



ALLIED MACHINE & ENGINEERING CORP

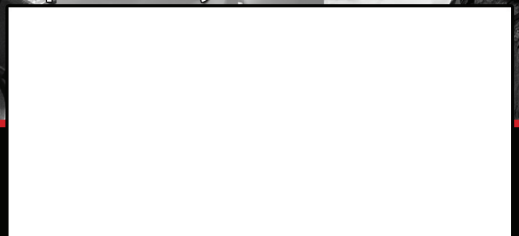


Structural Steel Catalog

www.alliedmachine.com



Represented by:



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 Machine high performance tooling is helping countless businesses around the world to produce better products with greater accuracy, increased speed and higher quality.

Precision, performance and productivity are core features of Allied Machine tooling. Our commitment to innovation in all aspects of holemaking 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 teams 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

⚠ 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.



GEN3SYS® XT Structural Steel



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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 hazard 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.

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



WARNING

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

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal 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.



Services and Support

Allied Machine's success is not just a result of our quality products and high performance solutions, but also the level of technical support and expertise we provide on a constant basis to all of our customers through a range of dedicated services.

Online Services



Allied Machine's website hosts a number of key features for distributors, one being our online ordering service that simplifies and speeds up the ordering process. Our website can also be used for checking inventory and pricing. Available

to distributors and end-users is our fast response **Insta-Quote™** quoting system that provides quotes and drawings for special purpose tooling online in a matter of minutes.

All of our case studies, product literature, industry sector information and a wealth of other data is available through our website, which includes the latest details to ensure that up-to-date information is available for download. Visit www.alliedmachine.com.

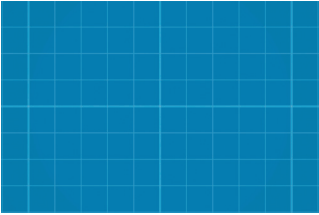
Customer Service



The most important aspect of our business is our customers. Our customer care processes and support operations are vital and integral parts of our commitment to customers.

Sometimes, all that's needed is a helpful and friendly voice at the end of a telephone to check an order, answer a question, or just point you in the right direction. Our fully trained team is always available to help. No matter what your requirement, we'll have someone who can handle your question quickly and effectively.

Technical Support



Our technical department is staffed by Allied Machine experts who have years of experience in helping customers meet demanding application challenges with high performance Allied Machine tooling. They are also

able to provide technical support on a wide range of industry sectors via our technical helpline, which can help customers save time and money when a solution is needed quickly.

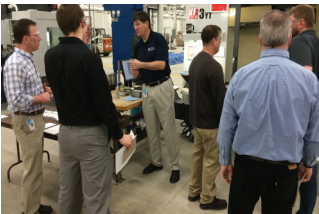
We also have an excellent and unique reference library of technical case studies and cutting data which is compiled from information and experience gained from our global applications base. Chances are, if you have an application issue or problem, we've already solved it somewhere in the world.

Training



Allied Machine holds regular Technical Education Seminar (TES) training courses in our training facility in Dover, Ohio. These classes allow customers to experience the advanced Allied Machine holmaking solutions and gain deeper knowledge of their applications. The seminars cover technical data, cutting technology, tool application, and benefits of all Allied Machine products as well as extensive and detailed on-machine training while demonstrating the tools in action. Details and listings for TES courses can be found at www.alliedmachine.com/TES.aspx.

External Support



Our Field Sales Engineers (FSE) provide a constant "on-the-ground" support network, helping solve manufacturing problems on site and providing the most effective solutions.



TES

Technical Education Seminar

GEN3SYS[®] XT Structural Steel



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Features & Benefits

- Provides higher penetration
- Designed for high speed carbide drilling machines
- Available in Carbide with AM300[®] coating for superior heat resistance and tool life

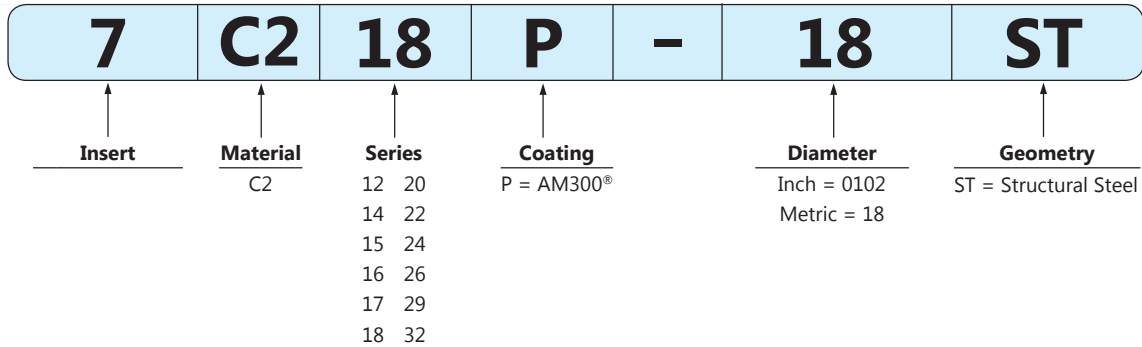




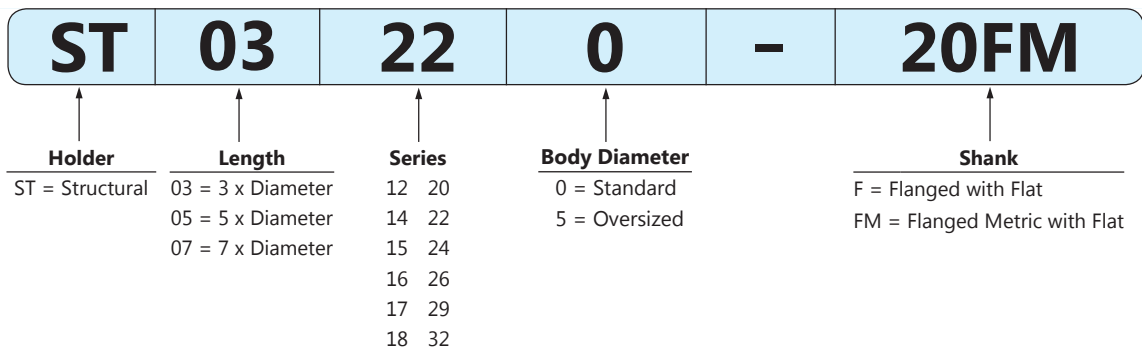
GEN3SYS® XT Structural Steel

Reference Page

GEN3SYS XT Structural Steel Drill Insert



GEN3SYS XT Structural Steel Holder



GEN3SYS® XT Structural Steel Drill Inserts

Range: 0.4724"-1.3780" (12,00mm-35,00mm)



GEN3SYS XT Structural Steel

GEN3SYS XT Structural Steel Drill Inserts

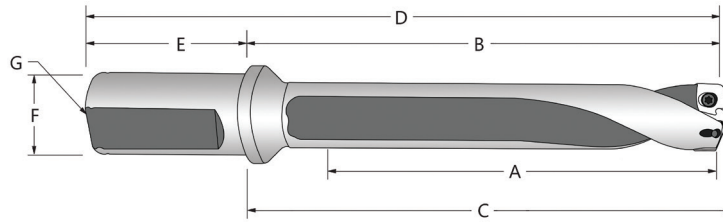
Series	Substrate	Coating	A (Diameter)			Availability & Geometry			
			Fractional Equivalent	(inch)	(mm)	GEN3SYS XT	①		
12	C2	AM300®		0.4724	12,00	7C212P-12ST	○		
14				0.5512	14,00	7C214P-14ST	○		
			9/16"	0.5625	14,29	7C214P-0018ST	○		
15				5/8"	0.6250	15,88	7C215P-0020ST	○	
16					0.6299	16,00	7C216P-16ST	○	
17					0.6875	17,46	7C217P-0022ST	○	
18					0.7087	18,00	7C218P-18ST	○	
					0.7874	20,00	7C220P-20ST	○	
20					13/16"	0.8125	20,64	7C220P-0026ST	○
					55/64"	0.8594	21,83	7C220P-.859ST	○
						0.8661	22,00	7C222P-22ST	○
22					7/8"	0.8750	22,23	7C222P-0028ST	○
					15/16"	0.9375	23,81	7C222P-0030ST	○
						0.9449	24,00	7C224P-24ST	○
24					1"	1.0000	25,40	7C224P-0100ST	○
					1-1/64"	1.0156	25,80	7C224P-1.015ST	○
						1.0236	26,00	7C226P-26ST	○
					1-1/16"	1.0625	26,99	7C226P-0102ST	○
26						1.0630	27,00	7C226P-27ST	○
						1.1024	28,00	7C226P-28ST	○
					1-1/8"	1.1250	28,58	7C226P-0104ST	○
						1.1417	29,00	7C229P-29ST	○
						1.1811	30,00	7C229P-30ST	○
29					1-3/16"	1.1875	30,16	7C229P-0106ST	○
						1.2205	31,00	7C229P-31ST	○
					1-1/4"	1.2500	31,75	7C229P-0108ST	○
						1.2598	32,00	7C232P-32ST	○
						1.2992	33,00	7C232P-33ST	○
32					1-5/16"	1.3125	33,34	7C232P-0110ST	○
					1-3/8"	1.3750	34,93	7C232P-0112ST	○

