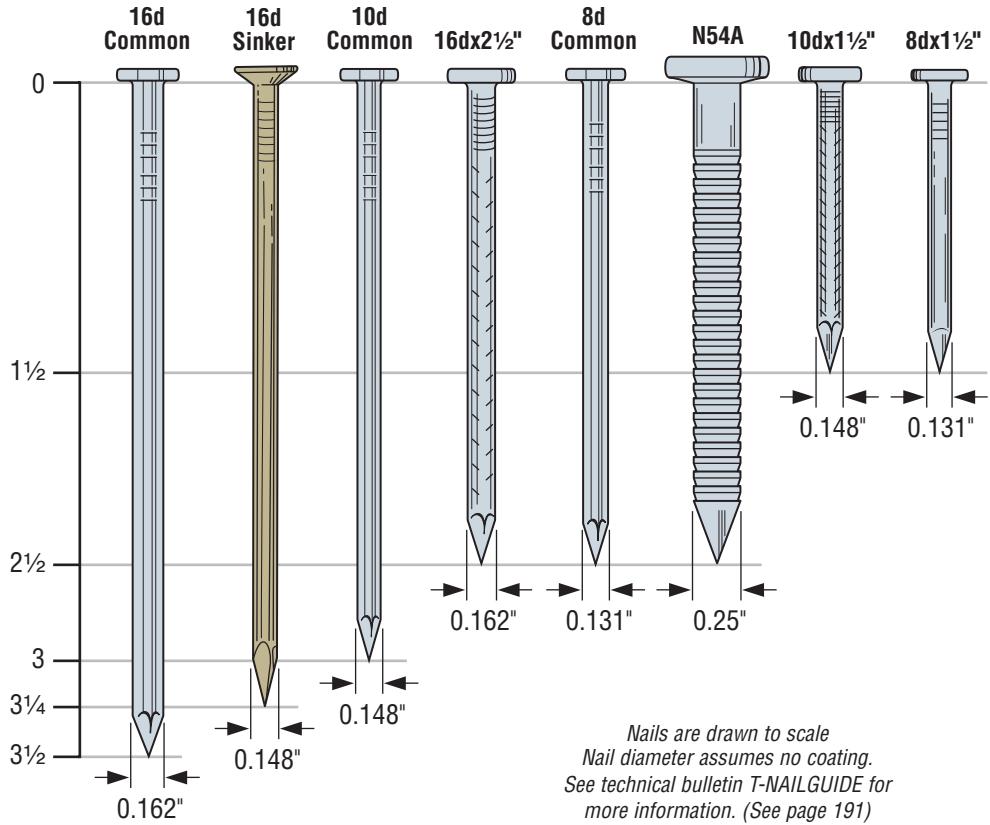


NAIL TYPES

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 finish are also important. Incorrect fastener selection or installation can compromise connector performance and could lead to failure.

Simpson Strong-Tie does not offer all of these nails, see page 17 for more information.



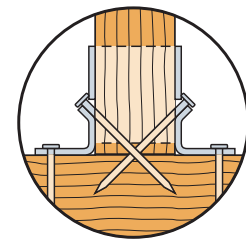
NAIL DESIGN INFORMATION

In some cases it is desirable to install Simpson Strong-Tie face mount joist hangers and 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.

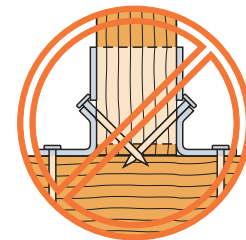
Load Adjustment Factors for Optional Nails Used with Face Mount Hangers and Straight Straps

Catalog Nail	Replacement	Allowable Load Adjustment Factor	
		Face Mount Hangers	Straight Straps
16d common (0.162"x3 1/2")	10dx1 1/2 (0.148"x1 1/2")	0.64	0.84 ⁷
16d common (0.162"x3 1/2")	10d common (0.148"x3") 12d common (0.148"x3 1/4")	0.84	0.84
16d common (0.162"x3 1/2")	16d sinker (0.148"x3 1/4")	0.84	0.84
16d common (0.162"x3 1/2")	16dx2 1/2 (N16) (0.162"x2 1/2")	1.00	1.00
10d common (0.148"x3") 12d common (0.148"x3 1/4") 16d sinker (0.148"x3 1/4")	10dx1 1/2 (0.148"x1 1/2")	0.77	1.00 ⁸
10d common (0.148"x3") 16d sinker (0.148"x3 1/4")	10dx1 1/4 (0.148"x1 1/4")	0.64	1.00 ⁸
10d common (0.148"x3") 12d common (0.148"x3 1/4")	16d sinker (0.148"x3 1/4")	1.00	1.00
8d common (0.131"x2 1/2")	8dx1 1/2 (0.131"x1 1/2")	0.85	1.00
10d common (0.148"x3")	8d common (0.131"x2 1/2")	0.83	0.83

- Allowable load adjustment factors shown in the table are based on calculated reduction factors and are applicable for all face mount hangers and straight straps throughout this catalog, except as noted in the footnotes below.
- Some products have been tested specifically with alternate fasteners and have allowable load adjustment factors or reduced capacities published on the specific product page which may differ from the values calculated using this table.
- This table does not apply to hangers modified per the Hanger Options described on pages 181-183, or steel thicker than 10 gauge.
- Unless noted otherwise, 10dx1 1/2" or 16dx2 1/2" nails may not be substituted for joist nails in double-shear hangers (i.e. LUS, MUS, HUS, HHUS, HGUS). For applications involving pneumatic nails, refer to specific tool manufacturer technical bulletins. Refer to technical bulletin T-PNEUMATIC (see page 191 for details).
- Do not substitute 10dx1 1/2" nails for face nails on slope and skew combinations or skewed only LSU and LSSU.
- For straps installed over sheathing use a 2 1/2" long nail minimum.
- Where noted, use 0.80 for 10 ga, 11 ga, and 12 ga products when using SPF lumber.
- Where noted, use 0.92 for 10 ga, 11 ga, and 12 ga products when using SPF lumber.

