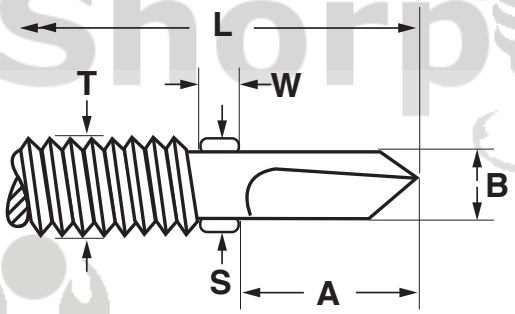
SELF-DRILLING

#4 Point with Wings, MACHINE SCREW Thread



#4 Point Self-Drilling Screws with Reaming Wings, Machine-Screw Thread

Nominal Screw Size & Threads per Inch	A	B		S		W		K		T		Drill Point Size
	Point Length	Point Diameter		Wing Span		Wing Width		Wing Thickness		Major Diameter		
	Ref	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	
10-24	0.394	.166	.159	.256	.236	.138	.098	.016	.011	.191	.183	4
12-24	0.433	.197	.190	.276	.255	.158	.118	.0157	.0118	.216	.209	4
1/4-20	0.491	.228	.222	.315	.294	.158	.118	.0157	.0118	.248	.242	4

	Steel	*Stainless*
Description	An externally threaded fastener with a machine screw thread pitch and an extended drill point which creates its own hole. The fastener also has two reaming wings located at opposite sides of the shank, below the threads and above the drill point.	
Applications/ Advantages	The unified thread pitch reduces friction and driving torques. Drill screws with this style thread are normally used with thicker materials, particularly when the materials being joined are thicker than a single spaced thread pitch. The reaming wings drill out a clearance hole in wood or other soft materials, then snap off when in contact with the metal surface to be drilled. The #4 point typically will drill through sheet metal from .145 to .312 inches thick.	Offers similar advantages as the steel screw of the same design but with better corrosion resistance. It is important to remember that the hardness of the material to be drilled should be a minimum of 10-20 Rockwell hardness points LESS than the hardness of the drill screw.
Material	AISI 1022 or equivalent steel	410 stainless steel
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 625°F minimum.	***410 SS:*** An ideal method of hardening 410 stainless screws is a bright hardening process, which typically involves a vacuum furnace. Another key factor affecting hardness is the chemistry of the fastener--most elements have maximum values but not minimums. This fact can contribute to hardness variance.
Case Hardness	Rockwell C52 - 58	-
Case Depth	***Nos. 10 & 12 diameter:*** .004 - .009 ***1/4" diameter and larger:*** .005 - .011	-
Hardness	**Core**: Rockwell C32 - 40 (after tempering)	***410 SS:*** Rockwell C38 - 46 (approx.)
Plating	See Appendix-A for plating information.	Stainless drill screws are usually supplied plain.