- ① Availability Codes
- Stocked



GEN3SYS® XT Structural Steel Holders

12 Series



GEN3SYS XT 12 Series Holders Range: 0.4724"-0.5117" (12,00mm-12,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
12	ST03120-075F	1-17/32"	2-5/8"	2-45/64"	Yes	4-21/32"	2-1/32"	3/4"	1/8"	
	ST05120-075F	2-9/16"	3-41/64"	3-47/64"	Yes	5-43/64"	2-1/32"	3/4"	1/8"	
	ST07120-075F	3-37/64"	4-43/64"	4-3/4"	Yes	6-11/16"	2-1/32"	3/4"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03120-20FM	39,0	66,6	68,8	Yes	116,6	50	20	1/8"	
	ST05120-20FM	65,0	92,6	94,8	Yes	142,6	50	20	1/8"	
	ST07120-20FM	90,9	118,5	120,8	Yes	168,6	50	20	1/8"	

Replacement TORX Plus Screws

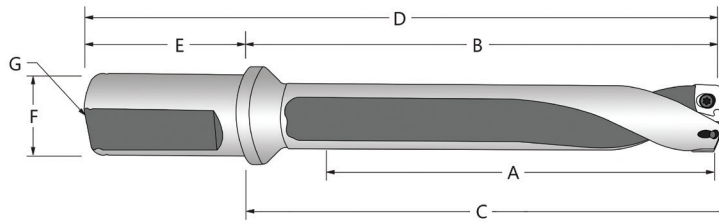
Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
12	7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	7.4 in.-lbs	84 N-cm

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

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

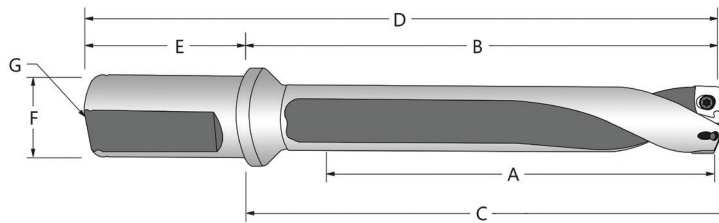
GEN3SYS® XT Structural Steel Holders

14 and 15 Series



GEN3SYS XT 14 Series Holders Range: 0.5512"-0.5905" (14,00mm-14,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
14	ST03140-075F	1-25/32"	2-27/32"	2-61/64"	YES	4-7/8"	2-1/32"	3/4"	1/8"	
	ST05140-075F	2-61/64"	4-1/32"	4-1/8"	YES	6-1/16"	2-1/32"	3/4"	1/8"	
	ST07140-075F	4-9/64"	5-13/64"	5-5/16"	YES	7-15/64"	2-1/32"	3/4"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03140-20FM	45,0	72,4	75,0	YES	122,4	50	20	1/8**	
	ST05140-20FM	75,0	102,4	104,9	YES	152,4	50	20	1/8**	
	ST07140-20FM	104,9	132,3	134,9	YES	182,3	50	20	1/8**	



GEN3SYS XT 15 Series Holders Range: 0.5906"-0.6298" (15,00mm-15,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
15	ST03150-075F	1-57/64"	2-61/64"	3-3/64"	YES	4-63/64"	2-1/32"	3/4"	1/8"	
	ST05150-075F	3-5/32"	4-7/32"	4-5/16"	YES	6-15/64"	2-1/32"	3/4"	1/8"	
	ST07150-075F	4-27/64"	5-15/32"	5-37/64"	YES	7-1/2"	2-1/32"	3/4"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03150-20FM	48,0	75,1	77,6	YES	125,1	50	20	1/8**	
	ST05150-20FM	80,0	107,0	109,6	YES	157,0	50	20	1/8**	
	ST07150-20FM	111,9	139,0	141,6	YES	189,0	50	20	1/8**	

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
14	7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	7.4 in.-lbs	84 N-cm
15	7247-IP7-1	7247N-IP7-1	8IP-7	8IP-7TL	8IP-7B	7.4 in.-lbs	84 N-cm

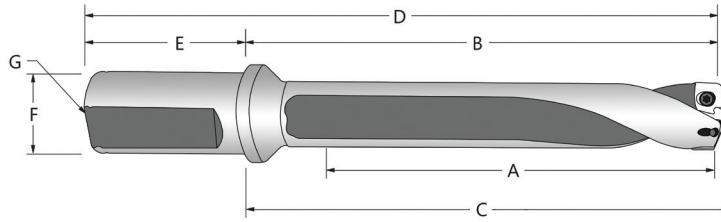
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

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



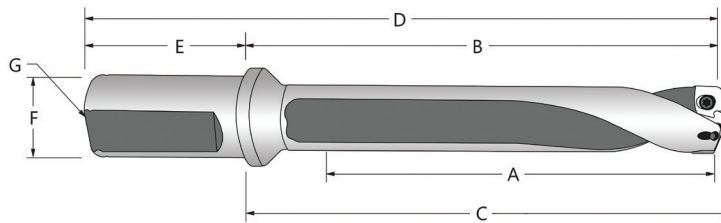
GEN3SYS® XT Structural Steel Holders

16 and 17 Series



GEN3SYS XT 16 Series Holders Range: 0.6299"-0.6692" (16,00mm-16,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
16	ST03160-075F	3-1/64"	3-13/64"	3-5/16"	YES	5-15/64"	2-1/32"	3/4"	1/8"	
	ST05160-075F	3-23/64"	4-17/32"	4-21/32"	YES	6-9/16"	2-1/32"	3/4"	1/8"	
	ST07160-075F	4-11/16"	5-7/8"	5-63/64"	YES	7-29/32"	2-1/32"	3/4"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03160-20FM	51,0	81,3	84,2	YES	131,3	50	20	1/8**	
	ST05160-20FM	84,9	115,3	118,2	YES	165,3	50	20	1/8**	
	ST07160-20FM	118,9	149,3	152,2	YES	199,3	50	20	1/8**	



GEN3SYS XT 17 Series Holders Range: 0.6693"-0.7086" (17,00mm-17,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
17	ST03170-075F	2-1/8"	3-5/16"	3-27/64"	YES	5-11/32"	2-1/32"	3/4"	1/8"	
	ST05170-075F	3-35/64"	4-23/32"	4-27/32"	YES	6-3/4"	2-1/32"	3/4"	1/8"	
	ST07170-075F	4-31/32"	6-9/64"	6-1/4"	YES	8-11/64"	2-1/32"	3/4"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03170-20FM	54,0	84,1	87,0	YES	134,1	50	20	1/8**	
	ST05170-20FM	89,9	120,0	122,9	YES	170,0	50	20	1/8**	
	ST07170-20FM	125,9	156,0	158,9	YES	206,0	50	20	1/8**	

Replacement TORX Plus Screws

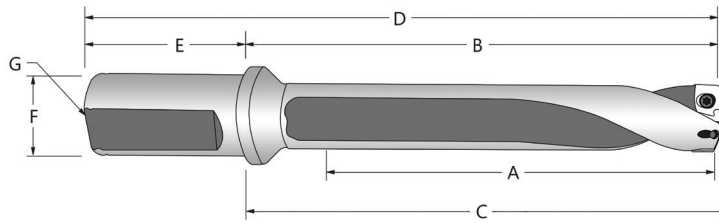
Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
16	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	15.5 in.-lbs	175 N-cm
17	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	15.5 in.-lbs	175 N-cm

