



ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing



Boring



Reaming



Burnishing



Threading



Specials



GEN3SYS[®] XT & XT Pro

► *DRILLING*

Replaceable Insert Drilling System

North America

Allied Machine

120 Deeds Drive
Dover, OH 44622
United States

Allied Machine

485 West 3rd Street
Dover, OH 44622
United States

ThreadMills USA™

4185 Crosstowne Ct #B
Evans, GA 30809
United States

Superion™

1285 S Patton St.
Xenia, OH 45385
United States

Europe

Allied Machine Europe

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

Wohlhaupter® GmbH

Maybachstrasse 4
Postfach 1264
72636 Frickenhausen
Germany

Asia

Wohlhaupter® India

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



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

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



ALLIED MACHINE
& ENGINEERING

www.alliedmachine.com

The Foundation

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



The Beginning

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



The T-A®

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



The Innovation

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

The People

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

The Future

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



Steve Stokey
Executive Vice President

William H. Stokey
President and CEO

Mike Stokey
Executive Vice President



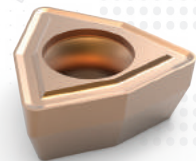
Replaceable Insert Drills

- Reduce costs by decreasing set-up time and utilizing a single holder for the lives of multiple inserts
- Provide flexibility to quickly switch between inserts with different geometries
- Products:
 - GEN3SYS® XT | GEN3SYS® XT Pro
 - Original T-A® | GEN2 T-A®
 - High Performance | Universal



Indexable Insert Drills

- Protect your investment and reduce your inventory with replaceable cartridges that allow the same holder to be used repeatedly
- Indexable inserts increase productivity and tool life while reducing costs
- Products:
 - 4TEX® Drill
 - Revolution Drill®
 - Opening Drill®



Replaceable / Indexable Insert Drills

- Allow for higher spindle speeds and take advantage of the power curve on modern CNC machines
- Achieve maximum penetration rates in deep hole drilling applications
- Holders cover a range of sizes with the replaceable heads determining the cutting diameter
- Products:
 - APX™ Drill



Solid Carbide Drills

- Offer greater strength and stability when drilling tougher materials
- Available in diameters from 3mm - 20mm
- Can be made-to-order specifically for your application (Superion™ quoted specials)
 - ASC 320®
 - Superion™



Structural Steel Solutions



- Deliver outstanding performance and durability in structural steel applications
- Designed to produce optimal results in difficult-to-machine materials
- Available in multiple lengths and diameters
- T-A® style drills have different insert geometry options to improve performance depending on material
- Products:
 - **Original T-A®** | **GEN2 T-A®**
 - **GEN3SYS® XT Pro**

BTA (STS) Machining Solutions

- The internal ejection system flushes chips and debris from the hole with no interference to the cutting process
- Utilizes the advantages of the T-A® drill insert
- Designed to significantly increase penetration rates over brazed heads and traditional gun drills
- Products:
 - **BT-A Drill**



Hydraulic Port Contour Cutters



- Save significant time and money by performing four processes in one step
- Replaceable insert design reduces costs, inventory, and set-up times
- Available in 4 industry specifications:
 - Imperial: SAE J-1926
 - Metric: ISO 6149-1:2006
 - Military: SAE AS5202
 - John Deere: JDS-G173.1
- Products:
 - **AccuPort 432®**



Enhanced Special Drilling Capabilities

- Allied Machine Engineers are available to meet with you to evaluate your application and recommend the best solution for you
- Special drilling solutions can incorporate advanced features such as adjustable diameter locations, multiple steps, additional coolant designs, special lengths and diameters, and more
- Special drills can drastically reduce your cost-per-hole and increase your overall productivity by eliminating multiple processes and increasing tool life



WOHLHAUPTER®

High Precision Boring Systems

- Designs available for high volume applications that increase rigidity to improve performance
- Versatile boring heads that are flexible with changing applications while maintaining excellent performance
- Provides high precision with absolute repeatability to ensure every part is held to tolerance
- Offers an industry leading modular shank connection that maintains rigidity and reduces inventory on your boring system
- Available with both digital and analog settings
- Products:
 - Wohlhaupter® Boring Tools



CRITERION®

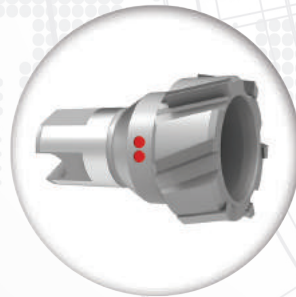
Modular Boring Systems

- The modular capabilities are ideal for use across multiple different projects
- Offers versatile boring heads suitable for all job shops and tooling rooms
- Provides an economical solution for low volume and/or short-term production applications
- Offers both rough and finish boring solutions
- Products:
 - Criterion® Boring Tools

S.C.A.M.I.®

Expandable Reaming Solutions

- Expandable cutting diameters accommodate for wear, which extends tool life
- Replaceable cutting heads and rings reduce waste and improve production time versus solid high speed steel and carbide reamers
- Hold tight tolerances to ensure processes are performed to accurate specifications
- Reduce tooling costs because many items are available for recondition
- Products:
 - ALVAN® Reamers

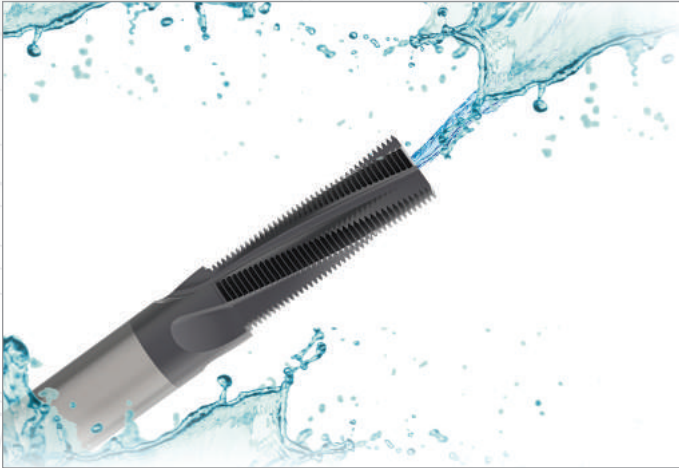


S.C.A.M.I.®

Roller Burnishing Solutions

- Produce excellent surface finishes
- Provide accurate size control
- Increase surface hardness
- Solutions for both through hole and blind hole applications
- Products:
 - S.C.A.M.I.® Roller Burnishing Tools





Solid Carbide Thread Mills

- Available with coolant through options
- Cover a wide range of thread forms
- Provide optimal solutions for both high production projects and short-run applications
- Products
 - AccuThread™ 856
 - AccuThread™ T3
 - ThreadMills USA™



Replaceable Insert Thread Mills

- 3 insert lengths are available that cover a wide range of thread forms
- Holders can utilize inserts with different pitches and thread forms
- Repeatability is achieved by both the bolt-in style and the pin style locking systems
- Increase tool life by 25 - 50% with Allied Machine's AM210® coating
- Products
 - AccuThread™ 856: Bolt-in Style
 - AccuThread™ 856: Pin Style



SPECIAL CAPABILITIES


When it comes to designing and developing special solutions for customers, Allied Machine is the top choice. If your application requires special tooling, give us a call. Our engineered specials are developed by the brightest engineers in the industry. Most of our standard tooling can be altered as specials, or we can create entirely new concepts for particularly unique applications.

One special tooling solution is Insta-Quote®, the online system that allows you to design your own special tooling 24/7. Receive a quote and drawings within minutes just by following the steps.

And with the addition of Superion™ technology and capabilities, we can customize made-to-order solid carbide tools to achieve optimal results for your applications.

Whatever your application, Allied Machine has the answer.



Insta-Quote® 



 SUPERION™



ToolMD™



Increase the production and success of your applications today.

- Offers direct access to 2D drawings and 3D models
- Assemble and view tool images in your browser
- Download drawings for use in most machining software programs
- Browse products, search item numbers, and save assemblies for future use

toolmd.com

WOHLHAUPTER® Tool-Architect

Find the right Wohlhaupter® solution for your application.

- Configure your complete tool assembly
- Compile an order list to be quoted
- Search and quickly find components using various criteria
- Adjust your language and measurement preferences



tool-architect.com

Insta-Quote®

Design your custom tooling and receive a drawing and quote...all within minutes.

- Design and quote your own tooling
- Guides you through steps to generate the solution you need
- Features the following products
 - T-A® Inserts
 - T-A® Holders
 - GEN3SYS® XT Holders
 - ALVAN® Reamers



iq.alliedmachine.com

Insta-Code®

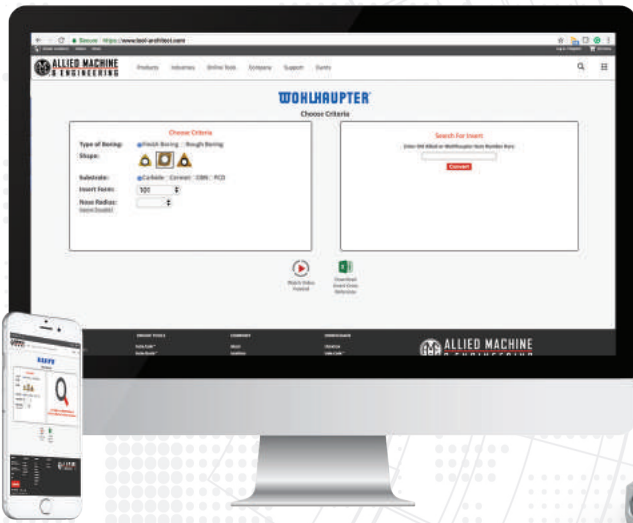
Eliminate the wait. Get your program now.

- Choose the best thread mill for your application
- Create program code for your machine
- Available as a PC download app (that can be used offline)
- Website app available 24/7



Insta-Code also has a
Cycle Time Calculator

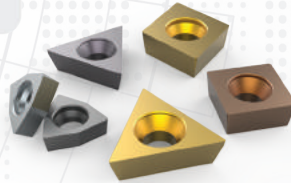
alliedmachine.com/InstaCode



WOHLHAUPTER® Boring Insert Selector

Find the best insert for your application.

- Generate the correct boring insert for your job in just six easy steps
- Choose type, shape, substrate, insert form, nose radius, and material
- Easily order by adding the item to your cart



www.alliedmachine.com/bis

Product Selector

Use the product selector to find the right tool for your application.

- Guides you through steps to generate the right tool for your application
- Learn about your recommended tool and how to maximize its performance

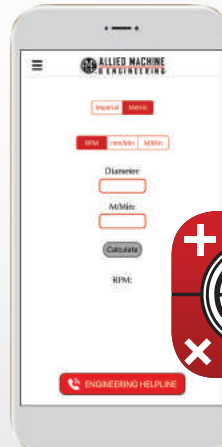


www.alliedmachine.com/productselector

Machinist Tool App

Quickly convert cutting tool parameters for the machine inputs you need.

- Input data to calculate the RPM and speed and feed rates
- Also features the Boring Insert Selector
- Access product literature right at your fingertips



GEN3SYS® XT and XT Pro

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

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



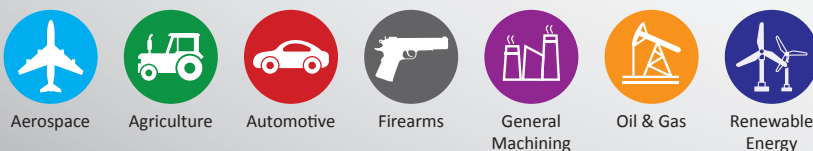
The Next Generation of Drilling

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



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



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

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

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

WARNING

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

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

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

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

GEN3SYS® XT and XT Pro Drilling System Contents

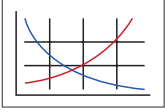
Reference Icons

The following icons will appear throughout the catalog 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	
	Imperial (inch)	Metric (mm)
11	0.4331 - 0.4723	11.00 - 11.99
12	0.4724 - 0.5117	12.00 - 12.99
13	0.5118 - 0.5511	13.00 - 13.99
14	0.5512 - 0.5905	14.00 - 14.99
15	0.5906 - 0.6298	15.00 - 15.99
16	0.6299 - 0.6692	16.00 - 16.99
17	0.6693 - 0.7086	17.00 - 17.99
18	0.7087 - 0.7873	18.00 - 19.99
20	0.7874 - 0.8660	20.00 - 21.99
22	0.8661 - 0.9448	22.00 - 23.99
24	0.9449 - 1.0235	24.00 - 25.99
26	1.0236 - 1.1416	26.00 - 28.99
29	1.1417 - 1.2597	29.00 - 31.99
32	1.2598 - 1.3780	32.00 - 35.00

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15 Series	28 - 31
16 Series	32 - 35
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18 Series	40 - 43
20 Series	44 - 47
22 Series	48 - 51
24 Series	52 - 55
26 Series	56 - 59
29 Series	60 - 63
32 Series	64 - 67

Recommended Cutting Data

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

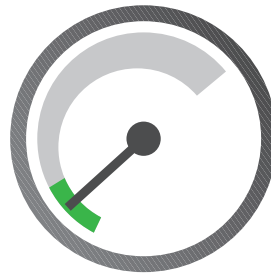
Why should you GO WITH THE PRO?

GEN3SYS® XT Pro

- ✓ **Up to 40% more tool life**
with the new design for steel applications
- ✓ **Increase your penetration rates**
with the new insert technology
- ✓ **Simplify your tooling selection**
with new specific geometry and coating combinations
- ✓ **Increased heat resistance**
with new AM420 coating on steel inserts
- ✓ **Increased abrasion resistance**
with new AM440 coating on cast iron inserts
- ✓ **Improved chip evacuation**
with enhanced flute design on new XT Pro holders
- ✓ **Increased coolant flow to the cutting zone**
with new coolant configuration on XT Pro holders



INCREASED
penetration rate by
67%



Competitor Insert Penetration Rate



XT Pro Insert Penetration Rate

Project Profile: 7075 Aluminum

Tooling Solution: GEN3SYS XT Pro: N (Non-Ferrous) Geometry

The Problem:

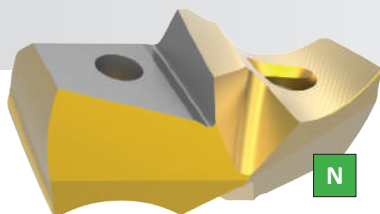
Previously, the customer was using a competitor drill running at the following parameters:

- 30 IPM (762 mm/min)
- Tool life = 15,000" (381 m)

The Solution:

Allied Machine recommended the GEN3SYS XT Pro with N (Non-Ferrous) geometry.

- **Insert** = XTN24-25.00
- The tool ran at the following parameters:
 - 50 IPM (1270 mm/min)
 - Tool life = 26,000" (660.4 m)



The Advantage:

The GEN3SYS XT Pro increased the penetration rate from 30 IPM to 50 IPM, while *drastically increasing the tool life.*

Bottom Line: 67% increase in penetration rate | 73% increase in tool life

Project Profile: Forged 8640
Tooling Solution: GEN3SYS XT Pro: P (Steel) Geometry

The Problem:
Previously, the customer was using a competitor drill running at the following parameters:

- 415 SFM (127 M/min)
- 0.009 IPR (0.23 mm/rev)
- The tool drilled a 17.25mm diameter hole to a 20mm depth
- Tool life = **1,000 holes**

The Solution:
Allied Machine recommended the GEN3SYS XT Pro with P (Steel) geometry.

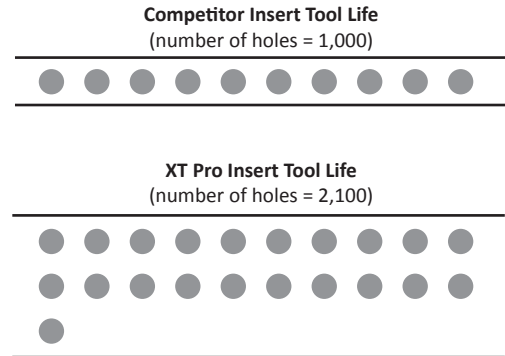
- **Insert** = XTP17-17.25

The tool ran at the following parameters:

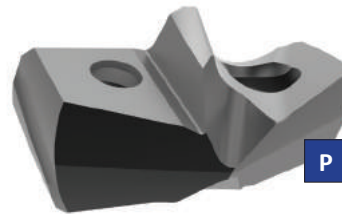
- 415 SFM (127 M/min)
- 0.009 IPR (0.23 mm/rev)
- The tool drilled a 17.25mm diameter hole to a 20mm depth
- Tool life = **2,100 holes**

The Advantage:
The GEN3SYS XT Pro increased the tool life from 1,000 holes to 2,100 holes.
Bottom Line: *Doubled the tool life*

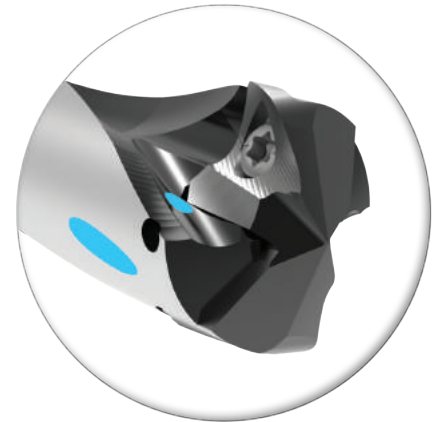
The PROOF is in the NUMBERS



INCREASE in
2x tool life



NEW HOLDER DESIGN



Drill deeper holes

The new XT Pro holders are now available in 10xD.
▶ **This lets you take advantage of the XT Pro insert benefits in deep hole applications.**

Increase your tool life

The new coolant configuration increases coolant flow and directs additional coolant to the cutting zone.
▶ **This increases tool life with all XT Pro inserts.**

That's why you should
GO WITH THE PRO

Competitive Test Results

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

TEST RESULTS

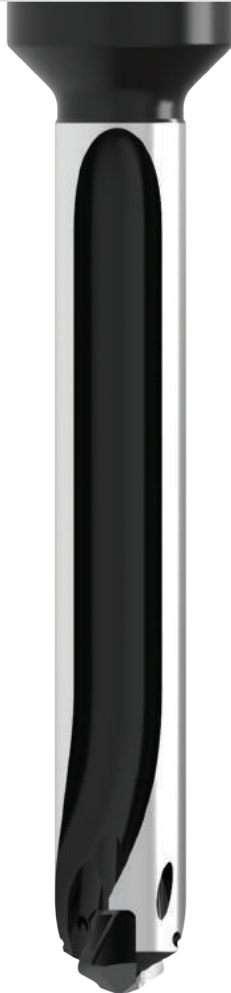
Project Profile: Competitive Testing in 4150 Steel
Tooling Solution: GEN3SYS XT Pro: Steel (P) Geometry with XT Pro Holder

The Parameters:

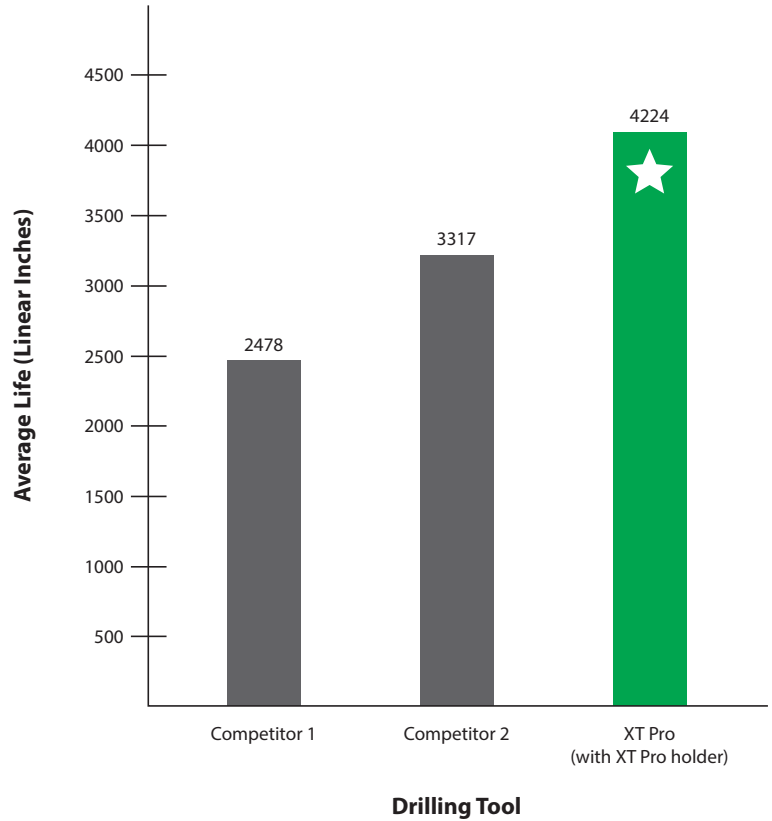
- Hole Diameter = 0.748" (19mm)
- Depth of Cut = 1-1/2" (38.1mm)
- Coolant = 300 PSI
- Speed = 1583 RPM
- Feed = 22.16 inch/min (563 mm/min)

The Results:
 When run at the listed parameters, here is how the 3 different tooling solutions performed:

Competitor 1 = 2478 total linear inches
Competitor 2 = 3317 total linear inches
GEN3SYS XT Pro = 4224 total linear inches



Average Tool Life
 Test Results Drilling in 4150 Steel



Case Study Example

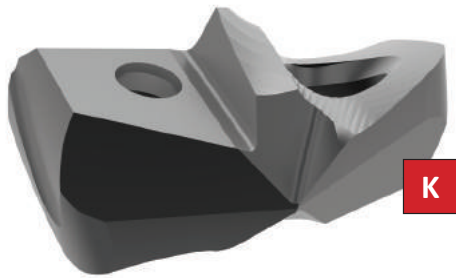
CASE STUDY

Project Profile: Ductile/Nodular Iron
Tooling Solution: GEN3SYS XT Pro: K (Cast Iron) Geometry

The Problem:
 Previously, the customer was using a competitor drill:
 • Solid carbide drill
 • Tool life = **65 holes**

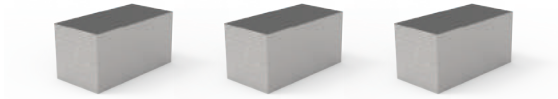
The Solution:
 Allied Machine recommended the GEN3SYS XT Pro with K (Cast Iron) geometry.
 The tool ran at the following parameters:
 • Hole Diameter = 9/16"
 • Coolant = None
 • Speed = 390 SFM (117 M/min)
 • Feed = 0.008 IPR (0.20 mm/rev)
 • Tool life = **390 holes**

The Advantage:
 The GEN3SYS XT Pro increased the tool life from 65 holes to 390 holes.
Bottom Line: *6x the tool life*

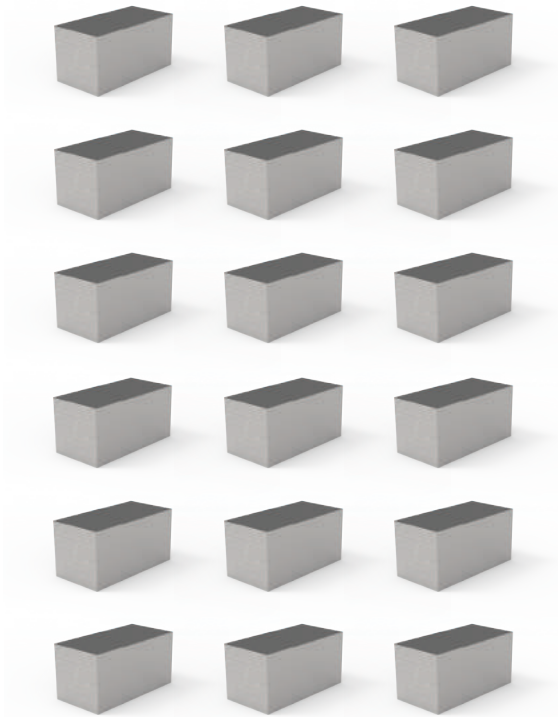


The PROOF is in the NUMBERS

Competitor Tool Life
 (number of holes = 65)



XT Pro Tool Life
 (number of holes = 390)



There's More to the Advantage than Tool Life

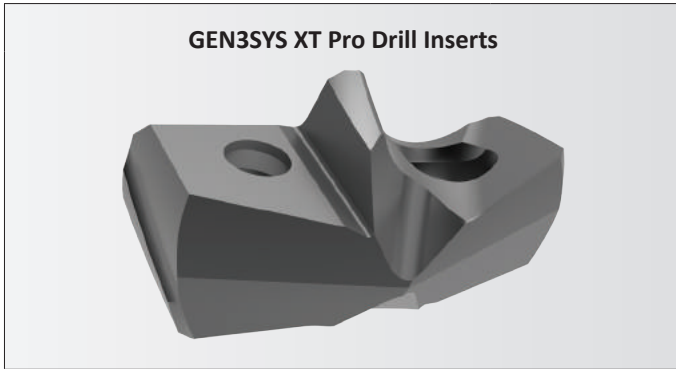
The XT Pro replaceable tip system provides other benefits in addition to the increase in tool life over the solid carbide drill:

- Because only the insert needs changed when it reaches the end of its life, the XT Pro eliminates the need to re-establish tool lengths, which reduces set-up times.
- Further benefit in set-up is also seen as the tool only needs changed one time for every six of the customer's current method.
- Without the need for regrinds, the customer's stock of tooling is reduced by eliminating the need for float inventory to cover regrind lead time.

