



**ALLIED MACHINE  
& ENGINEERING**

**WOHLHAUPTER®**

Holemaking Solutions for Today's Manufacturing



Boring



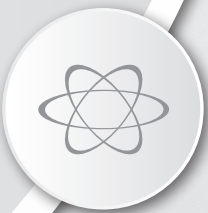
Reaming



Burnishing



Threading



Specials



## Structural Steel Solutions

► **DRILLING**

Replaceable Insert Drills

**FEBAMETAL**

EN

## North America

### Allied Machine

120 Deeds Drive  
Dover, OH 44622  
United States

### Allied Machine

485 West 3rd Street  
Dover, OH 44622  
United States

### ThreadMills USA™

4185 Crosstowne Ct #B  
Evans, GA 30809  
United States

### Superion™

1285 S Patton St.  
Xenia, OH 45385  
United States

## Europe

### Allied Machine Europe

93 Vantage Point  
Pensnett Estate  
Kingswinford  
West Midlands  
DY6 7FR, United Kingdom

### Wohlhaupter® GmbH

Maybachstrasse 4  
72636 Frickenhausen  
Germany

## Asia

### Wohlhaupter® India

B-23, 2nd Floor  
B Block Community Centre  
Janakpuri, New Delhi - 110058  
India



Allied Machine & Engineering is a worldwide leader in holmaking and finishing solutions. We are committed to providing practical and dependable solutions to our customers through innovative designs and superior customer and technical support.

We continue to expand our product offering in order to provide new and different solutions. With Field Sales Engineers located around the world, we position ourselves to provide technical support on site, right at your spindle.



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& ENGINEERING**

**WOHLHAUPTER®**

Holmaking Solutions for Today's Manufacturing

[www.alliedmachine.com](http://www.alliedmachine.com)

## The Foundation

Since 1941, Allied Machine & Engineering has provided dependable and practical holemaking solutions to the world. What was once a small job shop in Ohio is now a worldwide leader in cutting tool technology. With three manufacturing facilities in Ohio, one in Georgia, another in Germany and headquarters in both the United States and Europe, Allied Machine is positioned to bring innovative solutions and technical expertise directly to the customers' hands.



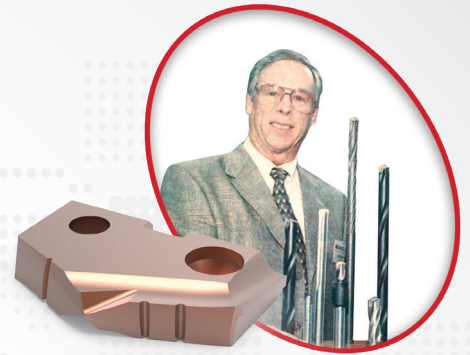
## The Beginning

Harold E. Stokey founded Allied Machine & Engineering to aid the war effort, manufacturing taper bearing lock nuts for the production of M1 tanks. Years later, after a sales meeting gone wrong, Stokey possessed a warehouse stocked with spade drill inserts. He set forth into the industry that would become Allied Machine's thriving identity: holemaking.



## The T-A®

When Harold's son, William H. Stokey, became the president and CEO, he developed the Throw Away, or T-A®, spade drill insert system. The T-A® revolutionized the holemaking industry, launching Allied Machine ahead of the competition. Since then, numerous innovations and advancements have been created from the T-A®'s inspiration.



## The Innovation

Since the development of the T-A®, Allied Machine has expanded its product offering to support a vast range of customer applications, including large diameter and deep hole drilling, boring, reaming, burnishing, porting and threading.

## The People

Allied Machine understands that high quality products are only one facet of success. Our customer support is crucial to what we do and that's why we make sure the best engineers and customer service associates are in place to assist our customers around the world.

## The Future

With over 75 years of experience, Allied Machine has encountered the challenges of growth and success. By investing in cutting edge technology and the brightest and sharpest minds, our knowledge and capabilities continue to expand and grow every day.



**Steve Stokey**

Executive Vice President  
Allied Machine & Engineering Corp.

**Frank-M. Wohlhaupter**

Managing Director  
Wohlhaupter GmbH

**Paul Crawford**

Managing Director  
AMEC Europe

**Mike Stokey**

Executive Vice President  
Allied Machine & Engineering Corp.

Allied Machine Dover, OH, USA



Wohlhaupter GmbH, Frickenhausen, Germany



Allied Machine Europe, Kingswinford, UK



**ALLIED MACHINE  
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing

**WOHLHAUPTER®**



**SUPERION™**

**CRITERION™**

# Structural Steel Drilling Solutions

Replaceable Insert Drilling System | GEN3SYS® XT Structural Steel | T-A® Original and GEN2 T-A® Structural Steel

- ▶ GEN3SYS®XT Pro ST and XT ST Diameter Range: 12.00mm - 35.00mm (0.4331" - 1.3780")
- ▶ T-A® Structural Steel Diameter Range: 12.98mm - 47.80mm (0.511" - 1.882")



## Take on Tough Drilling

Allied Machine's Structural Steel Drilling System is designed for maximum performance in structural steel materials and applications. These solutions utilise the GEN3SYS XT Pro, XT ST, T-A Original, and GEN2 T-A Structural Steel designs and capabilities.

With multiple geometries and coatings, you're sure to find the solution that is right for you. Tough drilling is tough no more.

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

Your safety and the safety of others is very important. This catalog 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 catalog, 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 catalog. 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](http://www.alliedmachine.com) for the most up-to-date information and procedures.

## Applicable Industries

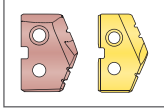


Structural Steel

## Structural Steel Drilling Solutions Contents

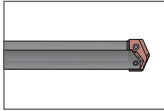
### Reference Icons

The following icons will appear throughout the catalog to help you navigate between products.



#### Corresponding T-A Inserts

Refers to the corresponding T-A insert items that connect with each specific holder series



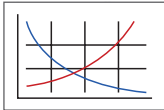
#### Corresponding T-A Holders

Refers to the corresponding T-A holder items that connect with each specific insert series



#### Setup / Assembly Information

Detailed instructions and information regarding the corresponding part(s)



#### Recommended Cutting Data

Speed and feed recommendations for optimum and safe drilling

### GEN3SYS® XT Pro and XT Structural Steel

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Series	GEN3SYS XT Pro ST Diameter Range	
	Metric (mm)	Imperial (inch)
12	12.00 - 12.99	0.4724 - 0.5117
13	13.00 - 13.99	0.5118 - 0.5511
14	14.00 - 14.99	0.5512 - 0.5905
15	15.00 - 15.99	0.5906 - 0.6298
16	16.00 - 16.99	0.6299 - 0.6692
17	17.00 - 17.99	0.6693 - 0.7086
18	18.00 - 19.99	0.7087 - 0.7873
20	20.00 - 21.99	0.7874 - 0.8660
22	22.00 - 23.99	0.8661 - 0.9448
24	24.00 - 25.99	0.9449 - 1.0235
26	26.00 - 28.99	1.0236 - 1.1416
29	29.00 - 31.99	1.1417 - 1.2597
32	32.00 - 35.00	1.2598 - 1.3780

Series	T-A Structural Steel Diameter Range	
	Metric (mm)	Imperial (inch)
0	12.98 - 17.65	0.511 - 0.695
1	17.53 - 24.38	0.690 - 0.960
2	24.41 - 35.05	0.961 - 1.380
3	34.36 - 47.80	1.353 - 1.882

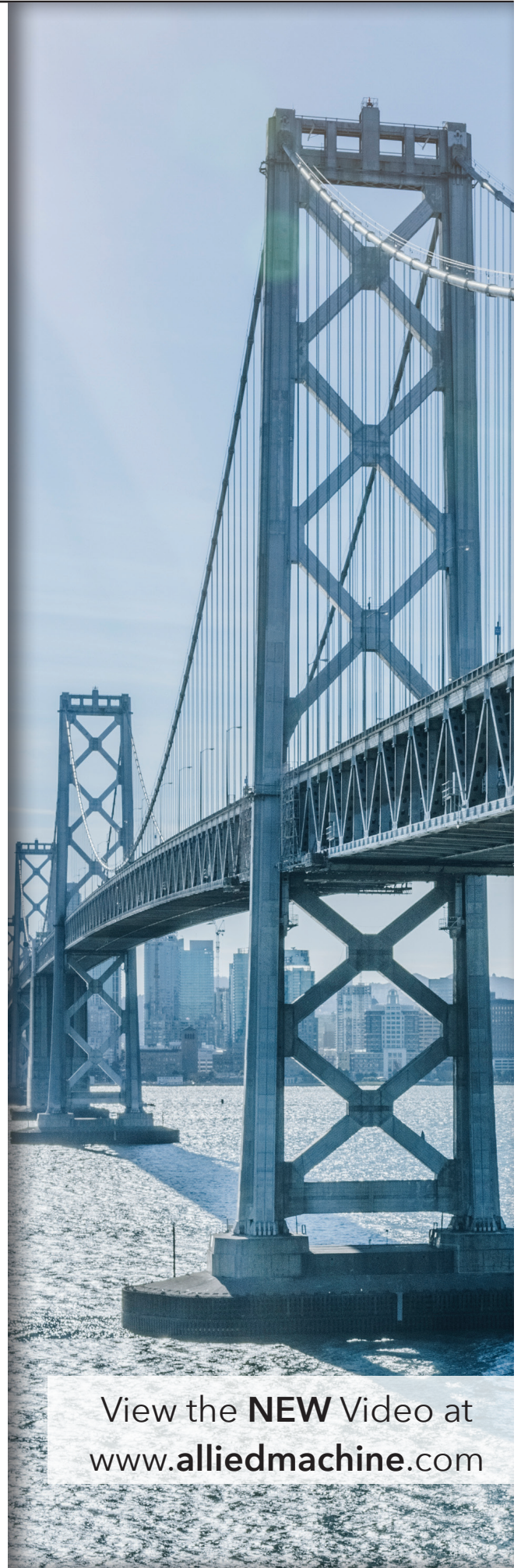


GEN3SYS® XT Pro ST Structural Steel Drilling System

GEN3SYS®  
**XT PRO ST**  
REPLACEABLE TIP  
**HIGH PENETRATION**  
STRUCTURAL STEEL *SOLUTION*

The challenge of drilling structural steel materials is about to get a whole lot easier. Developed through a rigorous and thorough testing process, the modified and improved XT Pro ST is a product of innovation.

Achieve the **consistent performance** you need and exceed your current parameters.



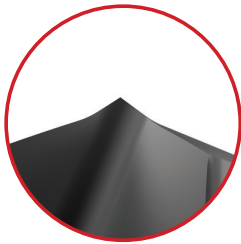
View the **NEW** Video at  
[www.alliedmachine.com](http://www.alliedmachine.com)

GEN3SYS® XT ST and Pro ST

T-A® Structural Steel

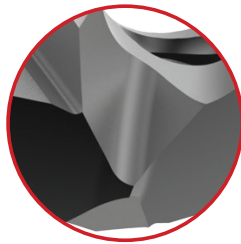
Cutting Data & Guaranteed Application Forms

GEN3SYS® XT Pro ST Structural Steel Drilling System



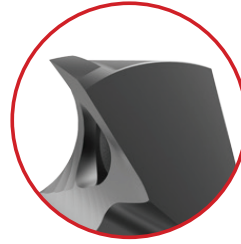
**New Point Design**

Increases stability without hindering penetration



**Redesigned Insert**

Provides consistent performance and adds durability



**Improved Geometry**

Extends tool life and increases insert strength without increasing horsepower consumption



**AM420**

**AM420 Coating**  
Increases heat threshold and extends tool life



3xD

5xD

7xD

**Get the Consistency You Need**

The challenge of drilling structural steel materials is about to get a whole lot easier. Developed through a rigorous and thorough testing process, the modified and improved XT ST insert is a product of innovation.

Achieve the **consistent performance** you need while matching or even exceeding your current parameters.

**Tough Drilling is Tough No More**

Structural steel applications can prove to be difficult to machine, so you need a drill that's been put through the fire to ensure it can conquer those challenging applications.

Rigorous testing and countless hours of design and programming make the XT Pro ST the optimal drill for structural steel applications.

- Diameter range: 12mm - 35mm
- Holders available in 3xD, 5xD, and 7xD lengths
- Flanged shank with flat
- Through Tool Coolant
- Fits on to existing GEN3SYS®XT ST holders



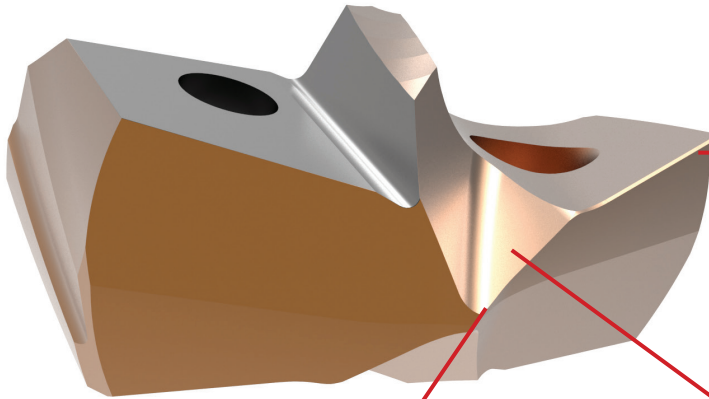
**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.



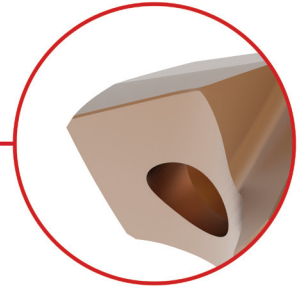
# GEN3SYS® XT Structural Steel Drilling System

## STRUCTURAL STEEL

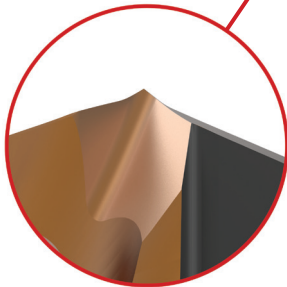
## GEN3SYS® XT ST



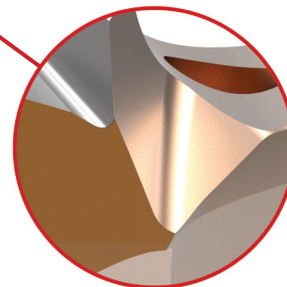
Available in AM300® Coating



**Improved Radial Rake**  
Improves chip control



**Spur Point**  
Increases stability



**Improved Notch Point**  
Reduces lead-off



### Holder Anatomy

1. Flanged Shank with Flat
2. Coolant Inlet
3. Flute (straight only)
4. Coolant Outlets



Straight Flute

**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.



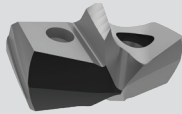
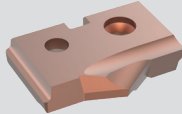
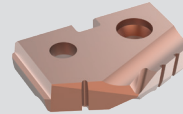
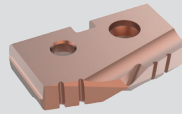
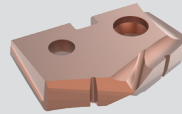
## Structural Steel Drilling

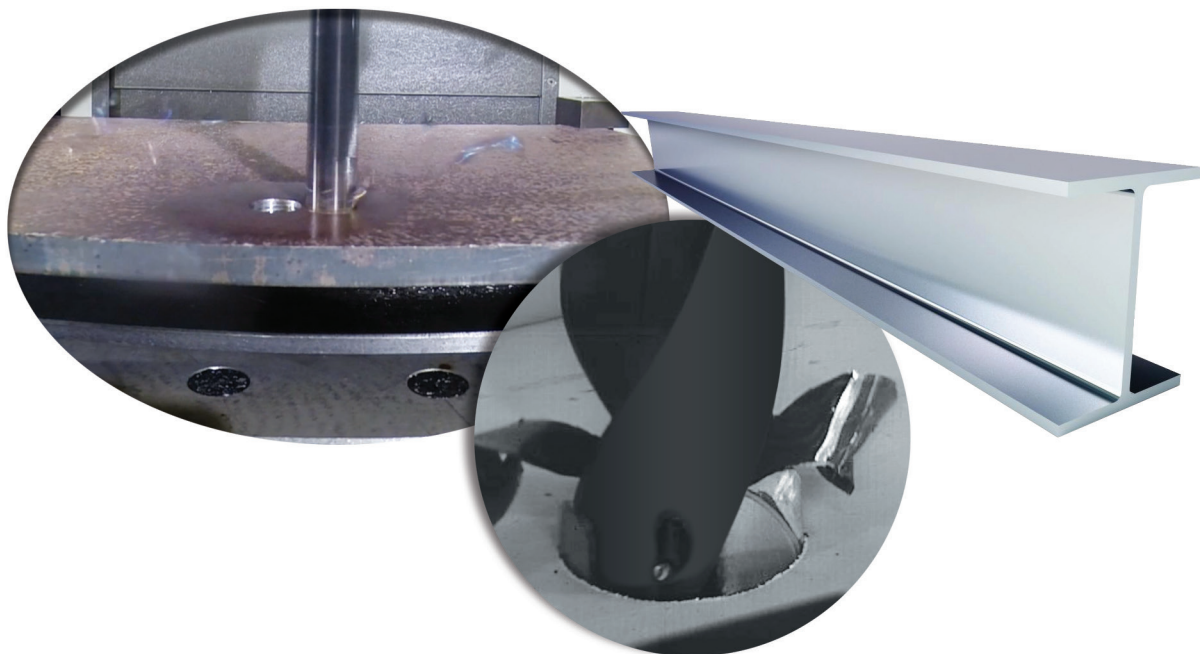
### Achieving Optimal Results in Structural Steel

Drilling in structural steel materials can be a difficult process, and achieving optimal results becomes a major issue. Allied Machine's structural steel drilling solutions have been specifically designed to produce the best results in the toughest materials. With solutions in both the T-A® and GEN3SYS® XT Pro product lines, you have multiple options to solve your application problems.



