ALLIED MACHINE & ENGINEERING CORP.

APX™ DRILL

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www.alliedmachine.com

ALLIED MACHINE & ENGINEERING CORP.

Our focus on product excellence, service to the customer, respect for the individual, and competitive advantage, enables us to deliver outstanding results in a diverse range of manufacturing, production and process engineering industries.

As a result, Allied high performance tooling is helping countless businesses across the world to produce better products with greater accuracy, increased speed and higher quality.

Precision, performance and productivity are core features of Allied tooling and our commitment to innovation in all aspects of hole making technology means we continually set new industry standards in production efficiency, tool life, and manufacturing cost improvements.

This product catalog provides detailed information on products in a comprehensive, easy to use, and informative single source reference guide. However, we recognize that every company's needs are unique, which is why our customer service and technical support team are always available to provide help and advice, should you need it.

Whatever your need, Allied Machine & Engineering Corp. delivers high performance tooling on the cutting edge.

Allied Machine & Engineering *Corp*.
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⚠ WARNING

Tool failure during use can cause serious injury. Follow safety precautions and instructions that accompany machinery and all tools.

Wear safety glasses and appropriate safety equipment at all times when machinery is operating.

APX™ Drill
Table of Contents

Made in the USA

SAFETY ALERT

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

This triangle is a safety alert symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury. When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

⚠ WARNING There are safety signal words also used in the catalog. Safety messages follow these words.

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

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

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

APX™ Heads

V 38 15 D - 0116

APX™ Head	Series		Pilot Series		Eff. Cutting	Major Diameter
	38	70	GEN3SYS®	T-A®	D = Double Effective	Inch = 0116
	44	76	15	00	S = Single Effective	Decimal = 1.5153
	51	83	17	01		Metric = 68
	57	89	18	02		
	63	95	20			
			22			
			24			
			26			
			29			
			32			

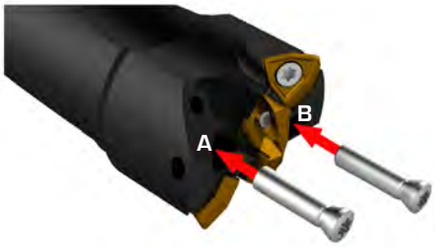
APX™ Holders

W 38 05 H - 200F

APX™ Body	Series		Depth to Ø		Shank
	38	70	05	H = Helical	200F = 2" Flanged Shank
	44	76	08		50FM = 50mm Flanged Shank
	51	83	10		CV50 = CAT50 Integral
	57	89			
	63	95			

APX™ Drill
Assembly Details

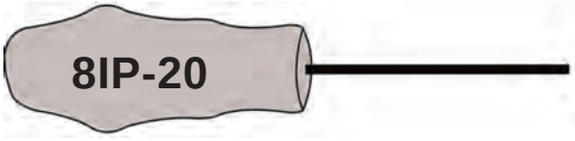
1) **Lower the APX™ head assembly onto the APX Holder**



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 pg 29**



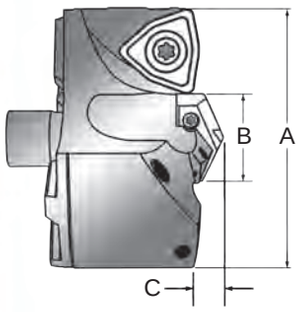
Torque Setting Chart

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

APX™ Drill - 38 Series

Range: 1.4961" - 1.7322" (38,00mm - 43,99mm)

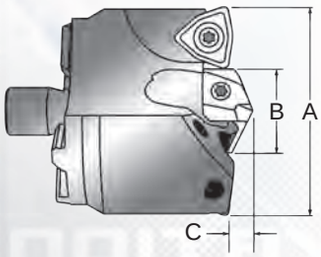
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V3800D-38	38	-	1.4961	38,00	5/8	19/64	0	4C*0H-0020	72567-IP8-10	8IP-8	3/8
V3800D-0116		1-1/2	1.5000	38,10							
V3800D-0117		1-17/32	1.5313	38,90							
V3800D-39		-	1.5354	39,00							
V3800D-0118		1-9/16	1.5625	39,69							
V3800D-40		-	1.5748	40,00	11/16			4C*0H-0022			
V3800D-0119		1-19/32	1.5938	40,48							
V3800D-41		-	1.6142	41,00							
V3800D-0120		1-5/8	1.6250	41,28							
V3801D-42		-	1.6535	42,00	3/4		1	4C*1H-0024	7375-IP9-10	8IP-9	
V3801D-0121		1-21/32	1.6563	42,07							
V3801D-0122		1-11/16	1.6875	42,86							
V3801D-43		-	1.6929	43,00	13/16			4C*1H-0026			
V3801D-0123		1-23/32	1.7188	43,66							

* denotes carbide grade

GEN3SYS® Pilot Heads



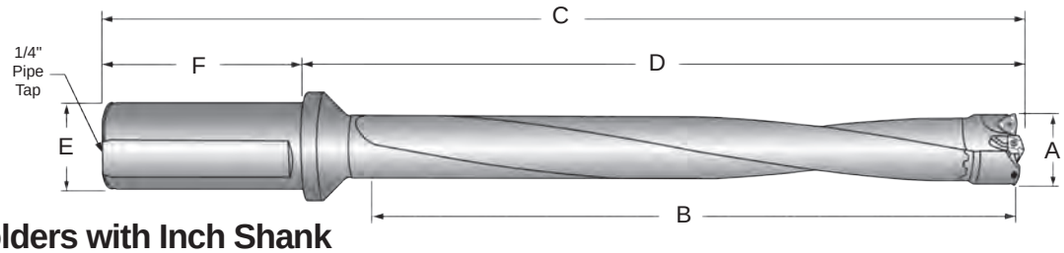
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V3815D-38	38	-	1.4961	38,00	5/8	19/64	15	7C*15P-0020	7247-IP7-10	8IP-7	3/8
V3815D-0116		1-1/2	1.5000	38,10							
V3815D-0117		1-17/32	1.5313	38,90							
V3815D-39		-	1.5354	39,00							
V3815D-0118		1-9/16	1.5625	39,69							
V3817D-40		-	1.5748	40,00	11/16		17	7C*17P-0022	72567-IP8-10	8IP-8	
V3817D-0119		1-19/32	1.5938	40,48							
V3817D-41		-	1.6142	41,00							
V3817D-0120		1-5/8	1.6250	41,28							
V3818D-42		-	1.6535	42,00	3/4		18	7C*18P-0024	7375-IP9-10	8IP-9	
V3818D-0121		1-21/32	1.6563	42,07							
V3818D-0122		1-11/16	1.6875	42,86							
V3820D-43		-	1.6929	43,00	13/16		20	7C*20P-0026			
V3820D-0123		1-23/32	1.7188	43,66							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver
3/8	C5	AM300®	OP-060408-PW	73595-IP15-10	8IP-15
	C1		OP-060408-1PW		

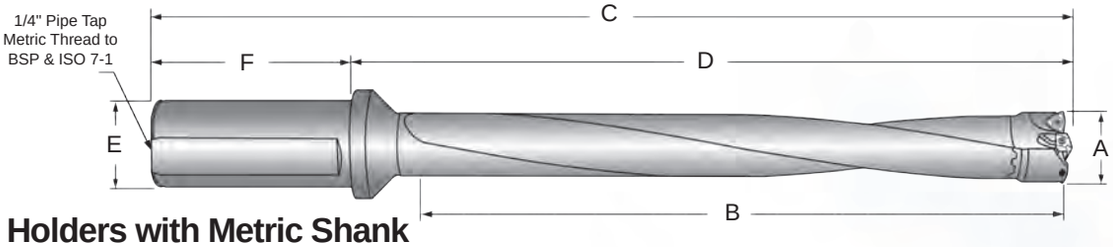
APX™ Drill - 38 Series

Range: 1.4961" - 1.7322" (38,00mm - 43,99mm)



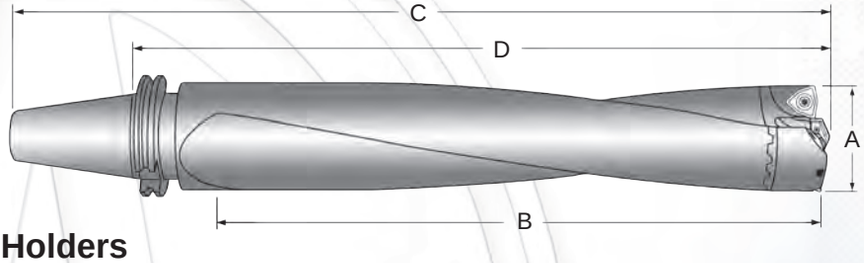
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W3805H-200F	38	1.4961-1.7322	38,00-43,99	8-5/8	15-45/64	11-13/64	2	4-1/2
⚠ W3808H-200F				13-7/8	20-57/64	16-25/64		
⚠ W3810H-200F				17-1/4	24-59/64	19-27/32		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W3805H-50FM	38	1.4961-1.7322	38,00-43,99	220,0	364,5	284,5	50,0	80,0
⚠ W3808H-50FM				352,0	496,3	416,3		
⚠ W3810H-50FM				439,9	583,9	503,9		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W3805H-CV50	38	1.4961-1.7322	38,00-43,99	8-5/8	15-51/64	11-11/16	CV50
⚠ W3808H-CV50				13-7/8	21	16-7/8	
⚠ W3810H-CV50				17-1/4	24-15/32	20-11/32	

