ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing

Boring

Reaming

Burnishing

Threading

Specials

GEN3SYS® XT & XT Pro

DRILLING

Replaceable Insert Drilling System

SECTION

A20

GEN3SYS® XT & XT Pro

GEN3SYS® XT and XT Pro

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

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

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.

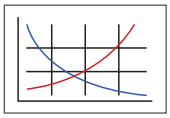
NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

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 drilling

Coolant-Through Option
Indicates that the product is coolant through

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

GEN3SYS® XT and XT Pro Drilling System Contents

Introduction Information

Drill Series

Recommended Cutting Data

WHY SHOULD YOU
GO WITH THE **PRO**?
GEN3SYS® XT **Pro**

- ✓ Increase your penetration rates
- ✓ ISO-specific geometries
- ✓ Improved chip evacuation
- ✓ Increased coolant flow to the cutting zone
- ✓ AM420 coating increases heat resistance
- ✓ AM440 coating increases abrasion resistance

THAT'S WHY YOU SHOULD
GO WITH THE **PRO**.

www.alliedmachine.com | 1.330.343.4283

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 17.25 mm diameter hole to a 20 mm 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 20 mm depth
- Tool life = **2,100 holes**

The Advantage:

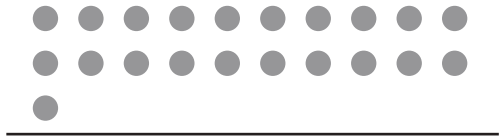
The GEN3SYS XT Pro increased the tool life from 1,000 holes to 2,100 holes.

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

HOLDER DESIGN

Drill deeper holes

The XT Pro holders are available up to 12xD.

- ***This lets you take advantage of the XT Pro insert benefits in deep hole applications.***

Increase your tool life

The coolant configuration increases coolant flow and directs additional coolant to the cutting zone.

- ***This increases tool life with all XT Pro inserts.***

Competitive Test Results

TEST RESULTS

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

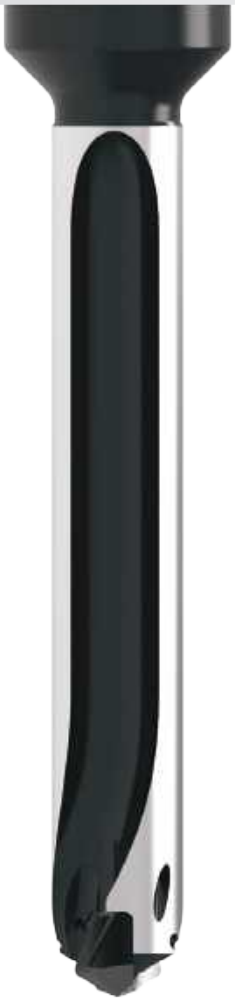
The Parameters:

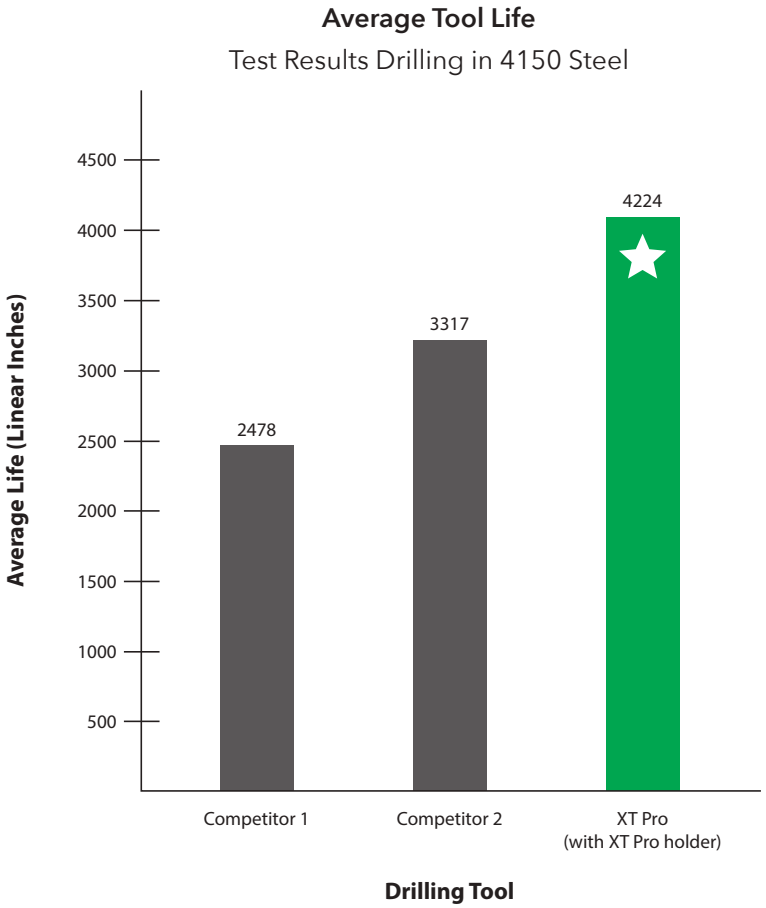
- Hole Diameter = 0.748" (19 mm)
- Depth of Cut = 1-1/2" (38.1 mm)
- Coolant = 300 PSI
- Speed = 1583 RPM
- Feed = 22.16 inch/min (563 mm/min)

The Results:

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

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





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

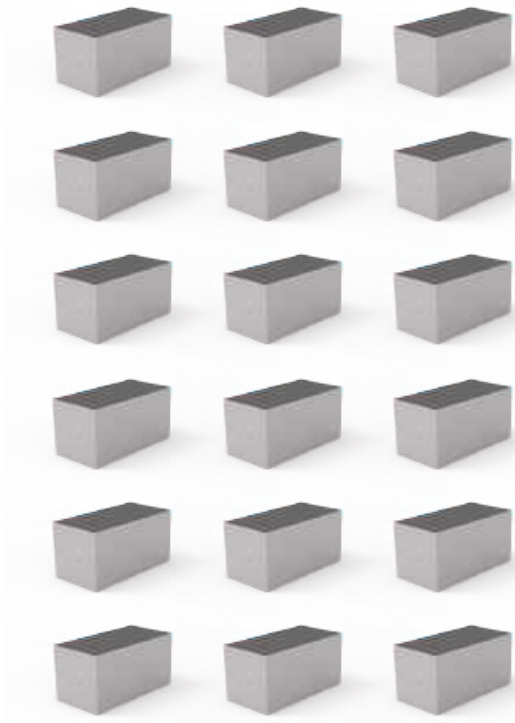
The XT Pro replaceable tip system provides other benefits in addition to the increase in tool life over the solid carbide drill:

- 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 setup times.
- Further benefit in setup 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)

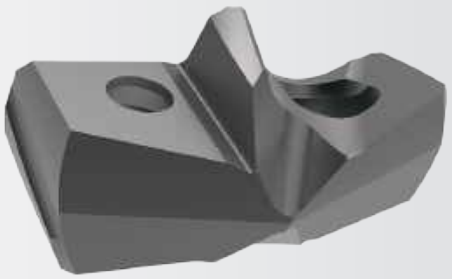
XT Pro Tool Life
(number of holes = 390)



INCREASE in
6x tool life

GEN3SYS XT Pro Drilling System Information

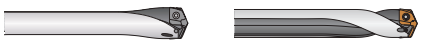
GEN3SYS XT Pro Drill Inserts



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 setup times so you can immediately increase your productivity.

XT Pro Inserts Connect with:



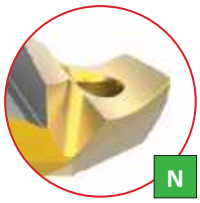
XT Pro holders | GEN3SYS holders

P - Steels

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

N - Nonferrous 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 buildup.

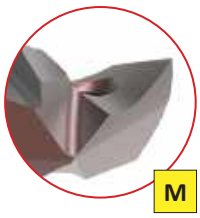


K - Cast Irons

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

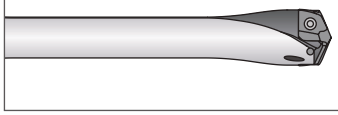
M - Stainless Steels*

- Designed for all 300 series, 400 series, Super Duplex Stainless steels, and other hard-to-machine materials in the ISO M group.
- Geometry optimized for improved chip formation while drilling at high penetration rates.
- Substrate chosen to provide balance of toughness and wear resistance in difficult applications.
- Allied's AM460 coating provides industry-leading tool life in stainless steels.



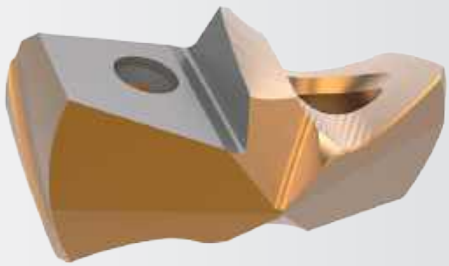
***Available in 12-32 series only.**

XT Pro Drill Holders

			**3xD, 5xD, 7xD, 10xD, 12xD**
Straight flutes	Enhanced coolant inlets improve the coolant flow	Provides increased insert life	Available in 3xD, 5xD, 7xD, 10xD, and 12xD

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 | GEN3SYS 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

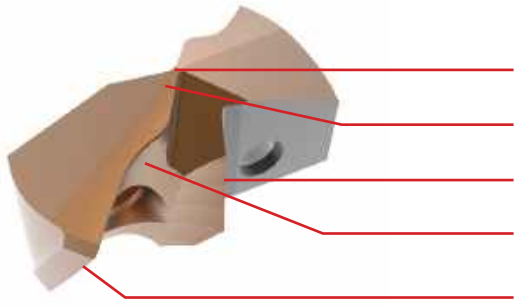
- The toughest XT geometry available.
- Designed for harder steels and less than ideal machining applications.
- Available in C1 or C2 carbide.

CI - Cast Iron Geometry

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

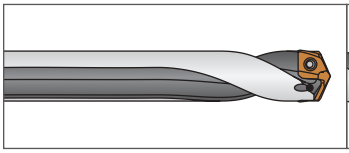
AS - Stainless Steel Geometry

- 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.

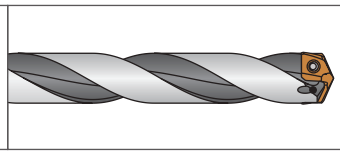


Coating	Features / Benefits
AM300®	• Increased heat resistance over AM200® coating. • Up to 20% increased tool life over AM200 coating. • Provides superior tool life at high penetration rates.

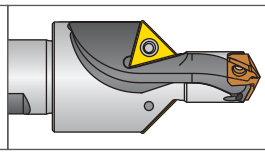
GEN3SYS Holders



Straight flutes



Helical flutes

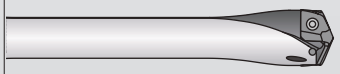


Drill / chamfer style

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 GEN3SYS holders		✓	✓

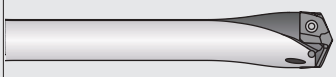
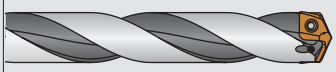
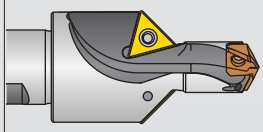
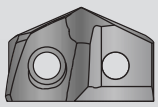
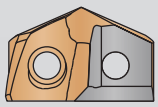
Step 1:
Align the flats on the GEN3SYS XT insert with the flats on the ears of the holder.

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

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

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

Holder Comparison and Overview

		XT Pro Holders	GEN3SYS Holders
Recommended for increased productivity		✓	
Straight flute		✓	✓
Helical flute			✓
Drill/chamfer option			✓
Available in 12xD length	12XD	✓	
Connects with XT Pro inserts		✓	✓
Connects with XT inserts		✓	✓

XT Pro Holders

Straight Flute

GEN3SYS Holders

Straight Flute

Helical Flute

Drill/Chamfer

Product Nomenclature

GEN3SYS XT Pro Drill Inserts

XT	P	11	–	11.00
1	2	3		4

1. XT Pro Drill Insert

XT = XT Pro insert

2. ISO Material / Geometry

P = Steel
K = Cast iron
N = Nonferrous
M = Stainless steel*

*Available in 12-32 series only.

3. Series

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

4. Diameter (mm)

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

7 = XT insert

2. Insert Material

C1 = C1 (K35) carbide
C2 = C2 (K20) carbide

3. Series

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

4. Coating

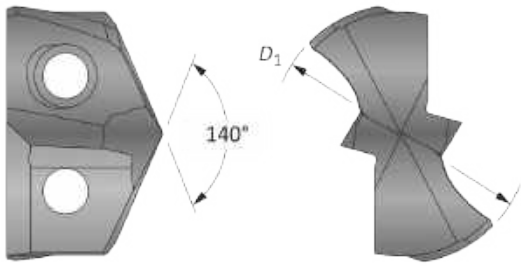
P = AM300®

5. Diameter

0017 = Inch
.515 = Decimal
13 = Metric

6. Geometry

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 and XT Pro Drill Holders

HXT	03	12	S	–	20	FM
1	2	3	4		5	6

1. Holder

6 = GEN3SYS holder

HXT = XT Pro holder

2. Length

01 = Stub Length (GEN3SYS only)

03 = 3x Diameter

05 = 5x Diameter

07 = 7x Diameter

10 = 10x Diameter (XT Pro only)

12 = 12x Diameter (11-26 series - XT Pro only)

3. Series

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

4. Flute

S = Straight

H = Helical

C45 = Drill/Chamfer (both helical and drill/chamfer options available for GEN3SYS only)

5. Shank Diameter

Imperial (inch)	Metric (mm)
063 = 5/8"	**16** = 16 mm
075 = 3/4"	**20** = 20 mm
100 = 1"	**25** = 25 mm
125 = 1-1/4"	**32** = 32 mm
150 = 1-1/2"	**40** = 40 mm

6. Shank Style

F = Flanged with flat

FM = Flanged metric with flat

C = Cylindrical (no flat)

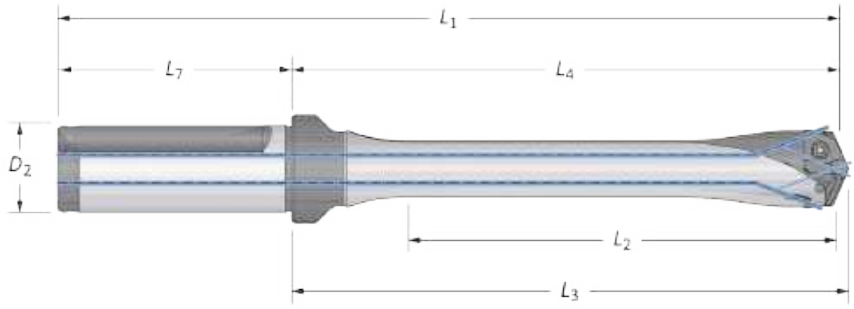
CM = Cylindrical metric (no flat)

Holder Ordering Information

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

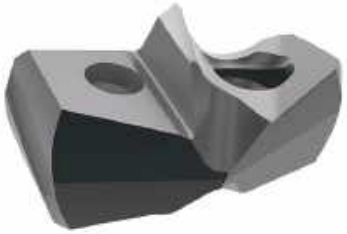
Reference Key

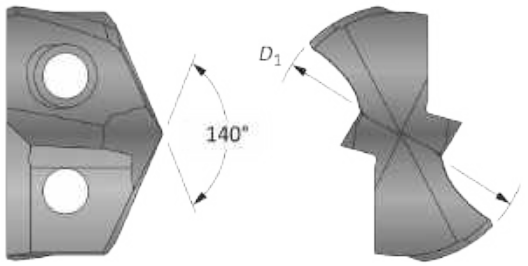
Symbol	Attribute
D_2	Shank diameter
D_5	Step diameter (drill/chamfer)
L_1	Overall length
L_2	Drill depth
L_3	Holder reference length
L_4	Holder body length
L_5	Step length (drill/chamfer)
L_7	Shank length
P_1	Rear pipe tap (GEN3SYS)



