



ALLIED MACHINE  
& ENGINEERING

WOHLHAUPTER®

Holemaking Solutions for Today's Manufacturing



Boring



Reaming



Burnishing



Threading



## Drilling

▶ GEN3SYS® XT Pro | XT  
High Penetration Drilling System



Specials

## 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<sup>®</sup>

When Harold's son, William H. Stokey, became the president and CEO, he developed the Throw Away—or T-A<sup>®</sup>—spade drill insert system. The T-A<sup>®</sup> 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 Future

Allied Machine is constantly investing in the brightest and sharpest minds, shaping a future filled with success and quality for customers around the world.



**Steve Stokey**  
Executive Vice President

**William H. Stokey**  
President and CEO

**Mike Stokey**  
Executive Vice President



**ALLIED MACHINE  
& ENGINEERING**

Holemaking Solutions for Today's Manufacturing

**WOHLHAUPTER®**



**SUPERION™**

**CRITERION™**

# DRILLING

## High Penetration



GEN3SYS® XT Pro

GEN3SYS® XT

ASC 320®

## General Production

(certain sizes are ideal for deep hole drilling and/or large diameter drilling)



GEN2 T-A®

T-A® Original

High Performance

Universal

## Large Diameter



Revolution Drill®



Opening Drill®

## Large Diameter / Deep Hole



APX Drill



BT-A Drill

## Deep Hole



Guided T-A® Drill  
(special)

## Porting



AccuPort 432®

## Structural Steel



GEN3SYS® XT



T-A® Original



## CRITERION™

Cri-Twin®  
Cri-Bore®  
Large Cri-Bore®  
CBER®  
CB Style  
Competitor Connection

# BORING

## WOHLHAUPTER®

Bringing you the finest in precision cutting tools

# REAMING

# BURNISHING



Reaming Systems



Roller Burnishing



# THREADING



**AccuThread™**  
Pin Style Indexable



**AccuThread™**  
Bolt-in Style Indexable



**AccuThread™**  
Solid Carbide



**ThreadMills USA**  
Solid Carbide



# SPECIALS



**Insta-Quote™**  
Online custom tool builder and quote generator



**i-Form**  
Custom indexable drill / form tool system

### Engineered Specials

If your special holemaking needs cannot be met with the Insta-Quote™ system, Allied Machine can specially engineer ANY product to make your application a success. Simply contact your local Field Sales Engineer or the Allied Machine Application Engineering department for assistance with creating your special tooling. Let Allied Machine resolve your challenges today.

Allied Machine & Engineering patent information can be found at [www.alliedmachine.com](http://www.alliedmachine.com)

# GEN3SYS® XT and XT Pro

High Penetration Replaceable Insert Drilling System | GEN3SYS®XT | GEN3SYS®XT Pro

► Diameter Range: 11.00mm - 35.00mm (0.4331" - 1.3780")



## The Next Generation of Drilling

The GEN3SYS®XT and XT Pro replaceable insert high penetration drilling system has been designed to provide high speed production machining beyond the capabilities of the T-A® drilling system. The product offering consists of various grades, geometries, and coatings available to suit the most demanding applications.

Conceived from the outset as the ultimate high performance drilling solution, the GEN3SYS®XT drill range is incredibly versatile. Incorporating both straight and helical fluted tool holder options across the range, as well as through coolant for maximum material removal, GEN3SYS®XT not only gives outstanding performance from day one, but it can also be reground for extended life and economy.

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



Aerospace



Agriculture



Automotive



Firearms



General Machining



Oil & Gas



Renewable Energy

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



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

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

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

### **WARNING**

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

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

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

Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures.

# GEN3SYS® XT and XT Pro Drilling System Contents

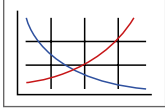
## Reference Icons

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



### Setup / Assembly Information

Detailed instructions and information regarding the corresponding part(s)



### Recommended Cutting Data

Speed and feed recommendations for optimum and safe boring

Series	Diameter Range	
	Metric (mm)	Imperial (inch)
11	11.00 - 11.99	0.4331 - 0.4723
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

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## GEN3SYS®XT Pro Drilling System Information

A

DRILLING

B

BORING

C

REAMING

D

BURNISHING

E

THREADING

X

SPECIALS

### GEN3SYS®XT Pro Drill Inserts



#### Advanced Design Capabilities

The advanced XT Pro insert combines a coating and geometry specifically designed to achieve optimal results in ISO material drilling applications. With quick connectivity to existing GEN3SYS® drill insert holders, the XT Pro insert can be interchanged with previous XT inserts with ease, resulting in minimal set-up times so you can immediately increase your productivity.

#### XT Pro Inserts Connect with:



XT Pro holders



XT standard holders

#### P - Steels

- Designed to provide increased penetration rates and tool life in steel applications
- Superior geometry and edge provides excellent chip control
- Allied's multi-layer **AM420** coating increases heat resistance and improves tool life



#### N - Non-ferrous Materials

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



#### K - Cast Irons

- Uniquely designed for cast/nodular iron applications
- Geometry includes a corner radius for improved hole finish and heat dispersion
- Allied's multi-layer **AM440** coating provides increased abrasion resistance and tool life

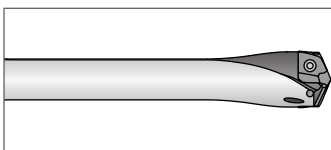


Increased Flute Area

Additional Coolant to the Cutting Zone



#### XT Pro Drill Holders



Straight flutes



Enhanced coolant inlets improve the coolant flow



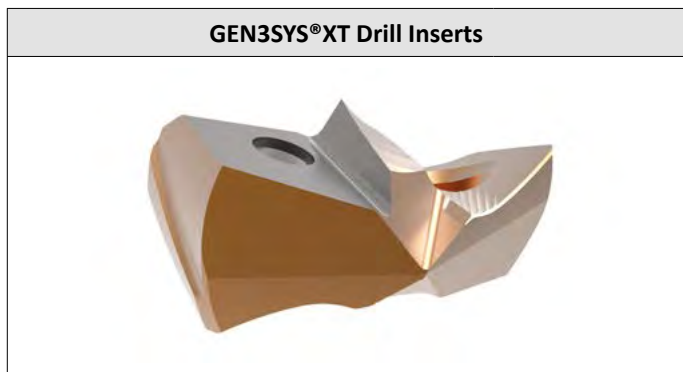
Provides increased insert life

3xD, 5xD, 7xD, 10xD

Available in 3xD, 5xD, 7xD, and 10xD



## GEN3SYS®XT Drilling System Information



### High Penetration Drilling Solutions

The unique geometry of the XT inserts provides excellent chip control. They are designed to increase hole quality, surface finish, and true position when compared to other competitive products. The helical margin design provides maximum durability and stability.

#### XT Inserts Connect with:



XT Pro holders

XT standard holders

#### Standard Geometry

- Designed with corner and cutting edge enhancements to deliver more reliability, durability, and productivity
- Increases penetration rates and tool life
- Available in C1 or C2 carbide



#### LR - Low Rake Geometry

- The toughest XT geometry available
- Designed for harder steels and less than ideal machining applications
- Available in C1 or C2 carbide



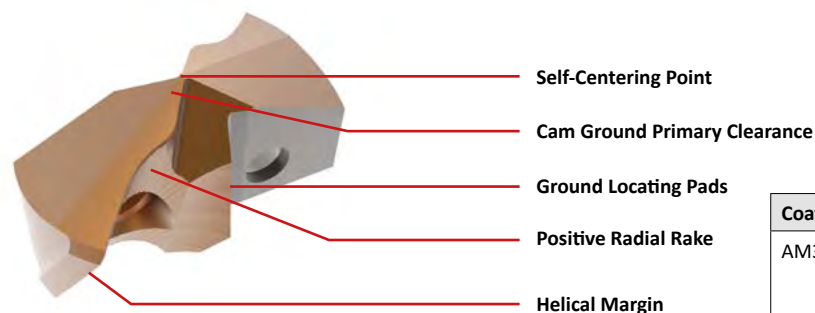
#### CI - Cast Iron Geometry

- Increases durability and tool life in ductile, nodular, and grey cast irons
- Available in C2 carbide



#### AS - Stainless Steel Geometry

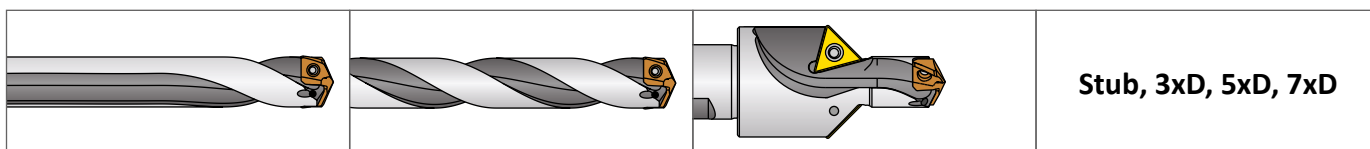
- Designed with a specific geometry to provide unmatched chip control and tool life in austenitic and PH stainless steels, as well as high temperature alloys such as Inconel, Hastelloy, and Titanium alloys
- Available in C2 carbide



Coating	Features / Benefits
AM300®	<ul style="list-style-type: none"> <li>• Increased heat resistance over AM200®</li> <li>• Up to 20% increased tool life over AM200®</li> <li>• Provides superior tool life at high penetration rates</li> </ul>



### XT Drill Standard Holders



Straight flutes

Helical flutes



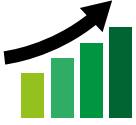

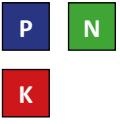







Drill / chamfer style

**Stub, 3xD, 5xD, 7xD**

Available in Stub, 3xD, 5xD, and 7xD



## Insert Comparison and Assembly Information

		 XT Pro Inserts	 XT Inserts
Recommended for increased productivity			
ISO specific geometry/coating combination			
Connects with XT Pro holders			
Connects with XT holders			



**Step 1:**  
Align the flats on the GEN3SYS®XT insert with the flats on the ears of the holder.








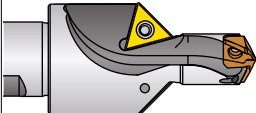
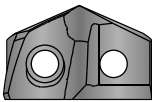
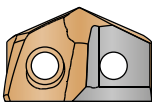
**Step 2:**  
Slide the insert into the precision ground locating pocket on the holder. The insert should not be turned, rotated, or twisted for locking purposes. The holder pocket and locating pads on the insert assure optimum fit and repeatability.



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

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

## Holder Comparison and Overview

		 XT Pro Holders	 XT Standard Holders
Recommended for increased productivity		<input checked="" type="checkbox"/>	
Straight flute		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Helical flute			<input checked="" type="checkbox"/>
Drill/chamfer option			<input checked="" type="checkbox"/>
Available in 10xD length	<b>10XD</b>	<input checked="" type="checkbox"/>	
Connects with XT Pro inserts		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Connects with XT inserts		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

XT Pro Holders

XT Standard Holders



Straight Flute



Straight Flute



Helical Flute



Drill/Chamfer

A  
DRILLING  
B  
BORING  
C  
REAMING  
D  
BURNISHING  
E  
THREADING  
X  
SPECIALS

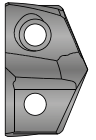


## Product Nomenclature

A  
DRILLING

### GEN3SYS®XT Pro Drill Inserts

<b>XT</b>	<b>P</b>	<b>11</b>	–	<b>11.00</b>
1	2	3		4

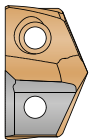


1. XT Pro Drill Insert	2. ISO Material / Geometry	3. Series	4. Diameter (mm)
<p><b>XT</b> = XT Pro insert</p>	<p><b>P</b> = Steel</p> <p><b>K</b> = Cast iron</p> <p><b>N</b> = Non-ferrous</p>	<p><b>11</b> = 11 series      <b>18</b> = 18 series</p> <p><b>12</b> = 12 series      <b>20</b> = 20 series</p> <p><b>13</b> = 13 series      <b>22</b> = 22 series</p> <p><b>14</b> = 14 series      <b>24</b> = 24 series</p> <p><b>15</b> = 15 series      <b>26</b> = 26 series</p> <p><b>16</b> = 16 series      <b>29</b> = 29 series</p> <p><b>17</b> = 17 series      <b>32</b> = 32 series</p>	<p>For complete list of diameter ranges by series, see contents page.</p>

B  
BORING

### GEN3SYS®XT Drill Inserts

<b>7</b>	<b>C2</b>	<b>12</b>	<b>P</b>	–	<b>.484</b>	<b>CI</b>
1	2	3	4		5	6

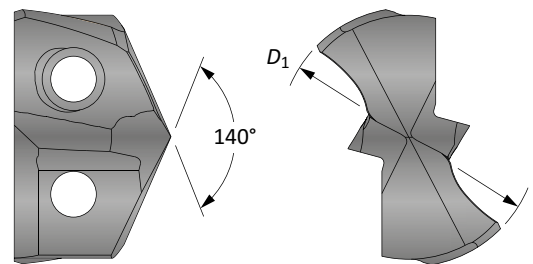


1. XT Drill Insert	2. Insert Material	3. Series	4. Coating
<p><b>7</b> = XT insert</p>	<p><b>C1</b> = K35 (C1) carbide</p> <p><b>C2</b> = K20 (C2) carbide</p>	<p><b>11</b> = 11 series      <b>18</b> = 18 series</p> <p><b>12</b> = 12 series      <b>20</b> = 20 series</p> <p><b>13</b> = 13 series      <b>22</b> = 22 series</p> <p><b>14</b> = 14 series      <b>24</b> = 24 series</p> <p><b>15</b> = 15 series      <b>26</b> = 26 series</p> <p><b>16</b> = 16 series      <b>29</b> = 29 series</p> <p><b>17</b> = 17 series      <b>32</b> = 32 series</p>	<p><b>P</b> = AM300®</p>

C  
REAMING

5. Diameter	6. Geometry
<p><b>0017</b> = Inch</p> <p><b>.515</b> = Decimal</p> <p><b>13</b> = Metric</p>	<p><b>CI</b> = Cast iron</p> <p><b>LR</b> = Low rake</p> <p><b>AS</b> = Stainless steel</p>

D  
BURNISHING



E  
THREADING

#### Regrinding and Recoating

The GEN3SYS®XT and XT Pro drilling system is so cost efficient that it eliminates the need for regrinding and recoating. However, if you choose to have your drill inserts reground, it is critical that it be done by Allied Machine. Any slight deviation in performance due to an improperly reground drill insert will more than offset any benefit from regrinding. Using our service ensures that the best tool performance is maintained in your production process. When returning tools for regrinding, please package tools carefully to avoid damage during shipment. Returning drill inserts for regrinding in their original packaging will help avoid damage during shipment. Drill inserts reground by Allied Machine are repackaged and clearly identified as “Allied Regrind” to avoid any confusion with new tools.

#### Reference Key

Symbol	Attribute
D <sub>1</sub>	Insert diameter

X  
SPECIALS

## Product Nomenclature

### GEN3SYS®XT and XT Pro Drill Holders

<b>HXT</b>	<b>03</b>	<b>12</b>	<b>S</b>	-	<b>20</b>	<b>FM</b>
1	2	3	4		5	6



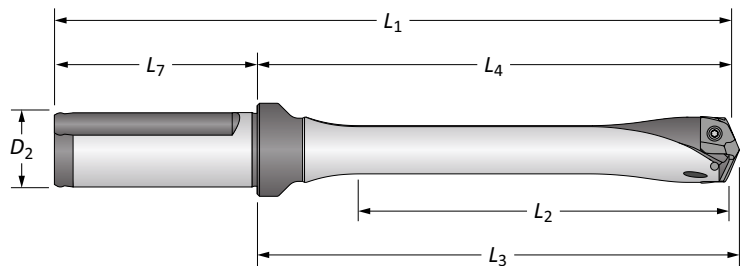
<b>1. Holder</b> 6 = XT standard holder HXT = XT Pro holder		<b>2. Length</b> 01 = Stub Length (standard only) 03 = 3x Diameter 05 = 5x Diameter 07 = 7x Diameter 10 = 10x Diameter (Pro only)		<b>3. Series</b> 11 = 11 series      18 = 18 series 12 = 12 series      20 = 20 series 13 = 13 series      22 = 22 series 14 = 14 series      24 = 24 series 15 = 15 series      26 = 26 series 16 = 16 series      29 = 29 series 17 = 17 series      32 = 32 series		<b>4. Flute</b> S = Straight H = Helical C45 = Drill/Chamfer (both helical and drill/chamfer options available for XT standard only)	
<b>5. Shank Diameter</b>				<b>6. Shank Style</b>			
<b>Metric (mm)</b> 16 = 16mm 20 = 20mm 25 = 25mm 32 = 32mm 40 = 40mm		<b>Imperial (inch)</b> 063 = 5/8" 075 = 3/4" 100 = 1" 125 = 1-1/4" 150 = 1-1/2"		F = Flanged with flat FM = Flanged metric with flat C = Cylindrical (no flat) CM = Cylindrical metric (no flat)			

#### Holder Ordering Information

The series designator (11 series, 12 series, etc.) in the top corner of each page is for your reference when ordering. Please refer to these series designators when placing an order. For example, a 12 series drill insert only fits into a 12 series holder.

#### Reference Key

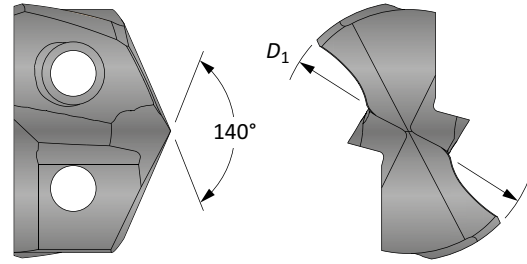
Symbol	Attribute
$D_2$	Shank diameter
$D_5$	Step diameter (drill/chamfer)
$L_1$	Overall length
$L_2$	Drill depth
$L_3$	Holder reference length
$L_4$	Holder body length
$L_5$	Step length (drill/chamfer)
$L_7$	Shank length
$P_1$	Rear pipe tap (XT standard)








## GEN3SYS®XT Pro Drill Inserts

11 Series | Diameter Range: 11.00mm - 11.99mm (0.4331" - 0.4723")



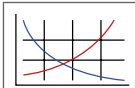
Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
11.00	0.4331	-	XTP11-11.00	XTK11-11.00	XTN11-11.00
11.11	0.4375	7/16	XTP11-11.11	XTK11-11.11	XTN11-11.11
11.20	0.4409	-	XTP11-11.20	XTK11-11.20	XTN11-11.20
11.30	0.4449	-	XTP11-11.30	XTK11-11.30	XTN11-11.30
11.40	0.4488	-	XTP11-11.40	XTK11-11.40	XTN11-11.40
11.50	0.4528	-	XTP11-11.50	XTK11-11.50	XTN11-11.50
11.51	0.4531	29/64	XTP11-11.51	XTK11-11.51	XTN11-11.51
11.60	0.4567	-	XTP11-11.60	XTK11-11.60	XTN11-11.60
11.70	0.4606	-	XTP11-11.70	XTK11-11.70	XTN11-11.70
11.80	0.4646	-	XTP11-11.80	XTK11-11.80	XTN11-11.80
11.91	0.4688	15/32	XTP11-11.91	XTK11-11.91	XTN11-11.91

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5

Key on A2: 1

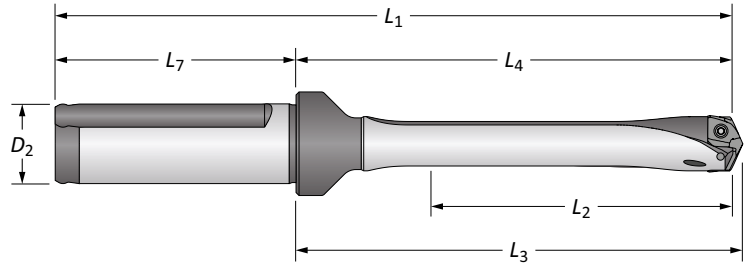








Sizes not shown are available upon request.  
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>





**GEN3SYS®XT Pro Drill Insert Holders**

11 Series | Diameter Range: 11.00mm - 11.99mm (0.4331" - 0.4723")



Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Ⓜ Straight	3xD	36.0	62.6	64.7	110.6	48.0	16.0	YES	HXT0311S-16FM
	3xD	36.0	62.6	64.7	110.6	48.0	16.0	NO	HXT0311S-16CM
	5xD	60.0	86.6	88.6	134.6	48.0	16.0	YES	HXT0511S-16FM
	5xD	60.0	86.6	88.6	134.6	48.0	16.0	NO	HXT0511S-16CM
	7xD	84.0	110.6	112.6	158.6	48.0	16.0	YES	HXT0711S-16FM
	7xD	84.0	110.6	112.6	158.6	48.0	16.0	NO	HXT0711S-16CM
	10xD	119.9	146.6	148.4	194.6	48.0	16.0	YES	 HXT1011S-16FM
	10xD	119.9	146.6	148.4	194.6	48.0	16.0	NO	 HXT1011S-16CM
 ⓘ Straight	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	YES	HXT0311S-063F
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	NO	HXT0311S-063C
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	YES	HXT0511S-063F
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	NO	HXT0511S-063C
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	YES	HXT0711S-063F
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	NO	HXT0711S-063C
	10xD	4-23/32	5-49/64	5-27/32	7-41/64	1-7/8	5/8	YES	 HXT1011S-063F
	10xD	4-23/32	5-49/64	5-27/32	7-41/64	1-7/8	5/8	NO	 HXT1011S-063C

**Connection Accessories**

				<b>Admissible Tightening Torque*</b>
71843-IP6-1	8IP-6	8IP-6TL	8IP-6B	50 N-cm (4.4 in-lbs)

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

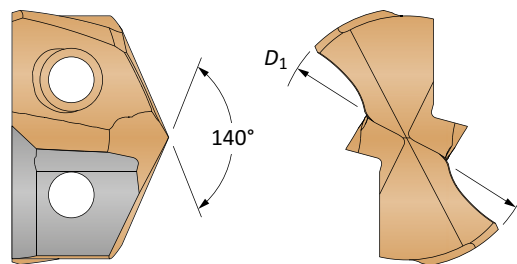
Ⓜ = Metric (mm)  
 ⓘ = Imperial (in)

Screws sold in multiples of 10

**⚠ WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

**GEN3SYS®XT Drill Inserts**

11 Series | Diameter Range: 11.00mm - 11.99mm (0.4331" - 0.4723")



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	11.00	0.4331	–	7C111P-11	7C111P-11LR	–	–
	11.11	0.4375	7/16	7C111P-0014	7C111P-0014LR	–	–
	11.50	0.4528	–	7C111P-11.5	7C111P-11.5LR	–	–
	11.51	0.4531	29/64	7C111P-.453	7C111P-.453LR	–	–
	11.91	0.4688	15/32	7C111P-0015	7C111P-0015LR	–	–
K20 (C2)	11.00	0.4331	–	7C211P-11	7C211P-11LR	7C211P-11CI	7C211P-11AS
	11.11	0.4375	7/16	7C211P-0014	7C211P-0014LR	7C211P-0014CI	7C211P-0014AS
	11.50	0.4528	–	7C211P-11.5	7C211P-11.5LR	7C211P-11.5CI	7C211P-11.5AS
	11.51	0.4531	29/64	7C211P-.453	7C211P-.453LR	7C211P-.453CI	7C211P-.453AS
	11.91	0.4688	15/32	7C211P-0015	7C211P-0015LR	7C211P-0015CI	7C211P-0015AS

Inserts sold in multiples of 1

A DRILLING  
B BORING  
C REAMING  
D BURISHING  
E THREADING  
X SPECIALS

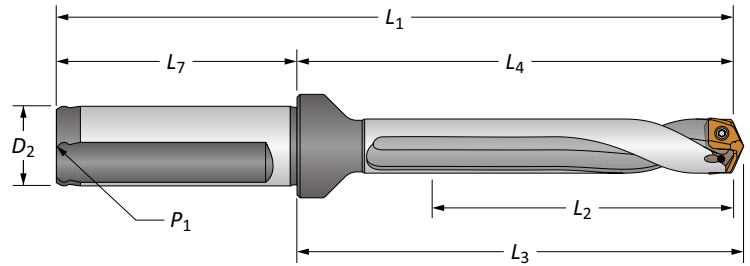
A2: 66 - 75 A2: 2 - 5

Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Imperial:</b>	0.5200", 13 series, C2 = use Part No. <b>7C213P-.5200</b>
<b>Metric:</b>	13.20mm, 13 series, C2 = use Part No. <b>7C213P-13.20</b>






### GEN3SYS® XT Standard Drill Insert Holders

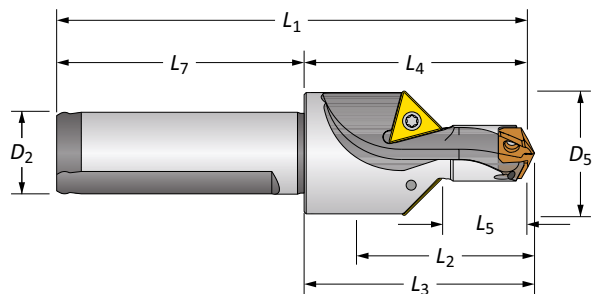
11 Series | Diameter Range: 11.00mm - 11.99mm (0.4331" - 0.4723")






#### Straight and Helical

Flute	Length	Body					Shank				Flat	Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$				
	3xD	36.0	62.6	64.7	110.6	48.0	16.0	1/16*	YES	<b>60311S-16FM</b>		
	5xD	60.0	86.6	88.6	134.6	48.0	16.0	1/16*	YES	<b>60511S-16FM</b>		
	7xD	84.0	110.6	112.6	158.6	48.0	16.0	1/16*	YES	<b>60711S-16FM</b>		
	Stub	16.0	42.6	44.7	90.6	48.0	16.0	1/16*	YES	<b>60111H-16FM</b>		
	3xD	36.0	62.6	64.7	110.6	48.0	16.0	1/16*	YES	<b>60311H-16FM</b>		
	3xD	36.0	62.6	64.7	110.6	48.0	16.0	1/16*	NO	<b>60311H-16CM</b>		
	5xD	60.0	86.6	88.6	134.6	48.0	16.0	1/16*	YES	<b>60511H-16FM</b>		
	5xD	60.0	86.6	88.6	134.6	48.0	16.0	1/16*	NO	<b>60511H-16CM</b>		
	7xD	84.0	110.6	112.6	158.6	48.0	16.0	1/16*	YES	<b>60711H-16FM</b>		
	7xD	84.0	110.6	112.6	158.6	48.0	16.0	1/16*	NO	<b>60711H-16CM</b>		
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	YES	<b>60311S-063F</b>		
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	YES	<b>60511S-063F</b>		
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	YES	<b>60711S-063F</b>		
	Stub	5/8	1-43/64	1-3/4	3-35/64	1-7/8	5/8	1/16	YES	<b>60111H-063F</b>		
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	YES	<b>60311H-063F</b>		
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	NO	<b>60311H-063C</b>		
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	YES	<b>60511H-063F</b>		
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	NO	<b>60511H-063C</b>		
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	YES	<b>60711H-063F</b>		
7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	NO	<b>60711H-063C</b>			





