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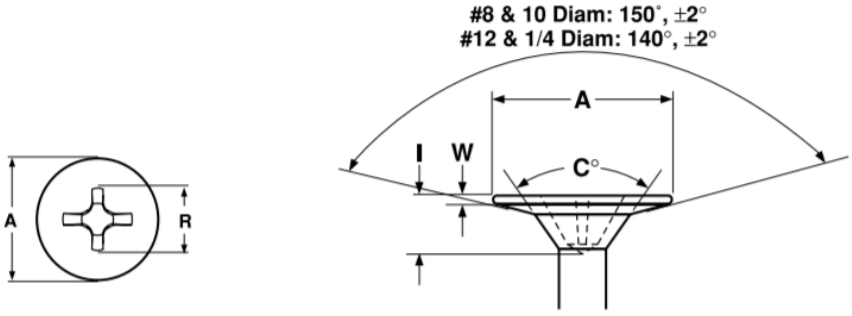
WAFER HEAD PHILLIPS SELF-DRILLING/TAPPING DRYWALL SCREW – STEEL ZINC

The following Specification Sheet applies to all **Wafer Head Phillips Self-Drilling/Tapping Drywall Screw – Steel Zinc** in our **WDS series** of screws.



WAFER HEADS FOR SELF-DRILLING SCREWS

Nominal Size	A		R		I	W		Bottom Countersink Angle	Phillips Driver Size
	Head Diameter		Recess Diameter		Recess Depth	Wafer Thickness			
	Max.	Min.	Max	Min	Ref.	Max	Min	± 2°	
8	.380	.359	.189	.176	.255	.035	.025	50°	2

NOTE: There is no single standard for Wafer head dimensions. These values are offered as a guide; deviations from these specifications may occur.

Metallics
229 Cross Street
Bristol, CT 06010
www.metallics.us
Phone: 860 589-4186 Toll Free: 800 243-8272
Fax: 860 584-1008 Toll Free Fax: 800 831-9358

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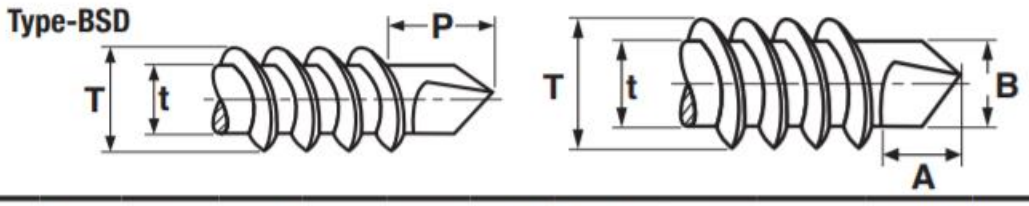
THREAD DIMENSIONS



SELF-DRILLING SCREWS, TYPE BSD (SPACED THREAD) *SAE J78-2013

Nominal Size or Basic Screw Diameter		Threads Per Inch	T Major Diameter		t Minor Diameter		P Protrusion Allowance	Minimum Practical Nominal Screw Lengths Formed Points		Minimum Torsional Strength, lb.- in. (STEEL SCREWS ONLY)
			Max	Min	Max	Min	#2 Pt.	90° Head, #2 Pt	Csk Head, #2 Pt	
8	.1640	18	.166	.161	.122	.116	.211	3/8	7/16	42

TYPE BSD SELF-DRILLING SCREW SELECTION CHART

Nominal Screw Size	Point Number	Recommended Panel Thickness, in.	
		Min.	Max.
8	2	.035	.100

This table is only a guide and does not constitute a warranty of any type.

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	Steel	*Stainless*
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. 8 thru 12 diameter:*** .004 - .009	-
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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