



WEAVER CONSTRUCTION MANAGEMENT, INC.
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 Englewood, CO 80110
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SUBMITTAL TRANSMITTAL

November 16, 2011
WCM Submittal No: 06100-001.B

PROJECT: Harold Thompson Regional WRF
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: GMS, Inc.
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: Lower Fountain Metropolitan
 Sewage Disposal District
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: Lam-Wood Systems, Inc.
 1580 W 47th Ave.
 Denver, CO 80211
 303-458-1736

SUBJECT: Resubmittal - Simpson Strong Tie Connectors H2.5T Hurricane Ties, LUS26 Face Mount Hangers and MTHM-2 Plate Truss Connectors

Note: Plywood and anchors by others

SPEC SECTION: 06100- Carpentry (3.3.D)

PREVIOUS SUBMISSION DATES: None

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by WCM and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

<p>Contractor's Stamp:</p> <p>Date: 11/16/11 Reviewed by: H.C. Myers <input checked="" type="checkbox"/> Reviewed Without Comments <input type="checkbox"/> Reviewed With Comments</p> <p>ENGINEER'S COMMENTS: _____</p>	<p>Engineer's Stamp:</p>
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Project: HDTWRF Project

Location: Fountain, CO

Supplier: Lam Wood Systems

Date: 11/16/11

Submittal for: Roof Trusses Headwork's

Submittal Review Comment 06100-1.B.

- 1. Submitting Simpson Strong Tie connectors: H2.5T hurricane ties, LS30 clips, LUS26 face mount hangers and MTHM-2 plates truss connectors. The species of wood is also noted in the attached document that was included in the previous submittal. Plywood and anchors by others.**

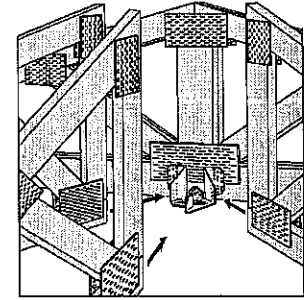
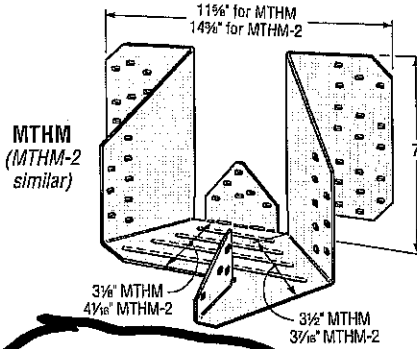
MTHM/MTHM-2 Multiple Truss Hangers

Medium to high load capacity hangers designed to carry 2 or 3 trusses. Accommodates right or left hand hips (at 45-degree skews) and can be used for terminal hips with or without the center common jack. The MTHM-2 accommodates 2-ply hips or jacks.

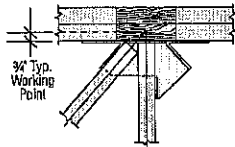
MATERIAL: 12 gauge **FINISH:** Galvanized
INSTALLATION: • Use all specified fasteners. See General Notes.

- All multiple members must be fastened together to act as a single unit.
- Shall be attached to a double girder truss to allow for required minimum nail penetration. See footnote 8.

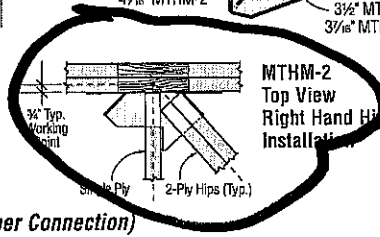
CODES: See page 20 for Code Reference Key Chart.



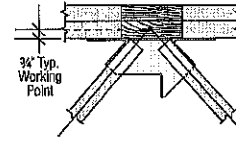
Typical MTHM Installation
(2 Hips and a Jack to Girder Truss)



MTHM Top View
Left Hand Hip
Installation



MTHM-2 Top View
Right Hand Hip
Installation

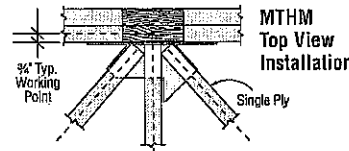


MTHM Top View
Terminal Installation
Without Center
Common Jack

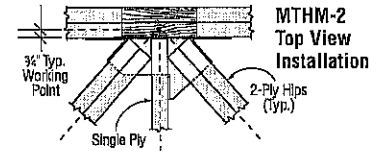
Right or Left Hand Hip Installation (Two Member Connection)

Model No.	Header	Fasteners			DF/SP Allowable Loads ^{4,5}												Code Ref.
		Carrying Member	Hip	Jack	Uplift (160)			Floor (100)			Snow (115)			Roof/Wind (125/160)			
					Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	
MTHM	2 ply 2x4	22-16d	8-10dx1 1/2	4-10dx1 1/2	805	270	1075	2185	730	2915	2185	730	2915	2185	730	2915	170
	2 ply 2x6	34-16d	8-10dx1 1/2	4-10dx1 1/2	805	270	1075	2630	875	3505	2630	875	3505	2630	875	3505	
	2 ply 2x8	42-16d	8-10dx1 1/2	4-10dx1 1/2	805	270	1075	3250	1085	4335	3250	1085	4335	3250	1085	4335	
MTHM-2	2 ply 2x6	39-16d	8-10dx1 1/2	4-10dx1 1/2	835	280	1115	2800	935	3735	2800	935	3735	2800	935	3735	170
	2 ply 2x8	47-16d	8-10dx1 1/2	4-10dx1 1/2	835	280	1115	3375	1125	4500	3375	1125	4500	3375	1125	4500	

Model No.	Header	Fasteners			SPF/HF Allowable Loads ^{4,5}												Code Ref.
		Carrying Member	Hip	Jack	Uplift (160)			Floor (100)			Snow (115)			Roof/Wind (125/160)			
					Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	
MTHM	2 ply 2x4	22-16d	8-10dx1 1/2	4-10dx1 1/2	655	220	875	1880	625	2505	1880	625	2505	1880	625	2505	170
	2 ply 2x6	34-16d	8-10dx1 1/2	4-10dx1 1/2	655	220	875	2260	755	3015	2260	755	3015	2260	755	3015	
	2 ply 2x8	42-16d	8-10dx1 1/2	4-10dx1 1/2	655	220	875	2795	930	3725	2795	930	3725	2795	930	3725	
MTHM-2	2 ply 2x6	39-16d	8-10dx1 1/2	4-10dx1 1/2	680	225	905	2510	835	3345	2510	835	3345	2510	835	3345	170
	2 ply 2x8	47-16d	8-10dx1 1/2	4-10dx1 1/2	680	225	905	2905	970	3875	2905	970	3875	2905	970	3875	