\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

	Step		Body				Shank		Part No.	 Chamfer Insert
	$D_5$	$L_5$	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$		
	24.1	16.5	23.8	42.2	44.3	90.2	48.0	16.0	<b>60111C45-16FM</b>	TCMT-110204
	61/64	21/32	15/16	1-43/64	1-3/4	3-35/64	1-7/8	5/8	<b>60111C45-063F</b>	TCMT-110204

#### Connection Accessories

 Insert Screws	 Insert Driver	 Preset Torque Hand Driver	 Replacement Tips	Admissible Tightening Torque*
71843-IP6-1	8IP-6	8IP-6TL	8IP-6B	50 N-cm (4.4 in-lbs)

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

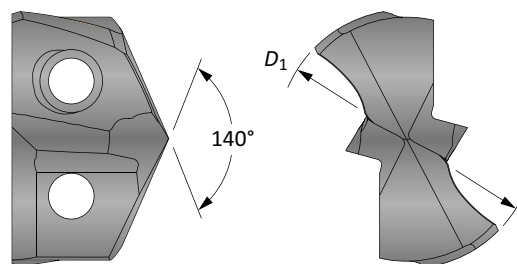
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




 = Metric (mm)  
 = Imperial (in)



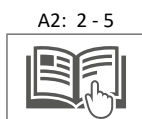
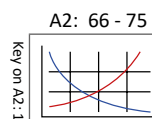
## GEN3SYS®XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
12.00	0.4724	-	XTP12-12.00	XTK12-12.00	XTN12-12.00
12.10	0.4764	-	XTP12-12.10	XTK12-12.10	XTN12-12.10
12.20	0.4803	-	XTP12-12.20	XTK12-12.20	XTN12-12.20
12.30	0.4844	31/64	XTP12-12.30	XTK12-12.30	XTN12-12.30
12.40	0.4882	-	XTP12-12.40	XTK12-12.40	XTN12-12.40
12.50	0.4921	-	XTP12-12.50	XTK12-12.50	XTN12-12.50
12.60	0.4961	-	XTP12-12.60	XTK12-12.60	XTN12-12.60
12.70	0.5000	1/2	XTP12-12.70	XTK12-12.70	XTN12-12.70
12.80	0.5039	-	XTP12-12.80	XTK12-12.80	XTN12-12.80
12.90	0.5079	-	XTP12-12.90	XTK12-12.90	XTN12-12.90

Inserts sold in multiples of 1



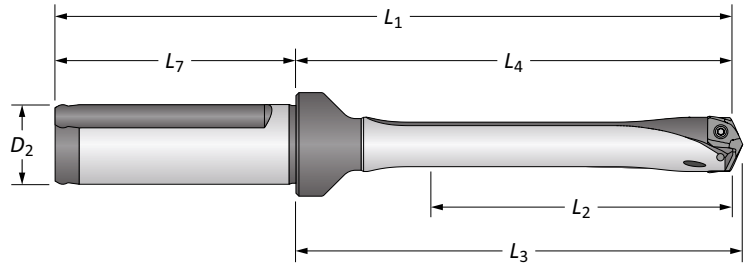
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>






## GEN3SYS® XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	39.0	66.6	68.8	116.6	50.0	20.0	YES	HXT0312S-20FM
	3xD	39.0	66.6	68.8	116.6	50.0	20.0	NO	HXT0312S-20CM
	5xD	65.0	92.5	94.8	142.6	50.0	20.0	YES	HXT0512S-20FM
	5xD	65.0	92.5	94.8	142.6	50.0	20.0	NO	HXT0512S-20CM
	7xD	91.0	118.5	120.8	168.5	50.0	20.0	YES	HXT0712S-20FM
	7xD	91.0	118.5	120.8	168.5	50.0	20.0	NO	HXT0712S-20CM
	10xD	129.9	157.5	159.7	207.5	50.0	20.0	YES	 HXT1012S-20FM
10xD	129.9	157.5	159.7	207.5	50.0	20.0	NO	 HXT1012S-20CM	
 Straight	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	YES	HXT0312S-075F
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	NO	HXT0312S-075C
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	YES	HXT0512S-075F
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	NO	HXT0512S-075C
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	YES	HXT0712S-075F
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	NO	HXT0712S-075C
	10xD	5-7/64	6-13/64	6-9/32	8-15/64	2-1/32	3/4	YES	 HXT1012S-075F
10xD	5-7/64	6-13/64	6-9/32	8-15/64	2-1/32	3/4	NO	 HXT1012S-075C	

### Connection Accessories


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

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

 = Metric (mm)

 = Imperial (in)

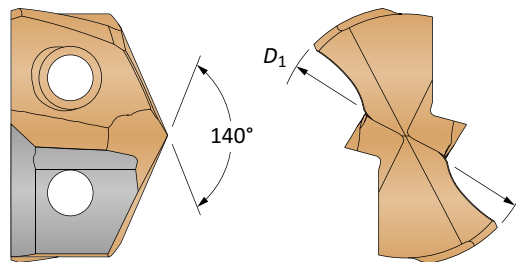
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



**GEN3SYS®XT Drill Inserts**

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



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	12.00	0.4724	–	7C112P-12	7C112P-12LR	–	–
	12.30	0.4844	31/64	7C112P-.484	7C112P-.484LR	–	–
	12.50	0.4921	–	7C112P-12.5	7C112P-12.5LR	–	–
	12.60	0.4961	–	7C112P-12.6	–	–	–
	12.70	0.5000	1/2	7C112P-0016	7C112P-0016LR	–	–
	12.80	0.5039	–	7C112P-12.8	–	–	–
K20 (C2)	12.00	0.4724	–	7C212P-12	7C212P-12LR	7C212P-12CI	7C212P-12AS
	12.30	0.4844	31/64	7C212P-.484	7C212P-.484LR	7C212P-.484CI	7C212P-.484AS
	12.50	0.4921	–	7C212P-12.5	7C212P-12.5LR	7C212P-12.5CI	7C212P-12.5AS
	12.60	0.4961	–	7C212P-12.6	–	–	–
	12.70	0.5000	1/2	7C212P-0016	7C212P-0016LR	7C212P-0016CI	7C212P-0016AS
	12.80	0.5039	–	7C212P-12.8	–	–	–

Inserts sold in multiples of 1

A  
DRILLING

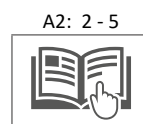
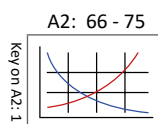
B  
BORING

C  
REAMING

D  
BURNISHING

F  
THREADING

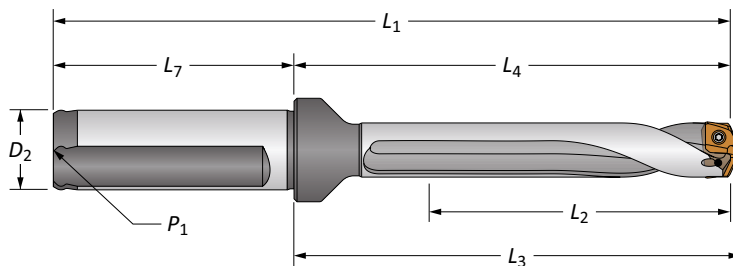
X  
SPECIALS



Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

**GEN3SYS®XT Standard Drill Insert Holders**

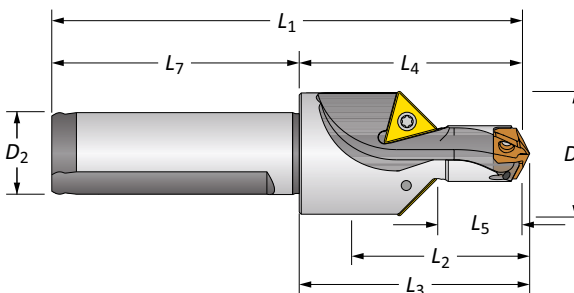
12 Series | Diameter Range: 12.00mm - 12.99mm (0.4724" - 0.5117")



**Straight and Helical**

Flute	Length	Body					Shank				Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
	3xD	39.0	66.6	68.8	116.6	50.0	20.0	1/8*	YES	<b>60312S-20FM</b>	
	5xD	65.0	92.6	94.8	142.6	50.0	20.0	1/8*	YES	<b>60512S-20FM</b>	
	7xD	91.0	118.5	120.8	168.5	50.0	20.0	1/8*	YES	<b>60712S-20FM</b>	
	Stub	16.0	43.2	45.4	93.2	50.0	20.0	1/8*	YES	<b>60112H-20FM</b>	
	3xD	39.0	66.6	68.8	116.6	50.0	20.0	1/8*	YES	<b>60312H-20FM</b>	
	3xD	39.0	66.6	68.8	116.6	50.0	20.0	1/8*	NO	<b>60312H-20CM</b>	
	5xD	65.0	92.6	94.8	142.6	50.0	20.0	1/8*	YES	<b>60512H-20FM</b>	
	5xD	65.0	92.6	94.8	142.6	50.0	20.0	1/8*	NO	<b>60512H-20CM</b>	
	7xD	91.0	118.5	120.8	168.5	50.0	20.0	1/8*	YES	<b>60712H-20FM</b>	
	7xD	91.0	118.5	120.8	168.5	50.0	20.0	1/8*	NO	<b>60712H-20CM</b>	
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	<b>60312S-075F</b>	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	<b>60512S-075F</b>	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	YES	<b>60712S-075F</b>	
	Stub	5/8	1-45/64	1-25/32	3-47/64	2-1/32	3/4	1/8	YES	<b>60112H-075F</b>	
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	<b>60312H-075F</b>	
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	NO	<b>60312H-075C</b>	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	<b>60512H-075F</b>	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	NO	<b>60512H-075C</b>	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	YES	<b>60712H-075F</b>	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	NO	<b>60712H-075C</b>	

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

	Step		Body				Shank		Part No.		Chamfer Insert
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
	24.8	18.0	35.2	43.2	45.4	93.2	50.0	20.0	<b>60112C45-20FM</b>	TCMT-110204	
	31/32	45/64	63/64	1-45/64	1-25/32	3-47/64	2-1/32	3/4	<b>60112C45-075F</b>	TCMT-110204	

**Connection Accessories**

					Admissible Tightening Torque*
Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	
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

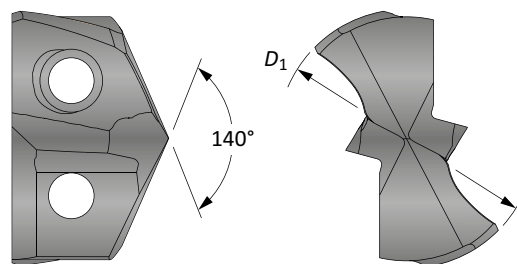
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




= Metric (mm)  
 = Imperial (in)



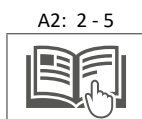
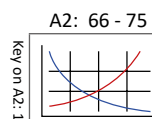
## GEN3SYS®XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
13.00	0.5118	-	XTP13-13.00	XTK13-13.00	XTN13-13.00
13.10	0.5156	33/64	XTP13-13.10	XTK13-13.10	XTN13-13.10
13.20	0.5197	-	XTP13-13.20	XTK13-13.20	XTN13-13.20
13.30	0.5236	-	XTP13-13.30	XTK13-13.30	XTN13-13.30
13.40	0.5276	-	XTP13-13.40	XTK13-13.40	XTN13-13.40
13.49	0.5313	17/32	XTP13-13.49	XTK13-13.49	XTN13-13.49
13.50	0.5315	-	XTP13-13.50	XTK13-13.50	XTN13-13.50
13.60	0.5354	-	XTP13-13.60	XTK13-13.60	XTN13-13.60
13.70	0.5394	-	XTP13-13.70	XTK13-13.70	XTN13-13.70
13.80	0.5433	-	XTP13-13.80	XTK13-13.80	XTN13-13.80
13.89	0.5469	35/64	XTP13-13.89	XTK13-13.89	XTN13-13.89

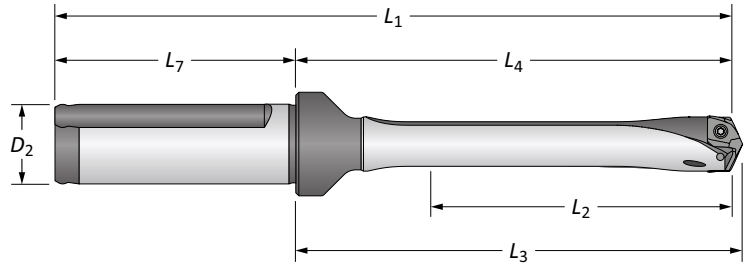
Inserts sold in multiples of 1









Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>




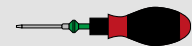

## GEN3SYS®XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	42.0	69.2	71.5	119.2	50.0	20.0	YES	HXT0313S-20FM
	3xD	42.0	69.2	71.5	119.2	50.0	20.0	NO	HXT0313S-20CM
	5xD	70.0	97.3	99.5	147.3	50.0	20.0	YES	HXT0513S-20FM
	5xD	70.0	97.3	99.5	147.3	50.0	20.0	NO	HXT0513S-20CM
	7xD	98.0	125.3	127.5	175.3	50.0	20.0	YES	HXT0713S-20FM
	7xD	98.0	125.3	127.5	175.3	50.0	20.0	NO	HXT0713S-20CM
	10xD	140.0	167.0	169.4	217.0	50.0	20.0	YES	 HXT1013S-20FM
	10xD	140.0	167.0	169.4	217.0	50.0	20.0	NO	 HXT1013S-20CM
 Straight	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	YES	HXT0313S-075F
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	NO	HXT0313S-075C
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	YES	HXT0513S-075F
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	NO	HXT0513S-075C
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	YES	HXT0713S-075F
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	NO	HXT0713S-075C
	10xD	5-33/64	6-37/64	6-43/64	8-39/64	2-1/32	3/4	YES	 HXT1013S-075F
	10xD	5-33/64	6-37/64	6-43/64	8-39/64	2-1/32	3/4	NO	 HXT1013S-075C

### Connection Accessories


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

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

 = Metric (mm)

 = Imperial (in)

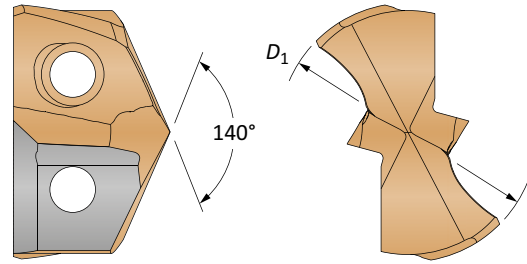
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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

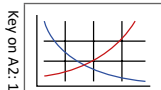


Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	13.00	0.5118	–	7C113P-13	7C113P-13LR	–	–
	13.08	0.5156	33/64	7C113P-.515	7C113P-.515LR	–	–
	13.10	0.5157	–	7C113P-13.1	–	–	–
	13.20	0.5197	–	7C113P-13.2	–	–	–
	13.49	0.5312	17/32	7C113P-0017	7C113P-0017LR	–	–
	13.50	0.5315	–	7C113P-13.5	7C113P-13.5LR	–	–
	13.60	0.5354	–	7C113P-13.6	–	–	–
	13.70	0.5394	–	7C113P-13.7	–	–	–
	13.80	0.5433	–	7C113P-13.8	–	–	–
K20 (C2)	13.89	0.5469	35/64	7C113P-.546	7C113P-.546LR	–	–
	13.00	0.5118	–	7C213P-13	7C213P-13LR	7C213P-13CI	7C213P-13AS
	13.08	0.5156	33/64	7C213P-.515	7C213P-.515LR	7C213P-.515CI	7C213P-.515AS
	13.10	0.5157	–	7C213P-13.1	–	–	–
	13.20	0.5197	–	7C213P-13.2	–	–	–
	13.49	0.5312	17/32	7C213P-0017	7C213P-0017LR	7C213P-0017CI	7C213P-0017AS
	13.50	0.5315	–	7C213P-13.5	7C213P-13.5LR	7C213P-13.5CI	7C213P-13.5AS
	13.60	0.5354	–	7C213P-13.6	–	–	–
	13.70	0.5394	–	7C213P-13.7	–	–	–
13.80	0.5433	–	7C213P-13.8	–	–	–	
13.89	0.5469	35/64	7C213P-.546	7C213P-.546LR	7C213P-.546CI	7C213P-.546AS	

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



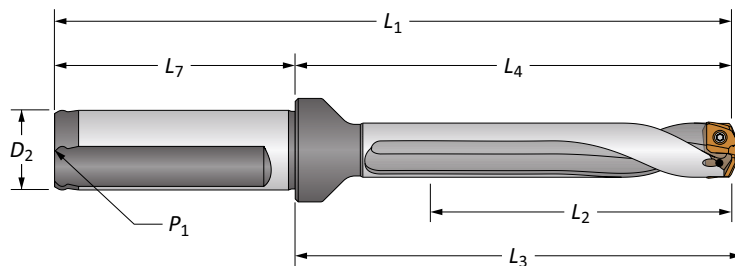
Sizes not shown are available upon request.  
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



**GEN3SYS®XT Standard Drill Insert Holders**

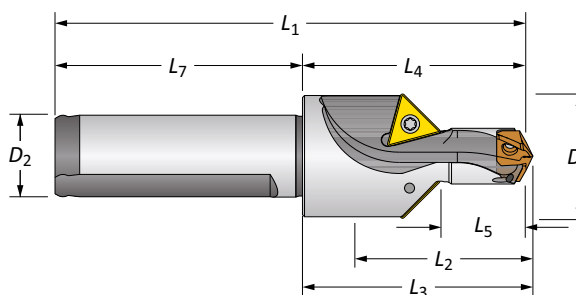
13 Series | Diameter Range: 13.00mm - 13.99mm (0.5118" - 0.5511")



**Straight and Helical**

Flute	Length	Body					Shank				Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
	3xD	42.0	69.2	71.5	119.2	50.0	20.0	1/8*	YES	<b>60313S-20FM</b>	
	5xD	70.0	97.3	99.5	147.3	50.0	20.0	1/8*	YES	<b>60513S-20FM</b>	
	7xD	98.0	125.3	127.5	175.3	50.0	20.0	1/8*	YES	<b>60713S-20FM</b>	
	Stub	16.0	43.0	45.2	93.0	50.0	20.0	1/8*	YES	<b>60113H-20FM</b>	
	3xD	42.0	69.2	71.5	119.2	50.0	20.0	1/8*	YES	<b>60313H-20FM</b>	
	3xD	42.0	69.2	71.5	119.2	50.0	20.0	1/8*	NO	<b>60313H-20CM</b>	
	5xD	70.0	97.3	99.5	147.3	50.0	20.0	1/8*	YES	<b>60513H-20FM</b>	
	5xD	70.0	97.3	99.5	147.3	50.0	20.0	1/8*	NO	<b>60513H-20CM</b>	
	7xD	98.0	125.3	127.5	175.3	50.0	20.0	1/8*	YES	<b>60713H-20FM</b>	
	7xD	98.0	125.3	127.5	175.3	50.0	20.0	1/8*	NO	<b>60713H-20CM</b>	
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	YES	<b>60313S-075F</b>	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	YES	<b>60513S-075F</b>	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	YES	<b>60713S-075F</b>	
	Stub	5/8	1-11/16	1-25/32	3-23/32	2-1/32	3/4	1/8	YES	<b>60113H-075F</b>	
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	YES	<b>60313H-075F</b>	
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	NO	<b>60313H-075C</b>	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	YES	<b>60513H-075F</b>	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	NO	<b>60513H-075C</b>	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	YES	<b>60713H-075F</b>	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	NO	<b>60713H-075C</b>	

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

	Step		Body				Shank		Part No.		Chamfer Insert
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
	25.8	19.5	25.4	43.0	45.2	93.0	50.0	20.0	<b>60113C45-20FM</b>	TCMT-110204	
	1-1/64	49/64	1	1-11/16	1-25/32	3-23/32	2-1/32	3/4	<b>60113C45-075F</b>	TCMT-110204	

**Connection Accessories**

					<b>Admissible Tightening Torque*</b>
<b>Insert Screws</b>	<b>Nylon Locking Screws</b>	<b>Insert Driver</b>	<b>Preset Torque Hand Driver</b>	<b>Replacement Tips</b>	
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

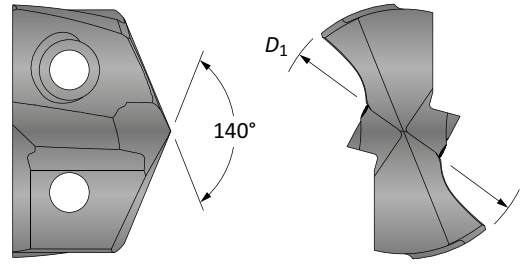
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




= Metric (mm)  
 = Imperial (in)



## GEN3SYS®XT Pro Drill Inserts

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



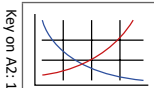
Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
14.00	0.5512	–	XTP14-14.00	XTK14-14.00	XTN14-14.00
14.10	0.5551	–	XTP14-14.10	XTK14-14.10	XTN14-14.10
14.20	0.5591	–	XTP14-14.20	XTK14-14.20	XTN14-14.20
14.29	0.5625	9/16	XTP14-14.29	XTK14-14.29	XTN14-14.29
14.40	0.5669	–	XTP14-14.40	XTK14-14.40	XTN14-14.40
14.50	0.5709	–	XTP14-14.50	XTK14-14.50	XTN14-14.50
14.60	0.5748	–	XTP14-14.60	XTK14-14.60	XTN14-14.60
14.68	0.5781	13/64	XTP14-14.68	XTK14-14.68	XTN14-14.68
14.80	0.5827	–	XTP14-14.80	XTK14-14.80	XTN14-14.80
14.90	0.5866	–	XTP14-14.90	XTK14-14.90	XTN14-14.90

Inserts sold in multiples of 1

A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS

A2: 66 - 75

A2: 2 - 5



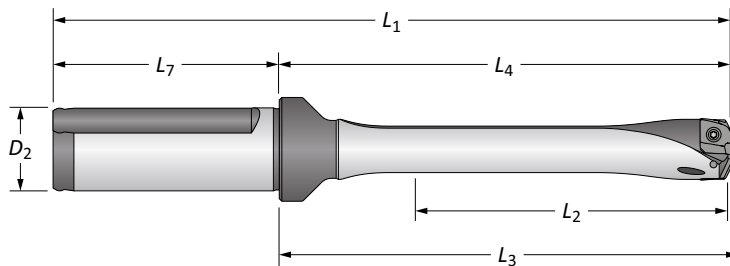
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>






### GEN3SYS®XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	45.0	72.4	75.0	122.4	50.0	20.0	YES	HXT0314S-20FM
	3xD	45.0	72.4	75.0	122.4	50.0	20.0	NO	HXT0314S-20CM
	5xD	75.0	102.4	104.9	152.4	50.0	20.0	YES	HXT0514S-20FM
	5xD	75.0	102.4	104.9	152.4	50.0	20.0	NO	HXT0514S-20CM
	7xD	105.0	132.4	134.9	182.4	50.0	20.0	YES	HXT0714S-20FM
	7xD	105.0	132.4	134.9	182.4	50.0	20.0	NO	HXT0714S-20CM
	10xD	149.9	177.4	179.8	227.4	50.0	20.0	YES	 HXT1014S-20FM
	10xD	149.9	177.4	179.8	227.4	50.0	20.0	NO	 HXT1014S-20CM
 Straight	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	YES	HXT0314S-075F
	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	NO	HXT0314S-075C
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	YES	HXT0514S-075F
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	NO	HXT0514S-075C
	7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	YES	HXT0714S-075F
	7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	NO	HXT0714S-075C
	10xD	5-29/32	6-63/64	7-5/64	9-1/64	2-1/32	3/4	YES	 HXT1014S-075F
	10xD	5-29/32	6-63/64	7-5/64	9-1/64	2-1/32	3/4	NO	 HXT1014S-075C

#### Connection Accessories

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

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

 = Metric (mm)

 = Imperial (in)

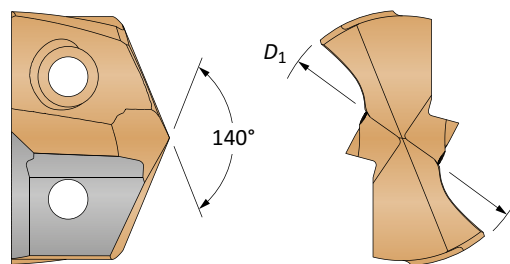
Screws sold in multiples of 10

**WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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



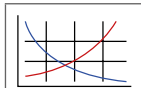
Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	$D_1$ mm	$D_1$ inch	Fractional Equivalent				
K35 (C1)	14.00	0.5512	–	7C114P-14	7C114P-14LR	–	–
	14.10	0.5551	–	7C114P-14.1	–	–	–
	14.20	0.5591	–	7C114P-14.2	–	–	–
	14.29	0.5625	9/16	7C114P-0018	7C114P-0018LR	–	–
	14.50	0.5709	–	7C114P-14.5	7C114P-14.5LR	–	–
	14.60	0.5748	–	7C114P-14.6	–	–	–
	14.68	0.5781	37/64	7C114P-.578	7C114P-.578LR	–	–
	14.80	0.5827	–	7C114P-14.8	7C114P-14.8LR	–	–
K20 (C2)	14.00	0.5512	–	7C214P-14	7C214P-14LR	7C214P-14CI	7C214P-14AS
	14.10	0.5551	–	7C214P-14.1	–	–	–
	14.20	0.5591	–	7C214P-14.2	–	–	–
	14.29	0.5625	9/16	7C214P-0018	7C214P-0018LR	7C214P-0018CI	7C214P-0018AS
	14.50	0.5709	–	7C214P-14.5	7C214P-14.5LR	7C214P-14.5CI	7C214P-14.5AS
	14.60	0.5748	–	7C214P-14.6	–	–	–
	14.68	0.5781	37/64	7C214P-.578	7C214P-.578LR	7C214P-.578CI	7C214P-.578AS
	14.80	0.5827	–	7C214P-14.8	7C214P-14.8LR	7C214P-14.8CI	7C214P-14.8AS

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5

Key on A2: 1

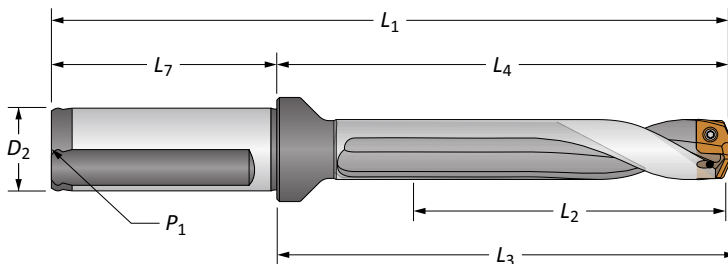


Sizes not shown are available upon request.  
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

