

# 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. Nail specifications include head size, thickness, steel and shank design, and point configuration to ensure conformity to published values.

For pneumatic nail use, see Instructions to the Installer, page 14.

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

Catalogue Nail	Replacement Nail	Adjustment Factor
16d common (0.162"x3½")	10dx1½ (0.148"x1½")	0.64
16d common (0.162"x3½")	10d common (0.148"x3") 12d common (0.148"x3¼")	0.82
16d common (0.162"x3½")	16dx2½ (N16) (0.162"x2½")	1.00
16d common (0.162"x3½")	spiral 10dx3 (0.132"x3")	0.54
16d common (0.162"x3½")	spiral 16dx3½ (0.152"x3½")	0.92
10d common (0.148"x3") 12d common (0.148"x3¼")	10dx1½ (0.148"x1½")	0.77
10d common (0.148"x3")	8d common (0.131"x2½")	0.77
10d common (0.148"x3")	spiral 8dx2½ (0.110"x2½")	0.51
10d common (0.148"x3")	spiral 10dx3 (0.132"x3")	0.66
8d common (0.131"x2½")	8dx1½ (0.131"x1½")	0.86
8d common (0.131"x2½")	spiral 8dx2½ (0.110"x2½")	0.65

**COMPARABLE SIZES:** SSN8 = N8; SS8D = 8d common;  
SSN10 = N10; SS10D = 10d common;  
SS16D = 16d common

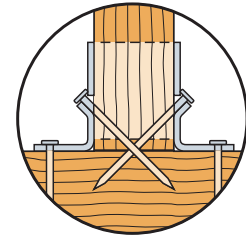
**TO ORDER:** Display Packages—available for N8D and N10D nails.

To order, specify:

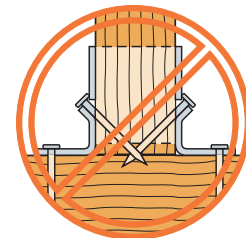
- N8DHDG MSTR CTN—24 display packs of 150 N8 nails.
- N8D5HDG MSTR CTN—6 display packs of 770 N8D nails
- N10DHDG MSTR CTN—24 display packs of 120 N10 nails.
- N10D5HDG MSTR CTN—6 display packs of 600 N10 nails.
- 10DHDG MSTR CTN—24 display packs of 50 10d nails.
- 10D5HDG MSTR CTN—6 display packs of 250 10d nails.
- 16DHDG MSTR CTN—24 display packs of 40 16d nails.
- 16D5HDG MSTR CTN—6 display packs of 200 16d nails.
- 50lb Bulk Boxes—available for N8, N10 and N16 nails.

- 10dx1½" or 16dx2½" nails may not be substituted for joist nails in double shear hangers (i.e. LUS, MUS, HUS, HHUS, HGUS). Contact Simpson Strong-Tie for exceptions.
- Do not substitute 10dx1½" nails for face nails on slope and skew combinations or skewed only LSU and LSSU.
- This table does not apply to specials (see Hanger Options). Face mount hangers and straight straps may be installed with alternate nails. Use this table to determine the load adjustment factor.
- All nails shall have a minimum length of penetration of 8 nail diameters into the main member.

