Strong-Drive®
SDS HEAVY-DUTY CONNECTOR Screw

Heavy-Duty Simpson Strong-Tie® Connectors

A 0.250"-diameter high-strength structural wood screw ideal for various connector installations as well as wood-to-wood and engineered wood applications.

Features:

- Type-17 point enables easy driving with no predrilling
- Available with a double-barrier coating and Type 316 stainless steel
- ⅜" hex head with 0.500" integrated washer
- Head is stamped with the Simpson Strong-Tie "≠" sign and fastener length for easy identification after installation
- Replacement driver bit — BITHEXR38-R1

For more information regarding driver bits for Simpson Strong-Tie fasteners, see p. 129.

Install Tips: A low-speed ½" drill with a ⅜" hex driver is the recommended tool for installation.

Codes/Standards: ICC-ES ESR-2236 (including City of LA Supplement), State of Florida FL9589

For Technical Data and Loads, see C-F-2023TECHSUP *Fastening Systems Technical Guide*, pp. 70–71, 78, 112, 166–169, 202

Type 316 Stainless Steel

Model No.	Dimensions				Retail Pack		Bulk	
	Inches		Millimeters					
	O.D.[1] x Length	Thread Length	O.D. x Length	Thread Length	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.
SDS25112SS	0.250 x 1½	1	6.5 x 38	25	25	SDS25112SS-R25	1,500	SDS25112SS
SDS25200SS	0.250 x 2	1¼	6.5 x 51	31	25	SDS25200SS-R25	1,300	SDS25200SS
SDS25212SS	0.250 x 2½	1½	6.5 x 63	38	25	SDS25212SS-R25	1,100	SDS25212SS
SDS25300SS	0.250 x 3	2	6.5 x 76	51	25	SDS25300SS-R25	950	SDS25300SS
SDS25312SS	0.250 x 3½	2¼	6.5 x 89	57	25	SDS25312SS-R25	900	SDS25312SS
					25	SDS25312SS-R25L*	—	—

*Packaged in a ledger-specific box with ⅜" hex-driver bit.
1. O.D. denotes thread outer diameter. Shank diameter is 0.235".

Double-Barrier Coating

Model No.	Dimensions				Retail Pack		Mini Bulk		Bulk	
	Inches		Millimeters							
	O.D.[1] x Length	Thread Length	O.D. x Length	Thread Length	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.
SDS25112	0.250 x 1½	1	6.5 x 38	25	25	SDS25112-R25	300	SDS25112MB	1,500	SDS25112
SDS25200	0.250 x 2	1¼	6.5 x 51	31	25	SDS25200-R25	250	SDS25200MB	1,300	SDS25200
SDS25212	0.250 x 2½	1½	6.5 x 63	38	25	SDS25212-R25	200	SDS25212MB	1,100	SDS25212
SDS25300	0.250 x 3	2	6.5 x 76	51	25	SDS25300-R25	150	SDS25300MB	950	SDS25300
SDS25312	0.250 x 3½	2¼	6.5 x 89	57	10	SDS25312-R10	125	SDS25312MB	900	SDS25312
					25	SDS25312-R25L*	—	—	—	—
SDS25412	0.250 x 4½	2¾	6.5 x 114	70	10	SDS25412-R10	100	SDS25412MB	800	SDS25412
SDS25500	0.250 x 5	2¾	6.5 x 127	70	10	SDS25500-R10	100	SDS25500MB	500	SDS25500
					25	SDS25500-R25L*	—	—	—	—
SDS25600	0.250 x 6	3¼	6.5 x 152	82	10	SDS25600-R10	100	SDS25600MB	600	SDS25600
SDS25800	0.250 x 8	3¼	6.5 x 203	82	10	SDS25800-R10	—	—	—	—
					50	SDS25800-R50	—	—	400	SDS25800

*Packaged in a ledger-specific box with ⅜" hex-driver bit.
1. O.D. denotes thread outer diameter. Shank diameter is 0.235".

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SDS HEAVY-DUTY CONNECTOR Screw

Heavy-Duty Simpson Strong-Tie Connectors, Indoor/Outdoor Projects

Codes/Standards: ICC-ES ESR-2236 (including City of LA Supplement), State of Florida FL9589

For more information, see p. 68, C-F-2023 *Fastening Systems* catalog

SDS Heavy-Duty Connector Screw — Allowable Shear Loads — Douglas Fir–Larch and Southern Pine Lumber

Length (in.)	Model No.	Reference DFL/SP Allowable Shear Loads (lb.)												
		Wood Side Plate Thickness (in.)												
		½	⅝	¾	1	1⅛	1¼	1½	1¾	2½	3	3½	4	4½
2	SDS25200	145	—	—	—	—	—	—	—	—	—	—	—	—
2½	SDS25212	165	165	170	165	—	—	190[1]	—	—	—	—	—	—
3	SDS25300	165	165	170	185	195	205	280[1]	—	—	—	—	—	—
3½	SDS25312	165	165	170	185	195	205	340[1]	340[1]	—	—	—	—	—
4½	SDS25412	165	165	170	185	195	205	350[1]	340[1]	230	200	—	—	—
5	SDS25500	165	165	170	185	195	205	350[1]	340[1]	230	230	200	—	—
6	SDS25600	165	165	170	185	195	205	350[1]	340[1]	340[1]	340[1]	340[1]	230	200
8	SDS25800	165	165	170	185	195	205	350[1]	340[1]	340[1]	340[1]	340[1]	230	230

See footnotes below.

