GEN3SYS® XT & GEN3SYS®



The GEN3SYS® XT and GEN3SYS® high penetration drilling systems continue to set new benchmarks for what can be achieved with replaceable insert drilling technology. The comprehensive range includes innovative new coatings and cutting geometries that deliver outstanding performance, productivity and tool life on a range of materials.

Features and Benefits

- Drilling range 11.00 - 35.00mm
- Selection of grades, geometries and coatings to support a wide range of applications
- Robust tool holder designed with through coolant for improved tool life, hole finish and chip removal
- High penetration rates increase productivity
- Helical margin design enables maximum durability and insert stability
- Structural Steel specific holders and inserts
- Specials available upon request
- Regrind service available

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How to Identify Information

High Penetration Drilling

GEN3SYS® XT and GEN3SYS® high penetration drilling systems have been designed to provide high speed production machining beyond the capabilities of the T-A® system. The standard product offering covers a diameter range from 11.00mm to 35.00mm with drill hole depths of up to 7 x diameter. The programme has various grades, geometries and coatings available to suit the most demanding of applications.

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

How to identify GEN3SYS® and GEN3SYS® ST Holders

6	03	12	H	-	20FM

Holder Designation
6 - GEN3SYS®
ST - Structural Steel

Length
01 - Stub or Drill & Chamfer
03 x Diameter
05 x Diameter
07 x Diameter

Series

11	18
12	20
13	22
14	24
15	26
16	29
17	32

Flute Style
H - Helical
S - Straight
C45 - Drill & Chamfer

Body Diameter (ST)
0 - Standard
5 - Oversized

Shank Style
CM - Cylindrical Metric
FM - Flanged Metric with Flat
WN - Whistle Notch

How to identify GEN3SYS® XT and GEN3SYS® Drill Inserts

7	C1	12	P	-	12	-	

Insert Designation
5 - GEN3SYS®
7 - GEN3SYS® XT

Grade
C1 - K35
C2 - K20

Series

11	18
12	20
13	22
14	24
15	26
16	29
17	32

Coating
P - AM300®
H - AM200®
A - TiAlN
N - TiCN
T - TiN

Insert Diameter
Stated as Metric or Imperial in multiples of 1/32" (special diameters available)

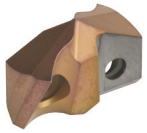
Geometries
- Standard
CI - Cast Iron
LR - LR
AS - Austenitic Stainless Steel
ST - Structural Steel

NOTE: AM300® coating available for GEN3SYS® XT only
ST & AS geometry available for GEN3SYS® XT only

Insert Coatings

AM300®

- Increased heat resistance over AM200®
- Provides superior tool life at high penetration rates
- Up to a 20% increase in tool life over AM200®
- Available as standard on GEN3SYS® XT
- Colour Light Bronze



AM200®

- Improved heat resistance over Tin, TiCN and TiAlN with improved wear capabilities
- Allows for improved tool life and higher penetration rates
- Over 20% increased tool life over TiAlN coating
- Available as standard on GEN3SYS®
- Colour Copper / Bronze
- TiN, TiCN and TiALN coatings available upon request



Insert Grades & Geometries Information

Grades

K20 Carbide (C2)

Excellent choice for drilling titanium alloys, cast aluminium and wrought aluminium together with SG/Nodular cast iron, grey/white iron, aluminium bronze, brass, copper, stainless steels and high temperature alloys.

K35 Carbide (C1)

Ideal for drilling free machining steel, low/medium carbon steels, alloys steels, high strength steels, tool steels, hardened steels and certain stainless steels.

GEN3SYS®XT Insert Geometries

Steel



Standard

- XT geometry - first choice for steels, alloys and hardened materials
- Optimum chip formation in elastic materials, with improved penetration rates
- AM300® coating provides exceptional wear resistance and up to 20% increase in tool life over AM200®
- Available in K35 & K20 grades

Steel



LR

- Enhanced LR-XT geometry supports applications with poor stability and rigidity
- First choice for machining structural, cast and forged steel in materials over 850N/mm² (250BHN)
- AM300® coating provides exceptional wear resistance and up to 20% increase in tool life over AM200®
- Available in K35 & K20 grades

Cast Iron



CI

- Enhanced CI-XT geometry provides high wear resistance in drilling of cast iron materials
- Improved penetration rates, chip formation and hole quality
- AM300® coating provides exceptional wear resistance and up to 20% increase in tool life over AM200®
- Stronger corner radius
- Tough K20 grade

Stainless Steel



AS

- Enhanced AS-XT geometry improves chip control in Austentic stainless steel
- Stronger point geometry improves penetration rates
- First choice for austenitic stainless steels
- AM300® coating provides exceptional wear resistance and up to 20% increase in tool life over AM200®
- Tough K20 grade

Structural Steel



ST

- Provides higher penetration
- Designed for high speed carbide drilling machines
- AM300® coating provides exceptional heat and wear resistance
- Tough K20 grade is an excellent choice for Structural Steel materials

GEN3SYS® Insert Geometries

Steel



Standard

- Suitable for steels, alloys and hardened materials
- Optimum chip formation in elastic materials, without compromising performance
- High wear resistance and extended tool life with AM200® coating
- Available in K35 & K20 grades

Steel



LR

- Suitable for applications with poor stability and rigidity
- Suitable for machining structural, cast and forged steel in materials over 850N/mm² (250BHN)
- High wear resistance and extended tool life with AM200® coating
- Available in K35 & K20 grades

Cast Iron



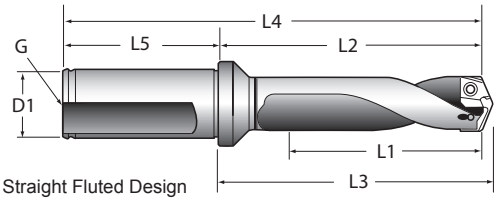
CI

- Suitable for drilling cast iron materials
- Enhanced geometry improves chip formation and hole quality
- High wear resistance and extended tool life with AM200® coating
- Enhanced corner radius reduces material break down on exit
- Tough K20 grade

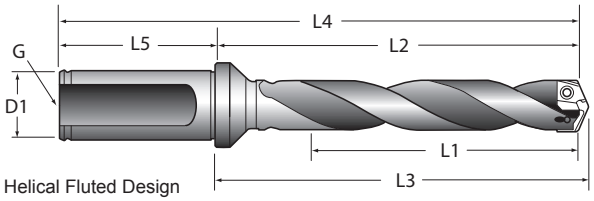
Note:
Regrind service available, please contact our sales department for further information.

11 Series Inserts and Holders

Diameter Range 11.00mm to 11.99mm



Straight Fluted Design



Helical Fluted Design

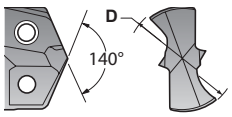
Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60311S-16FM	3xD	Straight	36.0	62.6	64.7	110.6	48.0	16	Yes	1/16"
60511S-16FM	5xD	Straight	60.0	86.6	88.6	134.6	48.0	16	Yes	1/16"
60711S-16FM	7xD	Straight	84.0	110.6	112.6	158.6	48.0	16	Yes	1/16"
60111H-16FM	Stub	Helical	16.0	42.6	44.7	90.6	48.0	16	Yes	1/16"
60311H-16FM	3xD	Helical	36.0	62.6	64.7	110.6	48.0	16	Yes	1/16"
60311H-16CM	3xD	Helical	36.0	62.6	64.7	110.6	48.0	16	No	1/16"
60511H-16FM	5xD	Helical	60.0	86.6	88.6	134.6	48.0	16	Yes	1/16"
60511H-16CM	5xD	Helical	60.0	86.6	88.6	134.6	48.0	16	No	1/16"
60711H-16FM	7xD	Helical	84.0	110.6	112.6	158.6	48.0	16	Yes	1/16"
60711H-16CM	7xD	Helical	84.0	110.6	112.6	158.6	48.0	16	No	1/16"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

Drill Inserts





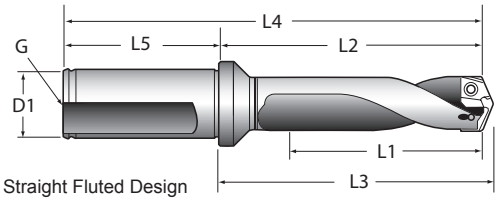
Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.
K35 (C1)	11.00	0.4331"	7C111P-11	●
	11.11	0.4375"	7C111P-0014	○
	11.50	0.4528"	7C111P-11.5	●
	11.51	0.4531"	7C111P-.453	○
	11.91	0.4688"	7C111P-0015	○
LR Geometry K35 (C1)	11.00	0.4331"	7C111P-11LR	◆
	11.11	0.4375"	7C111P-0014LR	◆
	11.50	0.4528"	7C111P-11.5LR	◆
	11.51	0.4531"	7C111P-.453LR	◆
	11.91	0.4688"	7C111P-0015LR	◆
K20 (C2)	11.00	0.4331"	7C211P-11	●
	11.11	0.4375"	7C211P-0014	○
	11.50	0.4528"	7C211P-11.5	●
	11.51	0.4531"	7C211P-.453	○
	11.91	0.4688"	7C211P-0015	○
Cast Iron Geometry K20 (C2)	11.00	0.4331"	7C211P-11CI	●
	11.11	0.4375"	7C211P-0014CI	○
	11.50	0.4528"	7C211P-11.5CI	●
	11.51	0.4531"	7C211P-.453CI	○
	11.91	0.4688"	7C211P-0015CI	○
Stainless Steel Geometry K20 (C2)	11.00	0.4331"	7C211P-11AS	●
	11.11	0.4375"	7C211P-0014AS	○
	11.50	0.4528"	7C211P-11.5AS	●
	11.51	0.4531"	7C211P-.453AS	○
	11.91	0.4688"	7C211P-0015AS	○
LR Geometry K20 (C2)	11.00	0.4331"	7C211P-11LR	◆
	11.11	0.4375"	7C211P-0014LR	◆
	11.50	0.4528"	7C211P-11.5LR	◆
	11.51	0.4531"	7C211P-.453LR	◆
	11.91	0.4688"	7C211P-0015LR	◆

Supplied in packs of 1

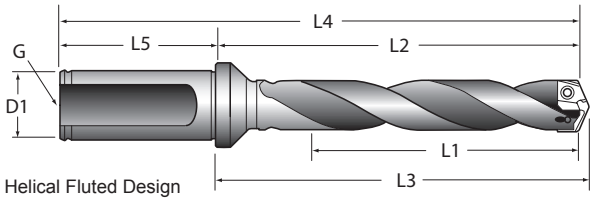
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

12 Series Inserts and Holders

Diameter Range 12.00mm to 12.99mm



Straight Fluted Design



Helical Fluted Design

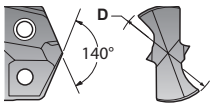
GEN3SYS® High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60312S-20FM	3xD	Straight	39.0	66.6	68.6	116.6	50.0	20	Yes	1/8"
60512S-20FM	5xD	Straight	65.0	92.6	94.8	142.6	50.0	20	Yes	1/8"
60712S-20FM	7xD	Straight	91.0	118.5	120.8	168.5	50.0	20	Yes	1/8"
60112H-20FM	Stub	Helical	16.0	43.2	45.4	93.2	50.0	20	Yes	1/8"
60312H-20FM	3xD	Helical	39.0	66.6	68.8	116.6	50.0	20	Yes	1/8"
60312H-20CM	3xD	Helical	39.0	66.6	68.8	116.6	50.0	20	No	1/8"
60512H-20FM	5xD	Helical	65.0	92.6	94.8	142.6	50.0	20	Yes	1/8"
60512H-20CM	5xD	Helical	65.0	92.6	94.8	142.6	50.0	20	No	1/8"
60712H-20FM	7xD	Helical	91.0	118.5	120.8	168.5	50.0	20	Yes	1/8"
60712H-20CM	7xD	Helical	91.0	118.5	120.8	168.5	50.0	20	No	1/8"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS®XT and GEN3SYS® High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	12.00	0.4724"	7C112P-12	●	5C112H12	●
	12.30	0.4844"	7C112P-.484	○	5C112H-.484	○
	12.50	0.4921"	7C112P-12.5	●	5C112H12.5	●
	12.60	0.4961"	N 7C112P-12.6	○	-	-
	12.70	0.5000"	7C112P-0016	○	5C112H-0016	○
	12.80	0.5039"	N 7C112P-12.8	○	-	-
LR Geometry K35 (C1)	12.00	0.4724"	7C112P-12LR	◆	5C112H-12LR	◆
	12.30	0.4844"	7C112P-.484LR	◆	5C112H-.484LR	◆
	12.50	0.4921"	7C112P-12.5LR	◆	5C112H-12.5LR	◆
	12.70	0.5000"	7C112P-0016LR	◆	5C112H-0016LR	◆
K20 (C2)	12.00	0.4724"	7C212P-12	●	5C212H-12	●
	12.30	0.4844"	7C212P-.484	○	5C212H-.484	○
	12.50	0.4921"	7C212P-12.5	●	5C212H-12.5	●
	12.60	0.4961"	N 7C212P-12.6	○	-	-
	12.70	0.5000"	7C212P-0016	○	5C212H-0016	○
	12.80	0.5039"	N 7C212P-12.8	○	-	-
Cast Iron Geometry K20 (C2)	12.00	0.4724"	7C212P-12CI	●	5C212H-12CI	●
	12.30	0.4844"	7C212P-.484CI	○	5C212H-.484CI	○
	12.50	0.4921"	7C212P-12.5CI	●	5C212H-12.5CI	●
	12.70	0.5000"	7C212P-0016CI	○	5C212H-0016CI	○
Stainless Steel Geometry K20 (C2)	12.00	0.4724"	7C212P-12AS	●	-	-
	12.30	0.4844"	7C212P-.484AS	○	-	-
	12.50	0.4921"	7C212P-12.5AS	●	-	-
	12.70	0.5000"	7C212P-0016AS	○	-	-
LR Geometry K20 (C2)	12.00	0.4724"	7C212P-12LR	◆	5C212H-12LR	◆
	12.30	0.4844"	7C212P-.484LR	◆	5C212H-.484LR	◆
	12.50	0.4921"	7C212P-12.5LR	◆	5C212H-12.LR	◆
	12.70	0.5000"	7C212P-0016LR	◆	5C212H- 0016LR	◆

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

Stk. - Stock Availability. *Supplied in packs of 1*
- ● Stock Item.
- ○ Stocked in limited quantities, advanced planning is recommended.
- ◆ Non-stock standard. Normal delivery 15 to 20 days.

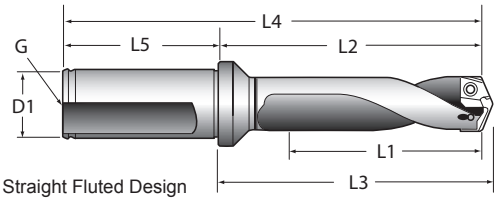
Any non-standard size available (minimum quantity 2)

Drill & Chamfer Holders available, see page 134. Holder Adaptors available, see page 138.

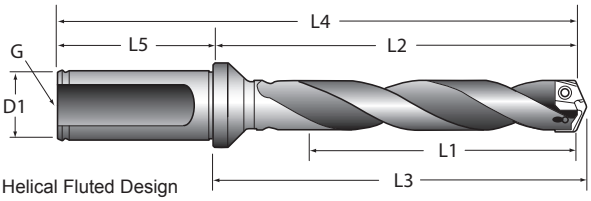
N This symbol can be found throughout this catalogue and highlights NEW products!