Model No.	Description	Metric Equivalent (mm)	Coating <sup>4</sup>	Fasteners per CWT	Factored Lateral <sup>1</sup> Resistance (K <sub>D</sub> =1.00)	
					D.Fir-L	S-P-F
					lbs	lbs
N8HDG	(8d) 0.131 x 1½" Smooth Shank	3.3 x 38.1	HDG	15200	185	130
					0.82	0.58
SSN8	(8d) 0.131 x 1½" Smooth Shank	3.3 x 38.1	SS	15200	185	130
					0.82	0.58
SS8D	(8d) 0.131 x 2½" Smooth Shank	3.3 x 63.5	SS	9400	185	130
					0.82	0.58
N10HDG	(10d) 0.148 x 1½" Smooth Shank	3.8 x 38.1	HDG	11900	236	169
					1.05	0.75
SSN10	(10d) 0.148 x 1½" Smooth Shank	3.8 x 38.1	SS	12200	236	169
					1.05	0.75
SS10D	(10d) 0.148 x 3" Smooth Shank	3.8 x 76.2	SS	6700	236	169
					1.05	0.75
10DHDG	(10d) 0.148 x 3" Smooth Shank	3.8 x 76.2	HDG	6700	236	169
					1.05	0.75
N16	(16d) 0.162 x 2½" Smooth Shank	4.1 x 63.5	BRIGHT	6300	287	202
					1.28	0.90
SS16D	(16d) 0.162 x 3½" Smooth Shank	4.1 x 88.9	SS	4400	287	202
					1.28	0.90
16DHDG	(16d) 0.162 x 3½" Smooth Shank	4.1 x 88.9	HDG	4400	287	202
					1.28	0.90
N54AHDG	0.250 x 2½" Annular Ring	6.4 x 63.5	BRIGHT	2700	708	472
					3.15	2.10
8d common <sup>6</sup> (2½" Common Wire)	(8d) 0.131 x 2½" Smooth Shank	3.3 x 63.5	BRIGHT	9400	185	130
					0.82	0.58
10d common <sup>6</sup> (3" Common Wire)	(10d) 0.148 x 3" Smooth Shank	3.8 x 76.2	BRIGHT	6700	236	169
					1.05	0.75
12d common <sup>6</sup> (3¼" Common Wire)	(12d) 0.148 x 3¼" Smooth Shank	3.8 x 82.6	BRIGHT	6100	236	169
					1.05	0.75
16d common <sup>6</sup> (3½" Common Wire)	(16d) 0.162 x 3½" Smooth Shank	4.1 x 88.9	BRIGHT	4400	287	202
					1.28	0.90
2½" Common Spiral	(8d) 0.110 x 2½" Spiral Shank	2.8 x 63.5	BRIGHT	—	121	86
					0.54	0.38
3" Common Spiral	(10d) 0.132 x 3" Spiral Shank	3.4 x 76.2	BRIGHT	—	155	116
					0.69	0.52
3¼" Common Spiral	(12d) 0.132 x 3¼" Spiral Shank	3.4 x 82.6	BRIGHT	—	155	116
					0.69	0.52
3½" Common Spiral	(16d) 0.152 x 3½" Spiral Shank	3.9 x 88.9	BRIGHT	—	270	185
					1.20	0.82



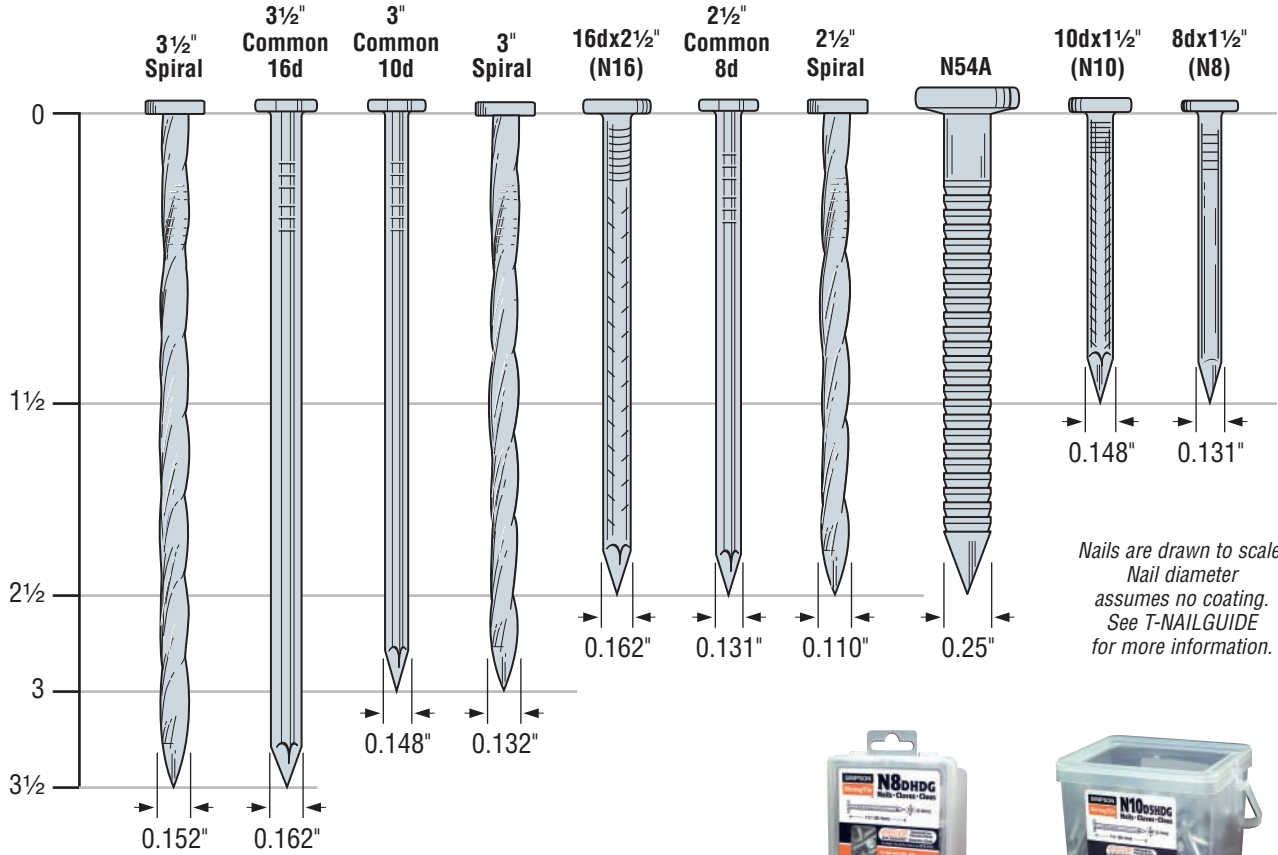
Double shear nailing must use full length common nails