### Insert Style Comparison

	 GEN3SYS® XT Pro ST GEN3SYS® XT ST	 Original T-A® Thin Wall	 Original T-A® Notch Point®	 Original T-A® 150° Structural Steel	 GEN2 T-A® High Efficiency
High penetration	<input checked="" type="checkbox"/>				
Material less than 6mm thick		<input checked="" type="checkbox"/>			
Material over 6mm thick	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reduced exit burr			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Includes Notch Point® geometry			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Available from carbide	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
Stocked in common sizes for the Structural Steel industry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

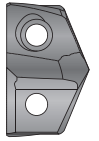




## GEN3SYS® XT Pro ST / GEN3SYS® XT ST Drill Insert Nomenclature

### GEN3SYS®XT Pro Drill Inserts

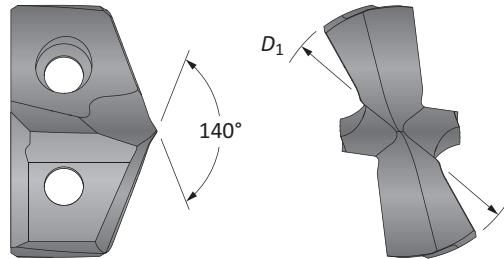
<b>XT</b>	<b>ST</b>	<b>20</b>	-	<b>20.00</b>
1	2	3		4



1. XT Pro ST Drill Insert	2. Geometry	3. Series	4. Diameter (mm)															
XT = XT Pro insert	ST = Structural Steel	<table border="0"> <tr> <td><b>12</b> = 12 series</td> <td><b>17</b> = 17 series</td> <td><b>26</b> = 26 series</td> </tr> <tr> <td><b>13</b> = 13 series</td> <td><b>18</b> = 18 series</td> <td><b>29</b> = 29 series</td> </tr> <tr> <td><b>14</b> = 14 series</td> <td><b>20</b> = 20 series</td> <td><b>32</b> = 32 series</td> </tr> <tr> <td><b>15</b> = 15 series</td> <td><b>22</b> = 22 series</td> <td></td> </tr> <tr> <td><b>16</b> = 16 series</td> <td><b>24</b> = 24 series</td> <td></td> </tr> </table>	<b>12</b> = 12 series	<b>17</b> = 17 series	<b>26</b> = 26 series	<b>13</b> = 13 series	<b>18</b> = 18 series	<b>29</b> = 29 series	<b>14</b> = 14 series	<b>20</b> = 20 series	<b>32</b> = 32 series	<b>15</b> = 15 series	<b>22</b> = 22 series		<b>16</b> = 16 series	<b>24</b> = 24 series		For complete list of diameter ranges by series, see contents page.
<b>12</b> = 12 series	<b>17</b> = 17 series	<b>26</b> = 26 series																
<b>13</b> = 13 series	<b>18</b> = 18 series	<b>29</b> = 29 series																
<b>14</b> = 14 series	<b>20</b> = 20 series	<b>32</b> = 32 series																
<b>15</b> = 15 series	<b>22</b> = 22 series																	
<b>16</b> = 16 series	<b>24</b> = 24 series																	

#### Reference Key

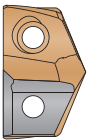
Symbol	Attribute
$D_1$	Insert diameter



Sizes not shown are available upon request. When ordering, please follow the example below:	
<b>Metric:</b>	20.10mm, 20 series = use Part No. <b>XTST20-20.10</b>
<b>Imperial:</b>	0.7913", 20 series = use Part No. <b>XTST20-20.10</b>

### GEN3SYS®XT ST Drill Inserts

<b>7</b>	<b>C2</b>	<b>14</b>	<b>P</b>	-	<b>0018</b>	<b>ST</b>
1	2	3	4		5	6

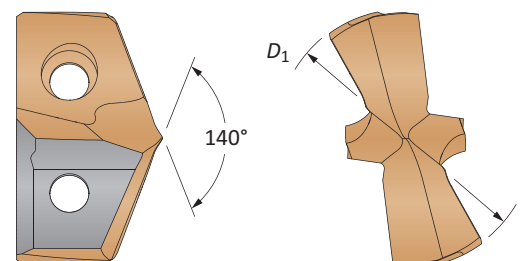


1. XT Drill Insert	2. Insert Material	3. Series	4. Coating												
7 = XT insert	C2 = K20 (C2) carbide	<table border="0"> <tr> <td><b>12</b> = 12 series</td> <td><b>17</b> = 17 series</td> <td><b>24</b> = 24 series</td> </tr> <tr> <td><b>14</b> = 14 series</td> <td><b>18</b> = 18 series</td> <td><b>26</b> = 26 series</td> </tr> <tr> <td><b>15</b> = 15 series</td> <td><b>20</b> = 20 series</td> <td><b>29</b> = 29 series</td> </tr> <tr> <td><b>16</b> = 16 series</td> <td><b>22</b> = 22 series</td> <td><b>32</b> = 32 series</td> </tr> </table>	<b>12</b> = 12 series	<b>17</b> = 17 series	<b>24</b> = 24 series	<b>14</b> = 14 series	<b>18</b> = 18 series	<b>26</b> = 26 series	<b>15</b> = 15 series	<b>20</b> = 20 series	<b>29</b> = 29 series	<b>16</b> = 16 series	<b>22</b> = 22 series	<b>32</b> = 32 series	P = AM300®
<b>12</b> = 12 series	<b>17</b> = 17 series	<b>24</b> = 24 series													
<b>14</b> = 14 series	<b>18</b> = 18 series	<b>26</b> = 26 series													
<b>15</b> = 15 series	<b>20</b> = 20 series	<b>29</b> = 29 series													
<b>16</b> = 16 series	<b>22</b> = 22 series	<b>32</b> = 32 series													

5. Diameter	6. Geometry
<b>18</b> = Metric <b>0102</b> = Inch	ST = Structural steel

#### Reference Key

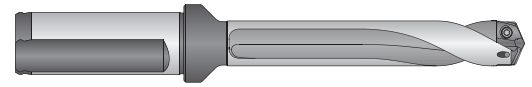
Symbol	Attribute
$D_1$	Insert diameter



## GEN3SYS® XT Structural Steel Drill Holder Nomenclature

### GEN3SYS®XT Structural Steel Drill Holders

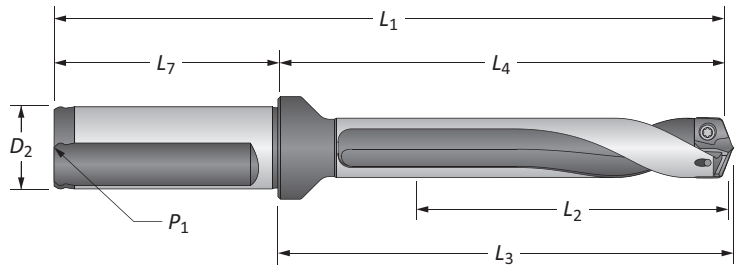
<b>ST</b>	<b>03</b>	<b>12</b>	<b>0</b>	-	<b>20</b>	<b>FM</b>
1	2	3	4		5	6



<b>1. Holder</b> ST = Structural steel holder	<b>2. Length</b> 03 = 3x Diameter 05 = 5x Diameter 07 = 7x Diameter	<b>3. Series</b> 12 = 12 series    17 = 17 series    26 = 26 series 13 = 13 series    18 = 18 series    29 = 29 series 14 = 14 series    20 = 20 series    32 = 32 series 15 = 15 series    22 = 22 series 16 = 16 series    24 = 24 series	<b>4. Body Diameter</b> 0 = Standard 5 = Oversized																
<b>5. Shank Diameter</b> <table border="1"> <thead> <tr> <th colspan="2">Metric (mm)</th> <th colspan="2">Imperial (in)</th> </tr> </thead> <tbody> <tr> <td>16 = 16mm</td> <td>32 = 32mm</td> <td>063 = 5/8"</td> <td>125 = 1-1/4"</td> </tr> <tr> <td>20 = 20mm</td> <td>40 = 40mm</td> <td>075 = 3/4"</td> <td>150 = 1-1/2"</td> </tr> <tr> <td>25 = 25mm</td> <td></td> <td>100 = 1"</td> <td></td> </tr> </tbody> </table>		Metric (mm)		Imperial (in)		16 = 16mm	32 = 32mm	063 = 5/8"	125 = 1-1/4"	20 = 20mm	40 = 40mm	075 = 3/4"	150 = 1-1/2"	25 = 25mm		100 = 1"		<b>6. Shank Style</b> F = Flanged with flat FM = Flanged metric with flat C = Cylindrical (no flat) CM = Cylindrical metric (no flat)	
Metric (mm)		Imperial (in)																	
16 = 16mm	32 = 32mm	063 = 5/8"	125 = 1-1/4"																
20 = 20mm	40 = 40mm	075 = 3/4"	150 = 1-1/2"																
25 = 25mm		100 = 1"																	

#### Reference Key

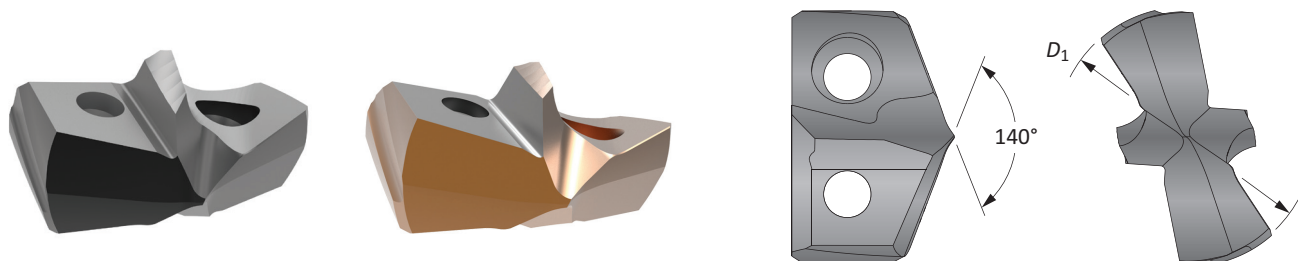
Symbol	Attribute
$D_2$	Shank diameter
$L_1$	Overall length
$L_2$	Drill depth
$L_3$	Holder reference length
$L_4$	Holder body length
$L_7$	Shank length
$P_1$	Rear pipe tap





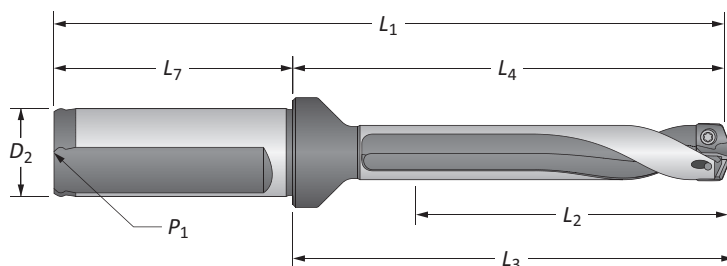
**NOTICE:** GEN3SYS®XT Structural Steel Holders are suitable for both GEN3SYS®XT Pro ST and GEN3SYS®XT ST Inserts ONLY.

**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

12 Series | Diameter Range: 12.00mm - 12.99mm (0.4724" - 0.5117")


**Inserts**






Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
12.00	0.4724	-	<b>XTST12-12.00</b>	<b>7C212P-12ST</b>

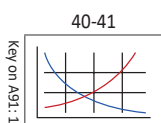

**Holders**

Length	Body				Shank					Part No.
	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat		
<b>m</b> 3xD	39.0	66.6	68.6	116.6	50	20	3.18*	YES	<b>ST03120-20FM</b>	
<b>m</b> 5xD	65.0	92.6	94.8	142.6	50	20	3.18*	YES	<b>ST05120-20FM</b>	
<b>m</b> 7xD	91.0	118.5	120.8	168.5	50	20	3.18*	YES	<b>ST07120-20FM</b>	
<b>i</b> 3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	<b>ST03120-075F</b>	
<b>i</b> 5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	<b>ST05120-075F</b>	
<b>i</b> 7xD	3-37/64	4-43/64	4-3/4	6-45/64	2-1/32	3/4	1/8	YES	<b>ST07120-075F</b>	

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					Admissible Tightening Torque*
7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	84 N-cm (7.4 in-lbs)

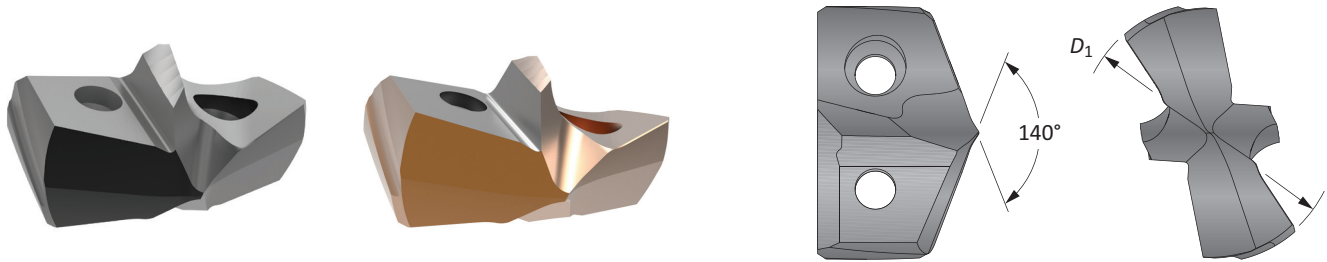
 \*Tightening torques are calculated with a friction coefficient of  $\mu = 0.14$  and develop 90% of ultimate yield strength

**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

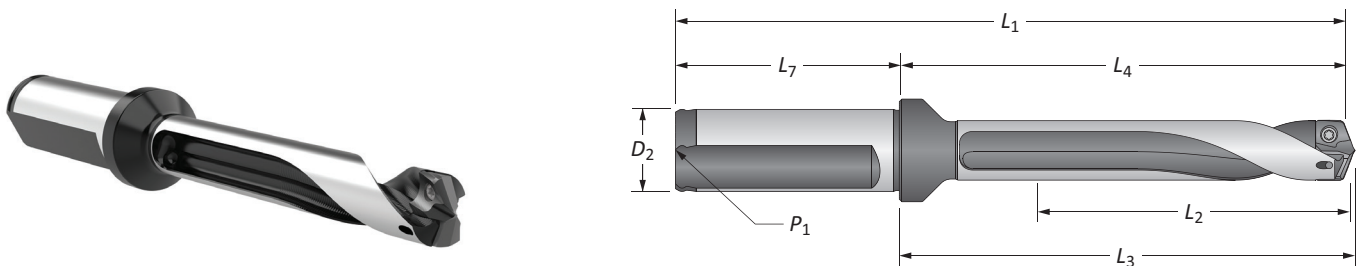
### GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System

13 Series | Diameter Range: 13.00mm - 13.99mm (0.5118" - 0.5511")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
13.00	0.5118	-	<b>XTST13-13.00</b>	<b>7C212P-13ST</b>




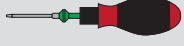



**Holders**

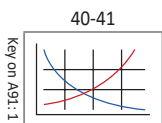
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b>	3xD	39.0	66.6	68.6	116.6	50	20	3.18*	YES	<b>ST03120-20FM</b>
	5xD	65.0	92.6	94.8	142.6	50	20	3.18*	YES	<b>ST05120-20FM</b>
	7xD	91.0	118.5	120.8	168.5	50	20	3.18*	YES	<b>ST07120-20FM</b>
<b>i</b>	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	<b>ST03120-075F</b>
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	<b>ST05120-075F</b>
	7xD	3-37/64	4-43/64	4-3/4	6-45/64	2-1/32	3/4	1/8	YES	<b>ST07120-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength



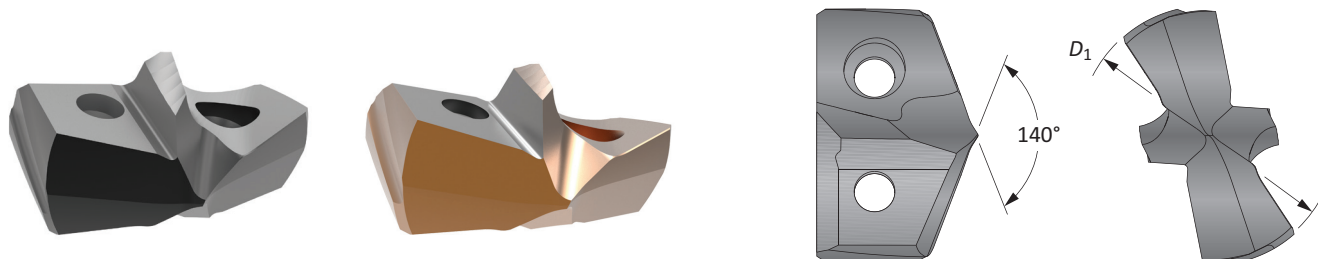
**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

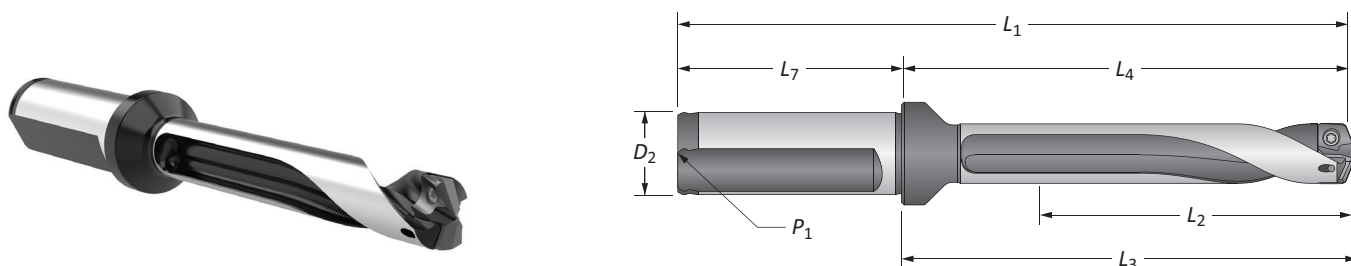
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

14 Series | Diameter Range: 14.00mm - 14.99mm (0.5512" - 0.5905")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
14.00	0.5512	-	<b>XTST14-14.00</b>	<b>7C214P-14ST</b>
14.29	0.5625	9/16	<b>XTST14-14.29</b>	<b>7C214P-0018ST</b>



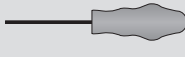
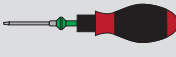
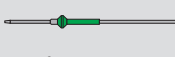


**Holders**

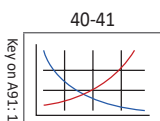
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
m	3xD	45.0	72.4	75.0	122.4	50	20	3.18*	YES	<b>ST03140-20FM</b>
	5xD	75.0	102.4	104.9	152.4	50	20	3.18*	YES	<b>ST05140-20FM</b>
	7xD	104.9	132.3	134.9	182.3	50	20	3.18*	YES	<b>ST07140-20FM</b>
i	3xD	1-25/32	2-27/32	2-61/64	4-7/8	2-1/32	3/4	1/8	YES	<b>ST03140-075F</b>
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	1/8	YES	<b>ST05140-075F</b>
	7xD	4-9/64	5-13/64	5-5/16	7-15/64	2-1/32	3/4	1/8	YES	<b>ST07140-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength



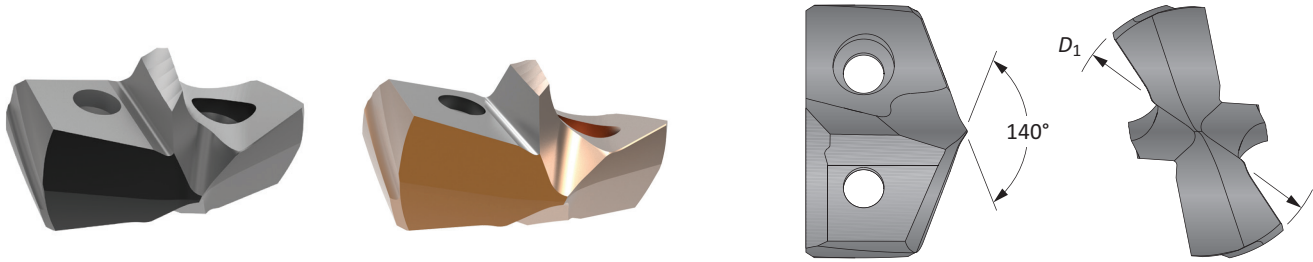
m = Metric (mm)  
i = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

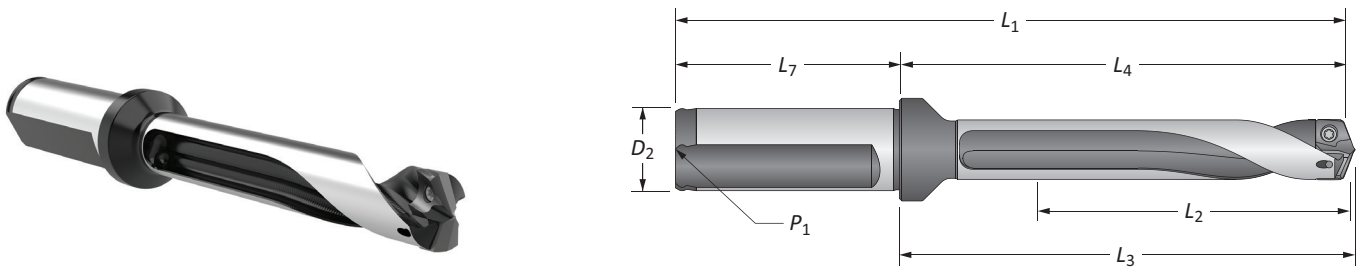
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

