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

ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing

GEN3SYS® XT and XT Pro

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

WOHLHAUPTER® ThreadMills USA SUPERION™ CRITERION™

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®**

4 IN 1

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

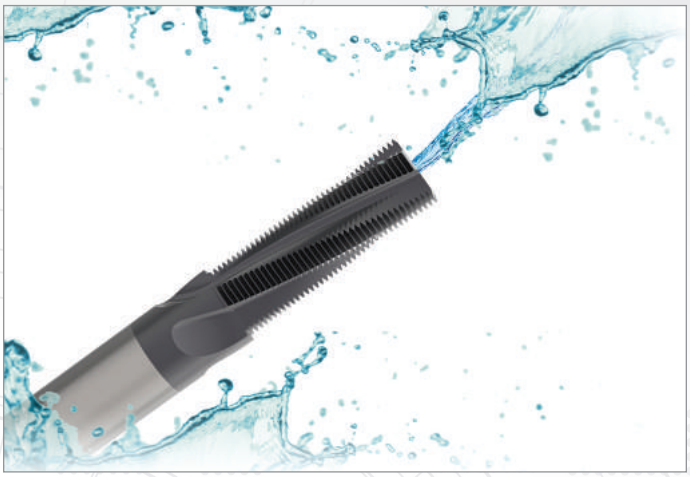
- The modular capabilities are ideal for use across multiple different projects
- Offers versatile boring heads suitable for all job shops and tooling rooms
- Provides an economical solution for low volume and/or short-term production applications
- Offers both rough and finish boring solutions
- Products: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

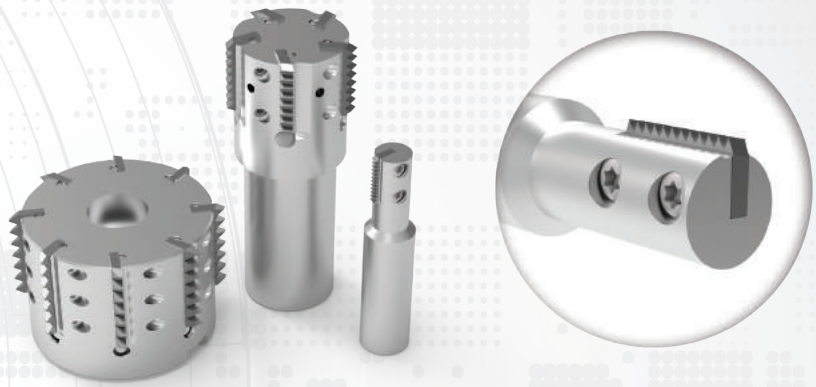


Solid Carbide Thread Mills

- 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

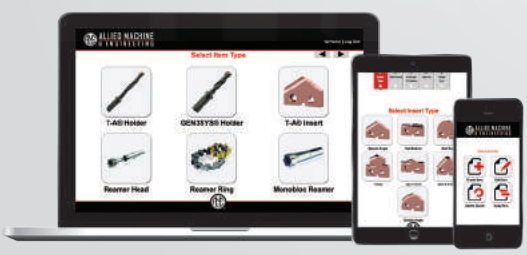
When it comes to designing and developing special solutions for customers, Allied Machine is the top choice. If your application requires special tooling, give us a call. Our engineered specials are developed by the brightest engineers in the industry. Most of our standard tooling can be altered as specials,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

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

Applicable Industries

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

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.

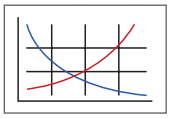
NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

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.

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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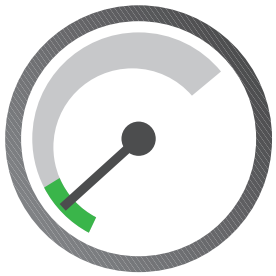
Why should you GO WITH THE **PRO**?

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

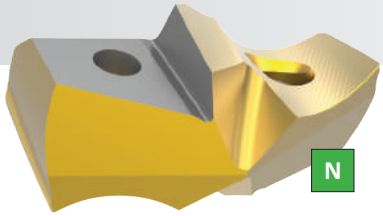
Project Profile: 7075 Aluminum

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:

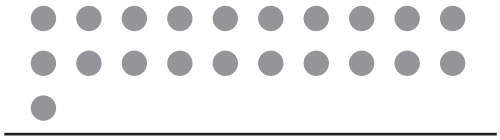
The GEN3SYS XT Pro increased the tool life from 1,000 holes to 2,100 holes.

Bottom Line: ***Doubled the tool life***

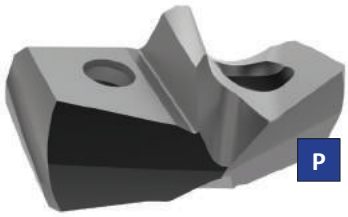
The **PROOF** is in the **NUMBERS**

Competitor Insert Tool Life
(number of holes = 1,000)

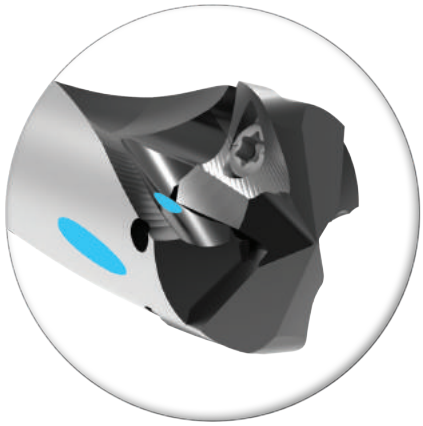
XT Pro Insert Tool Life
(number of holes = 2,100)



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

TEST RESULTS

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

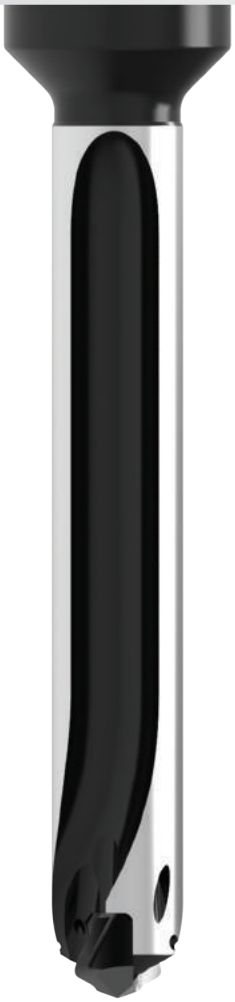
The Parameters:

- 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:

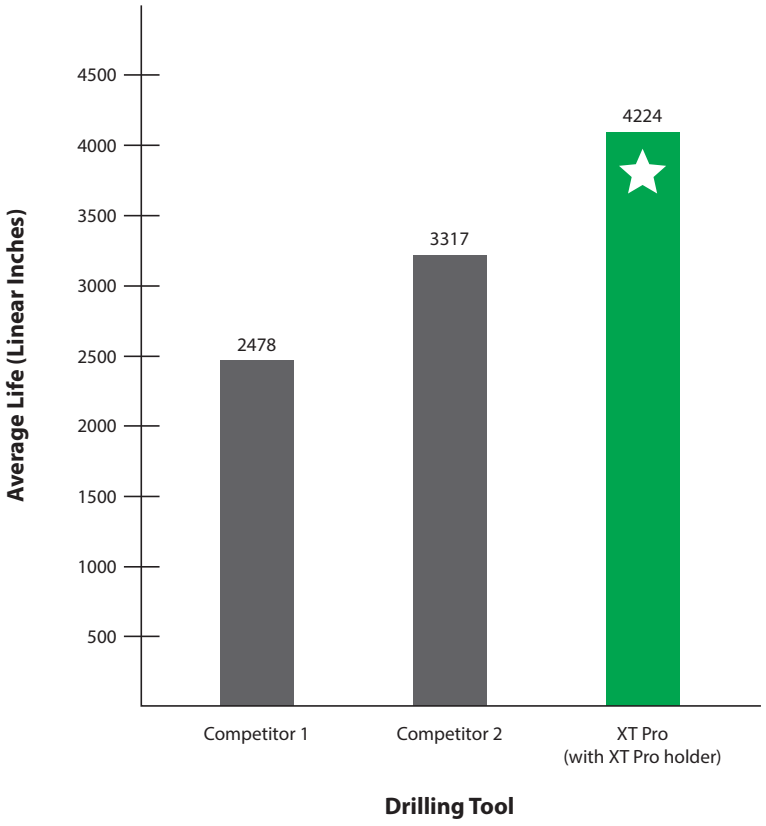
When run at the listed parameters, here is how the 3 different tooling solutions performed:

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



PREMIUM SOLUTION

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:

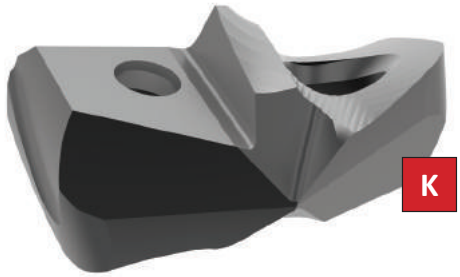
Allied Machine recommended the GEN3SYS XT Pro with K (Cast Iron) geometry. The tool ran at the following parameters:

- 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***



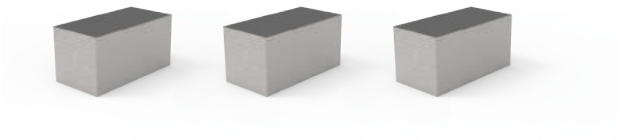
There's More to the **Advantage** than Tool Life

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

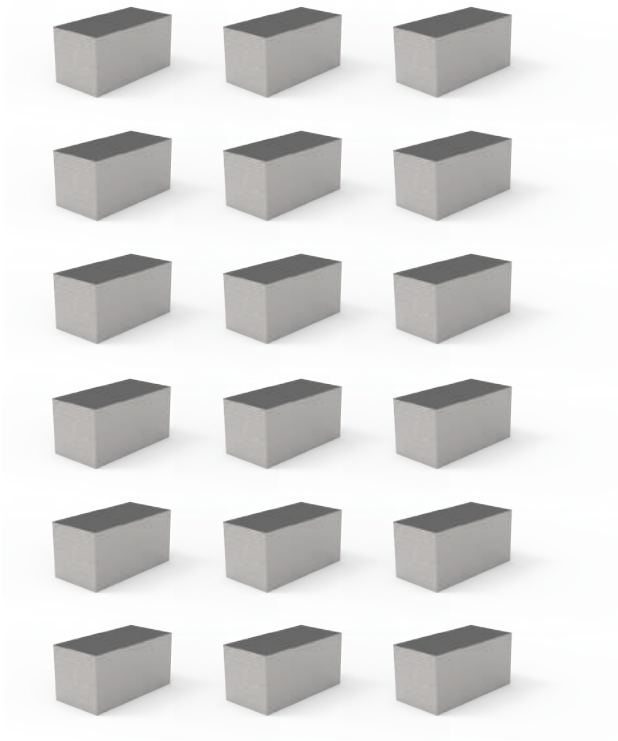
- Because only the insert needs changed when it reaches the end of its life, the XT Pro eliminates the need to re-establish tool lengths, which reduces set-up times.
- Further benefit in set-up is also seen as the tool only needs changed one time for every six of the customer's current method.
- Without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

The **PROOF** is in the **NUMBERS**

Competitor Tool Life
(number of holes = 65)



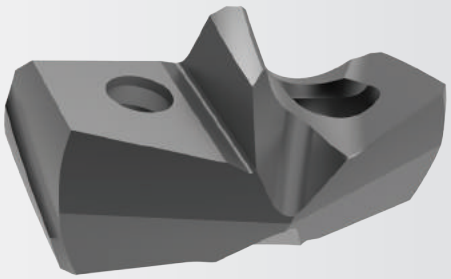
XT Pro Tool Life
(number of holes = 390)



INCREASE in
6x tool life

GEN3SYS XT Pro Drilling System Information

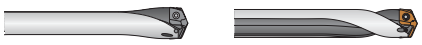
GEN3SYS XT Pro Drill Inserts



Advanced Design Capabilities

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

XT Pro Inserts Connect with:



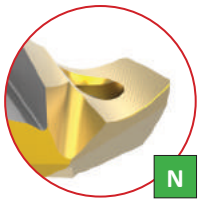
XT Pro holders | XT standard holders

P - Steels

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

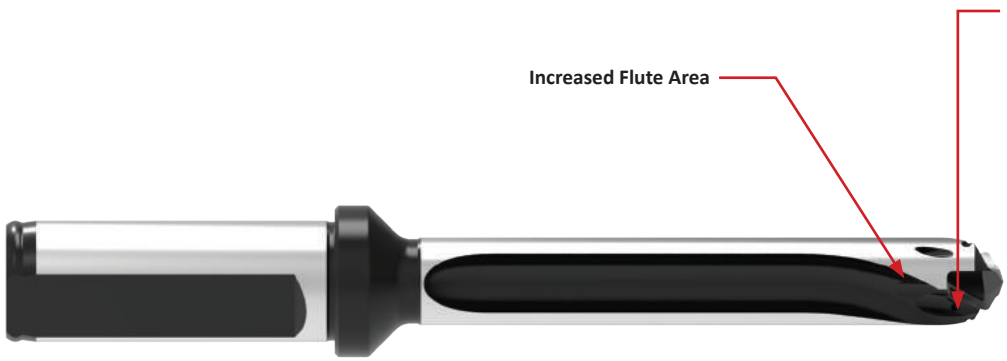
N - Non-ferrous Materials

- Designed for applications in 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

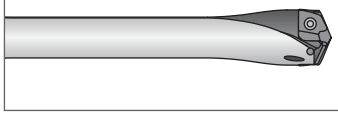


K - Cast Irons

- 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

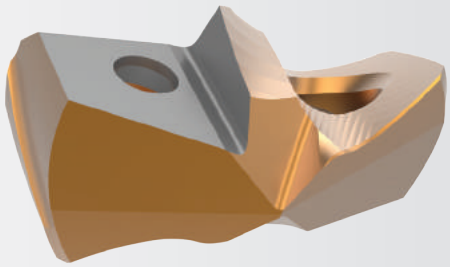


XT Pro Drill Holders

			**3xD, 5xD, 7xD, 10xD**
Straight flutes	Enhanced coolant inlets improve the coolant flow	Provides increased insert life	Available in 3xD, 5xD, 7xD, and 10xD

GEN3SYS XT Drilling System Information

GEN3SYS XT Drill Inserts



High Penetration Drilling Solutions

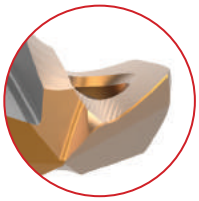
The unique geometry of the XT inserts provides excellent chip control. They are designed to increase hole quality, surface finish, and true position when compared to other competitive products. The helical margin design provides maximum durability and stability.

