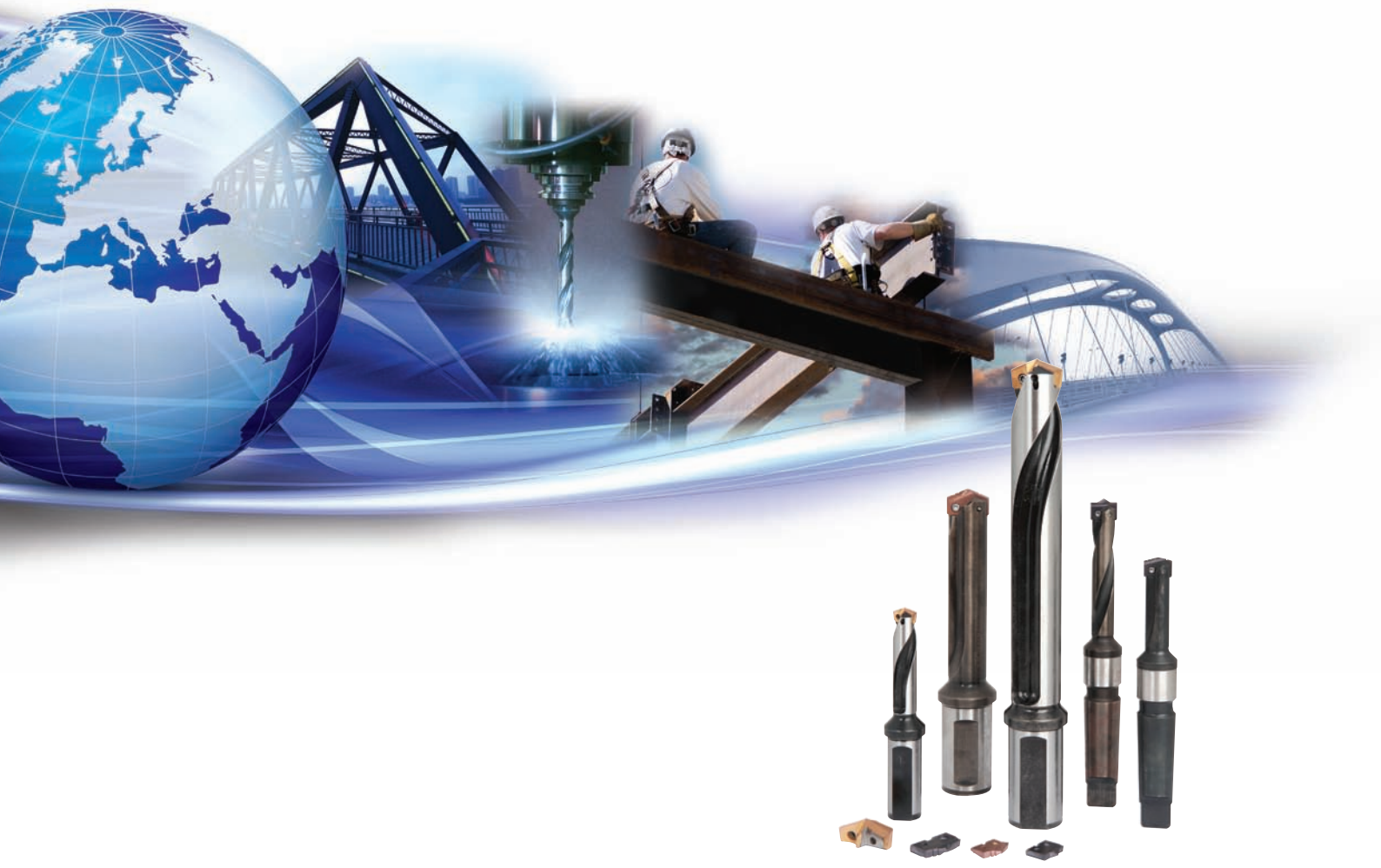
EN

Allied Maxcut
Engineering Co. Limited

Making a difference



Structural Steel

www.alliedmaxcut.com

Allied Maxcut (AMEC®) is the European Headquarters of Allied Machine & Engineering Corporation USA, a global leader in innovative high performance metal cutting technologies and solutions.

With more than 20 years experience of bringing performance improvement and productivity gains to our customers, we have extended the existing Structural Steel Programme with the addition of the new Structural Steel (ST) Geometry to the GEN3SYS® XT high penetration drilling system. Along with the existing Geometries in the T-A® Original range, we are able to provide a highly effective solution for the most demanding of applications.

Working closely with major structural steel machine manufacturers, we are continually developing our tooling solutions to increase productivity and provide cost savings to our customers.

Dedicated body diameters for rigidity and lengths for longer reach, precision ground tooling for less vibration and a range of geometry, grade and coating combinations for better chip control, wear resistance and higher productivity mean improved performance in a wide variety of applications, with oil mist or minimal coolant. Our tooling is easily adaptable to all major structural steel machines and covers all bolt hole applications.

This catalogue shows you the complete range of tooling for your structural steel needs. It is backed up with excellent after-sales technical support, both in the office and ‘on the ground’ with field based sales and application engineers.

If you have an application issue, chances are we have already solved it, somewhere in the world.

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Contents

GEN3SYS XT STRUCTURAL STEEL

GEN2 T-A® T-A® Original StructuralSteel

GEN3SYS® XT Structural Steel

Innovation for improved performance

Industry-specific holder design that maximises strength and rigidity, and exclusive insert geometry to meet the demands of the structural steel industry.

Dedicated body diameters and precision ground tooling provide for less vibration. High Helix flutes and coolant outlets designed around the largest diameter per series help chip evacuation.

The new GEN3SYS® XT ST Geometry inserts are manufactured from carbide and have AMEC's proprietary AM300® coating for superior heat resistance and tool life, making them ideal for use in high speed carbide drilling machines. The dedicated insert grade and geometry cover all bolt hole applications.

GEN3SYS® XT STRUCTURAL STEEL

Features and Benefits

- Holders available in 3, 5, and 7xD
- Available in both metric and imperial shanks
- Through shank coolant
- Provides higher penetration rates
- Designed for high speed carbide drilling machines
- Inserts available in Carbide with AM300® coating for superior heat resistance and tool life
- Dedicated insert grade and geometry for all bolt hole applications
- Regrind service available

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Effective solutions for demanding applications

The versatile T-A® Structural Steel system has a range of dedicated inserts and tool holders, which are designed to provide a highly effective solution for the most demanding of applications.

Dedicated body diameters for rigidity and lengths for longer reach make our tooling easily adaptable to all major structural steel machines. They provide increased stability and less deflection.

A range of geometry, grade and coating combinations provide for better chip control, wear resistance and higher productivity. Our variety of specific insert designs improve hole straightness, diminish thrust needs and reduce exit burrs.

GEN2 T-A®

T-A® Original

StructuralSteel

Features and Benefits

- Dedicated body diameters to increase rigidity
- Easily adapted to all major structural steel machines
- Side and rear coolant for easy adaption
- A dedicated range of insert grades and geometries for all bolt hole applications
- Series 0-3 (inclusive) holders and inserts
- HSS Super Cobalt inserts also available in GEN2 T-A® Carbide C1/K35

AMEC® Services and support

AMEC's success, is not just about the quality of our products and the high performance results they deliver; but also the level of technical support and expertise we provide on a constant basis to all our customers through a range of dedicated services.

Technical

Our technical department is staffed by AMEC® engineers who have years of experience in helping customers meet demanding applications challenges with high performance AMEC® tooling. They are also able to provide technical support on a wide range of industry sectors via our technical helpline, which can help customers save time and money when a solution is needed quickly.