INCREASE in
6x tool life

GEN3SYS XT Pro Drilling System Information

A DRILLING



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:



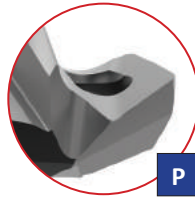
XT Pro holders

GEN3SYS holders

B BORING

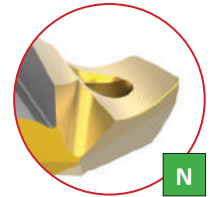
P - Steels

- 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

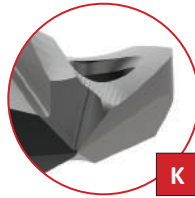
- Designed for applications in aluminum, brass, and copper
- The geometry yields excellent chip control in these softer materials
- TiN coating gives the versatility to run in a variety of materials while reducing build up



C REAMING

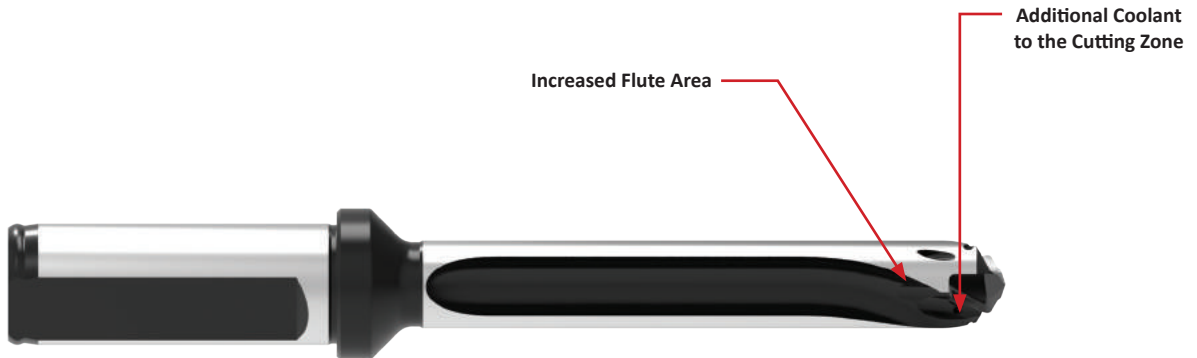
K - Cast Irons

- 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



D BURISHING

E THREADING



XT Pro Drill Holders



Straight flutes

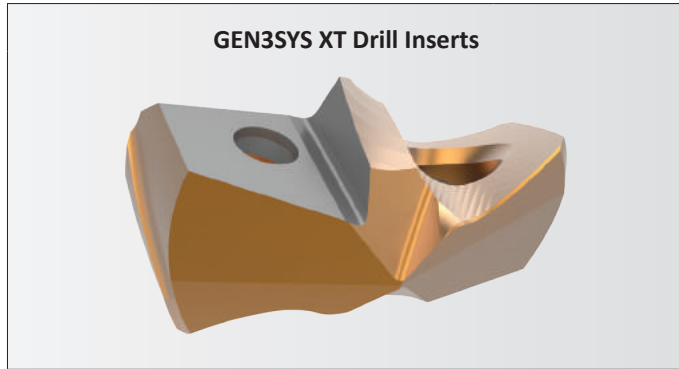
Enhanced coolant inlets improve the coolant flow

Provides increased insert life

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

X SPECIALS

GEN3SYS XT Drilling System Information



High Penetration Drilling Solutions

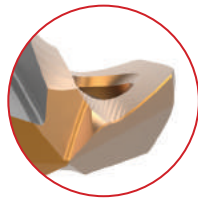
The unique geometry of the XT inserts provides excellent chip control. They are designed to increase hole quality, surface finish, and true position when compared to other competitive products. The helical margin design provides maximum durability and stability.

XT Inserts Connect with:



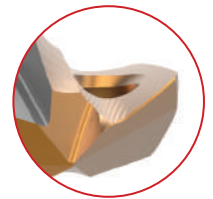
Standard Geometry

- 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



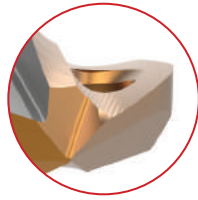
LR - Low Rake Geometry

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



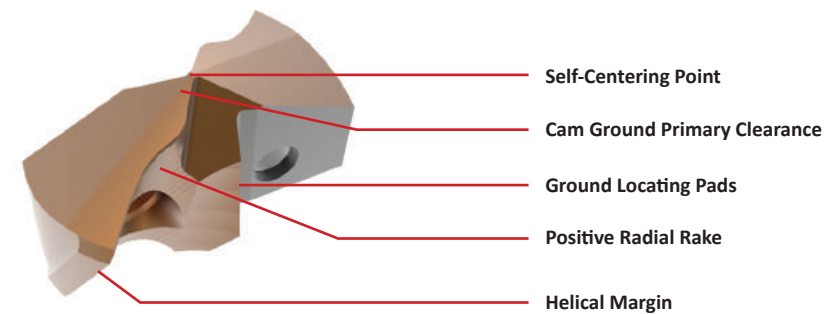
CI - Cast Iron Geometry

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



AS - Stainless Steel Geometry

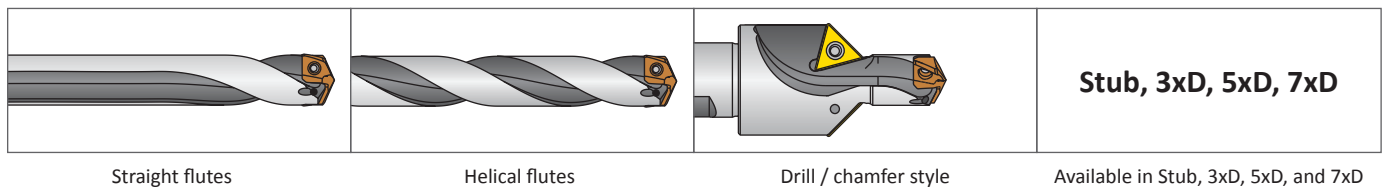
- Designed with a specific geometry to provide unmatched chip control and tool life in austenitic and PH stainless steels, as well as high temperature alloys such as Inconel, Hastelloy, and Titanium alloys
- Available in C2 carbide



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



GEN3SYS Holders





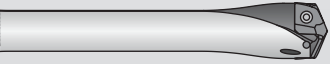

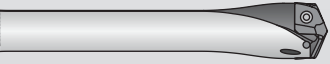



Straight flutes

Helical flutes

Drill / chamfer style

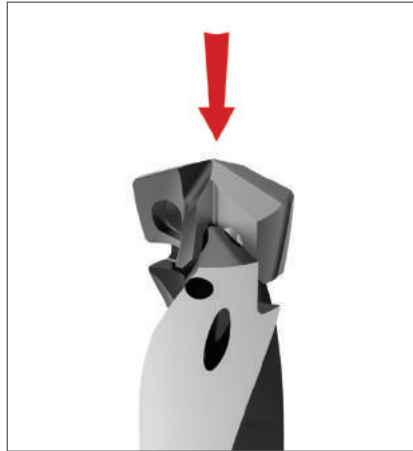
Available in Stub, 3xD, 5xD, and 7xD

Insert Comparison and Assembly Information

		XT Pro Inserts	XT Inserts
A	DRILLING		
B	BORING	Recommended for increased productivity 	
		ISO specific geometry/coating combination 	
C	REAMING	Connects with XT Pro holders 	Connects with XT Pro holders 
		Connects with GEN3SYS holders 	Connects with GEN3SYS holders 



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








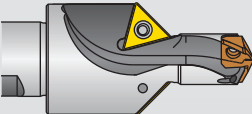
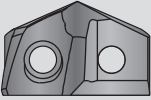
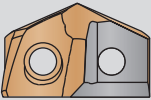
Step 2:
Slide the insert into the precision ground locating pocket on the holder. The insert should not be turned, rotated, or twisted for locking purposes. The holder pocket and locating pads on the insert assure optimum fit and repeatability.



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 catalog by series. A preset torx driver is available to assure that the proper torque is applied.

Holder Comparison and Overview

		 XT Pro Holders	 GEN3SYS 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	10XD	<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



Straight Flute

GEN3SYS Holders



Straight Flute



Helical Flute

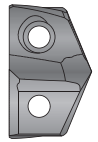


Drill/Chamfer

Product Nomenclature

GEN3SYS XT Pro Drill Inserts

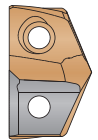
XT	P	11	–	11.00
1	2	3		4



1. XT Pro Drill Insert	2. ISO Material / Geometry	3. Series	4. Diameter (mm)
XT = XT Pro insert	P = Steel K = Cast iron N = Non-ferrous	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	For complete list of diameter ranges by series, see contents page.

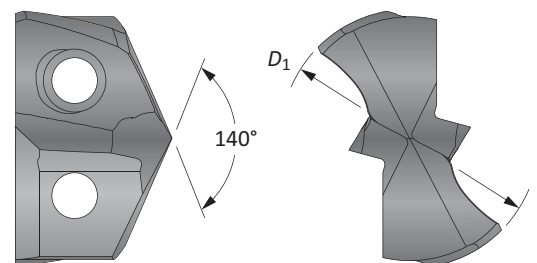
GEN3SYS XT Drill Inserts

7	C2	12	P	–	.484	CI
1	2	3	4		5	6



1. XT Drill Insert	2. Insert Material	3. Series	4. Coating
7 = XT insert	C1 = C1 (K35) carbide C2 = C2 (K20) carbide	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	P = AM300®

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



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_1	Insert diameter

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

Product Nomenclature

GEN3SYS and XT Pro Drill Holders

HXT	03	12	S	-	20	FM
1	2	3	4		5	6



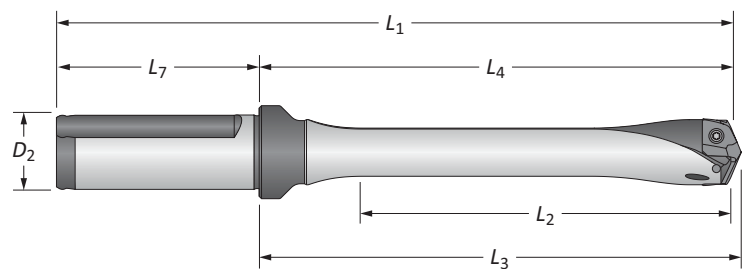
1. Holder 6 = GEN3SYS holder HXT = XT Pro holder	2. Length 01 = Stub Length (standard only) 03 = 3x Diameter 05 = 5x Diameter 07 = 7x Diameter 10 = 10x Diameter (Pro only)	3. Series 11 = 11 series 18 = 18 series 12 = 12 series 20 = 20 series 13 = 13 series 22 = 22 series 14 = 14 series 24 = 24 series 15 = 15 series 26 = 26 series 16 = 16 series 29 = 29 series 17 = 17 series 32 = 32 series	4. Flute S = Straight H = Helical C45 = Drill/Chamfer (both helical and drill/chamfer options available for GEN3SYS only)										
5. Shank Diameter <table border="1"> <thead> <tr> <th>Imperial (inch)</th> <th>Metric (mm)</th> </tr> </thead> <tbody> <tr> <td>063 = 5/8"</td> <td>16 = 16mm</td> </tr> <tr> <td>075 = 3/4"</td> <td>20 = 20mm</td> </tr> <tr> <td>100 = 1"</td> <td>25 = 25mm</td> </tr> <tr> <td>125 = 1-1/4"</td> <td>32 = 32mm</td> </tr> <tr> <td>150 = 1-1/2"</td> <td>40 = 40mm</td> </tr> </tbody> </table>	Imperial (inch)	Metric (mm)	063 = 5/8"	16 = 16mm	075 = 3/4"	20 = 20mm	100 = 1"	25 = 25mm	125 = 1-1/4"	32 = 32mm	150 = 1-1/2"	40 = 40mm	6. Shank Style F = Flanged with flat FM = Flanged metric with flat C = Cylindrical (no flat) CM = Cylindrical metric (no flat)
Imperial (inch)	Metric (mm)												
063 = 5/8"	16 = 16mm												
075 = 3/4"	20 = 20mm												
100 = 1"	25 = 25mm												
125 = 1-1/4"	32 = 32mm												
150 = 1-1/2"	40 = 40mm												

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.

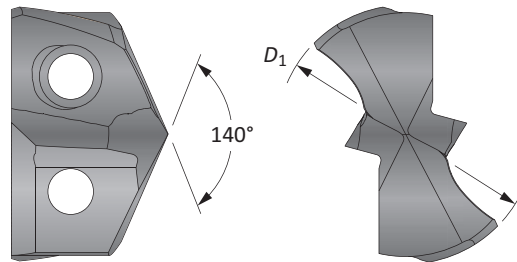
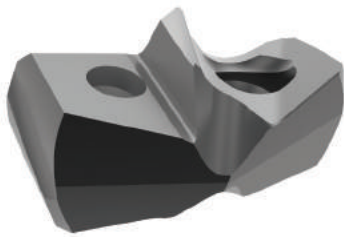
Reference Key




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 (GEN3SYS)



GEN3SYS XT Pro Drill Inserts

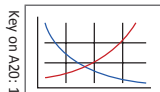
11 Series | Diameter Range: 0.4331" - 0.4723" (11.00mm - 11.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

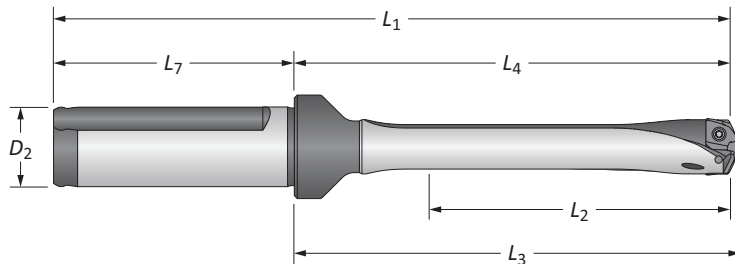


Sizes not shown are available upon request.
When ordering, please follow the example below:

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
iii Straight 	3xD	36.0	62.6	64.4	110.6	48.0	16.0	YES	HXT0311S-16FM
	3xD	36.0	62.6	64.4	110.6	48.0	16.0	NO	HXT0311S-16CM
	5xD	60.0	86.6	88.4	134.6	48.0	16.0	YES	HXT0511S-16FM
	5xD	60.0	86.6	88.4	134.6	48.0	16.0	NO	HXT0511S-16CM
	7xD	83.7	110.6	112.4	158.6	48.0	16.0	YES	HXT0711S-16FM
	7xD	83.7	110.6	112.4	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

Connection Accessories

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

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

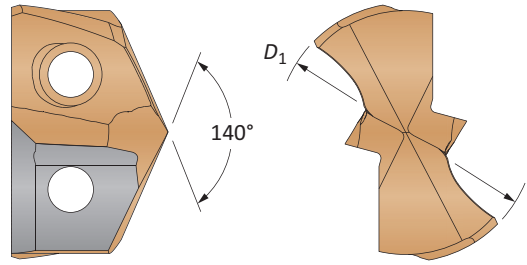
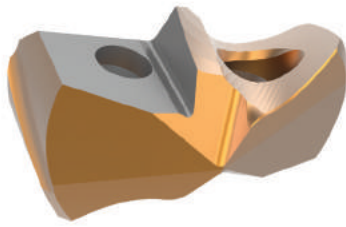
i = Imperial (in)
iii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

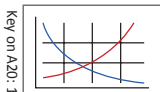
11 Series | Diameter Range: 0.4331" - 0.4723" (11.00mm - 11.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

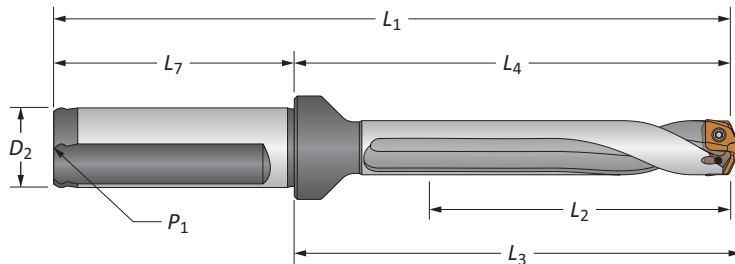


Sizes not shown are available upon request.
When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

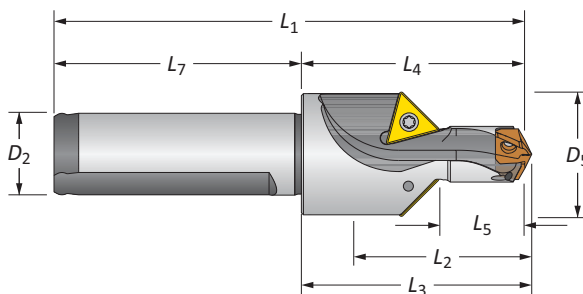
11 Series | Diameter Range: 0.4331" - 0.4723" (11.00mm - 11.99mm)



Straight and Helical

Flute	Length	Body				Shank				Part No.	
		L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	P ₁	Flat		
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	YES	60311S-063F	
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	YES	60511S-063F	
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	YES	60711S-063F	
	Stub	5/8	1-43/64	1-3/4	3-35/64	1-7/8	5/8	1/16	YES	60111H-063F	
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	YES	60311H-063F	
	3xD	1-27/64	2-29/64	2-17/32	4-21/64	1-7/8	5/8	1/16	NO	60311H-063C	
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	YES	60511H-063F	
	5xD	2-23/64	3-13/32	3-31/64	5-9/32	1-7/8	5/8	1/16	NO	60511H-063C	
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	YES	60711H-063F	
	7xD	3-19/64	4-11/32	4-27/64	6-7/32	1-7/8	5/8	1/16	NO	60711H-063C	
	Straight	3xD	36.0	62.6	64.4	110.6	48.0	16.0	1/16*	YES	60311S-16FM
		5xD	60.0	86.6	88.4	134.6	48.0	16.0	1/16*	YES	60511S-16FM
		7xD	83.7	110.6	112.4	158.6	48.0	16.0	1/16*	YES	60711S-16FM
	Helical	Stub	16.0	42.6	44.7	90.6	48.0	16.0	1/16*	YES	60111H-16FM
		3xD	36.0	62.6	64.4	110.6	48.0	16.0	1/16*	YES	60311H-16FM
		3xD	36.0	62.6	64.4	110.6	48.0	16.0	1/16*	NO	60311H-16CM
		5xD	60.0	86.6	88.4	134.6	48.0	16.0	1/16*	YES	60511H-16FM
		5xD	60.0	86.6	88.4	134.6	48.0	16.0	1/16*	NO	60511H-16CM
		7xD	83.7	110.6	112.4	158.6	48.0	16.0	1/16*	YES	60711H-16FM
		7xD	83.7	110.6	112.4	158.6	48.0	16.0	1/16*	NO	60711H-16CM

*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		
i	61/64	21/32	15/16	1-43/64	1-3/4	3-35/64	1-7/8	5/8	60111C45-063F	TCMT-110204
m	24.1	16.5	23.8	42.2	44.3	90.2	48.0	16.0	60111C45-16FM	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	4.4 in-lbs (50 N-cm)

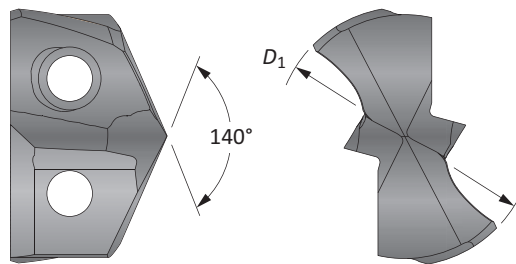
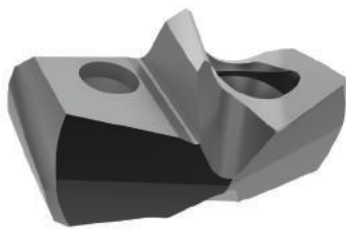
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

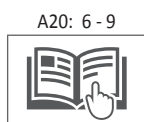
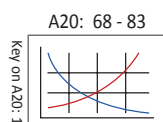
GEN3SYS XT Pro Drill Inserts

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



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

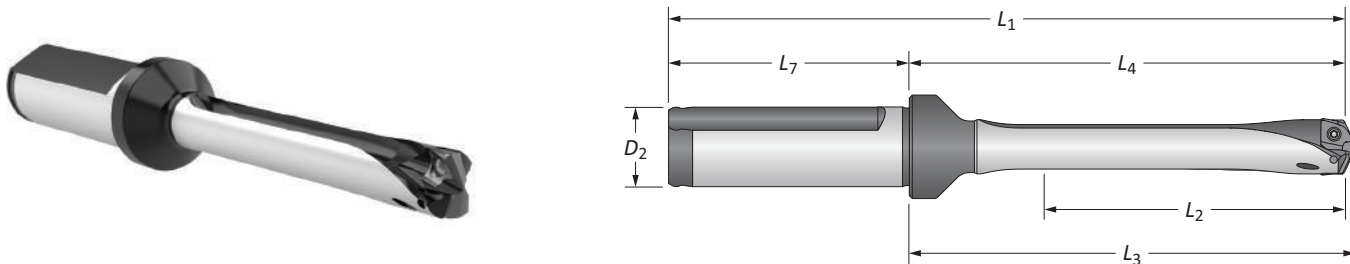
Inserts sold in multiples of 1



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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
m Straight	3xD	39.0	66.6	68.7	116.6	50.0	20.0	YES	HXT0312S-20FM
	3xD	39.0	66.6	68.7	116.6	50.0	20.0	NO	HXT0312S-20CM
	5xD	65.0	92.5	94.7	142.5	50.0	20.0	YES	HXT0512S-20FM
	5xD	65.0	92.5	94.7	142.5	50.0	20.0	NO	HXT0512S-20CM
	7xD	90.9	118.3	120.7	168.3	50.0	20.0	YES	HXT0712S-20FM
	7xD	90.9	118.3	120.7	168.3	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	

Connection Accessories

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

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

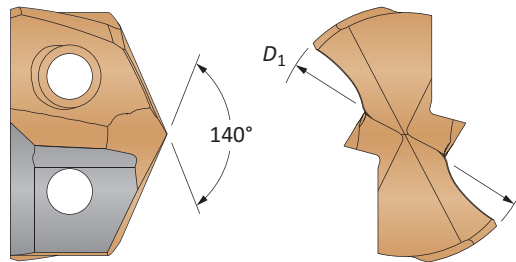
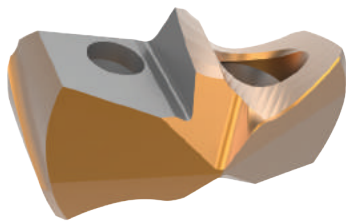
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Screws sold in multiples of 10

