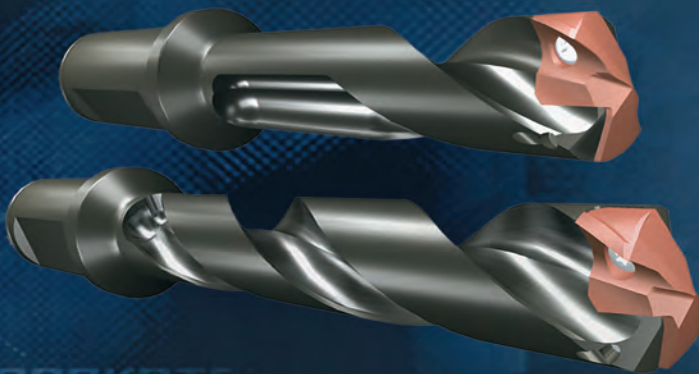




ALLIED MACHINE & ENGINEERING CORP.

GEN3SYS[®]
High Penetration Drilling System

GEN3SYS[®] XT
High Penetration Drilling System



INNOVATE

Represented by:





GEN3SYS® + GEN3SYS® XT Nomenclature

GEN3SYS® Drill Insert Item Number

| 5 | C1 | 12 | H | - | .484 | - | CI |
|---------------|-----------------|---------------|----------------|----------|-----------------|----------|-----------------|
| <u>Insert</u> | <u>Material</u> | <u>Series</u> | <u>Coating</u> | | <u>Diameter</u> | | <u>Geometry</u> |
| | C1 | 12 18 | H - AM200® | | Inch - 0017 | | CI - Cast Iron |
| | C2 | 13 20 | A - TiAlN | | Decimal - .515 | | LR - Low Rake |
| | | 14 22 | N - TiCN | | Metric - 13 | | |
| | | 15 24 | T - TiN | | | | |
| | | 16 26 | | | | | |
| | | 17 29 | | | | | |

GEN3SYS® XT Drill Insert Item Number

| 7 | C1 | 11 | P | - | .484 | - | CI |
|---------------|-----------------|---------------|----------------|----------|-----------------|----------|----------------------|
| <u>Insert</u> | <u>Material</u> | <u>Series</u> | <u>Coating</u> | | <u>Diameter</u> | | <u>Geometry</u> |
| | C1 | 11 18 | P - AM300® | | Inch - 0017 | | CI - Cast Iron |
| | C2 | 12 20 | | | Decimal - .515 | | LR - Low Rake |
| | | 13 22 | | | Metric - 13 | | AS - Stainless Steel |
| | | 14 24 | | | | | |
| | | 15 26 | | | | | |
| | | 16 29 | | | | | |
| | | 17 32 | | | | | |

GEN3SYS® and GEN3SYS® XT Holder Item Number

| 6 | 03 | 11 | H | - | 20FM |
|---------------|-------------------|---------------|--------------|----------|-----------------------------------|
| <u>Holder</u> | <u>Length</u> | <u>Series</u> | <u>Flute</u> | | <u>Shank Style</u> |
| | 01 - Stub Length | 11 18 | H - Helical | | F - Flanged with Flat |
| | 03 - 3 x Diameter | 12 20 | S - Straight | | FM - Flanged Metric with Flat |
| | 05 - 5 x Diameter | 13 22 | | | C - Cylindrical (No Flat) |
| | 07 - 7 x Diameter | 14 24 | | | CM - Cylindrical Metric (No Flat) |
| | | 15 26 | | | |
| | | 16 29 | | | |
| | | 17 32 | | | |



GEN3SYS® & GEN3SYS® XT
Geometry and Substrate Options

C1 Carbide

The primary application for this carbide grade is in steel applications. In addition to exceptional wear resistance, C-1 carbide is considerably more durable when compared to other carbide grades. The higher toughness allows this grade to function in applications not suitable for other carbides.

C2 Carbide

The primary application for this carbide grade is in non-ferrous applications (high temperature alloys, stainless steels, aluminums, cast irons). It offers exceptionally high wear resistance. Tool life increases in steel applications can be realized; however, high machine tool rigidity is required.

GEN3SYS® Standard Geometry

An excellent choice for general purpose high penetration drilling. This geometry is available as a standard in both C-1 and C-2 substrates with Allied's superior AM200® coating. The standard GEN3SYS® geometry is recommended when drilling free machining, carbon, and softer alloy steels.

GEN3SYS® Cast Iron Geometry (-CI)

Specifically designed to improve hole quality, exit, and increase tool life in all cast irons. This specialized geometry contains unique edge and corner preparations to maximize performance in cast irons when combined with Allied's C-2 substrate.

GEN3SYS® Low Rake Geometry (-LR)

Designed to increase reliability in structural and harder steels or lower rigidity applications. This geometry contains increased edge and corner strength combined with C-1 carbide substrate to maximize insert fracture resistance in more difficult drilling applications.

GEN3SYS® XT Standard Geometry

Allied's next generation of high penetration drilling utilizes corner and cutting edge enhancements combined with our new AM300® coating to deliver more durability, reliability, and productivity. The new GEN3SYS XT® geometry is designed to increase penetration rates and tool life, providing the lowest cost per hole among high penetration drill lines. This geometry is available in both C-1 and C-2 carbide substrates.

GEN3SYS® XT Stainless Steel Geometry (AS)

Designed with an austenitic specific geometry, C-2 carbide substrate, and Allied's new AM300® coating 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.

GEN3SYS® XT Cast Iron Geometry (CI)

Combination of a cutting edge enhancement and Allied's new AM300® coating delivers increased durability and tool life in ductile, nodular, and grey cast irons. This geometry is recommended in C-2 carbide substrate.

GEN3SYS® XT Low Rake Geometry (LR)

Allied's GEN3SYS XT® Low Rake is the toughest GEN3SYS® geometry Allied offers and is designed for harder steels and less than ideal machining applications. This geometry is recommended in either a C-1 or C-2 substrate, and AM300® coating.

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Proudly Made in the USA



11 Series GEN3SYS[®] XT Drill Inserts and Holders

Range: 0.4331 to 0.4723 (11,00mm to 11,99mm)

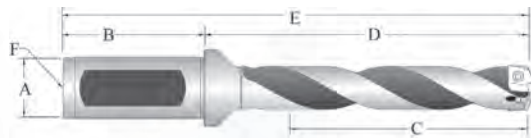


GEN3SYS[®] XT Drill Inserts (supplied in 1 piece packages)

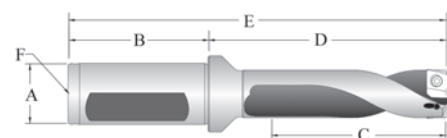
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | Item Number & Coating | Availability & Geometry |
|-----------------------|-------|--------|--------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------|-------------------------|
| Fractional Equivalent | (mm) | (inch) | C1 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● LR | C2 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● CI LR AS |
| | 11,00 | 0.4331 | | | | |
| 7/16" | 11,11 | 0.4375 | 7C111P-0014 | ○ ▲ | 7C211P-0014 | ○ ▲ ▲ ○ |
| | 11,50 | 0.4528 | 7C111P-11.5 | ○ ▲ | 7C211P-11.5 | ○ ▲ ▲ ○ |
| 29/64" | 11,51 | 0.4531 | 7C111P-.453 | ▲ ▲ | 7C211P-.453 | ▲ ▲ ▲ ▲ |
| 15/32" | 11,91 | 0.4688 | 7C111P-0015 | ○ ▲ | 7C211P-0015 | ○ ▲ ▲ ○ |

Ex. Geometries: Standard - 7C111P-11
Cast Iron - 7C211P-11CI

- see page 3 for geometry details



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] XT Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | Pipe Tap |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|------|----------|--------------------|----------|-----------------------|-------|----------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60311S-16FM | | 16 | | 41,9 | | 36,0 | yes | | 62,6 | | 104,5 | 1/16" |
| | | 60311S-063F | 5/8" | | 1-7/8" | | 1-27/64" | yes | 2-29/64" | | 4-21/64" | | 1/16" | |
| | 5xD | 60511S-16FM | | 16 | | 41,9 | | 59,9 | yes | | 86,6 | | 128,5 | 1/16" |
| | | 60511S-063F | 5/8" | | 1-7/8" | | 2-23/64" | yes | 3-13/32" | | 5-9/32" | | 1/16" | |
| | 7xD | 60711S-16FM | | 16 | | 41,9 | | 83,9 | yes | | 110,6 | | 152,5 | 1/16" |
| | | 60711S-063F | 5/8" | | 1-7/8" | | 3-19/64" | yes | 4-11/32" | | 6-7/32" | | 1/16" | |
| Helical (Machining Center) | Stub | 60111H-16FM | | 16 | | 41,9 | | 16 | yes | | 42,6 | | 84,6 | 1/16" |
| | | 60111H-063F | 5/8" | | 1-7/8" | | 5/8" | yes | 1-43/64" | | 3-35/64" | | 1/16" | |
| | 3xD | 60311H-16FM | | 16 | | 41,9 | | 36 | yes | | 62,6 | | 104,5 | 1/16" |
| | | 60311H-063F | 5/8" | | 1-7/8" | | 1-27/64" | yes | 2-29/64" | | 4-21/64" | | 1/16" | |
| | | 60311H-16CM | | 16 | | 41,9 | | 36 | no | | 62,6 | | 104,5 | 1/16" |
| | | 60311H-063C | 5/8" | | 1-7/8" | | 1-27/64" | no | 2-29/64" | | 4-21/64" | | 1/16" | |
| | 5xD | 60511H-16FM | | 16 | | 41,9 | | 59,9 | yes | | 86,6 | | 128,5 | 1/16" |
| | | 60511H-063F | 5/8" | | 1-7/8" | | 2-23/64" | yes | 3-13/32" | | 5-9/32" | | 1/16" | |
| | | 60511H-16CM | | 16 | | 41,9 | | 59,9 | no | | 86,6 | | 128,5 | 1/16" |
| | | 60511H-063C | 5/8" | | 1-7/8" | | 2-23/64" | no | 3-13/32" | | 5-9/32" | | 1/16" | |
| | 7xD | 60711H-16FM | | 16 | | 41,9 | | 83,9 | yes | | 110,6 | | 152,5 | 1/16" |
| | | 60711H-063F | 5/8" | | 1-7/8" | | 3-19/64" | yes | 4-11/32" | | 6-7/32" | | 1/16" | |
| | | 60711H-16CM | | 16 | | 41,9 | | 83,9 | no | | 110,6 | | 152,5 | 1/16" |
| | | 60711H-063C | 5/8" | | 1-7/8" | | 3-19/64" | no | 4-11/32" | | 6-7/32" | | 1/16" | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 11 | 71843-IP6-10 | 8IP-6 | 8IP-6TL | 8IP-6B | .4331-.4723 | 4.4 | 11,00 - 11,99 | 50 |

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

● Availability Codes

○ Stocked

▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

Decimals = .4340" AM300[®], 11 Series, C2 = 7C211P-.4340

Metric = 11,20 mm AM300[®], 11 Series, C2 = 7C211P-11.20

12 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.4724 to 0.5114 (12,00mm to 12,99mm)



GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

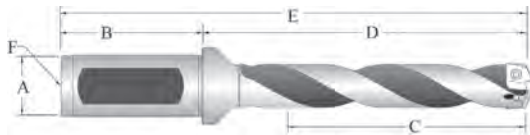
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -Cl | -LR |
| | 12,00 | 0.4724 | 5C112H-12 | ○ | ▲ | 5C212H-12 | ○ | ○ | ▲ |
| 31/64" | 12,30 | 0.4844 | 5C112H-.484 | ○ | ▲ | 5C212H-.484 | ○ | ▲ | ▲ |
| | 12,50 | 0.4921 | 5C112H-12.5 | ○ | ▲ | 5C212H-12.5 | ○ | ○ | ▲ |
| 1/2" | 12,70 | 0.5000 | 5C112H-0016 | ○ | ▲ | 5C212H-0016 | ○ | ▲ | ▲ |

Ex. Geometries: Standard - 5C112H-12
Cast Iron - 5C212H-12-CI - see page 3 for geometry details

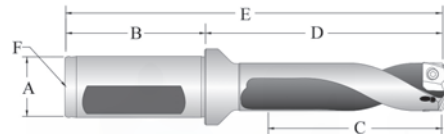
GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● | Cl | LR | AS |
| 7C112P-12 | ○ | ▲ | 7C212P-12 | ○ | ○ | ▲ | ○ |
| 7C112P-.484 | ○ | ▲ | 7C212P-.484 | ○ | ▲ | ▲ | ○ |
| 7C112P-12.5 | ○ | ▲ | 7C212P-12.5 | ○ | ○ | ▲ | ○ |
| 7C112P-0016 | ○ | ▲ | 7C212P-0016 | ○ | ▲ | ▲ | ○ |

