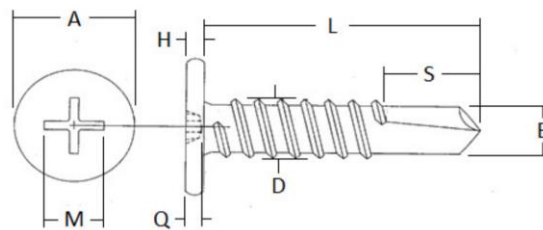


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PANCAKE HEAD SELF-DRILLING/TAPPING SCREWS – 410 STAINLESS

The following Specification Sheet applies to all **Pancake Head Self-Drilling/Tapping Screws – 410 Stainless** in our **WDS20** series of screws.



Size	A		H		M	Q	
	Min.	Max.	Min.	Max.	Ref.	Min.	Max.
#10-16	.405	.445	.086	.100	0.175	.072	.094
#12-14	.425	.448	.078	.090	0.175	.072	.094

Size	S		E		D	
	Min.	Max.	Min.	Max.	Min.	Max.
#10-16	.248	.268	.150	.156	.182	.188
#12-14	.295	.315	.177	.183	.209	.214

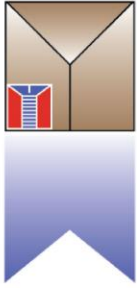
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THREAD DIMENSIONS



SELF-DRILLING SCREWS, TYPE BSD (SPACED THREAD)													SAE J78-2013
Nominal Size or Basic Screw Diameter		Threads Per Inch	T		t		P		Minimum Practical Nominal Screw Lengths, Formed Points				Minimum Torsional Strength, lb.- in. (STEEL SCREWS ONLY)
			Major Diameter		Minor Diameter		Protrusion Allowance						
			Max	Min	Max	Min	#2 Pt.	#3 Pt.	90° Head, #2 Pt	Csk Head, #2 Pt	90° Head, #3 Pt	Csk Head, #3 Pt	
10	.1900	16	.189	.183	.141	.135	.235	.300	7/16	1/2	1/2	9/16	61
12	.2160	14	.215	.209	.164	.157	.283	.353	1/2	5/8	1/2	5/8	92



TYPE BSD SELF-DRILLING SCREW SELECTION CHART			
Nominal Screw Size	Point Number	Recommended Panel Thickness, in.	
		Min.	Max.
10	2	.035	.110
12	3	.110	.210
This table is only a guide and does not constitute a warranty of any type.			

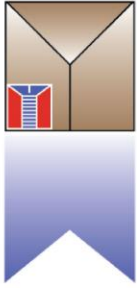
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	<i>Steel</i>	<i>Stainless</i>
Description	Type BSD: A tapping screw with spaced threads and a drill point which drills its own hole. Type CSD: A thread forming screw with machine screw thread pitch and a drill point which drills its own hole. Both types allow the screw to form mating threads and produce a complete fastening system in a single operation.	
Applications/ Advantages	Type BSD: May be used to attach plywood, soft woods or composition board to metal, or attach metal to metal. Type CSD: The finer thread pitch reduces friction and driving torques. Type-CSD screws are normally used with thicker materials. All self-drilling screws offer economical benefits: reduces labor and tooling costs; reduces or eliminates drill bits and taps.	The 18-8 stainless drill screw offers superior corrosion resistance while the 410 stainless screw will drill through harder material than the 18-8. The hardness of the material to be drilled should be a minimum of 10-20 Rockwell hardness points less than the screw's hardness. Minimum torques are the same for stainless and steel self-drill screws. Drill time is 2.5 seconds for a 1mm thick plate.
Material	AISI 1016 - 1024 or equivalent steel	410, 18-8 or 316 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. 18-8 & 316 are only hardenable by cold-working.
Case Hardness	Rockwell C52 -58	-
Case Depth	No. 4 and 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" diameter and larger: .005 - .011	-
Hardness	Core: Rockwell C32 - 40 (after tempering)	410 SS: Rockwell C38 - 46 (approx.) 18-8 & 316 SS: Rockwell B100 (approx.)
Plating	See Appendix-A for plating information.	Stainless drill screws are usually supplied plain.

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