrous Materials

- Designed for applications in aluminium, brass and copper
- The geometry yields excellent chip control in these softer materials
- TiCN coating gives the versatility to run in a variety of materials while reducing buildup

M - Stainless Steel*

- Designed for all stainless steels and heat-resistant superalloys
- Geometry optimised for improved chip formation while minimising exit burr
- Allied's new AM460 coating provides industry-leading tool life in stainless and HRSA materials



*Available in Z -3 series only.

High-Speed Steel Geometries

X - High-Speed Steel Materials

- Improved chip geometry for excellent chip control in all materials
- Long tool life and high-process security for the most challenging applications
- Allied's multilayer AM200® coating combines excellent heat resistance and high lubricity for wide application use

T-A Pro Drill Holders

Straight flutes.

Proprietary coolant outlets improve coolant flow.

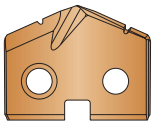
Provides increased insert life.

Stub, 3xD, 5xD, 7xD, 10xD, 12xD, 15xD

Available in Stub, 3xD, 5xD, 7xD, 10xD, 12xD and 15xD.

Product Nomenclature

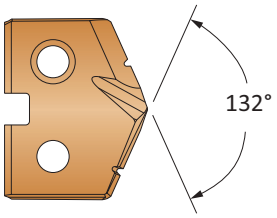
T-A Pro Drill Inserts

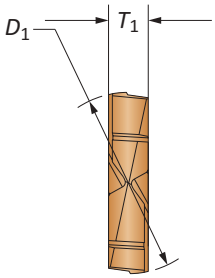


TA	P	0	–	15.00
1	2	3		4

1. T-A Pro Drill Insert	2. ISO Material / Geometry	3. Series	4. Diameter (mm)
TA = T-A Pro insert	**P** = Steel **K** = Cast iron **N** = Nonferrous **M** = Stainless Steel* **X** = HSS	**Y** = Y series **Z** = Z series **0** = 0 series **1** = 1 series **2** = 2 series **3** = 3 series	For complete list of diameter ranges by series, see contents page.

*Available in Z -3 series only.





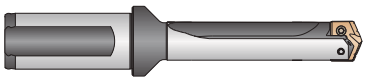
Reference Key

Symbol	Attribute
D_1	Insert diameter
T_1	Insert thickness

Product Nomenclature

T-A Pro Drill Holders

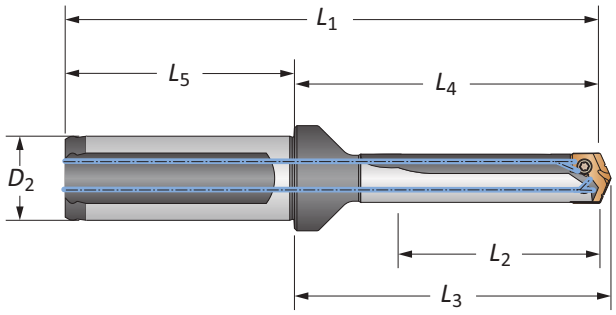
HTA	0	B	05	–	20	FM
1	2	3	4		5	6



1. Holder	2. Series	3. Body Diameter	4. Length
HTA = T-A Pro holder	**Y** = Y Series	**A** = A body diameter	**01** = Stub Length
	Z = Z Series	**B** = B body diameter	**03** = 3x Diameter
	0 = 0 Series	**C** = C body diameter	**05** = 5x Diameter
	1 = 1 Series	**D** = D body diameter	**07** = 7x Diameter
	2 = 2 Series		**10** = 10x Diameter
	3 = 3 Series		**12** = 12x Diameter
			15 = 15x Diameter

5. Shank Diameter		6. Shank Style
Metric (mm)	**Imperial (inch)**	**F** = Flanged with flat
20 = 20 mm	**075** = 3/4"	**FM** = Flanged metric with flat
25 = 25 mm	**100** = 1"	**C** = Cylindrical (no flat)
32 = 32 mm	**125** = 1-1/4"	**CM** = Cylindrical metric (no flat)
40 = 40 mm	**150** = 1-1/2"	

Holder Ordering Information
The series designator (Z series, 0 series, etc.) in the top corner of each page is for your reference when ordering. Please refer to these series designators when placing an order. For example, a Z series drill insert only fits into a Z series holder.

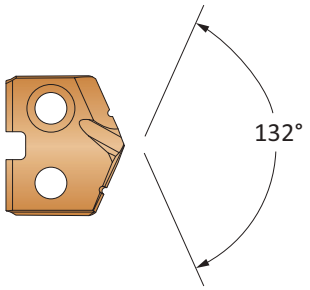


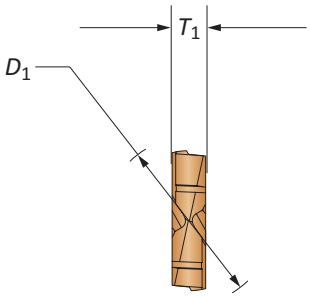
Reference Key

Symbol	Attribute
D_2	Shank diameter
L_1	Overall length
L_2	Drill depth
L_3	Holder reference length
L_4	Holder body length
L_5	Shank length

T-A Pro Drill Inserts

Y Series | Diameter Range: 9.50 mm - 11.09 mm (0.3739" - 0.4368")



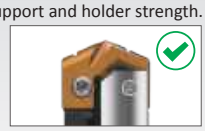


Insert					Carbide			HSS
					Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	X
Y-A	9.50	0.3740		3/32	TAPY-9.50	TAKY-9.50	TANY-9.50	TAXY-9.50
Y-A	9.53	0.3752	3/8	3/32	TAPY-9.53	TAKY-9.53	TANY-9.53	TAXY-9.53
Y-A	9.60	0.3780		3/32	TAPY-9.60	TAKY-9.60	TANY-9.60	TAXY-9.60
Y-A	9.70	0.3819		3/32	TAPY-9.70	TAKY-9.70	TANY-9.70	TAXY-9.70
Y-A	9.80	0.3858		3/32	TAPY-9.80	TAKY-9.80	TANY-9.80	TAXY-9.80
Y-A	9.90	0.3898		3/32	TAPY-9.90	TAKY-9.90	TANY-9.90	TAXY-9.90
Y-A	9.92	0.3906	25/64	3/32	TAPY-9.92	TAKY-9.92	TANY-9.92	TAXY-9.92
Y-A	10.00	0.3937		3/32	TAPY-10.00	TAKY-10.00	TANY-10.00	TAXY-10.00
Y-A	10.10	0.3976		3/32	TAPY-10.10	TAKY-10.10	TANY-10.10	TAXY-10.10
Y-A	10.20	0.4016		3/32	TAPY-10.20	TAKY-10.20	TANY-10.20	TAXY-10.20
Y-A	10.30	0.4055		3/32	TAPY-10.30	TAKY-10.30	TANY-10.30	TAXY-10.30

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.



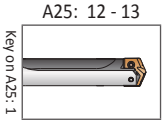
A Series Insert + A Series Holder

C Series Insert + A Series Holder

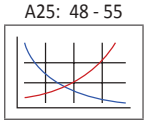
C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 12 - 13



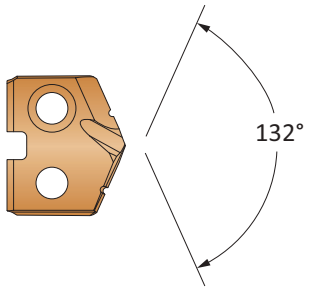
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

Y Series | Diameter Range: 9.50 mm - 11.09 mm (0.3739" - 0.4368")

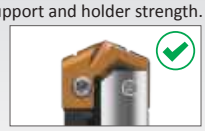


Insert					Carbide			HSS
					Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	X
Y-B	10.32	0.4063	13/32	3/32	TAPY-10.32	TAKY-10.32	TANY-10.32	TAXY-10.32
Y-B	10.40	0.4094		3/32	TAPY-10.40	TAKY-10.40	TANY-10.40	TAXY-10.40
Y-B	10.50	0.4134		3/32	TAPY-10.50	TAKY-10.50	TANY-10.50	TAXY-10.50
Y-B	10.60	0.4173		3/32	TAPY-10.60	TAKY-10.60	TANY-10.60	TAXY-10.60
Y-B	10.70	0.4213		3/32	TAPY-10.70	TAKY-10.70	TANY-10.70	TAXY-10.70
Y-B	10.72	0.4220	27/64	3/32	TAPY-10.72	TAKY-10.72	TANY-10.72	TAXY-10.72
Y-B	10.80	0.4252		3/32	TAPY-10.80	TAKY-10.80	TANY-10.80	TAXY-10.80
Y-B	10.90	0.4291		3/32	TAPY-10.90	TAKY-10.90	TANY-10.90	TAXY-10.90
Y-B	11.00	0.4331		3/32	TAPY-11.00	TAKY-11.00	TANY-11.00	TAXY-11.00

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.



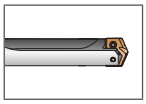
A Series Insert + A Series Holder

C Series Insert + A Series Holder

C Series Insert + C Series Holder

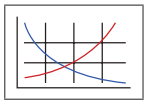
A Series Insert + C Series Holder

A25: 12 - 13



Key on A25: 1

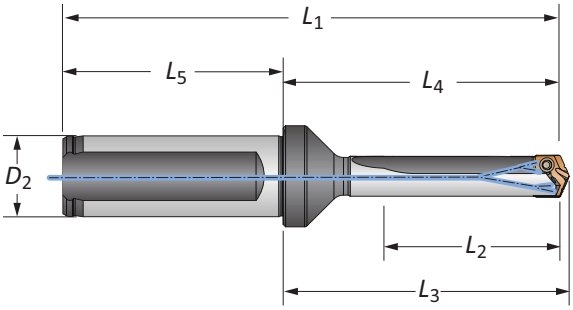
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

Y Series Metric | Diameter Range: 9.50 mm - 11.09 mm



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	11.1	39.5	41.5	89.5	50.0	20	Yes	**HTAYA01-20FM**
	Stub	A	11.1	39.5	41.5	89.5	50.0	20	No	**HTAYA01-20CM**
	Stub	B	11.1	39.5	41.5	89.5	50.0	20	Yes	**HTAYB01-20FM**
	Stub	B	11.1	39.5	41.5	89.5	50.0	20	No	**HTAYB01-20CM**
	3xD	A	33.2	64.9	66.9	114.9	50.0	20	Yes	**HTAYA03-20FM**
	3xD	A	33.2	64.9	66.9	114.9	50.0	20	No	**HTAYA03-20CM**
	3xD	B	33.2	64.9	66.9	114.9	50.0	20	Yes	**HTAYB03-20FM**
	3xD	B	33.2	64.9	66.9	114.9	50.0	20	No	**HTAYB03-20CM**
	5xD	A	55.4	87.0	89.1	137.1	50.0	20	Yes	**HTAYA05-20FM**
	5xD	A	55.4	87.0	89.1	137.1	50.0	20	No	**HTAYA05-20CM**
	5xD	B	55.4	87.0	89.1	137.1	50.0	20	Yes	**HTAYB05-20FM**
	5xD	B	55.4	87.0	89.1	137.1	50.0	20	No	**HTAYB05-20CM**
	7xD	A	77.5	109.2	111.2	159.2	50.0	20	Yes	**HTAYA07-20FM**
ⓜ	7xD	A	77.5	109.2	111.2	159.2	50.0	20	No	**HTAYA07-20CM**
	7xD	B	77.5	109.2	111.2	159.2	50.0	20	Yes	**HTAYB07-20FM**
	7xD	B	77.5	109.2	111.2	159.2	50.0	20	No	**HTAYB07-20CM**
	10xD	A	110.7	142.4	144.4	192.4	50.0	20	Yes	⚠ **HTAYA10-20FM**
	10xD	A	110.7	142.4	144.4	192.4	50.0	20	No	⚠ **HTAYA10-20CM**
	10xD	B	110.7	142.4	144.4	192.4	50.0	20	Yes	⚠ **HTAYB10-20FM**
	10xD	B	110.7	142.4	144.4	192.4	50.0	20	No	⚠ **HTAYB10-20CM**
	12xD	A	132.9	164.6	166.6	214.6	50.0	20	Yes	⚠ **HTAYA12-20FM**
	12xD	A	132.9	164.6	166.6	214.6	50.0	20	No	⚠ **HTAYA12-20CM**
	12xD	B	132.9	164.6	166.6	214.6	50.0	20	Yes	⚠ **HTAYB12-20FM**
	12xD	B	132.9	164.6	166.6	214.6	50.0	20	No	⚠ **HTAYB12-20CM**
	15xD	A	166.1	197.8	199.8	247.8	50.0	20	Yes	⚠ **HTAYA15-20FM**
	15xD	A	166.1	197.8	199.8	247.8	50.0	20	No	⚠ **HTAYA15-20CM**
	15xD	B	166.1	197.8	199.8	247.8	50.0	20	Yes	⚠ **HTAYB15-20FM**
	15xD	B	166.1	197.8	199.8	247.8	50.0	20	No	⚠ **HTAYB15-20CM**

Sub Series	Y Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
YA	9.50 mm - 11.09 mm	0.3739" - 0.4368"
YB	10.32 mm - 11.09 mm	0.4062" - 0.4368"

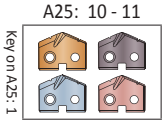
Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
724-IP7-1	724N-IP7-1	8IP-7	8IP-7TL	8IP-7B	84 N-cm (7.4 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 10 - 11



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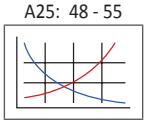
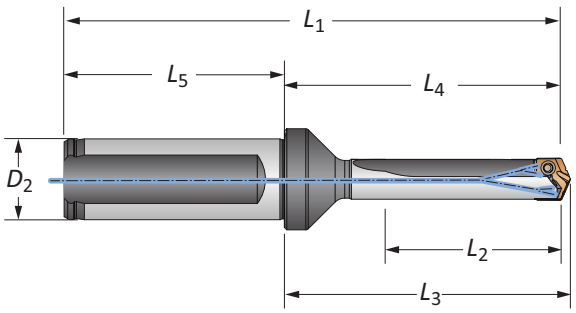
A25: 48 - 55



ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

Y Series Imperial | Diameter Range: 0.3739" - 0.4368"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	0.436	1.554	1.634	3.584	2.030	3/4	Yes	**HTAYA01-075F**
	Stub	A	0.436	1.554	1.634	3.584	2.030	3/4	No	**HTAYA01-075C**
	Stub	B	0.436	1.554	1.634	3.584	2.030	3/4	Yes	**HTAYB01-075F**
	Stub	B	0.436	1.554	1.634	3.584	2.030	3/4	No	**HTAYB01-075C**
	3xD	A	1.308	2.555	2.635	4.585	2.030	3/4	Yes	**HTAYA03-075F**
	3xD	A	1.308	2.555	2.635	4.585	2.030	3/4	No	**HTAYA03-075C**
	3xD	B	1.308	2.555	2.635	4.585	2.030	3/4	Yes	**HTAYB03-075F**
	3xD	B	1.308	2.555	2.635	4.585	2.030	3/4	No	**HTAYB03-075C**
	5xD	A	2.180	3.427	3.507	5.457	2.030	3/4	Yes	**HTAYA05-075F**
	5xD	A	2.180	3.427	3.507	5.457	2.030	3/4	No	**HTAYA05-075C**
	5xD	B	2.180	3.427	3.507	5.457	2.030	3/4	Yes	**HTAYB05-075F**
	5xD	B	2.180	3.427	3.507	5.457	2.030	3/4	No	**HTAYB05-075C**
	7xD	A	3.052	4.299	4.379	6.329	2.030	3/4	Yes	**HTAYA07-075F**
ⓘ	7xD	A	3.052	4.299	4.379	6.329	2.030	3/4	No	**HTAYA07-075C**
	7xD	B	3.052	4.299	4.379	6.329	2.030	3/4	Yes	**HTAYB07-075F**
	7xD	B	3.052	4.299	4.379	6.329	2.030	3/4	No	**HTAYB07-075C**
	10xD	A	4.360	5.607	5.687	7.637	2.030	3/4	Yes	⚠ **HTAYA10-075F**
	10xD	A	4.360	5.607	5.687	7.637	2.030	3/4	No	⚠ **HTAYA10-075C**
	10xD	B	4.360	5.607	5.687	7.637	2.030	3/4	Yes	⚠ **HTAYB10-075F**
	10xD	B	4.360	5.607	5.687	7.637	2.030	3/4	No	⚠ **HTAYB10-075C**
	12xD	A	5.232	6.479	6.559	8.509	2.030	3/4	Yes	⚠ **HTAYA12-075F**
	12xD	A	5.232	6.479	6.559	8.509	2.030	3/4	No	⚠ **HTAYA12-075C**
	12xD	B	5.232	6.479	6.559	8.509	2.030	3/4	Yes	⚠ **HTAYB12-075F**
	12xD	B	5.232	6.479	6.559	8.509	2.030	3/4	No	⚠ **HTAYB12-075C**
	15xD	A	6.540	7.787	7.867	9.817	2.030	3/4	Yes	⚠ **HTAYA15-075F**
	15xD	A	6.540	7.787	7.867	9.817	2.030	3/4	No	⚠ **HTAYA15-075C**
	15xD	B	6.540	7.787	7.867	9.817	2.030	3/4	Yes	⚠ **HTAYB15-075F**
	15xD	B	6.540	7.787	7.867	9.817	2.030	3/4	No	⚠ **HTAYB15-075C**

Sub Series	Y Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
YA	9.50 mm - 11.09 mm	0.3739" - 0.4368"
YB	10.32 mm - 11.09 mm	0.4062" - 0.4368"

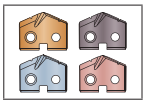
Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
724-IP7-1	724N-IP7-1	8IP-7	8IP-7TL	8IP-7B	84 N-cm (7.4 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 10 - 11



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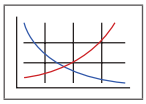
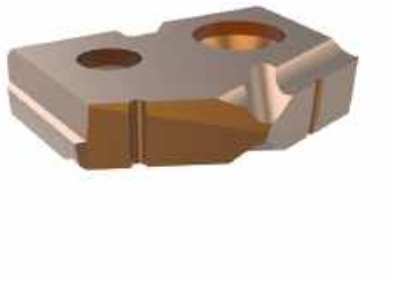
A25: 48 - 55

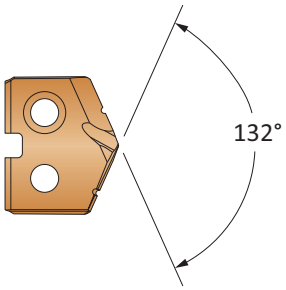


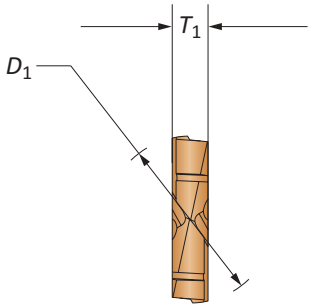
ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Inserts

Z Series | Diameter Range: 11.10 mm - 12.69 mm (0.4369" - 0.4998")





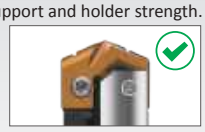


Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
Z-A	11.11	0.4374	7/16	3/32	TAPZ-11.11	TAKZ-11.11	TANZ-11.11	TAMZ-11.11	TAXZ-11.11
Z-A	11.20	0.4409		3/32	TAPZ-11.20	TAKZ-11.20	TANZ-11.20	TAMZ-11.20	TAXZ-11.20
Z-A	11.30	0.4449		3/32	TAPZ-11.30	TAKZ-11.30	TANZ-11.30	TAMZ-11.30	TAXZ-11.30
Z-A	11.40	0.4488		3/32	TAPZ-11.40	TAKZ-11.40	TANZ-11.40	TAMZ-11.40	TAXZ-11.40
Z-A	11.50	0.4528		3/32	TAPZ-11.50	TAKZ-11.50	TANZ-11.50	TAMZ-11.50	TAXZ-11.50
Z-A	11.51	0.4531	29/64	3/32	TAPZ-11.51	TAKZ-11.51	TANZ-11.51	TAMZ-11.51	TAXZ-11.51
Z-A	11.60	0.4567		3/32	TAPZ-11.60	TAKZ-11.60	TANZ-11.60	TAMZ-11.60	TAXZ-11.60
Z-A	11.70	0.4606		3/32	TAPZ-11.70	TAKZ-11.70	TANZ-11.70	TAMZ-11.70	TAXZ-11.70
Z-A	11.80	0.4646		3/32	TAPZ-11.80	TAKZ-11.80	TANZ-11.80	TAMZ-11.80	TAXZ-11.80
Z-A	11.91	0.4689	15/32	3/32	TAPZ-11.91	TAKZ-11.91	TANZ-11.91	TAMZ-11.91	TAXZ-11.91
Z-A	12.00	0.4724		3/32	TAPZ-12.00	TAKZ-12.00	TANZ-12.00	TAMZ-12.00	TAXZ-12.00
Z-A	12.10	0.4764		3/32	TAPZ-12.10	TAKZ-12.10	TANZ-12.10	TAMZ-12.10	TAXZ-12.10

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.



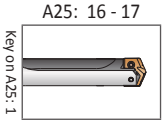
A Series Insert + A Series Holder

C Series Insert + A Series Holder

C Series Insert + C Series Holder

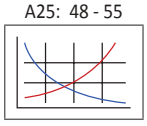
A Series Insert + C Series Holder

A25: 16 - 17



Key on A25: 1

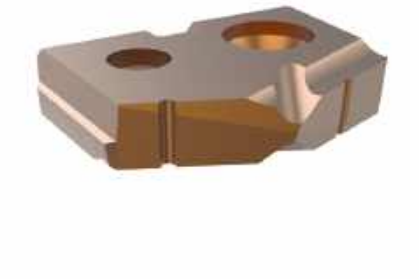
A25: 48 - 55

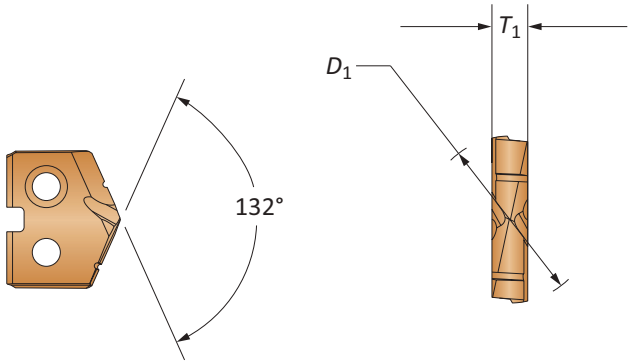


Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

Z Series | Diameter Range: 11.10 mm - 12.69 mm (0.4369" - 0.4998")



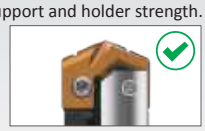


Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
Z-B	12.20	0.4803		3/32	TAPZ-12.20	TAKZ-12.20	TANZ-12.20	TAMZ-12.20	TAXZ-12.20
Z-B	12.30	0.4843	31/64	3/32	TAPZ-12.30	TAKZ-12.30	TANZ-12.30	TAMZ-12.30	TAXZ-12.30
Z-B	12.40	0.4882		3/32	TAPZ-12.40	TAKZ-12.40	TANZ-12.40	TAMZ-12.40	TAXZ-12.40
Z-B	12.50	0.4921		3/32	TAPZ-12.50	TAKZ-12.50	TANZ-12.50	TAMZ-12.50	TAXZ-12.50
Z-B	12.60	0.4961		3/32	TAPZ-12.60	TAKZ-12.60	TANZ-12.60	TAMZ-12.60	TAXZ-12.60

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.



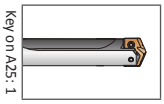
A Series Insert + A Series Holder

C Series Insert + A Series Holder

C Series Insert + C Series Holder

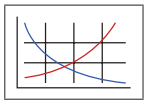
A Series Insert + C Series Holder

A25: 16 - 17



Key on A25: 1

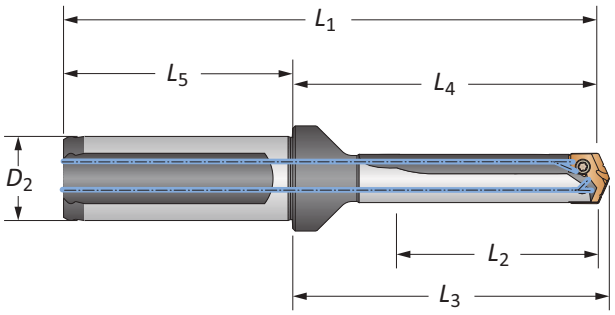
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

Z Series Metric | Diameter Range: 11.10 mm - 12.69 mm



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	12.0	40.6	42.7	90.7	50.0	20	Yes	**HTAZA01-20FM**
	Stub	A	12.0	40.6	42.7	90.7	50.0	20	No	**HTAZA01-20CM**
	Stub	B	12.0	40.6	42.7	90.7	50.0	20	Yes	**HTAZB01-20FM**
	Stub	B	12.0	40.6	42.7	90.7	50.0	20	No	**HTAZB01-20CM**
	3xD	A	36.1	68.4	70.4	118.4	50.0	20	Yes	**HTAZA03-20FM**
	3xD	A	36.1	68.4	70.4	118.4	50.0	20	No	**HTAZA03-20CM**
	3xD	B	36.1	68.4	70.4	118.4	50.0	20	Yes	**HTAZB03-20FM**
	3xD	B	36.1	68.4	70.4	118.4	50.0	20	No	**HTAZB03-20CM**
	5xD	A	60.2	92.5	94.5	142.5	50.0	20	Yes	**HTAZA05-20FM**
	5xD	A	60.2	92.5	94.5	142.5	50.0	20	No	**HTAZA05-20CM**
	5xD	B	60.2	92.5	94.5	142.5	50.0	20	Yes	**HTAZB05-20FM**
	5xD	B	60.2	92.5	94.5	142.5	50.0	20	No	**HTAZB05-20CM**
	7xD	A	84.3	116.6	118.6	166.6	50.0	20	Yes	**HTAZA07-20FM**
	7xD	A	84.3	116.6	118.6	166.6	50.0	20	No	**HTAZA07-20CM**
	7xD	B	84.3	116.6	118.6	166.6	50.0	20	Yes	**HTAZB07-20FM**
	7xD	B	84.3	116.6	118.6	166.6	50.0	20	No	**HTAZB07-20CM**
	10xD	A	120.4	152.7	154.7	202.7	50.0	20	Yes	**⚠ HTAZA10-20FM**
	10xD	A	120.4	152.7	154.7	202.7	50.0	20	No	**⚠ HTAZA10-20CM**
	10xD	B	120.4	152.7	154.7	202.7	50.0	20	Yes	**⚠ HTAZB10-20FM**
	10xD	B	120.4	152.7	154.7	202.7	50.0	20	No	**⚠ HTAZB10-20CM**
	12xD	A	144.5	176.8	178.8	226.8	50.0	20	Yes	**⚠ HTAZA12-20FM**
	12xD	A	144.5	176.8	178.8	226.8	50.0	20	No	**⚠ HTAZA12-20CM**
	12xD	B	144.5	176.8	178.8	226.8	50.0	20	Yes	**⚠ HTAZB12-20FM**
	12xD	B	144.5	176.8	178.8	226.8	50.0	20	No	**⚠ HTAZB12-20CM**
	15xD	A	180.6	212.9	214.9	262.9	50.0	20	Yes	**⚠ HTAZA15-20FM**
	15xD	A	180.6	212.9	214.9	262.9	50.0	20	No	**⚠ HTAZA15-20CM**
	15xD	B	180.6	212.9	214.9	262.9	50.0	20	Yes	**⚠ HTAZB15-20FM**
	15xD	B	180.6	212.9	214.9	262.9	50.0	20	No	**⚠ HTAZB15-20CM**

Sub Series	Z Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
ZA	11.10 mm - 12.69 mm	0.4369" - 0.4998"
ZB	12.20 mm - 12.69 mm	0.4802" - 0.4998"

Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	84 N-cm (7.4 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