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

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

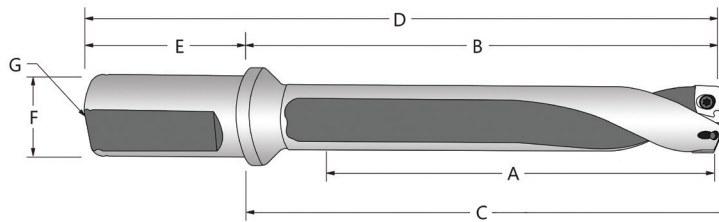
GEN3SYS® XT Structural Steel Holders

18 and 20 Series



GEN3SYS XT 18 Series Holders Range: 0.7087"-0.7873" (18,00mm-19,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
18	ST03180-100F	2-3/8"	3-45/64"	3-53/64"	YES	5-63/64"	2-9/32"	1"	1/8"	
	ST05180-100F	3-15/16"	5-9/32"	5-25/64"	YES	7-9/16"	2-9/32"	1"	1/8"	
	ST07180-100F	5-33/64"	6-27/32"	6-31/32"	YES	9-1/8"	2-9/32"	1"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03180-20FM	60,0	94,0	97,1	YES	144,0	50	20	1/8**	
	ST05180-20FM	99,9	134,0	137,1	YES	184,0	50	20	1/8**	
ST07180-20FM	139,9	174,0	177,1	YES	224,0	50	20	1/8**		



GEN3SYS XT 20 Series Holders Range: 0.7874"-0.8660" (20,00mm-21,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
20	ST03200-100F	2-17/32"	3-15/16"	4-1/16"	YES	6-7/32"	2-9/32"	1"	1/8"	
	ST05200-100F	4-11/32"	5-43/64"	5-51/64"	YES	7-61/64"	2-9/32"	1"	1/8"	
	ST07200-100F	6-1/16"	7-13/32"	7-17/32"	YES	9-11/16"	2-9/32"	1"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03200-25FM	66,0	100,1	103,3	YES	156,1	56	25	1/8**	
	ST05200-25FM	110,0	144,1	147,2	YES	200,1	56	25	1/8**	
ST07200-25FM	153,9	188,1	191,2	YES	244,1	56	25	1/8**		

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
18	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	27.0 in.-lbs	305 N-cm
20	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	27.0 in.-lbs	305 N-cm

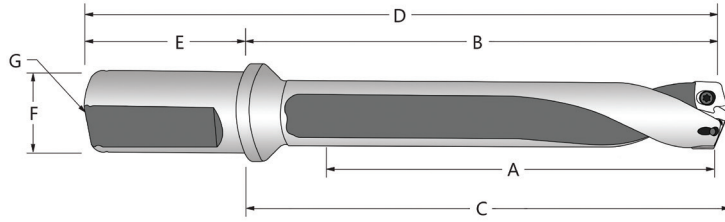
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

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



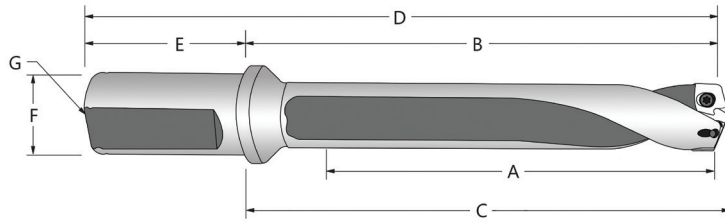
GEN3SYS® XT Structural Steel Holders

22 Series Range



GEN3SYS XT 22 Series Holders Range: 0.8661"-0.9448" (22,00mm-23,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
22	ST03220-100F	2-53/64"	4-9/64"	4-9/32"	YES	6-27/64"	2-9/32"	1"	1/8"	
	ST05220-100F	4-23/32"	6-1/32"	6-11/64"	YES	8-5/16"	2-9/32"	1"	1/8"	
	ST07220-100F	6-39/64"	7-59/64"	8-1/16"	YES	10-13/64"	2-9/32"	1"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03220-25FM	72,0	105,3	108,7	YES	161,3	56	25	1/8**	
	ST05220-25FM	119,9	153,3	156,7	YES	209,3	56	25	1/8**	
ST07220-25FM	167,9	201,3	204,7	Yes	257,3	56	25	1/8**		



GEN3SYS XT 22 Oversized Body Series Holders

NOTE: Minimum drill diameter is 23mm

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
22	ST03225-100F	2-53/64"	4-9/64"	4-9/32"	YES	6-27/64"	2-9/32"	1"	1/8"	
	ST05225-100F	4-23/32"	6-1/32"	6-11/64"	YES	8-5/16"	2-9/32"	1"	1/8"	
	ST07225-100F	6-39/64"	7-59/64"	8-1/16"	YES	10-13/64"	2-9/32"	1"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03225-25FM	72,0	105,3	108,7	YES	161,3	56	25	1/8**	
	ST05225-25FM	119,9	153,3	156,7	YES	209,3	56	25	1/8**	
ST07225-25FM	167,9	201,3	204,7	YES	257,3	56	25	1/8**		

Replacement TORX Plus Screws

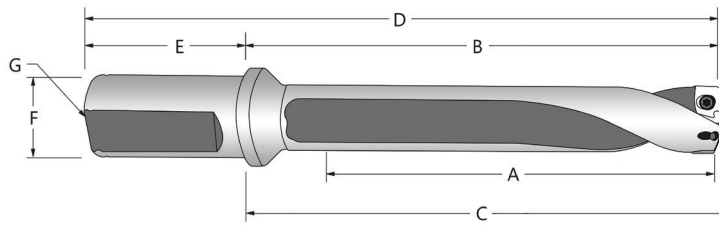
Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
22	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9TB	27.0 in.-lbs	305 N-cm

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

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

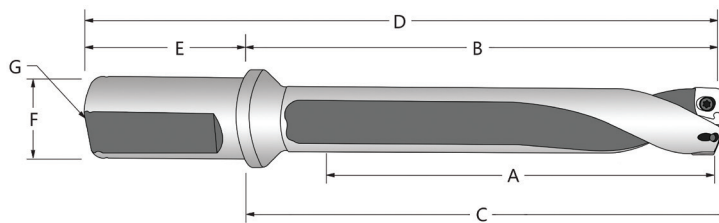
GEN3SYS® XT Structural Steel Holders

24 and 26 Series



GEN3SYS XT 24 Series Holders Range: 0.9449"-1.0235" (24,00mm-25,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
24	ST03240-100F	3-5/64"	4-31/64"	4-5/8"	YES	6-49/64"	2-9/32"	1"	1/8"	
	ST05240-100F	5-1/8"	6-17/32"	6-21/32"	YES	8-13/16"	2-9/32"	1"	1/8"	
	ST07240-100F	7-11/64"	8-37/64"	8-45/64"	YES	10-55/64"	2-9/32"	1"	1/8"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03240-25FM	78,0	113,8	117,3	YES	169,8	56	25	1/8**	
	ST05240-25FM	129,9	165,8	169,2	YES	221,8	56	25	1/8**	
	ST07240-25FM	181,9	217,8	221,2	YES	273,8	56	25	1/8**	



GEN3SYS XT 26 Series Holders Range: 1.0236"-1.1416" (26,00mm-28,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
26	ST03260-125F	3-27/64"	5-1/16"	5-3/16"	YES	7-11/32"	2-9/32"	1-1/4"	1/4"	
	ST05260-125F	5-23/32"	7-11/32"	7-31/64"	YES	9-5/8"	2-9/32"	1-1/4"	1/4"	
	ST07260-125F	7-63/64"	9-5/8"	9-49/64"	YES	11-29/32"	2-9/32"	1-1/4"	1/4"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03260-32FM	87,0	128,1	131,4	YES	188,1	60	32	1/4**	
	ST05260-32FM	145,0	186,1	189,4	YES	246,1	60	32	1/4**	
	ST07260-32FM	202,9	244,0	247,4	YES	304,0	60	32	1/4**	

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
24	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	27.0 in.-lbs	305 N-cm
26	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	61.0 in.-lbs	690 N-cm