MTHM Top View
Installation



MTHM-2 Top View
Installation

Terminal Type Installation (Three Member Connection)

Model No.	Header	Fasteners			DF/SP Allowable Loads ^{5,6}												Code Ref.
		Carrying Member	Hips (Total)	Jack	Uplift (160)			Floor (100)			Snow (115)			Roof/Wind (125/160)			
					Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	
MTHM	2 ply 2x4	22-16d	16-10dx1 1/2	4-10dx1 1/2	715	360	1790	1215	605	3035	1395	700	3490	1520	760	3800	170
	2 ply 2x6	34-16d	16-10dx1 1/2	4-10dx1 1/2	715	360	1790	1860	930	4650	1860	930	4650	1860	930	4650	
	2 ply 2x8	42-16d	16-10dx1 1/2	4-10dx1 1/2	715	360	1790	2010	1005	5025	2010	1005	5025	2010	1005	5025	
MTHM-2	2 ply 2x6	39-16d	16-10dx1 1/2	4-10dx1 1/2	745	370	1860	1955	980	4890	1955	980	4890	1955	980	4890	170
	2 ply 2x8	47-16d	16-10dx1 1/2	4-10dx1 1/2	745	370	1860	2470	1235	6175	2470	1235	6175	2470	1235	6175	

Model No.	Header	Fasteners			SPF/HF Allowable Loads ^{5,6}												Code Ref.
		Carrying Member	Hips (Total)	Jack	Uplift (160)			Floor (100)			Snow (115)			Roof/Wind (125/160)			
					Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	Hip	Jack	Total	
MTHM	2 ply 2x4	22-16d	16-10dx1 1/2	4-10dx1 1/2	580	290	1450	1055	530	2640	1215	605	3035	1320	660	3300	170
	2 ply 2x6	34-16d	16-10dx1 1/2	4-10dx1 1/2	580	290	1450	1600	800	4000	1600	800	4000	1600	800	4000	
	2 ply 2x8	42-16d	16-10dx1 1/2	4-10dx1 1/2	580	290	1450	1730	865	4325	1730	865	4325	1730	865	4325	
MTHM-2	2 ply 2x6	39-16d	16-10dx1 1/2	4-10dx1 1/2	600	300	1500	1680	840	4200	1680	840	4200	1680	840	4200	170
	2 ply 2x8	47-16d	16-10dx1 1/2	4-10dx1 1/2	600	300	1500	2125	1060	5310	2125	1060	5310	2125	1060	5310	

1. Allowable loads have been increased for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
2. Roof (125/160) is a download rating.
3. Tabulated hip and jack allowable loads assume that 75% of the total load is distributed to the hip and 25% to the jack. It is permitted to distribute 65% to 85% of the tabulated total load to the hip, and the remaining percentage of total load to the jack. The combined hip and jack load may not exceed the published Total Load.
4. For terminal hips divide the total allowable load by 2 to determine the allowable load for each hip.

5. Hip loads are for each hip.
6. Load distribution is 40% of total load for each hip and 20% for the jack. Other hip/jack load distributions are allowed if the sum of all three carried members does not exceed the total load and the hip members are equally loaded.
7. Truss chord cross-grain tension may limit allowable loads. Refer to technical bulletins T-ANSITPISPF, T-ANSITPISP and T-ANSITPIDF for allowable loads that consider ANSI/TP1-2007 wood member design criteria (see page 213 for details).
8. With single 2x carrying members, use 10dx1 1/2 nails with 0.67 of the table values.
9. NAILS: 16d = 0.162" dia. x 3 1/2" long, 10dx1 1/2 = 0.148" dia. x 1 1/2" long. See page 24-25 for other nail sizes and information.

FACE MOUNT HANGERS – SOLID SAWN LUMBER (DF & SP)

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

These products are approved for installation with the Strong-Drive SD Structural Connector screw. See page 30 for the correct substitution and SD screw size.