### GEN3SYS®XT Standard Drill Insert Holders

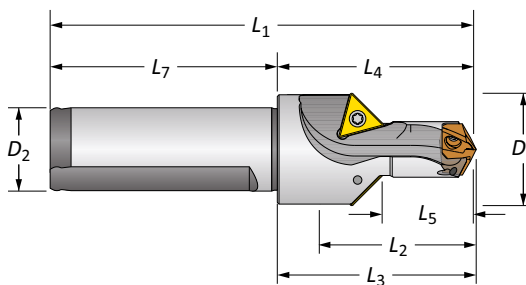
14 Series | Diameter Range: 14.00mm - 14.99mm (0.5512" - 0.5905")



#### Straight and Helical

Flute	Length	Body					Shank				Flat	Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$				
Straight	3xD	45.0	72.4	75.0	122.4	50.0	20.0	1/8*	YES	60314S-20FM		
	5xD	75.0	102.4	104.9	152.4	50.0	20.0	1/8*	YES	60514S-20FM		
	7xD	105.0	132.4	134.9	182.4	50.0	20.0	1/8*	YES	60714S-20FM		
Helical	Stub	17.5	44.6	47.2	94.6	50.0	20.0	1/8*	YES	60114H-20FM		
	3xD	45.0	72.4	75.0	122.4	50.0	20.0	1/8*	YES	60314H-20FM		
	3xD	45.0	72.4	75.0	122.4	50.0	20.0	1/8*	NO	60314H-20CM		
	5xD	75.0	102.4	104.9	152.4	50.0	20.0	1/8*	YES	60514H-20FM		
	5xD	75.0	102.4	104.9	152.4	50.0	20.0	1/8*	NO	60514H-20CM		
	7xD	105.0	132.4	134.9	182.4	50.0	20.0	1/8*	YES	60714H-20FM		
	7xD	105.0	132.4	134.9	182.4	50.0	20.0	1/8*	NO	60714H-20CM		
Straight	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	1/8	YES	60314S-075F		
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	1/8	YES	60514S-075F		
	7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	1/8	YES	60714S-075F		
	Stub	11/16	1-3/4	1-55/64	3-25/32	2-1/32	3/4	1/8	YES	60114H-075F		
	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	1/8	YES	60314H-075F		
	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	1/8	NO	60314H-075C		
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	1/8	YES	60514H-075F		
	5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	1/8	NO	60514H-075C		
	7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	1/8	YES	60714H-075F		
	7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	1/8	NO	60714H-075C		

\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

Step	Body					Shank			Part No.	Chamfer Insert
	$D_5$	$L_5$	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$		
Ⓜ	26.7	21.0	26.8	44.6	47.2	94.6	50.0	20.0	60114C45-20FM	TCMT-110204
Ⓢ	1-3/64	53/64	1-3/64	1-3/4	1-55/64	3-25/32	2-1/32	3/4	60114C45-075F	TCMT-110204

#### Connection Accessories

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

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

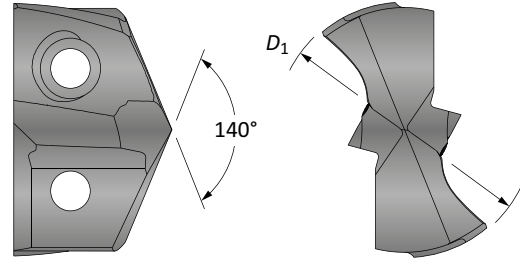
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




Ⓜ = Metric (mm)  
Ⓢ = Imperial (in)



## GEN3SYS® XT Pro Drill Inserts

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

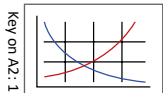


Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
15.00	0.5906	-	XTP15-15.00	XTK15-15.00	XTN15-15.00
15.08	0.5938	19/32	XTP15-15.08	XTK15-15.08	XTN15-15.08
15.20	0.5984	-	XTP15-15.20	XTK15-15.20	XTN15-15.20
15.30	0.6024	-	XTP15-15.30	XTK15-15.30	XTN15-15.30
15.40	0.6063	-	XTP15-15.40	XTK15-15.40	XTN15-15.40
15.48	0.6094	33/64	XTP15-15.48	XTK15-15.48	XTN15-15.48
15.50	0.6102	-	XTP15-15.50	XTK15-15.50	XTN15-15.50
15.60	0.6142	-	XTP15-15.60	XTK15-15.60	XTN15-15.60
15.70	0.6181	-	XTP15-15.70	XTK15-15.70	XTN15-15.70
15.80	0.6220	-	XTP15-15.80	XTK15-15.80	XTN15-15.80
15.88	0.6250	5/8	XTP15-15.88	XTK15-15.88	XTN15-15.88

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5

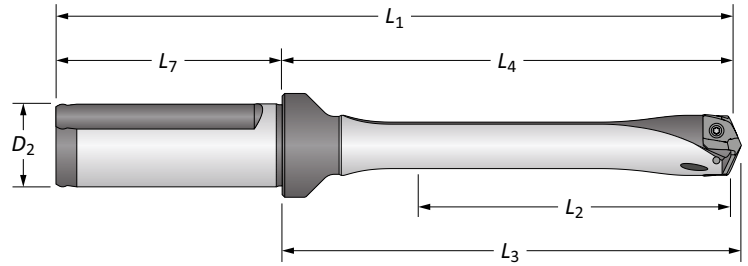








Sizes not shown are available upon request.  
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>






## GEN3SYS® XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 m Straight	3xD	48.0	75.1	77.6	125.1	50.0	20.0	YES	HXT0315S-20FM
	3xD	48.0	75.1	77.6	125.1	50.0	20.0	NO	HXT0315S-20CM
	5xD	80.0	107.0	109.6	157.0	50.0	20.0	YES	HXT0515S-20FM
	5xD	80.0	107.0	109.6	157.0	50.0	20.0	NO	HXT0515S-20CM
	7xD	112.0	139.0	141.6	189.0	50.0	20.0	YES	HXT0715S-20FM
	7xD	112.0	139.0	141.6	189.0	50.0	20.0	NO	HXT0715S-20CM
	10xD	159.9	186.9	189.5	236.9	50.0	20.0	YES	 HXT1015S-20FM
	10xD	159.9	186.9	189.5	236.9	50.0	20.0	NO	 HXT1015S-20CM
 i Straight	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	YES	HXT0315S-075F
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	NO	HXT0315S-075C
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	YES	HXT0515S-075F
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	NO	HXT0515S-075C
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	YES	HXT0715S-075F
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	NO	HXT0715S-075C
	10xD	6-19/64	7-23/64	7-29/64	9-25/64	2-1/32	3/4	YES	 HXT1015S-075F
	10xD	6-19/64	7-23/64	7-29/64	9-25/64	2-1/32	3/4	NO	 HXT1015S-075C

### Connection Accessories

					<b>Admissible Tightening Torque*</b>
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

 = Metric (mm)

 = Imperial (in)

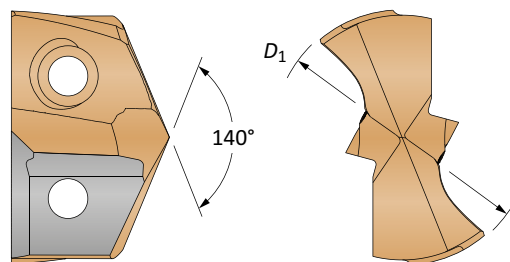
Screws sold in multiples of 10

**WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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

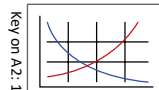


Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	$D_1$ mm	$D_1$ inch	Fractional Equivalent				
K35 (C1)	15.00	0.5906	–	7C115P-15	7C115P-15LR	–	–
	15.08	0.5938	19/32	7C115P-0019	7C115P-0019LR	–	–
	15.25	0.6004	–	7C115P-15.25	7C115P-15.25LR	–	–
	15.30	0.6024	–	7C115P-15.3	–	–	–
	15.48	0.6094	39/64	7C115P-.609	7C115P-.609LR	–	–
	15.50	0.6103	–	7C115P-15.5	7C115P-15.5LR	–	–
	15.60	0.6142	–	7C115P-15.6	–	–	–
	15.70	0.6181	–	7C115P-.618	7C115P-.618LR	–	–
	15.80	0.6220	–	7C115P-15.8	–	–	–
	15.88	0.6250	5/8	7C115P-0020	7C115P-0020LR	–	–
K20 (C2)	15.00	0.5906	–	7C215P-15	7C215P-15LR	7C215P-15CI	7C215P-15AS
	15.08	0.5938	19/32	7C215P-0019	7C215P-0019LR	7C215P-0019CI	7C215P-0019AS
	15.25	0.6004	–	7C215P-15.25	7C215P-15.25LR	7C215P-15.25CI	7C215P-15.25AS
	15.30	0.6024	–	7C215P-15.3	–	–	–
	15.48	0.6094	39/64	7C215P-.609	7C215P-.609LR	7C215P-.609CI	7C215P-.609AS
	15.50	0.6103	–	7C215P-15.5	7C215P-15.5LR	7C215P-15.5CI	7C215P-15.5AS
	15.60	0.6142	–	7C215P-15.6	–	–	–
	15.70	0.6181	–	7C215P-.618	7C215P-.618LR	7C215P-.618CI	7C215P-.618AS
	15.80	0.6220	–	7C215P-15.8	–	–	–
	15.88	0.6250	5/8	7C215P-0020	7C215P-0020LR	7C215P-0020CI	7C215P-0020AS

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



Sizes not shown are available upon request.

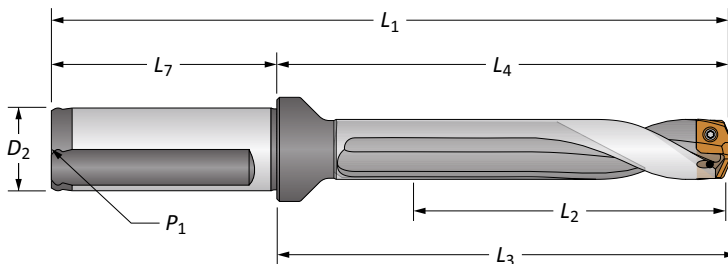
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



**GEN3SYS®XT Standard Drill Insert Holders**

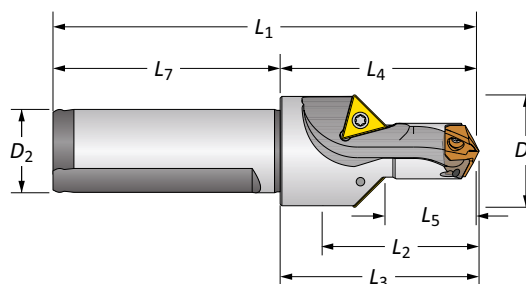
15 Series | Diameter Range: 15.00mm - 15.99mm (0.5906" - 0.6298")



**Straight and Helical**

Flute	Length	Body					Shank			Flat	Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$			
	3xD	48.0	75.1	77.6	125.1	50.0	20.0	1/8*	YES	<b>60315S-20FM</b>	
	5xD	80.0	107.0	109.6	157.0	50.0	20.0	1/8*	YES	<b>60515S-20FM</b>	
	7xD	112.0	139.0	141.6	189.0	50.0	20.0	1/8*	YES	<b>60715S-20FM</b>	
	Stub	17.5	44.3	46.8	94.3	50.0	20.0	1/8*	YES	<b>60115H-20FM</b>	
	3xD	48.0	75.1	77.6	125.1	50.0	20.0	1/8*	YES	<b>60315H-20FM</b>	
	3xD	48.0	75.1	77.6	125.1	50.0	20.0	1/8*	NO	<b>60315H-20CM</b>	
	5xD	80.0	107.0	109.6	157.0	50.0	20.0	1/8*	YES	<b>60515H-20FM</b>	
	5xD	80.0	107.0	109.6	157.0	50.0	20.0	1/8*	NO	<b>60515H-20CM</b>	
	7xD	112.0	139.0	141.6	189.0	50.0	20.0	1/8*	YES	<b>60715H-20FM</b>	
	7xD	112.0	139.0	141.6	189.0	50.0	20.0	1/8*	NO	<b>60715H-20CM</b>	
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	YES	<b>60315S-075F</b>	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	YES	<b>60515S-075F</b>	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	YES	<b>60715S-075F</b>	
	Stub	11/16	1-3/4	1-27/32	3-25/32	2-1/32	3/4	1/8	YES	<b>60115H-075F</b>	
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	YES	<b>60315H-075F</b>	
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	NO	<b>60315H-075C</b>	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	YES	<b>60515H-075F</b>	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	NO	<b>60515H-075C</b>	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	YES	<b>60715H-075F</b>	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	NO	<b>60715H-075C</b>	

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

	Step		Body				Shank		Part No.	Chamfer Insert
	$D_5$	$L_5$	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$		
	27.0	22.5	26.9	44.3	46.8	94.3	50.0	20.0	<b>60115C45-20FM</b>	TCMT-110204
	1-1/16	57/64	1-1/16	1-47/64	1-27/32	3-49/64	2-1/32	3/4	<b>60115C45-075F</b>	TCMT-110204

**Connection Accessories**

					<b>Admissible Tightening Torque*</b>
<b>Insert Screws</b>	<b>Nylon Locking Screws</b>	<b>Insert Driver</b>	<b>Preset Torque Hand Driver</b>	<b>Replacement Tips</b>	
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

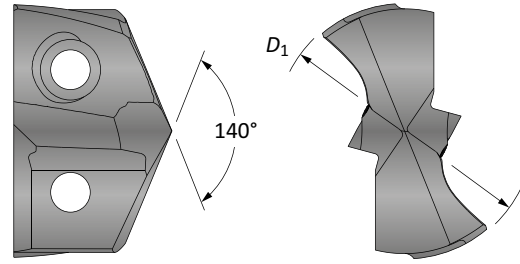
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




= Metric (mm)  
 = Imperial (in)



## GEN3SYS® XT Pro Drill Inserts

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



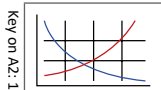
Insert			 Part No.	 Part No.	 Part No.
$D_1$ mm	$D_1$ inch	Fractional Equivalent	<b>P</b>	<b>K</b>	<b>N</b>
16.00	0.6299	–	XTP16-16.00	XTK16-16.00	XTN16-16.00
16.08	0.6331	–	XTP16-16.08	XTK16-16.08	XTN16-16.08
16.20	0.6378	–	XTP16-16.20	XTK16-16.20	XTN16-16.20
16.27	0.6406	41/64	XTP16-16.27	XTK16-16.27	XTN16-16.27
16.40	0.6457	–	XTP16-16.40	XTK16-16.40	XTN16-16.40
16.50	0.6496	–	XTP16-16.50	XTK16-16.50	XTN16-16.50
16.60	0.6535	–	XTP16-16.60	XTK16-16.60	XTN16-16.60
16.67	0.6563	21/32	XTP16-16.67	XTK16-16.67	XTN16-16.67
16.80	0.6614	–	XTP16-16.80	XTK16-16.80	XTN16-16.80
16.90	0.6654	–	XTP16-16.90	XTK16-16.90	XTN16-16.90

Inserts sold in multiples of 1

A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS

A2: 66 - 75

A2: 2 - 5



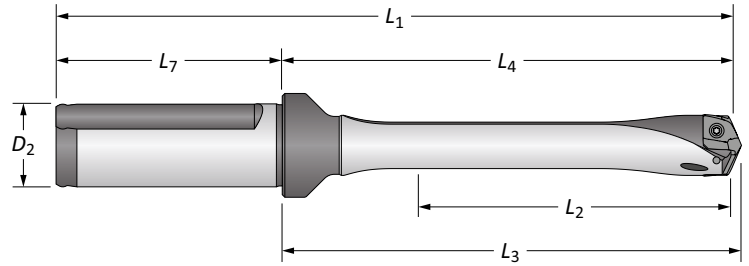
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>




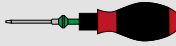

### GEN3SYS®XT Pro Drill Insert Holders

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




Flute	Body					Shank			Flat	Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
 Straight	3xD	51.0	81.3	84.2	131.3	50.0	20.0	YES	HXT0316S-20FM	
	3xD	51.0	81.3	84.2	131.3	50.0	20.0	NO	HXT0316S-20CM	
	5xD	85.0	115.3	118.2	165.3	50.0	20.0	YES	HXT0516S-20FM	
	5xD	85.0	115.3	118.2	165.3	50.0	20.0	NO	HXT0516S-20CM	
	7xD	119.0	149.3	152.2	199.3	50.0	20.0	YES	HXT0716S-20FM	
	7xD	119.0	149.3	152.2	199.3	50.0	20.0	NO	HXT0716S-20CM	
	10xD	169.9	200.0	203.2	250.0	50.0	20.0	YES	 HXT1016S-20FM	
	10xD	169.9	200.0	203.2	250.0	50.0	20.0	NO	 HXT1016S-20CM	
 Straight	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	YES	HXT0316S-075F	
	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	NO	HXT0316S-075C	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	YES	HXT0516S-075F	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	NO	HXT0516S-075C	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	YES	HXT0716S-075F	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	NO	HXT0716S-075C	
	10xD	6-11/16	7-7/8	8	9-29/32	2-1/32	3/4	YES	 HXT1016S-075F	
	10xD	6-11/16	7-7/8	8	9-29/32	2-1/32	3/4	NO	 HXT1016S-075C	

#### Connection Accessories


					Admissible Tightening Torque*
72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	

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

 = Metric (mm)

 = Imperial (in)

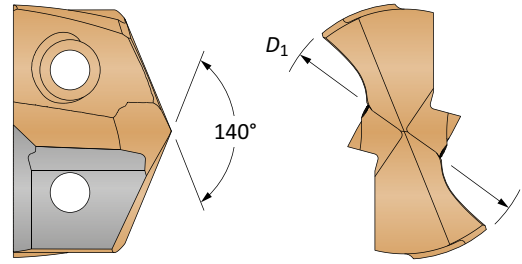
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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



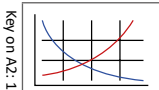
Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	$D_1$ mm	$D_1$ inch	Fractional Equivalent				
K35 (C1)	16.00	0.6299	–	7C116P-16	7C116P-16LR	–	–
	16.08	0.6331	–	7C116P-16.08	7C116P-16.08LR	–	–
	16.27	0.6406	41/64	7C116P-.640	7C116P-.640LR	–	–
	16.50	0.6496	–	7C116P-16.5	7C116P-16.5LR	–	–
	16.67	0.6563	21/32	7C116P-0021	7C116P-0021LR	–	–
K20 (C2)	16.00	0.6299	–	7C216P-16	7C216P-16LR	7C216P-16CI	7C216P-16AS
	16.08	0.6331	–	7C216P-16.08	7C216P-16.08LR	7C216P-16.08CI	7C216P-16.08AS
	16.27	0.6406	41/64	7C216P-.640	7C216P-.640LR	7C216P-.640CI	7C216P-.640AS
	16.50	0.6496	–	7C216P-16.5	7C216P-16.5LR	7C216P-16.5CI	7C216P-16.5AS
	16.67	0.6563	21/32	7C216P-0021	7C216P-0021LR	7C216P-0021CI	7C216P-0021AS

Inserts sold in multiples of 1

A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS

A2: 66 - 75

A2: 2 - 5



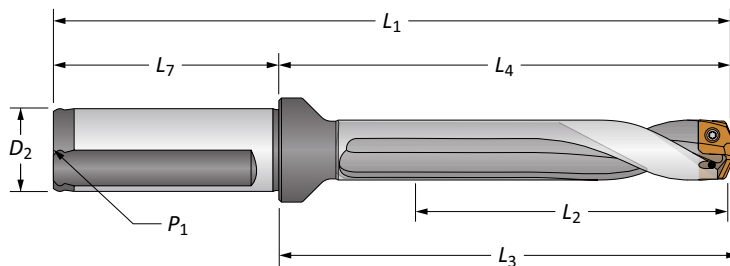
Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

**GEN3SYS®XT Standard Drill Insert Holders**

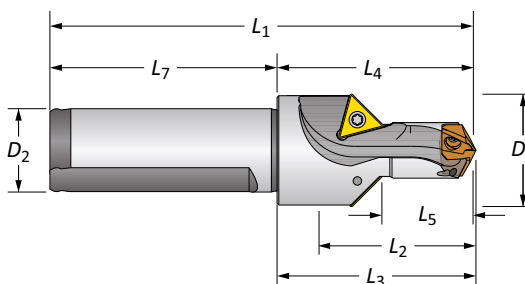
16 Series | Diameter Range: 16.00mm - 16.99mm (0.6299" - 0.6692")



**Straight and Helical**

Flute	Body						Shank				Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
Straight	3xD	51.0	81.3	84.2	131.3	50.0	20.0	1/8*	YES	<b>60316S-20FM</b>	
	5xD	85.0	115.3	118.2	165.3	50.0	20.0	1/8*	YES	<b>60516S-20FM</b>	
	7xD	119.0	149.3	152.2	199.3	50.0	20.0	1/8*	YES	<b>60716S-20FM</b>	
Helical	Stub	21.0	50.8	53.7	100.8	50.0	20.0	1/8*	YES	<b>60116H-20FM</b>	
	3xD	51.0	81.3	84.2	131.3	50.0	20.0	1/8*	YES	<b>60316H-20FM</b>	
	3xD	51.0	81.3	84.2	131.3	50.0	20.0	1/8*	NO	<b>60316H-20CM</b>	
	5xD	85.0	115.3	118.2	165.3	50.0	20.0	1/8*	YES	<b>60516H-20FM</b>	
	5xD	85.0	115.3	118.2	165.3	50.0	20.0	1/8*	NO	<b>60516H-20CM</b>	
	7xD	119.0	149.3	152.2	199.3	50.0	20.0	1/8*	YES	<b>60716H-20FM</b>	
	7xD	119.0	149.3	152.2	199.3	50.0	20.0	1/8*	NO	<b>60716H-20CM</b>	
Straight	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	YES	<b>60316S-075F</b>	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	YES	<b>60516S-075F</b>	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	YES	<b>60716S-075F</b>	
	Stub	13/16	2	2-7/64	4-1/32	2-1/32	3/4	1/8	YES	<b>60116H-075F</b>	
	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	YES	<b>60316H-075F</b>	
	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	NO	<b>60316H-075C</b>	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	YES	<b>60516H-075F</b>	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	NO	<b>60516H-075C</b>	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	YES	<b>60716H-075F</b>	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	NO	<b>60716H-075C</b>	

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

	Step		Body				Shank		Part No.	Chamfer Insert
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>		
m	27.0	24.0	33.1	50.8	53.7	100.8	50.0	20.0	<b>60116C45-20FM</b>	TCMT-110204
i	1-1/16	61/64	1-19/64	2	2-7/64	4-1/32	2-1/32	3/4	<b>60116C45-075F</b>	TCMT-110204

**Connection Accessories**

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

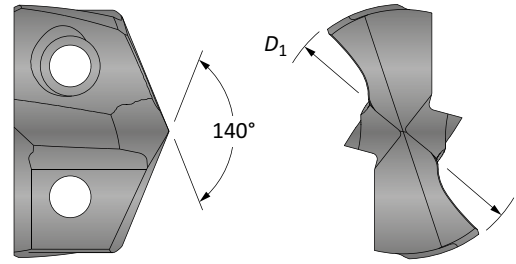
\*Tightening torques are calculated with a friction coefficient of  $\mu = 0.14$  and develop 90% of ultimate yield strength




= Metric (mm) | Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10 = Imperial (in)



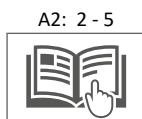
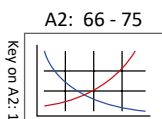
## GEN3SYS®XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
17.00	0.6693	-	XTP17-17.00	XTK17-17.00	XTN17-17.00
17.07	0.6719	43/64	XTP17-17.07	XTK17-17.07	XTN17-17.07
17.10	0.6732	-	XTP17-17.10	XTK17-17.10	XTN17-17.10
17.20	0.6772	-	XTP17-17.20	XTK17-17.20	XTN17-17.20
17.30	0.6811	-	XTP17-17.30	XTK17-17.30	XTN17-17.30
17.40	0.6850	-	XTP17-17.40	XTK17-17.40	XTN17-17.40
17.46	0.6875	11/16	XTP17-17.46	XTK17-17.46	XTN17-17.46
17.50	0.6890	-	XTP17-17.50	XTK17-17.50	XTN17-17.50
17.60	0.6929	-	XTP17-17.60	XTK17-17.60	XTN17-17.60
17.70	0.6969	-	XTP17-17.70	XTK17-17.70	XTN17-17.70
17.80	0.7008	-	XTP17-17.80	XTK17-17.80	XTN17-17.80
17.86	0.7031	45/64	XTP17-17.86	XTK17-17.86	XTN17-17.86
17.90	0.7047	-	XTP17-17.90	XTK17-17.90	XTN17-17.90

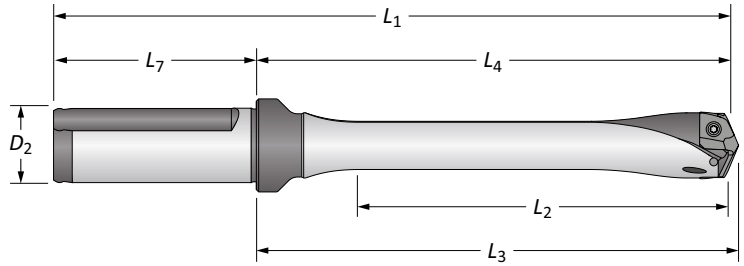
Inserts sold in multiples of 1









Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>





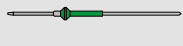
### GEN3SYS®XT Pro Drill Insert Holders

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



Flute	Body					Shank			Flat	Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
 Straight	3xD	54.0	84.1	87.0	134.1	50.0	20.0	YES	HXT0317S-20FM	
	3xD	54.0	84.1	87.0	134.1	50.0	20.0	NO	HXT0317S-20CM	
	5xD	90.0	120.0	122.9	170.0	50.0	20.0	YES	HXT0517S-20FM	
	5xD	90.0	120.0	122.9	170.0	50.0	20.0	NO	HXT0517S-20CM	
	7xD	126.0	156.0	158.9	206.0	50.0	20.0	YES	HXT0717S-20FM	
	7xD	126.0	156.0	158.9	206.0	50.0	20.0	NO	HXT0717S-20CM	
	10xD	179.8	209.9	212.8	259.9	50.0	20.0	YES	 HXT1017S-20FM	
	10xD	179.8	209.9	212.8	259.9	50.0	20.0	NO	 HXT1017S-20CM	
 Straight	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	YES	HXT0317S-075F	
	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	NO	HXT0317S-075C	
	5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	YES	HXT0517S-075F	
	5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	NO	HXT0517S-075C	
	7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	YES	HXT0717S-075F	
	7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	NO	HXT0717S-075C	
	10xD	7-5/64	8-17/64	8-3/8	10-19/64	2-1/32	3/4	YES	 HXT1017S-075F	
	10xD	7-5/64	8-17/64	8-3/8	10-19/64	2-1/32	3/4	NO	 HXT1017S-075C	

#### Connection Accessories

					<b>Admissible Tightening Torque*</b> 175 N-cm (15.5 in-lbs)
72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	

