APX DRILL

The APX Drill is a high performance modular system for large diameter holes and is designed to run at high speeds, maximising the power curves of modern CNC equipment.

Features and Benefits

- Drilling range 38.00mm to 101.60mm
- Depths 3, 5, 8 and 10 x D
- AMEC® proprietary IC inserts use AM300® coating for maximum performance
- Multiple pilot geometry choices from T-A®, GEN2®, GEN3SYS® or GEN3SYS® XT programmes offering greater flexibility
- Interchangeable heads allow each holder to cover a range of diameters reducing tool inventory

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APX Drill

High performance modular drilling system

Heads

The **A**llied **P**iloted Inde**X**able heads are dedicated in diameter and use both T-A® Original and GEN2 T-A® or GEN3SYS® XT pilot insert to stabilise the tool through the cut, and wiper styled carbide inserts to achieve the final cutting diameter. This allows for higher spindle speeds, taking advantage of the power curve on modern CNC machines for maximum penetration rates for larger diameter, deep holes.

The heads offer balanced, double-effective cutting up to 69.99mm diameter allowing for maximum feed rates in these ranges. For diameters from 70.00 to 101.60mm the tools are single-effective cutting to reduce power consumption. The heads are stocked in common diameters. Non-stock diameters are available in 15 days.

APX DRILL

Features and Benefits

- Interchangeable heads for either T-A® Original and GEN2 T-A® or GEN3SYS® XT
- Drills into solid, no pilot hole required
- Range of chip enhancing geometries from our standard programmes available
- Special diameters available upon request

Holders

The **A**llied **P**iloted Inde**X**able head uses a fixed series holders with various heads that determine the cutting diameter. There are 10 series to cover the diameter range of 38.00mm to 101.60mm. Non-stocked diameters are available in 15 days.

A unique “X” locator (patent pending) on the head to holder connection allows for simple assembly and superior strength.

Holders are available with a 40mm flanged shank in series 38 & 44 and 50mm flanged shank throughout the range and are designed with through-coolant. They have drill depths up to 704.90mm. Other shank designs are available with 15 days delivery.

For additional information on the APX range please visit www.alliedmaxcut.com or contact our technical department for support and assistance on +44 (0)1384 400 900 or email engineering@alliedmaxcut.com

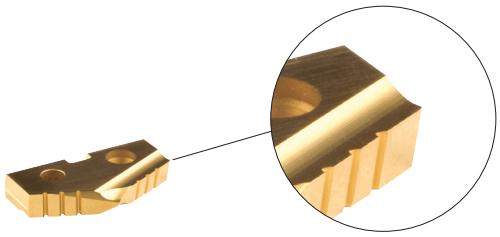
APX DRILL

Features and Benefits

- 15° slow helix for improved chip evacuation
- Drill depths of up to 3, 5, 8 and 10 x D as standard
- Holders cover up to 7.0mm diameter range
- Special length and diameters available upon request

Pilot Insert Information

T-A® Original and GEN2 T-A® Insert Geometries

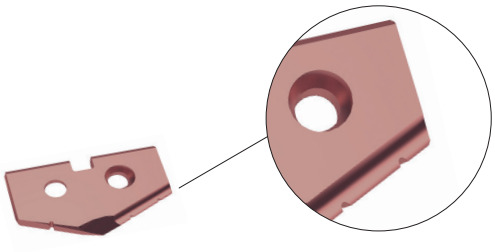


T-A® Original Geometries

T-A® original standard geometry offers excellent penetration rates and tool life. Smooth break-out on through holes, drill stability and excellent chip formation characteristics. Suitable for low to high rigidity machining applications.

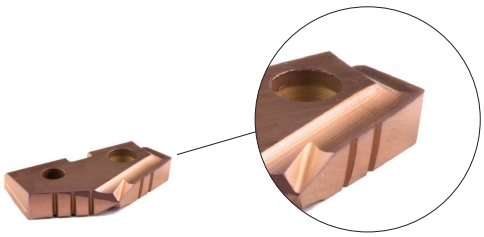
Point angle: 132º

- **Stocked standard**



TC - Tiny Chips

- Improved drilling capabilities in long-chipping materials such as low carbon steels and soft alloys
- Effective in lower power machines by allowing better chip formation at lower feed rates
- Unique lip and point designs for excellent chip control
- Available in either carbide or HSS substrates
- TiN, TiAlN, TiCN and AM200® coatings available
- Available in K35 carbide AM200® coated
- **Stocked standard**



GEN2 T-A® Geometries

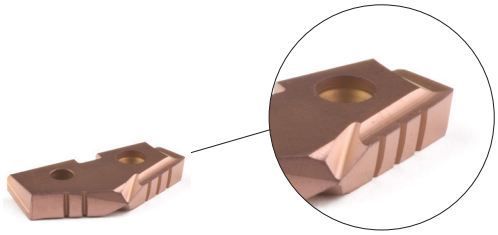
GEN2 T-A® standard geometry offers substantial increases in penetration rates and tool life.

As well as improved centring, smoother break-out on through holes, increased drill stability, improved chip formation, and lower drill forces.

Particularly suited for good to rigid machining applications, primarily used for drilling exotic and high alloy materials, or general use when the M/min surface speed needs to be increased

Point angle: 132º

- **Stocked standard**



HE - High Elasticity

- 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 in K35 carbide AM200® coated
- **Stocked standard**

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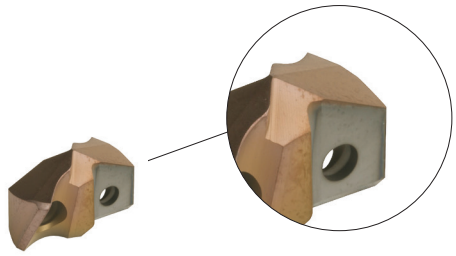
GEN3SYS® XT Insert Geometries

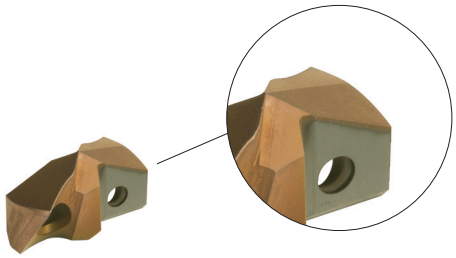


GEN3SYS® XT Geometries

GEN3SYS® XT Standard geometry is the first choice for steels, alloys and hardened materials offering optimum chip formation in elastic materials, with improved penetration rates. The inserts are available in K35 & K20 grades with AM300® coating providing exceptional wear resistance and up to 20% increase in tool life over AM200®.

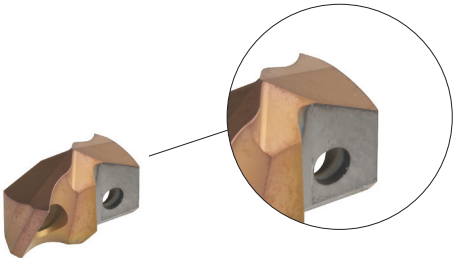
Point Angle: 140°

- **Stocked standard**



LR - Low Rake

- 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
- **Non stocked standard – delivery 3 weeks**



AS - Austenitic Steel

- Enhanced AS-XT geometry improves chip control in Austenitic 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®
- Available in K20
- **Stocked standard**

Grades

K35 (C1) Carbide

First choice in less rigid applications where a tougher grade is required for drilling free machining steel, low/medium carbon steels, alloy steels, high strength steels, tool steels and hardened steels.

K20 (C2) Carbide

Prefered 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.

P35 (C5) Carbide (IC Inserts)

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

Note: HSS grades also available for T-A® inserts.

Insert Coatings

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

AM300®

- Increased heat resistance over AM200® coating
- Provides superior tool life at high penetration rates
- Up to 20% increase in tool life over AM200® coating
- Colour Light Bronze

Note: AM200® Coating available for T-A® Original and GEN2 T-A® inserts only.
AM300® coating available for GEN3SYS® XT and IC inserts.

IC Insert Information

IC Inserts

Dedicated APX proprietary carbide inserts utilise a wiper on the outer diameter to act as a margin to help stabilise the tool and improve hole finish. The insert is available in 2 geometries, the Standard insert can cover applications across many materials and is available in both K35 (C1) and P35 (C5) carbide grades.

The High Rake (HR) geometry can achieve superior chip formation and tool life in long chipping carbon and alloy steels below 300 Bhn and is available in P35 (C5) carbide.There are 3 different sized IC inserts used throughout the APX range and all feature AM300® coating for maximum performance.

