



ALLIED MACHINE
& ENGINEERING

WOHLHAUPTER®

Holemaking Solutions for Today's Manufacturing



Boring



Reaming



Burnishing



Threading



Drilling

▶ GEN3SYS® XT Pro | XT
High Penetration Drilling System



Specials



GEN3SYS® XT and XT Pro

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

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



The Next Generation of Drilling

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

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

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



Aerospace



Agriculture



Automotive



Firearms



General Machining



Oil & Gas



Renewable Energy

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



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

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

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

WARNING

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

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

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

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

GEN3SYS® XT and XT Pro Drilling System Contents

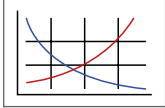
Reference Icons

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



Setup / Assembly Information

Detailed instructions and information regarding the corresponding part(s)



Recommended Cutting Data

Speed and feed recommendations for optimum and safe boring

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

Introduction Information

GEN3SYS®XT Pro Inserts	2
GEN3SYS®XT Inserts	3
Insert Comparison and Assembly Details	4
Holder Comparison and Overview	5
Product Nomenclature	6 - 7

Drill Series

11 Series	8 - 11
12 Series	12 - 15
13 Series	16 - 19
14 Series	20 - 23
15 Series	24 - 27
16 Series	28 - 31
17 Series	32 - 35
18 Series	36 - 39
20 Series	40 - 43
22 Series	44 - 47
24 Series	48 - 51
26 Series	52 - 55
29 Series	56 - 59
32 Series	60 - 63

Recommended Cutting Data

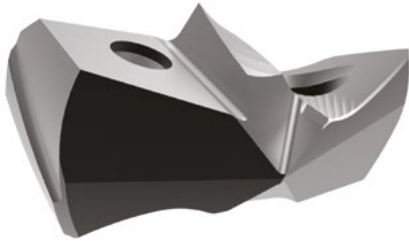
Competitive Test Results	64
Deep Hole Drilling Guidelines	65
Metric (mm)	66 - 69
Imperial (inch)	70 - 73
Tap Drill Information and Formulas	74 - 75
Troubleshooting Guide	76



GEN3SYS®XT Pro Drilling System Information

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

GEN3SYS®XT Pro Drill Inserts



Advanced Design Capabilities

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

XT Pro Inserts Connect with:



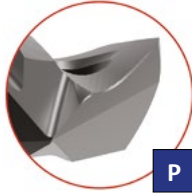
XT Pro holders



XT standard holders

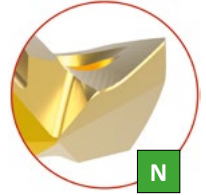
P - Steels

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



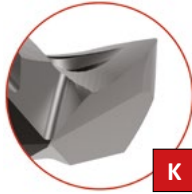
N - Non-ferrous Materials

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



K - Cast Irons

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



Increased Flute Area

Additional Coolant to the Cutting Zone



XT Pro Drill Holders

			<p>3xD, 5xD, 7xD, 10xD</p>
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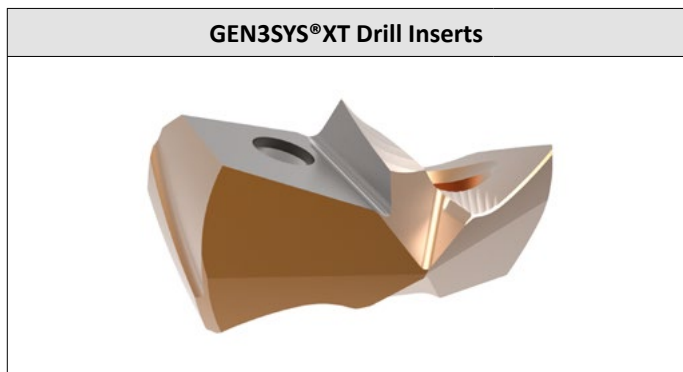
Straight flutes

Enhanced coolant inlets improve the coolant flow

Provides increased insert life

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

GEN3SYS®XT Drilling System Information



High Penetration Drilling Solutions

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

XT Inserts Connect with:



XT Pro holders

XT standard holders

Standard Geometry

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



LR - Low Rake Geometry

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



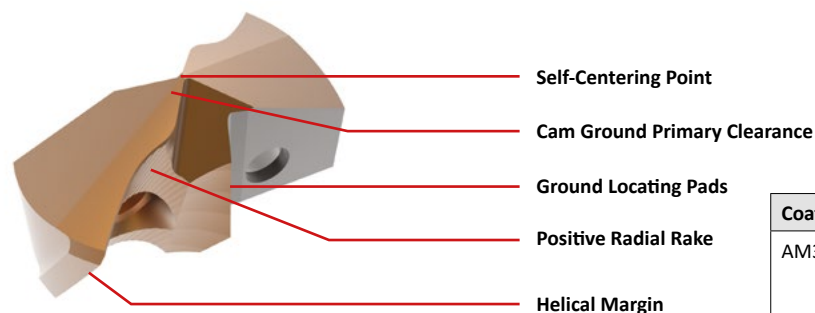
CI - Cast Iron Geometry

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



AS - Stainless Steel Geometry

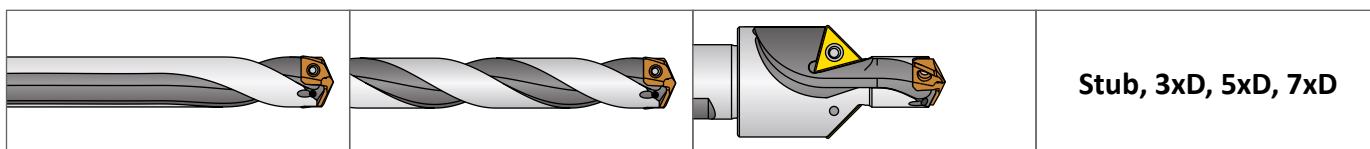
- Designed with a specific geometry to provide unmatched chip control and tool life in austenitic and PH stainless steels, as well as high temperature alloys such as Inconel, Hastelloy, and Titanium alloys
- Available in C2 carbide



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



XT Drill Standard Holders



Straight flutes

Helical flutes



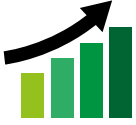

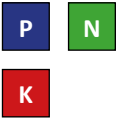







Drill / chamfer style

Stub, 3xD, 5xD, 7xD

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



Insert Comparison and Assembly Information

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



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



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



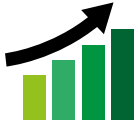


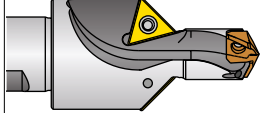
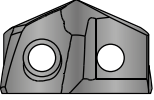
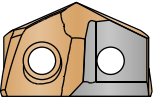


Step 3:
Apply a generous amount of E-Z Break® (provided in the packaging) onto the supplied TORX® Plus screws.

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

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

Holder Comparison and Overview

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

XT Pro Holders



Straight Flute

XT Standard Holders



Straight Flute



Helical Flute



Drill/Chamfer

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

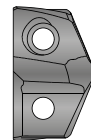


Product Nomenclature

A
DRILLING

GEN3SYS®XT Pro Drill Inserts

XT	P	11	–	11.00
1	2	3		4

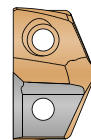


1. XT Pro Drill Insert	2. ISO Material / Geometry	3. Series	4. Diameter (mm)
XT = XT Pro insert	<p>P = Steel</p> <p>K = Cast iron</p> <p>N = Non-ferrous</p>	<p>11 = 11 series 18 = 18 series</p> <p>12 = 12 series 20 = 20 series</p> <p>13 = 13 series 22 = 22 series</p> <p>14 = 14 series 24 = 24 series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

B
BORING

GEN3SYS®XT Drill Inserts

7	C2	12	P	–	.484	CI
1	2	3	4		5	6

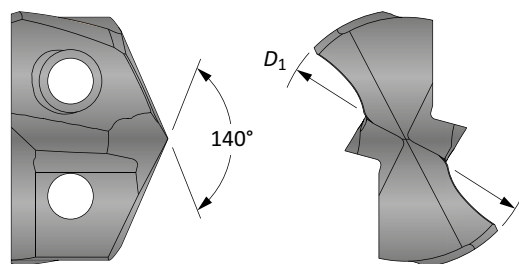


1. XT Drill Insert	2. Insert Material	3. Series	4. Coating
7 = XT insert	<p>C1 = K35 (C1) carbide</p> <p>C2 = K20 (C2) carbide</p>	<p>11 = 11 series 18 = 18 series</p> <p>12 = 12 series 20 = 20 series</p> <p>13 = 13 series 22 = 22 series</p> <p>14 = 14 series 24 = 24 series</p> <p>15 = 15 series 26 =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

C
REAMING

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

D
BURNISHING



E
THREADING

Regrinding and Recoating

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

Reference Key

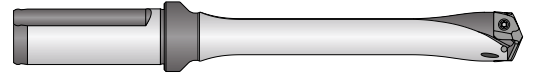
Symbol	Attribute
D ₁	Insert diameter

X
SPECIALS

Product Nomenclature

GEN3SYS®XT and XT Pro Drill Holders

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



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

Holder Ordering Information

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

Reference Key

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