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

 = Metric (mm)  
 = Imperial (in)

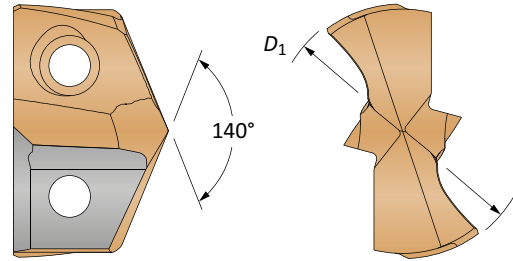
Screws sold in multiples of 10

**WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



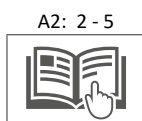
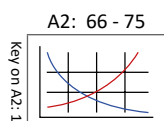
## GEN3SYS®XT Drill Inserts

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



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	$D_1$ mm	$D_1$ inch	Fractional Equivalent				
K35 (C1)	17.00	0.6693		<b>7C117P-17</b>	<b>7C117P-17LR</b>	-	-
	17.07	0.6719	43/64	<b>7C117P-.671</b>	<b>7C117P-.671LR</b>	-	-
	17.10	0.6732		<b>7C117P-17.1</b>	<b>7C117P-17.1LR</b>	-	-
	17.20	0.6772		<b>7C117P-17.2</b>	<b>7C117P-17.2LR</b>	-	-
	17.46	0.6875	11/16	<b>7C117P-0022</b>	<b>7C117P-0022LR</b>	-	-
	17.50	0.6890		<b>7C117P-17.5</b>	<b>7C117P-17.5LR</b>	-	-
K20 (C2)	17.00	0.6693		<b>7C217P-17</b>	<b>7C217P-17LR</b>	<b>7C217P-17CI</b>	<b>7C217P-17AS</b>
	17.07	0.6719	43/64	<b>7C217P-.671</b>	<b>7C217P-.671LR</b>	<b>7C217P-.671CI</b>	<b>7C217P-.671AS</b>
	17.10	0.6732		<b>7C217P-17.1</b>	<b>7C217P-17.1LR</b>	<b>7C217P-17.1CI</b>	<b>7C217P-17.1AS</b>
	17.20	0.6772		<b>7C217P-17.2</b>	<b>7C217P-17.2LR</b>	<b>7C217P-17.2CI</b>	<b>7C217P-17.2AS</b>
	17.46	0.6875	11/16	<b>7C217P-0022</b>	<b>7C217P-0022LR</b>	<b>7C217P-0022CI</b>	<b>7C217P-0022AS</b>
	17.50	0.6890		<b>7C217P-17.5</b>	<b>7C217P-17.5LR</b>	<b>7C217P-17.5CI</b>	<b>7C217P-17.5AS</b>
	17.86	0.7031	45/64	<b>7C217P-.703</b>	<b>7C217P-.703LR</b>	<b>7C217P-.703CI</b>	<b>7C217P-.703AS</b>

Inserts sold in multiples of 1

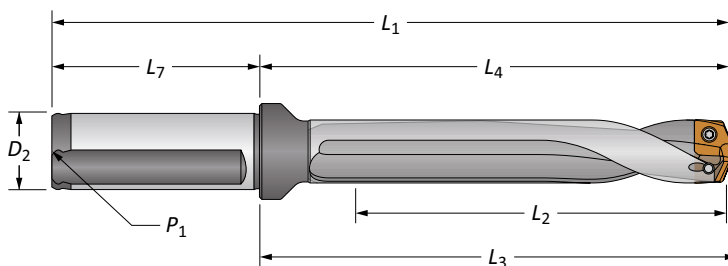


Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



### GEN3SYS®XT Standard Drill Insert Holders

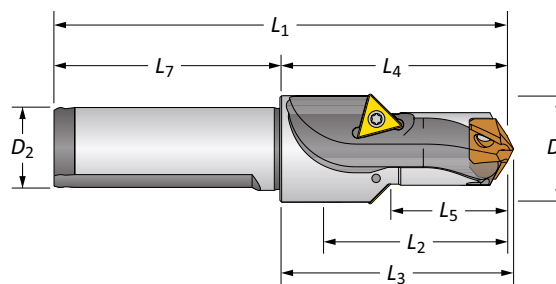
17 Series | Diameter Range: 17.00mm - 17.99mm (0.6693" - 0.7086")



#### Straight and Helical

Flute	Length	Body					Shank				Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
Straight	3xD	54.0	84.1	87.0	134.1	50.0	20.0	1/8*	YES	60317S-20FM	
	5xD	90.0	120.0	122.9	170.0	50.0	20.0	1/8*	YES	60517S-20FM	
	7xD	126.0	156.0	158.9	206.0	50.0	20.0	1/8*	YES	60717S-20FM	
Helical	Stub	21.0	50.5	53.4	100.5	50.0	20.0	1/8*	YES	60117H-20FM	
	3xD	54.0	84.1	87.0	134.1	50.0	20.0	1/8*	YES	60317H-20FM	
	3xD	54.0	84.1	87.0	134.1	50.0	20.0	1/8*	NO	60317H-20CM	
	5xD	90.0	120.0	122.9	170.0	50.0	20.0	1/8*	YES	60517H-20FM	
	5xD	90.0	120.0	122.9	170.0	50.0	20.0	1/8*	NO	60517H-20CM	
	7xD	126.0	156.0	158.9	206.0	50.0	20.0	1/8*	YES	60717H-20FM	
	7xD	126.0	156.0	158.9	206.0	50.0	20.0	1/8*	NO	60717H-20CM	
Straight	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	1/8	YES	60317S-075F	
	5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	1/8	YES	60517S-075F	
	7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	1/8	YES	60717S-075F	
	Stub	13/16	1-63/64	2-7/64	4-1/64	2-1/32	3/4	1/8	YES	60117H-075F	
	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	1/8	YES	60317H-075F	
	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	1/8	NO	60317H-075C	
	5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	1/8	YES	60517H-075F	
	5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	1/8	NO	60517H-075C	
	7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	1/8	YES	60717H-075F	
	7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	1/8	NO	60717H-075C	

\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

Step	Body					Shank		Part No.	Chamfer Insert	
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>			D <sub>2</sub>
1	25.4	25.5	33.3	50.5	53.4	108.6	50.0	20.0	60117C45-20FM	TCMT-110204
1	1	1	1-5/16	1-63/64	2-7/64	4-1/64	2-1/32	3/4	60117C45-075F	TCMT-110204

#### Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	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

Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

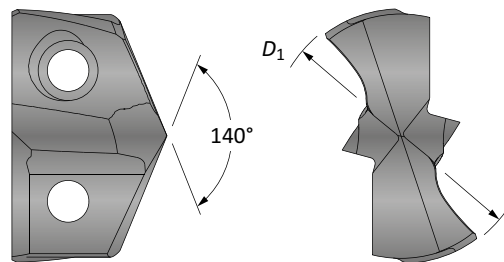
Ⓜ = Metric (mm)




Ⓢ = Imperial (in)



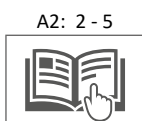
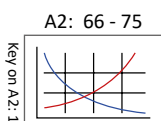
## GEN3SYS® XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
18.00	0.7087	-	XTP18-18.00	XTK18-18.00	XTN18-18.00
18.10	0.7126	-	XTP18-18.10	XTK18-18.10	XTN18-18.10
18.20	0.7165	-	XTP18-18.20	XTK18-18.20	XTN18-18.20
18.26	0.7188	23/32	XTP18-18.26	XTK18-18.26	XTN18-18.26
18.30	0.7205	-	XTP18-18.30	XTK18-18.30	XTN18-18.30
18.40	0.7244	-	XTP18-18.40	XTK18-18.40	XTN18-18.40
18.50	0.7283	-	XTP18-18.50	XTK18-18.50	XTN18-18.50
18.60	0.7323	-	XTP18-18.60	XTK18-18.60	XTN18-18.60
18.65	0.7344	47/64	XTP18-18.65	XTK18-18.65	XTN18-18.65
18.70	0.7362	-	XTP18-18.70	XTK18-18.70	XTN18-18.70
18.80	0.7402	-	XTP18-18.80	XTK18-18.80	XTN18-18.80
18.90	0.7441	-	XTP18-18.90	XTK18-18.90	XTN18-18.90
19.00	0.7480	-	XTP18-19.00	XTK18-19.00	XTN18-19.00
19.05	0.7500	3/4	XTP18-19.05	XTK18-19.05	XTN18-19.05
19.10	0.7520	-	XTP18-19.10	XTK18-19.10	XTN18-19.10
19.20	0.7559	-	XTP18-19.20	XTK18-19.20	XTN18-19.20
19.25	0.7580	-	XTP18-19.25	XTK18-19.25	XTN18-19.25
19.30	0.7598	-	XTP18-19.30	XTK18-19.30	XTN18-19.30
19.40	0.7638	-	XTP18-19.40	XTK18-19.40	XTN18-19.40
19.45	0.7656	49/64	XTP18-19.45	XTK18-19.45	XTN18-19.45
19.50	0.7677	-	XTP18-19.50	XTK18-19.50	XTN18-19.50
19.60	0.7717	-	XTP18-19.60	XTK18-19.60	XTN18-19.60
19.70	0.7756	-	XTP18-19.70	XTK18-19.70	XTN18-19.70
19.80	0.7795	-	XTP18-19.80	XTK18-19.80	XTN18-19.80
19.84	0.7813	25/32	XTP18-19.84	XTK18-19.84	XTN18-19.84
19.90	0.7835	-	XTP18-19.90	XTK18-19.90	XTN18-19.90

Inserts sold in multiples of 1

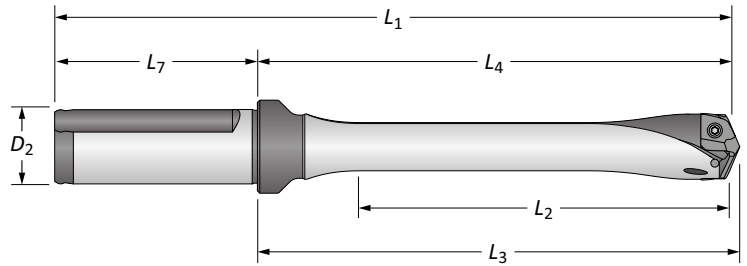








Sizes not shown are available upon request.  
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>





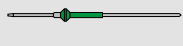
### GEN3SYS® XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	60.0	94.0	96.8	150.0	56.0	25.0	YES	HXT0318S-25FM
	3xD	60.0	94.0	96.8	150.0	56.0	25.0	NO	HXT0318S-25CM
	5xD	100.0	134.0	136.8	190.0	56.0	25.0	YES	HXT0518S-25FM
	5xD	100.0	134.0	136.8	190.0	56.0	25.0	NO	HXT0518S-25CM
	7xD	140.0	174.0	176.8	230.0	56.0	25.0	YES	HXT0718S-25FM
	7xD	140.0	174.0	176.8	230.0	56.0	25.0	NO	HXT0718S-25CM
	10xD	199.9	234.1	236.7	290.1	56.0	25.0	YES	 HXT1018S-25FM
	10xD	199.9	234.1	236.7	290.1	56.0	25.0	NO	 HXT1018S-25CM
 Straight	3xD	2-23/64	3-45/64	3-13/16	5-63/64	2-9/32	1	YES	HXT0318S-100F
	3xD	2-23/64	3-45/64	3-13/16	5-63/64	2-9/32	1	NO	HXT0318S-100C
	5xD	3-15/16	5-17/64	5-25/64	7-35/64	2-9/32	1	YES	HXT0518S-100F
	5xD	3-15/16	5-17/64	5-25/64	7-35/64	2-9/32	1	NO	HXT0518S-100C
	7xD	5-33/64	6-27/32	6-61/64	9-1/8	2-9/32	1	YES	HXT0718S-100F
	7xD	5-33/64	6-27/32	6-61/64	9-1/8	2-9/32	1	NO	HXT0718S-100C
	10xD	7-7/8	9-7/32	9-5/16	11-31/64	2-9/32	1	YES	 HXT1018S-100F
	10xD	7-7/8	9-7/32	9-5/16	11-31/64	2-9/32	1	NO	 HXT1018S-100C

#### Connection Accessories


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

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

 = Metric (mm)

 = Imperial (in)

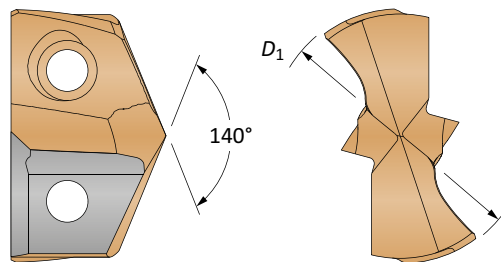
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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

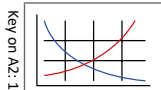


Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	18.00	0.7087	–	7C118P-18	7C118P-18LR	–	–
	18.26	0.7188	23/32	7C118P-0023	7C118P-0023LR	–	–
	18.50	0.7283	–	7C118P-18.5	7C118P-18.5LR	–	–
	18.65	0.7344	47/64	7C118P-.734	7C118P-.734LR	–	–
	19.00	0.7480	–	7C118P-19	7C118P-19LR	–	–
	19.05	0.7500	3/4	7C118P-0024	7C118P-0024LR	–	–
	19.25	0.7580	–	7C118P-.758	7C118P-.758LR	–	–
	19.45	0.7656	49/64	7C118P-.765	7C118P-.765LR	–	–
	19.50	0.7677	–	7C118P-19.5	7C118P-19.5LR	–	–
	19.80	0.7795	–	7C118P-19.8	7C118P-19.8LR	–	–
19.85	0.7813	25/32	7C118P-0025	7C118P-0025LR	–	–	
K20 (C2)	18.00	0.7087	–	7C218P-18	7C218P-18LR	7C218P-18CI	7C218P-18AS
	18.26	0.7188	23/32	7C218P-0023	7C218P-0023LR	7C218P-0023CI	7C218P-0023AS
	18.50	0.7283	–	7C218P-18.5	7C218P-18.5LR	7C218P-18.5CI	7C218P-18.5AS
	18.65	0.7344	47/64	7C218P-.734	7C218P-.734LR	7C218P-.734CI	7C218P-.734AS
	19.00	0.7480	–	7C218P-19	7C218P-19LR	7C218P-19CI	7C218P-19AS
	19.05	0.7500	3/4	7C218P-0024	7C218P-0024LR	7C218P-0024CI	7C218P-0024AS
	19.25	0.7580	–	7C218P-.758	7C218P-.758LR	7C218P-.758CI	7C218P-.758AS
	19.45	0.7656	49/64	7C218P-.765	7C218P-.765LR	7C218P-.765CI	7C218P-.765AS
	19.50	0.7677	–	7C218P-19.5	7C218P-19.5LR	7C218P-19.5CI	7C218P-19.5AS
	19.80	0.7795	–	7C218P-19.8	7C218P-19.8LR	7C218P-19.8CI	7C218P-19.8AS
19.85	0.7813	25/32	7C218P-0025	7C218P-0025LR	7C218P-0025CI	7C218P-0025AS	

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



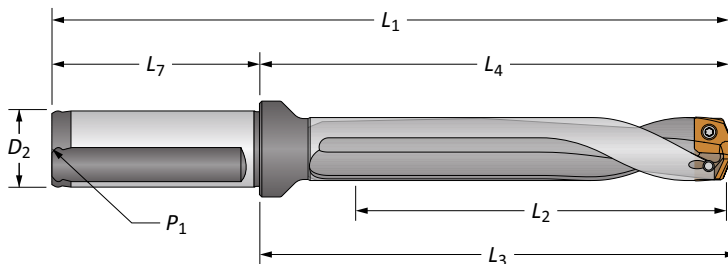
Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

### GEN3SYS®XT Standard Drill Insert Holders

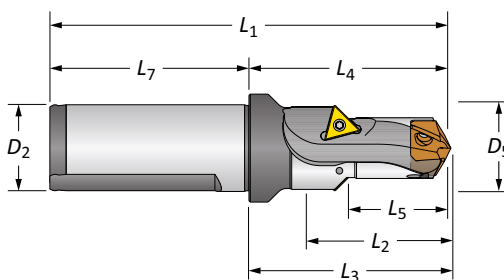
18 Series | Diameter Range: 18.00mm - 19.99mm (0.7087" - 0.7873")



#### Straight and Helical

Flute	Length	Body					Shank				Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
Straight	3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	YES	60318S-25FM	
	5xD	100.0	134.0	136.8	190.0	56.0	25.0	1/8*	YES	60518S-25FM	
	7xD	140.0	174.0	176.8	230.0	56.0	25.0	1/8*	YES	60718S-25FM	
Helical	Stub	22.0	56.0	58.8	112.0	56.0	25.0	1/8*	YES	60118H-25FM	
	3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	YES	60318H-25FM	
	3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	NO	60318H-25CM	
	5xD	100.0	134.0	136.8	190.0	56.0	25.0	1/8*	YES	60518H-25FM	
	5xD	100.0	134.0	136.8	190.0	56.0	25.0	1/8*	NO	60518H-25CM	
	7xD	140.0	174.0	176.8	230.0	56.0	25.0	1/8*	YES	60718H-25FM	
	7xD	140.0	174.0	176.8	230.0	56.0	25.0	1/8*	NO	60718H-25CM	
Straight	3xD	2-23/64	3-45/64	3-13/16	5-63/64	2-9/32	1	1/8	YES	60318S-100F	
	5xD	3-15/16	5-17/64	5-25/64	7-35/64	2-9/32	1	1/8	YES	60518S-100F	
	7xD	5-33/64	6-27/32	6-61/64	9-1/8	2-9/32	1	1/8	YES	60718S-100F	
	Stub	7/8	2-13/64	2-5/16	4-31/64	2-9/32	1	1/8	YES	60118H-100F	
	3xD	2-23/64	3-45/64	3-13/16	5-63/64	2-9/32	1	1/8	YES	60318H-100F	
	3xD	2-23/64	3-45/64	3-13/16	5-63/64	2-9/32	1	1/8	NO	60318H-100C	
	5xD	3-15/16	5-17/64	5-25/64	7-35/64	2-9/32	1	1/8	YES	60518H-100F	
	5xD	3-15/16	5-17/64	5-25/64	7-35/64	2-9/32	1	1/8	NO	60518H-100C	
	7xD	5-33/64	6-27/32	6-61/64	9-1/8	2-9/32	1	1/8	YES	60718H-100F	
	7xD	5-33/64	6-27/32	6-61/64	9-1/8	2-9/32	1	1/8	NO	60718H-100C	

\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

Step	Body					Shank		Part No.	Chamfer Insert
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>		
25.1	27	35.2	56.0	58.8	114.8	56.0	25.0	60118C45-25FM	TCMT-110204
63/64	1-1/16	1-25/64	2-13/64	2-5/16	4-31/64	2-9/32	1	60118C45-100F	TCMT-110204

#### Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	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

Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

Ⓜ = Metric (mm)




Ⓡ = Imperial (in)

20

DRILLING | GEN3SYS® XT Pro and XT High Penetration Replaceable Insert Drilling System

**GEN3SYS®XT Pro Drill Inserts**

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

Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
20.00	0.7874	-	XTP20-20.00	XTK20-20.00	XTN20-20.00
20.10	0.7913	-	XTP20-20.10	XTK20-20.10	XTN20-20.10
20.20	0.7953	-	XTP20-20.20	XTK20-20.20	XTN20-20.20
20.24	0.7969	51/64	XTP20-20.24	XTK20-20.24	XTN20-20.24
20.30	0.7992	-	XTP20-20.30	XTK20-20.30	XTN20-20.30
20.40	0.8031	-	XTP20-20.40	XTK20-20.40	XTN20-20.40
20.50	0.8071	-	XTP20-20.50	XTK20-20.50	XTN20-20.50
20.60	0.8110	-	XTP20-20.60	XTK20-20.60	XTN20-20.60
20.64	0.8125	13/16	XTP20-20.64	XTK20-20.64	XTN20-20.64
20.70	0.8150	-	XTP20-20.70	XTK20-20.70	XTN20-20.70
20.80	0.8189	-	XTP20-20.80	XTK20-20.80	XTN20-20.80
20.90	0.8228	-	XTP20-20.90	XTK20-20.90	XTN20-20.90
21.00	0.8268	-	XTP20-21.00	XTK20-21.00	XTN20-21.00
21.10	0.8307	-	XTP20-21.10	XTK20-21.10	XTN20-21.10
21.20	0.8346	-	XTP20-21.20	XTK20-21.20	XTN20-21.20
21.30	0.8386	-	XTP20-21.30	XTK20-21.30	XTN20-21.30
21.40	0.8425	-	XTP20-21.40	XTK20-21.40	XTN20-21.40
21.43	0.8438	27/32	XTP20-21.43	XTK20-21.43	XTN20-21.43
21.50	0.8465	-	XTP20-21.50	XTK20-21.50	XTN20-21.50
21.60	0.8504	-	XTP20-21.60	XTK20-21.60	XTN20-21.60
21.70	0.8543	-	XTP20-21.70	XTK20-21.70	XTN20-21.70
21.80	0.8583	-	XTP20-21.80	XTK20-21.80	XTN20-21.80
21.83	0.8594	55/64	XTP20-21.83	XTK20-21.83	XTN20-21.83
21.90	0.8622	-	XTP20-21.90	XTK20-21.90	XTN20-21.90

Inserts sold in multiples of 1

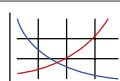
F

THREADING

X


SPECIALS

A2: 66 - 75



Key on A2: 1

A2: 2 - 5



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

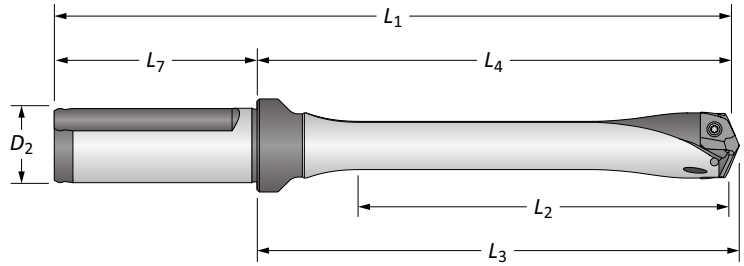
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>







A2: 40

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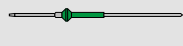
### GEN3SYS®XT Pro Drill Insert Holders

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



Flute	Body					Shank			Flat	Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
 Straight	3xD	66.0	100.1	102.9	156.1	56.0	25.0	YES	HXT0320S-25FM	
	3xD	66.0	100.1	102.9	156.1	56.0	25.0	NO	HXT0320S-25CM	
	5xD	110.0	144.1	146.9	200.1	56.0	25.0	YES	HXT0520S-25FM	
	5xD	110.0	144.1	146.9	200.1	56.0	25.0	NO	HXT0520S-25CM	
	7xD	154.0	188.1	190.9	244.1	56.0	25.0	YES	HXT0720S-25FM	
	7xD	154.0	188.1	190.9	244.1	56.0	25.0	NO	HXT0720S-25CM	
	10xD	219.9	254.0	256.8	310.0	56.0	25.0	YES	 HXT1020S-25FM	
	10xD	219.9	254.0	256.8	310.0	56.0	25.0	NO	 HXT1020S-25CM	
 Straight	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	YES	HXT0320S-100F	
	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	NO	HXT0320S-100C	
	5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	YES	HXT0520S-100F	
	5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	NO	HXT0520S-100C	
	7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	YES	HXT0720S-100F	
	7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	NO	HXT0720S-100C	
	10xD	8-21/32	10	10-7/64	12-9/32	2-9/32	1	YES	 HXT1020S-100F	
	10xD	8-21/32	10	10-7/64	12-9/32	2-9/32	1	NO	 HXT1020S-100C	


#### Connection Accessories

					<b>Admissible Tightening Torque*</b>
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

 = Metric (mm)  
 = Imperial (in)

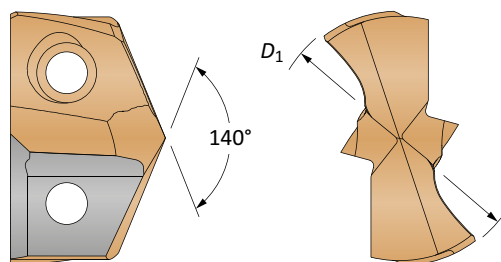
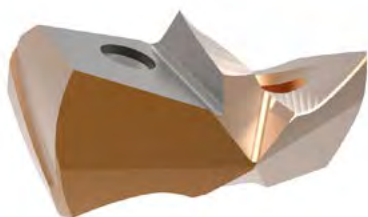
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

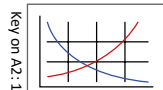
20 Series | Diameter Range: 20.00mm - 21.99mm (0.7874" - 0.8660")



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	20.00	0.7874	–	7C120P-20	7C120P-20LR	–	–
	20.24	0.7969	51/64	7C120P-.796	7C120P-.796LR	–	–
	20.50	0.8071	–	7C120P-20.5	7C120P-20.5LR	–	–
	20.64	0.8125	13/16	7C120P-0026	7C120P-0026LR	–	–
	21.00	0.8268	–	7C120P-21	7C120P-21LR	–	–
	21.43	0.8438	27/32	7C120P-0027	7C120P-0027LR	–	–
	21.50	0.8465	–	7C120P-21.5	7C120P-21.5LR	–	–
K20 (C2)	21.83	0.8594	55/64	7C120P-.859	7C120P-.859LR	–	–
	20.00	0.7874	–	7C220P-20	7C220P-20LR	7C220P-20CI	7C220P-20AS
	20.24	0.7969	51/64	7C220P-.796	7C220P-.796LR	7C220P-.796CI	7C220P-.796AS
	20.50	0.8071	–	7C220P-20.5	7C220P-20.5LR	7C220P-20.5CI	7C220P-20.5AS
	20.64	0.8125	13/16	7C220P-0026	7C220P-0026LR	7C220P-0026CI	7C220P-0026AS
	21.00	0.8268	–	7C220P-21	7C220P-21LR	7C220P-21CI	7C220P-21AS
	21.43	0.8438	27/32	7C220P-0027	7C220P-0027LR	7C220P-0027CI	7C220P-0027AS
21.50	0.8465	–	7C220P-21.5	7C220P-21.5LR	7C220P-21.5CI	7C220P-21.5AS	
21.83	0.8594	55/64	7C220P-.859	7C220P-.859LR	7C220P-.859CI	7C220P-.859AS	

Inserts sold in multiples of 1

A2: 66 - 75



A2: 2 - 5



Sizes not shown are available upon request.