Joist Size	Model No.	Ga	Dimensions			Min/Max	Fasteners			DF/SP Allowable Loads				Installed Cost Index (ICI)	Code Ref.			
			W	H	B		Header		Joist	Uplift (160)	Floor (100)		Snow (115)			Roof (125)		
							10d	16d			10d	16d	10d			16d	10d	16d
SAWN LUMBER SIZES																		
2x4	LU24	20	1 1/8	3 1/2	1 1/2	—	4-10d	4-16d	2-10dx1 1/2	265	465	555	530	635	675	685	Lowest	17, F6, L17
	LUS24	18	1 1/8	3 1/2	1 1/2	—	4-10d	—	2-10d	490	670	—	765	—	825	—	3%	
	U24	16	1 1/8	3 1/2	1 1/2	—	4-10d	4-16d	2-10dx1 1/2	265	485	575	550	655	595	705	67%	
	HU26	14	1 1/8	3 1/2	2 1/2	—	—	4-16d	2-10dx1 1/2	335	—	595	—	670	—	720	19	
DBL 2x4	LUS24-2	18	3 1/2	3 1/2	2	—	—	4-16d	2-16d	440	—	800	—	910	—	985	Lowest	
	U24-2	16	3 1/2	3	2	—	4-10d	4-16d	2-10d	370	485	575	550	655	595	705	33%	
	HU24-2/HUC24-2	14	3 1/2	3 1/2	2 1/2	—	—	4-16d	2-10d	380	—	595	—	670	—	720	240%	
	LUS26	18	1 1/8	4 1/2	1 1/2	—	4-10d	—	4-10d	1165	865	—	990	—	1070	—	Lowest	
2x6	LU26	20	1 1/8	4 1/2	1 1/2	—	6-10d	6-16d	4-10dx1 1/2	565	700	835	795	950	860	1030	6%	
	U26	16	1 1/8	4 1/2	2	—	6-10d	6-16d	4-10dx1 1/2	585	730	865	825	980	890	1055	43%	
	LUC26Z	18	1 1/8	4 1/2	1 1/2	—	6-10d	6-16d	4-10dx1 1/2	730	710	845	810	965	875	1040	160%	
	HU26	14	1 1/8	3 1/2	2 1/2	—	—	4-16d	2-10dx1 1/2	335	—	595	—	670	—	720	179%	
DBL 2x6	HUS26	16	1 1/8	5 1/2	3	—	—	14-16d	6-16d	1550	—	2720	—	3095	—	3335	276%	
	LUS26-2	18	3 1/2	4 1/2	2	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	179%	
	U26-2	16	3 1/2	5	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	179%	
	HUS26-2	14	3 1/2	5 1/2	2	—	—	4-16d	4-16d	1235	—	1065	—	1210	—	1305	233%	
TPL 2x6	HU26-2/HUC26-2	14	3 1/2	5 1/2	2 1/2	Min	—	8-16d	4-10d	760	—	1190	—	1345	—	1445	254%	
		14	3 1/2	5 1/2	2 1/2	Max	—	12-16d	6-10d	1135	—	1785	—	2015	—	2165	*	
	LUS26-3	18	4 1/2	4 1/2	2	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	*	
	U26-3	16	4 1/2	4 1/2	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	*	
2x8	HU26-3/HUC26-3	14	4 1/2	5 1/2	2 1/2	Min	—	8-16d	4-10d	760	—	1190	—	1345	—	1445	*	
		14	4 1/2	5 1/2	2 1/2	Max	—	12-16d	6-10d	1135	—	1785	—	2015	—	2165	*	
	LUS26	18	1 1/8	4 1/2	1 1/2	—	4-10d	—	4-10d	1165	865	—	990	—	1070	—	Lowest	
	LU26	20	1 1/8	4 1/2	1 1/2	—	6-10d	6-16d	4-10dx1 1/2	565	700	835	795	950	860	1030	6%	
2x8	LU28	18	1 1/8	6 1/2	1 1/2	—	6-10d	—	4-10d	1165	1100	—	1255	—	1360	—	23%	
	U28	20	1 1/8	6 1/2	1 1/2	—	8-10d	8-16d	6-10dx1 1/2	850	930	1110	1060	1270	1150	1335	39%	
	LUC26Z	18	1 1/8	4 1/2	1 1/2	—	6-10d	6-16d	4-10dx1 1/2	730	710	845	810	965	875	1040	160%	
	HU28	14	1 1/8	5 1/2	2 1/2	—	—	6-16d	4-10dx1 1/2	610	—	895	—	1005	—	1085	251%	
DBL 2x8	HUS26	16	1 1/8	5 1/2	3	—	—	14-16d	6-16d	1550	—	2720	—	3095	—	3335	276%	
	HUS28	16	1 1/8	7	3	—	—	22-16d	8-16d	2000	—	3965	—	4120	—	4220	409%	
	LUS26-2	18	3 1/2	4 1/2	2	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	Lowest	
	LUS28-2	18	3 1/2	7	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	8%	
TPL 2x8	U26-2	16	3 1/2	5	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	65%	
	HUS28-2	14	3 1/2	7 1/2	2	—	—	6-16d	6-16d	1550	—	1595	—	1815	—	1960	188%	
	HU28-2/HUC28-2	14	3 1/2	7	2 1/2	Min	—	10-16d	4-10d	760	—	1490	—	1680	—	1805	397%	
		14	3 1/2	7	2 1/2	Max	—	14-16d	6-10d	1135	—	2085	—	2350	—	2530	418%	
QUAD 2x8	LUS28-3	18	4 1/2	6 1/2	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	*	
	U26-3	16	4 1/2	4 1/2	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	*	
	HU26-3/HUC26-3	14	4 1/2	5 1/2	2 1/2	Min	—	8-16d	4-10d	760	—	1190	—	1345	—	1445	*	
		14	4 1/2	5 1/2	2 1/2	Max	—	12-16d	6-10d	1135	—	1785	—	2015	—	2165	*	
2x10	HU28-4/HUC28-4	14	6 1/2	6 1/2	2 1/2	Min	—	10-16d	4-16d	900	—	1490	—	1680	—	1805	*	
		14	6 1/2	6 1/2	2 1/2	Max	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	
	LUS28	18	1 1/8	6 1/2	1 1/2	—	6-10d	—	4-10d	1165	1100	—	1255	—	1360	—	Lowest	
	LU28	20	1 1/8	6 1/2	1 1/2	—	8-10d	8-16d	6-10dx1 1/2	850	930	1110	1060	1270	1150	1335	13%	
DBL 2x10	LUS210	18	1 1/8	7 1/2	1 1/2	—	8-10d	—	4-10d	1165	1340	—	1525	—	1650	—	15%	
	LU210	20	1 1/8	7 1/2	1 1/2	—	10-10d	10-16d	6-10dx1 1/2	850	1165	1390	1325	1585	1435	1715	28%	
	U210	16	1 1/8	7 1/2	2	—	10-10d	10-16d	6-10dx1 1/2	1110	1215	1440	1375	1635	1485	1685	76%	
	LUC210Z	18	1 1/8	7 1/2	1 1/2	—	10-10d	10-16d	6-10dx1 1/2	1100	1185	1410	1345	1605	1455	1735	180%	
TPL 2x10	HU210	14	1 1/8	7 1/2	2 1/2	—	—	8-16d	4-10dx1 1/2	610	—	1190	—	1345	—	1445	225%	
	HUS210	16	1 1/8	9	3	—	—	30-16d	10-16d	3000	—	4255	—	4445	—	4575	450%	
	LUS28-2	18	3 1/2	7	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	Lowest	
	LUS210-2	18	3 1/2	9	2	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	34%	
2x10	U210-2	16	3 1/2	8 1/2	2	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	88%	
	HUS210-2	14	3 1/2	8 1/2	2 1/2	Min	—	8-16d	8-16d	3295	—	2125	—	2420	—	2615	217%	
	HU210-2/HUC210-2	14	3 1/2	8 1/2	2 1/2	Max	—	14-16d	6-10d	1135	—	2085	—	2350	—	2530	441%	
	HHUS210-2	14	3 1/2	8 1/2	3	—	—	18-16d	10-10d	1895	—	2680	—	3020	—	3250	467%	
2x10	HUS210-3	14	3 1/2	9 1/2	3	—	—	30-16d	10-16d	4000	—	5635	—	6380	—	6880	*	
	LUS28-3	18	4 1/2	6 1/2	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	*	
	LUS210-3	18	4 1/2	8 1/2	2	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	*	
	U210-3	16	4 1/2	7 1/2	2	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	*	
2x10	HU210-3/HUC210-3	14	4 1/2	8 1/2	2 1/2	Min	—	14-16d	6-10d	1135	—	2085	—	2350	—	2530	*	
		14	4 1/2	8 1/2	2 1/2	Max	—	18-16d	10-10d	1895	—	2680	—	3020	—	3250	*	
	HHUS210-3	14	4 1/2	9	3	—	—	30-16d	10-16d	4000	—	5635	—	6380	—	6880	*	
	HGUS210-3	12	4 1/2	9 1/2	4	—	—	46-16d	16-16d	4095	—	9100	—	9100	—	9100	F23, 160	