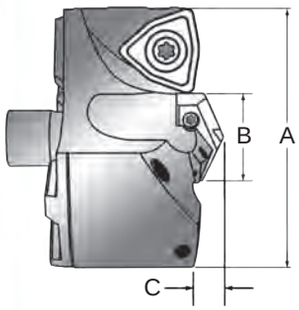
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	60 in-lb (678 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 44 Series

Range: 1.7323" - 2.0075" (44,00mm - 50,99mm)

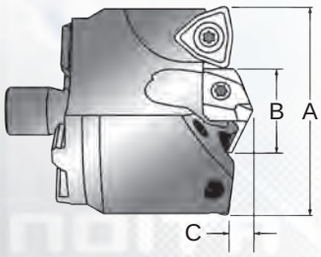
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V4401D-44	44	-	1.7323	44,00	7/8	21/64	1	4C*1H-0028	7375-IP9-10	8IP-9	3/8
V4401D-0124		1-3/4	1.7500	44,45							
V4401D-45		-	1.7717	45,00							
V4401D-0125		1-25/32	1.7813	45,25							
V4401D-46		-	1.8110	46,00	15/16			4C*1H-0030			
V4401D-0126		1-13/16	1.8125	46,04							
V4401D-0127		1-27/32	1.8438	46,83							
V4401D-47		-	1.8504	47,00							
V4401D-0128		1-7/8	1.8750	47,63							
V4401D-48		-	1.8898	48,00	45/64			4C*1H-0.703			1/2
V4401D-0129		1-29/32	1.9063	48,42							
V4401D-49		-	1.9291	49,00							
V4401D-0130		1-15/16	1.9375	49,21							
V4401D-50		-	1.9685	50,00	47/64			4C*1H-0.734			
V4401D-0131		1-31/32	1.9688	50,01							
V4401D-0200		2	2.0000	50,80							

* denotes carbide grade

GEN3SYS® Pilot Heads



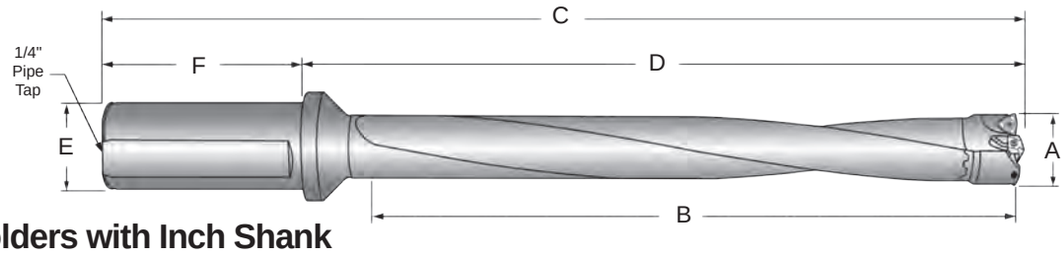
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V4422D-44	44	-	1.7323	44,00	7/8	21/64	22	7C*22P-0028	739-IP9-10	8IP-9	3/8
V4422D-0124		1-3/4	1.7500	44,45							
V4422D-45		-	1.7717	45,00							
V4422D-0125		1-25/32	1.7813	45,25							
V4422D-46		-	1.8110	46,00	15/16			7C*22P-0030			
V4422D-0126		1-13/16	1.8125	46,04							
V4422D-0127		1-27/32	1.8438	46,83							
V4422D-47		-	1.8504	47,00							
V4422D-0128		1-7/8	1.8750	47,63							
V4417D-48		-	1.8898	48,00	45/64		17	7C*17P-0.703	72567-IP8-10	8IP-8	1/2
V4417D-0129		1-29/32	1.9063	48,42							
V4417D-49		-	1.9291	49,00							
V4417D-0130		1-15/16	1.9375	49,21							
V4418D-50		-	1.9685	50,00	47/64		18	7C*18P-0.734	7375-IP9-10	8IP-9	
V4418D-0131		1-31/32	1.9688	50,01							
V4418D-0200		2	2.0000	50,80							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver
3/8	C5	AM300®	OP-060408-PW	73595-IP15-10	8IP-15
	C1		OP-060408-1PW		
1/2	C5		OP-080508-PW	74012-IP15-10	
	C1		OP-080508-1PW		

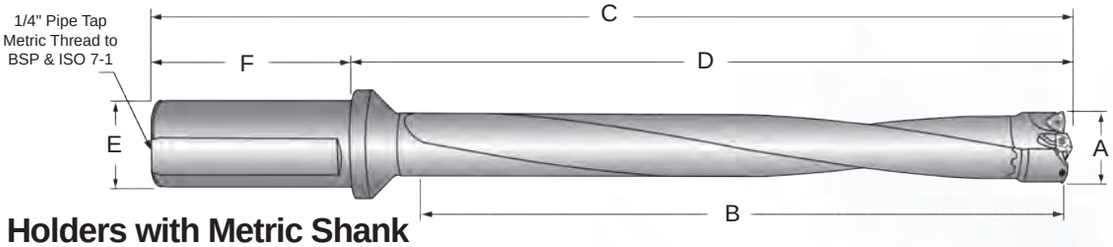
APX™ Drill - 44 Series

Range: 1.7323" - 2.0075" (44,00mm - 50,99mm)



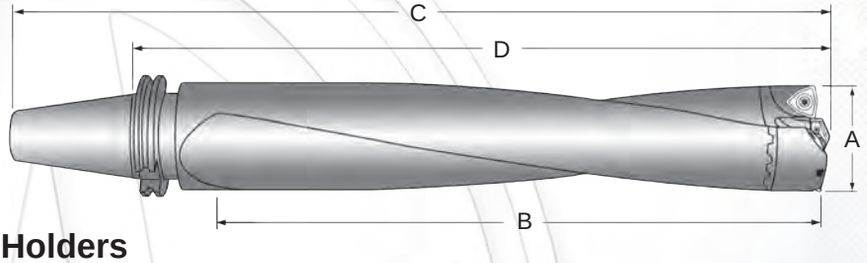
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W4405H-200F	44	1.7323-2.0075	44,00-50,99	10	17-3/64	12-35/64	2	4-1/2
⚠ W4408H-200F				16	23-5/64	18-37/64		
⚠ W4410H-200F				20-1/8	27-3/32	22-19/32		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W4405H-50FM	44	1.7323-2.0075	44,00-50,99	255,0	398,8	318,8	50,0	80,0
⚠ W4408H-50FM				407,9	551,7	471,7		
⚠ W4410H-50FM				510,0	653,8	573,8		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W4405H-CV50	44	1.7323-2.0075	44,00-50,99	10	17-17/64	13-9/64	CV50
⚠ W4408H-CV50				16	23-19/64	19-11/64	
⚠ W4410H-CV50				20	27-5/16	23-3/16	

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

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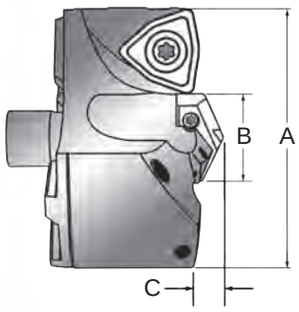
APX™ Drill - 51 Series

Range: 2.0076" - 2.2438" (51,00mm - 56,99mm)

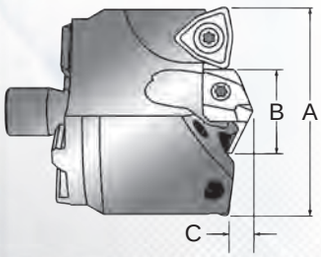
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V5101D-51	51	-	2.0079	51,00	25/32	11/32	1	4C*1H-0025	7375-IP9-10	8IP-9	1/2
V5101D-0201		2-1/32	2.0313	51,59							
V5101D-52		-	2.0472	52,00							
V5101D-0202		2-1/16	2.0625	52,39							
V5101D-53		-	2.0866	53,00	27/32			4C*1H-0027			
V5101D-0203		2-3/32	2.0938	53,18							
V5101D-0204		2-1/8	2.1250	53,98							
V5101D-54		-	2.1260	54,00	15/16			4C*1H-0030			
V5101D-0205		2-5/32	2.1563	54,77							
V5101D-55		-	2.1654	55,00							
V5101D-0206		2-3/16	2.1875	55,56							
V5101D-56		-	2.2047	56,00							
V5101D-0207		2-7/32	2.2188	56,36	13/16			4C*1H-0026			9/16