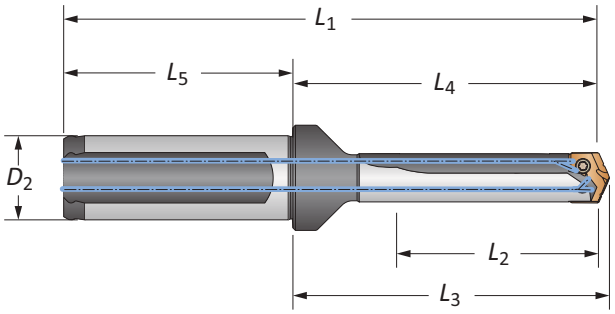
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 14 - 15
Key on A25: 1
A25: 48 - 55

Ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

Z Series Imperial | Diameter Range: 0.4369" - 0.4998"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	0.474	1.600	1.680	3.630	2.030	3/4	Yes	HTAZA01-075F
	Stub	A	0.474	1.600	1.680	3.630	2.030	3/4	No	HTAZA01-075C
	Stub	B	0.474	1.600	1.680	3.630	2.030	3/4	Yes	HTAZB01-075F
	Stub	B	0.474	1.600	1.680	3.630	2.030	3/4	No	HTAZB01-075C
	3xD	A	1.422	2.693	2.773	4.723	2.030	3/4	Yes	HTAZA03-075F
	3xD	A	1.422	2.693	2.773	4.723	2.030	3/4	No	HTAZA03-075C
	3xD	B	1.422	2.693	2.773	4.723	2.030	3/4	Yes	HTAZB03-075F
	3xD	B	1.422	2.693	2.773	4.723	2.030	3/4	No	HTAZB03-075C
	5xD	A	2.370	3.641	3.721	5.671	2.030	3/4	Yes	HTAZA05-075F
	5xD	A	2.370	3.641	3.721	5.671	2.030	3/4	No	HTAZA05-075C
	5xD	B	2.370	3.641	3.721	5.671	2.030	3/4	Yes	HTAZB05-075F
	5xD	B	2.370	3.641	3.721	5.671	2.030	3/4	No	HTAZB05-075C
	7xD	A	3.318	4.589	4.669	6.619	2.030	3/4	Yes	HTAZA07-075F
ⓘ	7xD	A	3.318	4.589	4.669	6.619	2.030	3/4	No	HTAZA07-075C
	7xD	B	3.318	4.589	4.669	6.619	2.030	3/4	Yes	HTAZB07-075F
	7xD	B	3.318	4.589	4.669	6.619	2.030	3/4	No	HTAZB07-075C
	10xD	A	4.740	6.011	6.091	8.041	2.030	3/4	Yes	⚠ HTAZA10-075F
	10xD	A	4.740	6.011	6.091	8.041	2.030	3/4	No	⚠ HTAZA10-075C
	10xD	B	4.740	6.011	6.091	8.041	2.030	3/4	Yes	⚠ HTAZB10-075F
	10xD	B	4.740	6.011	6.091	8.041	2.030	3/4	No	⚠ HTAZB10-075C
	12xD	A	5.688	6.959	7.039	8.989	2.030	3/4	Yes	⚠ HTAZA12-075F
	12xD	A	5.688	6.959	7.039	8.989	2.030	3/4	No	⚠ HTAZA12-075C
	12xD	B	5.688	6.959	7.039	8.989	2.030	3/4	Yes	⚠ HTAZB12-075F
	12xD	B	5.688	6.959	7.039	8.989	2.030	3/4	No	⚠ HTAZB12-075C
	15xD	A	7.110	8.381	8.461	10.411	2.030	3/4	Yes	⚠ HTAZA15-075F
	15xD	A	7.110	8.381	8.461	10.411	2.030	3/4	No	⚠ HTAZA15-075C
	15xD	B	7.110	8.381	8.461	10.411	2.030	3/4	Yes	⚠ HTAZB15-075F
	15xD	B	7.110	8.381	8.461	10.411	2.030	3/4	No	⚠ HTAZB15-075C

Sub Series	Z Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
ZA	11.10 mm - 12.69 mm	0.4369" - 0.4998"
ZB	12.20 mm - 12.69 mm	0.4802" - 0.4998"

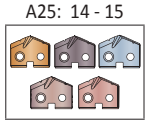
Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	84 N-cm (7.4 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 14 - 15



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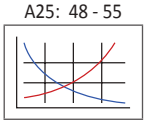
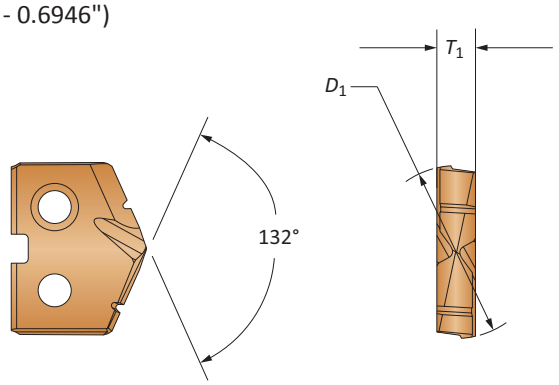
A25: 48 - 55



ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Inserts

0 Series | Diameter Range: 12.70 mm - 17.64 mm (0.4999" - 0.6946")

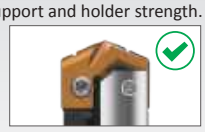


Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
0-A	12.70	0.5000	1/2	1/8	TAP0-12.70	TAK0-12.70	TAN0-12.70	TAM0-12.70	TAX0-12.70
0-A	12.80	0.5039		1/8	TAP0-12.80	TAK0-12.80	TAN0-12.80	TAM0-12.80	TAX0-12.80
0-A	12.90	0.5079		1/8	TAP0-12.90	TAK0-12.90	TAN0-12.90	TAM0-12.90	TAX0-12.90
0-A	13.00	0.5118		1/8	TAP0-13.00	TAK0-13.00	TAN0-13.00	TAM0-13.00	TAX0-13.00
0-A	13.10	0.5157	33/64	1/8	TAP0-13.10	TAK0-13.10	TAN0-13.10	TAM0-13.10	TAX0-13.10
0-A	13.20	0.5197		1/8	TAP0-13.20	TAK0-13.20	TAN0-13.20	TAM0-13.20	TAX0-13.20
0-A	13.30	0.5236		1/8	TAP0-13.30	TAK0-13.30	TAN0-13.30	TAM0-13.30	TAX0-13.30
0-A	13.40	0.5276		1/8	TAP0-13.40	TAK0-13.40	TAN0-13.40	TAM0-13.40	TAX0-13.40
0-A	13.49	0.5311	17/32	1/8	TAP0-13.49	TAK0-13.49	TAN0-13.49	TAM0-13.49	TAX0-13.49
0-A	13.50	0.5315		1/8	TAP0-13.50	TAK0-13.50	TAN0-13.50	TAM0-13.50	TAX0-13.50
0-A	13.60	0.5354		1/8	TAP0-13.60	TAK0-13.60	TAN0-13.60	TAM0-13.60	TAX0-13.60
0-A	13.70	0.5394		1/8	TAP0-13.70	TAK0-13.70	TAN0-13.70	TAM0-13.70	TAX0-13.70
0-A	13.80	0.5433		1/8	TAP0-13.80	TAK0-13.80	TAN0-13.80	TAM0-13.80	TAX0-13.80
0-A	13.89	0.5469	35/64	1/8	TAP0-13.89	TAK0-13.89	TAN0-13.89	TAM0-13.89	TAX0-13.89
0-B	14.00	0.5512		1/8	TAP0-14.00	TAK0-14.00	TAN0-14.00	TAM0-14.00	TAX0-14.00
0-B	14.10	0.5551		1/8	TAP0-14.10	TAK0-14.10	TAN0-14.10	TAM0-14.10	TAX0-14.10
0-B	14.20	0.5591		1/8	TAP0-14.20	TAK0-14.20	TAN0-14.20	TAM0-14.20	TAX0-14.20
0-B	14.29	0.5626	9/16	1/8	TAP0-14.29	TAK0-14.29	TAN0-14.29	TAM0-14.29	TAX0-14.29
0-B	14.40	0.5669		1/8	TAP0-14.40	TAK0-14.40	TAN0-14.40	TAM0-14.40	TAX0-14.40
0-B	14.50	0.5709		1/8	TAP0-14.50	TAK0-14.50	TAN0-14.50	TAM0-14.50	TAX0-14.50
0-B	14.60	0.5748		1/8	TAP0-14.60	TAK0-14.60	TAN0-14.60	TAM0-14.60	TAX0-14.60
0-B	14.68	0.5780	37/64	1/8	TAP0-14.68	TAK0-14.68	TAN0-14.68	TAM0-14.68	TAX0-14.68
0-B	14.80	0.5827		1/8	TAP0-14.80	TAK0-14.80	TAN0-14.80	TAM0-14.80	TAX0-14.80
0-B	14.90	0.5866		1/8	TAP0-14.90	TAK0-14.90	TAN0-14.90	TAM0-14.90	TAX0-14.90
0-B	15.00	0.5906		1/8	TAP0-15.00	TAK0-15.00	TAN0-15.00	TAM0-15.00	TAX0-15.00

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.

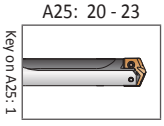

A Series Insert + A Series Holder


C Series Insert + A Series Holder

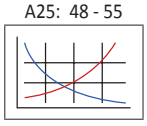

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 20 - 23



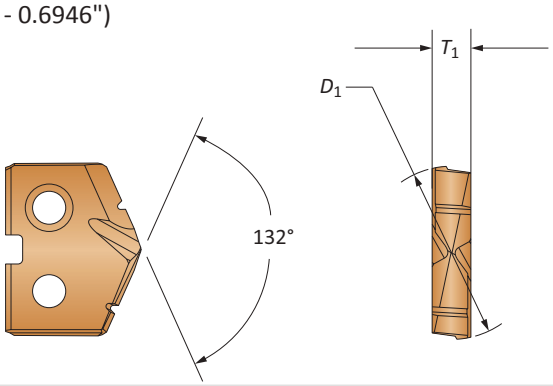
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

0 Series | Diameter Range: 12.70 mm - 17.64 mm (0.4999" - 0.6946")



Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
0-C	15.08	0.5937	19/32	1/8	TAP0-15.08	TAK0-15.08	TAN0-15.08	TAM0-15.08	TAX0-15.08
0-C	15.20	0.5984		1/8	TAP0-15.20	TAK0-15.20	TAN0-15.20	TAM0-15.20	TAX0-15.20
0-C	15.25	0.6004		1/8	TAP0-15.25	TAK0-15.25	TAN0-15.25	TAM0-15.25	TAX0-15.25
0-C	15.30	0.6024		1/8	TAP0-15.30	TAK0-15.30	TAN0-15.30	TAM0-15.30	TAX0-15.30
0-C	15.40	0.6063		1/8	TAP0-15.40	TAK0-15.40	TAN0-15.40	TAM0-15.40	TAX0-15.40
0-C	15.48	0.6094	39/64	1/8	TAP0-15.48	TAK0-15.48	TAN0-15.48	TAM0-15.48	TAX0-15.48
0-C	15.50	0.6102		1/8	TAP0-15.50	TAK0-15.50	TAN0-15.50	TAM0-15.50	TAX0-15.50
0-C	15.60	0.6142		1/8	TAP0-15.60	TAK0-15.60	TAN0-15.60	TAM0-15.60	TAX0-15.60
0-C	15.70	0.6181		1/8	TAP0-15.70	TAK0-15.70	TAN0-15.70	TAM0-15.70	TAX0-15.70
0-C	15.80	0.6220		1/8	TAP0-15.80	TAK0-15.80	TAN0-15.80	TAM0-15.80	TAX0-15.80
0-C	15.88	0.6252	5/8	1/8	TAP0-15.88	TAK0-15.88	TAN0-15.88	TAM0-15.88	TAX0-15.88
0-C	16.00	0.6299		1/8	TAP0-16.00	TAK0-16.00	TAN0-16.00	TAM0-16.00	TAX0-16.00
0-C	16.08	0.6331		1/8	TAP0-16.08	TAK0-16.08	TAN0-16.08	TAM0-16.08	TAX0-16.08
0-C	16.20	0.6378		1/8	TAP0-16.20	TAK0-16.20	TAN0-16.20	TAM0-16.20	TAX0-16.20
0-C	16.27	0.6406	41/64	1/8	TAP0-16.27	TAK0-16.27	TAN0-16.27	TAM0-16.27	TAX0-16.27
0-C	16.40	0.6457		1/8	TAP0-16.40	TAK0-16.40	TAN0-16.40	TAM0-16.40	TAX0-16.40
0-D	16.50	0.6496		1/8	TAP0-16.50	TAK0-16.50	TAN0-16.50	TAM0-16.50	TAX0-16.50
0-D	16.60	0.6535		1/8	TAP0-16.60	TAK0-16.60	TAN0-16.60	TAM0-16.60	TAX0-16.60
0-D	16.67	0.6563	21/32	1/8	TAP0-16.67	TAK0-16.67	TAN0-16.67	TAM0-16.67	TAX0-16.67
0-D	16.80	0.6614		1/8	TAP0-16.80	TAK0-16.80	TAN0-16.80	TAM0-16.80	TAX0-16.80
0-D	16.90	0.6654		1/8	TAP0-16.90	TAK0-16.90	TAN0-16.90	TAM0-16.90	TAX0-16.90
0-D	17.00	0.6693		1/8	TAP0-17.00	TAK0-17.00	TAN0-17.00	TAM0-17.00	TAX0-17.00
0-D	17.07	0.6720	43/64	1/8	TAP0-17.07	TAK0-17.07	TAN0-17.07	TAM0-17.07	TAX0-17.07
0-D	17.10	0.6732		1/8	TAP0-17.10	TAK0-17.10	TAN0-17.10	TAM0-17.10	TAX0-17.10
0-D	17.20	0.6772		1/8	TAP0-17.20	TAK0-17.20	TAN0-17.20	TAM0-17.20	TAX0-17.20
0-D	17.30	0.6811		1/8	TAP0-17.30	TAK0-17.30	TAN0-17.30	TAM0-17.30	TAX0-17.30
0-D	17.40	0.6850		1/8	TAP0-17.40	TAK0-17.40	TAN0-17.40	TAM0-17.40	TAX0-17.40
0-D	17.46	0.6874	11/16	1/8	TAP0-17.46	TAK0-17.46	TAN0-17.46	TAM0-17.46	TAX0-17.46
0-D	17.50	0.6890		1/8	TAP0-17.50	TAK0-17.50	TAN0-17.50	TAM0-17.50	TAX0-17.50
0-D	17.60	0.6929		1/8	TAP0-17.60	TAK0-17.60	TAN0-17.60	TAM0-17.60	TAX0-17.60

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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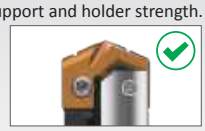


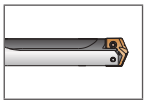
A Series Insert + A Series Holder

C Series Insert + A Series Holder

C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 20 - 23



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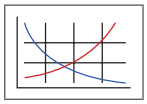
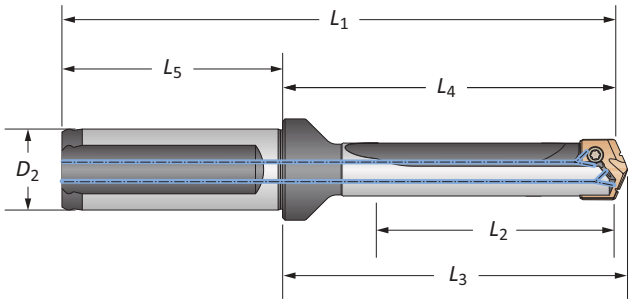
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

0 Series Metric | Diameter Range: 12.70 mm - 17.64 mm



	Body						Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	Stub	A	15.3	44.0	46.7	94.0	50.0	20	Yes	**HTA0A01-20FM**
	Stub	A	15.3	44.0	46.7	94.0	50.0	20	No	**HTA0A01-20CM**
	Stub	B	15.3	44.0	46.7	94.0	50.0	20	Yes	**HTA0B01-20FM**
	Stub	B	15.3	44.0	46.7	94.0	50.0	20	No	**HTA0B01-20CM**
	Stub	C	15.3	44.0	46.7	94.0	50.0	20	Yes	**HTA0C01-20FM**
	Stub	C	15.3	44.0	46.7	94.0	50.0	20	No	**HTA0C01-20CM**
	Stub	D	15.3	44.0	46.7	94.0	50.0	20	Yes	**HTA0D01-20FM**
	Stub	D	15.3	44.0	46.7	94.0	50.0	20	No	**HTA0D01-20CM**
	3xD	A	45.9	77.8	80.5	127.8	50.0	20	Yes	**HTA0A03-20FM**
	3xD	A	45.9	77.8	80.5	127.8	50.0	20	No	**HTA0A03-20CM**
	3xD	B	45.9	77.8	80.5	127.8	50.0	20	Yes	**HTA0B03-20FM**
	3xD	B	45.9	77.8	80.5	127.8	50.0	20	No	**HTA0B03-20CM**
	3xD	C	45.9	77.8	80.5	127.8	50.0	20	Yes	**HTA0C03-20FM**
	3xD	C	45.9	77.8	80.5	127.8	50.0	20	No	**HTA0C03-20CM**
	3xD	D	45.9	77.8	80.5	127.8	50.0	20	Yes	**HTA0D03-20FM**
ⓜ	3xD	D	45.9	77.8	80.5	127.8	50.0	20	No	**HTA0D03-20CM**
	5xD	A	76.6	108.5	111.2	158.5	50.0	20	Yes	**HTA0A05-20FM**
	5xD	A	76.6	108.5	111.2	158.5	50.0	20	No	**HTA0A05-20CM**
	5xD	B	76.6	108.5	111.2	158.5	50.0	20	Yes	**HTA0B05-20FM**
	5xD	B	76.6	108.5	111.2	158.5	50.0	20	No	**HTA0B05-20CM**
	5xD	C	76.6	108.5	111.2	158.5	50.0	20	Yes	**HTA0C05-20FM**
	5xD	C	76.6	108.5	111.2	158.5	50.0	20	No	**HTA0C05-20CM**
	5xD	D	76.6	108.5	111.2	158.5	50.0	20	Yes	**HTA0D05-20FM**
	5xD	D	76.6	108.5	111.2	158.5	50.0	20	No	**HTA0D05-20CM**
	7xD	A	107.2	139.1	141.8	189.1	50.0	20	Yes	**HTA0A07-20FM**
	7xD	A	107.2	139.1	141.8	189.1	50.0	20	No	**HTA0A07-20CM**
	7xD	B	107.2	139.1	141.8	189.1	50.0	20	Yes	**HTA0B07-20FM**
	7xD	B	107.2	139.1	141.8	189.1	50.0	20	No	**HTA0B07-20CM**
	7xD	C	107.2	139.1	141.8	189.1	50.0	20	Yes	**HTA0C07-20FM**
	7xD	C	107.2	139.1	141.8	189.1	50.0	20	No	**HTA0C07-20CM**
	7xD	D	107.2	139.1	141.8	189.1	50.0	20	Yes	**HTA0D07-20FM**
	7xD	D	107.2	139.1	141.8	189.1	50.0	20	No	**HTA0D07-20CM**

Sub Series	0 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
0A	12.70 mm - 17.64 mm	0.4999" - 0.6946"
0B	14.00 mm - 17.64 mm	0.5510" - 0.6946"
0C	15.08 mm - 17.64 mm	0.5936" - 0.6946"
0D	16.50 mm - 17.64 mm	0.6495" - 0.6946"

Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)
C/D	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

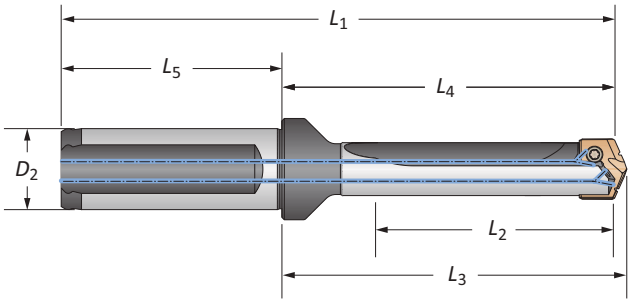
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 18 - 19
Key on A25: 1
A25: 48 - 55

ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

0 Series Metric | Diameter Range: 12.70 mm - 17.64 mm



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Shank Flat	Part No
	10xD	A	153.2	185.0	187.8	235.1	50.0	20	Yes	HTA0A10-20FM
	10xD	A	153.2	185.0	187.8	235.1	50.0	20	No	HTA0A10-20CM
	10xD	B	153.2	185.0	187.8	235.1	50.0	20	Yes	HTA0B10-20FM
	10xD	B	153.2	185.0	187.8	235.1	50.0	20	No	HTA0B10-20CM
	10xD	C	153.2	185.0	187.8	235.1	50.0	20	Yes	HTA0C10-20FM
	10xD	C	153.2	185.0	187.8	235.1	50.0	20	No	HTA0C10-20CM
	10xD	D	153.2	185.0	187.8	235.1	50.0	20	Yes	HTA0D10-20FM
	10xD	D	153.2	185.0	187.8	235.1	50.0	20	No	HTA0D10-20CM
	12xD	A	183.8	215.7	218.4	265.7	50.0	20	Yes	HTA0A12-20FM
	12xD	A	183.8	215.7	218.4	265.7	50.0	20	No	HTA0A12-20CM
	12xD	B	183.8	215.7	218.4	265.7	50.0	20	Yes	HTA0B12-20FM
m	12xD	B	183.8	215.7	218.4	265.7	50.0	20	No	HTA0B12-20CM
	12xD	C	183.8	215.7	218.4	265.7	50.0	20	Yes	HTA0C12-20FM
	12xD	C	183.8	215.7	218.4	265.7	50.0	20	No	HTA0C12-20CM
	12xD	D	183.8	215.7	218.4	265.7	50.0	20	Yes	HTA0D12-20FM
	12xD	D	183.8	215.7	218.4	265.7	50.0	20	No	HTA0D12-20CM
	15xD	A	229.7	261.6	264.3	311.6	50.0	20	Yes	HTA0A15-20FM
	15xD	A	229.7	261.6	264.3	311.6	50.0	20	No	HTA0A15-20CM
	15xD	B	229.7	261.6	264.3	311.6	50.0	20	Yes	HTA0B15-20FM
	15xD	B	229.7	261.6	264.3	311.6	50.0	20	No	HTA0B15-20CM
	15xD	C	229.7	261.6	264.3	311.6	50.0	20	Yes	HTA0C15-20FM
	15xD	C	229.7	261.6	264.3	311.6	50.0	20	No	HTA0C15-20CM
	15xD	D	229.7	261.6	264.3	311.6	50.0	20	Yes	HTA0D15-20FM
	15xD	D	229.7	261.6	264.3	311.6	50.0	20	No	HTA0D15-20CM

Sub Series	0 Series Holder Diameter Range Metric (mm)	Imperial (inch)
0A	12.70 mm - 17.64 mm	0.4999" - 0.6946"
0B	14.00 mm - 17.64 mm	0.5510" - 0.6946"
0C	15.08 mm - 17.64 mm	0.5936" - 0.6946"
0D	16.50 mm - 17.64 mm	0.6495" - 0.6946"

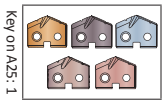
Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)
C/D	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 18 - 19



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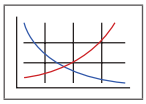
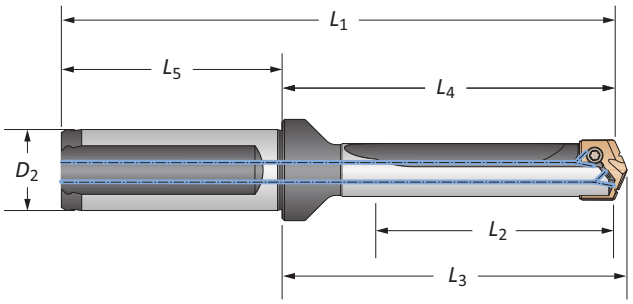
A25: 48 - 55



m = Metric (mm)
i = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

0 Series Imperial | Diameter Range: 0.4999" - 0.6946"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	0.603	1.731	1.838	3.761	2.030	3/4	Yes	**HTA0A01-075F**
	Stub	A	0.603	1.731	1.838	3.761	2.030	3/4	No	**HTA0A01-075C**
	Stub	B	0.603	1.731	1.838	3.761	2.030	3/4	Yes	**HTA0B01-075F**
	Stub	B	0.603	1.731	1.838	3.761	2.030	3/4	No	**HTA0B01-075C**
	Stub	C	0.603	1.731	1.838	3.761	2.030	3/4	Yes	**HTA0C01-075F**
	Stub	C	0.603	1.731	1.838	3.761	2.030	3/4	No	**HTA0C01-075C**
	Stub	D	0.603	1.731	1.838	3.761	2.030	3/4	Yes	**HTA0D01-075F**
	Stub	D	0.603	1.731	1.838	3.761	2.030	3/4	No	**HTA0D01-075C**
	3xD	A	1.809	3.064	3.171	5.094	2.030	3/4	Yes	**HTA0A03-075F**
	3xD	A	1.809	3.064	3.171	5.094	2.030	3/4	No	**HTA0A03-075C**
	3xD	B	1.809	3.064	3.171	5.094	2.030	3/4	Yes	**HTA0B03-075F**
	3xD	B	1.809	3.064	3.171	5.094	2.030	3/4	No	**HTA0B03-075C**
	3xD	C	1.809	3.064	3.171	5.094	2.030	3/4	Yes	**HTA0C03-075F**
	3xD	C	1.809	3.064	3.171	5.094	2.030	3/4	No	**HTA0C03-075C**
	3xD	D	1.809	3.064	3.171	5.094	2.030	3/4	Yes	**HTA0D03-075F**
ⓘ	3xD	D	1.809	3.064	3.171	5.094	2.030	3/4	No	**HTA0D03-075C**
	5xD	A	3.015	4.270	4.377	6.300	2.030	3/4	Yes	**HTA0A05-075F**
	5xD	A	3.015	4.270	4.377	6.300	2.030	3/4	No	**HTA0A05-075C**
	5xD	B	3.015	4.270	4.377	6.300	2.030	3/4	Yes	**HTA0B05-075F**
	5xD	B	3.015	4.270	4.377	6.300	2.030	3/4	No	**HTA0B05-075C**
	5xD	C	3.015	4.270	4.377	6.300	2.030	3/4	Yes	**HTA0C05-075F**
	5xD	C	3.015	4.270	4.377	6.300	2.030	3/4	No	**HTA0C05-075C**
	5xD	D	3.015	4.270	4.377	6.300	2.030	3/4	Yes	**HTA0D05-075F**
	5xD	D	3.015	4.270	4.377	6.300	2.030	3/4	No	**HTA0D05-075C**
	7xD	A	4.221	5.476	5.583	7.506	2.030	3/4	Yes	**HTA0A07-075F**
	7xD	A	4.221	5.476	5.583	7.506	2.030	3/4	No	**HTA0A07-075C**
	7xD	B	4.221	5.476	5.583	7.506	2.030	3/4	Yes	**HTA0B07-075F**
	7xD	B	4.221	5.476	5.583	7.506	2.030	3/4	No	**HTA0B07-075C**
	7xD	C	4.221	5.476	5.583	7.506	2.030	3/4	Yes	**HTA0C07-075F**
	7xD	C	4.221	5.476	5.583	7.506	2.030	3/4	No	**HTA0C07-075C**
	7xD	D	4.221	5.476	5.583	7.506	2.030	3/4	Yes	**HTA0D07-075F**
	7xD	D	4.221	5.476	5.583	7.506	2.030	3/4	No	**HTA0D07-075C**

Sub Series	0 Series Holder Diameter Range Metric (mm)	Imperial (inch)
0A	12.70 mm - 17.64 mm	0.4999" - 0.6946"
0B	14.00 mm - 17.64 mm	0.5510" - 0.6946"
0C	15.08 mm - 17.64 mm	0.5936" - 0.6946"
0D	16.50 mm - 17.64 mm	0.6495" - 0.6946"

Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)
C/D	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