Features and Benefits

- Wiper styled IC inserts to help stabilise the tool and allow better surface finish
- Only 3 different sized IC inserts used throughout the APX range to minimise inventory
- K35 (C1) and P35 (C5) grades available
- AM300® coating for maximum performance

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How to Identify Information

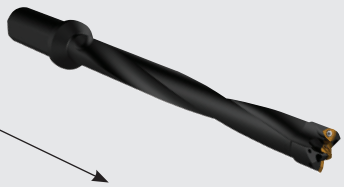
APX DRILL HEAD

V 38 15 D – 40

Head	Series	Pilot Series			Eff. Cutting	Diameter
V	38 (38.00 - 43.99mm) 70 (70.00 - 75.99mm)	GEN3SYS® XT		T-A® & GEN2 T-A®	D = Double Effective	mm
	44 (44.00 - 50.99mm) 76 (76.00 - 82.99mm)	15	24	0	S = Single Effective	
	51 (51.00 - 56.99mm) 83 (83.00 - 88.99mm)	17	26	1		
	57 (57.00 - 62.99mm) 89 (89.00 - 94.99mm)	18	29	2		
	63 (63.00 - 69.99mm) 95 (95.00 - 101.60mm)	20	32			
	(Special diameters available)	22				

APX DRILL HOLDER

W 38 05 H – 50 FM



Holder	Series	Depth	Flute	Shank
W	38 (38.00 - 43.99mm) 70 (70.00 - 75.99mm)	03 = 3xD	H = Helical	50FM Flanged Shank
	44 (44.00 - 50.99mm) 76 (76.00 - 82.99mm)	05 = 5xD		40FM Flanged Shank (38 & 44 Series)
	51 (51.00 - 56.99mm) 83 (83.00 - 88.99mm)	08 = 8xD		
	57 (57.00 - 62.99mm) 89 (89.00 - 94.99mm)	10 = 10xD		
	63 (63.00 - 69.99mm) 95 (95.00 - 101.60mm)	(Special lengths available)		

T-A® Original / GEN2 T-A® PILOT INSERT

4 C1 2 H – 32 – HE

Designation	Grade	Series	Coating	Diameter	Geometry
1 = T-A® Original	C1 = K35	0	T = TiN	mm	Blank = Standard (T-A® Original)
4 = GEN2 T-A®	C2 = K20	1	N = TiCN		Blank = Standard (GEN2 T-A®)
	C5 = P40	2	A = TiAlN		TC (T-A® Original)
			H = AM200®		HE = High Elasticity

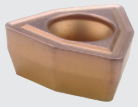
GEN3SYS® XT High Penetration Drilling System PILOT INSERT

7 C1 20 P – 21 LR

Designation	Grade	Series	Coating	Diameter	Geometry
7 = GEN3SYS® XT	C1 = K35	15 24	P = AM300®	mm	Blank = Standard
	C2 = K20	17 26			LR = Low Rake
		18 29			AS = Austenitic Steel
		20 32			
		22			

APX DRILL IC INSERT

OP – 06 04 08 - PW HR

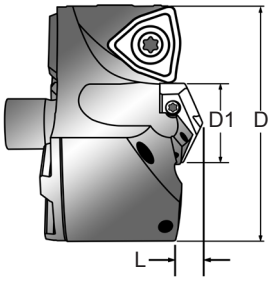


Designation	Size	Grade	Geometry
IC	060408 - 9.52mm (3/8")	PW - P35 (C5)	Blank - Standard
	080508 - 12.70mm (1/2")	1PW - K35 (C1)	HR - High Rake
	090608 - 14.30mm (9/16")		

38 Series Heads

Diameter Range 38.00 to 43.99mm

T-A Original & GEN2 T-A Pilot Heads

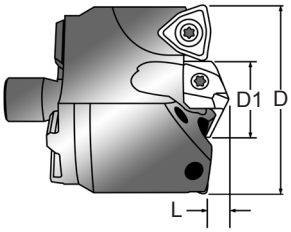


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V3800D-38	38	38.00	-	1.4961	15.5	7.54	0	4C*0H-15.5	72567-IP8-10	8IP-8	9.52
V3800D-0116		38.10	1-1/2	1.5000							
V3800D-0117		38.90	1-17/32	1.5313							
V3800D-39		39.00	-	1.5354							
V3800D-0118		39.69	1-9/16	1.5625							
V3800D-40		40.00	-	1.5748	17.5			4C*0H-17.5			
V3800D-0119		40.48	1-19/32	1.5938							
V3800D-41		41.00	-	1.6142							
V3800D-0120		41.28	1-5/8	1.6250							
V3801D-42		42.00	-	1.6535	19.5		1	4C*1H-19.5	7375-IP9-10	8IP-9	
V3801D-0121		42.07	1-21/32	1.6563							
V3801D-0122		42.86	1-11/16	1.6875							
V3801D-43		43.00	-	1.6929	21.0			4C*1H-21			
V3801D-0123		43.66	1-23/32	1.7188							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V3815D-38	38	38.00	-	1.4961	15.5	7.54	15	7C*15P-15.5	7247-IP7-10	8IP-7	9.52
V3815D-0116		38.10	1-1/2	1.5000							
V3815D-0117		38.90	1-17/32	1.5313							
V3815D-39		39.00	-	1.5354							
V3815D-0118		39.69	1-9/16	1.5625							
V3817D-40		40.00	-	1.5748	17.5		17	7C*17P-17.5	72567-IP8-10	8IP-8	
V3817D-0119		40.48	1-19/32	1.5938							
V3817D-41		41.00	-	1.6142							
V3817D-0120		41.28	1-5/8	1.6250							
V3818D-42		42.00	-	1.6535	19.5		18	7C*18P-19.5	7375-IP9-10	8IP-9	
V3818D-0121		42.07	1-21/32	1.6563							
V3818D-0122		42.86	1-11/16	1.6875							
V3820D-43		43.00	-	1.6929	21.0		20	7C*20P-21			
V3820D-0123		43.66	1-23/32	1.7188							

* denotes carbide grade

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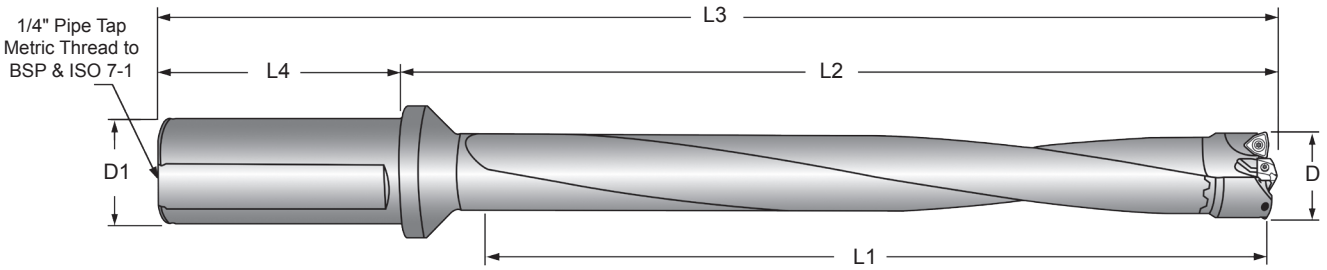
38 Series Holders

Diameter Range 38.00 to 43.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W3803H-40FM	38	38.00-43.99	1.4961-1.7322	130.5	196.5	266.5	70.0	40.0
W3805H-40FM				220.0	284.5	354.5		
⚠ W3808H-40FM				352.0	416.3	486.3		
⚠ W3810H-40FM				439.9	503.9	573.9		
N W3803H-50FM				130.5	196.5	276.5	80.0	50.0
W3805H-50FM				220.0	284.5	364.5		
⚠ W3808H-50FM				352.0	416.3	496.3		
⚠ W3810H-50FM				439.9	503.9	583.9		

Non standard lengths and diameters available upon request.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver
9.52	P35 (C5)	AM300®	OP-060408-PW	N OP-060408-PWHR	73595-IP15-10	8IP-15
	K35 (C1)		OP-060408-1PW	-		

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	678 N/cm (60 in/lb)

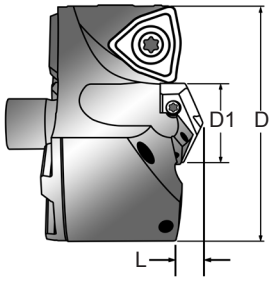
N This symbol can be found throughout this catalogue and highlights NEW products!

⚠ **WARNING** Refer to page 177 for APX Deep Hole 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.