GEN3SYS XT Drill Inserts

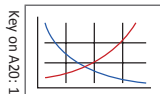
12 Series | Diameter Range: 0.4724" - 0.5117" (12.00mm - 12.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)	-	0.4724	12.00	7C112P-12	7C112P-12LR	-	-
	31/64	0.4844	12.30	7C112P-.484	7C112P-.484LR	-	-
	-	0.4921	12.50	7C112P-12.5	7C112P-12.5LR	-	-
	1/2	0.5000	12.70	7C112P-0016	7C112P-0016LR	-	-
C2 (K20)	-	0.4724	12.00	7C212P-12	7C212P-12LR	7C212P-12CI	7C212P-12AS
	31/64	0.4844	12.30	7C212P-.484	7C212P-.484LR	7C212P-.484CI	7C212P-.484AS
	-	0.4921	12.50	7C212P-12.5	7C212P-12.5LR	7C212P-12.5CI	7C212P-12.5AS
	1/2	0.5000	12.70	7C212P-0016	7C212P-0016LR	7C212P-0016CI	7C212P-0016AS

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

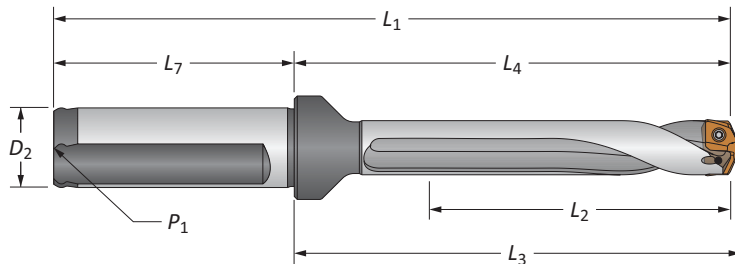


Sizes not shown are available upon request.
When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

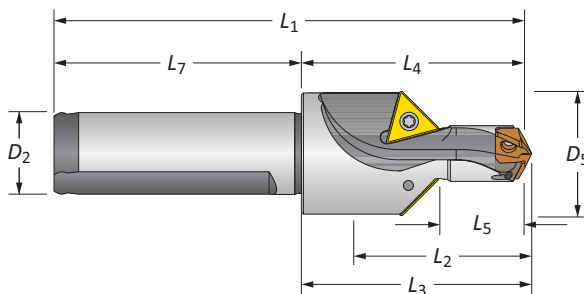
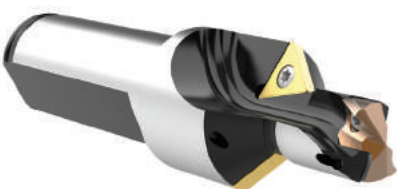
12 Series | Diameter Range: 0.4724" - 0.5117" (12.00mm - 12.99mm)



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	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	60312S-075F	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	60512S-075F	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	YES	60712S-075F	
	Stub	5/8	1-45/64	1-25/32	3-47/64	2-1/32	3/4	1/8	YES	60112H-075F	
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	YES	60312H-075F	
	3xD	1-17/32	2-5/8	2-45/64	4-21/32	2-1/32	3/4	1/8	NO	60312H-075C	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	YES	60512H-075F	
	5xD	2-9/16	3-41/64	3-47/64	5-43/64	2-1/32	3/4	1/8	NO	60512H-075C	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	YES	60712H-075F	
	7xD	3-37/64	4-21/32	4-3/4	6-11/16	2-1/32	3/4	1/8	NO	60712H-075C	
		3xD	39.0	66.6	68.7	116.6	50.0	20.0	1/8*	YES	60312S-20FM
5xD		65.0	92.5	94.7	142.5	50.0	20.0	1/8*	YES	60512S-20FM	
7xD		90.9	118.3	120.7	168.3	50.0	20.0	1/8*	YES	60712S-20FM	
Stub		16.0	43.2	45.4	93.2	50.0	20.0	1/8*	YES	60112H-20FM	
3xD		39.0	66.6	68.7	116.6	50.0	20.0	1/8*	YES	60312H-20FM	
3xD		39.0	66.6	68.7	116.6	50.0	20.0	1/8*	NO	60312H-20CM	
5xD		65.0	92.5	94.7	142.5	50.0	20.0	1/8*	YES	60512H-20FM	
5xD		65.0	92.5	94.7	142.5	50.0	20.0	1/8*	NO	60512H-20CM	
7xD		90.9	118.3	120.7	168.3	50.0	20.0	1/8*	YES	60712H-20FM	
7xD		90.9	118.3	120.7	168.3	50.0	20.0	1/8*	NO	60712H-20CM	

*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		
	31/32	45/64	63/64	1-45/64	1-25/32	3-47/64	2-1/32	3/4	60112C45-075F	TCMT-110204
	24.8	18.0	35.2	43.2	45.4	93.2	50.0	20.0	60112C45-20FM	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	7.4 in-lbs (84 N-cm)

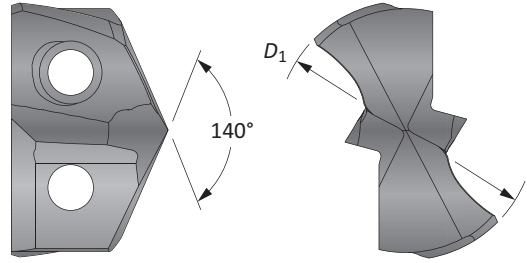
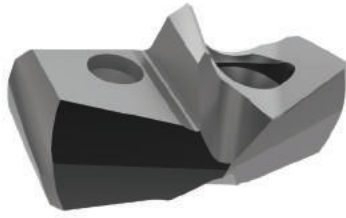
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

= Imperial (in)
 = Metric (mm)

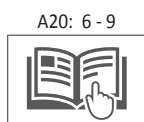
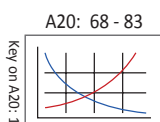
GEN3SYS XT Pro Drill Inserts

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



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

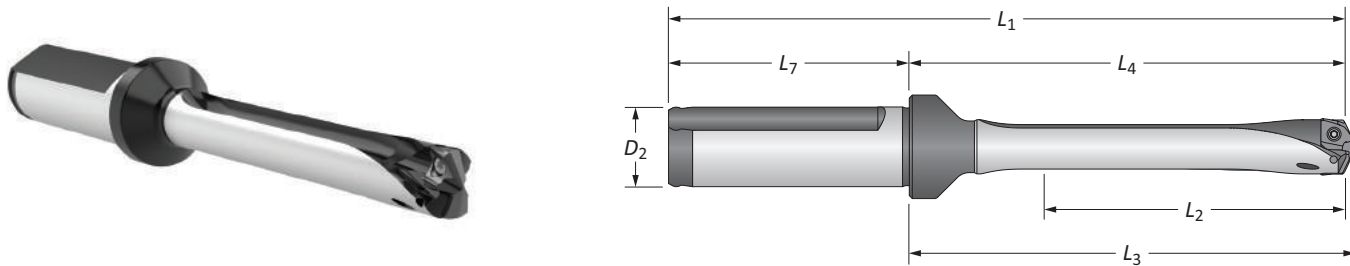
Inserts sold in multiples of 1





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




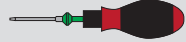

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight 	3xD	42.0	69.0	71.4	119.0	50.0	20.0	YES	HXT0313S-20FM
	3xD	42.0	69.0	71.4	119.0	50.0	20.0	NO	HXT0313S-20CM
	5xD	69.9	96.8	99.2	146.8	50.0	20.0	YES	HXT0513S-20FM
	5xD	69.9	96.8	99.2	146.8	50.0	20.0	NO	HXT0513S-20CM
	7xD	98.0	125.0	127.4	175.0	50.0	20.0	YES	HXT0713S-20FM
	7xD	98.0	125.0	127.4	175.0	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

Connection Accessories

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

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

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

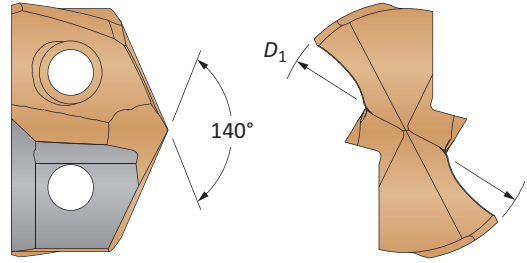
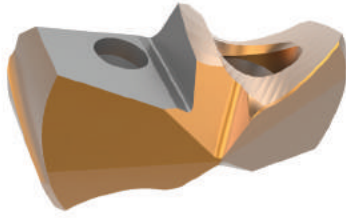
i = Imperial (in)
 ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

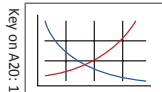
13 Series | Diameter Range: 0.5118" - 0.5511" (13.00mm - 13.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D ₁ inch	D ₁ mm				
C1 (K35)	-	0.5118	13.00	7C113P-13	7C113P-13LR	-	-
	33/64	0.5156	13.08	7C113P-.515	7C113P-.515LR	-	-
	17/32	0.5312	13.49	7C113P-0017	7C113P-0017LR	-	-
	-	0.5315	13.50	7C113P-13.5	7C113P-13.5LR	-	-
	35/64	0.5469	13.89	7C113P-.546	7C113P-.546LR	-	-
C2 (K20)	-	0.5118	13.00	7C213P-13	7C213P-13LR	7C213P-13CI	7C213P-13AS
	33/64	0.5156	13.08	7C213P-.515	7C213P-.515LR	7C213P-.515CI	7C213P-.515AS
	17/32	0.5312	13.49	7C213P-0017	7C213P-0017LR	7C213P-0017CI	7C213P-0017AS
	-	0.5315	13.50	7C213P-13.5	7C213P-13.5LR	7C213P-13.5CI	7C213P-13.5AS
	35/64	0.5469	13.89	7C213P-.546	7C213P-.546LR	7C213P-.546CI	7C213P-.546AS

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

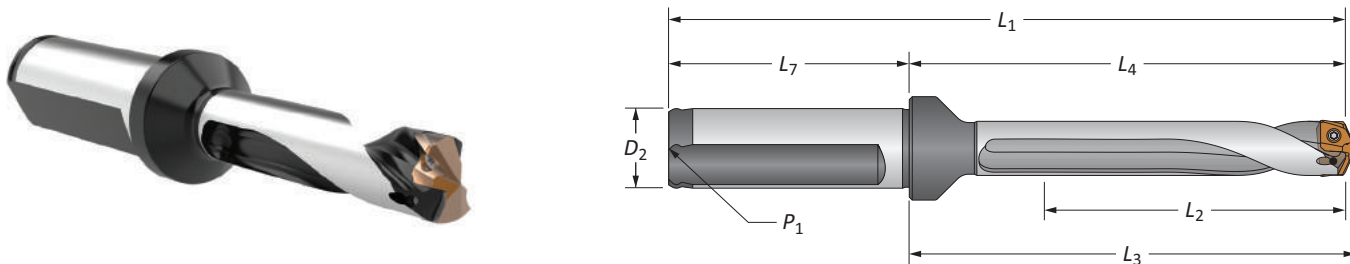


Sizes not shown are available upon request.
When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

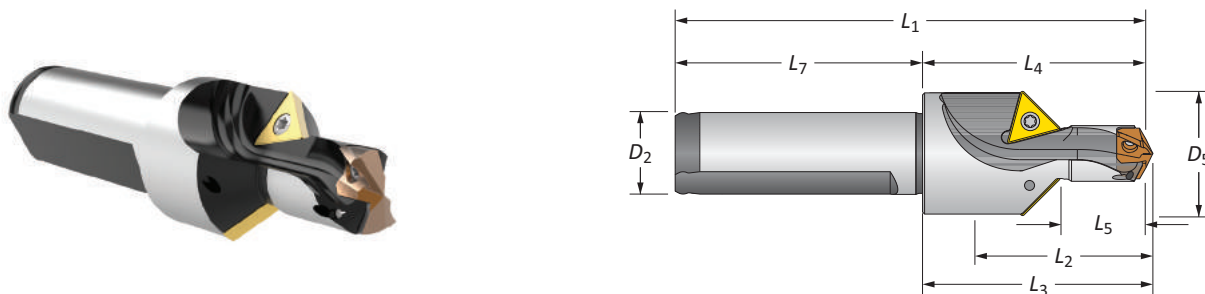
13 Series | Diameter Range: 0.5118" - 0.5511" (13.00mm - 13.99mm)



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	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	YES	60313S-075F	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	YES	60513S-075F	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	YES	60713S-075F	
	Stub	5/8	1-11/16	1-25/32	3-23/32	2-1/32	3/4	1/8	YES	60113H-075F	
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	YES	60313H-075F	
	3xD	1-21/32	2-23/32	2-13/16	4-3/4	2-1/32	3/4	1/8	NO	60313H-075C	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	YES	60513H-075F	
	5xD	2-3/4	3-13/16	3-29/32	5-27/32	2-1/32	3/4	1/8	NO	60513H-075C	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	YES	60713H-075F	
	7xD	3-55/64	4-59/64	5-1/64	6-61/64	2-1/32	3/4	1/8	NO	60713H-075C	
		3xD	42.0	69.0	71.4	119.0	50.0	20.0	1/8*	YES	60313S-20FM
5xD		69.9	96.8	99.2	146.8	50.0	20.0	1/8*	YES	60513S-20FM	
7xD		98.0	125.0	127.4	175.0	50.0	20.0	1/8*	YES	60713S-20FM	
Stub		16.0	43.0	45.2	93.0	50.0	20.0	1/8*	YES	60113H-20FM	
3xD		42.0	69.0	71.4	119.0	50.0	20.0	1/8*	YES	60313H-20FM	
3xD		42.0	69.0	71.4	119.0	50.0	20.0	1/8*	NO	60313H-20CM	
5xD		69.9	96.8	99.2	146.8	50.0	20.0	1/8*	YES	60513H-20FM	
5xD		69.9	96.8	99.2	146.8	50.0	20.0	1/8*	NO	60513H-20CM	
7xD		98.0	125.0	127.4	175.0	50.0	20.0	1/8*	YES	60713H-20FM	
7xD		98.0	125.0	127.4	175.0	50.0	20.0	1/8*	NO	60713H-20CM	

*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		
	1-1/64	49/64	1	1-11/16	1-25/32	3-23/32	2-1/32	3/4	60113C45-075F	TCMT-110204
	25.8	19.5	25.4	43.0	45.2	93.0	50.0	20.0	60113C45-20FM	TCMT-110204

Connection Accessories

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

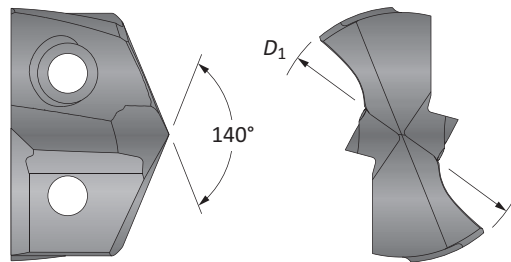
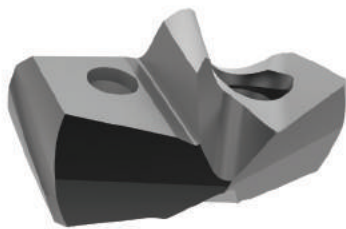
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

= Imperial (in)
 = Metric (mm)

GEN3SYS XT Pro Drill Inserts

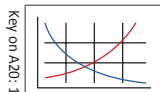
14 Series | Diameter Range: 0.5512" - 0.5905" (14.00mm - 14.99mm)



Fractional Equivalent	Insert				
	D_1 inch	D_1 mm	Part No. P	Part No. K	Part No. N
-	0.5512	14.00	XTP14-14.00	XTK14-14.00	XTN14-14.00
-	0.5551	14.10	XTP14-14.10	XTK14-14.10	XTN14-14.10
-	0.5591	14.20	XTP14-14.20	XTK14-14.20	XTN14-14.20
9/16	0.5625	14.29	XTP14-14.29	XTK14-14.29	XTN14-14.29
-	0.5669	14.40	XTP14-14.40	XTK14-14.40	XTN14-14.40
-	0.5709	14.50	XTP14-14.50	XTK14-14.50	XTN14-14.50
-	0.5748	14.60	XTP14-14.60	XTK14-14.60	XTN14-14.60
37/64	0.5781	14.68	XTP14-14.68	XTK14-14.68	XTN14-14.68
-	0.5827	14.80	XTP14-14.80	XTK14-14.80	XTN14-14.80
-	0.5866	14.90	XTP14-14.90	XTK14-14.90	XTN14-14.90

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

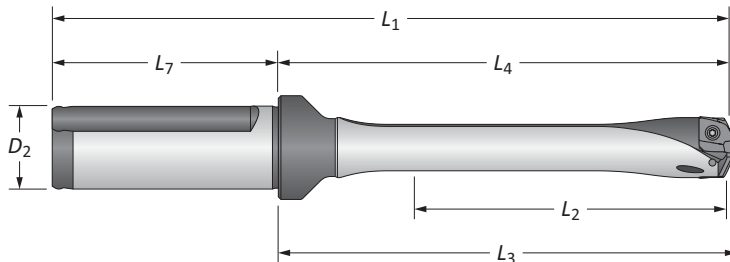


Sizes not shown are available upon request.
When ordering, please follow the example below:

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight 	3xD	44.8	72.2	74.9	122.2	50.0	20.0	YES	HXT0314S-20FM
	3xD	44.8	72.2	74.9	122.2	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	104.8	132.2	134.8	182.2	50.0	20.0	YES	HXT0714S-20FM
	7xD	104.8	132.2	134.8	182.2	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

Connection Accessories

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

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

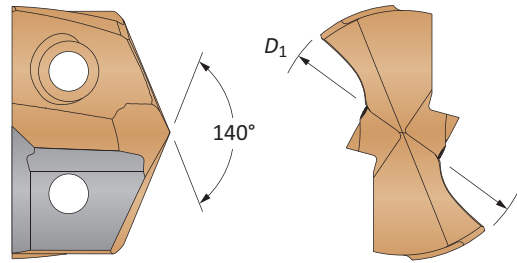
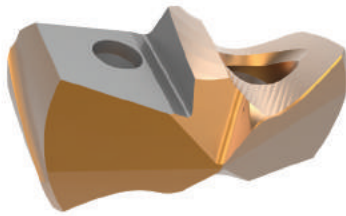
i = Imperial (in)
ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

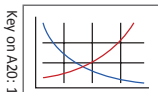
14 Series | Diameter Range: 0.5512" - 0.5905" (14.00mm - 14.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



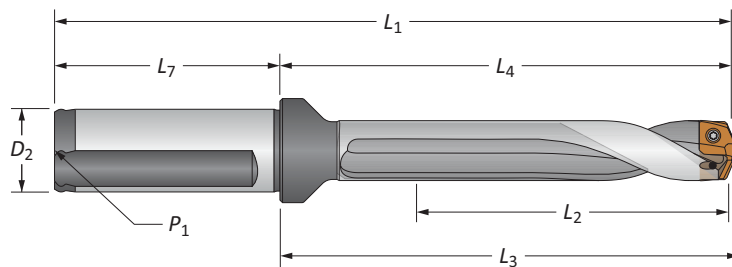
Key on A20: 1

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

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

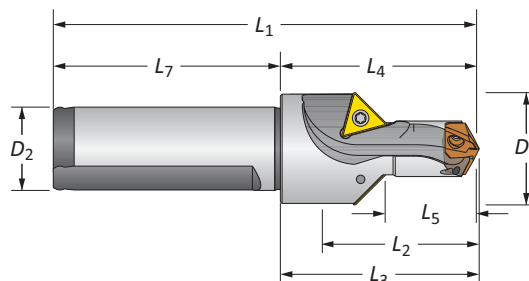
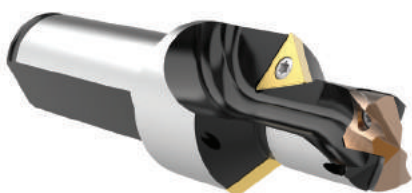
14 Series | Diameter Range: 0.5512" - 0.5905" (14.00mm - 14.99mm)



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	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	
		3xD	44.8	72.2	74.9	122.2	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		104.8	132.2	134.8	182.2	50.0	20.0	1/8*	YES	60714S-20FM	
Stub		17.5	44.5	47.2	94.5	50.0	20.0	1/8*	YES	60114H-20FM	
3xD		44.8	72.2	74.9	122.2	50.0	20.0	1/8*	YES	60314H-20FM	
3xD		44.8	72.2	74.9	122.2	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		104.8	132.2	134.8	182.2	50.0	20.0	1/8*	YES	60714H-20FM	
7xD		104.8	132.2	134.8	182.2	50.0	20.0	1/8*	NO	60714H-20CM	

*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		
	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
	26.7	21.0	26.8	44.6	47.2	94.6	50.0	20.0	60114C45-20FM	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	7.4 in-lbs (84 N-cm)

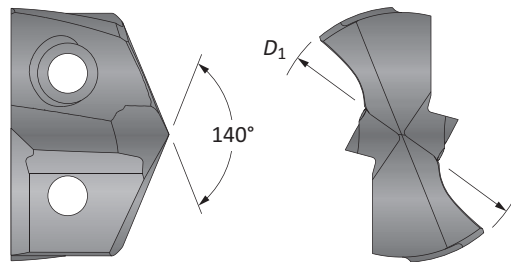
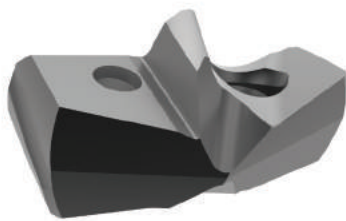
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

= Imperial (in)
 = Metric (mm)

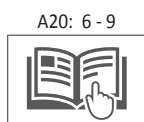
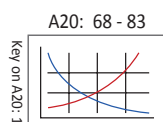
GEN3SYS XT Pro Drill Inserts

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



Fractional Equivalent	Insert				
	D_1 inch	D_1 mm	Part No. P	Part No. K	Part No. N
-	0.5906	15.00	XTP15-15.00	XTK15-15.00	XTN15-15.00
19/32	0.5938	15.08	XTP15-15.08	XTK15-15.08	XTN15-15.08
-	0.5984	15.20	XTP15-15.20	XTK15-15.20	XTN15-15.20
-	0.6024	15.30	XTP15-15.30	XTK15-15.30	XTN15-15.30
-	0.6063	15.40	XTP15-15.40	XTK15-15.40	XTN15-15.40
39/64	0.6094	15.48	XTP15-15.48	XTK15-15.48	XTN15-15.48
-	0.6102	15.50	XTP15-15.50	XTK15-15.50	XTN15-15.50
-	0.6142	15.60	XTP15-15.60	XTK15-15.60	XTN15-15.60
-	0.6181	15.70	XTP15-15.70	XTK15-15.70	XTN15-15.70
-	0.6220	15.80	XTP15-15.80	XTK15-15.80	XTN15-15.80
5/8	0.6250	15.88	XTP15-15.88	XTK15-15.88	XTN15-15.88

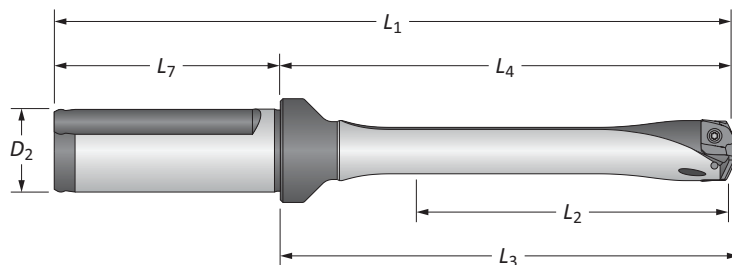
Inserts sold in multiples of 1





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




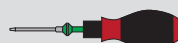

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
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	
ii Straight 	3xD	48.0	75.0	77.5	125.0	50.0	20.0	YES	HXT0315S-20FM
	3xD	48.0	75.0	77.5	125.0	50.0	20.0	NO	HXT0315S-20CM
	5xD	79.8	106.8	109.5	156.8	50.0	20.0	YES	HXT0515S-20FM
	5xD	79.8	106.8	109.5	156.8	50.0	20.0	NO	HXT0515S-20CM
	7xD	111.9	138.9	141.5	188.9	50.0	20.0	YES	HXT0715S-20FM
	7xD	111.9	138.9	141.5	188.9	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