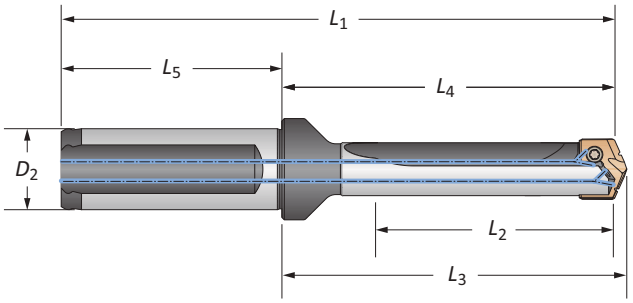
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 18 - 19
Key on A25: 1
A25: 48 - 55

ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

0 Series Imperial | Diameter Range: 0.4999" - 0.6946"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	10xD	A	6.030	7.285	7.392	9.315	2.030	3/4	Yes	HTA0A10-075F
	10xD	A	6.030	7.285	7.392	9.315	2.030	3/4	No	HTA0A10-075C
	10xD	B	6.030	7.285	7.392	9.315	2.030	3/4	Yes	HTA0B10-075F
	10xD	B	6.030	7.285	7.392	9.315	2.030	3/4	No	HTA0B10-075C
	10xD	C	6.030	7.285	7.392	9.315	2.030	3/4	Yes	HTA0C10-075F
	10xD	C	6.030	7.285	7.392	9.315	2.030	3/4	No	HTA0C10-075C
	10xD	D	6.030	7.285	7.392	9.315	2.030	3/4	Yes	HTA0D10-075F
	10xD	D	6.030	7.285	7.392	9.315	2.030	3/4	No	HTA0D10-075C
	12xD	A	7.236	8.491	8.598	10.521	2.030	3/4	Yes	HTA0A12-075F
	12xD	A	7.236	8.491	8.598	10.521	2.030	3/4	No	HTA0A12-075C
	12xD	B	7.236	8.491	8.598	10.521	2.030	3/4	Yes	HTA0B12-075F
ⓘ	12xD	B	7.236	8.491	8.598	10.521	2.030	3/4	No	HTA0B12-075C
	12xD	C	7.236	8.491	8.598	10.521	2.030	3/4	Yes	HTA0C12-075F
	12xD	C	7.236	8.491	8.598	10.521	2.030	3/4	No	HTA0C12-075C
	12xD	D	7.236	8.491	8.598	10.521	2.030	3/4	Yes	HTA0D12-075F
	12xD	D	7.236	8.491	8.598	10.521	2.030	3/4	No	HTA0D12-075C
	15xD	A	9.045	10.300	10.407	12.330	2.030	3/4	Yes	HTA0A15-075F
	15xD	A	9.045	10.300	10.407	12.330	2.030	3/4	No	HTA0A15-075C
	15xD	B	9.045	10.300	10.407	12.330	2.030	3/4	Yes	HTA0B15-075F
	15xD	B	9.045	10.300	10.407	12.330	2.030	3/4	No	HTA0B15-075C
	15xD	C	9.045	10.300	10.407	12.330	2.030	3/4	Yes	HTA0C15-075F
	15xD	C	9.045	10.300	10.407	12.330	2.030	3/4	No	HTA0C15-075C
	15xD	D	9.045	10.300	10.407	12.330	2.030	3/4	Yes	HTA0D15-075F
	15xD	D	9.045	10.300	10.407	12.330	2.030	3/4	No	HTA0D15-075C

Sub Series	0 Series Holder Diameter Range Metric (mm)	Imperial (inch)
0A	12.70 mm - 17.64 mm	0.4999" - 0.6946"
0B	14.00 mm - 17.64 mm	0.5510" - 0.6946"
0C	15.08 mm - 17.64 mm	0.5936" - 0.6946"
0D	16.50 mm - 17.64 mm	0.6495" - 0.6946"

Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)
C/D	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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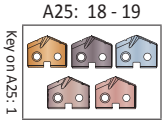
email: **engineering.eu@alliedmachine.com**

A25: 18 - 19



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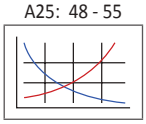
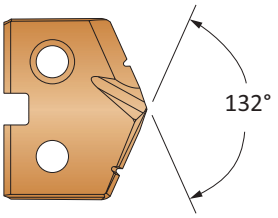
A25: 48 - 55

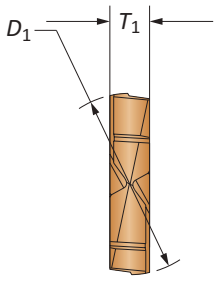


ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Inserts

1 Series | Diameter Range: 17.65 mm - 24.37 mm (0.6947" - 0.9596")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
1-A	17.70	0.6969		5/32	TAP1-17.70	TAK1-17.70	TAN1-17.70	TAM1-17.70	TAX1-17.70
1-A	17.80	0.7008		5/32	TAP1-17.80	TAK1-17.80	TAN1-17.80	TAM1-17.80	TAX1-17.80
1-A	17.86	0.7031	45/64	5/32	TAP1-17.86	TAK1-17.86	TAN1-17.86	TAM1-17.86	TAX1-17.86
1-A	17.90	0.7047		5/32	TAP1-17.90	TAK1-17.90	TAN1-17.90	TAM1-17.90	TAX1-17.90
1-A	18.00	0.7087		5/32	TAP1-18.00	TAK1-18.00	TAN1-18.00	TAM1-18.00	TAX1-18.00
1-A	18.10	0.7126		5/32	TAP1-18.10	TAK1-18.10	TAN1-18.10	TAM1-18.10	TAX1-18.10
1-A	18.20	0.7165		5/32	TAP1-18.20	TAK1-18.20	TAN1-18.20	TAM1-18.20	TAX1-18.20
1-A	18.26	0.7189	23/32	5/32	TAP1-18.26	TAK1-18.26	TAN1-18.26	TAM1-18.26	TAX1-18.26
1-A	18.30	0.7205		5/32	TAP1-18.30	TAK1-18.30	TAN1-18.30	TAM1-18.30	TAX1-18.30
1-A	18.40	0.7244		5/32	TAP1-18.40	TAK1-18.40	TAN1-18.40	TAM1-18.40	TAX1-18.40
1-A	18.50	0.7283		5/32	TAP1-18.50	TAK1-18.50	TAN1-18.50	TAM1-18.50	TAX1-18.50
1-A	18.60	0.7323		5/32	TAP1-18.60	TAK1-18.60	TAN1-18.60	TAM1-18.60	TAX1-18.60
1-A	18.65	0.7343	47/64	5/32	TAP1-18.65	TAK1-18.65	TAN1-18.65	TAM1-18.65	TAX1-18.65
1-A	18.70	0.7362		5/32	TAP1-18.70	TAK1-18.70	TAN1-18.70	TAM1-18.70	TAX1-18.70
1-A	18.80	0.7402		5/32	TAP1-18.80	TAK1-18.80	TAN1-18.80	TAM1-18.80	TAX1-18.80
1-A	18.90	0.7441		5/32	TAP1-18.90	TAK1-18.90	TAN1-18.90	TAM1-18.90	TAX1-18.90
1-A	19.00	0.7480		5/32	TAP1-19.00	TAK1-19.00	TAN1-19.00	TAM1-19.00	TAX1-19.00

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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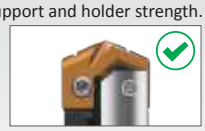


A Series Insert + A Series Holder

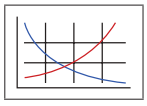
C Series Insert + A Series Holder

C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 28 - 31

A25: 48 - 55



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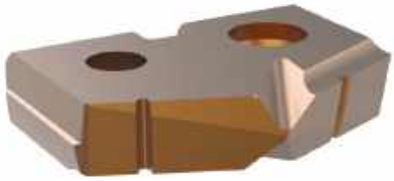
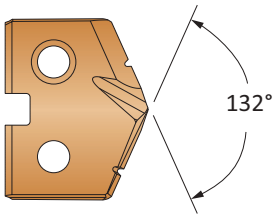
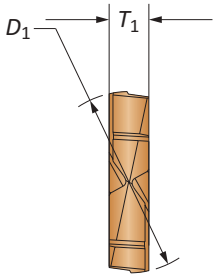
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

1 Series | Diameter Range: 17.65 mm - 24.37 mm (0.6947" - 0.9596")







Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
1-B	19.05	0.7500	3/4	5/32	TAP1-19.05	TAK1-19.05	TAN1-19.05	TAM1-19.05	TAX1-19.05
1-B	19.10	0.7520		5/32	TAP1-19.10	TAK1-19.10	TAN1-19.10	TAM1-19.10	TAX1-19.10
1-B	19.20	0.7559		5/32	TAP1-19.20	TAK1-19.20	TAN1-19.20	TAM1-19.20	TAX1-19.20
1-B	19.25	0.7579		5/32	TAP1-19.25	TAK1-19.25	TAN1-19.25	TAM1-19.25	TAX1-19.25
1-B	19.30	0.7598		5/32	TAP1-19.30	TAK1-19.30	TAN1-19.30	TAM1-19.30	TAX1-19.30
1-B	19.40	0.7638		5/32	TAP1-19.40	TAK1-19.40	TAN1-19.40	TAM1-19.40	TAX1-19.40
1-B	19.45	0.7657	49/64	5/32	TAP1-19.45	TAK1-19.45	TAN1-19.45	TAM1-19.45	TAX1-19.45
1-B	19.50	0.7677		5/32	TAP1-19.50	TAK1-19.50	TAN1-19.50	TAM1-19.50	TAX1-19.50
1-B	19.60	0.7717		5/32	TAP1-19.60	TAK1-19.60	TAN1-19.60	TAM1-19.60	TAX1-19.60
1-B	19.70	0.7756		5/32	TAP1-19.70	TAK1-19.70	TAN1-19.70	TAM1-19.70	TAX1-19.70
1-B	19.80	0.7795		5/32	TAP1-19.80	TAK1-19.80	TAN1-19.80	TAM1-19.80	TAX1-19.80
1-B	19.84	0.7811	25/32	5/32	TAP1-19.84	TAK1-19.84	TAN1-19.84	TAM1-19.84	TAX1-19.84
1-B	19.90	0.7835		5/32	TAP1-19.90	TAK1-19.90	TAN1-19.90	TAM1-19.90	TAX1-19.90
1-B	20.00	0.7874		5/32	TAP1-20.00	TAK1-20.00	TAN1-20.00	TAM1-20.00	TAX1-20.00
1-B	20.10	0.7913		5/32	TAP1-20.10	TAK1-20.10	TAN1-20.10	TAM1-20.10	TAX1-20.10
1-B	20.20	0.7953		5/32	TAP1-20.20	TAK1-20.20	TAN1-20.20	TAM1-20.20	TAX1-20.20
1-B	20.24	0.7969	51/64	5/32	TAP1-20.24	TAK1-20.24	TAN1-20.24	TAM1-20.24	TAX1-20.24
1-B	20.30	0.7992		5/32	TAP1-20.30	TAK1-20.30	TAN1-20.30	TAM1-20.30	TAX1-20.30
1-B	20.40	0.8031		5/32	TAP1-20.40	TAK1-20.40	TAN1-20.40	TAM1-20.40	TAX1-20.40
1-B	20.50	0.8071		5/32	TAP1-20.50	TAK1-20.50	TAN1-20.50	TAM1-20.50	TAX1-20.50

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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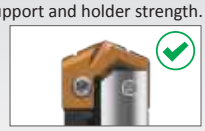


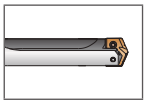
A Series Insert + A Series Holder

C Series Insert + A Series Holder

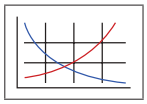
C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 28 - 31



A25: 48 - 55



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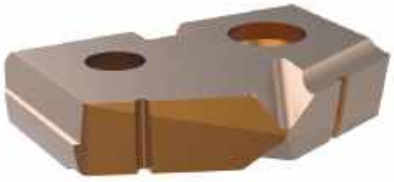
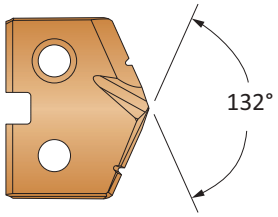
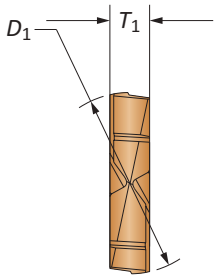
T-A Pro Drill Inserts

1 Series | Diameter Range: 17.65 mm - 24.37 mm (0.6947" - 0.9596")







Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
1-C	20.60	0.8110		5/32	TAP1-20.60	TAK1-20.60	TAN1-20.60	TAM1-20.60	TAX1-20.60
1-C	20.64	0.8126	13/16	5/32	TAP1-20.64	TAK1-20.64	TAN1-20.64	TAM1-20.64	TAX1-20.64
1-C	20.70	0.8150		5/32	TAP1-20.70	TAK1-20.70	TAN1-20.70	TAM1-20.70	TAX1-20.70
1-C	20.80	0.8189		5/32	TAP1-20.80	TAK1-20.80	TAN1-20.80	TAM1-20.80	TAX1-20.80
1-C	20.90	0.8228		5/32	TAP1-20.90	TAK1-20.90	TAN1-20.90	TAM1-20.90	TAX1-20.90
1-C	21.00	0.8268		5/32	TAP1-21.00	TAK1-21.00	TAN1-21.00	TAM1-21.00	TAX1-21.00
1-C	21.10	0.8307		5/32	TAP1-21.10	TAK1-21.10	TAN1-21.10	TAM1-21.10	TAX1-21.10
1-C	21.20	0.8346		5/32	TAP1-21.20	TAK1-21.20	TAN1-21.20	TAM1-21.20	TAX1-21.20
1-C	21.30	0.8386		5/32	TAP1-21.30	TAK1-21.30	TAN1-21.30	TAM1-21.30	TAX1-21.30
1-C	21.40	0.8425		5/32	TAP1-21.40	TAK1-21.40	TAN1-21.40	TAM1-21.40	TAX1-21.40
1-C	21.43	0.8437	27/32	5/32	TAP1-21.43	TAK1-21.43	TAN1-21.43	TAM1-21.43	TAX1-21.43
1-C	21.50	0.8465		5/32	TAP1-21.50	TAK1-21.50	TAN1-21.50	TAM1-21.50	TAX1-21.50
1-C	21.60	0.8504		5/32	TAP1-21.60	TAK1-21.60	TAN1-21.60	TAM1-21.60	TAX1-21.60
1-C	21.70	0.8543		5/32	TAP1-21.70	TAK1-21.70	TAN1-21.70	TAM1-21.70	TAX1-21.70
1-C	21.80	0.8583		5/32	TAP1-21.80	TAK1-21.80	TAN1-21.80	TAM1-21.80	TAX1-21.80
1-C	21.83	0.8594	55/64	5/32	TAP1-21.83	TAK1-21.83	TAN1-21.83	TAM1-21.83	TAX1-21.83
1-C	21.90	0.8622		5/32	TAP1-21.90	TAK1-21.90	TAN1-21.90	TAM1-21.90	TAX1-21.90
1-C	22.00	0.8661		5/32	TAP1-22.00	TAK1-22.00	TAN1-22.00	TAM1-22.00	TAX1-22.00
1-C	22.10	0.8701		5/32	TAP1-22.10	TAK1-22.10	TAN1-22.10	TAM1-22.10	TAX1-22.10
1-C	22.20	0.8740		5/32	TAP1-22.20	TAK1-22.20	TAN1-22.20	TAM1-22.20	TAX1-22.20
1-C	22.23	0.8752	7/8	5/32	TAP1-22.23	TAK1-22.23	TAN1-22.23	TAM1-22.23	TAX1-22.23
1-C	22.30	0.8780		5/32	TAP1-22.30	TAK1-22.30	TAN1-22.30	TAM1-22.30	TAX1-22.30
1-C	22.40	0.8819		5/32	TAP1-22.40	TAK1-22.40	TAN1-22.40	TAM1-22.40	TAX1-22.40
1-C	22.50	0.8858		5/32	TAP1-22.50	TAK1-22.50	TAN1-22.50	TAM1-22.50	TAX1-22.50
1-C	22.62	0.8906	57/64	5/32	TAP1-22.62	TAK1-22.62	TAN1-22.62	TAM1-22.62	TAX1-22.62
1-C	22.70	0.8937		5/32	TAP1-22.70	TAK1-22.70	TAN1-22.70	TAM1-22.70	TAX1-22.70
1-C	22.80	0.8976		5/32	TAP1-22.80	TAK1-22.80	TAN1-22.80	TAM1-22.80	TAX1-22.80

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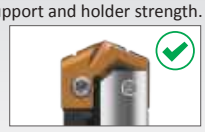
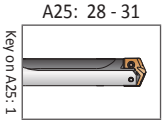

A Series Insert + A Series Holder


C Series Insert + A Series Holder

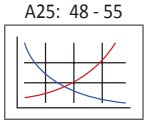

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 28 - 31



A25: 48 - 55



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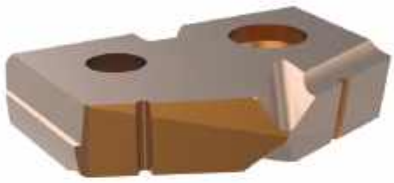

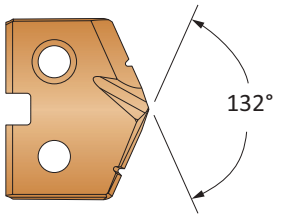

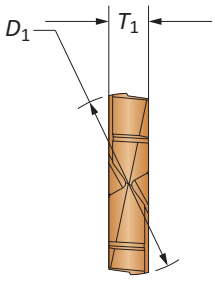

Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
1-D	22.90	0.9016		5/32	TAP1-22.90	TAK1-22.90	TAN1-22.90	TAM1-22.90	TAX1-22.90
1-D	23.00	0.9055		5/32	TAP1-23.00	TAK1-23.00	TAN1-23.00	TAM1-23.00	TAX1-23.00
1-D	23.02	0.9063	29/32	5/32	TAP1-23.02	TAK1-23.02	TAN1-23.02	TAM1-23.02	TAX1-23.02
1-D	23.10	0.9094		5/32	TAP1-23.10	TAK1-23.10	TAN1-23.10	TAM1-23.10	TAX1-23.10
1-D	23.20	0.9134		5/32	TAP1-23.20	TAK1-23.20	TAN1-23.20	TAM1-23.20	TAX1-23.20
1-D	23.30	0.9173		5/32	TAP1-23.30	TAK1-23.30	TAN1-23.30	TAM1-23.30	TAX1-23.30
1-D	23.42	0.9220	59/64	5/32	TAP1-23.42	TAK1-23.42	TAN1-23.42	TAM1-23.42	TAX1-23.42
1-D	23.50	0.9252		5/32	TAP1-23.50	TAK1-23.50	TAN1-23.50	TAM1-23.50	TAX1-23.50
1-D	23.60	0.9291		5/32	TAP1-23.60	TAK1-23.60	TAN1-23.60	TAM1-23.60	TAX1-23.60
1-D	23.70	0.9331		5/32	TAP1-23.70	TAK1-23.70	TAN1-23.70	TAM1-23.70	TAX1-23.70
1-D	23.81	0.9374	15/16	5/32	TAP1-23.81	TAK1-23.81	TAN1-23.81	TAM1-23.81	TAX1-23.81
1-D	23.90	0.9409		5/32	TAP1-23.90	TAK1-23.90	TAN1-23.90	TAM1-23.90	TAX1-23.90
1-D	24.00	0.9449		5/32	TAP1-24.00	TAK1-24.00	TAN1-24.00	TAM1-24.00	TAX1-24.00
1-D	24.10	0.9488		5/32	TAP1-24.10	TAK1-24.10	TAN1-24.10	TAM1-24.10	TAX1-24.10
1-D	24.20	0.9528		5/32	TAP1-24.20	TAK1-24.20	TAN1-24.20	TAM1-24.20	TAX1-24.20
1-D	24.30	0.9567		5/32	TAP1-24.30	TAK1-24.30	TAN1-24.30	TAM1-24.30	TAX1-24.30

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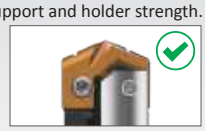
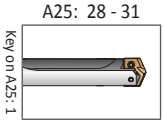

A Series Insert + A Series Holder


C Series Insert + A Series Holder

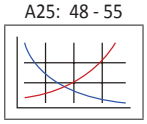

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 28 - 31



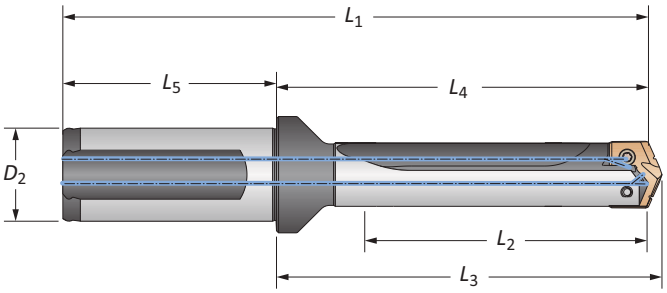
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

1 Series Metric | Diameter Range: 17.65 mm - 24.37 mm



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	Stub	A	21.0	56.5	60.0	112.5	56.0	25	Yes	**HTA1A01-25FM**
	Stub	A	21.0	56.5	60.0	112.5	56.0	25	No	**HTA1A01-25CM**
	Stub	B	21.0	56.5	60.0	112.5	56.0	25	Yes	**HTA1B01-25FM**
	Stub	B	21.0	56.5	60.0	112.5	56.0	25	No	**HTA1B01-25CM**
	Stub	C	21.0	56.5	60.0	112.5	56.0	25	Yes	**HTA1C01-25FM**
	Stub	C	21.0	56.5	60.0	112.5	56.0	25	No	**HTA1C01-25CM**
	Stub	D	21.0	56.5	60.0	112.5	56.0	25	Yes	**HTA1D01-25FM**
	Stub	D	21.0	56.5	60.0	112.5	56.0	25	No	**HTA1D01-25CM**
	3xD	A	62.9	100.9	104.5	156.9	56.0	25	Yes	**HTA1A03-25FM**
	3xD	A	62.9	100.9	104.5	156.9	56.0	25	No	**HTA1A03-25CM**
	3xD	B	62.9	100.9	104.5	156.9	56.0	25	Yes	**HTA1B03-25FM**
	3xD	B	62.9	100.9	104.5	156.9	56.0	25	No	**HTA1B03-25CM**
	3xD	C	62.9	100.9	104.5	156.9	56.0	25	Yes	**HTA1C03-25FM**
	3xD	C	62.9	100.9	104.5	156.9	56.0	25	No	**HTA1C03-25CM**
	3xD	D	62.9	100.9	104.5	156.9	56.0	25	Yes	**HTA1D03-25FM**
ⓜ	3xD	D	62.9	100.9	104.5	156.9	56.0	25	No	**HTA1D03-25CM**
	5xD	A	104.8	142.8	146.4	198.8	56.0	25	Yes	**HTA1A05-25FM**
	5xD	A	104.8	142.8	146.4	198.8	56.0	25	No	**HTA1A05-25CM**
	5xD	B	104.8	142.8	146.4	198.8	56.0	25	Yes	**HTA1B05-25FM**
	5xD	B	104.8	142.8	146.4	198.8	56.0	25	No	**HTA1B05-25CM**
	5xD	C	104.8	142.8	146.4	198.8	56.0	25	Yes	**HTA1C05-25FM**
	5xD	C	104.8	142.8	146.4	198.8	56.0	25	No	**HTA1C05-25CM**
	5xD	D	104.8	142.8	146.4	198.8	56.0	25	Yes	**HTA1D05-25FM**
	5xD	D	104.8	142.8	146.4	198.8	56.0	25	No	**HTA1D05-25CM**
	7xD	A	146.7	184.7	188.3	240.7	56.0	25	Yes	**HTA1A07-25FM**
	7xD	A	146.7	184.7	188.3	240.7	56.0	25	No	**HTA1A07-25CM**
	7xD	B	146.7	184.7	188.3	240.7	56.0	25	Yes	**HTA1B07-25FM**
	7xD	B	146.7	184.7	188.3	240.7	56.0	25	No	**HTA1B07-25CM**
	7xD	C	146.7	184.7	188.3	240.7	56.0	25	Yes	**HTA1C07-25FM**
	7xD	C	146.7	184.7	188.3	240.7	56.0	25	No	**HTA1C07-25CM**
	7xD	D	146.7	184.7	188.3	240.7	56.0	25	Yes	**HTA1D07-25FM**
	7xD	D	146.7	184.7	188.3	240.7	56.0	25	No	**HTA1D07-25CM**

Sub Series	1 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
1A	17.65 mm - 24.37 mm	0.6947" - 0.9596"
1B	19.05 mm - 24.37 mm	0.7499" - 0.9596"
1C	20.60 mm - 24.37 mm	0.8109" - 0.9596"
1D	22.90 mm - 24.37 mm	0.9014" - 0.9596"

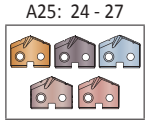
Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)
C/D	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 24 - 27



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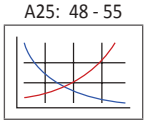
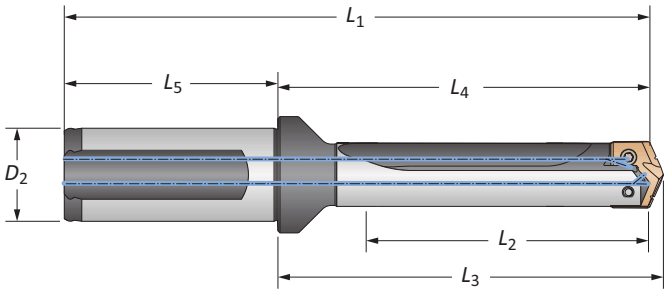
A25: 48 - 55



ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

1 Series Metric | Diameter Range: 17.65 mm - 24.37 mm



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	10xD	A	209.6	247.6	251.2	303.6	56.0	25	Yes	HTA1A10-25FM
	10xD	A	209.6	247.6	251.2	303.6	56.0	25	No	HTA1A10-25CM
	10xD	B	209.6	247.6	251.2	303.6	56.0	25	Yes	HTA1B10-25FM
	10xD	B	209.6	247.6	251.2	303.6	56.0	25	No	HTA1B10-25CM
	10xD	C	209.6	247.6	251.2	303.6	56.0	25	Yes	HTA1C10-25FM
	10xD	C	209.6	247.6	251.2	303.6	56.0	25	No	HTA1C10-25CM
	10xD	D	209.6	247.6	251.2	303.6	56.0	25	Yes	HTA1D10-25FM
	10xD	D	209.6	247.6	251.2	303.6	56.0	25	No	HTA1D10-25CM
	12xD	A	251.5	289.5	293.1	345.5	56.0	25	Yes	HTA1A12-25FM
	12xD	A	251.5	289.5	293.1	345.5	56.0	25	No	HTA1A12-25CM
	12xD	B	251.5	289.5	293.1	345.5	56.0	25	Yes	HTA1B12-25FM
ⓜ	12xD	B	251.5	289.5	293.1	345.5	56.0	25	No	HTA1B12-25CM
	12xD	C	251.5	289.5	293.1	345.5	56.0	25	Yes	HTA1C12-25FM
	12xD	C	251.5	289.5	293.1	345.5	56.0	25	No	HTA1C12-25CM
	12xD	D	251.5	289.5	293.1	345.5	56.0	25	Yes	HTA1D12-25FM
	12xD	D	251.5	289.5	293.1	345.5	56.0	25	No	HTA1D12-25CM
	15xD	A	314.3	352.4	355.9	408.4	56.0	25	Yes	HTA1A15-25FM
	15xD	A	314.3	352.4	355.9	408.4	56.0	25	No	HTA1A15-25CM
	15xD	B	314.3	352.4	355.9	408.4	56.0	25	Yes	HTA1B15-25FM
	15xD	B	314.3	352.4	355.9	408.4	56.0	25	No	HTA1B15-25CM
	15xD	C	314.3	352.4	355.9	408.4	56.0	25	Yes	HTA1C15-25FM
	15xD	C	314.3	352.4	355.9	408.4	56.0	25	No	HTA1C15-25CM
	15xD	D	314.3	352.4	355.9	408.4	56.0	25	Yes	HTA1D15-25FM
	15xD	D	314.3	352.4	355.9	408.4	56.0	25	No	HTA1D15-25CM

