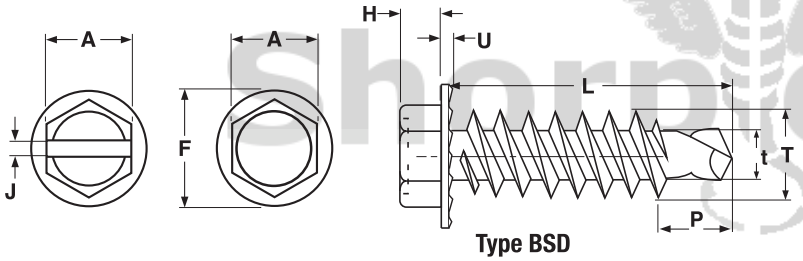
SELF-DRILLING

Serrated Hex Washer, SPACED Thread



Type BSD

Serrated Hex Washer Self-Drilling Screws, Spaced Thread

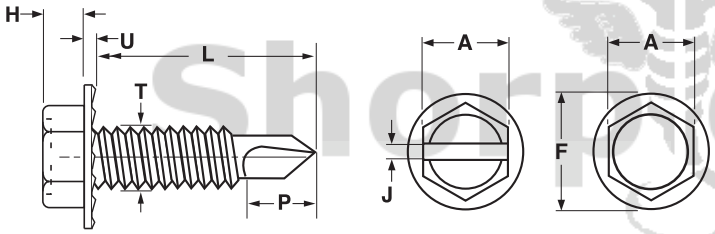
Nominal Screw Size & Threads per Inch	A		H		F		U		T		t		Drill Point Size	P	Drilling Thickness		Recommended Screw Gun Speed
	Width Across Head		Head Height		Washer Diameter		Washer Thickness		Major Diameter		Minor Diameter			Protrusion Allowance			
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min			Max	Min	Max RPM
6-20	.250	.244	.093	.080	.328	.302	.030	.019	.139	.135	.104	.099	2	.190	.090	.035	2500
8-18	.250	.244	.110	.096	.348	.322	.036	.024	.166	.161	.122	.116	2	.211	.100	.035	2500
10-16	.312	.305	.120	.105	.414	.384	.036	.024	.189	.183	.141	.135	2	.235	.110	.035	2500
12-14	.312	.305	.155	.139	.432	.398	.039	.022	.215	.209	.164	.157	3	.353	.210	.110	2500
1/4-14	.375	.367	.190	.172	.590	.551	.050	.029	.246	.240	.192	.185	3	.393	.220	.110	2000
1/4-14	.438	.428	.190	.172	.590	.560	.063	.037	.246	.240	.192	.185	3	.393	.220	.110	2000
5/16-12	.438	.428	.230	.208	.610	.580	.063	.037	.315	.307	.272	.263	4	.510	.312	.110	2000
5/16-12	.500	.489	.230	.208	.676	.624	.055	.035	.315	.307	.272	.263	3	-	.312	.110	2000

1/4 & 5/16” diameters are available with multiple head dimension configurations.

Description	An integrally formed hex washer head screw with serrations on the bearing surface side of the washer face and a drill point. Serrations extend from outer edge of washer face to the screw shank. Thread design is spaced (like a type-BSD drill screw).	
Applications/ Advantages	Used to attach plywood, soft wood or metal to metal. Serrated washer design adds greater holding power to components subject to vibrations caused by repeated movements. The 1/4-inch diameter screws, for instance, are commonly used to attach reinforcing strut or L-angle to garage doors.	The 18-8 stainless drill screw offers superior corrosion resistance but is a significantly softer metal than case-hardened carbon steel. The serrations can help create a fastening more resistant to loosening. The hardness of the material to be drilled should be a minimum of 10-20 Rockwell hardness points less than the screw’s hardness.
Material	AISI 1016 - 1024 or equivalent steel	18-8 Stainless Steel
Heat Treatment	Fasteners are heat treated in a carbonitriding or gas-carburizing system at a minimum temperature of 625°F, or in a cyaniding system (with consent of the buyer) at a minimum temperature of 450°F.	-
Case Hardness	Rockwell C 52 - 58	-
Case Depth	#8 thru #12 Diameters: .004 - .009 1/4” Diameter & larger: .005 - .011	-
Core Hardness	Rockwell C32 - 40	-
Minimum Torsional Strength for ZINC-plated screws	#8 diameter: 41 lb.-in. #10 diameter: 55 lb.-in. 1/4” diameter: 132 lb.-in. 5/16” diameter: (no industry standard)	-
Plating	Serrated hex washer self-drilling screws are usually supplied with a clear zinc finish.	Stainless self-drilling screws are usually supplied without additional finish.