Connection Accessories

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

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

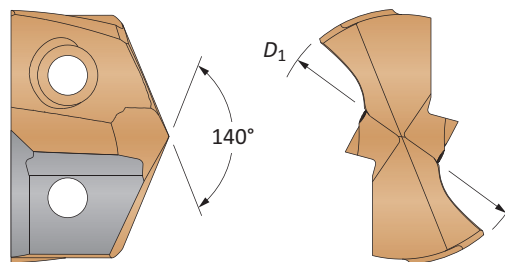
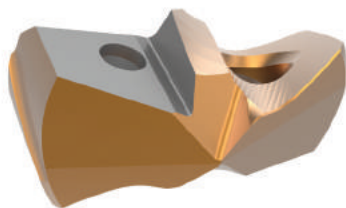
WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Screws sold in multiples of 10

GEN3SYS XT Drill Inserts

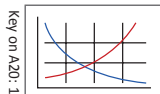
15 Series | Diameter Range: 0.5906" - 0.6298" (15.00mm - 15.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



Key on A20: 1

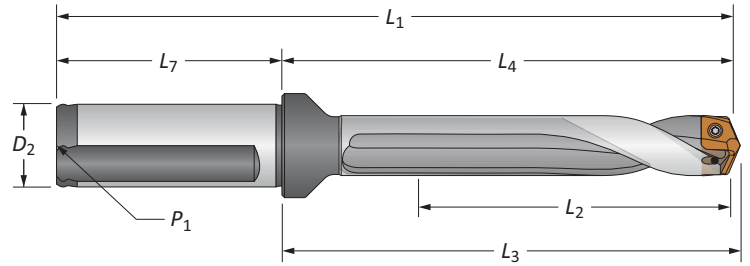
Sizes not shown are available upon request.
When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20



GEN3SYS Drill Insert Holders

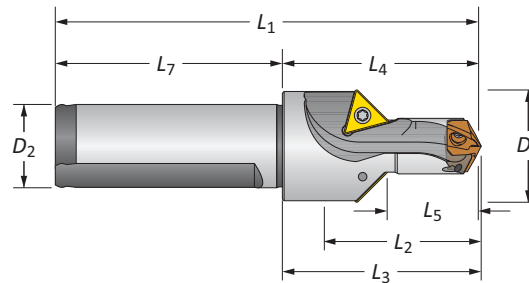
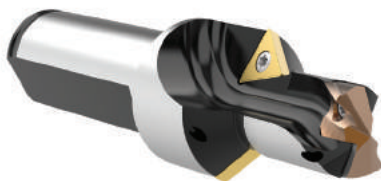
15 Series | Diameter Range: 0.5906" - 0.6298" (15.00mm - 15.99mm)



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	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	YES	60315S-075F	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	YES	60515S-075F	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	YES	60715S-075F	
Helical	Stub	11/16	1-3/4	1-27/32	3-25/32	2-1/32	3/4	1/8	YES	60115H-075F	
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	YES	60315H-075F	
	3xD	1-57/64	2-61/64	3-3/64	4-63/64	2-1/32	3/4	1/8	NO	60315H-075C	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	YES	60515H-075F	
	5xD	3-9/64	4-13/64	4-5/16	6-15/64	2-1/32	3/4	1/8	NO	60515H-075C	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	YES	60715H-075F	
	7xD	4-13/32	5-15/32	5-37/64	7-1/2	2-1/32	3/4	1/8	NO	60715H-075C	
Straight	3xD	48.0	75.0	77.5	125.0	50.0	20.0	1/8*	YES	60315S-20FM	
	5xD	79.8	106.8	109.5	156.8	50.0	20.0	1/8*	YES	60515S-20FM	
	7xD	111.9	138.9	141.5	188.9	50.0	20.0	1/8*	YES	60715S-20FM	
	Stub	17.5	44.5	46.8	94.5	50.0	20.0	1/8*	YES	60115H-20FM	
	3xD	48.0	75.0	77.5	125.0	50.0	20.0	1/8*	YES	60315H-20FM	
	3xD	48.0	75.0	77.5	125.0	50.0	20.0	1/8*	NO	60315H-20CM	
	5xD	79.8	106.8	109.5	156.8	50.0	20.0	1/8*	YES	60515H-20FM	
	5xD	79.8	106.8	109.5	156.8	50.0	20.0	1/8*	NO	60515H-20CM	
	7xD	111.9	138.9	141.5	188.9	50.0	20.0	1/8*	YES	60715H-20FM	
	7xD	111.9	138.9	141.5	188.9	50.0	20.0	1/8*	NO	60715H-20CM	

*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
i	1-1/16	57/64	1-1/16	1-47/64	1-27/32	3-49/64	2-1/32	3/4	60115C45-075F	TCMT-110204
m	27.0	22.5	26.9	44.3	46.8	94.3	50.0	20.0	60115C45-20FM	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	7.4 in-lbs (84 N-cm)

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

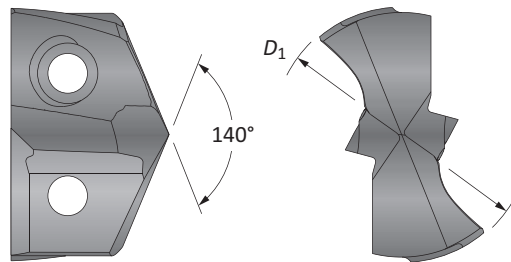
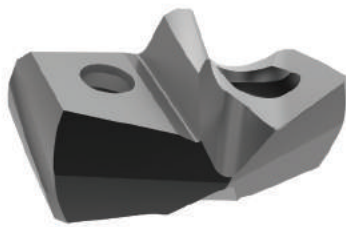
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10




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



GEN3SYS XT Pro Drill Inserts

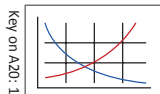
16 Series | Diameter Range: 0.6299" - 0.6692" (16.00mm - 16.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



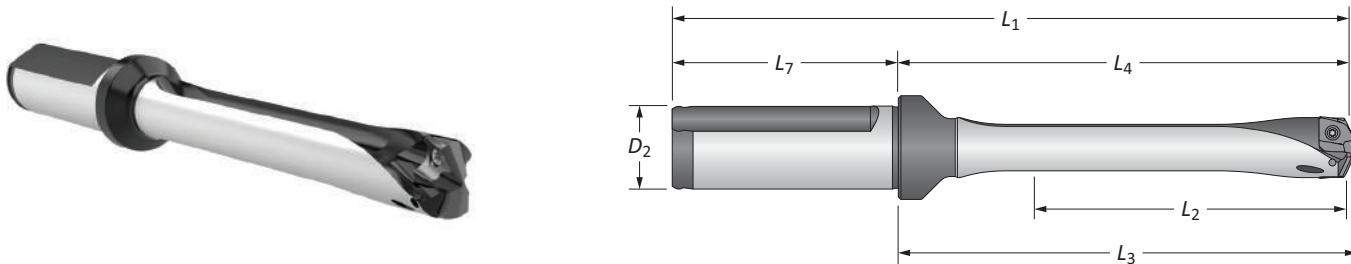
Sizes not shown are available upon request.

When ordering, please follow the example below:

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight	3xD	50.8	81.3	84.2	131.3	50.0	20.0	YES	HXT0316S-20FM
	3xD	50.8	81.3	84.2	131.3	50.0	20.0	NO	HXT0316S-20CM
	5xD	85.0	115.1	118.2	165.1	50.0	20.0	YES	HXT0516S-20FM
	5xD	85.0	115.1	118.2	165.1	50.0	20.0	NO	HXT0516S-20CM
	7xD	119.0	149.2	152.0	199.2	50.0	20.0	YES	HXT0716S-20FM
	7xD	119.0	149.2	152.0	199.2	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

Connection Accessories

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

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

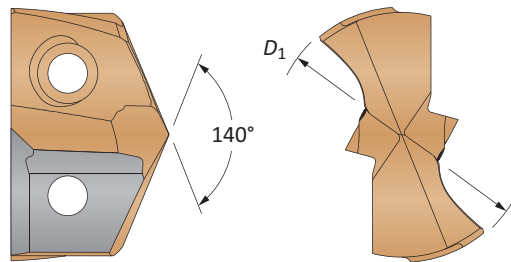
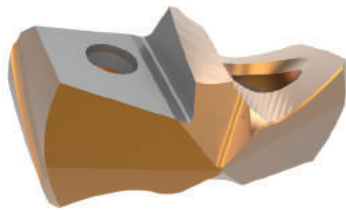
i = Imperial (in)
ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

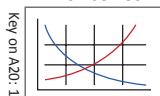
16 Series | Diameter Range: 0.6299" - 0.6692" (16.00mm - 16.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



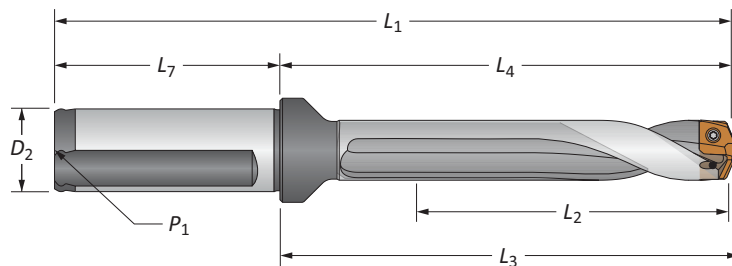
Sizes not shown are available upon request.

When ordering, please follow the example below:




Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

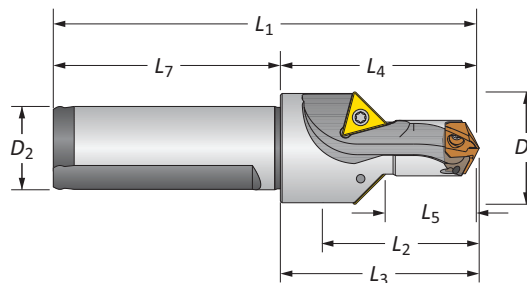
16 Series | Diameter Range: 0.6299" - 0.6692" (16.00mm - 16.99mm)




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	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	YES	60316S-075F	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	YES	60516S-075F	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	YES	60716S-075F	
	Stub	13/16	2	2-7/64	4-1/32	2-1/32	3/4	1/8	YES	60116H-075F	
	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	YES	60316H-075F	
	3xD	2	3-13/64	3-5/16	5-15/64	2-1/32	3/4	1/8	NO	60316H-075C	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	YES	60516H-075F	
	5xD	3-11/32	4-17/32	4-21/32	6-9/16	2-1/32	3/4	1/8	NO	60516H-075C	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	YES	60716H-075F	
	7xD	4-11/16	5-7/8	5-63/64	7-29/32	2-1/32	3/4	1/8	NO	60716H-075C	
	3xD	50.8	81.3	84.2	131.3	50.0	20.0	1/8*	YES	60316S-20FM	
	5xD	85.0	115.1	118.2	165.1	50.0	20.0	1/8*	YES	60516S-20FM	
	7xD	119.0	149.2	152.0	199.2	50.0	20.0	1/8*	YES	60716S-20FM	
	Stub	21.0	50.8	53.7	100.8	50.0	20.0	1/8*	YES	60116H-20FM	
	3xD	50.8	81.3	84.2	131.3	50.0	20.0	1/8*	YES	60316H-20FM	
	3xD	50.8	81.3	84.2	131.3	50.0	20.0	1/8*	NO	60316H-20CM	
	5xD	85.0	115.1	118.2	165.1	50.0	20.0	1/8*	YES	60516H-20FM	
	5xD	85.0	115.1	118.2	165.1	50.0	20.0	1/8*	NO	60516H-20CM	
	7xD	119.0	149.2	152.0	199.2	50.0	20.0	1/8*	YES	60716H-20FM	
	7xD	119.0	149.2	152.0	199.2	50.0	20.0	1/8*	NO	60716H-20CM	



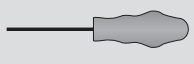

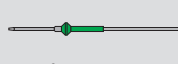
*Thread to BSP and ISO 7-1



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		
i	1-1/16	61/64	1-19/64	2	2-7/64	4-1/32	2-1/32	3/4	60116C45-075F	TCMT-110204
m	27.0	24.0	33.1	50.8	53.7	100.8	50.0	20.0	60116C45-20FM	TCMT-110204

Connection Accessories

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

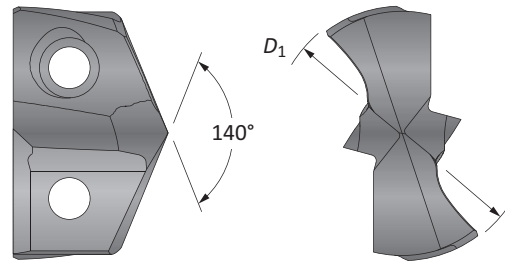
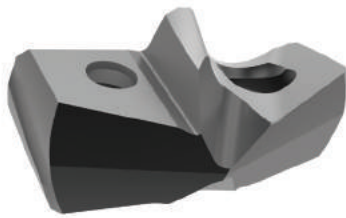
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

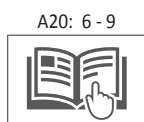
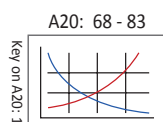
GEN3SYS XT Pro Drill Inserts

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



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

Inserts sold in multiples of 1

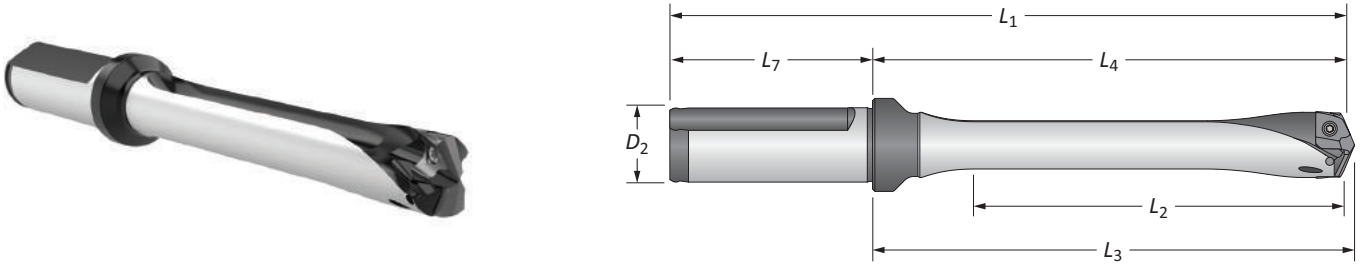


Sizes not shown are available upon request.	
When ordering, please follow the example below:	
Imperial:	0.5180", Steel, 13 series = use Part No. XTP13-13.16
Metric:	13.16mm, Steel, 13 series = use Part No. XTP13-13.16



GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 	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	
iii 	3xD	54.0	83.8	86.9	133.8	50.0	20.0	YES	HXT0317S-20FM
	3xD	54.0	83.8	86.9	133.8	50.0	20.0	NO	HXT0317S-20CM
	5xD	90.0	119.8	122.9	169.8	50.0	20.0	YES	HXT0517S-20FM
	5xD	90.0	119.8	122.9	169.8	50.0	20.0	NO	HXT0517S-20CM
	7xD	125.8	156.0	158.9	206.0	50.0	20.0	YES	HXT0717S-20FM
	7xD	125.8	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

Connection Accessories

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

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

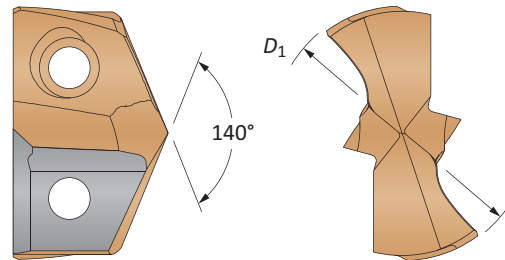
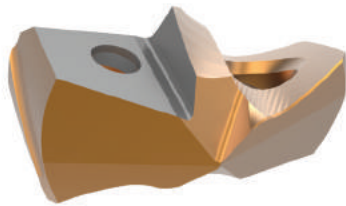
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Screws sold in multiples of 10

GEN3SYS XT Drill Inserts

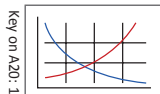
17 Series | Diameter Range: 0.6693" - 0.7086" (17.00mm - 17.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



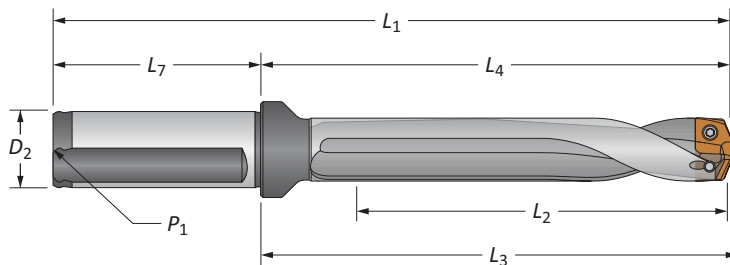
Key on A20: 1

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




Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

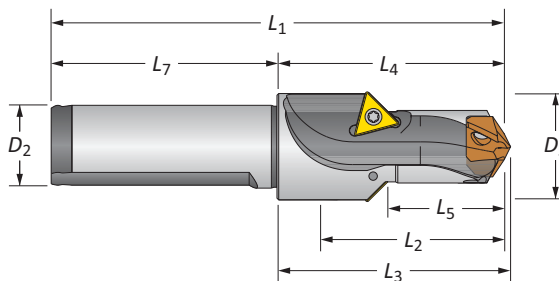
17 Series | Diameter Range: 0.6693" - 0.7086" (17.00mm - 17.99mm)






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	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	
		3xD	54.0	83.8	86.9	133.8	50.0	20.0	1/8*	YES	60317S-20FM
5xD		90.0	119.8	122.9	169.8	50.0	20.0	1/8*	YES	60517S-20FM	
7xD		125.8	156.0	158.9	206.0	50.0	20.0	1/8*	YES	60717S-20FM	
Stub		20.6	50.5	53.5	100.5	50.0	20.0	1/8*	YES	60117H-20FM	
3xD		54.0	83.8	86.9	133.8	50.0	20.0	1/8*	YES	60317H-20FM	
3xD		54.0	83.8	86.9	133.8	50.0	20.0	1/8*	NO	60317H-20CM	
5xD		90.0	119.8	122.9	169.8	50.0	20.0	1/8*	YES	60517H-20FM	
5xD		90.0	119.8	122.9	169.8	50.0	20.0	1/8*	NO	60517H-20CM	
7xD		125.8	156.0	158.9	206.0	50.0	20.0	1/8*	YES	60717H-20FM	
7xD		125.8	156.0	158.9	206.0	50.0	20.0	1/8*	NO	60717H-20CM	






*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		
	1	1	1-5/16	1-63/64	2-7/64	4-1/64	2-1/32	3/4	60117C45-075F	TCMT-110204
	25.4	25.5	33.3	50.5	53.4	100.5	50.0	20.0	60117C45-20FM	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	15.5 in-lbs (175 N-cm)

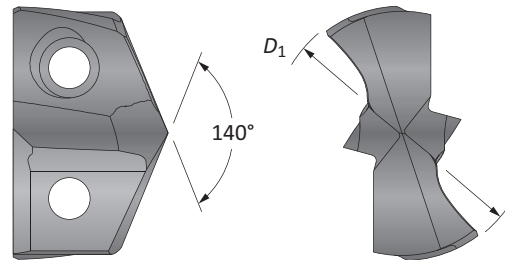
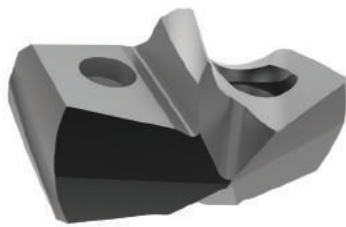
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

 = Imperial (in)
 = Metric (mm)

GEN3SYS XT Pro Drill Inserts

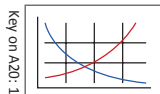
18 Series | Diameter Range: 0.7087" - 0.7873" (18.00mm - 19.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

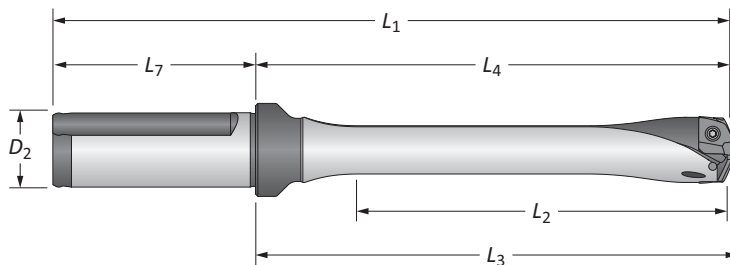


Sizes not shown are available upon request.
When ordering, please follow the example below:

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii 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	133.7	136.8	189.7	56.0	25.0	YES	HXT0518S-25FM
	5xD	100.0	133.7	136.8	189.7	56.0	25.0	NO	HXT0518S-25CM
	7xD	140.0	173.4	176.8	229.4	56.0	25.0	YES	HXT0718S-25FM
	7xD	140.0	173.4	176.8	229.4	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

Connection Accessories

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

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

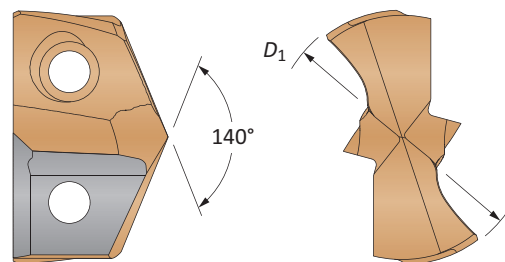
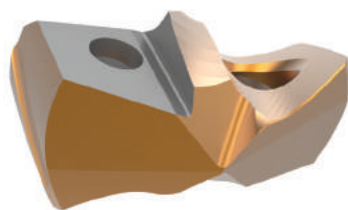
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Screws sold in multiples of 10

GEN3SYS XT Drill Inserts

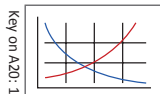
18 Series | Diameter Range: 0.7087" - 0.7873" (18.00mm - 19.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)	-	0.7087	18.00	7C118P-18	7C118P-18LR	-	-
	23/32	0.7188	18.26	7C118P-0023	7C118P-0023LR	-	-
	-	0.7283	18.50	7C118P-18.5	7C118P-18.5LR	-	-
	47/64	0.7344	18.65	7C118P-.734	7C118P-.734LR	-	-
	-	0.7480	19.00	7C118P-19	7C118P-19LR	-	-
	3/4	0.7500	19.05	7C118P-0024	7C118P-0024LR	-	-
	-	0.7580	19.25	7C118P-.758	7C118P-.758LR	-	-
	49/64	0.7656	19.45	7C118P-.765	7C118P-.765LR	-	-
	-	0.7677	19.50	7C118P-19.5	7C118P-19.5LR	-	-
	-	0.7795	19.80	7C118P-19.8	7C118P-19.8LR	-	-
-	0.7813	19.85	7C118P-0025	7C118P-0025LR	-	-	
C2 (K20)	-	0.7087	18.00	7C218P-18	7C218P-18LR	7C218P-18CI	7C218P-18AS
	23/32	0.7188	18.26	7C218P-0023	7C218P-0023LR	7C218P-0023CI	7C218P-0023AS
	-	0.7283	18.50	7C218P-18.5	7C218P-18.5LR	7C218P-18.5CI	7C218P-18.5AS
	47/64	0.7344	18.65	7C218P-.734	7C218P-.734LR	7C218P-.734CI	7C218P-.734AS
	-	0.7480	19.00	7C218P-19	7C218P-19LR	7C218P-19CI	7C218P-19AS
	3/4	0.7500	19.05	7C218P-0024	7C218P-0024LR	7C218P-0024CI	7C218P-0024AS
	-	0.7580	19.25	7C218P-.758	7C218P-.758LR	7C218P-.758CI	7C218P-.758AS
	49/64	0.7656	19.45	7C218P-.765	7C218P-.765LR	7C218P-.765CI	7C218P-.765AS
	-	0.7677	19.50	7C218P-19.5	7C218P-19.5LR	7C218P-19.5CI	7C218P-19.5AS
	-	0.7795	19.80	7C218P-19.8	7C218P-19.8LR	7C218P-19.8CI	7C218P-19.8AS
-	0.7813	19.85	7C218P-0025	7C218P-0025LR	7C218P-0025CI	7C218P-0025AS	

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



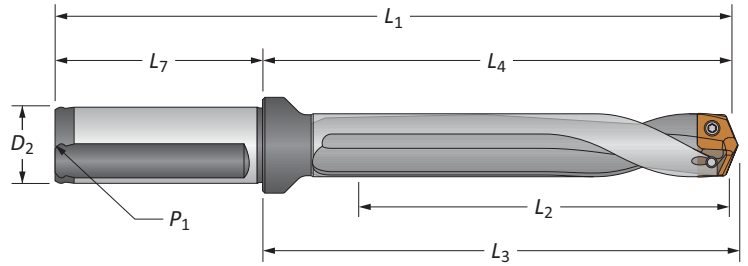
Sizes not shown are available upon request.

