

Exterior Screws

Strong-Drive® SD CONNECTOR Screw

For Simpson Strong-Tie Connectors

The Strong-Drive SD Connector screw is specifically designed to replace nails in certain Simpson Strong-Tie connectors, and is the only screw approved for that application. The load-rated SD screw has been tested and approved for use in many popular Simpson Strong-Tie products. In certain applications screws are easier and more convenient to install than nails, and the single-fastener load values achieved by the SD screw exceed those of typical 10d common or 16d common nails. In addition, the galvanized coating makes the SD screw ideal for both interior and most exterior conditions.

Features:

- Specifically designed to replace nails in certain Simpson Strong-Tie connectors, and is the only screw approved for that application. The #9 and #10 SD screws replace 10d and 16d nails, respectively.
- Tested and approved for use in many of our most popular connectors for both interior and exterior applications.
- Ideal for use in connector applications where more control is desired or using a hammer is inconvenient.
- ¼" hex head with 0.370"-dia. integrated washer is stamped with the Simpson Strong-Tie "S" sign and the fastener size for easy identification after installation.
- Shank is specifically designed to match the fastener holes in Simpson Strong-Tie connectors.
- Optimized heat treating for ductility and strength.
- The single-fastener load capacity of the SD9 exceeds the capacity of a 10d common nail, while the single-fastener load capacity of the SD10 exceeds that of the 16d common nail.
- Hex driver bit included.

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

Mechanically-galvanized coating meets ASTM B695 Class 55, is recommended for use with certain preservative-treated woods and recognized as an alternate to hot-dip galvanized in ESR-3046; it is compliant with the 2015 and 2018 International Residential Code®.

Codes/Standards: ICC-ES ESR-3046 (including City of LA Supplement), State of Florida FL9589

For Technical Data and Loads, see C-F-2023TECHSUP *Fastening Systems Technical Guide*, pp. 66–67, 203



Mechanically Galvanized Coating

Dimensions						Drive Type	Retail Pack		Mini-Bulk Pack		Bulk Packaging SKU	
Inches			Millimeters				Fasteners per Pack	Model No.	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.
O.D. x Length	Thread Length	Head Dia.	O.D. x Length	Thread Length	Head Dia.							
#9 x 1½	1½	0.370	4.5 x 38	28	9.3	¼" Hex	100	SD9112R100	500	SD9112R500	3000	SD9112MB
#9 x 2½	1½	0.370	4.5 x 63	28	9.3	¼" Hex	100	SD9212R100-R	500	SD9212R500	2000	SD9212MB
#10 x 1½	1½	0.370	5.0 x 38	28	9.3	¼" Hex	100	SD10112R100	500	SD10112R500	3000	SD10112MB
#10 x 2½	1½	0.370	5.0 x 63	28	9.3	¼" Hex	100	SD10212R100-R	500	SD10212R500	2000	SD10212MB

1. O.D. denotes thread outer diameter.

2. Shank diameter is 0.130" for #9 screws and 0.160" for #10 screws.

Exterior Screws

Strong-Drive® SD CONNECTOR SS Screw

For Simpson Strong-Tie Stainless-Steel Connectors

The stainless-steel Strong-Drive SD Connector SS screw (SD SS) is specifically designed to replace nails in certain Simpson Strong-Tie stainless-steel connectors. The load-rated SD SS screw has been tested and approved for use in many popular Simpson Strong-Tie products. In certain applications screws are easier and more convenient to install than nails, and the single-fastener load values achieved by the SD SS screw exceed those of 10d common nails. In addition, the Type 316 stainless steel provides excellent corrosion resistance appropriate for severe-exposure environments.

Features:

- Specifically designed to replace nails in certain Simpson Strong-Tie stainless-steel connectors and is the only screw tested and approved for that application
- The single-fastener load capacity of the #9 SD SS exceeds the capacity of a 10d common nail
- Ideal for use in connector applications where more control is desired or using a hammer is inconvenient installation
- ¼" hex head with 0.370"-dia. integrated washer is stamped with the Simpson Strong-Tie "S" sign and the fastener size for easy identification after installation
- Shank is specifically designed to match the fastener holes in Simpson Strong-Tie connectors
- Hex driver bit included

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

Codes/Standards: ICC-ES ESR-3046 (including City of LA Supplement), State of Florida FL9589

For Technical Data and Loads, see C-F-2023TECHSUP *Fastening Systems Technical Guide*, pp. 68–69, 203–205



Type 316 Stainless Steel

Dimensions						Drive Type	Retail Pack		Mini-Bulk Pack		Bulk Packaging SKU	
Inches			Millimeters				Model No.	Fasteners per Pack	Model No.	Fasteners per Pack	Model No.	Fasteners per Pack
O.D. x Length	Thread Length	Head Dia.	O.D. x Length	Thread Length	Head Dia.							
#9 x 1½	1¼	0.370	4.2 x 38	28	9.3	¼" Hex	SD9112SS-R100	100	SD9112SS-R500	500	SD9112SSMB	3,000
#9 x 2½	1¼	0.370	4.2 x 63	28	9.3	¼" Hex	SD9212SS-R100	100	SD9212SS-R500	500	SD9212SSMB	2,000