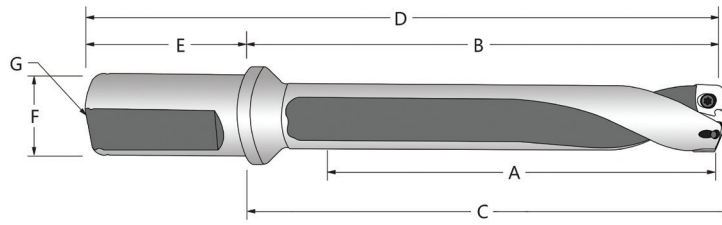
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

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



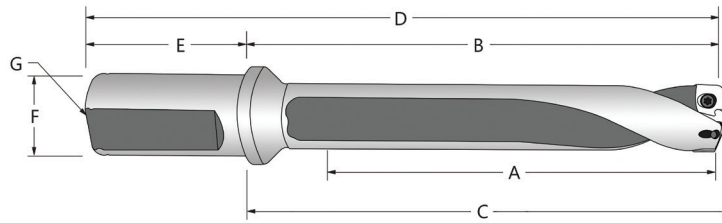
GEN3SYS® XT Structural Steel Holders

29 and 32 Series



GEN3SYS XT 29 Series Holders Range: 1.1417"-1.2597" (29,00mm-31,99mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
29	ST03290-125F	3-25/32"	5-3/8"	5-33/64"	YES	7-21/32"	2-9/32"	1-1/4"	1/4"	
	ST05290-125F	6-19/64"	7-29/32"	8-3/64"	YES	10-3/16"	2-9/32"	1-1/4"	1/4"	
	ST07290-125F	8-13/16"	10-27/64"	10-9/16"	YES	12-45/64"	2-9/32"	1-1/4"	1/4"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03290-32FM	96,0	136,2	139,7	YES	196,2	60	32	1/4**	
	ST05290-32FM	159,9	200,1	203,7	YES	260,1	60	32	1/4**	
ST07290-32FM	223,9	264,1	267,7	YES	324,1	60	32	1/4**		



GEN3SYS XT 32 Series Holders Range: 1.2598"-1.3780" (32,00mm-35,00mm)

Series	Item Number	A	B	C	Flat	D	E	F	G	
		Drill Depth	Body Length	Reference Length		Overall Length	Shank Length	Shank Diameter	Pipe Tap	
32	ST03320-150F	4-9/64"	6-7/32"	6-3/8"	YES	8-57/64"	2-11/16"	1-1/2"	1/4"	
	ST05320-150F	6-59/64"	8-31/32"	9-1/8"	YES	11-21/32"	2-11/16"	1-1/2"	1/4"	
	ST07320-150F	9-41/64"	11-23/32"	11-57/64"	YES	14-13/32"	2-11/16"	1-1/2"	1/4"	
	METRIC (mm) *Metric Thread to BSP & ISO 7-1									
	ST03320-32FM	105,0	157,7	162,0	YES	217,7	60	32	1/4**	
	ST05320-32FM	175,0	227,7	232,0	YES	287,7	60	32	1/4**	
	ST07320-32FM	244,9	297,7	302,2	YES	357,7	60	32	1/4**	
	ST03320-40FM	105,0	157,7	162,0	YES	227,7	70	40	1/4**	
ST05320-40FM	175,0	227,7	232,0	YES	297,7	70	40	1/4**		
ST07320-40FM	244,9	297,7	302,0	YES	367,7	70	40	1/4**		

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch	Metric
						TORX Plus Screw Admissible Tightening Torque	TORX Plus Screw Admissible Tightening Torque
29	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	61.0 in.-lbs	690 N-cm
32	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	61.0 in.-lbs	690 N-cm

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

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

GEN3SYS® XT Structural Steel

Recommended Speeds and Feeds



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

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

NOTE: If drilling material thickness of .500" (12,7mm) or less, a minimum of 10% reduction in feed is required to minimize material deflection.

GEN3SYS XT Structural Steel Drill Inserts (Inch)

Material	Hardness (BHN)	SPEED AM300® SFM (Mist Coolant)	FEED (IPR)											
			12	14	15	16	17	18	20	22	24	26	29	32
			0.4724" to 0.5117"	0.5512" to 0.5905"	0.5906" to 0.6298"	0.6299" to 0.6692"	0.6693" to 0.7086"	0.7087" to 0.7873"	0.7874" to 0.8660"	0.8661" to 0.9448"	0.9449" to 1.0235"	1.0236" to 1.1416"	1.1417" to 1.2597"	1.2598" to 1.3780"
Structural Steel A36, A285, A516, A572, etc.	100-150	350	0.008	0.010	0.010	0.012	0.012	0.014	0.015	0.016	0.017	0.018	0.019	0.019
	150-250	300	0.007	0.009	0.009	0.010	0.010	0.012	0.014	0.015	0.016	0.017	0.018	0.018
	250-350	260	0.006	0.008	0.008	0.009	0.009	0.011	0.012	0.013	0.014	0.015	0.016	0.016

Speed & Feed Multiplier

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

GEN3SYS XT Structural Steel Drill Inserts (Metric)

Material	Hardness (BHN)	SPEED AM300 M/min (Mist Coolant)	FEED (mm/rev)											
			12	14	15	16	17	18	20	22	24	26	29	32
			12,00 to 12,99	14,00 to 14,99	15,00 to 15,99	16,00 to 16,99	17,00 to 17,99	18,00 to 19,99	20,00 to 21,99	22,00 to 23,99	24,00 to 25,99	26,00 to 28,99	29,00 to 31,99	32,00 to 35,00
Structural Steel A36, A285, A516, A572, etc.	100-150	107	0,20	0,25	0,25	0,30	0,30	0,36	0,38	0,41	0,43	0,46	0,48	0,48
	150-250	91	0,18	0,23	0,23	0,25	0,25	0,30	0,36	0,38	0,41	0,43	0,46	0,46
	250-350	79	0,15	0,20	0,20	0,23	0,23	0,28	0,30	0,33	0,36	0,38	0,41	0,41

Speed & Feed Multiplier

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



Notes

T-A[®] and GEN2 T-A[®] Structural Steel



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Features & Benefits

- Designed for use on structural steel materials
- Delivers outstanding performance and durability
- TiAlN and AM200[®] coatings provide increased tool life
- Provides better hole tolerances