FACE MOUNT HANGERS – SOLID SAWN LUMBER (DF & SP)

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

These products are approved for installation with the Strong-Drive SD Structural Connector screw. See page 30 for the correct substitution and SD screw size.

Joist Size	Model No.	Ga	Dimensions				Min/Max	Fasteners			DF/SP Allowable Loads						Installed Cost Index (ICI)	Code Ref.
			W	H	B	Header		Joist	Uplift (160)	Floor (100)		Snow (115)		Roof (125)				
						10d				16d	10d	16d	10d	16d	10d	16d		
SAWN LUMBER SIZES																		
QUAD 2x10	HU210-4/ HUC210-4	14	6 1/8	8 3/8	2 1/2	Min	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	160
		14	6 1/8	8 3/8	2 1/2	Max	—	18-16d	8-16d	1795	—	2680	—	3020	—	3250	*	
	HHUS210-4	14	6 1/8	8 3/8	3	—	—	30-16d	10-16d	4000	—	5635	—	6380	—	6880	*	
	HGUS210-4	12	6 3/16	9 1/4	4	—	—	46-16d	16-16d	4095	—	9100	—	9100	—	9100	*	
2x12	LUS210	18	1 1/16	7 1/16	1 3/4	—	—	8-10d	—	4-10d	1165	1340	—	1525	—	1650	—	Lowest
	LU210	20	1 1/16	7 1/16	1 1/2	—	—	10-10d	10-16d	6-10dx1 1/2	850	1165	1390	1325	1585	1435	1715	11%
	U210	16	1 1/16	7 1/16	2	—	—	10-10d	10-16d	6-10dx1 1/2	1110	1215	1440	1375	1635	1485	1685	53%
	LUC210Z	18	1 1/16	7 3/4	1 3/4	—	—	10-10d	10-16d	6-10dx1 1/2	1100	1185	1410	1345	1605	1455	1735	180%
	HU212	14	1 1/16	9	2 1/4	—	—	—	10-16d	6-10dx1 1/2	1135	—	1490	—	1680	—	1805	347%
	HUS210	16	1 1/8	9	3	—	—	—	30-16d	10-16d	3000	—	4255	—	4445	—	4575	378%
DBL 2x12	LUS210-2	18	3 1/8	9	2	—	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	Lowest
	U210-2	16	3 1/8	8 1/2	2	—	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	40%
	LUS214-2	18	3 1/8	10 1/16	2	—	—	—	10-16d	6-16d	1745	—	2110	—	2410	—	2610	56%
	HUS210-2	14	3 1/8	9 3/16	2	—	—	—	8-16d	8-16d	3290	—	2125	—	2420	—	2615	—
	HUS212-2	14	3 1/8	10 1/4	2	—	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	40%
	HU212-2/ HUC212-2	14	3 1/8	10 3/16	2 1/2	Min	—	—	16-16d	6-10d	1135	—	2380	—	2685	—	2890	—
TPL 2x12	LUS210-3	18	4 1/8	8 3/16	2	—	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	*
	HU212-3/ HUC212-3	14	4 1/16	10 1/8	2 1/2	Min	—	—	16-16d	6-10d	1135	—	2380	—	2685	—	2890	*
		14	4 1/16	10 3/8	2 1/2	Max	—	—	22-16d	10-10d	1895	—	3275	—	3695	—	3970	411%
	U210-3	16	4 1/8	7 3/4	2	—	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	*
2x14	LUS210	18	1 1/16	7 1/16	1 3/4	—	—	8-10d	—	4-10d	1165	1340	—	1525	—	1650	—	Lowest
	LU210	20	1 1/16	7 1/16	1 3/4	—	—	10-10d	10-16d	6-10dx1 1/2	850	1165	1390	1325	1585	1435	1715	11%
	U210	16	1 1/16	7 1/16	2	—	—	10-10d	10-16d	6-10dx1 1/2	1110	1215	1440	1375	1635	1485	1685	53%
	HU214	14	1 1/16	10 1/4	2 1/4	—	—	—	12-16d	6-10dx1 1/2	1135	—	1785	—	2015	—	2165	88%
	U214	16	1 1/16	10	2	—	—	12-10d	12-16d	8-10dx1 1/2	1115	1460	1730	1655	1960	1685	2115	147%
	U210-2	16	3 1/8	8 1/2	2	—	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	Lowest
DBL 2x14	LUS214-2	18	3 1/8	10 1/16	2	—	—	—	10-16d	6-16d	1745	—	2110	—	2410	—	2610	12%
	HUS212-2	14	3 1/8	10 1/4	2	—	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	83%
	HU212-2/ HUC212-2	14	3 1/8	10 3/16	2 1/2	Min	—	—	16-16d	6-10d	1135	—	2380	—	2685	—	2890	248%
		14	3 1/8	10 3/8	2 1/2	Max	—	—	22-16d	10-10d	1895	—	3275	—	3695	—	3970	265%