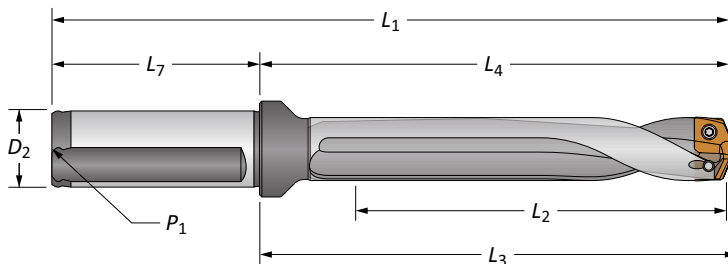
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



### GEN3SYS®XT Standard Drill Insert Holders

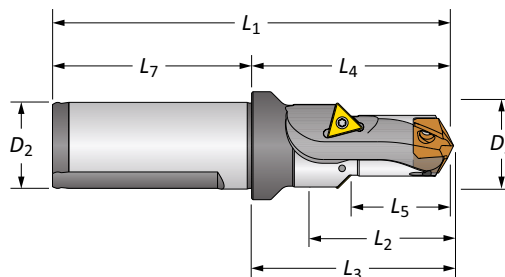
20 Series | Diameter Range: 20.00mm - 21.99mm (0.7874" - 0.8660")



#### Straight and Helical

Flute	Body						Shank				Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
Straight	3xD	66.0	100.1	102.9	156.1	56.0	25.0	1/8*	YES	60320S-25FM	
	5xD	110.0	144.1	146.9	200.1	56.0	25.0	1/8*	YES	60520S-25FM	
	7xD	154.0	188.1	190.9	244.1	56.0	25.0	1/8*	YES	60720S-25FM	
Helical	Stub	24.0	57.6	60.4	113.6	56.0	25.0	1/8*	YES	60120H-25FM	
	3xD	66.0	100.1	102.9	156.1	56.0	25.0	1/8*	YES	60320H-25FM	
	3xD	66.0	100.1	102.9	156.1	56.0	25.0	1/8*	NO	60320H-25CM	
	5xD	110.0	144.1	146.9	200.1	56.0	25.0	1/8*	YES	60520H-25FM	
	5xD	110.0	144.1	146.9	200.1	56.0	25.0	1/8*	NO	60520H-25CM	
	7xD	154.0	188.1	190.9	244.1	56.0	25.0	1/8*	YES	60720H-25FM	
	7xD	154.0	188.1	190.9	244.1	56.0	25.0	1/8*	NO	60720H-25CM	
Straight	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	1/8	YES	60320S-100F	
	5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	1/8	YES	60520S-100F	
	7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	1/8	YES	60720S-100F	
	Stub	15/16	2-17/64	2-3/8	4-35/64	2-9/32	1	1/8	YES	60120H-100F	
	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	1/8	YES	60320H-100F	
	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	1/8	NO	60320H-100C	
	5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	1/8	YES	60520H-100F	
	5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	1/8	NO	60520H-100C	
	7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	1/8	YES	60720H-100F	
	7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	1/8	NO	60720H-100C	

\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

Step	Body						Shank		Part No.	Chamfer Insert
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>		
<b>m</b>	27.2	30.0	37.1	57.6	60.4	116.5	56.0	25.0	60120C45-25FM	TCMT-110204
<b>i</b>	1-5/64	1-3/16	1-29/64	2-17/64	2-3/8	4-35/64	2-9/32	1	60120C45-100F	TCMT-110204

#### Connection Accessories

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	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

Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

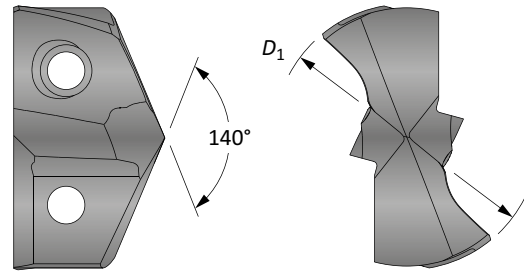
**m** = Metric (mm)




**i** = Imperial (in)



## GEN3SYS®XT Pro Drill Inserts

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

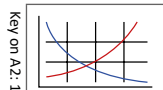


Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
22.00	0.8661	-	XTP22-22.00	XTK22-22.00	XTN22-22.00
22.10	0.8701	-	XTP22-22.10	XTK22-22.10	XTN22-22.10
22.20	0.8740	-	XTP22-22.20	XTK22-22.20	XTN22-22.20
22.23	0.8750	7/8	XTP22-22.23	XTK22-22.23	XTN22-22.23
22.30	0.8780	-	XTP22-22.30	XTK22-22.30	XTN22-22.30
22.40	0.8819	-	XTP22-22.40	XTK22-22.40	XTN22-22.40
22.50	0.8858	-	XTP22-22.50	XTK22-22.50	XTN22-22.50
22.62	0.8906	57/64	XTP22-22.62	XTK22-22.62	XTN22-22.62
22.70	0.8937	-	XTP22-22.70	XTK22-22.70	XTN22-22.70
22.80	0.8976	-	XTP22-22.80	XTK22-22.80	XTN22-22.80
22.90	0.9016	-	XTP22-22.90	XTK22-22.90	XTN22-22.90
23.00	0.9055	-	XTP22-23.00	XTK22-23.00	XTN22-23.00
23.02	0.9063	29/32	XTP22-23.02	XTK22-23.02	XTN22-23.02
23.10	0.9094	-	XTP22-23.10	XTK22-23.10	XTN22-23.10
23.20	0.9134	-	XTP22-23.20	XTK22-23.20	XTN22-23.20
23.30	0.9173	-	XTP22-23.30	XTK22-23.30	XTN22-23.30
23.42	0.9219	59/64	XTP22-23.42	XTK22-23.42	XTN22-23.42
23.50	0.9252	-	XTP22-23.50	XTK22-23.50	XTN22-23.50
23.60	0.9291	-	XTP22-23.60	XTK22-23.60	XTN22-23.60
23.70	0.9331	-	XTP22-23.70	XTK22-23.70	XTN22-23.70
23.81	0.9375	15/16	XTP22-23.81	XTK22-23.81	XTN22-23.81
23.90	0.9409	-	XTP22-23.90	XTK22-23.90	XTN22-23.90

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



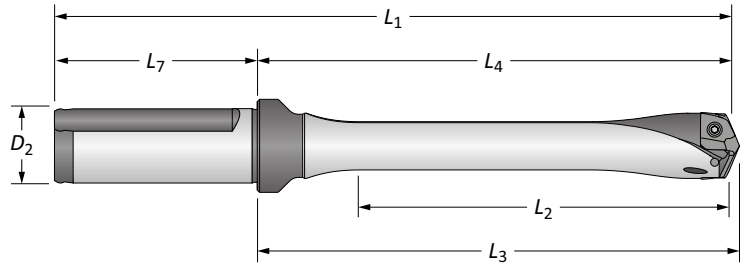
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>






## GEN3SYS® XT Pro Drill Insert Holders

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




Flute	Body					Shank			Flat	Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>			
 Straight	3xD	72.0	105.3	108.3	161.3	56.0	25.0	YES	HXT0322S-25FM	
	3xD	72.0	105.3	108.3	161.3	56.0	25.0	NO	HXT0322S-25CM	
	5xD	120.0	153.3	156.2	209.3	56.0	25.0	YES	HXT0522S-25FM	
	5xD	120.0	153.3	156.2	209.3	56.0	25.0	NO	HXT0522S-25CM	
	7xD	167.9	201.3	204.2	257.3	56.0	25.0	YES	HXT0722S-25FM	
	7xD	167.9	201.3	204.2	257.3	56.0	25.0	NO	HXT0722S-25CM	
	10xD	239.9	273.0	276.2	329.0	56.0	25.0	YES	 HXT1022S-25FM	
	10xD	239.9	273.0	276.2	329.0	56.0	25.0	NO	 HXT1022S-25CM	
 Straight	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	YES	HXT0322S-100F	
	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	NO	HXT0322S-100C	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	YES	HXT0522S-100F	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	NO	HXT0522S-100C	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	YES	HXT0722S-100F	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	NO	HXT0722S-100C	
	10xD	9-7/16	10-3/4	10-7/8	13-1/32	2-9/32	1	YES	 HXT1022S-100F	
	10xD	9-7/16	10-3/4	10-7/8	13-1/32	2-9/32	1	NO	 HXT1022S-100C	

### Connection Accessories


					<b>Admissible Tightening Torque*</b> 305 N-cm (27.0 in-lbs)
739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	

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

 = Metric (mm)

 = Imperial (in)

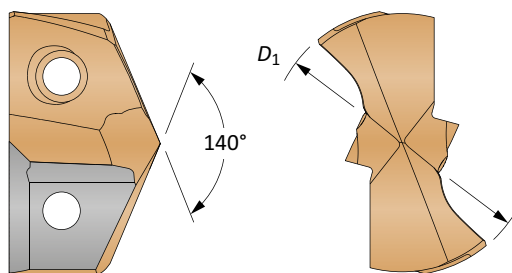
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

**GEN3SYS®XT Drill Inserts**

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

A  
DRILLING



B  
BORING

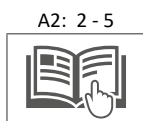
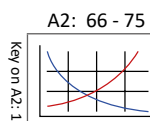
Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	22.00	0.8661	–	7C122P-22	7C122P-22LR	–	–
	22.23	0.8750	7/8	7C122P-0028	7C122P-0028LR	–	–
	22.50	0.8858	–	7C122P-22.5	–	–	–
	22.62	0.8906	57/64	7C122P-.890	7C122P-.890LR	–	–
	23.00	0.9055	–	7C122P-23	7C122P-23LR	–	–
	23.02	0.9063	29/32	7C122P-0029	7C122P-0029LR	–	–
	23.42	0.9219	59/64	7C122P-.921	7C122P-.921LR	–	–
	23.50	0.9252	–	7C122P-23.5	–	–	–
K20 (C2)	23.81	0.9375	15/16	7C122P-0030	7C122P-0030LR	–	–
	22.00	0.8661	–	7C222P-22	7C222P-22LR	7C222P-22CI	7C222P-22AS
	22.23	0.8750	7/8	7C222P-0028	7C222P-0028LR	7C222P-0028CI	7C222P-0028AS
	22.50	0.8858	–	7C222P-22.5	–	–	–
	22.62	0.8906	57/64	7C222P-.890	7C222P-.890LR	7C222P-.890CI	7C222P-.890AS
	23.00	0.9055	–	7C222P-23	7C222P-23LR	7C222P-23CI	7C222P-23AS
	23.02	0.9063	29/32	7C222P-0029	7C222P-0029LR	7C222P-0029CI	7C222P-0029AS
	23.42	0.9219	59/64	7C222P-.921	7C222P-.921LR	7C222P-.921CI	7C222P-.921AS
23.50	0.9252	–	7C222P-23.5	–	–	–	
23.81	0.9375	15/16	7C222P-0030	7C222P-0030LR	7C222P-0030CI	7C222P-0030AS	

Inserts sold in multiples of 1

D  
BURNISHING

F  
THREADING

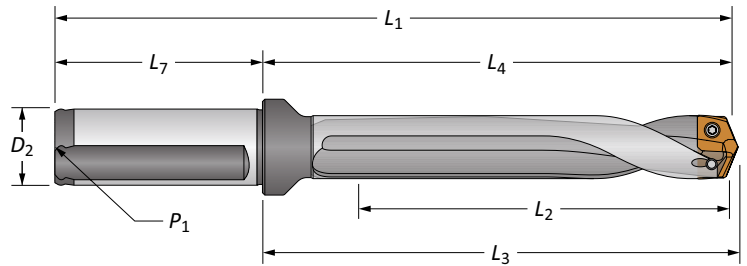
X  
SPECIALS



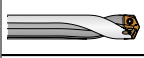

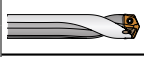
Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

### GEN3SYS®XT Standard Drill Insert Holders

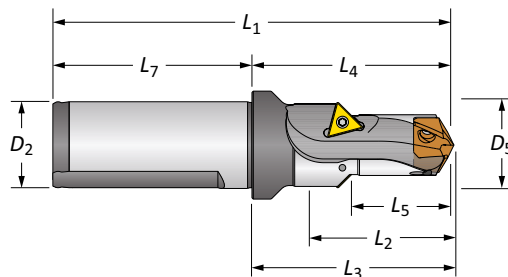
22 Series | Diameter Range: 22.00mm - 23.99mm (0.8661" - 0.9448")






#### Straight and Helical

Flute	Length	Body					Shank				Part No.
		$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$	$P_1$	Flat		
 Straight	3xD	72.0	105.3	108.3	161.3	56.0	25.0	1/8*	YES	<b>60322S-25FM</b>	
	5xD	120.0	153.3	156.2	209.3	56.0	25.0	1/8*	YES	<b>60522S-25FM</b>	
	7xD	168.0	201.3	204.2	257.3	56.0	25.0	1/8*	YES	<b>60722S-25FM</b>	
 Helical	Stub	27.0	60.1	63.0	116.1	56.0	25.0	1/8*	YES	<b>60122H-25FM</b>	
	3xD	72.0	105.3	108.3	161.3	56.0	25.0	1/8*	YES	<b>60322H-25FM</b>	
	3xD	72.0	105.3	108.3	161.3	56.0	25.0	1/8*	NO	<b>60322H-25CM</b>	
	5xD	120.0	153.3	156.2	209.3	56.0	25.0	1/8*	YES	<b>60522H-25FM</b>	
	5xD	120.0	153.3	156.2	209.3	56.0	25.0	1/8*	NO	<b>60522H-25CM</b>	
	7xD	168.0	201.3	204.2	257.3	56.0	25.0	1/8*	YES	<b>60722H-25FM</b>	
	7xD	168.0	201.3	204.2	257.3	56.0	25.0	1/8*	NO	<b>60722H-25CM</b>	
 Straight	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	YES	<b>60322S-100F</b>	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	YES	<b>60522S-100F</b>	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	YES	<b>60722S-100F</b>	
	Stub	1-1/16	2-23/64	2-31/64	4-41/64	2-9/32	1	1/8	YES	<b>60122H-100F</b>	
	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	YES	<b>60322H-100F</b>	
	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	NO	<b>60322H-100C</b>	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	YES	<b>60522H-100F</b>	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	NO	<b>60522H-100C</b>	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	YES	<b>60722H-100F</b>	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	NO	<b>60722H-100C</b>	






\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

	Step		Body				Shank		Part No.	 Chamfer Insert
	$D_5$	$L_5$	$L_2$	$L_4$	$L_3$	$L_1$	$L_7$	$D_2$		
	29.0	33.0	40.5	60.0	63.0	119.0	56.0	25.0	<b>60122C45-25FM</b>	TCMT-110204
	1-9/64	1-19/64	1-19/32	2-23/64	2-31/64	4-41/64	2-9/32	1	<b>60122C45-100F</b>	TCMT-110204

#### Connection Accessories

 Insert Screws	 Nylon Locking Screws	 Insert Driver	 Preset Torque Hand Driver	 Replacement Tips	Admissible Tightening Torque*
739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	

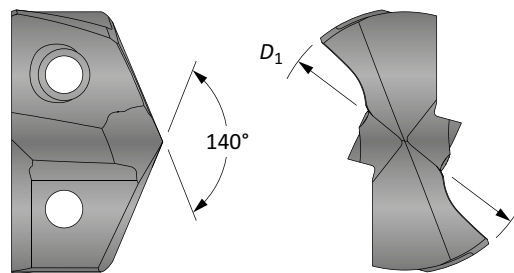
\*Tightening torques are calculated with a friction coefficient of  $\mu = 0.14$  and develop 90% of ultimate yield strength




Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10 Ⓜ = Metric (mm)  
Ⓜ = Imperial (in)



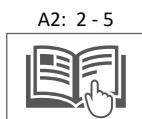
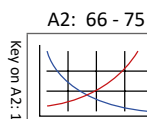
## GEN3SYS®XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
24.00	0.9449	-	XTP24-24.00	XTK24-24.00	XTN24-24.00
24.10	0.9488	-	XTP24-24.10	XTK24-24.10	XTN24-24.10
24.20	0.9528	-	XTP24-24.20	XTK24-24.20	XTN24-24.20
24.30	0.9567	-	XTP24-24.30	XTK24-24.30	XTN24-24.30
24.40	0.9606	-	XTP24-24.40	XTK24-24.40	XTN24-24.40
24.50	0.9646	-	XTP24-24.50	XTK24-24.50	XTN24-24.50
24.61	0.9688	31/32	XTP24-24.61	XTK24-24.61	XTN24-24.61
24.70	0.9724	-	XTP24-24.70	XTK24-24.70	XTN24-24.70
24.80	0.9764	-	XTP24-24.80	XTK24-24.80	XTN24-24.80
24.90	0.9803	-	XTP24-24.90	XTK24-24.90	XTN24-24.90
25.00	0.9843	63/64	XTP24-25.00	XTK24-25.00	XTN24-25.00
25.10	0.9882	-	XTP24-25.10	XTK24-25.10	XTN24-25.10
25.20	0.9921	-	XTP24-25.20	XTK24-25.20	XTN24-25.20
25.30	0.9961	-	XTP24-25.30	XTK24-25.30	XTN24-25.30
25.40	1.0000	1	XTP24-25.40	XTK24-25.40	XTN24-25.40
25.50	1.0039	-	XTP24-25.50	XTK24-25.50	XTN24-25.50
25.60	1.0080	-	XTP24-25.60	XTK24-25.60	XTN24-25.60
25.70	1.0118	-	XTP24-25.70	XTK24-25.70	XTN24-25.70
25.78	1.0150	1-1/16	XTP24-25.78	XTK24-25.78	XTN24-25.78
25.90	1.0197	-	XTP24-25.90	XTK24-25.90	XTN24-25.90

Inserts sold in multiples of 1

A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS

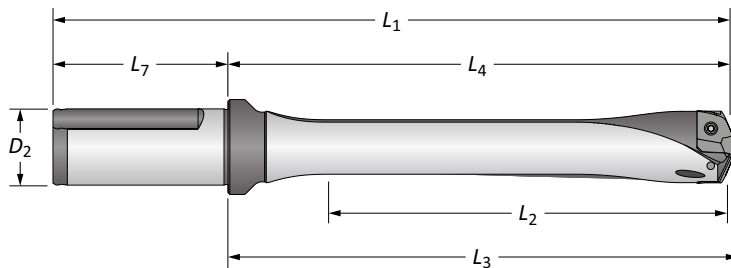
Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

GEN3SYS®XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
m Straight 	3xD	78.0	113.8	116.8	169.8	56.0	25.0	YES	HXT0324S-25FM
	3xD	78.0	113.8	116.8	169.8	56.0	25.0	NO	HXT0324S-25CM
	5xD	130.0	165.8	168.7	221.8	56.0	25.0	YES	HXT0524S-25FM
	5xD	130.0	165.8	168.7	221.8	56.0	25.0	NO	HXT0524S-25CM
	7xD	182.0	217.8	220.7	273.8	56.0	25.0	YES	HXT0724S-25FM
	7xD	182.0	217.8	220.7	273.8	56.0	25.0	NO	HXT0724S-25CM
	10xD	259.9	295.7	298.7	351.7	56.0	25.0	YES	HXT1024S-25FM
	10xD	259.9	295.7	298.7	351.7	56.0	25.0	NO	HXT1024S-25CM
i Straight 	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	YES	HXT0324S-100F
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	NO	HXT0324S-100C
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	YES	HXT0524S-100F
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	NO	HXT0524S-100C
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	YES	HXT0724S-100F
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	NO	HXT0724S-100C
	10xD	10-15/64	11-41/64	11-49/64	13-59/64	2-9/32	1	YES	HXT1024S-100F
	10xD	10-15/64	11-41/64	11-49/64	13-59/64	2-9/32	1	NO	HXT1024S-100C

Connection Accessories

					Admissible Tightening Torque*
739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	

\*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)

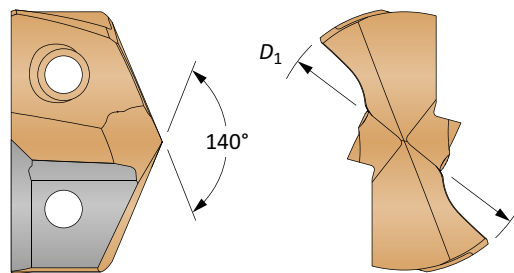
Screws sold in multiples of 10

**WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

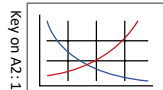
24 Series | Diameter Range: 24.00mm - 25.99mm (0.9449" - 1.0235")



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	24.00	0.9449	–	7C124P-24	7C124P-24LR	–	–
	24.50	0.9646	–	7C124P-24.5	–	–	–
	24.61	0.9688	31/32	7C124P-0031	7C124P-0031LR	–	–
	25.00	0.9843	63/64	7C124P-25	7C124P-25LR	–	–
	25.40	1.0000	1	7C124P-0100	7C124P-0100LR	–	–
	25.50	1.0039	–	7C124P-25.5	–	–	–
	25.60	1.0080	–	7C124P-1.008	7C124P-1.008LR	–	–
	25.65	1.0098	–	7C124P-25.65	–	–	–
K20 (C2)	24.00	0.9449	–	7C224P-24	7C224P-24LR	7C224P-24CI	7C224P-24AS
	24.50	0.9646	–	7C224P-24.5	–	–	–
	24.61	0.9688	31/32	7C224P-0031	7C224P-0031LR	7C224P-0031CI	7C224P-0031AS
	25.00	0.9843	63/64	7C224P-25	7C224P-25LR	7C224P-25CI	7C224P-25AS
	25.40	1.0000	1	7C224P-0100	7C224P-0100LR	7C224P-0100CI	7C224P-0100AS
	25.50	1.0039	–	7C224P-25.5	–	–	–
	25.60	1.0080	–	7C224P-1.008	7C224P-1.008LR	7C224P-1.008CI	7C224P-1.008AS
	25.65	1.0098	–	7C224P-25.65	–	–	–
	25.80	1.0156	1-1/64	7C224P-1.015	7C224P-1.015LR	7C224P-1.015CI	7C224P-1.015AS

Inserts sold in multiples of 1

A2: 66 - 75



A2: 2 - 5



Sizes not shown are available upon request.

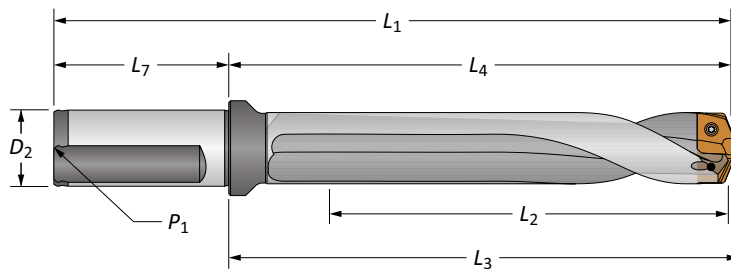
When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



**GEN3SYS®XT Standard Drill Insert Holders**

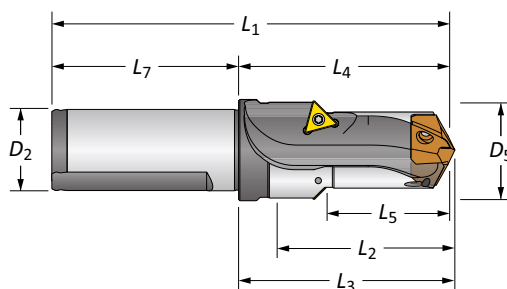
24 Series | Diameter Range: 24.00mm - 25.99mm (0.9449" - 1.0235")



**Straight and Helical**

Flute	Length	Body					Shank				Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>	Flat		
	3xD	78.0	113.8	116.8	169.8	56.0	25.0	1/8*	YES	<b>60324S-25FM</b>	
	5xD	130.0	165.8	168.7	221.8	56.0	25.0	1/8*	YES	<b>60524S-25FM</b>	
	7xD	182.0	217.8	220.7	273.8	56.0	25.0	1/8*	YES	<b>60724S-25FM</b>	
	Stub	28.5	64.2	67.1	120.2	56.0	25.0	1/8*	YES	<b>60124H-25FM</b>	
	3xD	78.0	113.8	116.8	169.8	56.0	25.0	1/8*	YES	<b>60324H-25FM</b>	
	3xD	78.0	113.8	116.8	169.8	56.0	25.0	1/8*	NO	<b>60324H-25CM</b>	
	5xD	130.0	165.8	168.7	221.8	56.0	25.0	1/8*	YES	<b>60524H-25FM</b>	
	5xD	130.0	165.8	168.7	221.8	56.0	25.0	1/8*	NO	<b>60524H-25CM</b>	
	7xD	182.0	217.8	220.7	273.8	56.0	25.0	1/8*	YES	<b>60724H-25FM</b>	
	7xD	182.0	217.8	220.7	273.8	56.0	25.0	1/8*	NO	<b>60724H-25CM</b>	
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	YES	<b>60324S-100F</b>	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	YES	<b>60524S-100F</b>	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	YES	<b>60724S-100F</b>	
	Stub	1-1/8	2-17/32	2-41/64	4-13/16	2-9/32	1	1/8	YES	<b>60124H-100F</b>	
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	YES	<b>60324H-100F</b>	
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	NO	<b>60324H-100C</b>	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	YES	<b>60524H-100F</b>	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	NO	<b>60524H-100C</b>	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	YES	<b>60724H-100F</b>	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	NO	<b>60724H-100C</b>	

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

Step	Body					Shank		Part No.	Chamfer Insert	
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>			D <sub>2</sub>
	31.0	36.0	45.5	64.2	67.1	123.0	56.0	25.0	<b>60124C45-25FM</b>	TCMT-110204
	1-7/32	1-27/64	1-51/64	2-17/32	2-41/64	4-13/16	2-9/32	1	<b>60124C45-100F</b>	TCMT-110204

**Connection Accessories**

Insert Screws	Nylon Locking Screws	Insert Driver	Preset Torque Hand Driver	Replacement Tips	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

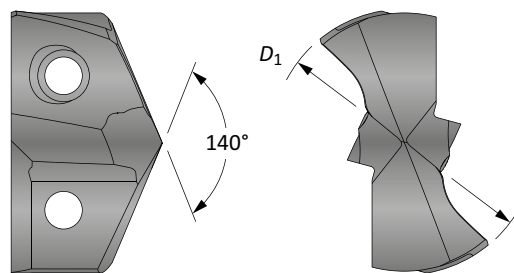
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




= Metric (mm)  
 = Imperial (in)