We also have an excellent and unique reference library of technical case studies and cutting data, which is compiled from information and experience gained from our global applications base. The chances are that if you have an application issue or problem we've probably already solved it, somewhere in the world.
Our technical department can be contacted on:
Tel: +44 (0)1384 400 900 - option 4
Fax: +44 (0)1384 408 372
E-mail: engineering@alliedmaxcut.com

External Support

In addition, our field based sales and applications engineers provide a constant 'on-the-ground' support network, helping solve manufacturing problems on site and provide the most effective solutions. The constant drive to improve productivity, reduce manufacturing costs and seek new higher performance systems means that our engineers are always conversant with the latest manufacturing technology to help customers achieve their objectives.
To arrange a visit by one of our engineers, contact our customer service department on:
Tel: +44 (0)1384 400 900 - option 4

Training

AMEC® hold regular technical education seminar (TES) programmes at our dedicated training and education facility in the UK, enabling customers to experience advanced AMEC® hole making solutions and gain more detailed knowledge on their applications. The seminars cover technical data, cutting technology and tool application and benefits of all AMEC® products as well as extensive and detailed on-machine training to demonstrate the tools in action. Details on all our technical education seminar programmes can be obtained from www.alliedmaxcut.com or by calling our technical department.

Online Services

AMEC's website hosts a number of key features one being our online ordering service which simplifies and speeds up the ordering process and can also be used for checking inventory and prices.
Alongside this service, our fast response Insta-Quote™ provides quotations and drawings for special purpose tooling online in a matter of minutes.

All our case studies, product brochures, industry sector information and a wealth of other data is also available through our website which is constantly updated with the latest details to ensure up to date information is always available for download. www.alliedmaxcut.com

Customer Service

The most important parts of our business are our customers. This is why our customer care processes and support operations are vital and integral parts of our commitment to customers.
Sometimes, all that's needed is a helpful voice at the end of a telephone to check an order, answer a query or just point you in the right direction and our fully trained team are all available to help. No matter what your requirement, we'll have someone who can deal with your question quickly and efficiently.
Our dedicated customer service department can be contacted on:
Tel: +44 (0)1384 400 900 - option 3
Fax: +44 (0)1384 400 105
E-mail: enquiries@alliedmaxcut.com

GEN3SYS® XT Structural Steel

Specific holder design that maximises strength and rigidity and exclusive drill geometry to meet the demands of the structural industry.

Features and Benefits

- Holders available in 3, 5, and 7xD
- Available in both metric and imperial shanks
- Through shank coolant
- Provides higher penetration rates
- Designed for high speed carbide drilling machines
- Inserts available in Carbide with AM300® coating for superior heat resistance and tool life
- Dedicated insert grade and geometry for all bolt hole applications
- Regrind service available

CONTENTS

GEN3SYS® XT Structural Steel

High penetration drilling

The GEN3SYS® XT Structural Steel Programme raises the versatility of this tooling range beyond the initial design to provide high speed production machining.

The new, industry-specific holder for structural steel maximises strength and rigidity beyond the initial design as the 'ultimate' high performance drilling solution in comparison with the capabilities of the T-A® system. Holders are available with through shank coolant. The exclusive Structural Steel (ST) Insert Geometry has been developed specifically to meet the demands of the structural steel industry.

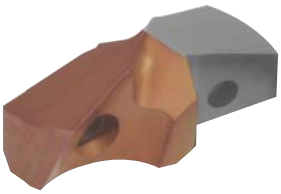
Holders

GEN3SYS XT STRUCTURAL STEEL

Patented design with a combination helical and straight flute configuration which maximises strength and rigidity and also aids efficient chip evacuation in vertical applications.

Available in 14-32 Series

Grade



C2 / K20 Carbide GEN3SYS XT STRUCTURAL STEEL

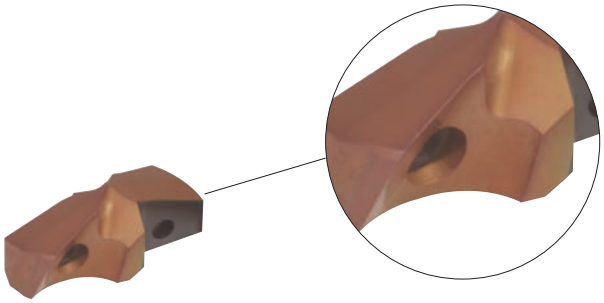
Excellent choice for drilling Structural Steel materials. Please refer to technical section.

Insert Coating

AM300® GEN3SYS XT STRUCTURAL STEEL

- Increased heat resistance
- Provides superior tool life at high penetration rates
- Colour Light Bronze

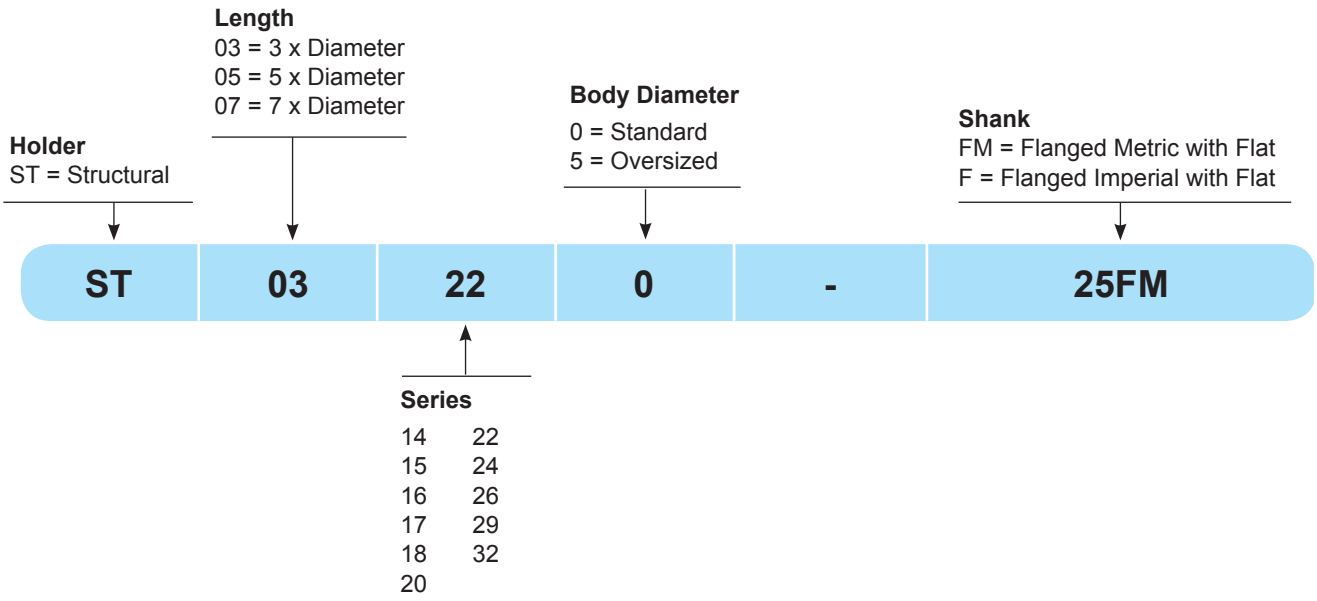
Geometry



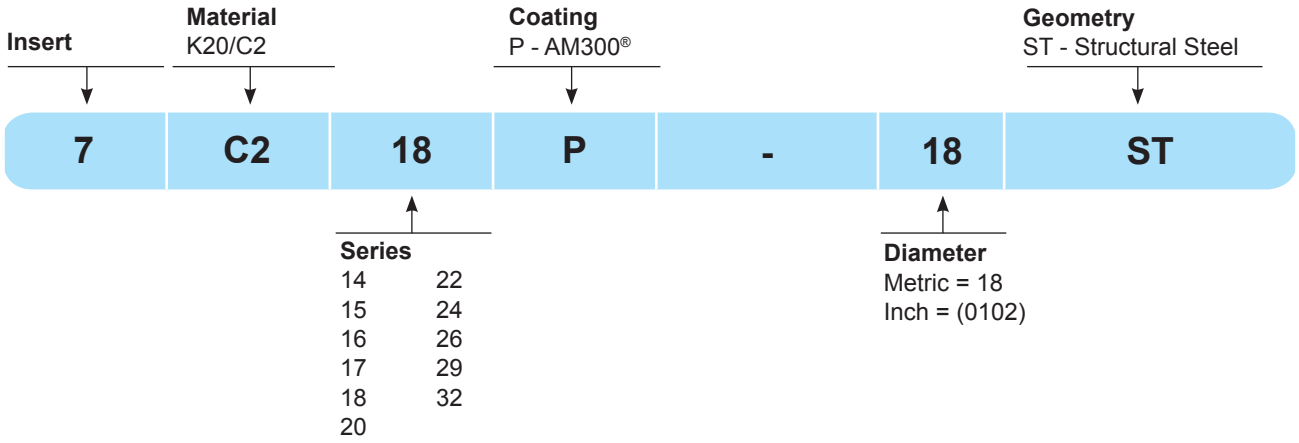
Structural Steel - ST GEN3SYS XT STRUCTURAL STEEL