XT Inserts Connect with:

XT Pro holders | XT standard holders

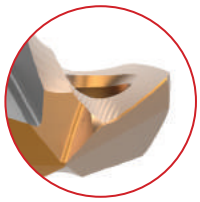
Standard Geometry

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



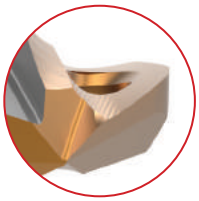
LR - Low Rake Geometry

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



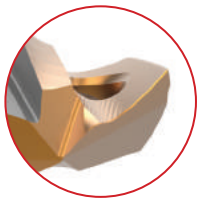
CI - Cast Iron Geometry

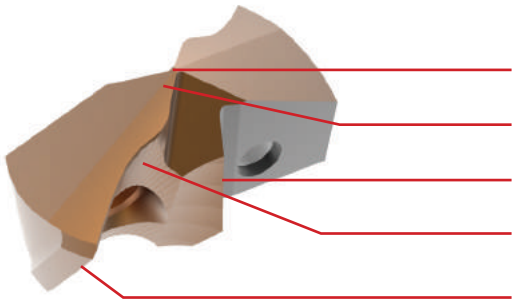
- Increases durability and tool life in ductile, nodular, and grey cast irons
- Available in C2 carbide



AS - Stainless Steel Geometry

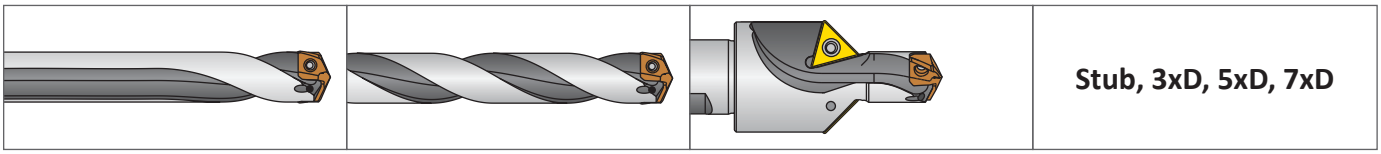
- Designed with a specific geometry to provide unmatched chip control and tool life in austenitic and PH stainless steels, as well as high temperature alloys such as Inconel, Hastelloy, and Titanium alloys
- Available in C2 carbide





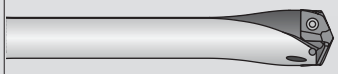
Coating	Features / Benefits
AM300®	• Increased heat resistance over AM200® coating • Up to 20% increased tool life over AM200 coating • Provides superior tool life at high penetration rates

XT Drill Standard Holders



Straight flutes	Helical flutes	Drill / chamfer style	Stub, 3xD, 5xD, 7xD
			Available in Stub, 3xD, 5xD, and 7xD

Insert Comparison and Assembly Information

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

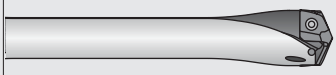
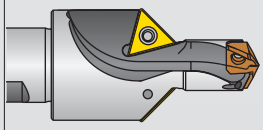
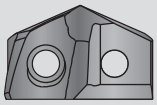
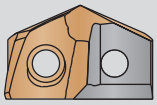
Step 1:
Align the flats on the GEN3SYS XT insert with the flats on the ears of the holder.

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

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

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

Holder Comparison and Overview

		 XT Pro Holders	 XT Standard Holders
Recommended for increased productivity		✓	
Straight flute		✓	✓
Helical flute			✓
Drill/chamfer option			✓
Available in 10xD length	10XD	✓	
Connects with XT Pro inserts		✓	✓
Connects with XT inserts		✓	✓

XT Pro Holders

Straight Flute

XT Holders

Straight Flute

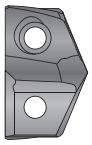
Helical Flute

Drill/Chamfer

Product Nomenclature

GEN3SYS XT Pro Drill Inserts

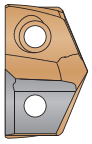
XT	P	11	–	11.00
1	2	3		4



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 **12** = 12 series **13** = 13 series **14** = 14 series **15** = 15 series **16** = 16 series **17** = 17 series **18** = 18 series **20** = 20 series **22** = 22 series **24** = 24 series **26** = 26 series **29** = 29 series **32** = 32 series	For complete list of diameter ranges by series, see contents page.

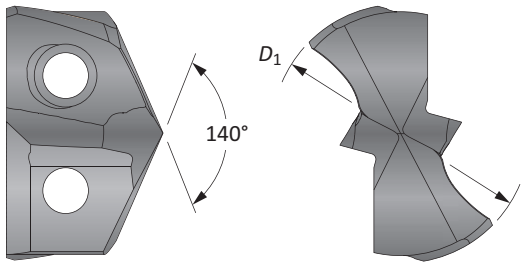
GEN3SYS XT Drill Inserts

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 **12** = 12 series **13** = 13 series **14** = 14 series **15** = 15 series **16** = 16 series **17** = 17 series **18** = 18 series **20** = 20 series **22** = 22 series **24** = 24 series **26** = 26 series **29** = 29 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

Product Nomenclature

GEN3SYS XT and XT Pro Drill Holders

HXT	03	12	S	–	20	FM
1	2	3	4		5	6

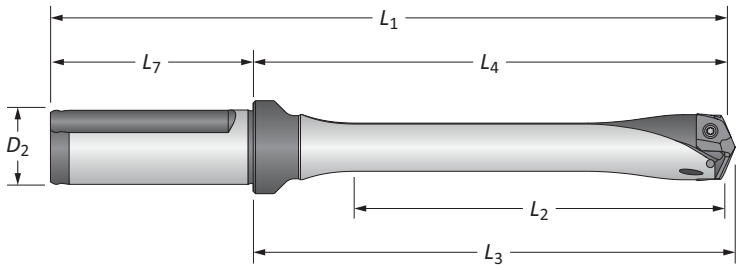
1. Holder	2. Length	3. Series	4. Flute
6 = XT standard holder **HXT** = XT Pro holder	**01** = Stub Length (standard only) **03** = 3x Diameter **05** = 5x Diameter **07** = 7x Diameter **10** = 10x Diameter (Pro only)	**11** = 11 series **12** = 12 series **13** = 13 series **14** = 14 series **15** = 15 series **16** = 16 series **17** = 17 series **18** = 18 series **20** = 20 series **22** = 22 series **24** = 24 series **26** = 26 series **29** = 29 series **32** = 32 series	**S** = Straight **H** = Helical **C45** = Drill/Chamfer (both helical and drill/chamfer options available for XT standard only)

5. Shank Diameter		6. Shank Style
Imperial (inch)	**Metric (mm)**	**F** = Flanged with flat
063 = 5/8"	**16** = 16mm	**FM** = Flanged metric with flat
075 = 3/4"	**20** = 20mm	**C** = Cylindrical (no flat)
100 = 1"	**25** = 25mm	**CM** = Cylindrical metric (no flat)
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.

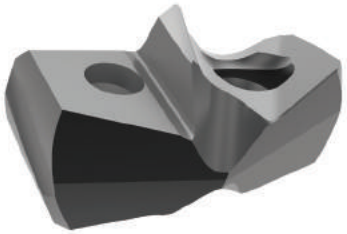
Reference Key

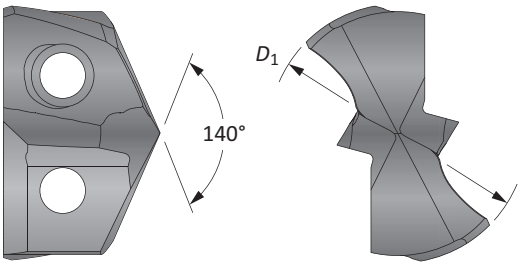
Symbol	Attribute
D_2	Shank diameter
D_5	Step diameter (drill/chamfer)
L_1	Overall length
L_2	Drill depth
L_3	Holder reference length
L_4	Holder body length
L_5	Step length (drill/chamfer)
L_7	Shank length
P_1	Rear pipe tap (XT standard)



GEN3SYS XT Pro Drill Inserts

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

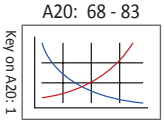




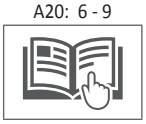
Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.4331	11.00	**XTP11-11.00**	**XTK11-11.00**	**XTN11-11.00**
7/16	0.4375	11.11	**XTP11-11.11**	**XTK11-11.11**	**XTN11-11.11**
–	0.4409	11.20	**XTP11-11.20**	**XTK11-11.20**	**XTN11-11.20**
–	0.4449	11.30	**XTP11-11.30**	**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
Key on A20: 1



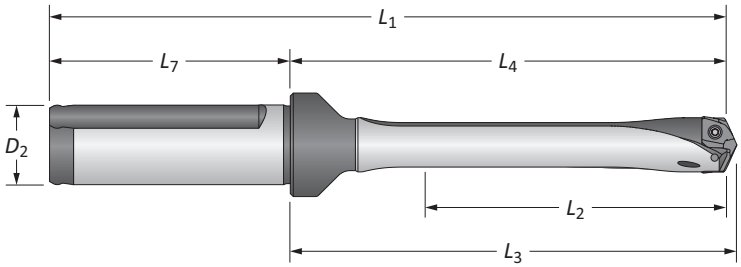
A20: 6 - 9



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**

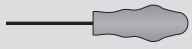
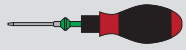
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

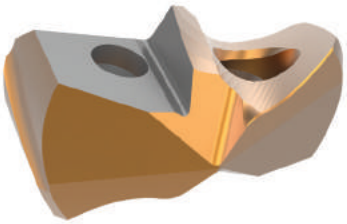
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

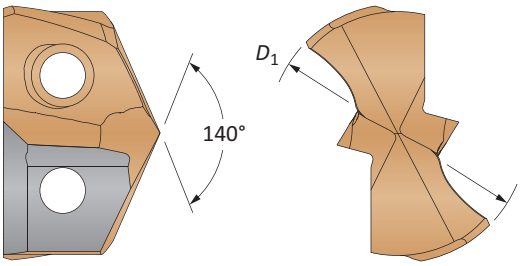
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
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**

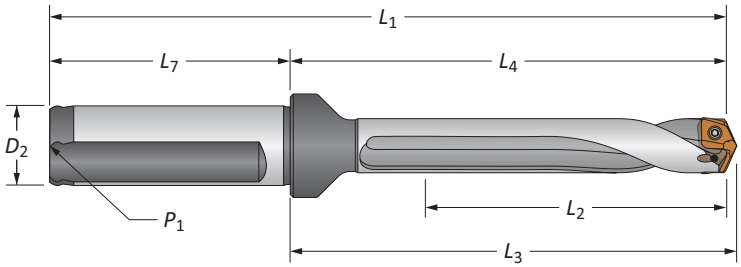
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

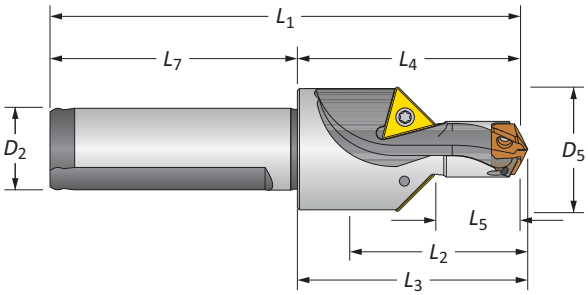
11 Series | Diameter Range: 0.4331" - 0.4723" (11.00mm - 11.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
	Straight	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**
	Helical	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**

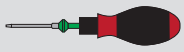
*Thread to BSP and ISO 7-1



Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
	61/64	21/32	15/16	1-43/64	1-3/4	3-35/64	1-7/8	5/8	**60111C45-063F**	TCMT-110204
	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)