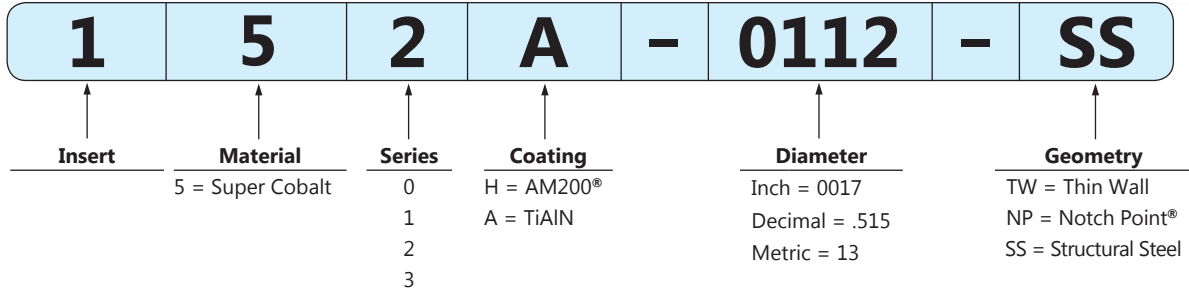
**ALLIED MACHINE
& ENGINEERING CORP**



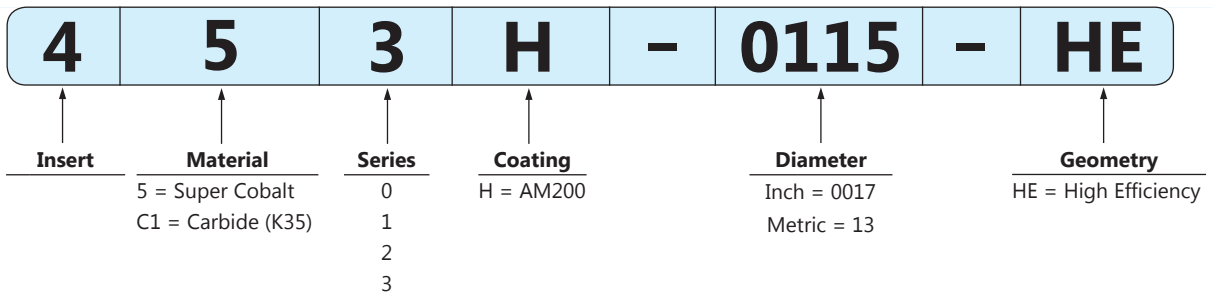
T-A[®] and GEN2 T-A[®] Structural Steel

Reference Page

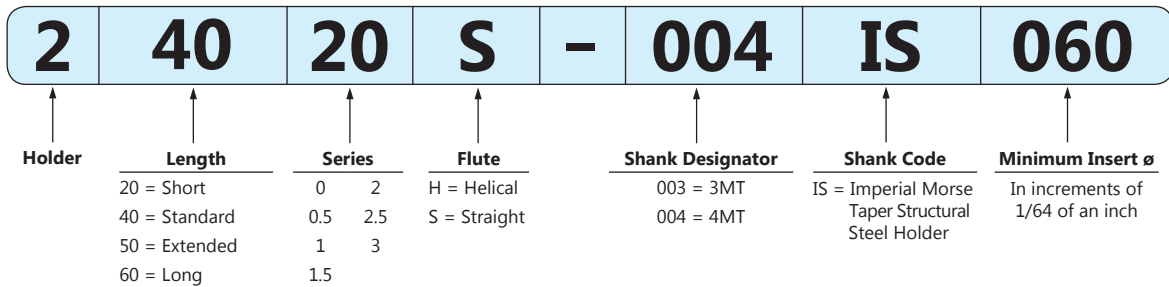
T-A Structural Steel Drill Insert



GEN2 T-A Drill Insert

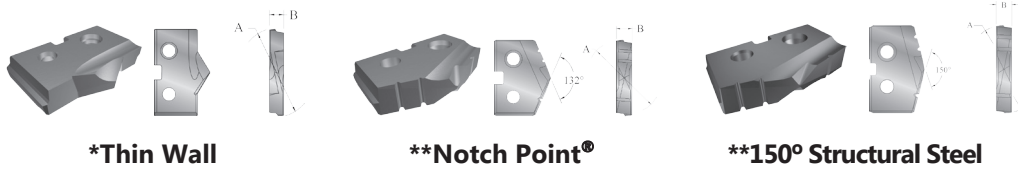


T-A and GEN2 T-A Structural Steel Holder



T-A[®] Structural Steel Drill Inserts

Range: 0.511"-1.882" (12,98mm-47,80mm)



T-A Structural Steel Drill Inserts

Series	A (Diameter)			B	Availability & Geometry					
	Fractional Equivalent	(inch)	(mm)		Thickness	Thin Wall Super Cobalt TiAlN	①	Notch Point Super Cobalt TiAlN	①	150° Structural Steel Super Cobalt TiAlN
0	-	0.5512	14,00	1/8"	150A-14-TW	○	150A-14-NP	○	150A-14-SS	○
	9/16"	0.5625	14,29		150A-0018-TW	○	150A-0018-NP	○	150A-0018-SS	○
	5/8"	0.6250	15,88		150A-0020-TW	○	150A-0020-NP	○	150A-0020-SS	○
	-	0.6299	16,00		150A-16-TW	○	150A-16-NP	○	150A-16-SS	○
	11/16"	0.6875	17,46		150A-0022-TW	○	150A-0022-NP	○	150A-0022-SS	○
1	-	0.7087	18,00	5/32"	151A-18-TW	○	151A-18-NP	○	151A-18-SS	○
	13/16"	0.8125	20,64		151A-0026-TW	○	151A-0026-NP	○	151A-0026-SS	○
	-	0.8661	22,00		151A-22-TW	○	151A-22-NP	○	151A-22-SS	○
	7/8"	0.8750	22,23		151A-0028-TW	○	151A-0028-NP	○	151A-0028-SS	○
	15/16"	0.9375	23,81		151A-0030-TW	○	151A-0030-NP	○	151A-0030-SS	○
2	-	0.9449	24,00	3/16"	151A-24-TW	○	151A-24-NP	○	151A-24-SS	○
	1"	1.0000	25,40		152A-0100-TW	○	152A-0100-NP	○	152A-0100-SS	○
	-	1.0236	26,00		152A-26-TW	○	152A-26-NP	○	152A-26-SS	○
	1-1/16"	1.0625	26,99		152A-0102-TW	○	152A-0102-NP	○	152A-0102-SS	○
	-	1.0630	27,00		152A-27-TW	○	152A-27-NP	○	152A-27-SS	○
	1-1/8"	1.1250	28,58		152A-0104-TW	○	152A-0104-NP	○	152A-0104-SS	○
	1-3/16"	1.1875	30,16		152A-0106-TW	○	152A-0106-NP	○	152A-0106-SS	○
	-	1.2205	31,00		152A-31-TW	○	152A-31-NP	○	152A-31-SS	○
	1-1/4"	1.2500	31,75		152A-0108-TW	○	152A-0108-NP	○	152A-0108-SS	○
	-	1.2992	33,00		152A-33-TW	○	152A-33-NP	○	152A-33-SS	○
3	1-5/16"	1.3125	33,34	1/4"	152A-0110-TW	○	152A-0110-NP	○	152A-0110-SS	○
	1-3/8"	1.3750	34,93		152A-0112-TW	○	152A-0112-NP	○	152A-0112-SS	○
	1-7/16"	1.4375	36,51		153A-0114-TW	○	153A-0114-NP	○	153A-0114-SS	○
	1-1/2"	1.5000	38,10		153A-0116-TW	○	153A-0116-NP	○	153A-0116-SS	○
	-	1.5354	39,00		153A-39-TW	○	153A-39-NP	○	153A-39-SS	○
	1-9/16"	1.5625	39,69		153A-0118-TW	○	153A-0118-NP	○	153A-0118-SS	○

*Use Thin Wall Drill Inserts for material up to 7/16" thick.

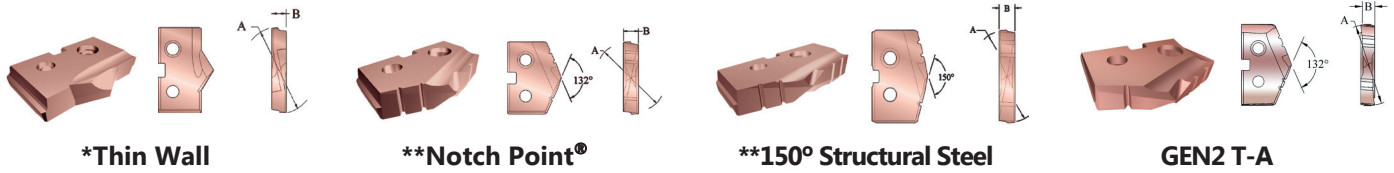
**Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.

- ① Availability Codes
- Stocked



T-A® and GEN2 T-A® Structural Steel Drill Inserts

Range: 0.511"-1.882" (12,98mm-47,80mm)



