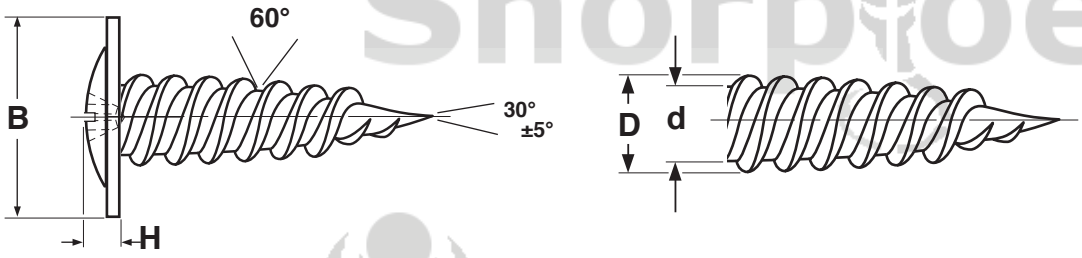
SELF-PIERCING

Modified Truss Phillips



Modified Truss Phillips Self-Piercing Screws

Size	B		H		D		d		Minimum Torque (Kg/cm)	Phillips Driver Size
	Overall Head Diameter		Total Head Height		Major Diameter		Minor Diameter			
	Max	Min	Max	Min	Max	Min	Max	Min		
6 - 18	.401	.385	.099	.070	.141	.136	.102	.096	27.7	2
8 - 15	.446	.426	.098	.082	.168	.162	.123	.116	45	2
10 - 12	.441	.425	.098	.079	.194	.188	.133	.126	55.3	2
12 - 11	.464	.440	.124	.101	.221	.215	.162	.155		3
Tolerance on Length					± 0.05					

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

Description	A fastener with an extra wide head, a single lead thread rolled to the tip of an extra sharp point, and a second thread spaced 180° apart. The head is an integrally formed round washer with a low rounded top that is approximately 75% the diameter of the washer.	
Applications/ Advantages	May be used in thin metal (less than .050 thick). Eliminates need for pre-drilled or pre-punched holes. The head design offers low clearance and an extra large bearing surface.	May be used in thin stainless sheet. The head design offers low clearance and an extra large bearing surface. 18-8 offers resistance to corrosion caused by moisture. 410 is a harder metal than 18-8 but less resistant to corrosion.
Material	AISI 1018 - 1022 or equivalent steel	18-8 or 410 Stainless Steel
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 650°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 is only hardenable by cold-working.
Surface Hardness	Rockwell C45 minimum	-
Hardness	**Core**: Rockwell C28 - 38 (after tempering)	***410 SS:*** Rockwell C38 - 46 (approx.) ***18-8 & 316 SS:*** Rockwell B100 (approx.)
Plating	See Appendix-A for plating information.	Stainless Self Pierce screws are usually supplied without an additional finish.