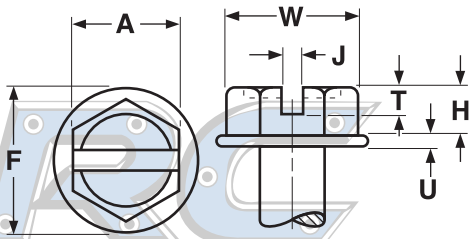
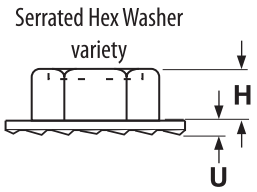
SELF-PIERCING

Slotted Hex Washer With & Without Serrations





Head dimensions of self-piercing screws differ from those of standard tapping screws.

HEX WASHER HEAD SLOTTED SELF-PIERCING SCREWS

Size	A		H		F		U		J		T		D		d	
	Width Across Flats		Head Height		Washer Diameter		Washer Thickness		Slot Width		Slot Depth		Major Diameter		Minor Diameter	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
6-18	.250	.244	.093	.080	.328	.302	.025	.015	.048	.039	.053	.033	.141	.136	.102	.096
7-16	.250	.244	.093	.080	.328	.302	.029	.017	.048	.039	.062	.040	.158	.152	.114	.108
8-15	.250	.244	.110	.096	.348	.322	.031	.019	.054	.045	.074	.052	.168	.162	.123	.116
10-12	.250	.244	.110	.096	.414	.384	.031	.019	.054	.045	.074	.052	.194	.188	.133	.126
10-12	.312	.305	.120	.105	.414	.384	.031	.019	.060	.050	.074	.052	.194	.188	.133	.126
10-16	.312	.305	.120	.105	.414	.384	.031	.019	.060	.050	.074	.052	.194	.188	.133	.126
12-11	.312	.305	.150	.133	.432	.398	.039	.022	.067	.056	.093	.077	.221	.215	.162	.155
14-10	.375	.366	.190	.171	.520	.479	.050	.029	.075	.064	.111	.082	.254	.247	.200	.178
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 slotted hex washer head thread forming tapping screw with a single lead thread rolled to the tip of an extra sharp point, and a second thread spaced 180° apart.	
Applications/ Advantages	May be used in thin metal (less than .050 thick). Eliminates need for pre-drilled or pre-punched holes. Undercut area beneath the head allows greater length of thread engagement. Twin lead threads help to reduce driving torque.	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 fastened should be a minimum of 10-20 Rockwell hardness points LESS than the hardness of the piercing screw.
Material	AISI 1018 - 1022 or equivalent steel	410 Stainless
Heat Treatment	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.	410 stainless screws shall be hardened and tempered by heating to 1800°-1900°F sufficient for austenitization, held for at least 1/2 hour and rapid air or oil-quenched then reheating to 500°-600°F for at least 1 hour and air cooled to provide the specified hardness.
Surface Hardness	Rockwell C45 minimum	410 SS: Rockwell C55 minimum
Case Depth	***No. 6 diameter:*** .002 - .007 ***No. 7 thru 12 diameter:*** .004 - .009 ***1/4" diameter:*** .005 - .011	-
Core Hardness (after tempering)	Rockwell C28 - 38	***410 SS:*** Rockwell C38 - 42 (after tempering)
Plating	See Appendix-A for plating information.	Stainless drill screws are usually supplied plain.