Ex. Geometries: Standard - 7C112P-12
Stainless - 7C212P-12AS



Helical Fluted Design



Straight Fluted Design

GEN3SYS[™] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|------|----------|--------------------|----------|-----------------------|-------|------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60312S-20FM | | 20 | | 41,9 | | 39,0 | yes | | 66,6 | | 108,5 | 1/8" |
| | | 60312S-075F | 3/4" | | 2-1/32" | | 1-35/64" | yes | 2-5/8" | | 4-21/32" | | 134,5 | 1/8" |
| | 5xD | 60512S-20FM | | 20 | | 41,9 | | 64,9 | yes | | 92,6 | | 134,5 | 1/8" |
| | | 60512S-075F | 3/4" | | 2-1/32" | | 2-9/16" | yes | 3-21/32" | | 5-43/64" | | 160,5 | 1/8" |
| | 7xD | 60712S-20FM | | 20 | | 41,9 | | 90,9 | yes | | 118,5 | | 160,5 | 1/8" |
| | | 60712S-075F | 3/4" | | 2-1/32" | | 3-19/32" | yes | 4-25/32" | | 6-45/64" | | 160,5 | 1/8" |
| Helical (Machining Center) | Stub | 60112H-20FM | | 20 | | 41,9 | | 16,0 | yes | | 43,2 | | 85,1 | 1/8" |
| | | 60112H-075F | 3/4" | | 2-1/32" | | 5/8" | yes | 1-45/64" | | 3-47/64" | | 108,5 | 1/8" |
| | 3xD | 60312H-20FM | | 20 | | 41,9 | | 39,0 | yes | | 66,6 | | 108,5 | 1/8" |
| | | 60312H-075F | 3/4" | | 2-1/32" | | 1-35/64" | yes | 2-5/8" | | 4-21/32" | | 134,5 | 1/8" |
| | 5xD | 60312H-20CM | | 20 | | 41,9 | | 39,0 | no | | 66,6 | | 108,5 | 1/8" |
| | | 60312H-075C | 3/4" | | 2-1/32" | | 1-35/64" | no | 2-5/8" | | 4-21/32" | | 134,5 | 1/8" |
| | 7xD | 60512H-20FM | | 20 | | 41,9 | | 64,9 | yes | | 92,6 | | 134,5 | 1/8" |
| | | 60512H-075F | 3/4" | | 2-1/32" | | 2-9/16" | yes | 3-21/32" | | 5-43/64" | | 160,5 | 1/8" |
| | 7xD | 60512H-20CM | | 20 | | 41,9 | | 64,9 | no | | 92,6 | | 134,5 | 1/8" |
| | | 60512H-075C | 3/4" | | 2-1/32" | | 2-9/16" | no | 3-21/32" | | 5-43/64" | | 160,5 | 1/8" |
| | | 60712H-20FM | | 20 | | 41,9 | | 90,9 | yes | | 118,5 | | 160,5 | 1/8" |
| | | 60712H-075F | 3/4" | | 2-1/32" | | 3-19/32" | yes | 4-25/32" | | 6-45/64" | | 160,5 | 1/8" |
| | 7xD | 60712H-20CM | | 20 | | 41,9 | | 90,9 | no | | 118,5 | | 160,5 | 1/8" |
| | | 60712H-075C | 3/4" | | 2-1/32" | | 3-19/32" | no | 4-25/32" | | 6-45/64" | | 160,5 | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 12 | 7247-IP7-10 | 7247N-IP7-10 | 8IP-7 | 8IP-7TL | 8IP-7B | 0.4724-0.5114 | 7.4 | 12.00-12.99 | 84 |

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

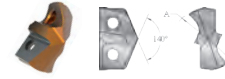
- Availability Codes
 - Stocked
 - ▲ Non-Stocked - 10 work day lead time
- All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.
When ordering, please follow the examples shown below:
 Decimals = .4900" AM200[®], 12 Series, C2 = 5C212H-.4900
 Metric = 12,20 mm AM200[®], 12 Series, C2 = 5C212H-12.20



13 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.5118 to 0.5511 (13,00mm to 13,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

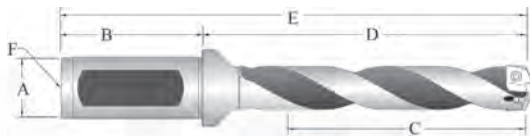
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 13,00 | 0.5118 | 5C113H-13 | ○ | ▲ | 5C213H-13 | ○ | ○ | ▲ |
| 33/64" | 13,08 | 0.5156 | 5C113H-.515 | ○ | ▲ | 5C213H-.515 | ○ | ▲ | ▲ |
| 17/32" | 13,49 | 0.5312 | 5C113H-0017 | ○ | ▲ | 5C213H-0017 | ○ | ○ | ▲ |
| | 13,50 | 0.5315 | 5C113H-13.5 | ○ | ▲ | 5C213H-13.5 | ○ | ○ | ▲ |
| 35/64" | 13,89 | 0.5469 | 5C113H-.546 | ○ | ▲ | 5C213H-.546 | ○ | ▲ | ▲ |

Ex. Geometries: Standard - 5C113H-13
Cast Iron - 5C213H-13-LR
- see page 3 for geometry details

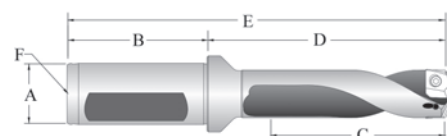
GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | CI | LR | AS |
| 7C113P-13 | ○ | ▲ | 7C213P-13 | ○ | ○ | ▲ | ○ |
| 7C113P-.515 | ○ | ▲ | 7C213P-.515 | ○ | ▲ | ▲ | ○ |
| 7C113P-0017 | ○ | ▲ | 7C213P-0017 | ○ | ○ | ▲ | ○ |
| 7C113P-13.5 | ○ | ▲ | 7C213P-13.5 | ○ | ○ | ▲ | ○ |
| 7C113P-.546 | ○ | ▲ | 7C213P-.546 | ○ | ▲ | ▲ | ○ |

Ex. Geometries: Standard - 7C113P-13
Cast Iron - 7C213P-13LR



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|------|----------|--------------------|----------|-----------------------|-------|------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60313S-20FM | | 20 | | 41,9 | | 42,0 | yes | | 69,2 | | 111,2 | 1/8" |
| | | 60313S-075F | 3/4" | | 2-1/32" | | 1-21/32" | yes | 2-47/64" | | 4-49/64" | | 1/8" | |
| | 5xD | 60513S-20FM | | 20 | | 41,9 | | 70,0 | yes | | 97,3 | | 139,2 | 1/8" |
| | | 60513S-075F | 3/4" | | 2-1/32" | | 2-49/64" | yes | 3-53/64" | | 5-55/64" | | 1/8" | |
| | 7xD | 60713S-20FM | | 20 | | 41,9 | | 97,9 | yes | | 125,3 | | 167,2 | 1/8" |
| | | 60713S-075F | 3/4" | | 2-1/32" | | 3-55/64" | yes | 4-15/16" | | 6-31/32" | | 1/8" | |
| Helical (Machining Center) | Stub | 60113H-20FM | | 20 | | 41,9 | | 16,0 | yes | | 43,0 | | 84,9 | 1/8" |
| | | 60113H-075F | 3/4" | | 2-1/32" | | 5/8" | yes | 1-11/16" | | 3-23/32" | | 1/8" | |
| | 3xD | 60313H-20FM | | 20 | | 41,9 | | 42,0 | yes | | 69,2 | | 111,2 | 1/8" |
| | | 60313H-075F | 3/4" | | 2-1/32" | | 1-21/32" | yes | 2-47/64" | | 4-49/64" | | 1/8" | |
| | | 60313H-20CM | | 20 | | 41,9 | | 42,0 | no | | 69,2 | | 111,2 | 1/8" |
| | | 60313H-075C | 3/4" | | 2-1/32" | | 1-21/32" | no | 2-47/64" | | 4-49/64" | | 1/8" | |
| | 5xD | 60513H-20FM | | 20 | | 41,9 | | 70,0 | yes | | 97,3 | | 139,2 | 1/8" |
| | | 60513H-075F | 3/4" | | 2-1/32" | | 2-49/64" | yes | 3-53/64" | | 5-55/64" | | 1/8" | |
| | | 60513H-20CM | | 20 | | 41,9 | | 70,0 | no | | 97,3 | | 139,2 | 1/8" |
| | | 60513H-075C | 3/4" | | 2-1/32" | | 2-49/64" | no | 3-53/64" | | 5-55/64" | | 1/8" | |
| | 7xD | 60713H-20FM | | 20 | | 41,9 | | 97,9 | yes | | 125,3 | | 167,2 | 1/8" |
| | | 60713H-075F | 3/4" | | 2-1/32" | | 3-55/64" | yes | 4-15/16" | | 6-31/32" | | 1/8" | |
| | | 60713H-20CM | | 20 | | 41,9 | | 97,9 | no | | 125,3 | | 167,2 | 1/8" |
| | | 60713H-075C | 3/4" | | 2-1/32" | | 3-55/64" | no | 4-15/16" | | 6-31/32" | | 1/8" | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 13 | 7247-IP7-10 | 7247N-IP7-10 | 8IP-7 | 8IP-7TL | 8IP-7B | 0.5118-0.5508 | 7.4 | 13.00-13.99 | 84 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

Decimals = .5200", C2, AM200[®], 13 Series = 5C213H-.5200

Metric = 13,20 mm, C2, AM200[®], 13 Series = 5C213H-13.20

14 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.5512 to 0.5902 (14,00mm to 14,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 14,00 | 0.5512 | 5C114H-14 | ○ | ▲ | 5C214H-14 | ○ | ○ | ▲ |
| 9/16" | 14,29 | 0.5625 | 5C114H-0018 | ○ | ▲ | 5C214H-0018 | ○ | ○ | ▲ |
| | 14,50 | 0.5709 | 5C114H-14.5 | ○ | ▲ | 5C214H-14.5 | ○ | ○ | ▲ |
| 37/64" | 14,68 | 0.5781 | 5C114H-.578 | ○ | ▲ | 5C214H-.578 | ○ | ▲ | ▲ |
| | 14,80 | 0.5827 | 5C114H-14.8 | ○ | ▲ | 5C214H-14.8 | ○ | ▲ | ▲ |

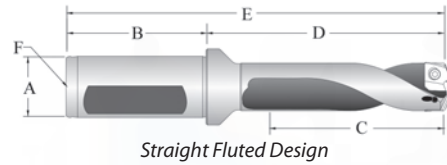
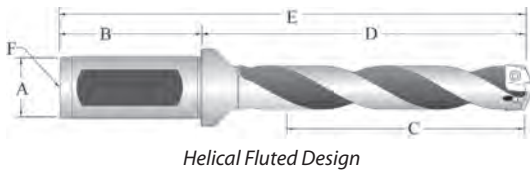
Ex. Geometries: Standard - 5C114H-14 - see page 3 for geometry details
Cast Iron - 5C214H-14-CI



GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | CI | LR | AS |
| 7C114P-14 | ○ | ○ | 7C214P-14 | ○ | ○ | ▲ | ○ |
| 7C114P-0018 | ○ | ○ | 7C214P-0018 | ○ | ○ | ▲ | ○ |
| 7C114P-14.5 | ○ | ▲ | 7C214P-14.5 | ○ | ○ | ▲ | ○ |
| 7C114P-.578 | ○ | ▲ | 7C214P-.578 | ○ | ▲ | ▲ | ○ |
| 7C114P-14.8 | ○ | ▲ | 7C214P-14.8 | ○ | ▲ | ▲ | ○ |

Ex. Geometries: Standard - 7C114P-14
Stainless - 7C214P-14AS



GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|----------|------|--------------------|----------|-----------------------|----------|------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60314S-20FM | | 20 | | 41,9 | | 45,0 | yes | | 72,4 | | 114,3 | 1/8" |
| | | 60314S-075F | 3/4" | | 2-1/32" | | | 1-25/32" | | yes | 2-55/64" | | 4-55/64" | 1/8" |
| | 5xD | 60514S-20FM | | 20 | | 41,9 | | 75,0 | yes | | 102,4 | | 144,3 | 1/8" |
| | | 60514S-075F | 3/4" | | 2-1/32" | | | 2-61/64" | | yes | 4-1/32" | | 6-1/16" | 1/8" |
| | 7xD | 60714S-20FM | | 20 | | 41,9 | | 104,9 | yes | | 132,4 | | 190,5 | 1/8" |
| | | 60714S-075F | 3/4" | | 2-1/32" | | | 4-9/64" | | yes | 5-7/32" | | 7-1/4" | 1/8" |
| Helical (Machining Center) | Stub | 60114H-20FM | | 20 | | 41,9 | | 17,5 | yes | | 44,6 | | 86,5 | 1/8" |
| | | 60114H-075F | 3/4" | | 2-1/32" | | | 11/16" | | yes | 1-3/4" | | 3-25/32" | 1/8" |
| | 3xD | 60314H-20FM | | 20 | | 41,9 | | 45,0 | yes | | 72,4 | | 114,3 | 1/8" |
| | | 60314H-075F | 3/4" | | 2-1/32" | | | 1-25/32" | | yes | 2-55/64" | | 4-55/64" | 1/8" |
| | | 60314H-20CM | | 20 | | 41,9 | | 45,0 | no | | 72,4 | | 114,3 | 1/8" |
| | | 60314H-075C | 3/4" | | 2-1/32" | | | 1-25/32" | | no | 2-55/64" | | 4-55/64" | 1/8" |
| | 5xD | 60514H-20FM | | 20 | | 41,9 | | 75,0 | yes | | 102,4 | | 144,3 | 1/8" |
| | | 60514H-075F | 3/4" | | 2-1/32" | | | 2-61/64" | | yes | 4-1/32" | | 6-1/16" | 1/8" |
| | | 60514H-20CM | | 20 | | 41,9 | | 75,0 | no | | 102,4 | | 144,3 | 1/8" |
| | | 60514H-075C | 3/4" | | 2-1/32" | | | 2-61/64" | | no | 4-1/32" | | 6-1/16" | 1/8" |
| | 7xD | 60714H-20FM | | 20 | | 41,9 | | 104,9 | yes | | 132,4 | | 190,5 | 1/8" |
| | | 60714H-075F | 3/4" | | 2-1/32" | | | 4-9/64" | | yes | 5-7/32" | | 7-1/4" | 1/8" |
| | | 60714H-20CM | | 20 | | 41,9 | | 104,9 | no | | 132,4 | | 190,5 | 1/8" |
| | | 60714H-075C | 3/4" | | 2-1/32" | | | 4-9/64" | | no | 5-7/32" | | 7-1/4" | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 14 | 7247-IP7-10 | 7247N-IP7-10 | 8IP-7 | 8IP-TTL | 8IP-7B | 0.5512-0.5902 | 7.4 | 14.00-14.99 | 84 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

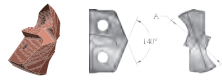
Decimals = .5600" AM200[®], 14 Series, C2 = 5C214H-.5600

Metric = 14,10 mm AM200[®], 14 Series, C2 = 5C214H-14.10



15 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.5906 to 0.6298 (15,00mm to 15,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

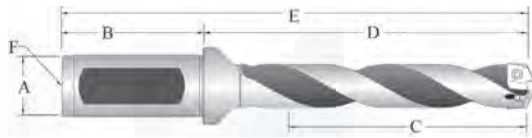
GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 15,00 | 0.5906 | 5C115H-15 | ○ | ▲ | 5C215H-15 | ○ | ▲ | ▲ |
| 19/32" | 15,08 | 0.5938 | 5C115H-0019 | ○ | ▲ | 5C215H-0019 | ○ | ○ | ▲ |
| | 15,25 | 0.6004 | 5C115H-15.25 | ▲ | ▲ | 5C215H-15.25 | ▲ | ○ | ▲ |
| 39/64" | 15,48 | 0.6094 | 5C115H-.609 | ○ | ▲ | 5C215H-.609 | ○ | ▲ | ▲ |
| | 15,50 | 0.6103 | 5C115H-15.5 | ○ | ▲ | 5C215H-15.5 | ○ | ○ | ▲ |
| | 15,70 | 0.6181 | 5C115H-.618 | ○ | ▲ | 5C215H-.618 | ○ | ▲ | ▲ |
| 5/8" | 15,88 | 0.6250 | 5C115H-0020 | ○ | ▲ | 5C215H-0020 | ○ | ○ | ▲ |