GEN3SYS XT Pro Drill Inserts

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

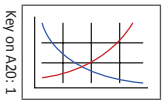




Insert			Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N
–	0.4331	11.00	**XTP11-11.00**	**XTK11-11.00**	**XTN11-11.00**
7/16	0.4374	11.11	**XTP11-11.11**	**XTK11-11.11**	**XTN11-11.11**
–	0.4409	11.20	**XTP11-11.20**	**XTK11-11.20**	**XTN11-11.20**
–	0.4449	11.30	**XTP11-11.30**	**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	0.4689	11.91	**XTP11-11.91**	**XTK11-11.91**	**XTN11-11.91**

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

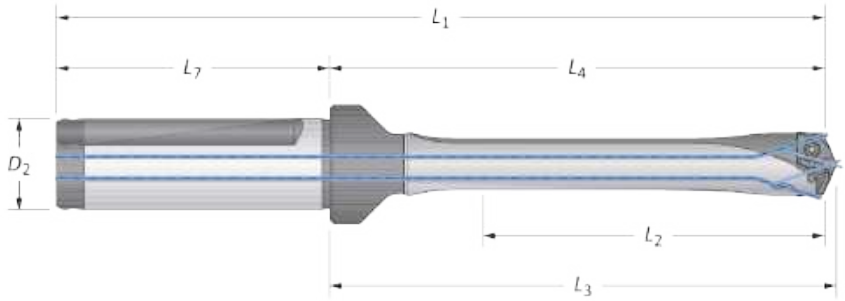


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

GEN3SYS XT Pro Drill Insert Holders

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



	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	1-27/64	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**
		12xD	5-43/64	6-45/64	6-25/32	8-37/64	1-7/8	5/8	YES	⚠ **HXT1211S-063F**
		12xD	5-43/64	6-45/65	6-25/32	8-37/64	1-7/8	5/8	NO	⚠ **HXT1211S-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**
		12xD	119.9	146.6	148.4	194.6	48.0	16.0	YES	⚠ **HXT1211S-16FM**
		12xD	119.9	146.6	148.4	194.6	48.0	16.0	NO	⚠ **HXT1211S-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)

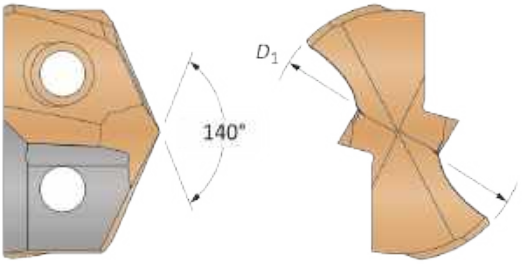
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

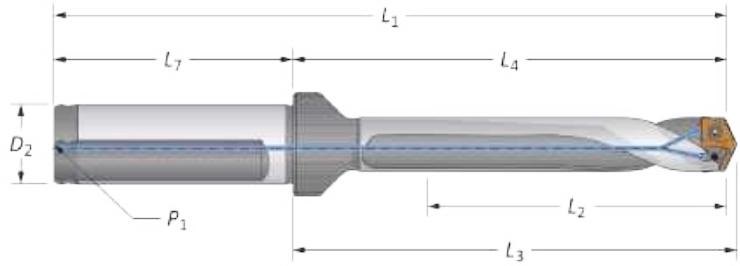
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

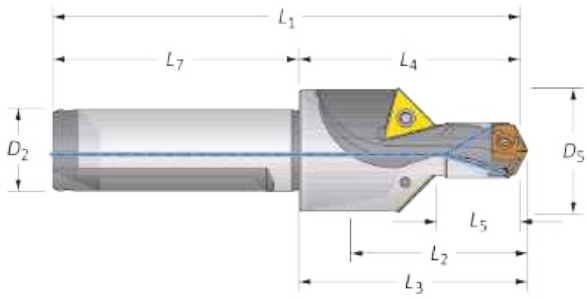
11 Series | Diameter Range: 0.4331" - 0.4723" (11.00 mm - 11.99 mm)



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	1-27/64	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**
m	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
i	61/64	21/32	15/16	1-43/64	1-3/4	3-35/64	1-7/8	5/8	**60111C45-063F**	**TCMT-110204**
m	24.1	16.5	23.8	42.2	44.3	90.2	48.0	16.0	**60111C45-16FM**	**TCMT-110204**

Connection Accessories

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

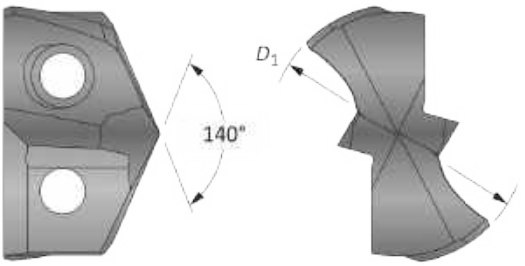
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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

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



Insert			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.4724	12.00	XTP12-12.00	XTK12-12.00	XTN12-12.00	XTM12-12.00
–	0.4764	12.10	XTP12-12.10	XTK12-12.10	XTN12-12.10	XTM12-12.10
–	0.4803	12.20	XTP12-12.20	XTK12-12.20	XTN12-12.20	XTM12-12.20
31/64	0.4843	12.30	XTP12-12.30	XTK12-12.30	XTN12-12.30	XTM12-12.30
–	0.4882	12.40	XTP12-12.40	XTK12-12.40	XTN12-12.40	XTM12-12.40
–	0.4921	12.50	XTP12-12.50	XTK12-12.50	XTN12-12.50	XTM12-12.50
–	0.4961	12.60	XTP12-12.60	XTK12-12.60	XTN12-12.60	XTM12-12.60
1/2	0.5000	12.70	XTP12-12.70	XTK12-12.70	XTN12-12.70	XTM12-12.70
–	0.5039	12.80	XTP12-12.80	XTK12-12.80	XTN12-12.80	XTM12-12.80
–	0.5079	12.90	XTP12-12.90	XTK12-12.90	XTN12-12.90	XTM12-12.90

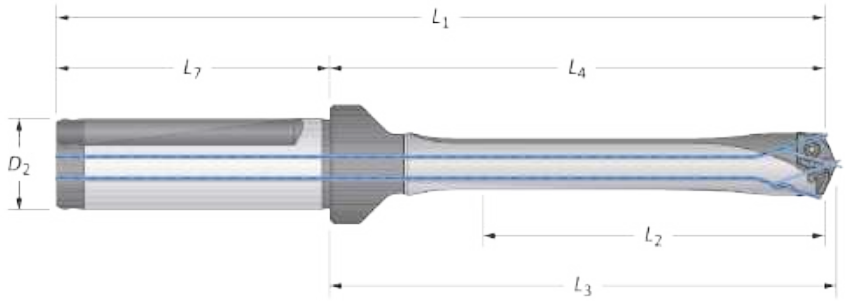
Inserts sold in multiples of 1.

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

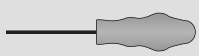
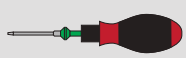
GEN3SYS XT Pro Drill Insert Holders

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



	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	1-17/32	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
		12xD	6-9/64	7-7/32	7-5/16	9-1/4	2-1/32	3/4	YES	⚠ HXT1212S-075F
		12xD	6-9/64	7-7/32	7-5/16	9-1/4	2-1/32	3/4	NO	⚠ HXT1212S-075C
ⓜ	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
		12xD	156.0	183.5	185.7	233.5	50.0	20.0	YES	⚠ HXT1212S-20FM
		12xD	156.0	183.5	185.7	233.5	50.0	20.0	NO	⚠ HXT1212S-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)

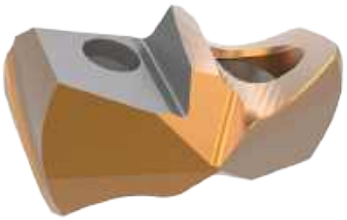
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

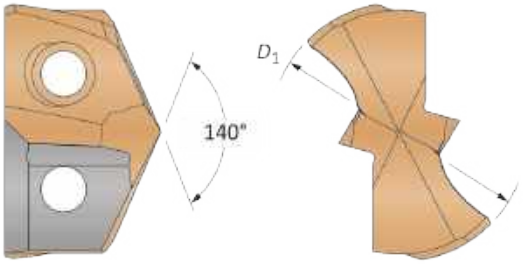
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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





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**

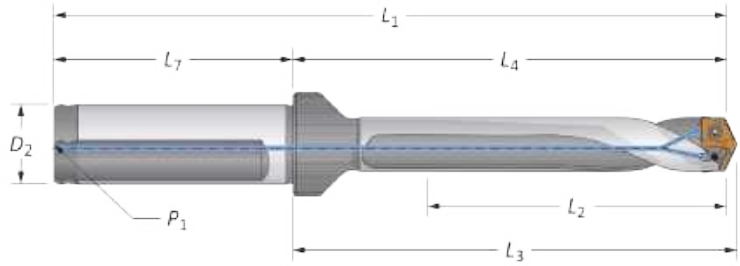
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

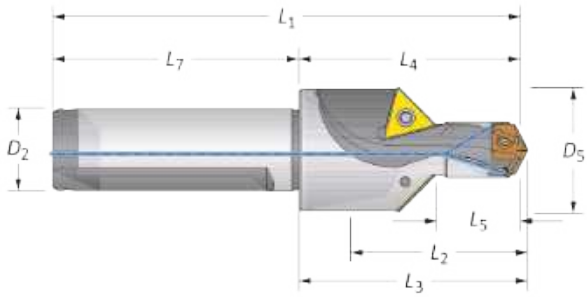
12 Series | Diameter Range: 0.4724" - 0.5117" (12.00 mm - 12.99 mm)



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	1-17/32	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)

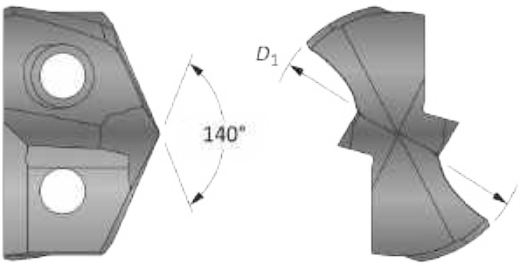
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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

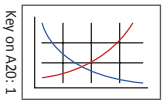
13 Series | Diameter Range: 0.5118" - 0.5511" (13.00 mm - 13.99 mm)



Insert						
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.	Part No.
			P	K	N	M
–	0.5118	13.00	XTP13-13.00	XTK13-13.00	XTN13-13.00	XTM13-13.00
33/64	0.5157	13.10	XTP13-13.10	XTK13-13.10	XTN13-13.10	XTM13-13.10
–	0.5197	13.20	XTP13-13.20	XTK13-13.20	XTN13-13.20	XTM13-13.20
–	0.5236	13.30	XTP13-13.30	XTK13-13.30	XTN13-13.30	XTM13-13.30
–	0.5276	13.40	XTP13-13.40	XTK13-13.40	XTN13-13.40	XTM13-13.40
17/32	0.5311	13.49	XTP13-13.49	XTK13-13.49	XTN13-13.49	XTM13-13.49
–	0.5315	13.50	XTP13-13.50	XTK13-13.50	XTN13-13.50	XTM13-13.50
–	0.5354	13.60	XTP13-13.60	XTK13-13.60	XTN13-13.60	XTM13-13.60
–	0.5394	13.70	XTP13-13.70	XTK13-13.70	XTN13-13.70	XTM13-13.70
–	0.5433	13.80	XTP13-13.80	XTK13-13.80	XTN13-13.80	XTM13-13.80
35/64	0.5469	13.89	XTP13-13.89	XTK13-13.89	XTN13-13.89	XTM13-13.89

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

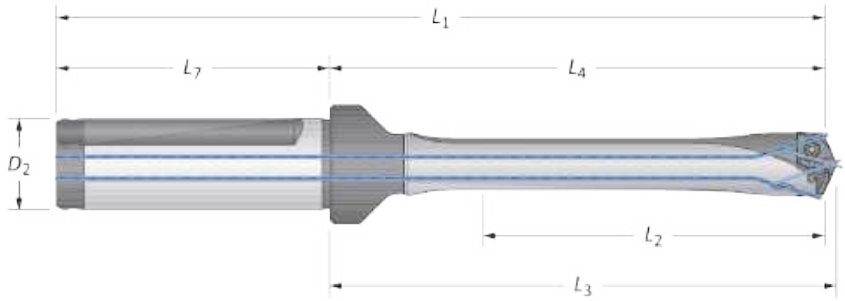


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

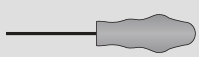
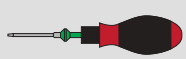
GEN3SYS XT Pro Drill Insert Holders

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



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	1-21/32	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
		12xD	6-39/64	7-11/16	7-25/32	9-23/32	2-1/32	3/4	YES	⚠ HXT1213S-075F
		12xD	6-39/64	7-11/17	7-25/32	9-23/32	2-1/32	3/4	NO	⚠ HXT1213S-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
		12xD	168.0	195.2	197.4	245.2	50.0	20.0	YES	⚠ HXT1213S-20FM
		12xD	168.0	195.2	197.4	245.2	50.0	20.0	NO	⚠ HXT1213S-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)

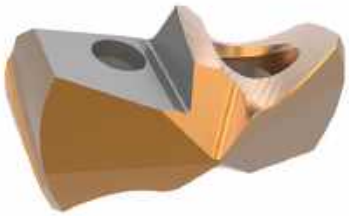
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

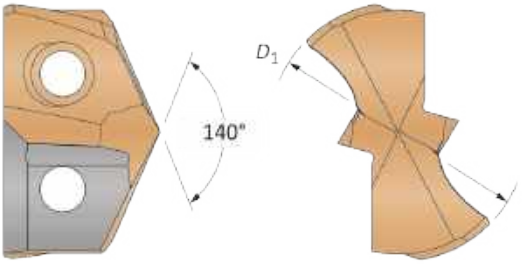
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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





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	0.5313	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**

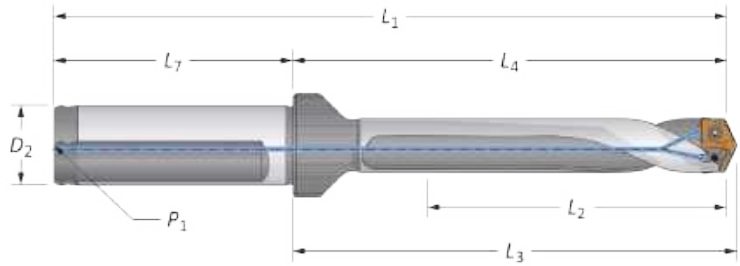
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

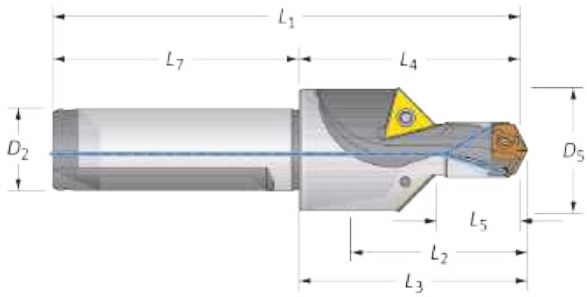
13 Series | Diameter Range: 0.5118" - 0.5511" (13.00 mm - 13.99 mm)