	HU214-2/ HUC214-2	14	3 1/8	12 1/16	2 1/2	Min	—	—	18-16d	8-10d	1515	—	2680	—	3020	—	3250	259%
		14	3 1/8	12 3/16	2 1/2	Max	—	—	24-16d	12-10d	2015	—	3570	—	4030	—	4335	276%
TPL 2x14	U210-3	16	4 1/8	7 3/4	2	—	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	*
	HU214-3/ HUC214-3	14	4 1/16	12 1/16	2 1/2	Min	—	—	18-16d	8-10d	1515	—	2680	—	3020	—	3250	*
		14	4 1/16	12 3/16	2 1/2	Max	—	—	24-16d	12-10d	2015	—	3570	—	4030	—	4335	*
2x16	U214	16	1 1/8	10	2	—	—	12-10d	12-16d	8-10dx1 1/2	1115	1460	1730	1655	1960	1685	2115	Lowest
	HU214	14	1 1/8	10 1/8	2 1/4	—	—	—	12-16d	6-10dx1 1/2	1135	—	1785	—	2015	—	2165	130%
	HU216	14	1 1/8	12 1/16	2 1/4	—	—	—	18-16d	8-10dx1 1/2	1515	—	2680	—	3020	—	3250	130%
DBL 2x16	HUS212-2	14	3 1/8	10 1/4	2	—	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	Lowest
	HU216-2/ HUC216-2	14	3 1/8	13 1/8	2 1/2	Min	—	—	20-16d	8-10d	1515	—	2975	—	3360	—	3610	111%
		14	3 1/8	13 3/8	2 1/2	Max	—	—	26-16d	12-10d	2015	—	3870	—	4365	—	4695	120%
TPL 2x16	HU216-3/ HUC216-3	14	4 1/16	13 1/8	2 1/2	Min	—	—	20-16d	8-10d	1515	—	2975	—	3360	—	3610	*
		14	4 1/16	13 3/8	2 1/2	Max	—	—	26-16d	12-10d	2015	—	3870	—	4365	—	4695	*
3x4	U34	16	2 1/8	3 3/8	2	—	—	4-10d	4-16d	2-10dx1 1/2	265	485	575	550	655	595	705	*
	HU34/HUC34	14	2 1/8	3 3/8	2 1/2	—	—	—	4-16d	2-10dx1 1/2	380	—	595	—	670	—	720	*
	U36	16	2 1/8	5 1/8	2	—	—	8-10d	8-16d	4-10dx1 1/2	585	975	1150	1100	1305	1185	1410	*
3x6	LUS36	18	2 1/8	5 1/4	2	—	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	*
	HU36/HUC36	14	2 1/8	5 1/4	2 1/2	—	—	—	8-16d	4-10dx1 1/2	610	—	1190	—	1345	—	1445	*
	U36	16	2 1/8	5 1/4	2	—	—	8-10d	8-16d	4-10dx1 1/2	585	975	1150	1100	1305	1185	1410	*
3x8	LUS36	18	2 1/8	5 1/4	2	—	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	*
	HU38/HUC38	14	2 1/8	7 1/4	2 1/2	—	—	—	10-16d	4-10dx1 1/2	610	—	1490	—	1680	—	1805	*
3x10	U310	16	2 1/8	8 1/4	2	—	—	14-10d	14-16d	6-10dx1 1/2	1110	1705	2015	1930	2285	2075	2465	*
	LUS310	18	2 1/8	7 1/4	2	—	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	*
	HU310/HUC310	14	2 1/8	8 1/4	2 1/2	—	—	—	14-16d	6-10dx1 1/2	915	—	2085	—	2350	—	2530	*
3x12	U310	16	2 1/8	8 1/4	2	—	—	14-10d	14-16d	6-10dx1 1/2	1110	1705	2015	1930	2285	2075	2465	*
	LUS310 HU312/HUC312	18 14	2 1/8 2 1/8	7 1/4 10 1/8	2 2 1/2	— —	— —	— —	6-16d 16-16d	4-16d 6-10dx1 1/2	1165 915	— —	1315 2380	— —	1500 2685	— —	1625 2890	 *
3x14	U314	16	2 1/8	10 1/2	2	—	—	16-10d	16-16d	6-10dx1 1/2	1110	1945	2305	2205	2615	2375	2820	*
	HU314/HUC314	14	2 1/8	12 1/4	2 1/2	—	—	—	18-16d	8-10dx1 1/2	1515	—	2680	—	3020	—	3250	*
3x16	U314	16	2 1/8	10 1/2	2	—	—	16-10d	16-16d	6-10dx1 1/2	1110	1945	2305	2205	2615	2375	2820	*
	HU316/HUC316	14	2 1/8	14 1/4	2 1/2	—	—	—	20-16d	8-10dx1 1/2	1515	—	2975	—	3360	—	3610	*
4x4	LUS44	18	3 1/8	3	2	—	—	—	4-16d	2-16d	440	—	800	—	910	—	985	Lowest
	U44	16	3 1/8	2 1/4	2	—	—	4-10d	4-16d	2-10d	370	485	575	550	655	595	705	20%
	HU44/HUC44	14	3 1/8	2 1/4	2 1/2	—	—	—	4-16d	2-10d	380	—	595	—	670	—	720	161%

Solid Sawn Lumber Connectors

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See footnotes on page 76.

CODES: See page 20 for Code Reference Key Chart.

FACE MOUNT HANGERS – SOLID SAWN LUMBER (DF & SP)

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

CODES: See page 20 for Code Reference Key Chart.