- Provides higher penetration
- Designed for high speed carbide drilling machines

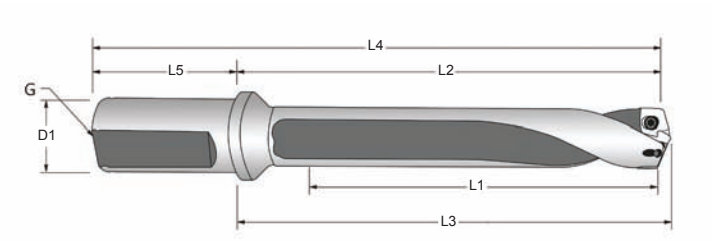
How to identify GEN3SYS XT® Structural Steel Holders



How to identify GEN3SYS XT® Structural Steel Inserts



GEN3SYS® XT Structural Steel Holders



3xD Holders

Series	Part	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	Stk.
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"	●

5xD Holders

Series	Part	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	Stk.
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"	●

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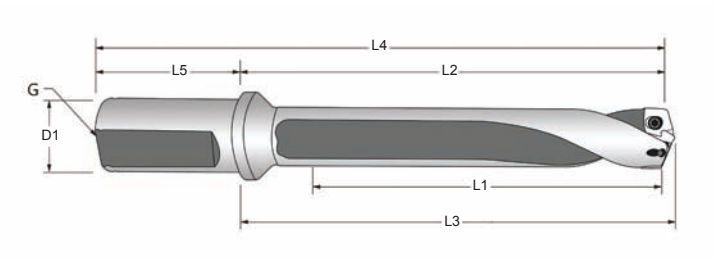
GEN3SYS® XT Structural Steel Holders



GEN3SYS XT STRUCTURAL STEEL

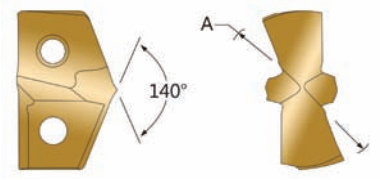
7xD Holders

Series	Part	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 Tapa	Stk.
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"	●

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

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.

GEN3SYS® XT Structural Steel Inserts



GEN3SYS XT STRUCTURAL STEEL

Inserts

Series	Material	A (Diameter)		GEN3SYS®XT	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	○
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	○
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

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

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GEN3SYS® XT Structural Steel 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 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

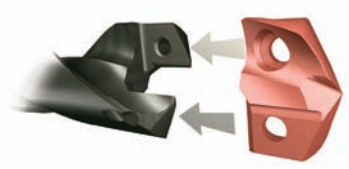
NOTE: The above speed and feed recommendations are based on a rigid setup utilizing air mist through tool coolant. Speed may be increased up to 50% if using high pressure flood or through coolant.

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.

GEN3SYS® XT Structural Steel Tool Assembly

Tool Assembly



1. Place the GEN3SYS® XT Structural Steel Drill Insert into the precision ground locating pocket on the GEN3SYS® XT Structural Steel 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.
See page 29.

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	85 - 200 BHN	5.45
	200 - 275 BHN	6.48
	275 - 375 BHN	6.89
	375 - 425 BHN	7.93

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T-A® & GEN2 T-A® Structural Steel

The versatile T-A® Structural Steel system has a range of dedicated inserts and tool holders, which are designed to provide a highly effective solution for the most demanding of applications.

Features and Benefits

- Dedicated body diameters to increase rigidity
- Easily adapted to all major structural steel machines
- Side and rear coolant for easy adaption
- A dedicated range of insert grades and geometries for all bolt hole applications
- Series 0-3 (inclusive) holders and inserts
- HSS Super Cobalt inserts also available in GEN2 T-A® Carbide C1/K35

CONTENTS

T-A® & GEN2 T-A® Structural Steel

Increased productivity with high accuracy

Grade

HSS Super Cobalt

Particularly suited for good to rigid machining applications, primarily used for or general use when the M/min surface speed needs to be increased. For use in material hardness up to 350 BHN 121kg.

K35 Carbide

Excellent choice for drilling free machining steel, low/medium carbon steels, alloy steels, high strength steels, tool steels and hardened steels.

Insert Coating

AM200®

- First choice for increased 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
- Colour Copper / Bronze

TiAlN

- Excellent choice for wear resistance over high surface speeds
- Excellent oxidation resistance
- Maximum working temperature 800°C
- Hardness HV 3000
- Colour Violet/Grey

Geometry

GEN2 T-A®

- Substantial increases in penetration rates and tool life
- Improved centring
- Smoother break-out on through holes
- Increased drill stability
- Consistent chip formation

High Elasticity - HE

- Excellent chip formation in materials with very high elasticity/ductility, extremely poor chip forming characteristics.
- Effective in lower powered machines
- Material example: Low carbon steel (not suitable for stainless steel)
- Available as a non-stock standard, Y - 4 series inclusive
- Delivery 3 weeks - as a non-stock standard

Structural Steel - SS

- 150° point angle for structural materials above 6mm thick reduces exit burrs
- Notch point design reduces bell mouth
- Available in AM200® and TiAlN coating which improves performance in oil mist applications
- Available as stock standard

Thin Wall - TW

- Designed for thin wall material up to 6mm thick
- Excellent hole tolerance and hole quality
- Geometry allows for increased speeds and feeds which in turn increases productivity
- HSS Super Cobalt provides extraordinary toughness and wear resistance
- Available in AM200® and TiAlN coating which provides excellent heat resistance and improved tool life
- Available as stock standard

Notch Point® - NP

- For material greater than 6mm thick
- Significant reduction in bell mouthing
- Available in Super Cobalt
- Available in TiAlN or AM200® coating for better heat resistance and increased tool life

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T-A® & GEN2 T-A® Structural Steel

How to order information

How to identify T-A® Holders

2	20	00	S	-	20FM

Holder

Length
20 - Short
40 - Standard
50 - Extended

Series
Z0 - Z
00 - 0
05 - 0.5
10 - 1
15 - 1.5
20 - 2
25 - 2.5
30 - 3

Flute Style
S - Straight
H - Helical

Shank Size
20FM - 20mm Flanged Shank with Flat
25FM - 25mm Flanged Shank with Flat
32FM - 32mm Flanged Shank with Flat
40FM - 40mm Flanged Shank with Flat

How to identify T-A® Structural Steel Holders

2	40	20	S	-	004	IS	060

Holder

Length
20 - Short
40 - Standard
50 - Extended
60 - Long

Series
00 - 0
05 - 0.5
10 - 1
15 - 1.5
20 - 2
25 - 2.5
30 - 3

Flute Style
H - Helical
S - Straight

Shank Designator
003 - 3MT
004 - 4MT

Shank Code
IS - Imperial Morse Taper Structual Steel Holder

Minimum Insert ø
In increments of 1/64 of an inch

How to identify GEN2 T-A® Inserts

4	5	3	H	-	0115	-	HE

Insert

Material
5 - Super Cobalt
C1 - Carbide (K35)

Series
0 2
1 3

Coating
H - AM200®

Diameter
Inch - 0017
Metric - 13

Geometry
- Standard
HE - High Efficiency

How to identify T-A® Structural Steel Inserts

1	5	2	A	-	0112	-	SS

Insert

Material
5 - Super Cobalt

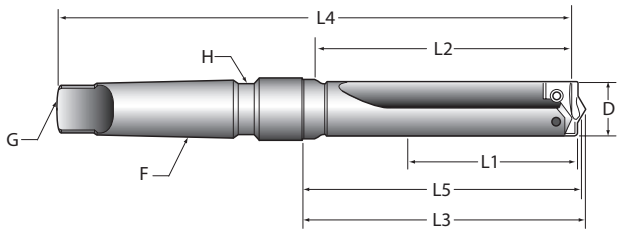
Series
0 2
1 3

Coating
H - AM200®
A - TiAlN

Diameter
Metric - 34.93
Inch - 0112

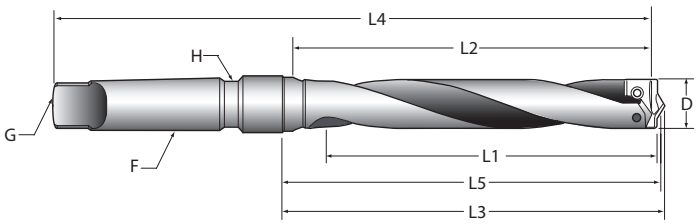
Geometry
SS - Structural Steel
TW - Thin Wall
NP - Notch Point