15 Series | Diameter Range: 15.00mm - 15.99mm (0.5906" - 0.6298")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
15.00	0.5906	-	<b>XTST15-15.00</b>	<b>7C215P-15ST</b>
15.88	0.6250	5/8	<b>XTST15-15.88</b>	<b>7C215P-0020ST</b>




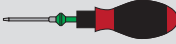



**Holders**

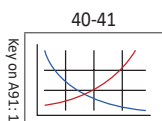
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b>	3xD	48.0	75.1	77.6	125.1	50	20	3.18*	YES	<b>ST03150-20FM</b>
	5xD	80.0	107.0	109.6	157.0	50	20	3.18*	YES	<b>ST05150-20FM</b>
	7xD	111.9	139.0	141.6	189.0	50	20	3.18*	YES	<b>ST07150-20FM</b>
<b>i</b>	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	YES	<b>ST03150-075F</b>
	5xD	3-5/32	4-7/32	4-5/16	6-1/4	2-1/32	3/4	1/8	YES	<b>ST05150-075F</b>
	7xD	4-27/64	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	YES	<b>ST07150-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength



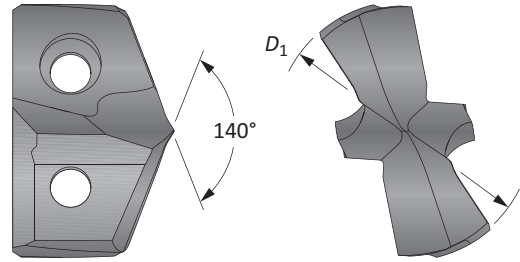
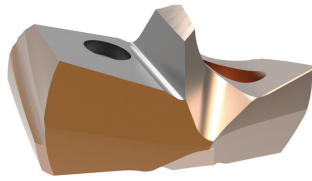
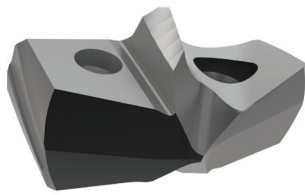
**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10

**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.



**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

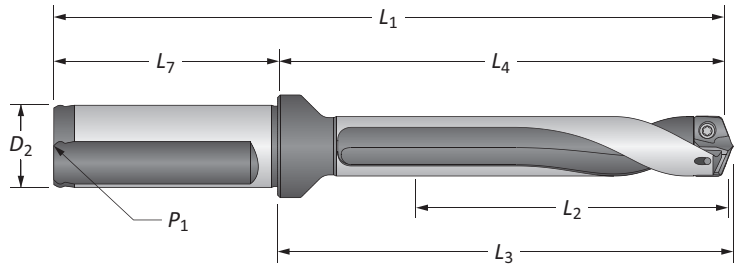
16 Series | Diameter Range: 16.00mm - 16.99mm (0.6299" - 0.6692")



GEN3SYS® XT ST and Pro ST

**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
16.00	0.6299	-	<b>XTST16-16.00</b>	<b>7C216P-16ST</b>








**Holders**

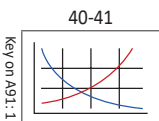
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b>	3xD	51.0	81.3	84.2	131.3	50	20	3.18*	YES	<b>ST03160-20FM</b>
	5xD	84.9	115.3	118.2	165.3	50	20	3.18*	YES	<b>ST05160-20FM</b>
	7xD	118.9	149.3	152.2	199.3	50	20	3.18*	YES	<b>ST07160-20FM</b>
<b>i</b>	3xD	3-1/64	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	YES	<b>ST03160-075F</b>
	5xD	3-23/64	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	YES	<b>ST05160-075F</b>
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	YES	<b>ST07160-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					Admissible Tightening Torque*
72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)

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



**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10

**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

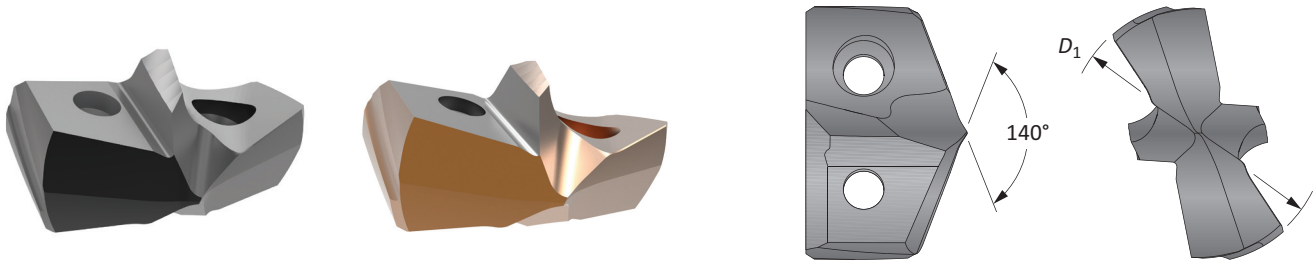
T-A® Structural Steel

Cutting Data & Guaranteed Application Forms





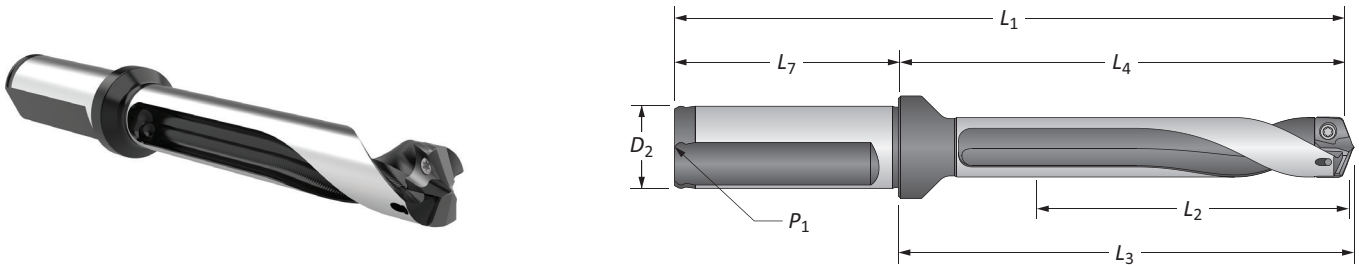
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

17 Series | Diameter Range: 17.00mm - 17.99mm (0.6693" - 0.7086")



**inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
17.00	0.6693	–	<b>XTST17-17.00</b>	<b>7C217P-17ST</b>
17.46	0.6875	11/16	<b>XTST17-17.46</b>	<b>7C217P-0022ST</b>




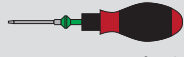



**holders**

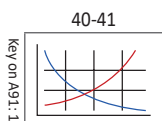
Length	Body				Shank				Part No.
	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b> 3xD	54.0	84.1	87.0	134.1	50	20	3.18*	YES	<b>ST03170-20FM</b>
5xD	89.9	120.0	122.9	170.0	50	20	3.18*	YES	<b>ST05170-20FM</b>
7xD	125.9	156.0	158.9	206.0	50	20	3.18*	YES	<b>ST07170-20FM</b>
<b>i</b> 3xD	2-1/8	3-5/16	3-27/64	5-11/32	2-1/32	3/4	1/8	YES	<b>ST03170-075F</b>
5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	1/8	YES	<b>ST05170-075F</b>
7xD	4-31/32	6-9/64	6-1/4	8-11/64	2-1/32	3/4	1/8	YES	<b>ST07170-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					Admissible Tightening Torque*
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  $\mu = 0.14$  and develop 90% of ultimate yield strength



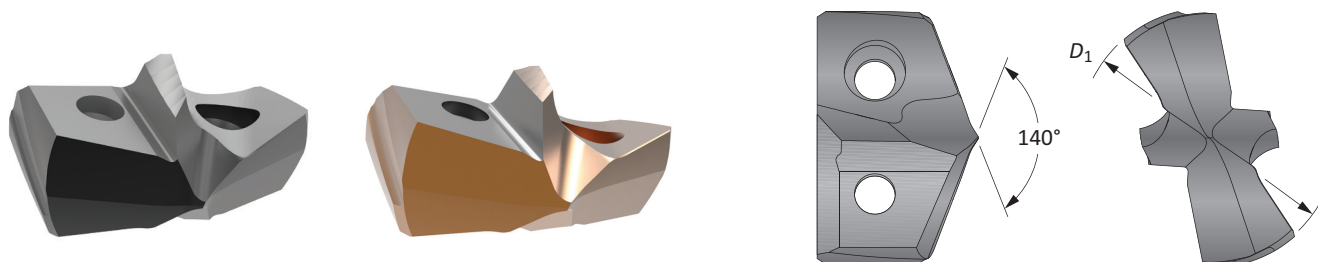
**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

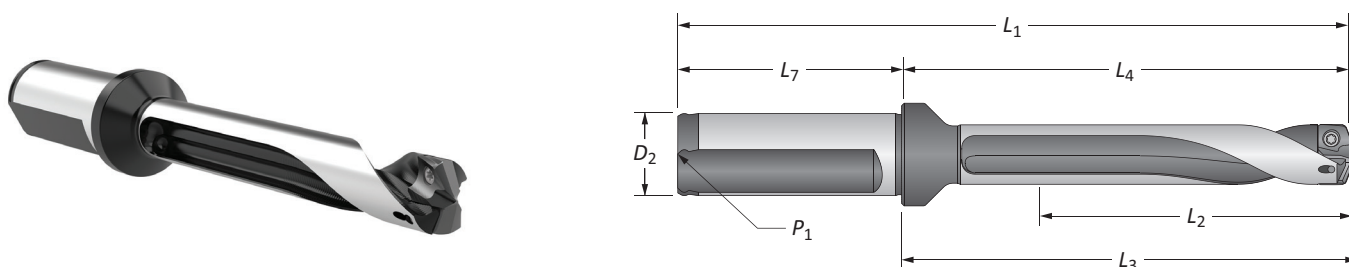
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

18 Series | Diameter Range: 18.00mm - 19.99mm (0.7087" - 0.7873")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
18.00	0.7087	-	<b>XTST18-18.00</b>	<b>7C218P-18ST</b>
19.00	0.7480	-	<b>XTST18-19.00</b>	<b>7C218P-19ST</b>




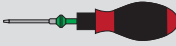



**Holders**

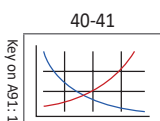
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b>	3xD	60.0	94.0	97.1	144.0	50	20	3.18*	YES	<b>ST03180-20FM</b>
	5xD	99.9	134.0	137.1	184.0	50	20	3.18*	YES	<b>ST05180-20FM</b>
	7xD	139.9	174.0	177.1	224.0	50	20	3.18*	YES	<b>ST07180-20FM</b>
<b>i</b>	3xD	2-3/8	3-45/64	3-53/64	5-63/64	2-9/32	1	1/8	YES	<b>ST03180-075F</b>
	5xD	3-15/16	5-9/32	5-25/64	7-9/16	2-9/32	1	1/8	YES	<b>ST05180-075F</b>
	7xD	5-33/64	6-27/32	6-31/32	9-1/8	2-9/32	1	1/8	YES	<b>ST07180-075F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					Admissible Tightening Torque*
7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

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



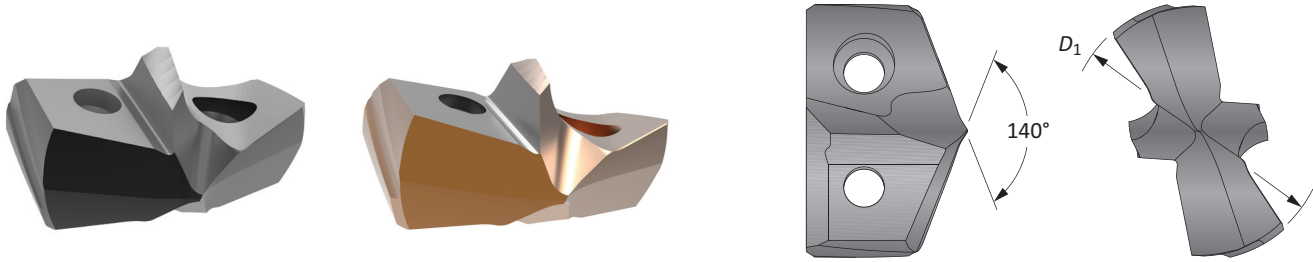
**m** = Metric (mm)  
**i** = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

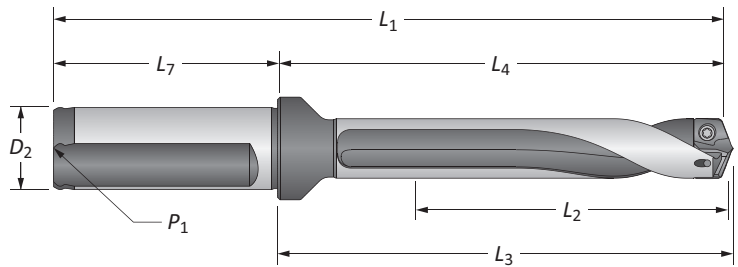
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

20 Series | Diameter Range: 20.00mm - 21.99mm (0.7874" - 0.8660")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
20.00	0.7874	–	<b>XTST20-20.00</b>	<b>7C220P-20ST</b>
20.64	0.8125	13/16	<b>XTST20-20.64</b>	<b>7C220P-0026ST</b>
21.00	0.8268	–	<b>XTST20-21.00</b>	<b>7C220P-21ST</b>
21.82	0.8594	55/64	<b>XTST20-21.82</b>	<b>7C220P-0026ST</b>



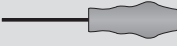
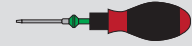



**HOLDERS**

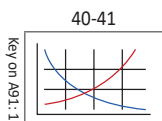
Length	Body				Shank				Part No.
	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b> 3xD	66.0	100.1	103.3	156.1	56	25	3.18*	YES	<b>ST03200-25FM</b>
<b>m</b> 5xD	110.0	144.1	147.2	200.1	56	25	3.18*	YES	<b>ST05200-25FM</b>
<b>m</b> 7xD	153.9	188.1	191.2	244.1	56	25	3.18*	YES	<b>ST07200-25FM</b>
<b>i</b> 3xD	2-17/32	3-15/16	4-1/16	6-7/32	2-9/32	1	1/8	YES	<b>ST03200-100F</b>
<b>i</b> 5xD	4-11/32	5-43/64	5-51/64	7-61/64	2-9/32	1	1/8	YES	<b>ST05200-100F</b>
<b>i</b> 7xD	6-1/16	7-13/32	7-17/32	9-11/16	2-9/32	1	1/8	YES	<b>ST07200-100F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					Admissible Tightening Torque*
7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)

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



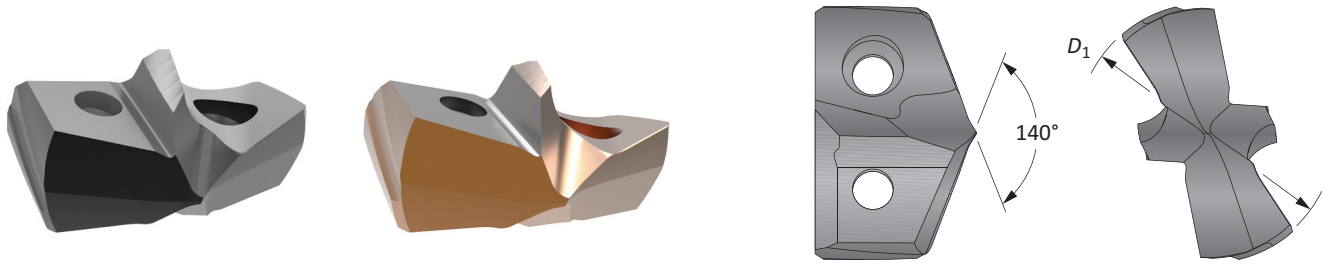
**m** = Metric (mm)  
**i** = Imperial (in)



Inserts sold in multiples of 1 | Screws sold in multiples of 10

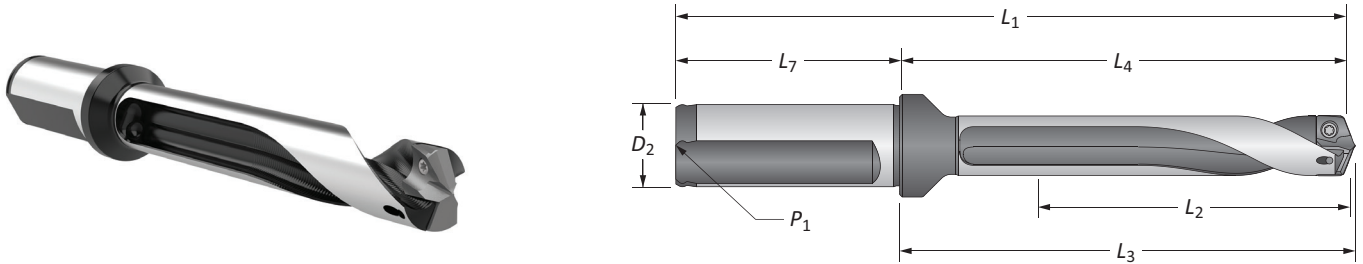
**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

22 Series | Diameter Range: 22.00mm - 23.99mm (0.8661" - 0.9448")


**Inserts**




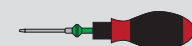

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
22.00	0.8661	–	<b>XTST22-22.00</b>	<b>7C222P-22ST</b>
22.23	0.8750	7/8	<b>XTST22-22.23</b>	<b>7C222P-0028ST</b>
23.00	0.9055	–	<b>XTST22-23.00</b>	<b>7C222P-23ST</b>
23.81	0.9375	15/16	<b>XTST22-23.81</b>	<b>7C222P-0030ST</b>

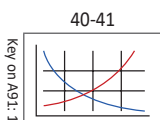

**Holders**

	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
Ⓜ	3xD	72.0	105.3	108.7	161.3	56	25	3.18*	YES	<b>ST03220-25FM</b>
	3xD	72.0	105.3	108.7	161.3	56	25	3.18*	YES	<b>ST03225-25FM**</b>
	5xD	119.9	153.3	156.7	209.3	56	25	3.18*	YES	<b>ST05220-25FM</b>
	5xD	119.9	153.3	156.7	209.3	56	25	3.18*	YES	<b>ST05225-25FM**</b>
	7xD	167.9	201.3	204.7	257.3	56	25	3.18*	YES	<b>ST07220-25FM</b>
	7xD	167.9	201.3	204.7	257.3	56	25	3.18*	YES	<b>ST07225-25FM**</b>
Ⓢ	3xD	2-53/64	4-9/64	4-9/32	6-27/64	2-9/32	1	1/8	YES	<b>ST03220-100F</b>
	3xD	2-53/64	4-9/64	4-9/32	6-27/64	2-9/32	1	1/8	YES	<b>ST03225-100F**</b>
	5xD	4-23/32	6-1/32	6-11/64	8-5/16	2-9/32	1	1/8	YES	<b>ST05220-100F</b>
	5xD	4-23/32	6-1/32	6-11/64	8-5/16	2-9/32	1	1/8	YES	<b>ST05225-100F**</b>
	7xD	6-39/64	7-59/64	8-1/16	10-13/64	2-9/32	1	1/8	YES	<b>ST07220-100F</b>
	7xD	6-39/64	7-59/64	8-1/16	10-13/64	2-9/32	1	1/8	YES	<b>ST07225-100F**</b>

\*Thread to BSP and ISO 7-1 | \*\*Oversized body holder (minimum drill diameter = 23mm)

**Connection Accessories**

					Admissible Tightening Torque*
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  $\mu = 0.14$  and develop 90% of ultimate yield strength


Ⓜ = Metric (mm)