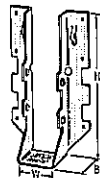
Solid Sawn Lumber Connectors

Joist Size	Model No.	Ga	Dimensions				Min/Max	Fasteners			DF/SP Allowable Loads					Installed Cost Index (ICI)	Code Ref.	
			W	H	B	Header		Joist	Uplift (160)	Floor (100)		Snow (115)		Roof (125)				
						10d				16d	10d	16d	10d	16d	10d			16d
SAWN LUMBER SIZES																		
4x6	LUS46	18	3 ³ / ₁₆	4 ¹ / ₂	2	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	Lowest	17, F6, L17
	U46	16	3 ³ / ₁₆	4 ¹ / ₂	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	37%	
	HUS46	14	3 ³ / ₁₆	5	2	—	—	4-16d	4-16d	1235	—	1065	—	1210	—	1305	152%	
	HU46/HUC46	14	3 ³ / ₁₆	5 ¹ / ₂	2 ¹ / ₂	Min	—	8-16d	4-10d	760	—	1190	—	1345	—	1445	19	
14		3 ³ / ₁₆	5 ¹ / ₂	2 ¹ / ₂	Max	—	12-16d	6-10d	1135	—	1785	—	2015	—	2165	185%		
4x8	LUS46	18	3 ³ / ₁₆	4 ¹ / ₂	2	—	—	4-16d	4-16d	1165	—	1030	—	1180	—	1280	Lowest	
	U46	16	3 ³ / ₁₆	4 ¹ / ₂	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	37%	
	LUS48	18	3 ³ / ₁₆	6 ¹ / ₂	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	40%	
	HUS48	14	3 ³ / ₁₆	6 ¹ / ₂	2	—	—	6-16d	6-16d	1550	—	1595	—	1815	—	1960	203%	
HU48/HUC48	14	3 ³ / ₁₆	6 ¹ / ₂	2 ¹ / ₂	Min	—	10-16d	4-10d	780	—	1490	—	1680	—	1805	213%		
	14	3 ³ / ₁₆	6 ¹ / ₂	2 ¹ / ₂	Max	—	14-16d	6-10d	1135	—	2085	—	2350	—	2530	235%		
	LUS48	18	3 ³ / ₁₆	6 ¹ / ₂	2	—	—	6-16d	4-16d	1165	—	1315	—	1500	—	1625	Lowest	
	LUS410	18	3 ³ / ₁₆	8 ¹ / ₂	2	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	19%	
4x10	U410	16	3 ³ / ₁₆	8 ¹ / ₂	2	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	Lowest	
	HUS410	14	3 ³ / ₁₆	8 ¹ / ₂	2	—	—	8-16d	8-16d	3295	—	2125	—	2420	—	2615		
	HU410/HUC410	14	3 ³ / ₁₆	8 ¹ / ₂	2 ¹ / ₂	Min	—	14-16d	6-10d	1135	—	2085	—	2350	—	2530		
		14	3 ³ / ₁₆	8 ¹ / ₂	2 ¹ / ₂	Max	—	18-16d	10-10d	1895	—	2680	—	3020	—	3250		253%
4x12	LUS410	18	3 ³ / ₁₆	8 ¹ / ₂	2	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	Lowest	
	LUS414	18	3 ³ / ₁₆	10 ¹ / ₂	2	—	—	10-16d	6-16d	1745	—	2110	—	2410	—	2610	33%	
	U410	16	3 ³ / ₁₆	8 ¹ / ₂	2	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	46%	
	HUS410	14	3 ³ / ₁₆	8 ¹ / ₂	2	—	—	8-16d	8-16d	3295	—	2125	—	2420	—	2615	114%	
	HUS412	14	3 ³ / ₁₆	10 ¹ / ₂	2	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	129%	
		14	3 ³ / ₁₆	10 ¹ / ₂	2 ¹ / ₂	Min	—	16-16d	6-10d	1135	—	2380	—	2685	—	2890	268%	
HU412/HUC412	14	3 ³ / ₁₆	10 ¹ / ₂	2 ¹ / ₂	Max	—	22-16d	10-10d	1895	—	3275	—	3695	—	3970	290%		
	LUS410	18	3 ³ / ₁₆	8 ¹ / ₂	2	—	—	8-16d	6-16d	1745	—	1830	—	2090	—	2265	Lowest	
	LUS414	18	3 ³ / ₁₆	10 ¹ / ₂	2	—	—	10-16d	6-16d	1745	—	2110	—	2410	—	2610	33%	
	U414	16	3 ³ / ₁₆	10 ¹ / ₂	2	—	16-10d	16-16d	6-10d	1110	1945	2305	2205	2615	2375	2820	93%	
4x14	HUS412	14	3 ³ / ₁₆	10 ¹ / ₂	2	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	129%	
	HU414/HUC414	14	3 ³ / ₁₆	12 ¹ / ₂	2 ¹ / ₂	Min	—	18-16d	8-10d	1515	—	2660	—	3020	—	3250	333%	
		14	3 ³ / ₁₆	12 ¹ / ₂	2 ¹ / ₂	Max	—	24-16d	12-10d	2015	—	3570	—	4030	—	4385	355%	
	U414	16	3 ³ / ₁₆	10 ¹ / ₂	2	—	16-10d	16-16d	6-10d	1110	1945	2305	2205	2615	2375	2820	Lowest	
4x16	HUS412	14	3 ³ / ₁₆	10 ¹ / ₂	2	—	—	10-16d	10-16d	3635	—	2660	—	3025	—	3265	19%	
	HU416/HUC416	14	3 ³ / ₁₆	13 ¹ / ₂	2 ¹ / ₂	Min	—	20-16d	8-10d	1515	—	2975	—	3360	—	3610	167%	
		14	3 ³ / ₁₆	13 ¹ / ₂	2 ¹ / ₂	Max	—	26-16d	12-10d	2015	—	3870	—	4365	—	4695	178%	
6x6	U66	16	5 ¹ / ₂	5	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	*	
	HU66/HUC66	14	5 ¹ / ₂	4 ¹ / ₂	2 ¹ / ₂	Min	—	8-16d	4-16d	900	—	1190	—	1345	—	1445	*	
		14	5 ¹ / ₂	4 ¹ / ₂	2 ¹ / ₂	Max	—	12-16d	6-16d	1345	—	1785	—	2015	—	2165	*	
6x8	U66	16	5 ¹ / ₂	5	2	—	8-10d	8-16d	4-10d	740	975	1150	1100	1305	1185	1410	*	
	HU68/HUC68	14	5 ¹ / ₂	5 ¹ / ₂	2 ¹ / ₂	Min	—	10-16d	4-16d	900	—	1490	—	1680	—	1805	*	
		14	5 ¹ / ₂	5 ¹ / ₂	2 ¹ / ₂	Max	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	
6x10	U610	16	5 ¹ / ₂	8 ¹ / ₂	2	—	14-10d	14-16d	6-10d	1110	1705	2015	1930	2285	2075	2465	*	
	HU610/HUC610	14	5 ¹ / ₂	7 ¹ / ₂	2 ¹ / ₂	Min	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	
		14	5 ¹ / ₂	7 ¹ / ₂	2 ¹ / ₂	Max	—	18-16d	8-16d	1795	—	2680	—	3020	—	3250	*	
6x12	HU612/HUC612	14	5 ¹ / ₂	9 ¹ / ₂	2 ¹ / ₂	Min	—	16-16d	6-16d	1345	—	2380	—	2685	—	2890	*	
		14	5 ¹ / ₂	9 ¹ / ₂	2 ¹ / ₂	Max	—	22-16d	8-16d	1795	—	3275	—	3695	—	3970	*	
6x14	HU614/HUC614	14	5 ¹ / ₂	11 ¹ / ₂	2 ¹ / ₂	Min	—	18-16d	8-16d	1795	—	2680	—	3020	—	3250	*	
		14	5 ¹ / ₂	11 ¹ / ₂	2 ¹ / ₂	Max	—	24-16d	12-16d	2695	—	3570	—	4030	—	4335	*	
6x16	HU616/HUC616	14	5 ¹ / ₂	12 ¹ / ₂	2 ¹ / ₂	Min	—	20-16d	8-16d	1795	—	2975	—	3360	—	3610	*	
		14	5 ¹ / ₂	12 ¹ / ₂	2 ¹ / ₂	Max	—	26-16d	12-16d	2695	—	3870	—	4365	—	4695	*	
8x8	HU88/HUC88	14	7 ¹ / ₂	6 ¹ / ₂	2 ¹ / ₂	Min	—	10-16d	4-16d	900	—	1490	—	1680	—	1805	*	
		14	7 ¹ / ₂	6 ¹ / ₂	2 ¹ / ₂	Max	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	
8x10	HU810/HUC810	14	7 ¹ / ₂	8 ¹ / ₂	2 ¹ / ₂	Min	—	14-16d	6-16d	1345	—	2085	—	2350	—	2530	*	
		14	7 ¹ / ₂	8 ¹ / ₂	2 ¹ / ₂	Max	—	18-16d	8-16d	1795	—	2680	—	3020	—	3250	*	
8x12	HU812/HUC812	14	7 ¹ / ₂	10 ¹ / ₂	2 ¹ / ₂	Min	—	16-16d	6-16d	1345	—	2380	—	2685	—	2890	*	
		14	7 ¹ / ₂	10 ¹ / ₂	2 ¹ / ₂	Max	—	22-16d	8-16d	1795	—	3275	—	3695	—	3970	*	
8x14	HU814/HUC814	14	7 ¹ / ₂	11 ¹ / ₂	2 ¹ / ₂	Min	—	18-16d	8-16d	1795	—	2680	—	3020	—	3250	*	
		14	7 ¹ / ₂	11 ¹ / ₂	2 ¹ / ₂	Max	—	24-16d	12-16d	2695	—	3570	—	4030	—	4335	*	
8x16	HU816/HUC816	14	7 ¹ / ₂	13 ¹ / ₂	2 ¹ / ₂	Min	—	20-16d	8-16d	1795	—	2975	—	3360	—	3610	*	
		14	7 ¹ / ₂	13 ¹ / ₂	2 ¹ / ₂	Max	—	26-16d	12-16d	2695	—	3870	—	4365	—	4695	*	