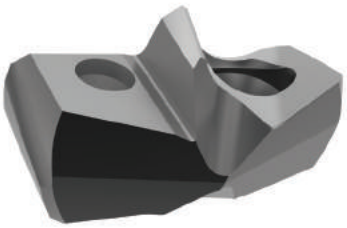
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

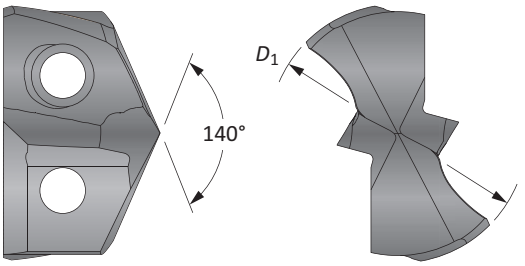
Chamfer inserts sold separately in multiples of 10 | Screws sold in multiples of 10

ⓘ = Imperial (in)
ⓜ = Metric (mm)

GEN3SYS XT Pro Drill Inserts

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





Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	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**

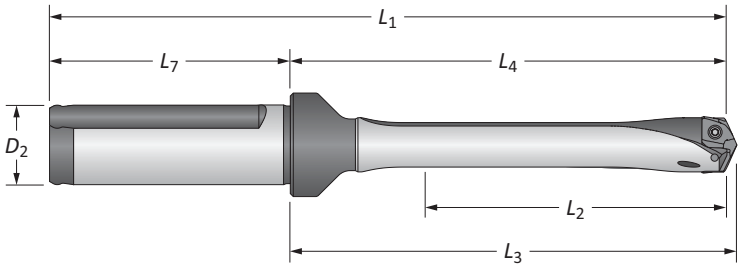
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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**

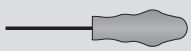
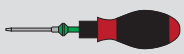
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
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

 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)

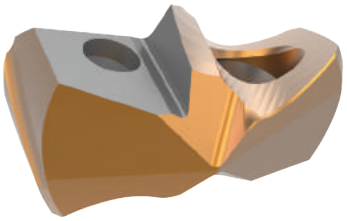
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

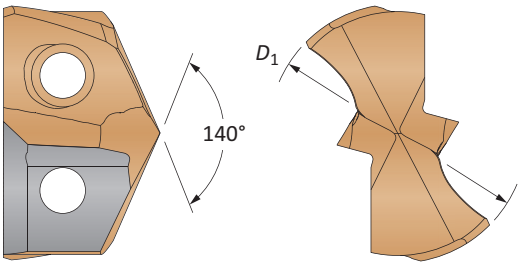
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
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**

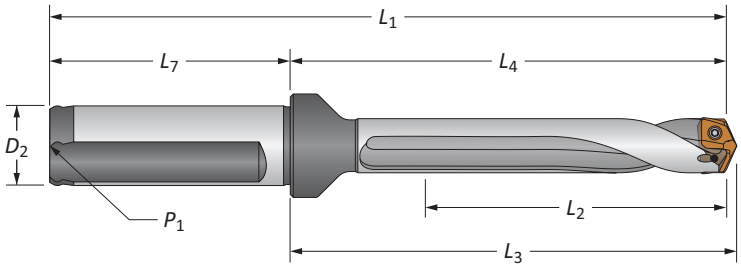
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

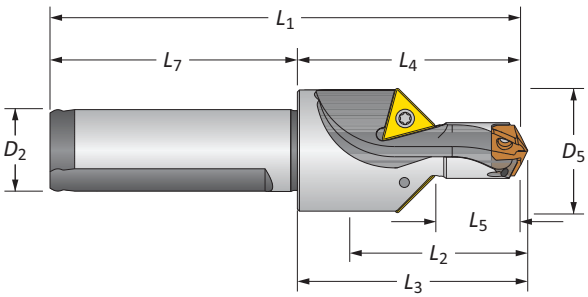
12 Series | Diameter Range: 0.4724" - 0.5117" (12.00mm - 12.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
i	Straight	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**
	Helical	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**
m	Straight	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**
	Helical	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**

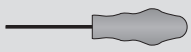
*Thread to BSP and ISO 7-1



Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
i	31/32	45/64	63/64	1-45/64	1-25/32	3-47/64	2-1/32	3/4	**60112C45-075F**	TCMT-110204
m	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)

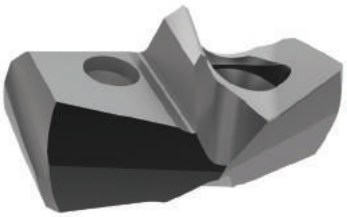
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

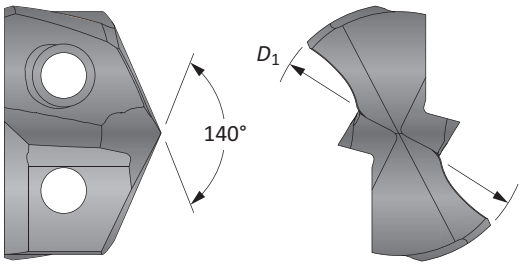
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

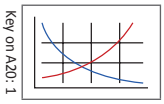




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.5118	13.00	**XTP13-13.00**	**XTK13-13.00**	**XTN13-13.00**
33/64	0.5156	13.10	**XTP13-13.10**	**XTK13-13.10**	**XTN13-13.10**
–	0.5197	13.20	**XTP13-13.20**	**XTK13-13.20**	**XTN13-13.20**
–	0.5236	13.30	**XTP13-13.30**	**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

A20: 68 - 83
Key on A20: 1

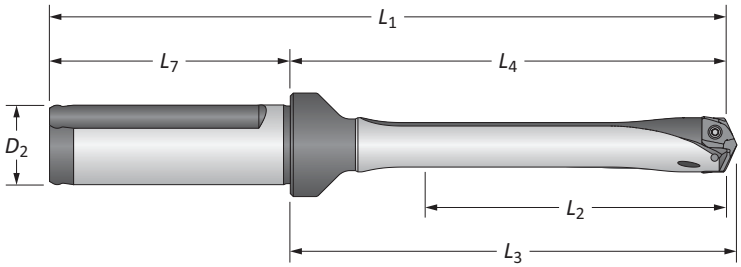


A20: 6 - 9

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**

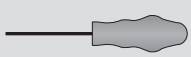
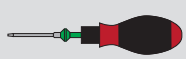
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

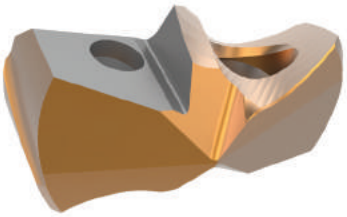
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

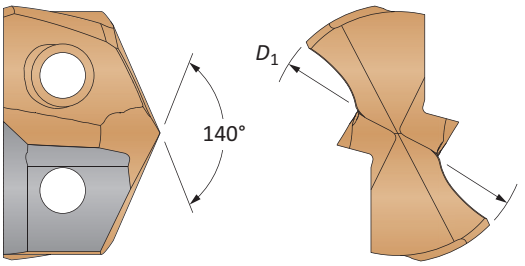
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	**Fractional Equivalent**	**D_1 inch**	**D_1 mm**	**Standard Part No.**	**Low Rake Part No.**	**Cast Iron Part No.**	**Stainless Part No.**
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**

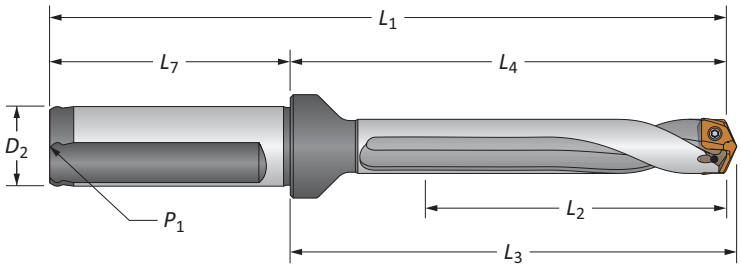
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

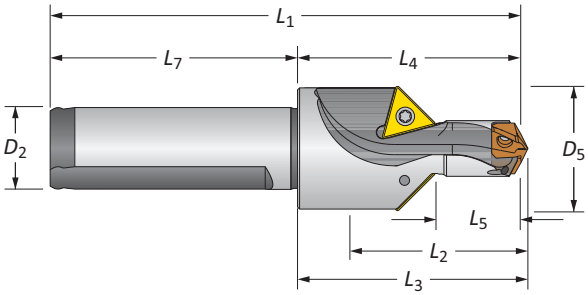
13 Series | Diameter Range: 0.5118" - 0.5511" (13.00mm - 13.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
i	Straight	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**
	Helical	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**
m	Straight	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**
	Helical	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**

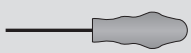
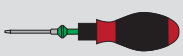
*Thread to BSP and ISO 7-1



Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
i	1-1/64	49/64	1	1-11/16	1-25/32	3-23/32	2-1/32	3/4	**60113C45-075F**	TCMT-110204
m	25.8	19.5	25.4	43.0	45.2	93.0	50.0	20.0	**60113C45-20FM**	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)

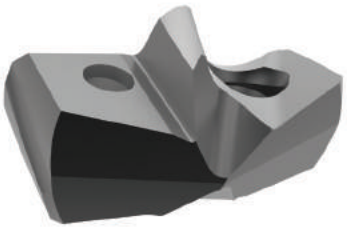
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

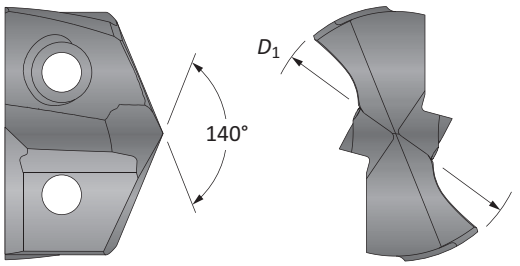
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

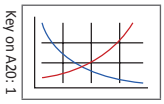




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.5512	14.00	**XTP14-14.00**	**XTK14-14.00**	**XTN14-14.00**
–	0.5551	14.10	**XTP14-14.10**	**XTK14-14.10**	**XTN14-14.10**
–	0.5591	14.20	**XTP14-14.20**	**XTK14-14.20**	**XTN14-14.20**
9/16	0.5625	14.29	**XTP14-14.29**	**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
Key on A20: 1

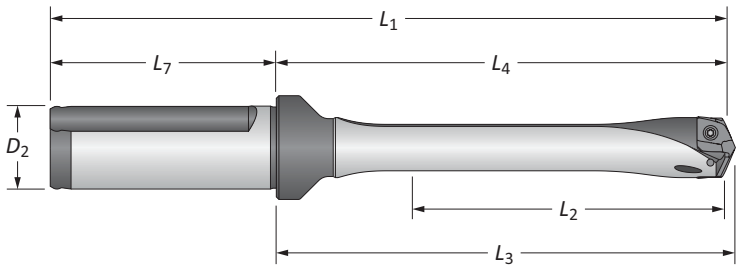


A20: 6 - 9

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**

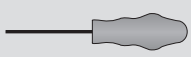
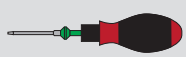
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

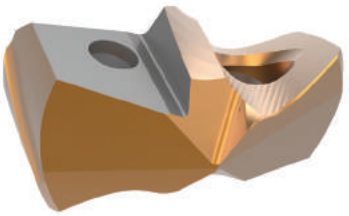
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

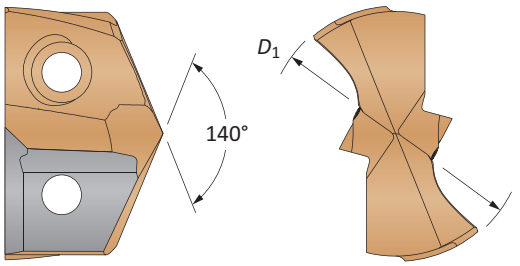
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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

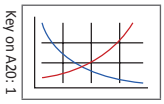




Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
C1 (K35)	–	0.5512	14.00	**7C114P-14**	**7C114P-14LR**	–	–
	9/16	0.5625	14.29	**7C114P-0018**	**7C114P-0018LR**	–	–
	–	0.5709	14.50	**7C114P-14.5**	**7C114P-14.5LR**	–	–
	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
Key on A20: 1

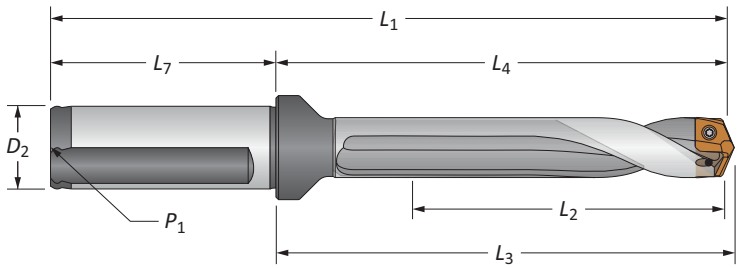


A20: 6 - 9

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 XT Standard Drill Insert Holders

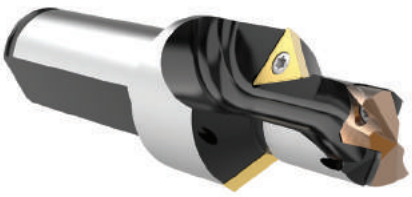
14 Series | Diameter Range: 0.5512” - 0.5905” (14.00mm - 14.99mm)