* denotes carbide grade

GEN3SYS® Pilot Heads



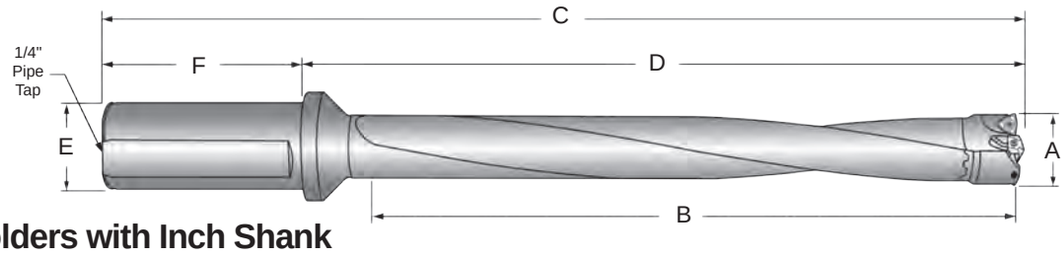
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V5118D-51	51	-	2.0079	51,00	25/32	11/32	18	7C*18P-0025	7375-IP9-10	8IP-9	1/2
V5118D-0201		2-1/32	2.0313	51,59							
V5118D-52		-	2.0472	52,00							
V5118D-0202		2-1/16	2.0625	52,39							
V5120D-53		-	2.0866	53,00	27/32		20	7C*20P-0027			
V5120D-0203		2-3/32	2.0938	53,18							
V5120D-0204		2-1/8	2.1250	53,98							
V5122D-54		-	2.1260	54,00	15/16		22	7C*22P-0030	739-IP9-10		
V5122D-0205		2-5/32	2.1563	54,77							
V5122D-55		-	2.1654	55,00							
V5122D-0206		2-3/16	2.1875	55,56							
V5122D-56		-	2.2047	56,00							
V5120D-0207		2-7/32	2.2188	56,36	13/16		20	7C*20P-0026	7375-IP9-10		9/16

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver
1/2	C5	AM300®	OP-080508-PW	74012-IP15-10	8IP-15
	C1		OP-080508-1PW		
9/16	C5		OP-090608-PW	75014-IP20-10	8IP-20
	C1		OP-090608-1PW		

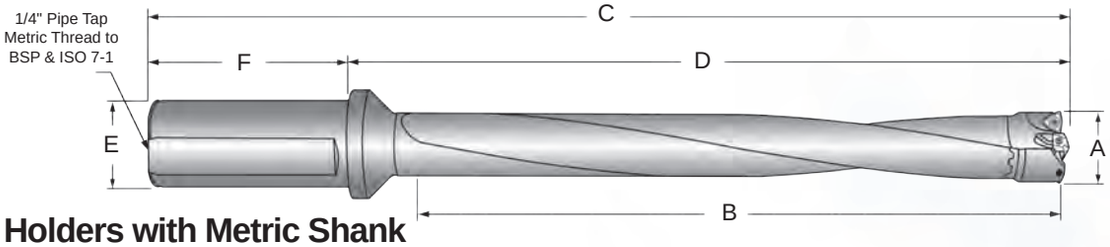
APX™ Drill - 51 Series

Range: 2.0076" - 2.2438" (51,00mm - 56,99mm)



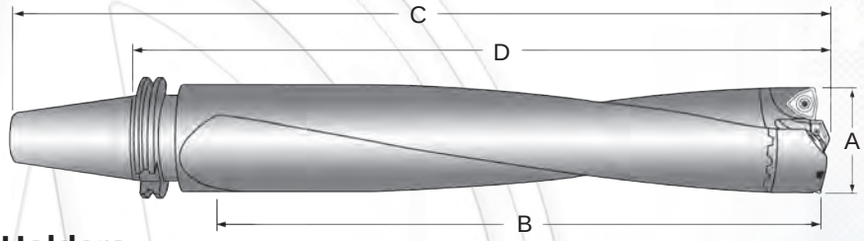
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W5105H-200F	51	2.0076-2.2438	51,00-56,99	11-1/8	17-7/8	13-3/8	2	4-1/2
⚠ W5108H-200F				17-7/8	24-19/32	20-3/32		
⚠ W5110H-200F				22-3/8	29-3/32	24-19/32		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W5105H-50FM	51	2.0076-2.2438	51,00-56,99	285,0	419,6	339,6	50,0	80,0
⚠ W5108H-50FM				455,9	590,5	510,5		
⚠ W5110H-50FM				570,0	704,6	624,6		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W5105H-CV50	51	2.0076-2.2438	51,00-56,99	11-1/4	18-7/32	14-3/32	CV50
⚠ W5108H-CV50				17-7/8	24-61/64	20-53/64	
⚠ W5110H-CV50				22-3/8	29-7/16	25-21/64	

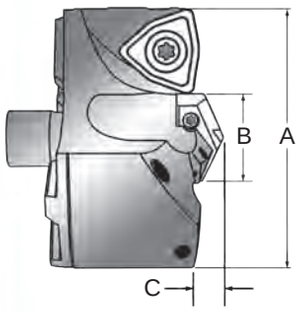
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	60 in-lb (678 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX Drill™ - 57 Series

Range: 2.2439" - 2.4799" (57,00mm - 62,99mm)

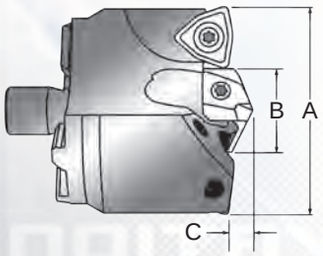
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V5701D-57	57	-	2.2441	57,00	29/32	25/64	1	4C*1H-0029	739-IP9-10	8IP-9	9/16
V5701D-0208		2-1/4	2.2500	57,15							
V5701D-0209		2-9/32	2.2813	57,94							
V5701D-58		-	2.2835	58,00							
V5701D-0210		2-5/16	2.3125	58,74							
V5701D-59		-	2.3228	59,00	15/16			4C*1H-0030			
V5701D-0211		2-11/32	2.3438	59,53							
V5701D-60		-	2.3622	60,00							
V5701D-0212		2-3/8	2.3750	60,33							
V5702D-61		-	2.4016	61,00	1		2	4C*2H-0100	7495-IP15-10	8IP-15	
V5702D-0213		2-13/32	2.4063	61,12							
V5702D-0214		2-7/16	2.4375	61,91							
V5702D-62		-	2.4409	62,00	1-1/16			4C*2H-0102			
V5702D-0215		2-15/32	2.4688	62,71							

* denotes carbide grade

GEN3SYS® Pilot Heads



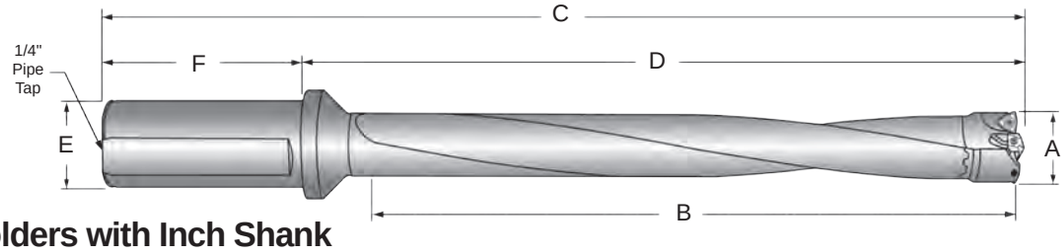
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V5722D-57	57	-	2.2441	57,00	29/32	25/64	22	7C*22P-0029	739-IP9-10	8IP-9	9/16
V5722D-0208		2-1/4	2.2500	57,15							
V5722D-0209		2-9/32	2.2813	57,94							
V5722D-58		-	2.2835	58,00							
V5722D-0210		2-5/16	2.3125	58,74							
V5722D-59		-	2.3228	59,00	15/16			7C*22P-0030			
V5722D-0211		2-11/32	2.3438	59,53							
V5722D-60		-	2.3622	60,00							
V5722D-0212		2-3/8	2.3750	60,33							
V5724D-61		-	2.4016	61,00	1		24	7C*24P-0100			
V5724D-0213		2-13/32	2.4063	61,12							
V5724D-0214		2-7/16	2.4375	61,91							
V5726D-62		-	2.4409	62,00	1-1/16		26	7C*26P-0102	7495-IP15-10	8IP-15	
V5726D-0215		2-15/32	2.4688	62,71							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver
9/16	C5	AM300®	OP-090608-PW	75014-IP20-10	8IP-20
	C1		OP-090608-1PW		

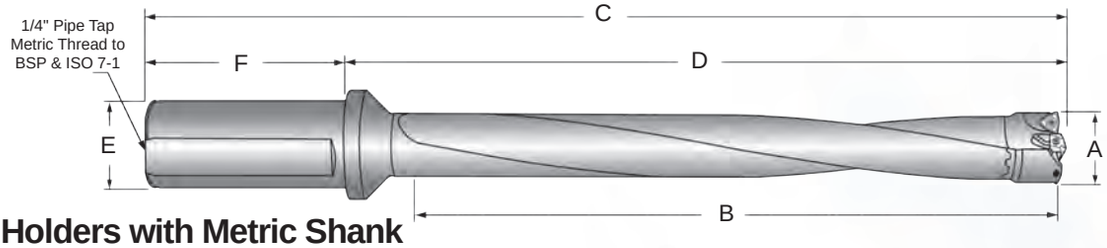
APX™ Drill - 57 Series

Range: 2.2439" - 2.4799" (57,00mm - 62,99mm)