- Uplift loads apply to 10d and 16d header fasteners. Uplift loads have been increased for wind or earthquake loading with no further increase allowed. Reduce where other loads govern.
- 10d commons or 16d sinkers may be used instead of the specified 16d at 0.84 of the table load value.
- 16d sinkers may be used instead of the specified 10d commons with no load reduction. (16d sinkers are not acceptable for HDG applications.)
- MIN nailing quantity and load values—fill all round holes; MAX nailing quantity and load values—fill all round and triangle holes.

- DF/SP loads can be used for SCL that has fastener holding capacity of Doug Fir.
- Truss chord cross-grain tension may limit allowable loads. Refer to technical bulletins T-ANSITPSPF, T-ANSITPISP and T-ANSITPIDF for allowable loads that consider ANSI/TPI 1-2007 wood member design criteria (see page 213 for details).
- NAILS: 16d = 0.162" dia. x 3 1/2" long, 10d = 0.148" dia. x 3" long, 10dx1 1/2" = 0.148" dia. x 1 1/2" long. See page 24-25 for other nail sizes and information.

*Hangers do not have an Installed Cost Index.



H/TSP Seismic & Hurricane Ties

The Hurricane Tie series features various configurations of wind and seismic ties for trusses and rafters.

The TSP stud plate tie has now been tested in the top-plate-to-rafter connection.

The H2A features an improved design and higher uplift loads to replace the H2. The H10A has a similar design as the H10 but offers higher uplift capacity. The H10S provides a high capacity connection from truss/rafter to stud.

The H2.5T's truncated design was developed to accommodate trusses with 2x4 bottom chords. The easy to install, five nail pattern is stronger and gets better uplift loads than our popular H2.5 hurricane tie. H1, H10, H10S, H10-2, H11Z and H14 have also been rated for download to provide additional bearing capacity

between the truss and wall.