13 Series Inserts and Holders

Diameter Range 13.00mm to 13.99mm



Straight Fluted Design



Helical Fluted Design

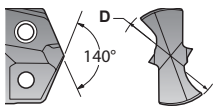
GEN3SYS Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60313S-20FM	3xD	Straight	42.0	69.2	71.5	119.2	50.0	20	Yes	1/8"
60513S-20FM	5xD	Straight	70.0	97.3	99.5	147.3	50.0	20	Yes	1/8"
60713S-20FM	7xD	Straight	98.0	125.3	127.5	175.3	50.0	20	Yes	1/8"
60113H-20FM	Stub	Helical	16.0	43.0	45.2	93.0	50.0	20	Yes	1/8"
60313H-20FM	3xD	Helical	42.0	69.2	71.5	119.2	50.0	20	Yes	1/8"
60313H-20CM	3xD	Helical	42.0	69.2	71.5	119.2	50.0	20	No	1/8"
60513H-20FM	5xD	Helical	70.0	97.3	99.5	147.3	50.0	20	Yes	1/8"
60513H-20CM	5xD	Helical	70.0	97.3	99.5	147.3	50.0	20	No	1/8"
60713H-20FM	7xD	Helical	98.0	125.3	127.5	175.3	50.0	20	Yes	1/8"
60713H-20CM	7xD	Helical	98.0	125.3	127.5	175.3	50.0	20	No	1/8"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS XT and GEN3SYS Drill Inserts





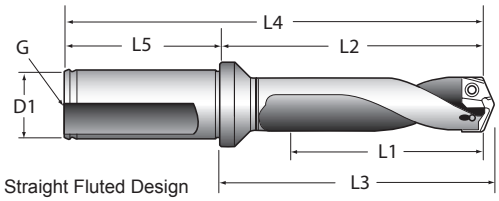
Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	13.00	0.5118"	7C113P-13	●	5C113H-13	●
	13.08	0.5150"	7C113P-.515	○	5C113H-.515	○
	13.10	0.5157"	N 7C113P-13.1	○	-	-
	13.20	0.5197"	N 7C113P-13.2	○	-	-
	13.49	0.5312"	7C113P-0017	○	5C113H-0017	○
	13.50	0.5315"	7C113P-13.5	●	5C113H-13.5	●
	13.60	0.5354"	N 7C113P-13.6	○	-	-
	13.70	0.5394"	N 7C113P-13.7	○	-	-
	13.80	0.5433"	N 7C113P-13.8	○	-	-
	13.89	0.5469"	7C113P-.546	○	5C113H-.546	○
LR Geometry K35 (C1)	13.00	0.5118"	7C113P-13LR	◆	5C113H-13LR	◆
	13.08	0.5150"	7C113P-.515LR	◆	5C113H-.515LR	◆
	13.49	0.5312"	7C113P-0017LR	◆	5C113H-0017LR	◆
	13.50	0.5315"	7C113P-13.5LR	◆	5C113H-13.5LR	◆
	13.89	0.5469"	7C113P-.546LR	◆	5C113H-.546LR	◆
K20 (C2)	13.00	0.5118"	7C213P-13	●	5C213H-13	●
	13.08	0.5150"	7C213P-.515	○	5C213H-.515	○
	13.10	0.5157"	N 7C213P-13.1	○	-	-
	13.20	0.5197"	N 7C213P-13.2	○	-	-
	13.49	0.5312"	7C213P-0017	○	5C213H-0017	○
	13.50	0.5315"	7C213P-13.5	●	5C213H-13.5	●
	13.60	0.5354"	N 7C213P-13.6	○	-	-
	13.70	0.5394"	N 7C213P-13.7	○	-	-
	13.80	0.5433"	N 7C213P-13.8	○	-	-
	13.89	0.5469"	7C213P-.546	○	5C213H-.546	○
Cast Iron Geometry K20 (C2)	13.00	0.5118"	7C213P-13CI	●	5C213H-13CI	●
	13.08	0.5150"	7C213P-.515CI	○	5C213H-.515CI	○
	13.49	0.5312"	7C213P-0017CI	○	5C213H-0017CI	○
	13.50	0.5315"	7C213P-13.5CI	●	5C213H-13.5CI	●
	13.89	0.5469"	7C213P-.546CI	○	5C213H-.546CI	○
Stainless Steel Geometry K20 (C2)	13.00	0.5118"	7C213P-13AS	●	-	-
	13.08	0.5150"	7C213P-.515AS	○	-	-
	13.49	0.5312"	7C213P-0017AS	○	-	-
	13.50	0.5315"	7C213P-13.5AS	●	-	-
	13.89	0.5469"	7C213P-.546AS	○	-	-
LR Geometry K20 (C2)	13.00	0.5118"	7C213P-13LR	◆	5C213H-13LR	◆
	13.08	0.5150"	7C213P-.515LR	◆	5C213H-.515LR	◆
	13.49	0.5312"	7C213P-0017LR	◆	5C213H-0017LR	◆
	13.50	0.5315"	7C213P-13.5LR	◆	5C213H-13.5LR	◆
	13.89	0.5469"	7C213P-.546LR	◆	5C213H-.546LR	◆

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

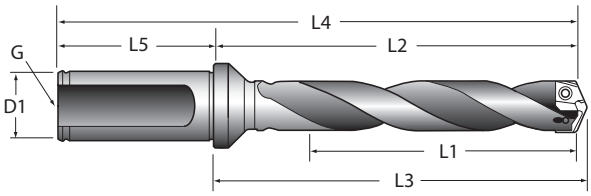
N This symbol can be found throughout this catalogue and highlights NEW products!

14 Series Inserts and Holders

Diameter Range 14.00mm to 14.99mm



Straight Fluted Design



Helical Fluted Design

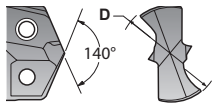
GEN3SYS® High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60314S-20FM	3xD	Straight	45.0	72.4	75.0	122.4	50.0	20	Yes	1/8"
60514S-20FM	5xD	Straight	75.0	102.4	104.9	152.4	50.0	20	Yes	1/8"
60714S-20FM	7xD	Straight	105.0	132.4	134.9	182.4	50.0	20	Yes	1/8"
60114H-20FM	Stub	Helical	17.5	44.6	47.2	94.6	50.0	20	Yes	1/8"
60314H-20FM	3xD	Helical	45.0	72.4	75.0	122.4	50.0	20	Yes	1/8"
60314H-20CM	3xD	Helical	45.0	72.4	75.0	122.4	50.0	20	No	1/8"
60514H-20FM	5xD	Helical	75.0	102.4	104.9	152.4	50.0	20	Yes	1/8"
60514H-20CM	5xD	Helical	75.0	102.4	104.9	152.4	50.0	20	No	1/8"
60714H-20FM	7xD	Helical	105.0	132.4	134.9	182.4	50.0	20	Yes	1/8"
60714H-20CM	7xD	Helical	105.0	132.4	134.9	182.4	50.0	20	No	1/8"
60514S-20WN	5xD	Straight	75.0	102.3	104.9	152.3	50.0	20	Yes	1/8"
60714S-20WN	7xD	Straight	105.0	132.4	134.9	182.4	50.0	20	Yes	1/8"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS® XT and GEN3SYS® High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	14.00	0.5512"	7C114P-14	●	5C114H-14	●
	14.10	0.5551"	N 7C114P-14.1	○	-	-
	14.20	0.5591"	N 7C114P-14.2	○	-	-
	14.29	0.5625"	7C114P-0018	○	5C114H-0018	○
	14.50	0.5709"	7C114P-14.5	●	5C114H-14.5	●
	14.60	0.5748"	N 7C114P-14.6	○	-	-
	14.68	0.5781"	7C114P-.578	○	5C114H-.578	○
	14.80	0.5827"	N 7C114P-14.8	○	-	-
LR Geometry K35 (C1)	14.00	0.5512"	7C114P-14LR	◆	5C114H-14LR	◆
	14.29	0.5625"	7C114P-0018LR	◆	5C114H-0018LR	◆
	14.50	0.5709"	7C114P-14.5LR	◆	5C114H-14.5LR	◆
	14.68	0.5781"	7C114P-.578LR	◆	5C114H-.578LR	◆
K20 (C2)	14.00	0.5512"	7C214P-14	●	5C214H-14	●
	14.10	0.5551"	N 7C214P-14.1	○	-	
	14.20	0.5591"	N 7C214P-14.2	○	-	
	14.29	0.5625"	7C214P-0018	○	5C214H-0018	○
	14.50	0.5709"	7C214P-14.5	●	5C214H-14.5	●
	14.60	0.5748"	N 7C214P-14.6	○	-	-
	14.68	0.5781"	7C214P-.578	○	5C214H-.578	○
	14.80	0.5827"	N 7C214P-14.8	○	-	-
Cast Iron Geometry K20 (C2)	14.00	0.5512"	7C214P-14CI	●	5C214H-14CI	●
	14.29	0.5625"	7C214P-0018CI	○	5C214H-0018CI	○
	14.50	0.5709"	7C214P-14.5CI	●	5C214H-14.5CI	●
	14.68	0.5781"	7C214P-.578CI	○	5C214H-.578CI	○
Stainless Steel Geometry K20 (C2)	14.00	0.5512"	7C214P-14AS	●	-	-
	14.29	0.5625"	7C214P-0018AS	○	-	-
	14.50	0.5709"	7C214P-14.5AS	●	-	-
	14.68	0.5781"	7C214P-.578AS	○	-	-
LR Geometry K20 (C2)	14.00	0.5512"	7C214P-14LR	◆	5C214H-14LR	◆
	14.29	0.5625"	7C214P-0018LR	◆	5C214H-0018LR	◆
	14.50	0.5709"	7C214P-14.5LR	◆	5C214H-14.5LR	◆
	14.68	0.5781"	7C214P-.578LR	◆	5C214H-.578LR	◆

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

Stk. - Stock Availability. *Supplied in packs of 1*

● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

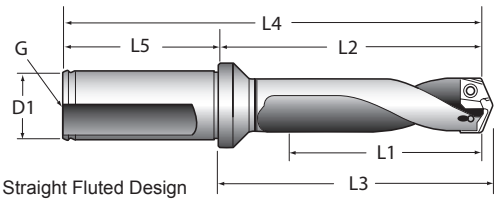
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

N This symbol can be found throughout this catalogue and highlights NEW products!

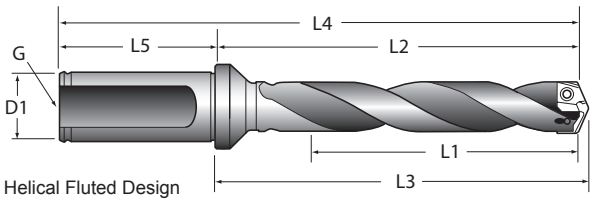
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15 Series Inserts and Holders

Diameter Range 15.00mm to 15.99mm



Straight Fluted Design



Helical Fluted Design

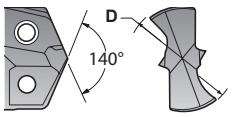
GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60315S-20FM	3xD	Straight	48.0	75.1	77.6	125.1	50.0	20	Yes	⅛"
60515S-20FM	5xD	Straight	80.0	107.0	109.6	157.0	50.0	20	Yes	⅛"
60715S-20FM	7xD	Straight	112.0	139.0	141.6	189.0	50.0	20	Yes	⅛"
60115H-20FM	Stub	Helical	17.5	44.3	46.8	94.3	50.0	20	Yes	⅛"
60315H-20FM	3xD	Helical	48.0	75.1	77.6	125.1	50.0	20	Yes	⅛"
60315H-20CM	3xD	Helical	48.0	75.1	77.6	125.1	50.0	20	No	⅛"
60515H-20FM	5xD	Helical	80.0	107.0	109.6	157.0	50.0	20	Yes	⅛"
60515H-20CM	5xD	Helical	80.0	107.0	109.6	157.0	50.0	20	No	⅛"
60715H-20FM	7xD	Helical	112.0	139.0	141.6	189.0	50.0	20	Yes	⅛"
60715H-20CM	7xD	Helical	112.0	139.0	141.6	189.0	50.0	20	No	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS®XT and GEN3SYS® Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	15.00	0.5906"	7C115P-15	●	5C115H-15	●
	15.08	0.5938"	7C115P-0019	○	5C115H-0019	○
	15.30	0.6024"	N 7C115P-15.3	○	-	-
	15.48	0.6094"	7C115P-.609	○	5C115H-.609	○
	15.50	0.6102"	7C115P-15.5	●	5C115H-15.5	●
	15.60	0.6142"	N 7C115P-15.6	○	-	-
	15.70	0.6181"	7C115P-.618	○	5C115H-.618	○
	15.80	0.6220"	N 7C115P-15.8	○	-	-
	15.88	0.6250"	7C115P-0020	○	5C115H-0020	○
LR Geometry K35 (C1)	15.00	0.5906"	7C115P-15LR	◆	5C115H-15LR	◆
	15.08	0.5938"	7C115P-0019LR	◆	5C115H-0019LR	◆
	15.48	0.6094"	7C115P-.609LR	◆	5C115H-.609LR	◆
	15.50	0.6102"	7C115P-15.5LR	◆	5C115H-15.5LR	◆
	15.70	0.6181"	7C115P-.618LR	◆	5C115H-.618LR	◆
	15.88	0.6250"	7C115P-0020LR	◆	5C115H-0020LR	◆
K20 (C2)	15.00	0.5906"	7C215P-15	●	5C215H-15	●
	15.08	0.5938"	7C215P-0019	○	5C215H-0019	○
	15.30	0.6024"	N 7C215P-15.3	○	-	-
	15.48	0.6094"	7C215P-.609	○	5C215H-.609	○
	15.50	0.6102"	7C215P-15.5	●	5C215H-15.5	●
	15.60	0.6142"	N 7C215P-15.6	○	-	-
	15.70	0.6181"	7C215P-.618	○	5C215H-.618	○
	15.80	0.6220"	N 7C215P-15.8	○	-	-
	15.88	0.6250"	7C215P-0020	○	5C215H-0020	○

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Supplied in packs of 1

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

N This symbol can be found throughout this catalogue and highlights NEW products!

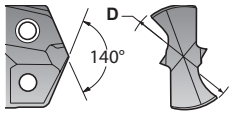
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15 Series Inserts and Holders

Diameter Range 15.00mm to 15.99mm

GEN3SYS®XT and GEN3SYS® Drill Inserts





Material	D (Diameter)		GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
	(mm)	(inch)				
Cast Iron Geometry K20 (C2)	15.00	0.5906"	7C215P-15CI	●	5C215H-15CI	●
	15.08	0.5938"	7C215P-0019CI	○	5C215H-0019CI	○
	15.48	0.6094"	7C215P-.609CI	○	5C215H-.609CI	○
	15.50	0.6102"	7C215P-15.5CI	●	5C215H-15.5CI	●
	15.70	0.6181"	7C215P-.618CI	○	5C215H-.618CI	○
	15.88	0.6250"	7C215P-0020CI	○	5C215H-0020CI	○
Stainless Steel Geometry K20 (C2)	15.00	0.5906"	7C215P-15AS	●	-	-
	15.08	0.5938"	7C215P-0019AS	○	-	-
	15.48	0.6094"	7C215P-.609AS	○	-	-
	15.50	0.6102"	7C215P-15.5AS	●	-	-
	15.70	0.6181"	7C215P-.618AS	○	-	-
	15.88	0.6250"	7C215P-0020AS	○	-	-
LR Geometry K20 (C2)	15.00	0.5906"	7C215P-15LR	◆	5C215H-15LR	◆
	15.08	0.5938"	7C215P-0019LR	◆	5C215H-0019LR	◆
	15.48	0.6094"	7C215P-.609LR	◆	5C215H-.609LR	◆
	15.50	0.6102"	7C215P-15.5LR	◆	5C215H-15.5LR	◆
	15.70	0.6181"	7C215P-.618LR	◆	5C215H-.618LR	◆
	15.88	0.6250"	7C215P-0020LR	◆	5C215H-0020LR	◆

Supplied in packs of 1

P	M	K	N	S	H
Steel N/mm²	Stainless Steel N/mm²	Cast and Ductile Iron N/mm²	Non-ferrous Material N/mm²	High Temperature Materials N/mm²	Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

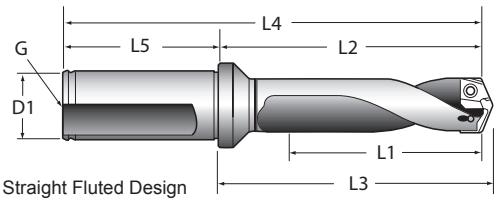
Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

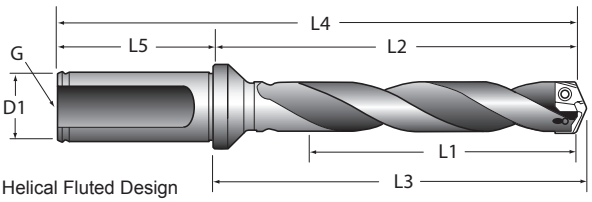
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

16 Series Inserts and Holders

Diameter Range 16.00mm to 16.99mm



Straight Fluted Design



Helical Fluted Design

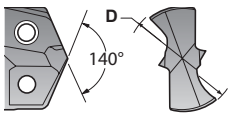
GEN3SYS Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60316S-20FM	3xD	Straight	51.0	81.3	84.2	131.3	50.0	20	Yes	⅛"
60516S-20FM	5xD	Straight	85.0	115.3	118.2	165.3	50.0	20	Yes	⅛"
60716S-20FM	7xD	Straight	119.0	149.3	152.2	199.3	50.0	20	Yes	⅛"
60116H-20FM	Stub	Helical	21.0	50.8	53.7	100.8	50.0	20	Yes	⅛"
60316H-20FM	3xD	Helical	51.0	81.3	84.2	131.3	50.0	20	Yes	⅛"
60316H-20CM	3xD	Helical	51.0	81.3	84.2	131.3	50.0	20	No	⅛"
60516H-20FM	5xD	Helical	85.0	115.3	118.2	165.3	50.0	20	Yes	⅛"
60516H-20CM	5xD	Helical	85.0	115.3	118.2	165.3	50.0	20	No	⅛"
60716H-20FM	7xD	Helical	119.0	149.3	152.2	199.3	50.0	20	Yes	⅛"
60716H-20CM	7xD	Helical	119.0	149.3	152.2	199.3	50.0	20	No	⅛"
60516S-20WN	5xD	Straight	85.0	115.3	118.2	165.3	50.0	20	Yes	⅛"
60716S-20WN	7xD	Straight	119.0	149.3	152.2	199.3	50.0	20	Yes	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS®XT and GEN3SYS® Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	16.00	0.6299"	7C116P-16	●	5C116H-16	●
	16.08	0.6331"	7C116P-16.08	○	5C116H-16.08	○
	16.27	0.6406"	7C116P-.640	○	5C116H-.640	○
	16.50	0.6496"	7C116P-16.5	●	5C116H-16.5	●
	16.67	0.6563"	7C116P-0021	○	5C116H-0021	○
LR Geometry K35 (C1)	16.00	0.6299"	7C116P-16LR	◆	5C116H-16LR	◆
	16.08	0.6331"	7C116P-16.08LR	◆	5C116H-16.08LR	◆
	16.27	0.6406"	7C116P-.640LR	◆	5C116H-.640LR	◆
	16.50	0.6496"	7C116P-16.5LR	◆	5C116H-16.5LR	◆
	16.67	0.6563"	7C116P-0021LR	◆	5C116H-0021LR	◆
K20 (C2)	16.00	0.6299"	7C216P-16	●	5C216H-16	●
	16.08	0.6331"	7C216P-16.08	○	5C216H-16.08	○
	16.27	0.6406"	7C216P-.640	○	5C216H-.640	○
	16.50	0.6496"	7C216P-16.5	●	5C216H-16.5	●
	16.67	0.6563"	7C216P-0021	○	5C216H- 0021	○

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available.