44 Series Heads

Diameter Range 44.00 to 50.99mm

T-A Original & GEN2 T-A Pilot Heads

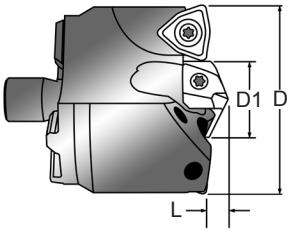


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V4401D-44	44	44.00	-	1.7323	23.0	8.33	1	4C*1H-23	7375-IP9-10	8IP-9	9.52
V4401D-0124		44.45	1-3/4	1.7500							
V4401D-45		45.00	-	1.7717							
V4401D-0125		45.25	1-25/32	1.7813							
V4401D-46		46.00	-	1.8110	24.0			4C*1H-24			
V4401D-0126		46.04	1-13/16	1.8125							
V4401D-0127		46.83	1-27/32	1.8438							
V4401D-47		47.00	-	1.8504							
V4401D-0128		47.63	1-7/8	1.8750							
V4401D-48		48.00	-	1.8898	18.0			4C*1H-18			12.70
V4401D-0129		48.42	1-29/32	1.9063							
V4401D-49		49.00	-	1.9291							
V4401D-0130		49.21	1-15/16	1.9375							
V4401D-50		50.00	-	1.9685	19.0			4C*1H-19			
V4401D-0131		50.01	1-31/32	1.9688							
V4401D-0200		50.80	2	2.0000							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V4422D-44	44	44.00	-	1.7323	23.0	8.33	22	7C*22P-23	739-IP9-10	8IP-9	9.52
V4422D-0124		44.45	1-3/4	1.7500							
V4422D-45		45.00	-	1.7717							
V4422D-0125		45.25	1-25/32	1.7813							
V4422D-46		46.00	-	1.8110	23.8			7C*22P-23.8			
V4422D-0126		46.04	1-13/16	1.8125							
V4422D-0127		46.83	1-27/32	1.8438							
V4422D-47		47.00	-	1.8504							
V4422D-0128		47.63	1-7/8	1.8750							
V4417D-48		48.00	-	1.8898	17.9		17	7C*17P-17.9	72567-IP8-10	8IP-8	12.70
V4417D-0129		48.42	1-29/32	1.9063							
V4417D-49		49.00	-	1.9291							
V4417D-0130		49.21	1-15/16	1.9375							
V4418D-50		50.00	-	1.9685	19.0		18	7C*18P-19	7375-IP9-10	8IP-9	
V4418D-0131		50.01	1-31/32	1.9688							
V4418D-0200		50.80	2	2.0000							

* denotes carbide grade

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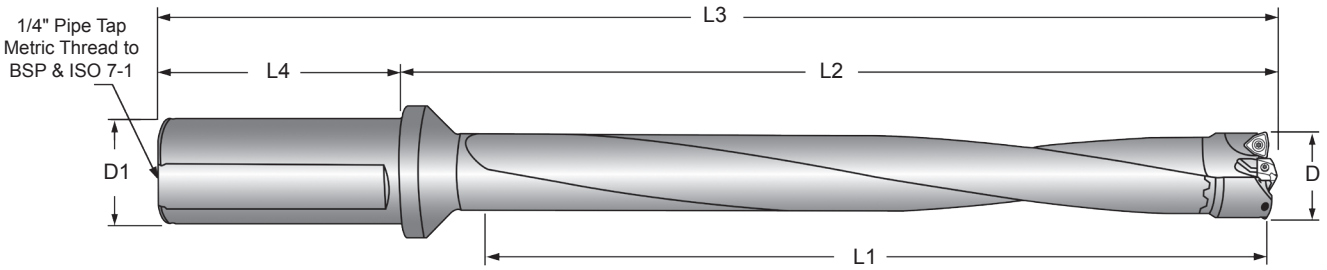
44 Series Holders

Diameter Range 44.00 to 50.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W4403H-40FM	44	44.00-50.99	1.7323-2.0075	151.5	216.8	286.9	70.0	40.0
W4405H-40FM				255.0	318.8	388.8		
⚠ W4408H-40FM				407.9	471.1	541.7		
⚠ W4410H-40FM				510.0	573.8	643.8		
N W4403H-50FM				151.5	216.8	296.9	80.0	50.0
W4405H-50FM				255.0	318.8	398.8		
⚠ W4408H-50FM				407.9	471.1	551.7		
⚠ W4410H-50FM				510.0	573.8	653.8		

Non standard lengths and diameters available upon request.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver
9.52	P35 (C5)	AM300®	OP-060408-PW	N OP-060408-PWHR	73595-IP15-10	8IP-15
	K35 (C1)		OP-060408-1PW	-		
12.70	P35 (C5)		OP-080508-PW	N OP-080508-PWHR	74012-IP15-10	
	K35 (C1)		OP-080508-1PW	-		

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	678 N/cm (60 in/lb)

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

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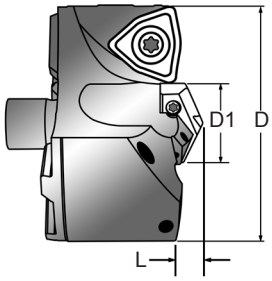
51 Series Heads

Diameter Range 51.00 to 56.99mm

T-A Original & GEN2 T-A Pilot Heads

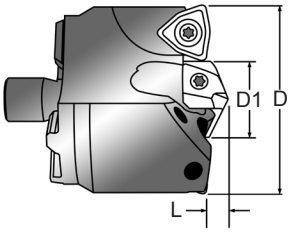


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V5101D-51	51	51.00	-	2.0079	20.0	8.73	1	4C*1H-20	7375-IP9-10	8IP-9	12.70
V5101D-0201		51.59	2-1/32	2.0313							
V5101D-52		52.00	-	2.0472							
V5101D-0202		52.39	2-1/16	2.0625							
V5101D-53		53.00	-	2.0866	21.5			4C*1H-21.5			
V5101D-0203		53.18	2-3/32	2.0938							
V5101D-0204		53.98	2-1/8	2.1250							
V5101D-54		54.00	-	2.1260	24.0			4C*1H-24			
V5101D-0205		54.77	2-5/32	2.1563							
V5101D-55		55.00	-	2.1654							
V5101D-0206		55.56	2-3/16	2.1875							
V5101D-56		56.00	-	2.2047							
V5101D-0207		56.36	2-7/32	2.2188	21.0			4C*1H-21			14.30

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V5118D-51	51	51.00	-	2.0079	19.8	8.73	18	7C*18P-19.8	7375-IP9-10	8IP-9	12.70
V5118D-0201		51.59	2-1/32	2.0313							
V5118D-52		52.00	-	2.0472							
V5118D-0202		52.39	2-1/16	2.0625							
V5120D-53		53.00	-	2.0866	21.5		20	7C*20P-21.5			
V5120D-0203		53.18	2-3/32	2.0938							
V5120D-0204		53.98	2-1/8	2.1250							
V5122D-54		54.00	-	2.1260	23.8		22	7C*22P-23.8	739-IP9-10		
V5122D-0205		54.77	2-5/32	2.1563							
V5122D-55		55.00	-	2.1654							
V5122D-0206		55.56	2-3/16	2.1875							
V5122D-56		56.00	-	2.2047							
V5120D-0207		56.36	2-7/32	2.2188	21.0		20	7C*20P-21	7375-IP9-10		14.30

* denotes carbide grade

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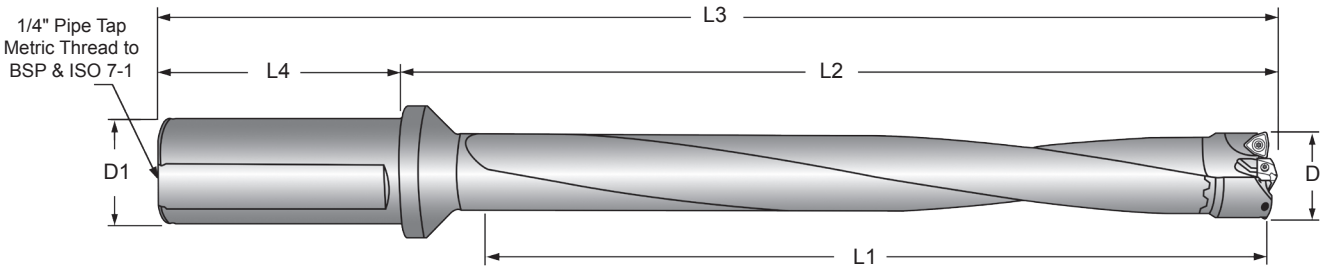
51 Series Holders

Diameter Range 51.00 to 56.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W5103H-50FM	51	51.00-56.99	2.0076-2.2438	161.8	225.5	305.5	80.0	50.0
W5105H-50FM				285.0	339.6	419.6		
⚠ W5108H-50FM				455.9	510.5	590.5		
⚠ W5110H-50FM				570.0	624.6	704.6		

Non standard lengths and diameters available upon request.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver
12.70	P35 (C5)	AM300®	OP-080508-PW	N OP-080508-PWHR	74012-IP15-10	8IP-15
	K35 (C1)		OP-080508-1PW	-		
14.30	P35 (C5)		OP-090608-PW	N OP-090608-PWHR	75014-IP20-10	8IP-20
	K35 (C1)		OP-090608-1PW	-		

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	678 N/cm (60 in/lb)

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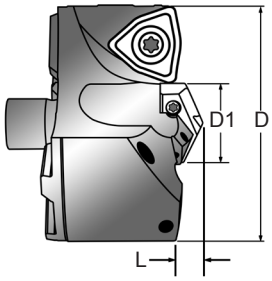
57 Series Heads