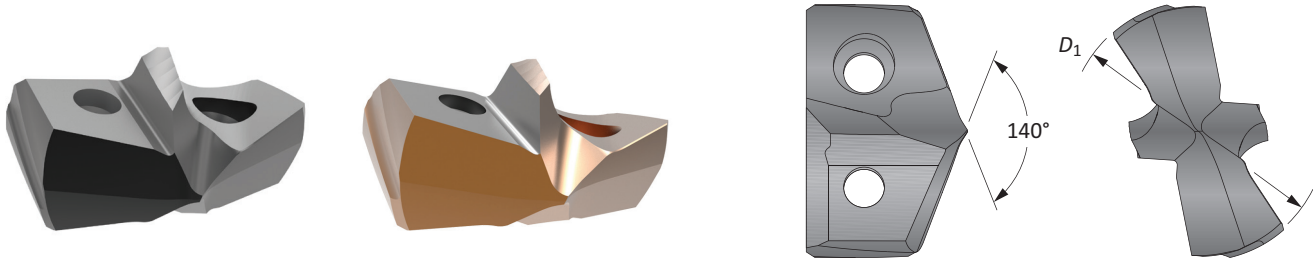
Ⓢ = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

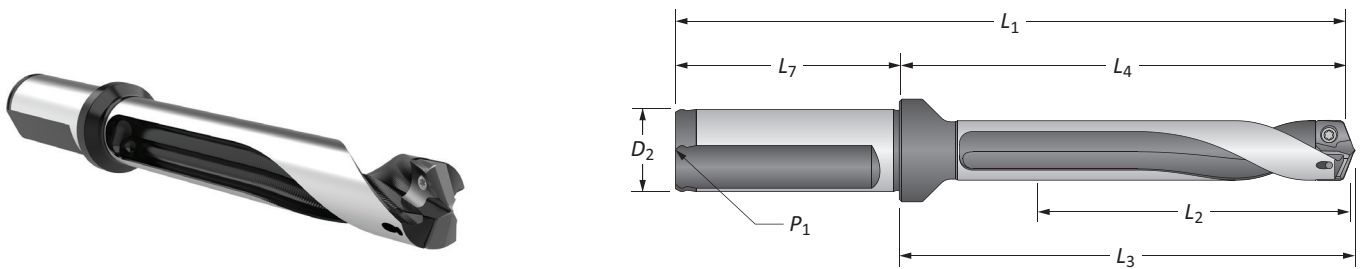
## GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System

24 Series | Diameter Range: 24.00mm - 25.99mm (0.9449" - 1.0235")



### Inserts

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
24.00	0.9449	-	XTST24-24.00	7C224P-24ST
24.60	0.9685	-	XTST24-24.60	-
25.00	0.9843	-	-	7C224P-25ST
25.40	1.0000	1	XTST24-25.40	7C224P-0100ST
25.78	1.0150	-	XTST24-25.78	-



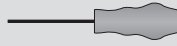
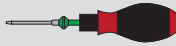



### Holders

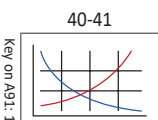
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
m	3xD	78.0	113.8	117.3	169.8	56	25	3.18*	YES	ST03240-25FM
	5xD	129.9	165.8	169.2	221.8	56	25	3.18*	YES	ST05240-25FM
	7xD	181.9	217.8	221.2	273.8	56	25	3.18*	YES	ST07240-25FM
i	3xD	3-5/64	4-31/64	4-5/8	6-49/64	2-9/32	1	1/8	YES	ST03240-100F
	5xD	5-1/8	6-17/32	6-21/32	8-13/16	2-9/32	1	1/8	YES	ST05240-100F
	7xD	7-11/64	8-37/64	8-45/64	10-55/64	2-9/32	1	1/8	YES	ST07240-100F

\*Thread to BSP and ISO 7-1

### Connection Accessories

					Admissible Tightening Torque*
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  $\mu = 0.14$  and develop 90% of ultimate yield strength



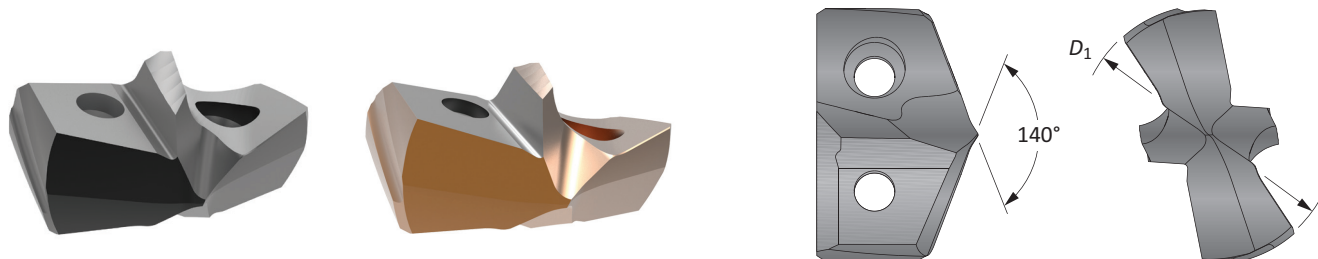
m = Metric (mm)  
i = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

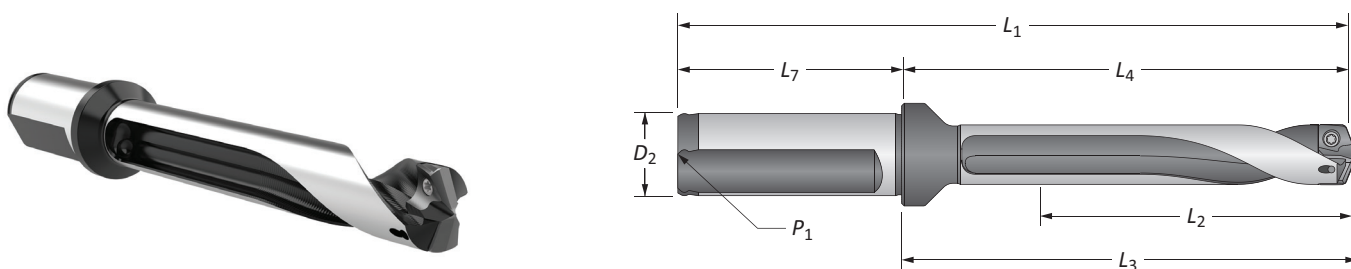
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

26 Series | Diameter Range: 26.00mm - 28.99mm (1.0236" - 1.1416")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
26.00	1.0236	-	XTST26-26.00	7C226P-26ST
26.99	1.0625	1-1/16	XTST26-26.99	7C226P-0102ST
27.00	1.0630	-	XTST26-27.00	7C226P-27ST
28.00	1.1024	-	XTST26-28.00	7C226P-28ST
28.58	1.1250	1-1/8	XTST26-28.58	7C226P-0104ST




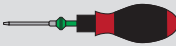



**Holders**

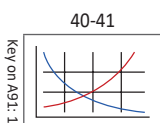
	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
m	3xD	87.0	128.1	131.4	188.1	60	32	6.35*	YES	ST03260-32FM
	5xD	145.0	186.1	189.4	246.1	60	32	6.35*	YES	ST05260-32FM
	7xD	202.9	244.0	247.4	304.0	60	32	6.35*	YES	ST07260-32FM
i	3xD	3-27/64	5-1/16	5-3/16	7-11/32	2-9/32	1-1/4	1/4	YES	ST03260-125F
	5xD	5-23/32	7-11/32	7-31/64	9-5/8	2-9/32	1-1/4	1/4	YES	ST05260-125F
	7xD	7-63/64	9-5/8	9-49/64	11-29/32	2-9/32	1-1/4	1/4	YES	ST07260-125F

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength



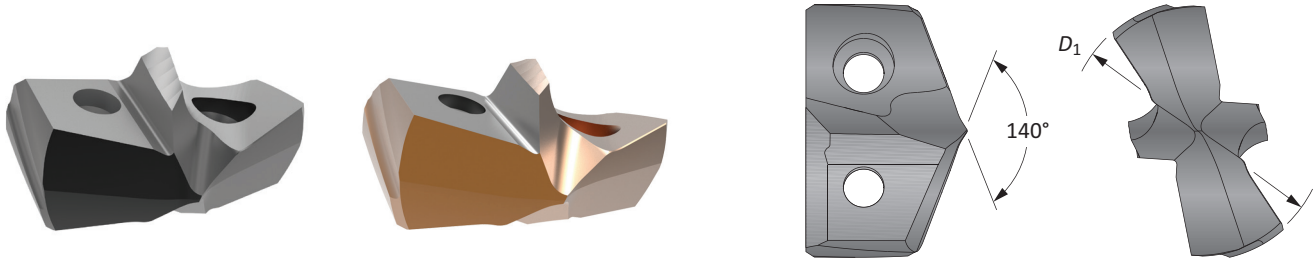
m = Metric (mm)  
i = Imperial (in)

Inserts sold in multiples of 1 | Screws sold in multiples of 10



**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

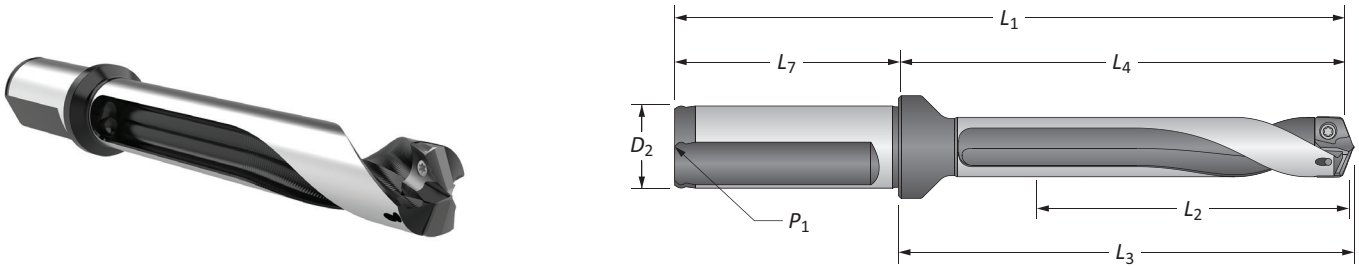
**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

29 Series | Diameter Range: 29.00mm - 31.99mm (1.1417" - 1.2597")



**Inserts**

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
29.00	1.1417	-	<b>XTST29-29.00</b>	<b>7C229P-29ST</b>
30.00	1.1811	-	<b>XTST29-30.00</b>	<b>7C229P-30ST</b>
30.16	1.1875	1-3/16	<b>XTST29-30.16</b>	<b>7C229P-0106ST</b>
30.50	1.2007	-	-	<b>7C229P-30.5ST</b>
31.00	1.2205	-	<b>XTST29-31.00</b>	<b>7C229P-31ST</b>
31.75	1.2500	1-1/4	<b>XTST29-31.75</b>	<b>7C229P-0108ST</b>




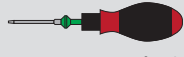



**Holders**

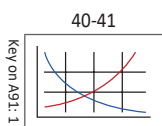
Length	Body				Shank				Part No.
	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
<b>m</b> 3xD	96.0	136.2	139.7	196.2	60	32	6.35*	YES	<b>ST03290-32FM</b>
<b>m</b> 5xD	159.9	200.1	203.7	260.1	60	32	6.35*	YES	<b>ST05290-32FM</b>
<b>m</b> 7xD	223.9	264.1	267.7	324.1	60	32	6.35*	YES	<b>ST07290-32FM</b>
<b>i</b> 3xD	3-25/32	5-3/8	5-33/64	7-21/32	2-9/32	1-1/4	1/4	YES	<b>ST03290-125F</b>
<b>i</b> 5xD	6-19/64	7-29/32	8-3/64	10-3/16	2-9/32	1-1/4	1/4	YES	<b>ST05290-125F</b>
<b>i</b> 7xD	8-13/16	10-27/64	10-9/16	12-45/64	2-9/32	1-1/4	1/4	YES	<b>ST07290-125F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength



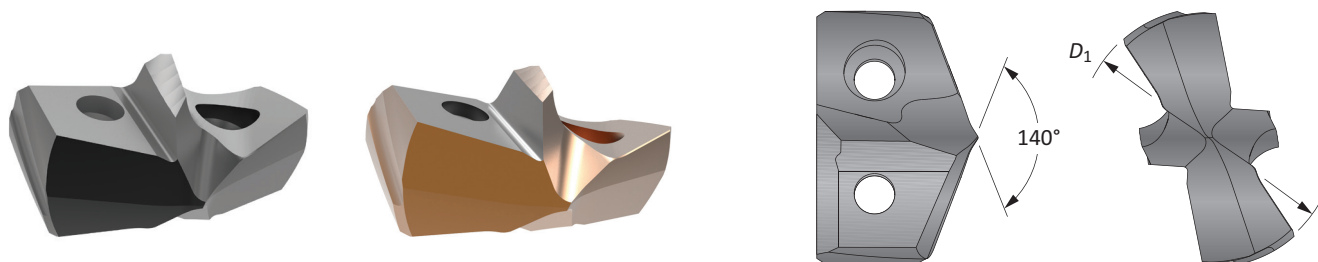
**m** = Metric (mm)  
**i** = Imperial (in)



Inserts sold in multiples of 1 | Screws sold in multiples of 10

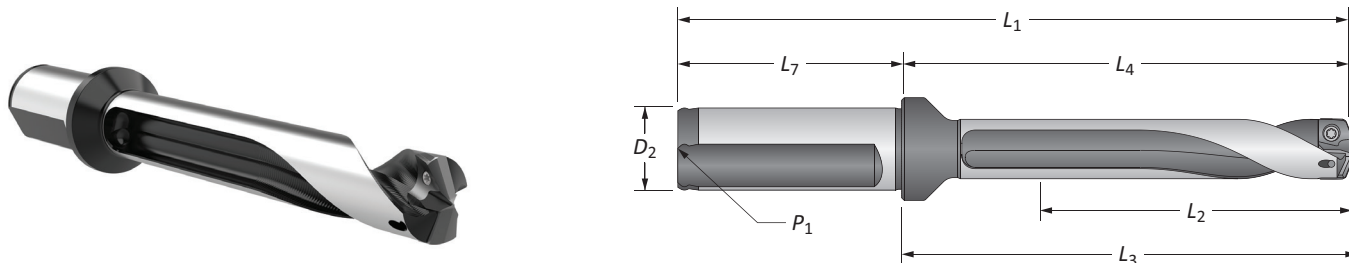
**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.

**GEN3SYS® XT Pro ST / GEN3SYS® XT ST Structural Steel Drilling System**

32 Series | Diameter Range: 32.00mm - 35.00mm (1.2598" - 1.3780")






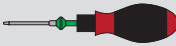

Insert				
$D_1$ mm	$D_1$ inch	Fractional Equivalent	XT Pro ST Part No.	XT ST Part No.
32.00	1.2598	–	<b>XTST32-32.00</b>	<b>7C232P-32ST</b>
33.00	1.2992	–	<b>XTST32-33.00</b>	<b>7C232P-33ST</b>
33.34	1.3125	1-5/16	<b>XTST32-33.34</b>	<b>7C232P-0110ST</b>
34.00	1.3386	–	<b>XTST32-34.00</b>	<b>7C232P-34ST</b>
34.93	1.3750	1-3/8	<b>XTST32-34.93</b>	<b>7C232P-0112ST</b>

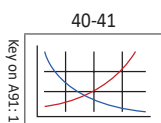

**Holders**

	Length	Body				Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat	
m	3xD	105.0	157.7	162.0	217.7	60	32	6.35*	YES	<b>ST03320-32FM</b>
	3xD	105.0	157.7	162.0	227.7	70	40	6.35*	YES	<b>ST03320-40FM</b>
	5xD	175.0	227.7	232.0	287.7	60	32	6.35*	YES	<b>ST05320-32FM</b>
	5xD	175.0	227.7	232.0	297.7	70	40	6.35*	YES	<b>ST05320-40FM</b>
	7xD	244.9	297.7	302.2	357.7	60	32	6.35*	YES	<b>ST07320-32FM</b>
	7xD	244.9	297.7	302.2	367.7	70	40	6.35*	YES	<b>ST07320-40FM</b>
i	3xD	4-9/64	6-7/32	6-3/8	8-29/32	2-11/16	1-1/2	1/4	YES	<b>ST03320-150F</b>
	5xD	6-59/64	8-31/32	9-1/8	11-21/32	2-11/16	1-1/2	1/4	YES	<b>ST05320-150F</b>
	7xD	9-41/64	11-23/32	11-57/64	14-13/32	2-11/16	1-1/2	1/4	YES	<b>ST07320-150F</b>

\*Thread to BSP and ISO 7-1

**Connection Accessories**

					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  $\mu = 0.14$  and develop 90% of ultimate yield strength

 m = Metric (mm)  
 i = Imperial (in)

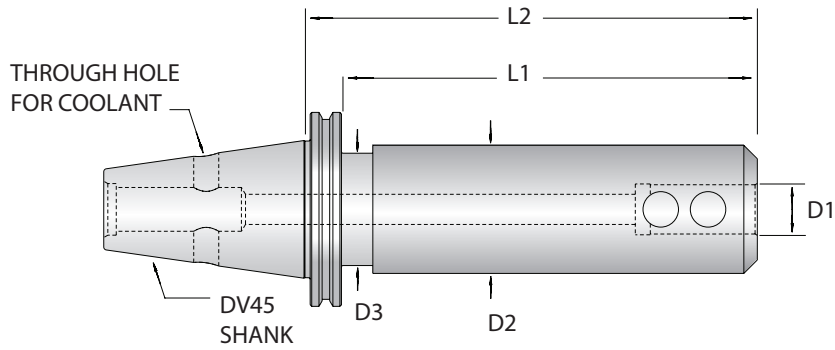
Inserts sold in multiples of 1 | Screws sold in multiples of 10

**NOTICE:** GEN3SYS XT Structural Steel holders are specifically designed to be used only with XT Pro ST or XT ST geometry inserts. Using other GEN3SYS XT Pro or XT insert geometries in these holders could lead to chip packing and tool failure. Contact Application Engineering for questions regarding proper use of tools.