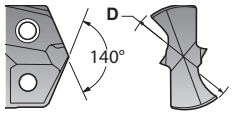
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

16 Series Inserts and Holders

Diameter Range 16.00mm to 16.99mm

GEN3SYS®XT High Penetration Drilling System and GEN3SYS High Penetration Drilling System Drill Inserts





Material	D (Diameter)		GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
	(mm)	(inch)				
Cast Iron Geometry K20 (C2)	16.00	0.6299"	7C216P-16CI	●	5C216H-16CI	●
	16.08	0.6331"	7C216P-16.08CI	○	5C216H-16.08CI	○
	16.27	0.6406"	7C216P-.640CI	○	5C216H-.640CI	○
	16.50	0.6496"	7C216P-16.5CI	●	5C216H-16.5CI	●
	16.67	0.6563"	7C216P-0021CI	○	5C216H-0021CI	○
Stainless Steel Geometry K20 (C2)	16.00	0.6299"	7C216P-16AS	●	-	-
	16.08	0.6331"	7C216P-16.08AS	○	-	-
	16.27	0.6406"	7C216P-.640AS	○	-	-
	16.50	0.6496"	7C216P-16.5AS	●	-	-
	16.67	0.6563"	7C216P-0021AS	○	-	-
LR Geometry K20 (C2)	16.00	0.6299"	7C216P-16LR	◆	5C216H-16LR	◆
	16.08	0.6331"	7C216P-16.08LR	◆	5C216H-16.08LR	◆
	16.27	0.6406"	7C216P-.640LR	◆	5C216H-.640LR	◆
	16.50	0.6496"	7C216P-16.5LR	◆	5C216H-16.5LR	◆
	16.67	0.6563"	7C216P-0021LR	◆	5C216H-0021LR	◆

Supplied in packs of 1

P	M	K	N	S	H
Steel N/mm²	Stainless Steel N/mm²	Cast and Ductile Iron N/mm²	Non-ferrous Material N/mm²	High Temperature Materials N/mm²	Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

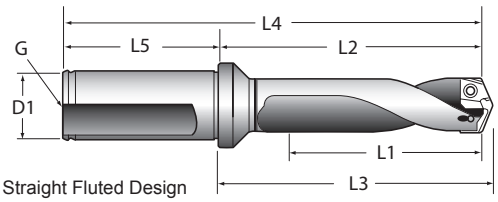
Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

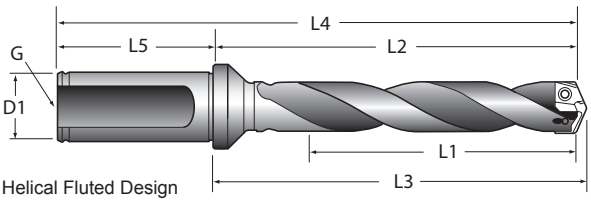
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

17 Series Inserts and Holders

Diameter Range 17.00mm to 17.99mm



Straight Fluted Design



Helical Fluted Design

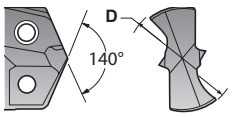
GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60317S-20FM	3xD	Straight	54.0	84.1	87.0	134.1	50.0	20	Yes	⅛"
60517S-20FM	5xD	Straight	90.0	120.0	122.9	170.0	50.0	20	Yes	⅛"
60717S-20FM	7xD	Straight	126.0	156.0	158.9	206.0	50.0	20	Yes	⅛"
60117H-20FM	Stub	Helical	21.0	55.5	53.4	105.5	50.0	20	Yes	⅛"
60317H-20FM	3xD	Helical	54.0	84.1	87.0	134.1	50.0	20	Yes	⅛"
60317H-20CM	3xD	Helical	54.0	84.1	87.0	134.1	50.0	20	No	⅛"
60517H-20FM	5xD	Helical	90.0	120.0	122.9	170.0	50.0	20	Yes	⅛"
60517H-20CM	5xD	Helical	90.0	120.0	122.9	170.0	50.0	20	No	⅛"
60717H-20FM	7xD	Helical	126.0	156.0	158.9	206.0	50.0	20	Yes	⅛"
60717H-20CM	7xD	Helical	126.0	156.0	158.9	206.0	50.0	20	No	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS®XT High Penetration Drilling System and GEN3SYS® High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	17.00	0.6693"	7C117P-17	●	5C117H-17	●
	17.07	0.6719"	7C117P-.671	○	5C117H-.671	○
	17.46	0.6875"	7C117P-0022	○	5C117H-0022	○
	17.50	0.6890"	7C117P-17.5	●	5C117H-17.5	●
	17.86	0.7030"	7C117P-.703	○	5C117H-.703	○
LR Geometry K35 (C1)	17.00	0.6693"	7C117P-17LR	◆	5C117H-17LR	◆
	17.07	0.6719"	7C117P-.671LR	◆	5C117H-.671LR	◆
	17.46	0.6875"	7C117P-0022LR	◆	5C117H-0022LR	◆
	17.50	0.6890"	7C117P-17.5LR	◆	5C117H-17.5LR	◆
	17.86	0.7030"	7C117P-.703LR	◆	5C117H-.703LR	◆
K20 (C2)	17.00	0.6693"	7C217P-17	●	5C217H-17	●
	17.07	0.6719"	7C217P-.671	○	5C217H-.671	○
	17.46	0.6875"	7C217P-0022	○	5C217H-0022	○
	17.50	0.6890"	7C217P-17.5	●	5C217H-17.5	●
	17.86	0.7030"	7C217P-.703	○	5C217H-.703	○

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

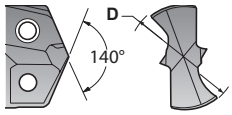
Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

17 Series Inserts and Holders

Diameter Range 17.00mm to 17.99mm





GEN3SYS®XT High Penetration Drilling System and GEN3SYS High Penetration Drilling System Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
Cast Iron Geometry K20 (C2)	17.00	0.6693"	7C217P-17CI	●	5C217H-17CI	●
	17.07	0.6719"	7C217P-.671CI	○	5C217H-.671CI	○
	17.46	0.6875"	7C217P-0022CI	○	5C217H-0022CI	○
	17.50	0.6890"	7C217P-17.5CI	●	5C217H-17.5CI	●
	17.86	0.7030"	7C217P-.703CI	○	5C217H-.703CI	○
Stainless Steel Geometry K20 (C2)	17.00	0.6693"	7C217P-17AS	●	-	-
	17.07	0.6719"	7C217P-.671AS	○	-	-
	17.46	0.6875"	7C217P-0022AS	○	-	-
	17.50	0.6890"	7C217P-17.5AS	●	-	-
	17.86	0.7030"	7C217P-.703AS	○	-	-
LR Geometry K20 (C2)	17.00	0.6693"	7C217P-17LR	◆	5C217H-17LR	◆
	17.07	0.6719"	7C217P-.671LR	◆	5C217H-.671LR	◆
	17.46	0.6875"	7C217P-0022LR	◆	5C217H-0022LR	◆
	17.50	0.6890"	7C217P-17.5LR	◆	5C217H-17.5LR	◆
	17.86	0.7030"	7C217P-.703LR	◆	5C217H-.703LR	◆

Supplied in packs of 1

P	M	K	N	S	H
Steel N/mm²	Stainless Steel N/mm²	Cast and Ductile Iron N/mm²	Non-ferrous Material N/mm²	High Temperature Materials N/mm²	Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

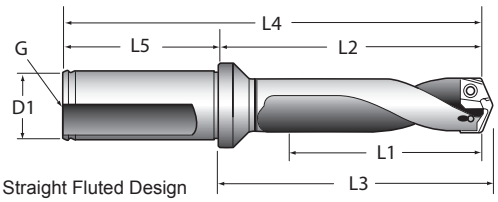
Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

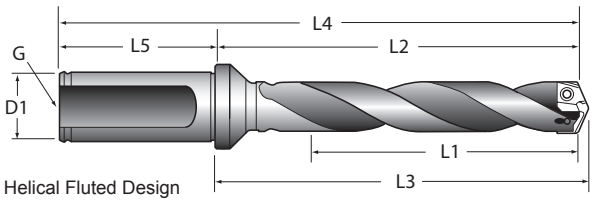
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

18 Series Inserts and Holders

Diameter Range 18.00mm to 19.99mm



Straight Fluted Design



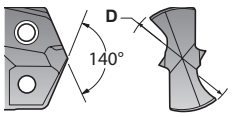
Helical Fluted Design

GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60318S-25FM	3xD	Straight	60.0	94.0	96.8	150.0	56.0	25	Yes	⅛"
60518S-25FM	5xD	Straight	100.0	134.0	136.8	190.0	56.0	25	Yes	⅛"
60718S-25FM	7xD	Straight	140.0	174.0	176.8	230.0	56.0	25	Yes	⅛"
60118H-25FM	Stub	Helical	22.0	56.0	58.8	112.0	56.0	25	Yes	⅛"
60318H-25FM	3xD	Helical	60.0	94.0	96.8	150.0	56.0	25	Yes	⅛"
60318H-25CM	3xD	Helical	60.0	94.0	96.8	150.0	56.0	25	No	⅛"
60518H-25FM	5xD	Helical	100.0	134.0	136.8	190.0	56.0	25	Yes	⅛"
60518H-25CM	5xD	Helical	100.0	134.0	136.8	190.0	56.0	25	No	⅛"
60718H-25FM	7xD	Helical	140.0	174.0	176.8	230.0	56.0	25	Yes	⅛"
60718H-25CM	7xD	Helical	140.0	174.0	176.8	230.0	56.0	25	No	⅛"
60518S-25WN	5xD	Straight	100.0	134.0	136.8	190.0	56.0	25	Yes	⅛"
60718S-25WN	7xD	Straight	140.0	174.0	176.8	230.0	56.0	25	Yes	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric





GEN3SYS XT High Penetration Drilling System and GEN3SYS High Penetration Drilling System Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	18.00	0.7087"	7C118P-18	●	5C118H-18	●
	18.26	0.7188"	7C118P-0023	○	5C118H-0023	○
	18.50	0.7283"	7C118P-18.5	●	5C118H-18.5	●
	18.65	0.7344"	7C118P-.734	○	5C118H-.734	○
	19.00	0.7480"	7C118P-19	●	5C118H-19	●
	19.05	0.7500"	7C118P-0024	○	5C118H-0024	○
	19.25	0.7580"	7C118P-.758	●	5C118H-.758	●
	19.30	0.7600"	7C118P-19.30	●	-	-
	19.45	0.7656"	7C118P-.765	○	5C118H-.765	○
	19.50	0.7677"	7C118P-19.5	●	5C118H-19.5	●
	19.85	0.7813"	7C118P-0025	○	5C118H-0025	○
LR Geometry K35 (C1)	18.00	0.7087"	7C118P-18LR	◆	5C118H-18LR	◆
	18.26	0.7188"	7C118P-0023LR	◆	5C118H-0023LR	◆
	18.50	0.7283"	7C118P-18.5LR	◆	5C118H-18.5LR	◆
	18.65	0.7344"	7C118P-.734LR	◆	5C118H-.734LR	◆
	19.00	0.7480"	7C118P-19LR	◆	5C118H-19LR	◆
	19.05	0.7500"	7C118P-0024LR	◆	5C118H-0024LR	◆
	19.25	0.7580"	7C118P-.758LR	◆	5C118H-.758LR	◆
	19.45	0.7656"	7C118P-.765LR	◆	5C118H-.765LR	◆
	19.50	0.7677"	7C118P-19.5LR	◆	5C118H-19.5LR	◆
	19.85	0.7813"	7C118P-0025LR	◆	5C118H-0025LR	◆

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available.

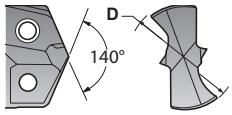
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

18 Series Inserts and Holders

Diameter Range 18.00mm to 19.99mm

GEN3SYS®XT and GEN3SYS® Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	18.00	0.7087"	7C218P-18	●	5C218H-18	●
	18.26	0.7188"	7C218P-0023	○	5C218H-0023	○
	18.50	0.7283"	7C218P-18.5	●	5C218H-18.5	●
	18.65	0.7344"	7C218P-.734	○	5C218H-.734	○
	19.00	0.7480"	7C218P-19	●	5C218H-19	●
	19.05	0.7500"	7C218P-0024	○	5C218H-0024	○
	19.25	0.7580"	7C218P-.758	●	5C218H-.758	●
	19.45	0.7656"	7C218P-.765	○	5C218H-.765	○
	19.50	0.7677"	7C218P-19.5	●	5C218H-19.5	●
	19.85	0.7813"	7C218P-0025	○	5C218H-0025	○
Cast Iron Geometry K20 (C2)	18.00	0.7087"	7C218P-18CI	●	5C218H-18CI	●
	18.26	0.7188"	7C218P-0023CI	○	5C218H-0023CI	○
	18.50	0.7283"	7C218P-18.5CI	●	5C218H-18.5CI	●
	18.65	0.7344"	7C218P-.734CI	○	5C218H-.734CI	○
	19.00	0.7480"	7C218P-19CI	●	5C218H-19CI	●
	19.05	0.7500"	7C218P-0024CI	○	5C218H-0024CI	○
	19.25	0.7580"	7C218P-.758CI	●	5C218H-.758CI	●
	19.45	0.7656"	7C218P-.765CI	○	5C218H-.765CI	○
	19.50	0.7677"	7C218P-19.5CI	●	5C218H-19.5CI	●
	19.85	0.7813"	7C218P-0025CI	○	5C218H-0025CI	○
Stainless Steel Geometry K20 (C2)	18.00	0.7087"	7C218P-18AS	●	-	-
	18.26	0.7188"	7C218P-0023AS	○	-	-
	18.50	0.7283"	7C218P-18.5AS	●	-	-
	18.65	0.7344"	7C218P-.734AS	○	-	-
	19.00	0.7480"	7C218P-19AS	●	-	-
	19.05	0.7500"	7C218P-0024AS	○	-	-
	19.25	0.7580"	7C218P-.758AS	●	-	-
	19.30	0.7600"	7C218P-19.30AS	●	-	-
	19.45	0.7656"	7C218P-.765AS	○	-	-
	19.50	0.7677"	7C218P-19.5AS	●	-	-
	19.85	0.7813"	7C218P-0025AS	○	-	-
LR Geometry K20 (C2)	18.00	0.7087"	7C218P-18LR	◆	5C218H-18LR	◆
	18.26	0.7188"	7C218P-0023LR	◆	5C218H-0023LR	◆
	18.50	0.7283"	7C218P-18.5LR	◆	5C218H-18.5LR	◆
	18.65	0.7344"	7C218P-.734LR	◆	5C218H-.734LR	◆
	19.00	0.7480"	7C218P-19LR	◆	5C218H-19LR	◆
	19.05	0.7500"	7C218P-0024LR	◆	5C218H-0024LR	◆
	19.25	0.7580"	7C218P-.758LR	◆	5C218H-.758LR	◆
	19.45	0.7656"	7C218P-.765LR	◆	5C218H-.765LR	◆
	19.50	0.7677"	7C218P-19.5LR	◆	5C218H-19.5LR	◆
	19.85	0.7813"	7C218P- 0025LR	◆	5C218H-0025LR	◆

Supplied in packs of 1

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

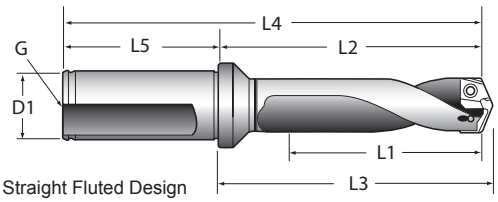
Stk. - Stock Availability.
- ● Stock Item.
- ○ Stocked in limited quantities, advanced planning is recommended.
- ◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

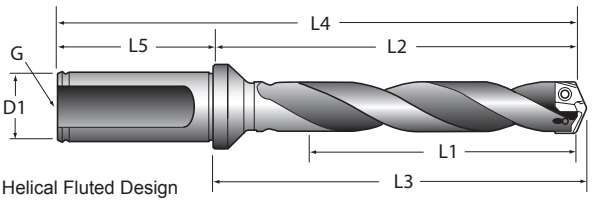
Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

20 Series Inserts and Holders

Diameter Range 20.00mm to 21.99mm



Straight Fluted Design



Helical Fluted Design

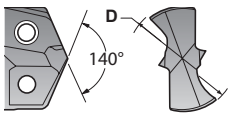
GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60320S-25FM	3xD	Straight	66.0	100.1	102.9	156.1	56.0	25	Yes	⅛"
60520S-25FM	5xD	Straight	110.0	144.1	146.9	200.1	56.0	25	Yes	⅛"
60720S-25FM	7xD	Straight	154.0	188.1	190.9	244.1	56.0	25	Yes	⅛"
60120H-25FM	Stub	Helical	24.0	57.6	60.4	113.6	56.0	25	Yes	⅛"
60320H-25FM	3xD	Helical	66.0	100.1	102.9	156.1	56.0	25	Yes	⅛"
60320H-25CM	3xD	Helical	66.0	100.1	102.9	156.1	56.0	25	No	⅛"
60520H-25FM	5xD	Helical	110.0	144.1	146.9	200.1	56.0	25	Yes	⅛"
60520H-25CM	5xD	Helical	110.0	144.1	146.9	200.1	56.0	25	No	⅛"
60720H-25FM	7xD	Helical	154.0	188.1	190.9	244.1	56.0	25	Yes	⅛"
60720H-25CM	7xD	Helical	154.0	188.1	190.9	244.1	56.0	25	No	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

GEN3SYS XT and GEN3SYS High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	20.00	0.7874"	7C120P-20	●	5C120H-20	●
	20.24	0.7969"	7C120P-.796	○	5C120H-.796	○
	20.50	0.8071"	7C120P-20.5	●	5C120H-20.5	●
	20.64	0.8125"	7C120P-0026	○	5C120H-0026	○
	21.00	0.8268"	7C120P-21	●	5C120H-21	●
	21.43	0.8438"	7C120P-0027	○	5C120H-0027	○
	21.50	0.8465"	N 7C120P-21.5	○	-	-
	21.83	0.8594"	7C120P-.859	○	5C120H-.859	○
LR Geometry K35 (C1)	20.00	0.7874"	7C120P-20LR	◆	5C120H-20LR	◆
	20.24	0.7969"	7C120P-.796LR	◆	5C120H-.796LR	◆
	20.50	0.8071"	7C120P-20.5LR	◆	5C120H-20.5LR	◆
	20.64	0.8125"	7C120P-0026LR	◆	5C120H-0026LR	◆
	21.00	0.8268"	7C120P-21LR	◆	5C120H-21LR	◆
	21.43	0.8438"	7C120P-0027LR	◆	5C120H-0027LR	◆
	21.83	0.8594"	7C120P-.859LR	◆	5C120H-.859LR	◆

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Supplied in packs of 1

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

N This symbol can be found throughout this catalogue and highlights NEW products!