Diameter Range 57.00 to 62.99mm

T-A Original & GEN2 T-A Pilot Heads

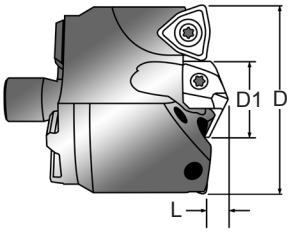


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V5701D-57	57	57.00	-	2.2441	23.0	9.92	1	4C*1H-23	739-IP9-10	8IP-9	14.30
V5701D-0208		57.15	2-1/4	2.2500							
V5701D-0209		57.94	2-9/32	2.2813							
V5701D-58		58.00	-	2.2835							
V5701D-0210		58.74	2-5/16	2.3125							
V5701D-59		59.00	-	2.3228	24.0			4C*1H-24			
V5701D-0211		59.53	2-11/32	2.3438							
V5701D-60		60.00	-	2.3622							
V5701D-0212		60.33	2-3/8	2.3750							
V5702D-61		61.00	-	2.4016	25.5		2	4C*2H-25.5	7495-IP15-10	8IP-15	
V5702D-0213		61.12	2-13/32	2.4063							
V5702D-0214		61.91	2-7/16	2.4375							
V5702D-62		62.00	-	2.4409	27.0			4C*2H-27			
V5702D-0215		62.71	2-15/32	2.4688							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V5722D-57	57	57.00	-	2.2441	23.0	9.92	22	7C*22P-23	739-IP9-10	8IP-9	14.30
V5722D-0208		57.15	2-1/4	2.2500							
V5722D-0209		57.94	2-9/32	2.2813							
V5722D-58		58.00	-	2.2835							
V5722D-0210		58.74	2-5/16	2.3125							
V5722D-59		59.00	-	2.3228	23.8			7C*22P-23.8			
V5722D-0211		59.53	2-11/32	2.3438							
V5722D-60		60.00	-	2.3622							
V5722D-0212		60.33	2-3/8	2.3750							
V5724D-61		61.00	-	2.4016	25.5		24	7C*24P-25.5			
V5724D-0213		61.12	2-13/32	2.4063							
V5724D-0214		61.91	2-7/16	2.4375							
V5726D-62		62.00	-	2.4409	27.0		26	7C*26P-27	7495-IP15-10	8IP-15	
V5726D-0215		62.71	2-15/32	2.4688							

* denotes carbide grade

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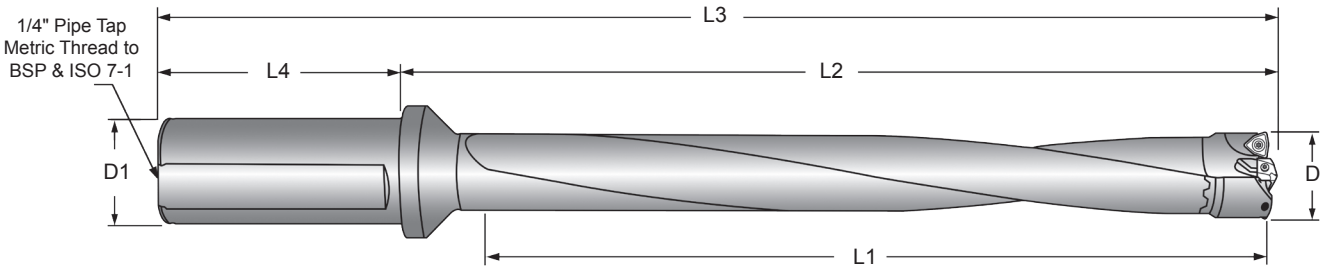
57 Series Holders

Diameter Range 57.00 to 62.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W5703H-50FM	57	57.00-62.99	2.2439-2.4799	179.9	242.7	322.7	80.0	50.0
W5705H-50FM				315.0	368.6	448.6		
⚠ W5708H-50FM				503.9	557.8	637.8		
⚠ W5710H-50FM				626.9	683.8	763.8		

Non standard lengths and diameters available upon request.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver
14.30	P35 (C5)	AM300®	OP-090608-PW	N OP-090608-PWHR	75014-IP20-10	8IP-20
	K35 (C1)		OP-090608-1PW	-		

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	678 N/cm (60 in/lb)

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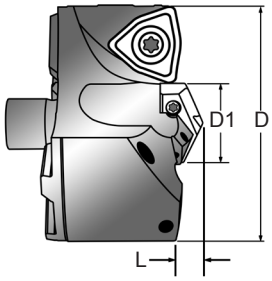
63 Series Heads

Diameter range 63.00 to 69.99mm

T-A Original & GEN2 T-A Pilot Heads

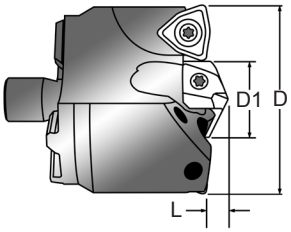


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V6302D-63	63	63.00	-	2.4803	28.5	11.11	2	4C*2H-28.5	7495-IP15-10	8IP-15	14.30
V6302D-0216		63.50	2-1/2	2.5000							
V6302D-64		64.00	-	2.5197							
V6302D-0217		64.29	2-17/32	2.5313							
V6302D-65		65.00	-	2.5591							
V6302D-0218		65.09	2-9/16	2.5625	31.0			4C*2H-31			
V6302D-0219		65.88	2-19/32	2.5938							
V6302D-66		66.00	-	2.5984							
V6302D-0220		66.68	2-5/8	2.6250							
V6302D-67		67.00	-	2.6378	32.0			4C*2H-32			
V6302D-0221		67.47	2-21/32	2.6563							
V6302D-68		68.00	-	2.6772							
V6302D-0222		68.26	2-11/16	2.6875							
V6302D-69		69.00	-	2.7165	34.0			4C*2H-34			
V6302D-0223		69.06	2-23/32	2.7188							
V6302D-0224		69.85	2-3/4	2.7500							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads

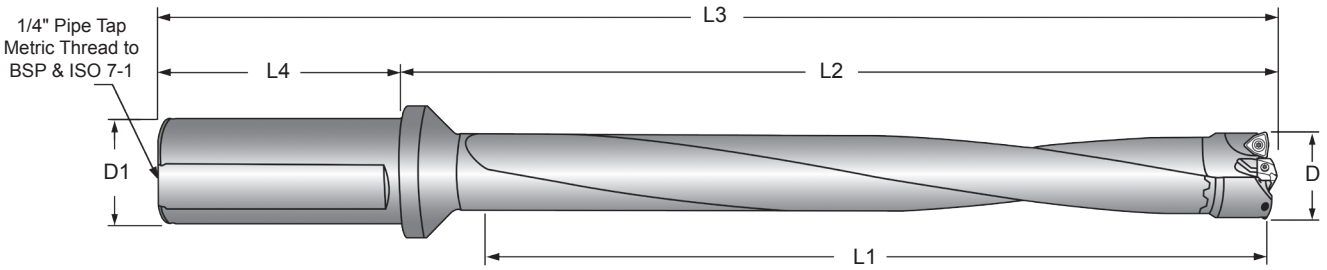


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V6326D-63	63	63.00	-	2.4803	28.5	11.11	26	7C*26P-28.5	7495-IP15-10	8IP-15	14.30
V6326D-0216		63.50	2-1/2	2.5000							
V6326D-64		64.00	-	2.5197							
V6326D-0217		64.29	2-17/32	2.5313							
V6326D-65		65.00	-	2.5591							
V6329D-0218		65.09	2-9/16	2.5625	31.0		29	7C*29P-31			
V6329D-0219		65.88	2-19/32	2.5938							
V6329D-66		66.00	-	2.5984							
V6329D-0220		66.68	2-5/8	2.6250							
V6329D-67		67.00	-	2.6378	31.8			7C*29P-31.8			
V6329D-0221		67.47	2-21/32	2.6563							
V6329D-68		68.00	-	2.6772							
V6329D-0222		68.26	2-11/16	2.6875							
V6332D-69		69.00	-	2.7165	34.0		32	7C*32P-34			
V6332D-0223		69.06	2-23/32	2.7188							
V6332D-0224		69.85	2-3/4	2.7500							

* denotes carbide grade

63 Series Holders

Diameter range 63.00 to 69.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W6303H-50FM	63	63.00-69.99	2.4800-2.7555	200.8	262.6	342.6	80.0	50.0
W6305H-50FM				350.0	402.6	482.6		
⚠ W6308H-50FM				560.0	612.6	692.6		
⚠ W6310H-50FM				688.3	740.9	820.9		

Non standard lengths and diameters available upon request.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10 pc. package)	IC Insert Driver
14.30	P35 (C5)	AM300®	OP-090608-PW	N OP-090608-PWHR	75014-IP20-10	8IP-20
	K35 (C1)		OP-090608-1PW	-		