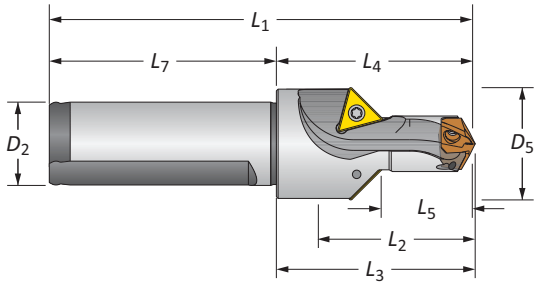


Straight and Helical

	Flute	Body Length	L_2	L_4	L_3	L_1	Shank L_7	D_2	P_1	Flat	Part No.
i	Straight	3xD	1-49/64	2-27/32	2-61/64	4-7/8	2-1/32	3/4	1/8	YES	**60314S-075F**
		5xD	2-61/64	4-1/32	4-1/8	6-1/16	2-1/32	3/4	1/8	YES	**60514S-075F**
		7xD	4-1/8	5-13/64	5-5/16	7-15/64	2-1/32	3/4	1/8	YES	**60714S-075F**
	Helical	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**
m	Straight	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**
	Helical	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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
i	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
m	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)

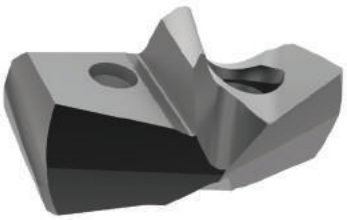
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

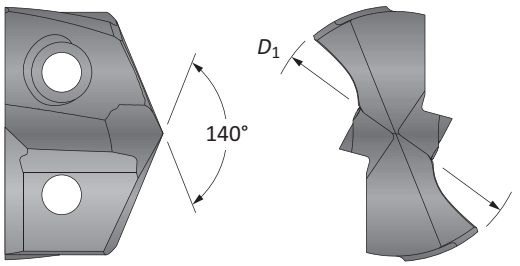
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

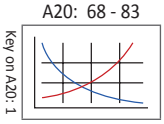




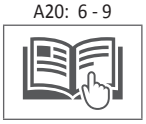
Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.5906	15.00	**XTP15-15.00**	**XTK15-15.00**	**XTN15-15.00**
19/32	0.5938	15.08	**XTP15-15.08**	**XTK15-15.08**	**XTN15-15.08**
–	0.5984	15.20	**XTP15-15.20**	**XTK15-15.20**	**XTN15-15.20**
–	0.6024	15.30	**XTP15-15.30**	**XTK15-15.30**	**XTN15-15.30**
–	0.6063	15.40	**XTP15-15.40**	**XTK15-15.40**	**XTN15-15.40**
33/64	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

A20: 68 - 83
Key on A20: 1



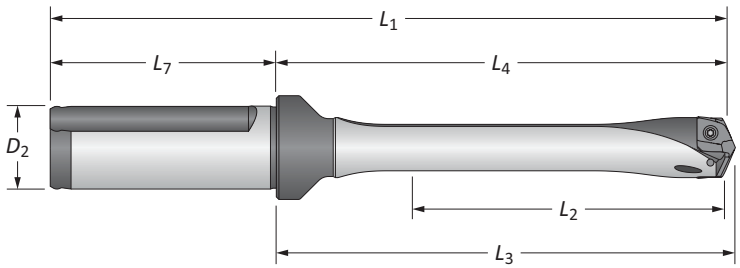
A20: 6 - 9



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**

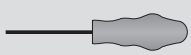
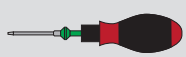
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

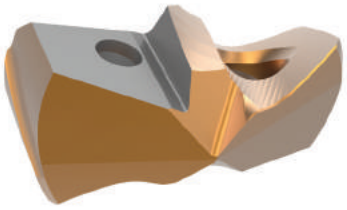
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

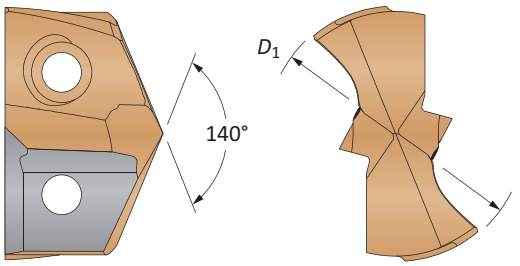
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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

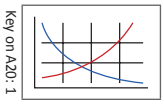




Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
C1 (K35)	–	0.5906	15.00	**7C115P-15**	**7C115P-15LR**	–	–
	19/32	0.5938	15.08	**7C115P-0019**	**7C115P-0019LR**	–	–
	–	0.6004	15.25	**7C115P-15.25**	**7C115P-15.25LR**	–	–
	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
Key on A20: 1

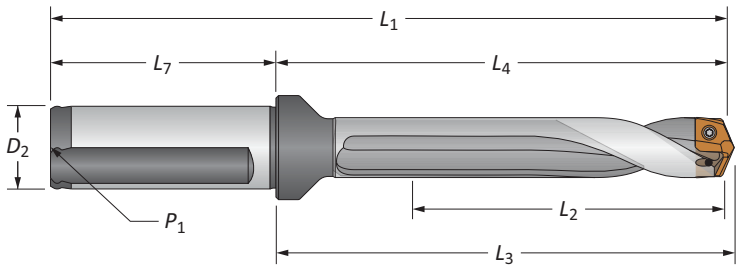


A20: 6 - 9

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 XT Standard Drill Insert Holders

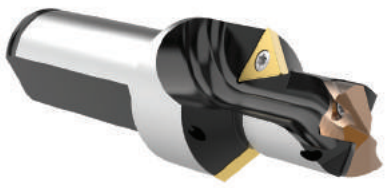
15 Series | Diameter Range: 0.5906" - 0.6298" (15.00mm - 15.99mm)

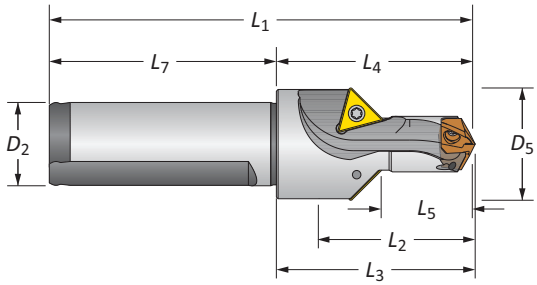


Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
i	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**
m	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**
	Helical	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

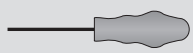
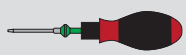




Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
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)

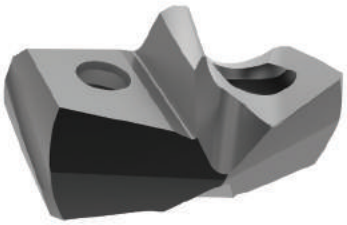
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

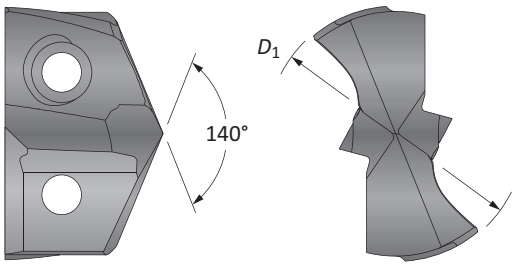
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

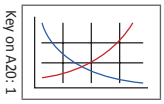




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.6299	16.00	**XTP16-16.00**	**XTK16-16.00**	**XTN16-16.00**
–	0.6331	16.08	**XTP16-16.08**	**XTK16-16.08**	**XTN16-16.08**
–	0.6378	16.20	**XTP16-16.20**	**XTK16-16.20**	**XTN16-16.20**
41/64	0.6406	16.27	**XTP16-16.27**	**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
Key on A20: 1

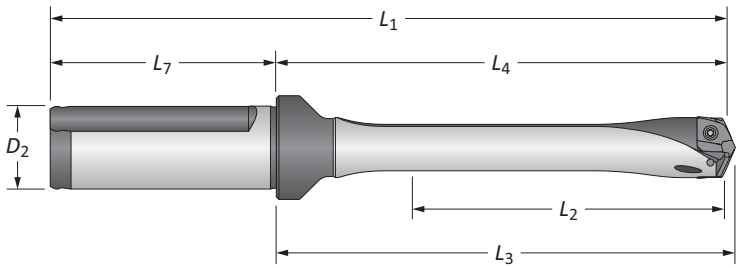


A20: 6 - 9

Sizes not shown are available upon request. When ordering, please follow the example below:	
Imperial:	0.5180”, Steel, 13 series = use Part No. **XTP13-16.16**
Metric:	13.16mm, Steel, 13 series = use Part No. **XTP13-16.16**

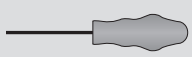
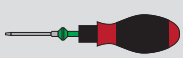
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

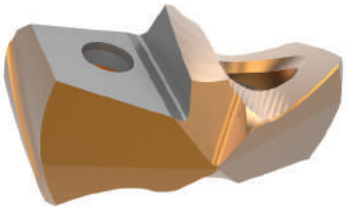
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

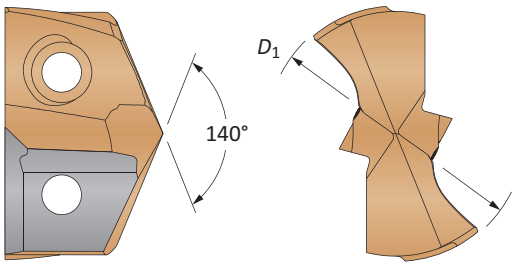
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
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**

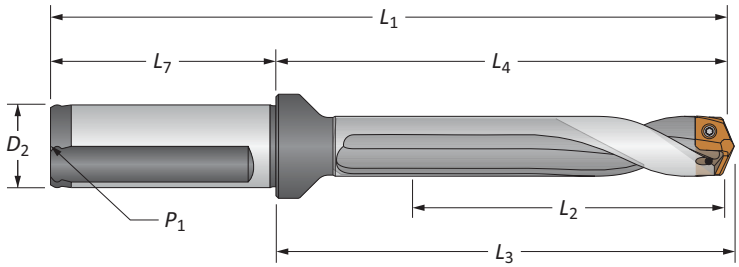
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

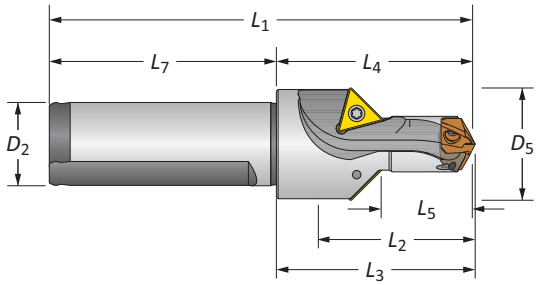
16 Series | Diameter Range: 0.6299” - 0.6692” (16.00mm - 16.99mm)



Straight and Helical

	Flute	Body Length	L_2	L_4	L_3	L_1	Shank L_7	D_2	P_1	Flat	Part No.
ⓘ	Straight	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**
	Helical	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**
ⓜ	Straight	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**
	Helical	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**

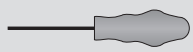
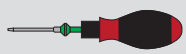
*Thread to BSP and ISO 7-1



Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	1-1/16	61/64	1-19/64	2	2-7/64	4-1/32	2-1/32	3/4	**60116C45-075F**	TCMT-110204
ⓜ	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)

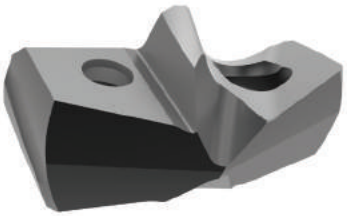
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

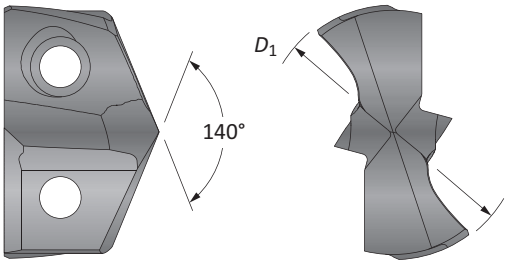
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

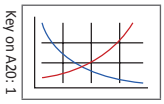




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.6693	17.00	**XTP17-17.00**	**XTK17-17.00**	**XTN17-17.00**
43/64	0.6719	17.07	**XTP17-17.07**	**XTK17-17.07**	**XTN17-17.07**
–	0.6732	17.10	**XTP17-17.10**	**XTK17-17.10**	**XTN17-17.10**
–	0.6772	17.20	**XTP17-17.20**	**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