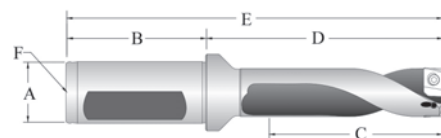
| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | CI | LR | AS |
| 7C115P-15 | ○ | ▲ | 7C215P-15 | ○ | ▲ | ▲ | ○ |
| 7C115P-0019 | ○ | ▲ | 7C215P-0019 | ○ | ▲ | ▲ | ○ |
| 7C115P-15.25 | ▲ | ▲ | 7C215P-15.25 | ▲ | ○ | ▲ | ▲ |
| 7C115P-.609 | ○ | ▲ | 7C215P-.609 | ○ | ▲ | ▲ | ○ |
| 7C115P-15.5 | ○ | ▲ | 7C215P-15.5 | ○ | ▲ | ▲ | ○ |
| 7C115P-.618 | ○ | ▲ | 7C215P-.618 | ○ | ▲ | ▲ | ○ |
| 7C115P-0020 | ○ | ▲ | 7C215P-0020 | ○ | ▲ | ▲ | ○ |

Ex. Geometries: Standard - 5C115H-15
Cast Iron - 5C215H-15-CI - see page 3 for geometry details

Ex. Geometries: Standard - 7C115P-15
Cast Iron - 7C215P-15CI



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F | |
|----------------------------|-------------|-------------|-----------------------|---------|---------------------|---------|--------------------|----------|----------|--------------------|----------|-----------------------|--------|------|----------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | | Pipe Tap |
| Straight (Lathe) | 3xD | 60315S-20FM | | 20 | | 41,9 | | 48,0 | yes | | 75,1 | | 117,0 | 1/8" | |
| | | 60315S-075F | 3/4" | | 2-1/32" | | | 1-57/64" | yes | 2-61/64" | | 4-63/64" | | 1/8" | |
| | | 60515S-20FM | | 20 | | 41,9 | | 80,0 | yes | | 107,0 | | 148,9 | 1/8" | |
| | 5xD | 60515S-075F | 3/4" | | | 2-1/32" | | | 3-5/32" | yes | 4-7/32" | | 6-1/4" | | 1/8" |
| | | 60715S-20FM | | 20 | | 41,9 | | 111,9 | yes | | 139,0 | | 180,9 | 1/8" | |
| | | 60715S-075F | 3/4" | | | 2-1/32" | | | 4-27/64" | yes | 5-31/64" | | 7-1/2" | | 1/8" |
| Helical (Machining Center) | Stub | 60115H-20FM | | 20 | | 41,9 | | 17,5 | yes | | 44,3 | | 86,2 | 1/8" | |
| | | 60115H-075F | 3/4" | | 2-1/32" | | | 11/16" | yes | 1-3/4" | | 3-25/32" | | 1/8" | |
| | | 60315H-20FM | | 20 | | 41,9 | | 48,0 | yes | | 75,1 | | 117,0 | 1/8" | |
| | | 60315H-075F | 3/4" | | 2-1/32" | | | 1-57/64" | yes | 2-61/64" | | 4-63/64" | | 1/8" | |
| | | 60315H-20CM | | 20 | | 41,9 | | 48,0 | no | | 75,1 | | 117,0 | 1/8" | |
| | | 60315H-075C | 3/4" | | 2-1/32" | | | 1-57/64" | no | 2-61/64" | | 4-63/64" | | 1/8" | |
| | 3xD | 60515H-20FM | | 20 | | 41,9 | | 80,0 | yes | | 107,0 | | 148,9 | 1/8" | |
| | | 60515H-075F | 3/4" | | 2-1/32" | | | 3-5/32" | yes | 4-7/32" | | 6-1/4" | | 1/8" | |
| | | 60515H-20CM | | 20 | | 41,9 | | 80,0 | no | | 107,0 | | 148,9 | 1/8" | |
| | | 60515H-075C | 3/4" | | 2-1/32" | | | 3-5/32" | no | 4-7/32" | | 6-1/4" | | 1/8" | |
| | | 60715H-20FM | | 20 | | 41,9 | | 111,9 | yes | | 139,0 | | 180,9 | 1/8" | |
| | | 60715H-075F | 3/4" | | 2-1/32" | | | 4-27/64" | yes | 5-31/64" | | 7-1/2" | | 1/8" | |
| 5xD | 60715H-20CM | | 20 | | 41,9 | | 111,9 | no | | 139,0 | | 180,9 | 1/8" | | |
| | 60715H-075C | 3/4" | | 2-1/32" | | | 4-27/64" | no | 5-31/64" | | 7-1/2" | | 1/8" | | |
| | 60715H-20FM | | 20 | | 41,9 | | 111,9 | yes | | 139,0 | | 180,9 | 1/8" | | |
| | 60715H-075F | 3/4" | | 2-1/32" | | | 4-27/64" | yes | 5-31/64" | | 7-1/2" | | 1/8" | | |
| 7xD | 60715H-20CM | | 20 | | 41,9 | | 111,9 | no | | 139,0 | | 180,9 | 1/8" | | |
| | 60715H-075C | 3/4" | | 2-1/32" | | | 4-27/64" | no | 5-31/64" | | 7-1/2" | | 1/8" | | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screws 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|----------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 15 | 7247-IP7-10 | 7247N-IP7-10 | 8IP-7 | 8IP-7TL | 8IP-7B | 0.5906-0.6295 | 7.4 | 15.00-15.99 | 84 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

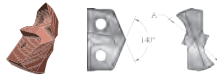
When ordering, please follow the examples shown below:

Decimals = .5925" AM200[®], 15 Series, C2 = 5C215H-.5925

Metric = 15,25 mm AM200[®], 15 Series, C2 = 5C215H-15.25

16 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

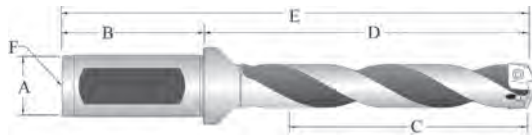
Range: 0.6299 to 0.6692 (16,00mm to 16,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|
| Fractional Equivalent | (mm) | (inch) | | ● | -LR | | ● | -CI |
| | 16,00 | 0.6299 | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ○ | ▲ | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ○ | ○ |
| | 16,08 | 0.6331 | 5C116H-16.08 | ▲ | ▲ | 5C216H-16.08 | ▲ | ▲ |
| 41/64" | 16,27 | 0.6406 | 5C116H-.640 | ○ | ▲ | 5C216H-.640 | ○ | ▲ |
| | 16,50 | 0.6496 | 5C116H-16.5 | ○ | ▲ | 5C216H-16.5 | ○ | ▲ |
| 21/32" | 16,67 | 0.6563 | 5C116H-0021 | ○ | ▲ | 5C216H-0021 | ○ | ▲ |

Ex. Geometries: Standard - 5C116H-16
Cast Iron - 5C216H-16-CI - see page 3 for geometry details

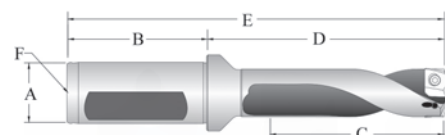


Helical Fluted Design

GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| | ● | LR | | ● | CI | LR | AS |
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ○ | ○ | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ○ | ○ | ▲ | ○ |
| 7C116P-16 | ○ | ○ | 7C216P-16 | ○ | ○ | ▲ | ○ |
| 7C116P-16.08 | ▲ | ▲ | 7C216P-16.08 | ▲ | ▲ | ▲ | ○ |
| 7C116P-.640 | ○ | ▲ | 7C216P-.640 | ○ | ○ | ▲ | ○ |
| 7C116P-16.5 | ○ | ▲ | 7C216P-16.5 | ○ | ▲ | ▲ | ○ |
| 7C116P-0021 | ○ | ▲ | 7C216P-0021 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C116P-16
Stainless - 7C216P-16AS



Straight Fluted Design

GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F | |
|----------------------------|--------|-------------|----------------|------|--------------|------|-------------|----------|------|-------------|-------|----------------|-------|------|----------|
| | | | Shank Diameter | | Shank Length | | Drill Depth | | | Body Length | | Overall Length | | | Pipe Tap |
| | | | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | | (inch) | (mm) | (inch) | (mm) | | |
| Straight (Lathe) | 3xD | 60316S-20FM | | 20 | | 41,9 | | 51,0 | yes | | 81,4 | | 123,3 | 1/8" | |
| | | 60316S-075F | 3/4" | | 2-1/32" | | | 2-1/64" | yes | 3-13/64" | | 5-15/64" | | 1/8" | |
| | 5xD | 60516S-20FM | | 20 | | 41,9 | | 84,9 | yes | | 115,3 | | 157,3 | 1/8" | |
| | | 60516S-075F | 3/4" | | 2-1/32" | | | 3-23/64" | yes | 4-35/64" | | 6-37/64" | | 1/8" | |
| | 7xD | 60716S-20FM | | 20 | | 41,9 | | 118,9 | yes | | 149,3 | | 191,2 | 1/8" | |
| | | 60716S-075F | 3/4" | | 2-1/32" | | | 4-11/16" | yes | 5-29/32" | | 7-29/32" | | 1/8" | |
| Helical (Machining Center) | Stub | 60116H-20FM | | 20 | | 41,9 | | 21,0 | yes | | 50,8 | | 92,7 | 1/8" | |
| | | 60116H-075F | 3/4" | | 2-1/32" | | | 13/16" | yes | 2" | | 4-1/32" | | 1/8" | |
| | 3xD | 60316H-20FM | | 20 | | 41,9 | | 51,0 | yes | | 81,4 | | 123,3 | 1/8" | |
| | | 60316H-075F | 3/4" | | 2-1/32" | | | 2-1/64" | yes | 3-13/64" | | 5-15/64" | | 1/8" | |
| | | 60316H-20CM | | 20 | | 41,9 | | 51,0 | no | | 81,4 | | 123,3 | 1/8" | |
| | | 60316H-075C | 3/4" | | 2-1/32" | | | 2-1/64" | no | 3-13/64" | | 5-15/64" | | 1/8" | |
| | 5xD | 60516H-20FM | | 20 | | 41,9 | | 84,9 | yes | | 115,3 | | 157,3 | 1/8" | |
| | | 60516H-075F | 3/4" | | 2-1/32" | | | 3-23/64" | yes | 4-35/64" | | 6-37/64" | | 1/8" | |
| | | 60516H-20CM | | 20 | | 41,9 | | 84,9 | no | | 115,3 | | 157,3 | 1/8" | |
| | | 60516H-075C | 3/4" | | 2-1/32" | | | 3-23/64" | no | 4-35/64" | | 6-37/64" | | 1/8" | |
| | 7xD | 60716H-20FM | | 20 | | 41,9 | | 118,9 | yes | | 149,3 | | 191,2 | 1/8" | |
| | | 60716H-075F | 3/4" | | 2-1/32" | | | 4-11/16" | yes | 5-29/32" | | 7-29/32" | | 1/8" | |
| | | 60716H-20CM | | 20 | | 41,9 | | 118,9 | no | | 149,3 | | 191,2 | 1/8" | |
| | | 60716H-075C | 3/4" | | 2-1/32" | | | 4-11/16" | no | 5-29/32" | | 7-29/32" | | 1/8" | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 16 | 72556-IP8-10 | 72556N-IP8-10 | 8IP-8 | 8IP-8TL | 8IP-8B | 0.6299-0.6689 | 15.5 | 16.00-16.99 | 175 |

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

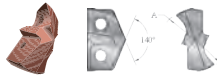
- Availability Codes
 - Stocked
 - ▲ Non-Stocked - 10 work day lead time
- All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.
When ordering, please follow the examples shown below:
Decimals = .6300" AM200[®], 16 Series, C2 = 5C216H-.6300
Metric = 16,20 mm AM200[®], 16 Series, C2 = 5C216H-16.20



17 Series GEN3SYS[®] and GEN3SYS^{XT} Drill Inserts and Holders

Range: 0.6693 to 0.7086 (17,00mm to 17,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

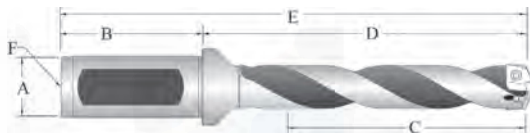
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 17,00 | 0.6693 | 5C117H-17 | ○ | ▲ | 5C217H-17 | ○ | ○ | ▲ |
| 43/64" | 17,07 | 0.6719 | 5C117H-.671 | ○ | ▲ | 5C217H-.671 | ○ | ○ | ▲ |
| | 17,10 | 0.6732 | 5C117H-17.1 | ▲ | ▲ | 5C217H-17.1 | ▲ | ○ | ▲ |
| | 17,20 | 0.6772 | 5C117H-17.2 | ▲ | ▲ | 5C217H-17.2 | ▲ | ○ | ▲ |
| 11/16" | 17,46 | 0.6875 | 5C117H-0022 | ○ | ▲ | 5C217H-0022 | ○ | ○ | ▲ |
| | 17,50 | 0.6890 | 5C117H-17.5 | ○ | ▲ | 5C217H-17.5 | ○ | ○ | ▲ |
| 45/64" | 17,86 | 0.7030 | 5C117H-.703 | ○ | ▲ | 5C217H-.703 | ○ | ○ | ▲ |

Ex. Geometries: Standard - 5C117H-17 - see page 3 for geometry details
Cast Iron - 5C217H-17-LR

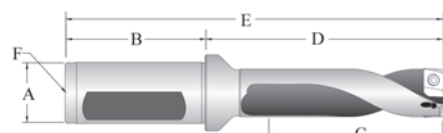
GEN3SYS^{XT} Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|---------------------------------------------------------------|-------------------------|----|---------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | CI | LR | AS |
| 7C117P-17 | ○ | ▲ | 7C217P-17 | ○ | ○ | ▲ | ○ |
| 7C117P-.671 | ○ | ▲ | 7C217P-.671 | ○ | ○ | ▲ | ○ |
| 7C117P-17.1 | ▲ | ▲ | 7C217P-17.1 | ▲ | ○ | ▲ | ▲ |
| 7C117P-17.2 | ▲ | ▲ | 7C217P-17.2 | ▲ | ○ | ▲ | ▲ |
| 7C117P-0022 | ○ | ○ | 7C217P-0022 | ○ | ○ | ▲ | ○ |
| 7C117P-17.5 | ○ | ▲ | 7C217P-17.5 | ○ | ○ | ▲ | ○ |
| 7C117P-.703 | ○ | ▲ | 7C217P-.703 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C117P-17
Cast Iron - 7C217P-17LR