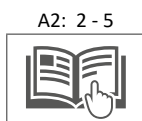
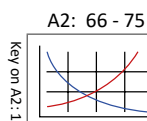
## GEN3SYS®XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
26.00	1.0236	-	XTP26-26.00	XTK26-26.00	XTN26-26.00
26.10	1.0276	-	XTP26-26.10	XTK26-26.10	XTN26-26.10
26.20	1.0313	1-1/32	XTP26-26.20	XTK26-26.20	XTN26-26.20
26.30	1.0354	-	XTP26-26.30	XTK26-26.30	XTN26-26.30
26.40	1.0394	-	XTP26-26.40	XTK26-26.40	XTN26-26.40
26.50	1.0433	-	XTP26-26.50	XTK26-26.50	XTN26-26.50
26.57	1.0460	1-3/64	XTP26-26.57	XTK26-26.57	XTN26-26.57
26.60	1.0472	-	XTP26-26.60	XTK26-26.60	XTN26-26.60
26.70	1.0512	-	XTP26-26.70	XTK26-26.70	XTN26-26.70
26.80	1.0551	-	XTP26-26.80	XTK26-26.80	XTN26-26.80
26.90	1.0591	-	XTP26-26.90	XTK26-26.90	XTN26-26.90
26.99	1.0625	1-1/16	XTP26-26.99	XTK26-26.99	XTN26-26.99
27.00	1.0630	-	XTP26-27.00	XTK26-27.00	XTN26-27.00
27.10	1.0669	-	XTP26-27.10	XTK26-27.10	XTN26-27.10
27.20	1.0709	-	XTP26-27.20	XTK26-27.20	XTN26-27.20
27.30	1.0748	-	XTP26-27.30	XTK26-27.30	XTN26-27.30
27.40	1.0787	-	XTP26-27.40	XTK26-27.40	XTN26-27.40
27.50	1.0827	-	XTP26-27.50	XTK26-27.50	XTN26-27.50
27.60	1.0866	-	XTP26-27.60	XTK26-27.60	XTN26-27.60
27.70	1.0906	-	XTP26-27.70	XTK26-27.70	XTN26-27.70
27.78	1.0938	1-3/32	XTP26-27.78	XTK26-27.78	XTN26-27.78
27.90	1.0984	-	XTP26-27.90	XTK26-27.90	XTN26-27.90
28.00	1.1024	-	XTP26-28.00	XTK26-28.00	XTN26-28.00
28.10	1.1063	-	XTP26-28.10	XTK26-28.10	XTN26-28.10
28.17	1.1090	1-7/64	XTP26-28.17	XTK26-28.17	XTN26-28.17
28.20	1.1102	-	XTP26-28.20	XTK26-28.20	XTN26-28.20
28.30	1.1142	-	XTP26-28.30	XTK26-28.30	XTN26-28.30
28.40	1.1181	-	XTP26-28.40	XTK26-28.40	XTN26-28.40
28.50	1.1220	-	XTP26-28.50	XTK26-28.50	XTN26-28.50
28.58	1.1250	1-1/8	XTP26-28.58	XTK26-28.58	XTN26-28.58
28.70	1.1299	-	XTP26-28.70	XTK26-28.70	XTN26-28.70
28.80	1.1339	-	XTP26-28.80	XTK26-28.80	XTN26-28.80
28.90	1.1378	-	XTP26-28.90	XTK26-28.90	XTN26-28.90

Inserts sold in multiples of 1



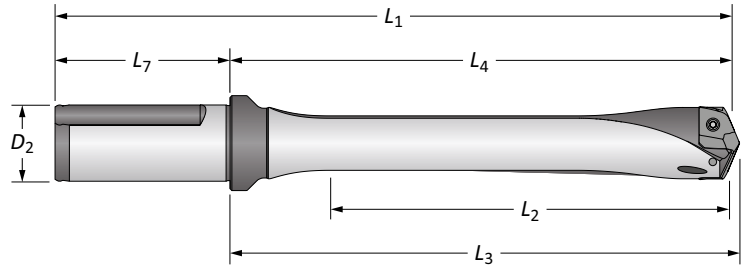
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>





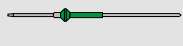
### GEN3SYS® XT Pro Drill Insert Holders

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



Flute	Length	Body				Shank			Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 m Straight	3xD	87.0	128.1	130.9	188.1	60.0	32.0	YES	HXT0326S-32FM
	3xD	87.0	128.1	130.9	188.1	60.0	32.0	NO	HXT0326S-32CM
	5xD	145.0	186.0	188.8	246.0	60.0	32.0	YES	HXT0526S-32FM
	5xD	145.0	186.0	188.8	246.0	60.0	32.0	NO	HXT0526S-32CM
	7xD	203.0	244.0	246.8	304.0	60.0	32.0	YES	HXT0726S-32FM
	7xD	203.0	244.0	246.8	304.0	60.0	32.0	NO	HXT0726S-32CM
	10xD	289.9	331.4	334.4	391.4	60.0	32.0	YES	 HXT1026S-32FM
	10xD	289.9	331.4	334.4	391.4	60.0	32.0	NO	 HXT1026S-32CM
 i Straight	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	YES	HXT0326S-125F
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	NO	HXT0326S-125C
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	YES	HXT0526S-125F
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	NO	HXT0526S-125C
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	YES	HXT0726S-125F
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	NO	HXT0726S-125C
	10xD	11-13/32	13-3/64	13-11/64	15-21/64	2-9/32	1-1/4	YES	 HXT1026S-125F
	10xD	11-13/32	13-3/64	13-11/64	15-21/64	2-9/32	1-1/4	NO	 HXT1026S-125C

#### Connection Accessories


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

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

 = Metric (mm)

 = Imperial (in)

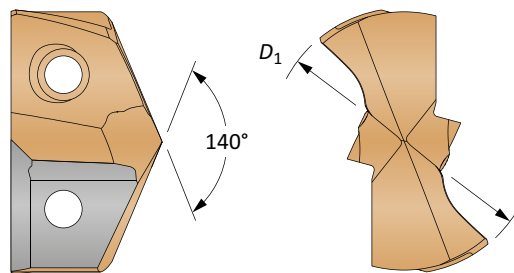
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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

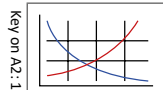


Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	26.00	1.0236	–	7C126P-26	7C126P-26LR	–	–
	26.20	1.0313	1-1/32	7C126P-0101	7C126P-0101LR	–	–
	26.50	1.0433	–	7C126P-26.5	–	–	–
	26.59	1.0469	1-3/64	7C126P-1.046	7C126P-1.046LR	–	–
	26.99	1.0625	1-1/16	7C126P-0102	7C126P-0102LR	–	–
	27.00	1.0630	–	7C126P-27	7C126P-27LR	–	–
	27.50	1.0827	–	7C126P-27.5	–	–	–
	27.78	1.0938	1-3/32	7C126P-0103	7C126P-0103LR	–	–
	28.00	1.1024	–	7C126P-28	7C126P-28LR	–	–
	28.18	1.1094	1-7/64	7C126P-1.109	7C126P-1.109LR	–	–
	28.50	1.1220	–	7C126P-28.5	–	–	–
	28.58	1.1250	1-1/8	7C126P-0104	7C126P-0104LR	–	–
K20 (C2)	26.00	1.0236	–	7C226P-26	7C226P-26LR	7C226P-26CI	7C226P-26AS
	26.20	1.0313	1-1/32	7C226P-0101	7C226P-0101LR	7C226P-0101CI	7C226P-0101AS
	26.50	1.0433	–	7C226P-26.5	–	–	–
	26.59	1.0469	1-3/64	7C226P-1.046	7C226P-1.046LR	7C226P-1.046CI	7C226P-1.046AS
	26.99	1.0625	1-1/16	7C226P-0102	7C226P-0102LR	7C226P-0102CI	7C226P-0102AS
	27.00	1.0630	–	7C226P-27	7C226P-27LR	7C226P-27CI	7C226P-27AS
	27.50	1.0827	–	7C226P-27.5	–	–	–
	27.78	1.0938	1-3/32	7C226P-0103	7C226P-0103LR	7C226P-0103CI	7C226P-0103AS
	28.00	1.1024	–	7C226P-28	7C226P-28LR	7C226P-28CI	7C226P-28AS
	28.18	1.1094	1-7/64	7C226P-1.109	7C226P-1.109LR	7C226P-1.109CI	7C226P-1.109AS
	28.50	1.1220	–	7C226P-28.5	–	–	–
	28.58	1.1250	1-1/8	7C226P-0104	7C226P-0104LR	7C226P-0104CI	7C226P-0104AS

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



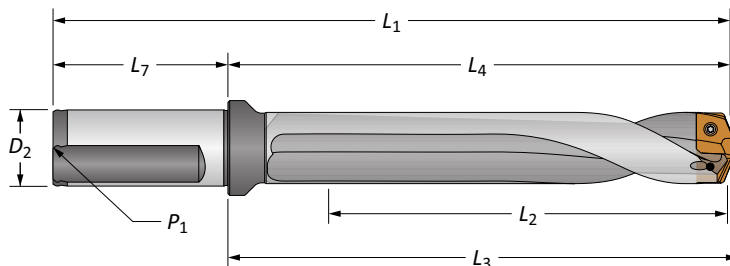
Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

**GEN3SYS®XT Standard Drill Insert Holders**

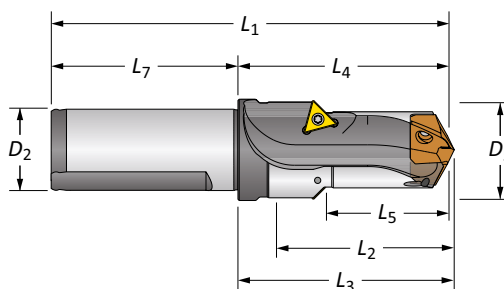
26 Series | Diameter Range: 26.00mm - 28.99mm (1.0236" - 1.1416")



**Straight and Helical**

Flute	Length	Body					Shank				Flat	Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>				
	3xD	87.0	128.1	130.9	188.1	60.0	32.0	1/8*	YES	<b>60326S-32FM</b>		
	5xD	145.0	186.0	188.8	246.0	60.0	32.0	1/8*	YES	<b>60526S-32FM</b>		
	7xD	203.0	244.0	246.8	304.0	60.0	32.0	1/8*	YES	<b>60726S-32FM</b>		
	Stub	32.0	72.9	75.7	132.9	60.0	32.0	1/8*	YES	<b>60126H-32FM</b>		
	3xD	87.0	128.1	130.9	188.1	60.0	32.0	1/8*	YES	<b>60326H-32FM</b>		
	3xD	87.0	128.1	130.9	188.1	60.0	32.0	1/8*	NO	<b>60326H-32CM</b>		
	5xD	145.0	186.0	188.8	246.0	60.0	32.0	1/8*	YES	<b>60526H-32FM</b>		
	5xD	145.0	186.0	188.8	246.0	60.0	32.0	1/8*	NO	<b>60526H-32CM</b>		
	7xD	203.0	244.0	246.8	304.0	60.0	32.0	1/8*	YES	<b>60726H-32FM</b>		
	7xD	203.0	244.0	246.8	304.0	60.0	32.0	1/8*	NO	<b>60726H-32CM</b>		
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	YES	<b>60326S-125F</b>		
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	YES	<b>60526S-125F</b>		
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	YES	<b>60726S-125F</b>		
	Stub	1-1/4	2-7/8	2-63/64	5-5/32	2-9/32	1-1/4	1/8	YES	<b>60126H-125F</b>		
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	YES	<b>60326H-125F</b>		
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	NO	<b>60326H-125C</b>		
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	YES	<b>60526H-125F</b>		
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	NO	<b>60526H-125C</b>		
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	YES	<b>60726H-125F</b>		
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	NO	<b>60726H-125C</b>		

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

Step	Body					Shank		Part No.	Chamfer Insert	
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>			D <sub>2</sub>
	34.0	39.0	52.1	72.9	75.7	132.9	60.0	32.0	<b>60126C45-32FM</b>	TCMT-110204
	1-11/32	1-17/32	2-3/64	2-7/8	2-63/64	5-5/32	2-9/32	1-1/4	<b>60126C45-125F</b>	TCMT-110204

**Connection Accessories**

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

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

Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

= Metric (mm)




= Imperial (in)

29

DRILLING | GEN3SYS® XT Pro and XT High Penetration Replaceable Insert Drilling System

**GEN3SYS®XT Pro Drill Inserts**

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

Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
29.00	1.1417	-	XTP29-29.00	XTK29-29.00	XTN29-29.00
29.10	1.1457	-	XTP29-29.10	XTK29-29.10	XTN29-29.10
29.20	1.1496	-	XTP29-29.20	XTK29-29.20	XTN29-29.20
29.30	1.1535	-	XTP29-29.30	XTK29-29.30	XTN29-29.30
29.37	1.1563	1-5/32	XTP29-29.37	XTK29-29.37	XTN29-29.37
29.40	1.1575	-	XTP29-29.40	XTK29-29.40	XTN29-29.40
29.50	1.1614	-	XTP29-29.50	XTK29-29.50	XTN29-29.50
29.60	1.1654	-	XTP29-29.60	XTK29-29.60	XTN29-29.60
29.70	1.1693	-	XTP29-29.70	XTK29-29.70	XTN29-29.70
29.80	1.1732	-	XTP29-29.80	XTK29-29.80	XTN29-29.80
29.90	1.1772	-	XTP29-29.90	XTK29-29.90	XTN29-29.90
30.00	1.1811	-	XTP29-30.00	XTK29-30.00	XTN29-30.00
30.10	1.1850	-	XTP29-30.10	XTK29-30.10	XTN29-30.10
30.16	1.1875	1-3/16	XTP29-30.16	XTK29-30.16	XTN29-30.16
30.20	1.1890	-	XTP29-30.20	XTK29-30.20	XTN29-30.20
30.30	1.1929	-	XTP29-30.30	XTK29-30.30	XTN29-30.30
30.40	1.1969	-	XTP29-30.40	XTK29-30.40	XTN29-30.40
30.50	1.2008	-	XTP29-30.50	XTK29-30.50	XTN29-30.50
30.60	1.2047	-	XTP29-30.60	XTK29-30.60	XTN29-30.60
30.70	1.2087	-	XTP29-30.70	XTK29-30.70	XTN29-30.70
30.80	1.2126	-	XTP29-30.80	XTK29-30.80	XTN29-30.80
30.90	1.2165	-	XTP29-30.90	XTK29-30.90	XTN29-30.90
30.96	1.2188	1-7/32	XTP29-30.96	XTK29-30.96	XTN29-30.96
31.00	1.2205	-	XTP29-31.00	XTK29-31.00	XTN29-31.00
31.10	1.2244	-	XTP29-31.10	XTK29-31.10	XTN29-31.10
31.20	1.2283	-	XTP29-31.20	XTK29-31.20	XTN29-31.20
31.30	1.2323	-	XTP29-31.30	XTK29-31.30	XTN29-31.30
31.40	1.2362	-	XTP29-31.40	XTK29-31.40	XTN29-31.40
31.50	1.2402	-	XTP29-31.50	XTK29-31.50	XTN29-31.50
31.60	1.2441	-	XTP29-31.60	XTK29-31.60	XTN29-31.60
31.70	1.2480	-	XTP29-31.70	XTK29-31.70	XTN29-31.70
31.75	1.2500	1-1/4	XTP29-31.75	XTK29-31.75	XTN29-31.75
31.80	1.2520	-	XTP29-31.80	XTK29-31.80	XTN29-31.80
31.90	1.2559	-	XTP29-31.90	XTK29-31.90	XTN29-31.90

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5

Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

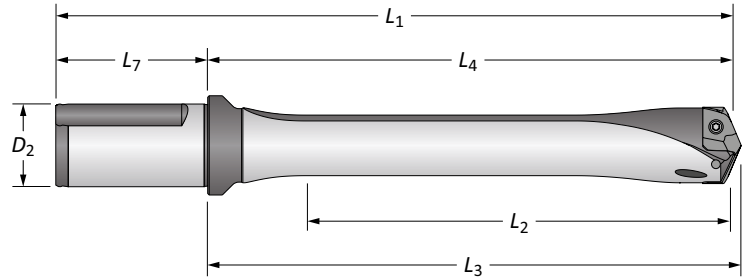
A2: 56







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A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS






### GEN3SYS®XT Pro Drill Insert Holders

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





Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	96.0	136.2	139.1	196.2	60.0	32.0	YES	HXT0329S-32FM
	3xD	96.0	136.2	139.1	196.2	60.0	32.0	NO	HXT0329S-32CM
	5xD	160.0	200.1	203.1	260.1	60.0	32.0	YES	HXT0529S-32FM
	5xD	160.0	200.1	203.1	260.1	60.0	32.0	NO	HXT0529S-32CM
	7xD	224.0	264.1	267.1	324.1	60.0	32.0	YES	HXT0729S-32FM
	7xD	224.0	264.1	267.1	324.1	60.0	32.0	NO	HXT0729S-32CM
	10xD	319.9	360.4	363.6	420.4	60.0	32.0	YES	 HXT1029S-32FM
	10xD	319.9	360.4	363.6	420.4	60.0	32.0	NO	 HXT1029S-32CM
 Straight	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	YES	HXT0329S-125F
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	NO	HXT0329S-125C
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	YES	HXT0529S-125F
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	NO	HXT0529S-125C
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	YES	HXT0729S-125F
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	NO	HXT0729S-125C
	10xD	12-19/32	14-3/16	14-5/16	16-15/32	2-9/32	1-1/4	YES	 HXT1029S-125F
	10xD	12-19/32	14-3/16	14-5/16	16-15/32	2-9/32	1-1/4	NO	 HXT1029S-125C


#### Connection Accessories

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

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

 = Metric (mm)  
 = Imperial (in)

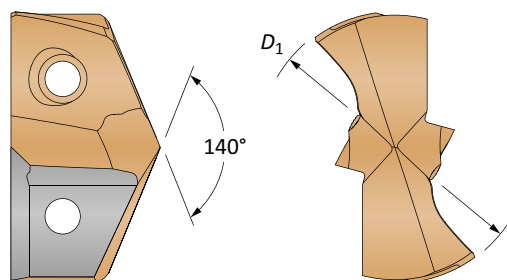
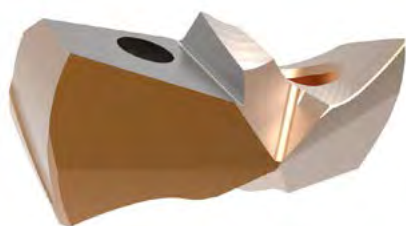
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



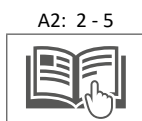
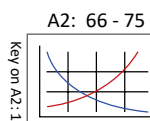
## GEN3SYS®XT Drill Inserts

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



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	$D_1$ mm	$D_1$ inch	Fractional Equivalent				
K35 (C1)	29.00	1.1417	–	7C129P-29	7C129P-29LR	–	–
	29.37	1.1563	1-5/32	7C129P-0105	7C129P-0105LR	–	–
	29.50	1.1614	–	7C129P-29.5	–	–	–
	30.00	1.1811	–	7C129P-30	7C129P-30LR	–	–
	30.16	1.1875	1-3/16	7C129P-0106	7C129P-0106LR	–	–
	30.50	1.2008	–	7C129P-30.5	7C129P-30.5LR	–	–
	30.96	1.2188	1-7/32	7C129P-0107	7C129P-0107LR	–	–
	31.00	1.2205	–	7C129P-31	7C129P-31LR	–	–
	31.50	1.2402	–	7C129P-31.5	–	–	–
	31.75	1.2500	1-1/4	7C129P-0108	7C129P-0108LR	–	–
K20 (C2)	29.00	1.1417	–	7C229P-29	7C229P-29LR	7C229P-29CI	7C229P-29AS
	29.37	1.1563	1-5/32	7C229P-0105	7C229P-0105LR	7C229P-0105CI	7C229P-0105AS
	29.50	1.1614	–	7C229P-29.5	–	–	–
	30.00	1.1811	–	7C229P-30	7C229P-30LR	7C229P-30CI	7C229P-30AS
	30.16	1.1875	1-3/16	7C229P-0106	7C229P-0106LR	7C229P-0106CI	7C229P-0106AS
	30.50	1.2008	–	7C229P-30.5	7C229P-30.5LR	7C229P-30.5CI	7C229P-30.5AS
	30.96	1.2188	1-7/32	7C229P-0107	7C229P-0107LR	7C229P-0107CI	7C229P-0107AS
	31.00	1.2205	–	7C229P-31	7C229P-31LR	7C229P-31CI	7C229P-31AS
	31.50	1.2402	–	7C229P-31.5	–	–	–
	31.75	1.2500	1-1/4	7C229P-0108	7C229P-0108LR	7C229P-0108CI	7C229P-0108AS

Inserts sold in multiples of 1

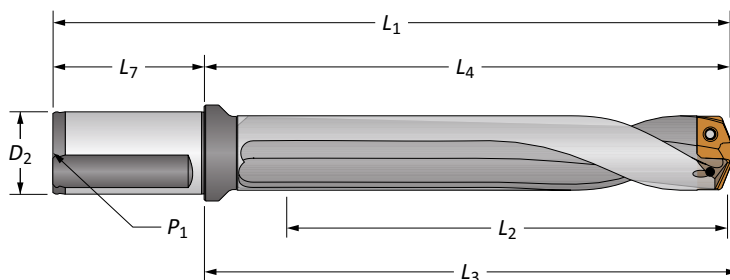
A  
DRILLINGB  
BORINGC  
REAMINGD  
BURNISHINGE  
THREADINGX  
SPECIALS

Sizes not shown are available upon request.	
When ordering, please follow the example below:	
<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>



**GEN3SYS®XT Standard Drill Insert Holders**

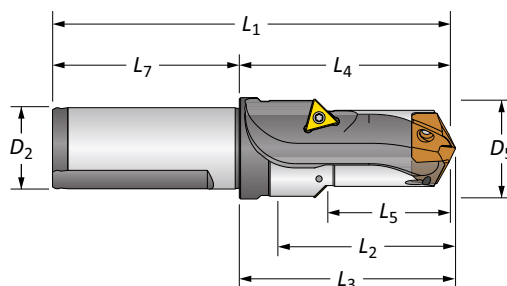
29 Series | Diameter Range: 29.00mm - 31.99mm (1.1417" - 1.2597")



**Straight and Helical**

Flute	Length	Body					Shank				Flat	Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>				
	3xD	96.0	136.2	139.1	196.2	60.0	32.0	1/4*	YES	<b>60329S-32FM</b>		
	5xD	160.0	200.1	203.1	260.1	60.0	32.0	1/4*	YES	<b>60529S-32FM</b>		
	7xD	224.0	264.1	267.1	324.1	60.0	32.0	1/4*	YES	<b>60729S-32FM</b>		
	Stub	35.0	75.2	78.2	135.2	60.0	32.0	1/4*	YES	<b>60129H-32FM</b>		
	3xD	96.0	136.2	139.1	196.2	60.0	32.0	1/4*	YES	<b>60329H-32FM</b>		
	3xD	96.0	136.2	139.1	196.2	60.0	32.0	1/4*	NO	<b>60329H-32CM</b>		
	5xD	160.0	200.1	203.1	260.1	60.0	32.0	1/4*	YES	<b>60529H-32FM</b>		
	5xD	160.0	200.1	203.1	260.1	60.0	32.0	1/4*	NO	<b>60529H-32CM</b>		
	7xD	224.0	264.1	267.1	324.1	60.0	32.0	1/4*	YES	<b>60729H-32FM</b>		
	7xD	224.0	264.1	267.1	324.1	60.0	32.0	1/4*	NO	<b>60729H-32CM</b>		
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	YES	<b>60329S-125F</b>		
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	YES	<b>60529S-125F</b>		
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	YES	<b>60729S-125F</b>		
	Stub	1-3/8	2-31/32	3-5/64	5-1/4	2-9/32	1-1/4	1/4	YES	<b>60129H-125F</b>		
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	YES	<b>60329H-125F</b>		
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	NO	<b>60329H-125C</b>		
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	YES	<b>60529H-125F</b>		
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	NO	<b>60529H-125C</b>		
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	YES	<b>60729H-125F</b>		
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	NO	<b>60729H-125C</b>		

\*Thread to BSP and ISO 7-1



**Drill / Chamfer**

Step	Body					Shank		Part No.	Chamfer Insert	
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>			D <sub>2</sub>
	37.1	43.5	55.9	75.2	78.2	135.2	60.0	32.0	<b>60129C45-32FM</b>	TCMT-16T304
	1-29/64	1-23/32	2-13/64	2-31/32	3-5/64	5-1/4	2-9/32	1-1/4	<b>60129C45-125F</b>	TCMT-16T304

**Connection Accessories**

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

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

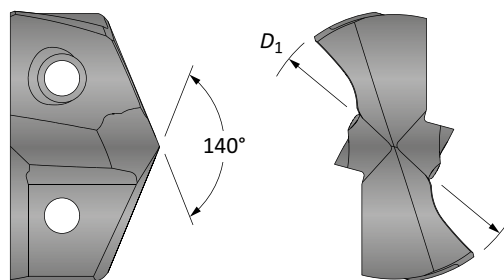
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




= Metric (mm)  
 = Imperial (in)



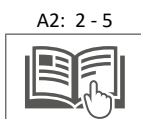
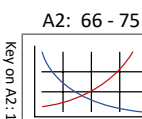
## GEN3SYS® XT Pro Drill Inserts

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



Insert					
$D_1$ mm	$D_1$ inch	Fractional Equivalent	Part No. <b>P</b>	Part No. <b>K</b>	Part No. <b>N</b>
32.00	1.2598	-	XTP32-32.00	XTK32-32.00	XTN32-32.00
32.10	1.2638	-	XTP32-32.10	XTK32-32.10	XTN32-32.10
32.15	1.2657	1-17/64	XTP32-32.15	XTK32-32.15	XTN32-32.15
32.20	1.2677	-	XTP32-32.20	XTK32-32.20	XTN32-32.20
32.30	1.2717	-	XTP32-32.30	XTK32-32.30	XTN32-32.30
32.40	1.2756	-	XTP32-32.40	XTK32-32.40	XTN32-32.40
32.50	1.2795	-	XTP32-32.50	XTK32-32.50	XTN32-32.50
32.55	1.2813	1-9/32	XTP32-32.55	XTK32-32.55	XTN32-32.55
32.60	1.2835	-	XTP32-32.60	XTK32-32.60	XTN32-32.60
32.70	1.2874	-	XTP32-32.70	XTK32-32.70	XTN32-32.70
32.80	1.2913	-	XTP32-32.80	XTK32-32.80	XTN32-32.80
32.90	1.2953	-	XTP32-32.90	XTK32-32.90	XTN32-32.90
33.00	1.2992	-	XTP32-33.00	XTK32-33.00	XTN32-33.00
33.10	1.3031	-	XTP32-33.10	XTK32-33.10	XTN32-33.10
33.20	1.3071	-	XTP32-33.20	XTK32-33.20	XTN32-33.20
33.30	1.3110	-	XTP32-33.30	XTK32-33.30	XTN32-33.30
33.34	1.3125	1-5/16	XTP32-33.34	XTK32-33.34	XTN32-33.34
33.40	1.3150	-	XTP32-33.40	XTK32-33.40	XTN32-33.40
33.50	1.3189	-	XTP32-33.50	XTK32-33.50	XTN32-33.50
33.60	1.3228	-	XTP32-33.60	XTK32-33.60	XTN32-33.60
33.70	1.3268	-	XTP32-33.70	XTK32-33.70	XTN32-33.70
33.80	1.3307	-	XTP32-33.80	XTK32-33.80	XTN32-33.80
33.90	1.3346	-	XTP32-33.90	XTK32-33.90	XTN32-33.90
34.00	1.3386	-	XTP32-34.00	XTK32-34.00	XTN32-34.00
34.10	1.3425	-	XTP32-34.10	XTK32-34.10	XTN32-34.10
34.13	1.3438	1-11/32	XTP32-34.13	XTK32-34.13	XTN32-34.13
34.20	1.3465	-	XTP32-34.20	XTK32-34.20	XTN32-34.20
34.30	1.3504	-	XTP32-34.30	XTK32-34.30	XTN32-34.30
34.40	1.3543	-	XTP32-34.40	XTK32-34.40	XTN32-34.40
34.50	1.3583	-	XTP32-34.50	XTK32-34.50	XTN32-34.50
34.60	1.3622	-	XTP32-34.60	XTK32-34.60	XTN32-34.60
34.70	1.3661	-	XTP32-34.70	XTK32-34.70	XTN32-34.70
34.80	1.3701	-	XTP32-34.80	XTK32-34.80	XTN32-34.80
34.90	1.3740	-	XTP32-34.90	XTK32-34.90	XTN32-34.90
34.93	1.3750	1-3/8	XTP32-34.93	XTK32-34.93	XTN32-34.93
35.00	1.3780	-	XTP32-35.00	XTK32-35.00	XTN32-35.00

Inserts sold in multiples of 1



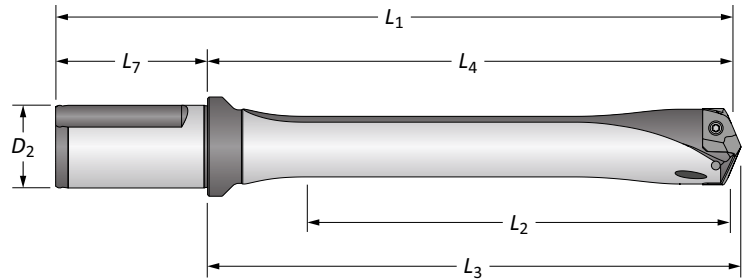
Sizes not shown are available upon request.