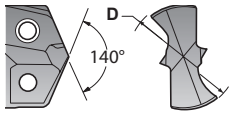
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20 Series Inserts and Holders

Diameter Range 20.00mm to 21.99mm

GEN3SYS®XT and GEN3SYS® Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	20.00	0.7874"	7C220P-20	●	5C220H-20	●
	20.24	0.7969"	7C220P-.796	○	5C220H-.796	○
	20.50	0.8071"	7C220P-20.5	●	5C220H-20.5	●
	20.64	0.8125"	7C220P-0026	○	5C220H-0026	○
	21.00	0.8268"	7C220P-21	●	5C220H-21	●
	21.43	0.8438"	7C220P-0027	○	5C220H-0027	○
	21.50	0.8465"	N 7C220P-21.5	○	-	-
	21.83	0.8594"	7C220P-.859	○	5C220H-.859	○
Cast Iron Geometry K20 (C2)	20.00	0.7874"	7C220P-20CI	●	5C220H-20CI	●
	20.24	0.7969"	7C220P-.796CI	○	5C220H-.796CI	○
	20.50	0.8071"	7C220P-20.5CI	●	5C220H-20.5CI	●
	20.64	0.8125"	7C220P-0026CI	○	5C220H-0026CI	○
	21.00	0.8268"	7C220P-21CI	●	5C220H-21CI	●
	21.43	0.8438"	7C220P-0027CI	○	5C220H-0027CI	○
	21.83	0.8594"	7C220P-.859CI	○	5C220H-.859CI	○
Stainless Steel Geometry K20 (C2)	20.00	0.7874"	7C220P-20AS	●	-	-
	20.24	0.7969"	7C220P-.796AS	○	-	-
	20.50	0.8071"	7C220P-20.5AS	●	-	-
	20.64	0.8125"	7C220P-0026AS	○	-	-
	21.00	0.8268"	7C220P-21AS	●	-	-
	21.43	0.8438"	7C220P-0027AS	○	-	-
	21.83	0.8594"	7C220P-.859AS	○	-	-
LR Geometry K20 (C2)	20.00	0.7874"	7C220P-20LR	◆	5C220H-20LR	◆
	20.24	0.7969"	7C220P-.796LR	◆	5C220H-.796LR	◆
	20.50	0.8071"	7C220P-20.5LR	◆	5C220H-20.5LR	◆
	20.64	0.8125"	7C220P-0026LR	◆	5C220H-0026LR	◆
	21.00	0.8268"	7C220P-21LR	◆	5C220H-21LR	◆
	21.43	0.8438"	7C220P-0027LR	◆	5C220H-0027LR	◆
	21.83	0.8594"	7C220P-.859LR	◆	5C220H-.859LR	◆

Supplied in packs of 1

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

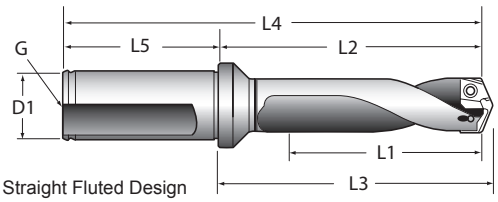
Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

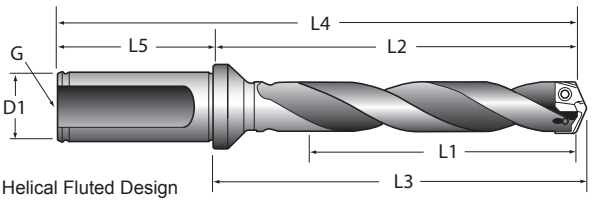
N This symbol can be found throughout this catalogue and highlights NEW products!

22 Series Inserts and Holders

Diameter Range 20.00mm to 23.99mm



Straight Fluted Design



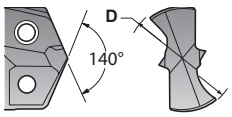
Helical Fluted Design

GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60322S-25FM	3xD	Straight	72.0	105.3	108.3	161.3	56.0	25	Yes	⅛"
60522S-25FM	5xD	Straight	120.0	153.3	156.2	209.3	56.0	25	Yes	⅛"
60722S-25FM	7xD	Straight	168.0	201.3	204.2	257.3	56.0	25	Yes	⅛"
60122H-25FM	Stub	Helical	27.0	60.1	63.0	116.1	56.0	25	Yes	⅛"
60322H-25FM	3xD	Helical	72.0	105.3	108.3	161.3	56.0	25	Yes	⅛"
60322H-25CM	3xD	Helical	72.0	105.3	108.3	161.3	56.0	25	No	⅛"
60522H-25FM	5xD	Helical	120.0	153.3	156.2	209.3	56.0	25	Yes	⅛"
60522H-25CM	5xD	Helical	120.0	153.3	156.2	209.3	56.0	25	No	⅛"
60722H-25FM	7xD	Helical	168.0	201.3	204.2	257.3	56.0	25	Yes	⅛"
60722H-25CM	7xD	Helical	168.0	201.3	204.2	257.3	56.0	25	No	⅛"
60522S-25WN	5xD	Straight	119.0	153.3	156.2	209.3	56.0	25	Yes	⅛"
60722S-25WN	7xD	Straight	168.0	201.3	204.2	257.3	56.0	25	Yes	⅛"

FM - Flanged Metric with Flat
CM - Cylindrical Metric





GEN3SYS®XT High Penetration Drilling System and GEN3SYS High Penetration Drilling System Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	22.00	0.8661"	7C122P-22	●	5C122H-22	●
	22.23	0.8750"	7C122P-0028	○	5C122H-0028	○
	22.50	0.8858"	N 7C122P-22.5	○	-	-
	22.62	0.8906"	7C122P-.890	○	5C122H-.890	○
	23.00	0.9055"	7C122P-23	●	5C122H-23	●
	23.02	0.9063"	7C122P-0029	○	5C122H-0029	○
	23.42	0.9219"	7C122P-.921	○	5C122H-.921	○
	23.50	0.9252"	N 7C122P-23.5	○	-	-
	23.81	0.9375"	7C122P-0030	○	5C122H-0030	○
LR Geometry K35 (C1)	22.00	0.8661"	7C122P-22LR	◆	5C122H-22LR	◆
	22.23	0.8750"	7C122P-0028LR	◆	5C122H-0028LR	◆
	22.62	0.8906"	7C122P-.890LR	◆	5C122H-.890LR	◆
	23.00	0.9055"	7C122P-23LR	◆	5C122H-23LR	◆
	23.02	0.9063"	7C122P-0029LR	◆	5C122H-0029LR	◆
	23.42	0.9219"	7C122P-.921LR	◆	5C122H-.921LR	◆
	23.81	0.9375"	7C122P-0030LR	◆	5C122H-0030LR	◆

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. Holder Adaptors available, see page 138.

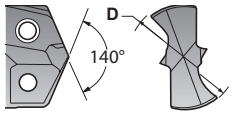
N This symbol can be found throughout this catalogue and highlights NEW products!

22 Series Inserts and Holders

Diameter Range 20.00mm to 23.99mm

GEN3SYS®XT High Penetration Drilling System and GEN3SYS® High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	22.00	0.8661”	7C222P-22	●	5C222H-22	●
	22.23	0.8750”	7C222P-0028	○	5C222H-0028	○
	22.50	0.8858”	N 7C222P-22.5	○	-	-
	22.62	0.8906”	7C222P-.890	○	5C222H-.890	○
	23.00	0.9055”	7C222P-23	●	5C222H-23	●
	23.02	0.9063”	7C222P-0029	○	5C222H-0029	○
	23.42	0.9219”	7C222P-.921	○	5C222H-.921	○
	23.50	0.9252”	N 7C222P-23.5	○	-	-
	23.81	0.9375”	7C222P-0030	○	5C222H-0030	○
Cast Iron Geometry K20 (C2)	22.00	0.8661”	7C222P-22CI	●	5C222H-22CI	●
	22.23	0.8750”	7C222P-0028CI	○	5C222H-0028CI	○
	22.62	0.8906”	7C222P-.890CI	○	5C222H-.890CI	○
	23.00	0.9055”	7C222P-23CI	●	5C222H-23CI	●
	23.02	0.9063”	7C222P-0029CI	○	5C222H-0029CI	○
	23.42	0.9219”	7C222P-.921CI	○	5C222H-.921CI	○
	23.81	0.9375”	7C222P-0030CI	○	5C222H-0030CI	○
Stainless Steel Geometry K20 (C2)	22.00	0.8661”	7C222P-22AS	●	-	-
	22.23	0.8750”	7C222P-0028AS	○	-	-
	22.62	0.8906”	7C222P-.890AS	○	-	-
	23.00	0.9055”	7C222P-23AS	●	-	-
	23.02	0.9063”	7C222P-0029AS	○	-	-
	23.42	0.9219”	7C222P-.921AS	○	-	-
	23.81	0.9375”	7C222P-0030AS	○	-	-
LR Geometry K20 (C2)	22.00	0.8661”	7C222P-22LR	◆	5C222H-22LR	◆
	22.23	0.8750”	7C222P-0028LR	◆	5C222H-0028LR	◆
	22.62	0.8906”	7C222P-.890LR	◆	5C222H-.890LR	◆
	23.00	0.9055”	7C222P-23LR	◆	5C222H-23LR	◆
	23.02	0.9063”	7C222P-0029LR	◆	5C222H-0029LR	◆
	23.42	0.9219”	7C222P-.921LR	◆	5C222H-.921LR	◆
	23.81	0.9375”	7C222P-0030LR	◆	5C222H-0030LR	◆

Supplied in packs of 1

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

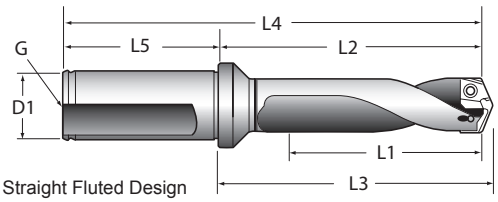
Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

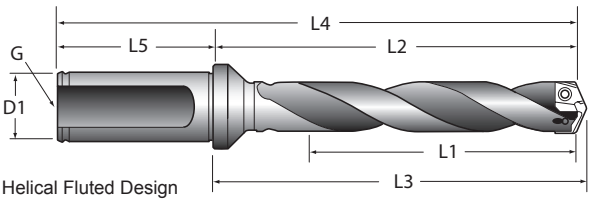
N This symbol can be found throughout this catalogue and highlights NEW products!

24 Series Inserts and Holders

Diameter Range 24.00mm to 25.99mm



Straight Fluted Design



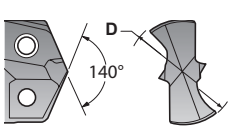
Helical Fluted Design

GEN3SYS Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60324S-25FM	3xD	Straight	78.0	113.8	116.8	169.8	56.0	25	Yes	1/8"
60524S-25FM	5xD	Straight	130.0	165.8	168.7	221.8	56.0	25	Yes	1/8"
60724S-25FM	7xD	Straight	182.0	217.8	220.7	273.8	56.0	25	Yes	1/8"
60124H-25FM	Stub	Helical	28.5	64.2	67.1	120.2	56.0	25	Yes	1/8"
60324H-25FM	3xD	Helical	78.0	113.8	116.8	169.8	56.0	25	Yes	1/8"
60324H-25CM	3xD	Helical	78.0	113.8	116.8	169.8	56.0	25	No	1/8"
60524H-25FM	5xD	Helical	130.0	165.8	168.7	221.8	56.0	25	Yes	1/8"
60524H-25CM	5xD	Helical	130.0	165.8	168.7	221.8	56.0	25	No	1/8"
60724H-25FM	7xD	Helical	182.0	217.8	220.7	273.8	56.0	25	Yes	1/8"
60724H-25CM	7xD	Helical	182.0	217.8	220.7	273.8	56.0	25	No	1/8"
60524S-25WN	5xD	Straight	130.0	165.8	168.7	221.8	56.0	25	Yes	1/8"
60724S-25WN	7xD	Straight	182.0	217.8	220.7	273.8	56.0	25	Yes	1/8"

FM - Flanged Metric with Flat
CM - Cylindrical Metric





GEN3SYS®XT and GEN3SYS Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	24.00	0.9449"	7C124P-24	●	5C124H-24	●
	24.50	0.9646"	N 7C124P-24.5	○	-	-
	24.61	0.9688"	7C124P-0031	○	5C124H-0031	○
	25.00	0.9843"	7C124P-25	●	5C124H-25	●
	25.40	1.0000"	7C124P-0100	○	5C124H-0100	○
	25.50	1.0039	N 7C124P-25.5	○	-	-
	25.60	1.0081"	7C124P-1.008	●	5C124H-1.008	●
	25.65	1.0098	N 7C124P-25.65	○	-	-
	25.80	1.0157"	7C124P-1.015	○	5C124H-1.015	○
LR Geometry K35 (C1)	24.00	0.9449"	7C124P-24LR	◆	5C124H-24LR	◆
	24.61	0.9688"	7C124P-0031LR	◆	5C124H-0031LR	◆
	25.00	0.9843"	7C124P-25LR	◆	5C124H-25LR	◆
	25.40	1.0000"	7C124P-0100LR	◆	5C124H-0100LR	◆
	25.60	1.0081"	7C124P-1.008LR	◆	5C124H-1.008LR	◆
	25.80	1.0157"	7C124P-1.015LR	◆	5C124H-1.015LR	◆

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Supplied in packs of 1

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

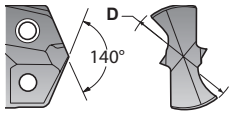
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24 Series Inserts and Holders

Diameter Range 24.00mm to 25.99mm





GEN3SYS XT and GEN3SYS Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	24.00	0.9449"	7C224P-24	●	5C224H-24	●
	24.50	0.9646"	N 7C224P-24.5	○	-	-
	24.61	0.9688"	7C224P-0031	○	5C224H-0031	○
	25.00	0.9843"	7C224P-25	●	5C224H-25	●
	25.40	1.0000"	7C224P-0100	○	5C224H-0100	○
	25.50	1.0039	N 7C224P-25.5	○	-	-
	25.60	1.0081"	7C224P-1.008	○	5C224H-1.008	○
	25.67	1.0098"	N 7C224P-25.65	○	-	-
	25.80	1.0157"	7C224P-1.015	○	5C224H-1.015	○
Cast Iron Geometry K20 (C2)	24.00	0.9449"	7C224P-24CI	●	5C224H-24CI	●
	24.61	0.9688"	7C224P-0031CI	○	5C224H-0031CI	○
	25.00	0.9843"	7C224P-25CI	●	5C224H-25CI	●
	25.40	1.0000"	7C224P-0100CI	○	5C224H-0100CI	○
	25.60	1.0081"	7C224P-1.008CI	●	5C224H-1.008CI	●
	25.80	1.0157"	7C224P-1.015CI	○	5C224H-1.015CI	○
Stainless Steel Geometry K20 (C2)	24.00	0.9449"	7C224P-24AS	●	-	-
	24.61	0.9688"	7C224P-0031AS	○	-	-
	25.00	0.9843"	7C224P-25AS	●	-	-
	25.40	1.0000"	7C224P-0100AS	○	-	-
	25.60	1.0081"	7C224P-1.008AS	○	-	-
	25.80	1.0157"	7C224P-1.015AS	○	-	-
LR Geometry K20 (C2)	24.00	0.9449"	7C224P-24LR	◆	5C224H-24LR	◆
	24.61	0.9688"	7C224P-0031LR	◆	5C224H-0031LR	◆
	25.00	0.9843"	7C224P-25LR	◆	5C224H-25LR	◆
	25.40	1.0000"	7C224P-0100LR	◆	5C224H-0100LR	◆
	25.60	1.0081"	7C224P-1.008LR	◆	5C224H-1.008LR	◆
	25.80	1.0157"	7C224P-1.015LR	◆	5C224H-1.015LR	◆

Supplied in packs of 1

P	M	K	N	S	H
Steel N/mm²	Stainless Steel N/mm²	Cast and Ductile Iron N/mm²	Non-ferrous Material N/mm²	High Temperature Materials N/mm²	Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

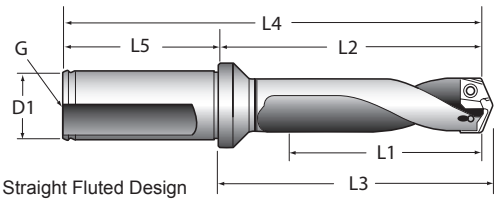
Stk. - Stock Availability.
- ● Stock Item.
- ○ Stocked in limited quantities, advanced planning is recommended.
- ◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

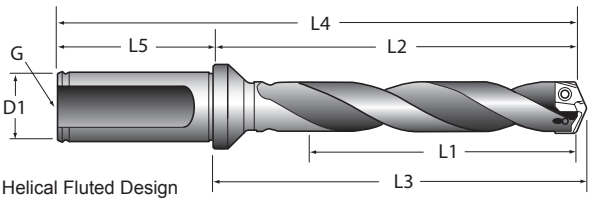
N This symbol can be found throughout this catalogue and highlights NEW products!