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	678 N/cm (60 in/lb)

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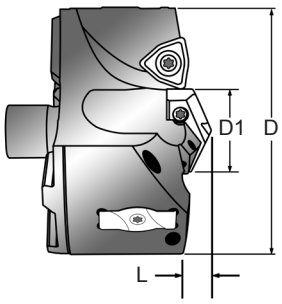
70 Series Heads

Diameter Range 70.00 to 75.99mm

T-A Original & GEN2 T-A Pilot Heads

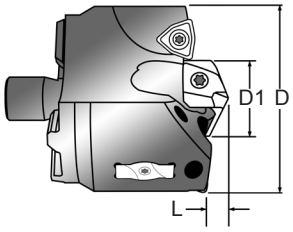


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V7002S-70	70	70.00	-	2.7559	31.0	9.92	2	4C*2H-31	7495-IP15-10	8IP-15	9.52
V7002S-0226		71.44	2-13/16	2.8125							
V7002S-72		72.00	-	2.8346							
V7002S-0228		73.03	2-7/8	2.8750							
V7002S-74		74.00	-	2.9134							
V7002S-0230		74.61	2-15/16	2.9375							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V7029S-70	70	70.00	-	2.7559	31.0	9.92	29	7C*29P-31	7495-IP15-10	8IP-15	9.52
V7029S-0226		71.44	2-13/16	2.8125							
V7029S-72		72.00	-	2.8346							
V7029S-0228		73.03	2-7/8	2.8750							
V7029S-74		74.00	-	2.9134							
V7029S-0230		74.61	2-15/16	2.9375							

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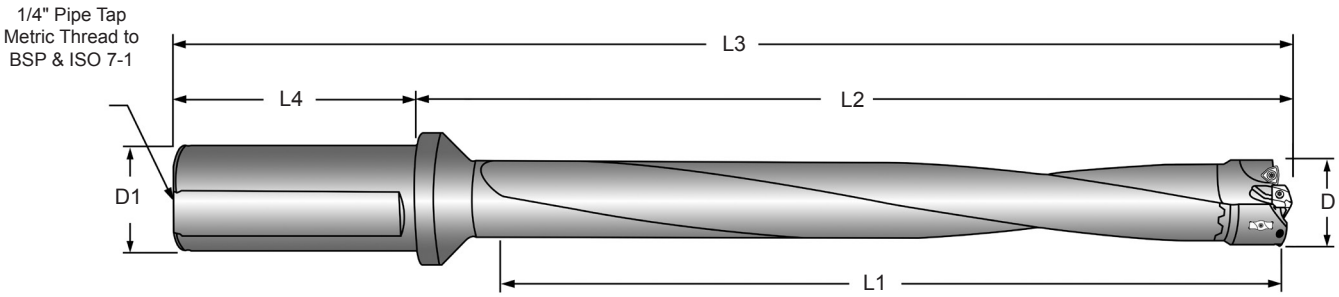
70 Series Holders

Diameter Range 70.00 to 75.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W7003H-50FM	70	70.00-75.99	2.7556-2.9917	218.8	269.0	349.0	80.0	50.0
W7005H-50FM				380.0	421.1	501.1		
⚠ W7008H-50FM				608.0	649.0	729.0		
⚠ W7010H-50FM				709.4	750.3	830.3		

Non standard lengths and diameters available upon request.

NOTE: Each 70 through 95 Series APX Head is equipped with two factory installed wear pads for added stability. Replacement wear pads can be ordered using the item number below.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw (4pc. package)	Wear Pad Admissible Tightening Torque
9.52	P35 (C5)	AM300®	OP-060408-PW	N OP-060408-PWHR	73595-IP15-10	8IP-15	WP7095	7358-IP10-4	290 N/cm (25 in/lb)
	K35 (C1)		OP-060408-1PW	-					

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	2825 N/cm (250 in/lb)

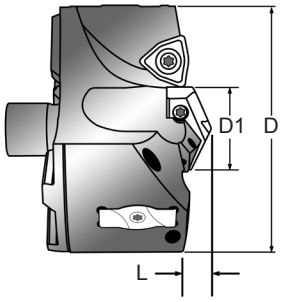
N This symbol can be found throughout this catalogue and highlights NEW products!

⚠WARNING Refer to page 177 for APX Deep Hole 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.

76 Series Heads

Diameter Range 76.00 to 82.99mm

T-A Original & GEN2 T-A Pilot Heads

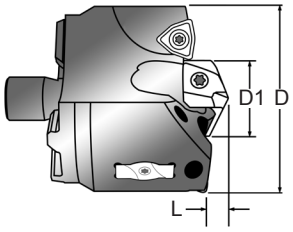


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V7602S-76	76	76.00	-	2.9921	31.0	10.32	2	4C*2H-31	7495-IP15-10	8IP-15	12.70
V7602S-0300		76.20	3	3.0000							
V7602S-0302		77.79	3-1/16	3.0625							
V7602S-78		78.00	-	3.0709							
V7602S-0304		79.38	3-1/8	3.1250							
V7602S-80		80.00	-	3.1496							
V7602S-0306		80.96	3-3/16	3.1875							
V7602S-82		82.00	-	3.2282							
V7602S-0308		82.55	3-1/4	3.2500							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V7629S-76	76	76.00	-	2.9921	31.0	10.32	29	7C*29P-31	7495-IP15-10	8IP-15	12.70
V7629S-0300		76.20	3	3.0000							
V7629S-0302		77.79	3-1/16	3.0625							
V7629S-78		78.00	-	3.0709							
V7629S-0304		79.38	3-1/8	3.1250							
V7629S-80		80.00	-	3.1496							
V7629S-0306		80.96	3-3/16	3.1875							
V7629S-82		82.00	-	3.2283							
V7629S-0308		82.55	3-1/4	3.2500							

* denotes carbide grade

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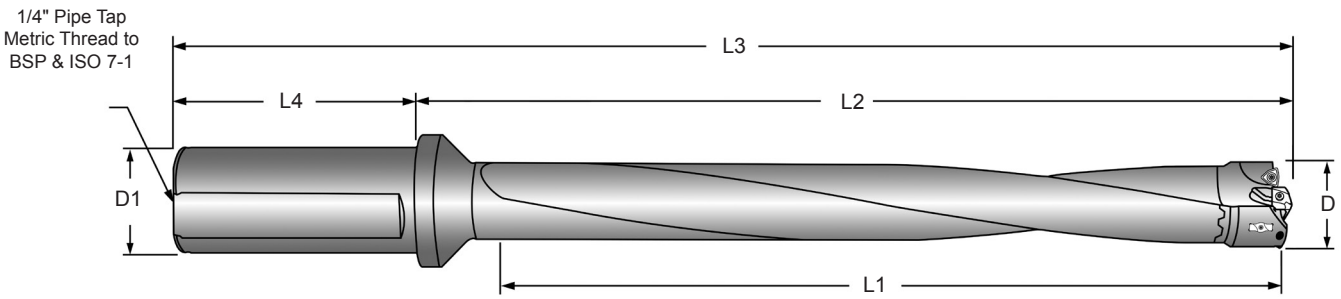
76 Series Holders

Diameter Range 76.00 to 82.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
(N) W7603H-50FM	76	76.00-82.99	2.9918-3.2673	239.9	292.4	372.4	80.0	50.0
W7605H-50FM				415.0	458.2	538.2		
⚠ W7608H-50FM				664.0	707.1	786.1		

Non standard lengths and diameters available upon request.