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS^{XT} Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F Pipe Tap |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|-------|------|--------------------|-------|-----------------------|-------|---------------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60317S-20FM | | 20 | | 41,9 | | 54,0 | yes | | 84,1 | | 126,0 | 1/8" |
| | | 60317S-075F | 3/4" | | 2-1/32" | | 2-1/8" | | yes | 3-5/16" | | 5-15/64" | | 1/8" |
| | 5xD | 60517S-20FM | | 20 | | 41,9 | | 89,9 | yes | | 120,0 | | 162,0 | 1/8" |
| | | 60517S-075F | 3/4" | | 2-1/32" | | 3-35/64" | | yes | 4-47/64" | | 6-49/64" | | 1/8" |
| | 7xD | 60717S-20FM | | 20 | | 41,9 | | 125,9 | yes | | 156,0 | | 197,9 | 1/8" |
| | | 60717S-075F | 3/4" | | 2-1/32" | | 4-31/32" | | yes | 6-9/64" | | 8-11/64" | | 1/8" |
| Helical (Machining Center) | Stub | 60117H-20FM | | 20 | | 41,9 | | 21,0 | yes | | 55,5 | | 92,4 | 1/8" |
| | | 60117H-075F | 3/4" | | 2-1/32" | | 13/16" | | yes | 1-63/64" | | 4-1/64" | | 1/8" |
| | 3xD | 60317H-20FM | | 20 | | 41,9 | | 54,0 | yes | | 84,1 | | 126,0 | 1/8" |
| | | 60317H-075F | 3/4" | | 2-1/32" | | 2-1/8" | | yes | 3-5/16" | | 5-15/64" | | 1/8" |
| | | 60317H-20CM | | 20 | | 41,9 | | 54,0 | no | | 84,1 | | 126,0 | 1/8" |
| | | 60317H-075C | 3/4" | | 2-1/32" | | 2-1/8" | | no | 3-5/16" | | 5-15/64" | | 1/8" |
| | 5xD | 60517H-20FM | | 20 | | 41,9 | | 89,9 | yes | | 120,0 | | 162,0 | 1/8" |
| | | 60517H-075F | 3/4" | | 2-1/32" | | 3-35/64" | | yes | 4-47/64" | | 6-49/64" | | 1/8" |
| | | 60517H-20CM | | 20 | | 41,9 | | 89,9 | no | | 120,0 | | 162,0 | 1/8" |
| | | 60517H-075C | 3/4" | | 2-1/32" | | 3-35/64" | | no | 4-47/64" | | 6-49/64" | | 1/8" |
| | 7xD | 60717H-20FM | | 20 | | 41,9 | | 125,9 | yes | | 156,0 | | 197,9 | 1/8" |
| | | 60717H-075F | 3/4" | | 2-1/32" | | 4-31/32" | | yes | 6-9/64" | | 8-11/64" | | 1/8" |
| | | 60717H-20CM | | 20 | | 41,9 | | 125,9 | no | | 156,0 | | 197,9 | 1/8" |
| | | 60717H-075C | 3/4" | | 2-1/32" | | 4-31/32" | | no | 6-9/64" | | 8-11/64" | | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 17 | 72567-IP8-10 | 72567N-IP8 | 8IP-8 | 8IP-8TL | 8IP-8B | 0.6693-0.7083 | 15.5 | 17.00-17.99 | 175 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

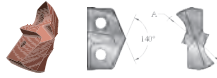
When ordering, please follow the examples shown below:

Decimals = .6800" AM200[®], 17 Series, C2 = 5C217H-.6800

Metric = 17,20 mm AM200[®], 17 Series, C2 = 5C217H-17.20

18 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.7087 to 0.7873 (18,00mm to 19,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

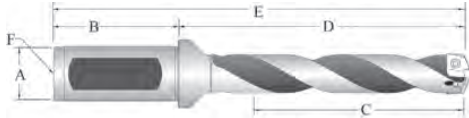
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|--------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| 18,00 | 0.7087 | | 5C118H-18 | ○ | ▲ | 5C218H-18 | ○ | ○ | ▲ |
| 23/32" | 18,26 | 0.7188 | 5C118H-0023 | ○ | ▲ | 5C218H-0023 | ○ | ○ | ▲ |
| | 18,50 | 0.7283 | 5C118H-18.5 | ○ | ▲ | 5C218H-18.5 | ○ | ○ | ▲ |
| 47/64" | 18,65 | 0.7344 | 5C118H-.734 | ○ | ▲ | 5C218H-.734 | ○ | ▲ | ▲ |
| | 19,00 | 0.7480 | 5C118H-19 | ○ | ▲ | 5C218H-19 | ○ | ▲ | ▲ |
| 3/4" | 19,05 | 0.7500 | 5C118H-0024 | ○ | ▲ | 5C218H-0024 | ○ | ○ | ▲ |
| | 19,25 | 0.7580 | 5C118H-.758 | ○ | ▲ | 5C218H-.758 | ○ | ○ | ▲ |
| 49/64" | 19,45 | 0.7656 | 5C118H-.765 | ○ | ▲ | 5C218H-.765 | ○ | ▲ | ▲ |
| | 19,50 | 0.7677 | 5C118H-19.5 | ○ | ▲ | 5C218H-19.5 | ○ | ▲ | ▲ |
| | 19,80 | 0.7795 | 5C118H-19.8 | ▲ | ▲ | 5C218H-19.8 | ▲ | ▲ | ▲ |
| 25/32" | 19,85 | 0.7813 | 5C118H-0025 | ○ | ▲ | 5C218H-0025 | ○ | ○ | ▲ |

Ex. Geometries: Standard - 5C118H-18
Cast Iron - 5C218H-18-CI - see page 3 for geometry details

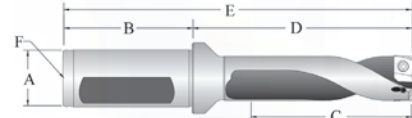
GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | CI | LR | AS |
| 7C118P-18 | ○ | ○ | 7C218P-18 | ○ | ○ | ▲ | ○ |
| 7C118P-0023 | ○ | ▲ | 7C218P-0023 | ○ | ○ | ▲ | ○ |
| 7C118P-18.5 | ○ | ▲ | 7C218P-18.5 | ○ | ○ | ▲ | ○ |
| 7C118P-.734 | ○ | ▲ | 7C218P-.734 | ○ | ▲ | ▲ | ○ |
| 7C118P-19 | ○ | ▲ | 7C218P-19 | ○ | ▲ | ▲ | ○ |
| 7C118P-0024 | ○ | ▲ | 7C218P-0024 | ○ | ○ | ▲ | ○ |
| 7C118P-.758 | ○ | ○ | 7C218P-.758 | ○ | ○ | ▲ | ○ |
| 7C118P-.765 | ○ | ○ | 7C218P-.765 | ○ | ▲ | ▲ | ○ |
| 7C118P-19.5 | ○ | ▲ | 7C218P-19.5 | ○ | ▲ | ▲ | ○ |
| 7C118P-19.8 | ▲ | ▲ | 7C218P-19.8 | ▲ | ▲ | ▲ | ▲ |
| 7C118P-0025 | ○ | ○ | 7C218P-0025 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C118P-18
Cast Iron - 7C218P-18AS



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|-------|------|--------------------|-------|-----------------------|-------|------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60318S-25FM | | 25 | | 53,1 | | 60,0 | yes | | 94,0 | | 147,1 | 1/8" |
| | | 60318S-100F | 1" | | 2-9/32" | | 2-3/8" | | yes | 3-45/64" | | 5-63/64" | | 1/8" |
| | 5xD | 60518S-25FM | | 25 | | 53,1 | | 99,9 | yes | | 134,0 | | 187,1 | 1/8" |
| | | 60518S-100F | 1" | | 2-9/32" | | 3-15/16" | | yes | 5-9/32" | | 7-9/16" | | 1/8" |
| | 7xD | 60718S-25FM | | 25 | | 53,1 | | 139,9 | yes | | 174,0 | | 227,1 | 1/8" |
| | | 60718S-100F | 1" | | 2-9/32" | | 5-33/64" | | yes | 6-55/64" | | 9-9/64" | | 1/8" |
| Helical (Machining Center) | Stub | 60118H-25FM | | 25 | | 53,1 | | 22,0 | yes | | 56,0 | | 109,1 | 1/8" |
| | | 60118H-100F | 1" | | 2-9/32" | | 7/8" | | yes | 2-13/64" | | 4-31/64" | | 1/8" |
| | 3xD | 60318H-25FM | | 25 | | 53,1 | | 60,0 | yes | | 94,0 | | 147,1 | 1/8" |
| | | 60318H-100F | 1" | | 2-9/32" | | 2-3/8" | | yes | 3-45/64" | | 5-63/64" | | 1/8" |
| | | 60318H-25CM | | 25 | | 53,1 | | 60,0 | no | | 94,0 | | 147,1 | 1/8" |
| | 5xD | 60318H-100C | 1" | | 2-9/32" | | 2-3/8" | | no | 3-45/64" | | 5-63/64" | | 1/8" |
| | | 60518H-25FM | | 25 | | 53,1 | | 99,9 | yes | | 134,0 | | 187,1 | 1/8" |
| | | 60518H-100F | 1" | | 2-9/32" | | 3-15/16" | | yes | 5-9/32" | | 7-9/16" | | 1/8" |
| | 7xD | 60518H-25CM | | 25 | | 53,1 | | 99,9 | no | | 134,0 | | 187,1 | 1/8" |
| | | 60518H-100C | 1" | | 2-9/32" | | 3-15/16" | | no | 5-9/32" | | 7-9/16" | | 1/8" |
| | | 60718H-25FM | | 25 | | 53,1 | | 139,9 | yes | | 174,0 | | 227,1 | 1/8" |
| | | 60718H-100F | 1" | | 2-9/32" | | 5-33/64" | | yes | 6-55/64" | | 9-9/64" | | 1/8" |
| | | 60718H-25CM | | 25 | | 53,1 | | 139,9 | no | | 174,0 | | 227,1 | 1/8" |
| | | 60718H-100C | 1" | | 2-9/32" | | 5-33/64" | | no | 6-55/64" | | 9-9/64" | | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 18 | 7375-IP9-10 | 7375N-IP9-10 | 8IP-9 | 8IP-9TL | 8IP-9B | 0.7087-0.7870 | 27.0 | 18.00-19.99 | 305 |

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

● Availability Codes

○ Stocked

▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

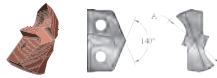
Decimals = .7350" AM200[®], 18 Series, C2 = 5C218H-.7350

Metric = 18,40 mm AM200[®], 18 Series, C2 = 5C218H-18.40



20 Series GEN3SYS[®] and GEN3SYS^{XT} Drill Inserts and Holders

Range: 0.7874 to 0.8660 (20,00mm to 21,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

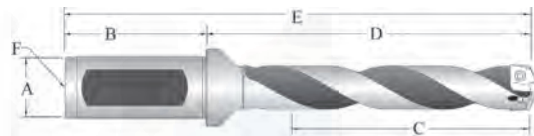
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 20,00 | 0.7874 | 5C120H-20 | ○ | ▲ | 5C220H-20 | ○ | ○ | ▲ |
| 51/64" | 20,24 | 0.7969 | 5C120H-.796 | ○ | ▲ | 5C220H-.796 | ○ | ▲ | ▲ |
| | 20,50 | 0.8071 | 5C120H-20.5 | ○ | ▲ | 5C220H-20.5 | ○ | ○ | ▲ |
| 13/16" | 20,64 | 0.8125 | 5C120H-0026 | ○ | ▲ | 5C220H-0026 | ○ | ○ | ▲ |
| | 21,00 | 0.8268 | 5C120H-21 | ○ | ▲ | 5C220H-21 | ○ | ○ | ▲ |
| 27/32" | 21,43 | 0.8438 | 5C120H-0027 | ○ | ▲ | 5C220H-0027 | ○ | ○ | ▲ |
| | 21,50 | 0.8465 | 5C120H-21.5 | ○ | ▲ | 5C220H-21.5 | ○ | ○ | ▲ |
| 55/64" | 21,83 | 0.8494 | 5C120H-.859 | ○ | ▲ | 5C220H-.859 | ○ | ▲ | ▲ |

Ex. Geometries: Standard - 5C120H-20 - see page 3 for geometry details
Cast Iron - 5C220H-20-CI

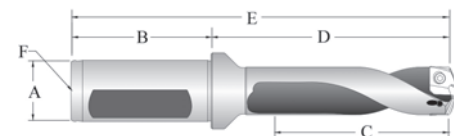
GEN3SYS^{XT} Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|---------------------------------------------------------------|-------------------------|----|---------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | CI | LR | AS |
| 7C120P-20 | ○ | ▲ | 7C220P-20 | ○ | ○ | ▲ | ○ |
| 7C120P-.796 | ○ | ▲ | 7C220P-.796 | ○ | ▲ | ▲ | ○ |
| 7C120P-20.5 | ○ | ▲ | 7C220P-20.5 | ○ | ○ | ▲ | ○ |
| 7C120P-0026 | ○ | ○ | 7C220P-0026 | ○ | ○ | ▲ | ○ |
| 7C120P-21 | ○ | ▲ | 7C220P-21 | ○ | ○ | ▲ | ○ |
| 7C120P-0027 | ○ | ▲ | 7C220P-0027 | ○ | ○ | ▲ | ○ |
| 7C120P-21.5 | ○ | ▲ | 7C220P-21.5 | ○ | ○ | ▲ | ○ |
| 7C120P-.859 | ○ | ▲ | 7C220P-.859 | ○ | ▲ | ▲ | ○ |