T-A® Structural Steel Holders



T-A Original Short Length - Taper Shank Holders - Straight Flute

Series	Part Number	D	L1	L2	L3	L5*	L4	F	G	H	Stk.
		Min. Drill Dia. mm	Max. Drill Depth. mm	Body Length (mm)	Ref Length mm	Ref Length mm	Overall Length mm	MT	Coolant Inlet		
									Through Tang Coolant	Through Shank Coolant	
0	22000S-003IS036	14	35	56	64.7	63.1	154	3	TTC	TSC	●
	22005S-003IS040	16	35	56	64.7	63.1	154	3	TTC	TSC	●
	22005S-003IS044	17.46	35	56	64.7	63.1	154	3	TTC	TSC	○
1	22010S-003IS045	18	70	89	108.4	16.8	197	3	TTC	TSC	○
	22010S-004IS045	18	70	98	109.9	108.3	222	4	TTC	TSC	●
	22010S-003IS052	21	70	98	108.4	106.8	197	3	TTC	TSC	○
	22010S-004IS052	21	70	98	109.9	108.3	222	4	TTC	TSC	○
	22015S-003IS056	22	70	98	108.4	106.8	197	3	TTC	TSC	○
	22015S-004IS056	22	70	98	109.9	108.3	222	4	TTC	TSC	●
	22015S-003IS060	24	70	98	108.4	106.8	197	3	TTC	TSC	○
	22015S-004IS060	24	70	98	108.4	106.8	197	4	TTC	TSC	●
2	22020S-004IS100	26	86	114	126.6	124.2	238	4	TTC	TSC	●
	22025S-004IS112	31-33	86	114	126.6	124.2	238	4	TTC	TSC	●
3	22030S-004IS126	39	121	152	165.1	163.5	276	4	TTC	TSC	●



T-A Original Standard Length - Taper Shank Holders - Helical Flute

Series	Part Number	D	L1	L2	L3	L5*	L4	F	G	H	Stk.
		Min. Drill Dia. mm	Max. Drill Depth. mm	Body Length (mm)	Ref Length mm	Ref Length mm	Overall Length mm	MT	Coolant Inlet		
									Through Tang Coolant	Through Shank Coolant	
0	24000H-003IS036	14	64	84	93.3	91.7	183	3	TTC	TSC	●
	24005H-003IS040	16	64	84	93.3	91.7	183	3	TTC	TSC	●
	24005H-003IS044	17.46	64	84	93.3	91.7	183	3	TTC	TSC	○
1	24010H-003IS045	18	121	149	159.2	159.6	248	3	TTC	TSC	○
	24010H-004IS045	18	121	149	160.8	159.2	273	4	TTC	TSC	●
	24010H-003IS052	21	121	149	159.2	157.6	248	3	TTC	TSC	○
	24010H-004IS052	21	121	149	160.8	159.2	273	4	TTC	TSC	○
	24015H-003IS056	22	121	149	159.2	157.6	248	3	TTC	TSC	○
	24015H-004IS056	22	121	149	160.8	159.2	273	4	TTC	TSC	●
	24015H-003IS060	24	121	149	159.2	157.6	248	3	TTC	TSC	○
	24015H-004IS060	24	121	149	163.8	159.2	273	4	TTC	TSC	●
2	24020H-004IS100	26	137	165	177.4	175.0	289	4	TTC	TSC	●
	24025H-004IS112	31	137	165	177.4	175.0	289	4	TTC	TSC	●
3	24030H-004IS126	35	165	197	209.6	207.9	321	4	TTC	TSC	●

*Note: Dimension if using a Structural Steel Holder with GEN2 & Structural Steel T-A Drill Insert Geometry

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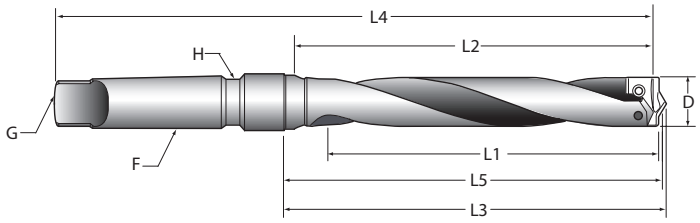
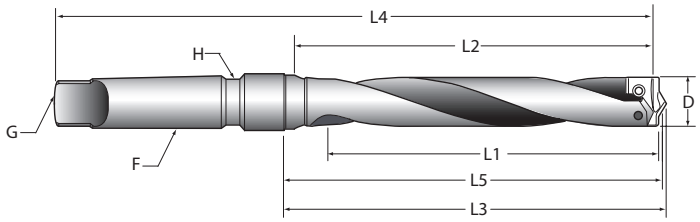


Extended Length - Taper Shank Holders - Helical Flute

Series	Part Number	D	L1	L2	L3	L5*	L4	F	G	H	Stk.
		Min. Drill Dia. mm	Max. Drill Depth. mm	Body Length (mm)	Ref Length mm	Ref Length mm	Overall Length mm	MT	Coolant Inlet		
									Through Tang Coolant	Through Shank Coolant	
0	⚠25000H-003IS036	14	165	240	248.8	243.7	338	3	TTC	TSC	●
	⚠25005H-003IS044	17.46	165	240	248.8	243.7	332	3	TTC	TSC	●
1	⚠25010H-003IS045	18	165	237	247.3	241.3	336	3	TTC	TSC	○
	⚠25010H-003IS052	22	165	237	247.3	241.3	336	3	TTC	TSC	○
	⚠25010H-004IS052	22	165	236	247.3	245.7	360	4	TTC	TSC	●
	⚠25015H-003IS060	24	165	237	247.3	240.5	360	3	TTC	TSC	○
	⚠25015H-004IS060	24	165	236	247.3	245.7	360	4	TTC	TSC	●
2	⚠25020H-003IS100	26	165	234	247.7	240.1	336	3	TTC	TSC	○
	⚠25020H-004IS100	26	165	234	247.7	246.0	360	4	TTC	TSC	●



Long Length - Taper Shank Holders - Helical Flute

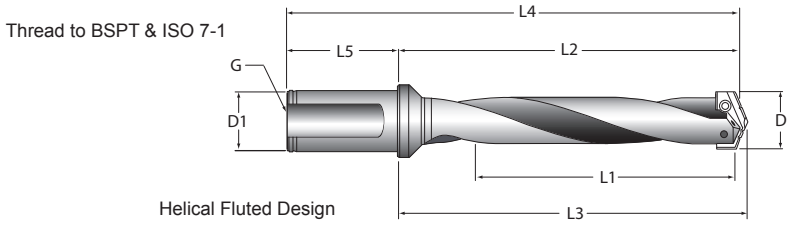
Series	Part Number	D	L1	L2	L3	L5*	L4	F	G	H	Stk.
		Min. Drill Dia. mm	Max. Drill Depth. mm	Body Length (mm)	Ref Length mm	Ref Length mm	Overall Length mm	MT	Coolant Inlet		
									Through Tang Coolant	Through Shank Coolant	
1	⚠26010H-004IS052	22	165	401	412.4	410.8	525	4	TTC	TSC	●
	⚠26015H-004IS060	24	165	401	413.1	411.6	525	4	TTC	TSC	●
2	⚠26020H-004IS100	26	165	406	418.3	416.3	530	4	TTC	TSC	●

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

⚠WARNING Refer to page 27 for T-A® Drilling Guidelines in Technical Reference section of catalogue.
Visit *www.alliedmaxcut.com* for the most up-to-date information and procedures.
Technical assistance is available for your specific applications through our Application Engineering Team.