26 Series Inserts and Holders

Diameter Range 26.00mm to 28.99mm



Straight Fluted Design



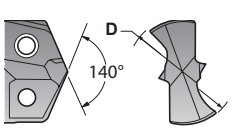
Helical Fluted Design

GEN3SYS High Penetration Drilling System Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60326S-32FM	3xD	Straight	87.0	128.1	130.9	188.1	60.0	32	Yes	¼"
60526S-32FM	5xD	Straight	145.0	186.0	188.8	246.0	60.0	32	Yes	¼"
60726S-32FM	7xD	Straight	203.0	244.0	246.8	304.0	60.0	32	Yes	¼"
60126H-32FM	Stub	Helical	32.0	72.9	75.7	132.9	60.0	32	Yes	¼"
60326H-32FM	3xD	Helical	87.0	128.1	130.9	188.1	60.0	32	Yes	¼"
60326H-32CM	3xD	Helical	87.0	128.1	130.9	188.1	60.0	32	No	¼"
60526H-32FM	5xD	Helical	145.0	186.0	188.8	246.0	60.0	32	Yes	¼"
60526H-32CM	5xD	Helical	145.0	186.0	188.8	246.0	60.0	32	No	¼"
60726H-32FM	7xD	Helical	203.0	244.0	246.8	304.0	60.0	32	Yes	¼"
60726H-32CM	7xD	Helical	203.0	244.0	246.8	304.0	60.0	32	No	¼"
60526S-32WN	5xD	Straight	145.0	186.0	188.8	246.0	60.0	32	Yes	¼"
60726S-32WN	7xD	Straight	203.0	244.0	246.8	304.0	60.0	32	Yes	¼"

FM - Flanged Metric with Flat
CM - Cylindrical Metric





GEN3SYS®XT High Penetration Drilling System and GEN3SYS High Penetration Drilling System Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	26.00	1.0236"	7C126P-26	●	5C126H-26	●
	26.19	1.0313"	7C126P-0101	○	5C126H-0101	○
	26.50	1.0433"	N 7C126P-26.5	○	-	-
	26.59	1.0469"	7C126P-1.046	○	5C126H-1.046	○
	26.99	1.0625"	7C126P-0102	○	5C126H-0102	○
	27.00	1.0630"	7C126P-27	●	5C126H-27	●
	27.50	1.0827"	N 7C126P-27.5	○	-	-
	27.78	1.0938"	7C126P-0103	○	5C126H-0103	○
	28.00	1.1024"	7C126P-28	●	5C126H-28	●
	28.18	1.1094"	7C126P-1.109	○	5C126H-1.109	○
	28.50	1.1220"	N 7C126P-28.5	○	-	-
	28.58	1.1250"	7C126P-0104	○	5C126H-0104	○
LR Geometry K35 (C1)	26.00	1.0236"	7C126P-26LR	◆	5C126H-26LR	◆
	26.19	1.0313"	7C126P-0101LR	◆	5C126H-0101LR	◆
	26.59	1.0469"	7C126P-1.046LR	◆	5C126H-1.046LR	◆
	26.99	1.0625"	7C126P-0102LR	◆	5C126H-0102LR	◆
	27.00	1.0630"	7C126P-27LR	◆	5C126H-27LR	◆
	27.78	1.0938"	7C126P-0103LR	◆	5C126H-0103LR	◆
	28.00	1.1024"	7C126P-28LR	◆	5C126H-28LR	◆
	28.18	1.1094"	7C126P-1.109LR	◆	5C126H-1.109LR	◆
	28.58	1.1250"	7C126P-0104LR	◆	5C126H-0104LR	◆

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

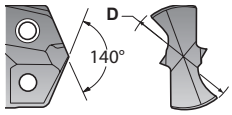
N This symbol can be found throughout this catalogue and highlights NEW products!

26 Series Inserts and Holders

Diameter Range 26.00mm to 28.99mm

GEN3SYS®XT High Penetration Drilling System and GEN3SYS® High Penetration Drilling System Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	26.00	1.0236"	7C226P-26	●	5C226H-26	●
	26.19	1.0313"	7C226P-0101	○	5C226H-0101	○
	26.50	1.0433"	N 7C226P-26.5	○	-	-
	26.59	1.0469"	7C226P-1.046	○	5C226H-1.046	○
	26.99	1.0625"	7C226P-0102	○	5C226H-0102	○
	27.00	1.0630"	7C226P-27	●	5C226H-27	●
	27.50	1.0827"	N 7C226P-27.5	○	-	-
	27.78	1.0938"	7C226P-0103	○	5C226H-0103	○
	28.00	1.1024"	7C226P-28	●	5C226H-28	●
	28.18	1.1094"	7C226P-1.109	○	5C226H-1.109	○
	28.50	1.1220"	N 7C226P-28.5	○	-	-
	28.58	1.1250"	7C226P-0104	○	5C226H-0104	○
Cast Iron Geometry K20 (C2)	26.00	1.0236"	7C226P-26CI	●	5C226H-26CI	●
	26.19	1.0313"	7C226P-0101CI	○	5C226H-0101CI	○
	26.59	1.0469"	7C226P-1.046CI	○	5C226H-1.046CI	○
	26.99	1.0625"	7C226P-0102CI	○	5C226H-0102CI	○
	27.00	1.0630"	7C226P-27CI	●	5C226H-27CI	●
	27.78	1.0938"	7C226P-0103CI	○	5C226H-0103CI	○
	28.00	1.1024"	7C226P-28CI	●	5C226H-28CI	●
	28.18	1.1094"	7C226P-1.109CI	○	5C226H-1.109CI	○
	28.58	1.1250"	7C226P-0104CI	○	5C226H-0104CI	○
Stainless Steel Geometry K20 (C2)	26.00	1.0236"	7C226P-26AS	●	-	-
	26.19	1.0313"	7C226P-0101AS	○	-	-
	26.59	1.0469"	7C226P-1.046AS	○	-	-
	26.99	1.0625"	7C226P-0102AS	○	-	-
	27.00	1.0630"	7C226P-27AS	●	-	-
	27.78	1.0938"	7C226P-0103AS	○	-	-
	28.00	1.1024"	7C226P-28AS	●	-	-
	28.18	1.1094"	7C226P-1.109AS	○	-	-
	28.58	1.1250"	7C226P-0104AS	○	-	-
LR Geometry K20 (C2)	26.00	1.0236"	7C226P-26LR	◆	5C226H-26LR	◆
	26.19	1.0313"	7C226P-0101LR	◆	5C226H-0101LR	◆
	26.59	1.0469"	7C226P-1.046LR	◆	5C226H-1.046LR	◆
	26.99	1.0625"	7C226P-0102LR	◆	5C226H-0102LR	◆
	27.00	1.0630v	7C226P-27LR	◆	5C226H-27LR	◆
	27.78	1.0938"	7C226P-0103LR	◆	5C226H-0103LR	◆
	28.00	1.1024"	7C226P-28LR	◆	5C226H-28LR	◆
	28.18	1.1094"	7C226P-1.109LR	◆	5C226H-1.109LR	◆
	28.58	1.1250"	7C226P-0104LR	◆	5C226H-0104LR	◆

Supplied in packs of 1

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

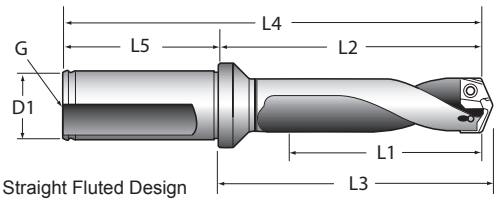
Stk. - Stock Availability.
- ● Stock Item.
- ○ Stocked in limited quantities, advanced planning is recommended.
- ◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

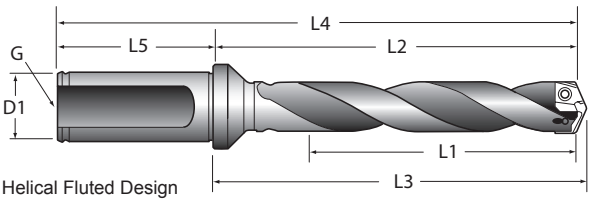
N This symbol can be found throughout this catalogue and highlights NEW products!

29 Series Inserts and Holders

Diameter Range 29.00mm to 31.99mm



Straight Fluted Design



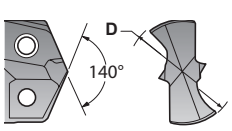
Helical Fluted Design

GEN3SYS Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60329S-32FM	3xD	Straight	96.0	136.2	139.1	196.2	60.0	32	Yes	¼"
60529S-32FM	5xD	Straight	160.0	200.1	203.1	260.1	60.0	32	Yes	¼"
60729S-32FM	7xD	Straight	224.0	264.1	267.1	324.1	60.0	32	Yes	¼"
60129H-32FM	Stub	Helical	35.0	75.2	78.2	135.2	60.0	32	Yes	¼"
60329H-32FM	3xD	Helical	96.0	136.2	139.1	196.2	60.0	32	Yes	¼"
60329H-32CM	3xD	Helical	96.0	136.2	139.1	196.2	60.0	32	No	¼"
60529H-32FM	5xD	Helical	160.0	200.1	203.1	260.1	60.0	32	Yes	¼"
60529H-32CM	5xD	Helical	160.0	200.1	203.1	260.1	60.0	32	No	¼"
60729H-32FM	7xD	Helical	224.0	264.1	267.1	324.1	60.0	32	Yes	¼"
60729H-32CM	7xD	Helical	224.0	264.1	267.1	324.1	60.0	32	No	¼"
60529S-32WN	5xD	Straight	160.0	200.1	203.1	260.1	60.0	32	Yes	¼"
60729S-32WN	7xD	Straight	224.0	264.1	267.1	324.1	60.0	32	Yes	¼"

FM - Flanged Metric with Flat
CM - Cylindrical Metric





GEN3SYS®XT and GEN3SYS Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K35 (C1)	29.00	1.1417"	7C129P-29	●	5C129H-29	●
	29.37	1.1563"	7C129P-0105	○	5C129H-0105	○
	29.50	1.1614"	N 7C129P-29.5	○	-	-
	30.00	1.1811"	7C129P-30	●	5C129H-30	●
	30.16	1.1875"	7C129P-0106	○	5C129H-0106	○
	30.50	1.2007"	7C129P-30.5	●	5C129H-30.5	●
	30.96	1.2188"	7C129P-0107	○	5C129H-0107	○
	31.00	1.2205"	7C129P-31	●	5C129H-31	●
	31.50	1.2402"	N 7C129P-31.5	○	-	-
	31.75	1.2500"	7C129P-0108	○	5C129H-0108	○
LR Geometry K35 (C1)	29.00	1.1417"	7C129P-29LR	◆	5C129H-29LR	◆
	29.37	1.1563"	7C129P-0105LR	◆	5C129H-0105LR	◆
	30.00	1.1811"	7C129P-30LR	◆	5C129H-30LR	◆
	30.16	1.1875"	7C129P-0106LR	◆	5C129H-0106LR	◆
	30.50	1.2007"	7C129P-30.5LR	◆	5C129H-30.5LR	◆
	30.96	1.2188"	7C129P-0107LR	◆	5C129H-0107LR	◆
	31.00	1.2205"	7C129P-31LR	◆	5C129H-31LR	◆
	31.75	1.2500"	7C129P-0108LR	◆	5C129H-0108LR	◆

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

N This symbol can be found throughout this catalogue and highlights NEW products!

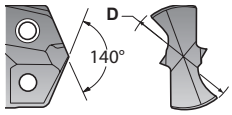
+44 (0)1384 400 900 +44 (0)1384 400 105 enquiries@alliedmaxcut.com www.alliedmaxcut.com

29 Series Inserts and Holders

Diameter Range 29.00mm to 31.99mm

GEN3SYS®XT High Penetration Drilling System and GEN3SYS® High Penetration Drilling System **Drill Inserts**





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.	GEN3SYS® Part Number	Stk.
K20 (C2)	29.00	1.1417"	7C229P-29	●	5C229H-29	●
	29.37	1.1563"	7C229P-0105	○	5C229H-0105	○
	29.50	1.1614"	N 7C229P-29.5	○	-	-
	30.00	1.1811"	7C229P-30	●	5C229H-30	●
	30.16	1.1875"	7C229P-0106	○	5C229H-0106	○
	30.50	1.2007"	7C229P-30.5	●	5C229H-30.5	●
	30.96	1.2188"	7C229P-0107	○	5C229H-0107	○
	31.00	1.2205"	7C229P-31	●	5C229H-31	●
	31.50	1.2402"	N 7C229P-31.5	○	-	-
	31.75	1.2500"	7C229P-0108	○	5C229H-0108	○
Cast Iron Geometry K20 (C2)	29.00	1.1417"	7C229P-29CI	●	5C229H-29CI	●
	29.37	1.1563"	7C229P-0105CI	○	5C229H-0105CI	○
	30.00	1.1811"	7C229P-30CI	●	5C229H-30CI	●
	30.16	1.1875"	7C229P-0106CI	○	5C229H-0106CI	○
	30.50	1.2007"	7C229P-30.5CI	●	5C229H-30.5CI	●
	30.96	1.2188"	7C229P-0107CI	○	5C229H-0107CI	○
	31.00	1.2205"	7C229P-31CI	●	5C229H-31CI	●
	31.75	1.2500"	7C229P-0108CI	○	5C229H-0108CI	○
Stainless Steel Geometry K20 (C2)	29.00	1.1417"	7C229P-29AS	●	-	-
	29.37	1.1563"	7C229P-0105AS	○	-	-
	30.00	1.1811"	7C229P-30AS	●	-	-
	30.16	1.1875"	7C229P-0106AS	○	-	-
	30.50	1.2007"	7C229P-30.5AS	●	-	-
	30.96	1.2188"	7C229P-0107AS	○	-	-
	31.00	1.2205"	7C229P-31AS	●	-	-
	31.75	1.2500"	7C229P-0108AS	○	-	-
LR Geometry K20 (C2)	29.00	1.1417"	7C229P-29LR	◆	5C229H-29LR	◆
	29.37	1.1563"	7C229P-0105LR	◆	5C229H-0105LR	◆
	30.00	1.1811"	7C229P-30LR	◆	5C229H-30LR	◆
	30.16	1.1875"	7C229P-0106LR	◆	5C229H-0106LR	◆
	30.50	1.2007"	7C229P-30.5LR	◆	5C229H-30.5LR	◆
	30.96	1.2188"	7C229P-0107LR	◆	5C229H-0107LR	◆
	31.00	1.2205"	7C229P-31LR	◆	5C229H-31LR	◆
	31.75	1.2500"	7C229P-0108LR	◆	5C229H-0108LR	◆

Supplied in packs of 1

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

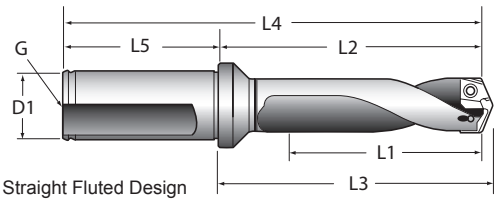
Stk. - Stock Availability.
- ● Stock Item.
- ○ Stocked in limited quantities, advanced planning is recommended.
- ◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

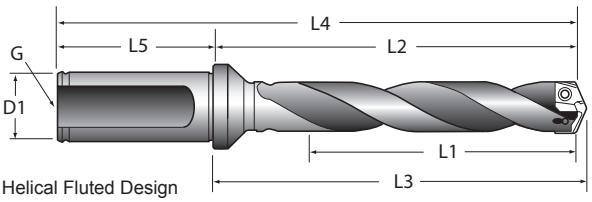
N This symbol can be found throughout this catalogue and highlights NEW products!