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	1-21/32	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**

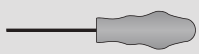
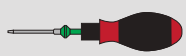
*Thread to BSP and ISO 7-1



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)

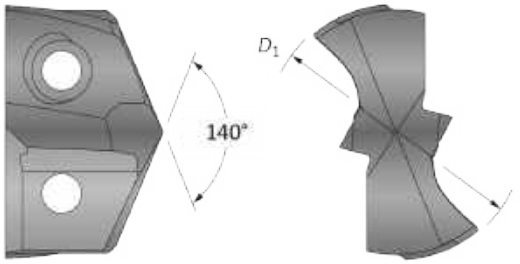
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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

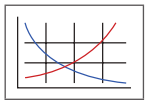
14 Series | Diameter Range: 0.5512" - 0.5905" (14.00 mm - 14.99 mm)



Insert						
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.	Part No.
			P	K	N	M
–	0.5512	14.00	XTP14-14.00	XTK14-14.00	XTN14-14.00	XTM14-14.00
–	0.5551	14.10	XTP14-14.10	XTK14-14.10	XTN14-14.10	XTM14-14.10
–	0.5591	14.20	XTP14-14.20	XTK14-14.20	XTN14-14.20	XTM14-14.20
9/16	0.5626	14.29	XTP14-14.29	XTK14-14.29	XTN14-14.29	XTM14-14.29
–	0.5669	14.40	XTP14-14.40	XTK14-14.40	XTN14-14.40	XTM14-14.40
–	0.5709	14.50	XTP14-14.50	XTK14-14.50	XTN14-14.50	XTM14-14.50
–	0.5748	14.60	XTP14-14.60	XTK14-14.60	XTN14-14.60	XTM14-14.60
37/64	0.5780	14.68	XTP14-14.68	XTK14-14.68	XTN14-14.68	XTM14-14.68
–	0.5827	14.80	XTP14-14.80	XTK14-14.80	XTN14-14.80	XTM14-14.80
–	0.5866	14.90	XTP14-14.90	XTK14-14.90	XTN14-14.90	XTM14-14.90

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

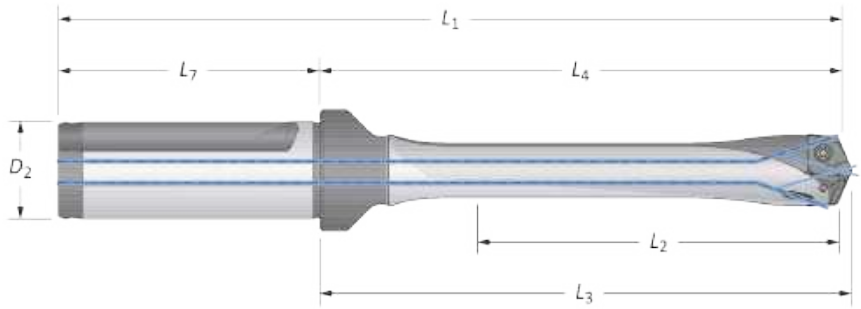


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

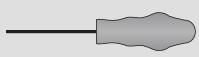
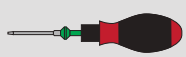
GEN3SYS XT Pro Drill Insert Holders

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



	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	1-49/64	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
		12xD	7-3/32	8-5/32	8-1/4	10-3/16	2-1/32	3/4	YES	⚠ HXT1214S-075F
		12xD	7-3/32	8-5/32	8-1/4	10-3/16	2-1/32	3/4	NO	⚠ HXT1214S-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
		12xD	180.0	207.2	209.8	257.2	50.0	20.0	YES	⚠ HXT1214S-20FM
		12xD	180.0	207.2	209.8	257.2	50.0	20.0	NO	⚠ HXT1214S-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)

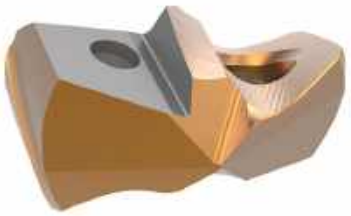
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

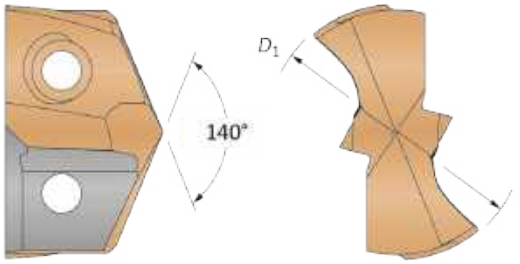
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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





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**

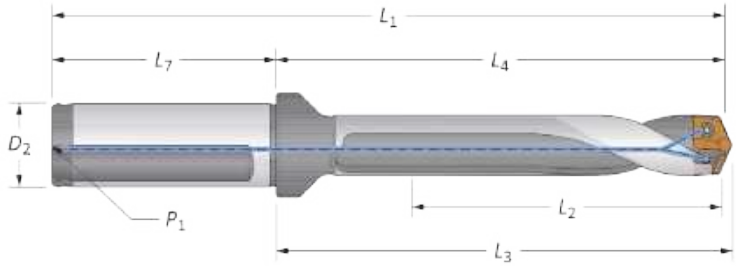
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

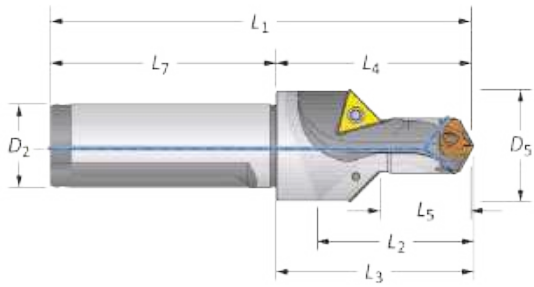
14 Series | Diameter Range: 0.5512" - 0.5905" (14.00 mm - 14.99 mm)



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	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**
	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**

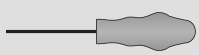
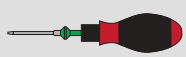
*Thread to BSP and ISO 7-1



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
ⓘ	1-3/64	53/64	1-3/64	1-3/4	1-55/64	3-25/32	2-1/32	3/4	**60114C45-075F**	**TCMT-110204**
ⓜ	26.7	21.0	26.8	44.6	47.2	94.6	50.0	20.0	**60114C45-20FM**	**TCMT-110204**

Connection Accessories

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

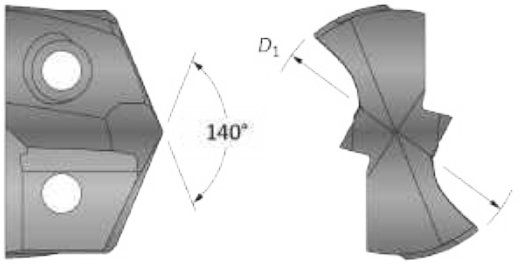
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

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



Insert						
			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.5906	15.00	XTP15-15.00	XTK15-15.00	XTN15-15.00	XTM15-15.00
19/32	0.5937	15.08	XTP15-15.08	XTK15-15.08	XTN15-15.08	XTM15-15.08
–	0.5984	15.20	XTP15-15.20	XTK15-15.20	XTN15-15.20	XTM15-15.20
–	0.6024	15.30	XTP15-15.30	XTK15-15.30	XTN15-15.30	XTM15-15.30
–	0.6063	15.40	XTP15-15.40	XTK15-15.40	XTN15-15.40	XTM15-15.40
39/64	0.6094	15.48	XTP15-15.48	XTK15-15.48	XTN15-15.48	XTM15-15.48
–	0.6102	15.50	XTP15-15.50	XTK15-15.50	XTN15-15.50	XTM15-15.50
–	0.6142	15.60	XTP15-15.60	XTK15-15.60	XTN15-15.60	XTM15-15.60
–	0.6181	15.70	XTP15-15.70	XTK15-15.70	XTN15-15.70	XTM15-15.70
–	0.6220	15.80	XTP15-15.80	XTK15-15.80	XTN15-15.80	XTM15-15.80
5/8	0.6252	15.88	XTP15-15.88	XTK15-15.88	XTN15-15.88	XTM15-15.88

Inserts sold in multiples of 1.

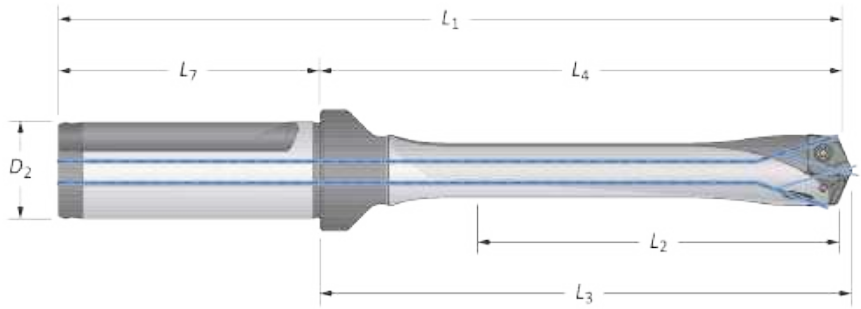
A20: 68 - 83
Key on A20: 1

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

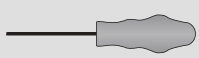
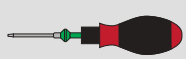
GEN3SYS XT Pro Drill Insert Holders

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



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
		12xD	7-9/16	8-39/64	8-23/32	10-41/64	2-1/32	3/4	YES	⚠ HXT1215S-075F
		12xD	7-9/16	8-39/64	8-21/32	10-41/64	2-1/32	3/4	NO	⚠ HXT1215S-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
		12xD	192.0	219.0	221.6	269.0	50.0	20.0	YES	⚠ HXT1215S-20FM
		12xD	192.0	219.0	221.6	269.0	50.0	20.0	NO	⚠ HXT1215S-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.

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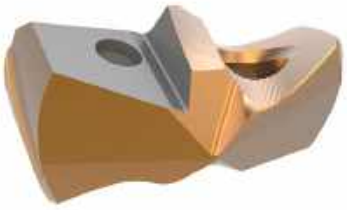
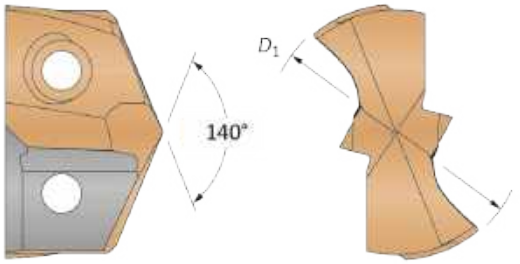
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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

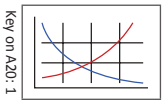




Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
C1 (K35)	–	0.5906	15.00	**7C115P-15**	**7C115P-15LR**	–	–
	19/32	0.5938	15.08	**7C115P-0019**	**7C115P-0019LR**	–	–
	–	0.6004	15.25	**7C115P-15.25**	**7C115P-15.25LR**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

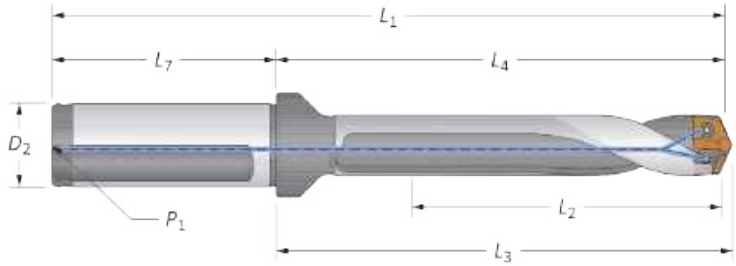


A20: 6 - 9

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

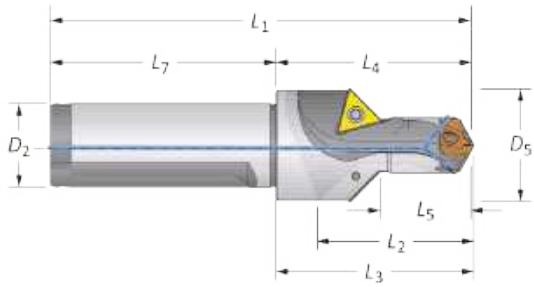
15 Series | Diameter Range: 0.5906" - 0.6298" (15.00 mm - 15.99 mm)



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

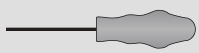
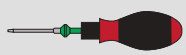
*Thread to BSP and ISO 7-1



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
ⓘ	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**
ⓜ	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)

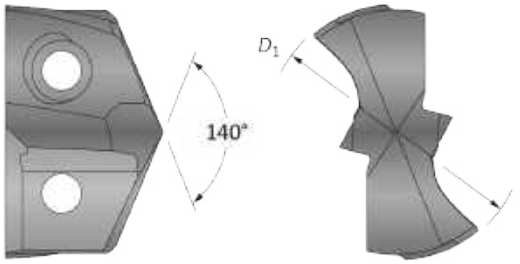
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = 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" (16.00 mm - 16.99 mm)



Insert						
			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.6299	16.00	XTP16-16.00	XTK16-16.00	XTN16-16.00	XTM16-16.00
–	0.6331	16.08	XTP16-16.08	XTK16-16.08	XTN16-16.08	XTM16-16.08
–	0.6378	16.20	XTP16-16.20	XTK16-16.20	XTN16-16.20	XTM16-16.20
41/64	0.6406	16.27	XTP16-16.27	XTK16-16.27	XTN16-16.27	XTM16-16.27
–	0.6457	16.40	XTP16-16.40	XTK16-16.40	XTN16-16.40	XTM16-16.40
–	0.6496	16.50	XTP16-16.50	XTK16-16.50	XTN16-16.50	XTM16-16.50
–	0.6535	16.60	XTP16-16.60	XTK16-16.60	XTN16-16.60	XTM16-16.60
21/32	0.6563	16.67	XTP16-16.67	XTK16-16.67	XTN16-16.67	XTM16-16.67
–	0.6614	16.80	XTP16-16.80	XTK16-16.80	XTN16-16.80	XTM16-16.80
–	0.6654	16.90	XTP16-16.90	XTK16-16.90	XTN16-16.90	XTM16-16.90

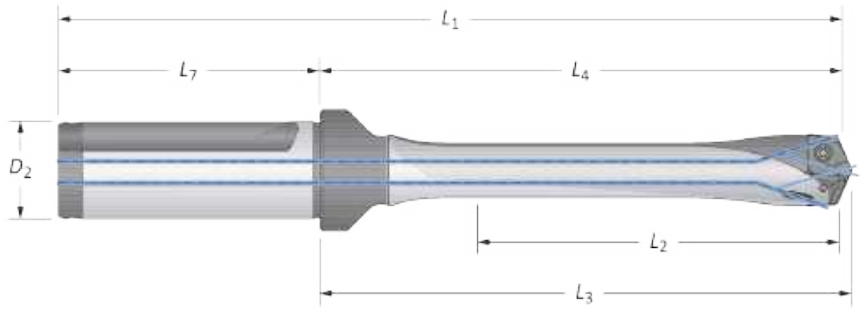
Inserts sold in multiples of 1.