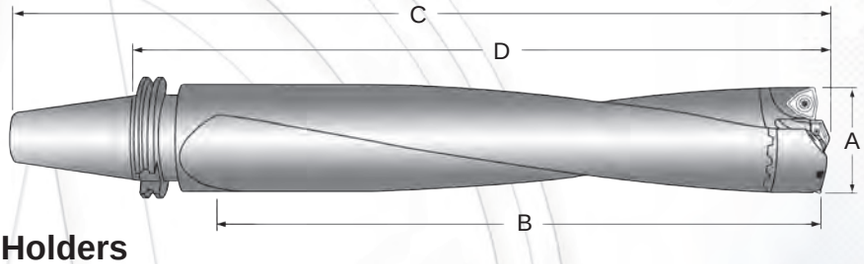
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W5705H-200F	57	2.2439-2.4799	57,00-62,99	12-3/8	19-1/64	14-33/64	2	4-1/2
⚠ W5708H-200F				19-3/4	26-15/32	21-31/32		
⚠ W5710H-200F				24-3/4	31-27/64	26-59/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W5705H-50FM	57	2.2439-2.4799	57,00-62,99	315,0	448,6	368,6	50,0	80,0
⚠ W5708H-50FM				503,9	637,8	557,8		
⚠ W5710H-50FM				626,9	763,8	683,8		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W5705H-CV50	57	2.2439-2.4799	57,00-62,99	12-3/8	19-31/64	15-23/64	CV50
⚠ W5708H-CV50				19-7/8	26-15/16	22-51/64	
⚠ W5710H-CV50				24-3/4	31-57/64	27-49/64	

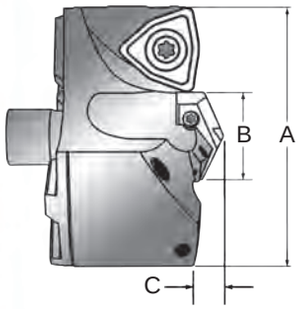
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	60 in-lb (678 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 63 Series

Range: 2.4800" - 2.7555" (63,00mm - 69,99mm)

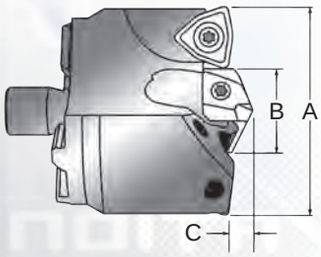
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V6302D-63	63	-	2.4803	63,00	1-1/8	7/16	2	4C*2H-0104	7495-IP15-10	8IP-15	9/16
V6302D-0216		2-1/2	2.5000	63,50							
V6302D-64		-	2.5197	64,00							
V6302D-0217		2-17/32	2.5313	64,29							
V6302D-65		-	2.5591	65,00							
V6302D-0218		2-9/16	2.5625	65,09	1-3/16			4C*2H-0106			
V6302D-0219		2-19/32	2.5938	65,88							
V6302D-66		-	2.5984	66,00							
V6302D-0220		2-5/8	2.6250	66,68							
V6302D-67		-	2.6378	67,00	1-1/4			4C*2H-0108			
V6302D-0221		2-21/32	2.6563	67,47							
V6302D-68		-	2.6772	68,00							
V6302D-0222		2-11/16	2.6875	68,26							
V6302D-69		-	2.7165	69,00	1-5/16			4C*2H-0110			
V6302D-0223		2-23/32	2.7188	69,06							
V6302D-0224		2-3/4	2.7500	69,85							

* denotes carbide grade

GEN3SYS® Pilot Heads



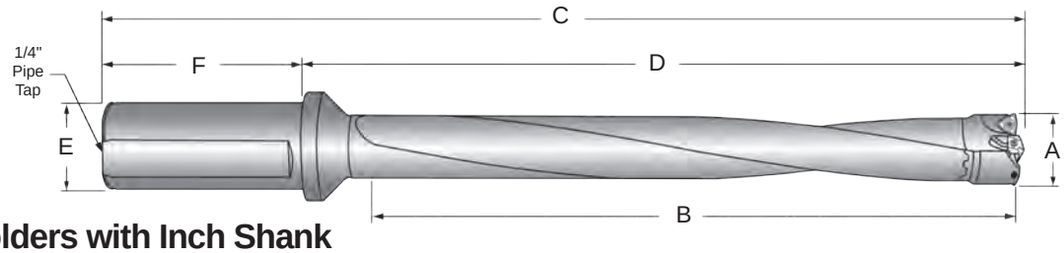
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V6326D-63	63	-	2.4803	63,00	1-1/8	7/16	26	7C*26P-0104	7495-IP15-10	8IP-15	9/16
V6326D-0216		2-1/2	2.5000	63,50							
V6326D-64		-	2.5197	64,00							
V6326D-0217		2-17/32	2.5313	64,29							
V6326D-65		-	2.5591	65,00							
V6329D-0218		2-9/16	2.5625	65,09	1-3/16		29	7C*29P-0106			
V6329D-0219		2-19/32	2.5938	65,88							
V6329D-66		-	2.5984	66,00							
V6329D-0220		2-5/8	2.6250	66,68							
V6329D-67		-	2.6378	67,00	1-1/4			7C*29P-0108			
V6329D-0221		2-21/32	2.6563	67,47							
V6329D-68		-	2.6772	68,00							
V6329D-0222		2-11/16	2.6875	68,26							
V6332D-69		-	2.7165	69,00	1-5/16		32	7C*32P-0110			
V6332D-0223		2-23/32	2.7188	69,06							
V6332D-0224		2-3/4	2.7500	69,85							

* denotes carbide grade

IC Size	Carbide	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver
9/16	C5	AM300®	OP-090608-PW	75014-IP20-10	8IP-20
	C1		OP-090608-1PW		

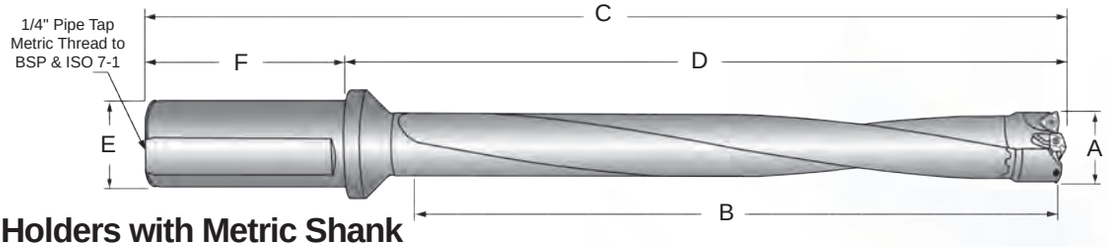
APX™ Drill - 63 Series

Range: 2.4800" - 2.7555" (63,00mm - 69,99mm)



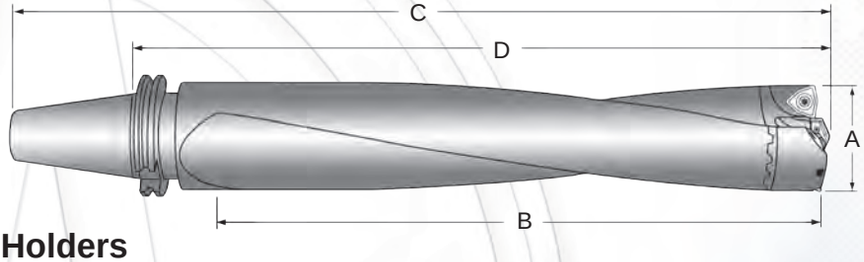
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W6305H-200F	63	2.4800-2.7555	63,00-69,99	13-3/4	20-11/32	15-27/32	2	4-1/2
⚠ W6308H-200F				22-1/8	28-5/8	24-1/8		
⚠ W6310H-200F				27-1/8	33-43/64	29-11/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W6305H-50FM	63	2.4080-2.7555	63,00-69,99	350,0	482,6	402,6	50,0	80,0
⚠ W6308H-50FM				560,0	692,6	612,6		
⚠ W6310H-50FM				688,3	820,9	740,9		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W6305H-CV50	63	2.4080-2.7555	63,00-69,99	13-3/4	20-15/16	16-53/64	CV50
⚠ W6308H-CV50				22	29-7/32	25-5/64	
⚠ W6310H-CV50				26-1/2	33-43/64	29-35/64	

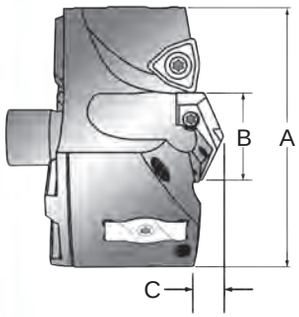
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
75020-IP20-4	8IP-20	60 in-lb (678 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 70 Series

Range: 2.7556" - 2.9917" (70,00mm - 75,99mm)

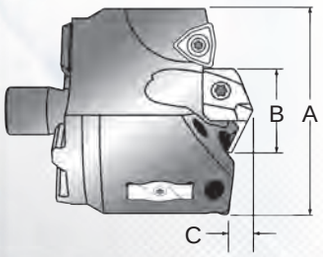
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V7002S-70	70	-	2.7559	70,00	1-7/32	25/64	2	4C*2H-0107	7495-IP15-10	8IP-15	3/8
V7002S-0226		2-13/16	2.8125	71,44							
V7002S-72		-	2.8346	72,00							
V7002S-0228		2-7/8	2.8750	73,03							
V7002S-74		-	2.9134	74,00							
V7002S-0230		2-15/16	2.9375	74,61							

