

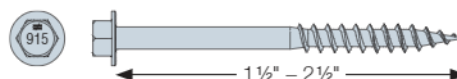
Structural and General Fastening

Strong-Drive® SD CONNECTOR Screw

Simpson Strong-Tie® Connectors, Indoor/Outdoor Projects

Codes/Standards: ICC-ES ESR-3046, State of Florida FL 9589

For more information, see p. 61, C-F-2019 Fastening Systems Catalog



SD — Allowable Shear Loads for Wood Connections

Size (in.)	Model No.	Thread Length (in.)	Reference DFL/SP Allowable Shear Loads (lb.)			Reference SPF/HF Allowable Shear Loads (lb.)		
			Wood Side Plate Thickness (in.)			Wood Side Plate Thickness (in.)		
			1 ⁵ / ₃₂ - 1/2	2 ³ / ₃₂ - 3/4	1 1/2	1 ⁵ / ₃₂ - 1/2	2 ³ / ₃₂ - 3/4	1 1/2
#9 x 1 1/2	SD9112	1	105	—	—	93	—	—
#9 x 2 1/2	SD9212	1	118	133	130	99	94	109
#10 x 1 1/2	SD10112	1	127	—	—	102	—	—
#10 x 2 1/2	SD10212	1	147	168	152	106	126	123

1. Allowable loads are shown at the wood load duration factor of $C_D = 1.00$. Loads may be increased for load duration per the building code up to a $C_D = 1.60$.
2. The 1⁵/₃₂" and 2³/₃₂" side members must be plywood or OSB with minimum equivalent specific gravities of 0.50 for DFL and SP design values, and 0.42 for SPF and HF design values. See NDS, Table 12.3.3B for specific WSP grades and associated equivalent specific gravities.
3. Loads are based on connections with main members of DFL/SP or SPF/HF and side members as shown and described in table note 2. Screws shall be installed normal to the surface of the wood members.

SD — Allowable Withdrawal Loads — DFL, SP, SPF, HF Lumber

Size (in.)	Model No.	Thread Length (in.)	Head Diameter (in.)	Reference Withdrawal Design Value, W (lb./in.)	
				DFL and SP Main Member	SPF and HF Main Member
#9 x 1 1/2	SD9112	1.0	0.37	173	122
#9 x 2 1/2	SD9212				
#10 x 1 1/2	SD10112			173	122
#10 x 2 1/2	SD10212				

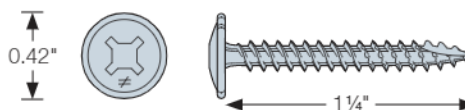
1. The tabulated reference withdrawal design value, W, is in pounds per inch of the thread penetration into the side grain of the main member.
2. Tabulated reference withdrawal design value, W, must be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC.
3. Embedded thread length is that portion held in the main member including the screw tip.
4. For connections with 1⁵/₃₂" thick plywood or OSB side members, reference withdrawal design values, W, must be limited by the head pull-through design value of 130 lb.

Connector/Steel-to-Wood Fastening

Wafer-Head Screw

General Wood-to-Wood, Metal-to-Wood Fastening

For more information, see p. 87, C-F-2019 Fastening Systems Catalog



Allowable Loads

Size (in.)	Model No.	Reference Allowable Shear Loads (lb.)		Reference Allowable Withdrawal Loads (lb.)	
		Steel Side Plate Thickness, in. (ga.)			
		0.054 – 0.25 (16-3)			
		DFL/SP	SPF/HF	DFL/SP	SPF/HF
#8 x 1 ¼	SD8x1.25	50	45	82	58

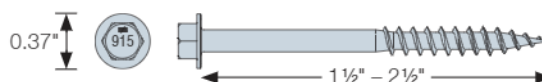
1. Allowable loads are shown at the wood load duration factor of $C_D = 1.00$. Loads may be increased for load duration up to a $C_D = 1.60$.
2. SD8x1.25 requires 3/4" minimum penetration into the main member.
3. Do not use SD8x1.25 wood screws with structural connectors unless specified.
4. Warning: Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Accordingly, use this product in dry, interior, and noncorrosive environments only.

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SD — Allowable Shear Loads — Steel Side Plate

Size (in.)	Model No.	Thread Length (in.)	Reference Allowable Shear Loads with Steel Side Plates (lb.)	
			DFL/SP	SPF/HF
#9 x 1 1/2	SD9112	1	171	112
#9 x 2 1/2	SD9212	1	200	112
#10 x 1 1/2	SD10112	1	173	138
#10 x 2 1/2	SD10212	1	215	165

1. Loads are given for $C_D = 1.00$ and may be increased for load duration per the building code to $C_D = 1.60$.
2. Steel side-plate thickness is 33 to 100 mil (20 – 12 ga.).