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. **XTP13-13.16**
Metric:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

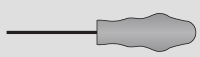
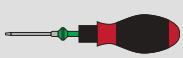
GEN3SYS XT Pro Drill Insert Holders

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



	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	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
		12xD	8-1/32	9-7/32	9-21/64	11-1/4	2-1/32	3/4	YES	⚠ HXT1216S-075F
		12xD	8-1/32	9-7/32	9-21/64	11-1/4	2-1/32	3/4	NO	⚠ HXT1216S-075C
m	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
		12xD	204.0	234.3	237.2	284.3	50.0	20.0	YES	⚠ HXT1216S-20FM
		12xD	204.0	234.3	237.2	284.3	50.0	20.0	NO	⚠ HXT1216S-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)

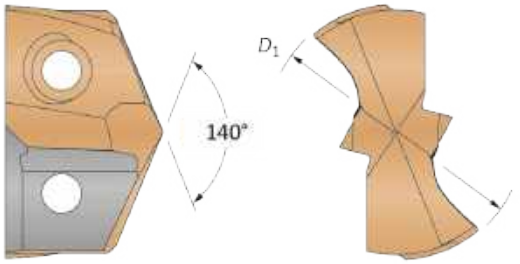
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

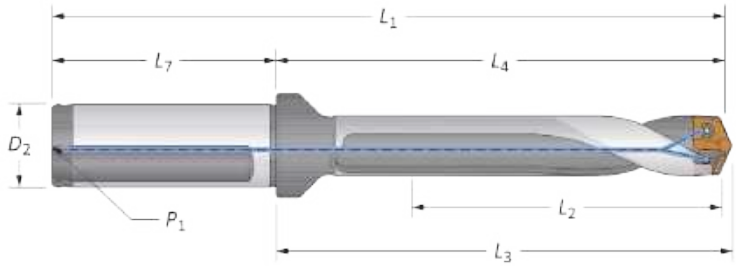
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

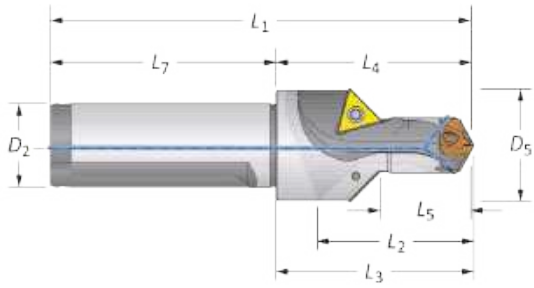
16 Series | Diameter Range: 0.6299" - 0.6692" (16.00 mm - 16.99 mm)



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**

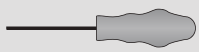
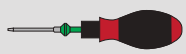
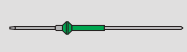
*Thread to BSP and ISO 7-1



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)

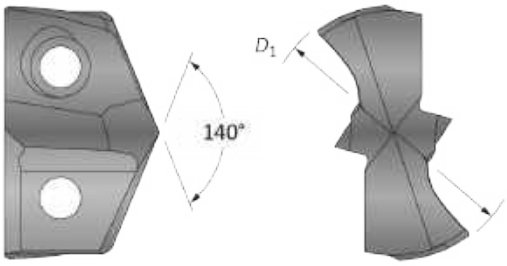
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

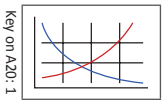
17 Series | Diameter Range: 0.6693" - 0.7086" (17.00 mm - 17.99 mm)



Insert			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.6693	17.00	XTP17-17.00	XTK17-17.00	XTN17-17.00	XTM17-17.00
43/64	0.6720	17.07	XTP17-17.07	XTK17-17.07	XTN17-17.07	XTM17-17.07
–	0.6732	17.10	XTP17-17.10	XTK17-17.10	XTN17-17.10	XTM17-17.10
–	0.6772	17.20	XTP17-17.20	XTK17-17.20	XTN17-17.20	XTM17-17.20
–	0.6811	17.30	XTP17-17.30	XTK17-17.30	XTN17-17.30	XTM17-17.30
–	0.6850	17.40	XTP17-17.40	XTK17-17.40	XTN17-17.40	XTM17-17.40
11/16	0.6874	17.46	XTP17-17.46	XTK17-17.46	XTN17-17.46	XTM17-17.46
–	0.6890	17.50	XTP17-17.50	XTK17-17.50	XTN17-17.50	XTM17-17.50
–	0.6929	17.60	XTP17-17.60	XTK17-17.60	XTN17-17.60	XTM17-17.60
–	0.6969	17.70	XTP17-17.70	XTK17-17.70	XTN17-17.70	XTM17-17.70
–	0.7008	17.80	XTP17-17.80	XTK17-17.80	XTN17-17.80	XTM17-17.80
45/64	0.7031	17.86	XTP17-17.86	XTK17-17.86	XTN17-17.86	XTM17-17.86
–	0.7047	17.90	XTP17-17.90	XTK17-17.90	XTN17-17.90	XTM17-17.90

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

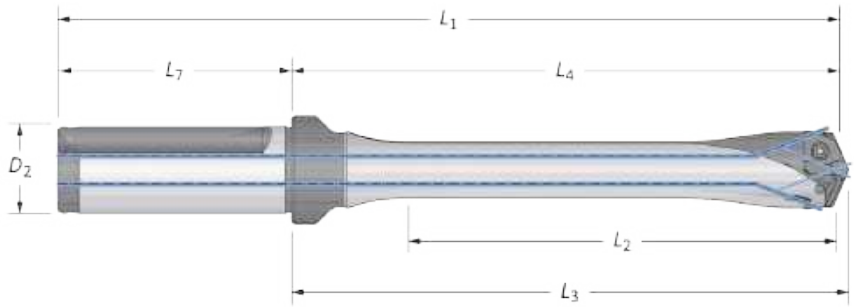


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

GEN3SYS XT Pro Drill Insert Holders

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



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
		12xD	8-1/2	9-11/16	9-13/16	11-23/32	2-1/32	3/4	YES	⚠ HXT1217S-075F
		12xD	8-1/2	9-11/16	9-13/16	11-23/32	2-1/32	3/4	NO	⚠ HXT1217S-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
		12xD	216.0	246.0	248.9	296.0	50.0	20.0	YES	⚠ HXT1217S-20FM
		12xD	216.0	246.0	248.9	296.0	50.0	20.0	NO	⚠ HXT1217S-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)

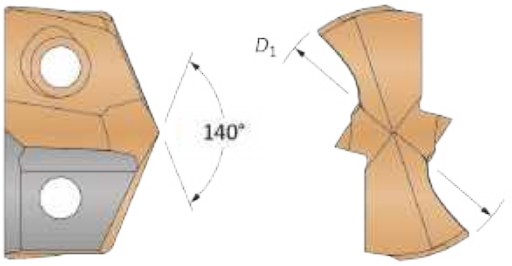
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

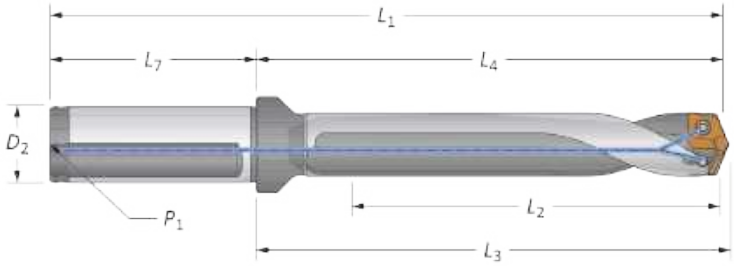
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

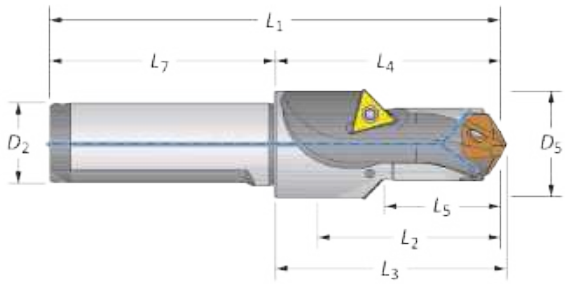
17 Series | Diameter Range: 0.6693" - 0.7086" (17.00 mm - 17.99 mm)



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**

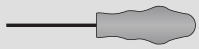
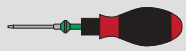
*Thread to BSP and ISO 7-1



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)

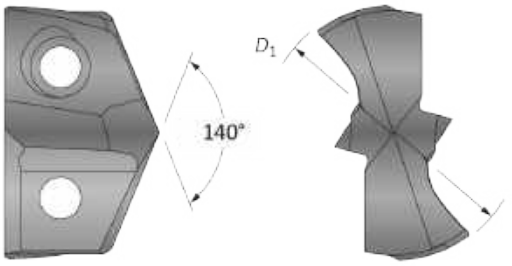
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

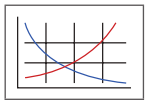
18 Series | Diameter Range: 0.7087" - 0.7873" (18.00 mm - 19.99 mm)



Insert			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.7087	18.00	XTP18-18.00	XTK18-18.00	XTN18-18.00	XTM18-18.00
–	0.7126	18.10	XTP18-18.10	XTK18-18.10	XTN18-18.10	XTM18-18.10
–	0.7165	18.20	XTP18-18.20	XTK18-18.20	XTN18-18.20	XTM18-18.20
23/32	0.7189	18.26	XTP18-18.26	XTK18-18.26	XTN18-18.26	XTM18-18.26
–	0.7205	18.30	XTP18-18.30	XTK18-18.30	XTN18-18.30	XTM18-18.30
–	0.7244	18.40	XTP18-18.40	XTK18-18.40	XTN18-18.40	XTM18-18.40
–	0.7283	18.50	XTP18-18.50	XTK18-18.50	XTN18-18.50	XTM18-18.50
–	0.7323	18.60	XTP18-18.60	XTK18-18.60	XTN18-18.60	XTM18-18.60
47/64	0.7343	18.65	XTP18-18.65	XTK18-18.65	XTN18-18.65	XTM18-18.65
–	0.7362	18.70	XTP18-18.70	XTK18-18.70	XTN18-18.70	XTM18-18.70
–	0.7402	18.80	XTP18-18.80	XTK18-18.80	XTN18-18.80	XTM18-18.80
–	0.7441	18.90	XTP18-18.90	XTK18-18.90	XTN18-18.90	XTM18-18.90
–	0.7480	19.00	XTP18-19.00	XTK18-19.00	XTN18-19.00	XTM18-19.00
3/4	0.7500	19.05	XTP18-19.05	XTK18-19.05	XTN18-19.05	XTM18-19.05
–	0.7520	19.10	XTP18-19.10	XTK18-19.10	XTN18-19.10	XTM18-19.10
–	0.7559	19.20	XTP18-19.20	XTK18-19.20	XTN18-19.20	XTM18-19.20
–	0.7579	19.25	XTP18-19.25	XTK18-19.25	XTN18-19.25	XTM18-19.25
–	0.7598	19.30	XTP18-19.30	XTK18-19.30	XTN18-19.30	XTM18-19.30
–	0.7638	19.40	XTP18-19.40	XTK18-19.40	XTN18-19.40	XTM18-19.40
49/64	0.7657	19.45	XTP18-19.45	XTK18-19.45	XTN18-19.45	XTM18-19.45
–	0.7677	19.50	XTP18-19.50	XTK18-19.50	XTN18-19.50	XTM18-19.50
–	0.7717	19.60	XTP18-19.60	XTK18-19.60	XTN18-19.60	XTM18-19.60
–	0.7756	19.70	XTP18-19.70	XTK18-19.70	XTN18-19.70	XTM18-19.70
–	0.7795	19.80	XTP18-19.80	XTK18-19.80	XTN18-19.80	XTM18-19.80
25/32	0.7811	19.84	XTP18-19.84	XTK18-19.84	XTN18-19.84	XTM18-19.84
–	0.7835	19.90	XTP18-19.90	XTK18-19.90	XTN18-19.90	XTM18-19.90

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

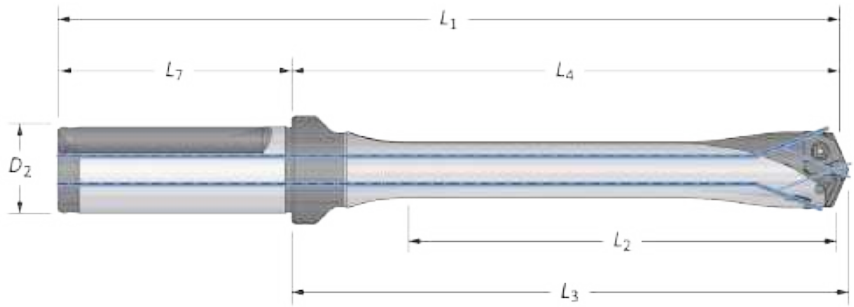


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

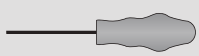
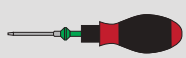
GEN3SYS XT Pro Drill Insert Holders

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



	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
		12xD	9-7/16	10-25/32	10-57/64	13-1/16	2-9/32	1	YES	⚠ HXT1218S-100F
		12xD	9-7/16	10-25-32	10-57/64	13-1/16	2-9/32	1	NO	⚠ HXT1218S-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
		12xD	240.0	273.9	276.7	329.9	56.0	25.0	YES	⚠ HXT1218S-25FM
		12xD	240.0	273.9	276.7	329.9	56.0	25.0	NO	⚠ HXT1218S-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)

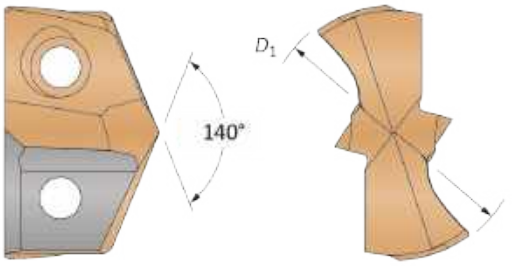
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

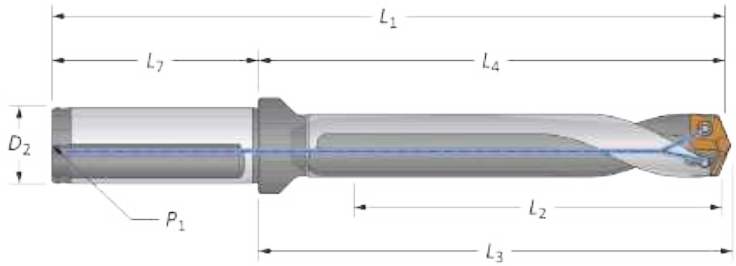
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

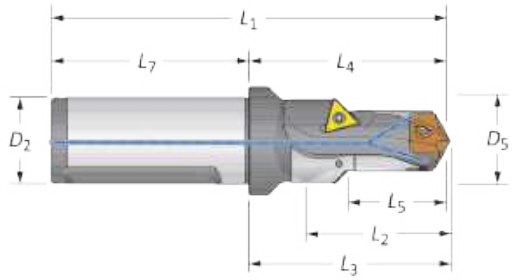
18 Series | Diameter Range: 0.7087" - 0.7873" (18.00 mm - 19.99 mm)



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	2-23/64	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**

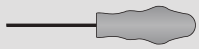
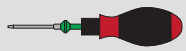
*Thread to BSP and ISO 7-1



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)

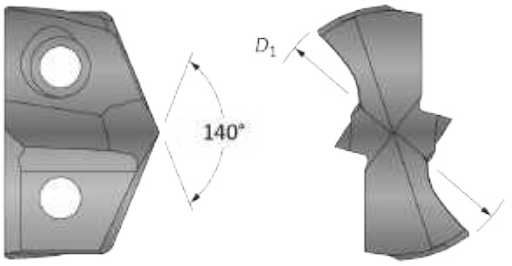
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

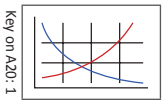
20 Series | Diameter Range: 0.7874" - 0.8660" (20.00 mm - 21.99 mm)