When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>




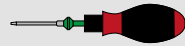

## GEN3SYS®XT Pro Drill Insert Holders

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




Flute	Body					Shank			Part No.
	Length	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	Flat	
 Straight	3xD	105.0	157.7	161.3	227.7	60.0	32.0	YES	HXT0332S-32FM
	3xD	105.0	157.7	161.3	227.7	60.0	32.0	NO	HXT0332S-32CM
	5xD	175.0	227.7	231.3	297.7	60.0	32.0	YES	HXT0532S-32FM
	5xD	175.0	227.7	231.3	297.7	60.0	32.0	NO	HXT0532S-32CM
	7xD	244.9	297.7	301.3	367.7	60.0	32.0	YES	HXT0732S-32FM
	7xD	244.9	297.7	301.3	367.7	60.0	32.0	NO	HXT0732S-32CM
	10xD	350.0	402.8	406.4	462.8	60.0	32.0	YES	 HXT1032S-32FM
	10xD	350.0	402.8	406.4	462.8	60.0	32.0	NO	 HXT1032S-32CM
 Straight	3xD	4-9/64	6-7/32	6-23/64	8-29/32	2-11/16	1-1/2	YES	HXT0332S-150F
	3xD	4-9/64	6-7/32	6-23/64	8-29/32	2-11/16	1-1/2	NO	HXT0332S-150C
	5xD	6-57/64	8-31/32	9-7/64	11-21/32	2-11/16	1-1/2	YES	HXT0532S-150F
	5xD	6-57/64	8-31/32	9-7/64	11-21/32	2-11/16	1-1/2	NO	HXT0532S-150C
	7xD	9-41/64	11-23/32	11-55/64	14-13/32	2-11/16	1-1/2	YES	HXT0732S-150F
	7xD	9-41/64	11-23/32	11-55/64	14-13/32	2-11/16	1-1/2	NO	HXT0732S-150C
	10xD	13-25/32	15-55/64	16	18-35/64	2-11/16	1-1/2	YES	 HXT1032S-150F
	10xD	13-25/32	15-55/64	16	18-35/64	2-11/16	1-1/2	NO	 HXT1032S-150C

### Connection Accessories


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

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

 = Metric (mm)

 = Imperial (in)

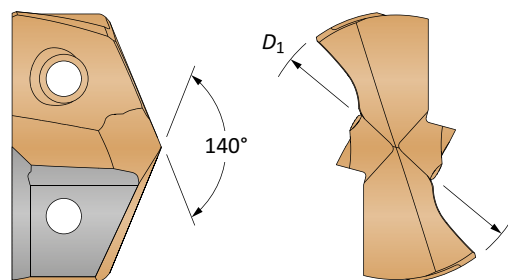
Screws sold in multiples of 10

 **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A2: 65 for deep hole drilling guidelines in this section of the catalogue. Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## GEN3SYS®XT Drill Inserts

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

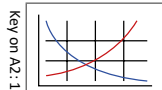


Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	D <sub>1</sub> mm	D <sub>1</sub> inch	Fractional Equivalent				
K35 (C1)	32.00	1.2598	–	7C132P-32	7C132P-32LR	–	–
	32.15	1.2658	1-17/64	7C132P-32.15	7C132P-32.15LR	–	–
	32.50	1.2795	–	7C132P-32.5	7C132P-32.5LR	–	–
	32.55	1.2813	1-9/32	7C132P-0109	7C132P-0109LR	–	–
	33.00	1.2992	–	7C132P-33	7C132P-33LR	–	–
	33.34	1.3125	1-5/16	7C132P-0110	7C132P-0110LR	–	–
	33.50	1.3189	–	7C132P-33.5	7C132P-33.5LR	–	–
	34.00	1.3386	–	7C132P-34	7C132P-34LR	–	–
	34.13	1.3438	1-11/32	7C132P-0111	7C132P-0111LR	–	–
	34.50	1.3583	–	7C132P-34.5	7C132P-34.5LR	–	–
K20 (C2)	34.93	1.3750	1-3/8	7C132P-0112	7C132P-0112LR	–	–
	35.00	1.3780	–	7C132P-35	7C132P-35LR	–	–
	32.00	1.2598	–	7C232P-32	7C232P-32LR	7C232P-32CI	7C232P-32AS
	32.15	1.2658	1-17/64	7C232P-32.15	7C232P-32.15LR	7C232P-32.15CI	7C232P-32.15AS
	32.50	1.2795	–	7C232P-32.5	7C232P-32.5LR	7C232P-32.5CI	7C232P-32.5AS
	32.55	1.2813	1-9/32	7C232P-0109	7C232P-0109LR	7C232P-0109CI	7C232P-0109AS
	33.00	1.2992	–	7C232P-33	7C232P-33LR	7C232P-33CI	7C232P-33AS
	33.34	1.3125	1-5/16	7C232P-0110	7C232P-0110LR	7C232P-0110CI	7C232P-0110AS
	33.50	1.3189	–	7C232P-33.5	7C232P-33.5LR	7C232P-33.5CI	7C232P-33.5AS
	34.00	1.3386	–	7C232P-34	7C232P-34LR	7C232P-34CI	7C232P-34AS
	34.13	1.3438	1-11/32	7C232P-0111	7C232P-0111LR	7C232P-0111CI	7C232P-0111AS
	34.50	1.3583	–	7C232P-34.5	7C232P-34.5LR	7C232P-34.5CI	7C232P-34.5AS
	34.93	1.3750	1-3/8	7C232P-0112	7C232P-0112LR	7C232P-0112CI	7C232P-0112AS
	35.00	1.3780	–	7C232P-35	7C232P-35LR	7C232P-35CI	7C232P-35AS

Inserts sold in multiples of 1

A2: 66 - 75

A2: 2 - 5



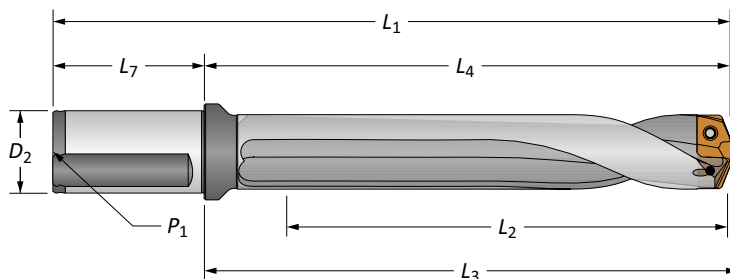
Sizes not shown are available upon request.

When ordering, please follow the example below:

<b>Metric:</b>	13.16mm, Steel, 13 series = use Part No. <b>XTP13-13.16</b>
<b>Imperial:</b>	0.5180", Steel, 13 series = use Part No. <b>XTP13-13.16</b>

### GEN3SYS®XT Standard Drill Insert Holders

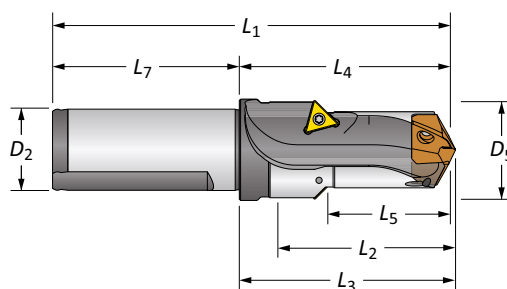
32 Series | Diameter Range: 32.00mm - 35.00mm (1.2598" - 1.3780")



#### Straight and Helical

Flute	Length	Body					Shank				Flat	Part No.
		L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>	D <sub>2</sub>	P <sub>1</sub>				
	3xD	105.0	157.7	161.3	227.7	70.0	40.0	1/4*	YES	60332S-40FM		
	5xD	175.0	227.7	231.3	297.7	70.0	40.0	1/4*	YES	60532S-40FM		
	7xD	244.9	297.7	301.3	367.7	70.0	40.0	1/4*	YES	60732S-40FM		
	Stub	38.0	90.7	94.2	160.7	70.0	40.0	1/4*	YES	60132H-40FM		
	3xD	105.0	157.7	161.3	227.7	70.0	40.0	1/4*	YES	60332H-40FM		
	3xD	105.0	157.7	161.3	227.7	70.0	40.0	1/4*	NO	60332H-40CM		
	5xD	175.0	227.7	231.3	297.7	70.0	40.0	1/4*	YES	60532H-40FM		
	5xD	175.0	227.7	231.3	297.7	70.0	40.0	1/4*	NO	60532H-40CM		
	7xD	244.9	297.7	301.3	367.7	70.0	40.0	1/4*	YES	60732H-40FM		
	7xD	244.9	297.7	301.3	367.7	70.0	40.0	1/4*	NO	60732H-40CM		
	3xD	4-9/64	6-7/32	6-23/64	8-29/32	2-11/16	1-1/2	1/4	YES	60332S-150F		
	5xD	6-57/64	8-31/32	9-7/64	11-21/32	2-11/16	1-1/2	1/4	YES	60532S-150F		
	7xD	9-41/64	11-23/32	11-55/64	14-13/32	2-11/16	1-1/2	1/4	YES	60732S-150F		
	Stub	1-1/2	3-37/64	3-45/64	6-1/4	2-11/16	1-1/2	1/4	YES	60132H-150F		
	3xD	4-9/64	6-7/32	6-23/64	8-29/32	2-11/16	1-1/2	1/4	YES	60332H-150F		
	3xD	4-9/64	6-7/32	6-23/64	8-29/32	2-11/16	1-1/2	1/4	NO	60332H-150C		
	5xD	6-57/64	8-31/32	9-7/64	11-21/32	2-11/16	1-1/2	1/4	YES	60532H-150F		
	5xD	6-57/64	8-31/32	9-7/64	11-21/32	2-11/16	1-1/2	1/4	NO	60532H-150C		
	7xD	9-41/64	11-23/32	11-55/64	14-13/32	2-11/16	1-1/2	1/4	YES	60732H-150F		
	7xD	9-41/64	11-23/32	11-55/64	14-13/32	2-11/16	1-1/2	1/4	NO	60732H-150C		

\*Thread to BSP and ISO 7-1



#### Drill / Chamfer

Step	Body					Shank		Part No.	Chamfer Insert	
	D <sub>5</sub>	L <sub>5</sub>	L <sub>2</sub>	L <sub>4</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>7</sub>			D <sub>2</sub>
	40.1	48.0	62.4	90.7	94.2	160.6	70.0	40.0	60132C45-40FM	TCMT-16T304
	1-37/64	1-57/64	2-29/64	3-37/64	3-23/32	6-1/4	2-11/16	1-1/2	60132C45-150F	TCMT-16T304

#### Connection Accessories

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

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

Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

= Metric (mm)

= Imperial (in)



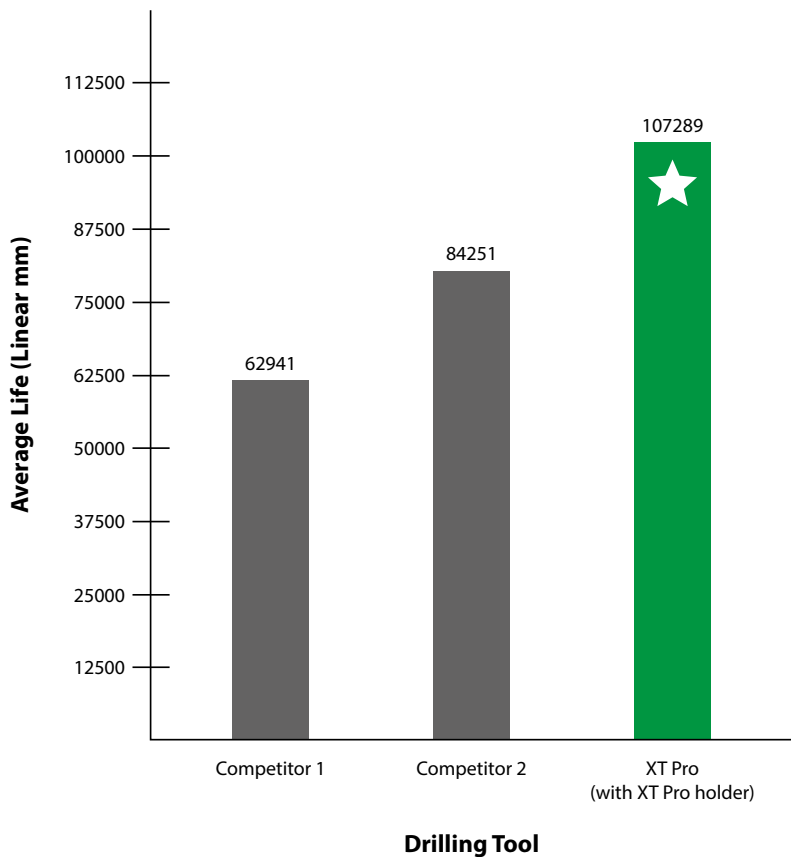
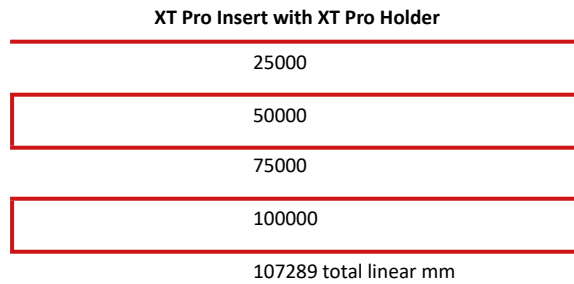
## Competitive Test Results

### GEN3SYS®XT Pro

The GEN3SYS®XT Pro drilling system is designed to provide optimal results in each specific ISO material class. This allows the XT Pro to outperform the competition no matter what material you're drilling. Let's take a look at some real world test results for the GEN3SYS®XT Pro drilling system.

**P** Average Tool Life:  
Test results drilling in 4150 steel

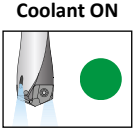

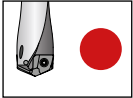
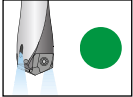
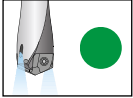
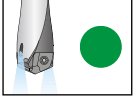

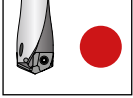
Hole Diameter	Depth of Cut	Coolant	Speed	Feed
19mm (0.748")	38.1mm (1-1/2")	21 BAR	1583 RPM	563 mm/min (22.16 inch/min)



A DRILLING  
B BORING  
C REAMING  
D BURNISHING  
E THREADING  
X SPECIALS

## Deep Hole Drilling Guidelines

GEN3SYS®XT Pro | 10xD Holders

<p><b>1. Pilot Hole</b> 100 % RPM 100% mm/rev (IPR)</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>Coolant ON</b></p> 
<p><b>2. Feed-in</b>  50 RPM max 300 mm/min (12 IPM)</p>	<p>Feed the longer drill within 1.5mm ( 1/16" ) short of the established pilot hole bottom at a <b>maximum of 50 RPM</b> and 300 mm/min (12 IPM) feed rate.</p>	<p><b>Coolant OFF</b></p> 
<p><b>3. Deep Hole Transition Drilling</b> 50 % RPM 75% mm/rev (IPR)</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>Coolant ON</b></p> 
<p><b>4. Deep Hole Drilling - Blind</b> 100% RPM 100% mm/rev (IPR)</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>Coolant ON</b></p> 
<p><b>5. Deep Hole Drilling - at Breakout</b> 50% RPM 75% mm/rev (IPR)</p>	<p><b>For through holes only:</b> Reduce speed by 50% and feed by 25% prior to breakout. Do not break out more than 3mm ( 1/8" ) past the full diameter of the drill.</p>	<p><b>Coolant ON</b></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>	<p><b>Coolant OFF</b></p> 

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

- When using holders without support bushing, use a short GEN3SYS® 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](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.



## Recommended Drilling Data | Metric (mm)

ISO	Material	Hardness			Speed (M/mm)	Feed Rate (mm/rev) by Diameter			
		BHN	kg	N/mm <sup>2</sup>		11 series 11.00 - 11.99	12 series 12.00 - 12.99	13 series 13.00 - 13.99	14 series 14.00 - 14.99
P	Free Machining Steel 1118, 1215, 12L14, etc.	100 - 150	38-50	370-500	168	0.28	0.30	0.33	0.36
		150 - 200	50-70	500-700	145	0.25	0.28	0.30	0.33
		200 - 250	70-88	700-870	130	0.20	0.23	0.25	0.28
	Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	30-46	300-450	158	0.28	0.30	0.33	0.36
		125 - 175	46-62	450-600	137	0.25	0.28	0.30	0.33
		175 - 225	62-77	600-775	125	0.23	0.25	0.28	0.30
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	77-96	775-940	107	0.18	0.20	0.23	0.25
		125 - 175	46-62	450-600	137	0.25	0.28	0.30	0.33
		175 - 225	62-77	600-775	125	0.23	0.25	0.28	0.30
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	77-96	775-940	107	0.20	0.23	0.25	0.28
		275 - 325	96-111	940-1090	91	0.18	0.20	0.23	0.25
		125 - 175	42-62	450-600	126	0.25	0.28	0.30	0.33
175 - 225		62-77	600-775	116	0.23	0.25	0.28	0.30	
High Strength Alloy 4340, 4330V, 300M, etc.	225 - 275	77-96	775-940	104	0.20	0.23	0.25	0.28	
	275 - 325	96-111	940-1090	94	0.15	0.18	0.20	0.23	
	325 - 375	111-129	1090-1265	85	0.15	0.15	0.18	0.20	
Structural Steel A36, A285, A516, etc.	225 - 300	77-104	600-1020	76	0.20	0.23	0.25	0.28	
	300 - 350	104-121	1020-1180	69	0.15	0.18	0.20	0.23	
	350 - 400	121-139	1180-1365	61	0.13	0.18	0.18	0.20	
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	100 - 150	38-50	370-500	125	0.25	0.28	0.30	0.33	
	150 - 250	50-88	500-850	101	0.20	0.23	0.25	0.28	
	250 - 350	88-121	850-1180	93	0.18	0.20	0.23	0.25	
S	High Temp Alloy Hastelloy B, Inconel 600, etc.	150 - 200	50-70	500-700	81	0.15	0.18	0.18	0.20
		200 - 250	70-88	700-870	62	0.13	0.15	0.15	0.18
	Titanium Alloy	140 - 220	49-77	480-755	40	0.15	0.18	0.18	0.20
		220 - 310	77-101	755-990	30	0.13	0.15	0.15	0.18
	Aerospace Alloy S82	140 - 220	49-77	480-755	43	0.13	0.15	0.18	0.20
220 - 310		77-101	755-990	34	0.10	0.13	0.15	0.18	
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	65-96	640-940	50	0.10	0.10	0.12	0.14
		275 - 350	96-121	940-1180	41	0.09	0.09	0.10	0.12
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185 - 275	65-96	640-940	73	0.15	0.18	0.18	0.20
		275 - 350	96-121	940-1180	56	0.13	0.15	0.15	0.18
	Super Duplex Stainless Steel	135 - 185	49-65	480-640	67	0.10	0.13	0.13	0.15
		185 - 275	65-96	640-940	49	0.08	0.10	0.10	0.13
		135 - 185	49-65	480-640	38	0.07	0.07	0.09	0.10
185 - 275	65-96	640-940	30	0.06	0.06	0.08	0.09		

### 7xD Adjustment Example (0.80 Adjustment)

Data • Adjustment Value	Speed/Feed (7xD)
61 M/min • 0.80	= 48.8 M/min
0.20 mm/rev • 0.80	= 0.16 mm/rev

### 10xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD)
61 M/min • 0.70	= 42.7 M/min
0.20 mm/rev • 0.70	= 0.14 mm/rev

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

- When using holders without support bushing, use a short GEN3SYS®S holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with the workpiece or fixture.

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



Feed Rate (mm/rev) by Diameter									
15 series 15.00 - 15.99	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
0.38	0.41	0.43	0.48	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.41	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.38	0.41	0.43	0.48	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.41	0.46	0.48	0.51	0.53	0.56	0.58	0.61
0.33	0.36	0.38	0.42	0.46	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.38	0.41	0.42	0.46	0.48	0.51	0.53
0.36	0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64
0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.38	0.41	0.43	0.46	0.48	0.51	0.53
0.36	0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64
0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.25	0.28	0.30	0.36	0.38	0.41	0.43	0.46	0.48	0.51
0.23	0.25	0.28	0.33	0.36	0.38	0.41	0.43	0.46	0.48
0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46	0.48	0.51
0.25	0.28	0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46
0.23	0.25	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43
0.33	0.38	0.38	0.43	0.48	0.53	0.56	0.58	0.61	0.64
0.30	0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56
0.20	0.23	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41
0.18	0.20	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38
0.20	0.23	0.23	0.25	0.28	0.28	0.30	0.30	0.33	0.36
0.18	0.20	0.20	0.23	0.25	0.25	0.28	0.28	0.30	0.33
0.20	0.23	0.23	0.25	0.28	0.28	0.30	0.30	0.33	0.33
0.18	0.20	0.20	0.23	0.25	0.25	0.28	0.28	0.30	0.30
0.15	0.16	0.18	0.18	0.20	0.22	0.24	0.26	0.28	0.31
0.14	0.15	0.16	0.16	0.18	0.20	0.22	0.24	0.26	0.29
0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43
0.18	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41
0.15	0.18	0.18	0.20	0.20	0.23	0.23	0.25	0.25	0.28
0.13	0.15	0.15	0.18	0.18	0.20	0.20	0.23	0.23	0.25
0.11	0.12	0.13	0.15	0.16	0.18	0.20	0.20	0.22	0.25
0.10	0.11	0.12	0.14	0.15	0.16	0.18	0.18	0.20	0.22

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD		10xD	
	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM
11	31	19	41	30	55	38
12	31	19	41	30	55	38
13	28	23	34	36	52	45
14	28	26	34	36	52	45
15	26	26	33	42	48	53
16	26	30	33	45	48	57
17	24	30	31	47	45	62
18	24	34	31	47	45	62
20	21	38	28	49	41	68
22	21	42	28	53	41	68
24	21	42	28	53	41	68
26	21	45	28	61	41	76
29	21	45	28	61	41	76
32	21	45	28	61	41	76

A DRILLING  
B BORING  
C REAMING  
D BURNISHING  
E THREADING  
X SPECIALS



**Recommended Drilling Data | Metric (mm)**

ISO	Material	Hardness			Speed (M/min)	Feed Rate (mm/rev) by Diameter			
		BHN`	kg	N/mm <sup>2</sup>		11 series 11.00 - 11.99	12 series 12.00 - 12.99	13 series 13.00 - 13.99	14 series 14.00 - 14.99
H	Wear Plate Hardox, AR400, T-1, etc.	400	139	1365	50	0.13	0.13	0.15	0.17
		500	160	1600	40	0.11	0.11	0.13	0.15
		600	210	2000	27	0.10	0.10	0.11	0.13
	Hardened Steel	300 - 400	104-139	1020-1365	51	0.13	0.13	0.15	0.17
		400 - 500	139+	1365+	40	0.11	0.11	0.13	0.15
K	SG / Nodular Cast Iron	120 - 150	44-50	430-500	168	0.27	0.30	0.33	0.36
		150 - 200	50-70	500-700	159	0.25	0.28	0.30	0.33
		200 - 220	70-77	700-755	141	0.22	0.25	0.28	0.30
		220 - 260	77-90	755-890	124	0.20	0.23	0.25	0.28
		260 - 320	90-104	890-1020	112	0.20	0.21	0.23	0.25
	Grey / White Iron	120 - 150	44-50	430-500	175	0.30	0.33	0.36	0.38
		150 - 200	50-70	500-700	168	0.28	0.30	0.33	0.36
		200 - 220	70-77	700-755	151	0.25	0.28	0.30	0.33
		220 - 260	77-90	755-890	130	0.23	0.25	0.28	0.30
		260 - 320	90-104	890-1020	116	0.23	0.25	0.28	0.30
N	Cast Aluminium	30	10	100	351	0.30	0.33	0.36	0.38
		180	62	600	262	0.28	0.30	0.33	0.36
	Wrought Aluminium	30	10	100	488	0.33	0.38	0.41	0.43
		180	62	600	351	0.30	0.36	0.38	0.41
	Aluminium Bronze	100 - 200	38-68	370-670	126	0.26	0.28	0.30	0.32
		200 - 250	68-87	670-855	103	0.22	0.24	0.26	0.28
	Brass	100	38	370	230	0.29	0.30	0.33	0.36
Copper	60	21	200	149	0.07	0.08	0.09	0.11	

**7xD Adjustment Example (0.80 Adjustment)**

Data • Adjustment Value	Speed/Feed (7xD)
61 M/min • 0.80	= 48.8 M/min
0.20 mm/rev • 0.80	= 0.16 mm/rev

**10xD Adjustment Example (0.70 Adjustment)**

Speed • Adjustment Value	Speed/Feed (10xD)
61 M/min • 0.70	= 42.7 M/min
0.20 mm/rev • 0.70	= 0.14 mm/rev