* denotes carbide grade

GEN3SYS® Pilot Heads



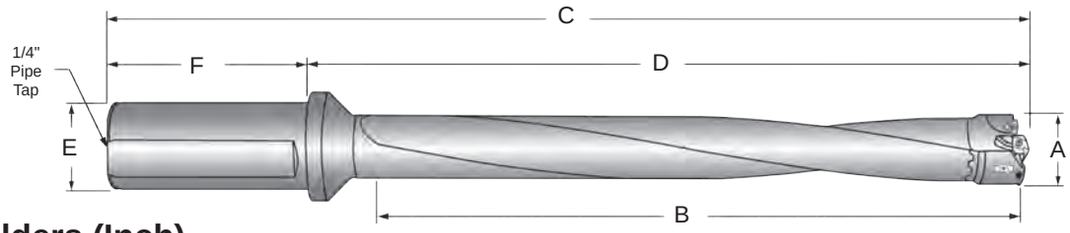
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V7029S-70	70	-	2.7559	70,00	1-7/32	25/64	29	7C*29P-0107	7495-IP15-10	8IP-15	3/8
V7029S-0226		2-13/16	2.8125	71,44							
V7029S-72		-	2.8346	72,00							
V7029S-0228		2-7/8	2.8750	73,03							
V7029S-74		-	2.9134	74,00							
V7029S-0230		2-15/16	2.9375	74,61							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw
3/8	C5	AM300®	OP-060408-PW	73595-IP15-10	8IP-15	WP7095	7358-IP9-4
	C1		OP-060408-1PW				

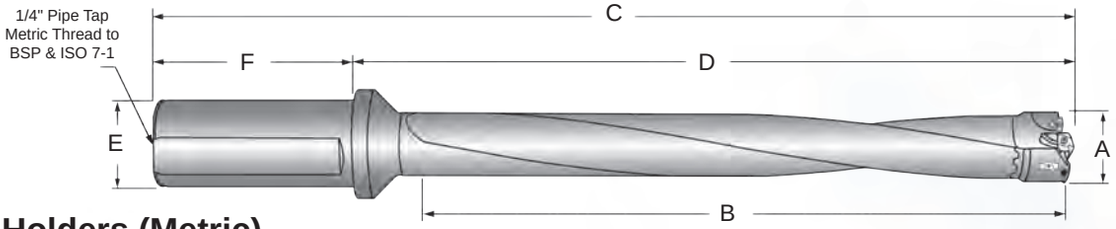
APX™ Drill - 70 Series

Range: 2.7556" - 2.9917" (70,00mm - 75,99mm)



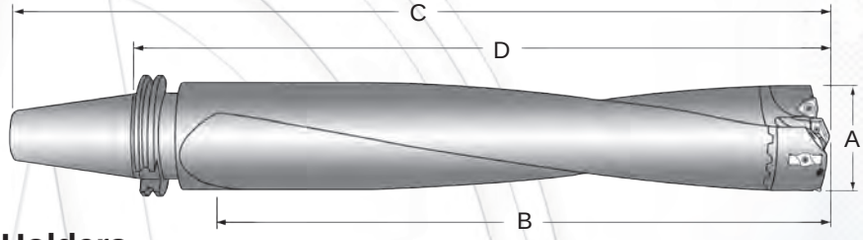
Holders (Inch)

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W7005H-200F	70	2.7556-2.9917	70,00-75,99	14-7/8	21-5/64	16-37/64	2	4-1/2
⚠ W7008H-200F				23-7/8	30-3/64	25-35/64		
⚠ W7010H-200F				27-7/8	34-3/64	29-35/64		



Holders (Metric)

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W7005H-50FM	70	2.7556-2.9917	70,00-75,99	380,0	501,1	421,1	50,0	80,0
⚠ W7008H-50FM				608,0	729,0	649,0		
⚠ W7010H-50FM				709,4	830,3	750,3		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W7005H-CV50	70	2.7556-2.9917	70,00-75,99	14-7/8	22-7/32	18-5/64	CV50
⚠ W7008H-CV50				23-7/8	31-3/16	27-3/64	
⚠ W7010H-CV50				26-3/4	34-3/64	29-59/64	

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

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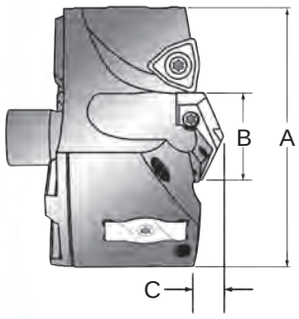
APX™ Drill - 76 Series

Range: 2.9918" - 3.2673" (76,00mm - 82,99mm)

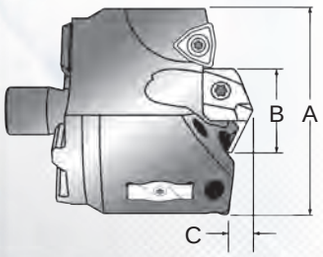
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V7602S-76	76	-	2.9921	76,00	1-7/32	13/32	2	4C*2H-0107	7495-IP15-10	8IP-15	1/2
V7602S-0300		3	3.0000	76,20							
V7602S-0302		3-1/16	3.0625	77,79							
V7602S-78		-	3.0709	78,00							
V7602S-0304		3-1/8	3.1250	79,38							
V7602S-80		-	3.1496	80,00							
V7602S-0306		3-3/16	3.1875	80,96							
V7602S-82		-	3.2282	82,00							
V7602S-0308		3-1/4	3.2500	82,55							

* denotes carbide grade

GEN3SYS® Pilot Heads



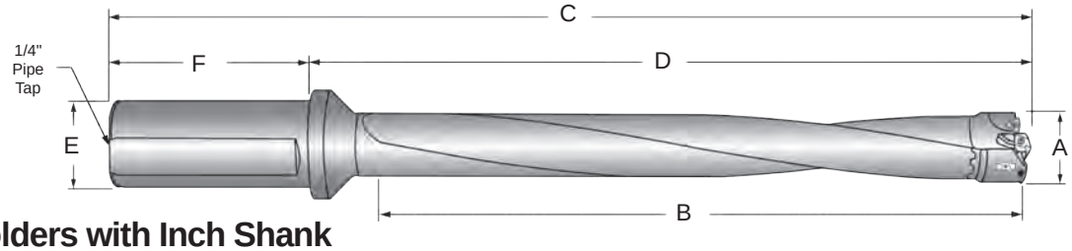
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V7629S-76	76	-	2.9921	76,00	1-7/32	13/32	29	7C*29P-0107	7495-IP15-10	8IP-15	1/2
V7629S-0300		3	3.0000	76,20							
V7629S-0302		3-1/16	3.0625	77,79							
V7629S-78		-	3.0709	78,00							
V7629S-0304		3-1/8	3.1250	79,38							
V7629S-80		-	3.1496	80,00							
V7629S-0306		3-3/16	3.1875	80,96							
V7629S-82		-	3.2283	82,00							
V7629S-0308		3-1/4	3.2500	82,55							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw
1/2	C5	AM300®	OP-080508-PW	74012-IP15-10	8IP-15	WP7095	7358-IP9-4
	C1		OP-080508-1PW				

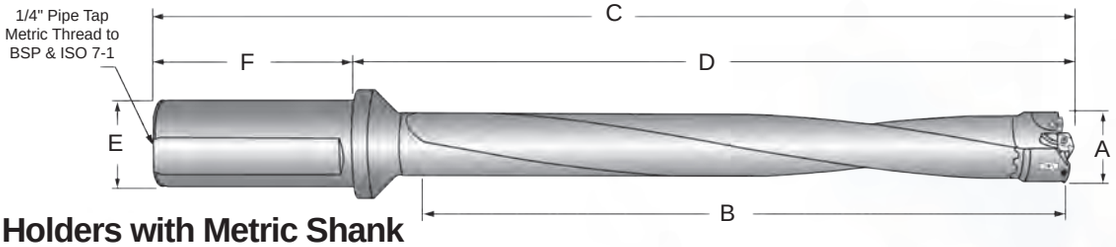
APX™ Drill - 76 Series

Range: 2.9918" - 3.2673" (76,00mm - 82,99mm)



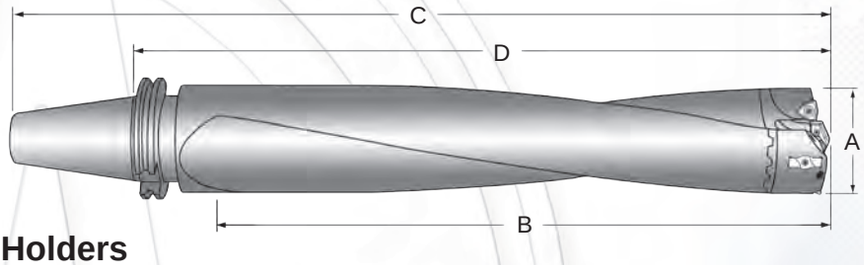
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W7605H-200F	76	2.9918-3.2673	76,00-82,99	16-3/8	21-5/64	16-37/64	2	4-1/2
⚠ W7608H-200F				26-1/8	30-3/64	25-35/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W7605H-50FM	76	2.9918-3.2673	76,00-82,99	415,0	501,1	421,1	50,0	80,0
⚠ W7608H-50FM				664,0	728,7	648,7		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W7605H-CV50	76	2.9918-3.2673	76,00-82,99	16-3/8	23-27/64	19-19/64	CV50
⚠ W7608H-CV50				26-1/8	33-15/64	29-3/32	

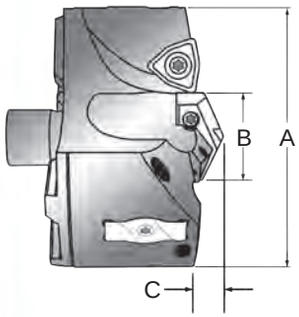
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	250 in-lb (2825 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 83 Series

Range: 3.2674" - 3.5035" (83,00mm - 88,99mm)