NOTE: Each 70 through 95 Series APX Head is equipped with two factory installed wear pads for added stability. Replacement wear pads can be ordered using the item number below.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw (4pc. package)	Wear Pad Admissible Tightening Torque
12.70	P35 (C5)	AM300®	OP-080508-PW	(N) OP-080508-PWHR	74012-IP15-10	8IP-15	WP7095	7358-IP10-4	290 N/cm (25 in/lb)
	K35 (C1)		OP-080508-1PW	-					

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	2825 N/cm (250 in/lb)

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

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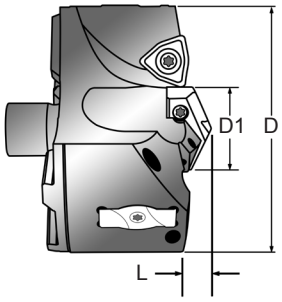
83 Series Heads

Diameter Range 83.00 to 88.99mm

T-A Original & GEN2 T-A Pilot Heads

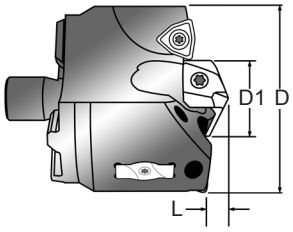


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V8302S-84	83	84.00	-	3.3071	35.0	11.11	2	4C*2H-35	7495-IP15-10	8IP-15	12.70
V8302S-0310		84.14	3-5/16	3.3125							
V8302S-0312		85.73	3-3/8	3.3750							
V8302S-86		86.00	-	3.3859							
V8302S-0314		87.31	3-7/16	3.4375							
V8302S-88		88.00	-	3.4646							
V8302S-0316		88.90	3-1/2	3.5000							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V8332S-84	83	84.00	-	3.3071	35.0	11.11	32	7C*32P-35	7495-IP15-10	8IP-15	12.70
V8332S-0310		84.14	3-5/16	3.3125							
V8332S-0312		85.73	3-3/8	3.3750							
V8332S-86		86.00	-	3.3859							
V8332S-0314		87.31	3-7/16	3.4375							
V8332S-88		88.00	-	3.4646							
V8332S-0316		88.90	3-1/2	3.5000							

* denotes carbide grade

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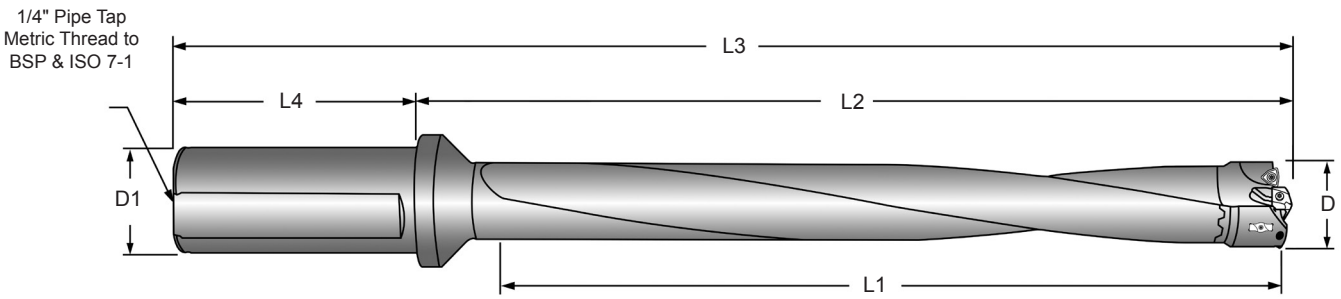
83 Series Holders

Diameter Range 83.00 to 88.99mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W8303H-50FM	83	83.00-88.99	3.2674-3.5035	257.8	312.5	392.6	80.0	50.0
W8305H-50FM				445.0	490.5	570.5		
⚠ W8308H-50FM				704.9	750.3	830.3		

Non standard lengths and diameters available upon request.

NOTE: Each 70 through 95 Series APX Head is equipped with two factory installed wear pads for added stability. Replacement wear pads can be ordered using the item number below.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw (4pc. package)	Wear Pad Admissible Tightening Torque
12.70	P35 (C5)	AM300®	OP-080508-PW	N OP-080508-PWHR	74012-IP15-10	8IP-15	WP7095	7358-IP10-4	290 N/cm (25 in/lb)
	K35 (C1)		OP-080508-1PW	-					

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	2825 N/cm (250 in/lb)

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

⚠ **WARNING** Refer to page 177 for APX Deep Hole Drilling Guidelines in Technical Reference section of catalogue.
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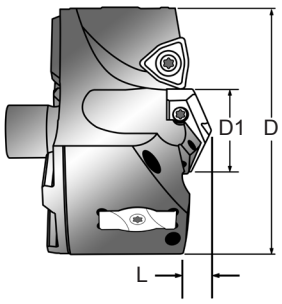
89 Series Heads

Diameter Range 89.00 to 94.99mm

T-A Original & GEN2 T-A Pilot Heads

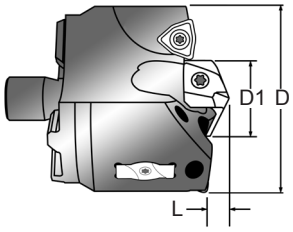


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V8902S-90	89	90.00	-	3.5433	32.0	10.72	2	4C*2H-32	7495-IP15-10	8IP-15	14.30
V8902S-0318		90.49	3-9/16	3.5625							
V8902S-92		92.00	-	3.6220							
V8902S-0320		92.08	3-5/8	3.6250							
V8902S-0322		93.66	3-11/16	3.6875							
V8902S-94		94.00	-	3.7008							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V8929S-90	89	90.00	-	3.5433	31.8	10.72	29	7C*29P-31.8	7495-IP15-10	8IP-15	14.30
V8929S-0318		90.49	3-9/16	3.5625							
V8929S-92		92.00	-	3.6220							
V8929S-0320		92.08	3-5/8	3.6250							
V8929S-0322		93.66	3-11/16	3.6875							
V8929S-94		94.00	-	3.7008							

* denotes carbide grade

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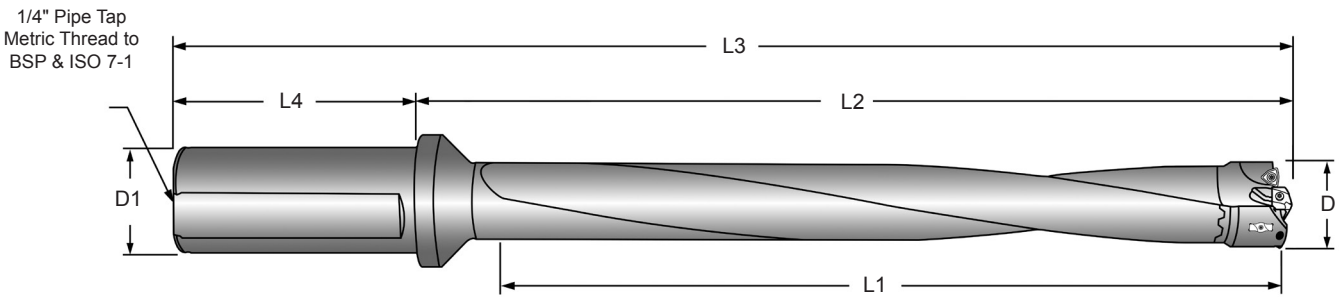


APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
N W8903H-50FM	89	89.00-94.99	3.5036-3.7400	275.8	333.6	413.6	80.0	50.0
W8905H-50FM				475.0	523.7	603.7		
⚠ W8908H-50FM				701.8	750.3	830.3		

Non standard lengths and diameters available upon request.

NOTE: Each 70 through 95 Series APX Head is equipped with two factory installed wear pads for added stability. Replacement wear pads can be ordered using the item number below.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw (4pc. package)	Wear Pad Admissible Tightening Torque
14.30	P35 (C5)	AM300®	OP-090608-PW	N OP-090608-PWHR	75014-IP20-10	8IP-20	WP7095	7358-IP10-4	290 N/cm (25 in/lb)
	K35 (C1)		OP-090608-1PW	-					

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	2825 N/cm (250 in/lb)

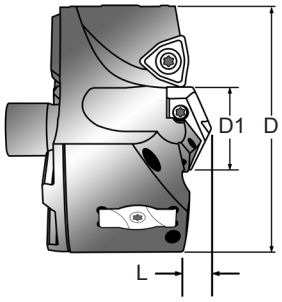
N This symbol can be found throughout this catalogue and highlights NEW products!

⚠ **WARNING** Refer to page 177 for APX Deep Hole 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.

95 Series Heads

Diameter Range 95.00 to 101.60mm

T-A Original & GEN2 T-A Pilot Heads

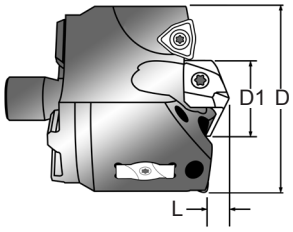


Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V9502S-0324	95	95.25	3-3/4	3.7500	35.0	11.51	2	4C*2H-35	7494-IP15-10	8IP-15	14.30
V9502S-96		96.00	-	3.7795							
V9502S-0326		96.84	3-13/16	3.8125							
V9502S-98		98.00	-	3.8583							
V9502S-0328		98.43	3-7/8	3.8750							
V9502S-100		100.00	-	3.9370							
V9502S-0330		100.01	3-15/16	3.9375							
V9502S-0400		101.60	4	4.0000							

* denotes carbide grade

Non standard diameters available in 15-20 working days

GEN3SYS XT High Penetration Drilling System Pilot Heads



Part Number	Series	D			D1	L	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Metric)	Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Pilot Dia.	Pilot Length					
V9532S-0324	95	95.25	3-3/4	3.7500	35.0	11.51	32	7C*32P-35	7494-IP15-10	8IP-15	14.30
V9532S-96		96.00	-	3.7795							
V9532S-0326		96.84	3-13/16	3.8125							
V9532S-98		98.00	-	3.8583							
V9532S-0328		98.43	3-7/8	3.8750							
V9532S-100		100.00	-	3.9370							
V9532S-0330		100.01	3-15/16	3.9375							
V9532S-0400		101.60	4	4.0000							