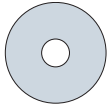


Double shear nailing should use full length common nails



Shorter nails may not be used as double shear nails

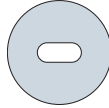
FASTENING IDENTIFICATION



Round Holes

Purpose: to fasten a connector.

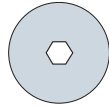
Fill Requirements: always fill, unless noted otherwise.



Obround Holes

Purpose: to make fastening a connector in a tight location easier.

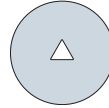
Fill Requirements: always fill.



Hexagonal Holes

Purpose: to fasten a connector to concrete or masonry.

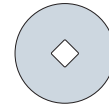
Fill Requirements: always fill when fastening a connector to concrete or masonry.



Triangular Holes

Purpose: to increase a connector's strength or to achieve Max strength.

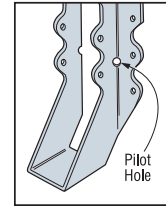
Fill Requirements: when the Designer specifies Max nailing.



Diamond Holes

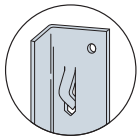
Purpose: to temporarily fasten a connector to make installing it easier.

Fill Requirements: none.



Pilot Holes

Tooling holes for manufacturing purposes. No fasteners required.



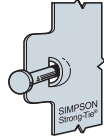
Speed Prongs

Used to temporarily position and secure the connector for easier and faster installation.



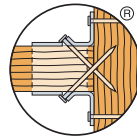
Positive Angle Nailing (PAN)

Provided when wood splitting may occur, and to speed installation.



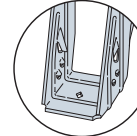
Dome Nailing

This feature guides the nail into the joist and header at a 45° angle. U.S. Patent 5,603,580



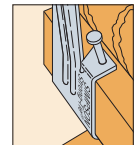
Double Shear Nailing

The nail is installed into the joist and header, distributing the load through two points on each joist nail for greater strength.



ITS Strong-Grip™ (IUS Similar)

The Strong-Grip™ seat allows the I-joist to "snap" in securely without the need for joist nails.



ITT Tab Nailing

The nail is hammered in at an angle of approximately 45° to prevent the wood from splitting.

SIMPSON STRONG-TIE® NAILS

Simpson Strong-Tie nails and structural fasteners have been developed as the optimum fasteners for connector products. Special lengths afford economy of purchase and installation, and depth compatibility with framing members.

For pneumatic nail use, see Instructions to the Installer, page 14 and visit www.strongtie.com for technical bulletins.

Retail Packaging



1 lb. Retail Tub



5 lb. Retail Bucket

Simpson Strong-Tie hot-dip galvanized nails are packed in 1 lb. and 5 lb. plastic retail containers for easy handling.

Display Packages

Display Package	Description
N8DHDG MSTR CTN	24 display packs of 150 N8 nails
N8D5HDG MSTR CTN	6 display packs of 750 N8 nails
N10DHDG MSTR CTN	24 display packs of 120 N10 nails
N10D5HDG MSTR CTN	6 display packs of 600 N10 nails
10DHDG MSTR CTN	24 display packs of 50 10d nails
10D5HDG MSTR CTN	6 display packs of 250 10d nails
16DHDG MSTR CTN	24 display packs of 40 16d nails
16D5HDG MSTR CTN	6 display packs of 200 16d nails
50 lb. Bulk Boxes	Available for N8HDG and N10HDG Model no. N8, N10

Nails Sold by the Pound

Nail	Simpson Model No.	Dimensions	Wire Gauge	Finish	Fasteners ⁹ per CWT
8dx1½"	N8	0.131" x 1½" (3.3mm x 38.1mm)	10¼	HDG	15200
	SSN8			SS	15200
8d Common	SS8D	0.131" x 2½" (3.3mm x 63.5mm)	10¼	SS	9400
10dx1½"	N10	0.148" x 1½" (3.8mm x 38.1mm)	9	HDG	11900
	SSN10			SS	12200
10d Common	10DHDG	0.148" x 3" (3.8mm x 76.2mm)	9	HDG	6700
	SS10D			SS	6700
16dx2½"	N16	0.162" x 2½" (4.1mm x 63.5mm)	8	Bright	6300
16d Common	16DHDG	0.162" x 3½" (4.1mm x 88.9mm)	8	HDG	4400
	SS16D			SS	4400
N54A	N54A	0.250" x 2½" (6.4mm x 63.5mm)	3	Bright	2700
	N54AHDG			HDG	2700

- N16 fasteners may be ordered electro-galvanized; specify EG; for example N16EG. This finish is not acceptable for ZMAX® or HDG applications.
- HDG = hot-dip galvanized; SS = stainless steel; Bright = no finish; GV = green vinyl.
- Metric equivalents are listed (Diameter x Length).
- For pneumatic fastener info, request additional technical information.
- Recommended minimum end distance to prevent splitting with a steel side member is 10 x the nail diameter per 2005 NDS Commentary Table 11.1.5.6.
- Use HDG nails with ZMAX and HDG products.
- 16d sinker with GV finish is not acceptable for ZMAX or HDG applications.
- HDG nails sold by Simpson Strong-Tie meet the specifications of ASTM A153. Stainless-steel nails are type 316 stainless.
- Fasteners per CWT references the quantity of fasteners per 100 lbs.