32 Series Inserts and Holders

Diameter Range 32.00mm to 35.00mm



Straight Fluted Design



Helical Fluted Design

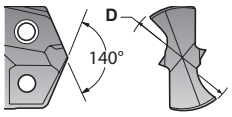
Holders

Part Number	Holder Type	Flute Type	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	Flat	G Pipe Tap
60332S-40FM	3xD	Straight	105.0	157.7	161.3	227.7	70.0	40	Yes	¼"
60532S-40FM	5xD	Straight	175.0	227.7	231.3	297.7	70.0	40	Yes	¼"
60732S-40FM	7xD	Straight	244.9	297.7	301.3	367.7	70.0	40	Yes	¼"
60132H-40FM	Stub	Helical	38.0	90.7	94.2	160.7	70.0	40	Yes	¼"
60332H-40FM	3xD	Helical	105.0	157.7	161.3	227.7	70.0	40	Yes	¼"
60332H-40CM	3xD	Helical	105.0	157.7	161.3	227.7	70.0	40	No	¼"
60532H-40FM	5xD	Helical	175.0	227.7	231.3	297.7	70.0	40	Yes	¼"
60532H-40CM	5xD	Helical	175.0	227.7	231.3	297.7	70.0	40	No	¼"
60732H-40FM	7xD	Helical	244.9	297.7	301.3	367.7	70.0	40	Yes	¼"
60732H-40CM	7xD	Helical	244.9	297.7	301.3	367.7	70.0	40	No	¼"

FM - Flanged Metric with Flat
CM - Cylindrical Metric

Drill Inserts





Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.
K35 (C1)	32.00	1.2598"	7C132P-32	●
	32.15	1.2658"	7C132P-32.15	◆
	32.50	1.2795"	7C132P-32.5	◆
	32.55	1.2813"	7C132P-0109	◆
	33.00	1.2992"	7C132P-33	●
	33.34	1.3125"	7C132P-0110	◆
	33.50	1.3189"	7C132P-33.5	◆
	34.00	1.3386"	7C132P-34	●
	34.13	1.3438"	7C132P-0111	◆
	34.50	1.3583"	7C132P-34.5	◆
	34.93	1.3750"	7C132P-0112	◆
	35.00	1.3779"	7C132P-35	●

Supplied in packs of 1

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
◆ Non-stock standard. Normal delivery 15 to 20 days.

Any non-standard size available (minimum quantity 2)

P Steel N/mm²	M Stainless Steel N/mm²	K Cast and Ductile Iron N/mm²	N Non-ferrous Material N/mm²	S High Temperature Materials N/mm²	H Hardened Materials N/mm²
<1365	<940	<1020	<855	<990	<1365

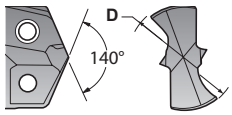
For further information on Material, Hardnesses and Cutting Data, please refer to the Technical Section from page 143.

Drill & Chamfer Holders available, see page 134. **Holder Adaptors available, see page 138.**

32 Series Inserts

Diameter Range 32.00mm to 35.00mm



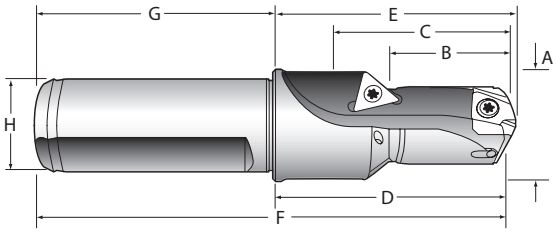


GEN3SYS®XT High Penetration Drilling System — Drill Inserts

Material	D (Diameter) (mm)	D (Diameter) (inch)	GEN3SYS®XT Part Number	Stk.
LR Geometry K35 (C1)	32.00	1.2598"	7C132P-32LR	◆
	32.15	1.2658"	7C132P-32.15LR	◆
	32.50	1.2795"	7C132P-32.5LR	◆
	32.55	1.2813"	7C132P-0109LR	◆
	33.00	1.2992"	7C132P-33LR	◆
	33.34	1.3125"	7C132P-0110LR	◆
	33.50	1.3189"	7C132P-33.5LR	◆
	34.00	1.3386"	7C132P-34LR	◆
	34.13	1.3438"	7C132P-0111LR	◆
	34.50	1.3583"	7C132P-34.5LR	◆
	34.93	1.3750"	7C132P-0112LR	◆
	35.00	1.3779"	7C132P-35LR	◆
K20 (C2)	32.00	1.2598"	7C232P32	●
	32.15	1.2658"	7C232P-32.15	◆
	32.50	1.2795"	7C232P-32.5	◆
	32.55	1.2813"	7C232P-0109	◆
	33.00	1.2992"	7C232P-33	●
	33.34	1.3125"	7C232P-0110	◆
	33.50	1.3189"	7C232P-33.5	◆
	34.00	1.3386"	7C232P-34	●
	34.13	1.3438"	7C232P-0111	◆
	34.50	1.3583"	7C232P-34.5	◆
	34.93	1.3750"	7C232P-0112	◆
	35.00	1.3779"	7C232P-35	●
Cast Iron Geometry K20 (C2)	32.00	1.2598"	7C232P-32CI	●
	32.15	1.2658"	7C232P-32.15CI	◆
	32.50	1.2795"	7C232P-32.5CI	◆
	32.55	1.2813"	7C232P-0109CI	◆
	33.00	1.2992"	7C232P-33CI	●
	33.34	1.3125"	7C232P-0110CI	◆
	33.50	1.3189"	7C232P-33.5CI	◆
	34.00	1.3386"	7C232P-34CI	●
	34.13	1.3438"	7C232P-0111CI	◆
	34.50	1.3583"	7C232P-34.5CI	◆
	34.93	1.3750"	7C232P-0112CI	◆
	35.00	1.3779"	7C232P-35CI	●
Stainless Steel Geometry K20 (C2)	32.00	1.2598"	7C232P-32AS	●
	32.15	1.2658"	7C232P-32.15AS	◆
	32.50	1.2795"	7C232P-32.5AS	◆
	32.55	1.2813"	7C232P-0109AS	◆
	33.00	1.2992"	7C232P-33AS	●
	33.34	1.3125"	7C232P-0110AS	◆
	33.50	1.3189"	7C232P-33.5AS	◆
	34.00	1.3386"	7C232P-34AS	●
	34.13	1.3438"	7C232P-0111AS	◆
	34.50	1.3583"	7C232P-34.5AS	◆
	34.93	1.3750"	7C232P-0112AS	◆
	35.00	1.3779"	7C232P-35AS	●
LR Geometry K20 (C2)	32.00	1.2598"	7C232P-32LR	◆
	32.15	1.2658"	7C232P-32.15LR	◆
	32.50	1.2795"	7C232P-32.5LR	◆
	32.55	1.2813"	7C232P-0109LR	◆
	33.00	1.2992"	7C232P-33LR	◆
	33.34	1.3125"	7C232P-0110LR	◆
	33.50	1.3189"	7C232P-33.5LR	◆
	34.00	1.3386"	7C232P-34LR	◆
	34.13	1.3438"	7C232P-0111LR	◆
	34.50	1.3583"	7C232P-34.5LR	◆
	34.93	1.3750"	7C232P-0112LR	◆
	35.00	1.3779"	7C232P-35LR	◆

Supplied in packs of 1

Drill & Chamfer Holders



GEN3SYS XT High Penetration Drilling System — Drill & Chamfer Holders

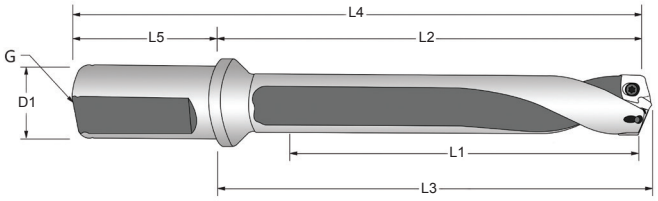
Series	Part Number	A Step Diameter (mm)	B* Step Length (mm)	C Drill Depth (mm)	D Body Length (mm)	E Tool Ref Length (mm)	F Ref OAL (mm)	G Shank Length (mm)	H Shank Diameter (mm)	Chamfer Insert
11	60111C45-16FM	241	16.5	23.8	42.3	44.3	90.3	48	16	TCMT-110204
12	60112C45-20FM	24.8	18.0	35.2	43.2	45.4	93.2	50	20	TCMT-110204
13	60113C45-20FM	25.8	19.5	25.4	43.0	45.2	93.0	50	20	TCMT-110204
14	60114C45-20FM	26.7	21.0	26.8	44.6	47.2	94.6	50	20	TCMT-110204
15	60115C45-20FM	27.0	22.5	26.9	44.3	46.8	94.3	50	20	TCMT-110204
16	60116C45-20FM	27.0	24.0	33.1	50.8	53.7	100.8	50	20	TCMT-110204
17	60117C45-20FM	25.4	25.5	33.3	50.5	53.4	100.5	50	20	TCMT-110204
18	60118C45-25FM	25.1	27.0	35.2	56.0	58.8	111.9	56	25	TCMT-110204
20	60120C45-25FM	27.2	30.0	37.1	57.6	60.4	113.6	56	25	TCMT-110204
22	60122C45-25FM	29.0	33.0	40.5	60.0	63.0	116.1	56	25	TCMT-110204
24	60124C45-25FM	31.0	36.0	45.5	64.2	67.1	120.1	56	25	TCMT-110204
26	60126C45-32FM	34.0	39.0	52.1	72.9	75.7	133.0	60	32	TCMT-110204
29	60129C45-32FM	37.1	43.5	55.9	75.2	78.2	135.2	60	32	TCMT-16T304
32	60132C45-40FM	40.1	48.0	62.4	90.7	94.2	160.7	70	40	TCMT-16T304

B - Step Length (mm)
Based on minimum diameter GEN3SYS® insert per range.

***Chamfer Inserts are sold separately and supplied in packs of 10.*

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GEN3SYS® XT Structural Steel Holders



N GEN3SYS XT STRUCTURAL STEEL 3xD Holders

Series	Part Number	Diameter Range (mm)	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	G Pipe Tap
14	ST03140-20FM	14.00-14.29	45.0	72.4	75.0	122.4	50	20	1/8"
15	ST03150-20FM	15.88	48.0	75.1	77.6	125.1	50	20	1/8"
16	ST03160-20FM	16.00	51.0	81.3	84.2	131.3	50	20	1/8"
17	ST03170-20FM	17.46	54.0	84.1	87.0	134.1	50	20	1/8"
18	ST03180-20FM	18.00	60.0	94.0	97.1	144.0	50	20	1/8"
20	ST03200-25FM	20.00-20.64	66.0	100.1	103.3	156.1	56	25	1/8"
22	ST03220-25FM	22.00-22.23	72.0	105.3	108.7	161.3	56	25	1/8"
22.5	ST03225-25FM	23.81	72.0	105.3	108.7	161.3	56	25	1/8"
24	ST03240-25FM	24.00	78.0	113.8	117.3	169.8	56	25	1/8"
26	ST03260-32FM	26.00-28.58	87.0	128.1	131.4	188.1	60	32	1/4"
29	ST03290-32FM	29.00-31.75	96.0	136.2	139.7	196.2	60	32	1/4"
32	ST03320-40FM	32.00-34.93	105.0	157.7	162.0	227.7	70	40	1/4"

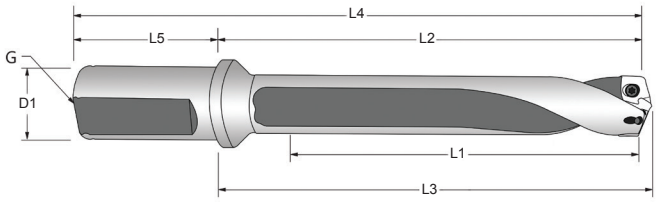
N GEN3SYS XT STRUCTURAL STEEL 5xD Holders

Series	Part Number	Diameter Range (mm)	L1 Max Drill Depth (mm)	L2 Body Length (mm)	L3 New Tool Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	G Pipe Tap
14	ST05140-20FM	14.00-14.29	75.0	102.4	104.9	152.4	50	20	1/8"
15	ST05150-20FM	15.88	80.0	107.0	109.6	157.0	50	20	1/8"
16	ST05160-20FM	16.00	84.9	115.3	118.2	165.3	50	20	1/8"
17	ST05170-20FM	17.46	89.9	120.0	122.9	170.0	50	20	1/8"
18	ST05180-20FM	18.00	99.9	134.0	137.1	184.0	50	20	1/8"
20	ST05200-25FM	20.00-20.64	110.0	144.1	147.2	200.1	56	25	1/8"
22	ST05220-25FM	22.00-22.23	119.9	153.3	156.7	209.3	56	25	1/8"
22.5	ST05225-25FM	23.81	119.9	153.3	156.7	209.3	56	25	1/8"
24	ST05240-25FM	24.00	129.9	165.8	169.2	221.8	56	25	1/8"
26	ST05260-32FM	26.00-28.58	145.0	186.1	189.4	246.1	60	32	1/4"
29	ST05290-32FM	29.00-31.75	159.9	200.1	203.7	260.1	60	32	1/4"
32	ST05320-40FM	32.00-34.93	175.0	227.7	232.0	297.7	70	40	1/4"

NOTE: Structural Steel GEN3SYS® XT holders are specifically designed to be used only with ST Geometry inserts. Using other GEN3SYS® or GEN3SYS® XT insert geometries in these holders could lead to tool failure. Contact Application Engineering for questions regarding proper use of tools.

N This symbol can be found throughout this catalogue and highlights NEW products!

GEN3SYS® XT Structural Steel Holders



N GEN3SYS® XT STRUCTURAL STEEL

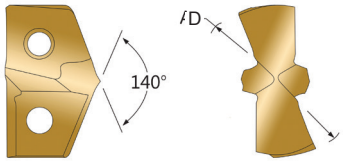
7xD Holders

Series	Part	Diameter Range (mm)	L1	L2	L3	L4	L5	D1	G
			Max Drill Depth (mm)	Body Length (mm)	New Tool Ref Length (mm)	Overall Length (mm)	Shank Length (mm)	Shank Diameter (mm)	Pipe Tapa
14	ST07140-20FM	14.00-14.29	104.9	132.3	134.9	182.3	50	20	1/8"
15	ST07150-20FM	15.88	111.9	139.0	141.6	189.0	50	20	1/8"
16	ST07160-20FM	16.00	118.9	149.3	152.2	199.3	50	20	1/8"
17	ST07170-20FM	17.46	125.9	156.0	158.9	206.0	50	20	1/8"
18	ST07180-20FM	18.00	139.9	174.0	177.1	224.0	50	20	1/8"
20	ST07200-25FM	20.00-20.64	153.9	188.1	191.2	244.1	56	25	1/8"
22	ST07220-25FM	22.00-22.23	167.9	201.3	204.7	257.3	56	25	1/8"
22.5	ST07225-25FM	23.81	167.9	201.3	204.7	257.3	56	25	1/8"
24	ST07240-25FM	24.00	181.9	217.8	221.2	273.8	56	25	1/8"
26	ST07260-32FM	26.00-28.58	202.9	244.0	247.4	304.0	60	32	1/4"
29	ST07290-32FM	29.00-31.75	223.9	264.1	267.7	324.1	60	32	1/4"
32	ST07320-40FM	32.00-34.93	244.9	297.7	302.0	367.7	70	40	1/4"

NOTE: Structural Steel GEN3SYS® XT holders are specifically designed to be used only with ST Geometry inserts. Using other GEN3SYS® or GEN3SYS® XT insert geometries in these holders could lead to tool failure. Contact Application Engineering for questions regarding proper use of tools.

N This symbol can be found throughout this catalogue and highlights NEW products!

GEN3SYS® XT Structural Steel Inserts



N GEN3SYS XT STRUCTURAL STEEL **Inserts**

Series	Material	D (Diameter)		GEN3SYS®XT ST	Stk.
		(mm)	(Inch)	Part Number	
14	K20 (C2)	14.00	0.5512”	7C214P-14ST	●
		14.29	0.5625”	7C214P-0018ST	○
15		15.88	0.625”	7C215P-0020ST	○
16		16.00	0.630”	7C216P-16ST	●
17		17.46	0.6875”	7C217P-0022ST	○
18		18.00	0.7087”	7C218P-18ST	●
20		20.00	0.7874”	7C220P-20ST	●
		20.64	0.8125”	7C220P-0026ST	○
		21.83	0.8594”	7C220P-.859ST	○
22		22.00	0.8661”	7C222P-22ST	●
		22.23	0.875”	7C222P-0028ST	○
		23.81*	0.9375*”	7C222P-0030ST*	○
24		24.00	0.9449”	7C224P-24ST	●
		25.40	1.000”	7C224P-0100ST	○
		25.80	1.0156”	7C224P-1.015ST	○
26		26.00	1.0236”	7C226P-26ST	●
		26.99	1.0625”	7C226P-0102ST	○
		27.00	1.063”	7C226P-27ST	●
		28.00	1.1024”	7C226P-28ST	●
		28.58	1.125”	7C226P-0104ST	○
29		29.00	1.1417”	7C229P-29ST	●
		30.00	1.1811”	7C229P-30ST	●
		30.16	1.1875”	7C229P-0106ST	○
		31.00	1.2205”	7C229P-31ST	●
		31.75	1.250”	7C229P-0108ST	○
32		32.00	1.260”	7C232P-32ST	●
		33.00	1.2992”	7C232P-33ST	●
		33.34	1.3125”	7C232P-0110ST	○
		34.93	1.375”	7C232P-0112ST	○

* for 22.5 Series Holder

Supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.
Any non-standard size available upon request

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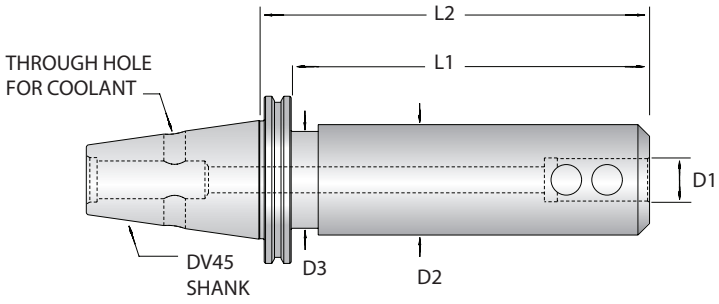
Regrind service available please contact our sales department for further information.