T-A and GEN2 T-A Structural Steel Drill Inserts

Series	A (Diameter)			B	Availability & Geometry									
	Fractional Equivalent	(inch)	(mm)		Thickness	Thin Wall Super Cobalt AM200®	①	Notch Point Super Cobalt AM200	①	150° Structural Steel Super Cobalt AM200	①	GEN2 T-A Super Cobalt AM200	①	GEN2 T-A Carbide AM200
0	-	0.5512	14,00	1/8"	150H-14-TW	○	150H-14-NP	○	150H-14-SS	○	450H-14-HE	○	4C10H-14-HE	○
	9/16"	0.5625	14,29		150H-0018-TW	○	150H-0018-NP	○	150H-0018-SS	○	450H-0018-HE	○	4C10H-0018-HE	○
	5/8"	0.6250	15,88		150H-0020-TW	○	150H-0020-NP	○	150H-0020-SS	○	450H-0020-HE	○	4C10H-0020-HE	○
	-	0.6299	16,00		150H-16-TW	○	150H-16-NP	○	150H-16-SS	○	450H-16-HE	○	4C10H-16-HE	○
1	11/16"	0.6875	17,46	5/32"	150H-0022-TW	○	150H-0022-NP	○	150H-0022-SS	○	450H-0022-HE	○	4C10H-0022-HE	○
	-	0.7087	18,00		151H-18-TW	○	151H-18-NP	○	151H-18-SS	○	451H-18-HE	○	4C11H-18-HE	○
	13/16"	0.8125	20,64		151H-0026-TW	○	151H-0026-NP	○	151H-0026-SS	○	451H-0026-HE	○	4C11H-0026-HE	○
	-	0.8268	21,00		151H-21-TW	○	151H-21-NP	○	151H-21-SS	○	451H-21-HE	○	4C11H-21-HE	○
	-	0.8661	22,00		151H-22-TW	○	151H-22-NP	○	151H-22-SS	○	451H-22-HE	○	4C11H-22-HE	○
	7/8"	0.8750	22,23		151H-0028-TW	○	151H-0028-NP	○	151H-0028-SS	○	451H-0028-HE	○	4C11H-0028-HE	○
	15/16"	0.9375	23,81		151H-0030-TW	○	151H-0030-NP	○	151H-0030-SS	○	451H-0030-HE	○	4C11H-0030-HE	○
	-	0.9449	24,00		151H-24-TW	○	151H-24-NP	○	151H-24-SS	○	451H-24-HE	○	4C11H-24-HE	○
2	1"	1.0000	25,40	3/16"	152H-0100-TW	○	152H-0100-NP	○	152H-0100-SS	○	452H-0100-HE	○	4C12H-0100-HE	○
	-	1.0236	26,00		152H-26-TW	○	152H-26-NP	○	152H-26-SS	○	452H-26-HE	○	4C12H-26-HE	○
	1-1/16"	1.0625	26,99		152H-0102-TW	○	152H-0102-NP	○	152H-0102-SS	○	452H-0102-HE	○	4C12H-0102-HE	○
	-	1.0630	27,00		152H-27-TW	○	152H-27-NP	○	152H-27-SS	○	452H-27-HE	○	4C12H-27-HE	○
	1-1/8"	1.1250	28,58		152H-0104-TW	○	152H-0104-NP	○	152H-0104-SS	○	452H-0104-HE	○	4C12H-0104-HE	○
	1-3/16"	1.1875	30,16		152H-0106-TW	○	152H-0106-NP	○	152H-0106-SS	○	452H-0106-HE	○	4C12H-0106-HE	○
	-	1.2205	31,00		152H-31-TW	○	152H-31-NP	○	152H-31-SS	○	452H-31-HE	○	4C12H-31-HE	○
	1-1/4"	1.2500	31,75		152H-0108-TW	○	152H-0108-NP	○	152H-0108-SS	○	452H-0108-HE	○	4C12H-0108-HE	○
	-	1.2992	33,00		152H-33-TW	○	152H-33-NP	○	152H-33-SS	○	452H-33-HE	○	4C12H-33-HE	○
	1-5/16"	1.3125	33,34		152H-0110-TW	○	152H-0110-NP	○	152H-0110-SS	○	452H-0110-HE	○	4C12H-0110-HE	○
	1-3/8"	1.3750	34,93		152H-0112-TW	○	152H-0112-NP	○	152H-0112-SS	○	452H-0112-HE	○	4C12H-0112-HE	○
	3	1-7/16"	1.4375		36,51	1/4"	153H-0114-TW	○	153H-0114-NP	○	153H-0114-SS	○	453H-0114-HE	○
1-1/2"		1.5000	38,10	153H-0116-TW	○		153H-0116-NP	○	153H-0116-SS	○	453H-0116-HE	○	-	○
-		1.5354	39,00	153H-39-TW	○		153H-39-NP	○	153H-39-SS	○	453H-39-HE	○	-	○
1-9/16"		1.5625	39,69	153H-0118-TW	○		153H-0118-NP	○	153H-0118-SS	○	453H-0118-HE	○	-	○

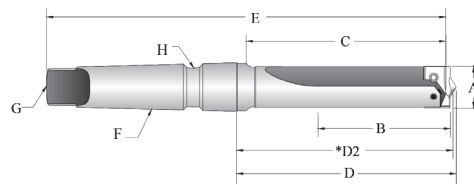
*Use Thin Wall Drill Inserts for material up to 7/16" thick.

**Use Notch Point Geometry or 150° Structural Steel Drill Inserts for material over 7/16" thick. Use 150° Structural Steel for reduced exit burr.

① Availability Codes
○ Stocked

T-A® and GEN2 T-A® Structural Steel Holders

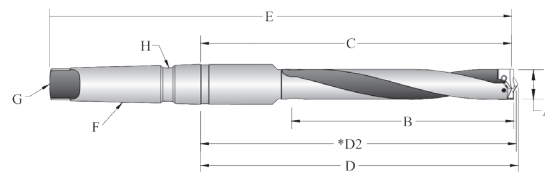
0 and 0.5 Series Range: 0.511"-0.695" (12,98mm-17,65mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22000S-003IS036	9/16"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
Short	22005S-003IS040	5/8"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
Short	22005S-003IS044	11/16"	1-3/8"	2-13/16"	2-35/64"	2-31/64"	6-1/16"	#3	TTC	TSC
METRIC (mm)										
Short	22000S-003IS036	14	35	56	64,7	63,1	154	#3	TTC	TSC
Short	22000S-003IS040	16	35	56	64,7	63,1	154	#3	TTC	TSC
Short	22000S-003IS044	17,5	35	56	64,7	63,1	154	#3	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24000H-003IS036	9/16"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Standard	24005H-003IS040	5/8"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Standard	24005H-003IS044	11/16"	2-1/2"	3-5/16"	3-43/64"	3-39/64"	7-3/16"	#3	TTC	TSC
Extended	25000H-003IS036	9/16"	6-1/2"	9-7/16"	9-51/64"	9-19/32"	13-5/64"	#3	TTC	TSC
Extended	25005H-003IS044	11/16"	6-1/2"	9-7/16"	9-51/64"	9-19/32"	13-5/64"	#3	TTC	TSC
METRIC (mm)										
Standard	24000H-003IS036	14	64	84	93,3	91,7	183	#3	TTC	TSC
Standard	24005H-003IS040	16	64	84	93,3	91,7	183	#3	TTC	TSC
Standard	24005H-003IS044	17,5	64	84	93,3	91,7	183	#3	TTC	TSC
Extended	25000H-003IS036	14	165	240	248,8	243,7	338	#3	TTC	TSC
Extended	25005H-003IS044	17,5	165	240	248,8	243,7	338	#3	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
0	72556-IP8-1	72556N-IP8-1	8IP-8	8IP-8TL	8IP-8B	33/64" - 11/16"	15.5 in.-lbs	13,0 - 17,5	175 N-cm
0.5	72567-IP8-1	72567N-IP8-1	8IP-8	8IP-8TL	8IP-8B	39/64" - 11/16"	15.5 in.-lbs	15,5 - 17,5	175 N-cm

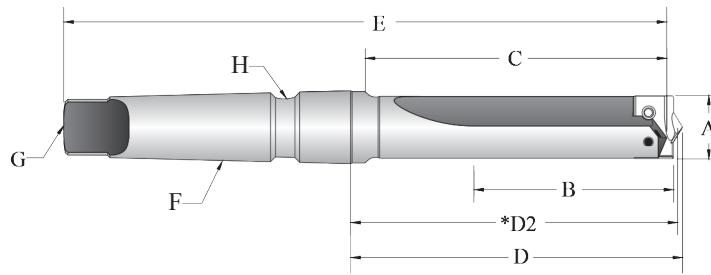
Tightening torques are calculated with a friction coefficient of $\mu = 0.14$ and develop 90% of ultimate yield strength.

WARNING Refer to Speed and Feed charts on page 24 for recommended adjustments to speeds and feeds. Refer to page 25 for Structural Steel Deep Hole Drilling Guidelines in this 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.