1. O.D. denotes thread outer diameter.

2. Shank diameter is 0.130".

3. Master carton retail pack quantity: 10; mini-bulk pack quantity: 3.

4. One (1) hex driver bit is included in each package.

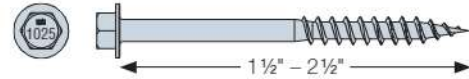
Structural and General Fastening

Strong-Drive® SD CONNECTOR Screw

Simpson Strong-Tie Connectors, Indoor/Outdoor Projects

Codes/Standards: ICC-ES ESR-3046 (including City of LA Supplement), State of Florida FL 9589

For more information, see p. 69, C-F-2023 Fastening Systems catalog



SD Connector Screw — Allowable Shear Loads for Wood Connections

Size x Length (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.)		
			$1\frac{1}{32} - \frac{1}{2}$	$2\frac{3}{32} - \frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{32} - \frac{1}{2}$	$2\frac{3}{32} - \frac{3}{4}$	$1\frac{1}{2}$
#9 x $1\frac{1}{2}$	SD9112	1	105	—	—	93	—	—
#9 x $2\frac{1}{2}$	SD9212	1	118	133	130	99	94	109
#10 x $1\frac{1}{2}$	SD10112	1	127	—	—	102	—	—
#10 x $2\frac{1}{2}$	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 $1\frac{1}{32}$ " and $2\frac{3}{32}$ " 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.

4. For minimum fastener spacing requirements for both side and main members, see the Spacing Requirements Figure and Table on p. 67.

SD Connector Screw — Allowable Withdrawal Loads

Size x Length (in.)	Model No.	Thread Length (in.)	Head Diameter (in.)	Reference Allowable Withdrawal Loads, W (lb./in.)	
				DFL/SP Main Member	SPF/HF Main Member
#9 x $1\frac{1}{2}$	SD9112	1	0.37	173	122
#9 x $2\frac{1}{2}$	SD9212				
#10 x $1\frac{1}{2}$	SD10112			173	122
#10 x $2\frac{1}{2}$	SD10212				

1. The tabulated reference allowable withdrawal value, W, is in pounds per inch of the thread penetration into the side grain of the main member.

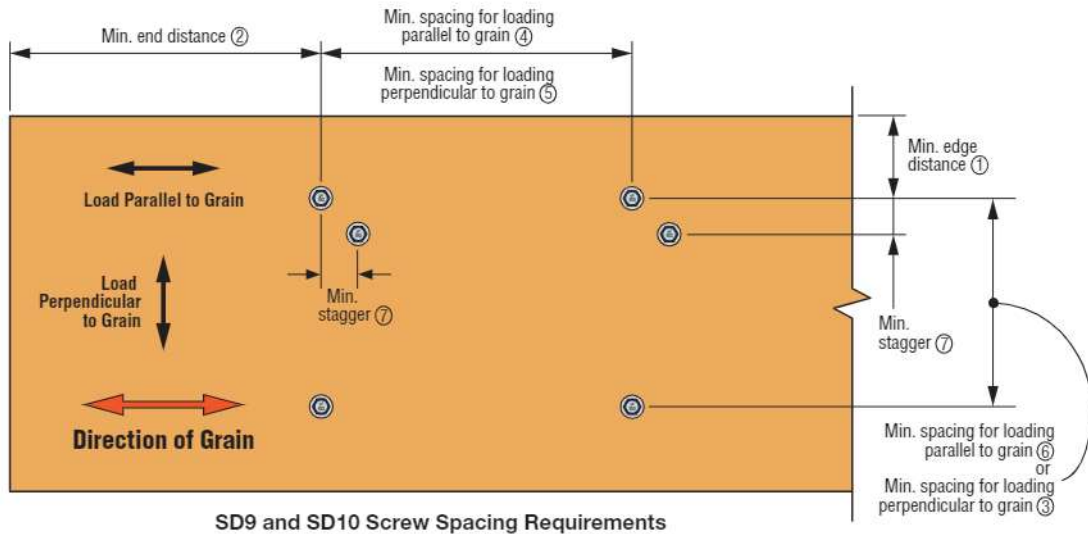
2. Tabulated reference allowable withdrawal value, W, must be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC.

3. Embedded thread length is that portion held in the main member including the screw tip.

4. For connections with $1\frac{1}{32}$ " thick plywood or OSB side members, allowable withdrawal loads, W, must be limited by the head pull-through design value of 130 lb.

Structural and General Fastening

Strong-Drive® SD CONNECTOR Screw (cont.)