A20: 68 - 83
Key on A20: 1

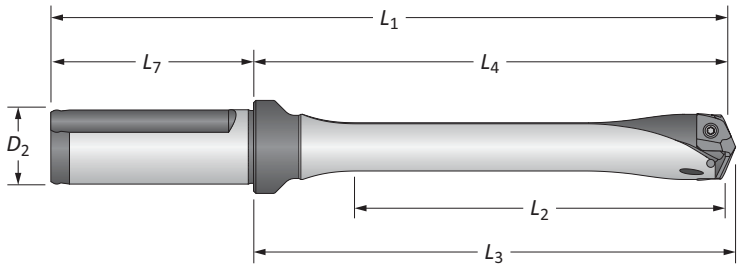


A20: 6 - 9

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**

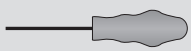
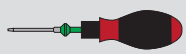
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	Straight	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	YES	**HXT0317S-075F**
		3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	NO	**HXT0317S-075C**
		5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	YES	**HXT0517S-075F**
		5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	NO	**HXT0517S-075C**
		7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	YES	**HXT0717S-075F**
		7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	NO	**HXT0717S-075C**
		10xD	7-5/64	8-17/64	8-3/8	10-19/64	2-1/32	3/4	YES	⚠ **HXT1017S-075F**
		10xD	7-5/64	8-17/64	8-3/8	10-19/64	2-1/32	3/4	NO	⚠ **HXT1017S-075C**
ⓜ	Straight	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

 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)

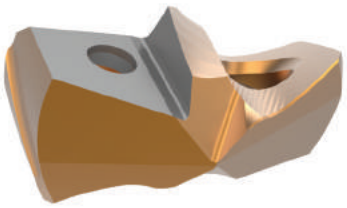
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

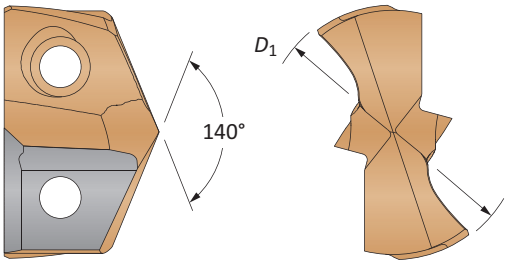
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
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**

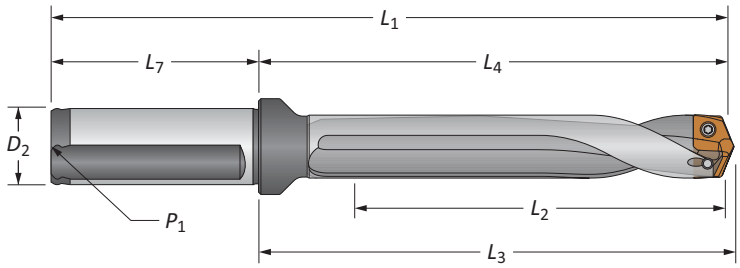
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

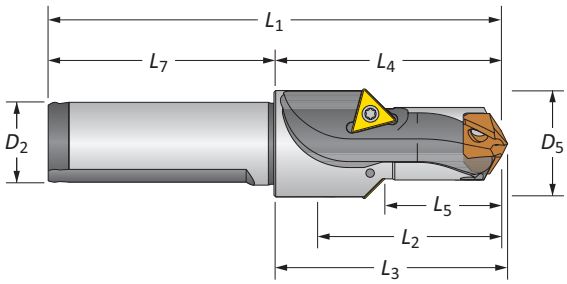
17 Series | Diameter Range: 0.6693” - 0.7086” (17.00mm - 17.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
ⓘ	Straight	3xD	2-1/8	3-19/64	3-27/64	5-21/64	2-1/32	3/4	1/8	YES	**60317S-075F**
		5xD	3-35/64	4-23/32	4-27/32	6-3/4	2-1/32	3/4	1/8	YES	**60517S-075F**
		7xD	4-61/64	6-9/64	6-1/4	8-11/64	2-1/32	3/4	1/8	YES	**60717S-075F**
	Helical	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**
ⓜ	Straight	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**
	Helical	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**

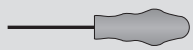
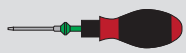
*Thread to BSP and ISO 7-1



Drill / Chamfer

	Step D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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)

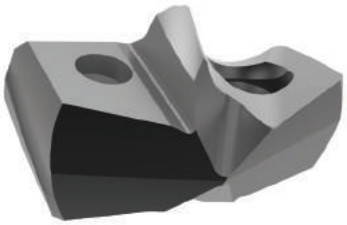
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

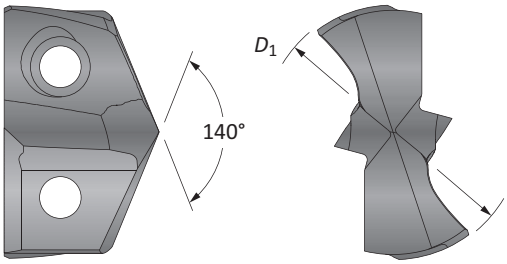
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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





Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	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**

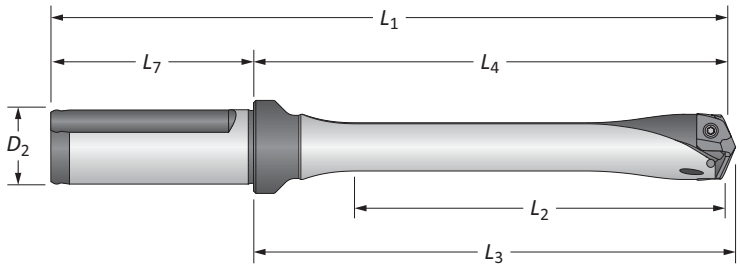
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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**

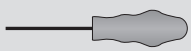
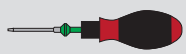
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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

 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)

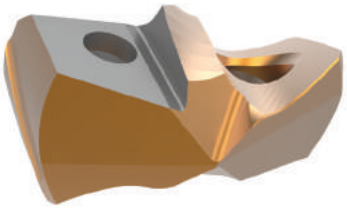
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

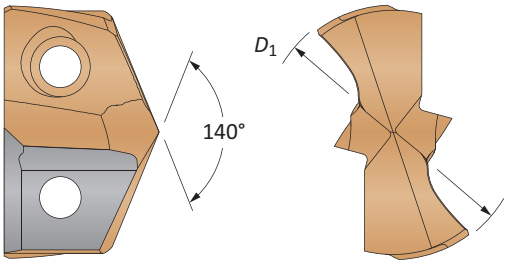
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
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**	–	–
	25/32	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**
	25/32	0.7813	19.85	**7C218P-0025**	**7C218P-0025LR**	**7C218P-0025CI**	**7C218P-0025AS**

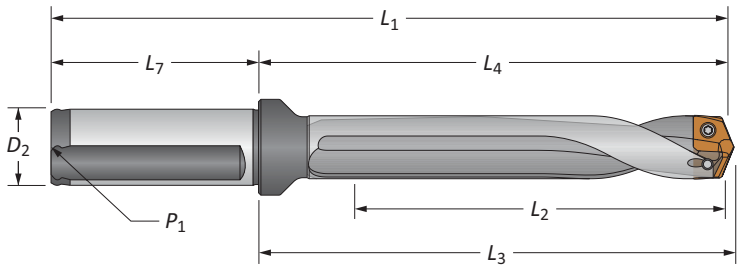
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

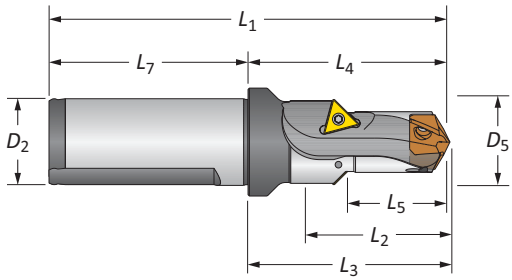
18 Series | Diameter Range: 0.7087” - 0.7873” (18.00mm - 19.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
ⓘ	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**
	Helical	Stub	22.0	56.0	58.8	112.0	56.0	25.0	1/8*	YES	**60118H-25FM**
		3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	YES	**60318H-25FM**
		3xD	60.0	94.0	96.8	150.0	56.0	25.0	1/8*	NO	**60318H-25CM**
		5xD	100.0	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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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
ⓜ	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)

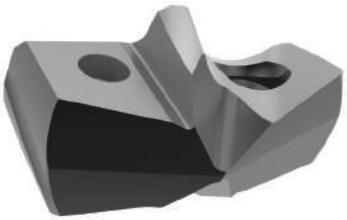
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

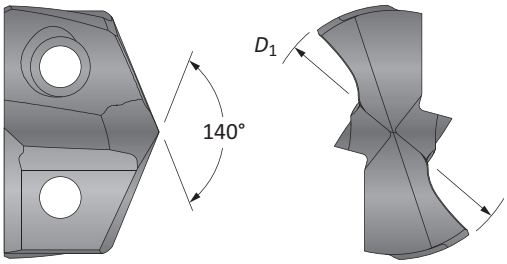
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

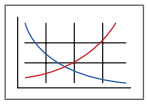




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	0.7874	20.00	**XTP20-20.00**	**XTK20-20.00**	**XTN20-20.00**
–	0.7913	20.10	**XTP20-20.10**	**XTK20-20.10**	**XTN20-20.10**
–	0.7953	20.20	**XTP20-20.20**	**XTK20-20.20**	**XTN20-20.20**
51/64	0.7969	20.24	**XTP20-20.24**	**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
Key on A20: 1

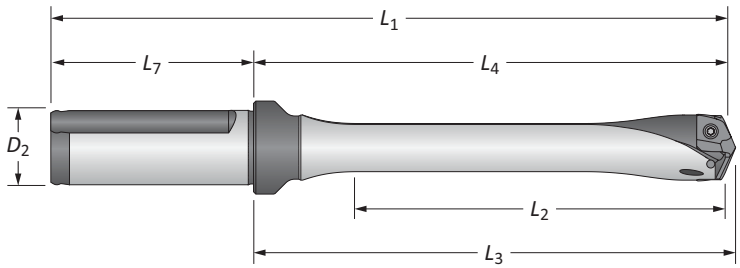


A20: 6 - 9

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	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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

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)

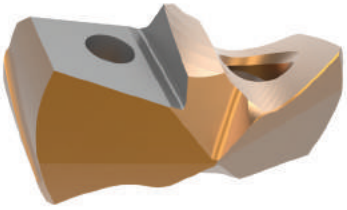
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

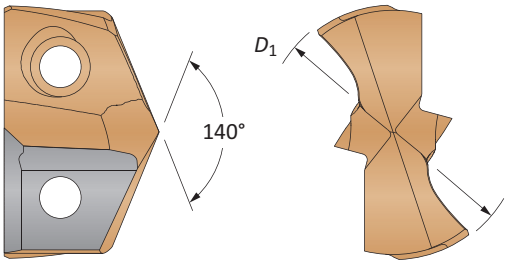
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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

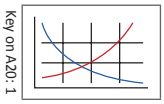




Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
C1 (K35)	–	0.7874	20.00	**7C120P-20**	**7C120P-20LR**	–	–
	51/64	0.7969	20.24	**7C120P-.796**	**7C120P-.796LR**	–	–
	–	0.8071	20.50	**7C120P-20.5**	**7C120P-20.5LR**	–	–
	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
Key on A20: 1

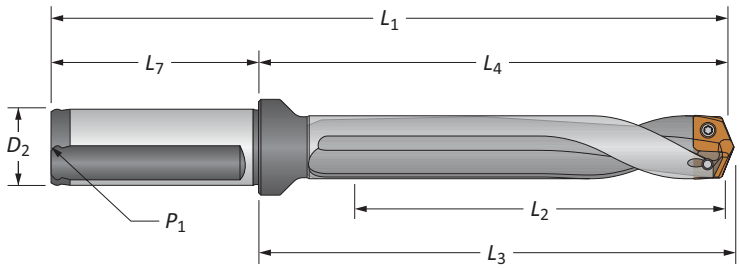


A20: 6 - 9

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 XT Standard Drill Insert Holders

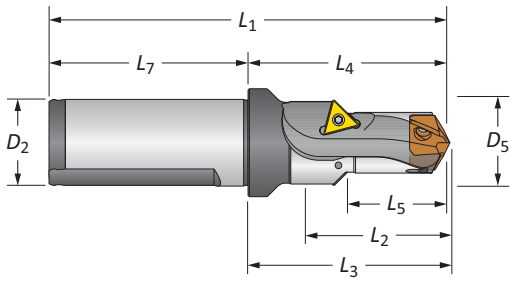
20 Series | Diameter Range: 0.7874” - 0.8660” (20.00mm - 21.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
i	Straight	3xD	2-19/32	3-15/16	4-3/64	6-7/32	2-9/32	1	1/8	YES	**60320S-100F**
		5xD	4-21/64	5-43/64	5-25/32	7-61/64	2-9/32	1	1/8	YES	**60520S-100F**
		7xD	6-1/16	7-13/32	7-33/64	9-11/16	2-9/32	1	1/8	YES	**60720S-100F**
	Helical	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**
m	Straight	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**
	Helical	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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
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

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)

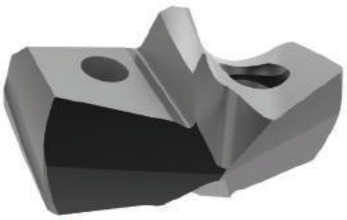
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

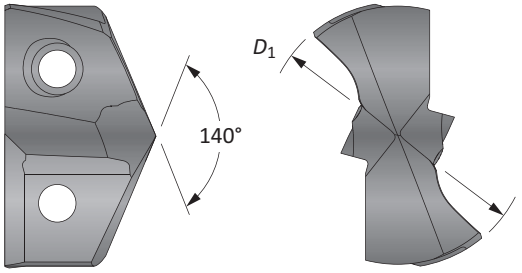
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