Holder Accessories

GEN3SYS® Adaptors

DV45 Adaptor

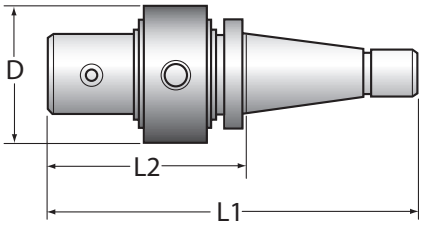
Includes Lateral Side Coolant Hole



DIN69871-A

Item Number	Outer Taper	D1 Inner Ø mm	D2 Ø	D3 Ø	L1	L2	Qty of Clamping Screws	Stk.
AMDV45-EM20-120	DV45	20	52	57	101	120	1	•
AMDV45-EM25-120	DV45	25	65	57	101	120	2	•
AMDV45-EM32-120	DV45	32	78	57	101	120	2	•
AMDV45-EM20-230	DV45	20	52	57	211	230	1	•
AMDV45-EM25-230	DV45	25	65	57	211	230	2	•
AMDV45-EM32-230	DV45	32	78	57	211	230	2	•

DIN 2080 ISO Taper Shank Coolant Fed Holders



Item Number	Outer Taper	D Inner Ø mm	L1 mm	L2 mm	D Ø mm
4020-5SRM	QC40	20	188.00	94.00	76.20
4025-5SRM	QC40	25	199.00	106.00	76.20
5020-5SRM	DT50	20	227.00	100.00	76.20
5025-5SRM	DT50	25	239.00	112.00	76.20
5032-6SRM	ST50	32	254.00	127.00	95.27

Max coolant Pressure: 40 Bar. **Max RPM:** 3000. **Suitable for Holders:** Y, Z, 0, 0.5, 1, 1.5, 2.0, 2.5 series

Note: DIN 69871-A and BT50 tapers available upon request

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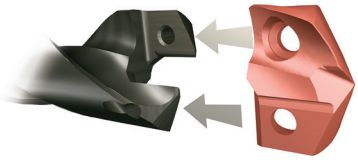
GEN3SYS® Replacement TORX Plus Screws and Driver information

Insert Series	Drill Range	Part Number					TORX Plus Screw Recommended Tightening Torque (N/cm)
		TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	TORX Plus Screws*	Nylon Locking TORX Plus Screws*	
11	11.00 - 11.99mm	8IP-6	8IP-6TL	8IP-6B	71843-IP6-10	-	50
12	12.00 - 12.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
13	13.00 - 13.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
14	14.00 - 14.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
15	15.00 - 15.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
16	16.00 - 16.99mm	8IP-8	8IP-8TL	8IP-8B	72556-IP8-10	72556N-IP8-10	175
17	17.00 - 17.99mm	8IP-8	8IP-8TL	8IP-8B	72567-IP8-10	72567N-IP8-10	175
18	18.00 - 19.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
20	20.00 - 21.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
22	22.00 - 23.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	739N-IP9-10	305
24	24.00 - 25.99mm	8IP-9	8IP-9TL	8IP-9B	739-IP9-10	739N-IP9-10	305
26	26.00 - 28.99mm	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
29	29.00 - 31.99mm	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
32	32.00 - 35.00mm	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690

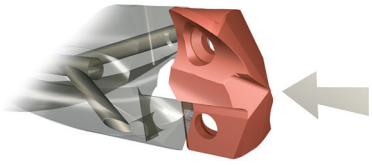
* Tightening torques are calculated with a friction coefficient of μ = 0.14 and develops 90% of ultimate yield strength

*Supplied in packs of 10

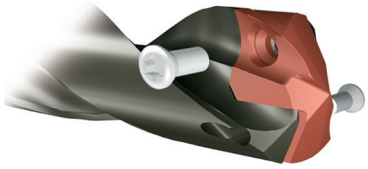
GEN3SYS® XT / GEN3SYS® Tool Assembly



1. Place the GEN3SYS® Drill Insert into the precision ground locating pocket on the GEN3SYS® Holder.



2. The drill insert should not be turned, rotated or twisted for locking purposes. The holder pocket and locating pad on the drill insert assure optimum fit and repeatability.



3. Place a generous amount of Never Seize (provided in the packaging) onto the supplied TORX Plus Screws. Tighten the TORX Plus Screws utilising the predetermined TORX Plus Drivers and TORX Plus Screw admissible tightening Torque outlined in the catalogue per GEN3SYS® Series.

Thrust & Horsepower

FORMULAS

1. RPM $= \frac{(318.47) \cdot (M/min)}{DIA}$

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

2. Thrust = 154 • (mm/rev) • DIA • Km

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

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

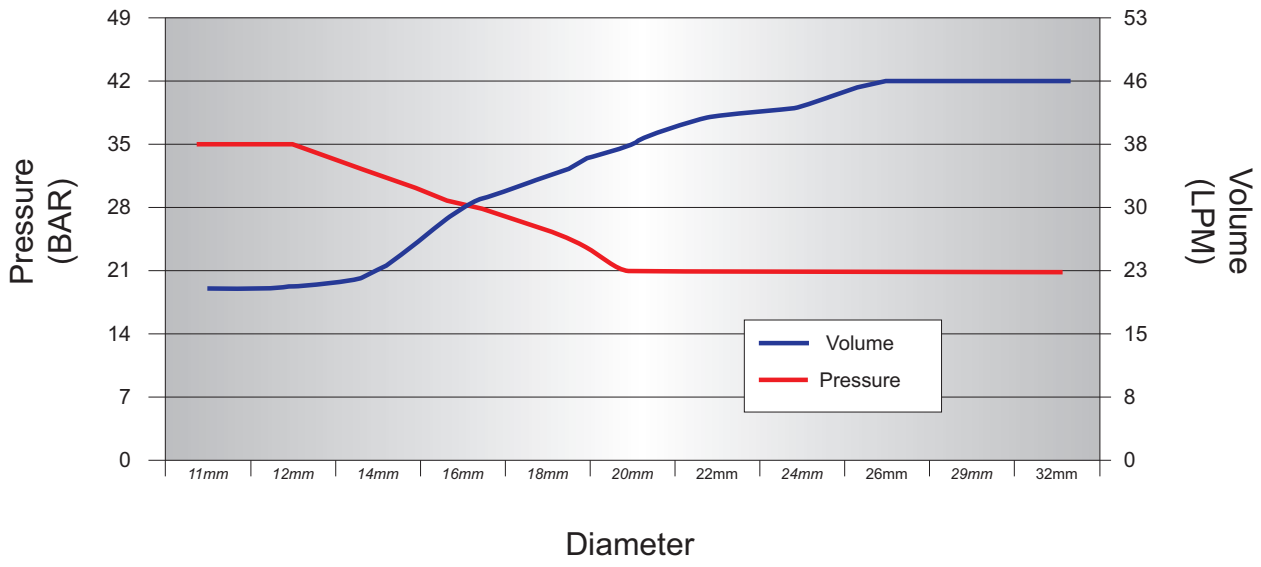
where:
Tool Power = tool power in kilowatts (kW)
mm/rev = feedrate (mm/rev)
RPM = revolutions per minute (rev/min)
Km = specific cutting energy (kpa)
DIA = diameter of drill (mm)

Note:
The 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.

MATERIAL CONSTANTS

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

Drill Inserts Coolant Recommendations
Inch and Metric



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

The coolant pressure and flow rate recommendation above, represents a good approximation to obtain optimum tool life and chip evacuation at AMEC® recommended speeds and feeds for 3x & 5x diameter holder lengths. Please multiply the above by 1.5 when using the 7x diameter holder. For a more specific approximation of coolant requirements, consult the AMEC® Application Engineering Department.

Technical Section

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 1,75	10.2mm	0.4016"	79%	0.075mm	10.28mm	76%
	13.32	0.4063"	74%	0.075mm	10.40mm	71%
12 x 1,25	27/64"	0.4219"	79%	0.075mm	10.79mm	74%
	10.8mm	0.4252"	74%	0.075mm	10.88mm	69%
14 x 2,0	15/32"	0.4688"	81%	0.075mm	11.98mm	78%
	12.0mm	0.4724"	77%	0.075mm	12.08mm	74%
14 x 1,5	12.5mm	0.4921"	77%	0.075mm	12.58mm	73%
16 x 2,0	14.0mm	0.5512"	77%	0.075mm	14.08mm	74%
16 x 1,5	14.5mm	0.5709"	77%	0.075mm	14.58mm	73%
	37/64"	0.5781"	68%	0.075mm	14.76mm	64%
18 x 2,5	15.5mm	0.6102"	77%	0.075mm	15.58mm	75%
18 x 1,5	16.5mm	0.6496"	77%	0.075mm	16.58mm	73%
	21/32"	0.6563"	68%	0.075mm	16.75mm	64%
20 x 2,5	11/16"	0.6875"	78%	0.075mm	17.54mm	76%
	17.5mm	0.6890"	77%	0.075mm	17.58mm	74%
20 x 1,5	18.5mm	0.7283"	77%	0.075mm	18.58mm	73%
	47/64"	0.7344"	69%	0.075mm	18.66mm	65%
22 x 2,5	49/64"	0.7656"	79%	0.075mm	19.52mm	76%
	19.5mm	0.7677"	77%	0.075mm	19.58mm	75%
22 x 1,5	20.5mm	0.8071"	77%	0.075mm	20.58mm	73%
	13/16"	0.8125"	70%	0.075mm	20.71mm	66%
24 x 3	13/16"	0.8125"	86%	0.075mm	20.71mm	84%
	21.0mm	0.8268"	76%	0.075mm	21.08mm	75%
24 x 2	22.0mm	0.8661"	77%	0.075mm	22.08mm	74%
	7/8"	0.8750"	68%	0.075mm	22.30mm	65%
27 x 3	24.0mm	0.9449"	77%	0.075mm	24.08mm	75%

* Based on nominal tap drill diameter. **Based on 0.075mm probable mean oversize.

To calculate percent of full thread for a given hole diameter: $\%\ \text{Thread} = \frac{76{,}93}{\text{Pitch mm}}$ (Basic Major Diameter (mm) - drill Hole Size (mm))

Taper Pipe Thread (BSP & ISO 7-1)						
Metric Profile Screw Thread						
Tap Size	**Tap Drill Size**	**Decimal Equivalent**	*** Theo % Thread**	**Prob Mean Oversize**	**Prob Hole Size**	**** Prob % Thread**
1/4" - 19	7/16"	0.4325"	N/A	0.075mm	11.19mm	N/A
3/8" - 19	37/64"	0.5781"	N/A	0.075mm	14.76mm	N/A
1/2" - 14	23/32"	0.7188"	N/A	0.075mm	18.33mm	N/A
3/4" - 14	15/16"	0.9375"	N/A	0.075mm	23.89mm	N/A

The above tap drill information represents probable thread percentages for the standard tap drills stocked at AMEC®. 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.

GEN3SYS XT High Penetration Drilling System

GEN3SYS High Penetration Drilling System

Structural Steel Recommended Cutting Data - Series 12 - 32

Substrate	Material Hardness (BHN)	Speed (M/min) Mist Coolant AM300®	Speed (M/min) Mist Coolant AM200®	FEED (mm/rev)												
				12	13	14	15	16	17	18	20	22	24	26	29	32
K35 Carbide	100 - 150	87	75	0.28	0.28	0.30	0.30	0.30	0.30	0.36	0.36	0.36	0.36	0.45	0.45	0.47
	150 - 250	70	61	0.24	0.24	0.27	0.27	0.27	0.28	0.33	0.33	0.33	0.33	0.42	0.42	0.43
	250 - 350	65	57	0.20	0.20	0.24	0.24	0.24	0.28	0.30	0.30	0.30	0.30	0.33	0.33	0.40

• 0.80 multiplier for feed rate on 7 x Diameter holder

IMPORTANT NOTE: *- The speeds and feeds listed above are considered a general guideline for all applications. In the case of extreme ductile steels a further reduction in speed of 20% should be applied. Factory technical assistance is also available for your specific applications through our Application Engineering Team.*

mm/min = (RPM) • (mm/rev) **M/min = RPM • 0.003 • Dia** **RPM = M/min • (318.47/Dia)**