When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

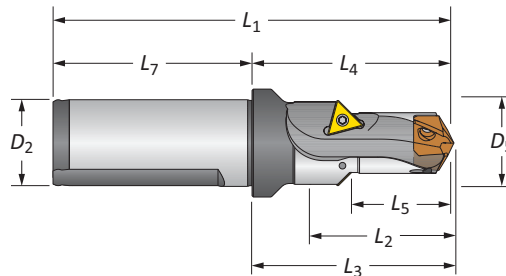
18 Series | Diameter Range: 0.7087" - 0.7873" (18.00mm - 19.99mm)



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	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	
Helical	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	
Straight	3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	YES	60318S-25FM	
	5xD	100.0	133.7	136.8	189.7	56.0	25.0	1/8*	YES	60518S-25FM	
	7xD	140.0	173.4	176.8	229.4	56.0	25.0	1/8*	YES	60718S-25FM	
	Stub	22.0	56.0	58.8	112.0	56.0	25.0	1/8*	YES	60118H-25FM	
	Helical	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	133.7	136.8	189.7	56.0	25.0	1/8*	YES	60518H-25FM
		5xD	100.0	133.7	136.8	189.7	56.0	25.0	1/8*	NO	60518H-25CM
		7xD	140.0	173.4	176.8	229.4	56.0	25.0	1/8*	YES	60718H-25FM
		7xD	140.0	173.4	176.8	229.4	56.0	25.0	1/8*	NO	60718H-25CM

*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		
i	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
m	25.1	27	35.2	56.0	58.8	112.0	56.0	25.0	60118C45-25FM	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	27.0 in-lbs (305 N-cm)

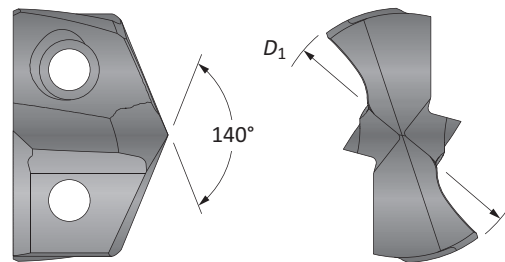
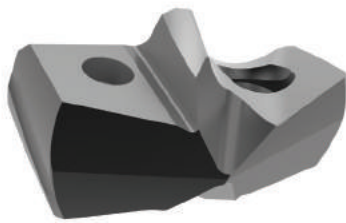
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

GEN3SYS XT Pro Drill Inserts

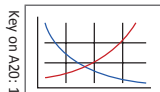
20 Series | Diameter Range: 0.7874" - 0.8660" (20.00mm - 21.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



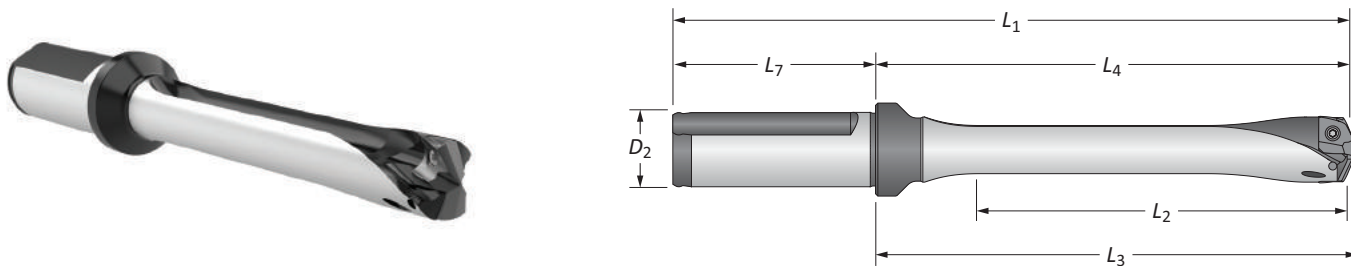
Sizes not shown are available upon request.

When ordering, please follow the example below:

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight	3xD	66.0	100.0	102.9	156.0	56.0	25.0	YES	HXT0320S-25FM
	3xD	66.0	100.0	102.9	156.0	56.0	25.0	NO	HXT0320S-25CM
	5xD	110.0	144.0	146.9	200.0	56.0	25.0	YES	HXT0520S-25FM
	5xD	110.0	144.0	146.9	200.0	56.0	25.0	NO	HXT0520S-25CM
	7xD	153.9	187.0	190.9	243.0	56.0	25.0	YES	HXT0720S-25FM
	7xD	153.9	187.0	190.9	243.0	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

Connection Accessories

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

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

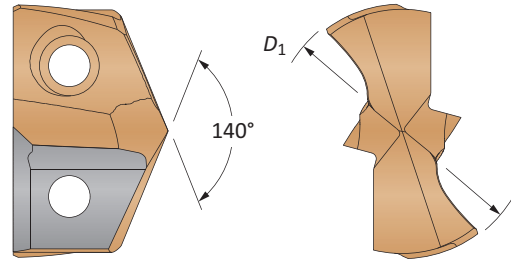
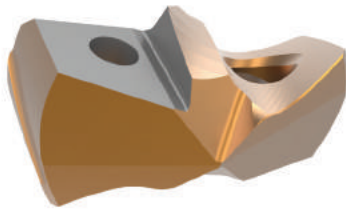
i = Imperial (in)
ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

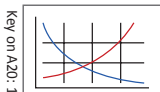
20 Series | Diameter Range: 0.7874" - 0.8660" (20.00mm - 21.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)	-	0.7874	20.00	7C120P-20	7C120P-20LR	-	-
	51/64	0.7969	20.24	7C120P-.796	7C120P-.796LR	-	-
	-	0.8071	20.50	7C120P-20.5	7C120P-20.5LR	-	-
	13/16	0.8125	20.64	7C120P-0026	7C120P-0026LR	-	-
	-	0.8268	21.00	7C120P-21	7C120P-21LR	-	-
	27/32	0.8438	21.43	7C120P-0027	7C120P-0027LR	-	-
	-	0.8465	21.50	7C120P-21.5	7C120P-21.5LR	-	-
	55/64	0.8594	21.83	7C120P-.859	7C120P-.859LR	-	-
C2 (K20)	-	0.7874	20.00	7C220P-20	7C220P-20LR	7C220P-20CI	7C220P-20AS
	51/64	0.7969	20.24	7C220P-.796	7C220P-.796LR	7C220P-.796CI	7C220P-.796AS
	-	0.8071	20.50	7C220P-20.5	7C220P-20.5LR	7C220P-20.5CI	7C220P-20.5AS
	13/16	0.8125	20.64	7C220P-0026	7C220P-0026LR	7C220P-0026CI	7C220P-0026AS
	-	0.8268	21.00	7C220P-21	7C220P-21LR	7C220P-21CI	7C220P-21AS
	27/32	0.8438	21.43	7C220P-0027	7C220P-0027LR	7C220P-0027CI	7C220P-0027AS
	-	0.8465	21.50	7C220P-21.5	7C220P-21.5LR	7C220P-21.5CI	7C220P-21.5AS
	55/64	0.8594	21.83	7C220P-.859	7C220P-.859LR	7C220P-.859CI	7C220P-.859AS

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



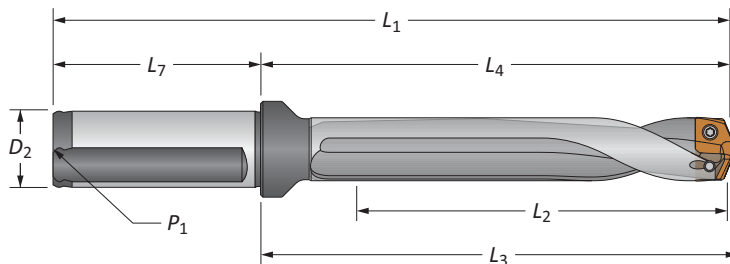
Key on A20: 1

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





Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

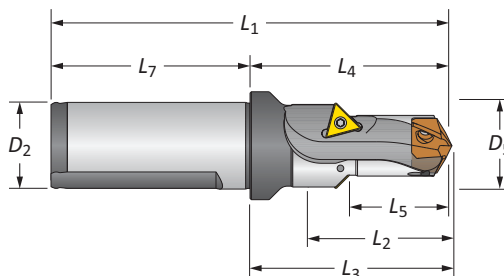
20 Series | Diameter Range: 0.7874" - 0.8660" (20.00mm - 21.99mm)




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	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	
	3xD	66.0	100.0	102.9	156.0	56.0	25.0	1/8*	YES	60320S-25FM	
	5xD	110.0	144.0	146.9	200.0	56.0	25.0	1/8*	YES	60520S-25FM	
	7xD	153.9	187.0	190.9	243.0	56.0	25.0	1/8*	YES	60720S-25FM	
	Stub	24.0	57.6	60.4	113.6	56.0	25.0	1/8*	YES	60120H-25FM	
	3xD	66.0	100.0	102.9	156.0	56.0	25.0	1/8*	YES	60320H-25FM	
	3xD	66.0	100.0	102.9	156.0	56.0	25.0	1/8*	NO	60320H-25CM	
	5xD	110.0	144.0	146.9	200.0	56.0	25.0	1/8*	YES	60520H-25FM	
	5xD	110.0	144.0	146.9	200.0	56.0	25.0	1/8*	NO	60520H-25CM	
	7xD	153.9	187.0	190.9	243.0	56.0	25.0	1/8*	YES	60720H-25FM	
	7xD	153.9	187.0	190.9	243.0	56.0	25.0	1/8*	NO	60720H-25CM	




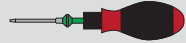

*Thread to BSP and ISO 7-1



Drill / Chamfer

Step	Body				Shank			Part No.		Chamfer Insert
	D ₅	L ₅	L ₂	L ₄	L ₃	L ₁	L ₇			
i 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	
m 27.2	30.0	37.1	57.6	60.4	113.6	56.0	25.0	60120C45-25FM	TCMT-110204	

Connection Accessories

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

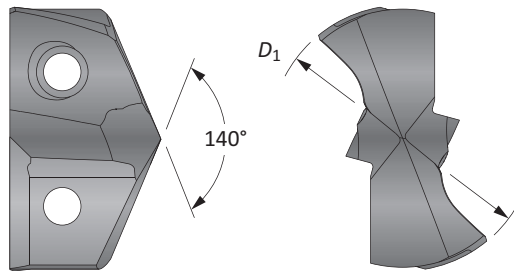
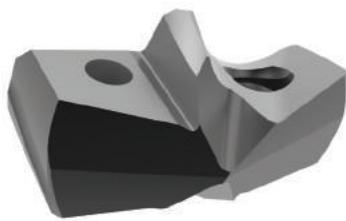
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

GEN3SYS XT Pro Drill Inserts

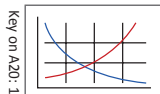
22 Series | Diameter Range: 0.8661" - 0.9448" (22.00mm - 23.99mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

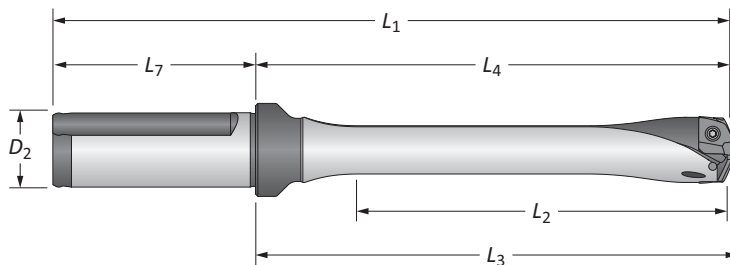




Sizes not shown are available upon request.
When ordering, please follow the example below:

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






GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
m Straight 	3xD	72.0	105.1	108.3	161.1	56.0	25.0	YES	HXT0322S-25FM
	3xD	72.0	105.1	108.3	161.1	56.0	25.0	NO	HXT0322S-25CM
	5xD	120.0	153.2	156.2	209.2	56.0	25.0	YES	HXT0522S-25FM
	5xD	120.0	153.2	156.2	209.2	56.0	25.0	NO	HXT0522S-25CM
	7xD	167.9	201.2	204.2	257.2	56.0	25.0	YES	HXT0722S-25FM
	7xD	167.9	201.2	204.2	257.2	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

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	27.0 in-lbs (305 N-cm)

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

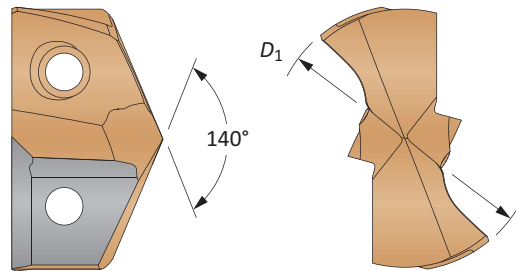
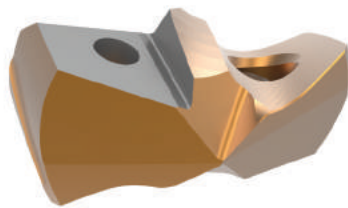
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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

Screws sold in multiples of 10

GEN3SYS XT Drill Inserts

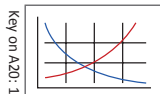
22 Series | Diameter Range: 0.8661" - 0.9448" (22.00mm - 23.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)		0.8661	22.00	7C122P-22	7C122P-22LR	-	-
	7/8	0.8750	22.23	7C122P-0028	7C122P-0028LR	-	-
	57/64	0.8906	22.61	7C122P-.890	7C122P-.890LR	-	-
		0.9055	23.00	7C122P-23	7C122P-23LR	-	-
	29/32	0.9063	23.02	7C122P-0029	7C122P-0029LR	-	-
	59/64	0.9219	23.42	7C122P-.921	7C122P-.921LR	-	-
	0.9375	23.81	7C122P-0030	7C122P-0030LR	-	-	
C2 (K20)		0.8661	22.00	7C222P-22	7C222P-22LR	7C222P-22CI	7C222P-22AS
	7/8	0.8750	22.23	7C222P-0028	7C222P-0028LR	7C222P-0028CI	7C222P-0028AS
	57/64	0.8906	22.61	7C222P-.890	7C222P-.890LR	7C222P-.890CI	7C222P-.890AS
		0.9055	23.00	7C222P-23	7C222P-23LR	7C222P-23CI	7C222P-23AS
	29/32	0.9063	23.02	7C222P-0029	7C222P-0029LR	7C222P-0029CI	7C222P-0029AS
	59/64	0.9219	23.42	7C222P-.921	7C222P-.921LR	7C222P-.921CI	7C222P-.921AS
	0.9375	23.81	7C222P-0030	7C222P-0030LR	7C222P-0030CI	7C222P-0030AS	

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

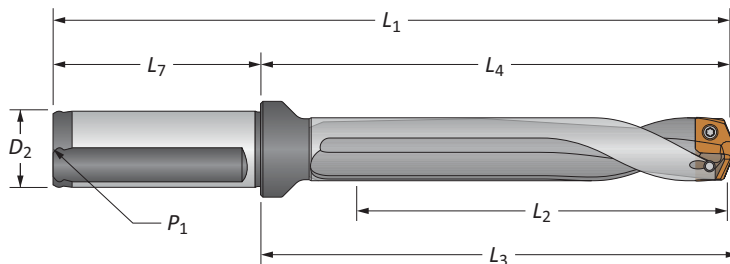


Sizes not shown are available upon request.
When ordering, please follow the example below:

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

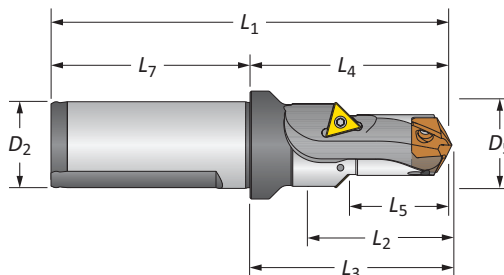
22 Series | Diameter Range: 0.8661" - 0.9448" (22.00mm - 23.99mm)



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	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	YES	60322S-100F	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	YES	60522S-100F	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	YES	60722S-100F	
Helical	Stub	1-1/16	2-23/64	2-31/64	4-41/64	2-9/32	1	1/8	YES	60122H-100F	
	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	YES	60322H-100F	
	3xD	2-53/64	4-9/64	4-17/64	6-27/64	2-9/32	1	1/8	NO	60322H-100C	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	YES	60522H-100F	
	5xD	4-23/32	6-1/32	6-5/32	8-5/16	2-9/32	1	1/8	NO	60522H-100C	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	YES	60722H-100F	
	7xD	6-39/64	7-59/64	8-3/64	10-13/64	2-9/32	1	1/8	NO	60722H-100C	
Straight	3xD	72.0	105.1	108.3	161.1	56.0	25.0	1/8*	YES	60322S-25FM	
	5xD	120.0	153.2	156.2	209.2	56.0	25.0	1/8*	YES	60522S-25FM	
	7xD	167.9	201.2	204.2	257.2	56.0	25.0	1/8*	YES	60722S-25FM	
	Stub	27.0	60.1	63.0	116.1	56.0	25.0	1/8*	YES	60122H-25FM	
	Helical	3xD	72.0	105.1	108.3	161.1	56.0	25.0	1/8*	YES	60322H-25FM
		3xD	72.0	105.1	108.3	161.1	56.0	25.0	1/8*	NO	60322H-25CM
		5xD	120.0	153.2	156.2	209.2	56.0	25.0	1/8*	YES	60522H-25FM
		5xD	120.0	153.2	156.2	209.2	56.0	25.0	1/8*	NO	60522H-25CM
		7xD	167.9	201.2	204.2	257.2	56.0	25.0	1/8*	YES	60722H-25FM
		7xD	167.9	201.2	204.2	257.2	56.0	25.0	1/8*	NO	60722H-25CM

*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		
1-9/64	1-19/64	1-19/32	2-23/64	2-31/64	4-41/64	2-9/32	1	60122C45-100F	TCMT-110204
29.0	33.0	40.5	60.0	63.0	116.0	56.0	25.0	60122C45-25FM	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	27.0 in-lbs (305 N-cm)

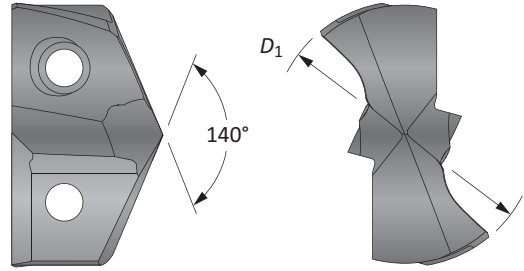
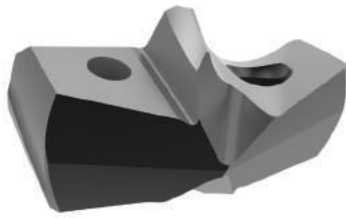
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

= Imperial (in)
 = Metric (mm)

GEN3SYS XT Pro Drill Inserts

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



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

Inserts sold in multiples of 1

A
DRILLING

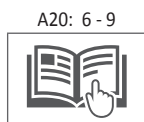
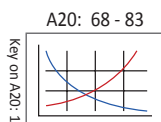
B
BORING

C
REAMING

D
BURNISHING

E
THREADING

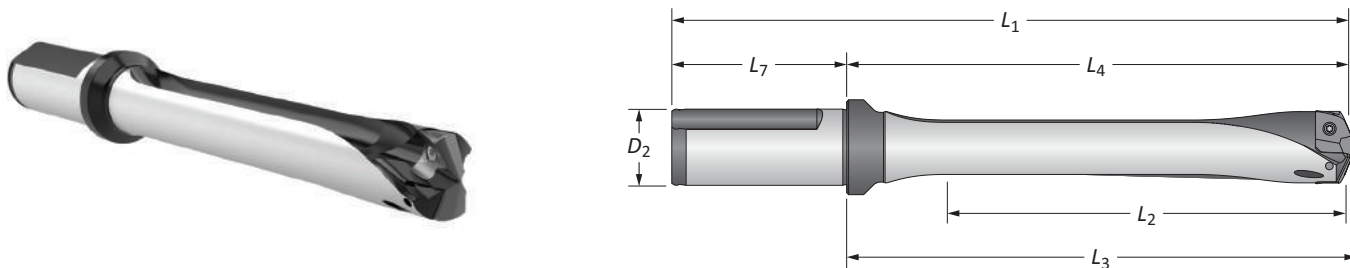
X
SPECIALS



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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
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	
ii Straight	3xD	78.0	113.9	116.8	169.9	56.0	25.0	YES	HXT0324S-25FM
	3xD	78.0	113.9	116.8	169.9	56.0	25.0	NO	HXT0324S-25CM
	5xD	130.0	165.9	168.7	221.9	56.0	25.0	YES	HXT0524S-25FM
	5xD	130.0	165.9	168.7	221.9	56.0	25.0	NO	HXT0524S-25CM
	7xD	181.9	217.9	220.7	273.9	56.0	25.0	YES	HXT0724S-25FM
	7xD	181.9	217.9	220.7	273.9	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

Connection Accessories

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

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

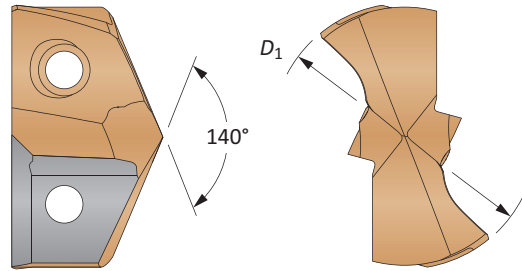
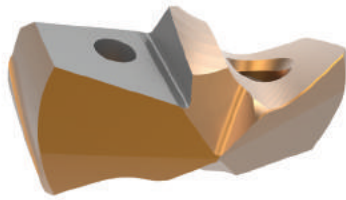
i = Imperial (in)
ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

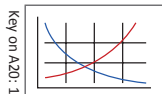
24 Series | Diameter Range: 0.9449" - 1.0235" (24.00mm - 25.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)	-	0.9449	24.00	7C124P-24	7C124P-24LR	-	-
	31/32	0.9688	24.61	7C124P-0031	7C124P-0031LR	-	-
	63/64	0.9843	25.00	7C124P-25	7C124P-25LR	-	-
	1	1.0000	25.40	7C124P-0100	7C124P-0100LR	-	-
	-	1.0080	25.60	7C124P-1.008	7C124P-1.008LR	-	-
	1-1/64	1.0156	25.78	7C124P-1.015	7C124P-1.015LR	-	-
C2 (K20)	-	0.9449	24.00	7C224P-24	7C224P-24LR	7C224P-24CI	7C224P-24AS
	31/32	0.9688	24.61	7C224P-0031	7C224P-0031LR	7C224P-0031CI	7C224P-0031AS
	63/64	0.9843	25.00	7C224P-25	7C224P-25LR	7C224P-25CI	7C224P-25AS
	1	1.0000	25.40	7C224P-0100	7C224P-0100LR	7C224P-0100CI	7C224P-0100AS
	-	1.0080	25.60	7C224P-1.008	7C224P-1.008LR	7C224P-1.008CI	7C224P-1.008AS
	1-1/64	1.0156	25.78	7C224P-1.015	7C224P-1.015LR	7C224P-1.015CI	7C224P-1.015AS

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9

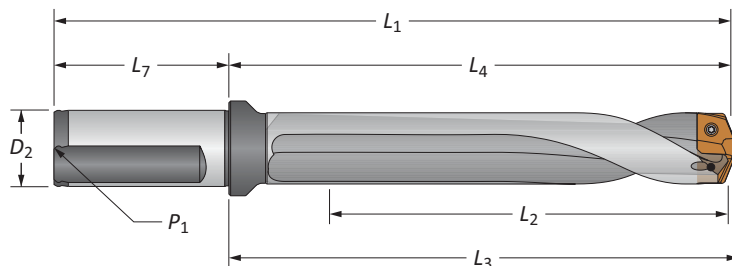


Sizes not shown are available upon request.
When ordering, please follow the example below:




Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

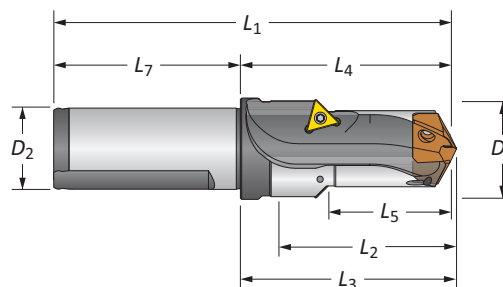
24 Series | Diameter Range: 0.9449" - 1.0235" (24.00mm - 25.99mm)





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	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	YES	60324S-100F	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	YES	60524S-100F	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	YES	60724S-100F	
	Stub	1-1/8	2-17/32	2-41/64	4-13/16	2-9/32	1	1/8	YES	60124H-100F	
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	YES	60324H-100F	
	3xD	3-1/16	4-31/64	4-19/32	6-49/64	2-9/32	1	1/8	NO	60324H-100C	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	YES	60524H-100F	
	5xD	5-7/64	6-17/32	6-41/64	8-13/16	2-9/32	1	1/8	NO	60524H-100C	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	YES	60724H-100F	
	7xD	7-5/32	8-37/64	8-11/16	10-55/64	2-9/32	1	1/8	NO	60724H-100C	
	3xD	78.0	113.9	116.8	169.9	56.0	25.0	1/8*	YES	60324S-25FM	
	5xD	130.0	165.9	168.7	221.9	56.0	25.0	1/8*	YES	60524S-25FM	
	7xD	181.9	217.9	220.7	273.9	56.0	25.0	1/8*	YES	60724S-25FM	
	Stub	28.5	64.2	67.1	120.1	56.0	25.0	1/8*	YES	60124H-25FM	
	3xD	78.0	113.9	116.8	169.9	56.0	25.0	1/8*	YES	60324H-25FM	
	3xD	78.0	113.9	116.8	169.9	56.0	25.0	1/8*	NO	60324H-25CM	
	5xD	130.0	165.9	168.7	221.9	56.0	25.0	1/8*	YES	60524H-25FM	
	5xD	130.0	165.9	168.7	221.9	56.0	25.0	1/8*	NO	60524H-25CM	
	7xD	181.9	217.9	220.7	273.9	56.0	25.0	1/8*	YES	60724H-25FM	
	7xD	181.9	217.9	220.7	273.9	56.0	25.0	1/8*	NO	60724H-25CM	

*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
	1-7/32	1-27/64	1-51/64	2-17/32	2-41/64	4-13/16	2-9/32	1	60124C45-100F	TCMT-110204
	31.0	36.0	45.5	64.2	67.1	120.2	56.0	25.0	60124C45-25FM	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	27.0 in-lbs (305 N-cm)

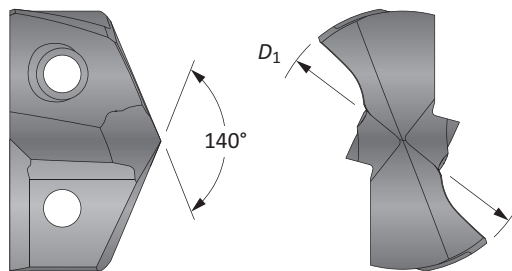
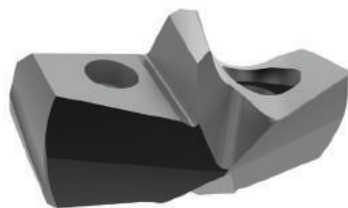
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

 = Imperial (in)
 = Metric (mm)

GEN3SYS XT Pro Drill Inserts

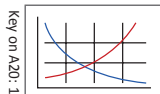
26 Series | Diameter Range: 1.0236" - 1.1416" (26.00mm - 28.99mm)



Fractional Equivalent	Insert				
	D_1 inch	D_1 mm	Part No. P	Part No. K	Part No. N
-	1.0236	26.00	XTP26-26.00	XTK26-26.00	XTN26-26.00
-	1.0276	26.10	XTP26-26.10	XTK26-26.10	XTN26-26.10
1-1/32	1.0313	26.20	XTP26-26.20	XTK26-26.20	XTN26-26.20
-	1.0354	26.30	XTP26-26.30	XTK26-26.30	XTN26-26.30
-	1.0394	26.40	XTP26-26.40	XTK26-26.40	XTN26-26.40
-	1.0433	26.50	XTP26-26.50	XTK26-26.50	XTN26-26.50
1-3/64	1.0469	26.59	XTP26-26.59	XTK26-26.59	XTN26-26.59
-	1.0472	26.60	XTP26-26.60	XTK26-26.60	XTN26-26.60
-	1.0512	26.70	XTP26-26.70	XTK26-26.70	XTN26-26.70
-	1.0551	26.80	XTP26-26.80	XTK26-26.80	XTN26-26.80
-	1.0591	26.90	XTP26-26.90	XTK26-26.90	XTN26-26.90
1-1/16	1.0625	26.99	XTP26-26.99	XTK26-26.99	XTN26-26.99
-	1.0630	27.00	XTP26-27.00	XTK26-27.00	XTN26-27.00
-	1.0669	27.10	XTP26-27.10	XTK26-27.10	XTN26-27.10
-	1.0709	27.20	XTP26-27.20	XTK26-27.20	XTN26-27.20
-	1.0748	27.30	XTP26-27.30	XTK26-27.30	XTN26-27.30
-	1.0787	27.40	XTP26-27.40	XTK26-27.40	XTN26-27.40
-	1.0827	27.50	XTP26-27.50	XTK26-27.50	XTN26-27.50
-	1.0866	27.60	XTP26-27.60	XTK26-27.60	XTN26-27.60
-	1.0906	27.70	XTP26-27.70	XTK26-27.70	XTN26-27.70
1-3/32	1.0938	27.78	XTP26-27.78	XTK26-27.78	XTN26-27.78
-	1.0984	27.90	XTP26-27.90	XTK26-27.90	XTN26-27.90
-	1.1024	28.00	XTP26-28.00	XTK26-28.00	XTN26-28.00
-	1.1063	28.10	XTP26-28.10	XTK26-28.10	XTN26-28.10
1-7/64	1.1090	28.17	XTP26-28.17	XTK26-28.17	XTN26-28.17
-	1.1102	28.20	XTP26-28.20	XTK26-28.20	XTN26-28.20
-	1.1142	28.30	XTP26-28.30	XTK26-28.30	XTN26-28.30
-	1.1181	28.40	XTP26-28.40	XTK26-28.40	XTN26-28.40
-	1.1220	28.50	XTP26-28.50	XTK26-28.50	XTN26-28.50
1-1/8	1.1250	28.58	XTP26-28.58	XTK26-28.58	XTN26-28.58
-	1.1299	28.70	XTP26-28.70	XTK26-28.70	XTN26-28.70
-	1.1339	28.80	XTP26-28.80	XTK26-28.80	XTN26-28.80
-	1.1378	28.90	XTP26-28.90	XTK26-28.90	XTN26-28.90

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



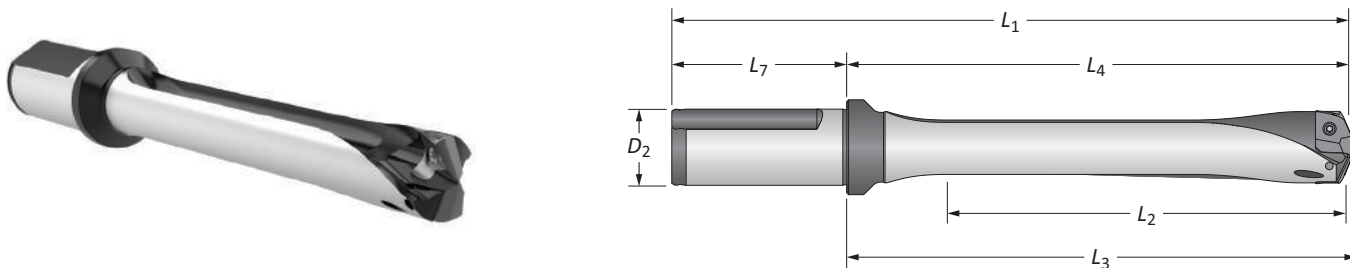
Key on A20: 1

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

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

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
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	
ii Straight 	3xD	87.0	128.6	131.4	188.6	60.0	32.0	YES	HXT0326S-32FM
	3xD	87.0	128.6	131.4	188.6	60.0	32.0	NO	HXT0326S-32CM
	5xD	145.0	186.5	189.4	246.5	60.0	32.0	YES	HXT0526S-32FM
	5xD	145.0	186.5	189.4	246.5	60.0	32.0	NO	HXT0526S-32CM
	7xD	202.9	244.5	247.4	304.5	60.0	32.0	YES	HXT0726S-32FM
	7xD	202.9	244.5	247.4	304.5	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

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	61.0 in-lbs (690 N-cm)

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

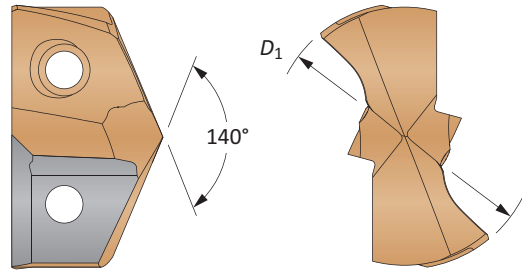
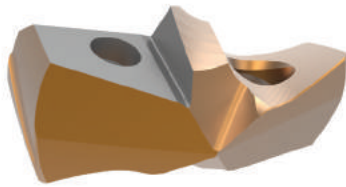
i = Imperial (in)
 ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

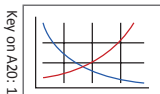
26 Series | Diameter Range: 1.0236" - 1.1416" (26.00mm - 28.99mm)



Carbide Substrate	Insert			Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
	Fractional Equivalent	D_1 inch	D_1 mm				
C1 (K35)		1.0236	26.00	7C126P-26	7C126P-26LR	-	-
	1-1/32	1.0313	26.20	7C126P-0101	7C126P-0101LR	-	-
	1-3/64	1.0469	26.59	7C126P-1.046	7C126P-1.046LR	-	-
	1-1/16	1.0625	26.99	7C126P-0102	7C126P-0102LR	-	-
		1.0630	27.00	7C126P-27	7C126P-27LR	-	-
	1-3/32	1.0938	27.78	7C126P-0103	7C126P-0103LR	-	-
		1.1024	28.00	7C126P-28	7C126P-28LR	-	-
	1-7/64	1.1094	28.17	7C126P-1.109	7C126P-1.109LR	-	-
1-1/8	1.1250	28.58	7C126P-0104	7C126P-0104LR	-	-	
C2 (K20)		1.0236	26.00	7C226P-26	7C226P-26LR	7C226P-26CI	7C226P-26AS
	1-1/32	1.0313	26.20	7C226P-0101	7C226P-0101LR	7C226P-0101CI	7C226P-0101AS
	1-3/64	1.0469	26.59	7C226P-1.046	7C226P-1.046LR	7C226P-1.046CI	7C226P-1.046AS
	1-1/16	1.0625	26.99	7C226P-0102	7C226P-0102LR	7C226P-0102CI	7C226P-0102AS
		1.0630	27.00	7C226P-27	7C226P-27LR	7C226P-27CI	7C226P-27AS
	1-3/32	1.0938	27.78	7C226P-0103	7C226P-0103LR	7C226P-0103CI	7C226P-0103AS
		1.1024	28.00	7C226P-28	7C226P-28LR	7C226P-28CI	7C226P-28AS
	1-7/64	1.1094	28.17	7C226P-1.109	7C226P-1.109LR	7C226P-1.109CI	7C226P-1.109AS
1-1/8	1.1250	28.58	7C226P-0104	7C226P-0104LR	7C226P-0104CI	7C226P-0104AS	

Inserts sold in multiples of 1

A20: 68 - 83



A20: 6 - 9



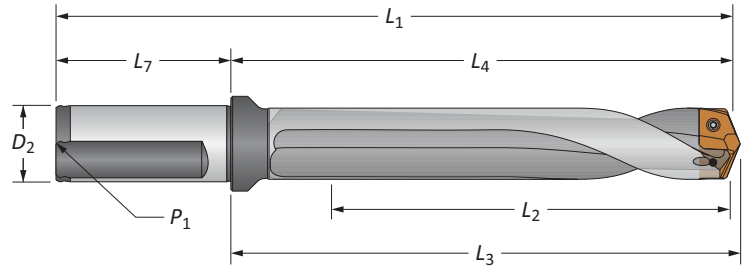
Key on A20: 1

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

Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-.5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

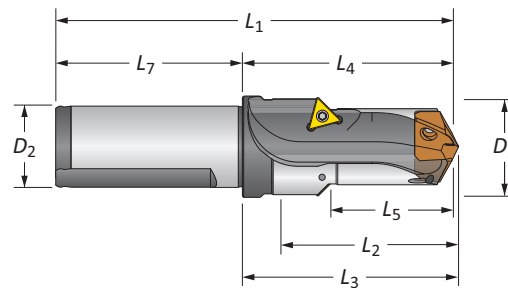
26 Series | Diameter Range: 1.0236" - 1.1416" (26.00mm - 28.99mm)



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	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	YES	60326S-125F	
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	YES	60526S-125F	
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	YES	60726S-125F	
Helical	Stub	1-1/4	2-7/8	2-63/64	5-5/32	2-9/32	1-1/4	1/8	YES	60126H-125F	
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	YES	60326H-125F	
	3xD	3-27/64	5-1/16	5-11/64	7-11/32	2-9/32	1-1/4	1/8	NO	60326H-125C	
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	YES	60526H-125F	
	5xD	5-45/64	7-11/32	7-29/64	9-5/8	2-9/32	1-1/4	1/8	NO	60526H-125C	
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	YES	60726H-125F	
	7xD	7-63/64	9-5/8	9-47/64	11-29/32	2-9/32	1-1/4	1/8	NO	60726H-125C	
Straight	3xD	87.0	128.6	131.4	188.6	60.0	32.0	1/8*	YES	60326S-32FM	
	5xD	145.0	186.5	189.4	246.5	60.0	32.0	1/8*	YES	60526S-32FM	
	7xD	202.9	244.5	247.4	304.5	60.0	32.0	1/8*	YES	60726S-32FM	
	Stub	32.0	72.9	75.7	132.9	60.0	32.0	1/8*	YES	60126H-32FM	
	Helical	3xD	87.0	128.6	131.4	188.6	60.0	32.0	1/8*	YES	60326H-32FM
		3xD	87.0	128.6	131.4	188.6	60.0	32.0	1/8*	NO	60326H-32CM
		5xD	145.0	186.5	189.4	246.5	60.0	32.0	1/8*	YES	60526H-32FM
		5xD	145.0	186.5	189.4	246.5	60.0	32.0	1/8*	NO	60526H-32CM
		7xD	202.9	244.5	247.4	304.5	60.0	32.0	1/8*	YES	60726H-32FM
		7xD	202.9	244.5	247.4	304.5	60.0	32.0	1/8*	NO	60726H-32CM

*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		
i	1-11/32	1-17/32	2-3/64	2-7/8	2-63/64	5-5/32	2-9/32	1-1/4	60126C45-125F	TCMT-110204
m	34.0	39.0	52.1	72.9	75.7	132.9	60.0	32.0	60126C45-32FM	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	61.0 in-lbs (690 N-cm)

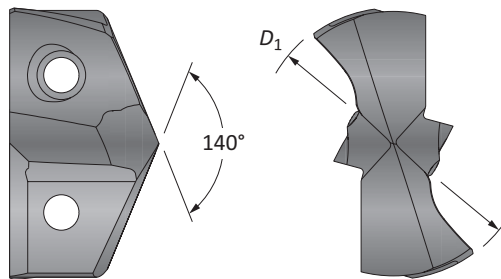
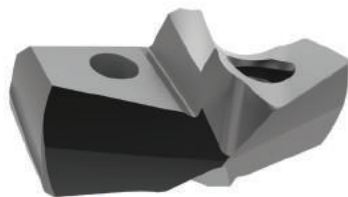
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

GEN3SYS XT Pro Drill Inserts

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

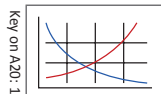


Fractional Equivalent	Insert				
	D ₁ inch	D ₁ mm	Part No. P	Part No. K	Part No. N
-	1.1417	29.00	XTP29-29.00	XTK29-29.00	XTN29-29.00
-	1.1457	29.10	XTP29-29.10	XTK29-29.10	XTN29-29.10
-	1.1496	29.20	XTP29-29.20	XTK29-29.20	XTN29-29.20
-	1.1535	29.30	XTP29-29.30	XTK29-29.30	XTN29-29.30
1-5/32	1.1563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

Inserts sold in multiples of 1

A20: 68 - 83

A20: 6 - 9



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

A

DRILLING

B

BORING

C

REAMING

D

BURNISHING

E

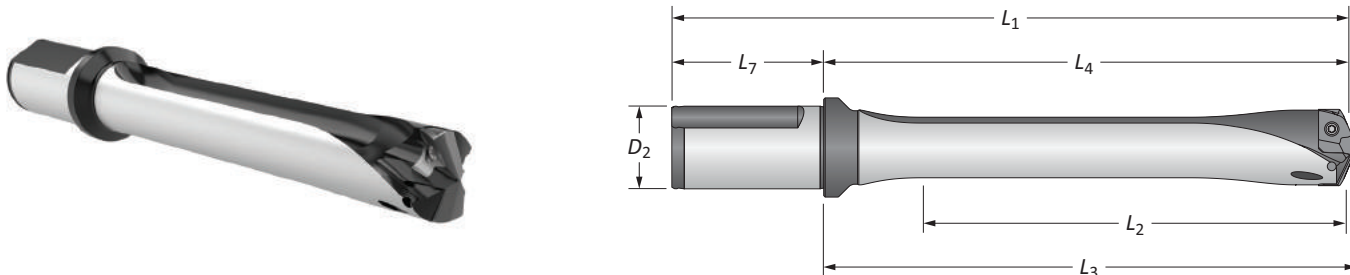
THREADING



X

SPECIALS

GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight 	3xD	96.0	136.5	139.7	196.5	60.0	32.0	YES	HXT0329S-32FM
	3xD	96.0	136.5	139.7	196.5	60.0	32.0	NO	HXT0329S-32CM
	5xD	160.0	200.8	203.7	260.8	60.0	32.0	YES	HXT0529S-32FM
	5xD	160.0	200.8	203.7	260.8	60.0	32.0	NO	HXT0529S-32CM
	7xD	223.9	264.7	267.6	324.7	60.0	32.0	YES	HXT0729S-32FM
	7xD	223.9	264.7	267.6	324.7	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

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	61.0 in-lbs (690 N-cm)

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

WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

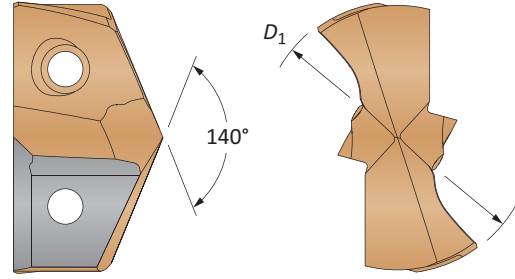
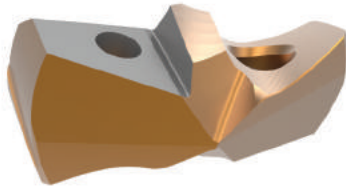
i = Imperial (in)
 ii = Metric (mm)

Screws sold in multiples of 10



GEN3SYS XT Drill Inserts

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



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

Inserts sold in multiples of 1

A
DRILLING

B

BORING

C

REAMING

D

BURNISHING

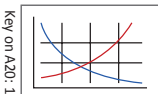
E

THREADING

X

SPECIALS

A20: 68 - 83



A20: 6 - 9



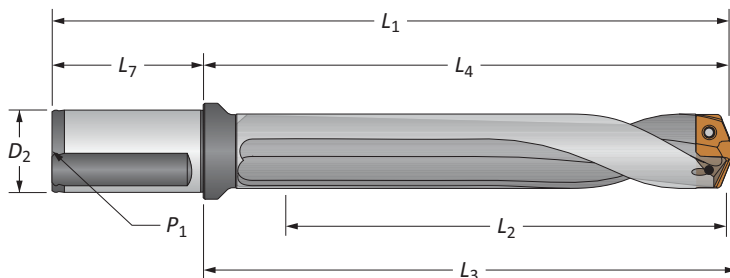
Key on A20: 1

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




Imperial:	0.5200", 13 series, C2 = use Part No. 7C213P-5200
Metric:	13.20mm, 13 series, C2 = use Part No. 7C213P-13.20

GEN3SYS Drill Insert Holders

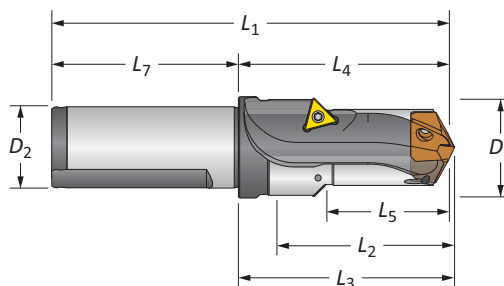
29 Series | Diameter Range: 1.1417" - 1.2597" (29.00mm - 31.99mm)




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	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	YES	60329S-125F	
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	YES	60529S-125F	
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	YES	60729S-125F	
	Stub	1-3/8	2-31/32	3-5/64	5-1/4	2-9/32	1-1/4	1/4	YES	60129H-125F	
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	YES	60329H-125F	
	3xD	3-25/32	5-3/8	5-1/2	7-21/32	2-9/32	1-1/4	1/4	NO	60329H-125C	
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	YES	60529H-125F	
	5xD	6-19/64	7-29/32	8-1/64	10-3/16	2-9/32	1-1/4	1/4	NO	60529H-125C	
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	YES	60729H-125F	
	7xD	8-13/16	10-27/64	10-17/64	12-45/64	2-9/32	1-1/4	1/4	NO	60729H-125C	
	3xD	96.0	136.5	139.7	196.5	60.0	32.0	1/4*	YES	60329S-32FM	
	5xD	160.0	200.8	203.7	260.8	60.0	32.0	1/4*	YES	60529S-32FM	
	7xD	223.9	264.7	267.6	324.7	60.0	32.0	1/4*	YES	60729S-32FM	
	Stub	35.0	75.2	78.2	135.2	60.0	32.0	1/4*	YES	60129H-32FM	
	3xD	96.0	136.5	139.7	196.5	60.0	32.0	1/4*	YES	60329H-32FM	
	3xD	96.0	136.5	139.7	196.5	60.0	32.0	1/4*	NO	60329H-32CM	
	5xD	160.0	200.8	203.7	260.8	60.0	32.0	1/4*	YES	60529H-32FM	
	5xD	160.0	200.8	203.7	260.8	60.0	32.0	1/4*	NO	60529H-32CM	
	7xD	223.9	264.7	267.6	324.7	60.0	32.0	1/4*	YES	60729H-32FM	
	7xD	223.9	264.7	267.6	324.7	60.0	32.0	1/4*	NO	60729H-32CM	




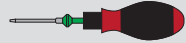

*Thread to BSP and ISO 7-1



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		
i	1-29/64	1-23/32	2-13/64	2-31/32	3-5/64	5-1/4	2-9/32	1-1/4	60129C45-125F	TCMT-16T304
m	37.1	43.5	55.9	75.2	78.2	135.2	60.0	32.0	60129C45-32FM	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	61.0 in-lbs (690 N-cm)