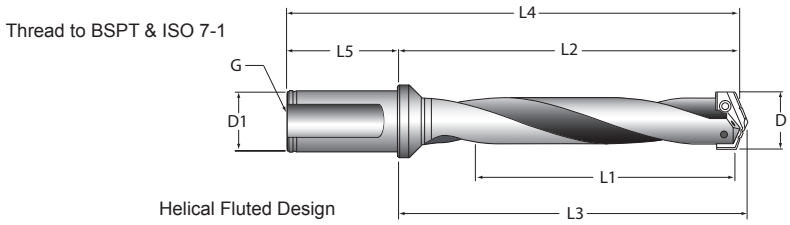
*Note: Dimension if using a Structural Steel Holder with GEN2 & Structural Steel T-A Drill Insert Geometry

T-A® Holders



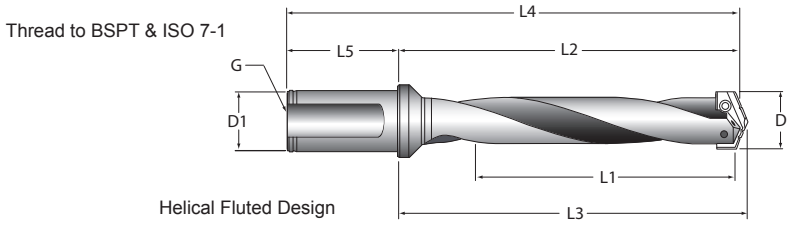
Short Length - Flanged Straight Shank Holders

Series	Part Number	Flute Type	D Drill Range D (mm)	L1 Max. Drill Depth. mm	L2 Body Length (mm)	L3 Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	G Pipe Tap	Stk.
z	220Z0S-20FM	Straight	11.50-12.80	32	61.1	63.5	111.1	50	20.0	1/8"	●
0	22000S-20FM	Straight	13.00-17.50	35	63.5	66.3	113.5	20	20.0	1/8"	●
	22005S-20FM	Straight	15.50-17.50	35	63.5	66.3	113.5	50	20.0	1/8"	●
1	22010S-25FM	Straight	18.00-24.00	67	107.2	110.7	163.2	56	25.0	1/8"	●
	22015S-25FM	Straight	22.00-24.00	67	107.2	110.7	163.2	56	25.0	1/8"	●
2	22020S-32FM	Straight	24.50-35.00	86	128.6	132.2	188.6	60	32.0	1/4"	●
	22025S-32FM	Straight	30.00-35.00	86	128.6	132.2	188.6	60	32.0	1/4"	●
3	22030S-40FM	Straight	36.00-47.00	121	173	177.8	243	70	40.0	1/4"	●



Standard Length - Flanged Straight Shank Holders

Series	Part Number	Flute Type	D Drill Range D (mm)	L1 Max. Drill Depth. mm	L2 Body Length (mm)	L3 Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	G Pipe Tap	Stk.
z	240Z0H-20FM	Helical	11.50-12.80	60	89.7	92.1	139.7	50	20.0	1/8"	●
0	24000S-20FM	Straight	13.00-17.50	64	92.1	94.9	142.1	50	20.0	1/8"	●
	24000H-20FM	Helical	13.00-17.50	64	92.1	94.9	142.1	50	20.0	1/8"	●
	24005H-20FM	Helical	15.50-17.50	64	92.1	94.9	142.1	50	20.0	1/8"	●
1	24010S-25FM	Straight	18.00-24.00	168	205.6	209.2	261.6	56	25.0	1/8"	●
	24015S-25FM	Straight	22.00-24.00	168	205.6	209.2	261.6	56	25.0	1/8"	●
	24010H-25FM	Helical	18.00-24.00	168	205.6	209.2	261.6	56	25.0	1/8"	●
	24015H-25FM	Helical	22.00-24.00	168	205.6	209.2	261.6	56	25.0	1/8"	●
2	24020S-32FM	Straight	24.50-35.00	187	230.2	233.8	290.2	60	32.0	1/4"	●
	24020H-32FM	Helical	24.50-35.00	187	230.2	233.8	290.2	60	32.0	1/4"	●
	24025H-32FM	Helical	30.00-35.00	187	230.2	233.8	290.2	60	32.0	1/4"	●
3	24030H-40FM	Helical	36.00-47.00	210	261.9	266.7	331.9	70	40.0	1/4"	●



Extended Length - Flanged Straight Shank Holders

Series	Part Number	Flute Type	D Drill Range D (mm)	L1 Max. Drill Depth. mm	L2 Body Length (mm)	L3 Ref Length (mm)	L4 Overall Length (mm)	L5 Shank Length (mm)	D1 Shank Diameter (mm)	G Pipe Tap	Stk.
z	⚠ 250Z0H-20FM	Helical	11.50-12.80	111	140.5	142.9	190.5	50	20.0	1/8"	●
0	⚠ 25000H-20FM	Helical	13.00-17.50	114	142.9	145.7	192.9	50	20.0	1/8"	●
	⚠ 25005H-20FM	Helical	15.50-17.50	114	142.9	145.7	192.9	50	20.0	1/8"	●
1	⚠ 25010H-25FM	Helical	18.00-24.00	270	307.2	310.8	363.2	56	25.0	1/8"	●
	⚠ 25015H-25FM	Helical	22.00-24.00	270	307.2	310.8	363.2	56	25.0	1/8"	●
2	⚠ 25020H-32FM	Helical	24.50-35.00	289	331.8	335.4	391.8	60	32.0	1/4"	●
	⚠ 25025H-32FM	Helical	30.00-35.00	289	331.8	335.4	391.8	60	32.0	1/4"	●
3	⚠ 25030S-40FM	Straight	36.00-47.00	349.3	401.6	406.4	471.6	70	40.0	1/4"	●

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

⚠WARNING Refer to page 27 for T-A® Drilling Guidelines in Technical Reference section of catalogue.
Visit *www.alliedmaxcut.com* for the most up-to-date information and procedures.
Technical assistance is available for your specific applications through our Application Engineering Team.

GEN2 T-A® Inserts

GEN2 T-A® Standard with AM200® Coating

Series	ø mm	ø Inch	Item Number, Coating and Availability			
			HSS Super Cobalt	Stk.	C1/K35 Carbide	Stk.
Z	12.00	0.4724	45ZH-12	●	4C1ZH-12	●
0	14.00	0.5512	450H-14	●	4C10H-14	●
	14.29	0.5625	450H-0018	○	4C10H-0018	○
	15.88	0.6250	450H-0020	○	4C10H-0020	○
	16.00	0.6299	450H-16	●	4C10H-16	●
	17.46	0.6875	450H-0022	○	4C10H-0022	○
1	18.00	0.7087	451H-18	●	4C11H-18	●
	20.64	0.8125	451H-0026	○	4C11H-0026	○
	21.00	0.8268	451H-21	●	4C11H-21	●
	22.00	0.8661	451H-22	●	4C11H-22	●
	22.23	0.8750	451H-0028	○	4C11H-0028	○
	23.81	0.9375	451H-0030	○	4C11H-0030	○
	24.00	0.9449	451H-24	●	4C11H-24	●
2	25.40	1.0000	452H-0100	○	4C12H-0100	○
	26.00	1.0236	452H-26	●	4C12H-26	●
	26.99	1.0625	452H-0102	○	4C12H-0102	○
	27.00	1.0630	452H-27	●	4C12H-27	●
	28.58	1.1250	452H-0104	○	4C12H-0104	○
	30.16	1.1875	452H-0106	○	4C12H-0106	○
	31.00	1.2205	452H-31	●	4C12H-31	●
	31.75	1.2500	452H-0108	○	4C12H-0108	○
	33.00	1.2992	452H-33	●	4C12H-33	●
	33.34	1.3125	452H-0110	○	4C12H-0110	○
	34.93	1.3750	452H-0112	○	4C12H-0112	○
3	36.51	1.4375	453H-0114	○	-	-
	38.10	1.5000	453H-0116	○	-	-
	39.00	1.5354	453H-39	●	-	-
	39.69	1.5625	453H-0118	○	-	-

Series Z-2 supplied in packs of 2
Series 3 supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

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GEN2 T-A® High Elasticity Inserts