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

- When using holders without support bushing, use a short GEN3SYS® 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](http://www.alliedmachine.com) for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Feed Rate (mm/rev) by Diameter									
15 series 15.00 - 15.99	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
0.19	0.21	0.23	0.25	0.27	0.27	0.29	0.29	0.31	0.31
0.17	0.19	0.21	0.23	0.25	0.25	0.27	0.27	0.29	0.29
0.15	0.17	0.19	0.21	0.23	0.23	0.25	0.25	0.25	0.27
0.19	0.21	0.22	0.23	0.25	0.25	0.27	0.27	0.29	0.29
0.17	0.19	0.20	0.21	0.23	0.23	0.25	0.25	0.27	0.27
0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58	0.61	0.63
0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58	0.60
0.30	0.33	0.38	0.43	0.46	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.36	0.38	0.43	0.46	0.48	0.51	0.53	0.55
0.41	0.43	0.48	0.53	0.56	0.58	0.61	0.64	0.66	0.69
0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.43	0.51	0.51	0.53	0.56	0.58	0.61	0.64
0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58	0.61
0.33	0.36	0.38	0.43	0.46	0.48	0.51	0.53	0.56	0.58
0.41	0.43	0.46	0.48	0.51	0.53	0.56	0.58	0.61	0.64
0.38	0.41	0.43	0.46	0.48	0.51	0.53	0.56	0.58	0.58
0.46	0.48	0.51	0.53	0.56	0.61	0.66	0.69	0.74	0.76
0.43	0.46	0.48	0.53	0.56	0.58	0.64	0.66	0.71	0.74
0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.48	0.50
0.30	0.32	0.34	0.36	0.38	0.42	0.46	0.46	0.46	0.48
0.38	0.41	0.43	0.48	0.53	0.56	0.60	0.63	0.66	0.66
0.13	0.15	0.16	0.18	0.20	0.20	0.22	0.25	0.25	0.28

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD		10xD	
	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM	Pressure BAR	Flow Rate LPM
11	31	19	41	30	55	38
12	31	19	41	30	55	38
13	28	23	34	36	52	45
14	28	26	34	36	52	45
15	26	26	33	42	48	53
16	26	30	33	45	48	57
17	24	30	31	47	45	62
18	24	34	31	47	45	62
20	21	38	28	49	41	68
22	21	42	28	53	41	68
24	21	42	28	53	41	68
26	21	45	28	61	41	76
29	21	45	28	61	41	76
32	21	45	28	61	41	76

A DRILLING  
B BORING  
C REAMING  
D BURNISHING  
E THREADING  
X SPECIALS



## Recommended Drilling Data | Imperial (inch)

ISO	Material	Hardness			Speed (SFM)	Feed Rate (IPR) by Diameter			
		BHN	kg	N/mm <sup>2</sup>		11 series 0.4331 - 0.4723	12 series 0.4724 - 0.5117	13 series 0.5118 - 0.5511	14 series 0.5512 - 0.5905
P	Free Machining Steel 1118, 1215, 12L14, etc.	100 - 150	38-50	370-500	550	0.011	0.012	0.013	0.014
		150 - 200	50-70	500-700	475	0.010	0.011	0.012	0.013
		200 - 250	70-88	700-870	425	0.008	0.009	0.010	0.011
	Low Carbon Stee I 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	30-46	300-450	520	0.011	0.012	0.013	0.014
		125 - 175	46-62	450-600	450	0.010	0.011	0.012	0.013
		175 - 225	62-77	600-775	410	0.009	0.010	0.011	0.012
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	77-96	775-940	350	0.007	0.008	0.009	0.010
		125 - 175	46-62	450-600	450	0.010	0.011	0.012	0.013
		175 - 225	62-77	600-775	410	0.009	0.010	0.011	0.012
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	77-96	775-940	350	0.008	0.009	0.010	0.011
		275 - 325	96-111	940-1090	300	0.007	0.008	0.009	0.010
		325 - 375	111-129	1090-1265	280	0.006	0.006	0.007	0.008
225 - 300		77-104	600-1020	250	0.008	0.009	0.010	0.011	
High Strength Alloy 4340, 4330V, 300M, etc.	300 - 350	104-121	1020-1180	225	0.006	0.007	0.008	0.009	
	350 - 400	121-139	1180-1365	200	0.005	0.006	0.007	0.008	
	100 - 150	38-50	370-500	410	0.010	0.011	0.012	0.013	
Structural Steel A36, A285, A516, etc.	150 - 250	50-88	500-850	330	0.008	0.009	0.010	0.011	
	250 - 350	88-121	850-1180	305	0.007	0.008	0.009	0.010	
	150 - 200	50-70	500-700	265	0.006	0.007	0.007	0.008	
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	200 - 250	70-88	700-870	205	0.005	0.006	0.006	0.007	
	S	High Temp Alloy Hastelloy B, Inconel 600, etc.	140 - 220	49-77	480-755	130	0.006	0.007	0.007
220 - 310			77-101	755-990	100	0.005	0.006	0.006	0.007
Titanium Alloy		140 - 220	49-77	480-755	140	0.005	0.006	0.007	0.008
		220 - 310	77-101	755-990	110	0.004	0.005	0.006	0.007
Aerospace Alloy S82	185 - 275	65-96	640-940	165	0.004	0.004	0.005	0.005	
	275 - 350	96-121	940-1180	135	0.003	0.003	0.004	0.005	
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	65-96	640-940	240	0.006	0.007	0.007	0.008
		275 - 350	96-121	940-1180	180	0.005	0.006	0.006	0.007
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	49-65	480-640	220	0.004	0.005	0.005	0.006
		185 - 275	65-96	640-940	160	0.003	0.004	0.004	0.005
	Super Duplex Stainless Steel	135 - 185	49-65	480-640	125	0.003	0.003	0.003	0.004
		185 - 275	65-96	640-940	100	0.002	0.002	0.003	0.003

### 7xD Adjustment Example (0.80 Adjustment)

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

### 10xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

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

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Feed Rate (IPR) by Diameter									
15 series 0.5906 - 0.6298	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
0.015	0.016	0.017	0.019	0.021	0.022	0.023	0.024	0.025	0.026
0.014	0.015	0.016	0.017	0.019	0.020	0.021	0.022	0.023	0.024
0.012	0.013	0.014	0.016	0.018	0.019	0.020	0.021	0.022	0.023
0.015	0.016	0.017	0.019	0.021	0.022	0.023	0.024	0.025	0.026
0.014	0.015	0.016	0.018	0.019	0.020	0.021	0.022	0.023	0.024
0.013	0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.023
0.011	0.012	0.013	0.015	0.016	0.017	0.018	0.019	0.020	0.021
0.014	0.015	0.016	0.018	0.020	0.021	0.022	0.023	0.024	0.025
0.013	0.014	0.015	0.017	0.019	0.020	0.021	0.022	0.023	0.024
0.012	0.013	0.014	0.016	0.018	0.019	0.020	0.021	0.022	0.023
0.011	0.012	0.013	0.015	0.016	0.017	0.018	0.019	0.020	0.021
0.014	0.015	0.016	0.018	0.020	0.021	0.022	0.023	0.024	0.025
0.013	0.014	0.015	0.017	0.019	0.020	0.021	0.022	0.023	0.024
0.012	0.013	0.014	0.016	0.018	0.019	0.020	0.021	0.022	0.023
0.010	0.011	0.012	0.014	0.015	0.016	0.017	0.018	0.019	0.020
0.009	0.010	0.011	0.013	0.014	0.015	0.016	0.017	0.018	0.019
0.011	0.012	0.013	0.014	0.015	0.016	0.017	0.018	0.019	0.020
0.010	0.011	0.011	0.012	0.013	0.014	0.015	0.016	0.017	0.018
0.009	0.010	0.010	0.011	0.012	0.013	0.014	0.015	0.016	0.017
0.013	0.015	0.015	0.017	0.019	0.021	0.022	0.023	0.024	0.025
0.012	0.013	0.014	0.015	0.017	0.019	0.020	0.021	0.022	0.023
0.011	0.012	0.013	0.014	0.015	0.017	0.019	0.020	0.021	0.022
0.008	0.009	0.009	0.010	0.011	0.012	0.013	0.014	0.015	0.016
0.007	0.008	0.008	0.009	0.010	0.011	0.012	0.013	0.014	0.015
0.008	0.009	0.009	0.010	0.011	0.011	0.012	0.012	0.013	0.014
0.007	0.008	0.008	0.009	0.010	0.010	0.011	0.011	0.012	0.013
0.008	0.009	0.009	0.010	0.011	0.011	0.012	0.012	0.013	0.014
0.007	0.008	0.008	0.009	0.010	0.010	0.011	0.011	0.012	0.012
0.006	0.006	0.007	0.007	0.008	0.008	0.009	0.010	0.011	0.012
0.005	0.006	0.006	0.006	0.007	0.008	0.008	0.009	0.010	0.011
0.008	0.009	0.010	0.011	0.012	0.013	0.014	0.015	0.016	0.017
0.007	0.008	0.009	0.010	0.011	0.012	0.013	0.014	0.015	0.016
0.006	0.007	0.007	0.008	0.008	0.009	0.009	0.010	0.010	0.011
0.005	0.006	0.006	0.007	0.007	0.008	0.008	0.009	0.009	0.010
0.004	0.005	0.005	0.006	0.006	0.007	0.008	0.008	0.008	0.010
0.004	0.004	0.005	0.005	0.006	0.006	0.007	0.007	0.008	0.008

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD		10xD	
	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM
11	450	5	600	8	800	10
12	450	5	600	8	800	10
13	400	6	500	9.5	750	12
14	400	7	500	9.5	750	12
15	380	7	475	11	700	14
16	380	8	475	12	700	15
17	350	8	450	12.5	650	16.5
18	350	9	450	12.5	650	16.5
20	300	10	400	13	600	18
22	300	11	400	14	600	18
24	300	11	400	14	600	18
26	300	12	400	16	600	20
29	300	12	400	16	600	20
32	300	12	400	16	600	20

A DRILLING  
B BORING  
C REAMING  
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E THREADING  
X SPECIALS



## Recommended Drilling Data | Imperial (inch)

ISO	Material	Hardness			Speed (SFM)	Feed Rate (IPR) by Diameter			
		BHN	kg	N/mm <sup>2</sup>		11 series 0.4331 - 0.4723	12 series 0.4724 - 0.5117	13 series 0.5118 - 0.5511	14 series 0.5512 - 0.5905
H	Wear Plate Hardox, AR400, T-1, etc.	400	139	1365	160	0.005	0.005	0.006	0.006
		500	160	1600	130	0.004	0.004	0.005	0.006
		600	210	2000	90	0.004	0.004	0.004	0.005
	Hardened Steel	300 - 400	104-139	1020-1365	170	0.005	0.005	0.006	0.006
		400 - 500	139+	1365+	130	0.004	0.004	0.005	0.006
K	SG / Nodular Cast Iron	120 - 150	44-50	430-500	550	0.010	0.012	0.013	0.014
		150 - 200	50-70	500-700	520	0.010	0.011	0.012	0.013
		200 - 220	70-77	700-755	465	0.008	0.010	0.011	0.012
		220 - 260	77-90	755-890	405	0.008	0.009	0.010	0.011
		260 - 320	90-104	890-1020	365	0.008	0.008	0.009	0.010
	Grey / White Iron	120 - 150	44-50	430-500	575	0.012	0.013	0.014	0.015
		150 - 200	50-70	500-700	550	0.011	0.012	0.013	0.014
		200 - 220	70-77	700-755	495	0.010	0.011	0.012	0.013
		220 - 260	77-90	755-890	425	0.009	0.010	0.011	0.012
		260 - 320	90-104	890-1020	380	0.009	0.010	0.011	0.012
N	Cast Aluminium	30	10	100	1150	0.012	0.013	0.014	0.015
		180	62	600	860	0.011	0.012	0.013	0.014
	Wrought Aluminium	30	10	100	1600	0.013	0.015	0.016	0.017
		180	62	600	1150	0.012	0.014	0.015	0.016
	Aluminium Bronze	100 - 200	38-68	370-670	415	0.010	0.011	0.012	0.012
		200 - 250	68-87	670-855	335	0.008	0.009	0.010	0.011
	Brass	100	38	370	755	0.010	0.012	0.013	0.014
Copper	60	21	200	490	0.003	0.003	0.003	0.004	

### 7xD Adjustment Example (0.80 Adjustment)

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

### 10xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

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

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Feed Rate (IPR) by Diameter									
15 series 0.5906 - 0.6298	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
0.007	0.008	0.009	0.010	0.010	0.010	0.011	0.011	0.012	0.012
0.006	0.007	0.008	0.009	0.010	0.010	0.010	0.010	0.011	0.011
0.006	0.006	0.007	0.008	0.009	0.009	0.010	0.010	0.010	0.010
0.007	0.008	0.008	0.009	0.010	0.010	0.010	0.010	0.011	0.011
0.006	0.007	0.008	0.008	0.009	0.009	0.010	0.010	0.010	0.010
0.015	0.016	0.018	0.020	0.020	0.022	0.022	0.024	0.025	0.026
0.014	0.015	0.017	0.019	0.020	0.020	0.022	0.022	0.024	0.024
0.013	0.014	0.016	0.018	0.019	0.020	0.020	0.022	0.022	0.023
0.012	0.013	0.015	0.017	0.018	0.019	0.020	0.020	0.022	0.022
0.011	0.012	0.014	0.015	0.017	0.018	0.019	0.020	0.020	0.021
0.016	0.017	0.019	0.021	0.022	0.023	0.024	0.025	0.026	0.027
0.015	0.016	0.018	0.020	0.021	0.022	0.023	0.024	0.025	0.026
0.014	0.015	0.017	0.020	0.020	0.021	0.022	0.023	0.024	0.025
0.013	0.014	0.016	0.018	0.019	0.020	0.021	0.022	0.023	0.024
0.013	0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.023
0.016	0.017	0.018	0.019	0.020	0.021	0.022	0.023	0.024	0.025
0.015	0.016	0.017	0.018	0.019	0.020	0.021	0.022	0.023	0.023
0.018	0.019	0.020	0.022	0.023	0.024	0.026	0.027	0.029	0.030
0.017	0.018	0.019	0.021	0.022	0.023	0.025	0.026	0.028	0.029
0.013	0.014	0.015	0.015	0.016	0.017	0.018	0.019	0.019	0.019
0.012	0.012	0.013	0.014	0.015	0.016	0.017	0.018	0.018	0.019
0.015	0.016	0.017	0.019	0.020	0.022	0.023	0.024	0.026	0.026
0.005	0.006	0.006	0.007	0.008	0.008	0.008	0.010	0.010	0.011

Coolant Recommendations

Series	Stub, 3xD, 5xD		7xD		10xD	
	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM	Pressure PSI	Flow Rate GPM
11	450	5	600	8	800	10
12	450	5	600	8	800	10
13	400	6	500	9.5	750	12
14	400	7	500	9.5	750	12
15	380	7	475	11	700	14
16	380	8	475	12	700	15
17	350	8	450	12.5	650	16.5
18	350	9	450	12.5	650	16.5
20	300	10	400	13	600	18
22	300	11	400	14	600	18
24	300	11	400	14	600	18
26	300	12	400	16	600	20
29	300	12	400	16	600	20
32	300	12	400	16	600	20

A  
DRILLING  
B  
BORING  
C  
REAMING  
D  
BURNISHING  
E  
THREADING  
X  
SPECIALS



## Tap Drill Information and Formulas | Metric (mm)

Tap Size	Tap Drill Size	Decimal Equivalent (inch)	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
12 X 1.25	27/64	.4219	79%	0.075 mm	10.79 mm	74%
	10.8 mm	.4252	74%	0.075 mm	10.88 mm	69%
14 X 2.0	15/32	.4688	81%	0.075 mm	11.98 mm	78%
	12.0 mm	.4724	77%	0.075 mm	12.08 mm	74%
14 X 1.5	12.5 mm	.4921	77%	0.075 mm	12.58 mm	73%
16 X 2.0	14.0 mm	.5512	77%	0.075 mm	14.08 mm	74%
16 X 1.5	14.5 mm	.5709	77%	0.075 mm	14.58 mm	73%
	37/64	.5781	68%	0.075 mm	14.76 mm	64%
18 X 2.5	15.5 mm	.6102	77%	0.075 mm	15.58 mm	75%
18 X 1.5	16.5 mm	.6496	77%	0.075 mm	16.58 mm	73%
	21/32	.6563	68%	0.075 mm	16.75 mm	64%
20 X 2.5	11/16	.6875	78%	0.075 mm	17.54 mm	76%
	17.5 mm	.6890	77%	0.075 mm	17.58 mm	74%
20 X 1.5	18.5 mm	.7283	77%	0.075 mm	18.58 mm	73%
	47/64	.7344	69%	0.075 mm	18.66 mm	65%
22 X 2.5	49/64	.7656	79%	0.075 mm	19.52 mm	76%
	19.5 mm	.7677	77%	0.075 mm	19.58 mm	75%
22 X 1.5	20.5 mm	.8071	77%	0.075 mm	20.58 mm	73%
	13/16	.8125	70%	0.075 mm	20.71 mm	66%
24 X 3	13/16	.8125	86%	0.075 mm	20.71 mm	84%
	21.0 mm	.8268	76%	0.075 mm	21.08 mm	75%
24 X 2	22.0 mm	.8661	77%	0.075 mm	22.08 mm	74%
	7/8	.8750	68%	0.075 mm	22.30 mm	65%
27 X 3	24.0 mm	.9449	77%	0.075 mm	24.08 mm	75%

### Formulas

1.	<b>RPM</b>	= (318.47 • M/min) / DIA
	where:	
	RPM	= revolutions per minute (rev/min)
	M/min	= speed (M/min)
	DIA	= diameter of drill (mm)
2.	<b>mm/min</b>	= RPM • mm/rev
	where:	
	mm/min	= mm per minute (mm/min)
	RPM	= revolutions per minute (rev/min)
	mm/rev	= feed rate (mm/rev)
3.	<b>M/min</b>	= RPM • 0.003 • DIA
	where:	
	M/min	= speed (M/min)
	RPM	= revolutions per minute (rev/min)
	DIA	= diameter of drill (mm)
4.	<b>Thrust</b>	= 154 • (mm/rev) • DIA • K <sub>m</sub>
	where:	
	Thrust	= axial thrust (N)
	mm/rev	= feed rate (mm/rev)
	DIA	= diameter of drill (mm)
	K <sub>m</sub>	= specific cutting energy (kPa)
5.	<b>Tool Power</b>	= ((mm/rev) • RPM • K <sub>m</sub> • DIA <sup>3</sup> ) / 218604.8
	where:	
	Tool Power	= tool power (HP)
	mm/rev	= feed rate (mm/rev)
	RPM	= revolutions per minute (rev/min)
	K <sub>m</sub>	= specific cutting energy (kPa)
	DIA	= diameter of drill (mm)

### BSP and ISO 7-1

Tap Size	Tap Drill Size	Decimal Equivalent	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
1/4-19	7/16"	.4375"	-	0.075 mm	11.19 mm	-
3/8-19	37/64"	.5781"	-	0.075 mm	14.76 mm	-
1/2-14	23/32"	.7188"	-	0.075 mm	18.33 mm	-
3/4-14	15/16"	.9375"	-	0.075 mm	23.89 mm	-

\* Based on nominal tap drill diameter

\*\* Based on 0.075mm probable mean oversize

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

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

### Material Constants

Type of Material	Hardness	Km (kPa)
Plain Carbon and Alloy Steel	85 - 200 BHN	5.45
	200 - 275 BHN	6.48
	275 - 375 BHN	6.89
	375 - 425 BHN	7.93
High Temperature Alloys	-	9.93
Titanium Alloy	-	4.96
Stainless Steels	135 - 275 BHN	6.48
	30 - 45 RC	7.45
Cast Iron	100 - 200 BHN	3.45
	200 - 300 BHN	7.45
Copper Alloy	20 - 80 RB	2.96
	80 - 100 RB	4.96
Aluminium Alloy	-	1.52
Magnesium Alloy	-	1.10

### Notes

- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The .075mm probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page are found in the *Machinery's Handbook*. Permission to simplify and print the equations is granted by the Editor of the *Machinery's Handbook*.



## Tap Drill Information and Formulas | Imperial (inch)

### American - Unified Inch Screw Thread

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

### Taper Pipe Thread (NPT)

Tap Size	Tap Drill Size		Decimal Equivalent	* Theo % Thread	Probable Mean Oversize	Probable Hole Size	** Probable % Thread
	Metric (mm)	Imperial					
1/4 - 18	11.10	7/16	.4375	-	.003	.4405	-
3/8 - 18	14.70	9/16	.5625	-	.003	.5655	-
1/2 - 14	18.25	45/64	.7031	-	.003	.7061	-
3/4 - 14	23.80	29/32	.9063	-	.003	.9093	-

\* Based on nominal tap drill diameter

\*\* Based on .003" probable mean oversize

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

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

### Notes

- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The .003 probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page are found in the *Machinery's Handbook*. Permission to simplify and print the equations is granted by the Editor of the *Machinery's Handbook*.

### Formulas

1.	<b>RPM</b> = (3.82 • SFM) / DIA
	where: RPM = revolutions per minute (rev/min) SFM = speed (ft/min) DIA = diameter of drill (inch)
2.	<b>IPM</b> = RPM • IPR
	where: IPM = inches per minute (in/min) RPM = revolutions per minute (rev/min) IPR = feed rate (in/rev)
3.	<b>SFM</b> = RPM • 0.262 • DIA
	where: SFM = speed (ft/min) RPM = revolutions per minute (rev/min) DIA = diameter of drill (inch)
4.	<b>Thrust</b> = 153,700 • IPR • DIA • Km
	where: Thrust = axial thrust (lbs) IPR = feed rate (in/rev) DIA = diameter of drill (inch) Km = specific cutting energy (lbs/in <sup>2</sup> )
5.	<b>Tool Power</b> = .6283 • IPR • RPM • Km • DIA <sup>2</sup>
	where: Tool Power = tool power (HP) IPR = feed rate (in/rev) RPM = revolutions per minute (rev/min) Km = specific cutting energy (lbs/in <sup>2</sup> ) DIA = diameter of drill (inch)

### Material Constants

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



## Troubleshooting Guide

	Potential Problem																				
	Accelerated corner wear	Barber pole	Bell mouth hole	Insert chipping	Blue chips	Build Up Edge (BUE)	Chatter	Chip packing	Chipping of point	Damaged or broken tools	Excessive margin wear	High flank wear	Hole lead off	Hole out of position	Hole out of round	Over-size hole	Poor hole finish	Poor tool life	Power spikes - Load meter	Retract spiral	
<b>Setup Condition</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	<b>Possible Solutions</b>
Worn or misaligned spindle (lathe, screw machine, chucker)	1		3				7		9	10	11		13			16	17			20	<ul style="list-style-type: none"> <li>Align spindle and turret or tailstock.</li> <li>Repair spindle.</li> </ul>
Use of low rigidity machine tools		2	3	4			7		9	10			13	14						20	<ul style="list-style-type: none"> <li>Reduce penetration rate to fall within the physical limits of the machine or setup (<b>NOTICE:</b> Do not reduce feed below threshold of good chip formation).</li> </ul>
Poor work piece support		2		4			7		10	11					15		17			20	<ul style="list-style-type: none"> <li>Provide additional support for the work piece.</li> <li>Reduce penetration rate to fall within the physical limits of the machine or setup (<b>NOTICE:</b> Do not reduce feed below threshold of good chip formation).</li> </ul>
Flood coolant, low coolant pressure, or low coolant volume	1				5	6		8		10		12				16	17	18	19		<ul style="list-style-type: none"> <li>Run coolant through tool holder when drilling greater than 1xD.</li> <li>Increase coolant pressure and volume through the tool holder.</li> <li>Reduce penetration rate to fall within the coolant limitations (<b>NOTICE:</b> Do not reduce feed below threshold of good chip formation).</li> <li>Add a peck cycle to help clear chips.</li> </ul>
Interrupted cuts. Entry or exit surfaces that are not perpendicular to the spindle (draft angles, parting lines, curved or stepped surfaces, cross holes, and cast or forged surfaces)				4			7		9	10	11		13	14	15	16	17	18			<ul style="list-style-type: none"> <li>Pre-mill (spot face) entry or exit surface to remove interruption.</li> <li>Decrease feed as much as 50% through entry or exit interruption.</li> <li>Use short holders in low impact entry cuts.</li> </ul>
Material harder than expected or running tools beyond recommended speed	1				5	6				10		12							18		<ul style="list-style-type: none"> <li>Reduce speed.</li> <li>Increase coolant pressure and volume.</li> <li>Improve coolant condition by use of quality products and regular maintenance.</li> </ul>
Poor material micro-structure or foreign particles (forgings and castings that have not been normalized or annealed, poorly prepared steel, flame cut parts, and sand casting)				4		6				10		12	13						18		<ul style="list-style-type: none"> <li>Compare performance of other tools for similar wear problems, which may indicate poor micro-structure. Anneal or normalize parts to improve micro-structure for machining.</li> <li>Reduce feeds (<b>NOTICE:</b> Do not reduce feed below threshold of good chip formation).</li> </ul>
Poor chip control								8		10	11		13			16	17	18	19		<ul style="list-style-type: none"> <li>Increase feed to recommended levels. Contact Allied Application Engineering group for technical recommendations.</li> <li>Increase coolant pressure and volume.</li> <li>Improve coolant condition by use of quality products and regular maintenance.</li> </ul>
Spot drilled holes with included angle less than that matching GEN3SYS®XT or cored holes	1			4			7						13						18		<ul style="list-style-type: none"> <li>Spot hole with short tool of same or greater included angle as GEN3SYS®XT drill insert.</li> <li>Reduce feed (<b>NOTICE:</b> Do not reduce feed below threshold of good chip formation). If possible, drill from solid.</li> </ul>

# 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\* .....

## 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  Flat Stock  Round Stock  Tubular Stock  Plate  
 Stacked Plate  Hot Rolled  Cold Rolled  Casting  Forging

Hole Diameter.....  mm  Inch Hole Depth.....  Thru Hole  Blind Hole

Drilled Hole Tolerance Req'd ..... Drilled Hole RMS Finish Req'd\*.....  µInch  µMetre

## MACHINE AND SET-UP INFORMATION

Machine Tool Type  Machining Centre  Lathe  Boring Mill  
 Multi-spindle auto  Multi spindle drill  Transfer Line  
 Gantry Machine  Dial Index Machine  Radial Arm  
 Gun Drilling Machine  Pedestal Drill  Other

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

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

Spindle Orientation\*  Vertical  Horizontal  Other.....

Tool\*  Stationery  Revolves

Available Power\*  KW  HP Available Feed Thrust.....  Newtons  Lbs

Available Speed\*  Variable  Fixed  RPM  m/min

Preferred Shank Type\*  Flanged  Morse No  RCA  Lathe Diameter.....  mm  Inch

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

Coolant Pressure.....\*  Bar  PSI

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

## CURRENT DRILL INFORMATION

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

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

Tool Grade  HSS  Carbide  Ceramic  Other .....

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

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

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

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

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

Potential this application: Current Annual Usage €£: Tools per Annum?

\* Required Fields where applicable

## FOR OFFICE USE ONLY

Application Engineer: Number: Status:



## Notes

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**A**

DRILLING

**B**

BORING

**C**

REAMING

**D**

BURNISHING

**F**

THREADING

**X**

SPECIALS





# 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.

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