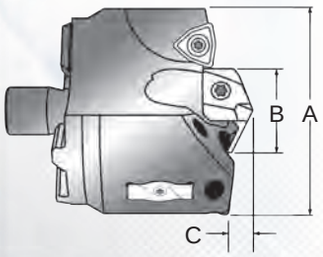
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V8302S-84	83	-	3.3071	84,00	1-3/8	7/16	2	4C*2H-0112	7495-IP15-10	8IP-15	1/2
V8302S-0310		3-5/16	3.3125	84,14							
V8302S-0312		3-3/8	3.3750	85,73							
V8302S-86		-	3.3859	86,00							
V8302S-0314		3-7/16	3.4375	87,31							
V8302S-88		-	3.4646	88,00							
V8302S-0316		3-1/2	3.5000	88,90							

* denotes carbide grade

GEN3SYS® Pilot Heads



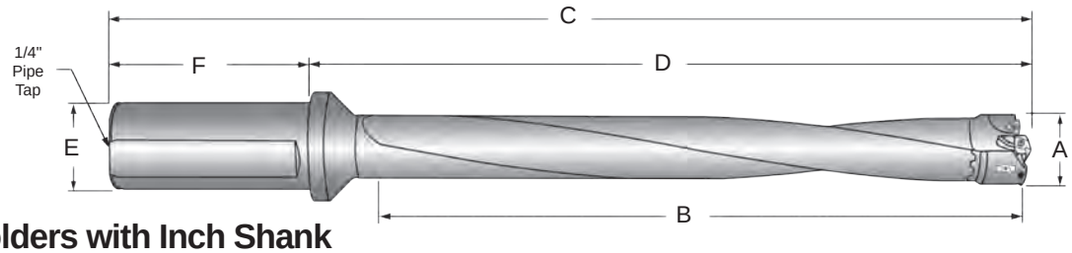
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V8332S-84	83	-	3.3071	84,00	1-3/8	7/16	32	7C*32P-0112	7495-IP15-10	8IP-15	1/2
V8332S-0310		3-5/16	3.3125	84,14							
V8332S-0312		3-3/8	3.3750	85,73							
V8332S-86		-	3.3859	86,00							
V8332S-0314		3-7/16	3.4375	87,31							
V8332S-88		-	3.4646	88,00							
V8332S-0316		3-1/2	3.5000	88,90							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw
1/2	C5	AM300®	OP-080508-PW	74012-IP15-10	8IP-15	WP7095	7358-IP9-4
	C1		OP-080508-1PW				

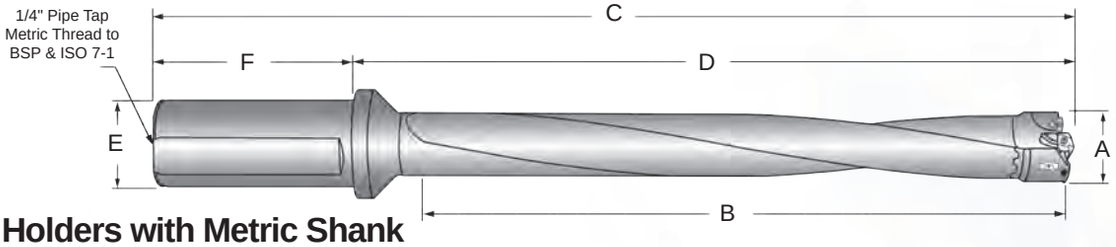
APX™ Drill - 83 Series

Range: 3.2674" - 3.5035" (83,00mm - 88,99mm)



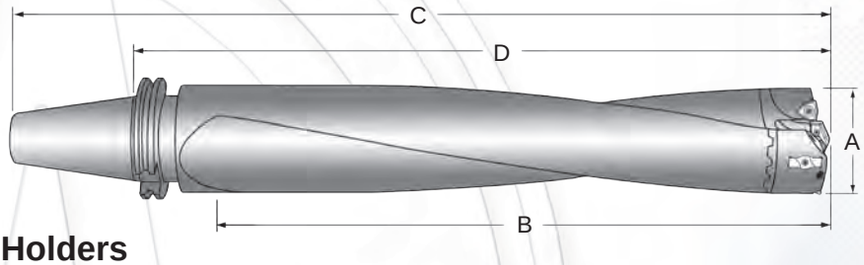
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W8305H-200F	83	3.2674-3.5035	83,00-88,99	17-1/2	32-13/16	19-5/16	2	4-1/2
⚠ W8308H-200F				27-3/4	34-3/64	29-35/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W8305H-50FM	83	3.2674-3.5035	83,00-88,99	445,0	570,5	490,5	50,0	80,0
⚠ W8308H-50FM				704,9	830,3	750,3		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W8305H-CV50	83	3.2674-3.5035	83,00-88,99	17-1/2	24-11/16	20-37/64	CV50
⚠ W8308H-CV50				26-7/8	34-3/64	29-59/64	

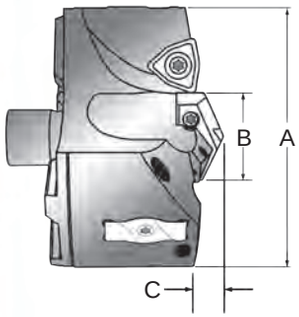
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	250 in-lb (2825 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 89 Series

Range: 3.5036" - 3.7400" (89,00mm -94,99mm)

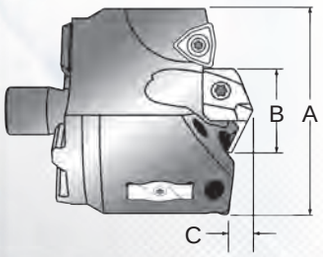
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V8902S-90	89	-	3.5433	90,00	1-1/4	27/64	2	4C*2H-0108	7495-IP15-10	8IP-15	9/16
V8902S-0318		3-9/16	3.5625	90,49							
V8902S-92		-	3.6220	92,00							
V8902S-0320		3-5/8	3.6250	92,08							
V8902S-0322		3-11/16	3.6875	93,66							
V8902S-94		-	3.7008	94,00							

* denotes carbide grade

GEN3SYS® Pilot Heads



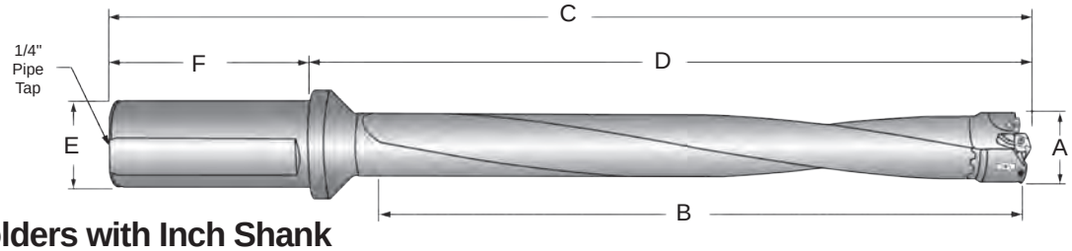
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V8929S-90	89	-	3.5433	90,00	1-1/4	27/64	29	7C*29P-0108	7495-IP15-10	8IP-15	9/16
V8929S-0318		3-9/16	3.5625	90,49							
V8929S-92		-	3.6220	92,00							
V8929S-0320		3-5/8	3.6250	92,08							
V8929S-0322		3-11/16	3.6875	93,66							
V8929S-94		-	3.7008	94,00							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw
9/16	C5	AM300®	OP-090608-PW	75014-IP20-10	8IP-20	WP7095	7358-IP9-4
	C1		OP-090608-1PW				

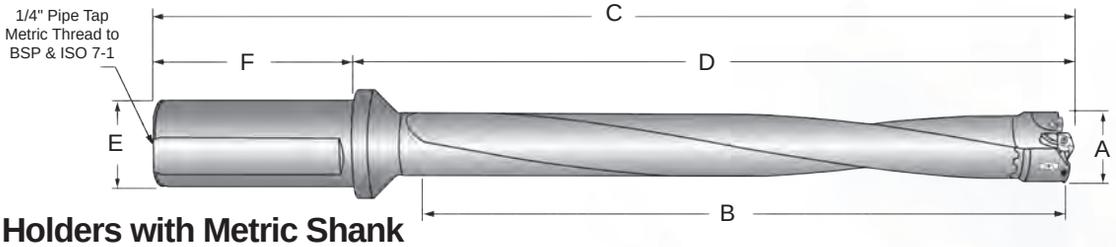
APX™ Drill - 89 Series

Range: 3.5036" - 3.7400" (89,00mm -94,99mm)



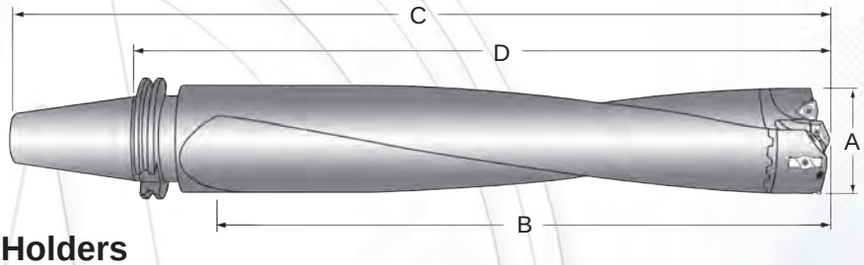
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W8905H-200F	89	3.5036-3.7400	89,00-94,99	18-5/8	25-1/8	20-5/8	2	4-1/2
⚠ W8908H-200F				27-5/8	34-3/64	29-35/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W8905H-50FM	89	3.5036-3.7400	89,00-94,99	475,0	603,7	523,7	50,0	80,0
⚠ W8908H-50FM				701,8	830,3	750,3		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W8905H-CV50	89	3.5036-3.7400	89,00-94,99	18-5/8	26	21-7/8	CV50
⚠ W8908H-CV50				26-3/4	34-3/64	29-59/64	

