

NAIL TYPES

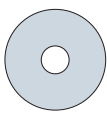
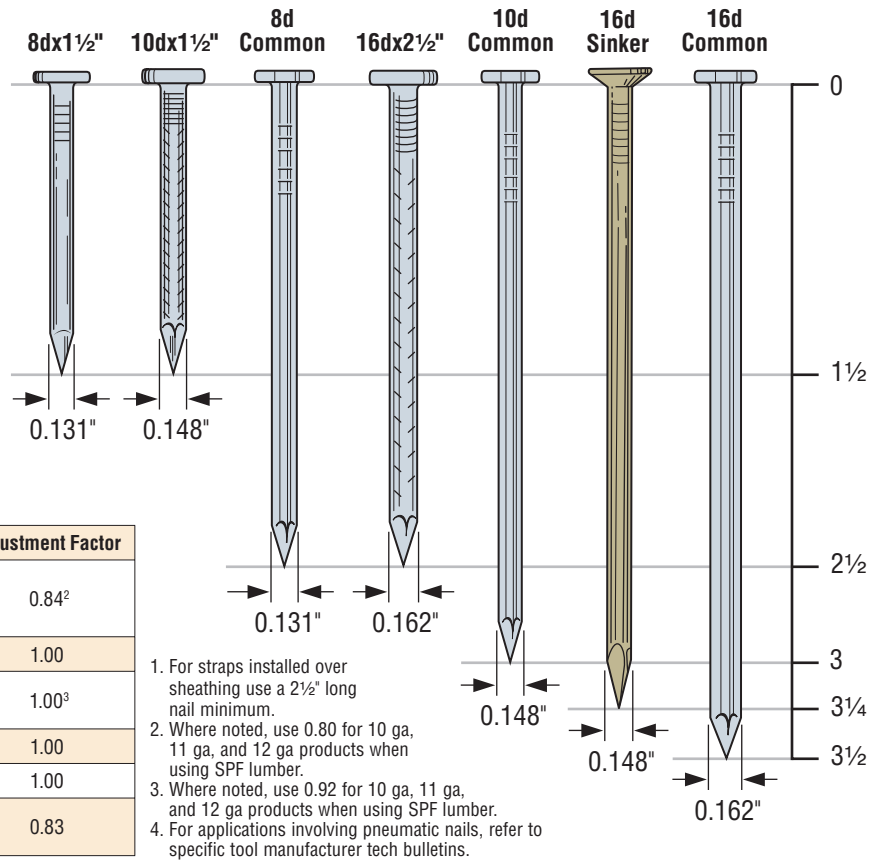
Nail Types and Sizes Specified for Simpson Strong-Tie® Connectors

Many Simpson Strong-Tie® connectors have been designed and tested for use with specific types and sizes of nails. The specified quantity, type and size of nail must be installed in the correct holes on the connector to achieve published loads. Other factors such as nail material and coating are also important. Incorrect fastener selection or installation can compromise connector performance and could lead to failure.

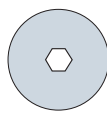
In some cases it is desirable to install Simpson Strong-Tie® straight straps with nails that are a different type or size than what is called out in the load table. In these cases these reduction factors must be applied to the allowable loads listed for the connector.

Load Adjustment Factors for Optional Nails Used with Straight Straps

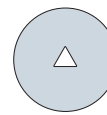
Catalog Nail	Replacement	Adjustment Factor
16d common (0.162"x3½")	10dx1½ (0.148"x1½") 10d common (0.148"x3") 16d sinker (0.148"x3¼")	0.84 ²
16d common (0.162"x3½")	16dx2½ (N16) (0.162"x2½")	1.00
10d common (0.148"x3") 16d sinker (0.148"x3¼")	10dx1½ (0.148"x1½")	1.00 ³
10d common (0.148"x3")	16d sinker (0.148"x3¼")	1.00
8d common (0.131"x2½")	8dx1½ (0.131"x1½")	1.00
10d common (0.148"x3")	8d common (0.131"x2½") 8dx1½ (0.131"x1½")	0.83



Round Holes
Purpose: to fasten a connector to wood.
Fill Requirements: always fill, unless noted otherwise.