Ex. Geometries: Standard - 7C120P-20
Cast Iron - 7C220P-20CI



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS^{XT} Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | Pipe Tap |
|----------------------------|--------|-------------|----------------|------|--------------|------|-------------|-------|-------|-------------|----------|----------------|----------|----------|
| | | | Shank Diameter | | Shank Length | | Drill Depth | | | Body Length | | Overall Length | | |
| | | | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | | (inch) | (mm) | (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60320S-25FM | | 25 | | 53,1 | | 66,0 | yes | | 100,1 | | 153,2 | 1/8" |
| | | 60320S-100F | 1" | | 2-9/32" | | 53,1 | | 66,0 | yes | 3-61/64" | | 6-15/64" | 1/8" |
| | 5xD | 60520S-25FM | | 25 | | 53,1 | | 110,0 | yes | | 144,1 | | 197,2 | 1/8" |
| | | 60520S-100F | 1" | | 2-9/32" | | 53,1 | | 110,0 | yes | 5-11/16" | | 7-61/64" | 1/8" |
| | 7xD | 60720S-25FM | | 25 | | 53,1 | | 153,9 | yes | | 188,1 | | 241,1 | 1/8" |
| | | 60720S-100F | 1" | | 2-9/32" | | 53,1 | | 153,9 | yes | 7-13/32" | | 9-11/16" | 1/8" |
| Helical (Machining Center) | Stub | 60120H-25FM | | 25 | | 53,1 | | 24,0 | yes | | 57,6 | | 110,7 | 1/8" |
| | | 60120H-100F | 1" | | 2-9/32" | | 53,1 | | 24,0 | yes | 2-17/64" | | 4-35/64" | 1/8" |
| | 3xD | 60320H-25FM | | 25 | | 53,1 | | 66,0 | yes | | 100,1 | | 153,2 | 1/8" |
| | | 60320H-100F | 1" | | 2-9/32" | | 53,1 | | 66,0 | yes | 3-61/64" | | 6-15/64" | 1/8" |
| | | 60320H-25CM | | 25 | | 53,1 | | 66,0 | no | | 100,1 | | 153,2 | 1/8" |
| | | 60320H-100C | 1" | | 2-9/32" | | 53,1 | | 66,0 | no | 3-61/64" | | 6-15/64" | 1/8" |
| | 5xD | 60520H-25FM | | 25 | | 53,1 | | 110,0 | yes | | 144,1 | | 197,2 | 1/8" |
| | | 60520H-100F | 1" | | 2-9/32" | | 53,1 | | 110,0 | yes | 5-11/16" | | 7-61/64" | 1/8" |
| | | 60520H-25CM | | 25 | | 53,1 | | 110,0 | no | | 144,1 | | 197,2 | 1/8" |
| | | 60520H-100C | 1" | | 2-9/32" | | 53,1 | | 110,0 | no | 5-11/16" | | 7-61/64" | 1/8" |
| | 7xD | 60720H-25FM | | 25 | | 53,1 | | 153,9 | yes | | 188,1 | | 241,1 | 1/8" |
| | | 60720H-100F | 1" | | 2-9/32" | | 53,1 | | 153,9 | yes | 7-13/32" | | 9-11/16" | 1/8" |
| | | 60720H-25CM | | 25 | | 53,1 | | 153,9 | no | | 188,1 | | 241,1 | 1/8" |
| | | 60720H-100C | 1" | | 2-9/32" | | 53,1 | | 153,9 | no | 7-13/32" | | 9-11/16" | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 20 | 7375-IP9-10 | 7375N-IP9-10 | 8IP-9 | 8IP-9TL | 8IP-9B | 0.7874-0.8657 | 27.0 | 20.00-21.99 | 305 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

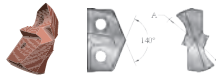
When ordering, please follow the examples shown below:

Decimals = .8025" AM200[®], 20 Series, C2 = 5C220H-.8025

Metric = 20,10 mm AM200[®], 20 Series, C2 = 5C220H-20.10

22 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 0.8661 to 0.9448 (22.00mm to 23.99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

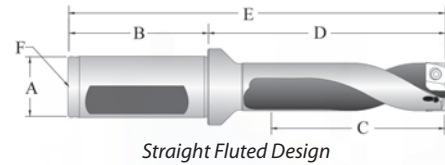
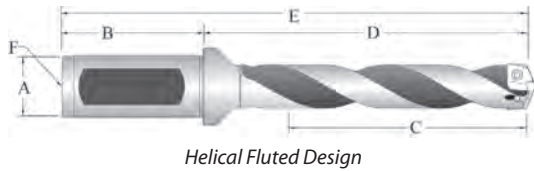
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 22,00 | 0.8661 | 5C122H-22 | ○ | ▲ | 5C222H-22 | ○ | ○ | ▲ |
| 7/8" | 22,23 | 0.8750 | 5C122H-0028 | ○ | ▲ | 5C222H-0028 | ○ | ○ | ▲ |
| 57/64" | 22,61 | 0.8900 | 5C122H-.890 | ○ | ▲ | 5C222H-.890 | ○ | ▲ | ▲ |
| | 23,00 | 0.9055 | 5C122H-23 | ○ | ▲ | 5C222H-23 | ○ | ○ | ▲ |
| 29/32" | 23,02 | 0.9063 | 5C122H-0029 | ○ | ▲ | 5C222H-0029 | ○ | ▲ | ▲ |
| 59/64" | 23,42 | 0.9219 | 5C122H-.921 | ○ | ▲ | 5C222H-.921 | ○ | ○ | ▲ |
| 15/16" | 23,81 | 0.9375 | 5C122H-0030 | ○ | ▲ | 5C222H-0030 | ○ | ○ | ▲ |

Ex. Geometries: Standard - 5C122H-22
Cast Iron - 5C222H-22-CI - see page 3 for geometry details

GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [™] XT Geometry | ● | CI | LR | AS |
| 7C122P-22 | ○ | ○ | 7C222P-22 | ○ | ○ | ▲ | ○ |
| 7C122P-0028 | ○ | ○ | 7C222P-0028 | ○ | ○ | ▲ | ○ |
| 7C122P-.890 | ○ | ▲ | 7C222P-.890 | ○ | ▲ | ▲ | ○ |
| 7C122P-23 | ○ | ▲ | 7C222P-23 | ○ | ○ | ▲ | ○ |
| 7C122P-0029 | ○ | ▲ | 7C222P-0029 | ○ | ▲ | ▲ | ○ |
| 7C122P-.921 | ○ | ▲ | 7C222P-.921 | ○ | ○ | ▲ | ○ |
| 7C122P-0030 | ○ | ○ | 7C222P-0030 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C122P-22
Stainless - 7C222P-22AS



GEN3SYS[®] and GEN3SYS[™] Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | Pipe Tap |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|----------|------|--------------------|-------|-----------------------|-------|----------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60322S-25FM | | 25 | | 53,1 | | 72,0 | yes | | 105,3 | | 158,4 | 1/8" |
| | | 60322S-100F | 1" | | 2-9/32" | | 53,1 | 2-53/64" | yes | 4-9/64" | | 6-27/64" | | 1/8" |
| | 5xD | 60522S-25FM | | 25 | | 53,1 | | 119,0 | yes | | 153,3 | | 206,4 | 1/8" |
| | | 60522S-100F | 1" | | 2-9/32" | | 53,1 | 4-23/32" | yes | 6-1/32" | | 8-5/16" | | 1/8" |
| | 7xD | 60722S-25FM | | 25 | | 53,1 | | 167,9 | yes | | 201,3 | | 254,4 | 1/8" |
| | | 60722S-100F | 1" | | 2-9/32" | | 53,1 | 6-39/64" | yes | 7-59/64" | | 10-13/64" | | 1/8" |
| Helical (Machining Center) | Stub | 60122H-25FM | | 25 | | 53,1 | | 27,0 | yes | | 60,1 | | 113,2 | 1/8" |
| | | 60122H-100F | 1" | | 2-9/32" | | 53,1 | 1-1/16" | yes | 2-23/64" | | 4-41/64" | | 1/8" |
| | 3xD | 60322H-25FM | | 25 | | 53,1 | | 72,0 | yes | | 105,3 | | 158,4 | 1/8" |
| | | 60322H-100F | 1" | | 2-9/32" | | 53,1 | 2-53/64" | yes | 4-9/64" | | 6-27/64" | | 1/8" |
| | | 60322H-25CM | | 25 | | 53,1 | | 72,0 | no | | 105,3 | | 158,4 | 1/8" |
| | | 60322H-100C | 1" | | 2-9/32" | | 53,1 | 2-53/64" | no | 4-9/64" | | 6-27/64" | | 1/8" |
| | | 60522H-25FM | | 25 | | 53,1 | | 119,9 | yes | | 153,3 | | 206,4 | 1/8" |
| | 5xD | 60522H-100F | 1" | | 2-9/32" | | 53,1 | 4-23/32" | yes | 6-1/32" | | 8-5/16" | | 1/8" |
| | | 60522H-25CM | | 25 | | 53,1 | | 119,9 | no | | 153,3 | | 206,4 | 1/8" |
| | | 60522H-100C | 1" | | 2-9/32" | | 53,1 | 4-23/32" | no | 6-1/32" | | 8-5/16" | | 1/8" |
| | | 60722H-25FM | | 25 | | 53,1 | | 167,9 | yes | | 201,3 | | 254,4 | 1/8" |
| | | 60722H-100F | 1" | | 2-9/32" | | 53,1 | 6-39/64" | yes | 7-59/64" | | 10-13/64" | | 1/8" |
| | 7xD | 60722H-25CM | | 25 | | 53,1 | | 167,9 | no | | 201,3 | | 254,4 | 1/8" |
| | | 60722H-100C | 1" | | 2-9/32" | | 53,1 | 6-39/64" | no | 7-59/64" | | 10-13/64" | | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 22 | 739-IP9-10 | 739N-IP9-10 | 8IP-9 | 8IP-9TL | 8IP-9TB | .8661-.9448 | 27.0 | 22.00-23.99 | 305 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

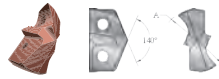
Decimals = .8750" AM200[®], 22 Series, C2 = 5C122H-.8750

Metric = 23,12mm AM200[®], 22 Series, C2 = 5C122H-23.12



24 Series GEN3SYS[®] and GEN3SYS^{XT} Drill Inserts and Holders

Range: 0.9449 to 1.0235 (24,00mm to 25,99mm)



GEN3SYS[®] Drill Inserts (supplied in 1 piece packages)

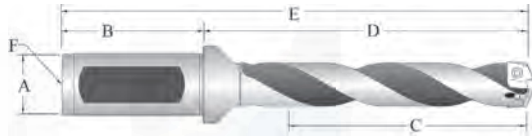
GEN3SYS^{XT} Drill Inserts (supplied in 1 piece packages)

| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|-----|--------------------------------------------------------------|-------------------------|-----|-----|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -LR | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● | -CI | -LR |
| | 24,00 | 0.9449 | 5C124H-24 | ○ | ▲ | 5C224H-24 | ○ | ○ | ▲ |
| 31/32" | 24,61 | 0.9688 | 5C124H-0031 | ○ | ▲ | 5C224H-0031 | ○ | ○ | ▲ |
| 63/64" | 25,00 | 0.9843 | 5C124H-25 | ○ | ▲ | 5C224H-25 | ○ | ○ | ▲ |
| 1" | 25,40 | 1.0000 | 5C124H-0100 | ○ | ▲ | 5C224H-0100 | ○ | ○ | ▲ |
| | 25,60 | 1.0080 | 5C124H-1.008 | ○ | ▲ | 5C224H-1.008 | ○ | ▲ | ▲ |
| 1-1/64" | 25,78 | 1.0150 | 5C124H-1.015 | ○ | ▲ | 5C224H-1.015 | ○ | ○ | ▲ |

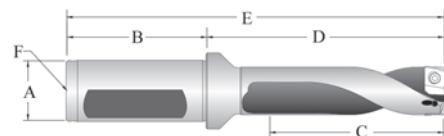
| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|---------------------------------------------------------------|-------------------------|----|---------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS ^{XT} Geometry | ● | CI | LR | AS |
| 7C124P-24 | ○ | ○ | 7C224P-24 | ○ | ○ | ▲ | ○ |
| 7C124P-0031 | ○ | ▲ | 7C224P-0031 | ○ | ○ | ▲ | ○ |
| 7C124P-25 | ○ | ▲ | 7C224P-25 | ○ | ○ | ▲ | ○ |
| 7C124P-0100 | ○ | ○ | 7C224P-0100 | ○ | ○ | ▲ | ○ |
| 7C124P-1.008 | ○ | ○ | 7C224P-1.008 | ○ | ▲ | ▲ | ○ |
| 7C124P-1.015 | ○ | ○ | 7C224P-1.015 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 5C124H-24
Cast Iron - 5C224H-24-CI - see page 3 for geometry details

Ex. Geometries: Standard - 7C124P-24
Cast Iron - 7C224P-24CI



Helical Fluted Design



Straight Fluted Design

GEN3SYS[®] and GEN3SYS^{XT} Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | F Pipe Tap |
|----------------------------|--------|-------------|-----------------------|------|---------------------|------|--------------------|-------|------|--------------------|-------|-----------------------|-------|---------------|
| | | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60324S-25FM | | 25 | | 53,1 | | 78,0 | yes | | 113,8 | | 164,0 | 1/8" |
| | | 60324S-100F | 1" | | 2-9/32" | | 3-5/64" | | yes | 4-31/64" | | 6-49/64" | | 1/8" |
| | 5xD | 60524S-25FM | | 25 | | 53,1 | | 129,9 | yes | | 165,8 | | 216,0 | 1/8" |
| | | 60524S-100F | 1" | | 2-9/32" | | 5-1/8" | | yes | 6-17/32" | | 8-13/16" | | 1/8" |
| | | 60724S-25FM | | 25 | | 53,1 | | 181,9 | yes | | 217,8 | | 267,9 | 1/8" |
| | | 60724S-100F | 1" | | 2-9/32" | | 7-11/64" | | yes | 8-37/64" | | 10-55/64" | | 1/8" |
| Helical (Machining Center) | Stub | 60124H-25FM | | 25 | | 53,1 | | 28,5 | yes | | 64,2 | | 117,3 | 1/8" |
| | | 60124H-100F | 1" | | 2-9/32" | | 1-1/8" | | yes | 2-17/32" | | 4-13/16" | | 1/8" |
| | 3xD | 60324H-25FM | | 25 | | 53,1 | | 78,0 | yes | | 113,8 | | 164,0 | 1/8" |
| | | 60324H-100F | 1" | | 2-9/32" | | 3-5/64" | | yes | 4-31/64" | | 6-49/64" | | 1/8" |
| | | 60324H-25CM | | 25 | | 53,1 | | 78,0 | no | | 113,8 | | 164,0 | 1/8" |
| | | 60324H-100C | 1" | | 2-9/32" | | 3-5/64" | | no | 4-31/64" | | 6-49/64" | | 1/8" |
| | 5xD | 60524H-25FM | | 25 | | 53,1 | | 129,9 | yes | | 165,8 | | 216,0 | 1/8" |
| | | 60524H-100F | 1" | | 2-9/32" | | 5-1/8" | | yes | 6-17/32" | | 8-13/16" | | 1/8" |
| | | 60524H-25CM | | 25 | | 53,1 | | 129,9 | no | | 165,8 | | 216,0 | 1/8" |
| | | 60524H-100C | 1" | | 2-9/32" | | 5-1/8" | | no | 6-17/32" | | 8-13/16" | | 1/8" |
| | 7xD | 60724H-25FM | | 25 | | 53,1 | | 181,9 | yes | | 217,8 | | 267,9 | 1/8" |
| | | 60724H-100F | 1" | | 2-9/32" | | 7-11/64" | | yes | 8-37/64" | | 10-55/64" | | 1/8" |
| | | 60724H-25CM | | 25 | | 53,1 | | 181,9 | no | | 217,8 | | 267,9 | 1/8" |
| | | 60724H-100C | 1" | | 2-9/32" | | 7-11/64" | | no | 8-37/64" | | 10-55/64" | | 1/8" |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 24 | 739-IP9-10 | 739N-IP9-10 | 8IP-9 | 8IP-9TL | 8IP-9B | .9449-1.0235 | 27.0 | 24.00-25.99 | 305 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