Sub Series	1 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
1A	17.65 mm - 24.37 mm	0.6947" - 0.9596"
1B	19.05 mm - 24.37 mm	0.7499" - 0.9596"
1C	20.60 mm - 24.37 mm	0.8109" - 0.9596"
1D	22.90 mm - 24.37 mm	0.9014" - 0.9596"

Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)
C/D	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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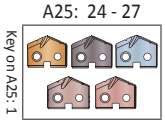
email: **engineering.eu@alliedmachine.com**

A25: 24 - 27



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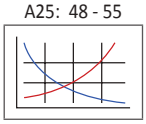
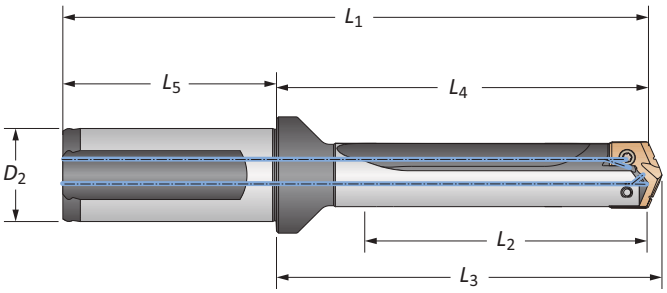
A25: 48 - 55



ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

1 Series Imperial | Diameter Range: 0.6947" - 0.9596"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Flat	Part No
	Stub	A	0.825	2.224	2.364	4.504	2.280	1	Yes	**HTA1A01-100F**
	Stub	A	0.825	2.224	2.364	4.504	2.280	1	No	**HTA1A01-100C**
	Stub	B	0.825	2.224	2.364	4.504	2.280	1	Yes	**HTA1B01-100F**
	Stub	B	0.825	2.224	2.364	4.504	2.280	1	No	**HTA1B01-100C**
	Stub	C	0.825	2.224	2.364	4.504	2.280	1	Yes	**HTA1C01-100F**
	Stub	C	0.825	2.224	2.364	4.504	2.280	1	No	**HTA1C01-100C**
	Stub	D	0.825	2.224	2.364	4.504	2.280	1	Yes	**HTA1D01-100F**
	Stub	D	0.825	2.224	2.364	4.504	2.280	1	No	**HTA1D01-100C**
	3xD	A	2.475	3.973	4.113	6.253	2.280	1	Yes	**HTA1A03-100F**
	3xD	A	2.475	3.973	4.113	6.253	2.280	1	No	**HTA1A03-100C**
	3xD	B	2.475	3.973	4.113	6.253	2.280	1	Yes	**HTA1B03-100F**
	3xD	B	2.475	3.973	4.113	6.253	2.280	1	No	**HTA1B03-100C**
	3xD	C	2.475	3.973	4.113	6.253	2.280	1	Yes	**HTA1C03-100F**
	3xD	C	2.475	3.973	4.113	6.253	2.280	1	No	**HTA1C03-100C**
	3xD	D	2.475	3.973	4.113	6.253	2.280	1	Yes	**HTA1D03-100F**
ⓘ	3xD	D	2.475	3.973	4.113	6.253	2.280	1	No	**HTA1D03-100C**
	5xD	A	4.125	5.623	5.763	7.903	2.280	1	Yes	**HTA1A05-100F**
	5xD	A	4.125	5.623	5.763	7.903	2.280	1	No	**HTA1A05-100C**
	5xD	B	4.125	5.623	5.763	7.903	2.280	1	Yes	**HTA1B05-100F**
	5xD	B	4.125	5.623	5.763	7.903	2.280	1	No	**HTA1B05-100C**
	5xD	C	4.125	5.623	5.763	7.903	2.280	1	Yes	**HTA1C05-100F**
	5xD	C	4.125	5.623	5.763	7.903	2.280	1	No	**HTA1C05-100C**
	5xD	D	4.125	5.623	5.763	7.903	2.280	1	Yes	**HTA1D05-100F**
	5xD	D	4.125	5.623	5.763	7.903	2.280	1	No	**HTA1D05-100C**
	7xD	A	5.775	7.273	7.413	9.553	2.280	1	Yes	**HTA1A07-100F**
	7xD	A	5.775	7.273	7.413	9.553	2.280	1	No	**HTA1A07-100C**
	7xD	B	5.775	7.273	7.413	9.553	2.280	1	Yes	**HTA1B07-100F**
	7xD	B	5.775	7.273	7.413	9.553	2.280	1	No	**HTA1B07-100C**
	7xD	C	5.775	7.273	7.413	9.553	2.280	1	Yes	**HTA1C07-100F**
	7xD	C	5.775	7.273	7.413	9.553	2.280	1	No	**HTA1C07-100C**
	7xD	D	5.775	7.273	7.413	9.553	2.280	1	Yes	**HTA1D07-100F**
	7xD	D	5.775	7.273	7.413	9.553	2.280	1	No	**HTA1D07-100C**

Sub Series	1 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
1A	17.65 mm - 24.37 mm	0.6947" - 0.9596"
1B	19.05 mm - 24.37 mm	0.7499" - 0.9596"
1C	20.60 mm - 24.37 mm	0.8109" - 0.9596"
1D	22.90 mm - 24.37 mm	0.9014" - 0.9596"

Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)
C/D	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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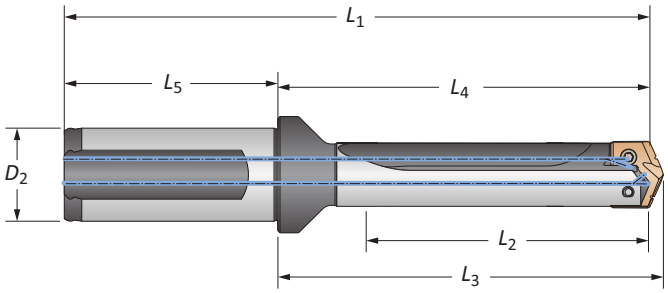
email: **engineering.eu@alliedmachine.com**

A25: 24 - 27
Key on A25: 1
A25: 48 - 55

Ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

1 Series Imperial | Diameter Range: 0.6947" - 0.9596"



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	10xD	A	8.250	9.748	9.888	12.028	2.280	1	Yes	⚠ HTA1A10-100F
	10xD	A	8.250	9.748	9.888	12.028	2.280	1	No	⚠ HTA1A10-100C
	10xD	B	8.250	9.748	9.888	12.028	2.280	1	Yes	⚠ HTA1B10-100F
	10xD	B	8.250	9.748	9.888	12.028	2.280	1	No	⚠ HTA1B10-100C
	10xD	C	8.250	9.748	9.888	12.028	2.280	1	Yes	⚠ HTA1C10-100F
	10xD	C	8.250	9.748	9.888	12.028	2.280	1	No	⚠ HTA1C10-100C
	10xD	D	8.250	9.748	9.888	12.028	2.280	1	Yes	⚠ HTA1D10-100F
	10xD	D	8.250	9.748	9.888	12.028	2.280	1	No	⚠ HTA1D10-100C
	12xD	A	9.900	11.398	11.538	13.678	2.280	1	Yes	⚠ HTA1A12-100F
	12xD	A	9.900	11.398	11.538	13.678	2.280	1	No	⚠ HTA1A12-100C
	12xD	B	9.900	11.398	11.538	13.678	2.280	1	Yes	⚠ HTA1B12-100F
ⓘ	12xD	B	9.900	11.398	11.538	13.678	2.280	1	No	⚠ HTA1B12-100C
	12xD	C	9.900	11.398	11.538	13.678	2.280	1	Yes	⚠ HTA1C12-100F
	12xD	C	9.900	11.398	11.538	13.678	2.280	1	No	⚠ HTA1C12-100C
	12xD	D	9.900	11.398	11.538	13.678	2.280	1	Yes	⚠ HTA1D12-100F
	12xD	D	9.900	11.398	11.538	13.678	2.280	1	No	⚠ HTA1D12-100C
	15xD	A	12.375	13.873	14.013	16.153	2.280	1	Yes	⚠ HTA1A15-100F
	15xD	A	12.375	13.873	14.013	16.153	2.280	1	No	⚠ HTA1A15-100C
	15xD	B	12.375	13.873	14.013	16.153	2.280	1	Yes	⚠ HTA1B15-100F
	15xD	B	12.375	13.873	14.013	16.153	2.280	1	No	⚠ HTA1B15-100C
	15xD	C	12.375	13.873	14.013	16.153	2.280	1	Yes	⚠ HTA1C15-100F
	15xD	C	12.375	13.873	14.013	16.153	2.280	1	No	⚠ HTA1C15-100C
	15xD	D	12.375	13.873	14.013	16.153	2.280	1	Yes	⚠ HTA1D15-100F
	15xD	D	12.375	13.873	14.013	16.153	2.280	1	No	⚠ HTA1D15-100C

Sub Series	1 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
1A	17.65 mm - 24.37 mm	0.6947" - 0.9596"
1B	19.05 mm - 24.37 mm	0.7499" - 0.9596"
1C	20.60 mm - 24.37 mm	0.8109" - 0.9596"
1D	22.90 mm - 24.37 mm	0.9014" - 0.9596"

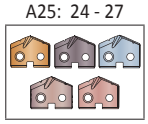
Connection Accessories

	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
A/B	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)
C/D	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

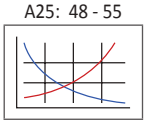
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 24 - 27



Key on A25: 1

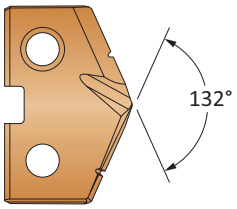
A25: 48 - 55

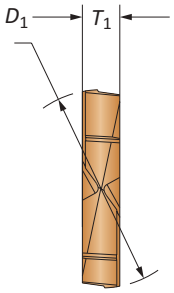


ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Inserts

2 Series | Diameter Range: 24.38 mm - 35.04 mm (0.9597" - 1.3797")



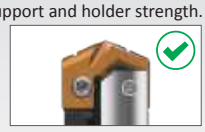


Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
2-A	24.40	0.9606		3/16	TAP2-24.40	TAK2-24.40	TAN2-24.40	TAM2-24.40	TAX2-24.40
2-A	24.50	0.9646		3/16	TAP2-24.50	TAK2-24.50	TAN2-24.50	TAM2-24.50	TAX2-24.50
2-A	24.61	0.9689	31/32	3/16	TAP2-24.61	TAK2-24.61	TAN2-24.61	TAM2-24.61	TAX2-24.61
2-A	24.70	0.9724		3/16	TAP2-24.70	TAK2-24.70	TAN2-24.70	TAM2-24.70	TAX2-24.70
2-A	24.80	0.9764		3/16	TAP2-24.80	TAK2-24.80	TAN2-24.80	TAM2-24.80	TAX2-24.80
2-A	24.90	0.9803		3/16	TAP2-24.90	TAK2-24.90	TAN2-24.90	TAM2-24.90	TAX2-24.90
2-A	25.00	0.9843	63/64	3/16	TAP2-25.00	TAK2-25.00	TAN2-25.00	TAM2-25.00	TAX2-25.00
2-A	25.10	0.9882		3/16	TAP2-25.10	TAK2-25.10	TAN2-25.10	TAM2-25.10	TAX2-25.10
2-A	25.20	0.9921		3/16	TAP2-25.20	TAK2-25.20	TAN2-25.20	TAM2-25.20	TAX2-25.20
2-A	25.30	0.9961		3/16	TAP2-25.30	TAK2-25.30	TAN2-25.30	TAM2-25.30	TAX2-25.30

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.


A Series Insert + A Series Holder


C Series Insert + A Series Holder


C Series Insert + C Series Holder


A Series Insert + C Series Holder

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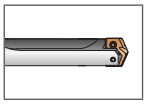
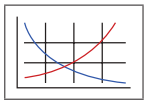

Key on A25: 1

A25: 48 - 55

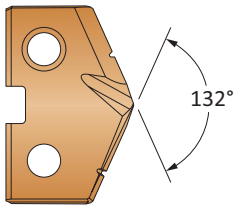


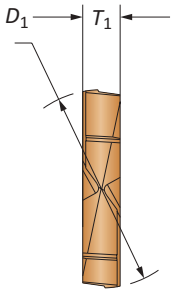
Sizes not shown are available upon request.
When ordering, please follow the example below:

Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

2 Series | Diameter Range: 24.38 mm - 35.04 mm (0.9597" - 1.3797")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	Fractional Equivalent	D_1 inch	D_1 mm	T_1	P	K	N	M	X
2-B	1	1.0000	25.40	3/16	TAP2-25.40	TAK2-25.40	TAN2-25.40	TAM2-25.40	TAX2-25.40
2-B		1.0039	25.50	3/16	TAP2-25.50	TAK2-25.50	TAN2-25.50	TAM2-25.50	TAX2-25.50
2-B		1.0079	25.60	3/16	TAP2-25.60	TAK2-25.60	TAN2-25.60	TAM2-25.60	TAX2-25.60
2-B		1.0118	25.70	3/16	TAP2-25.70	TAK2-25.70	TAN2-25.70	TAM2-25.70	TAX2-25.70
2-B		1.0150	25.78	3/16	TAP2-25.78	TAK2-25.78	TAN2-25.78	TAM2-25.78	TAX2-25.78
2-B		1.0197	25.90	3/16	TAP2-25.90	TAK2-25.90	TAN2-25.90	TAM2-25.90	TAX2-25.90
2-B		1.0236	26.00	3/16	TAP2-26.00	TAK2-26.00	TAN2-26.00	TAM2-26.00	TAX2-26.00
2-B		1.0276	26.10	3/16	TAP2-26.10	TAK2-26.10	TAN2-26.10	TAM2-26.10	TAX2-26.10
2-B	1-1/32	1.0315	26.20	3/16	TAP2-26.20	TAK2-26.20	TAN2-26.20	TAM2-26.20	TAX2-26.20
2-B		1.0354	26.30	3/16	TAP2-26.30	TAK2-26.30	TAN2-26.30	TAM2-26.30	TAX2-26.30
2-B		1.0394	26.40	3/16	TAP2-26.40	TAK2-26.40	TAN2-26.40	TAM2-26.40	TAX2-26.40
2-B		1.0433	26.50	3/16	TAP2-26.50	TAK2-26.50	TAN2-26.50	TAM2-26.50	TAX2-26.50
2-B		1.0461	26.57	3/16	TAP2-26.57	TAK2-26.57	TAN2-26.57	TAM2-26.57	TAX2-26.57
2-B	1-3/64	1.0469	26.59	3/16	TAP2-26.59	TAK2-26.59	TAN2-26.59	TAM2-26.59	TAX2-26.59
2-B		1.0472	26.60	3/16	TAP2-26.60	TAK2-26.60	TAN2-26.60	TAM2-26.60	TAX2-26.60
2-B		1.0512	26.70	3/16	TAP2-26.70	TAK2-26.70	TAN2-26.70	TAM2-26.70	TAX2-26.70
2-B		1.0551	26.80	3/16	TAP2-26.80	TAK2-26.80	TAN2-26.80	TAM2-26.80	TAX2-26.80
2-B		1.0591	26.90	3/16	TAP2-26.90	TAK2-26.90	TAN2-26.90	TAM2-26.90	TAX2-26.90
2-B	1-1/16	1.0626	26.99	3/16	TAP2-26.99	TAK2-26.99	TAN2-26.99	TAM2-26.99	TAX2-26.99
2-B		1.0630	27.00	3/16	TAP2-27.00	TAK2-27.00	TAN2-27.00	TAM2-27.00	TAX2-27.00
2-B		1.0669	27.10	3/16	TAP2-27.10	TAK2-27.10	TAN2-27.10	TAM2-27.10	TAX2-27.10
2-B		1.0709	27.20	3/16	TAP2-27.20	TAK2-27.20	TAN2-27.20	TAM2-27.20	TAX2-27.20
2-B		1.0748	27.30	3/16	TAP2-27.30	TAK2-27.30	TAN2-27.30	TAM2-27.30	TAX2-27.30
2-B		1.0787	27.40	3/16	TAP2-27.40	TAK2-27.40	TAN2-27.40	TAM2-27.40	TAX2-27.40
2-B		1.0827	27.50	3/16	TAP2-27.50	TAK2-27.50	TAN2-27.50	TAM2-27.50	TAX2-27.50
2-B		1.0866	27.60	3/16	TAP2-27.60	TAK2-27.60	TAN2-27.60	TAM2-27.60	TAX2-27.60
2-B		1.0906	27.70	3/16	TAP2-27.70	TAK2-27.70	TAN2-27.70	TAM2-27.70	TAX2-27.70
2-B	1-3/32	1.0937	27.78	3/16	TAP2-27.78	TAK2-27.78	TAN2-27.78	TAM2-27.78	TAX2-27.78
2-B		1.0984	27.90	3/16	TAP2-27.90	TAK2-27.90	TAN2-27.90	TAM2-27.90	TAX2-27.90
2-B		1.1024	28.00	3/16	TAP2-28.00	TAK2-28.00	TAN2-28.00	TAM2-28.00	TAX2-28.00
2-B		1.1063	28.10	3/16	TAP2-28.10	TAK2-28.10	TAN2-28.10	TAM2-28.10	TAX2-28.10
2-B	1-7/64	1.1091	28.17	3/16	TAP2-28.17	TAK2-28.17	TAN2-28.17	TAM2-28.17	TAX2-28.17
2-B		1.1102	28.20	3/16	TAP2-28.20	TAK2-28.20	TAN2-28.20	TAM2-28.20	TAX2-28.20
2-B		1.1142	28.30	3/16	TAP2-28.30	TAK2-28.30	TAN2-28.30	TAM2-28.30	TAX2-28.30
2-B		1.1181	28.40	3/16	TAP2-28.40	TAK2-28.40	TAN2-28.40	TAM2-28.40	TAX2-28.40

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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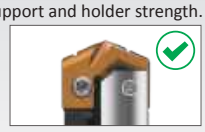
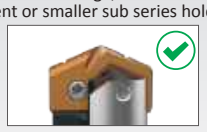
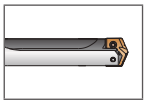

A Series Insert + A Series Holder


C Series Insert + A Series Holder

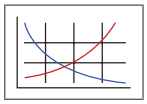

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 36 - 39



A25: 48 - 55



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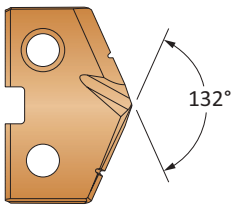
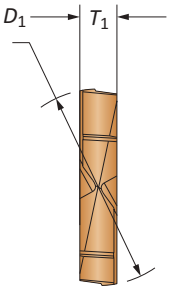
T-A Pro Drill Inserts

2 Series | Diameter Range: 24.38 mm - 35.04 mm (0.9597" - 1.3797")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
2-C	28.50	1.1220		3/16	TAP2-28.50	TAK2-28.50	TAN2-28.50	TAM2-28.50	TAX2-28.50
2-C	28.58	1.1252	1-1/8	3/16	TAP2-28.58	TAK2-28.58	TAN2-28.58	TAM2-28.58	TAX2-28.58
2-C	28.70	1.1299		3/16	TAP2-28.70	TAK2-28.70	TAN2-28.70	TAM2-28.70	TAX2-28.70
2-C	28.80	1.1339		3/16	TAP2-28.80	TAK2-28.80	TAN2-28.80	TAM2-28.80	TAX2-28.80
2-C	28.90	1.1378		3/16	TAP2-28.90	TAK2-28.90	TAN2-28.90	TAM2-28.90	TAX2-28.90
2-C	29.00	1.1417		3/16	TAP2-29.00	TAK2-29.00	TAN2-29.00	TAM2-29.00	TAX2-29.00
2-C	29.10	1.1457		3/16	TAP2-29.10	TAK2-29.10	TAN2-29.10	TAM2-29.10	TAX2-29.10
2-C	29.20	1.1496		3/16	TAP2-29.20	TAK2-29.20	TAN2-29.20	TAM2-29.20	TAX2-29.20
2-C	29.30	1.1535		3/16	TAP2-29.30	TAK2-29.30	TAN2-29.30	TAM2-29.30	TAX2-29.30
2-C	29.37	1.1563	1-5/32	3/16	TAP2-29.37	TAK2-29.37	TAN2-29.37	TAM2-29.37	TAX2-29.37
2-C	29.40	1.1575		3/16	TAP2-29.40	TAK2-29.40	TAN2-29.40	TAM2-29.40	TAX2-29.40
2-C	29.50	1.1614		3/16	TAP2-29.50	TAK2-29.50	TAN2-29.50	TAM2-29.50	TAX2-29.50
2-C	29.60	1.1654		3/16	TAP2-29.60	TAK2-29.60	TAN2-29.60	TAM2-29.60	TAX2-29.60
2-C	29.70	1.1693		3/16	TAP2-29.70	TAK2-29.70	TAN2-29.70	TAM2-29.70	TAX2-29.70
2-C	29.80	1.1732		3/16	TAP2-29.80	TAK2-29.80	TAN2-29.80	TAM2-29.80	TAX2-29.80
2-C	29.90	1.1772		3/16	TAP2-29.90	TAK2-29.90	TAN2-29.90	TAM2-29.90	TAX2-29.90
2-C	30.00	1.1811		3/16	TAP2-30.00	TAK2-30.00	TAN2-30.00	TAM2-30.00	TAX2-30.00
2-C	30.10	1.1850		3/16	TAP2-30.10	TAK2-30.10	TAN2-30.10	TAM2-30.10	TAX2-30.10
2-C	30.16	1.1874	1-3/16	3/16	TAP2-30.16	TAK2-30.16	TAN2-30.16	TAM2-30.16	TAX2-30.16
2-C	30.20	1.1890		3/16	TAP2-30.20	TAK2-30.20	TAN2-30.20	TAM2-30.20	TAX2-30.20
2-C	30.30	1.1929		3/16	TAP2-30.30	TAK2-30.30	TAN2-30.30	TAM2-30.30	TAX2-30.30
2-C	30.40	1.1969		3/16	TAP2-30.40	TAK2-30.40	TAN2-30.40	TAM2-30.40	TAX2-30.40
2-C	30.50	1.2008		3/16	TAP2-30.50	TAK2-30.50	TAN2-30.50	TAM2-30.50	TAX2-30.50
2-C	30.60	1.2047		3/16	TAP2-30.60	TAK2-30.60	TAN2-30.60	TAM2-30.60	TAX2-30.60
2-C	30.70	1.2087		3/16	TAP2-30.70	TAK2-30.70	TAN2-30.70	TAM2-30.70	TAX2-30.70
2-C	30.80	1.2126		3/16	TAP2-30.80	TAK2-30.80	TAN2-30.80	TAM2-30.80	TAX2-30.80
2-C	30.90	1.2165		3/16	TAP2-30.90	TAK2-30.90	TAN2-30.90	TAM2-30.90	TAX2-30.90
2-C	30.96	1.2189	1-7/32	3/16	TAP2-30.96	TAK2-30.96	TAN2-30.96	TAM2-30.96	TAX2-30.96
2-C	31.00	1.2205		3/16	TAP2-31.00	TAK2-31.00	TAN2-31.00	TAM2-31.00	TAX2-31.00
2-C	31.10	1.2244		3/16	TAP2-31.10	TAK2-31.10	TAN2-31.10	TAM2-31.10	TAX2-31.10
2-C	31.20	1.2283		3/16	TAP2-31.20	TAK2-31.20	TAN2-31.20	TAM2-31.20	TAX2-31.20
2-C	31.30	1.2323		3/16	TAP2-31.30	TAK2-31.30	TAN2-31.30	TAM2-31.30	TAX2-31.30
2-C	31.40	1.2362		3/16	TAP2-31.40	TAK2-31.40	TAN2-31.40	TAM2-31.40	TAX2-31.40
2-C	31.50	1.2402		3/16	TAP2-31.50	TAK2-31.50	TAN2-31.50	TAM2-31.50	TAX2-31.50
2-C	31.60	1.2441		3/16	TAP2-31.60	TAK2-31.60	TAN2-31.60	TAM2-31.60	TAX2-31.60

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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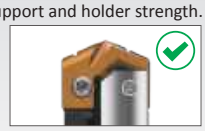
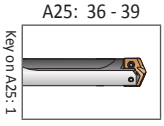

A Series Insert + A Series Holder


C Series Insert + A Series Holder

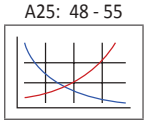

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 36 - 39



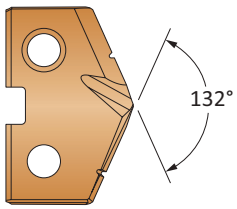
A25: 48 - 55

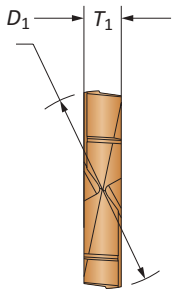


Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

2 Series | Diameter Range: 24.38 mm - 35.04 mm (0.9597" - 1.3797")



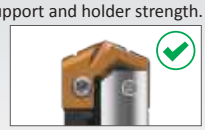


Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
2-D	31.70	1.2480		3/16	TAP2-31.70	TAK2-31.70	TAN2-31.70	TAM2-31.70	TAX2-31.70
2-D	31.75	1.2500	1-1/4	3/16	TAP2-31.75	TAK2-31.75	TAN2-31.75	TAM2-31.75	TAX2-31.75
2-D	31.80	1.2520		3/16	TAP2-31.80	TAK2-31.80	TAN2-31.80	TAM2-31.80	TAX2-31.80
2-D	31.90	1.2559		3/16	TAP2-31.90	TAK2-31.90	TAN2-31.90	TAM2-31.90	TAX2-31.90
2-D	32.00	1.2598		3/16	TAP2-32.00	TAK2-32.00	TAN2-32.00	TAM2-32.00	TAX2-32.00
2-D	32.10	1.2638		3/16	TAP2-32.10	TAK2-32.10	TAN2-32.10	TAM2-32.10	TAX2-32.10
2-D	32.15	1.2657	1-17/64	3/16	TAP2-32.15	TAK2-32.15	TAN2-32.15	TAM2-32.15	TAX2-32.15
2-D	32.20	1.2677		3/16	TAP2-32.20	TAK2-32.20	TAN2-32.20	TAM2-32.20	TAX2-32.20
2-D	32.30	1.2717		3/16	TAP2-32.30	TAK2-32.30	TAN2-32.30	TAM2-32.30	TAX2-32.30
2-D	32.40	1.2756		3/16	TAP2-32.40	TAK2-32.40	TAN2-32.40	TAM2-32.40	TAX2-32.40
2-D	32.50	1.2795		3/16	TAP2-32.50	TAK2-32.50	TAN2-32.50	TAM2-32.50	TAX2-32.50
2-D	32.55	1.2815	1-9/32	3/16	TAP2-32.55	TAK2-32.55	TAN2-32.55	TAM2-32.55	TAX2-32.55
2-D	32.60	1.2835		3/16	TAP2-32.60	TAK2-32.60	TAN2-32.60	TAM2-32.60	TAX2-32.60
2-D	32.70	1.2874		3/16	TAP2-32.70	TAK2-32.70	TAN2-32.70	TAM2-32.70	TAX2-32.70
2-D	32.80	1.2913		3/16	TAP2-32.80	TAK2-32.80	TAN2-32.80	TAM2-32.80	TAX2-32.80
2-D	32.90	1.2953		3/16	TAP2-32.90	TAK2-32.90	TAN2-32.90	TAM2-32.90	TAX2-32.90
2-D	33.00	1.2992		3/16	TAP2-33.00	TAK2-33.00	TAN2-33.00	TAM2-33.00	TAX2-33.00
2-D	33.10	1.3031		3/16	TAP2-33.10	TAK2-33.10	TAN2-33.10	TAM2-33.10	TAX2-33.10
2-D	33.20	1.3071		3/16	TAP2-33.20	TAK2-33.20	TAN2-33.20	TAM2-33.20	TAX2-33.20
2-D	33.30	1.3110		3/16	TAP2-33.30	TAK2-33.30	TAN2-33.30	TAM2-33.30	TAX2-33.30
2-D	33.34	1.3126	1-5/16	3/16	TAP2-33.34	TAK2-33.34	TAN2-33.34	TAM2-33.34	TAX2-33.34
2-D	33.40	1.3150		3/16	TAP2-33.40	TAK2-33.40	TAN2-33.40	TAM2-33.40	TAX2-33.40
2-D	33.50	1.3189		3/16	TAP2-33.50	TAK2-33.50	TAN2-33.50	TAM2-33.50	TAX2-33.50
2-D	33.60	1.3228		3/16	TAP2-33.60	TAK2-33.60	TAN2-33.60	TAM2-33.60	TAX2-33.60
2-D	33.70	1.3268		3/16	TAP2-33.70	TAK2-33.70	TAN2-33.70	TAM2-33.70	TAX2-33.70
2-D	33.80	1.3307		3/16	TAP2-33.80	TAK2-33.80	TAN2-33.80	TAM2-33.80	TAX2-33.80
2-D	33.90	1.3346		3/16	TAP2-33.90	TAK2-33.90	TAN2-33.90	TAM2-33.90	TAX2-33.90
2-D	34.00	1.3386		3/16	TAP2-34.00	TAK2-34.00	TAN2-34.00	TAM2-34.00	TAX2-34.00
2-D	34.10	1.3425		3/16	TAP2-34.10	TAK2-34.10	TAN2-34.10	TAM2-34.10	TAX2-34.10
2-D	34.13	1.3437	1-11/32	3/16	TAP2-34.13	TAK2-34.13	TAN2-34.13	TAM2-34.13	TAX2-34.13
2-D	34.20	1.3465		3/16	TAP2-34.20	TAK2-34.20	TAN2-34.20	TAM2-34.20	TAX2-34.20
2-D	34.30	1.3504		3/16	TAP2-34.30	TAK2-34.30	TAN2-34.30	TAM2-34.30	TAX2-34.30
2-D	34.40	1.3543		3/16	TAP2-34.40	TAK2-34.40	TAN2-34.40	TAM2-34.40	TAX2-34.40
2-D	34.50	1.3583		3/16	TAP2-34.50	TAK2-34.50	TAN2-34.50	TAM2-34.50	TAX2-34.50
2-D	34.60	1.3622		3/16	TAP2-34.60	TAK2-34.60	TAN2-34.60	TAM2-34.60	TAX2-34.60
2-D	34.70	1.3661		3/16	TAP2-34.70	TAK2-34.70	TAN2-34.70	TAM2-34.70	TAX2-34.70
2-D	34.80	1.3701		3/16	TAP2-34.80	TAK2-34.80	TAN2-34.80	TAM2-34.80	TAX2-34.80
2-D	34.90	1.3740		3/16	TAP2-34.90	TAK2-34.90	TAN2-34.90	TAM2-34.90	TAX2-34.90
2-D	34.93	1.3752	1-3/8	3/16	TAP2-34.93	TAK2-34.93	TAN2-34.93	TAM2-34.93	TAX2-34.93
2-D	35.00	1.3780		3/16	TAP2-35.00	TAK2-35.00	TAN2-35.00	TAM2-35.00	TAX2-35.00

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.