* denotes carbide grade

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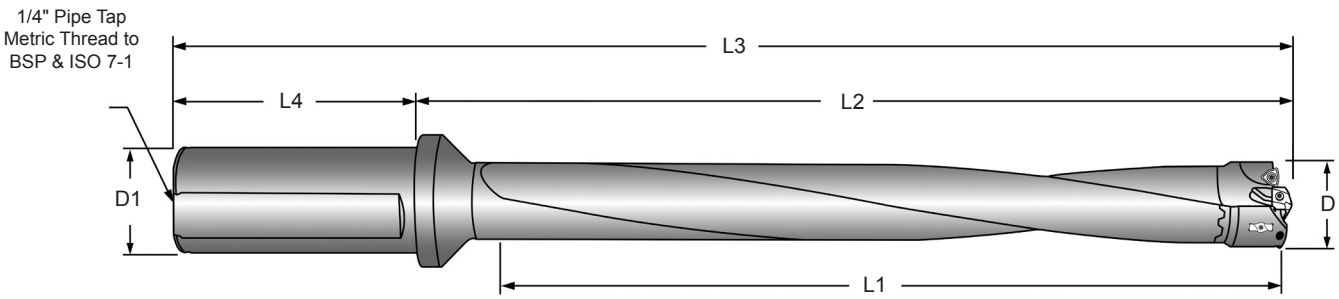
95 Series Holders

Diameter Range 95.00 to 101.60mm



APX DRILL Holders with Metric Shank

Part Number	Series	D		L1	L2	L3	L4	D1
		Dia. Range (Metric)	Dia. Range (Inch)	Drill Depth	Assembled Reference Length	Assembled OAL	Shank Length	Shank Dia.
(N) W9503H-50FM	95	95.00-101.60	3.7401-4.0000	302.0	362.8	442.8	80.0	50.0
W9505H-50FM				508.0	566.2	646.2		
⚠ W9508H-50FM				698.5	756.7	8367		

Non standard lengths and diameters available upon request.

NOTE: Each 70 through 95 Series APX Head is equipped with two factory installed wear pads for added stability. Replacement wear pads can be ordered using the item number below.

IC Size	Grade	Coating	IC Insert (2pc. package)	HR IC Insert (2pc. package)	IC Insert Screw (10pc. package)	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw (4pc. package)	Wear Pad Admissible Tightening Torque
14.30	P35 (C5)	AM300®	OP-090608-PW	(N) OP-090608-PWHR	75014-IP20-10	8IP-20	WP7095	7358-IP10-4	290 N/cm (25 in/lb)
	K35 (C1)		OP-090608-1PW	-					

Head Mounting Screw (4pc. package)	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	2825 N/cm (250 in/lb)

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

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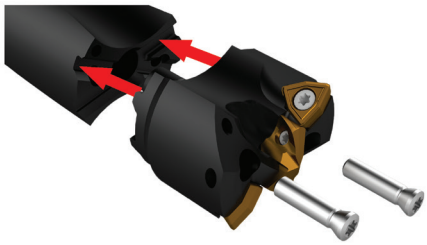
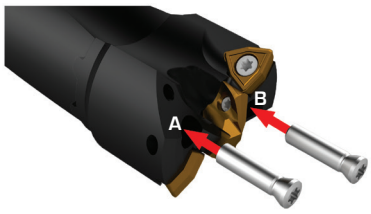
APX DRILL Set up instructions

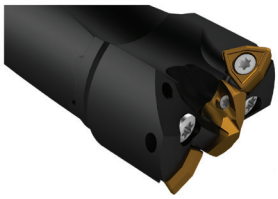
1 Lower the APX head assembly onto the APX Holder



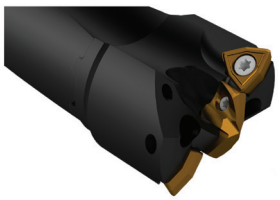
2 Insert Head Mounting Screws into points A and B and hand tighten until APX Head is properly secured to APX Holder



3 Tighten with Head Mounting Driver using torque setting chart below



4 Finished Assembly.
Follow proper APX Deep Hole Drilling Guidelines on page 177



APX DRILL Torque Setting Chart

8IP-20

8IP-30B

Series	Screw	Driver	Torque
38 - 63	75020-IP20	8IP-20	678 N/cm (60 in/lb)
70 - 95	78027-IP30	8IP-30B	2825 N/cm (250 in/lb)

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IMPORTANT: The speeds and feeds listed below are a general starting point for all applications. Refer to the Coolant Recommendation charts for coolant requirements to run at the recommended speeds and feeds. Factory technical assistance is also available through our Application Engineering Team.

Material Category	Material Hardness			IC Insert		FEED RATE (mm/rev)					
				Series		9.52	12.70	14.70	9.52	12.70 IC	14.30 IC
						38-44	44-51	51-57-63	70	76-83	89-95
	BHN	kg	N/mm²	Speed (M/min)	Pilot Drill	Ø38.00 - Ø47.88	Ø47.89 - Ø56.13	Ø56.14 - Ø69.99	Ø70.00 - Ø75.99	Ø76.00 - Ø88.99	Ø89.00 -Ø101.60
Free Machining Steel	100-250	38-88	370-870	137-229	T-A or GEN3SYS	0.20 - 0.36	0.25 - 0.40	0.25 - 0.40	0.15 - 0.30	0.18 - 0.36	0.18 - 0.36
Low Carbon Steel	85-275	30-96	300-940	137- 229	T-A or GEN3SYS	0.20 - 0.36	0.25 - 0.40	0.25 - 0.40	0.15 - 0.30	0.18 - 0.36	0.18 - 0.36
Medium Carbon Steel	125-325	46-111	450-1090	137 - 229	T-A or GEN3SYS	0.20 - 0.36	0.25 - 0.40	0.25 - 0.40	0.15 - 0.30	0.18 - 0.36	0.18 - 0.36
Alloy Steel	125-375	46-129	450-1265	122 - 213	T-A or GEN3SYS	0.15 - 0.30	0.20 - 0.36	0.20 - 0.36	0.13 - 0.25	0.15 - 0.30	0.15 - 0.30
High Strength Alloy	225-400	77-139	600-1365	91 - 152	T-A	0.15 - 0.20	0.15 - 0.25	0.15 - 0.30	0.13 - 0.18	0.15 - 0.20	0.15 - 0.20
Structural Steel	100-350	38-121	370-1180	137 - 229	T-A or GEN3SYS	0.20 - 0.30	0.25 - 0.36	0.25 - 0.40	0.15 - 0.30	0.18 - 0.36	0.18 - 0.36
Tool Steel	150-250	50-88	500-870	91 - 152	T-A or GEN3SYS	0.15 - 0.20	0.20 - 0.25	0.25 - 0.30	0.15 - 0.20	0.18 - 0.36	0.18 - 0.36
High Temperature Alloy	140-310	49-101	480-990	61 - 122	T-A	0.15 - 0.20	0.20 - 0.25	0.20 - 0.25	0.10 - 0.15	0.13 - 0.18	0.13 - 0.18
Titanium Alloy	140-310	49-101	480-990	91 - 152	T-A	0.15 - 0.20	0.20 - 0.25	0.20 - 0.25	0.10 - 0.15	0.13 - 0.18	0.13 - 0.18
Aerospace Alloy S82	185-350	65-121	640-1180	122 - 183	T-A	0.13 - 0.18	0.15 - 0.20	0.15 - 0.20	0.10 - 0.15	0.13 - 0.18	0.13 - 0.18
Stainless Steel 400 Series 303, 416, 420	185-350	65-121	640-1180	91 - 152	T-A or GEN3SYS	0.20 - 0.30	0.25 - 0.36	0.25 - 0.36	0.10 - 0.20	0.15 - 0.25	0.15 - 0.25
Stainless Steel 300 Series 304, 316, 17-4PH	135-275	49-96	480-940	91 - 152	T-A or GEN3SYS	0.15 - 0.20	0.20 - 0.25	0.20 - 0.25	0.10 - 0.20	0.15 - 0.25	0.15 - 0.25
Super Duplex Stainless Steel	135-275	49-96	480-940	76 - 137	T-A or GEN3SYS	0.15 - 0.20	0.20 - 0.25	0.20 - 0.25	0.10 - 0.20	0.15 - 0.25	0.15 - 0.25
Wear Plate Hardox, AR400, T-1, etc.	400-600	139-210	1365-2000	91 - 152	T-A	0.10 - 0.15	0.15 - 0.20	0.20 - 0.25	0.08 - 0.13	0.10 - 0.15	0.10 - 0.15
Hardened Steel	300-500	104-139+	1020-1365+	91 - 152	T-A	0.13 - 0.15	0.15 - 0.20	0.15 - 0.20	0.08 - 0.13	0.10 - 0.15	0.10 - 0.15
Nodular, Grey, Ductile Cast Iron	120-320	44-104	430-1020	152 - 244	T-A or GEN3SYS	0.15 - 0.30	0.25 - 0.38	0.30 -0.40	0.20 - 0.30	0.25 - 0.36	0.25 - 0.36
Cast Aluminum	30-180	10-62	100-600	183 - 244	T-A or GEN3SYS	0.30 - 0.40	0.36 - 0.46	0.36 - 0.46	0.15 - 0.25	0.20 - 0.36	0.20 - 0.36
Wrought Aluminum	30-180	10-62	100-600	183 - 244	T-A or GEN3SYS	0.20 - 0.30	0.25 - 0.36	0.30 - 0.40	0.15 - 0.25	0.20 - 0.36	0.20 - 0.36
Aluminum Bronze	100-250	38-87	370-855	123 - 213	T-A or GEN3SYS	0.13 - 0.25	0.20 - 0.30	0.25- 0.36	0.15 - 0.25	0.20 - 0.36	0.20 - 0.36
Brass	100	38	370	244	T-A or GEN3SYS	0.20 - 0.25	0.25 - 0.30	0.30 - 0.36	0.15 - 0.20	0.20 - 0.25	0.20 - 0.25
Copper	60	21	200	213	T-A or GEN3SYS	0.08 - 0.15	0.15 - 0.20	0.20 - 0.25	0.08 - 0.15	0.15 - 0.20	0.15 - 0.20