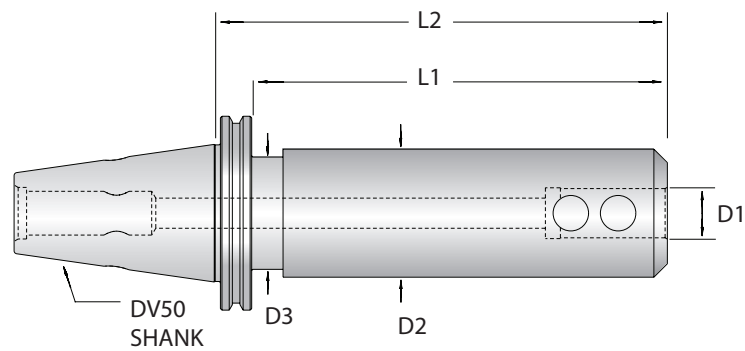
## Structural Steel Adaptors

### DV45 & DV50 Adaptors



#### DV45 Adaptor

Item Number	Outer Taper	D1 Inner $\phi$ mm	D2 $\phi$	D3 $\phi$	L1	L2	Qty of Clamping Screws
AMDV45-EM20-120	DV45	20	52	57	101	120	1
AMDV45-EM25-120	DV45	25	65	57	101	120	2
AMDV45-EM32-120	DV45	32	78	57	101	120	2
AMDV45-EM20-230	DV45	20	52	57	211	230	1
AMDV45-EM25-230	DV45	25	65	57	211	230	2
AMDV45-EM32-230	DV45	32	78	57	211	230	2



#### DV50 Adaptor

Item Number	Outer Taper	D1 Inner $\phi$ mm	D2 $\phi$	D3 $\phi$	L1	L2	Qty of Clamping Screws
AMDV45-EM50-120	DV50	50	100	69.858	100	120	2



## T-A® Structural Steel Drilling System

GEN3SYS®XT ST and Pro ST

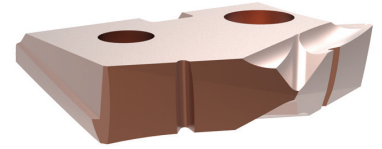
T-A® Structural Steel

Cutting Data & Guaranteed Application Forms

# STRUCTURAL STEEL ENHANCEMENTS T-A® Original & GEN2 T-A®

### GEN2 T-A® Insert

Available in AM200® Coating

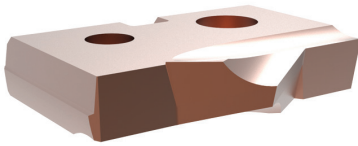


#### High Efficiency (-HE)

- Improves performance
- Improves tool life
- Improves chip formation in structural steel materials

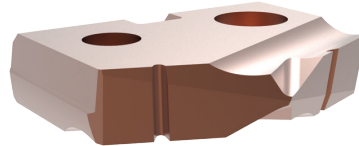
### T-A® Original Inserts

Available in AM200® and TiAlN Coatings



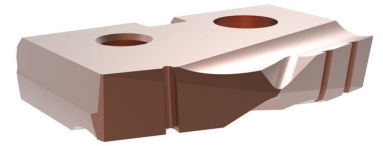
#### Thin Wall (-TW)

- Designed for drilling 6mm thick or less H-Beam or structural materials
- Increases hole diameter tolerance
- Improves hole roundness
- Decreases material deflection



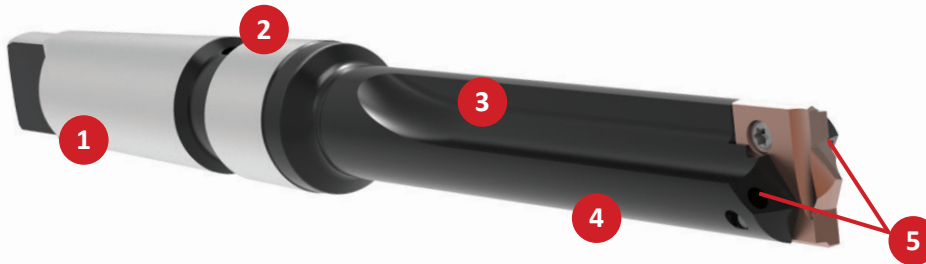
#### Notch Point® (-NP)

- Provides excellent self-centring characteristics
- Reduces bell mouth and tool lead-off
- Reduces axial thrust requirements



#### Structural Steel (-SS)

- Designed for drilling 6mm thick or thicker H-Beam or structural materials
- Reduces exit burrs
- Increases stability
- Lowers drilling forces
- Includes Notch Point® web geometry



#### Holder Anatomy

1. Morse Taper Shank
2. Coolant Inlet
3. Flute (straight or helical)
4. Built-up Body Diameter
5. Coolant Outlets



Straight Flute

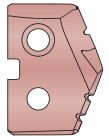


Helical Flute

## T-A® Drill Nomenclature

### T-A® Drill Inserts

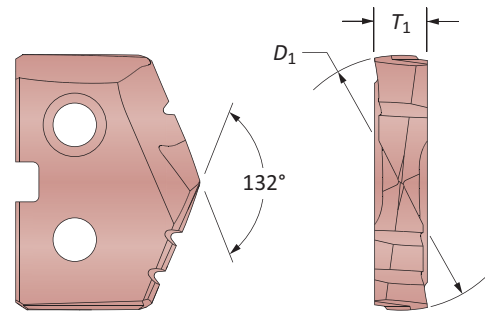
<b>4</b>	<b>5</b>	<b>3</b>	<b>H</b>	-	<b>0115</b>	-	<b>HE</b>
1	2	3	4		5		6



1. Insert	2. Material	3. Series	4. Coating	5. Diameter	6. Geometry
1 = T-A® Original 4 = GEN2 T-A®	5 = Super cobalt C1 = C1 (K35) carbide	0 = 0 series 1 = 1 series 2 = 2 series 3 = 3 series	H = AM200® A = TiAlN	13 = Metric .515 = Decimal 0017 = Inch	TW = Thin Wall NP = Notch Point® SS = Structural Steel HE = High Efficiency

#### Reference Key

Symbol	Attribute
$D_1$	Insert diameter
$T_1$	Insert thickness



### T-A® Drill Holders

<b>2</b>	<b>40</b>	<b>20</b>	<b>S</b>	-	<b>004</b>	<b>IS</b>	<b>060</b>
1	2	3	4		5	6	7

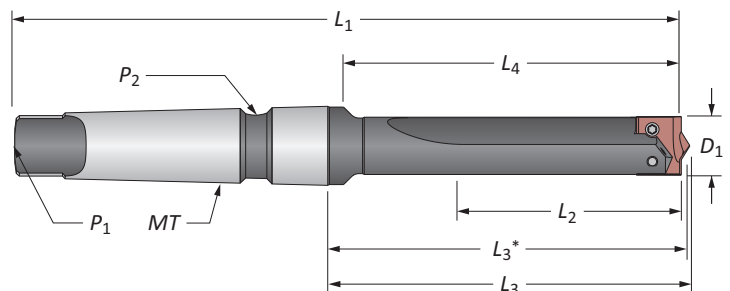


1. Holder	2. Length	3. Series	4. Flute
2 = T-A® holder	20 = Short 40 = Standard 50 = Extended 60 = Long	00 = 0 series 05 = 0.5 series 10 = 1 series 15 = 1.5 series 20 = 2 series 25 = 2.5 series 30 = 3 series	S = Straight H = Helical
5. Shank Designator	6. Shank Code	7. Minimum Insert Diameter	
003 = 3MT 004 = 4MT	IS = Imperial Morse taper structural steel	In increments of 0.4mm (1/64")	

#### Reference Key

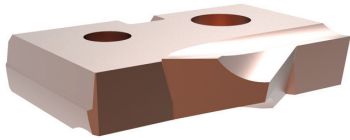
Symbol	Attribute	Symbol	Attribute
$D_1$	Drill insert range	$L_4$	Flute length
$L_1$	Overall length	$P_1$	Rear pipe tap
$L_2$	Drill depth	$P_2$	Side pipe tap
$L_3$	Holder reference length	$MT$	Morse taper size
$L_3^*$	Holder reference length		

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

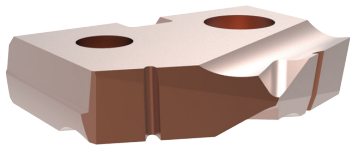
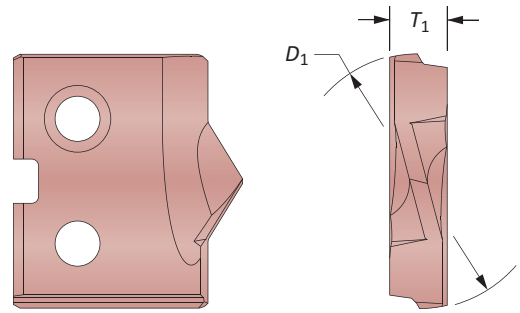


## T-A® Original Structural Steel Drill Inserts

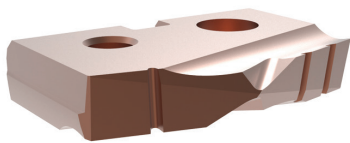
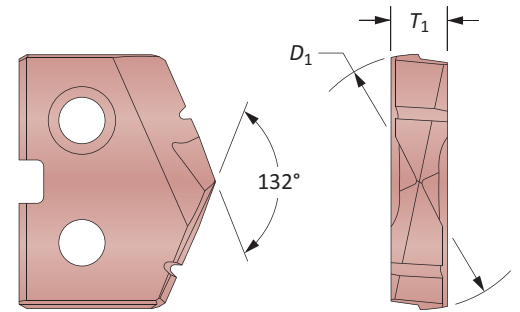
0 Series | Diameter Range: 14.00mm - 17.46mm (0.5512" - 0.6875")



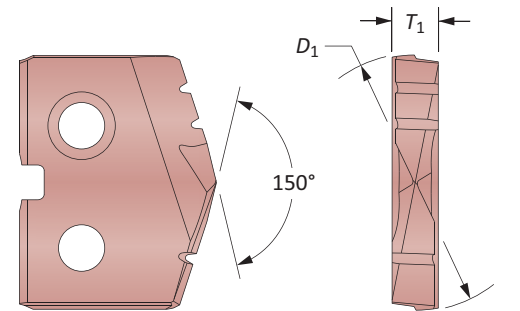
**Thin Wall**  
For material up to 6mm thick









**Notch Point®**  
For material over 6mm thick



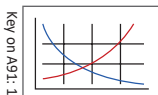
**150° Structural Steel**  
For material over 6mm thick and for reduced exit burr



### HSS Inserts – Super Cobalt

Series	Insert				Thin Wall		Notch Point		150° Structural Steel	
	Fractional Equivalent	$D_1$ mm	$D_1$ inch	$T_1$	 AM200 Part No.	 TiAlN Part No.	 AM200 Part No.	 TiAlN Part No.	 AM200 Part No.	 TiAlN Part No.
0	–	14.00	0.5512	3.18	150H-14-TW	150A-14-TW	150H-14-NP	150A-14-NP	150H-14-SS	150A-14-SS
	9/16	14.29	0.5625	3.18	150H-0018-TW	150A-0018-TW	150H-0018-NP	150A-0018-NP	150H-0018-SS	150A-0018-SS
0.5	5/8	15.88	0.6250	3.18	150H-0020-TW	150A-0020-TW	150H-0020-NP	150A-0020-NP	150H-0020-SS	150A-0020-SS
	–	16.00	0.6299	3.18	150H-16-TW	150A-16-TW	150H-16-NP	150A-16-NP	150H-16-SS	150A-16-SS
	11/16	17.46	0.6875	3.18	150H-0022-TW	150A-0022-TW	150H-0022-NP	150A-0022-NP	150H-0022-SS	150A-0022-SS

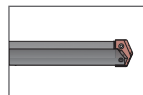
40-41



A91: 5



A91: 22 - 23

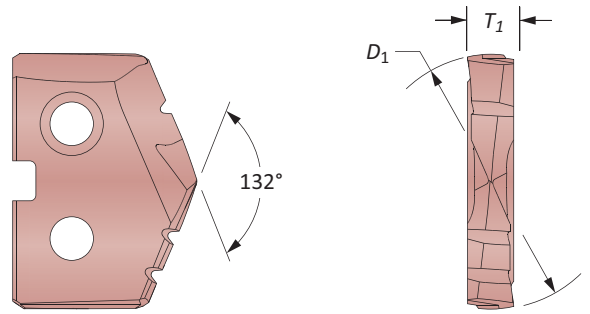
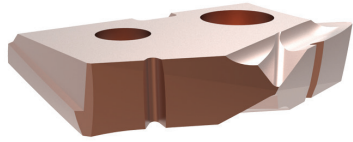


Key on A91: 1



Inserts sold in multiples of 2

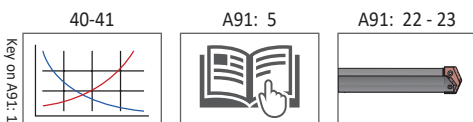
## GEN2 T-A® Structural Steel Drill Inserts

0 Series | Diameter Range: 14.00mm - 17.46mm (0.5512" - 0.6875")



HSS Inserts – Super Cobalt | Carbide Inserts – C1 (K35)

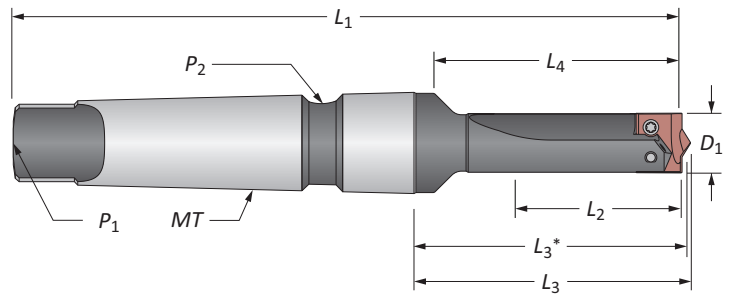
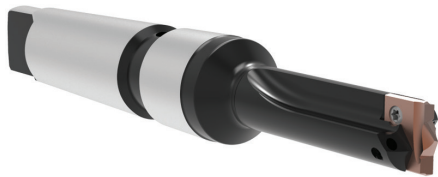
Series	Fractional Equivalent	Insert			Part No.	
		$D_1$ mm	$D_1$ inch	$T_1$	 Super Cobalt	 C1 (K35)
0	–	14.00	0.5512	3.18	<b>450H-14-HE</b>	<b>4C10H-14-HE</b>
	9/16	14.29	0.5625	3.18	<b>450H-0018-HE</b>	<b>4C10H-0018-HE</b>
0.5	5/8	15.88	0.6250	3.18	<b>450H-0020-HE</b>	<b>4C10H-0020-HE</b>
	–	16.00	0.6299	3.18	<b>450H-16-HE</b>	<b>4C10H-16-HE</b>
	11/16	17.46	0.6875	3.18	<b>450H-0022-HE</b>	<b>4C10H-0022-HE</b>



Inserts sold in multiples of 2

## T-A® Structural Steel Drill Insert Holders

0 Series | Taper Shank



### Straight Flute #3 Morse Taper

Series	Length	$D_1$	Body					Shank			Part No.	
			$L_2$	$L_4$	$L_3$	$L_3^*$	$L_1$	$MT$	$P_1$	$P_2$		
m	0	Short	14	35	56	64.7	63.1	154	#3	TTC	TSC	22000S-003IS036
		Short	16	35	56	64.7	63.1	154	#3	TTC	TSC	22000S-003IS040
		Short	17.46	35	56	64.7	63.1	154	#3	TTC	TSC	22000S-003IS044
i	0	Short	9/16	1-3/8	2-3/16	2-35/64	2-31/64	6-1/16	#3	TTC	TSC	22000S-003IS036
		Short	5/8	1-3/8	2-3/16	2-35/64	2-31/64	6-1/16	#3	TTC	TSC	22005S-003IS040
		Short	11/16	1-3/8	2-3/16	2-35/64	2-31/64	6-1/16	#3	TTC	TSC	22005S-003IS044

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

### Connection Accessories

Series	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
0	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	175 N-cm (15.5 in-lbs)
0.5	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  $\mu = 0.14$  and develop 90% of ultimate yield strength

A91: 5

A91: 20 - 21

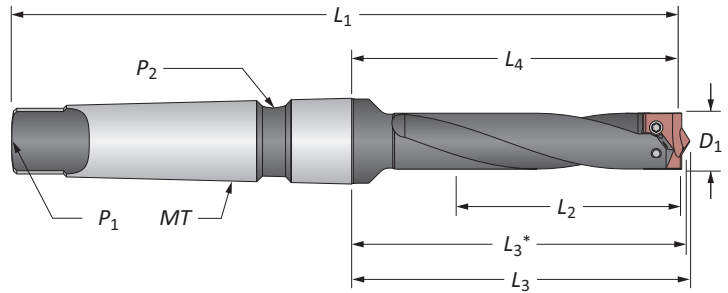


m = Metric (mm)  
i = Imperial (in)

Screws sold in multiples of 10

## T-A® Structural Steel Drill Insert Holders

0 Series | Taper Shank



### Helical Flute #3 Morse Taper

Series	Length	D <sub>1</sub>	Body					Shank			Part No.	
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>	P <sub>2</sub>		
m	0	14	64	84	93.3	91.7	183	#3	TTC	TSC	24000H-003IS036	
	Extended	14	165	240	248.8	243.7	338	#3	TTC	TSC	<b>⚠ 25000H-003IS036</b>	
m	0.5	Standard	64	84	93.3	91.7	183	#3	TTC	TSC	24005H-003IS040	
		Standard	17.46	64	84	93.3	91.7	183	#3	TTC	TSC	24005H-003IS044
	Extended	17.46	165	240	248.8	243.7	338	#3	TTC	TSC	<b>⚠ 25005H-003IS044</b>	
i	0	Standard	2-1/2	3-5/16	3-43/64	3-39/64	7-3/16	#3	TTC	TSC	24000H-003IS036	
		Extended	6-1/2	9-7/16	9-51/64	9-19/32	13-5/64	#3	TTC	TSC	<b>⚠ 25000H-003IS036</b>	
	0.5	Standard	2-1/2	3-5/16	3-43/64	3-39/64	7-3/16	#3	TTC	TSC	24005H-003IS040	
		Standard	11/16	2-1/2	3-5/16	3-43/64	3-39/64	7-3/16	#3	TTC	TSC	24005H-003IS044
		Extended	11/16	6-1/2	9-7/16	9-51/64	9-19/32	13-5/64	#3	TTC	TSC	<b>⚠ 25005H-003IS044</b>

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

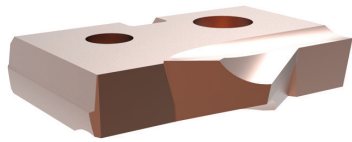
m = Metric (mm)  
i = Imperial (in)

Screws sold in multiples of 10

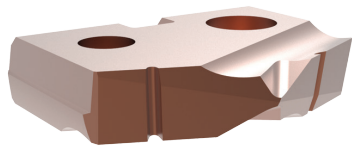
**⚠ WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A91: 35 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com/deepholeguidelines.aspx](http://www.alliedmachine.com/deepholeguidelines.aspx) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

## T-A® Original Structural Steel Drill Inserts

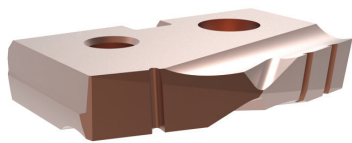
1 Series | Diameter Range: 18.00mm - 24.00mm (0.7087" - 0.9449")



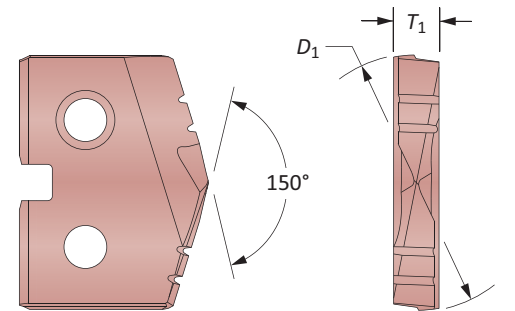
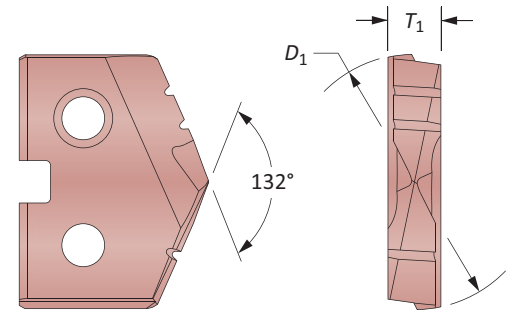
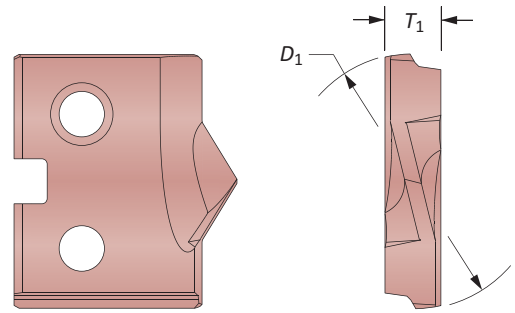
**Thin Wall**  
For material up to 6mm thick