Hexagonal Holes
Purpose: to fasten a connector to concrete or masonry.
Fill Requirements: always fill when fastening a connector to concrete or masonry.



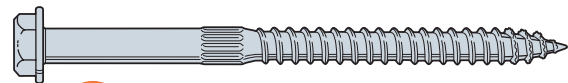
Triangular Holes
Purpose: to increase a connector's strength or to achieve MAX strength.
Fill Requirements: when the Designer specifies max nailing.

SDS Screws

The Simpson Strong-Tie® Strong-Drive® screw (SDS) is a ¼" diameter structural wood screw ideal for various connector installations as well as wood-to-wood applications. It installs with no predrilling and has been extensively tested in various applications. The new SDS is improved with a patented new easy driving 4CUT™ tip and a corrosion resistant double-barrier coating.



Identification on all SDS screw heads



SDS ¼"x3"

U.S. Patent 6,109,850 - 5,897,280 - 5,044,853



SDS Screws

These products are available with additional corrosion protection.

Size (in)	Model No.	Thread Length (in)	Fasteners per Carton	DF/SP Allowable Loads ⁴						SPF Allowable Loads ⁴					
				Shear (100) ¹					Withdrawal ⁵ (100)	Shear (100)					Withdrawal ⁵ (100)
				Wood Side Plate ³		Steel Side Plate				Wood Side Plate ³		Steel Side Plate			
1½"	1¾" SCL	16 ga	14 ga & 12 ga	10 ga or Greater	Wood or Steel Side Plate	1½"	1¾" SPF LVL	16 ga	14 ga & 12 ga	10 ga or Greater	Wood or Steel Side Plate				
¼ x 1½	SDS25112	1	1500	—	—	250	250	250	170	—	—	180	180	180	120
¼ x 1¾	SDS25134	1¼	1400	—	—	250	250	250	215	—	—	180	180	180	150
¼ x 2	SDS25200	1¼	1300	—	—	—	290	290	215	—	—	—	210	210	150
¼ x 2½	SDS25212	1½	1100	190	—	—	390	420	255	135	—	—	280	300	180
¼ x 3	SDS25300	2	950	280	—	—	420	420	345	200	—	—	300	300	240
¼ x 3½	SDS25312	2¼	900	340	340	—	420	420	385	245	245	—	300	300	270
¼ x 4½	SDS25412	2¾	800	350	340	—	420	420	475	250	245	—	300	300	330
¼ x 6	SDS25600	3¼	600	350	340	—	420	420	560	250	245	—	300	300	395

- Allowable loads for SDS screws are based on ICC-ES Code Report ESR-2236. Screws may be provided with the 4CUT or Type 17 tip.
- SDS screws install best with a low speed ½" drill with a ⅝" hex head driver.
- All applications are based on full penetration into the main member. Contact Simpson Strong-Tie for allowable loads for other side or main member thicknesses.
- Allowable loads are shown at the wood load duration factor of C_D=1.00. Loads may be increased for load duration by the Designer up to a C_D=1.60.
- Withdrawal loads shown are in pounds (lbs.) and are based on the entire threaded section installed into the main member. If thread penetration into the main member

- is less than the Thread Length as shown in the table, reduce allowable load by 172 lbs./in. x inches of thread not in main member for DF/SP lumber. Reduce by 121 lbs./in. x inches of thread for SPF.
- For more information, refer to technical bulletin T-SDSSCREWAPPS.
- Fasteners per Carton represent the quantity of screws which are available in bulk packaging. Screws are also available in mini bulk and retail packs. Refer to Simpson Strong-Tie List Price book. Contact Simpson Strong-Tie for more information.
- LSL wood-to-wood applications that require 4½" and 6" SDS screws are limited to interior-dry use only.