Insert						
						
Fractional Equivalent	D_1 inch	D_1 mm	Part No. P	Part No. K	Part No. N	Part No. M
–	0.7874	20.00	XTP20-20.00	XTK20-20.00	XTN20-20.00	XTM20-20.00
–	0.7913	20.10	XTP20-20.10	XTK20-20.10	XTN20-20.10	XTM20-20.10
–	0.7953	20.20	XTP20-20.20	XTK20-20.20	XTN20-20.20	XTM20-20.20
51/64	0.7969	20.24	XTP20-20.24	XTK20-20.24	XTN20-20.24	XTM20-20.24
–	0.7992	20.30	XTP20-20.30	XTK20-20.30	XTN20-20.30	XTM20-20.30
–	0.8031	20.40	XTP20-20.40	XTK20-20.40	XTN20-20.40	XTM20-20.40
–	0.8071	20.50	XTP20-20.50	XTK20-20.50	XTN20-20.50	XTM20-20.50
–	0.8110	20.60	XTP20-20.60	XTK20-20.60	XTN20-20.60	XTM20-20.60
13/16	0.8126	20.64	XTP20-20.64	XTK20-20.64	XTN20-20.64	XTM20-20.64
–	0.8150	20.70	XTP20-20.70	XTK20-20.70	XTN20-20.70	XTM20-20.70
–	0.8189	20.80	XTP20-20.80	XTK20-20.80	XTN20-20.80	XTM20-20.80
–	0.8228	20.90	XTP20-20.90	XTK20-20.90	XTN20-20.90	XTM20-20.90
–	0.8268	21.00	XTP20-21.00	XTK20-21.00	XTN20-21.00	XTM20-21.00
–	0.8307	21.10	XTP20-21.10	XTK20-21.10	XTN20-21.10	XTM20-21.10
–	0.8346	21.20	XTP20-21.20	XTK20-21.20	XTN20-21.20	XTM20-21.20
–	0.8386	21.30	XTP20-21.30	XTK20-21.30	XTN20-21.30	XTM20-21.30
–	0.8425	21.40	XTP20-21.40	XTK20-21.40	XTN20-21.40	XTM20-21.40
27/32	0.8437	21.43	XTP20-21.43	XTK20-21.43	XTN20-21.43	XTM20-21.43
–	0.8465	21.50	XTP20-21.50	XTK20-21.50	XTN20-21.50	XTM20-21.50
–	0.8504	21.60	XTP20-21.60	XTK20-21.60	XTN20-21.60	XTM20-21.60
–	0.8543	21.70	XTP20-21.70	XTK20-21.70	XTN20-21.70	XTM20-21.70
–	0.8583	21.80	XTP20-21.80	XTK20-21.80	XTN20-21.80	XTM20-21.80
55/64	0.8594	21.83	XTP20-21.83	XTK20-21.83	XTN20-21.83	XTM20-21.83
–	0.8622	21.90	XTP20-21.90	XTK20-21.90	XTN20-21.90	XTM20-21.90

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

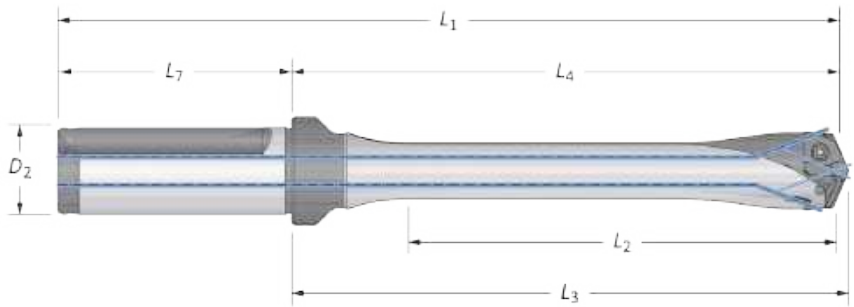


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

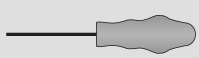
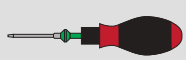
GEN3SYS XT Pro Drill Insert Holders

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



	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
		12xD	10-25/64	11-47/64	11-27/32	14-1/64	2-9/32	1	YES	⚠ HXT1220S-100F
		12xD	10-25/64	11-47/64	11-27/32	14-1/64	2-9/32	1	NO	⚠ HXT1220S-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
		12xD	264.0	298.0	300.8	354.0	56.0	25.0	YES	⚠ HXT1220S-25FM
		12xD	264.0	298.0	300.8	354.0	56.0	25.0	NO	⚠ HXT1220S-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)

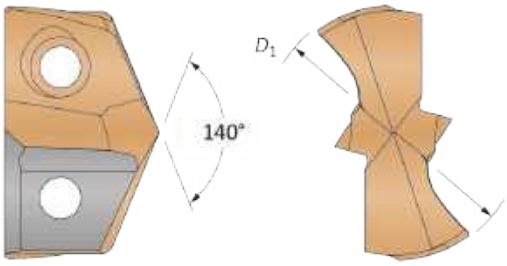
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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.

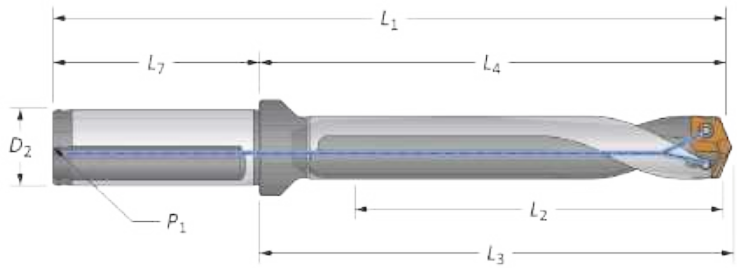
A20: 68 - 83
Key on A20: 1

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

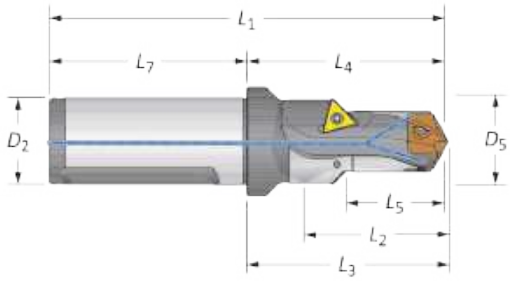
20 Series | Diameter Range: 0.7874" - 0.8660" (20.00 mm - 21.99 mm)



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	2-19/32	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**
ⓜ	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**

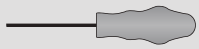
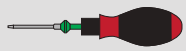
*Thread to BSP and ISO 7-1



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
ⓘ	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**
ⓜ	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)

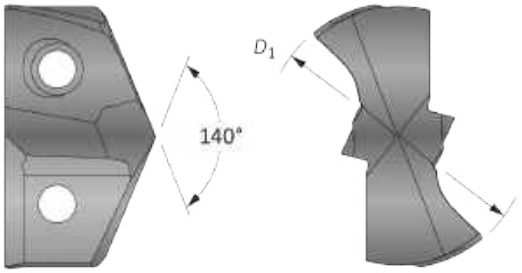
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = 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" (22.00 mm - 23.99 mm)



Insert						
						
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.	Part No.
			P	K	N	M
–	0.8661	22.00	XTP22-22.00	XTK22-22.00	XTN22-22.00	XTM22-22.00
–	0.8701	22.10	XTP22-22.10	XTK22-22.10	XTN22-22.10	XTM22-22.10
–	0.8740	22.20	XTP22-22.20	XTK22-22.20	XTN22-22.20	XTM22-22.20
7/8	0.8752	22.23	XTP22-22.23	XTK22-22.23	XTN22-22.23	XTM22-22.23
–	0.8780	22.30	XTP22-22.30	XTK22-22.30	XTN22-22.30	XTM22-22.30
–	0.8819	22.40	XTP22-22.40	XTK22-22.40	XTN22-22.40	XTM22-22.40
–	0.8858	22.50	XTP22-22.50	XTK22-22.50	XTN22-22.50	XTM22-22.50
57/64	0.8906	22.62	XTP22-22.62	XTK22-22.62	XTN22-22.62	XTM22-22.62
–	0.8937	22.70	XTP22-22.70	XTK22-22.70	XTN22-22.70	XTM22-22.70
–	0.8976	22.80	XTP22-22.80	XTK22-22.80	XTN22-22.80	XTM22-22.80
–	0.9016	22.90	XTP22-22.90	XTK22-22.90	XTN22-22.90	XTM22-22.90
–	0.9055	23.00	XTP22-23.00	XTK22-23.00	XTN22-23.00	XTM22-23.00
29/32	0.9063	23.02	XTP22-23.02	XTK22-23.02	XTN22-23.02	XTM22-23.02
–	0.9094	23.10	XTP22-23.10	XTK22-23.10	XTN22-23.10	XTM22-23.10
–	0.9134	23.20	XTP22-23.20	XTK22-23.20	XTN22-23.20	XTM22-23.20
–	0.9173	23.30	XTP22-23.30	XTK22-23.30	XTN22-23.30	XTM22-23.30
59/64	0.9220	23.42	XTP22-23.42	XTK22-23.42	XTN22-23.42	XTM22-23.42
–	0.9252	23.50	XTP22-23.50	XTK22-23.50	XTN22-23.50	XTM22-23.50
–	0.9291	23.60	XTP22-23.60	XTK22-23.60	XTN22-23.60	XTM22-23.60
–	0.9331	23.70	XTP22-23.70	XTK22-23.70	XTN22-23.70	XTM22-23.70
15/16	0.9374	23.81	XTP22-23.81	XTK22-23.81	XTN22-23.81	XTM22-23.81
–	0.9409	23.90	XTP22-23.90	XTK22-23.90	XTN22-23.90	XTM22-23.90

Inserts sold in multiples of 1.

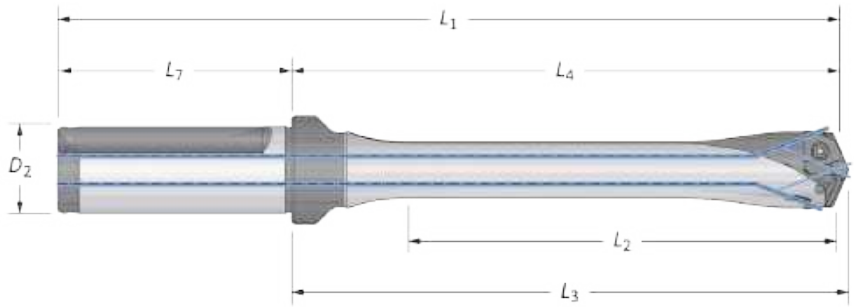
A20: 68 - 83
Key on A20: 1
A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

GEN3SYS XT Pro Drill Insert Holders

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



	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	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
		12xD	11-11/32	12-41/64	12-3/4	14-59/64	2-9/32	1	YES	⚠ HXT1222S-100F
		12xD	11-11/32	12-41/64	12-3/4	14-59/64	2-9/32	1	NO	⚠ HXT1222S-100C
m	Straight	3xD	72.0	105.1	108.3	161.1	56.0	25.0	YES	HXT0322S-25FM
		3xD	72.0	105.1	108.3	161.1	56.0	25.0	NO	HXT0322S-25CM
		5xD	120.0	153.2	156.2	209.2	56.0	25.0	YES	HXT0522S-25FM
		5xD	120.0	153.2	156.2	209.2	56.0	25.0	NO	HXT0522S-25CM
		7xD	167.9	201.2	204.2	257.2	56.0	25.0	YES	HXT0722S-25FM
		7xD	167.9	201.2	204.2	257.2	56.0	25.0	NO	HXT0722S-25CM
		10xD	239.9	273.0	276.2	329.0	56.0	25.0	YES	⚠ HXT1022S-25FM
		10xD	239.9	273.0	276.2	329.0	56.0	25.0	NO	⚠ HXT1022S-25CM
		12xD	288.0	321.2	324.2	377.2	56.0	25.0	YES	⚠ HXT1222S-25FM
		12xD	288.0	321.2	324.2	377.2	56.0	25.0	NO	⚠ HXT1222S-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)

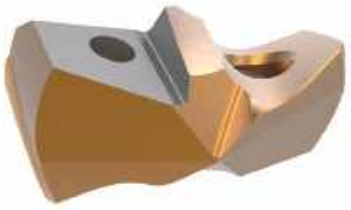
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

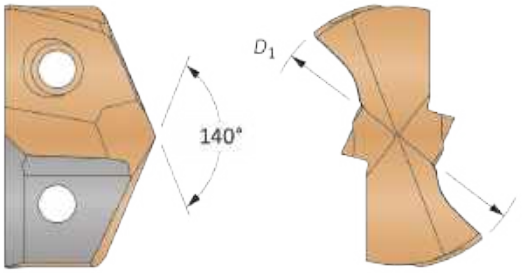
⚠ WARNING Refer to Speed and Feed charts for recommended adjustments to speeds and feeds. Refer to page A20: 86 for deep hole drilling guidelines in this section of the catalog. Visit **www.alliedmachine.com/DeepHoleGuidelines** for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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

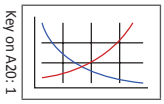




Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
C1 (K35)		0.8661	22.00	**7C122P-22**	**7C122P-22LR**	–	–
	7/8	0.8750	22.23	**7C122P-0028**	**7C122P-0028LR**	–	–
	57/64	0.8906	22.61	**7C122P-.890**	**7C122P-.890LR**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

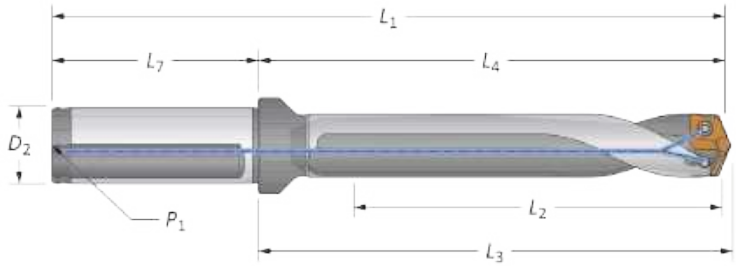


A20: 6 - 9

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

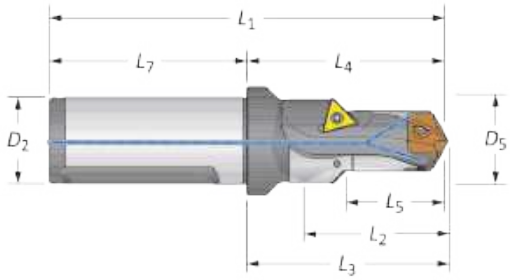
22 Series | Diameter Range: 0.8661" - 0.9448" (22.00 mm - 23.99 mm)



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)

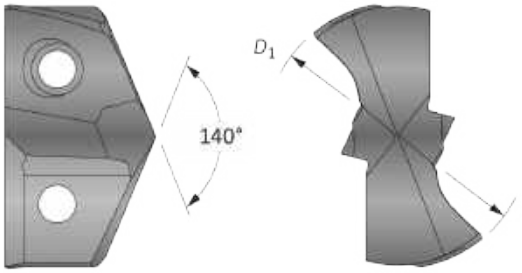
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

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

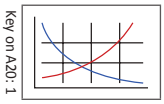
24 Series | Diameter Range: 0.9449" - 1.0235" (24.00 mm - 25.99 mm)