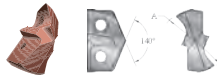
When ordering, please follow the examples shown below:

Decimals = 1.0102" AM200[®], 24 Series, C2 = 5C124H-1.0102

Metric = 25,74mm AM200[®], 24 Series, C2 = 5C124H-25.74

26 Series GEN3SYS[®] and GEN3SYS[™] Drill Inserts and Holders

Range: 1.0236 to 1.1416 (26,00mm to 28,99mm)



GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

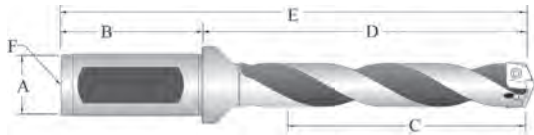
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | |
|-----------------------|-------|--------|--------------------------------------------------------------|-------------------------|---|--------------------------------------------------------------|-------------------------|-------|
| Fractional Equivalent | (mm) | (inch) | C1 AM200 [®] Standard GEN3SYS [®] Geometry | ● -LR | ▲ | C2 AM200 [®] Standard GEN3SYS [®] Geometry | ● -CI | ▲ -LR |
| | 26,00 | 1.0236 | 5C126H-26 | ○ | ▲ | 5C226H-26 | ○ | ▲ |
| 1-1/32" | 26,20 | 1.0313 | 5C126H-0101 | ○ | ▲ | 5C226H-0101 | ○ | ▲ |
| 1-3/64" | 26,59 | 1.0469 | 5C126H-1.046 | ○ | ▲ | 5C226H-1.046 | ○ | ▲ |
| 1-1/16" | 26,99 | 1.0625 | 5C126H-0102 | ○ | ▲ | 5C226H-0102 | ○ | ▲ |
| | 27,00 | 1.0630 | 5C126H-27 | ○ | ▲ | 5C226H-27 | ○ | ▲ |
| 1-3/32" | 27,78 | 1.0938 | 5C126H-0103 | ○ | ▲ | 5C226H-0103 | ○ | ▲ |
| | 28,00 | 1.1024 | 5C126H-28 | ○ | ▲ | 5C226H-28 | ○ | ▲ |
| 1-7/64" | 28,17 | 1.1090 | 5C126H-1.109 | ○ | ▲ | 5C226H-1.109 | ○ | ▲ |
| 1-1/8" | 28,58 | 1.1250 | 5C126H-0104 | ○ | ▲ | 5C226H-0104 | ○ | ▲ |

Ex. Geometries: Standard - 5C126H-26
Cast Iron - 5C226H-26-CI - see page 3 for geometry details

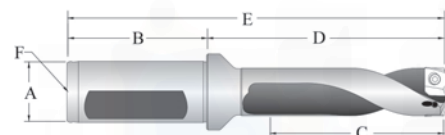
GEN3SYS[™] Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------------------------------|-------------------------|----|-----------------------------------------------------------------|-------------------------|----|----|----|
| C1 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● | LR | C2 AM300 [®] Standard GEN3SYS [®] XT Geometry | ● | CI | LR | AS |
| 7C126P-26 | ○ | ○ | 7C226P-26 | ○ | ▲ | ▲ | ○ |
| 7C126P-0101 | ○ | ○ | 7C226P-0101 | ○ | ▲ | ▲ | ○ |
| 7C126P-1.046 | ○ | ▲ | 7C226P-1.046 | ○ | ▲ | ▲ | ○ |
| 7C126P-0102 | ○ | ○ | 7C226P-0102 | ○ | ▲ | ▲ | ○ |
| 7C126P-27 | ○ | ○ | 7C226P-27 | ○ | ▲ | ▲ | ○ |
| 7C126P-0103 | ○ | ▲ | 7C226P-0103 | ○ | ▲ | ▲ | ○ |
| 7C126P-28 | ○ | ▲ | 7C226P-28 | ○ | ▲ | ▲ | ○ |
| 7C126P-1.109 | ○ | ▲ | 7C226P-1.109 | ○ | ▲ | ▲ | ○ |
| 7C126P-0104 | ○ | ○ | 7C226P-0104 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C126P-26
Stainless - 7C226P-26AS



Helical Fluted Design



Straight Fluted Design

GEN3SYS[™] and GEN3SYS[™] Holders

| Style | Length | A | | B | | C | | Flat | D | | E | | F Pipe Tap |
|----------------------------|--------|-------------|-------------------------------|-----------------------------|----------------------------|----------------------------|-------------------------------|-----------|------|--|---|--|---------------|
| | | Item Number | Shank Diameter (inch) (mm) | Shank Length (inch) (mm) | Drill Depth (inch) (mm) | Body Length (inch) (mm) | Overall Length (inch) (mm) | | | | | | |
| Straight (Lathe) | 3xD | 60326S-32FM | 32 | 57,9 | 87,0 | yes | 128,1 | 186,0 | 1/8" | | | | |
| | | 60326S-125F | 1-1/4" | 2-9/32" | 3-27/64" | yes | 5-1/16" | 7-11/32" | 1/8" | | | | |
| | 5xD | 60526S-32FM | 32 | 57,9 | 145,0 | yes | 186,1 | 244,0 | 1/8" | | | | |
| | | 60526S-125F | 1-1/4" | 2-9/32" | 5-23/32" | yes | 7-11/32" | 9-5/8" | 1/8" | | | | |
| | 7xD | 60726S-32FM | 32 | 57,9 | 202,9 | yes | 244,0 | 302,0 | 1/8" | | | | |
| | | 60726S-125F | 1-1/4" | 2-9/32" | 7-63/64" | yes | 9-5/8" | 11-29/32" | 1/8" | | | | |
| Helical (Machining Center) | Stub | 60126H-32FM | 32 | 57,9 | 32,0 | yes | 72,9 | 130,8 | 1/4" | | | | |
| | | 60126H-125F | 1-1/4" | 2-9/32" | 1-1/4" | yes | 2-7/8" | 5-5/32" | 1/4" | | | | |
| | 3xD | 60326H-32FM | 32 | 57,9 | 87,0 | yes | 128,1 | 186,0 | 1/8" | | | | |
| | | 60326H-125F | 1-1/4" | 2-9/32" | 3-27/64" | yes | 5-1/16" | 7-11/32" | 1/8" | | | | |
| | | 60326H-32CM | 32 | 57,9 | 87,0 | no | 128,1 | 186,0 | 1/8" | | | | |
| | | 60326H-125C | 1-1/4" | 2-9/32" | 3-27/64" | no | 5-1/16" | 7-11/32" | 1/8" | | | | |
| | 5xD | 60526H-32FM | 32 | 57,9 | 145,0 | yes | 186,1 | 244,0 | 1/8" | | | | |
| | | 60526H-125F | 1-1/4" | 2-9/32" | 5-23/32" | yes | 7-11/32" | 9-5/8" | 1/8" | | | | |
| | | 60526H-32CM | 32 | 57,9 | 145,0 | no | 186,1 | 244,0 | 1/8" | | | | |
| | | 60526H-125C | 1-1/4" | 2-9/32" | 5-23/32" | no | 7-11/32" | 9-5/8" | 1/8" | | | | |
| | 7xD | 60726H-32FM | 32 | 57,9 | 202,9 | yes | 244,0 | 302,0 | 1/8" | | | | |
| | | 60726H-125F | 1-1/4" | 2-9/32" | 7-63/64" | yes | 9-5/8" | 11-29/32" | 1/8" | | | | |
| | | 60726H-32CM | 32 | 57,9 | 202,9 | no | 244,0 | 302,0 | 1/8" | | | | |
| | | 60726H-125C | 1-1/4" | 2-9/32" | 7-63/64" | no | 9-5/8" | 11-29/32" | 1/8" | | | | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|------------------------------|--------------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 26 | 7495-IP15-10 | 7495N-IP15-10 | 8IP-15 | 8IP-15TL | 8IP-15B | 1.0236-1.1416 | 61.0 | 26.00-28.99 | 690 |

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

● Availability Codes

○ Stocked

▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

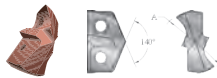
Decimals = 1.1416" AM200[®], 26 Series, C2 = 5C126H-1.1416

Metric = 28,18mm AM200[®], 26 Series, C2 = 5C126H-28,18



29 Series GEN3SYS® and GEN3SYS® XT Drill Inserts and Holders

Range: 1.1417 to 1.2598 (29,00mm to 32,00mm)



GEN3SYS® Drill Inserts (supplied in 1 piece packages)

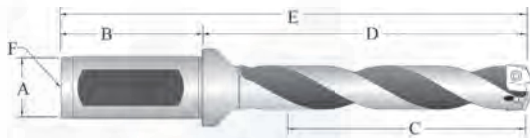
| Fractional Equivalent | A (Diameter) | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | |
|-----------------------|--------------|--------|--------------------------------------|-------------------------|---|--------------------------------------|-------------------------|-------|
| | (mm) | (inch) | C1 AM200® Standard GEN3SYS® Geometry | ● -LR | ▲ | C2 AM200® Standard GEN3SYS® Geometry | ● -CI | ▲ -LR |
| | 29,00 | 1.1417 | 5C129H-29 | ○ | ▲ | 5C229H-29 | ○ | ▲ |
| 1-5/32" | 29,37 | 1.1563 | 5C129H-0105 | ○ | ▲ | 5C229H-0105 | ○ | ▲ |
| | 30,00 | 1.1811 | 5C129H-30 | ○ | ▲ | 5C229H-30 | ○ | ▲ |
| 1-3/16" | 30,16 | 1.1875 | 5C129H-0106 | ○ | ▲ | 5C229H-0106 | ○ | ▲ |
| | 30,50 | 1.2008 | 5C129H-30.5 | ○ | ▲ | 5C229H-30.5 | ○ | ▲ |
| 1-7/32" | 30,96 | 1.2188 | 5C129H-0107 | ○ | ▲ | 5C229H-0107 | ○ | ▲ |
| | 31,00 | 1.2205 | 5C129H-31 | ○ | ▲ | 5C229H-31 | ○ | ▲ |
| 1-1/4" | 31,75 | 1.2500 | 5C129H-0108 | ○ | ▲ | 5C229H-0108 | ○ | ▲ |

Ex. Geometries: Standard - 5C129H-29
Cast Iron - 5C229H-29-CI - see page 3 for geometry details

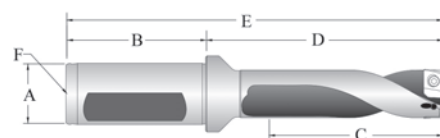
GEN3SYS® XT Drill Inserts (supplied in 1 piece packages)

| Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------------------------|-------------------------|----|-----------------------------------------|-------------------------|----|----|----|
| | ● | LR | | ● | CI | LR | AS |
| C1 AM300® Standard GEN3SYS® XT Geometry | ○ | ○ | C2 AM300® Standard GEN3SYS® XT Geometry | ○ | ▲ | ▲ | ○ |
| 7C129P-29 | ○ | ○ | 7C229P-29 | ○ | ▲ | ▲ | ○ |
| 7C129P-0105 | ○ | ▲ | 7C229P-0105 | ○ | ▲ | ▲ | ○ |
| 7C129P-30 | ○ | ▲ | 7C229P-30 | ○ | ▲ | ▲ | ○ |
| 7C129P-0106 | ○ | ○ | 7C229P-0106 | ○ | ▲ | ▲ | ○ |
| 7C129P-30.5 | ○ | ▲ | 7C229P-30.5 | ○ | ▲ | ▲ | ○ |
| 7C129P-0107 | ○ | ▲ | 7C229P-0107 | ○ | ▲ | ▲ | ○ |
| 7C129P-31 | ○ | ▲ | 7C229P-31 | ○ | ○ | ▲ | ○ |
| 7C129P-0108 | ○ | ○ | 7C229P-0108 | ○ | ○ | ▲ | ○ |