T-A® and GEN2 T-A® Structural Steel Holders

1 and 1.5 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22010S-003IS045	18mm	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22010S-004IS045	18mm	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22010S-003IS052	13/16"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22010S-004IS052	13/16"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22015S-003IS056	7/8"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22015S-004IS056	7/8"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
Short	22015S-003IS060	15/16"	2-3/4"	3-7/8"	4-17/64"	4-13/64"	7-3/4"	#3	TTC	TSC
Short	22015S-004IS060	15/16"	2-3/4"	3-7/8"	4-21/64"	4-17/64"	8-3/4"	#4	TTC	TSC
METRIC (mm)										
Short	22010S-003IS045	18	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22010S-004IS045	18	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22010S-003IS052	21	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22010S-004IS052	21	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22015S-003IS056	22	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22015S-004IS056	22	70	98	109,9	108,3	222	#4	TTC	TSC
Short	22015S-003IS060	24	70	98	108,4	106,8	197	#3	TTC	TSC
Short	22015S-004IS060	24	70	98	109,9	108,3	222	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

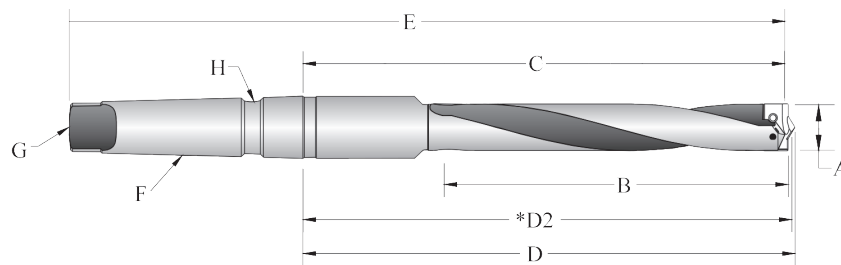
Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
1	7375-IP9-1	7375N-IP9-1	8IP-9	8IP-9TL	8IP-9B	45/64" - 15/16"	27.0 in.-lbs	18,0 - 24,0	305 N-cm
1.5	739-IP9-1	739N-IP9-1	8IP-9	8IP-9TL	8IP-9B	55/64" - 15/16"	27.0 in.-lbs	18,0 - 24,0	305 N-cm

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

T-A® and GEN2 T-A® Structural Steel Holders

1 and 1.5 Series Range: 0.690"-0.960" (17,53mm-24,38mm)



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24010H-003IS045	18mm	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24010H-004IS045	18mm	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24010H-003IS052	13/16"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24010H-004IS052	13/16"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24015H-003IS056	7/8"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24015H-004IS056	7/8"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
Standard	24015H-003IS060	15/16"	4-3/4"	5-7/8"	6-17/64"	6-13/64"	9-3/4"	#3	TTC	TSC
Standard	24015H-004IS060	15/16"	4-3/4"	5-7/8"	6-21/64"	6-17/64"	10-3/4"	#4	TTC	TSC
⚠ Extended	25010H-003IS045	18mm	6-1/2"	9-11/32"	9-47/64"	9-1/2"	13-7/32"	#3	TTC	TSC
⚠ Extended	25010H-003IS052	13/16"	6-1/2"	9-11/32"	9-47/64"	9-1/2"	13-7/32"	#3	TTC	TSC
⚠ Extended	25010H-004IS052	13/16"	6-1/2"	9-9/32"	9-47/64"	9-43/64"	14-5/32"	#4	TTC	TSC
⚠ Extended	25015H-003IS060	15/16"	6-1/2"	9-11/32"	9-47/64"	9-15/32"	13-7/32"	#3	TTC	TSC
⚠ Extended	25015H-004IS060	15/16"	6-1/2"	9-9/32"	9-47/64"	9-43/64"	14-5/32"	#4	TTC	TSC
⚠ Long	26010H-004IS052	13/16"	6-1/2"	15-25/32"	16-15/64"	16-11/64"	20-21/32"	#4	TTC	TSC
⚠ Long	26015H-004IS060	15/16"	6-1/2"	15-13/16"	16-17/64"	16-13/64"	20-11/16"	#4	TTC	TSC
METRIC (mm)										
Standard	24010H-003IS045	18	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24010H-004IS045	18	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24010H-003IS052	21	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24010H-004IS052	21	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24015H-003IS056	22	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24015H-004IS056	22	121	149	160,8	159,2	273	#4	TTC	TSC
Standard	24015H-003IS060	24	121	149	159,2	157,6	248	#3	TTC	TSC
Standard	24015H-004IS060	24	121	149	160,8	159,2	273	#4	TTC	TSC
⚠ Extended	25010H-003IS045	18	165	237	247,3	241,3	336	#3	TTC	TSC
⚠ Extended	25010H-003IS052	22	165	237	247,3	241,3	336	#3	TTC	TSC
⚠ Extended	25010H-004IS052	22	165	236	247,3	245,7	384	#4	TTC	TSC
⚠ Extended	25015H-003IS060	24	165	237	247,3	234,5	336	#3	TTC	TSC
⚠ Extended	25015H-004IS060	24	165	236	247,3	245,7	384	#4	TTC	TSC
⚠ Long	26010H-004IS052	22	165	401	412,4	410,8	525	#4	TTC	TSC
⚠ Long	26015H-004IS060	24	165	401	413,1	411,6	525	#4	TTC	TSC

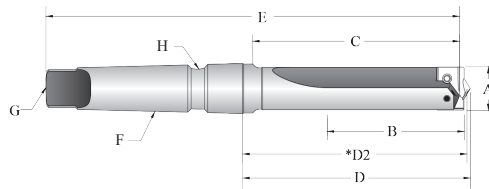
*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

⚠ WARNING Refer to Speed and Feed charts on page 24 for recommended adjustments to speeds and feeds. Refer to page 25 for Structural Steel Deep Hole Drilling Guidelines in this 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.



T-A® and GEN2 T-A® Structural Steel Holders

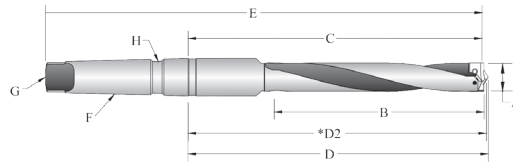
2 and 2.5 Series Range: 0.961"-1.380" (24,41mm-35,05mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22020S-004IS100	1" - 1-3/8"	3-3/8"	4-1/2"	4-63/64"	4-57/64"	9-3/8"	#4	TTC	TSC
Short	22025S-004IS112	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-63/64"	4-57/64"	9-3/8"	#4	TTC	TSC
METRIC (mm)										
Short	22020S-004IS100	26	86	114	126,6	124,2	238	#4	TTC	TSC
Short	22025S-004IS112	31	86	114	126,6	124,2	238	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24020H-004IS100	1" - 1-3/8"	5-3/8"	6-1/2"	6-63/64"	6-57/64"	11-3/8"	#4	TTC	TSC
Standard	24025H-004IS112	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	6-63/64"	6-57/64"	11-3/8"	#4	TTC	TSC
Extended	25020H-003IS100	1" - 1-3/8"	6-1/2"	9-11/32"	9-3/4"	9-29/64"	13-7/32"	#3	TTC	TSC
Extended	25020H-004IS100	1" - 1-3/8"	6-1/2"	9-7/32"	9-3/4"	9-43/64"	14-5/32"	#4	TTC	TSC
Long	26020H-004IS100	1" - 1-3/8"	6-1/2"	16"	16-15/32"	16-25/64"	20-7/8"	#4	TTC	TSC
METRIC (mm)										
Standard	24020H-004IS100	26	137	165	177,4	175,0	289	#4	TTC	TSC
Standard	24025H-004IS112	31	137	165	177,4	175,0	289	#4	TTC	TSC
Extended	25020H-003IS100	26	165	237	247,7	240,1	336	#3	TTC	TSC
Extended	25020H-004IS100	26	165	237	247,7	245,7	360	#4	TTC	TSC
Long	26020H-004IS100	26	165	406	418,3	416,3	530	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

Replacement TORX Plus Screws

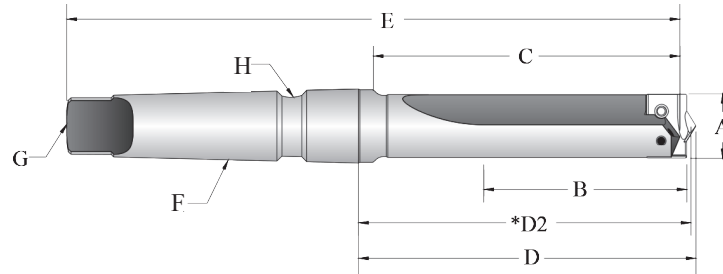
Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Preset Torque TORX Plus Hand Driver	Replacement TORX Plus Tips	Inch		Metric	
						Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
2	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	31/32" - 1-3/8"	61.0 in.-lbs	25,0 - 35,0	690 N-cm
2.5	7495-IP15-1	7495N-IP15-1	8IP-15	8IP-15TL	8IP-15B	1-3/16" - 1-3/8"	61.0 in.-lbs	30,0 - 35,0	690 N-cm

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

WARNING Refer to Speed and Feed charts on page 24 for recommended adjustments to speeds and feeds. Refer to page 25 for Structural Steel Deep Hole Drilling Guidelines in this 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.