⚠ WARNING **Tool failure can cause serious injury. To prevent:**
- For APX Holders 8xD or longer, do not rotate tool more than 50 RPM unless it is engaged with workpiece or fixture.

Refer to page 177 for Deep hole Drilling Guidelines in Technical Section of catalogue. *Visit www.alliedmaxcut.com* for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Technical Section

Chip Enhancing Geometries

IMPORTANT: The coolant pressure and flow rate recommendations below represent a good approximation to obtain optimum tool life and chip evacuation at Allied recommended speeds and feeds. If lower coolant capabilities exist in a drilling application, the APX Drilling System will still function at reduced penetration rates. Contact our Application Engineering Department for a more specific recommendation of coolant requirements and/or speeds and feeds.

Series	Pressure		Flow Rate	
	BAR	PSI	LPM	GPM
38	21	300	38	10
44	19	275	45	12
51	17	250	68	18
57	16	225	76	20
63	14	200	83	22
70	10	150	95	25
76	7	100	106	28
83	7	100	114	30
89	7	100	125	33
95	7	100	125	33

Insert Guidelines

T-A® Original

Standard T-A® : Allied's Standard T-A® Geometry is an excellent choice for general purpose use. The design provides fast penetration rates that produce good hole size and finish. Standard Geometry combines highly efficient, stable cutting action to minimize power consumption. Recommended for use in most steels, cast irons, high temperature alloys and aluminum alloys.

GEN2 T-A® : For more stable applications with good rigidity to take advantage of the centering notch point geometry and increased efficiency. Offers improved tool life verses Standard T-A®. Recommended for most steels and cast iron.

GEN2 T-A® High Elasticity (HE) : Allied's GEN2 T-A® HE Geometry is designed for improved chip formation in elastic materials like low carbon steels. HE Geometry combined with the other advanced features of the GEN2 T-A®, allows for maximum performance and increased value. Available in K35 with AM200® Coating.

TC : Allied's TC geometry is an excellent choice for applications that are running at lighter feed rates, or require a more manageable chip. Recommended for use in low carbon steels, soft alloy steels, and other long chipping materials. Available in K35 with AM200® Coating.

GEN3SYS® XT

GEN3SYS® XT offers superior chip forming capabilities and material specific geometries such as (-AS), which is designed for austinetic stainless steels.

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.

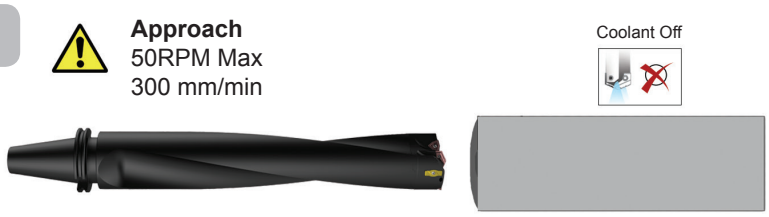
LR : Enhanced LR-XT geometry supports applications with poor stability and rigidity. First choice for machining structural, cast and forged steel in materials over 850N/mm² (250BHN). AM300® coating provides exceptional wear resistance and up to 20% increase in tool life over AM200®. Available in K35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

STD : 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.

Technical Section - Deep Hole Drilling Guidelines

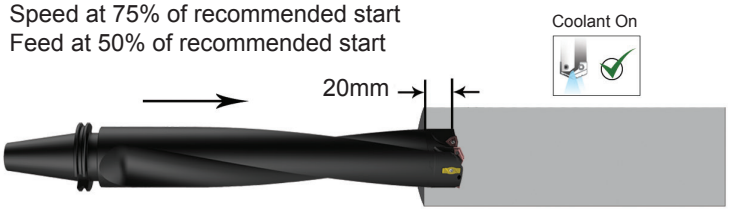
For use with APX Drills 8xD & greater (Depths to Diameter)

1 **Approach**
50RPM Max
300 mm/min



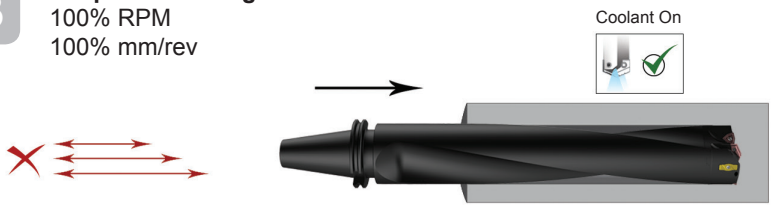
Feed the longer drill within 1.5 mm short of the workpiece at a maximum of 50 RPM and 300 mm/min feed rate

2 **Feed In**
Speed at 75% of recommended start
Feed at 50% of recommended start



Drill 20mm deep at 75% recommended speed and 50% recommended feed to establish hole

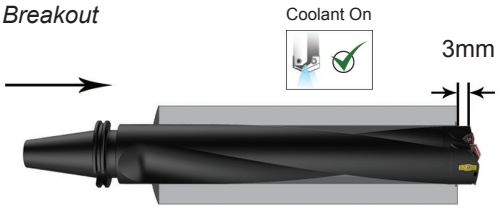
3 **Deep Hole Drilling** - *Blind*
100% RPM
100% mm/rev



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

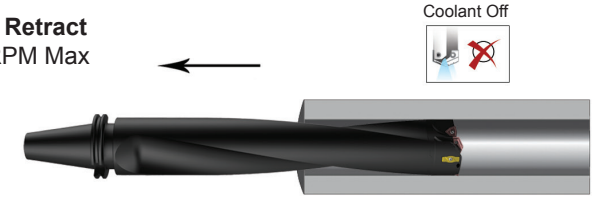
No peck cycle recommended

4 **Deep Hole Drilling** - *At Breakout*
50% RPM
100% mm/rev



* For Through Holes Only*
- Reduce speed by 50% prior to break out
- Do not break out more than 3 mm past the full diameter of drill

5 **Drill Retract**
50 RPM Max



Reduce speed to maximum of 50 RPM before retracting from hole

⚠ WARNING **Tool failure can cause serious injury. To prevent:**
NEVER rotate these tool holders more than 50RPM without proper engagement with a workpiece or fixture. Failure to do so could result in tool failure and/or personal injury. Visit *www.alliedmaxcut.com* for the most up-to-date information and procedures. Technical assistance is also available for your specific applications.

Holder Accessories

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

Insert Series	Part Number			Maximum Torque (N/cm)
	TORX Plus® Hand Drivers	TORX Plus® Screws*	Nylon Locking TORX Screws*	
0	8IP-8	72556-IP8-10	72556N-IP8-10	175
1	8IP-9	7375-IP9-10	7375N-IP9-10	305
2	8IP-15	7495-IP15-10	7495N-IP15-10	690

Supplied in 10 piece packages.

GEN3SYS® XT Pilot Insert Replacement TORX Plus Screws and Driver information

Insert Series	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*	
15	8IP-7	8IP-7TL	8IP-7B	7247-IP7-10	7247N-IP7-10	84
17	8IP-8	8IP-8TL	8IP-8B	72567-IP8-10	72567N-IP8-10	175
18	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
20	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
22	8IP-9	8IP-9TL	8IP-9B	7375-IP9-10	7375N-IP9-10	305
24	8IP-9	8IP-9TL	8IP-9B	739-IP9-10	739N-IP9-10	305
26	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
29	8IP-15	8IP-15TL	8IP-15B	7495-IP15-10	7495N-IP15-10	690
32	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 10 piece packages.

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