A Series Insert + A Series Holder


C Series Insert + A Series Holder


C Series Insert + C Series Holder


A Series Insert + C Series Holder

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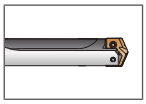
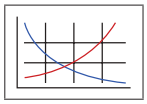


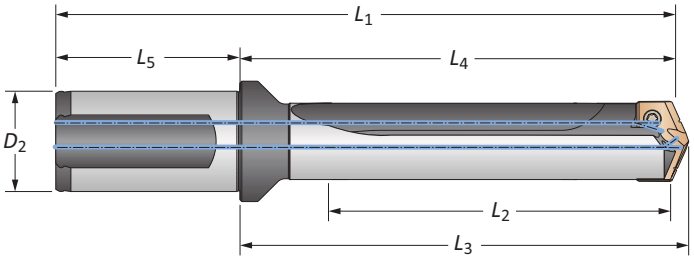
A25: 48 - 55



Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

2 Series Metric | Diameter Range: 24.38 mm - 35.04 mm



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	Stub	A	29.7	75.0	78.6	135.0	60.0	32	Yes	**HTA2A01-32FM**
	Stub	A	29.7	75.0	78.6	135.0	60.0	32	No	**HTA2A01-32CM**
	Stub	B	29.7	75.0	78.6	135.0	60.0	32	Yes	**HTA2B01-32FM**
	Stub	B	29.7	75.0	78.6	135.0	60.0	32	No	**HTA2B01-32CM**
	Stub	C	29.7	75.0	78.6	135.0	60.0	32	Yes	**HTA2C01-32FM**
	Stub	C	29.7	75.0	78.6	135.0	60.0	32	No	**HTA2C01-32CM**
	Stub	D	29.7	75.0	78.6	135.0	60.0	32	Yes	**HTA2D01-32FM**
	Stub	D	29.7	75.0	78.6	135.0	60.0	32	No	**HTA2D01-32CM**
	3xD	A	89.2	137.4	141.0	197.4	60.0	32	Yes	**HTA2A03-32FM**
	3xD	A	89.2	137.4	141.0	197.4	60.0	32	No	**HTA2A03-32CM**
	3xD	B	89.2	137.4	141.0	197.4	60.0	32	Yes	**HTA2B03-32FM**
	3xD	B	89.2	137.4	141.0	197.4	60.0	32	No	**HTA2B03-32CM**
	3xD	C	89.2	137.4	141.0	197.4	60.0	32	Yes	**HTA2C03-32FM**
	3xD	C	89.2	137.4	141.0	197.4	60.0	32	No	**HTA2C03-32CM**
	3xD	D	89.2	137.4	141.0	197.4	60.0	32	Yes	**HTA2D03-32FM**
Ⓜ	3xD	D	89.2	137.4	141.0	197.4	60.0	32	No	**HTA2D03-32CM**
	5xD	A	148.7	196.9	200.5	256.9	60.0	32	Yes	**HTA2A05-32FM**
	5xD	A	148.7	196.9	200.5	256.9	60.0	32	No	**HTA2A05-32CM**
	5xD	B	148.7	196.9	200.5	256.9	60.0	32	Yes	**HTA2B05-32FM**
	5xD	B	148.7	196.9	200.5	256.9	60.0	32	No	**HTA2B05-32CM**
	5xD	C	148.7	196.9	200.5	256.9	60.0	32	Yes	**HTA2C05-32FM**
	5xD	C	148.7	196.9	200.5	256.9	60.0	32	No	**HTA2C05-32CM**
	5xD	D	148.7	196.9	200.5	256.9	60.0	32	Yes	**HTA2D05-32FM**
	5xD	D	148.7	196.9	200.5	256.9	60.0	32	No	**HTA2D05-32CM**
	7xD	A	208.2	256.4	260.0	316.4	60.0	32	Yes	**HTA2A07-32FM**
	7xD	A	208.2	256.4	260.0	316.4	60.0	32	No	**HTA2A07-32CM**
	7xD	B	208.2	256.4	260.0	316.4	60.0	32	Yes	**HTA2B07-32FM**
	7xD	B	208.2	256.4	260.0	316.4	60.0	32	No	**HTA2B07-32CM**
	7xD	C	208.2	256.4	260.0	316.4	60.0	32	Yes	**HTA2C07-32FM**
	7xD	C	208.2	256.4	260.0	316.4	60.0	32	No	**HTA2C07-32CM**
	7xD	D	208.2	256.4	260.0	316.4	60.0	32	Yes	**HTA2D07-32FM**
	7xD	D	208.2	256.4	260.0	316.4	60.0	32	No	**HTA2D07-32CM**

Sub Series	2 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
2A	24.38 mm - 35.04 mm	0.9597" - 1.3797"
2B	25.40 mm - 35.04 mm	0.9999" - 1.3797"
2C	28.50 mm - 35.04 mm	1.1219" - 1.3797"
2D	31.70 mm - 35.04 mm	1.2479" - 1.3797"

Connection Accessories

 Insert Screws	 Nylon Locking Screws	 Insert Driver	 Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	690 N-cm (61.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

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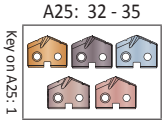
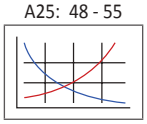


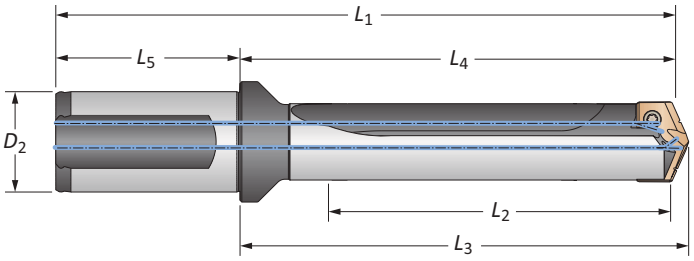
A25: 48 - 55



Ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

2 Series Metric | Diameter Range: 24.38 mm - 35.04 mm



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	10xD	A	297.4	345.6	349.2	405.6	60.0	32	Yes	HTA2A10-32FM
	10xD	A	297.4	345.6	349.2	405.6	60.0	32	No	HTA2A10-32CM
	10xD	B	297.4	345.6	349.2	405.6	60.0	32	Yes	HTA2B10-32FM
	10xD	B	297.4	345.6	349.2	405.6	60.0	32	No	HTA2B10-32CM
	10xD	C	297.4	345.6	349.2	405.6	60.0	32	Yes	HTA2C10-32FM
	10xD	C	297.4	345.6	349.2	405.6	60.0	32	No	HTA2C10-32CM
	10xD	D	297.4	345.6	349.2	405.6	60.0	32	Yes	HTA2D10-32FM
	10xD	D	297.4	345.6	349.2	405.6	60.0	32	No	HTA2D10-32CM
	12xD	A	356.9	405.1	408.7	465.1	60.0	32	Yes	HTA2A12-32FM
	12xD	A	356.9	405.1	408.7	465.1	60.0	32	No	HTA2A12-32CM
	12xD	B	356.9	405.1	408.7	465.1	60.0	32	Yes	HTA2B12-32FM
Ⓜ	12xD	B	356.9	405.1	408.7	465.1	60.0	32	No	HTA2B12-32CM
	12xD	C	356.9	405.1	408.7	465.1	60.0	32	Yes	HTA2C12-32FM
	12xD	C	356.9	405.1	408.7	465.1	60.0	32	No	HTA2C12-32CM
	12xD	D	356.9	405.1	408.7	465.1	60.0	32	Yes	HTA2D12-32FM
	12xD	D	356.9	405.1	408.7	465.1	60.0	32	No	HTA2D12-32CM
	15xD	A	446.2	494.4	497.9	554.4	60.0	32	Yes	HTA2A15-32FM
	15xD	A	446.2	494.4	497.9	554.4	60.0	32	No	HTA2A15-32CM
	15xD	B	446.2	494.4	497.9	554.4	60.0	32	Yes	HTA2B15-32FM
	15xD	B	446.2	494.4	497.9	554.4	60.0	32	No	HTA2B15-32CM
	15xD	C	446.2	494.4	497.9	554.4	60.0	32	Yes	HTA2C15-32FM
	15xD	C	446.2	494.4	497.9	554.4	60.0	32	No	HTA2C15-32CM
	15xD	D	446.2	494.4	497.9	554.4	60.0	32	Yes	HTA2D15-32FM
	15xD	D	446.2	494.4	497.9	554.4	60.0	32	No	HTA2D15-32CM

Sub Series	2 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
2A	24.38 mm - 35.04 mm	0.9597" - 1.3797"
2B	25.40 mm - 35.04 mm	0.9999" - 1.3797"
2C	28.50 mm - 35.04 mm	1.1219" - 1.3797"
2D	31.70 mm - 35.04 mm	1.2479" - 1.3797"

Connection Accessories

 Insert Screws	 Nylon Locking Screws	 Insert Driver	 Preset Torque Hand Driver	 Replacement Tips	Admissible Tightening Torque*
7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	690 N-cm (61.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

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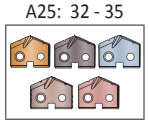
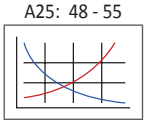


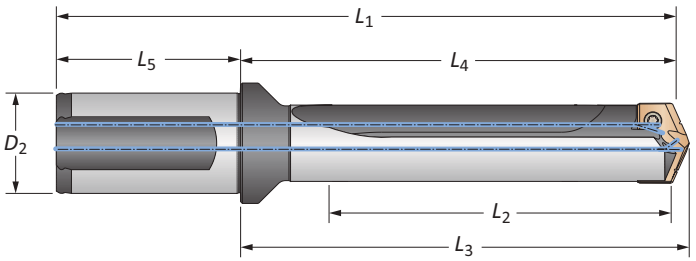
A25: 48 - 55



Ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

2 Series Imperial | Diameter Range: 0.9597" - 1.3797"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Shank Flat	Part No
	Stub	A	1.171	2.954	3.094	5.234	2.280	1-1/4	Yes	**HTA2A01-125F**
	Stub	A	1.171	2.954	3.094	5.234	2.280	1-1/4	No	**HTA2A01-125C**
	Stub	B	1.171	2.954	3.094	5.234	2.280	1-1/4	Yes	**HTA2B01-125F**
	Stub	B	1.171	2.954	3.094	5.234	2.280	1-1/4	No	**HTA2B01-125C**
	Stub	C	1.171	2.954	3.094	5.234	2.280	1-1/4	Yes	**HTA2C01-125F**
	Stub	C	1.171	2.954	3.094	5.234	2.280	1-1/4	No	**HTA2C01-125C**
	Stub	D	1.171	2.954	3.094	5.234	2.280	1-1/4	Yes	**HTA2D01-125F**
	Stub	D	1.171	2.954	3.094	5.234	2.280	1-1/4	No	**HTA2D01-125C**
	3xD	A	3.513	5.411	5.551	7.691	2.280	1-1/4	Yes	**HTA2A03-125F**
	3xD	A	3.513	5.411	5.551	7.691	2.280	1-1/4	No	**HTA2A03-125C**
	3xD	B	3.513	5.411	5.551	7.691	2.280	1-1/4	Yes	**HTA2B03-125F**
	3xD	B	3.513	5.411	5.551	7.691	2.280	1-1/4	No	**HTA2B03-125C**
	3xD	C	3.513	5.411	5.551	7.691	2.280	1-1/4	Yes	**HTA2C03-125F**
	3xD	C	3.513	5.411	5.551	7.691	2.280	1-1/4	No	**HTA2C03-125C**
	3xD	D	3.513	5.411	5.551	7.691	2.280	1-1/4	Yes	**HTA2D03-125F**
ⓘ	3xD	D	3.513	5.411	5.551	7.691	2.280	1-1/4	No	**HTA2D03-125C**
	5xD	A	5.855	7.753	7.893	10.033	2.280	1-1/4	Yes	**HTA2A05-125F**
	5xD	A	5.855	7.753	7.893	10.033	2.280	1-1/4	No	**HTA2A05-125C**
	5xD	B	5.855	7.753	7.893	10.033	2.280	1-1/4	Yes	**HTA2B05-125F**
	5xD	B	5.855	7.753	7.893	10.033	2.280	1-1/4	No	**HTA2B05-125C**
	5xD	C	5.855	7.753	7.893	10.033	2.280	1-1/4	Yes	**HTA2C05-125F**
	5xD	C	5.855	7.753	7.893	10.033	2.280	1-1/4	No	**HTA2C05-125C**
	5xD	D	5.855	7.753	7.893	10.033	2.280	1-1/4	Yes	**HTA2D05-125F**
	5xD	D	5.855	7.753	7.893	10.033	2.280	1-1/4	No	**HTA2D05-125C**
	7xD	A	8.197	10.095	10.235	12.375	2.280	1-1/4	Yes	**HTA2A07-125F**
	7xD	A	8.197	10.095	10.235	12.375	2.280	1-1/4	No	**HTA2A07-125C**
	7xD	B	8.197	10.095	10.235	12.375	2.280	1-1/4	Yes	**HTA2B07-125F**
	7xD	B	8.197	10.095	10.235	12.375	2.280	1-1/4	No	**HTA2B07-125C**
	7xD	C	8.197	10.095	10.235	12.375	2.280	1-1/4	Yes	**HTA2C07-125F**
	7xD	C	8.197	10.095	10.235	12.375	2.280	1-1/4	No	**HTA2C07-125C**
	7xD	D	8.197	10.095	10.235	12.375	2.280	1-1/4	Yes	**HTA2D07-125F**
	7xD	D	8.197	10.095	10.235	12.375	2.280	1-1/4	No	**HTA2D07-125C**

Sub Series	2 Series Holder Diameter Range Metric (mm)	Imperial (inch)
2A	24.38 mm - 35.04 mm	0.9597" - 1.3797"
2B	25.40 mm - 35.04 mm	0.9999" - 1.3797"
2C	28.50 mm - 35.04 mm	1.1219" - 1.3797"
2D	31.70 mm - 35.04 mm	1.2479" - 1.3797"

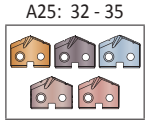
Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	690 N-cm (61.0 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 32 - 35



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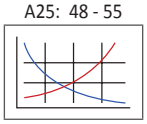
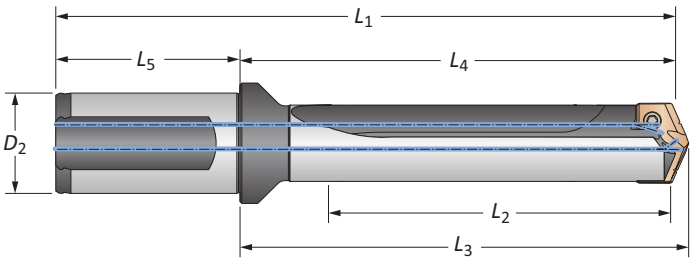
A25: 48 - 55



ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

2 Series Imperial | Diameter Range: 0.9597" - 1.3797"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Shank Flat	Part No
	10xD	A	11.710	13.608	13.748	15.888	2.280	1-1/4	Yes	HTA2A10-125F
	10xD	A	11.710	13.608	13.748	15.888	2.280	1-1/4	No	HTA2A10-125C
	10xD	B	11.710	13.608	13.748	15.888	2.280	1-1/4	Yes	HTA2B10-125F
	10xD	B	11.710	13.608	13.748	15.888	2.280	1-1/4	No	HTA2B10-125C
	10xD	C	11.710	13.608	13.748	15.888	2.280	1-1/4	Yes	HTA2C10-125F
	10xD	C	11.710	13.608	13.748	15.888	2.280	1-1/4	No	HTA2C10-125C
	10xD	D	11.710	13.608	13.748	15.888	2.280	1-1/4	Yes	HTA2D10-125F
	10xD	D	11.710	13.608	13.748	15.888	2.280	1-1/4	No	HTA2D10-125C
	12xD	A	14.052	15.950	16.090	18.230	2.280	1-1/4	Yes	HTA2A12-125F
	12xD	A	14.052	15.950	16.090	18.230	2.280	1-1/4	No	HTA2A12-125C
	12xD	B	14.052	15.950	16.090	18.230	2.280	1-1/4	Yes	HTA2B12-125F
ⓘ	12xD	B	14.052	15.950	16.090	18.230	2.280	1-1/4	No	HTA2B12-125C
	12xD	C	14.052	15.950	16.090	18.230	2.280	1-1/4	Yes	HTA2C12-125F
	12xD	C	14.052	15.950	16.090	18.230	2.280	1-1/4	No	HTA2C12-125C
	12xD	D	14.052	15.950	16.090	18.230	2.280	1-1/4	Yes	HTA2D12-125F
	12xD	D	14.052	15.950	16.090	18.230	2.280	1-1/4	No	HTA2D12-125C
	15xD	A	17.565	19.463	19.603	21.743	2.280	1-1/4	Yes	HTA2A15-125F
	15xD	A	17.565	19.463	19.603	21.743	2.280	1-1/4	No	HTA2A15-125C
	15xD	B	17.565	19.463	19.603	21.743	2.280	1-1/4	Yes	HTA2B15-125F
	15xD	B	17.565	19.463	19.603	21.743	2.280	1-1/4	No	HTA2B15-125C
	15xD	C	17.565	19.463	19.603	21.743	2.280	1-1/4	Yes	HTA2C15-125F
	15xD	C	17.565	19.463	19.603	21.743	2.280	1-1/4	No	HTA2C15-125C
	15xD	D	17.565	19.463	19.603	21.743	2.280	1-1/4	Yes	HTA2D15-125F
	15xD	D	17.565	19.463	19.603	21.743	2.280	1-1/4	No	HTA2D15-125C

Sub Series	2 Series Holder Diameter Range Metric (mm)	Imperial (inch)
2A	24.38 mm - 35.04 mm	0.9597" - 1.3797"
2B	25.40 mm - 35.04 mm	0.9999" - 1.3797"
2C	28.50 mm - 35.04 mm	1.1219" - 1.3797"
2D	31.70 mm - 35.04 mm	1.2479" - 1.3797"

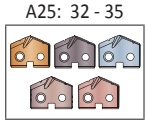
Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	690 N-cm (61.0 in-lbs)

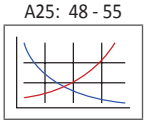
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
email: **engineering.eu@alliedmachine.com**

A25: 32 - 35



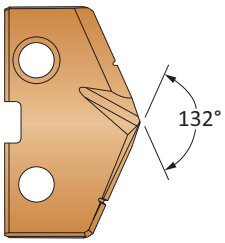
A25: 48 - 55

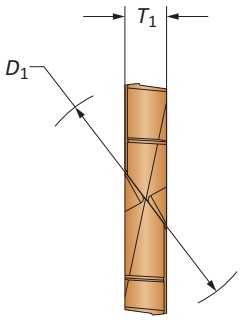


ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Inserts

3 Series | Diameter Range: 35.05 mm - 47.80 mm (1.3798" - 1.8820")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
3-A	35.10	1.3819		1/4	TAP3-35.10	TAK3-35.10	TAN3-35.10	TAM3-35.10	TAX3-35.10
3-A	35.20	1.3858		1/4	TAP3-35.20	TAK3-35.20	TAN3-35.20	TAM3-35.20	TAX3-35.20
3-A	35.30	1.3898		1/4	TAP3-35.30	TAK3-35.30	TAN3-35.30	TAM3-35.30	TAX3-35.30
3-A	35.40	1.3937		1/4	TAP3-35.40	TAK3-35.40	TAN3-35.40	TAM3-35.40	TAX3-35.40
3-A	35.50	1.3976		1/4	TAP3-35.50	TAK3-35.50	TAN3-35.50	TAM3-35.50	TAX3-35.50
3-A	35.60	1.4016		1/4	TAP3-35.60	TAK3-35.60	TAN3-35.60	TAM3-35.60	TAX3-35.60
3-A	35.70	1.4055		1/4	TAP3-35.70	TAK3-35.70	TAN3-35.70	TAM3-35.70	TAX3-35.70
3-A	35.72	1.4063	1-13/32	1/4	TAP3-35.72	TAK3-35.72	TAN3-35.72	TAM3-35.72	TAX3-35.72
3-A	35.80	1.4094		1/4	TAP3-35.80	TAK3-35.80	TAN3-35.80	TAM3-35.80	TAX3-35.80
3-A	35.90	1.4134		1/4	TAP3-35.90	TAK3-35.90	TAN3-35.90	TAM3-35.90	TAX3-35.90
3-A	36.00	1.4173		1/4	TAP3-36.00	TAK3-36.00	TAN3-36.00	TAM3-36.00	TAX3-36.00
3-A	36.10	1.4213		1/4	TAP3-36.10	TAK3-36.10	TAN3-36.10	TAM3-36.10	TAX3-36.10
3-A	36.20	1.4252		1/4	TAP3-36.20	TAK3-36.20	TAN3-36.20	TAM3-36.20	TAX3-36.20
3-A	36.30	1.4291		1/4	TAP3-36.30	TAK3-36.30	TAN3-36.30	TAM3-36.30	TAX3-36.30
3-A	36.40	1.4331		1/4	TAP3-36.40	TAK3-36.40	TAN3-36.40	TAM3-36.40	TAX3-36.40
3-A	36.50	1.4370		1/4	TAP3-36.50	TAK3-36.50	TAN3-36.50	TAM3-36.50	TAX3-36.50
3-A	36.51	1.4374	1-7/16	1/4	TAP3-36.51	TAK3-36.51	TAN3-36.51	TAM3-36.51	TAX3-36.51
3-A	36.60	1.4409		1/4	TAP3-36.60	TAK3-36.60	TAN3-36.60	TAM3-36.60	TAX3-36.60
3-A	36.70	1.4449		1/4	TAP3-36.70	TAK3-36.70	TAN3-36.70	TAM3-36.70	TAX3-36.70
3-A	36.80	1.4488		1/4	TAP3-36.80	TAK3-36.80	TAN3-36.80	TAM3-36.80	TAX3-36.80
3-A	36.90	1.4528		1/4	TAP3-36.90	TAK3-36.90	TAN3-36.90	TAM3-36.90	TAX3-36.90
3-A	37.00	1.4567		1/4	TAP3-37.00	TAK3-37.00	TAN3-37.00	TAM3-37.00	TAX3-37.00
3-A	37.10	1.4606		1/4	TAP3-37.10	TAK3-37.10	TAN3-37.10	TAM3-37.10	TAX3-37.10
3-A	37.20	1.4646		1/4	TAP3-37.20	TAK3-37.20	TAN3-37.20	TAM3-37.20	TAX3-37.20
3-A	37.30	1.4685		1/4	TAP3-37.30	TAK3-37.30	TAN3-37.30	TAM3-37.30	TAX3-37.30
3-A	37.31	1.4689	1-15/32	1/4	TAP3-37.31	TAK3-37.31	TAN3-37.31	TAM3-37.31	TAX3-37.31
3-A	37.40	1.4724		1/4	TAP3-37.40	TAK3-37.40	TAN3-37.40	TAM3-37.40	TAX3-37.40
3-A	37.50	1.4764		1/4	TAP3-37.50	TAK3-37.50	TAN3-37.50	TAM3-37.50	TAX3-37.50
3-A	37.60	1.4803		1/4	TAP3-37.60	TAK3-37.60	TAN3-37.60	TAM3-37.60	TAX3-37.60
3-A	37.70	1.4843		1/4	TAP3-37.70	TAK3-37.70	TAN3-37.70	TAM3-37.70	TAX3-37.70

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.