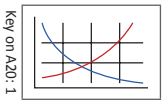




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No. P	Part No. K	Part No. N
–	0.8661	22.00	**XTP22-22.00**	**XTK22-22.00**	**XTN22-22.00**
–	0.8701	22.10	**XTP22-22.10**	**XTK22-22.10**	**XTN22-22.10**
–	0.8740	22.20	**XTP22-22.20**	**XTK22-22.20**	**XTN22-22.20**
7/8	0.8750	22.23	**XTP22-22.23**	**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
Key on A20: 1

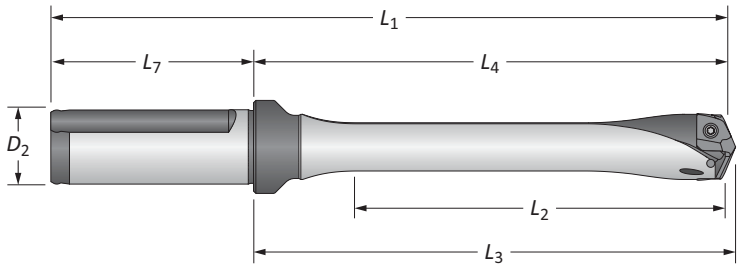


A20: 6 - 9

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**

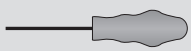
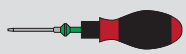
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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)

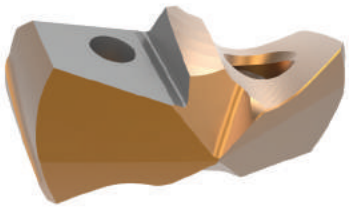
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

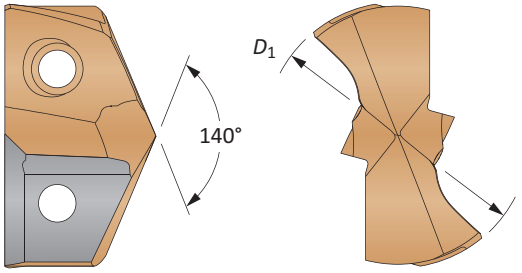
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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

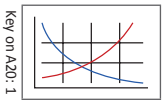




Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
C1 (K35)		0.8661	22.00	**7C122P-22**	**7C122P-22LR**	–	–
	7/8	0.8750	22.23	**7C122P-0028**	**7C122P-0028LR**	–	–
	57/64	0.8906	22.61	**7C122P-.890**	**7C122P-.890LR**	–	–
		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**	–	–
	15/16	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**
	15/16	0.9375	23.81	**7C222P-0030**	**7C222P-0030LR**	**7C222P-0030CI**	**7C222P-0030AS**

Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1

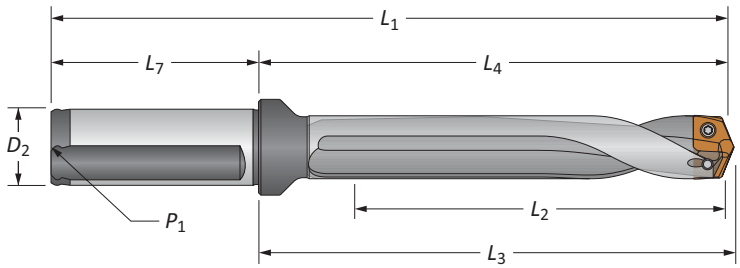


A20: 6 - 9

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 XT Standard Drill Insert Holders

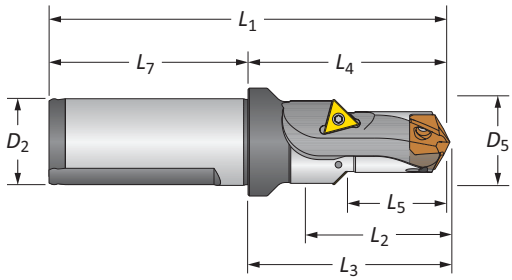
22 Series | Diameter Range: 0.8661" - 0.9448" (22.00mm - 23.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
i	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**
m	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**
	Helical	Stub	27.0	60.1	63.0	116.1	56.0	25.0	1/8*	YES	**60122H-25FM**
		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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
i	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
m	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)

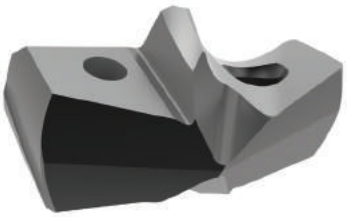
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

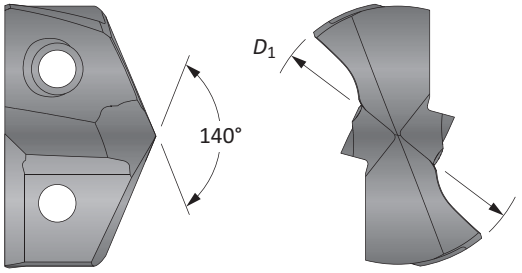
i = Imperial (in)
m = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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





Insert			Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	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**

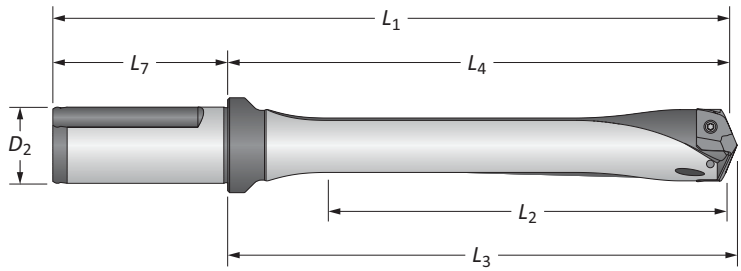
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Flat	Part No.
ⓘ	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**
ⓜ	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

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)

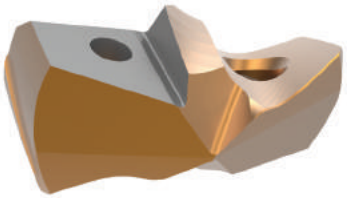
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

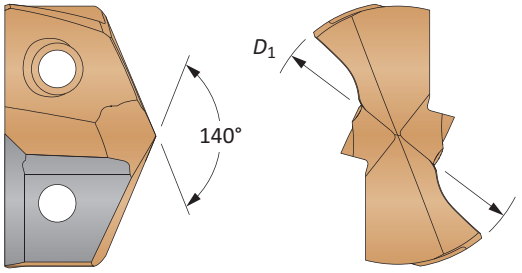
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
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**

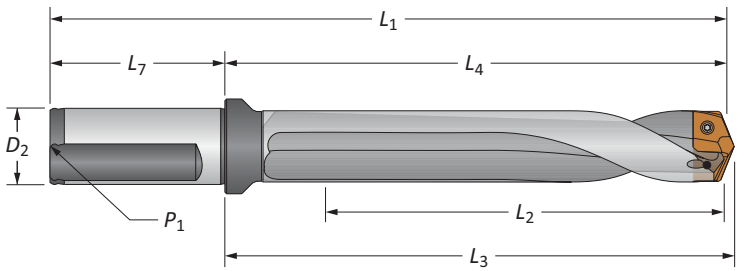
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

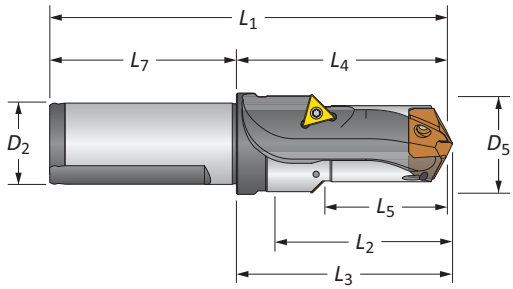
24 Series | Diameter Range: 0.9449” - 1.0235” (24.00mm - 25.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
ⓘ	Straight	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**
	Helical	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**
ⓜ	Straight	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**
	Helical	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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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)

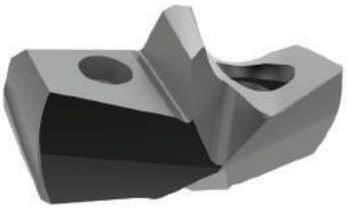
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

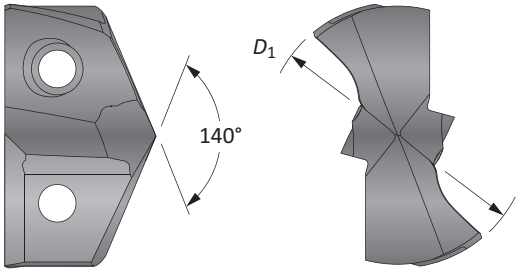
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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





Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	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

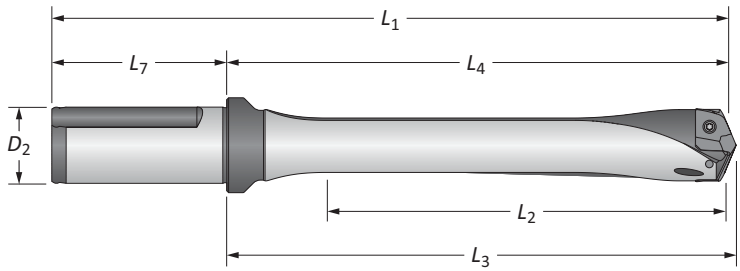
A20: 68 - 83
Key on A20: 1

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

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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)

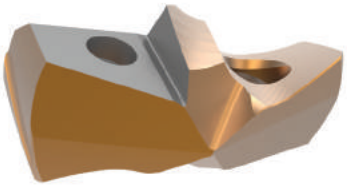
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

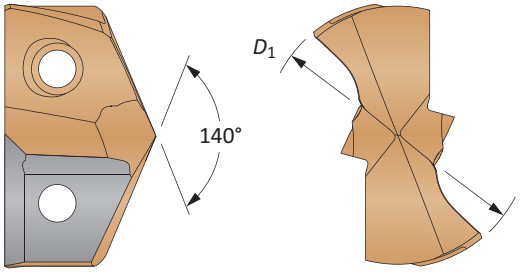
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
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**

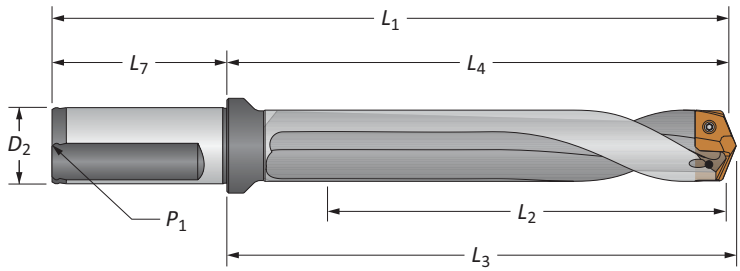
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

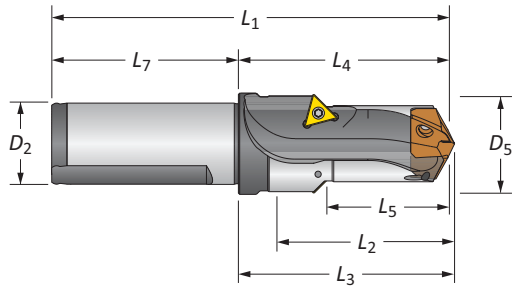
26 Series | Diameter Range: 1.0236" - 1.1416" (26.00mm - 28.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Shank Flat	Part No.
ⓘ	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**
	Helical	Stub	32.0	72.9	75.7	132.9	60.0	32.0	1/8*	YES	**60126H-32FM**
		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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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
ⓜ	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)

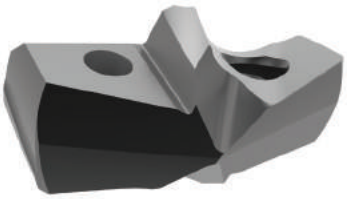
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

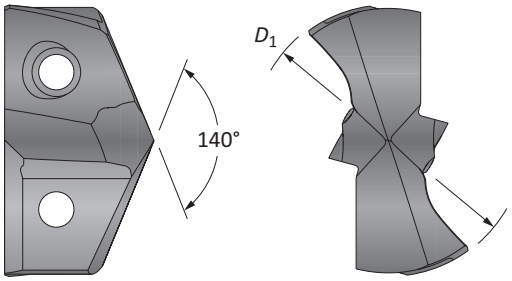
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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





Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	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

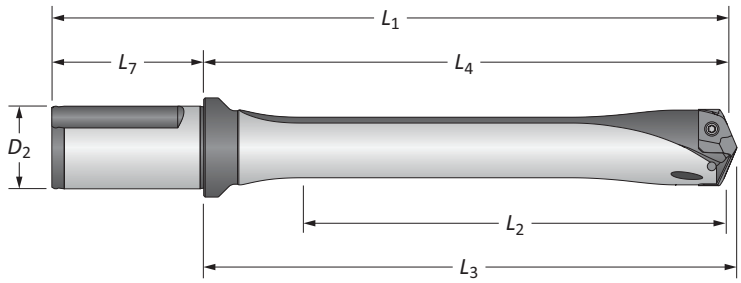
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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**

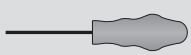
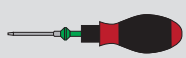
GEN3SYS XT Pro Drill Insert Holders

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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)