T-A® and GEN2 T-A® Structural Steel Holders

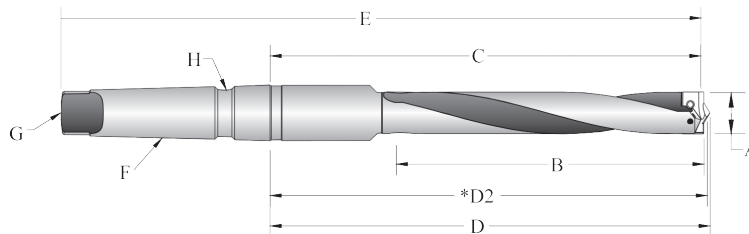
3 Series Range: 1.353"-1.882" (34,36mm-47,80mm)



Structural Steel Taper Shank Straight Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Short	22030S-004IS126	1-13/32" - 1-7/8"	4-3/4"	6"	6-1/2"	6-7/16"	10-7/8"	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry



Structural Steel Taper Shank Helical Flute Holders

Length	Item Number	A	B	C	D	*D2	E	F	G	H
		Drill Insert Range	Drill Depth	Body Length	Tool Ref. Length	Tool Ref. Length	Overall Length	MT	Coolant Inlet Style	
Standard	24030H-004IS126	1-13/32" - 1-7/8"	6-1/2"	7-3/4"	8-1/4"	8-3/16"	12-5/8"	#4	TTC	TSC

*If using Structural Steel Holder with Notch Point®, GEN2 T-A®, or 150° Structural Steel T-A® Drill Insert Geometry

Replacement TORX Plus Screws

Series	TORX Plus Screws 10 Pieces	Nylon Locking TORX Plus Screws 10 Pieces	TORX Plus Hand Driver	Inch		Metric	
				Drill Range Used With	TORX Plus Screw Admissible Tightening Torque	Drill Range Used With	TORX Plus Screw Admissible Tightening Torque
3	7514-IP20-1	7514N-IP20-1	8IP-20	1-13/32" - 1-7/8"	121.3 in.-lbs	36,0 - 65,0	1370 N-cm

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



T-A[®] and GEN2 T-A[®] Structural Steel

Recommended Speeds and Feeds

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

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

Super Cobalt Thin Wall Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		-TW TiAlN SFM (Mist Coolant)	-TW AM200 [®] SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"
Structural Steel A36, A285, A516, etc.	100-150	110	125	0.012	0.018	0.019	0.020
	150-250	100	115	0.011	0.016	0.017	0.019
	250-350	90	105	0.010	0.014	0.016	0.018

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-TW TiAlN M/min (Mist Coolant)	-TW AM200 [®] M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel A36, A285, A516, etc.	100-150	34	39	0,30	0,45	0,48	0,50
	150-250	31	35	0,28	0,40	0,43	0,48
	250-350	28	32	0,25	0,36	0,40	0,45

Super Cobalt Notch Point[®] and 150[°] Structural Steel Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		-NP & -SS TiAlN SFM (Mist Coolant)	-NP & -SS AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"
Structural Steel A36, A285, A516, etc.	100-150	110	125	0.010	0.012	0.014	0.018
	150-250	100	115	0.009	0.011	0.012	0.016
	250-350	90	105	0.008	0.010	0.011	0.014

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		-NP & -SS TiAlN M/min (Mist Coolant)	-NP & -SS AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm
Structural Steel A36, A285, A516, etc.	100-150	34	39	0,25	0,30	0,36	0,45
	150-250	31	35	0,23	0,28	0,30	0,40
	250-350	28	32	0,20	0,25	0,28	0,36

Super Cobalt GEN2 T-A Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"	
Structural Steel A36, A285, A516, etc.	100-150	125	0.010	0.012	0.014	0.018	
	150-250	115	0.009	0.011	0.012	0.016	
	250-350	105	0.008	0.010	0.011	0.014	

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm	
Structural Steel A36, A285, A516, etc.	100-150	39	0,25	0,30	0,36	0,46	
	150-250	35	0,23	0,28	0,30	0,40	
	250-350	32	0,20	0,25	0,28	0,36	

C1 Carbide GEN2 T-A Drill Inserts

Material	Hardness (BHN)	SPEED		FEED (IPR)			
		AM200 SFM (Mist Coolant)	9/16" to 11/16"	13/16" to 15/16"	1" to 1-3/8"	1-13/32" to 1-7/8"	
Structural Steel A36, A285, A516, etc.	100-150	165	0.008	0.011	0.015	0.017	
	150-250	155	0.006	0.010	0.013	0.015	
	250-350	140	0.005	0.009	0.012	0.013	

Material	Hardness (BHN)	SPEED		FEED (mm/rev)			
		AM200 M/min (Mist Coolant)	14mm to 16mm	18mm to 24mm	25mm to 35mm	36mm to 47mm	
Structural Steel A36, A285, A516, etc.	100-150	50	0,20	0,28	0,38	0,43	
	150-250	47	0,15	0,25	0,33	0,38	
	250-350	43	0,13	0,23	0,30	0,33	



Deep Hole Drilling Guidelines

For use with Allied drills greater than 9xD (Depths to Diameter), including Extended, Long, XL, 3XL, and Special Length

1) Pilot Hole
100% RPM
100% IPR (mm/rev)

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

2) Feed In
50 RPM Max
12 IPM (300mm/min)

- Feed the longer drill within 1/16" (1.5 mm) short of the established pilot hole bottom at a **maximum of 50 RPM** and 12 IPM (300 mm/min) feed rate

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

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

4) 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

5) Deep Hole Drilling - At Breakout
50% RPM
75% IPR (mm/rev)

For Through Holes Only

- Reduce speed by 50% and feed by 25% prior to break out
- Do not break out more than 1/8" (3 mm) past the full diameter of drill

6) Drill Retract
50 RPM Max

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

WARNING

Tool failure can cause serious injury. To prevent:

- When using holders without support bushing, use a short T-A holder to establish an initial hole that is a minimum of 2 diameters deep.
- Do not rotate tool holders more than 50 RPM unless it is engaged with workpiece or fixture

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: _____

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

Test Objective List what would make this a successful test (i.e. Penetration Rate, Finish, Tool Life, Hole Size, etc.)

Application Information		
Hole Diameter: _____ in/mm	Tolerance: _____	Material: _____ (4150/A36/Cast Iron/etc.)
Pre-existing Diameter: _____ in/mm	Depth of Cut: _____ in/mm	Hardness: _____ (BHN/Rc)
Required Finish: _____ RMS	Material State: _____	(Casting/Hot Rolled/Forging)

Machine Information		
Machine Type: _____ (Lathe/Screw Machine/Machine Center, etc.)	Builder: _____ (Haas/Mori Seiki, etc.)	Model#: _____
Shank Required: _____ (CAT50, Morse Taper, etc.)	Rigidity: <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Poor	Tool Rotating: <input type="checkbox"/> Yes <input type="checkbox"/> No
Power: _____ HP/KW	Orientation: <input type="checkbox"/> Vertical <input type="checkbox"/> Horizontal	
Thrust: _____ Lbs./N		

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

Requested Tooling

QTY	Item Number	QTY	Item Number

Allied Machine & Engineering Corp.
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 Fax: (330) 602-3400

Warranty Information

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 for a replacement, or the option of 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, set-up, and application of cutting fluid should accompany any product returned for inspection. The provisions of this warranty shall not apply to any Allied products which have been subjected to misuse, improper operating conditions, machine set-up or application of cutting fluid or which have been repaired or altered if such repair or alteration in the judgment of Allied would adversely affect performance of the product.

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Also available

Allied Drilling Products Catalog



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

Allied Threadmilling Catalog



AccuThread 856® specific Threadmills 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 threadmills and taps.

Literature Order Number: TMC

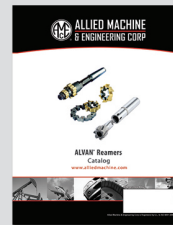
Allied Criterion Boring Systems



Allied Criterion products offer a wide variety of options that can cover a range of .050" in diameter. Products include CB Style Boring Head, Cri-Twin®, Cri-Bore®, LCB1500, and CBER®. Ideal for close tolerance precision boring.

Literature Order Number: CRIT-14

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