Shorter nails must not be used as double shear nails

- Factored resistances are based on 10.9 CSA O86-01 assuming seasoned lumber under dry service condition. See 10.2.1.5 CSA O86-01 for reduction factors (K<sub>SF</sub>) where unseasoned lumber or wet service conditions apply.
- N16 and N54A fasteners may be ordered electro-galvanized; specify EG; for example N16EG. This coating is not acceptable for ZMAX<sup>®</sup> or HDG applications.
- Metric equivalents are listed Diameter x Length.
- EG = electro-galvanized; HDG = hot-dip galvanized; SS = stainless steel; Bright = uncoated.
- A 12d common and a 10d common have the same factored resistance value as an SS10D. A 16d common has the same factored resistance value as an SS16D.
- The 8d common, 10d common, 12d common, 16d common and spiral nails are for reference only. Simpson Strong-Tie does not sell these nails. All other nails are available through Simpson Strong-Tie.
- Use HDG nails with ZMAX and HDG products.

**NAILS**



Nails are drawn to scale.  
Nail diameter assumes no coating.  
See T-NAILGUIDE for more information.

**10** Nail info on N8HDG, N10HDG and N16 similar nail heads (N10HDG shown)

On all stainless steel and N54A nail heads

1. Spiral nails are for reference only. Simpson Strong-Tie does not sell these nails. All other nails are available through Simpson Strong-Tie.



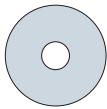
1 lb. Retail Tub



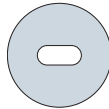
5 lb. Retail Bucket

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

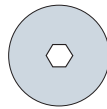
**FASTENING IDENTIFICATION**



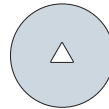
**Round Holes**  
**Purpose:** to fasten a connector to wood.  
**Fill Requirements:** always fill, unless noted otherwise.



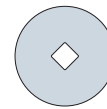
**Ovoid Holes**  
**Purpose:** to make fastening a connector in a tight location easier.  
**Fill Requirements:** always fill.



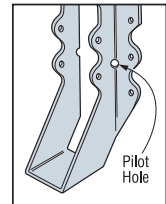
**Hexagonal Holes**  
**Purpose:** to fasten a connector to concrete or masonry.  
**Fill Requirements:** always fill when fastening a connector to concrete or masonry.



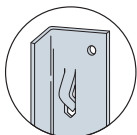
**Triangular Holes**  
**Purpose:** to increase a connector's strength or to achieve MAX strength.  
**Fill Requirements:** when the Designer specifies max nailing.



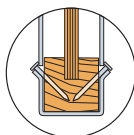
**Diamond Holes**  
**Purpose:** to temporarily fasten a connector to make installing it easier.  
**Fill Requirements:** none.



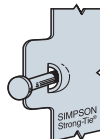
**Pilot Holes**  
Tooling holes for manufacturing purposes. No fasteners required.



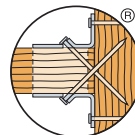
**Speed Prongs**  
Used to temporarily position and secure the connector for easier and faster installation.



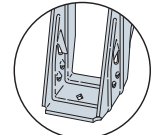
**Positive Angle Nailing (PAN)**  
Provided when wood splitting may occur, and to speed installation.



**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.