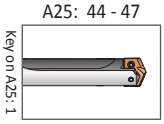

A Series Insert + A Series Holder


C Series Insert + A Series Holder

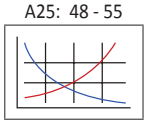

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 44 - 47



A25: 48 - 55

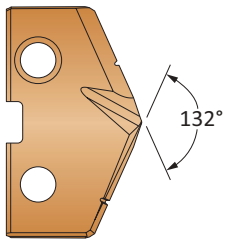


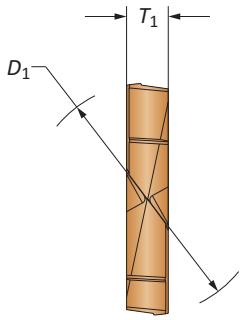
Sizes not shown are available upon request.
When ordering, please follow the example below:

Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

3 Series | Diameter Range: 35.05 mm - 47.80 mm (1.3798" - 1.8820")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
3-B	37.80	1.4882		1/4	TAP3-37.80	TAK3-37.80	TAN3-37.80	TAM3-37.80	TAX3-37.80
3-B	37.90	1.4921		1/4	TAP3-37.90	TAK3-37.90	TAN3-37.90	TAM3-37.90	TAX3-37.90
3-B	38.00	1.4961		1/4	TAP3-38.00	TAK3-38.00	TAN3-38.00	TAM3-38.00	TAX3-38.00
3-B	38.10	1.5000	1-1/2	1/4	TAP3-38.10	TAK3-38.10	TAN3-38.10	TAM3-38.10	TAX3-38.10
3-B	38.20	1.5039		1/4	TAP3-38.20	TAK3-38.20	TAN3-38.20	TAM3-38.20	TAX3-38.20
3-B	38.30	1.5079		1/4	TAP3-38.30	TAK3-38.30	TAN3-38.30	TAM3-38.30	TAX3-38.30
3-B	38.40	1.5118		1/4	TAP3-38.40	TAK3-38.40	TAN3-38.40	TAM3-38.40	TAX3-38.40
3-B	38.50	1.5157		1/4	TAP3-38.50	TAK3-38.50	TAN3-38.50	TAM3-38.50	TAX3-38.50
3-B	38.60	1.5197		1/4	TAP3-38.60	TAK3-38.60	TAN3-38.60	TAM3-38.60	TAX3-38.60
3-B	38.70	1.5236		1/4	TAP3-38.70	TAK3-38.70	TAN3-38.70	TAM3-38.70	TAX3-38.70
3-B	38.80	1.5276		1/4	TAP3-38.80	TAK3-38.80	TAN3-38.80	TAM3-38.80	TAX3-38.80
3-B	38.89	1.5311	1-17/32	1/4	TAP3-38.89	TAK3-38.89	TAN3-38.89	TAM3-38.89	TAX3-38.89
3-B	38.90	1.5315		1/4	TAP3-38.90	TAK3-38.90	TAN3-38.90	TAM3-38.90	TAX3-38.90
3-B	39.00	1.5354		1/4	TAP3-39.00	TAK3-39.00	TAN3-39.00	TAM3-39.00	TAX3-39.00
3-B	39.10	1.5394		1/4	TAP3-39.10	TAK3-39.10	TAN3-39.10	TAM3-39.10	TAX3-39.10
3-B	39.20	1.5433		1/4	TAP3-39.20	TAK3-39.20	TAN3-39.20	TAM3-39.20	TAX3-39.20
3-B	39.29	1.5469		1/4	TAP3-39.29	TAK3-39.29	TAN3-39.29	TAM3-39.29	TAX3-39.29
3-B	39.30	1.5472		1/4	TAP3-39.30	TAK3-39.30	TAN3-39.30	TAM3-39.30	TAX3-39.30
3-B	39.40	1.5512		1/4	TAP3-39.40	TAK3-39.40	TAN3-39.40	TAM3-39.40	TAX3-39.40
3-B	39.50	1.5551		1/4	TAP3-39.50	TAK3-39.50	TAN3-39.50	TAM3-39.50	TAX3-39.50
3-B	39.60	1.5591		1/4	TAP3-39.60	TAK3-39.60	TAN3-39.60	TAM3-39.60	TAX3-39.60
3-B	39.69	1.5626	1-9/16	1/4	TAP3-39.69	TAK3-39.69	TAN3-39.69	TAM3-39.69	TAX3-39.69
3-B	39.70	1.5630		1/4	TAP3-39.70	TAK3-39.70	TAN3-39.70	TAM3-39.70	TAX3-39.70
3-B	39.80	1.5669		1/4	TAP3-39.80	TAK3-39.80	TAN3-39.80	TAM3-39.80	TAX3-39.80
3-B	39.90	1.5709		1/4	TAP3-39.90	TAK3-39.90	TAN3-39.90	TAM3-39.90	TAX3-39.90
3-B	40.00	1.5748		1/4	TAP3-40.00	TAK3-40.00	TAN3-40.00	TAM3-40.00	TAX3-40.00
3-B	40.10	1.5787		1/4	TAP3-40.10	TAK3-40.10	TAN3-40.10	TAM3-40.10	TAX3-40.10
3-B	40.20	1.5827		1/4	TAP3-40.20	TAK3-40.20	TAN3-40.20	TAM3-40.20	TAX3-40.20
3-B	40.30	1.5866		1/4	TAP3-40.30	TAK3-40.30	TAN3-40.30	TAM3-40.30	TAX3-40.30
3-B	40.40	1.5906		1/4	TAP3-40.40	TAK3-40.40	TAN3-40.40	TAM3-40.40	TAX3-40.40
3-B	40.48	1.5937	1-19/32	1/4	TAP3-40.48	TAK3-40.48	TAN3-40.48	TAM3-40.48	TAX3-40.48
3-B	40.50	1.5945		1/4	TAP3-40.50	TAK3-40.50	TAN3-40.50	TAM3-40.50	TAX3-40.50
3-B	40.60	1.5984		1/4	TAP3-40.60	TAK3-40.60	TAN3-40.60	TAM3-40.60	TAX3-40.60
3-B	40.70	1.6024		1/4	TAP3-40.70	TAK3-40.70	TAN3-40.70	TAM3-40.70	TAX3-40.70
3-B	40.80	1.6063		1/4	TAP3-40.80	TAK3-40.80	TAN3-40.80	TAM3-40.80	TAX3-40.80
3-B	40.90	1.6102		1/4	TAP3-40.90	TAK3-40.90	TAN3-40.90	TAM3-40.90	TAX3-40.90

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

Sub series holders are recommended when running carbide inserts toward the upper end of the series drill range, as well as in tougher applications requiring more insert support and holder strength. **NOTE:** Only specified sub series inserts should be used with equivalent or smaller sub series holders.

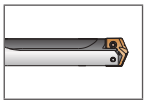
A Series Insert + A Series Holder

C Series Insert + A Series Holder

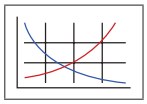
C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 44 - 47



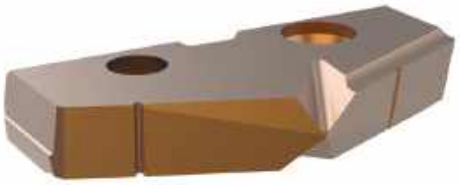
A25: 48 - 55

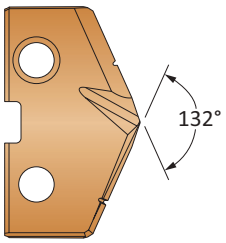


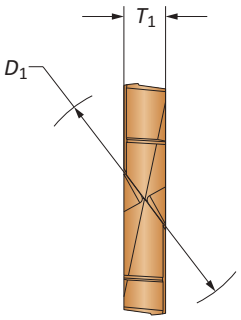
Sizes not shown are available upon request. When ordering, please follow the example below:	
Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Inserts

3 Series | Diameter Range: 35.05 mm - 47.80 mm (1.3798" - 1.8820")







Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
3-C	41.00	1.6142		1/4	TAP3-41.00	TAK3-41.00	TAN3-41.00	TAM3-41.00	TAX3-41.00
3-C	41.10	1.6181		1/4	TAP3-41.10	TAK3-41.10	TAN3-41.10	TAM3-41.10	TAX3-41.10
3-C	41.20	1.6220		1/4	TAP3-41.20	TAK3-41.20	TAN3-41.20	TAM3-41.20	TAX3-41.20
3-C	41.28	1.6252	1-5/8	1/4	TAP3-41.28	TAK3-41.28	TAN3-41.28	TAM3-41.28	TAX3-41.28
3-C	41.30	1.6260		1/4	TAP3-41.30	TAK3-41.30	TAN3-41.30	TAM3-41.30	TAX3-41.30
3-C	41.40	1.6299		1/4	TAP3-41.40	TAK3-41.40	TAN3-41.40	TAM3-41.40	TAX3-41.40
3-C	41.50	1.6339		1/4	TAP3-41.50	TAK3-41.50	TAN3-41.50	TAM3-41.50	TAX3-41.50
3-C	41.60	1.6378		1/4	TAP3-41.60	TAK3-41.60	TAN3-41.60	TAM3-41.60	TAX3-41.60
3-C	41.70	1.6417		1/4	TAP3-41.70	TAK3-41.70	TAN3-41.70	TAM3-41.70	TAX3-41.70
3-C	41.80	1.6457		1/4	TAP3-41.80	TAK3-41.80	TAN3-41.80	TAM3-41.80	TAX3-41.80
3-C	41.90	1.6496		1/4	TAP3-41.90	TAK3-41.90	TAN3-41.90	TAM3-41.90	TAX3-41.90
3-C	42.00	1.6535		1/4	TAP3-42.00	TAK3-42.00	TAN3-42.00	TAM3-42.00	TAX3-42.00
3-C	42.07	1.6563	1-21/32	1/4	TAP3-42.07	TAK3-42.07	TAN3-42.07	TAM3-42.07	TAX3-42.07
3-C	42.10	1.6575		1/4	TAP3-42.10	TAK3-42.10	TAN3-42.10	TAM3-42.10	TAX3-42.10
3-C	42.20	1.6614		1/4	TAP3-42.20	TAK3-42.20	TAN3-42.20	TAM3-42.20	TAX3-42.20
3-C	42.30	1.6654		1/4	TAP3-42.30	TAK3-42.30	TAN3-42.30	TAM3-42.30	TAX3-42.30
3-C	42.40	1.6693		1/4	TAP3-42.40	TAK3-42.40	TAN3-42.40	TAM3-42.40	TAX3-42.40
3-C	42.50	1.6732		1/4	TAP3-42.50	TAK3-42.50	TAN3-42.50	TAM3-42.50	TAX3-42.50
3-C	42.60	1.6772		1/4	TAP3-42.60	TAK3-42.60	TAN3-42.60	TAM3-42.60	TAX3-42.60
3-C	42.70	1.6811		1/4	TAP3-42.70	TAK3-42.70	TAN3-42.70	TAM3-42.70	TAX3-42.70
3-C	42.80	1.6850		1/4	TAP3-42.80	TAK3-42.80	TAN3-42.80	TAM3-42.80	TAX3-42.80
3-C	42.86	1.6874	1-11/16	1/4	TAP3-42.86	TAK3-42.86	TAN3-42.86	TAM3-42.86	TAX3-42.86
3-C	42.90	1.6890		1/4	TAP3-42.90	TAK3-42.90	TAN3-42.90	TAM3-42.90	TAX3-42.90
3-C	43.00	1.6929		1/4	TAP3-43.00	TAK3-43.00	TAN3-43.00	TAM3-43.00	TAX3-43.00
3-C	43.10	1.6969		1/4	TAP3-43.10	TAK3-43.10	TAN3-43.10	TAM3-43.10	TAX3-43.10
3-C	43.20	1.7008		1/4	TAP3-43.20	TAK3-43.20	TAN3-43.20	TAM3-43.20	TAX3-43.20
3-C	43.30	1.7047		1/4	TAP3-43.30	TAK3-43.30	TAN3-43.30	TAM3-43.30	TAX3-43.30
3-C	43.40	1.7087		1/4	TAP3-43.40	TAK3-43.40	TAN3-43.40	TAM3-43.40	TAX3-43.40
3-C	43.50	1.7126		1/4	TAP3-43.50	TAK3-43.50	TAN3-43.50	TAM3-43.50	TAX3-43.50
3-C	43.60	1.7165		1/4	TAP3-43.60	TAK3-43.60	TAN3-43.60	TAM3-43.60	TAX3-43.60
3-C	43.66	1.7189	1-23/32	1/4	TAP3-43.66	TAK3-43.66	TAN3-43.66	TAM3-43.66	TAX3-43.66
3-C	43.70	1.7205		1/4	TAP3-43.70	TAK3-43.70	TAN3-43.70	TAM3-43.70	TAX3-43.70
3-C	43.80	1.7244		1/4	TAP3-43.80	TAK3-43.80	TAN3-43.80	TAM3-43.80	TAX3-43.80
3-C	43.90	1.7283		1/4	TAP3-43.90	TAK3-43.90	TAN3-43.90	TAM3-43.90	TAX3-43.90
3-C	44.00	1.7323		1/4	TAP3-44.00	TAK3-44.00	TAN3-44.00	TAM3-44.00	TAX3-44.00
3-C	44.10	1.7362		1/4	TAP3-44.10	TAK3-44.10	TAN3-44.10	TAM3-44.10	TAX3-44.10
3-C	44.20	1.7402		1/4	TAP3-44.20	TAK3-44.20	TAN3-44.20	TAM3-44.20	TAX3-44.20
3-C	44.30	1.7441		1/4	TAP3-44.30	TAK3-44.30	TAN3-44.30	TAM3-44.30	TAX3-44.30

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Sub Series Holders (A, B, C, D)

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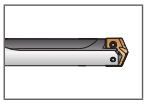
A Series Insert + A Series Holder


C Series Insert + A Series Holder

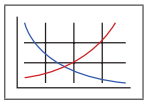

C Series Insert + C Series Holder


A Series Insert + C Series Holder

A25: 44 - 47



A25: 48 - 55



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Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

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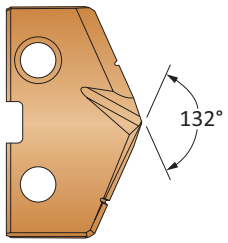
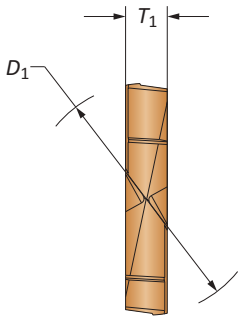
T-A Pro Drill Inserts

3 Series | Diameter Range: 35.05 mm - 47.80 mm (1.3798" - 1.8820")





Insert					Carbide				HSS
					Part No.	Part No.	Part No.	Part No.	Part No.
Series	D_1 mm	D_1 inch	Fractional Equivalent	T_1	P	K	N	M	X
3-D	44.40	1.7480		1/4	TAP3-44.40	TAK3-44.40	TAN3-44.40	TAM3-44.40	TAX3-44.40
3-D	44.45	1.7500	1-3/4	1/4	TAP3-44.45	TAK3-44.45	TAN3-44.45	TAM3-44.45	TAX3-44.45
3-D	44.50	1.7520		1/4	TAP3-44.50	TAK3-44.50	TAN3-44.50	TAM3-44.50	TAX3-44.50
3-D	44.60	1.7559		1/4	TAP3-44.60	TAK3-44.60	TAN3-44.60	TAM3-44.60	TAX3-44.60
3-D	44.70	1.7598		1/4	TAP3-44.70	TAK3-44.70	TAN3-44.70	TAM3-44.70	TAX3-44.70
3-D	44.80	1.7638		1/4	TAP3-44.80	TAK3-44.80	TAN3-44.80	TAM3-44.80	TAX3-44.80
3-D	44.90	1.7677		1/4	TAP3-44.90	TAK3-44.90	TAN3-44.90	TAM3-44.90	TAX3-44.90
3-D	45.00	1.7717		1/4	TAP3-45.00	TAK3-45.00	TAN3-45.00	TAM3-45.00	TAX3-45.00
3-D	45.10	1.7756		1/4	TAP3-45.10	TAK3-45.10	TAN3-45.10	TAM3-45.10	TAX3-45.10
3-D	45.20	1.7795		1/4	TAP3-45.20	TAK3-45.20	TAN3-45.20	TAM3-45.20	TAX3-45.20
3-D	45.24	1.7811	1-25/32	1/4	TAP3-45.24	TAK3-45.24	TAN3-45.24	TAM3-45.24	TAX3-45.24
3-D	45.30	1.7835		1/4	TAP3-45.30	TAK3-45.30	TAN3-45.30	TAM3-45.30	TAX3-45.30
3-D	45.40	1.7874		1/4	TAP3-45.40	TAK3-45.40	TAN3-45.40	TAM3-45.40	TAX3-45.40
3-D	45.50	1.7913		1/4	TAP3-45.50	TAK3-45.50	TAN3-45.50	TAM3-45.50	TAX3-45.50
3-D	45.50	1.7913		1/4	TAP3-45.50	TAK3-45.50	TAN3-45.50	TAM3-45.50	TAX3-45.50
3-D	45.60	1.7953		1/4	TAP3-45.60	TAK3-45.60	TAN3-45.60	TAM3-45.60	TAX3-45.60
3-D	45.64	1.7969		1/4	TAP3-45.64	TAK3-45.64	TAN3-45.64	TAM3-45.64	TAX3-45.64
3-D	45.70	1.7992		1/4	TAP3-45.70	TAK3-45.70	TAN3-45.70	TAM3-45.70	TAX3-45.70
3-D	45.80	1.8031		1/4	TAP3-45.80	TAK3-45.80	TAN3-45.80	TAM3-45.80	TAX3-45.80
3-D	45.90	1.8071		1/4	TAP3-45.90	TAK3-45.90	TAN3-45.90	TAM3-45.90	TAX3-45.90
3-D	46.00	1.8110		1/4	TAP3-46.00	TAK3-46.00	TAN3-46.00	TAM3-46.00	TAX3-46.00
3-D	46.04	1.8126	1-13/16	1/4	TAP3-46.04	TAK3-46.04	TAN3-46.04	TAM3-46.04	TAX3-46.04
3-D	46.10	1.8150		1/4	TAP3-46.10	TAK3-46.10	TAN3-46.10	TAM3-46.10	TAX3-46.10
3-D	46.20	1.8189		1/4	TAP3-46.20	TAK3-46.20	TAN3-46.20	TAM3-46.20	TAX3-46.20
3-D	46.30	1.8228		1/4	TAP3-46.30	TAK3-46.30	TAN3-46.30	TAM3-46.30	TAX3-46.30
3-D	46.40	1.8268		1/4	TAP3-46.40	TAK3-46.40	TAN3-46.40	TAM3-46.40	TAX3-46.40
3-D	46.50	1.8307		1/4	TAP3-46.50	TAK3-46.50	TAN3-46.50	TAM3-46.50	TAX3-46.50
3-D	46.60	1.8346		1/4	TAP3-46.60	TAK3-46.60	TAN3-46.60	TAM3-46.60	TAX3-46.60
3-D	46.70	1.8386		1/4	TAP3-46.70	TAK3-46.70	TAN3-46.70	TAM3-46.70	TAX3-46.70
3-D	46.80	1.8425		1/4	TAP3-46.80	TAK3-46.80	TAN3-46.80	TAM3-46.80	TAX3-46.80
3-D	46.83	1.8437	1-27/32	1/4	TAP3-46.83	TAK3-46.83	TAN3-46.83	TAM3-46.83	TAX3-46.83
3-D	46.90	1.8465		1/4	TAP3-46.90	TAK3-46.90	TAN3-46.90	TAM3-46.90	TAX3-46.90
3-D	47.00	1.8504		1/4	TAP3-47.00	TAK3-47.00	TAN3-47.00	TAM3-47.00	TAX3-47.00
3-D	47.10	1.8543		1/4	TAP3-47.10	TAK3-47.10	TAN3-47.10	TAM3-47.10	TAX3-47.10
3-D	47.20	1.8583		1/4	TAP3-47.20	TAK3-47.20	TAN3-47.20	TAM3-47.20	TAX3-47.20
3-D	47.30	1.8622		1/4	TAP3-47.30	TAK3-47.30	TAN3-47.30	TAM3-47.30	TAX3-47.30
3-D	47.40	1.8661		1/4	TAP3-47.40	TAK3-47.40	TAN3-47.40	TAM3-47.40	TAX3-47.40
3-D	47.50	1.8701		1/4	TAP3-47.50	TAK3-47.50	TAN3-47.50	TAM3-47.50	TAX3-47.50
3-D	47.60	1.8740		1/4	TAP3-47.60	TAK3-47.60	TAN3-47.60	TAM3-47.60	TAX3-47.60
3-D	47.63	1.8752	1-7/8	1/4	TAP3-47.63	TAK3-47.63	TAN3-47.63	TAM3-47.63	TAX3-47.63

Inserts sold in multiples of 2.

Sub Series Holders (A, B, C, D)

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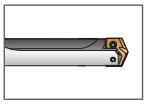
A Series Insert + A Series Holder

C Series Insert + A Series Holder

C Series Insert + C Series Holder

A Series Insert + C Series Holder

A25: 44 - 47



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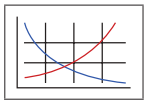
A25: 48 - 55

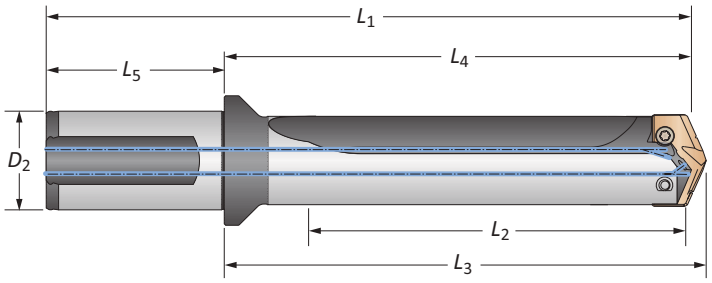


Sizes not shown are available upon request.
When ordering, please follow the example below:

Metric:	13.16 mm, steel, 0 series = use Part No. **TAP0-13.16**
Imperial:	0.5180", steel, 0 series = use Part No. **TAP0-13.16**

T-A Pro Drill Holders

3 Series Metric | Diameter Range: 35.05 mm - 47.80 mm



			Body				Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	Stub	A	41.1	92.3	97.1	162.3	70.0	40	Yes	**HTA3A01-40FM**
	Stub	A	41.1	92.3	97.1	162.3	70.0	40	No	**HTA3A01-40CM**
	Stub	B	41.1	92.3	97.1	162.3	70.0	40	Yes	**HTA3B01-40FM**
	Stub	B	41.1	92.3	97.1	162.3	70.0	40	No	**HTA3B01-40CM**
	Stub	C	41.1	92.3	97.1	162.3	70.0	40	Yes	**HTA3C01-40FM**
	Stub	C	41.1	92.3	97.1	162.3	70.0	40	No	**HTA3C01-40CM**
	Stub	D	41.1	92.3	97.1	162.3	70.0	40	Yes	**HTA3D01-40FM**
	Stub	D	41.1	92.3	97.1	162.3	70.0	40	No	**HTA3D01-40CM**
	3xD	A	123.3	180.1	184.8	250.1	70.0	40	Yes	**HTA3A03-40FM**
	3xD	A	123.3	180.1	184.8	250.1	70.0	40	No	**HTA3A03-40CM**
	3xD	B	123.3	180.1	184.8	250.1	70.0	40	Yes	**HTA3B03-40FM**
	3xD	B	123.3	180.1	184.8	250.1	70.0	40	No	**HTA3B03-40CM**
	3xD	C	123.3	180.1	184.8	250.1	70.0	40	Yes	**HTA3C03-40FM**
	3xD	C	123.3	180.1	184.8	250.1	70.0	40	No	**HTA3C03-40CM**
	3xD	D	123.3	180.1	184.8	250.1	70.0	40	Yes	**HTA3D03-40FM**
ⓜ	3xD	D	123.3	180.1	184.8	250.1	70.0	40	No	**HTA3D03-40CM**
	5xD	A	205.5	262.3	267.0	332.3	70.0	40	Yes	**HTA3A05-40FM**
	5xD	A	205.5	262.3	267.0	332.3	70.0	40	No	**HTA3A05-40CM**
	5xD	B	205.5	262.3	267.0	332.3	70.0	40	Yes	**HTA3B05-40FM**
	5xD	B	205.5	262.3	267.0	332.3	70.0	40	No	**HTA3B05-40CM**
	5xD	C	205.5	262.3	267.0	332.3	70.0	40	Yes	**HTA3C05-40FM**
	5xD	C	205.5	262.3	267.0	332.3	70.0	40	No	**HTA3C05-40CM**
	5xD	D	205.5	262.3	267.0	332.3	70.0	40	Yes	**HTA3D05-40FM**
	5xD	D	205.5	262.3	267.0	332.3	70.0	40	No	**HTA3D05-40CM**
	7xD	A	287.7	344.4	349.2	414.5	70.0	40	Yes	**HTA3A07-40FM**
	7xD	A	287.7	344.4	349.2	414.5	70.0	40	No	**HTA3A07-40CM**
	7xD	B	287.7	344.4	349.2	414.5	70.0	40	Yes	**HTA3B07-40FM**
	7xD	B	287.7	344.4	349.2	414.5	70.0	40	No	**HTA3B07-40CM**
	7xD	C	287.7	344.4	349.2	414.5	70.0	40	Yes	**HTA3C07-40FM**
	7xD	C	287.7	344.4	349.2	414.5	70.0	40	No	**HTA3C07-40CM**
	7xD	D	287.7	344.4	349.2	414.5	70.0	40	Yes	**HTA3D07-40FM**
	7xD	D	287.7	344.4	349.2	414.5	70.0	40	No	**HTA3D07-40CM**

Sub Series	3 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
3A	35.05 mm - 47.80 mm	1.3798" - 1.8820"
3B	37.80 mm - 47.80 mm	1.4880" - 1.8820"
3C	41.00 mm - 47.80 mm	1.6140" - 1.8820"
3D	44.40 mm - 47.80 mm	1.7479" - 1.8820"

Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Admissible Tightening Torque*
7514-IP20-1	7514N-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
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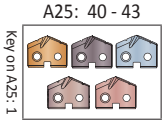

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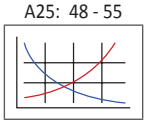
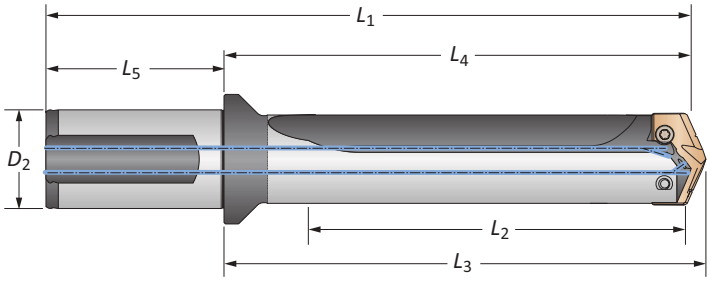


ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

3 Series Metric | Diameter Range: 35.05 mm - 47.80 mm



	Body						Shank			
	Length	Sub Series	L_2	L_4	L_3	L_1	L_5	D_2	Flat	Part No
	10xD	A	411.0	467.7	472.5	537.7	70.0	40	Yes	HTA3A10-40FM
	10xD	A	411.0	467.7	472.5	537.7	70.0	40	No	HTA3A10-40CM
	10xD	B	411.0	467.7	472.5	537.7	70.0	40	Yes	HTA3B10-40FM
	10xD	B	411.0	467.7	472.5	537.7	70.0	40	No	HTA3B10-40CM
	10xD	C	411.0	467.7	472.5	537.7	70.0	40	Yes	HTA3C10-40FM
	10xD	C	411.0	467.7	472.5	537.7	70.0	40	No	HTA3C10-40CM
	10xD	D	411.0	467.7	472.5	537.7	70.0	40	Yes	HTA3D10-40FM
	10xD	D	411.0	467.7	472.5	537.7	70.0	40	No	HTA3D10-40CM
	12xD	A	493.2	549.9	554.7	619.9	70.0	40	Yes	HTA3A12-40FM
	12xD	A	493.2	549.9	554.7	619.9	70.0	40	No	HTA3A12-40CM
	12xD	B	493.2	549.9	554.7	619.9	70.0	40	Yes	HTA3B12-40FM
m	12xD	B	493.2	549.9	554.7	619.9	70.0	40	No	HTA3B12-40CM
	12xD	C	493.2	549.9	554.7	619.9	70.0	40	Yes	HTA3C12-40FM
	12xD	C	493.2	549.9	554.7	619.9	70.0	40	No	HTA3C12-40CM
	12xD	D	493.2	549.9	554.7	619.9	70.0	40	Yes	HTA3D12-40FM
	12xD	D	493.2	549.9	554.7	619.9	70.0	40	No	HTA3D12-40CM
	15xD	A	616.5	673.2	678.0	743.2	70.0	40	Yes	HTA3A15-40FM
	15xD	A	616.5	673.2	678.0	743.2	70.0	40	No	HTA3A15-40CM
	15xD	B	616.5	673.2	678.0	743.2	70.0	40	Yes	HTA3B15-40FM
	15xD	B	616.5	673.2	678.0	743.2	70.0	40	No	HTA3B15-40CM
	15xD	C	616.5	673.2	678.0	743.2	70.0	40	Yes	HTA3C15-40FM
	15xD	C	616.5	673.2	678.0	743.2	70.0	40	No	HTA3C15-40CM
	15xD	D	616.5	673.2	678.0	743.2	70.0	40	Yes	HTA3D15-40FM
	15xD	D	616.5	673.2	678.0	743.2	70.0	40	No	HTA3D15-40CM

Sub Series	3 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
3A	35.05 mm - 47.80 mm	1.3798" - 1.8820"
3B	37.80 mm - 47.80 mm	1.4880" - 1.8820"
3C	41.00 mm - 47.80 mm	1.6140" - 1.8820"
3D	44.40 mm - 47.80 mm	1.7479" - 1.8820"

Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Admissible Tightening Torque*
7514-IP20-1	7514N-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
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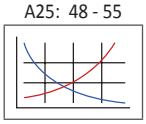
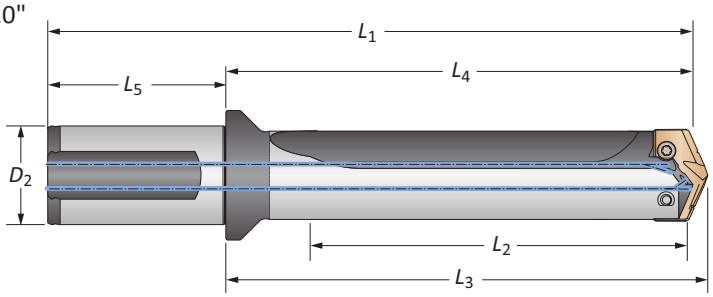


m = Metric (mm)
i = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

3 Series Imperial | Diameter Range: 1.3798" - 1.8820"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Shank Flat	Part No
	Stub	A	1.618	3.634	3.821	6.322	2.688	1-1/2	Yes	**HTA3A01-150F**
	Stub	A	1.618	3.634	3.821	6.322	2.688	1-1/2	No	**HTA3A01-150C**
	Stub	B	1.618	3.634	3.821	6.322	2.688	1-1/2	Yes	**HTA3B01-150F**
	Stub	B	1.618	3.634	3.821	6.322	2.688	1-1/2	No	**HTA3B01-150C**
	Stub	C	1.618	3.634	3.821	6.322	2.688	1-1/2	Yes	**HTA3C01-150F**
	Stub	C	1.618	3.634	3.821	6.322	2.688	1-1/2	No	**HTA3C01-150C**
	Stub	D	1.618	3.634	3.821	6.322	2.688	1-1/2	Yes	**HTA3D01-150F**
	Stub	D	1.618	3.634	3.821	6.322	2.688	1-1/2	No	**HTA3D01-150C**
	3xD	A	4.854	7.089	7.276	9.777	2.688	1-1/2	Yes	**HTA3A03-150F**
	3xD	A	4.854	7.089	7.276	9.777	2.688	1-1/2	No	**HTA3A03-150C**
	3xD	B	4.854	7.089	7.276	9.777	2.688	1-1/2	Yes	**HTA3B03-150F**
	3xD	B	4.854	7.089	7.276	9.777	2.688	1-1/2	No	**HTA3B03-150C**
	3xD	C	4.854	7.089	7.276	9.777	2.688	1-1/2	Yes	**HTA3C03-150F**
	3xD	C	4.854	7.089	7.276	9.777	2.688	1-1/2	No	**HTA3C03-150C**
	3xD	D	4.854	7.089	7.276	9.777	2.688	1-1/2	Yes	**HTA3D03-150F**
ⓘ	3xD	D	4.854	7.089	7.276	9.777	2.688	1-1/2	No	**HTA3D03-150C**
	5xD	A	8.090	10.325	10.512	13.013	2.688	1-1/2	Yes	**HTA3A05-150F**
	5xD	A	8.090	10.325	10.512	13.013	2.688	1-1/2	No	**HTA3A05-150C**
	5xD	B	8.090	10.325	10.512	13.013	2.688	1-1/2	Yes	**HTA3B05-150F**
	5xD	B	8.090	10.325	10.512	13.013	2.688	1-1/2	No	**HTA3B05-150C**
	5xD	C	8.090	10.325	10.512	13.013	2.688	1-1/2	Yes	**HTA3C05-150F**
	5xD	C	8.090	10.325	10.512	13.013	2.688	1-1/2	No	**HTA3C05-150C**
	5xD	D	8.090	10.325	10.512	13.013	2.688	1-1/2	Yes	**HTA3D05-150F**
	5xD	D	8.090	10.325	10.512	13.013	2.688	1-1/2	No	**HTA3D05-150C**
	7xD	A	11.326	13.561	13.748	16.249	2.688	1-1/2	Yes	**HTA3A07-150F**
	7xD	A	11.326	13.561	13.748	16.249	2.688	1-1/2	No	**HTA3A07-150C**
	7xD	B	11.326	13.561	13.748	16.249	2.688	1-1/2	Yes	**HTA3B07-150F**
	7xD	B	11.326	13.561	13.748	16.249	2.688	1-1/2	No	**HTA3B07-150C**
	7xD	C	11.326	13.561	13.748	16.249	2.688	1-1/2	Yes	**HTA3C07-150F**
	7xD	C	11.326	13.561	13.748	16.249	2.688	1-1/2	No	**HTA3C07-150C**
	7xD	D	11.326	13.561	13.748	16.249	2.688	1-1/2	Yes	**HTA3D07-150F**
	7xD	D	11.326	13.561	13.748	16.249	2.688	1-1/2	No	**HTA3D07-150C**

Sub Series	3 Series Holder Diameter Range Metric (mm)	Imperial (inch)
3A	35.05 mm - 47.80 mm	1.3798" - 1.8820"
3B	37.80 mm - 47.80 mm	1.4880" - 1.8820"
3C	41.00 mm - 47.80 mm	1.6140" - 1.8820"
3D	44.40 mm - 47.80 mm	1.7479" - 1.8820"

Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Admissible Tightening Torque*
7514-IP20-1	7514N-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
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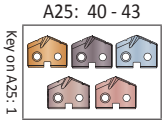

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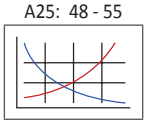
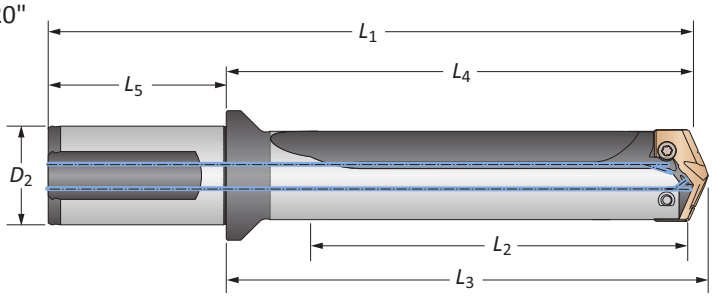


ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

T-A Pro Drill Holders

3 Series Imperial | Diameter Range: 1.3798" - 1.8820"



	Length	Sub Series	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_5	Shank D_2	Shank Flat	Part No
	10xD	A	16.180	18.415	18.602	21.103	2.688	1-1/2	Yes	⚠ HTA3A10-150F
	10xD	A	16.180	18.415	18.602	21.103	2.688	1-1/2	No	⚠ HTA3A10-150C
	10xD	B	16.180	18.415	18.602	21.103	2.688	1-1/2	Yes	⚠ HTA3B10-150F
	10xD	B	16.180	18.415	18.602	21.103	2.688	1-1/2	No	⚠ HTA3B10-150C
	10xD	C	16.180	18.415	18.602	21.103	2.688	1-1/2	Yes	⚠ HTA3C10-150F
	10xD	C	16.180	18.415	18.602	21.103	2.688	1-1/2	No	⚠ HTA3C10-150C
	10xD	D	16.180	18.415	18.602	21.103	2.688	1-1/2	Yes	⚠ HTA3D10-150F
	10xD	D	16.180	18.415	18.602	21.103	2.688	1-1/2	No	⚠ HTA3D10-150C
	12xD	A	19.416	21.651	21.838	24.339	2.688	1-1/2	Yes	⚠ HTA3A12-150F
	12xD	A	19.416	21.651	21.838	24.339	2.688	1-1/2	No	⚠ HTA3A12-150C
	12xD	B	19.416	21.651	21.838	24.339	2.688	1-1/2	Yes	⚠ HTA3B12-150F
ⓘ	12xD	B	19.416	21.651	21.838	24.339	2.688	1-1/2	No	⚠ HTA3B12-150C
	12xD	C	19.416	21.651	21.838	24.339	2.688	1-1/2	Yes	⚠ HTA3C12-150F
	12xD	C	19.416	21.651	21.838	24.339	2.688	1-1/2	No	⚠ HTA3C12-150C
	12xD	D	19.416	21.651	21.838	24.339	2.688	1-1/2	Yes	⚠ HTA3D12-150F
	12xD	D	19.416	21.651	21.838	24.339	2.688	1-1/2	No	⚠ HTA3D12-150C
	15xD	A	24.270	26.505	26.692	29.193	2.688	1-1/2	Yes	⚠ HTA3A15-150F
	15xD	A	24.270	26.505	26.692	29.193	2.688	1-1/2	No	⚠ HTA3A15-150C
	15xD	B	24.270	26.505	26.692	29.193	2.688	1-1/2	Yes	⚠ HTA3B15-150F
	15xD	B	24.270	26.505	26.692	29.193	2.688	1-1/2	No	⚠ HTA3B15-150C
	15xD	C	24.270	26.505	26.692	29.193	2.688	1-1/2	Yes	⚠ HTA3C15-150F
	15xD	C	24.270	26.505	26.692	29.193	2.688	1-1/2	No	⚠ HTA3C15-150C
	15xD	D	24.270	26.505	26.692	29.193	2.688	1-1/2	Yes	⚠ HTA3D15-150F
	15xD	D	24.270	26.505	26.692	29.193	2.688	1-1/2	No	⚠ HTA3D15-150C

Sub Series	3 Series Holder Diameter Range	
	Metric (mm)	Imperial (inch)
3A	35.05 mm - 47.80 mm	1.3798" - 1.8820"
3B	37.80 mm - 47.80 mm	1.4880" - 1.8820"
3C	41.00 mm - 47.80 mm	1.6140" - 1.8820"
3D	44.40 mm - 47.80 mm	1.7479" - 1.8820"

Connection Accessories

 Insert Screws	 Nylon Locking Screws	 Insert Driver	Admissible Tightening Torque*
7514-IP20-1	7514N-IP20-1	8IP-20	1370 N-cm (121.3 in-lbs)

*Tightening torques are calculated with a friction coefficient of μ = 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 **A25: 58** for deep hole drilling guidelines in this section of the catalogue. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering department.
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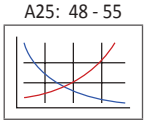

ⓜ = Metric (mm)
ⓘ = Imperial (in)
Screws sold in multiples of 10.

Carbide Recommended Drilling Data | Metric (mm)

	Material	Hardness (BHN)	Insert Grade	Speed (m/min)	Feed Rate (mm/rev) by Diameter: Y / Z Series (9.50 - 12.69)	0 Series (12.70 - 17.64)	1 Series (17.65 - 24.37)	2 Series (24.38 - 35.04)	3 Series (35.05 - 47.80)
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	P	145	0.18	0.25	0.33	0.410	0.51
		150 - 200	P	135	0.18	0.25	0.33	0.41	0.51
		200 - 250	P	125	0.15	0.25	0.33	0.41	0.51
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	P	130	0.15 ❖	0.23	0.30	0.38	0.48
		125 - 175	P	125	0.15 ❖	0.23	0.30	0.38	0.48
		175 - 225	P	115	0.13 ❖	0.20	0.25	0.36	0.46
		225 - 275	P	110	0.13 ❖	0.20	0.25	0.36	0.46
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	P	125	0.15	0.23	0.30	0.38	0.48
		175 - 225	P	115	0.13	0.20	0.25	0.36	0.46
		225 - 275	P	110	0.13	0.20	0.25	0.36	0.46
		275 - 325	P	100	0.10	0.18	0.23	0.30	0.41
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	P	130	0.15	0.23	0.30	0.36	0.43
		175 - 225	P	120	0.13	0.20	0.28	0.36	0.43
		225 - 275	P	110	0.13	0.20	0.28	0.36	0.43
		275 - 325	P	105	0.10	0.18	0.25	0.30	0.38
		325 - 375	P	95	0.08	0.18	0.25	0.30	0.38
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	P	105	0.10	0.18	0.25	0.33	0.38
		300 - 350	P	100	0.08	0.15	0.23	0.30	0.36
		350 - 400	P	90	0.08	0.15	0.20	0.28	0.33
	Structural Steel A36, A285, A516, etc.	100 - 150	P	120	0.15 ❖	0.25	0.30	0.36	0.46
		150 - 250	P	105	0.13 ❖	0.23	0.25	0.30	0.41
		250 - 350	P	85	0.10 ❖	0.20	0.23	0.25	0.36
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	P	65	0.10	0.15	0.20	0.25	0.30
		200 - 250	P	55	0.10	0.15	0.20	0.25	0.30
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	M	35	0.05 ❖	0.13	0.18	0.20	0.23
		220 - 310	M	25	0.05 ❖	0.08	0.13	0.15	0.18
	Titanium Alloy	140 - 220	M	45	0.08 ❖	0.10	0.18	0.20	0.23
		220 - 310	M	36	0.08 ❖	0.08	0.13	0.15	0.18
	Aerospace Alloy S82	185 - 275	M	45	0.08 ❖	0.10	0.18	0.20	0.23
		275 - 350	M	35	0.08 ❖	0.08	0.13	0.15	0.18

❖ Contact our Application Engineering department for assistance when machining these materials.

7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
100 m/min • 0.80	= 80 m/min
0.2 mm/rev • 0.80	= 0.16 mm/rev

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
100 m/min • 0.70	= 70 m/min
0.2 mm/rev • 0.70	= 0.14 mm/rev

Coolant Recommendations

Series	Stub, 3xD, 5xD: Pressure BAR	Stub, 3xD, 5xD: Flow Rate LPM	7xD, 10xD: Pressure BAR	7xD, 10xD: Flow Rate LPM	12xD, 15xD: Pressure BAR	12xD, 15xD: Flow Rate LPM
Y	31	15	34	55	45	30
Z	31	15	34	22	45	30
0	24	22	31	34	34	45
1	21	30	27	38	34	45
2	17	38	24	49	31	60
3	14	45	21	53	27	68

⚠ WARNING **Tool failure can cause serious injury. To prevent:**
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Carbide Recommended Drilling Data | Metric (mm)

	Material	Hardness (BHN)	Insert Grade	Speed (m/min)	Feed Rate (mm/rev) by Diameter				
					Y / Z Series (9.50 - 12.69)	0 Series (12.70 - 17.64)	1 Series (17.65 - 24.37)	2 Series (24.38 - 35.04)	3 Series (35.05 - 47.80)
M	**Stainless Steel 400 Series**	185 - 275	M	85	0.13 ❖	0.23	0.25	0.30	0.33
	416, 420, etc.	275 - 350	M	70	0.10 ❖	0.20	0.23	0.28	0.30
	Stainless Steel 300 Series	135 - 185	M	85	0.08 ❖	0.10	0.13	0.20	0.28
	304, 316, 17-4PH, etc.	185 - 275	M	75	0.05 ❖	0.08	0.10	0.18	0.23
	Stainless Steel 300L Series	135 - 185	M	100	0.08 ❖	0.10	0.13	0.20	0.28
	304L, 316L, etc.	185 - 275	M	85	0.05 ❖	0.08	0.10	0.18	0.23
	PH Stainless	275-350	M	85	0.08 ❖	0.10	0.13	0.20	0.28
	17-4, 13-8, 15-5	350-425	M	75	0.05 ❖	0.08	0.10	0.18	0.23
	Super Duplex Stainless Steel	135 - 185	M	75	0.08 ❖	0.10	0.13	0.20	0.28
		185 - 275	M	70	0.05 ❖	0.08	0.10	0.18	0.23
H	**Wear Plate**	400	P	20	0.08	0.15	0.20	0.23	0.30
	Hardox®, AR400, T-1, etc.	500	P	15	0.05	0.13	0.18	0.20	0.25
		600	–	–	–	–	–	–	–
	Hardened Steel	300 - 400	P	30	0.08	0.15	0.20	0.23	0.30
		400 - 500	P	15	0.05	0.13	0.18	0.20	0.25
K	**SG / Nodular Cast Iron**	120 - 150	K	185	0.18	0.30	0.41	0.51	0.61
		150 - 200	K	170	0.15	0.28	0.36	0.46	0.56
		200 - 220	K	150	0.15	0.23	0.30	0.41	0.46
		220 - 260	K	135	0.13	0.18	0.23	0.30	0.36
		260 - 320	K	120	0.10	0.15	0.18	0.23	0.30
N	**Cast Aluminium**	30	N	335	0.20	0.33	0.41	0.51	0.56
		180	N	185	0.20	0.33	0.41	0.46	0.56
	Wrought Aluminium	30	N	335	0.23	0.33	0.43	0.51	0.61
		180	N	185	0.13	0.18	0.25	0.33	0.41
	Aluminium Bronze	100 - 200	N	150	0.15	0.28	0.36	0.46	0.56
		200 - 250	N	90	0.13	0.18	0.23	0.30	0.36
	Brass	100	N	200	0.18	0.30	0.41	0.51	0.61
	Copper	60	N	130	0.05	0.08	0.15	0.20	0.25

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7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
100 m/min • 0.80	= 80 m/min
0.2 mm/rev • 0.80	= 0.16 mm/rev

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
100 m/min • 0.70	= 70 m/min
0.2 mm/rev • 0.70	= 0.14 mm/rev

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD, 10xD		12xD, 15xD	
	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM
Y	31	15	34	55	45	30
Z	31	15	34	22	45	30
0	24	22	31	34	34	45
1	21	30	27	38	34	45
2	17	38	24	49	31	60
3	14	45	21	53	27	68

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High-Speed Steel Recommended Drilling Data | Metric (mm)

	Material	Hardness (BHN)	Insert Grade	Speed (m/min)	Feed Rate (mm/rev) by Diameter: Y / Z Series (9.50 - 12.69)	0 Series (12.70 - 17.64)	1 Series (17.65 - 24.37)	2 Series (24.38 - 35.04)	3 Series (35.05 - 47.80)
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	X	105	0.15	0.25	0.33	0.41	0.51
		150 - 200	X	100	0.15	0.25	0.33	0.41	0.51
		200 - 250	X	90	0.13	0.25	0.33	0.41	0.51
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	X	95	0.15 ❖	0.23	0.30	0.38	0.48
		125 - 175	X	90	0.13 ❖	0.23	0.30	0.38	0.48
		175 - 225	X	85	0.13 ❖	0.20	0.25	0.36	0.46
		225 - 275	X	80	0.13 ❖	0.20	0.25	0.36	0.46
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	X	90	0.15	0.23	0.30	0.38	0.48
		175 - 225	X	85	0.13	0.20	0.25	0.36	0.46
		225 - 275	X	80	0.13	0.20	0.25	0.36	0.46
		275 - 325	X	70	0.10	0.18	0.23	0.30	0.41
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	X	75	0.15	0.23	0.30	0.36	0.43
		175 - 225	X	70	0.13	0.20	0.28	0.36	0.43
		225 - 275	X	65	0.13	0.20	0.28	0.36	0.43
		275 - 325	X	60	0.10	0.18	0.25	0.30	0.38
		325 - 375	X	60	0.08	0.18	0.25	0.30	0.38
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	X	40	0.10	0.18	0.25	0.33	0.38
		300 - 350	X	35	0.08	0.15	0.23	0.30	0.36
		350 - 400	X	25	0.08	0.15	0.20	0.28	0.33
	Structural Steel A36, A285, A516, etc.	100 - 150	X	75	0.15 ❖	0.25	0.30	0.36	0.46
		150 - 250	X	65	0.13 ❖	0.23	0.25	0.30	0.41
		250 - 350	X	55	0.10 ❖	0.20	0.23	0.25	0.36
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	X	45	0.10	0.15	0.20	0.25	0.30
		200 - 250	X	35	0.10	0.15	0.20	0.25	0.30
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	X	15	0.08 ❖	0.18	0.20	0.25	0.30
		220 - 310	X	10	0.08 ❖	0.15	0.18	0.20	0.25
	Titanium Alloy	140 - 220	X	20	0.08	0.18	0.20	0.25	0.30
		220 - 310	X	15	0.08	0.15	0.18	0.20	0.25
	Aerospace Alloy S82	185 - 275	X	40	0.13	0.20	0.23	0.25	0.36
		275 - 350	X	35	0.10	0.18	0.20	0.20	0.30

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7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
100 m/min • 0.80	= 80 m/min
0.2 mm/rev • 0.80	= 0.16 mm/rev

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
100 m/min • 0.70	= 70 m/min
0.2 mm/rev • 0.70	= 0.14 mm/rev

Coolant Recommendations

Series	Stub, 3xD, 5xD: Pressure BAR	Stub, 3xD, 5xD: Flow Rate LPM	7xD, 10xD: Pressure BAR	7xD, 10xD: Flow Rate LPM	12xD, 15xD: Pressure BAR	12xD, 15xD: Flow Rate LPM
Y	31	15	34	55	45	30
Z	31	15	34	22	45	30
0	24	22	31	34	34	45
1	21	30	27	38	34	45
2	17	38	24	49	31	60
3	14	45	21	53	27	68

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High-Speed Steel Recommended Drilling Data | Metric (mm)

	Material	Hardness (BHN)	Insert Grade	Speed (m/min)	Feed Rate (mm/rev) by Diameter				
					Y / Z Series (9.50 - 12.69)	0 Series (12.70 - 17.64)	1 Series (17.65 - 24.37)	2 Series (24.38 - 35.04)	3 Series (35.05 - 47.80)
M	**Stainless Steel 400 Series**	185 - 275	X	40	0.13 ❖	0.25	0.28	0.30	0.33
	416, 420, etc.	275 - 350	X	35	0.10 ❖	0.23	0.25	0.28	0.30
	Stainless Steel 300 Series	135 - 185	X	40	0.13 ❖	0.18	0.20	0.23	0.30
	304, 316, 17-4PH, etc.	185 - 275	X	35	0.10 ❖	0.15	0.18	0.20	0.28
	Stainless Steel 300L Series	275-350	X	30	0.08 ❖	0.10	0.15	0.20	0.25
	304L, 316L, etc.	350-425	X	25	0.08 ❖	0.10	0.15	0.20	0.25
	PH Stainless	135 - 185	X	40	0.13 ❖	0.13	0.15	0.15	0.18
	17-4, 13-8, 15-5	185 - 275	X	35	0.10 ❖	0.13	0.13	0.15	0.15
	Super Duplex Stainless Steel	135 - 185	X	35	0.08 ❖	0.10	0.13	0.20	0.28
		185 - 275	X	30	0.05 ❖	0.08	0.10	0.18	0.23
H	**Wear Plate**	400	X	20	0.08	0.15	0.20	0.23	0.30
	Hardox®, AR400, T-1, etc.	500	X	15	0.05	0.13	0.18	0.20	0.25
		600	–	–	–	–	–	–	–
	Hardened Steel	300 - 400	X	25	0.08	0.15	0.20	0.23	0.30
		400 - 500	X	15	0.05	0.13	0.18	0.20	0.25
K	**SG / Nodular Cast Iron**	120 - 150	X	90	0.18	0.30	0.41	0.51	0.61
		150 - 200	X	85	0.15	0.28	0.36	0.46	0.56
		200 - 220	X	75	0.15	0.23	0.30	0.41	0.46
		220 - 260	X	65	0.13	0.18	0.23	0.30	0.36
		260 - 320	X	55	0.10	0.15	0.18	0.23	0.30
N	**Cast Aluminium**	30	X	185	0.20	0.33	0.41	0.51	0.56
		180	X	90	0.20	0.33	0.41	0.46	0.56
	Wrought Aluminium	30	X	275	0.23	0.33	0.43	0.51	0.61
		180	X	185	0.13	0.18	0.25	0.33	0.41
	Aluminium Bronze	100 - 200	X	90	0.15	0.28	0.36	0.46	0.56
		200 - 250	X	75	0.13	0.18	0.23	0.30	0.36
	Brass	100	X	150	0.18	0.30	0.41	0.51	0.61
	Copper	60	X	100	0.05	0.08	0.15	0.20	0.25

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7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
100 m/min • 0.80	= 80 m/min
0.2 mm/rev • 0.80	= 0.16 mm/rev

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
100 m/min • 0.70	= 70 m/min
0.2 mm/rev • 0.70	= 0.14 mm/rev

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD, 10xD		12xD, 15xD	
	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM
Y	31	15	34	55	45	30
Z	31	15	34	22	45	30
0	24	22	31	34	34	45
1	21	30	27	38	34	45
2	17	38	24	49	31	60
3	14	45	21	53	27	68

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Carbide Recommended Drilling Data | Imperial (inch)

	Material	Hardness (BHN)	Insert Grade	Speed (SFM)	Feed Rate (IPR) by Diameter: Y / Z Series (0.3739" - 0.4998")	0 Series (0.4999" - 0.6946")	1 Series (0.6947" - 0.9596")	2 Series (0.9597" - 1.3797")	3 Series (1.3798" - 1.8820")
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	P	475	0.007	0.010	0.013	0.016	0.020
		150 - 200	P	440	0.007	0.010	0.013	0.016	0.020
		200 - 250	P	410	0.006	0.010	0.013	0.016	0.020
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	P	425	0.006 ❖	0.009	0.012	0.015	0.019
		125 - 175	P	410	0.006 ❖	0.009	0.012	0.015	0.019
		175 - 225	P	385	0.005 ❖	0.008	0.010	0.014	0.018
		225 - 275	P	355	0.005 ❖	0.008	0.010	0.014	0.018
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	P	410	0.006	0.009	0.012	0.015	0.019
		175 - 225	P	385	0.005	0.008	0.010	0.014	0.018
		225 - 275	P	355	0.005	0.008	0.010	0.014	0.018
		275 - 325	P	330	0.004	0.007	0.009	0.012	0.016
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	P	420	0.006	0.009	0.012	0.014	0.017
		175 - 225	P	390	0.005	0.008	0.011	0.014	0.017
		225 - 275	P	360	0.005	0.008	0.011	0.014	0.017
		275 - 325	P	340	0.004	0.007	0.010	0.012	0.015
		325 - 375	P	310	0.003	0.007	0.010	0.012	0.015
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	P	350	0.004	0.007	0.010	0.013	0.015
		300 - 350	P	325	0.003	0.006	0.009	0.012	0.014
		350 - 400	P	300	0.003	0.006	0.008	0.011	0.013
	Structural Steel A36, A285, A516, etc.	100 - 150	P	400	0.006 ❖	0.010	0.012	0.014	0.018
		150 - 250	P	340	0.005 ❖	0.009	0.010	0.012	0.016
		250 - 350	P	280	0.004 ❖	0.008	0.009	0.010	0.014
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	P	220	0.004	0.006	0.008	0.010	0.012
		200 - 250	P	180	0.004	0.006	0.008	0.010	0.012
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	M	110	0.002 ❖	0.005	0.007	0.008	0.009
		220 - 310	M	85	0.002 ❖	0.003	0.005	0.006	0.007
	Titanium Alloy	140 - 220	M	150	0.003 ❖	0.004	0.007	0.008	0.009
		220 - 310	M	120	0.003 ❖	0.003	0.005	0.006	0.007
	Aerospace Alloy S82	185 - 275	M	150	0.003 ❖	0.004	0.007	0.008	0.009
		275 - 350	M	120	0.003 ❖	0.003	0.005	0.006	0.007

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7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
200 SFM • 0.80	= 160 SFM
0.008 IPR • 0.80	= 0.0064 IPR

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

Coolant Recommendations

Series	Stub, 3xD, 5xD: Pressure PSI	Stub, 3xD, 5xD: Flow Rate GPM	7xD, 10xD: Pressure PSI	7xD, 10xD: Flow Rate GPM	12xD, 15xD: Pressure PSI	12xD, 15xD: Flow Rate GPM
Y	450	4	550	6	650	8
Z	450	4	550	6	650	8
0	350	6	450	9	550	12
1	300	8	400	10	500	12
2	250	10	350	13	450	16
3	200	12	300	14	400	18

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Carbide Recommended Drilling Data | Imperial (inch)

	Material	Hardness (BHN)	Insert Grade	Speed (SFM)	Feed Rate (IPR) by Diameter: Y / Z Series (0.3739" - 0.4998")	0 Series (0.4999" - 0.6946")	1 Series (0.6947" - 0.9596")	2 Series (0.9597" - 1.3797")	3 Series (1.3798" - 1.8820")
M	**Stainless Steel 400 Series**	185 - 275	M	280	0.005 ❖	0.009	0.010	0.012	0.013
	416, 420, etc.	275 - 350	M	230	0.004 ❖	0.008	0.009	0.011	0.012
	Stainless Steel 300 Series	135 - 185	M	280	0.003 ❖	0.004	0.005	0.008	0.011
	304, 316, 17-4PH, etc.	185 - 275	M	250	0.002 ❖	0.003	0.004	0.007	0.009
	Stainless Steel 300L Series	135 - 185	M	325	0.003 ❖	0.004	0.005	0.008	0.011
	304L, 316L, etc.	185 - 275	M	280	0.002 ❖	0.003	0.004	0.007	0.009
	PH Stainless	275-350	M	280	0.003 ❖	0.004	0.005	0.008	0.011
	17-4, 13-8, 15-5	350-425	M	250	0.002 ❖	0.003	0.004	0.007	0.009
	Super Duplex Stainless Steel	135 - 185	M	250	0.003 ❖	0.004	0.005	0.008	0.011
		185 - 275	M	230	0.002 ❖	0.003	0.004	0.007	0.009
H	**Wear Plate**	400	P	70	0.003	0.006	0.008	0.009	0.012
	Hardox®, AR400, T-1, etc.	500	P	45	0.002	0.005	0.007	0.008	0.010
		600	–	–	–	–	–	–	–
	Hardened Steel	300 - 400	P	95	0.003	0.006	0.008	0.009	0.012
		400 - 500	P	45	0.002	0.005	0.007	0.008	0.010
K	**SG / Nodular Cast Iron**	120 - 150	K	600	0.007	0.012	0.016	0.020	0.024
		150 - 200	K	550	0.006	0.011	0.014	0.018	0.022
		200 - 220	K	500	0.006	0.009	0.012	0.016	0.018
		220 - 260	K	450	0.005	0.007	0.009	0.012	0.014
		260 - 320	K	400	0.004	0.006	0.007	0.009	0.012
N	**Cast Aluminium**	30	N	1100	0.008	0.013	0.016	0.020	0.022
		180	N	600	0.008	0.013	0.016	0.018	0.022
	Wrought Aluminium	30	N	1100	0.009	0.013	0.017	0.020	0.024
		180	N	600	0.005	0.007	0.010	0.013	0.016
	Aluminium Bronze	100 - 200	N	500	0.006	0.011	0.014	0.018	0.022
		200 - 250	N	300	0.005	0.007	0.009	0.012	0.014
	Brass	100	N	650	0.007	0.012	0.016	0.020	0.024
	Copper	60	N	430	0.002	0.003	0.006	0.008	0.010

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7xD and 10xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
200 SFM • 0.80	= 160 SFM
0.008 IPR • 0.80	= 0.0064 IPR

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

Coolant Recommendations

Series	Stub, 3xD, 5xD: Pressure PSI	Stub, 3xD, 5xD: Flow Rate GPM	7xD, 10xD: Pressure PSI	7xD, 10xD: Flow Rate GPM	12xD, 15xD: Pressure PSI	12xD, 15xD: Flow Rate GPM
Y	450	4	550	6	650	8
Z	450	4	550	6	650	8
0	350	6	450	9	550	12
1	300	8	400	10	500	12
2	250	10	350	13	450	16
3	200	12	300	14	400	18

⚠ WARNING **Tool failure can cause serious injury. To prevent:**
- When using holders without support bushing, use a short T-A Pro 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 the workpiece or fixture.