Insert						
			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	0.9449	24.00	XTP24-24.00	XTK24-24.00	XTN24-24.00	XTM24-24.00
–	0.9488	24.10	XTP24-24.10	XTK24-24.10	XTN24-24.10	XTM24-24.10
–	0.9528	24.20	XTP24-24.20	XTK24-24.20	XTN24-24.20	XTM24-24.20
–	0.9567	24.30	XTP24-24.30	XTK24-24.30	XTN24-24.30	XTM24-24.30
–	0.9606	24.40	XTP24-24.40	XTK24-24.40	XTN24-24.40	XTM24-24.40
–	0.9646	24.50	XTP24-24.50	XTK24-24.50	XTN24-24.50	XTM24-24.50
31/32	0.9689	24.61	XTP24-24.61	XTK24-24.61	XTN24-24.61	XTM24-24.61
–	0.9724	24.70	XTP24-24.70	XTK24-24.70	XTN24-24.70	XTM24-24.70
–	0.9764	24.80	XTP24-24.80	XTK24-24.80	XTN24-24.80	XTM24-24.80
–	0.9803	24.90	XTP24-24.90	XTK24-24.90	XTN24-24.90	XTM24-24.90
63/64	0.9843	25.00	XTP24-25.00	XTK24-25.00	XTN24-25.00	XTM24-25.00
–	0.9882	25.10	XTP24-25.10	XTK24-25.10	XTN24-25.10	XTM24-25.10
–	0.9921	25.20	XTP24-25.20	XTK24-25.20	XTN24-25.20	XTM24-25.20
–	0.9961	25.30	XTP24-25.30	XTK24-25.30	XTN24-25.30	XTM24-25.30
1	1.0000	25.40	XTP24-25.40	XTK24-25.40	XTN24-25.40	XTM24-25.40
–	1.0039	25.50	XTP24-25.50	XTK24-25.50	XTN24-25.50	XTM24-25.50
–	1.0079	25.60	XTP24-25.60	XTK24-25.60	XTN24-25.60	XTM24-25.60
–	1.0118	25.70	XTP24-25.70	XTK24-25.70	XTN24-25.70	XTM24-25.70
1-1/64	1.0150	25.78	XTP24-25.78	XTK24-25.78	XTN24-25.78	XTM24-25.78
–	1.0197	25.90	XTP24-25.90	XTK24-25.90	XTN24-25.90	XTM24-25.90

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1

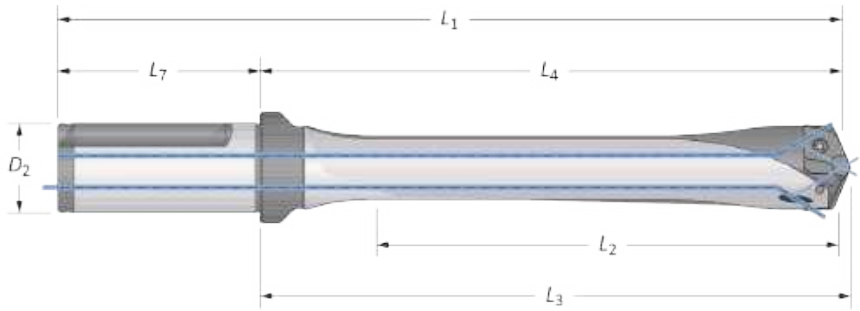


A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

GEN3SYS XT Pro Drill Insert Holders

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



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	3-1/16	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
		12xD	12-9/32	13-11/16	13-51/64	15-31/32	2-9/32	1	YES	⚠ HXT1224S-100F
		12xD	12-9/32	13-11/16	13-15/64	15-31/32	2-9/32	1	NO	⚠ HXT1224S-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
		12xD	312.0	347.7	350.7	403.7	56.0	25.0	YES	⚠ HXT1224S-25FM
		12xD	312.0	347.7	350.7	403.7	56.0	25.0	NO	⚠ HXT1224S-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)

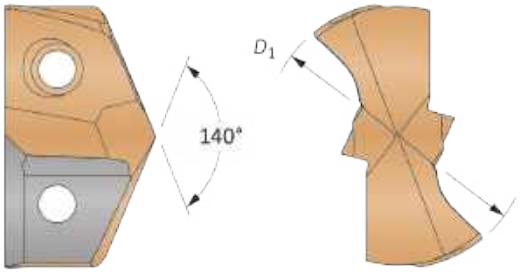
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

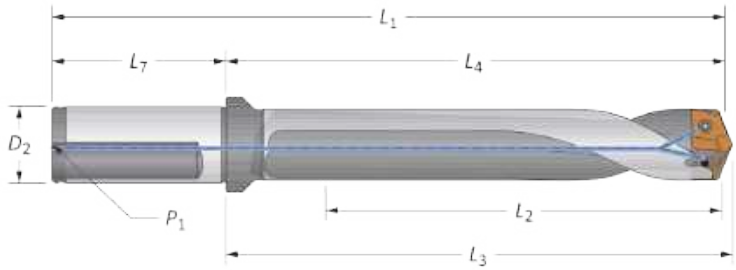
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

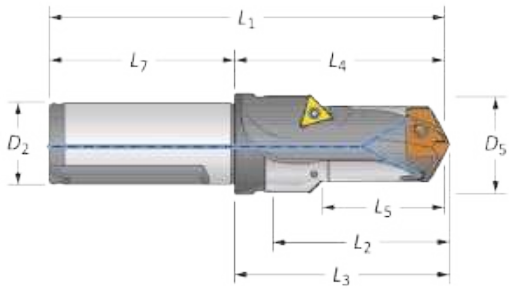
24 Series | Diameter Range: 0.9449" - 1.0235" (24.00 mm - 25.99 mm)



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	3-1/16	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)

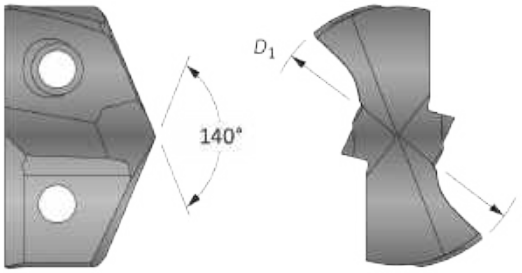
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = 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" (26.00 mm - 28.99 mm)



Insert						
Fractional Equivalent	D_1 inch	D_1 mm	Part No.	Part No.	Part No.	Part No.
			P	K	N	M
–	1.0236	26.00	XTP26-26.00	XTK26-26.00	XTN26-26.00	XTM26-26.00
–	1.0276	26.10	XTP26-26.10	XTK26-26.10	XTN26-26.10	XTM26-26.10
1-1/32	1.0315	26.20	XTP26-26.20	XTK26-26.20	XTN26-26.20	XTM26-26.20
–	1.0354	26.30	XTP26-26.30	XTK26-26.30	XTN26-26.30	XTM26-26.30
–	1.0394	26.40	XTP26-26.40	XTK26-26.40	XTN26-26.40	XTM26-26.40
–	1.0433	26.50	XTP26-26.50	XTK26-26.50	XTN26-26.50	XTM26-26.50
1-3/64	1.0469	26.59	XTP26-26.59	XTK26-26.59	XTN26-26.59	XTM26-26.59
–	1.0472	26.60	XTP26-26.60	XTK26-26.60	XTN26-26.60	XTM26-26.60
–	1.0512	26.70	XTP26-26.70	XTK26-26.70	XTN26-26.70	XTM26-26.70
–	1.0551	26.80	XTP26-26.80	XTK26-26.80	XTN26-26.80	XTM26-26.80
–	1.0591	26.90	XTP26-26.90	XTK26-26.90	XTN26-26.90	XTM26-26.90
1-1/16	1.0626	26.99	XTP26-26.99	XTK26-26.99	XTN26-26.99	XTM26-26.99
–	1.0630	27.00	XTP26-27.00	XTK26-27.00	XTN26-27.00	XTM26-27.00
–	1.0669	27.10	XTP26-27.10	XTK26-27.10	XTN26-27.10	XTM26-27.10
–	1.0709	27.20	XTP26-27.20	XTK26-27.20	XTN26-27.20	XTM26-27.20
–	1.0748	27.30	XTP26-27.30	XTK26-27.30	XTN26-27.30	XTM26-27.30
–	1.0787	27.40	XTP26-27.40	XTK26-27.40	XTN26-27.40	XTM26-27.40
–	1.0827	27.50	XTP26-27.50	XTK26-27.50	XTN26-27.50	XTM26-27.50
–	1.0866	27.60	XTP26-27.60	XTK26-27.60	XTN26-27.60	XTM26-27.60
–	1.0906	27.70	XTP26-27.70	XTK26-27.70	XTN26-27.70	XTM26-27.70
1-3/32	1.0937	27.78	XTP26-27.78	XTK26-27.78	XTN26-27.78	XTM26-27.78
–	1.0984	27.90	XTP26-27.90	XTK26-27.90	XTN26-27.90	XTM26-27.90
–	1.1024	28.00	XTP26-28.00	XTK26-28.00	XTN26-28.00	XTM26-28.00
–	1.1063	28.10	XTP26-28.10	XTK26-28.10	XTN26-28.10	XTM26-28.10
1-7/64	1.1091	28.17	XTP26-28.17	XTK26-28.17	XTN26-28.17	XTM26-28.17
–	1.1102	28.20	XTP26-28.20	XTK26-28.20	XTN26-28.20	XTM26-28.20
–	1.1142	28.30	XTP26-28.30	XTK26-28.30	XTN26-28.30	XTM26-28.30
–	1.1181	28.40	XTP26-28.40	XTK26-28.40	XTN26-28.40	XTM26-28.40
–	1.1220	28.50	XTP26-28.50	XTK26-28.50	XTN26-28.50	XTM26-28.50
1-1/8	1.1252	28.58	XTP26-28.58	XTK26-28.58	XTN26-28.58	XTM26-28.58
–	1.1299	28.70	XTP26-28.70	XTK26-28.70	XTN26-28.70	XTM26-28.70
–	1.1339	28.80	XTP26-28.80	XTK26-28.80	XTN26-28.80	XTM26-28.80
–	1.1378	28.90	XTP26-28.90	XTK26-28.90	XTN26-28.90	XTM26-28.90

Inserts sold in multiples of 1.

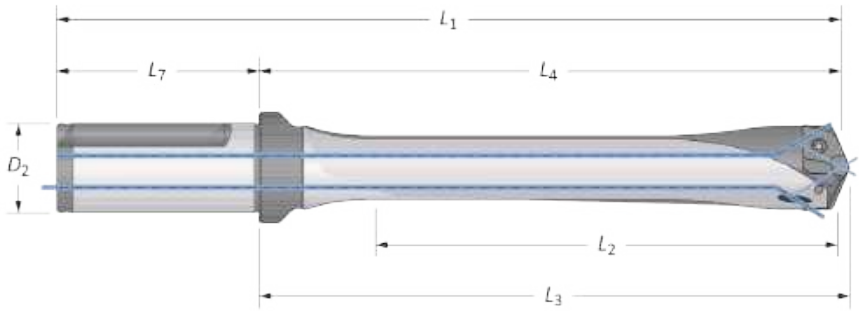
A20: 68 - 83
Key on A20: 1
A20: 6 - 9

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

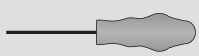
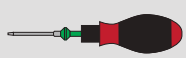
GEN3SYS XT Pro Drill Insert Holders

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



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
		12xD	13-45/64	15-11/32	15-29/64	17-5/8	2-9/32	1-1/4	YES	⚠ HXT1226S-125F
		12xD	13-45/64	15-11/32	15-29/64	17-5/8	2-9/32	1-1/4	NO	⚠ HXT1226S-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
		12xD	348.0	389.0	391.8	449.0	60.0	32.0	YES	⚠ HXT1226S-32FM
		12xD	348.0	389.0	391.8	449.0	60.0	32.0	NO	⚠ HXT1226S-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)

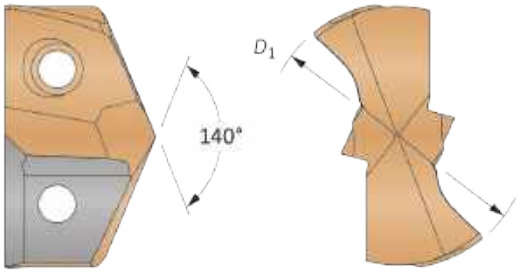
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ 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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

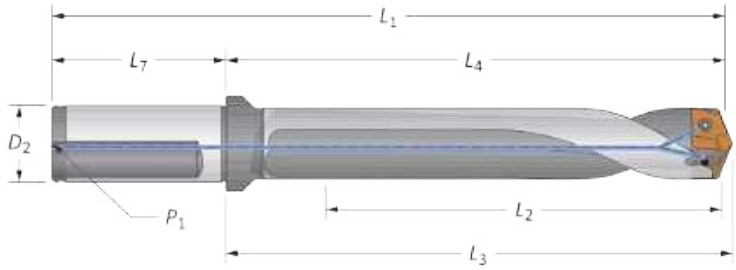
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

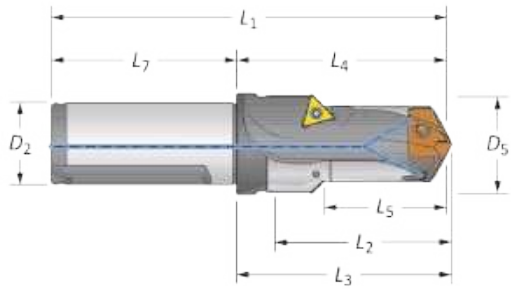
26 Series | Diameter Range: 1.0236" - 1.1416" (26.00 mm - 28.99 mm)



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	3-27/64	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**

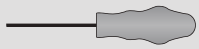
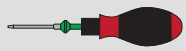
*Thread to BSP and ISO 7-1



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)

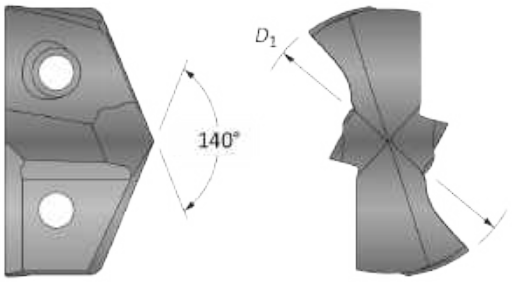
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = 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" (29.00 mm - 31.99 mm)