GEN2 T-A® Standard with AM200® Coating

Series	ø mm	ø Inch	Item Number, Coating and Availability			
			HSS Super Cobalt	Stk.	C1/K35 Carbide	Stk.
Z	12.00	0.4724	45ZH-12-HE	●	4C1ZH-12-HE	●
0	14.00	0.5512	450H-14-HE	●	4C10H-14-HE	●
	14.29	0.5625	450H-0018-HE	○	4C10H-0018-HE	○
	15.88	0.6250	450H-0020-HE	○	4C10H-0020-HE	○
	16.00	0.6299	450H-16-HE	●	4C10H-16-HE	●
	17.46	0.6875	450H-0022-HE	○	4C10H-0022-HE	○
1	18.00	0.7087	451H-18-HE	●	4C11H-18-HE	●
	20.64	0.8125	451H-0026-HE	○	4C11H-0026-HE	○
	21.00	0.8268	451H-21-HE	●	4C11H-21-HE	●
	22.00	0.8661	451H-22-HE	●	4C11H-22-HE	●
	22.23	0.8750	451H-0028-HE	○	4C11H-0028-HE	○
	23.81	0.9375	451H-0030-HE	○	4C11H-0030-HE	○
	24.00	0.9449	451H-24-HE	●	4C11H-24-HE	●
2	25.40	1.0000	452H-0100-HE	○	4C12H-0100-HE	○
	26.00	1.0236	452H-26-HE	●	4C12H-26-HE	●
	26.99	1.0625	452H-0102-HE	○	4C12H-0102-HE	○
	27.00	1.0630	452H-27-HE	●	4C12H-27-HE	●
	28.58	1.1250	452H-0104-HE	○	4C12H-0104-HE	○
	30.16	1.1875	452H-0106-HE	○	4C12H-0106-HE	○
	31.00	1.2205	452H-31-HE	●	4C12H-31-HE	●
	31.75	1.2500	452H-0108-HE	○	4C12H-0108-HE	○
	33.00	1.2992	452H-33-HE	●	4C12H-33-HE	●
	33.34	1.3125	452H-0110-HE	○	4C12H-0110-HE	○
	34.93	1.3750	452H-0112-HE	○	4C12H-0112-HE	○
3	36.51	1.4375	453H-0114-HE	○	-	-
	38.10	1.5000	453H-0116-HE	○	-	-
	39.00	1.5354	453H-39-HE	●	-	-
	39.69	1.5625	453H-0118-HE	○	-	-

Series Z-2 supplied in packs of 2
Series 3 supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

T-A® Structural Steel Inserts

Structural Steel HSS Super Cobalt Inserts

Series	ø mm	ø Inch	Item Number, Coating and Availability			
			AM200	Stk.	TiAlN	Stk.
0	14.00	0.5512	150H-14-SS	●	150A-14-SS	●
	14.29	0.5625	150H-0018-SS	○	150A-0018-SS	○
	15.88	0.6250	150H-0020-SS	○	150A-0020-SS	○
	16.00	0.6299	150H-16-SS	●	150A-16-SS	●
	17.46	0.6875	150H-0022-SS	○	150A-0022-SS	○
1	18.00	0.7087	151H-18-SS	●	151A-18-SS	●
	20.64	0.8125	151H-0026-SS	○	151A-0026-SS	○
	21.00	0.8268	151H-21-SS	●	-	-
	22.00	0.8661	151H-22-SS	●	151A-22-SS	●
	22.23	0.8750	151H-0028-SS	○	151A-0028-SS	○
	23.81	0.9375	151H-0030-SS	○	151A-0030-SS	○
	24.00	0.9449	151H-24-SS	●	151A-24-SS	●
2	25.40	1.0000	152H-0100-SS	○	152A-0100-SS	○
	26.00	1.0236	152H-26-SS	●	152A-26-SS	●
	26.99	1.0625	152H-0102-SS	○	152A-0102-SS	○
	27.00	1.0630	152H-27-SS	●	152A-27-SS	●
	28.58	1.1250	152H-0104-SS	○	152A-0104-SS	○
	30.16	1.1875	152H-0106-SS	○	152A-0106-SS	○
	31.00	1.2205	152H-31-SS	●	152A-31-SS	●
	31.75	1.2500	152H-0108-SS	○	152A-0108-SS	○
	33.00	1.2992	152H-33-SS	●	152A-33-SS	●
	33.34	1.3125	152H-0110-SS	○	152A-0110-SS	○
	34.93	1.3750	152H-0112-SS	○	152A-0112-SS	○
3	36.51	1.4375	153H-0114-SS	○	153A-0114-SS	○
	38.10	1.5000	153H-0116-SS	○	153A-0116-SS	○
	39.00	1.5354	153H-39-SS	●	153A-39-SS	●
	39.69	1.5625	153H-0118-SS	○	153A-0118-SS	○

Non-listed sizes are quoted items

Series Z-2 supplied in packs of 2
Series 3 supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

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Thin Wall HSS Super Cobalt Inserts

Series	Ø mm	ø Inch	Item Number, Coating and Availability			
			AM200	Stk.	TiAlN	Stk.
0	14.00	0.5512	150H-14-TW	●	150A-14-TW	●
	14.29	0.5625	150H-0018-TW	○	150A-0018-TW	○
	15.88	0.6250	150H-0020-TW	○	150A-0020-TW	○
	16.00	0.6299	150H-16-TW	●	150A-16-TW	●
	17.46	0.6875	150H-0022-TW	○	150A-0022-TW	○
1	18.00	0.7087	151H-18-TW	●	151A-18-TW	●
	20.64	0.8125	151H-0026-TW	○	151A-0026-TW	○
	21.00	0.8268	151H-21-TW	●	-	-
	22.00	0.8661	151H-22-TW	●	151A-22-TW	●
	22.23	0.8750	151H-0028-TW	○	151A-0028-TW	○
	23.81	0.9375	151H-0030-TW	○	151A-0030-TW	○
	24.00	0.9449	151H-24-TW	●	151A-24-TW	●
2	25.40	1.0000	152H-0100-TW	○	152A-0100-TW	○
	26.00	1.0236	152H-26-TW	●	152A-26-TW	●
	26.99	1.0625	152H0102-TW	○	152A0102-TW	○
	27.00	1.0630	152H-27-TW	●	152A-27-TW	●
	28.58	1.1250	152H-0104-TW	○	152A-0104-TW	○
	30.16	1.1875	152H-0106-TW	○	152A-0106-TW	○
	31.00	1.2205	152H-31-TW	●	152A-31-TW	●
	31.75	1.2500	152H-0108-TW	○	152A-0108-TW	○
	33.00	1.2992	152H-33-TW	●	152A-33-TW	●
	33.34	1.3125	152H-0110-TW	○	152A-0110-TW	○
	34.93	1.3750	152H-0112-TW	○	152A-0112-TW	○
3	36.51	1.4375	153H-0114-TW	○	153A-0114-TW	○
	38.10	1.5000	153H-0116-TW	○	153A-0116-TW	○
	39.00	1.5354	153H-39-TW	●	153A-39-TW	●
	39.69	1.5625	153H-0118-TW	○	153A-0118-TW	○

Non-listed sizes are quoted items

Series Z-2 supplied in packs of 2
Series 3 supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

T-A® Notch Point Inserts

T-A® Original Notch Point HSS Super Cobalt Inserts

Series	ø mm	ø Inch	Item Number, Coating and Availability			
			AM200	Stk.	TiAlN	Stk.
0	14.00	0.5512	150H-14-NP	●	150A-14-NP	●
	14.29	0.5625	150H-0018-NP	○	150A-0018-NP	○
	15.88	0.6250	150H-0020-NP	○	150A-0020-NP	○
	16.00	0.6299	150H-16-NP	●	150A-16-NP	●
	17.46	0.6875	150H-0022-NP	○	150A-0022-NP	○
1	18.00	0.7087	151H-18-NP	●	151A-18-NP	●
	20.64	0.8125	151H-0026-NP	○	151A-0026-NP	○
	21.00	0.8268	151H-21-NP	●	-	-
	22.00	0.8661	151H-22-NP	●	151A-22-NP	●
	22.23	0.8750	151H-0028-NP	○	151A-0028-NP	○
	23.81	0.9375	151H-0030-NP	○	151A-0030-NP	○
	24.00	0.9449	151H-24-NP	●	151A-24-NP	●
2	25.40	1.0000	152H-0100-NP	○	152A-0100-NP	○
	26.00	1.0236	152H-26-NP	●	152A-26-NP	●
	26.99	1.0625	152H-0102-NP	○	152A-0102-NP	○
	27.00	1.0630	152H-27-NP	●	152A-27-NP	●
	28.58	1.1250	152H-0104-NP	○	152A-0104-NP	○
	30.16	1.1875	152H-0106-NP	○	152A-0106-NP	○
	31.00	1.2205	152H-31-NP	●	152A-31-NP	●
	31.75	1.2500	152H-0108-NP	○	152A-0108-NP	○
	33.00	1.2992	152H-33-NP	●	152A-33-NP	●
	33.34	1.3125	152H-0110-NP	○	152A-0110-NP	○
	34.93	1.3750	152H-0112-NP	○	152A-0112-NP	○
3	36.51	1.4375	153H-0114-NP	○	153A-0114-NP	○
	38.10	1.5000	153H-0116-NP	○	153A-0116-NP	○
	39.00	1.5354	153H-39-NP	●	153A-39-NP	●
	39.69	1.5625	153H-0118-NP	○	153A-0118-NP	○

Non-listed sizes are 15 days delivery, non-stock standards.