**Notch Point®**  
For material over 6mm thick



**150° Structural Steel**  
For material over 6mm thick and for reduced exit burr



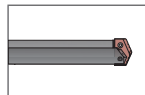
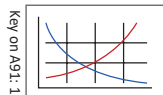
### HSS Inserts – Super Cobalt

Series	Insert				Thin Wall		Notch Point		150° Structural Steel	
	Fractional Equivalent	$D_1$ mm	$D_1$ inch	$T_1$	 AM200 Part No.	 TiAlN Part No.	 AM200 Part No.	 TiAlN Part No.	 AM200 Part No.	 TiAlN Part No.
1	–	18.00	0.7087	3.97	151H-18-TW	151A-18-TW	151H-18-NP	151A-18-NP	151H-18-SS	151A-18-SS
	13/16	20.64	0.8125	3.97	151H-0026-TW	151A-0026-TW	151H-0026-NP	151A-0026-NP	151H-0026-SS	151A-0026-SS
	–	21.00	0.8268	3.97	151H-21-TW	151A-21-TW	151H-21-NP	151A-21-NP	151H-21-SS	151A-21-SS
	–	22.00	0.8661	3.97	151H-22-TW	151A-22-TW	151H-22-NP	151A-22-NP	151H-22-SS	151A-22-SS
1.5	7/8	22.23	0.8750	3.97	151H-0028-TW	151A-0028-TW	151H-0028-NP	151A-0028-NP	151H-0028-SS	151A-0028-SS
	15/16	23.81	0.9375	3.97	151H-0030-TW	151A-0030-TW	151H-0030-NP	151A-0030-NP	151H-0030-SS	151A-0030-SS
	–	24.00	0.9449	3.97	151H-24-TW	151A-24-TW	151H-24-NP	151A-24-NP	151H-24-SS	151A-24-SS

40-41

A91: 5

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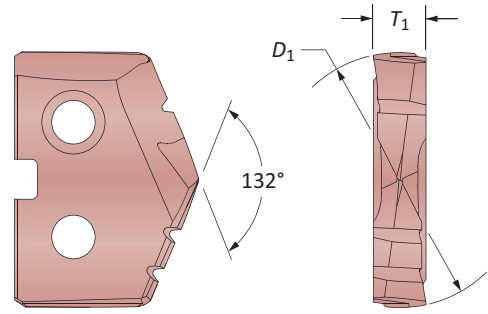
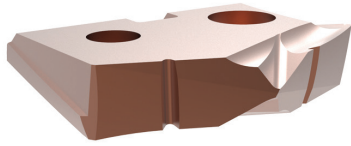


Inserts sold in multiples of 2





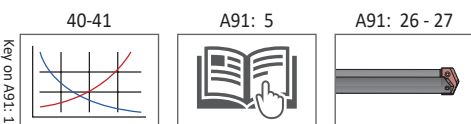
## GEN2 T-A® Structural Steel Drill Inserts

1 Series | Diameter Range: 18.00mm - 24.00mm (0.7087" - 0.9449")



HSS Inserts – Super Cobalt | Carbide Inserts – C1 (K35)

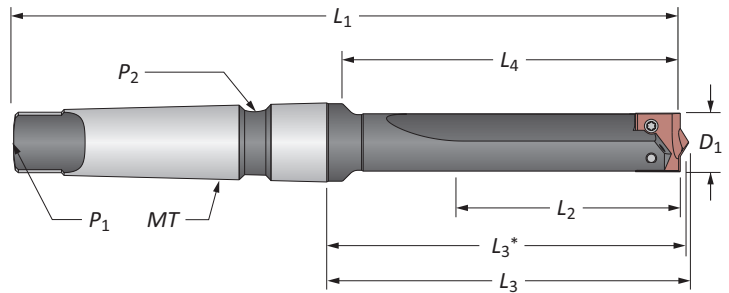
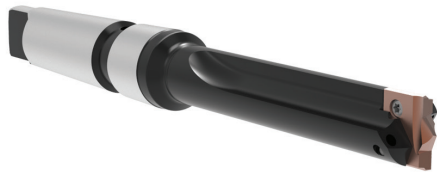
Series	Fractional Equivalent	Insert			Part No.	
		$D_1$ mm	$D_1$ inch	$T_1$	 Super Cobalt	 C1 (K35)
1	–	18.00	0.7087	3.97	<b>451H-18-HE</b>	<b>4C11H-18-HE</b>
	13/16	20.64	0.8125	3.97	<b>451H-0026-HE</b>	<b>4C11H-0026-HE</b>
	–	21.00	0.8268	3.97	<b>451H-21-HE</b>	<b>4C11H-21-HE</b>
	–	22.00	0.8661	3.97	<b>451H-22-HE</b>	<b>4C11H-22-HE</b>
1.5	7/8	22.23	0.8750	3.97	<b>451H-0028-HE</b>	<b>4C11H-0028-HE</b>
	15/16	23.81	0.9375	3.97	<b>451H-0030-HE</b>	<b>4C11H-0030-HE</b>
	–	24.00	0.9449	3.97	<b>451H-24-HE</b>	<b>4C11H-24-HE</b>



Inserts sold in multiples of 2

## T-A® Structural Steel Drill Insert Holders

1 Series | Taper Shank



### Straight Flute #3 Morse Taper

Series	Length	$D_1$	Body					Shank			Part No.	
			$L_2$	$L_4$	$L_3$	$L_3^*$	$L_1$	MT	$P_1$	$P_2$		
m	1	Short	18	70	98	108.4	106.8	197	#3	TTC	TSC	22010S-003IS045
		Short	20.64	70	98	108.4	106.8	197	#3	TTC	TSC	22010S-003IS052
m	1.5	Short	22	70	98	108.4	106.8	197	#3	TTC	TSC	22015S-003IS056
		Short	24	70	98	108.4	106.8	197	#3	TTC	TSC	22015S-003IS060
i	1	Short	18mm	2-3/4	3-7/8	4-17/64	4-13/64	7-3/4	#3	TTC	TSC	22010S-003IS045
		Short	13/16	2-3/4	3-7/8	4-17/64	4-13/64	7-3/4	#3	TTC	TSC	22010S-003IS052
i	1.5	Short	7/8	2-3/4	3-7/8	4-17/64	4-13/64	7-3/4	#3	TTC	TSC	22015S-003IS056
		Short	15/16	2-3/4	3-7/8	4-17/64	4-13/64	7-3/4	#3	TTC	TSC	22015S-003IS060

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

### Straight Flute #4 Morse Taper

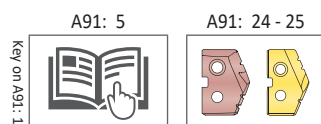
Series	Length	$D_1$	Body					Shank			Part No.	
			$L_2$	$L_4$	$L_3$	$L_3^*$	$L_1$	MT	$P_1$	$P_2$		
m	1	Short	18	70	98	109.9	108.3	222	#4	TTC	TSC	22010S-004IS045
		Short	20.64	70	98	109.9	108.3	222	#4	TTC	TSC	22010S-004IS052
m	1.5	Short	22	70	98	109.9	108.3	222	#4	TTC	TSC	22015S-004IS056
		Short	24	70	98	109.9	108.3	222	#4	TTC	TSC	22015S-004IS060
i	1	Short	18mm	2-3/4	3-7/8	4-21/64	4-17/64	8-3/4	#4	TTC	TSC	22010S-004IS045
		Short	13/16	2-3/4	3-7/8	4-21/64	4-17/64	8-3/4	#4	TTC	TSC	22010S-004IS052
i	1.5	Short	7/8	2-3/4	3-7/8	4-21/64	4-17/64	8-3/4	#4	TTC	TSC	22015S-004IS056
		Short	15/16	2-3/4	3-7/8	4-21/64	4-17/64	8-3/4	#4	TTC	TSC	22015S-004IS060

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

### Connection Accessories

Series	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
1	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	305 N-cm (27.0 in-lbs)
1.5	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  $\mu = 0.14$  and develop 90% of ultimate yield strength

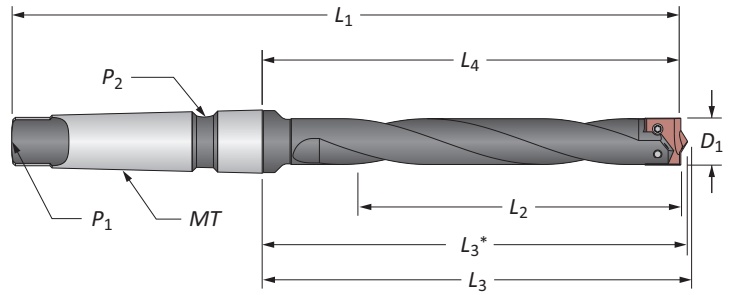
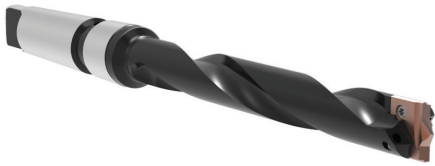


m = Metric (mm)  
i = Imperial (in)

Screws sold in multiples of 10

# T-A® Structural Steel Drill Insert Holders

1 Series | Taper Shank



## Helical Flute #3 Morse Taper

Series	Length	D <sub>1</sub>	Body					Shank			Part No.	
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>	P <sub>2</sub>		
m	1	Standard	18	121	149	159.2	157.6	248	#3	TTC	TSC	24010H-003IS045
		Standard	20.64	121	149	159.2	157.6	248	#3	TTC	TSC	24010H-003IS052
	Extended	18	165	237	247.3	241.3	336	#3	TTC	TSC	▲ 25010H-003IS045	
		22	165	237	247.3	241.3	336	#3	TTC	TSC	▲ 25010H-003IS052	
	1.5	Standard	22	121	149	159.2	157.6	248	#3	TTC	TSC	24015H-003IS056
		Standard	24	121	149	159.2	157.6	248	#3	TTC	TSC	24015H-003IS060
Extended	24	165	237	247.3	234.5	336	#3	TTC	TSC	▲ 25015H-003IS060		
i	1	Standard	18mm	4-3/4	5-7/8	6-17/64	6-13/64	9-3/4	#3	TTC	TSC	24010H-003IS045
		Standard	13/16	4-3/4	5-7/8	6-17/64	6-13/64	9-3/4	#3	TTC	TSC	24010H-003IS052
	Extended	18mm	6-1/2	9-11/32	9-47/64	9-1/2	13-7/32	#3	TTC	TSC	▲ 25010H-003IS045	
		13/16	6-1/2	9-11/32	9-47/64	9-1/2	13-7/32	#3	TTC	TSC	▲ 25010H-003IS052	
	1.5	Standard	7/8	4-3/4	5-7/8	6-17/64	6-13/64	9-3/4	#3	TTC	TSC	24015H-003IS056
		Standard	15/16	4-3/4	5-7/8	6-17/64	6-13/64	9-3/4	#3	TTC	TSC	24015H-003IS060
Extended	15/16	6-1/2	9-11/32	9-47/64	9-15/32	13-7/32	#3	TTC	TSC	▲ 25015H-003IS060		

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

## Helical Flute #4 Morse Taper

Series	Length	D <sub>1</sub>	Body					Shank			Part No.	
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>	P <sub>2</sub>		
m	1	Standard	18	121	149	159.2	157.6	248	#4	TTC	TSC	24010H-004IS045
		Standard	20.64	121	149	159.2	157.6	248	#4	TTC	TSC	24010H-004IS056
	Extended	20.64	165	237	247.3	241.3	336	#4	TTC	TSC	▲ 25010H-004IS056	
		Long	20.64	165	237	247.3	241.3	336	#4	TTC	TSC	▲ 26010H-004IS056
	1.5	Standard	22	121	149	159.2	157.6	248	#4	TTC	TSC	24015H-004IS056
		Standard	24	121	149	159.2	157.6	248	#4	TTC	TSC	24015H-004IS060
Extended	24	165	149	159.2	157.6	248	#4	TTC	TSC	▲ 25015H-004IS060		
Long	24	165	237	247.3	234.5	336	#4	TTC	TSC	▲ 26015H-004IS060		
i	1	Standard	18mm	4-3/4	5-7/8	6-21/64	6-17/64	10-3/4	#4	TTC	TSC	24010H-004IS045
		Standard	13/16	4-3/4	5-7/8	6-21/64	6-17/64	10-3/4	#4	TTC	TSC	24010H-004IS052
	Extended	13/16	6-1/2	9-9/32	9-47/64	9-43/64	14-5/32	#4	TTC	TSC	▲ 25010H-004IS052	
		Long	13/16	6-1/2	15-25/32	16-15/64	16-11/64	20-21/32	#4	TTC	TSC	▲ 26010H-004IS052
	1.5	Standard	7/8	4-3/4	5-7/8	6-21/64	6-17/64	10-3/4	#4	TTC	TSC	24015H-004IS056
		Standard	15/16	4-3/4	5-7/8	6-21/64	6-17/64	10-3/4	#4	TTC	TSC	24015H-004IS060
Extended	15/16	6-1/2	9-9/32	9-47/64	9-43/64	14-5/32	#4	TTC	TSC	▲ 25015H-004IS060		
Long	15/16	6-1/2	15-13/16	16-17/64	16-13/64	20-11/16	#4	TTC	TSC	▲ 26015H-004IS060		

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

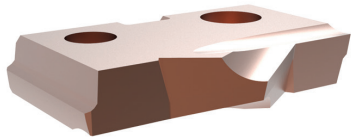
m = Metric (mm)  
i = Imperial (in)

Screws sold in multiples of 10

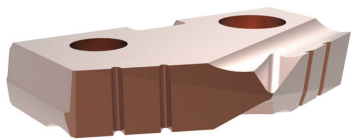
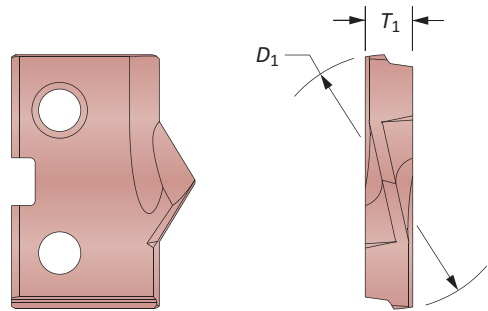
**WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A91: 35 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com/deepholeguidelines.aspx](http://www.alliedmachine.com/deepholeguidelines.aspx) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

T-A® Original Structural Steel Drill Inserts

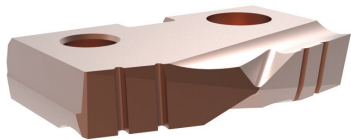
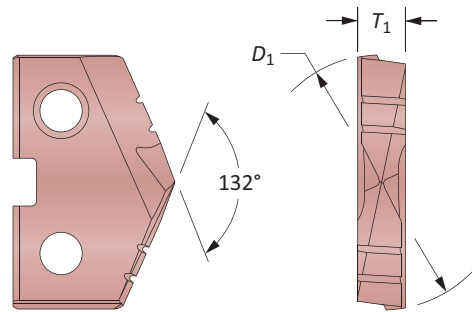
2 Series | Diameter Range: 25.40mm - 34.93mm (1.0000" - 1.3750")



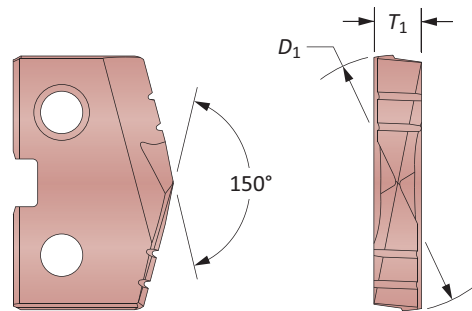
**Thin Wall**  
For material up to 6mm thick



**Notch Point®**  
For material over 6mm thick



**150° Structural Steel**  
For material over 6mm thick and for reduced exit burr



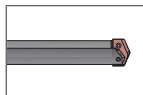
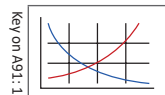
HSS Inserts – Super Cobalt

Series	Insert				Thin Wall		Notch Point		150° Structural Steel	
	Fractional Equivalent	D <sub>1</sub> mm	D <sub>1</sub> inch	T <sub>1</sub>	AM200 Part No.	TiAlN Part No.	AM200 Part No.	TiAlN Part No.	AM200 Part No.	TiAlN Part No.
2	1	25.40	1.0000	4.76	152H-0100-TW	152A-0100-TW	152H-0100-NP	152A-0100-NP	152H-0100-SS	152A-0100-SS
	-	26.00	1.0236	4.76	152H-26-TW	152A-26-TW	152H-26-NP	152A-26-NP	152H-26-SS	152A-26-SS
	1-1/16	26.99	1.0625	4.76	152H-0102-TW	152A-0102-TW	152H-0102-NP	152A-0102-NP	152H-0102-SS	152A-0102-SS
	-	27.00	1.0630	4.76	152H-27-TW	152A-27-TW	152H-27-NP	152A-27-NP	152H-27-SS	152A-27-SS
	1-1/8	28.58	1.1250	4.76	152H-0104-TW	152A-0104-TW	152H-0104-NP	152A-0104-NP	152H-0104-SS	152A-0104-SS
2.5	1-3/16	30.16	1.1875	4.76	152H-0106-TW	152A-0106-TW	152H-0106-NP	152A-0106-NP	152H-0106-SS	152A-0106-SS
	-	31.00	1.2205	4.76	152H-31-TW	152A-31-TW	152H-31-NP	152A-31-NP	152H-31-SS	152A-31-SS
	1-1/4	31.75	1.2500	4.76	152H-0108-TW	152A-0108-TW	152H-0108-NP	152A-0108-NP	152H-0108-SS	152A-0108-SS
	-	33.00	1.2992	4.76	152H-33-TW	152A-33-TW	152H-33-NP	152A-33-NP	152H-33-SS	152A-33-SS
	1-5/16	33.34	1.3125	4.76	152H-0110-TW	152A-0110-TW	152H-0110-NP	152A-0110-NP	152H-0110-SS	152A-0110-SS
	1-3/8	34.93	1.3750	4.76	152H-0112-TW	152A-0112-TW	152H-0112-NP	152A-0112-NP	152H-0112-SS	152A-0112-SS

40-41

A91: 5

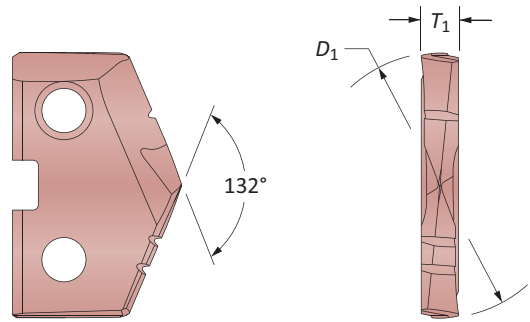
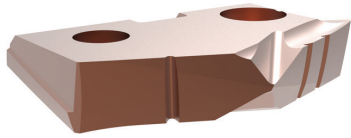
A91: 30 - 31





Inserts sold in multiples of 2

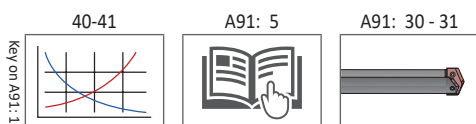
### GEN2 T-A® Structural Steel Drill Inserts

2 Series | Diameter Range: 25.40mm - 34.93mm (1.0000" - 1.3750")



HSS Inserts – Super Cobalt | Carbide Inserts – C1 (K35)