Insert						
			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	1.1417	29.00	XTP29-29.00	XTK29-29.00	XTN29-29.00	XTM29-29.00
–	1.1457	29.10	XTP29-29.10	XTK29-29.10	XTN29-29.10	XTM29-29.10
–	1.1496	29.20	XTP29-29.20	XTK29-29.20	XTN29-29.20	XTM29-29.20
–	1.1535	29.30	XTP29-29.30	XTK29-29.30	XTN29-29.30	XTM29-29.30
1-5/32	1.1563	29.37	XTP29-29.37	XTK29-29.37	XTN29-29.37	XTM29-29.37
–	1.1575	29.40	XTP29-29.40	XTK29-29.40	XTN29-29.40	XTM29-29.40
–	1.1614	29.50	XTP29-29.50	XTK29-29.50	XTN29-29.50	XTM29-29.50
–	1.1654	29.60	XTP29-29.60	XTK29-29.60	XTN29-29.60	XTM29-29.60
–	1.1693	29.70	XTP29-29.70	XTK29-29.70	XTN29-29.70	XTM29-29.70
–	1.1732	29.80	XTP29-29.80	XTK29-29.80	XTN29-29.80	XTM29-29.80
–	1.1772	29.90	XTP29-29.90	XTK29-29.90	XTN29-29.90	XTM29-29.90
–	1.1811	30.00	XTP29-30.00	XTK29-30.00	XTN29-30.00	XTM29-30.00
–	1.1850	30.10	XTP29-30.10	XTK29-30.10	XTN29-30.10	XTM29-30.10
1-3/16	1.1874	30.16	XTP29-30.16	XTK29-30.16	XTN29-30.16	XTM29-30.16
–	1.1890	30.20	XTP29-30.20	XTK29-30.20	XTN29-30.20	XTM29-30.20
–	1.1929	30.30	XTP29-30.30	XTK29-30.30	XTN29-30.30	XTM29-30.30
–	1.1969	30.40	XTP29-30.40	XTK29-30.40	XTN29-30.40	XTM29-30.40
–	1.2008	30.50	XTP29-30.50	XTK29-30.50	XTN29-30.50	XTM29-30.50
–	1.2047	30.60	XTP29-30.60	XTK29-30.60	XTN29-30.60	XTM29-30.60
–	1.2087	30.70	XTP29-30.70	XTK29-30.70	XTN29-30.70	XTM29-30.70
–	1.2126	30.80	XTP29-30.80	XTK29-30.80	XTN29-30.80	XTM29-30.80
–	1.2165	30.90	XTP29-30.90	XTK29-30.90	XTN29-30.90	XTM29-30.90
1-7/32	1.2189	30.96	XTP29-30.96	XTK29-30.96	XTN29-30.96	XTM29-30.96
–	1.2205	31.00	XTP29-31.00	XTK29-31.00	XTN29-31.00	XTM29-31.00
–	1.2244	31.10	XTP29-31.10	XTK29-31.10	XTN29-31.10	XTM29-31.10
–	1.2283	31.20	XTP29-31.20	XTK29-31.20	XTN29-31.20	XTM29-31.20
–	1.2323	31.30	XTP29-31.30	XTK29-31.30	XTN29-31.30	XTM29-31.30
–	1.2362	31.40	XTP29-31.40	XTK29-31.40	XTN29-31.40	XTM29-31.40
–	1.2402	31.50	XTP29-31.50	XTK29-31.50	XTN29-31.50	XTM29-31.50
–	1.2441	31.60	XTP29-31.60	XTK29-31.60	XTN29-31.60	XTM29-31.60
–	1.2480	31.70	XTP29-31.70	XTK29-31.70	XTN29-31.70	XTM29-31.70
1-1/4	1.2500	31.75	XTP29-31.75	XTK29-31.75	XTN29-31.75	XTM29-31.75
–	1.2520	31.80	XTP29-31.80	XTK29-31.80	XTN29-31.80	XTM29-31.80
–	1.2559	31.90	XTP29-31.90	XTK29-31.90	XTN29-31.90	XTM29-31.90

Inserts sold in multiples of 1.

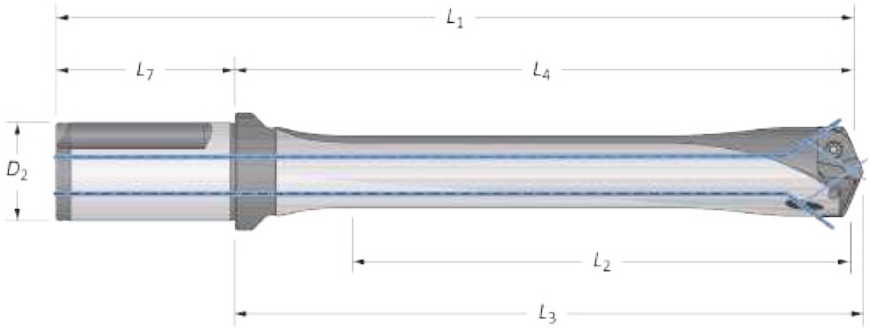
A20: 68 - 83
Key on A20: 1

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:	13.16 mm, Steel, 13 series = use Part No. **XTP13-13.16**

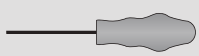
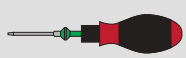
GEN3SYS XT Pro Drill Insert Holders

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



	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)

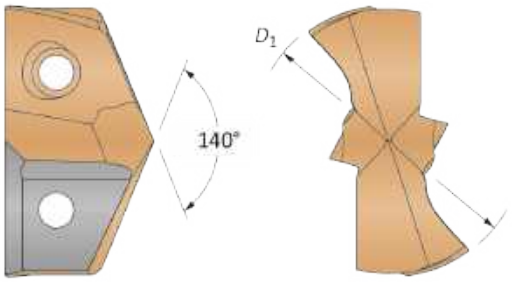
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ **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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

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



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**

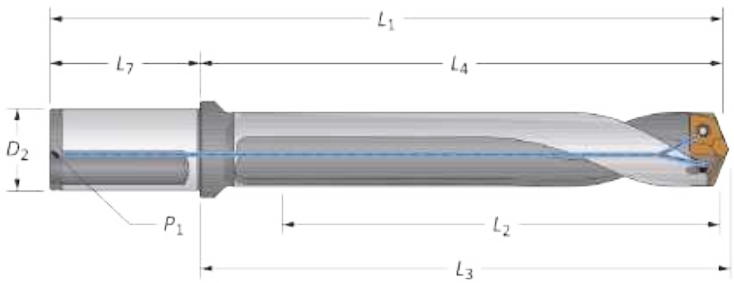
Inserts sold in multiples of 1.

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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

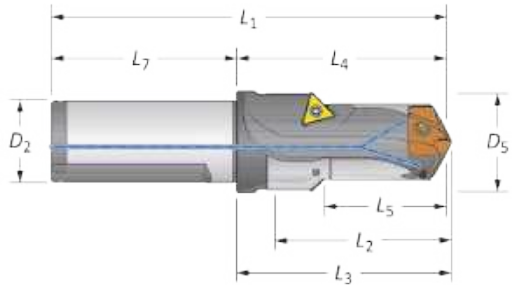
29 Series | Diameter Range: 1.1417" - 1.2597" (29.00 mm - 31.99 mm)



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	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**

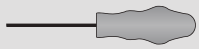
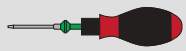
*Thread to BSP and ISO 7-1



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)

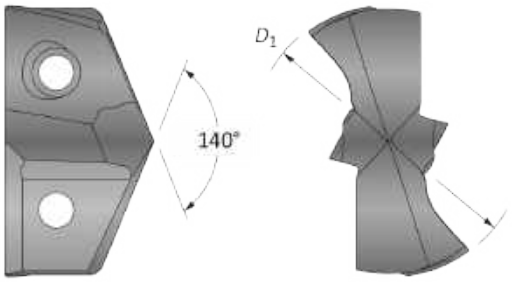
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

ⓘ = Imperial (in)
ⓜ = Metric (mm)

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

GEN3SYS XT Pro Drill Inserts

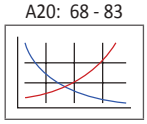
32 Series | Diameter Range: 1.2598" - 1.3780" (32.00 mm - 35.00 mm)



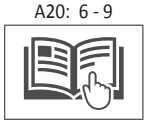
Insert						
			Part No.	Part No.	Part No.	Part No.
Fractional Equivalent	D_1 inch	D_1 mm	P	K	N	M
–	1.2598	32.00	XTP32-32.00	XTK32-32.00	XTN32-32.00	XTM32-32.00
–	1.2638	32.10	XTP32-32.10	XTK32-32.10	XTN32-32.10	XTM32-32.10
1-17/64	1.2657	32.15	XTP32-32.15	XTK32-32.15	XTN32-32.15	XTM32-32.15
–	1.2677	32.20	XTP32-32.20	XTK32-32.20	XTN32-32.20	XTM32-32.20
–	1.2717	32.30	XTP32-32.30	XTK32-32.30	XTN32-32.30	XTM32-32.30
–	1.2756	32.40	XTP32-32.40	XTK32-32.40	XTN32-32.40	XTM32-32.40
–	1.2795	32.50	XTP32-32.50	XTK32-32.50	XTN32-32.50	XTM32-32.50
1-9/32	1.2815	32.55	XTP32-32.55	XTK32-32.55	XTN32-32.55	XTM32-32.55
–	1.2835	32.60	XTP32-32.60	XTK32-32.60	XTN32-32.60	XTM32-32.60
–	1.2874	32.70	XTP32-32.70	XTK32-32.70	XTN32-32.70	XTM32-32.70
–	1.2913	32.80	XTP32-32.80	XTK32-32.80	XTN32-32.80	XTM32-32.80
–	1.2953	32.90	XTP32-32.90	XTK32-32.90	XTN32-32.90	XTM32-32.90
–	1.2992	33.00	XTP32-33.00	XTK32-33.00	XTN32-33.00	XTM32-33.00
–	1.3031	33.10	XTP32-33.10	XTK32-33.10	XTN32-33.10	XTM32-33.10
–	1.3071	33.20	XTP32-33.20	XTK32-33.20	XTN32-33.20	XTM32-33.20
–	1.3110	33.30	XTP32-33.30	XTK32-33.30	XTN32-33.30	XTM32-33.30
1-5/16	1.3126	33.34	XTP32-33.34	XTK32-33.34	XTN32-33.34	XTM32-33.34
–	1.3150	33.40	XTP32-33.40	XTK32-33.40	XTN32-33.40	XTM32-33.40
–	1.3189	33.50	XTP32-33.50	XTK32-33.50	XTN32-33.50	XTM32-33.50
–	1.3228	33.60	XTP32-33.60	XTK32-33.60	XTN32-33.60	XTM32-33.60
–	1.3268	33.70	XTP32-33.70	XTK32-33.70	XTN32-33.70	XTM32-33.70
–	1.3307	33.80	XTP32-33.80	XTK32-33.80	XTN32-33.80	XTM32-33.80
–	1.3346	33.90	XTP32-33.90	XTK32-33.90	XTN32-33.90	XTM32-33.90
–	1.3386	34.00	XTP32-34.00	XTK32-34.00	XTN32-34.00	XTM32-34.00
–	1.3425	34.10	XTP32-34.10	XTK32-34.10	XTN32-34.10	XTM32-34.10
1-11/32	1.3437	34.13	XTP32-34.13	XTK32-34.13	XTN32-34.13	XTM32-34.13
–	1.3465	34.20	XTP32-34.20	XTK32-34.20	XTN32-34.20	XTM32-34.20
–	1.3504	34.30	XTP32-34.30	XTK32-34.30	XTN32-34.30	XTM32-34.30
–	1.3543	34.40	XTP32-34.40	XTK32-34.40	XTN32-34.40	XTM32-34.40
–	1.3583	34.50	XTP32-34.50	XTK32-34.50	XTN32-34.50	XTM32-34.50
–	1.3622	34.60	XTP32-34.60	XTK32-34.60	XTN32-34.60	XTM32-34.60
–	1.3661	34.70	XTP32-34.70	XTK32-34.70	XTN32-34.70	XTM32-34.70
–	1.3701	34.80	XTP32-34.80	XTK32-34.80	XTN32-34.80	XTM32-34.80
–	1.3740	34.90	XTP32-34.90	XTK32-34.90	XTN32-34.90	XTM32-34.90
1-3/8	1.3752	34.93	XTP32-34.93	XTK32-34.93	XTN32-34.93	XTM32-34.93
–	1.3780	35.00	XTP32-35.00	XTK32-35.00	XTN32-35.00	XTM32-35.00

Inserts sold in multiples of 1.

A20: 68 - 83
Key on A20: 1



A20: 6 - 9

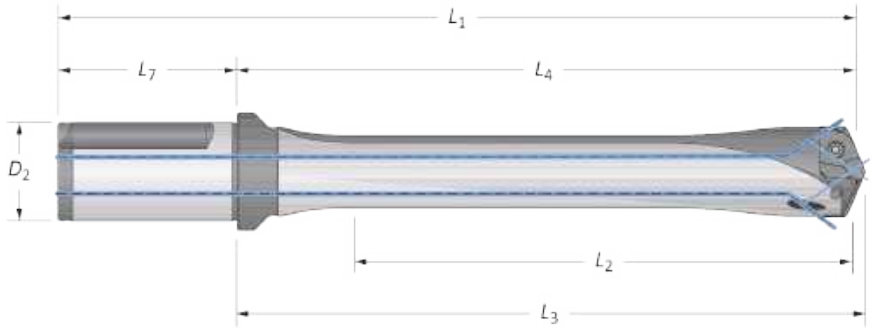


Sizes not shown are available upon request.
When ordering, please follow the example below:

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

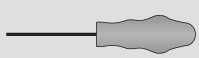
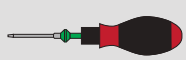
GEN3SYS XT Pro Drill Insert Holders

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



	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	157.9	161.5	217.9	60.0	32.0	YES	**HXT0332S-32FM**
		3xD	105.0	157.9	161.5	217.9	60.0	32.0	NO	**HXT0332S-32CM**
		5xD	175.0	227.8	231.3	287.8	60.0	32.0	YES	**HXT0532S-32FM**
		5xD	175.0	227.8	231.3	287.8	60.0	32.0	NO	**HXT0532S-32CM**
		7xD	245.0	297.6	301.2	357.6	60.0	32.0	YES	**HXT0732S-32FM**
		7xD	245.0	297.6	301.2	357.6	60.0	32.0	NO	**HXT0732S-32CM**
		10xD	350.0	402.8	406.4	459.3	60.0	32.0	YES	⚠ **HXT1032S-32FM**
		10xD	350.0	402.8	406.4	459.3	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)

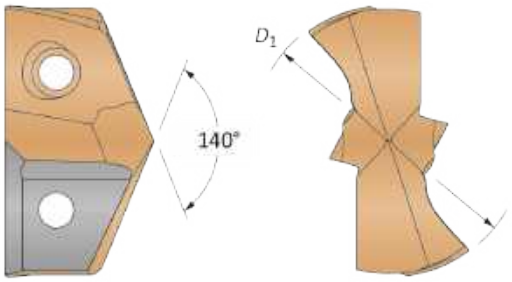
*Tightening torques are calculated with a friction coefficient of μ = 0.14 and develop 90% of ultimate yield strength.