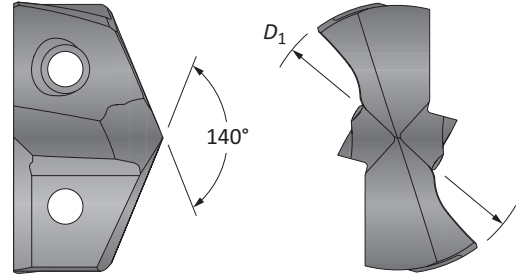
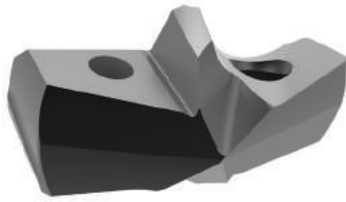
*Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength




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

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

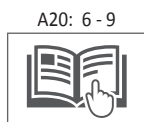
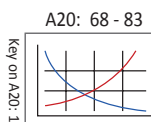
GEN3SYS XT Pro Drill Inserts

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



Fractional Equivalent	Insert				
	D ₁ inch	D ₁ mm	P	K	N
-	1.2598	32.00	XTP32-32.00	XTK32-32.00	XTN32-32.00
-	1.2638	32.10	XTP32-32.10	XTK32-32.10	XTN32-32.10
1-17/64	1.2657	32.15	XTP32-32.15	XTK32-32.15	XTN32-32.15
-	1.2677	32.20	XTP32-32.20	XTK32-32.20	XTN32-32.20
-	1.2717	32.30	XTP32-32.30	XTK32-32.30	XTN32-32.30
-	1.2756	32.40	XTP32-32.40	XTK32-32.40	XTN32-32.40
-	1.2795	32.50	XTP32-32.50	XTK32-32.50	XTN32-32.50
1-9/32	1.2813	32.55	XTP32-32.55	XTK32-32.55	XTN32-32.55
-	1.2835	32.60	XTP32-32.60	XTK32-32.60	XTN32-32.60
-	1.2874	32.70	XTP32-32.70	XTK32-32.70	XTN32-32.70
-	1.2913	32.80	XTP32-32.80	XTK32-32.80	XTN32-32.80
-	1.2953	32.90	XTP32-32.90	XTK32-32.90	XTN32-32.90
-	1.2992	33.00	XTP32-33.00	XTK32-33.00	XTN32-33.00
-	1.3031	33.10	XTP32-33.10	XTK32-33.10	XTN32-33.10
-	1.3071	33.20	XTP32-33.20	XTK32-33.20	XTN32-33.20
-	1.3110	33.30	XTP32-33.30	XTK32-33.30	XTN32-33.30
1-5/16	1.3125	33.34	XTP32-33.34	XTK32-33.34	XTN32-33.34
-	1.3150	33.40	XTP32-33.40	XTK32-33.40	XTN32-33.40
-	1.3189	33.50	XTP32-33.50	XTK32-33.50	XTN32-33.50
-	1.3228	33.60	XTP32-33.60	XTK32-33.60	XTN32-33.60
-	1.3268	33.70	XTP32-33.70	XTK32-33.70	XTN32-33.70
-	1.3307	33.80	XTP32-33.80	XTK32-33.80	XTN32-33.80
-	1.3346	33.90	XTP32-33.90	XTK32-33.90	XTN32-33.90
-	1.3386	34.00	XTP32-34.00	XTK32-34.00	XTN32-34.00
-	1.3425	34.10	XTP32-34.10	XTK32-34.10	XTN32-34.10
1-11/32	1.3438	34.13	XTP32-34.13	XTK32-34.13	XTN32-34.13
-	1.3465	34.20	XTP32-34.20	XTK32-34.20	XTN32-34.20
-	1.3504	34.30	XTP32-34.30	XTK32-34.30	XTN32-34.30
-	1.3543	34.40	XTP32-34.40	XTK32-34.40	XTN32-34.40
-	1.3583	34.50	XTP32-34.50	XTK32-34.50	XTN32-34.50
-	1.3622	34.60	XTP32-34.60	XTK32-34.60	XTN32-34.60
-	1.3661	34.70	XTP32-34.70	XTK32-34.70	XTN32-34.70
-	1.3701	34.80	XTP32-34.80	XTK32-34.80	XTN32-34.80
-	1.3740	34.90	XTP32-34.90	XTK32-34.90	XTN32-34.90
1-3/8	1.3750	34.93	XTP32-34.93	XTK32-34.93	XTN32-34.93
-	1.3780	35.00	XTP32-35.00	XTK32-35.00	XTN32-35.00

Inserts sold in multiples of 1

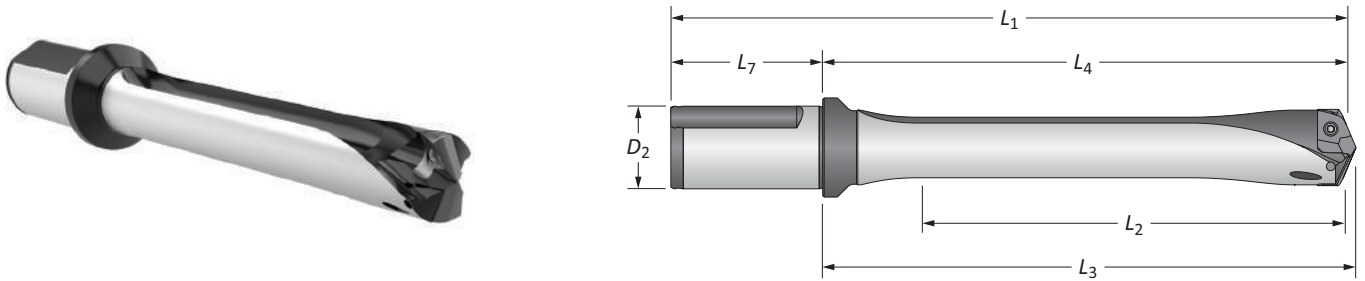


Sizes not shown are available upon request.	
When ordering, please follow the example below:	
Imperial:	0.5180", Steel, 13 series = use Part No. XTP13-13.16
Metric:	13.16mm, Steel, 13 series = use Part No. XTP13-13.16



GEN3SYS XT Pro Drill Insert Holders

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



Flute	Body					Shank			Part No.
	Length	L ₂	L ₄	L ₃	L ₁	L ₇	D ₂	Flat	
i 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	
ii Straight 	3xD	105.0	150.7	154.3	210.7	60.0	32.0	YES	HXT0332S-32FM
	3xD	105.0	150.7	154.3	210.7	60.0	32.0	NO	HXT0332S-32CM
	5xD	175.0	220.7	224.3	280.7	60.0	32.0	YES	HXT0532S-32FM
	5xD	175.0	220.7	224.3	280.7	60.0	32.0	NO	HXT0532S-32CM
	7xD	245.0	290.7	294.3	350.7	60.0	32.0	YES	HXT0732S-32FM
	7xD	245.0	290.7	294.3	350.7	60.0	32.0	NO	HXT0732S-32CM
	10xD	350.0	395.7	399.3	455.7	60.0	32.0	YES	HXT1032S-32FM
	10xD	350.0	395.7	399.3	455.7	60.0	32.0	NO	HXT1032S-32CM

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	61.0 in-lbs (690 N-cm)

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

⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit www.alliedmachine.com/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

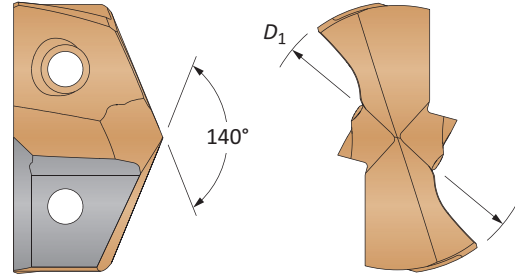
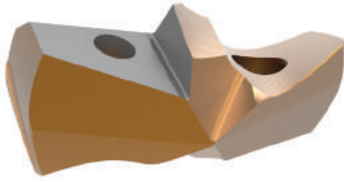
i = Imperial (in)
 ii = Metric (mm)

Screws sold in multiples of 10

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

GEN3SYS XT Drill Inserts

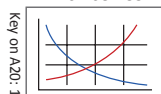
32 Series | Diameter Range: 1.2598" - 1.3780" (32.00mm - 35.00mm)



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

Inserts sold in multiples of 1

A20: 68 - 83



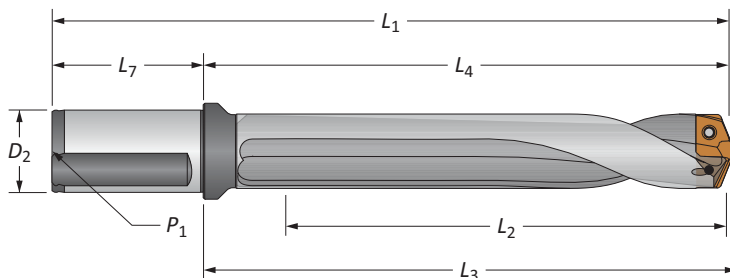
A20: 6 - 9



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

GEN3SYS Drill Insert Holders

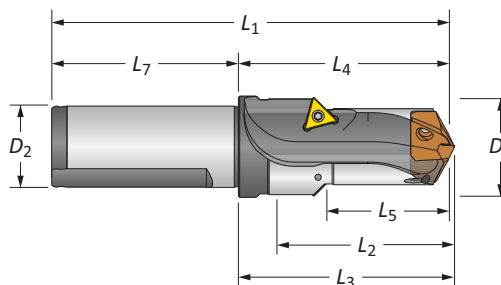
32 Series | Diameter Range: 1.2598" - 1.3780" (32.00mm - 35.00mm)



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	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	
Helical	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	
Straight	3xD	105.0	150.7	154.3	220.7	70.0	40.0	1/4*	YES	60332S-40FM	
	5xD	175.0	220.7	224.3	290.7	70.0	40.0	1/4*	YES	60532S-40FM	
	7xD	245.0	290.7	294.3	360.7	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	
	Helical	3xD	105.0	150.7	154.3	220.7	70.0	40.0	1/4*	YES	60332H-40FM
		3xD	105.0	150.7	154.3	220.7	70.0	40.0	1/4*	NO	60332H-40CM
		5xD	175.0	220.7	224.3	290.7	70.0	40.0	1/4*	YES	60532H-40FM
		5xD	175.0	220.7	224.3	290.7	70.0	40.0	1/4*	NO	60532H-40CM
		7xD	245.0	290.7	294.3	360.7	70.0	40.0	1/4*	YES	60732H-40FM
		7xD	245.0	290.7	294.3	360.7	70.0	40.0	1/4*	NO	60732H-40CM

*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		
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
40.1	48.0	62.4	90.7	94.2	160.7	70.0	40.0	60132C45-40FM	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	61.0 in-lbs (690 N-cm)

*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

= Imperial (in)
 = Metric (mm)

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

Recommended Drilling Data | Imperial (inch)

GEN3SYS XT Pro

ISO	Material	Hardness (BHN)	Speed (SFM)	Feed Rate (IPR) by Diameter			
				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	550	0.011	0.012	0.013	0.014
		150 - 200	475	0.010	0.011	0.012	0.013
		200 - 250	425	0.008	0.009	0.010	0.011
	Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	520	0.011	0.012	0.013	0.014
		125 - 175	450	0.010	0.011	0.012	0.013
		175 - 225	410	0.009	0.010	0.011	0.012
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	350	0.007	0.008	0.009	0.010
		125 - 175	450	0.010	0.011	0.012	0.013
		175 - 225	410	0.009	0.010	0.011	0.012
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	350	0.008	0.009	0.010	0.011
		275 - 325	300	0.007	0.008	0.009	0.010
		125 - 175	415	0.010	0.011	0.012	0.013
		175 - 225	380	0.009	0.010	0.011	0.012
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 275	340	0.008	0.009	0.010	0.011
		275 - 325	310	0.006	0.007	0.008	0.009
		325 - 375	280	0.006	0.006	0.007	0.008
		225 - 300	250	0.008	0.009	0.010	0.011
	Structural Steel A36, A285, A516, etc.	300 - 350	225	0.006	0.007	0.008	0.009
350 - 400		200	0.005	0.006	0.007	0.008	
100 - 150		410	0.010	0.011	0.012	0.013	
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 200	265	0.006	0.007	0.007	0.008	
	200 - 250	205	0.005	0.006	0.006	0.007	
S	High Temp Alloy Hastelloy B, Inconel 600, etc.	140 - 220	130	0.006	0.007	0.007	0.008
		220 - 310	100	0.005	0.006	0.006	0.007
	Titanium Alloy	140 - 220	140	0.005	0.006	0.007	0.008
		220 - 310	110	0.004	0.005	0.006	0.007
	Aerospace Alloy S82	185 - 275	165	0.004	0.004	0.005	0.005
		275 - 350	135	0.003	0.003	0.004	0.005
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	240	0.006	0.007	0.007	0.008
		275 - 350	180	0.005	0.006	0.006	0.007
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	220	0.004	0.005	0.005	0.006
		185 - 275	160	0.003	0.004	0.004	0.005
	Super Duplex Stainless Steel	135 - 185	125	0.003	0.003	0.003	0.004
185 - 275		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:

- 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/DeepHoleGuidelines 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.

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

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

Recommended Drilling Data | Imperial (inch)

GEN3SYS XT Pro

ISO	Material	Hardness (BHN)	Speed (SFM)	Feed Rate (IPR) by Diameter			
				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	160	0.005	0.005	0.006	0.006
		500	130	0.004	0.004	0.005	0.006
		600	90	0.004	0.004	0.004	0.005
	Hardened Steel	300 - 400	170	0.005	0.005	0.006	0.006
400 - 500		130	0.004	0.004	0.005	0.006	
K	SG / Nodular Cast Iron	120 - 150	550	0.010	0.012	0.013	0.014
		150 - 200	520	0.010	0.011	0.012	0.013
		200 - 220	465	0.008	0.010	0.011	0.012
		220 - 260	405	0.008	0.009	0.010	0.011
		260 - 320	365	0.008	0.008	0.009	0.010
	Grey / White Iron	120 - 150	575	0.012	0.013	0.014	0.015
		150 - 200	550	0.011	0.012	0.013	0.014
		200 - 220	495	0.010	0.011	0.012	0.013
		220 - 260	425	0.009	0.010	0.011	0.012
		260 - 320	380	0.009	0.010	0.011	0.012
N	Cast Aluminum	30	1150	0.012	0.013	0.014	0.015
		180	860	0.011	0.012	0.013	0.014
	Wrought Aluminum	30	1600	0.013	0.015	0.016	0.017
		180	1150	0.012	0.014	0.015	0.016
	Aluminum Bronze	100 - 200	415	0.010	0.011	0.012	0.012
		200 - 250	335	0.008	0.009	0.010	0.011
	Brass	100	755	0.010	0.012	0.013	0.014
Copper	60	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:

- When using holders without support bushing, use a short GEN3SYS holder to establish an initial hole that is a minimum of 2 diameters deep.
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A
DRILLING
B
BORING
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REAMING
D
BURNISHING
E
THREADING
X
SPECIALS

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

Recommended Drilling Data | Imperial (inch)

GEN3SYS XT

ISO	Material	Hardness (BHN)	Speed (SFM)	Feed Rate (IPR) by Diameter			
				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	480	0.009	0.011	0.012	0.013
		150 - 200	415	0.009	0.010	0.011	0.012
		200 - 250	390	0.007	0.008	0.009	0.010
	Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	450	0.010	0.011	0.012	0.013
		125 - 175	390	0.009	0.010	0.011	0.012
		175 - 225	355	0.008	0.009	0.010	0.011
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	310	0.006	0.007	0.008	0.009
		125 - 175	390	0.009	0.010	0.011	0.012
		175 - 225	355	0.008	0.009	0.010	0.011
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	310	0.007	0.008	0.009	0.010
		275 - 325	265	0.006	0.007	0.008	0.009
		125 - 175	375	0.009	0.010	0.011	0.012
		175 - 225	345	0.008	0.009	0.010	0.011
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 275	310	0.007	0.008	0.009	0.010
		275 - 325	285	0.006	0.006	0.007	0.008
		325 - 375	255	0.006	0.006	0.006	0.007
	Structural Steel A36, A285, A516, etc.	100 - 150	355	0.009	0.010	0.011	0.012
		150 - 250	285	0.007	0.008	0.009	0.010
		250 - 350	265	0.006	0.007	0.008	0.009
	Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 200	255	0.006	0.006	0.006	0.007
200 - 250		195	0.005	0.006	0.006	0.006	
S	High Temp Alloy Hastelloy B, Inconel 600, etc.	140 - 220	120	0.006	0.006	0.006	0.007
		220 - 310	95	0.005	0.006	0.006	0.006
	Titanium Alloy	140 - 220	140	0.005	0.006	0.006	0.007
		220 - 310	110	0.004	0.005	0.006	0.006
	Aerospace Alloy S82	185 - 275	145	0.004	0.004	0.005	0.005
275 - 350		120	0.003	0.003	0.004	0.005	
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	240	0.006	0.007	0.007	0.008
		275 - 350	185	0.005	0.006	0.006	0.007
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	220	0.004	0.005	0.005	0.006
		185 - 275	160	0.003	0.004	0.004	0.005
	Super Duplex Stainless Steel	135 - 185	125	0.003	0.003	0.003	0.004
185 - 275		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
0.014	0.015	0.016	0.017	0.019	0.020	0.021	0.022	0.023	0.024
0.013	0.014	0.015	0.016	0.017	0.018	0.019	0.020	0.021	0.022
0.011	0.012	0.013	0.015	0.017	0.017	0.018	0.019	0.020	0.021
0.014	0.015	0.016	0.017	0.019	0.020	0.021	0.022	0.023	0.024
0.013	0.014	0.015	0.016	0.017	0.018	0.019	0.020	0.021	0.022
0.012	0.013	0.014	0.015	0.016	0.017	0.018	0.019	0.020	0.021
0.010	0.011	0.012	0.014	0.015	0.016	0.017	0.017	0.018	0.019
0.013	0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.023
0.012	0.013	0.014	0.016	0.017	0.018	0.019	0.020	0.021	0.022
0.011	0.012	0.013	0.015	0.016	0.017	0.018	0.019	0.020	0.021
0.010	0.011	0.012	0.014	0.015	0.016	0.017	0.017	0.018	0.019
0.013	0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.023
0.012	0.013	0.014	0.016	0.017	0.018	0.019	0.020	0.021	0.022
0.011	0.012	0.013	0.015	0.015	0.017	0.018	0.019	0.020	0.021
0.009	0.010	0.011	0.013	0.014	0.015	0.016	0.017	0.018	0.018
0.008	0.009	0.010	0.012	0.013	0.014	0.015	0.016	0.017	0.017
0.010	0.011	0.012	0.013	0.014	0.015	0.016	0.017	0.017	0.018
0.009	0.010	0.010	0.011	0.012	0.013	0.014	0.015	0.016	0.017
0.008	0.009	0.009	0.010	0.011	0.012	0.013	0.014	0.015	0.016
0.012	0.014	0.014	0.016	0.017	0.019	0.020	0.021	0.022	0.023
0.011	0.012	0.013	0.014	0.016	0.017	0.018	0.019	0.020	0.021
0.010	0.011	0.012	0.013	0.014	0.016	0.017	0.018	0.019	0.020
0.007	0.008	0.008	0.009	0.010	0.011	0.012	0.013	0.014	0.015
0.006	0.007	0.007	0.008	0.009	0.010	0.011	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
0.006	0.007	0.007	0.008	0.009	0.009	0.010	0.010	0.011	0.012
0.007	0.008	0.008	0.009	0.010	0.010	0.011	0.011	0.012	0.013
0.006	0.007	0.007	0.008	0.009	0.009	0.010	0.010	0.011	0.011
0.006	0.006	0.006	0.006	0.007	0.007	0.008	0.009	0.010	0.011
0.005	0.006	0.006	0.006	0.006	0.007	0.007	0.008	0.009	0.010
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

Recommended Drilling Data | Imperial (inch)

GEN3SYS XT

ISO	Material	Hardness (BHN)	Speed (SFM)	Feed Rate (IPR) by Diameter			
				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	145	0.005	0.005	0.006	0.006
		500	110	0.004	0.004	0.005	0.006
		600	80	0.004	0.004	0.004	0.005
	Hardened Steel	300 - 400	155	0.005	0.005	0.006	0.006
400 - 500		120	0.004	0.004	0.005	0.006	
K	SG / Nodular Cast Iron	120 - 150	480	0.009	0.011	0.012	0.013
		150 - 200	450	0.009	0.010	0.011	0.012
		200 - 220	400	0.007	0.009	0.010	0.011
		220 - 260	350	0.007	0.008	0.009	0.010
		260 - 320	320	0.007	0.007	0.008	0.009
	Grey / White Iron	120 - 150	500	0.011	0.012	0.013	0.014
		150 - 200	480	0.010	0.011	0.012	0.013
		200 - 220	430	0.009	0.010	0.011	0.012
		220 - 260	370	0.008	0.009	0.010	0.011
		260 - 320	335	0.008	0.009	0.010	0.011
N	Cast Aluminum	30	1000	0.011	0.012	0.013	0.014
		180	750	0.010	0.011	0.012	0.013
	Wrought Aluminum	30	1400	0.012	0.014	0.015	0.016
		180	1000	0.011	0.013	0.014	0.015
	Aluminum Bronze	100 - 200	360	0.009	0.010	0.011	0.011
		200 - 250	295	0.007	0.008	0.009	0.010
	Brass	100	660	0.009	0.011	0.012	0.013
Copper	60	425	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
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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

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0.006	0.007	0.008	0.009	0.009	0.009	0.010	0.010	0.011	0.011
0.006	0.006	0.007	0.008	0.009	0.009	0.009	0.009	0.010	0.010
0.006	0.006	0.006	0.007	0.008	0.008	0.009	0.009	0.009	0.009
0.006	0.007	0.007	0.008	0.009	0.009	0.009	0.009	0.010	0.010
0.006	0.006	0.007	0.007	0.008	0.008	0.009	0.009	0.009	0.009
0.014	0.015	0.017	0.018	0.018	0.020	0.020	0.022	0.023	0.024
0.013	0.014	0.016	0.017	0.018	0.018	0.020	0.020	0.022	0.022
0.012	0.013	0.015	0.016	0.017	0.018	0.018	0.020	0.020	0.021
0.011	0.012	0.014	0.015	0.016	0.017	0.018	0.018	0.020	0.020
0.010	0.011	0.013	0.014	0.015	0.016	0.017	0.018	0.018	0.019
0.015	0.016	0.018	0.019	0.020	0.021	0.022	0.023	0.024	0.025
0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.023	0.024
0.013	0.014	0.016	0.018	0.018	0.019	0.020	0.021	0.022	0.023
0.012	0.013	0.015	0.017	0.017	0.018	0.019	0.020	0.021	0.022
0.012	0.013	0.014	0.016	0.016	0.017	0.018	0.019	0.020	0.021
0.015	0.016	0.017	0.017	0.018	0.019	0.020	0.021	0.022	0.023
0.014	0.015	0.016	0.016	0.017	0.018	0.019	0.020	0.021	0.021
0.017	0.017	0.018	0.020	0.021	0.022	0.024	0.025	0.027	0.028
0.016	0.016	0.017	0.019	0.020	0.021	0.023	0.024	0.026	0.027
0.012	0.013	0.014	0.014	0.015	0.016	0.017	0.017	0.017	0.017
0.011	0.011	0.012	0.013	0.014	0.015	0.016	0.016	0.016	0.016
0.014	0.015	0.016	0.017	0.018	0.020	0.021	0.022	0.024	0.024
0.005	0.006	0.006	0.006	0.007	0.007	0.007	0.009	0.009	0.010

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

Recommended Drilling Data | Metric (mm)