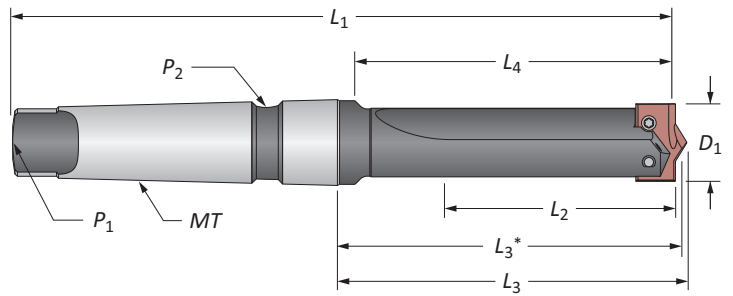
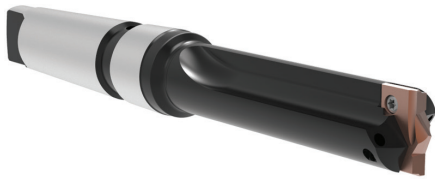
Series	Fractional Equivalent	Insert			Part No.	
		D <sub>1</sub> mm	D <sub>1</sub> inch	T <sub>1</sub>	 Super Cobalt	 C1 (K35)
2	1	25.40	1.0000	4.76	452H-0100-HE	4C12H-0100-HE
	–	26.00	1.0236	4.76	452H-26-HE	4C12H-26-HE
	1-1/16	26.99	1.0625	4.76	452H-0102-HE	4C12H-0102-HE
	–	27.00	1.0630	4.76	452H-27-HE	4C12H-27-HE
	1-1/8	28.58	1.1250	3/16	452H-0104-HE	4C12H-0104-HE
2.5	1-3/16	30.16	1.1875	4.76	452H-0106-HE	4C12H-0106-HE
	–	31.00	1.2205	4.76	452H-31-HE	4C12H-31-HE
	1-1/4	31.75	1.2500	4.76	452H-0108-HE	4C12H-0108-HE
	–	33.00	1.2992	4.76	452H-33-HE	4C12H-33-HE
	1-5/16	33.34	1.3125	4.76	452H-0110-HE	4C12H-0110-HE
	1-3/8	34.93	1.3750	4.76	452H-0112-HE	4C12H-0112-HE



Inserts sold in multiples of 2

## T-A® Structural Steel Drill Insert Holders

2 Series | Taper Shank



### Straight Flute #4 Morse Taper

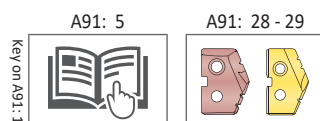
Series	Length	$D_1$	Body					Shank			Part No.	
			$L_2$	$L_4$	$L_3$	$L_3^*$	$L_1$	MT	$P_1$	$P_2$		
m	2	Short	26	86	114	126.6	124.2	238	#4	TTC	TSC	22020S-004IS100
	2.5	Short	30.16	86	114	126.6	124.2	238	#4	TTC	TSC	22025S-004IS112
i	2	Short	1 - 1-3/8	3-3/8	4-1/2	4-63/64	4-57/64	9-3/8	#4	TTC	TSC	22020S-004IS100
	2.5	Short	1-3/16 - 1-3/8	3-3/8	4-1/2	4-63/64	4-57/64	9-3/8	#4	TTC	TSC	22025S-004IS112

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

### Connection Accessories

Series	Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	Admissible Tightening Torque*
2	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	690 N-cm (61.0 in-lbs)
2.5	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  $\mu = 0.14$  and develop 90% of ultimate yield strength



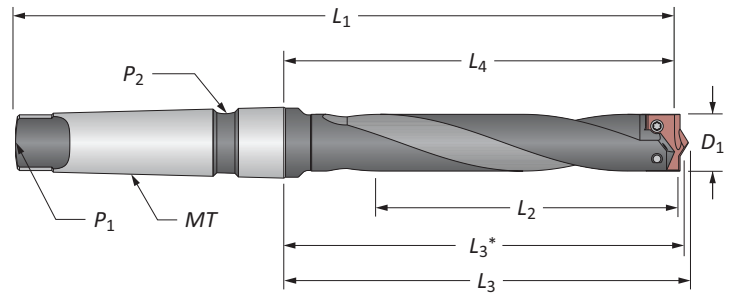
Key on A91: 1

m = Metric (mm)  
i = Imperial (in)





Screws sold in multiples of 10

## T-A<sup>®</sup> Structural Steel Drill Insert Holders

2 Series | Taper Shank









### Helical Flute #3 Morse Taper

Series	Length	D <sub>1</sub>	Body					Shank			Part No.
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>	P <sub>2</sub>	
 2	Extended	26	165	237	247.7	240.1	336	#3	TTC	TSC	 25020H-003IS100
 2	Extended	1 - 1-3/8	6-1/2	9-11/32	9-3/4	9-29/64	13-7/32	#3	TTC	TSC	 25020H-003IS100


\*If using Structural Steel holder with Notch Point<sup>®</sup>, GEN2 T-A<sup>®</sup>, or 150° Structural Steel T-A<sup>®</sup> drill insert geometry

### Helical Flute #4 Morse Taper


Series	Length	D <sub>1</sub>	Body					Shank			Part No.
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>	P <sub>2</sub>	
 2	Standard	26	137	165	177.4	175.0	289	#4	TTC	TSC	24020H-004IS100
	Extended	26	165	237	247.7	240.1	336	#4	TTC	TSC	 25020H-004IS100
	Long	26	165	406	418.3	416.3	530	#4	TTC	TSC	 26020H-004IS100
2.5	Standard	30.16	137	165	177.4	175.0	289	#4	TTC	TSC	24025H-004IS112
 2	Standard	1 - 1-3/8	5-3/8	6-1/2	6-63/64	6-57/64	11-3/8	#4	TTC	TSC	24020H-004IS100
	Extended	1 - 1-3/8	6-1/2	9-7/32	9-3/4	9-43/64	15-5/32	#4	TTC	TSC	 25020H-004IS100
	Long	1 - 1-3/8	6-1/2	16	16-15/32	16-25/64	20-7/8	#4	TTC	TSC	 26020H-004IS100
2.5	Standard	1-3/16 - 1-3/8	5-3/8	6-1/2	6-63/64	6-57/64	11-3/8	#4	TTC	TSC	24025H-004IS112

\*If using Structural Steel holder with Notch Point<sup>®</sup>, GEN2 T-A<sup>®</sup>, or 150° Structural Steel T-A<sup>®</sup> drill insert geometry

 = Metric (mm)

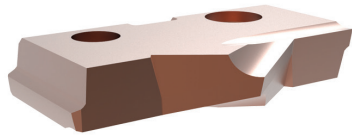
 = Imperial (in)

Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A91: 35 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com/deepholeguidelines.aspx](http://www.alliedmachine.com/deepholeguidelines.aspx) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

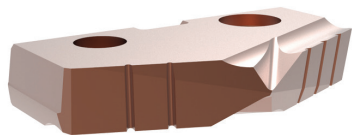
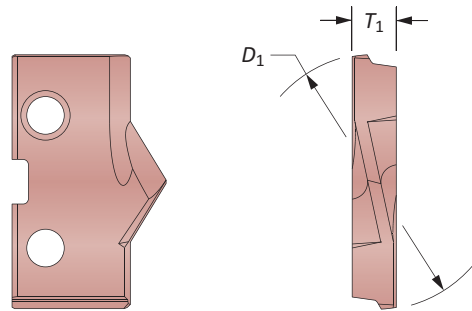
## T-A® Original Structural Steel Drill Inserts

3 Series | Diameter Range: 36.51mm - 39.69mm ( 1.4375" - 1.5625")



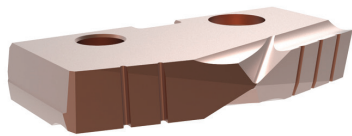
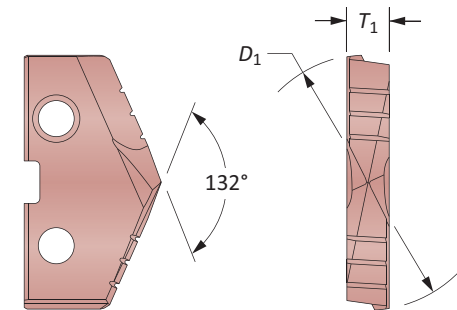
### Thin Wall

For material up to 6mm thick



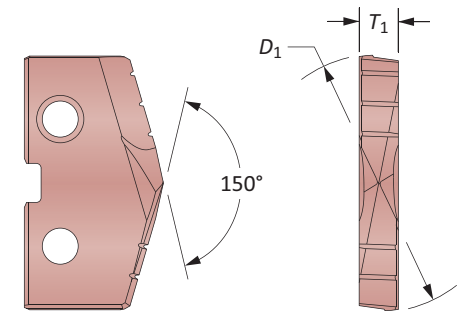
### Notch Point®

For material over 6mm thick



### 150° Structural Steel

For material over 6mm thick and for reduced exit burr



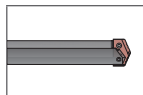
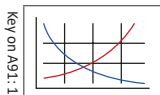
## HSS Inserts – Super Cobalt

Fractional Equivalent	Insert			Thin Wall		Notch Point		150° Structural Steel	
	$D_1$ mm	$D_1$ inch	$T_1$	AM200 Part No.	TiAlN Part No.	AM200 Part No.	TiAlN Part No.	AM200 Part No.	TiAlN Part No.
1-7/16	36.51	1.4375	6.35	153H-0114-TW	153A-0114-TW	153H-0114-NP	153A-0114-NP	153H-0114-SS	153A-0114-SS
1-1/2	38.10	1.5000	6.35	153H-0116-TW	153A-0116-TW	153H-0116-NP	153A-0116-NP	153H-0116-SS	153A-0116-SS
–	39.00	1.5354	6.35	153H-39-TW	153A-39-TW	153H-39-NP	153A-39-NP	153H-39-SS	153A-39-SS
1-9/16	39.69	1.5625	6.35	153H-0118-TW	153A-0118-TW	153H-0118-NP	153A-0118-NP	153H-0118-SS	153A-0118-SS

40-41

A91: 5

A91: 34

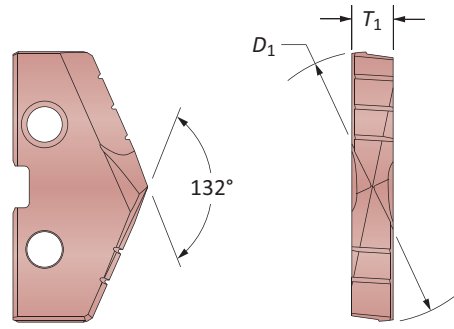
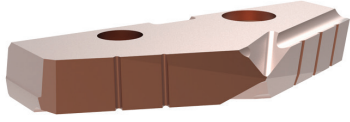


Inserts sold in multiples of 1

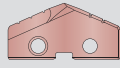


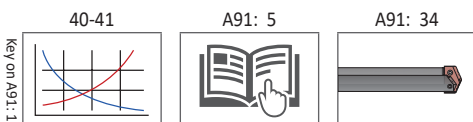
## GEN2 T-A® Structural Steel Drill Inserts

3 Series | Diameter Range: 36.51mm - 39.69mm (1.4375" - 1.5625")



### HSS Inserts – Super Cobalt

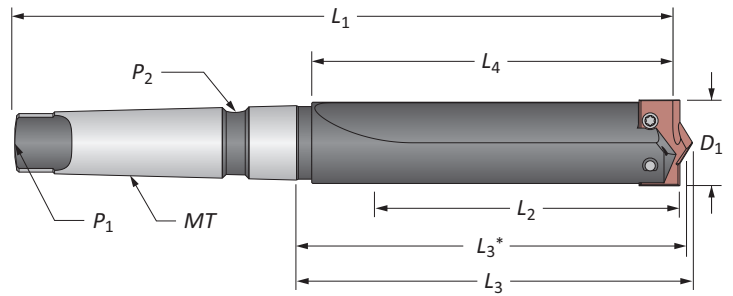
Fractional Equivalent	Insert			Part No.
	$D_1$ mm	$D_1$ inch	$T_1$	 Super Cobalt
1-7/16	36.51	1.4375	6.35	<b>453H-0114-HE</b>
1-1/2	38.10	1.5000	6.35	<b>453H-0116-HE</b>
-	39.00	1.5354	6.35	<b>453H-39-HE</b>
1-9/16	39.69	1.5625	6.35	<b>453H-0118-HE</b>



Inserts sold in multiples of 1

## T-A® Structural Steel Drill Insert Holders

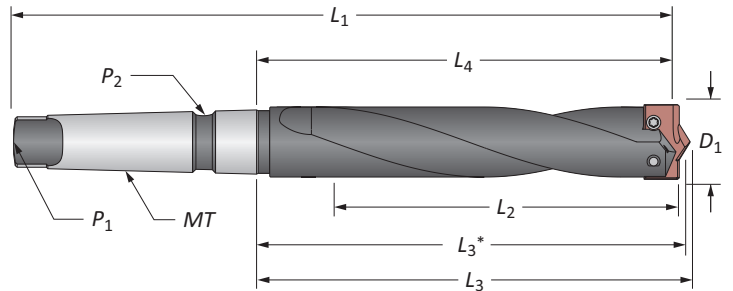
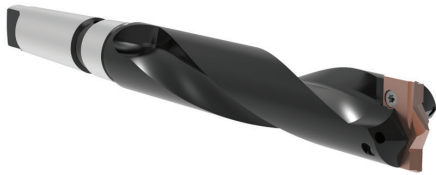
3 Series | Taper Shank



### Straight Flute #4 Morse Taper

	Length	D <sub>1</sub>	Body				Shank			Part No.	
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>		P <sub>2</sub>
<b>m</b>	Short	39	121	152.14	165.1	163.5	276	4	TTC	TSC	22030S-004IS126
<b>i</b>	Short	1-13/32 - 1-7/8	4-3/4	6	6-1/2	6-7/16	10-7/8	#4	TTC	TSC	22030S-004IS126

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry



### Helical Flute #4 Morse Taper

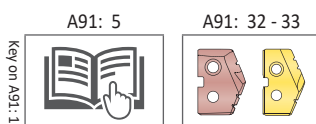
	Length	D <sub>1</sub>	Body				Shank			Part No.	
			L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>3</sub> *	L <sub>1</sub>	MT	P <sub>1</sub>		P <sub>2</sub>
<b>m</b>	Short	35.71	165.1	197	209.55	207.9	320.68	4	TTC	TSC	24030H-004IS126
<b>i</b>	Standard	1-13/32 - 1-7/8	6-1/2	7-3/4	8-1/4	8-3/16	12-5/8	#4	TTC	TSC	24030H-004IS126

\*If using Structural Steel holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® drill insert geometry

### Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	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  $\mu = 0.14$  and develop 90% of ultimate yield strength

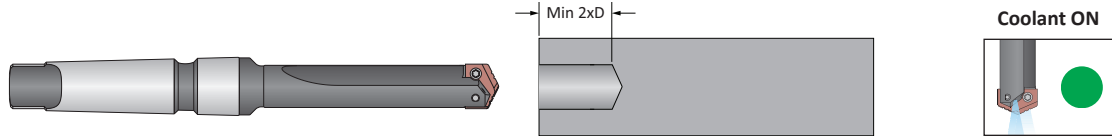

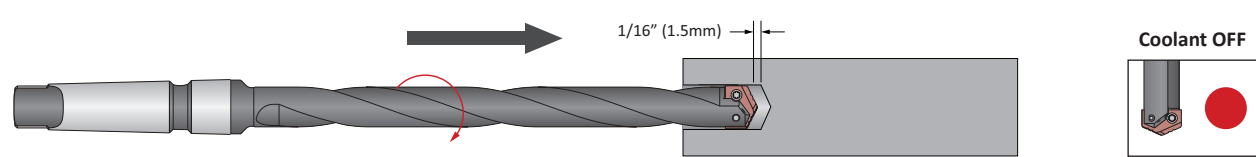
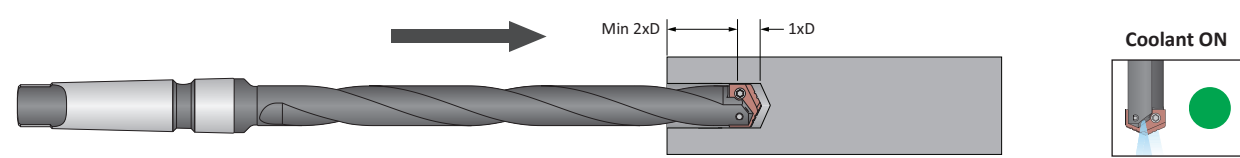
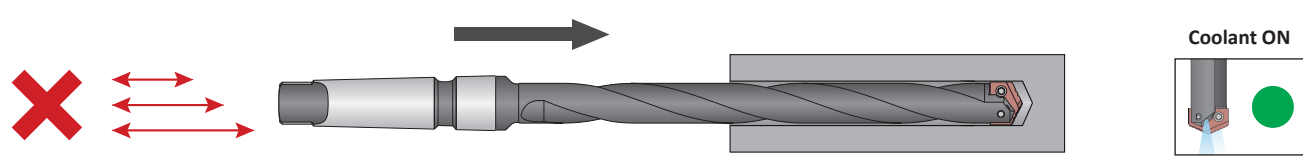
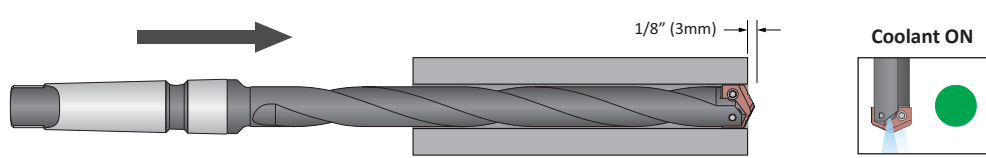

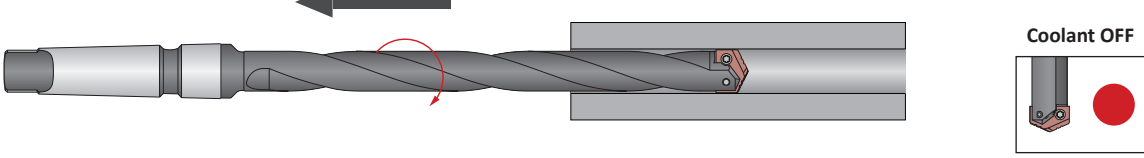


**m** = Metric (mm)  
**i** = Imperial (in)

Screws sold in multiples of 10

## Deep Hole Drilling Guidelines

For Use with Drills Greater than 9xD (Extended, Long, XL, 3XL, and Special Length)

<p><b>1. Pilot Hole</b> 100 % RPM 100% IPR (mm/rev)</p>	<p>Establish the pilot hole using the same diameter short drill to a depth of 2xD minimum. Utilize a pilot drill with the same or larger included point angle.</p>	
<p><b>2. Feed-in</b>  50 RPM max 12 IPM (300 mm/min)</p>	<p>Feed the longer drill within 1/16" (1.5mm) short of the established pilot hole bottom at a <b>maximum of 50 RPM</b> and 12 IPM (300 mm/min) feed rate.</p>	
<p><b>3. Deep Hole Transition Drilling</b> 50 % RPM 75% IPR (mm/rev)</p>	<p>Drill additional 1xD past the bottom of the pilot hole at 50% reduction of recommended speed and 25% reduction of recommended feed. Minimum of 1 second dwell is required to meet full speed before feeding.</p>	
<p><b>4. Deep Hole Drilling - Blind</b> 100% RPM 100% IPR (mm/rev)</p>	<p>Drill to full depth at recommended speed and feed for longer drill according to Allied speed and feed charts. <b>No peck cycle recommended.</b></p>	
<p><b>5. Deep Hole Drilling - at Breakout</b> 50% RPM 75% IPR (mm/rev)</p>	<p><b>For through holes only:</b> Reduce speed by 50% and feed by 25% prior to breakout. Do not breakout more than 1/8" (3mm) past the full diameter of the drill.</p>	
<p><b>6. Drill Retract</b>  50 RPM max</p>	<p>Reduce speed to a <b>maximum of 50 RPM</b> before retracting from the hole.</p>	

**⚠ WARNING** Tool failure can cause serious injury. To prevent:

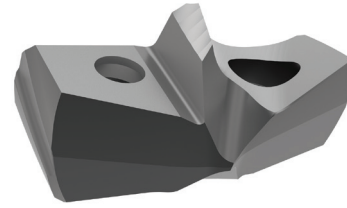
- When using holders without support bushing, use a short T-A® holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with the workpiece or fixture.