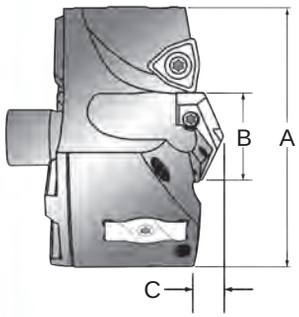
Head Mounting Screw	Head Mounting Screw Driver	Admissible Tightening Torque
78027-IP30-4	8IP-30B	250 in-lb (2825 N-cm)

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

APX™ Drill - 95 Series

Range: 3.7401" - 4.0000" (95,00mm - 101,60mm)

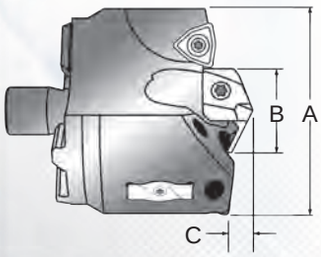
T-A® Pilot Heads



Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V9502S-0324	95	3-3/4	3.7500	95,25	1-3/8	29/64	2	4C*2H-0112	7494-IP15-10	8IP-15	9/16
V9502S-96		-	3.7795	96,00							
V9502S-0326		3-13/16	3.8125	96,84							
V9502S-98		-	3.8583	98,00							
V9502S-0328		3-7/8	3.8750	98,43							
V9502S-100		-	3.9370	100,00							
V9502S-0330		3-15/16	3.9375	100,01							
V9502S-0400		4	4.0000	101,60							

* denotes carbide grade

GEN3SYS® Pilot Heads



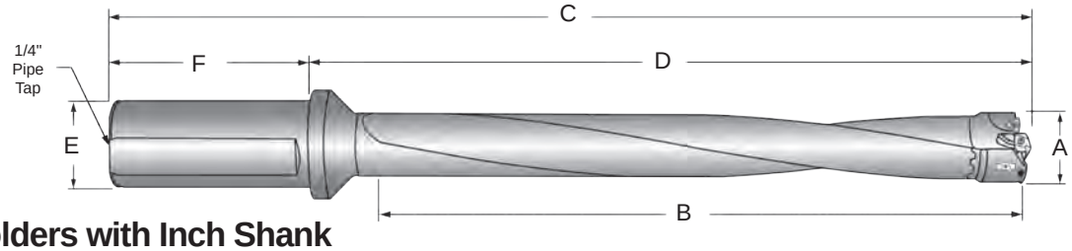
Item Number	Series	A			B	C	Pilot Series	Pilot Insert	Drill Insert Screw	Drill Insert Driver	IC Insert Size
		Major Cutting Dia. (Fractional)	Major Cutting Dia. (Inch)	Major Cutting Dia. (Metric)	Pilot Dia.	Pilot Length					
V9532S-0324	95	3-3/4	3.7500	95,25	1-3/8	29/64	32	7C*32P-0112	7494-IP15-10	8IP-15	9/16
V9532S-96		-	3.7795	96,00							
V9532S-0326		3-13/16	3.8125	96,84							
V9532S-98		-	3.8583	98,00							
V9532S-0328		3-7/8	3.8750	98,43							
V9532S-100		-	3.9370	100,00							
V9532S-0330		3-15/16	3.9375	100,01							
V9532S-0400		4	4.0000	101,60							

* denotes carbide grade

IC Size	Grade	Coating	IC Insert (2pc. package)	IC Insert Screw	IC Insert Driver	Wear Pad (2pc. package)	Wear Pad Screw
9/16	C5	AM300®	OP-090608-PW	75014-IP20-10	8IP-20	WP7095	7358-IP9-4
	C1		OP-090608-1PW				

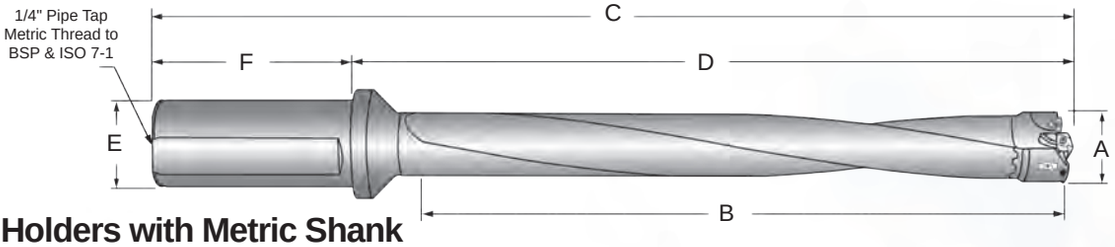
APX™ Drill - 95 Series

Range: 3.7401" - 4.0000" (95,00mm - 101,60mm)



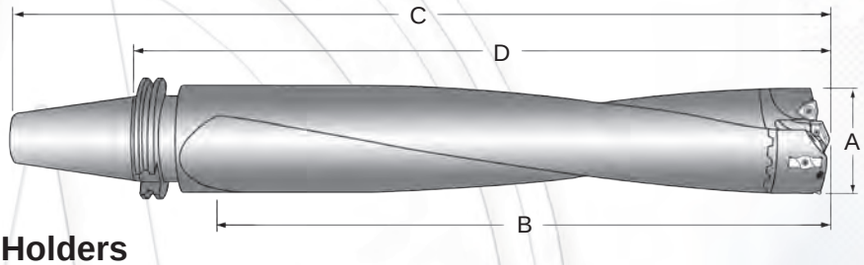
Holders with Inch Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W9505H-200F	95	3.7401-4.0000	95,00-101,60	20	26-51/64	22-19/64	2	4-1/2
⚠ W9508H-200F				27-1/2	34-19/64	29-51/64		



Holders with Metric Shank

Item Number	Series	A		B	C	D	E	F
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	Shank Dia.	Shank Length
W9505H-50FM	95	3.7401-4.0000	95,00-101,60	508,0	646,2	566,2	50,0	80,0
⚠ W9508H-50FM				698,5	836,7	756,7		



CAT50 Holders

Item Number	Series	A		B	C	D	Shank
		Dia. Range (Inch)	Dia. Range (Metric)	Drill Depth	Assembled OAL	Assembled Reference Length	
W9505H-CV50	95	3.7401-4.000	95,00-101,60	20	27-43/64	23-35/64	CV50
⚠ W9508H-CV50				26-5/8	34-15/64	30-11/64	

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

⚠ WARNING Refer to page 29 for APX™ Deep Hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is available for your specific applications through our Application Engineering Team.

Recommended Speeds and Feeds - Inch

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.

				FEED RATE (IPR)					
		Outboard Insert		3-8" IC	1/2" IC	9/16" IC	3/8" IC	1/2" IC	9/16" IC
		Series		38-44	44-51	51-57-63	70	76-83	89-95
Material Category	Material Hardness (BHN)	Speed (SFM)	Pilot Drill	ø1.496 - ø1.885	ø1.886 - ø2.210	ø2.211 - ø2.755	ø2.756 - ø2.991	ø2.992 - ø3.502	ø3.503 - ø4.000
Free Machining Steel 1118, 1215, 12L14, etc.	100 - 250	450 - 750	T-A or GEN3SYS	.008 - .014	.010 - .016	.010 - .016	.006 - .012	.007 - .014	.007 - .014
Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc.	85 - 275	450 - 750	T-A or GEN3SYS	.008 - .014	.010 - .016	.010 - .016	.006 - .012	.007 - .014	.007 - .014
Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 325	450 - 750	T-A or GEN3SYS	.008 - .014	.010 - .016	.010 - .016	.006 - .012	.007 - .014	.007 - .014
Alloy Steel 4140, 5140, 8640, etc.	125 - 375	400 - 700	T-A or GEN3SYS	.006 - .012	.008 - .014	.008 - .014	.005 - .010	.006 - .012	.006 - .012
High Strength Alloy 4340, 4330V, 300M, etc.	225 - 400	300 - 500	T-A	.006 - .008	.006 - .010	.006 - .012	.005 - .007	.006 - .008	.006 - .008
Structural Steel A36, A285, A516, etc.	100 - 350	450 - 750	T-A or GEN3SYS	.008 - .012	.010 - .014	.010 - .016	.006 - .012	.007 - .014	.007 - .014
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 250	300 - 500	T-A or GEN3SYS	.006 - .008	.008 - .010	.010 - .012	.006 - .008	.007 - .014	.007 - .014
High Temperature Alloy Hastelloy B, Inconel 600, etc.	140 - 310	200 - 400	T-A	.006 - .008	.008 - .010	.008 - .010	.004 - .006	.005 - .007	.005 - .007
Titanium Alloy	140 - 310	300 - 500	T-A	.006 - .008	.008 - .010	.008 - .010	.004 - .006	.005 - .007	.005 - .007
Aerospace Alloy S82	185 - 350	400 - 600	T-A	.005 - .007	.006 - .008	.006 - .008	.004 - .006	.005 - .007	.005 - .007
Stainless Steel 400 Series 303, 416, 420	185 - 350	300 - 500	T-A or GEN3SYS	.008 - .012	.010 - .014	.010 - .014	.004 - .008	.006 - .010	.006 - .010
Stainless Steel 300 Series 304, 316, 17-4PH	135 - 275	300 - 500	T-A or GEN3SYS	.006 - .008	.008 - .010	.008 - .010	.004 - .008	.006 - .010	.006 - .010
Super Duplex Stainless Steel	135 - 275	250 - 450	T-A or GEN3SYS	.006 - .008	.008 - .010	.008 - .010	.004 - .008	.006 - .010	.006 - .010
Wear Plate Hardox, AR400, T-1, etc.	400 - 600	300 - 500	T-A	.004 - .006	.006 - .008	.008 - .010	.003 - .005	.004 - .006	.004 - .006
Hardened Steel	300 - 500	300 - 500	T-A	.005 - .006	.006 - .008	.006 - .008	.003 - .005	.004 - .006	.004 - .006
Nodular, Grey, Ductile Cast Iron	120 - 320	500 - 800	T-A or GEN3SYS	.006 - .012	.010 - .015	.012 - .016	.008 - .012	.010 - .014	.010 - .014
Cast Aluminum	30 - 180	600 - 800	T-A or GEN3SYS	.012 - .016	.014 - .018	.014 - .018	.006 - .010	.008 - .014	.008 - .014
Wrought Aluminum	30 - 180	600 - 800	T-A or GEN3SYS	.008 - .012	.010 - .014	.012 - .016	.006 - .010	.008 - .014	.008 - .014
Aluminum Bronze	100 - 250	400 - 700	T-A or GEN3SYS	.005 - .010	.008 - .012	.010 - .014	.006 - .010	.008 - .014	.008 - .014
Brass	100	800	T-A or GEN3SYS	.008 - .010	.010 - .012	.012 - .014	.006 - .008	.008 - .010	.008 - .010
Copper	60	700	T-A or GEN3SYS	.003 - .006	.006 - .008	.008 - .010	.003 - .006	.006 - .008	.006 - .008