Series Z-2 supplied in packs of 2
Series 3 supplied in packs of 1.

Stk. - Stock Availability.
● Stock Item.
○ Stocked in limited quantities, advanced planning is recommended.

Any non-standard size available.

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Super Cobalt Thin Wall Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-TW TiAlN M/min (Mist Coolant)	-TW AM200® M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel	100-150	34	39	0.30	0.45	0.48	0.50
	150-250	31	35	0.28	0.40	0.43	0.48
	250-350	28	32	0.25	0.36	0.40	0.45

Super Cobalt Notch Point® and 150º Structural Steel Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-NP & -SS TiAlN M/min (Mist Coolant)	-NP & -SS AM200® M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel	100-150	34	39	0.25	0.30	0.36	0.45
	150-250	31	35	0.23	0.28	0.30	0.40
	250-350	28	32	0.20	0.25	0.28	0.36

Super Cobalt GEN2 T-A Drill Inserts

Material	Hardness (BHN)	SPEED	FEED (mm/rev)			
		AM200® M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel	100-150	39	0.25	0.30	0.36	0.46
	150-250	35	0.23	0.28	0.30	0.40
	250-350	32	0.20	0.25	0.28	0.36

C1 Carbide GEN2 T-A Drill Inserts

Material	Hardness (BHN)	SPEED	FEED (mm/rev)			
		AM200® M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel	100-150	50	0.20	0.28	0.38	0.43
	150-250	47	0.15	0.25	0.33	0.38
	250-350	43	0.13	0.23	0.30	0.33

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

T-A® & GEN2 T-A® Guidelines

T-A® Insert System Guidelines for Use

- Select the shortest holder possible for the application
- Use our Holemaking catalogue from page 90 'Recommended Cutting Data' for guidance in selecting correct insert grade, speed and feed information. These cutting parameters are starting conditions only and make no allowance for machine or component rigidity.
  For more detailed application guidelines, use our 'Electronic Product Selector' to obtain:
  - Recommended grade of insert.
  - Recommended cutting speed.
  - Recommended cutting feed.
  - Minimum coolant requirements.
  - Machine power / thrust requirements
- Ensure the T-A® holder is held securely and is within 0.02/0.07mm of centreline
- The T-A® insert should be installed in the slot of the holder using the Torx Screws provided which should be tightened to the values listed on page 29. The holder slot should be clean and free from dirt or debris.
- Check the insert outer diameter is a minimum 0.3mm larger than the holder body diameter.
- When setting up new applications, check coolant flows adequately through the tool before commencing machining.

It is best practice to:

- Drill a short hole 1 x diameter deep initially.
- The chips produced should be short in length, self coloured, not straw or blue.
- Measure the hole produced to check that it is to the desired tolerance.
- If all is correct, continue to machine the remainder of the hole.
- Ensure the drilling process is quiet and smooth with no chip packing.
- If chip packing is occurring, stop the drill and refer to the 'Problems and Solutions' guide on Allied Maxcut Holemaking Catalogue page 104.

Extended & Long Length holders

It is best practice to:

- Establish a pilot hole using the same diameter T-A® Drill Insert in a short holder to a depth of 2 - 3 diameters deep.
- Enter the pilot hole with the extended length T-A® holders and Drill Insert with the spindle stationery or at low RPM (10 - 20).
- Increase speed and feed to recommended data in table, ensuring chips are short and are being evacuated by coolant throughout the length of the hole. If chip control is not obtained, please contact AMEC for assistance.
- At the end of the drilling cycle do not remove the holder from the hole whilst at full RPM, stop spindle or reduce to low RPM (10 - 20).

Refer to page 27 for T-A® drilling guidelines.

Note: Carbide inserts should not be used in Extended or Long Length holders without consulting Allied Maxcut.

Tool Assembly

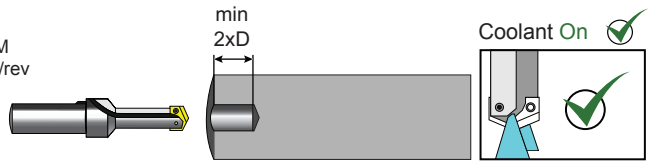
1. Place the T-A® Drill Insert into the precision ground locating pocket on the T-A® Holder. The holder pocket and locating pad on the drill insert assure optimum fit and repeatability.
2. Place a generous amount of Never Seize (provided in the packaging) onto the supplied TORX Plus Screws.
3. Tighten the TORX Plus Screws utilising the predetermined TORX Plus Drivers and TORX Plus Screw admissible tightening Torque outlined in the catalogue per T-A® Series.

Deep Hole Drilling Guidelines

For use with AMEC® Drills greater than 9xD (Depths to Diameter) including Extended, Long and Special Length

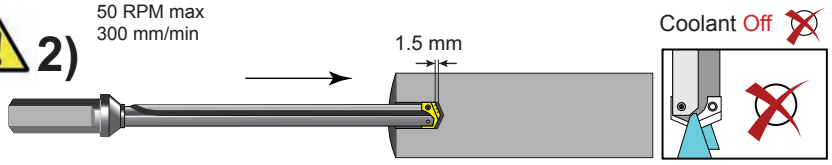
T-A Original GEN2 T-A

1) Pilot Drill
100% RPM
100% mm/rev



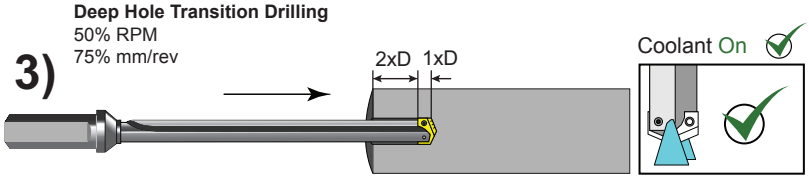
- Establish the pilot hole using the same diameter short drill to a depth of a 2xD minimum
- Utilize a pilot drill with the same or larger included point angle

2) Feed In
50 RPM max
300 mm/min



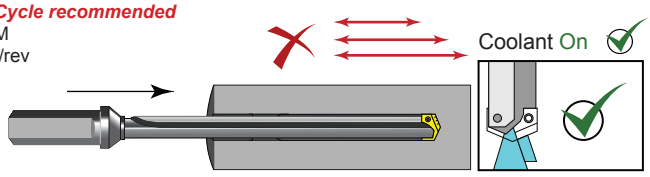
- Feed the longer drill within 1.5mm short of the established pilot hole bottom at a **maximum of 50 RPM** and 300 mm/min feed rate

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



- Drill additional 1xD past bottom of pilot hole at 50% reduction of recommended speed and 25% reduction of recommend feed
- Minimum of 1 second dwell is required to meet full speed before feeding

4) Deep Hole Drilling – ***Blind***
No Peck Cycle recommended
100% RPM
100% mm/rev



- Drill to full depth at recommended speed and feed for longer drills according to Allied speed and feed charts