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IMPORTANT: The speeds and feeds listed above are a general starting point for all applications. Refer to the coolant recommendation chart for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is available through our Application Engineering department. For 7xD, 10xD, 12xD and 15xD holder lengths, see adjustment example above.

High-Speed Steel Recommended Drilling Data | Imperial (inch)

	Material	Hardness (BHN)	Insert Grade	Speed (SFM)	Feed Rate (IPR) by Diameter: Y / Z Series (0.3739" - 0.4998")	0 Series (0.4999" - 0.6946")	1 Series (0.6947" - 0.9596")	2 Series (0.9597" - 1.3797")	3 Series (1.3798" - 1.8820")
P	**Free-Machining Steel** 1118, 1215, 12L14, etc.	100 - 150	X	350	0.006	0.010	0.013	0.016	0.020
		150 - 200	X	325	0.006	0.010	0.013	0.016	0.020
		200 - 250	X	300	0.005	0.010	0.013	0.016	0.020
	Low-Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	X	315	0.006 ❖	0.009	0.012	0.015	0.019
		125 - 175	X	300	0.005 ❖	0.009	0.012	0.015	0.019
		175 - 225	X	285	0.005 ❖	0.008	0.010	0.014	0.018
		225 - 275	X	265	0.005 ❖	0.008	0.010	0.014	0.018
	Medium-Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	X	300	0.006	0.009	0.012	0.015	0.019
		175 - 225	X	285	0.005	0.008	0.010	0.014	0.018
		225 - 275	X	265	0.005	0.008	0.010	0.014	0.018
		275 - 325	X	235	0.004	0.007	0.009	0.012	0.016
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	X	250	0.006	0.009	0.012	0.014	0.017
		175 - 225	X	235	0.005	0.008	0.011	0.014	0.017
		225 - 275	X	220	0.005	0.008	0.011	0.014	0.017
		275 - 325	X	205	0.004	0.007	0.010	0.012	0.015
		325 - 375	X	190	0.003	0.007	0.010	0.012	0.015
	High-Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	X	135	0.004	0.007	0.010	0.013	0.015
		300 - 350	X	110	0.003	0.006	0.009	0.012	0.014
		350 - 400	X	90	0.003	0.006	0.008	0.011	0.013
	Structural Steel A36, A285, A516, etc.	100 - 150	X	250	0.006 ❖	0.010	0.012	0.014	0.018
		150 - 250	X	210	0.005 ❖	0.009	0.010	0.012	0.016
		250 - 350	X	175	0.004 ❖	0.008	0.009	0.010	0.014
	Tool Steel H-13, H-21, A-4, S-3, etc.	150 - 200	X	145	0.004	0.006	0.008	0.010	0.012
		200 - 250	X	120	0.004	0.006	0.008	0.010	0.012
S	**High-Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	X	45	0.003 ❖	0.007	0.008	0.010	0.012
		220 - 310	X	40	0.003 ❖	0.006	0.007	0.008	0.010
	Titanium Alloy	140 - 220	X	60	0.003	0.007	0.008	0.010	0.012
		220 - 310	X	50	0.003	0.006	0.007	0.008	0.010
	Aerospace Alloy S82	185 - 275	X	125	0.005	0.008	0.009	0.010	0.014
		275 - 350	X	110	0.004	0.007	0.008	0.008	0.012

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Data • Adjustment Value	Speed/Feed (7xD)
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0.008 IPR • 0.80	= 0.0064 IPR

12xD and 15xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (12xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

Coolant Recommendations

Series	Stub, 3xD, 5xD: Pressure PSI	Stub, 3xD, 5xD: Flow Rate GPM	7xD, 10xD: Pressure PSI	7xD, 10xD: Flow Rate GPM	12xD, 15xD: Pressure PSI	12xD, 15xD: Flow Rate GPM
Y	450	4	550	6	650	8
Z	450	4	550	6	650	8
0	350	6	450	9	550	12
1	300	8	400	10	500	12
2	250	10	350	13	450	16
3	200	12	300	14	400	18

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High-Speed Steel Recommended Drilling Data | Imperial (inch)

	Material	Hardness (BHN)	Insert Grade	Speed (SFM)	Feed Rate (IPR) by Diameter				
					Y / Z Series (0.3739" - 0.4998")	0 Series (0.4999" - 0.6946")	1 Series (0.6947" - 0.9596")	2 Series (0.9597" - 1.3797")	3 Series (1.3798" - 1.8820")
M	**Stainless Steel 400 Series**	185 - 275	X	125	0.005 ❖	0.010	0.011	0.012	0.013
	416, 420, etc.	275 - 350	X	110	0.004 ❖	0.009	0.010	0.011	0.012
	Stainless Steel 300 Series	135 - 185	X	125	0.005 ❖	0.007	0.008	0.009	0.012
	304, 316, 17-4PH, etc.	185 - 275	X	110	0.004 ❖	0.006	0.007	0.008	0.011
	Stainless Steel 300L Series	275-350	X	95	0.003 ❖	0.004	0.006	0.008	0.010
	304L, 316L, etc.	350-425	X	75	0.003 ❖	0.004	0.006	0.008	0.010
	PH Stainless	135 - 185	X	125	0.005 ❖	0.005	0.006	0.006	0.007
	17-4, 13-8, 15-5	185 - 275	X	110	0.004 ❖	0.005	0.005	0.006	0.006
	Super Duplex Stainless Steel	135 - 185	X	115	0.003 ❖	0.004	0.005	0.008	0.011
		185 - 275	X	100	0.002 ❖	0.003	0.004	0.007	0.009
H	**Wear Plate**	400	X	60	0.003	0.006	0.008	0.009	0.012
	Hardox®, AR400, T-1, etc.	500	X	45	0.002	0.005	0.007	0.008	0.010
		600	–	–	–	–	–	–	–
	Hardened Steel	300 - 400	X	75	0.003	0.006	0.008	0.009	0.012
		400 - 500	X	45	0.002	0.005	0.007	0.008	0.010
K	**SG / Nodular Cast Iron**	120 - 150	X	300	0.007	0.012	0.016	0.020	0.024
		150 - 200	X	275	0.006	0.011	0.014	0.018	0.022
		200 - 220	X	240	0.006	0.009	0.012	0.016	0.018
		220 - 260	X	215	0.005	0.007	0.009	0.012	0.014
		260 - 320	X	175	0.004	0.006	0.007	0.009	0.012
N	**Cast Aluminium**	30	X	600	0.008	0.013	0.016	0.020	0.022
		180	X	300	0.008	0.013	0.016	0.018	0.022
	Wrought Aluminium	30	X	900	0.009	0.013	0.017	0.020	0.024
		180	X	600	0.005	0.007	0.010	0.013	0.016
	Aluminium Bronze	100 - 200	X	300	0.006	0.011	0.014	0.018	0.022
		200 - 250	X	250	0.005	0.007	0.009	0.012	0.014
	Brass	100	X	485	0.007	0.012	0.016	0.020	0.024
	Copper	60	X	320	0.002	0.003	0.006	0.008	0.010

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Speed • Adjustment Value	Speed/Feed (12xD)
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Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD, 10xD		12xD, 15xD	
	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM
Y	450	4	550	6	650	8
Z	450	4	550	6	650	8
0	350	6	450	9	550	12
1	300	8	400	10	500	12
2	250	10	350	13	450	16
3	200	12	300	14	400	18

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Tap Drill Information and Formulas | Metric (mm)

Tap Size	Tap Drill Size	Decimal Equivalent (inch)	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
12 X 1.25	27/64	0.4219	79%	0.075 mm	10.79 mm	74%
	10.8 mm	0.4252	74%	0.075 mm	10.88 mm	69%
14 X 2.0	15/32	0.4688	81%	0.075 mm	11.98 mm	78%
	12.0 mm	0.4724	77%	0.075 mm	12.08 mm	74%
14 X 1.5	12.5 mm	0.4921	77%	0.075 mm	12.58 mm	73%
16 X 2.0	14.0 mm	0.5512	77%	0.075 mm	14.08 mm	74%
16 X 1.5	14.5 mm	0.5709	77%	0.075 mm	14.58 mm	73%
	37/64	0.5781	68%	0.075 mm	14.76 mm	64%
18 X 2.5	15.5 mm	0.6102	77%	0.075 mm	15.58 mm	75%
18 X 1.5	16.5 mm	0.6496	77%	0.075 mm	16.58 mm	73%
	21/32	0.6563	68%	0.075 mm	16.75 mm	64%
20 X 2.5	11/16	0.6875	78%	0.075 mm	17.54 mm	76%
	17.5 mm	0.6890	77%	0.075 mm	17.58 mm	74%
20 X 1.5	18.5 mm	0.7283	77%	0.075 mm	18.58 mm	73%
	47/64	0.7344	69%	0.075 mm	18.66 mm	65%
22 X 2.5	49/64	0.7656	79%	0.075 mm	19.52 mm	76%
	19.5 mm	0.7677	77%	0.075 mm	19.58 mm	75%
22 X 1.5	20.5 mm	0.8071	77%	0.075 mm	20.58 mm	73%
	13/16	0.8125	70%	0.075 mm	20.71 mm	66%
24 X 3	13/16	0.8125	86%	0.075 mm	20.71 mm	84%
	21.0 mm	0.8268	76%	0.075 mm	21.08 mm	75%
24 X 2	22.0 mm	0.8661	77%	0.075 mm	22.08 mm	74%
	7/8	0.8750	68%	0.075 mm	22.30 mm	65%
27 X 3	24.0 mm	0.9449	77%	0.075 mm	24.08 mm	75%

Formulas

1. **RPM = (318.47 • m/min) / DIA**
   where:
   RPM = revolutions per minute (rev/min)
   m/min = speed (m/min)
   DIA = diameter of drill (mm)

2. **mm/min = RPM • mm/rev**
   where:
   mm/min = mm per minute (mm/min)
   RPM = revolutions per minute (rev/min)
   mm/rev = feed rate (mm/rev)

3. **m/min = RPM • 0.003 • DIA**
   where:
   m/min = speed (m/min)
   RPM = revolutions per minute (rev/min)
   DIA = diameter of drill (mm)

4. **Thrust = 154 • (mm/rev) • DIA • K_m**
   where:
   Thrust = axial thrust (N)
   mm/rev = feed rate (mm/rev)
   DIA = diameter of drill (mm)
   K_m = specific cutting energy (kPa)

5. **Tool Power = ((mm/rev) • RPM • K_m • DIA²) / 218604.8**
   where:
   Tool Power = tool power (HP)
   mm/rev = feed rate (mm/rev)
   RPM = revolutions per minute (rev/min)
   K_m = specific cutting energy (kPa)
   DIA = diameter of drill (mm)

BSP and ISO 7-1

Tap Size	Tap Drill Size	Decimal Equivalent	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
1/4-19	7/16	0.4375	–	0.075 mm	11.19 mm	–
3/8-19	37/64	0.5781	–	0.075 mm	14.76 mm	–
1/2-14	23/32	0.7188	–	0.075 mm	18.33 mm	–
3/4-14	15/16	0.9375	–	0.075 mm	23.89 mm	–

* Based on nominal tap drill diameter
** Based on 0.075 mm probable mean oversize

To calculate the percent of full thread for a given hole diameter:

$$\text{\% Thread} = \frac{76.93}{\text{Pitch (mm)}} \bullet \text{(Basic major diameter - Drill hole size)}$$

Material Constants

Type of Material	Hardness	K_m (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
Titanium Alloy	–	4.96
Stainless Steels	135 - 275 BHN	6.48
	30 - 45 RC	7.45
Cast Iron	100 - 200 BHN	3.45
	200 - 300 BHN	7.45
Copper Alloy	20 - 80 RB	2.96
	80 - 100 RB	4.96
Aluminium Alloy	–	1.52
Magnesium Alloy	–	1.10

Notes

- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The 0.075 mm probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page 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 and Formulas | Imperial (inch)

American - Unified Inch Screw Thread

Tap Size	Tap Drill Size	Decimal Equivalent	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
1/2 - 20	29/64	0.4531	72%	0.003	0.4561	68%
9/16 - 12	12.0 mm	0.4724	72%	0.003	0.4754	69%
	31/64	0.4844	83%	0.003	0.4874	80%
9/16 - 18	1/2	0.5000	87%	0.003	0.5030	82%
	13.0 mm	0.5118	70%	0.003	0.5148	66%
	31/64	0.5156	65%	0.003	0.5186	61%
5/8 - 11	17/32	0.5313	79%	0.003	0.5343	77%
5/8 - 12	35/64	0.5469	72%	0.003	0.5499	69%
5/8 - 18	9/16	0.5625	87%	0.003	0.5655	82%
	14.5 mm	0.5709	75%	0.003	0.5739	71%
	37/64	0.5781	65%	0.003	0.5811	61%
11/16 - 12	39/64	0.6094	72%	0.003	0.6124	69%
3/4 - 10	41/64	0.6406	84%	0.003	0.6436	82%
	16.5 mm	0.6496	77%	0.003	0.6526	75%
	21/32	0.6563	72%	0.003	0.6593	70%
3/4 - 12	43/64	0.6719	72%	0.003	0.6749	69%
3/4 - 16	11/16	0.6875	77%	0.003	0.6905	73%
	17.5 mm	0.6890	75%	0.003	0.6920	71%
7/8 - 9	49/64	0.7656	76%	0.003	0.7686	74%
	25/32	0.7813	65%	0.003	0.7843	63%
7/8 - 14	51/64	0.7969	84%	0.003	0.7999	81%
	13/16	0.8125	67%	0.003	0.8155	64%
15/16 - 12	55/64	0.8594	72%	0.003	0.8624	69%
15/16 - 20	57/64	0.8906	72%	0.003	0.8936	68%
1 - 8	22.0 mm	0.8661	82%	0.003	0.8691	81%
	7/8	0.8750	77%	0.003	0.8780	75%
	57/64	0.8906	67%	0.003	0.8936	65%
1 - 12	29/32	0.9063	87%	0.003	0.9093	84%
	59/64	0.9219	72%	0.003	0.9249	69%
1 - 14	15/16	0.9375	67%	0.003	0.9405	64%
1-1/8 - 12	1-1/32	1.0313	87%	0.003	1.0343	84%
	1-3/64	1.0469	72%	0.003	1.0499	69%
1-1/4 - 7	1-7/64	1.1094	76%	0.003	1.1124	74%

Formulas

1. **RPM = (3.82 • SFM) / DIA**
   where:
   RPM = revolutions per minute (rev/min)
   SFM = speed (ft/min)
   DIA = diameter of drill (inch)

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

3. **SFM = RPM • 0.262 • DIA**
   where:
   SFM = speed (ft/min)
   RPM = revolutions per minute (rev/min)
   DIA = diameter of drill (inch)

4. **Thrust = 153,700 • IPR • DIA • K_m**
   where:
   Thrust = axial thrust (lbs)
   IPR = feed rate (in/rev)
   DIA = diameter of drill (inch)
   K_m = specific cutting energy (lbs/in^2)

5. **Tool Power = .6991 • IPR • RPM • K_m • 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/in^2)
   DIA = diameter of drill (inch)

Taper Pipe Thread (NPT)

Tap Size	Tap Drill Size	Decimal Equivalent	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
1/4 - 18	7/16	0.4375	–	0.003	0.4405	–
3/8 - 18	9/16	0.5625	–	0.003	0.5655	–
1/2 - 14	45/64	0.7031	–	0.003	0.7061	–
3/4 - 14	29/32	0.9063	–	0.003	0.9093	–

* Based on nominal tap drill diameter
** Based on 0.003" probable mean oversize

To calculate the percent of full thread for a given hole diameter:

$$\% \text{ Thread} = \text{\# of threads per inch} \bullet \frac{(\text{Basic major diameter of thread} - \text{Drill hole size})}{.0130}$$

Material Constants

Type of Material	Hardness	K_m (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
Titanium Alloy	–	0.72
Stainless Steels	135 - 275 BHN	0.94
	30 - 45 RC	1.08
Cast Iron	100 - 200 BHN	0.50
	200 - 300 BHN	1.08
Copper Alloy	20 - 80 RB	0.43
	80 - 100 RB	0.72
Aluminium Alloy	–	0.22
Magnesium Alloy	–	0.16

Notes

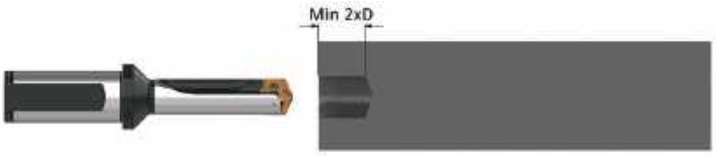
- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The 0.003" probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page are found in the *Machinery's Handbook*. Permission to simplify and print the equations is granted by the editor of the *Machinery's Handbook*.

Deep Hole Drilling Guidelines

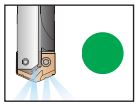
T-A Pro | 10xD, 12xD and 15xD Holders

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

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



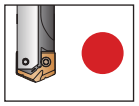
Coolant ON



2. Feed-in
50 RPM max
300 mm/min (12 IPM)

Feed the longer drill within 1.5 mm (1/16") short of the established pilot hole bottom at a **maximum of 50 RPM** and 300 mm/min (12 IPM) feed rate.

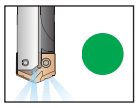
Coolant OFF



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

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

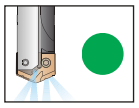
Coolant ON



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

Drill to full depth at recommended speed and feed for longer drill according to Allied speed and feed charts.
No peck cycle recommended.

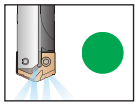
Coolant ON



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

For through holes only:
Reduce speed by 50% and feed by 25% prior to breakout.
Do not break out more than 3 mm (1/8") past the full diameter of the drill.

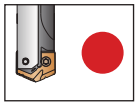
Coolant ON



6. Drill Retract
50 RPM max

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

Coolant OFF



⚠ WARNING **Tool failure can cause serious injury. To prevent:**
- When using holders without support bushing, use a short T-A Pro 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 the workpiece or fixture.

Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures.
Factory technical assistance is available for your specific applications through our Application Engineering department. *email*: **engineering.eu@alliedmachine.com**

Troubleshooting Guide

	Potential Problem																		
	Accelerated corner wear	Barber pole	Bell-mouth hole	Insert chipping	Blue chips	Built-Up Edge (BUE)	Chatter	Chip packing	Chipping of point	Damaged or broken tools	Excessive margin wear	High flank wear	Hole lead off	Hole out of position	Hole out of round	Oversize hole	Poor hole finish	Poor tool life	Power spikes - Load meter	
Setup Condition	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	**Possible Solutions**
Worn or misaligned spindle (lathe, screw machine, chucker)	**1**	**2**	**3**				**7**		**9**	**10**	**11**		**13**			**16**	**17**			• Align spindle and turret or tailstock. • Repair spindle.
Use of low rigidity machine tools		**2**	**3**	**4**			**7**		**9**	**10**			**13**	**14**						• 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).
Poor work piece support		**2**		**4**			**7**			**10**	**11**				**15**		**17**			• 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).
Flood coolant, low coolant pressure, or low coolant volume	**1**				**5**	**6**		**8**		**10**		**12**				**16**	**17**	**18**	**19**	• Run coolant through tool holder when drilling greater than 1xD. • Increase coolant pressure and volume through the tool holder. • Reduce penetration rate to fall within the coolant limitations (**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, parting lines, curved or stepped surfaces, cross holes and cast or forged surfaces)				**4**			**7**		**9**	**10**	**11**		**13**	**14**	**15**	**16**	**17**	**18**		• Pre-mill (spot face) entry or exit surface to remove interruption. • 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 speed	**1**				**5**	**6**				**10**		**12**						**18**		• Reduce speed. • Increase coolant pressure and volume. • Improve coolant condition by use of quality products and regular maintenance.
Poor material micro-structure or foreign particles (forgings and castings that have not been normalised or annealed, poorly prepared steel, flame cut parts and sand casting)				**4**		**6**				**10**		**12**	**13**					**18**		• Compare performance of other tools for similar wear problems, which may indicate poor micro-structure. Anneal or normalise parts to improve micro-structure for machining. • Reduce feeds (**NOTICE:** Do not reduce feed below threshold of good chip formation).
Poor chip control								**8**		**10**	**11**		**13**			**16**	**17**	**18**	**19**	• Increase feed to recommended levels. Contact Allied's Application Engineering group for technical recommendations. • Increase coolant pressure and volume. • Improve coolant condition by use of quality products and regular maintenance.
Spot drilled holes with included angle less than that matching T-A Pro or cored holes	**1**			**4**			**7**						**13**					**18**		• Spot hole with short tool of same or greater included angle as T-A Pro drill insert. • Reduce feed (**NOTICE:** Do not reduce feed below threshold of good chip formation). If possible, drill from solid.

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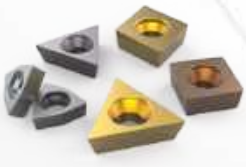

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Our highly trained and skilled Application Engineers are here to assist you. If you are experiencing technical difficulties, our engineers will recommend the best solutions to the problem. Speeds and feeds, coolant pressure, and other machining components all affect the performance of our tooling. Our Application Engineers (AEs) are experienced in working with difficult materials in many different environments. Give us a call and put our knowledge to the test.

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Allied Machine provides local engineering support all over the world. Our Field Sales Engineers (FSEs) spend months training in-house before going to the field. This support line allows us to provide assistance to our customers right at the spindle. They are available to visit your facility, run demos and tests, and work hand-in-hand with machine operators and engineers to find the best possible tooling solutions.

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Drilling Guaranteed Application Form

*The following must be filled out completely before your test will be considered

CONTACT DETAILS

Trial P.O. No.*..... Date*..... Proposed Test Date*.....

Favoured Distributor*..... Distributor Contact*.....

Customer Name*..... Industry..... Contact Name*.....

APPLICATION INFORMATION

ATTENTION: The following Information is required to enable the best combination of tooling to be recommended. Please complete all that apply.

Material Type*..... Specification*..... Material Hardness ..... ☐ Kg ☐ BRN ☐ RC ☐ N/mm²

Material Condition ☐ Flat Stock ☐ Round Stock ☐ Tubular Stock ☐ Plate ☐ Stacked Plate ☐ Hot Rolled ☐ Cold Rolled ☐ Casting ☐ Forging

Hole Diameter .....☐ mm ☐ Inch ☐ Hole Depth..... ☐ Through Hole ☐ Blind Hole

Drilled Hole Tolerance Req'd ..... Drilled Hole RMS Finished Req'd ..... ☐ µInch ☐ µMetre

MACHINE SETUP

Machine Type ☐ Machining Centre ☐ Lathe ☐ Boring Mill ☐ Multi-spindle Auto ☐ Multi-spindle Drill ☐ Transfer Line ☐ Gantry Machine ☐ Dial Index Machine ☐ Radial Arm ☐ Gun Drilling Machine ☐ Pedestal Drill ☐ Other: .....

Machine Tool Builder* ..... Model .....

Machine Tool Control* ☐ CNC ☐ NC ☐ Manual ☐ Other .....

Spindle Orientation* ☐ Vertical ☐ Horizontal ☐ Other .....

Machine Shank Required ☐ MAS BT ☐ DIN69871 ☐ HSK Spindle Taper Size ☐ 40 ☐ 50 ☐ 63 ☐ 100 ☐ Other .....

Tool* ☐ Stationary ☐ Revolves

Available Power* ☐ KW ..... ☐ HP ..... Available Feed Trust ..... ☐ Newtons ☐ Lbs

Available Speed* ☐ RPM ..... ☐ M/min ..... ☐ Variable ☐ Fixed

Preferred Shank Type* ☐ Flanged ☐ Morse Taper ☐ RCA ☐ Lathe ☐ Diameter ..... ☐ mm ☐ Inch

Coolant Type* ☐ Cutting Oil ☐ Water Soluble Oil ☐ Air Mist ☐ Air ☐ Dry

Coolant Pressure* ☐ Bar ..... ☐ PSI .....

Coolant Flow Rate* ☐ L/min ..... ☐ GPM ..... Coolant Supply ☐ Through Tool ☐ External

CURRENT DRILL INFORMATION

Drill Manufacturer ..... Part Number .....

Drill Type ☐ Twist ☐ Brazed ☐ Indexable Insert ☐ Gun Drill ☐ Removable Tip ☐ Other .....

Tool Grade ☐ HSS ☐ Carbide ☐ Ceramic ☐ Other .....

Tool Coating ☐ Uncoated ☐ TiN ☐ TiCN ☐ TiAlN ☐ Other .....

Current Speed ☐ RPM ..... ☐ M/min ..... Current Feed Rate ☐ mm/rev ..... ☐ mm/min .....

Average Number of Holes Drilled New ..... After Regrind? .....

Reason(s) for Tool change ☐ Wear ☐ Fracture ☐ Chipping ☐ Losing Hole Tolerance ☐ Losing Chip Control ☐ Burr ☐ Other ..... ☐ Chatter ☐ New Application

What criteria defines a successful test* ☐ Decreased Cycle Time ☐ Better Chip Control ☐ Safer Process ☐ Longer Tool Life ☐ Reduced Cost per Hole ☐ Other .....

Current Annual Usage €/£: ..... Current Tools per Annum? .....

*Required fields where applicable

FOR OFFICE USE ONLY

Application Engineer:

Number:

Status:

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