

Proper fasteners are a critical component in a sound wood frame structure. To ensure successful installations of its connectors, USP offers a full range of structurally-rated nails. All galvanized nails supplied by USP are Hot-dipped for greater corrosion resistance. Any USP connector requiring a NA16D-RS or NA20D nail is shipped with the nails attached to the connector in convenient poly bags.



				Metric (mm)		Factored Shear Resistance <sup>3</sup>			
	USP					DF-L		S-P-F	
Finish	Stock No.	Ref. No.	Description (in)	Dia	Length	Lbs	kN	Lbs	kN
HDG	NA11	N8	8d (0.131) x 1-1/2	3.33	38.1	178	0.79	163	0.72
	NA9D	N10	10d (0.148) x 1-1/2	3.76	38.1	200	0.89	184	0.82
	N10C	10DHDG	10d (0.148) x 3	3.76	76.2	218	0.97	201	0.90
	NA16D	N16, N16EG	16d (0.162) x 2-1/2	4.11	63.5	250	1.11	230	1.02
	N16C	16DHDG	16d (0.162) x 3-1/2	4.11	88.9	250	1.11	230	1.02
	NA20D		20d (0.192) x 2-1/2	4.88	63.5	323	1.44	296	1.32
GC	N8-GC		8d (0.131) x 1-1/2	3.33	38.1	178	0.79	163	0.72
	N10-GC		10d (0.148) x 1-1/2	3.76	38.1	200	0.89	184	0.82
	N10C-GC		10d (0.148) x 3	3.76	76.2	218	0.97	201	0.90
	N16C-GC		16d (0.162) x 3-1/2	4.11	88.9	250	1.11	230	1.02
SS	SSNA8D	SSN8	8d (0.131) x 1-1/2	3.33	38.1	178	0.79	163	0.72
	SSNA10D	SSN10	10d (0.148) x 1-1/2	3.76	38.1	200	0.89	184	0.82
	SSN8C	SS8D	8d (0.131) x 2-1/2	3.33	63.5	181	0.81	168	0.75
	SSN10C	SS10D	10d (0.148) x 3	3.76	76.2	218	0.97	201	0.90
	SSN16C	SS16D	16d (0.162) x 3-1/2	3.76	82.6	250	1.11	230	1.02
Bright	8d Common		8d (0.131) x 2-1/2	3.33	63.5	181	0.81	168	0.75
	10d Common		10d (0.148) x 3	3.76	76.2	218	0.97	201	0.90
	16d Sinker		16d (0.148) x 3-1/4	3.76	82.6	218	0.97	201	0.90
	NA16D-RS		16d (0.148) x 3-1/2 Ring Shank	3.76	88.9	218	0.97	201	0.90
	16d Common		16d (0.162) x 3-1/2	4.11	88.9	250	1.11	230	1.02
	20d Common		20d (0.192) x 4	4.88	101.6	323	1.44	296	1.32
	2-1/2" Common Spiral		8d (0.110) x 2-1/2 Spiral Shank	2.77	63.5	139	0.62	130	0.58
	3″ Common Spiral		10d (0.122) x 3 Spiral Shank	3.10	76.20	163	0.73	151	0.67
	3-1/4" Common Spiral		12d (0.122) x 3-1/4 Spiral Shank	3.10	82.60	163	0.73	151	0.67
	3-1/2" Common Spiral		16d (0.152) x 3-1/2 Spiral Shank	3.86	88.9	227	1.01	209	0.93

### **Gun-Nails:**

It is permissible to use nail guns to install connectors.

## Note:

- **1.** Many nail guns use fasteners smaller than the common nail size specified with USP product, factored resistance must be reduced accordingly.
- **2.** Drive through pre-punched nail holes only.
- 3. Do not over drive.
- 4. Recommend the use of guns featuring hole-locating mechanisms.

1) Factored shear resistance values determined in accordance with CSA 086-09 Clause 10.9.

2) Factored shear resistance values apply to DF-L: Douglas Fir-Larch (SG=0.49, fv=1.9 MPa) and S-P-F: Spruce-Pine-Fir (SG=0.42, fv=1.5 MPa).

3) Fastener values shown in this table are for 16Ga steel side member with Fu=45,000 psi and design metal thickness of 0.058 inch (1.47mm). Approximate fastener values for other steel thicknesses can be determined as follows:

For 18Ga steel (0.046 inch, 1.17mm), multiply table values by 0.91

For 14Ga steel (0.074 inch, 1.88mm), multiply table values by 1.05

For 12Ga steel (0.104 inch, 2.64mm), multiply table values by 1.05

4) Fastener values shown are based on standard-term load duration of  $K_{\rm D} = 1.00$ . Values may be adjusted for other load durations.

5) HDG = Hot-Dip Galvanized; SS = Stainless Steel; GC = Gold Coat; Bright = No Finish.

6) Bright finish common, sinker, and spiral nails are listed for reference only. USP does not stock these type nails.

# Nails





#### **Optional Nails for Face Mount Hangers** (Does not apply to slant nail hangers: HUS, JUS, MSH, MUS, THDH)

Specified Nail	Replacement Nail	Strength Adjustment Factor		
10d x 1-1/2 (0.148" x 1-1/2")	8d x 1-1/2 (0.131" x 1-1/2")	0.88		
10d common (0.148" v.2")	8d common (0.131" x 2-1/2")	0.82		
12d  common  (0.148  x 3.1/4  w)	10d spiral (0.122" x 3")	0.73		
120 common (0.140 × 3-1/4 )	10d x 1-1/2 (0.148" x 1-1/2")	0.90		
	8d common (0.131" x 2-1/2")	0.71		
	10d common (0.148" x 3")	0.86		
	12d common (0.148" x 3-1/4")	0.86		
16d common (0.162" x 2.1/2")	10d spiral (0.122" x 3")	0.61		
100 common (0.102 x 3-1/2 )	12d spiral (0.122" x 3-1/4")	0.61		
	16d spiral (0.152" x 3-1/2")	0.90		
	10d x 1-1/2 (0.148" x 1-1/2")	0.78		
	16d x 2-1/2 (0.162" x 2-1/2")	1.00		

- 1. This chart does not apply to custom hangers or hangers modified to skew and/or slope.
- 2. This chart applies to metal side member of 14Ga or thinner. For steel thicker than 14Ga, contact USP for exceptions.
- 3. Strength adjustment factor is the multiplier to the published factored resistance when a nail of different size and/or type is used in lieu of a Specified Nail.
- 4. Roofing nails shall not be substituted for any nail size or type.
- 5. Decking nails are not to be used as a substitution for any load carrying nails.