Ex. Geometries: Standard - 7C129P-29
Cast Iron - 7C229P-29CI



Helical Fluted Design



Straight Fluted Design

GEN3SYS® and GEN3SYS® XT Holders

| Style | Length | Item Number | A | | B | | C | | Flat | D | | E | | Pipe Tap | |
|----------------------------|-------------|-------------|---------|---------|----------|----------|----------|-------|-----------|-----------|-----------|-----------|-----------|----------|------|
| | | | (inch) | (mm) | (inch) | (mm) | (inch) | (mm) | | (inch) | (mm) | (inch) | (mm) | | |
| Straight (Lathe) | 3xD | 60329S-32FM | | 32 | | 57,9 | | 96,0 | yes | 5-3/8" | 136,2 | 7-43/64" | 194,1 | 1/4" | |
| | 3xD | 60329S-125F | 1-1/4" | | 2-9/32" | | 3-25/32" | | yes | 5-3/8" | | 7-43/64" | | 1/4" | |
| | 5xD | 60529S-32FM | | 32 | | 57,9 | | 159,9 | yes | 7-29/32" | 200,1 | 10-3/16" | 258,0 | 1/4" | |
| | 5xD | 60529S-125F | 1-1/4" | | 2-9/32" | | 6-19/64" | | yes | 7-29/32" | | 10-3/16" | | 1/4" | |
| | 7xD | 60729S-32FM | | 32 | | 57,9 | | 223,9 | yes | 10-27/64" | 264,1 | 12-45/64" | 322,0 | 1/4" | |
| 7xD | 60729S-125F | 1-1/4" | | 2-9/32" | | 8-13/16" | | yes | 10-27/64" | | 12-45/64" | | 1/4" | | |
| Helical (Machining Center) | Stub | 60129H-32FM | | 32 | | 57,9 | | 35,0 | yes | 2-31/32" | 75,2 | 5-1/4" | 133,1 | 1/4" | |
| | | 60129H-125F | 1-1/4" | | 2-9/32" | | 1-3/8" | | yes | 2-31/32" | | 5-1/4" | | 1/4" | |
| | | 60329H-32FM | | 32 | | 57,9 | | 96,0 | yes | 5-3/8" | 136,2 | 7-43/64" | 194,1 | 1/4" | |
| | 3xD | 60329H-125F | 1-1/4" | | 2-9/32" | | 3-25/32" | | 96,0 | no | 5-3/8" | | 7-43/64" | | 1/4" |
| | | 60329H-32CM | | 32 | | 57,9 | | 96,0 | no | 5-3/8" | 136,2 | 7-43/64" | 194,1 | 1/4" | |
| | | 60329H-125C | 1-1/4" | | 2-9/32" | | 3-25/32" | | 96,0 | no | 5-3/8" | | 7-43/64" | | 1/4" |
| | 5xD | 60529H-32FM | | 32 | | 57,9 | | 159,9 | yes | 7-29/32" | 200,1 | 10-3/16" | 258,0 | 1/4" | |
| | | 60529H-125F | 1-1/4" | | 2-9/32" | | 6-19/64" | | 159,9 | yes | 7-29/32" | | 10-3/16" | | 1/4" |
| | | 60529H-32CM | | 32 | | 57,9 | | 159,9 | no | 7-29/32" | 200,1 | 10-3/16" | 258,0 | 1/4" | |
| | 7xD | 60529H-125C | 1-1/4" | | 2-9/32" | | 6-19/64" | | 159,9 | no | 7-29/32" | | 10-3/16" | | 1/4" |
| | | 60729H-32FM | | 32 | | 57,9 | | 223,9 | yes | 10-27/64" | 264,1 | 12-45/64" | 322,0 | 1/4" | |
| | | 60729H-125F | 1-1/4" | | 2-9/32" | | 8-13/16" | | 223,9 | yes | 10-27/64" | | 12-45/64" | | 1/4" |
| | | 60729H-32CM | | 32 | | 57,9 | | 223,9 | no | 10-27/64" | 264,1 | 12-45/64" | 322,0 | 1/4" | |
| 60729H-125C | 1-1/4" | | 2-9/32" | | 8-13/16" | | 223,9 | no | 10-27/64" | | 12-45/64" | | 1/4" | | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 29 | 7495-IP15-10 | 7495N-IP15-10 | 8IP-15 | 8IP-15TL | 8IP-15B | 1.1417-1.2598 | 61.0 | 29.00-32.00 | 690 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.
When ordering, please follow the examples shown below:
 Decimals = 1.2569" AM200®, 29 Series, C2 = 5C129H-1.2569
 Metric = 31,82mm AM200®, 29 Series, C2 = 5C129H-31.82

32 Series GEN3SYS™ Drill Inserts and Holders

Range: 1.2598 to 1.378 (32,00mm to 35,00mm)



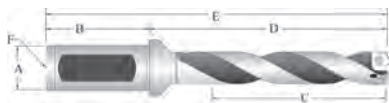
GEN3SYS™ Drill Inserts (supplied in 1 piece packages)



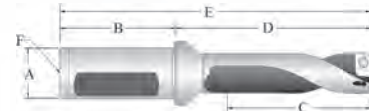
| A (Diameter) | | | Item Number & Coating | Availability & Geometry | | Item Number & Coating | Availability & Geometry | | | |
|-----------------------|-------|--------|-----------------------------------------|-------------------------|----|-----------------------------------------|-------------------------|----|----|----|
| Fractional Equivalent | (mm) | (inch) | C1 AM300® Standard GEN3SYS® XT Geometry | ● | LR | C2 AM300® Standard GEN3SYS® XT Geometry | ● | CI | LR | AS |
| | 32,00 | 1.2598 | 7C132P-32 | ○ | ▲ | 7C232P-32 | ○ | ▲ | ▲ | ○ |
| 1-17/64" | 32,15 | 1.2658 | 7C132P-32.15 | ○ | ▲ | 7C232P-32.15 | ○ | ▲ | ▲ | ▲ |
| | 32,50 | 1.2795 | 7C132P-32.5 | ○ | ▲ | 7C232P-32.5 | ○ | ▲ | ▲ | ▲ |
| 1-9/32" | 32,55 | 1.2813 | 7C132P-0109 | ○ | ▲ | 7C232P-0109 | ○ | ▲ | ▲ | ▲ |
| | 33,00 | 1.2992 | 7C132P-33 | ○ | ○ | 7C232P-33 | ○ | ▲ | ▲ | ○ |
| 1-5/16" | 33,34 | 1.3125 | 7C132P-0110 | ○ | ○ | 7C232P-0110 | ○ | ▲ | ▲ | ○ |
| | 33,50 | 1.3189 | 7C132P-33.5 | ○ | ▲ | 7C232P-33.5 | ○ | ▲ | ▲ | ▲ |
| | 34,00 | 1.3386 | 7C132P-34 | ○ | ▲ | 7C232P-34 | ○ | ▲ | ▲ | ▲ |
| 1-11/32" | 34,13 | 1.3438 | 7C132P-0111 | ○ | ▲ | 7C232P-0111 | ○ | ▲ | ▲ | ▲ |
| | 34,50 | 1.3583 | 7C132P-34.5 | ○ | ▲ | 7C232P-34.5 | ○ | ▲ | ▲ | ▲ |
| 1-3/8" | 34,93 | 1.3750 | 7C132P-0112 | ○ | ○ | 7C232P-0112 | ○ | ▲ | ▲ | ○ |
| | 35,00 | 1.3780 | 7C132P-35 | ○ | ▲ | 7C232P-35 | ○ | ▲ | ▲ | ▲ |

Ex. Geometries: Standard - 7C129P-29
Stainless - 7C229P-29AS

- see page 3 for geometry details



Helical Fluted Design



Straight Fluted Design

GEN3SYS™ Holders

| Style | Length | A | | B | | C | | Flat | D | | E | | F |
|----------------------------|--------|-----------------------|--------|---------------------|----------|--------------------|-----------|-----------|--------------------|------|-----------------------|------|---|
| | | Shank Diameter (inch) | (mm) | Shank Length (inch) | (mm) | Drill Depth (inch) | (mm) | | Body Length (inch) | (mm) | Overall Length (inch) | (mm) | |
| Straight (Lathe) | 3xD | 60332S-40FM | 40 | 70,1 | 105,0 | yes | 157,7 | 227,8 | 1/4" | | | | |
| | | 60332S-150F | 1-1/2" | 2-11/16" | 4-9/64" | yes | 6-29/64" | 8-59/64" | 1/4" | | | | |
| | 5xD | 60532S-40FM | 40 | 70,1 | 175,0 | yes | 227,7 | 297,8 | 1/4" | | | | |
| | | 60532S-150F | 1-1/2" | 2-11/16" | 6-59/64" | yes | 8-31/32" | 11-21/32" | 1/4" | | | | |
| | 7xD | 60732S-40FM | 40 | 70,1 | 244,9 | yes | 297,7 | 367,8 | 1/4" | | | | |
| | | 60732S-150F | 1-1/2" | 2-11/16" | 9-41/64" | yes | 11-23/32" | 14-13/32" | 1/4" | | | | |
| Helical (Machining Center) | Stub | 60132H-40FM | 40 | 70,1 | 38 | yes | 90,7 | 160,8 | 1/4" | | | | |
| | | 60132H-150F | 1-1/2" | 2-11/16" | 1-1/2" | yes | 3-37/64" | 6-17/64" | 1/4" | | | | |
| | 3xD | 60332H-40FM | 40 | 70,1 | 105,0 | yes | 157,7 | 227,8 | 1/4" | | | | |
| | | 60332H-150F | 1-1/2" | 2-11/16" | 4-9/64" | yes | 6-29/64" | 8-59/64" | 1/4" | | | | |
| | | 60332H-40CM | 40 | 70,1 | 105,0 | no | 157,7 | 227,8 | 1/4" | | | | |
| | | 60332H-150C | 1-1/2" | 2-11/16" | 4-9/64" | no | 6-29/64" | 8-59/64" | 1/4" | | | | |
| | 5xD | 60532H-40FM | 40 | 70,1 | 175,0 | yes | 227,7 | 297,8 | 1/4" | | | | |
| | | 60532H-150F | 1-1/2" | 2-11/16" | 6-59/64" | yes | 8-31/32" | 11-21/32" | 1/4" | | | | |
| | | 60532H-40CM | 40 | 70,1 | 175,0 | no | 227,7 | 297,8 | 1/4" | | | | |
| | | 60532H-150C | 1-1/2" | 2-11/16" | 6-59/64" | no | 8-31/32" | 11-21/32" | 1/4" | | | | |
| | 7xD | 60732H-40FM | 40 | 70,1 | 244,9 | yes | 297,7 | 367,8 | 1/4" | | | | |
| | | 60732H-150F | 1-1/2" | 2-11/16" | 9-41/64" | yes | 11-23/32" | 14-13/32" | 1/4" | | | | |
| | | 60732H-40CM | 40 | 70,1 | 244,9 | no | 297,7 | 367,8 | 1/4" | | | | |
| | | 60732H-150C | 1-1/2" | 2-11/16" | 9-41/64" | no | 11-23/32" | 14-13/32" | 1/4" | | | | |

Replacement TORX Plus Screws (supplied in 10 piece packages)

| Holder Series | TORX Plus Screw 10 Pieces | Nylon Locking TORX Plus Screw 10 Pieces | TORX Plus Hand Driver | Preset Torque TORX Plus Hand Driver | Replacement TORX Plus Tips | Inch | | Metric | |
|---------------|---------------------------|-----------------------------------------|-----------------------|-------------------------------------|----------------------------|-----------------------|-----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| | | | | | | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (in. - lbs.) | Drill Range Used With | TORX Plus Screw Admissible Tightening Torque (N - cm) |
| 32 | 7495-IP15-10 | 7495N-IP15-10 | 8IP-15 | 8IP-15TL | 8IP-15B | 1.2598 - 1.3779 | 61.0 | 32.00-35.00 | 690 |

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

- Availability Codes
- Stocked
- ▲ Non-Stocked - 10 work day lead time

*All other coatings are non-stocked standards - 10 day delivery applies.

Sizes not shown (Non-standard Diameters) are available in all coatings.

When ordering, please follow the examples shown below:

Decimals = 1.2825" AM300®, 32 Series, C1 = 7C232P-1.2825

Metric = 34,20mm AM300®, 32 Series, C2 = 7C232P-34.20



GEN3SYS[®] and GEN3SYS[™] Drill Inserts

Technical Information

Inch

TAP DRILL INFORMATION

AMERICAN - Unified Inch Screw Thread

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

| Taper Pipe Thread (NPT) | | | | | | |
|-------------------------|----------------|--------------------|-----------------|--------------------|----------------|------------------|
| Tap Size | Tap Drill Size | Decimal Equivalent | * Theo % Thread | Prob Mean Oversize | Prob Hole Size | ** Prob % Thread |
| 1/4 - 18 | 7/16 | .4375" | N/A | .003" | .4405" | N/A |
| 3/8 - 18 | 9/16 | .5625" | N/A | .003" | .5655" | N/A |
| 1/2 - 14 | 45/64 | .7031" | N/A | .003" | .7061" | N/A |
| 3/4 - 14 | 29/32 | .9063" | N/A | .003" | .9093" | N/A |

Based on nominal tap drill diameter. ** Based on .003" probable mean oversize. To calculate percent of full thread for a given hole diameter:

$$\% \text{ Thread} = \# \text{ of Threads per inch} \cdot \frac{(\text{Basic Major Dia. of thread (inch)} - \text{Drill Hole Size (inch)})}{.0130}$$

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

The .003" probable mean oversize hole condition is based on optimum cutting conditions. Probable % of full thread may vary based on less ideal cutting conditions.

THRUST & HORSEPOWER

FORMULAS

$$1. \text{ RPM} = \frac{3.82 \cdot \text{SFM}}{\text{DIA}}$$

where:

RPM = revolutions per minute (rev/min)
SFM = surface feet per minute (ft/min)
DIA = diameter of drill (in)

$$2. \text{ Thrust} = 153,700 \cdot \text{IPR} \cdot \text{DIA} \cdot \text{Km}$$

where:

Thrust = axial thrust (lbs)
IPR = feed rate (in/rev)
DIA = diameter of drill (in)
Km = specific cutting energy (lbs/in²)

$$3. \text{ Tool Power} = .6911 \cdot \text{IPR} \cdot \text{RPM} \cdot \text{Km} \cdot \text{DIA}^2$$

where:

Tool Power = tool power (HP)
IPR = feed rate (in/rev)
RPM = revolutions per minute (rev/min)
Km = specific cutting energy (lbs/in²)
DIA = diameter of drill (in)

MATERIAL CONSTANTS

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

Note: The above table and equations 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