SDS Heavy-Duty Connector Screw — Allowable Shear Loads — Spruce-Pine-Fir and Hem-Fir

Length (in.)	Model No.	Reference SPF/HF Allowable Shear Loads (lb.)												
		Wood Side Plate Thickness (in.)												
		½	⅝	¾	1	1⅛	1¼	1½	1¾	2½	3	3½	4	4½
2	SDS25200	105	—	—	—	—	—	—	—	—	—	—	—	—
2½	SDS25212	130	135	130	120	—	—	135[1]	—	—	—	—	—	—
3	SDS25300	130	140	140	150	150	145	200[1]	—	—	—	—	—	—
3½	SDS25312	130	140	140	150	155	165	245[1]	245[1]	—	—	—	—	—
4½	SDS25412	130	140	140	150	155	165	250[1]	245[1]	190	160	—	—	—
5	SDS25500	130	140	140	150	155	165	250[1]	245[1]	190	190	160	—	—
6	SDS25600	130	140	140	150	155	165	250[1]	245[1]	245[1]	245[1]	245[1]	190	160
8	SDS25800	130	140	140	150	155	165	250[1]	245[1]	245[1]	245[1]	245[1]	195	195

1. Noted loads are based on testing per ICC-ES AC233 and assume a minimum main member thickness of the screw length minus the side member thickness. All other allowable loads are based on the NDS and a minimum penetration of 6D = 1.5" into the main member.
2. Values are valid for a connection involving only two members. Where the side and main members have different specific gravities, the lower specific gravity shall be used.
3. Allowable loads are also applicable to structural composite lumber (e.g., LVL, PSL, and LSL) having an equivalent specific gravity of 0.50 or greater.
4. Allowable loads are shown at the wood load duration factor of C_D = 1.00. Loads may be increased for load duration by the building code up to a C_D = 1.60. The designer shall apply all adjustment factors required per NDS.
5. Loads are based on perpendicular installation into the side grain of the wood members.
6. Loads apply to corresponding stainless-steel models.
7. For in-service moisture greater than 19%, use C_M = 0.7.

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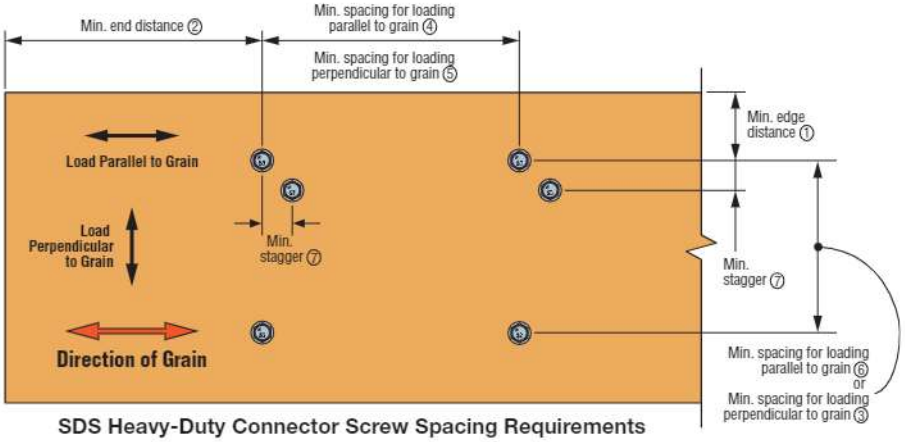
SDS Heavy-Duty Connector Screw — Reference Allowable Withdrawal Loads — Douglas Fir–Larch, Southern Pine, Spruce-Pine-Fir and Hem-Fir Lumber

Model No.	Length (in.)	Thread Length (in.)	Reference Allowable Withdrawal Loads, W (lb./in.)		Max. Reference Allowable Withdrawal Loads, W_{max} (lb.)	
			DFL and SP Main Member	HF and SPF Main Member	DFL and SP Main Member	HF and SPF Main Member
SDS25112	1.5	1	172	121	170	120
SDS25200	2	1.25	172	121	215	150
SDS25212	2.5	1.5	172	121	255	180
SDS25300	3	2	172	121	345	240
SDS25312	3.5	2.25	172	121	345	240
SDS25412	4.5	2.75	172	121	345	240
SDS25500	5	2.75	172	121	345	240
SDS25600	6	3.25	172	121	345	240
SDS25800	8	3.25	172	121	345	240

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. The tabulated reference withdrawal design value, W_{max}, is in pounds where the entire thread length must penetrate into the side grain of the main member.
3. The tabulated reference withdrawal design values, W and W_{max}, are shown at a $C_D = 1.6$. For end-grain withdrawal, 0.65. Tabulated values must be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC.
4. Embedded thread length is that portion held in the main member including the screw tip.
5. Values are based on the lesser of withdrawal from the main member or pull-through of a 1½" side member.
6. For in-service moisture content greater than 19%, use $C_M = 0.7$.



SDS Heavy-Duty Connector Screw Spacing Requirements

SDS Heavy-Duty Connector Screw Spacing Requirements

Condition	Direction of Load to Grain	ID	Minimum Distance or Spacing (in.)
Edge Distance	Perpendicular	①	1½
	Parallel	①	1
End Distance	Perpendicular	②	4
	Parallel	②	3
Spacing Between Fasteners in a Row	Perpendicular	③	3
	Parallel	④	3
Spacing Between Rows of Fasteners	Perpendicular	⑤	3
	Parallel	⑥	3
Spacing Between Staggered Rows	Perpendicular or Parallel	⑦	1½

1. For axial loading only, use the following minimum dimensions: end distance = 3¼", edge distance = 1⅜", spacing parallel to grain = 2¼", spacing perpendicular to grain = 1⅜".