⚠ **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.
ext: **7611** | *email:* **appeng@alliedmachine.com**

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

GEN3SYS XT Drill Inserts

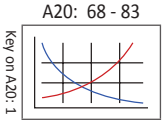
32 Series | Diameter Range: 1.2598" - 1.3780" (32.00 mm - 35.00 mm)



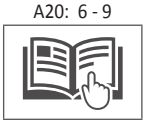
Insert								
Carbide Substrate	Fractional Equivalent	D_1 inch	D_1 mm	 Standard Part No.	 Low Rake Part No.	 Cast Iron Part No.	 Stainless Part No.
C1 (K35)	–	1.2598	32.00	**7C132P-32**	**7C132P-32LR**	–	–
	1-17/64	1.2658	32.15	**7C132P-32.15**	**7C132P-32.15LR**	–	–
	–	1.2795	32.50	**7C132P-32.5**	**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



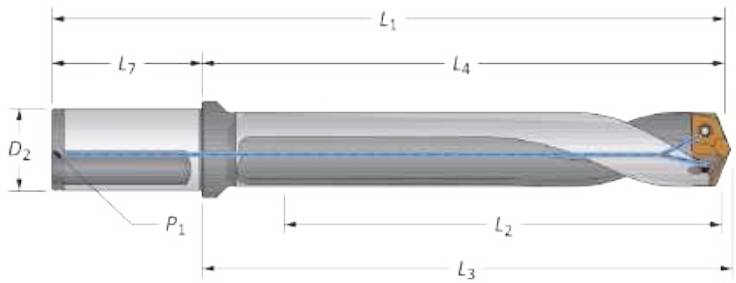
A20: 6 - 9



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:	13.20 mm, 13 series, C2 = use Part No. **7C213P-13.20**

GEN3SYS Drill Insert Holders

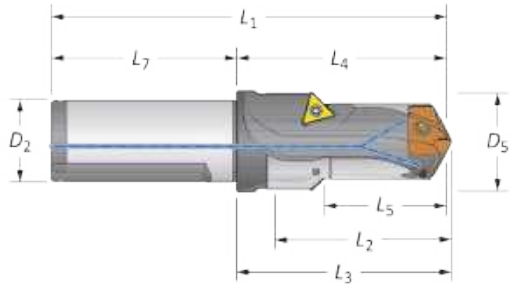
32 Series | Diameter Range: 1.2598" - 1.3780" (32.00 mm - 35.00 mm)



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 and 12xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD/12xD)
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. *ext:* **7611** | *email:* **appeng@alliedmachine.com**

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, 10xD, and 12xD holder lengths, see adjustment examples 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, 12xD	
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 and 12xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD/12xD)
200 SFM • 0.70	= 140 SFM
0.008 IPR • 0.70	= 0.0056 IPR

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

- When using holders without support bushing, use a short GEN3SYS holder to establish an initial hole that is a minimum of 2 diameters deep.
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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, 12xD	
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

⚠ 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. *ext:* **7611** | *email:* **appeng@alliedmachine.com**

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, 10xD, and 12xD 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

	3xD, 5xD		7xD		10xD, 12xD	
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

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

- When using holders without support bushing, use a short GEN3SYS holder to establish an initial hole that is a minimum of 2 diameters deep.
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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

Series	3xD, 5xD		7xD		10xD, 12xD	
	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 mm - 11.99 mm	12 series 12.00 mm - 12.99 mm	13 series 13.00 mm - 13.99 mm	14 series 14.00 mm - 14.99 mm
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 and 12xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD/12xD)
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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- 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, 10xD, and 12xD holder lengths, see adjustment example above.

Feed Rate (mm/rev) by Diameter									
15 series 15.00 mm - 15.99 mm	16 series 16.00 mm - 16.99 mm	17 series 17.00 mm - 17.99 mm	18 series 18.00 mm - 19.99 mm	20 series 20.00 mm - 21.99 mm	22 series 22.00 mm - 23.99 mm	24 series 24.00 mm - 25.99 mm	26 series 26.00 mm - 28.99 mm	29 series 29.00 mm - 31.99 mm	32 series 32.00 mm - 35.00 mm
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, 12xD	
	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 mm - 11.99 mm	12 series 12.00 mm - 12.99 mm	13 series 13.00 mm - 13.99 mm	14 series 14.00 mm - 14.99 mm
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 and 12xD Adjustment Example (0.70 Adjustment)

Speed • Adjustment Value	Speed/Feed (10xD/12xD)
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. *ext:* **7611** | *email:* **appeng@alliedmachine.com**

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, 10xD, and 12xD holder lengths, see adjustment example above.

Feed Rate (mm/rev) by Diameter									
15 series 15.00mm - 15.99mm	16 series 16.00 mm - 16.99 mm	17 series 17.00 mm - 17.99 mm	18 series 18.00 mm - 19.99 mm	20 series 20.00 mm - 21.99 mm	22 series 22.00 mm - 23.99 mm	24 series 24.00 mm - 25.99 mm	26 series 26.00 mm - 28.99 mm	29 series 29.00 mm - 31.99 mm	32 series 32.00 mm - 35.00 mm
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, 12xD	
	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 mm - 11.99 mm	12 series 12.00 mm - 12.99 mm	13 series 13.00 mm - 13.99 mm	14 series 14.00 mm - 14.99 mm
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

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

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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, 10xD, and 12xD holder lengths, see adjustment example above.

Feed Rate (mm/rev) by Diameter									
15 series 15.00 mm - 15.99 mm	16 series 16.00 mm - 16.99 mm	17 series 17.00 mm - 17.99 mm	18 series 18.00 mm - 19.99 mm	20 series 20.00 mm - 21.99 mm	22 series 22.00 mm - 23.99 mm	24 series 24.00 mm - 25.99 mm	26 series 26.00 mm - 28.99 mm	29 series 29.00 mm - 31.99 mm	32 series 32.00 mm - 35.00 mm
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	3xD, 5xD		7xD		10xD, 12xD	
	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 mm - 11.99 mm	12 series 12.00 mm - 12.99 mm	13 series 13.00 mm - 13.99 mm	14 series 14.00 mm - 14.99 mm
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

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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, 10xD, and 12xD holder lengths, see adjustment example above.

Feed Rate (mm/rev) by Diameter									
15 series 15.00 mm - 15.99 mm	16 series 16.00 mm - 16.99 mm	17 series 17.00 mm - 17.99 mm	18 series 18.00 mm - 19.99 mm	20 series 20.00 mm - 21.99 mm	22 series 22.00 mm - 23.99 mm	24 series 24.00 mm - 25.99 mm	26 series 26.00 mm - 28.99 mm	29 series 29.00 mm - 31.99 mm	32 series 32.00 mm - 35.00 mm
0.16	0.19	0.21	0.23	0.23	0.23	0.26	0.26	0.28	0.28
0.14	0.16	0.19	0.21	0.23	0.23	0.23	0.23	0.26	0.26
0.14	0.14	0.16	0.19	0.21	0.21	0.23	0.23	0.23	0.23
0.16	0.19	0.19	0.21	0.23	0.23	0.23	0.23	0.26	0.26
0.14	0.16	0.19	0.19	0.21	0.21	0.23	0.23	0.23	0.23
0.35	0.37	0.42	0.47	0.47	0.51	0.51	0.56	0.58	0.61
0.33	0.35	0.40	0.44	0.47	0.47	0.51	0.51	0.56	0.56
0.30	0.33	0.37	0.41	0.44	0.47	0.47	0.51	0.51	0.54
0.28	0.30	0.35	0.38	0.41	0.44	0.47	0.47	0.51	0.51
0.26	0.28	0.33	0.35	0.38	0.41	0.44	0.47	0.47	0.49
0.37	0.40	0.46	0.49	0.51	0.54	0.56	0.58	0.61	0.63
0.35	0.37	0.42	0.47	0.49	0.51	0.54	0.56	0.58	0.61
0.33	0.35	0.40	0.47	0.47	0.49	0.51	0.54	0.56	0.58
0.30	0.33	0.37	0.42	0.44	0.47	0.49	0.51	0.54	0.56
0.30	0.33	0.35	0.40	0.41	0.44	0.47	0.49	0.51	0.54
0.37	0.40	0.42	0.44	0.47	0.49	0.51	0.54	0.56	0.58
0.35	0.37	0.40	0.41	0.44	0.47	0.49	0.51	0.54	0.54
0.42	0.44	0.47	0.51	0.54	0.56	0.61	0.63	0.68	0.70
0.40	0.41	0.44	0.49	0.51	0.54	0.58	0.61	0.65	0.68
0.30	0.33	0.35	0.35	0.37	0.40	0.42	0.44	0.44	0.44
0.28	0.28	0.30	0.33	0.35	0.37	0.40	0.41	0.41	0.41
0.35	0.37	0.40	0.44	0.47	0.51	0.54	0.56	0.61	0.61
0.12	0.14	0.14	0.16	0.19	0.19	0.19	0.23	0.23	0.26

Coolant Recommendations

Series	3xD, 5xD		7xD		10xD, 12xD	
	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 0.003" probable mean oversize

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

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

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

5. **Tool Power = .6991 • IPR • RPM • K_m • DIA^2**
   where:
   Tool Power = tool power (HP)
   IPR = feed rate (in/rev)
   RPM = revolutions per minute (rev/min)
   K_m = specific cutting energy (lbs/in^2)
   DIA = diameter of drill (inch)

Material Constants

Type of Material	Hardness	K_m (lbs/in^2)
Plain Carbon and Alloy Steel	85 - 200 BHN	0.79
	200 - 275 BHN	0.94
	275 - 375 BHN	1.00
	375 - 425 BHN	1.15
High-Temperature Alloys	–	1.44
Titanium Alloy	–	0.72
Stainless Steels	135 - 275 BHN	0.94
	30 - 45 RC	1.08
Cast Iron	100 - 200 BHN	0.50
	200 - 300 BHN	1.08
Copper Alloy	20 - 80 RB	0.43
	80 - 100 RB	0.72
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 0.003" probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page are found in the *Machinery's Handbook*. Permission to simplify and print the equations is granted by the editor of the *Machinery's Handbook*.

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	= millimeter 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 0.075 mm probable mean oversize

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

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

Material Constants

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

Notes

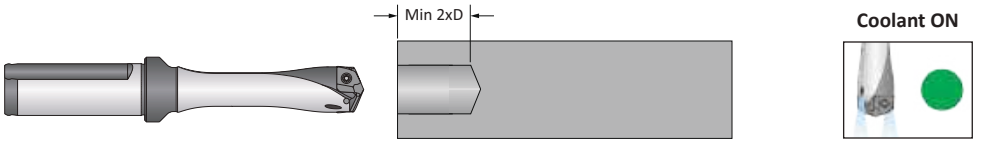
- The above tap drill information represents probable thread percentages for the standard tap drills stocked at Allied Machine. Special insert diameters may be required in order to meet a user specific percentage of thread requirement.
- The 0.075 mm probable mean oversize hole condition is based on optimum cutting conditions. Probable percent of full thread may vary based on less ideal cutting conditions.
- The table and equations on this page are found in the *Machinery's Handbook*. Permission to simplify and print the equations is granted by the editor of the *Machinery's Handbook*.

Deep Hole Drilling Guidelines

GEN3SYS XT Pro | 10xD and 12xD Holders

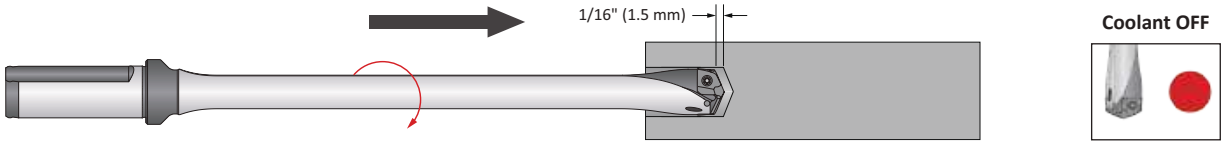
1. Pilot Hole
100 % RPM
100% IPR (mm/rev)

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.



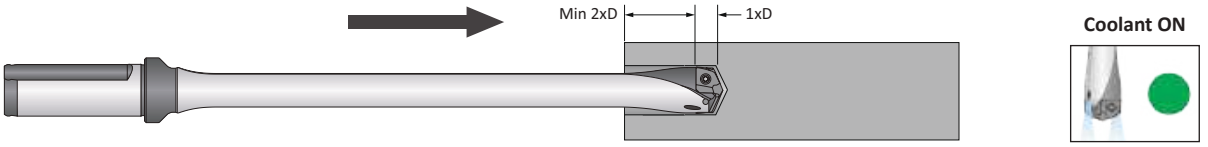
2. Feed-in
50 RPM max
12 IPM (300 mm/min)

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



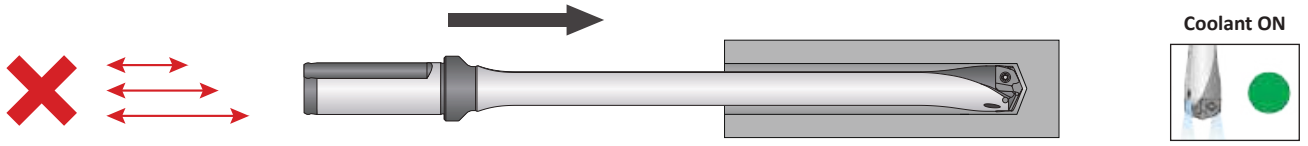
3. Deep Hole Transition Drilling
50 % RPM
75% IPR (mm/rev)

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.



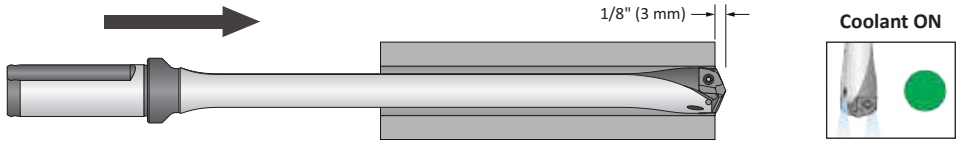
4. Deep Hole Drilling - Blind
100% RPM
100% IPR (mm/rev)

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



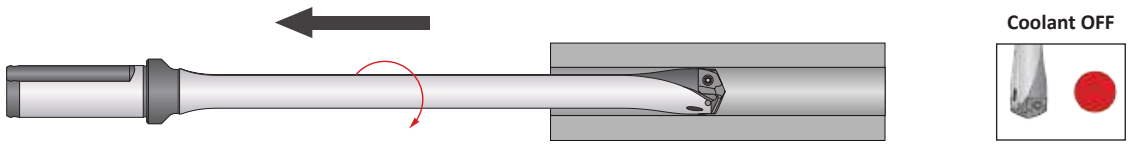
5. Deep Hole Drilling - at Breakout
50% RPM
75% IPR (mm/rev)

For through holes only:
Reduce speed by 50% and feed by 25% prior to breakout.
Do not break out more than 1/8" (3 mm) 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. *ext:* **7611** | *email:* **appeng@alliedmachine.com**

Troubleshooting Guide

	Potential Problem																			
	Accelerated corner wear	Barber pole	Bell-mouth hole	Insert chipping	Blue chips	Built-up Edge (BUE)	Chatter	Chip packing	Chipping of point	Damaged or broken tools	Excessive margin wear	High flank wear	Hole lead off	Hole out of position	Hole out of round	Oversize hole	Poor hole finish	Poor tool life	Power spikes - Load meter	
Setup Condition	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	**Possible Solutions**
Worn or misaligned spindle (lathe, screw machine, chucker)	**1**	**2**	**3**				**7**		**9**	**10**	**11**		**13**			**16**	**17**			• Align spindle and turret or tailstock. • Repair spindle.
Use of low rigidity machine tools		**2**	**3**	**4**			**7**		**9**	**10**			**13**	**14**						• Reduce penetration rate to fall within the physical limits of the machine or setup (**NOTICE:** Do not reduce feed below threshold of good chip formation).
Poor workpiece support		**2**		**4**			**7**			**10**	**11**				**15**		**17**			• Provide additional support for the workpiece. • 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**		• Premill (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's Application Engineering group for technical recommendations. • Increase coolant pressure and volume. • Improve coolant condition by use of quality products and regular maintenance.
Spot drilled holes with included angle less than that matching 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.

Guaranteed Test / Demo Application Form

Distributor PO #	

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

IMPORTANT: For processing, send purchase order to your Allied Field Sales Engineer (FSE). Please clearly mark the paperwork as "Test Order."

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.)

Preexisting 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

Thrust: _____ lbs/N

Rigidity:
- ☐ Excellent
- ☐ Good
- ☐ Poor

Orientation:
- ☐ Vertical
- ☐ Horizontal

Tool Rotating:
- ☐ Yes
- ☐ No

Coolant Information

Coolant Delivery: _____ (Through tool, flood)

Coolant Pressure: _____ PSI / bar

Coolant Type: _____ (Air mist, oil, synthetic, water soluble, etc.)

Coolant Volume: _____ GPM / LPM

Requested Tooling

QTY	Item Number

QTY	Item Number

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Dover, OH 44622

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ALLIED MACHINE & ENGINEERING

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

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