METRIC Profile Screw Thread

| Tap Size | Tap Drill Size | Decimal Equivalent | * Theo % Thread | Prob Mean Oversize | Prob Hole Size | ** Prob % Thread |
|-----------|----------------|--------------------|-----------------|--------------------|----------------|------------------|
| 12 X 1,25 | 27/64 | .4219" | 79% | 0,075 mm | 10,79 mm | 74% |
| | 10,8 mm | .4252" | 74% | 0,075 mm | 10,88 mm | 69% |
| 14 X 2,0 | 15/32 | .4688" | 81% | 0,075 mm | 11,98 mm | 78% |
| | 12,0 mm | .4724" | 77% | 0,075 mm | 12,08 mm | 74% |
| 14 X 1,5 | 12,5 mm | .4921" | 77% | 0,075 mm | 12,58 mm | 73% |
| 16 X 2,0 | 14,0 mm | .5512" | 77% | 0,075 mm | 14,08 mm | 74% |
| 16 X 1,5 | 14,5 mm | .5709" | 77% | 0,075 mm | 14,58 mm | 73% |
| | 37/64 | .5781" | 68% | 0,075 mm | 14,76 mm | 64% |
| 18 X 2,5 | 15,5 mm | .6102" | 77% | 0,075 mm | 15,58 mm | 75% |
| 18 X 1,5 | 16,5 mm | .6496" | 77% | 0,075 mm | 16,58 mm | 73% |
| | 21/32 | .6563" | 68% | 0,075 mm | 16,75 mm | 64% |
| 20 X 2,5 | 11/16 | .6875" | 78% | 0,075 mm | 17,54 mm | 76% |
| | 17,5 mm | .6890" | 77% | 0,075 mm | 17,58 mm | 74% |
| 20 X 1,5 | 18,5 mm | .7283" | 77% | 0,075 mm | 18,58 mm | 73% |
| | 47/64 | .7344" | 69% | 0,075 mm | 18,66 mm | 65% |
| 22 X 2,5 | 49/64 | .7656" | 79% | 0,075 mm | 19,52 mm | 76% |
| | 19,5 mm | .7677" | 77% | 0,075 mm | 19,58 mm | 75% |
| 22 X 1,5 | 20,5 mm | .8071" | 77% | 0,075 mm | 20,58 mm | 73% |
| | 13/16 | .8125" | 70% | 0,075 mm | 20,71 mm | 66% |
| 24 X 3 | 13/16 | .8125" | 86% | 0,075 mm | 20,71 mm | 84% |
| | 21,0 mm | .8268" | 76% | 0,075 mm | 21,08 mm | 75% |
| 24 X 2 | 22,0 mm | .8661" | 77% | 0,075 mm | 22,08 mm | 74% |
| | 7/8 | .8750" | 68% | 0,075 mm | 22,30 mm | 65% |
| 27 X 3 | 24,0 mm | .9449" | 77% | 0,075 mm | 24,08 mm | 75% |

| Taper Pipe Thread (BSP & ISO 7-1) | | | | | | |
|-----------------------------------|----------------|--------------------|-----------------|--------------------|----------------|------------------|
| Tap Size | Tap Drill Size | Decimal Equivalent | * Theo % Thread | Prob Mean Oversize | Prob Hole Size | ** Prob % Thread |
| 1/4 - 19 | 7/16 | .4325" | N/A | 0,075 mm | 11,19 mm | N/A |
| 3/8 - 19 | 37/64 | .5781" | N/A | 0,075 mm | 14,76 mm | N/A |
| 1/2 - 14 | 23/32 | .7188" | N/A | 0,075 mm | 18,33 mm | N/A |
| 3/4 - 14 | 15/16 | .9375" | N/A | 0,075 mm | 23,89 mm | N/A |

Based on nominal tap drill diameter. ** Based on 0,075 mm probable mean oversize. To calculate percent of full thread for a given hole diameter:

$$\% \text{ Thread} = \frac{76,93}{\text{Pitch (mm)}} * \left(\text{Basic Major Diameter (mm)} - \text{Drill Hole Size (mm)} \right)$$

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

The 0,075mm probable mean oversize hole condition is based on optimum cutting conditions. Probable % of full thread may vary based on less ideal cutting conditions.

THRUST & HORSEPOWER

FORMULAS

1. $RPM = \frac{318,47 \cdot M/min}{DIA}$

where:
 RPM = revolutions per minute (rev/min)
 SFM = surface feet per minute (M/min)
 DIA = diameter of drill (mm)

2. Thrust = $154 \cdot (mm/rev) \cdot DIA \cdot Km$

where:
 Thrust = axial thrust in newtons (N)
 IPR = feed rate (mm/rev)
 DIA = diameter of drill (mm)
 Km = specific cutting energy (bar)

3. Tool Power = $\frac{(mm/rev) \cdot RPM \cdot Km \cdot DIA^2}{218604,8}$

where:
 Tool Power = tool power (HP)
 mm/rev = feed rate (mm/rev)
 RPM = revolutions per minute (rev/min)
 Km = specific cutting energy (bar)
 DIA = diameter of drill (mm)

MATERIAL CONSTANTS

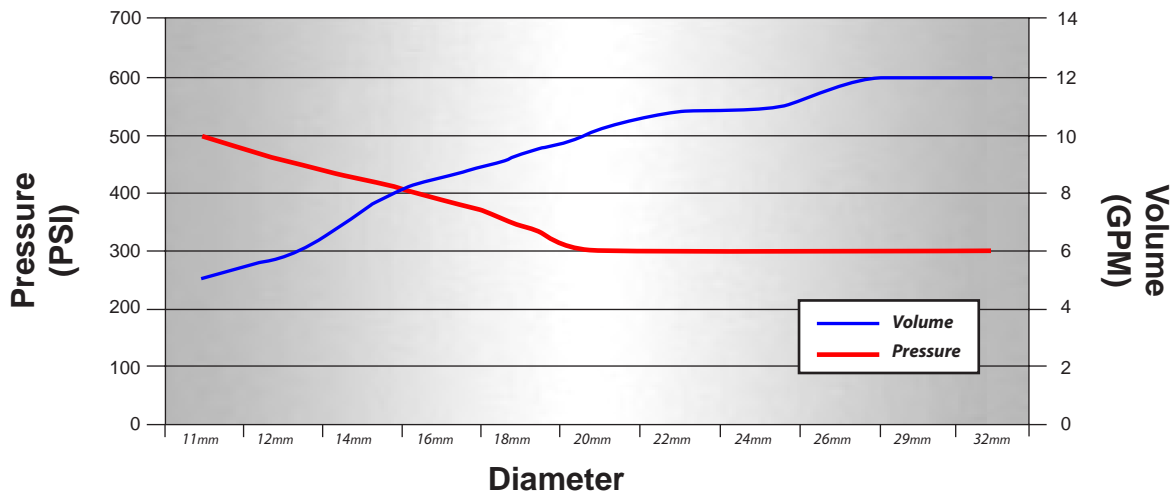
| Type of Material | Km (kPa) |
|------------------------------|----------|
| Plain Carbon and Alloy Steel | |
| 85 - 200 BHN | 5,45 |
| 200 - 275 BHN | 6,48 |
| 275 - 375 BHN | 6,89 |
| 375 - 425 BHN | 7,93 |
| High Temperature Alloys | 9,93 |
| Stainless Steel: | |
| 135-275 BHN | 6,48 |
| 30 - 45 RC | 7,45 |
| Copper Alloy | |
| 20 - 80 RB | 2,96 |
| 80 - 100 RB | 4,96 |
| Titanium Alloy | 4,96 |
| Aluminum Alloy | 1,52 |
| Magnesium Alloy | 1,10 |
| Cast Iron | |
| 100 - 200 BHN | 3,45 |
| 200 - 300 BHN | 7,45 |

Note: The above table and equations are found in the Machinery's Handbook. Permission to simplify and print the equations is granted by the Editor of the Machinery's Handbook.



GEN3SYS® and GEN3SYS® XT Drill Inserts

Coolant Recommendations Inch



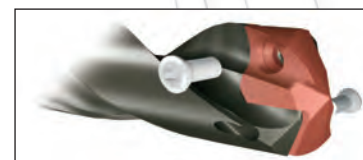
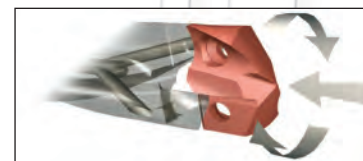
1.5 multiplier for 7xD

| Diameter | Inch | | Metric | |
|----------|------|-----|--------|-----|
| | PSI | GPM | BAR | LPM |
| 11 mm | 500 | 5 | 35 | 19 |
| 12 mm | 500 | 5 | 35 | 19 |
| 14 mm | 450 | 6 | 31 | 23 |
| 16 mm | 410 | 8 | 28 | 30 |
| 18 mm | 360 | 9 | 25 | 34 |
| 20 mm | 300 | 10 | 21 | 38 |
| 22 mm | 300 | 11 | 21 | 42 |
| 24 mm | 300 | 11 | 21 | 42 |
| 26 mm | 300 | 12 | 21 | 46 |
| 29 mm | 300 | 12 | 21 | 46 |
| 32 mm | 300 | 12 | 21 | 46 |

The coolant pressure and flow rate recommendation above represents a good approximation to obtain optimum tool life and chip evacuation at Allied recommended speeds and feeds. For a more specific approximation of coolant requirements, consult the Allied Application Engineering Department.

Assembly of GEN3SYS® and GEN3SYS® XT Tools:

1. Align the flats on the GEN3SYS® or GEN3SYS® XT Drill Insert with the flats on the ears of the GEN3SYS® Holder.
2. Slide the GEN3SYS® or GEN3SYS® XT Drill Insert into the precision ground locating pocket on the GEN3SYS® Holder. The drill insert should not be turned, rotated, or twisted for locking purposes. The holder pocket and locating pads on the drill insert assure optimum fit and repeatability.
3. Place a generous amount of E-Z Break (provided in the packaging) onto the supplied TORX Plus Screws.
4. 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.





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

Technical Information



Guaranteed Test/Demo Application Form

Distributor PO # _____

The Following must be filled out completely before test will be considered

Distributor: _____ End User: _____
Contact: _____ Contact: _____
Account Number: _____ Industry: _____
Phone: _____ Phone: _____
Email: _____ Email: _____

Test Objective List what would make this a successful test. (i.e. Performance, Chip Control, etc.)

Application Information

Hole Diameter: _____ in/mm Depth of Cut: _____ in/mm Tolerance: _____
Material: _____ Hardness: _____ BHN/Rc Required Finish: _____ RMS
(4150/A36/Cast Iron, etc.)
Material State: _____
(Flat Stock/Casting/Tube Stock/Hot Rolled/Forging)

Machine Information

Machine Type: _____ Builder: _____ Model#: _____
(Lathe/Screw Machine/Machine Center, etc.) (Haas/Mori Seiki, etc.)
Power: _____ HP/KW Thrust: _____ Lbs./N Orientation: [] Vertical
[] Horizontal
Shank Required: _____ Rigidity: [] Excellent Tool Rotating: [] Yes
(3/4" Straight/#4 Morse Taper, etc.) [] Good [] No
[] Poor

Coolant Information

Coolant Delivery: _____ Coolant Pressure: _____ PSI/bar
(Through Tool/Flood)
Coolant Type: _____ Coolant Volume: _____ GPM/LPM
(Air Mist/Oil/Synthetic/Water Soluble, etc.)

Current Process List all tooling, coatings, substrates, speeds and feeds, tool life and any problems.

Requested Tooling

Table with 2 columns: QTY, Item Number (repeated twice)

Allied Machine & Engineering Corp.
Telephone: (330) 343-4283
Toll Free USA & Canada: (800) 321-5537
Fax: (330) 364-7666
Email: jporter@alliedmachine.com

Warranty



Allied Machine & Engineering Corp. warrants to original equipment manufacturers, distributors, industrial and commercial users of its products, that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

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

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

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied shall have no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein. IN NO EVENT SHALL ALLIED MACHINE & ENGINEERING CORP. BE LIABLE FOR ANY SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES. Allied makes no other warranty, express or implied, except as set forth above, and Allied neither assumes nor authorizes any other person or entity to assume for it any other obligation or liability in connection with any of its products.

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Allied Machine & Engineering Corp.

120 Deeds Drive, Dover, Ohio 44622

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

Fax: (330) 602-3400 Toll Free USA & Canada: (800) 223-5140

International Country Code: 01

Website Address: www.alliedmachine.com

Email Address: info@alliedmachine.com



Proudly Made in the USA

WARNING

Cutting tools, tooling and metalworking machines may fail during use. Use safety glasses, appropriate safety equipment and exercise personal safety at all times while operating machinery.

Regional Distribution Warehouse Locations:

USA

Allied Machine & Engineering Corp.
120 Deeds Drive • PO Box 36 • Dover, Ohio 44622-0036

Telephone: (330) 343-4283
Toll Free USA & Canada: (800) 321-5537
Fax: (330) 602-3400
Toll Free USA & Canada: (800) 223-5140
Engineering Fax: (330) 364-7666

Europe

Allied Maxcut Engineering Co. Ltd.
93 Vantage Point, Pensnett Estate,
Kingswinford, West Midlands
DY6 7FR ENGLAND

Telephone: 011-44-1384-400900
Fax: 011-44-1384-400105

Other Product Literature:

High Performance and Universal Style DRILLS, HOLDERS, AND ACCESSORIES



This catalog lists the widest variety of Spade Drills and Holders in our industry. Our TiN, TiAlN, and TiCN coated High Performance Spade Drills (3/16" to 5") offer a 100% to 500% increase in productivity and an extended tool life of 3 to 20 times over uncoated tools.

Literature Order Number: HPU

EcoCut

DRILLING AND TURNING WITH ONLY ONE TOOL



Allied offers a versatile line of lathe tools that can perform up to four machining operations. One EcoCut tool can be used for drilling, boring applications, facing applications and standard turning operations.

Literature Order Number: EC

AccuThread 856® THREAD MILLING PRODUCTS



AccuThread 856® specific Thread Mills conform with J1926 and SAE AS5202. AccuThread 856® has a thicker core and a helical flute which offers increased strength and rigidity when cutting forces are applied. AccuThread 856® provides superior thread forms compared to other competitive thread mills and taps.

Literature Order Number: AT856

Structural Steel T-A® Drilling System HIGH PERFORMANCE HOLDERS AND INSERTS



Designed specifically for use on structural steel materials, this patent-pending system delivers Outstanding Performance and Durability. TiAlN insert coating allows for increased tool life and better heat resistance while providing better hole tolerances. Tool holders can be used with standard T-A® Drill Inserts.

Literature Order Number: SS

ALVAN® Expandable Reamers



The ALVAN® product line includes both monobloc and ring style expandable reamers, offered with carbide, cermet, PCD and CBN cutting edges and are available in sizes from 0.228 inch to 7.898 inch (5.8 mm to 200.6 mm) diameters.

Literature Order Number: ALV

BT-A

REPLACEABLE TIP SINGLE TUBE BTA TOOL & ACCESSORIES



Allied's BT-A tool offers a bearing area for improved straightness, as well as more balanced cutting forces. This tool also provides significantly increased penetration rates over brazed heads and traditional gun drills. The BT-A's patent-pending design allows for replaceable cutting edges, eliminating the need for re-sharpening. This tool is compatible with standard BTA-STS Systems.

Literature Order Number: BTAFL

i-Form

CUSTOM INDEXABLE DRILL/FORM TOOL SYSTEM



With i-Form, you can design complex forms for any style hole with increased productivity in mind. The i-Form design (blade and form inserts) provides custom engineered forms that allow for complex design, replaceable cutting edges, and improved consistency while outperforming brazed and solid carbide tools.

Literature Order Number: IFFL



Allied Machine & Engineering Corp.



**Allied
Machine &
Engineering Corp.**

120 Deeds Drive
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Email Address: info@alliedmachine.com