⚠ 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 29 for Deep hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Recommended Speeds and Feeds - Metric

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.

				FEED RATE (mm/rev)					
		Outboard Insert		3/8" IC	1/2" IC	9/16" IC	3/8" IC	1/2" IC	9/16" IC
		Series		38-44	44-51	51-57-63	70	76-83	89-95
Material Category	Material Hardness (BHN)	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 1118, 1215, 12L14, etc.	100 - 250	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 1010, 1020, 1025, 1522, 1144, etc.	85 - 275	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 1030, 1040, 1050, 1527, 1140, 1151, etc.	125 - 325	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 4140, 5140, 8640, etc.	125 - 375	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 4340, 4330V, 300M, etc.	225 - 400	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 A36, A285, A516, etc.	100 - 350	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 H-13, H-21, A-4, O-2, S-3, etc.	150 - 250	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 Hastelloy B, Inconel 600, etc.	140 - 310	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	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	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	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	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	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	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	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	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	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	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	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	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	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 29 for Deep hole Drilling Guidelines in Technical Reference section of catalog. Visit *www.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Coolant Recommendations

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

Geometry Guidelines

T-A®:

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.

High Impact (HI): Allied's high impact geometry is specifically designed to enhance chip formation in materials with high elasticity/ductility, and poor chip forming characteristics. Includes Allied's SK2 corner preparation for increased tool life. Effective at improving chip formation in structural, cast, and forged steels, plus, cast stainless steel and high temperature alloys, particularly in materials above 200 BHN.

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 Efficiency (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.

Tiny Chip (TC): Allied's Tiny Chip 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.

GEN3SYS® XT:

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

APX™ Deep Hole Drilling Guidelines

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

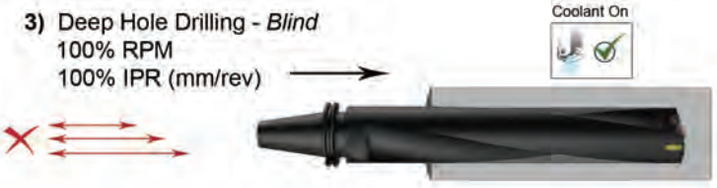
1) Approach
50RPM Max
12 IPM (300 mm/min)

- Feed the longer drill within 1/16" (1,5 mm) short of the workpiece at a **maximum of 50 RPM** and 12 IPM (300 mm/min) feed rate

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

- Drill 3/4" deep at 75% recommended speed and 50% recommended feed to establish hole

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



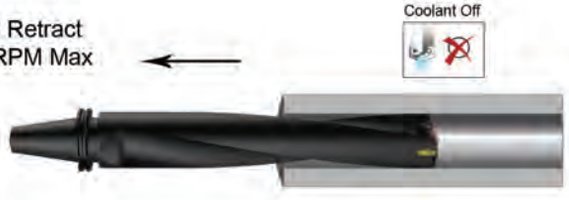
- Drill to full depth at recommended speed and feed for longer drills, according to Allied speed and feed charts

No peck cycle recommended

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

For Through Holes Only
- Reduce speed by 50% prior to break out
- Do not break out more than 1/8" (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.alliedmachine.com/deepholeguidelines.aspx* for the most up-to-date information and procedures. Factory technical assistance is also available for your specific applications.

Guaranteed Test/Demo Application Form

Distributor PO # _____

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

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

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

_____

_____

Application Information

Hole Diameter: _____ in/mm Depth of Cut: _____ in/mm Tolerance: _____

Material: _____ Hardness: _____ BHN/Rc Required Finish: _____ RMS

(4150/A36/Cast Iron, etc.)

Material State: _____

(Flat Stock/Casting/Tube Stock/Hot Rolled/Forging)

Machine Information

Machine Type: _____ Builder: _____ Model#: _____

(Lathe/Screw Machine/Machine Center, etc.) (Haas/Mori Seiki, etc.)

Power: _____ HP/KW Thrust: _____ Lbs./N Orientation: ☐ Vertical ☐ Horizontal

Shank Required: _____ Rigidity: ☐ Excellent ☐ Good ☐ Poor Tool Rotating: ☐ Yes ☐ No

(3/4" Straight/#4 Morse Taper, etc.)

Coolant Information

Coolant Delivery: _____ Coolant Pressure: _____ PSI/bar

(Through Tool/Flood)

Coolant Type: _____ Coolant Volume: _____ GPM/LPM

(Air Mist/Oil/Synthetic/Water Soluble, etc.)

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

_____

_____

Requested Tooling

QTY	Item Number	QTY	Item Number

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

Warranty

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

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

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

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

ALL PRICES, DELIVERIES, DESIGNS, AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Ordering Instructions

All orders are processed through Allied's computerized order entry and invoicing system. Please specify the correct item number as well as full description of the desired item(s) so we can process your order accurately and efficiently. Incorrect item numbers and/or descriptions will cause unnecessary delays and returns that are subject to a 10% restocking charge. Your assistance is critical if we are to achieve our goal of processing orders and shipping in stock items within 24 hours.

Allied Machine & Engineering *Corp*.
120 Deeds Drive, Dover, Ohio 44622
Telephone: **(330) 343-4283**
Toll Free USA & Canada: **(800) 321-5537**
Fax: **(330) 602-3400**
Toll Free USA & Canada: **(800) 223-5140**
International Country Code: **01**
Website Address: **www.alliedmachine.com**
Email Address: **info@alliedmachine.com**

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Fax: (330) 602-3400
(800) 223-5140 (*Toll Free USA & Canada*)
(330) 364-7666 (*Engineering*)

Europe

Allied Maxcut Engineering Co. Limited
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Kingswinford, West Midlands
DY6 7FR ENGLAND

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

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United States Cutting Tool Institute

ISA
INDUSTRIAL SUPPLY ASSOCIATION

UL REGISTERED FIRM

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Criterion Allied, Inc.
765 W 16th St
Costa Mesa, California 92627
Ph: +1 (949) 631-5444
Fax: +1 (949) 631-4923
www.criterionmachineworks.com

Also available

Allied Drilling Products

Allied Drilling Products are designed and manufactured by Allied Machine & Engineering Corp. The combination of premium materials, along with unique geometry and coatings allows for the finest drilling systems in the metal cutting industry, resulting in the lowest cost per hole.

Literature Order Number: ADP

AccuThread 856®

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

Literature Order Number: AT856

Structural Steel T-A® Drilling System

Designed specifically for use on structural steel materials, this patent-pending system delivers outstanding performance and durability. Available in AM200® and TiALN cloatings. Insert coatings allow for increased tool life and better heat resistance while providing better hole tolerances.

Literature Order Number: SS

ALVAN® Reamers

The ALVAN® product line includes monobloc, ring style, and replaceable head reamers, offered with carbide, cermet, PCD, and CBN cutting edges.

Literature Order Number: ALV-13

Criterion Modular Boring Systems

Criterion Allied, Inc. offers a wide variety of options that can cover a range of .050" in diameter. Products include CB Style Boring Head, Cri-Twin®, Cri-Bore, LCB1.5, CBER®. Ideal for close tolerance precision boring.

Literature Order Number: CRIT-13

i-Form

Custom indexable drill/form tool system that allows you to design forms for any style hole with increased productivity in mind.

Literature Order Number: IFFL

Literature Order Number: APX-13