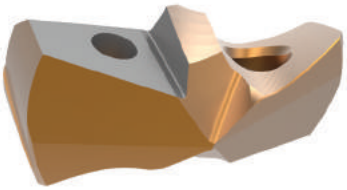
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

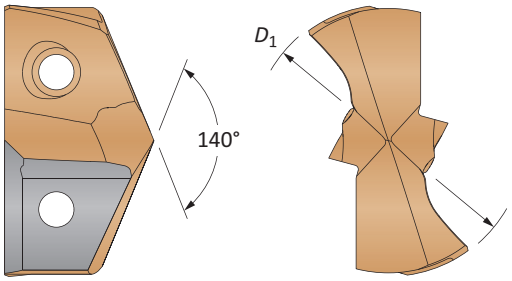
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert							
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	Standard Part No.	Low Rake Part No.	Cast Iron Part No.	Stainless Part No.
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**

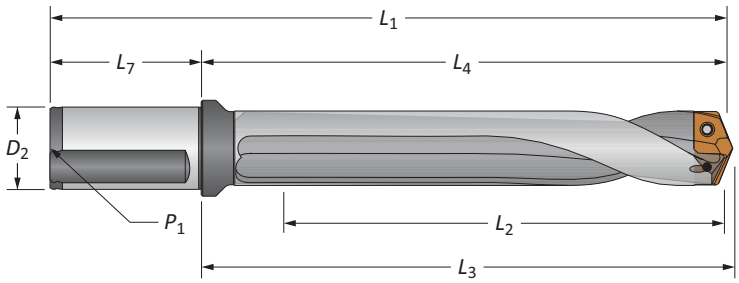
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

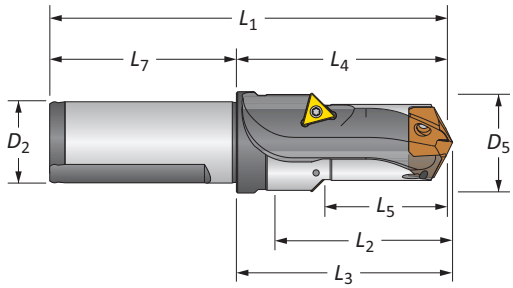
29 Series | Diameter Range: 1.1417" - 1.2597" (29.00mm - 31.99mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
ⓘ	Straight	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**
	Helical	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**
ⓜ	Straight	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**
	Helical	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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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
ⓜ	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)

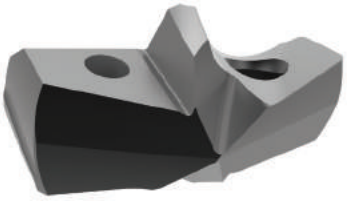
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

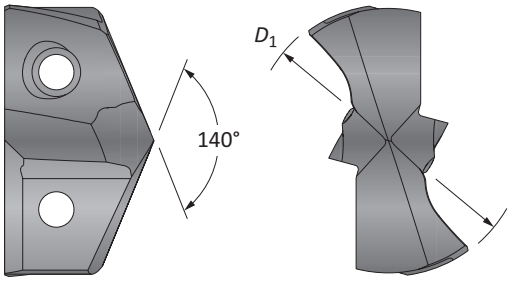
ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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

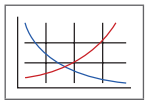




Insert					
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.
			P	K	N
–	1.2598	32.00	XTP32-32.00	XTK32-32.00	XTN32-32.00
–	1.2638	32.10	XTP32-32.10	XTK32-32.10	XTN32-32.10
1-17/64	1.2657	32.15	XTP32-32.15	XTK32-32.15	XTN32-32.15
–	1.2677	32.20	XTP32-32.20	XTK32-32.20	XTN32-32.20
–	1.2717	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

A20: 68 - 83
Key on A20: 1

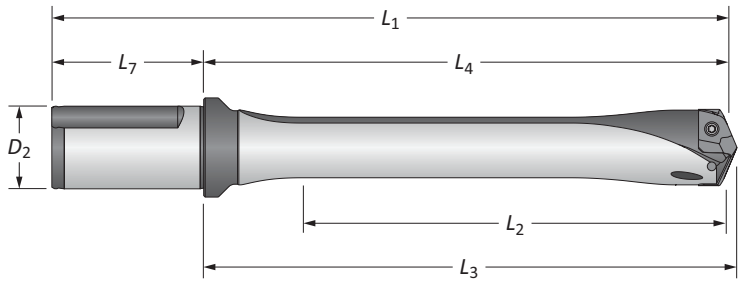


A20: 6 - 9

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

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



	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank Flat	Part No.
ⓘ	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**
ⓜ	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)

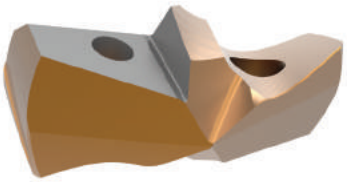
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength

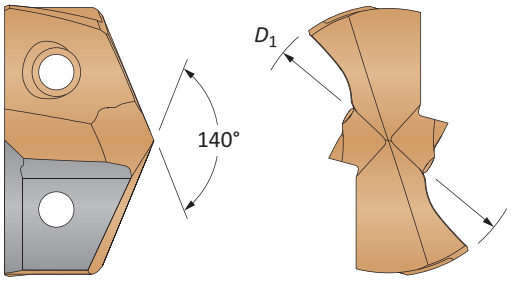
⚠ **WARNING** Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical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

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

GEN3SYS XT Drill Inserts

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





Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
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**	–	–
	1-3/8	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**
	1-3/8	1.3750	34.93	**7C232P-0112**	**7C232P-0112LR**	**7C232P-0112CI**	**7C232P-0112AS**
	–	1.3780	35.00	**7C232P-35**	**7C232P-35LR**	**7C232P-35CI**	**7C232P-35AS**

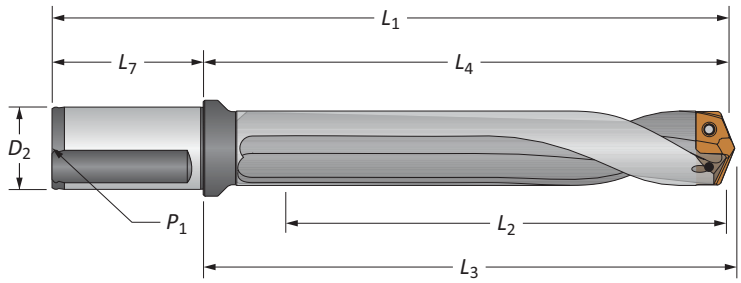
Inserts sold in multiples of 1

A20: 68 - 83
Key on A20: 1
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 XT Standard Drill Insert Holders

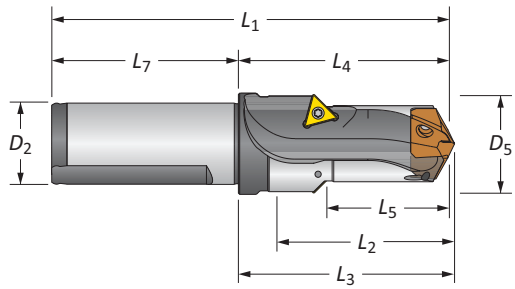
32 Series | Diameter Range: 1.2598” - 1.3780” (32.00mm - 35.00mm)



Straight and Helical

	Flute	Length	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Shank P_1	Flat	Part No.
ⓘ	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**
	Helical	Stub	38.0	90.7	94.2	160.7	70.0	40.0	1/4*	YES	**60132H-40FM**
		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 D_5	Step L_5	Body L_2	Body L_4	Body L_3	Body L_1	Shank L_7	Shank D_2	Part No.	Chamfer Insert
ⓘ	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 μ = 0.14 and develop 90% of ultimate yield strength

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

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
		225 - 275	350	0.007	0.008	0.009	0.010
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	450	0.010	0.011	0.012	0.013
		175 - 225	410	0.009	0.010	0.011	0.012
		225 - 275	350	0.008	0.009	0.010	0.011
		275 - 325	300	0.007	0.008	0.009	0.010
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	415	0.010	0.011	0.012	0.013
		175 - 225	380	0.009	0.010	0.011	0.012
		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
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	250	0.008	0.009	0.010	0.011
		300 - 350	225	0.006	0.007	0.008	0.009
		350 - 400	200	0.005	0.006	0.007	0.008
	Structural Steel A36, A285, A516, etc.	100 - 150	410	0.010	0.011	0.012	0.013
		150 - 250	330	0.008	0.009	0.010	0.011
		250 - 350	305	0.007	0.008	0.009	0.010
	Tool Steel H-13, H-21, A-4, 0-2, 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.

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

	Stub, 3xD, 5xD		7xD		10xD	
Series	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.
- 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.

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

	Stub, 3xD, 5xD		7xD		10xD	
Series	**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
		225 - 275	310	0.006	0.007	0.008	0.009
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	390	0.009	0.010	0.011	0.012
		175 - 225	355	0.008	0.009	0.010	0.011
		225 - 275	310	0.007	0.008	0.009	0.010
		275 - 325	265	0.006	0.007	0.008	0.009
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	375	0.009	0.010	0.011	0.012
		175 - 225	345	0.008	0.009	0.010	0.011
		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
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	230	0.007	0.008	0.009	0.010
		300 - 350	205	0.006	0.006	0.007	0.008
		350 - 400	185	0.005	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, 0-2, 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:**

- 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.

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

	Stub, 3xD, 5xD		7xD		10xD	
Series	**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
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.

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

Feed Rate (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
0.006	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

	Stub, 3xD, 5xD		7xD		10xD	
Series	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
		225 - 275	107	0.18	0.20	0.23	0.25
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	137	0.25	0.28	0.30	0.33
		175 - 225	125	0.23	0.25	0.28	0.30
		225 - 275	107	0.20	0.23	0.25	0.28
		275 - 325	91	0.18	0.20	0.23	0.25
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	126	0.25	0.28	0.30	0.33
		175 - 225	116	0.23	0.25	0.28	0.30
		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
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	76	0.20	0.23	0.25	0.28
		300 - 350	69	0.15	0.18	0.20	0.23
		350 - 400	61	0.13	0.18	0.18	0.20
	Structural Steel A36, A285, A516, etc.	100 - 150	125	0.25	0.28	0.30	0.33
		150 - 250	101	0.20	0.23	0.25	0.28
		250 - 350	93	0.18	0.20	0.23	0.25
	Tool Steel H-13, H-21, A-4, 0-2, S-3, etc.	150 - 200	81	0.15	0.18	0.18	0.20
		200 - 250	62	0.13	0.15	0.15	0.18
S	**High Temp Alloy** Hastelloy B, Inconel 600, etc.	140 - 220	40	0.15	0.18	0.18	0.20
		220 - 310	30	0.13	0.15	0.15	0.18
	Titanium Alloy	140 - 220	43	0.13	0.15	0.18	0.20
		220 - 310	34	0.10	0.13	0.15	0.18
	Aerospace Alloy S82	185 - 275	50	0.10	0.10	0.12	0.14
		275 - 350	41	0.09	0.09	0.10	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

⚠ 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.

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

Feed Rate (mm/rev) by Diameter									
15 series 15.00 - 15.99	16 series 16.00 - 16.99	17 series 17.00 - 17.99	18 series 18.00 - 19.99	20 series 20.00 - 21.99	22 series 22.00 - 23.99	24 series 24.00 - 25.99	26 series 26.00 - 28.99	29 series 29.00 - 31.99	32 series 32.00 - 35.00
0.38	0.41	0.43	0.48	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.41	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.38	0.41	0.43	0.48	0.53	0.56	0.58	0.61	0.64	0.66
0.36	0.38	0.41	0.46	0.48	0.51	0.53	0.56	0.58	0.61
0.33	0.36	0.38	0.42	0.46	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.38	0.41	0.42	0.46	0.48	0.51	0.53
0.36	0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64
0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.38	0.41	0.43	0.46	0.48	0.51	0.53
0.36	0.38	0.41	0.46	0.51	0.53	0.56	0.58	0.61	0.64
0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58	0.61
0.30	0.33	0.36	0.41	0.46	0.48	0.51	0.53	0.56	0.58
0.25	0.28	0.30	0.36	0.38	0.41	0.43	0.46	0.48	0.51
0.23	0.25	0.28	0.33	0.36	0.38	0.41	0.43	0.46	0.48
0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46	0.48	0.51
0.25	0.28	0.28	0.30	0.33	0.36	0.38	0.41	0.43	0.46
0.23	0.25	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43
0.33	0.38	0.38	0.43	0.48	0.53	0.56	0.58	0.61	0.64
0.30	0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56	0.58
0.28	0.30	0.33	0.36	0.38	0.43	0.48	0.51	0.53	0.56
0.20	0.23	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41
0.18	0.20	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38
0.20	0.23	0.23	0.25	0.28	0.28	0.30	0.30	0.33	0.36
0.18	0.20	0.20	0.23	0.25	0.25	0.28	0.28	0.30	0.33
0.20	0.23	0.23	0.25	0.28	0.28	0.30	0.30	0.33	0.33
0.18	0.20	0.20	0.23	0.25	0.25	0.28	0.28	0.30	0.30
0.15	0.16	0.18	0.18	0.20	0.22	0.24	0.26	0.28	0.31
0.14	0.15	0.16	0.16	0.18	0.20	0.22	0.24	0.26	0.29
0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41	0.43
0.18	0.20	0.23	0.25	0.28	0.30	0.33	0.36	0.38	0.41
0.15	0.18	0.18	0.20	0.20	0.23	0.23	0.25	0.25	0.28
0.13	0.15	0.15	0.18	0.18	0.20	0.20	0.23	0.23	0.25
0.10	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
		260 - 320	116	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

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

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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
		225 - 275	95	0.16	0.19	0.21	0.23
	Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 175	119	0.23	0.26	0.28	0.30
		175 - 225	108	0.21	0.23	0.26	0.28
		225 - 275	95	0.19	0.21	0.23	0.26
		275 - 325	81	0.16	0.19	0.21	0.23
	Alloy Steel 4140, 5140, 8640, etc.	125 - 175	114	0.23	0.26	0.28	0.30
		175 - 225	105	0.21	0.23	0.26	0.28
		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
	High Strength Alloy 4340, 4330V, 300M, etc.	225 - 300	70	0.19	0.21	0.23	0.26
		300 - 350	63	0.14	0.16	0.19	0.21
		350 - 400	56	0.12	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, 0-2, 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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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.