GEN3SYS XT Pro

ISO	Material	Hardness (BHN)	Speed (M/mm)	Feed Rate (mm/rev) by Diameter			
				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	168	0.28	0.30	0.33	0.36
		150 - 200	145	0.25	0.28	0.30	0.33
		200 - 250	130	0.20	0.23	0.25	0.28
	Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	158	0.28	0.3	0.33	0.36
		125 - 175	137	0.25	0.28	0.30	0.33
		175 - 225	125	0.23	0.25	0.28	0.30
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	107	0.18	0.20	0.23	0.25
		125 - 175	137	0.25	0.28	0.30	0.33
		175 - 225	125	0.23	0.25	0.28	0.30
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	107	0.20	0.23	0.25	0.28
		275 - 325	91	0.18	0.20	0.23	0.25
		125 - 175	126	0.25	0.28	0.30	0.33
		175 - 225	116	0.23	0.25	0.28	0.30
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 275	104	0.20	0.23	0.25	0.28
		275 - 325	94	0.15	0.18	0.20	0.23
		325 - 375	85	0.15	0.15	0.18	0.20
	Structural Steel A36, A285, A516, etc.	300 - 350	69	0.15	0.18	0.20	0.23
		350 - 400	61	0.13	0.18	0.18	0.20
100 - 150		125	0.25	0.28	0.30	0.33	
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 250	101	0.20	0.23	0.25	0.28	
	250 - 350	93	0.18	0.20	0.23	0.25	
S	High Temp Alloy Hastelloy B, Inconel 600, etc.	150 - 200	81	0.15	0.18	0.18	0.20
		200 - 250	62	0.13	0.15	0.15	0.18
	Titanium Alloy	140 - 220	40	0.15	0.18	0.18	0.20
		220 - 310	30	0.13	0.15	0.15	0.18
	Aerospace Alloy S82	140 - 220	43	0.13	0.15	0.18	0.20
220 - 310		34	0.10	0.13	0.15	0.18	
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	50	0.10	0.10	0.12	0.14
		275 - 350	41	0.09	0.09	0.10	0.12
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	185 - 275	73	0.15	0.18	0.18	0.20
		275 - 350	56	0.13	0.15	0.15	0.18
	Super Duplex Stainless Steel	135 - 185	64	0.10	0.13	0.13	0.15
135 - 185		47	0.08	0.10	0.10	0.13	
		135 - 185	38	0.08	0.08	0.08	0.10
		185 - 275	30	0.05	0.05	0.08	0.08

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

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
0.10	0.13	0.13	0.15	0.15	0.18	0.20	0.20	0.20	0.25
0.10	0.10	0.13	0.13	0.15	0.15	0.18	0.18	0.20	0.20

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

Recommended Drilling Data | Metric (mm)

GEN3SYS XT Pro

ISO	Material	Hardness (BHN)	Speed (M/min)	Feed Rate (mm/rev) by Diameter			
				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	50	0.13	0.13	0.15	0.17
		500	40	0.11	0.11	0.13	0.15
		600	27	0.10	0.10	0.11	0.13
	Hardened Steel	300 - 400	51	0.13	0.13	0.15	0.17
400 - 500		40	0.11	0.11	0.13	0.15	
K	SG / Nodular Cast Iron	120 - 150	168	0.27	0.30	0.33	0.36
		150 - 200	159	0.25	0.28	0.30	0.33
		200 - 220	141	0.22	0.25	0.28	0.30
		220 - 260	124	0.20	0.23	0.25	0.28
		260 - 320	112	0.20	0.21	0.23	0.25
	Grey / White Iron	120 - 150	175	0.30	0.33	0.36	0.38
		150 - 200	168	0.28	0.30	0.33	0.36
		200 - 220	151	0.25	0.28	0.30	0.33
220 - 260		130	0.23	0.25	0.28	0.30	
N	Cast Aluminum	30	351	0.30	0.33	0.36	0.38
		180	262	0.28	0.30	0.33	0.36
	Wrought Aluminum	30	488	0.33	0.38	0.41	0.43
		180	351	0.30	0.36	0.38	0.41
	Aluminum Bronze	100 - 200	126	0.26	0.28	0.30	0.32
		200 - 250	103	0.22	0.24	0.26	0.28
	Brass	100	230	0.29	0.30	0.33	0.36
Copper	60	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

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A
DRILLING
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E
THREADING
X
SPECIALS

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

Recommended Drilling Data | Metric (mm)

GEN3SYS XT

ISO	Material	Hardness (BHN)	Speed (M/mm)	Feed Rate (mm/rev) by Diameter			
				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	146	0.23	0.28	0.30	0.33
		150 - 200	126	0.23	0.26	0.28	0.30
		200 - 250	119	0.19	0.21	0.23	0.26
	Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 125	137	0.26	0.28	0.30	0.33
		125 - 175	119	0.23	0.26	0.28	0.30
		175 - 225	108	0.21	0.23	0.26	0.28
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	225 - 275	95	0.16	0.19	0.21	0.23
		125 - 175	119	0.23	0.26	0.28	0.30
		175 - 225	108	0.21	0.23	0.26	0.28
	Alloy Steel 4140, 5140, 8640, etc.	225 - 275	95	0.19	0.21	0.23	0.26
		275 - 325	81	0.16	0.19	0.21	0.23
		125 - 175	114	0.23	0.26	0.28	0.30
		175 - 225	105	0.21	0.23	0.26	0.28
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 275	95	0.19	0.21	0.23	0.26
		275 - 325	87	0.14	0.16	0.19	0.21
		325 - 375	78	0.14	0.14	0.16	0.19
	Structural Steel A36, A285, A516, etc.	100 - 150	108	0.23	0.26	0.28	0.30
		150 - 250	87	0.19	0.21	0.23	0.26
250 - 350		81	0.16	0.19	0.21	0.23	
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 200	78	0.14	0.16	0.16	0.19	
	200 - 250	59	0.12	0.14	0.14	0.16	
S	High Temp Alloy Hastelloy B, Inconel 600, etc.	140 - 220	37	0.14	0.16	0.16	0.19
		220 - 310	29	0.12	0.14	0.14	0.16
	Titanium Alloy	140 - 220	42	0.12	0.14	0.16	0.19
		220 - 310	33	0.09	0.12	0.14	0.16
	Aerospace Alloy S82	185 - 275	45	0.09	0.09	0.12	0.12
275 - 350		37	0.07	0.07	0.09	0.12	
M	Stainless Steel 400 Series 416, 420, etc.	185 - 275	73	0.15	0.18	0.18	0.20
		275 - 350	56	0.13	0.15	0.15	0.18
	Stainless Steel 300 Series 304, 316, 17-4PH, etc.	135 - 185	64	0.10	0.13	0.13	0.15
		185 - 275	47	0.08	0.10	0.10	0.13
	Super Duplex Stainless Steel	135 - 185	38	0.08	0.08	0.08	0.10
185 - 275		30	0.05	0.05	0.08	0.08	

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

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A
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SPECIALS

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
0.35	0.37	0.40	0.44	0.49	0.51	0.54	0.56	0.58	0.61
0.33	0.35	0.37	0.40	0.44	0.47	0.49	0.51	0.54	0.56
0.28	0.30	0.33	0.37	0.42	0.44	0.47	0.49	0.51	0.54
0.35	0.37	0.40	0.44	0.49	0.51	0.54	0.56	0.58	0.61
0.33	0.35	0.37	0.41	0.44	0.47	0.49	0.51	0.54	0.56
0.30	0.33	0.35	0.38	0.41	0.44	0.47	0.49	0.51	0.54
0.26	0.28	0.30	0.35	0.37	0.40	0.42	0.44	0.47	0.49
0.33	0.35	0.37	0.42	0.47	0.49	0.51	0.54	0.56	0.58
0.30	0.33	0.35	0.40	0.44	0.47	0.49	0.51	0.54	0.56
0.28	0.30	0.33	0.37	0.41	0.44	0.47	0.49	0.51	0.54
0.26	0.28	0.30	0.35	0.37	0.40	0.42	0.44	0.47	0.49
0.33	0.35	0.37	0.42	0.47	0.49	0.51	0.54	0.56	0.58
0.30	0.33	0.35	0.40	0.44	0.47	0.49	0.51	0.54	0.56
0.28	0.30	0.33	0.37	0.38	0.44	0.47	0.49	0.51	0.54
0.23	0.26	0.28	0.33	0.35	0.37	0.40	0.42	0.46	0.47
0.21	0.23	0.26	0.30	0.33	0.35	0.37	0.40	0.42	0.44
0.26	0.28	0.30	0.33	0.35	0.37	0.40	0.42	0.44	0.47
0.23	0.26	0.26	0.28	0.30	0.33	0.35	0.37	0.40	0.42
0.21	0.23	0.23	0.26	0.28	0.30	0.33	0.35	0.37	0.40
0.30	0.35	0.35	0.40	0.44	0.49	0.51	0.54	0.56	0.58
0.28	0.30	0.33	0.35	0.40	0.44	0.47	0.49	0.51	0.54
0.26	0.28	0.30	0.33	0.35	0.40	0.44	0.47	0.49	0.51
0.19	0.21	0.21	0.23	0.26	0.28	0.30	0.33	0.35	0.37
0.16	0.19	0.19	0.21	0.23	0.26	0.28	0.30	0.33	0.35
0.19	0.21	0.21	0.23	0.26	0.26	0.28	0.28	0.30	0.33
0.16	0.19	0.19	0.21	0.23	0.23	0.26	0.26	0.28	0.30
0.19	0.21	0.21	0.23	0.26	0.26	0.28	0.28	0.30	0.33
0.16	0.19	0.19	0.21	0.23	0.23	0.26	0.26	0.28	0.28
0.14	0.14	0.16	0.16	0.19	0.19	0.21	0.23	0.26	0.28
0.12	0.14	0.14	0.14	0.16	0.19	0.19	0.21	0.23	0.26
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
0.10	0.13	0.13	0.15	0.15	0.18	0.20	0.20	0.20	0.25
0.10	0.10	0.13	0.13	0.15	0.15	0.18	0.18	0.20	0.20

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

Recommended Drilling Data | Metric (mm)

GEN3SYS XT

ISO	Material	Hardness (BHN)	Speed (M/min)	Feed Rate (mm/rev) by Diameter			
				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	45	0.12	0.12	0.14	0.14
		500	37	0.09	0.09	0.12	0.14
		600	25	0.09	0.09	0.09	0.12
	Hardened Steel	300 - 400	47	0.12	0.12	0.14	0.14
		400 - 500	37	0.09	0.09	0.12	0.14
K	SG / Nodular Cast Iron	120 - 150	146	0.23	0.28	0.30	0.33
		150 - 200	138	0.23	0.26	0.28	0.30
		200 - 220	123	0.19	0.23	0.26	0.28
		220 - 260	108	0.19	0.21	0.23	0.26
		260 - 320	97	0.19	0.19	0.21	0.23
	Grey / White Iron	120 - 150	152	0.28	0.30	0.33	0.35
		150 - 200	146	0.26	0.28	0.30	0.33
		200 - 220	131	0.23	0.26	0.28	0.30
		220 - 260	113	0.21	0.23	0.26	0.28
		260 - 320	102	0.21	0.23	0.26	0.28
N	Cast Aluminum	30	300	0.28	0.30	0.33	0.35
		180	225	0.26	0.28	0.30	0.33
	Wrought Aluminum	30	425	0.30	0.35	0.37	0.40
		180	300	0.28	0.33	0.35	0.37
	Aluminum Bronze	100 - 200	110	0.23	0.26	0.28	0.28
		200 - 250	90	0.19	0.21	0.23	0.26
	Brass	100	200	0.23	0.28	0.30	0.33
Copper	60	130	0.07	0.07	0.07	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 holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with the workpiece or fixture.

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

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

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
0.16	0.19	0.21	0.23	0.23	0.23	0.26	0.26	0.28	0.28
0.14	0.16	0.19	0.21	0.23	0.23	0.23	0.23	0.26	0.26
0.14	0.14	0.16	0.19	0.21	0.21	0.23	0.23	0.23	0.23
0.16	0.19	0.19	0.21	0.23	0.23	0.23	0.23	0.26	0.26
0.14	0.16	0.19	0.19	0.21	0.21	0.23	0.23	0.23	0.23
0.35	0.37	0.42	0.47	0.47	0.51	0.51	0.56	0.58	0.61
0.33	0.35	0.40	0.44	0.47	0.47	0.51	0.51	0.56	0.56
0.30	0.33	0.37	0.41	0.44	0.47	0.47	0.51	0.51	0.54
0.28	0.30	0.35	0.38	0.41	0.44	0.47	0.47	0.51	0.51
0.26	0.28	0.33	0.35	0.38	0.41	0.44	0.47	0.47	0.49
0.37	0.40	0.46	0.49	0.51	0.54	0.56	0.58	0.61	0.63
0.35	0.37	0.42	0.47	0.49	0.51	0.54	0.56	0.58	0.61
0.33	0.35	0.40	0.47	0.47	0.49	0.51	0.54	0.56	0.58
0.30	0.33	0.37	0.42	0.44	0.47	0.49	0.51	0.54	0.56
0.30	0.33	0.35	0.40	0.41	0.44	0.47	0.49	0.51	0.54
0.37	0.40	0.42	0.44	0.47	0.49	0.51	0.54	0.56	0.58
0.35	0.37	0.40	0.41	0.44	0.47	0.49	0.51	0.54	0.54
0.42	0.44	0.47	0.51	0.54	0.56	0.61	0.63	0.68	0.70
0.40	0.41	0.44	0.49	0.51	0.54	0.58	0.61	0.65	0.68
0.30	0.33	0.35	0.35	0.37	0.40	0.42	0.44	0.44	0.44
0.28	0.28	0.30	0.33	0.35	0.37	0.40	0.41	0.41	0.41
0.35	0.37	0.40	0.44	0.47	0.51	0.54	0.56	0.61	0.61
0.12	0.14	0.14	0.16	0.19	0.19	0.19	0.23	0.23	0.26

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

Tap Drill Information and Formulas | Imperial (inch)

American - Unified Inch Screw Thread

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

Taper Pipe Thread (NPT)

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

* Based on nominal tap drill diameter

** Based on .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.	RPM	= (3.82 • SFM) / DIA
	where:	
	RPM	= revolutions per minute (rev/min)
	SFM	= speed (ft/min)
	DIA	= diameter of drill (inch)
2.	IPM	= RPM • IPR
	where:	
	IPM	= inches per minute (in/min)
	RPM	= revolutions per minute (rev/min)
	IPR	= feed rate (in/rev)
3.	SFM	= RPM • 0.262 • DIA
	where:	
	SFM	= speed (ft/min)
	RPM	= revolutions per minute (rev/min)
	DIA	= diameter of drill (inch)
4.	Thrust	= 153,700 • IPR • DIA • Km
	where:	
	Thrust	= axial thrust (lbs)
	IPR	= feed rate (in/rev)
	DIA	= diameter of drill (inch)
	Km	= specific cutting energy (lbs/in ²)
5.	Tool Power	= .6991 • IPR • RPM • Km • DIA²
	where:	
	Tool Power	= tool power (HP)
	IPR	= feed rate (in/rev)
	RPM	= revolutions per minute (rev/min)
	Km	= specific cutting energy (lbs/in ²)
	DIA	= diameter of drill (inch)

Material Constants

Type of Material	Hardness	Km (lbs/in ²)
Plain Carbon and Alloy Steel	85 - 200 BHN	0.79
	200 - 275 BHN	0.94
	275 - 375 BHN	1.00
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
Aluminum Alloy	-	0.22
Magnesium Alloy	-	0.16

Tap Drill Information and Formulas | Metric (mm)

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

Formulas

1.	RPM = $(318.47 \cdot M/min) / DIA$ where: RPM = revolutions per minute (rev/min) M/min = speed (M/min) DIA = diameter of drill (mm)
2.	mm/min = $RPM \cdot mm/rev$ where: mm/min = mm per minute (mm/min) RPM = revolutions per minute (rev/min) mm/rev = feed rate (mm/rev)
3.	M/min = $RPM \cdot 0.003 \cdot DIA$ where: M/min = speed (M/min) RPM = revolutions per minute (rev/min) DIA = diameter of drill (mm)
4.	Thrust = $154 \cdot (mm/rev) \cdot DIA \cdot K_m$ where: Thrust = axial thrust (N) mm/rev = feed rate (mm/rev) DIA = diameter of drill (mm) K_m = specific cutting energy (kPa)
5.	Tool Power = $((mm/rev) \cdot RPM \cdot K_m \cdot DIA^2) / 218604.8$ where: Tool Power = tool power (HP) mm/rev = feed rate (mm/rev) RPM = revolutions per minute (rev/min) K_m = specific cutting energy (kPa) DIA = diameter of drill (mm)

BSP and ISO 7-1

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

* Based on nominal tap drill diameter

** Based on 0.075mm probable mean oversize

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

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

Notes

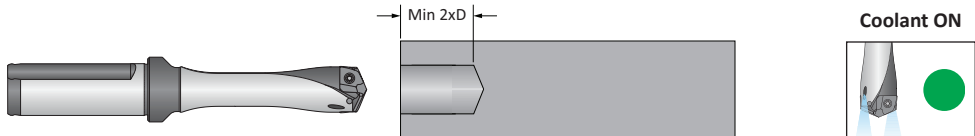
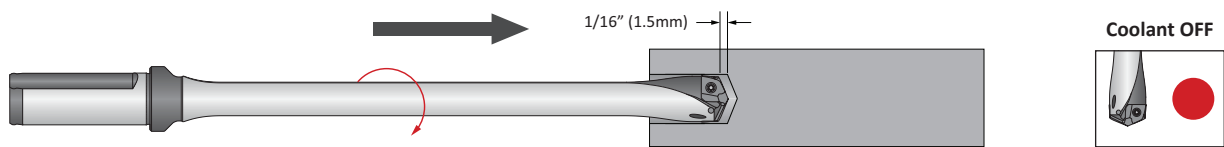
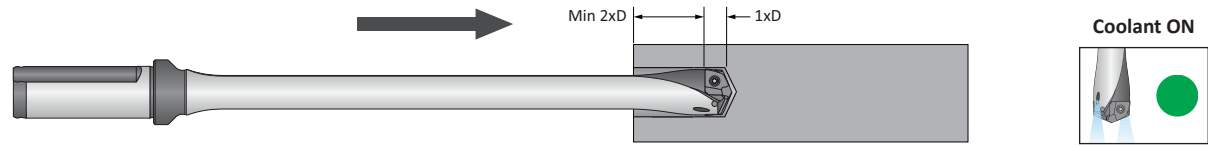
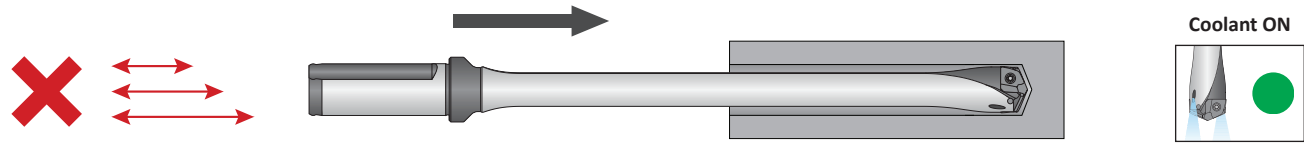
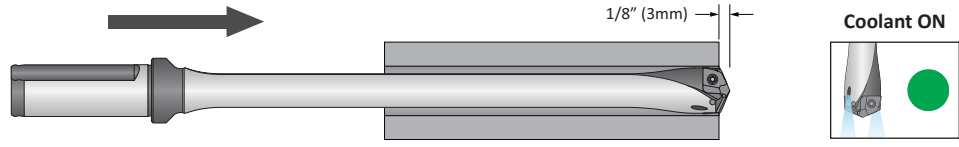
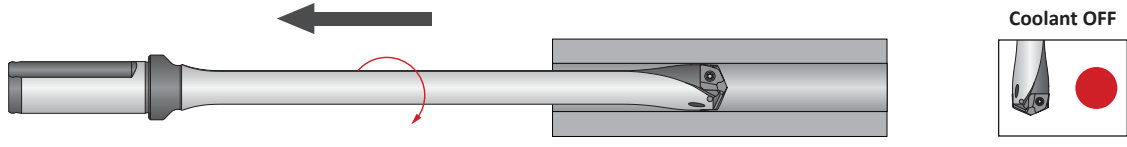
- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The .075mm probable mean oversize hole condition is based on optimum 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*.

Material Constants

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

Deep Hole Drilling Guidelines

GEN3SYS XT Pro | 10xD Holders

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

1. 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/DeepHoleGuidelines for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

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	
Setup Condition	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Possible Solutions
Worn or misaligned spindle (lathe, screw machine, chucker)	1		3				7		9	10	11		13			16	17			20	<ul style="list-style-type: none"> Align spindle and turret or tailstock. Repair spindle.
Use of low rigidity machine tools		2	3	4			7		9	10			13	14						20	<ul style="list-style-type: none"> Reduce penetration rate to fall within the physical limits of the machine or setup (NOTICE: Do not reduce feed below threshold of good chip formation).
Poor work piece support		2		4			7			10	11				15		17			20	<ul style="list-style-type: none"> Provide additional support for the work piece. Reduce penetration rate to fall within the physical limits of the machine or setup (NOTICE: Do not reduce feed below threshold of good chip formation).
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"> Run coolant through tool holder when drilling greater than 1xD. Increase coolant pressure and volume through the tool holder. Reduce penetration rate to fall within the coolant limitations (NOTICE: Do not reduce feed below threshold of good chip formation). Add a peck cycle to help clear chips.
Interrupted cuts. Entry or exit surfaces that are not perpendicular to the spindle (draft angles, parting lines, curved or stepped surfaces, cross holes, and cast or forged surfaces)				4			7		9	10	11		13	14	15	16	17	18			<ul style="list-style-type: none"> Pre-mill (spot face) entry or exit surface to remove interruption. Decrease feed as much as 50% through entry or exit interruption. Use short holders in low impact entry cuts.
Material harder than expected or running tools beyond recommended speed	1				5	6				10		12							18		<ul style="list-style-type: none"> Reduce speed. Increase coolant pressure and volume. Improve coolant condition by use of quality products and regular maintenance.
Poor material micro-structure or foreign particles (forgings and castings that have not been normalized or annealed, poorly prepared steel, flame cut parts, and sand casting)				4		6				10		12	13						18		<ul style="list-style-type: none"> 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. Reduce feeds (NOTICE: Do not reduce feed below threshold of good chip formation).
Poor chip control								8		10	11		13			16	17	18	19		<ul style="list-style-type: none"> Increase feed to recommended levels. Contact Allied Application Engineering group for technical recommendations. Increase coolant pressure and volume. Improve coolant condition by use of quality products and regular maintenance.
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"> Spot hole with short tool of same or greater included angle as GEN3SYS XT drill insert. Reduce feed (NOTICE: Do not reduce feed below threshold of good chip formation). If possible, drill from solid.

A

DRILLING

B

BORING

C

REAMING

D

BURNISHING

E

THREADING

X

SPECIALS

Guaranteed Test / Demo Application Form

Distributor PO #	
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The following must be filled out completely before your test will be considered

Distributor Information

Company Name: _____
 Contact: _____
 Account Number: _____
 Phone: _____
 Email: _____

End User Information

Company Name: _____
 Contact: _____
 Industry: _____
 Phone: _____
 Email: _____

Current Process List all tooling, coatings, substrates, speeds and feeds, tool life, and any problems you are experiencing

Test Objective List what would make this a successful test (i.e. penetration rate, finish, tool life, hole size, etc.)

Application Information

Hole Diameter: _____ in/mm	Tolerance: _____	Material: _____ (4150 / A36 / Cast Iron / etc.)
Pre-existing Diameter: _____ in/mm	Depth of Cut: _____ in/mm	Hardness: _____ (BHN / Rc)
Required Finish: _____ RMS	State: _____ (Casting / Hot rolled / Forging)	

Machine Information

Machine Type: _____ (Lathe / Screw machine / Machine center / etc.)	Builder: _____ (Haas, Mori Seiki, etc.)	Model #: _____
Shank Required: _____ (CAT50 / Morse taper, etc.)		Power: _____ HP/KW
Rigidity: _____	Orientation: _____	Tool Rotating: _____
<input type="checkbox"/> Excellent	<input type="checkbox"/> Vertical	<input type="checkbox"/> Yes
<input type="checkbox"/> Good	<input type="checkbox"/> Horizontal	<input type="checkbox"/> No
<input type="checkbox"/> Poor		Thrust: _____ lbs/N

Coolant Information

Coolant Delivery: _____ (Through tool / Flood)	Coolant Pressure: _____ PSI / bar
Coolant Type: _____ (Air mist, oil, synthetic, water soluble, etc.)	Coolant Volume: _____ GPM / LPM

Requested Tooling

QTY	Item Number	QTY	Item Number



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