Visit [www.alliedmachine.com/DeepHoleGuidelines](http://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 Team.




## Recommended Cutting Data


GEN3SYS® XT Pro (XT ST)



### Metric (mm)

ISO	Material	Speed (M/mm) - Mist Coolant		Feed Rate (mm/rev) by Diameter			
		Hardness (BHN)	 AM420 Speed	12 series 12.00 - 12.99	13 series 13.00 - 13.99	14 series 14.00 - 14.99	15 series 15.00 - 15.99
P	Structural Steel A36, A285, A516, A572, etc.	100 - 150	107	0.20	0.22	0.25	0.25
		150 - 250	91	0.18	0.20	0.23	0.23
		250 - 350	79	0.15	0.17	0.20	0.20

### Imperial (inch)

ISO	Material	Speed (SFM) - Mist Coolant		Feed Rate (IPR) by Diameter			
		Hardness (BHN)	 AM420 Speed	12 series 0.4724 - 0.5117	13 series 0.5118 - 0.5511	14 series 0.5512 - 0.5905	15 series 0.5906 - 0.6298
P	Structural Steel A36, A285, A516, A572, etc.	100 - 150	350	0.008	0.009	0.010	0.010
		150 - 250	300	0.007	0.008	0.009	0.009
		250 - 350	260	0.006	0.007	0.008	0.008

### Speed and Feed Multiplier

	Depth of Cut	
	<= 1.5xD	> 1.5xD
Speed	See above chart	0.75
Feed	See above chart	0.90

**NOTE:** The speeds and feeds listed above are based on a rigid setup using air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.  
**NOTE:** If drilling dry without coolant, speed must be reduced significantly based on setup, drill depth, and material hardness. Up to 50% speed and feed reduction may be necessary in these types of applications. Contact the Application Engineering department for assistance.  
**NOTE:** If drilling material thickness of 0.500" (12.7mm) or less, a minimum of 10% reduction in feed is required to minimize material deflection.

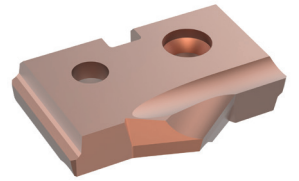
Feed Rate (mm/rev) by Diameter								
16 series 16.00 - 16.99	17 series 17.00 - 17.99	18 series 18.00 - 19.99	20 series 20.00 - 21.99	22 series 22.00 - 23.99	24 series 24.00 - 25.99	26 series 26.00 - 28.99	29 series 29.00 - 31.99	32 series 32.00 - 35.00
0.30	0.30	0.36	0.38	0.41	0.43	0.46	0.48	0.48
0.25	0.25	0.30	0.36	0.38	0.41	0.43	0.46	0.46
0.23	0.23	0.28	0.30	0.33	0.36	0.38	0.41	0.41

Feed Rate (IPR) by Diameter								
16 series 0.6299 - 0.6692	17 series 0.6693 - 0.7086	18 series 0.7087 - 0.7873	20 series 0.7874 - 0.8660	22 series 0.8661 - 0.9448	24 series 0.9449 - 1.0235	26 series 1.0236 - 1.1416	29 series 1.1417 - 1.2597	32 series 1.2598 - 1.3780
0.012	0.012	0.014	0.015	0.016	0.017	0.018	0.019	0.019
0.010	0.010	0.012	0.014	0.015	0.016	0.017	0.018	0.018
0.009	0.009	0.011	0.012	0.013	0.014	0.015	0.016	0.016





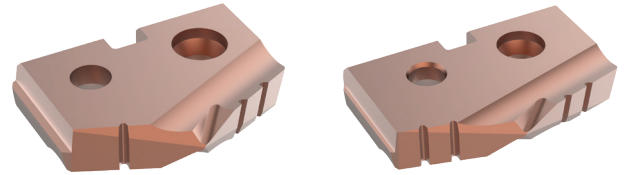
## Recommended Cutting Data | Metric (mm)

Original T-A® | GEN2 T-A®





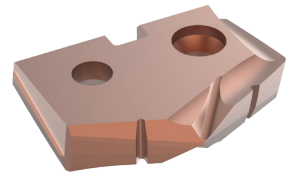
### Thin Wall Inserts Super Cobalt

ISO	Material	Speed (M/mm) - Mist Coolant		Feed Rate (mm/rev) by Diameter				
		Hardness (BHN)	 AM200 Speed	 TiAlN Speed	0 series 14 - 16	1 series 18 - 24	2 series 25 - 35	3 series 36 - 47
P	Structural Steel A36, A285, A516, etc.	100 - 150	39	34	0.30	0.45	0.48	0.50
		150 - 250	35	31	0.28	0.40	0.43	0.48
		250 - 350	32	28	0.25	0.36	0.40	0.45




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


ISO	Material	Speed (M/mm) - Mist Coolant		Feed Rate (mm/rev) by Diameter				
		Hardness (BHN)	 AM200 Speed	 TiAlN Speed	0 series 14 - 16	1 series 18 - 24	2 series 25 - 35	3 series 36 - 47
P	Structural Steel A36, A285, A516, etc.	100 - 150	39	34	0.25	0.30	0.36	0.45
		150 - 250	35	31	0.23	0.28	0.30	0.40
		250 - 350	35	28	0.20	0.25	0.28	0.36



### GEN2 T-A Inserts Super Cobalt

ISO	Material	Speed (M/mm) - Mist Coolant		Feed Rate (mm/rev) by Diameter			
		Hardness (BHN)	 AM200 Speed	0 series 14 - 16	1 series 18 - 24	2 series 25 - 35	3 series 36 - 47
P	Structural Steel A36, A285, A516, etc.	100 - 150	39	0.25	0.30	0.36	0.46
		150 - 250	35	0.23	0.28	0.30	0.40
		250 - 350	35	0.20	0.25	0.28	0.36

### GEN2 T-A Inserts Carbide C1 (K35)

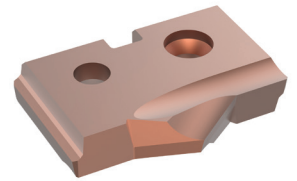
ISO	Material	Speed (M/mm) - Mist Coolant		Feed Rate (mm/rev) by Diameter			
		Hardness (BHN)	 AM200 Speed	0 series 14 - 16	1 series 18 - 24	2 series 25 - 35	3 series 36 - 47
P	Structural Steel A36, A285, A516, etc.	100 - 150	50	0.20	0.28	0.38	0.43
		150 - 250	47	0.15	0.25	0.33	0.38
		250 - 350	43	0.13	0.23	0.30	0.33

**NOTE:** The speeds and feeds listed above are based on a rigid setup using air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.



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

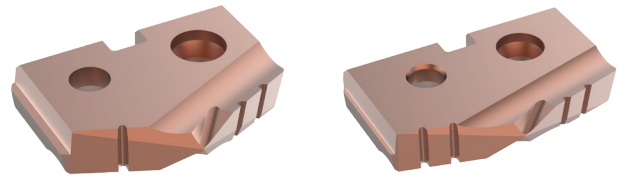
## Recommended Cutting Data | Imperial (inch)

Original T-A® | GEN2 T-A®





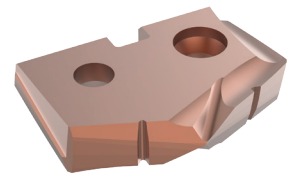
### Thin Wall Inserts Super Cobalt

ISO	Material	Speed (SFM) - Mist Coolant		Feed Rate (IPR) by Diameter				
		Hardness (BHN)	 AM200 Speed	 TiAlN Speed	0 series 9/16 - 11/16	1 series 13/16 - 15/16	2 series 1 - 1-3/8	3 series 1-13/32 - 1-7/8
P	Structural Steel A36, A285, A516, etc.	100 - 150	125	110	0.012	0.018	0.019	0.020
		150 - 250	115	100	0.011	0.016	0.017	0.019
		250 - 350	105	90	0.010	0.014	0.016	0.018




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


ISO	Material	Speed (SFM) - Mist Coolant		Feed Rate (IPR) by Diameter				
		Hardness (BHN)	 AM200 Speed	 TiAlN Speed	0 series 9/16 - 11/16	1 series 13/16 - 15/16	2 series 1 - 1-3/8	3 series 1-13/32 - 1-7/8
P	Structural Steel A36, A285, A516, etc.	100 - 150	125	110	0.010	0.012	0.014	0.018
		150 - 250	115	100	0.009	0.011	0.012	0.016
		250 - 350	105	90	0.008	0.010	0.011	0.014



### GEN2 T-A Inserts Super Cobalt

ISO	Material	Speed (SFM) - Mist Coolant		Feed Rate (IPR) by Diameter			
		Hardness (BHN)	 AM200 Speed	0 series 9/16 - 11/16	1 series 13/16 - 15/16	2 series 1 - 1-3/8	3 series 1-13/32 - 1-7/8
P	Structural Steel A36, A285, A516, etc.	100 - 150	125	0.010	0.012	0.014	0.018
		150 - 250	115	0.009	0.011	0.012	0.016
		250 - 350	105	0.008	0.010	0.011	0.014

### GEN2 T-A Inserts Carbide C1 (K35)

ISO	Material	Speed (SFM) - Mist Coolant		Feed Rate (IPR) by Diameter			
		Hardness (BHN)	 AM200 Speed	0 series 9/16 - 11/16	1 series 13/16 - 15/16	2 series 1 - 1-3/8	3 series 1-13/32 - 1-7/8
P	Structural Steel A36, A285, A516, etc.	100 - 150	165	0.008	0.011	0.015	0.017
		150 - 250	155	0.006	0.010	0.013	0.015
		250 - 350	140	0.005	0.009	0.012	0.013

**NOTE:** The speeds and feeds listed above are based on a rigid setup using air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.

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



## Guaranteed Application Request Structural Steel

Guidelines on use

### Guidelines for use of the Guaranteed Request Form

The request for a Guaranteed Application is a method of proving AMEC tooling on demonstration.

The Guaranteed Application form must be completed as fully as possible and sent to the Allied Machine Technical Department.

### Example - Required Informations

**Contact Details:**

- Purchase Order Number
- Date
- Customer Name
- Customer Telephone and Fax Number
- Proposed Date of the Demonstration
- Customer Contact Name

**Application Information:**

- Material: Type, Specification, Hardness, Condition, Thickness
- Hole: Diameter, Diameter Range

**Machine and Set-up Information:**

- Machine: Type, Model, Feedline, Control, Speed, Preferred Shank Type
- Spindle: Orientation, Type
- Coolant: Type, Feed

**Current Drill Information:**

Details of current, or previous tooling used on application, and its performance history

**What defines a successful test:**

The objective of the demonstration i.e. Decreased Cycle Time, Better Chip Control, Safer Process, Longer Tool Life and Reduced Cost per Hole

Providing the Allied Machine Technical Department have enough information to judge the application, and its objectives are feasible, the test will be approved.



**Structural Steel Guaranteed Application Form**

Distributor PO #

The Following must be filled out completely before your test will be considered

**CONTACT DETAILS**

Trial P.O No\* ..... Date\* ..... Proposed Test Date\* .....  
 Distributor\* ..... Distributor Contact\* .....  
 Customer Name\* ..... Industry..... Contact Name\* .....  
 Contact Telephone\* ..... Contact E-mail\* .....

**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/mm<sup>2</sup>  
 Material Condition  Angle  H-Section  Tubular Stock  
 Stacked Plate  Plate  U-Section  
 Hole Diameter .....  mm  Inch  Hole Diameter Range used.....  mm  Inch  
 Material Thickness this test ..... Material Thickness Range used \* .....

**MACHINE AND SET-UP INFORMATION**

Machine Tool Type  Ficep  Steeltec  Pedestal Drill  
 Peddinghaus  Voortman  Vernet Behringer  
 Kaltenbach  Radial Arm  Other  
 Model\* .....  
 Feedline\*  Hydraulic  Ball Screw  
 Machine Tool Control\*  CNC  NC  Manual  Other .....  
 Spindle Orientation\*  Vertical  Horizontal  Other .....  
 Spindle Type\*  ISO  Quick Change  Morse Taper No ..... Gauge Length .....  mm  Inch  
 Available Speed\*  Variable  Fixed  RPM  m/Min  
 Preferred Shank Type\*  Flanged  Morse Taper N° ..... Diameter .....  mm  Inch  
 Coolant Type\*  Cutting Oil  Water Soluble Oil  Air Mist  Air  Dry  
 Coolant Feed\*  Constant  Pulsed  Through Coolant  External

**CURRENT DRILL INFORMATION**

Drill Manufacturer ..... Point Angle .....  
 Drill Type .....  Twist  Brazed  Indexable Insert  
 Removable Tip  Other .....  
 Tool Grade  HSS  Carbide  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  Other .....  
 Other .....  Chatter  New Application  
 What Criteria define a successful test\*  Decreased Cycle Time  Better Chip Control  Safer Process  
 Longer Tool Life  Reduced Cost per Hole  Other .....

Potential this application: Current Annual Usage € / £:

Tools per Annum?

\*Required Fields where applicable

**FOR OFFICE USE ONLY**

Application Engineer: \_\_\_\_\_ Number: \_\_\_\_\_ Status: \_\_\_\_\_



# ALLIED MACHINE & ENGINEERING

## Warranty Information



Allied Machine & Engineering warrants to original equipment manufacturers, distributors, industrial and commercial users of its products that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied Machine's obligation under this warranty is limited to furnishing without additional charge a replacement or, at its option repairing or issuing credit for any product which shall within one year from the date of sale be returned freight prepaid to the plant designated by an Allied Machine representative and which upon inspection is determined by Allied Machine to be defective in materials or workmanship.

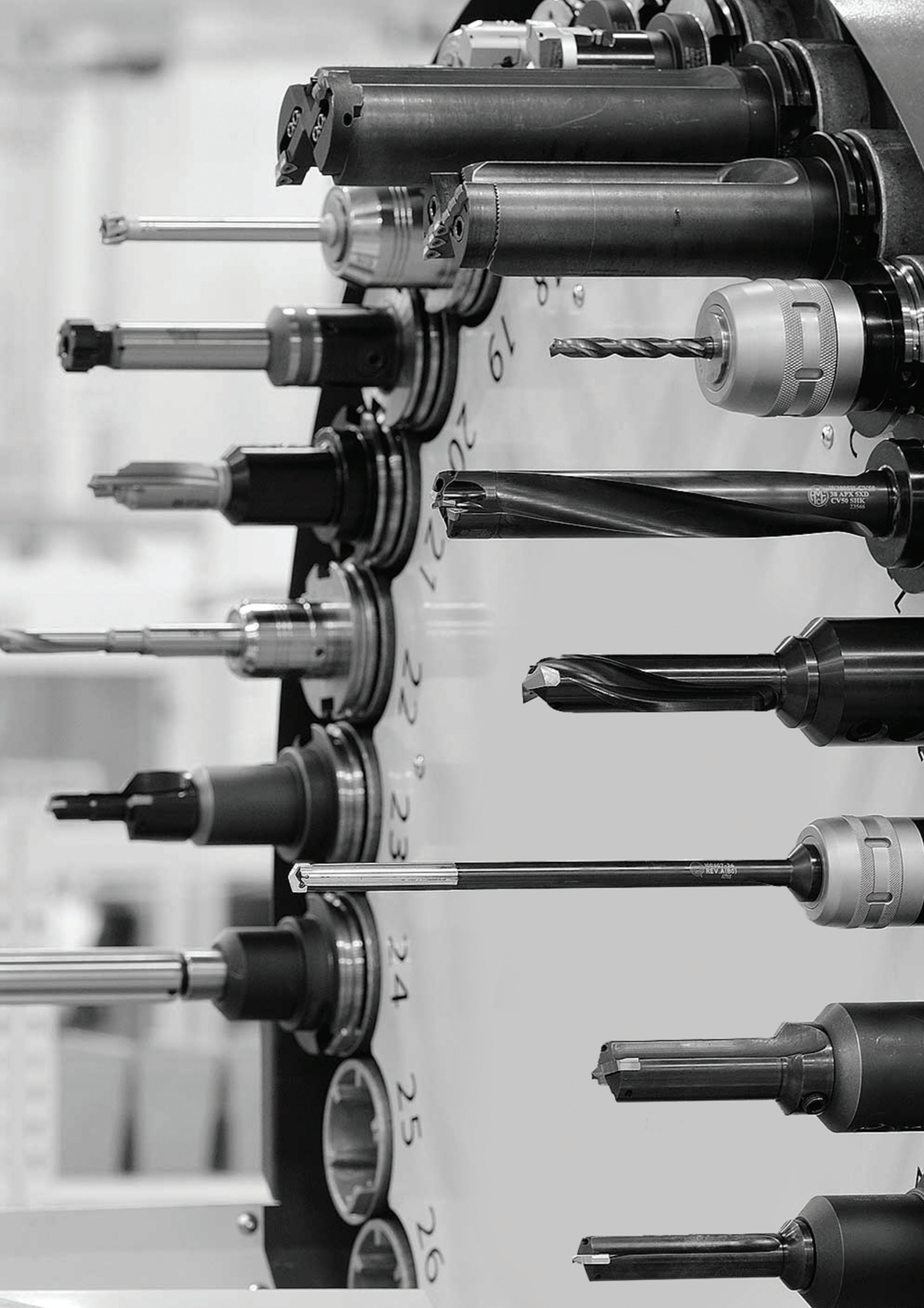
Complete information as to operating conditions, machine, set-up and application of cutting fluid should accompany any product returned for inspection. The provisions of this warranty shall not apply to any Allied Machine products which have been subjected to misuse, improper operating conditions, machine set-up or application of cutting fluid or which have been repaired or altered if such repair or alteration in the judgment of Allied Machine would adversely affect performance of the product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied Machine shall have no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein.

ALL PRICES, DELIVERIES, DESIGNS and MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



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## Europe

### **Allied Machine & Engineering Co. (Europe) Ltd.**

93 Vantage Point  
Pensnett Estate  
Kingswinford  
West Midlands  
DY6 7FR England

**Phone:**

+44 (0)1384 400900

**Email:**

enquiries.eu@alliedmachine.com

**Web:**

www.alliedmachine.com

### **Wohlhaupter GmbH**

Maybachstraße 4  
72636 Frickenhausen  
Germany

**Phone:**

+49 (0)7022 408 0

**Email:**

info@wohlhaupter.de

**Web:**

www.wohlhaupter.com

## United States

### **Allied Machine & Engineering**

120 Deeds Drive  
Dover OH 44622  
United States

**Phone:**

+1 330 343 4283

**Toll Free USA and Canada:**

800 321 5537

**Fax:**

+1 330 602 3400

**Toll Free USA and Canada:**

800 223 5140

### **Allied Machine & Engineering**

485 W Third Street  
Dover OH 44622  
United States

**Phone:**

+1 330 343 4283

**Toll Free USA and Canada:**

800 321 5537

**Fax:**

+1 330 364 7666  
(Engineering Dept.)

## Asia

### **Wohlhaupter India Pvt. Ltd.**

B-23, 2nd Floor  
B Block Community Centre  
Janakpuri, New Delhi - 110058  
India

**Phone:**

+91 11 41827044

Your local Allied Machine representative:

**FEBAMETAL**

Febametal S.p.A.  
Via Grandi 15, Grugliasco 10095 (TO)  
011-7701412  
febametal@febametal.com  
www.febametal.com



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