SD Connector Screw Spacing Requirements

Condition	Direction of Load to Grain	ID	Minimum Distance or Spacing (in.)	
			Main Member	Wood Side Member
Edge Distance	Perpendicular	①	1	1
	Parallel	①	1/2	1/2
End Distance	Perpendicular	②	2	27/16
	Parallel	②	2	27/16
Spacing Between Fasteners in a Row	Perpendicular	③	2	27/16
	Parallel	④	2	27/16
Spacing Between Rows of Fasteners	Perpendicular	⑤	1/2	13/16
	Parallel	⑥	1/2	13/16
Spacing Between Staggered Rows	Perpendicular or Parallel	⑦	1/2	1/2

1. For SD9 screws subject to axial loading only, use the following minimum dimensions: end distance = 1 7/8", edge distance = 3/4", spacing parallel to grain = 1 1/4", spacing perpendicular to grain = 3/4".
2. For SD10 screws subject to axial loading only, use the following minimum dimensions: end distance = 2", edge distance = 7/8", spacing parallel to grain = 1 1/2", spacing perpendicular to grain = 7/8".

Structural and General Fastening

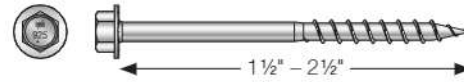
Strong-Drive® SD CONNECTOR SS Screw

For Simpson Strong-Tie Stainless-Steel Connectors

Codes/Standards: ICC-ES ESR-3046 (including City of LA Supplement); State of Florida FL9589

For more information, see p. 70, C-F-2023 Fastening Systems catalog

SD Connector SS Screw — Allowable Shear Loads for Wood Connections



Size x Length (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	SD9112SS	1	105	—	—	93	—	—
#9 x 2 1/2	SD9212SS		118	133	130	99	94	109

- 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 $C_D = 1.60$.
- 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.
- 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.
- For minimum fastener spacing requirements for both side and main members, see the Spacing Requirements Figure and Table on p. 69.

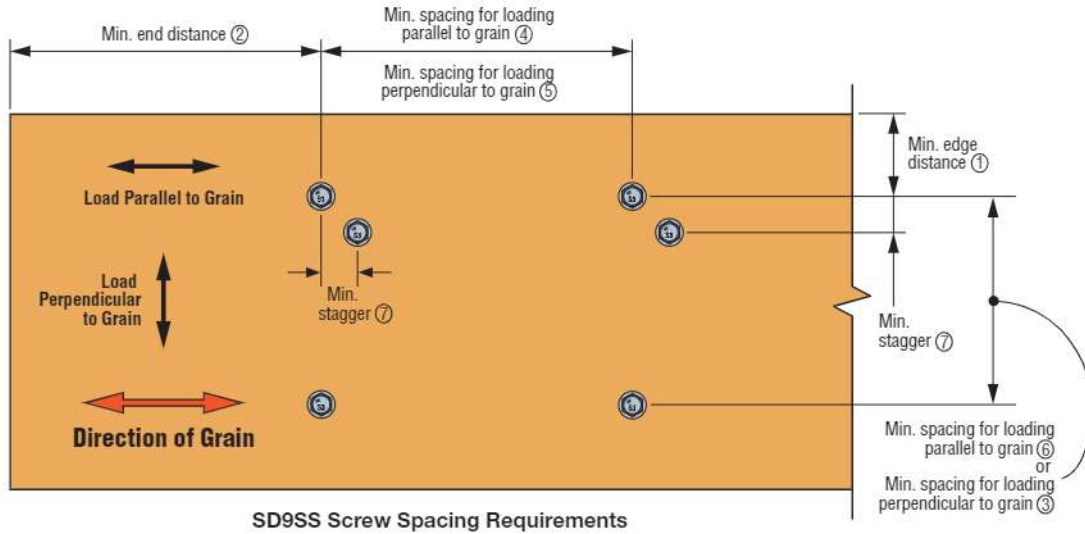
SD Connector SS Screw — Allowable Withdrawal Loads

Size x Length (in.)	Model No.	Thread Length (in.)	Head Diameter (in.)	Reference Allowable Withdrawal Loads, W (lb./in.)	
				DFL/SP Main Member	SPF/HF Main Member
#9 x 1 1/2	SD9112SS	1	0.37	173	122
#9 x 2 1/2	SD9212SS				

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

Structural and General Fastening

Strong-Drive® SD CONNECTOR SS Screw (cont.)



SD Connector SS Screw Spacing Requirements

Condition	Direction of Load to Grain	ID	Minimum Distance or Spacing (in.)	
			Main Member	Wood Side Member
Edge Distance	Perpendicular	①	1	1
	Parallel	①	1/2	1/2
End Distance	Perpendicular	②	2	27/16
	Parallel	②	2	27/16
Spacing Between Fasteners in a Row	Perpendicular	③	2	27/16
	Parallel	④	2	27/16
Spacing Between Rows of Fasteners	Perpendicular	⑤	1/2	13/16
	Parallel	⑥	1/2	13/16
Spacing Between Staggered Rows	Perpendicular or Parallel	⑦	1/2	1/2

1. For SD9SS screws subject to axial loading only, use the following minimum dimensions: end distance = 1 3/4", edge distance = 3/4", spacing parallel to grain = 1 1/4", spacing perpendicular to grain = 3/4".