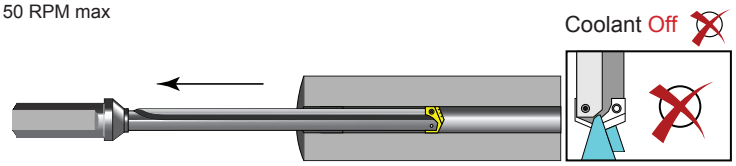
No peck cycle recommended

5) Deep Hole Drilling – At Breakout
50% RPM
75% mm/rev

For Through Holes Only

- Reduce speed by 50% and feed by 25% prior to break out
- Do not break out more than 3mm past the full diameter of drill

6) Drill Retract
50 RPM max



Reduce speed to a **maximum of 50 RPM** before reacting from hole

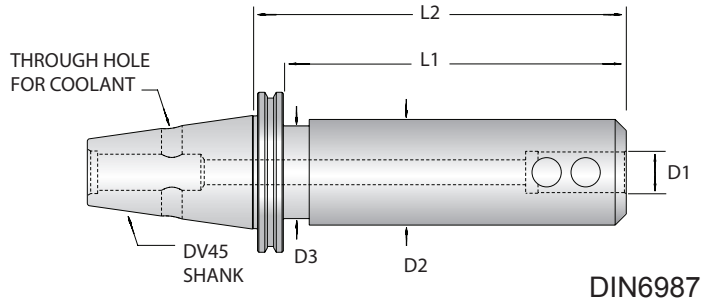
⚠ WARNING

Tool failure can cause serious injury. To prevent:
- When using this holder without support bushing, use a short holder to establish an initial hole that is 2-3 diameters deep.
- Do not rotate tool more than 50 RPM unless it is engaged with workpiece or fixture.
- Follow the Deep Hole Guidelines above and in AMEC® Catalogue for best practices in Deep Hole Drilling.
- Visit www.alliedmaxcut.com for most up-to-date information and procedures.
- For further information please contact our technical office at +44 (0) 1384 400 900 or Email: engineering@alliedmaxcut.com

T-A® and GEN3SYS®/XT 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	●

Stk. - Stock Availability.
● Stock Item.

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T-A® Pilot Insert Replacement TORX Plus Screws and Driver information

Insert Series	Drill Range	Part Number			Maximum Torque (N/cm)†
		TORX Plus® Hand Drivers	TORX Plus® Screws*	Nylon Locking TORX Screws*	
Y	9.5mm - 11.07mm	8IP-7	724-IP7-10	724N-IP7-10	84
Z	11.1mm - 12.95mm	8IP-7	7247-IP7-10	7247N-IP7-10	84
0	12.98mm - 17.65mm	8IP-8	72556-IP8-10	72556N-IP8-10	175
0.5	15.5mm - 17.65mm	8IP-8	72567-IP8-10	72567N-IP8-10	175
1	17.53mm - 24.38mm	8IP-9	7375-IP9-10	7375N-IP9-10	305
1.5	22.0mm - 24.38mm	8IP-9	739-IP9-10	739N-IP9-10	305
2, 2.5	24.41mm - 35.05mm	8IP-15	7495-IP15-10	7495N-IP15-10	690
3, 4	34.37mm - 65.28mm	8IP-20	7514-IP20-10	7514N-IP20-10	1370
5-8	62.38mm - 114.48mm	8IP-25	7619-IP25-10	N/A	1750

† 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 Pilot Insert 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	11.00mm - 11.99mm	8IP-6	8IP-6TL	8IP-6B	71843-IP6-10	-	50
12	12.00mm - 12.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
13	13.00mm - 13.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
14	14.00mm - 14.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
15	15.00mm - 15.99mm	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
16	16.00mm - 16.99mm	8IP-8	8IP-8TL	8IP-8B	72556-IP8-10	72556N-IP8-10	175
17	17.00mm - 17.99mm	8IP-8	8IP-8TL	8IP-8B	72567-IP8-10	72567N-IP8-10	175
18	18.00mm - 19.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
20	20.00mm - 21.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
22	22.00mm - 23.99mm	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	739N-IP9-10	305
24	24.00mm - 25.99mm	8IP-9	8IP-9TL	8IP-9B	739-IP9-10	739N-IP9-10	305
26	26.00mm - 28.99mm	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
29	29.00mm - 31.99mm	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
32	32.00mm - 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.*

Guaranteed Application Request Form

Guidelines for use

Guidelines for use of the Guaranteed Application Request Form

The request for a Guaranteed Application is a method of proving AMEC tooling on demonstration.

The Guaranteed Application form must be completed as fully as possible and sent to the Allied Maxcut Technical Department.

Example – Required Information

Contact Details:

Purchase Order Number
Date
Customer Name
Customer Telephone and Fax Number
Proposed Date of the Demonstration
Customer Contact Name

Application Information:

Material: Type, Specification, Hardness, Condition,Thickness
Hole: Diameter, Diameter Range

Machine and Set-up Information:

Machine: Type, Model, Feedline, Control, Speed, Preferred Shank Type
Spindle: Orientation, Type
Coolant: Type, Feed

Current Drill Information:

Details of current, or previous tooling used on application, and its performance history

What defines a successful test:

The objective of the demonstration i.e. Decreased Cycle Time, Better Chip Control, Safer Process, Longer Tool Life and Reduced Cost per Hole

Providing the Allied Maxcut Technical Department have enough information to judge the application, and its objectives are feasible, the test will be approved.

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Structural Steel Guaranteed Application Request

CONTACT DETAILS

Trial P.O No* ..... Date*..... Proposed Test Date* .....

Distributor* ..... Distributor Contact* .....

Company Name* ..... Contact Name* .....

Address*.....

Contact Telephone*..... Contact E-mail*.....

APPLICATION INFORMATION

ATTENTION: The following information is required to enable the best combination of tooling to be recommended. Please complete all that apply.

Material Type*..... Specification*..... Material Hardness..... ☐ KG ☐ BRN ☐ RC ☐ N/mm²

Material Condition ☐ Angle ☐ H-Section ☐ Tubular Stock ☐ Stacked Plate ☐ Plate ☐ U-Section

Hole Diameter.....mm Hole Diameter Range used.....mm

Material Thickness this test ..... Material Thickness range used*.....

MACHINE AND SET-UP INFORMATION

Machine Tool Type ☐ Ficep ☐ Steeltec ☐ Pedestal Drill ☐ Peddinghaus ☐ Voortman ☐ Vernet Behringer ☐ Kaltenbach ☐ Radial Arm ☐ Other

Model* .....

Feedline* ☐ Hydraulic ☐ Ball Screw

Machine Tool Control* ☐ CNC ☐ NC ☐ Manual ☐ Other.....

Spindle Orientation* ☐ Vertical ☐ Horizontal ☐ Other.....

Spindle Type* ☐ ISO ☐ Quick Change ☐ Morse Taper No..... Gauge length..... ☐ mm ☐ Inch

Available Speed* ☐ Variable ☐ Fixed ☐ RPM ☐ m/min

Preferred Shank Type* ☐ Flanged ☐ Morse No..... Diameter..... ☐ mm ☐ Inch

Coolant Type* ☐ Cutting Oil ☐ Water Soluble Oil ☐ Air Mist ☐ Air ☐ Dry

Coolant Feed* ☐ Constant ☐ Pulsed ☐ Through Coolant ☐ External

CURRENT DRILL INFORMATION

Drill Manufacturer..... Point Angle.....

Drill Type..... ☐ Twist ☐ Brazed ☐ Indexable Insert ☐ Removable Tip ☐ Other.....

Tool Grade ☐ HSS ☐ Carbide ☐ Other .....

Tool Coating ☐ Uncoated ☐ TiN ☐ TiCN ☐ TiAlN ☐ Other.....

Current Speed..... ☐ RPM ☐ M/min ☐ Current Feed Rate..... ☐ mm/rev ☐ mm/min

Average Number of Holes Drilled New..... After Regrind?.....

Reason(s) for Tool Change ☐ Wear ☐ Fracture ☐ Chipping ☐ Losing Hole Tolerance ☐ Losing Chip Control ☐ Other.....

What criteria defines a successful test* ☐ Decreased Cycle Time ☐ Better Chip Control ☐ Safer Process ☐ Longer Tool Life ☐ Reduced Cost per Hole ☐ Other.....

Potential this application: Current Annual Usage €/£: Tools per Annum?

* Required Fields where applicable

FOR OFFICE USE ONLY

Application Engineer: Number: Status:

Notes

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