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

	Stub, 3xD, 5xD		7xD		10xD	
Series	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:

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

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 • DIA^2**
   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
	375 - 425 BHN	1.15
High Temperature Alloys	–	1.44
Titanium Alloy	–	0.72
Stainless Steels	135 - 275 BHN	0.94
	30 - 45 RC	1.08
Cast Iron	100 - 200 BHN	0.50
	200 - 300 BHN	1.08
Copper Alloy	20 - 80 RB	0.43
	80 - 100 RB	0.72
Aluminum Alloy	–	0.22
Magnesium Alloy	–	0.16

Notes

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

Tap Drill Information and Formulas | Metric (mm)

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

Formulas

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

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

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

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

5. **Tool Power = ((mm/rev) • RPM • K_m • 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:

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

Material Constants

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

Notes

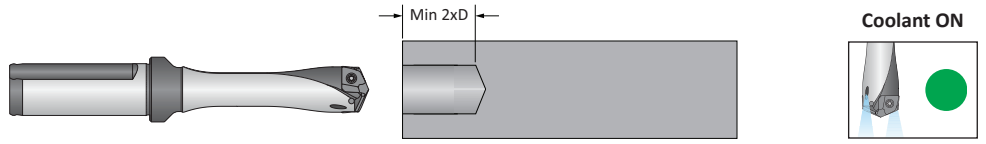
- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The .075mm probable mean oversize hole condition is based on optimum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

Deep Hole Drilling Guidelines

GEN3SYS XT Pro | 10xD Holders

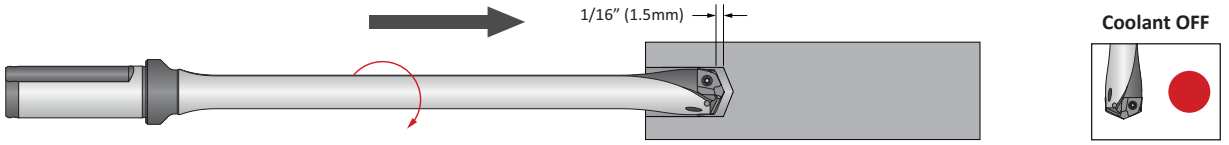
1. Pilot Hole
100 % RPM
100% IPR (mm/rev)

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.



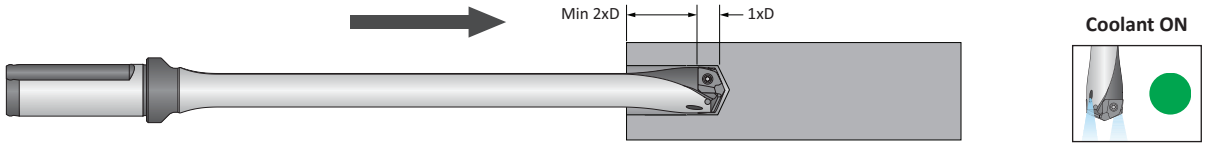
2. Feed-in
50 RPM max
12 IPM (300 mm/min)

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.



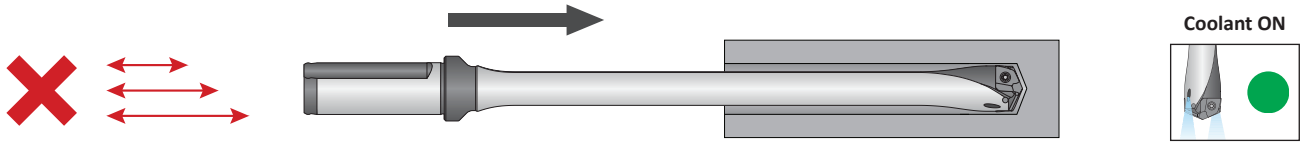
3. Deep Hole Transition Drilling
50 % RPM
75% IPR (mm/rev)

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.



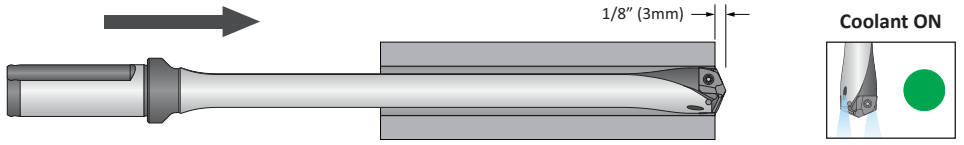
4. Deep Hole Drilling - Blind
100% RPM
100% IPR (mm/rev)

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



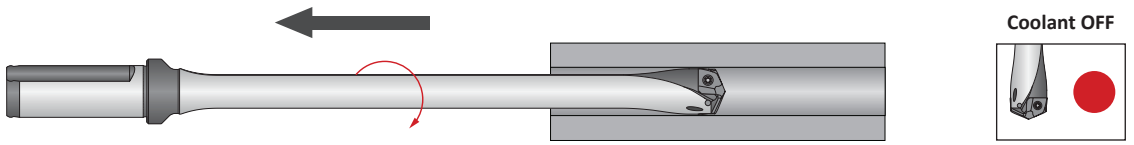
5. Deep Hole Drilling - at Breakout
50% RPM
75% IPR (mm/rev)

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



6. Drill Retract
50 RPM max

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



⚠ 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	Oversize 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	• Align spindle and turret or tailstock. • Repair spindle.
Use of low rigidity machine tools		2	3	4			7		9	10			13	14						20	• 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	• Provide additional support for the work piece. • Reduce penetration rate to fall within the physical limits of the machine or setup (**NOTICE:** Do not reduce feed below threshold of good chip formation).
Flood coolant, low coolant pressure, or low coolant volume	1				5	6		8		10		12				16	17	18	19		• Run coolant through tool holder when drilling greater than 1xD. • Increase coolant pressure and volume through the tool holder. • Reduce penetration rate to fall within the coolant limitations (**NOTICE:** Do not reduce feed below threshold of good chip formation). • Add a peck cycle to help clear chips.
Interrupted cuts. Entry or exit surfaces that are not perpendicular to the spindle (draft angles, parting lines, curved or stepped surfaces, cross holes, and cast or forged surfaces)				4			7		9	10	11		13	14	15	16	17	18			• Pre-mill (spot face) entry or exit surface to remove interruption. • Decrease feed as much as 50% through entry or exit interruption. • Use short holders in low impact entry cuts.
Material harder than expected or running tools beyond recommended speed	1				5	6				10		12						18			• Reduce speed. • Increase coolant pressure and volume. • Improve coolant condition by use of quality products and regular maintenance.
Poor material micro-structure or foreign particles (forgings and castings that have not been normalized or annealed, poorly prepared steel, flame cut parts, and sand casting)				4		6				10		12	13					18			• Compare performance of other tools for similar wear problems, which may indicate poor micro-structure. Anneal or 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		• 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			• 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.

Notes

Notes

Guaranteed Test / Demo Application Form

Distributor PO #	

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:
- ☐ Excellent
- ☐ Good
- ☐ Poor

Orientation:
- ☐ Vertical
- ☐ Horizontal

Tool Rotating:
- ☐ Yes
- ☐ No

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

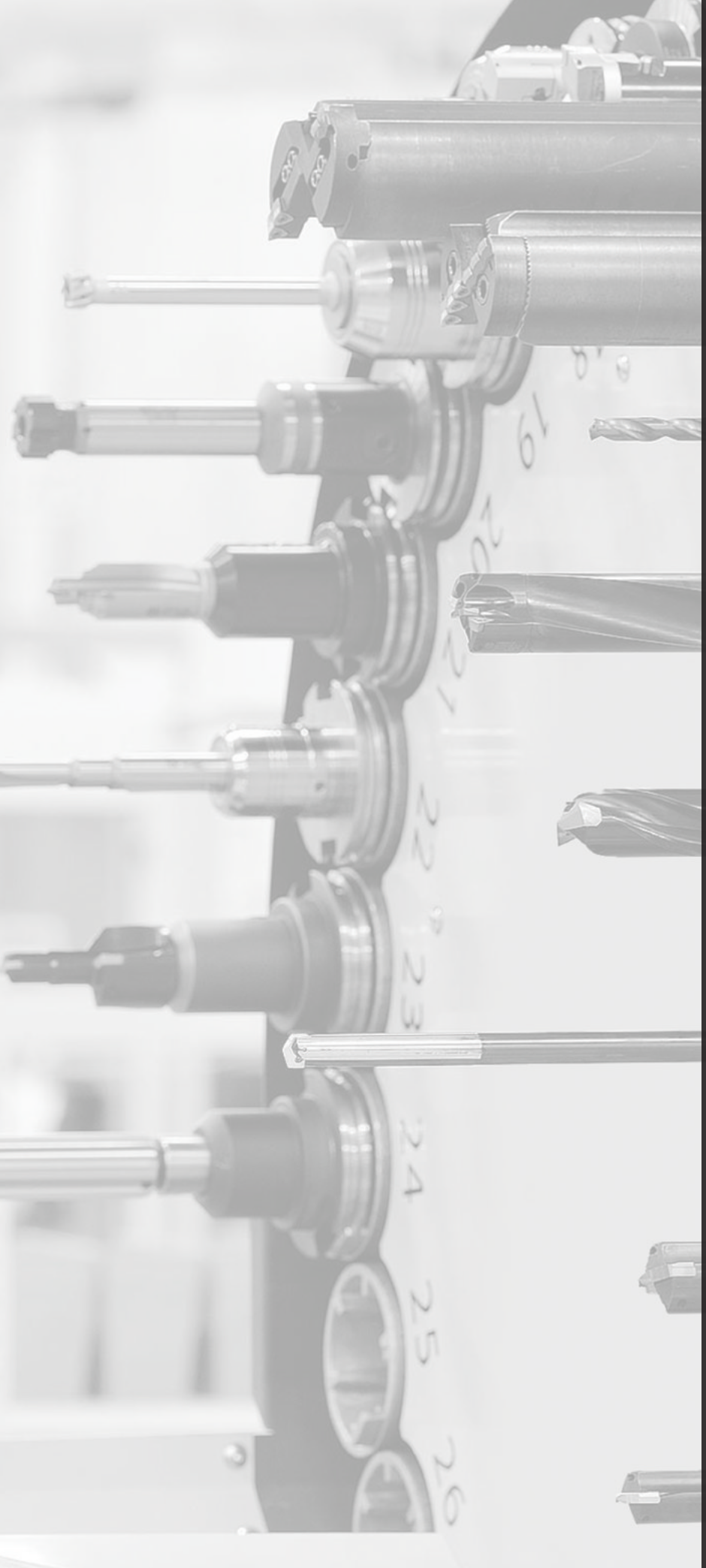
QTY	Item Number

QTY	Item Number

ALLIED MACHINE & ENGINEERING

Allied Machine & Engineering
120 Deeds Drive
Dover, OH 44622

Telephone: (330) 343-4283
Toll Free USA & Canada: (800) 321-5537
Fax: (330) 602-3400



ALLIED MACHINE & ENGINEERING

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

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

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Certified Management System

Allied Machine & Engineering
Registered to ISO 9001
10001329

United States

Allied Machine & Engineering
120 Deeds Drive
Dover OH 44622
United States

Phone:
+1.330.343.4283

Fax:
+1.330.602.3400

Toll Free USA and Canada:
800.321.5537

Toll Free USA and Canada:
800.223.5140

Allied Machine & Engineering
485 W Third Street
Dover OH 44622
United States

Phone:
+1.330.343.4283

Fax:
+1.330.364.7666
(Engineering Dept.)

Toll Free USA and Canada:
800.321.5537

Europe

Allied Machine & Engineering Co. (Europe) Ltd.
93 Vantage Point
Pensnett Estate
Kingswinford
West Midlands
DY6 7FR England

Phone:
+44 (0) 1384.400900

Wohlhaupter GmbH
Maybachstrasse 4
Postfach 1264
72636 Frickenhausen
Germany

Phone:
+49 (0) 7022.408.0

Fax:
+49 (0) 7022.408.212

Asia

Wohlhaupter India Pvt. Ltd.
B-23, 2nd Floor
B Block Community Centre
Janakpuri, New Delhi - 110058
India

Phone:
+91 (0) 11.41827044

Your local Allied Machine representative:

ALLIED MACHINE & ENGINEERING

www.alliedmachine.com

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