Serrated Hex Washer, MACHINE SCREW Thread

SELF-DRILLING



Type CSD

SERRATED HEX WASHER SELF-DRILLING SCREWS, MACHINE SCREW THREAD

Nominal Screw Size & Threads per Inch	A		H		F		U		T		Drill Point Size	P	Drilling Thickness (Steel screws)		Recommended Screw Gun Speed
	Width Across Head		Head Height		Washer Diameter		Washer Thickness		Major Diameter			Protrusion Allowance			
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min			Max	Min	Max RPM
8-32	.250	.244	.110	.096	.348	.322	.036	.024	.163	.157	2	.162	.100		2500
10-24	.312	.305	.120	.105	.414	.384	036	.024	.189	.181	2	.193	.110		2500
											3	.258	.175	.110	
10-32	.312	.305	.120	.105	.414	.384	036	.024	.189	.183	3	.258	.175	.110	2500
12-24	.312	.305	.155	.139	.432	.398	.029	.022	.215	.207	3	.293	.210	.110	2500
1/4-20	.375	.367	.190	.172	.590	.551	.063	.029	.250	.242	3	.350	.220	.110	2000
1/4-20	.438	.428	.190	.172	.590	.551	.063	.029	.250	.242	2	.275	.175	.035	2000
5/16-18	.438	.428	.229	.208	.610	.580	.063	.037	.315	.307	3	.421			

Description	An integrally formed hex washer head screw with serrations on the bearing surface side of the washer face and a drill point. Serrations extend from outer edge of washer face to the screw shank. Thread design is unified (type-CSD).	
Applications/ Advantages	Used to attach plywood, soft wood or metal to metal. Serrated washer design adds greater holding power to components subject to vibrations caused by repeated movements. The 1/4-inch diameter screws, for instance, are commonly used to attach reinforcing strut or L-angle to garage doors.	The 18-8 stainless drill screw offers superior corrosion resistance but is a significantly softer metal than case-hardened carbon steel. The serrations can help create a fastening more resistant to loosening. The hardness of the material to be drilled should be a minimum of 10-20 Rockwell hardness points less than the screw's hardness.
Material	AISI 1016 - 1024 or equivalent steel	18-8 or 410 Stainless
Heat Treatment	Fasteners are heat treated in a carbonitriding or gas-carburizing system at a minimum temperature of 625°F, or in a cyaniding system (with consent of the buyer) at a minimum temperature of 450°F.	***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.
Case Hardness	Rockwell C 52 - 58	-
Case Depth	#8 thru #12 Diameters: .004 - .009 1/4" Diameter & larger: .005 - .011	-
Hardness	Core: Rockwell C32 - 40	***410 SS:*** Rockwell C38 - 46 (approx.) ***18-8 & 316 SS:*** Rockwell B100 (approx.)
Torsional Strength for ZINC-plated screws	#8 diameter: 41 lb.-in., minimum #10 diameter: 55 lb.-in., minimum 1/4" diameter: 132 lb.-in., minimum	-
Plating	Serrated hex washer self-drilling screws are usually supplied with a clear zinc finish.	Stainless self-drilling screws are usually supplied without additional finish.