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Technical Section

Recommended Cutting Data - Series 11 - 17

Material	Hardness			Grade	GEN3SYS® XT AM300® M/min	GEN3SYS® AM200® M/min	Feed (mm/rev)						
							11	12	13	14	15	16	17
	BHN	kg	N/mm²				11.00 to 11.99	12.00 to 12.99	13.00 to 13.99	14.00 to 14.99	15.00 to 15.99	16.00 to 16.99	17.00 to 17.99
Free Machining Steel 118, 1215, 12L14, etc	100-150	38-50	370-500	K35	168	146	0.28	0.30	0.33	0.36	0.38	0.41	0.43
	150-200	50-70	500-700	K35	145	127	0.25	0.28	0.30	0.33	0.36	0.38	0.41
	200-250	70-88	700-870	K35	130	119	0.20	0.23	0.25	0.28	0.30	0.33	0.36
Low Carbon Steel 1010, 1020, 1025, 1522,1144, etc	85-125	30-46	300-450	K35	158	137	0.28	0.30	0.33	0.36	0.38	0.41	0.43
	125-175	46-62	450-600	K35	137	119	0.25	0.28	0.30	0.33	0.36	0.38	0.41
	175-225	62-77	600-775	K35	125	108	0.23	0.25	0.28	0.30	0.33	0.36	0.38
	225-275	77-96	775-940	K35	107	95	0.18	0.20	0.23	0.25	0.28	0.30	0.33
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc	125-175	46-62	450-600	K35	137	119	0.25	0.28	0.30	0.33	0.36	0.38	0.41
	175-225	62-77	600-775	K35	125	108	0.23	0.25	0.28	0.30	0.33	0.36	0.38
	225-275	77-96	775-940	K35	107	95	0.20	0.23	0.25	0.28	0.30	0.33	0.36
	275-325	96-111	940-1090	K35	91	81	0.18	0.20	0.23	0.25	0.28	0.30	0.33
Alloy Steel 4140, 5140, 8640, etc	125-175	46-62	450-600	K35	126	114	0.25	0.28	0.30	0.33	0.36	0.38	0.41
	175-225	62-77	600-775	K35	116	105	0.23	0.25	0.28	0.30	0.33	0.36	0.38
	225-275	77-96	775-940	K35	104	95	0.20	0.23	0.25	0.28	0.30	0.33	0.36
	275-325	96-111	940-1090	K35	94	87	0.15	0.18	0.20	0.23	0.25	0.28	0.30
	325-375	111-129	1090-1265	K35	85	78	0.15	0.15	0.18	0.20	0.23	0.25	0.28
High Strength Steel 4340, 4330V, 300M, etc	225-300	77-104	600-1020	K35	76	70	0.20	0.23	0.25	0.28	0.28	0.30	0.33
	300-350	104-121	1020-1180	K35	69	63	0.15	0.18	0.20	0.23	0.25	0.28	0.28
	350-400	121-139	1180-1365	K35	61	56	0.13	0.15	0.18	0.20	0.23	0.25	0.25
Structural Steel A36, A285, A516, etc	100-150	38-50	370-500	K35	125	108	0.25	0.28	0.30	0.33	0.33	0.38	0.38
	150-250	50-88	500-850	K35	101	87	0.20	0.23	0.25	0.28	0.30	0.33	0.36
	250-350	88-121	850-1180	K35	93	81	0.18	0.20	0.23	0.25	0.28	0.30	0.33
Tool Steel H-13, H-21, A-4, 0-2, S-3	150-200	50-70	500-700	K35	81	78	0.15	0.18	0.18	0.20	0.20	0.23	0.23
	200-250	70-88	700-870	K35	62	59	0.13	0.15	0.15	0.18	0.18	0.20	0.20
High Temp Alloy	140-220	49-77	480-755	K20	40	37	0.15	0.18	0.18	0.20	0.20	0.23	0.23
	223-310	77-101	755-990	K20	30	29	0.13	0.15	0.15	0.18	0.18	0.20	0.20
Titanium Alloy	140-220	49-77	480-755	K20	43	42	0.13	0.15	0.17	0.20	0.20	0.22	0.22
	220-310	77-101	755-990	K20	34	33	0.10	0.12	0.15	0.17	0.17	0.20	0.20
Aerospace Alloy S82	185-275	65-96	640-940	K20	50	45	0.10	0.10	0.12	0.14	0.15	0.16	0.18
	275-350	96-121	940-1180	K20	41	37	0.09	0.09	0.10	0.12	0.14	0.15	0.16
Stainless Steel 400 Series 416, 420	185-275	65-96	640-940	K20	73	73	0.15	0.18	0.18	0.20	0.20	0.23	0.25
	275-350	96-121	940-1180	K20	56	56	0.13	0.15	0.15	0.18	0.18	0.20	0.23
Stainless Steel 300 Series 304, 316, 17-4PH	135-185	49-65	480-640	K20	67	64	0.10	0.13	0.13	0.15	0.15	0.18	0.18
	185-275	65-96	640-940	K20	49	47	0.08	0.10	0.10	0.13	0.13	0.15	0.15
Super Duplex Duplex St.Stl	135-185	49-65	480-640	K20	38	38	0.07	0.07	0.09	0.10	0.11	0.12	0.13
	185-275	65-96	640-940	K20	30	30	0.06	0.06	0.08	0.09	0.10	0.11	0.12
Hardox	400	139	1365	K35	49	45	0.13	0.13	0.15	0.17	0.19	0.21	0.23
	500	160	1600	K35	40	37	0.11	0.11	0.13	0.15	0.17	0.19	0.21
	600	210	2000	K20	27	25	0.10	0.10	0.11	0.13	0.15	0.17	0.19
Hardened Steel	300-400	104-139	1020-1365	K35	51	47	0.13	0.13	0.15	0.17	0.19	0.21	0.22
	400-500	139+	1365+	K35	40	37	0.11	0.11	0.13	0.15	0.17	0.19	0.20
SG/Nodular Cast Iron	120-150	44-50	430-500	K20	168	146	0.27	0.30	0.33	0.36	0.38	0.41	0.46
	150-200	50-70	500-700	K20	159	138	0.25	0.28	0.30	0.33	0.36	0.38	0.43
	200-220	70-77	700-755	K20	141	123	0.22	0.25	0.28	0.30	0.33	0.36	0.41
	220-260	77-90	755-890	K20	124	108	0.20	0.23	0.25	0.28	0.30	0.33	0.38
	260-320	90-104	890-1020	K20	112	97	0.20	0.21	0.23	0.25	0.28	0.30	0.36
Grey/White Iron	120-150	44-50	430-500	K20	175	152	0.30	0.33	0.36	0.38	0.41	0.43	0.48
	150-200	50-70	500-700	K20	168	146	0.28	0.30	0.33	0.36	0.38	0.41	0.46
	200-220	70-77	700-755	K20	151	131	0.25	0.28	0.30	0.33	0.36	0.38	0.43
	220-260	77-90	755-890	K20	130	113	0.23	0.25	0.28	0.30	0.33	0.36	0.41
	260-320	90-104	890-1020	K20	116	102	0.23	0.25	0.28	0.30	0.33	0.36	0.38
Cast Aluminium	30	10	100	K20	351	300	0.30	0.33	0.35	0.38	0.40	0.43	0.45
	180	62	600	TiCN	262	225	0.28	0.30	0.33	0.35	0.38	0.40	0.43
Wrought Aluminium	30	10	100	K20	488	425	0.33	0.38	0.40	0.43	0.45	0.48	0.50
	180	62	600	K20	351	300	0.30	0.35	0.38	0.40	0.43	0.45	0.48
Aluminium Bronze	100-200	38-68	370-670	K20	126	110	0.26	0.28	0.30	0.32	0.34	0.36	0.38
	200-250	68-87	670-855	K20	103	90	0.22	0.24	0.26	0.28	0.30	0.32	0.34
Brass	100	38	370	K20	230	200	0.27	0.30	0.33	0.36	0.38	0.41	0.43
Copper	60	21	200	K20	149	130	0.07	0.08	0.09	0.11	0.13	0.15	0.16

.80 Multiplier for 7 x Diameter

Formulas: **mm/min = rev/min • mm/rev** **M/min = rev/min • 0.003 • DIA** **rev/min = M/min • 318.47/DIA**

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Technical Section

Recommended Cutting Data - Series 18 - 32

Material	Hardness			Grade	GEN3SYS® XT AM300® M/min	GEN3SYS® AM200® M/min	Feed (mm/rev)						
							18	20	22	24	26	29	32
	BHN	kg	N/mm²				11.00 to 11.99	12.00 to 12.99	13.00 to 13.99	14.00 to 14.99	15.00 to 15.99	16.00 to 16.99	17.00 to 17.99
Free Machining Steel 118, 1215, 12L14, etc	100-150	38-50	370-500	K35	168	146	0.48	0.53	0.56	0.58	0.61	0.64	0.66
	150-200	50-70	500-700	K35	145	127	0.43	0.48	0.51	0.53	0.56	0.58	0.61
	200-250	70-88	700-870	K35	130	119	0.41	0.46	0.48	0.51	0.53	0.56	0.58
Low Carbon Steel 1010, 1020, 1025, 1522,1144, etc	85-125	30-46	300-450	K35	158	137	0.48	0.53	0.56	0.58	0.61	0.64	0.66
	125-175	46-62	450-600	K35	137	119	0.46	0.48	0.51	0.53	0.56	0.58	0.61
	175-225	62-77	600-775	K35	125	108	0.43	0.46	0.48	0.51	0.53	0.56	0.58
	225-275	77-96	775-940	K35	107	95	0.38	0.41	0.43	0.46	0.48	0.51	0.53
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc	125-175	46-62	450-600	K35	137	119	0.46	0.51	0.53	0.56	0.58	0.61	0.64
	175-225	62-77	600-775	K35	125	108	0.43	0.48	0.51	0.53	0.56	0.58	0.61
	225-275	77-96	775-940	K35	107	95	0.41	0.46	0.48	0.51	0.53	0.56	0.58
	275-325	96-111	940-1090	K35	91	81	0.38	0.41	0.43	0.46	0.48	0.51	0.53
Alloy Steel 4140, 5140, 8640, etc	125-175	46-62	450-600	K35	126	114	0.46	0.51	0.53	0.56	0.58	0.61	0.64
	175-225	62-77	600-775	K35	116	105	0.43	0.48	0.51	0.53	0.56	0.58	0.61
	225-275	77-96	775-940	K35	104	95	0.41	0.46	0.48	0.51	0.53	0.56	0.58
	275-325	96-111	940-1090	K35	94	87	0.36	0.38	0.41	0.43	0.46	0.48	0.51
	325-375	111-129	1090-1265	K35	85	78	0.33	0.36	0.38	0.41	0.43	0.46	0.48
High Strength Steel 4340, 4330V, 300M, etc	225-300	77-104	600-1020	K35	76	70	0.36	0.38	0.41	0.43	0.46	0.48	0.51
	300-350	104-121	1020-1180	K35	69	63	0.30	0.33	0.36	0.38	0.41	0.43	0.46
	350-400	121-139	1180-1365	K35	61	56	0.28	0.30	0.33	0.36	0.38	0.41	0.43
Structural Steel A36, A285, A516, etc	100-150	38-50	370-500	K35	125	108	0.43	0.48	0.53	0.56	0.58	0.61	0.64
	150-250	50-88	500-850	K35	101	87	0.38	0.43	0.48	0.51	0.53	0.56	0.58
	250-350	88-121	850-1180	K35	93	81	0.36	0.38	0.43	0.48	0.51	0.53	0.56
Tool Steel H-13, H-21, A-4, 0-2, S-3	150-200	50-70	500-700	K35	81	78	0.25	0.28	0.30	0.33	0.36	0.38	0.41
	200-250	70-88	700-870	K35	62	59	0.23	0.25	0.28	0.30	0.33	0.36	0.38
High Temp Alloy	140-220	49-77	480-755	K20	40	37	0.25	0.28	0.28	0.30	0.30	0.33	0.36
	223-310	77-101	755-990	K20	30	29	0.23	0.25	0.25	0.28	0.28	0.30	0.33
Titanium Alloy	140-220	49-77	480-755	K20	43	42	0.25	0.28	0.28	0.30	0.30	0.33	0.33
	220-310	77-101	755-990	K20	34	33	0.22	0.25	0.25	0.28	0.28	0.30	0.30
Aerospace Alloy S82	185-275	65-96	640-940	K20	50	45	0.18	0.20	0.22	0.24	0.26	0.28	0.31
	275-350	96-121	940-1180	K20	41	37	0.16	0.18	0.20	0.22	0.24	0.26	0.29
Stainless Steel 400 Series 416, 420	185-275	65-96	640-940	K20	73	73	0.28	0.30	0.33	0.36	0.38	0.41	0.43
	275-350	96-121	940-1180	K20	56	56	0.25	0.28	0.30	0.33	0.36	0.38	0.41
Stainless Steel 300 Series 304, 316, 17-4PH	135-185	49-65	480-640	K20	67	64	0.20	0.20	0.23	0.23	0.25	0.25	0.28
	185-275	65-96	640-940	K20	49	47	0.18	0.18	0.20	0.20	0.23	0.23	0.25
Super Duplex Duplex St.Stl	135-185	49-65	480-640	K20	38	38	0.15	0.16	0.18	0.20	0.20	0.22	0.25
	185-275	65-96	640-940	K20	30	30	0.14	0.15	0.16	0.18	0.18	0.20	0.22
Hardox	400	139	1365	K35	49	45	0.25	0.27	0.27	0.29	0.29	0.31	0.31
	500	160	1600	K35	40	37	0.23	0.25	0.25	0.27	0.27	0.29	0.29
	600	210	2000	K20	27	25	0.21	0.23	0.23	0.25	0.25	0.27	0.27
Hardened Steel	300-400	104-139	1020-1365	K35	51	47	0.23	0.25	0.25	0.27	0.27	0.29	0.29
	400-500	139+	1365+	K35	40	37	0.21	0.23	0.23	0.25	0.25	0.27	0.27
SG/Nodular Cast Iron	120-150	44-50	430-500	K20	168	146	0.51	0.53	0.56	0.58	0.61	0.64	0.66
	150-200	50-70	500-700	K20	159	138	0.48	0.51	0.53	0.56	0.58	0.61	0.63
	200-220	70-77	700-755	K20	141	123	0.46	0.48	0.51	0.53	0.56	0.58	0.60
	220-260	77-90	755-890	K20	124	108	0.43	0.46	0.48	0.51	0.53	0.56	0.58
	260-320	90-104	890-1020	K20	112	97	0.38	0.43	0.46	0.48	0.51	0.53	0.55
Grey/White Iron	120-150	44-50	430-500	K20	175	152	0.53	0.56	0.58	0.61	0.64	0.66	0.69
	150-200	50-70	500-700	K20	168	146	0.51	0.53	0.56	0.58	0.61	0.64	0.66
	200-220	70-77	700-755	K20	151	131	0.48	0.51	0.53	0.56	0.58	0.61	0.64
	220-260	77-90	755-890	K20	130	113	0.46	0.48	0.51	0.53	0.56	0.58	0.61
	260-320	90-104	890-1020	K20	116	102	0.43	0.46	0.48	0.51	0.53	0.56	0.58
Cast Aluminium	30	10	100	K20	351	300	0.48	0.50	0.53	0.56	0.58	0.61	0.64
	180	62	600	TiCN	262	225	0.45	0.48	0.51	0.53	0.56	0.58	0.58
Wrought Aluminium	30	10	100	K20	488	425	0.55	0.58	0.61	0.66	0.68	0.74	0.76
	180	62	600	K20	351	300	0.50	0.55	0.58	0.63	0.66	0.71	0.74
Aluminium Bronze	100-200	38-68	370-670	K20	126	110	0.40	0.42	0.44	0.46	0.48	0.48	0.50
	200-250	68-87	670-855	K20	103	90	0.36	0.38	0.42	0.48	0.46	0.46	0.48
Brass	100	38	370	K20	230	200	0.48	0.53	0.56	0.60	0.63	0.66	0.66
Copper	60	21	200	K20	149	130	0.18	0.20	0.20	0.22	0.25	0.25	0.28

Speed and Feed Recommendation Example: If recommended speed and feed is 61M/min and 0.20 mm/rev for a 3 x diameter or 5 x diameter holder, then the speed and feeds using a 7 x diameter holder in the same application would be 48.8M/min and 0.16mm/rev.

Example: **61 M/min • 0.80 = 48.8 M/min** **0.20 mm/rev • 0.80 = 0.16mm/rev**

GEN3SYS® XT Structural Steel ST Drill Inserts (Metric)

Material	Hardness (BHN)	Speed	FEED (mm/rev)										
			14	15	16	17	18	20	22	24	26	29	32
		AM300 M/min (Mist Coolant)	14.00 to 14.99	15.00 to 15.99	16.00 to 16.99	17.00 to 17.99	18.00 to 19.99	20.00 to 21.99	22.00 to 23.99	24.00 to 25.99	26.00 to 28.99	29.00 to 31.99	32.00 to 35.00
Structural Steel	100-150	107	0.25	0.25	0.30	0.30	0.36	0.38	0.41	0.43	0.46	0.48	0.48
	150-250	91	0.23	0.23	0.25	0.25	0.30	0.36	0.38	0.41	0.43	0.46	0.46
	250-350	79	0.20	0.20	0.23	0.23	0.28	0.30	0.33	0.36	0.38	0.41	0.41

Speed & Feed Multiplier

	Depth of Cut	
	<=1.5xD	>1.5xD
SPEED	See above chart	0.75
FEED	See above chart	0.90

GEN3SYS® XT Structural Steel ST Drill Inserts (Inch)

Material	Hardness (BHN)	Speed	FEED (IPR)										
			14	15	16	17	18	20	22	24	26	29	32
		AM300® SFM (Mist Coolant)	0.5512" to 0.5905"	0.5906" to 0.6298"	0.6299" to 0.6692"	0.6693" to 0.7086"	0.7087" to 0.7873"	0.7874" to 0.8660"	0.8661" to 0.9448"	0.9449" to 1.0235"	1.0236" to 1.1416"	1.1417" to 1.2597"	1.2598" to 1.3780"
Structural Steel	100-150	350	0.010	0.010	0.012	0.012	0.014	0.015	0.016	0.017	0.018	0.019	0.019
	150-250	300	0.009	0.009	0.010	0.010	0.012	0.014	0.015	0.016	0.017	0.018	0.018
	250-350	260	0.008	0.008	0.009	0.009	0.011	0.012	0.013	0.014	0.015	0.016	0.016

Speed & Feed Multiplier

	Depth of Cut	
	<=1.5xD	>1.5xD
SPEED	See above chart	0.75
FEED	See above chart	0.90

NOTE: The above speed and feed recommendations are based on a rigid setup utilizing air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.

NOTE: If drilling dry without coolant, speed must be reduced significantly based on setup, drill depth, and material hardness. Up to 50% speed and feed reduction may be necessary in these types of applications. Contact our Application Engineering Team for assistance.

NOTE: If drilling material thickness of 12.7mm or less, a minimum of 10% reduction in feed is required to minimize material deflection.

Troubleshooting Guide

Setup Condition	1 Accelerated corner wear	2 Barber pole	3 Bell mouth hole	4 Blade chipping	5 Blue chips	6 Build Up Edge (BUE)	7 Chatter	8 Chip packing	9 Chipping of point	10 Damaged or broken tools	11 Excessive margin wear	12 High flank wear	13 Hole lead off	14 Hole out of position	15 Hole out of round	16 Notching of blade	17 Oversize hole	18 Poor hole finish	19 Poor tool life	20 Power spikes - Load meter	21 Retract spiral	22 Step burned	Action required
Worn is mis-aligned spindle (lathe, screw machine, chucker)	1		3				7		9	10	11		13				17	18			21		• Align spindle and turret or tailstock. • Repair spindle. • Spot hole with stub tool of same or greater included angle as GEN3SYS® Drill Insert.
Use of low rigidity machine tools		2	3	4			7		9	10			13	14							21		• Spot hole with stub tool of same or greater included angle as GEN3SYS® Drill Insert. • 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). • Use special holder with wear pads or chrome bearing area to work with drill bushing.
Poor work piece support		2		4			7			10	11				15			18			21		• 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 control).
Flood coolant, low coolant pressure or low coolant volume	1				5	6		8		10		12					17	18	19	20		22	• 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		17	18	19				• Pre-mill (spot face) entry or exit surface to remove interruption. • Spot hole with stub tool of same or greater included angle as GEN3SYS® Drill Insert. • 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							19			22	• Reduce speed. If a step is worn in the blade, calculate SFM at the worn diameter. Reduce this value by 10% and apply this new value to the original tool diameter. • Increase coolant pressure and volume. • Improve coolant condition by use of quality products and regular maintenance.
Poor chip control				4		6				10		12	13			16			19				• 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. • To improve tool life in materials with poor micro-structure try carbide grades. • Reduce feeds. (Caution: Do not reduce feed below threshold of good chip formation).
Poor material micro- structure of foreign particles: (forgings and castings that have not been normalized or annealed, poorly prepared steel, flame cut parts and sand casting).								8		10	11		13				17	18	19	20			• Increase feed to recommended levels. Contact Allied Application Engineering 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			16			19				• 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.