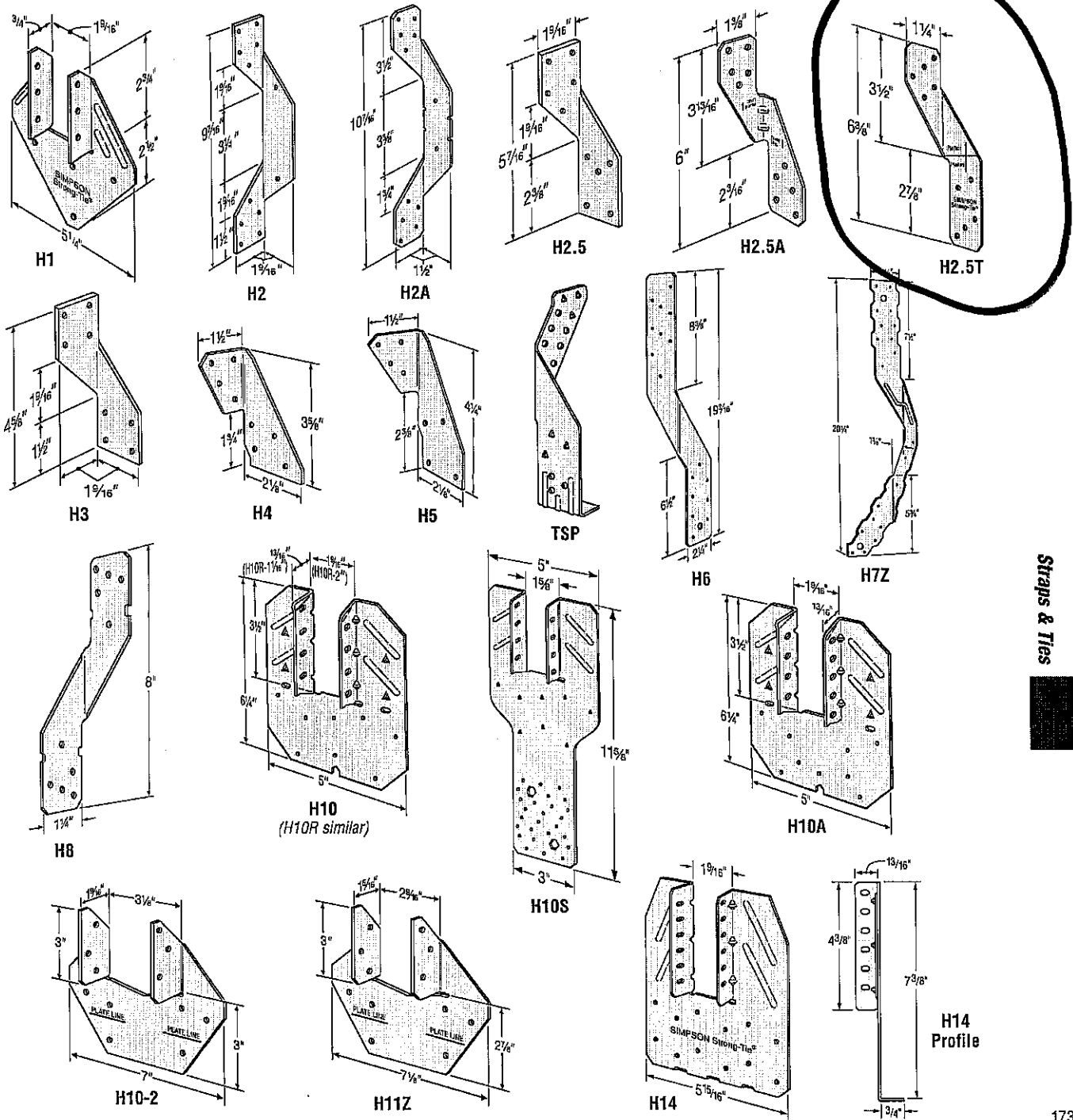
MATERIAL: See table.

FINISH: Galvanized. H7Z and H11Z—ZMAX® coating. Some models available in stainless steel or ZMAX; see Corrosion Information, page 18-19.

INSTALLATION: • Use all specified fasteners. See General Notes.

- H1 can be installed with flanges facing inwards (reverse of H1 drawing number 1).
- H2.5, H2.5T, H3, H4, H5 and H6 ties are only shipped in equal quantities of rights and lefts. (Rights shown.)
- Hurricane Ties do not replace solid blocking.
- Do not drive nails through the truss plate on the opposite side of single-ply trusses, which could force the plate off the truss.

CODES: See page 20 for Code Reference Key Chart.



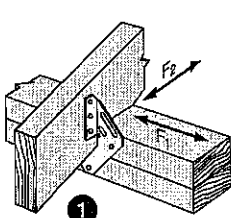
These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

These products are approved for installation with the Strong-Drive SD Structural-Connector screw. See page 30 for the correct substitution and SD screw size.

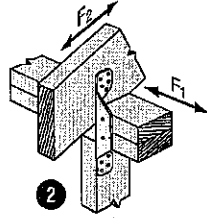
Model No.	Ga	Fasteners			DF/SP Allowable Loads			Uplift Load with 8dx1½ Nails (160)	SPF/HF Allowable Loads			Uplift Load with 8dx1½ Nails (160)	Code Ref.
		To Rafter/Truss	To Plates	To Studs	Uplift (160)	Lateral (160)			Uplift (160)	Lateral (160)			
						F ₁	F ₂			F ₁	F ₂		
H1	18	6-8dx1½	4-8d	—	585	485	165	455	400	415	140	370	H17, L6, F16
H2	18	5-8d	—	5-8d	335	—	—	335	230	—	—	230	
H2A	18	5-8dx1½	2-8dx1½	5-8dx1½	575	130	55	—	495	130	55	—	IP1, L18, F25
H2.5	18	5-8d	5-8d	—	415	150	150	415	365	130	130	365	H17, L6, F16
H2.5A	18	5-8d	5-8d	—	600	110	110	480	535	110	110	480	H17, F16
H2.5T	18	5-8d	5-8d	—	545	135	145	425	545	135	145	425	IP1, L18, F25
H3	18	4-8d	4-8d	—	455	125	160	415	320	105	140	290	H17, L6, F16
H4	20	4-8d	4-8d	—	360	165	160	360	235	140	135	235	
H5	18	4-8d	4-8d	—	455	115	200	455	265	100	170	265	H17, F16
H6	16	—	8-8d	8-8d	950	—	—	—	820	—	—	—	
H7Z	16	4-8d	2-8d	8-8d	985	400	—	—	845	345	—	—	H17, F16
H8	18	5-10dx1½	5-10dx1½	—	745	75	—	630	565	75	—	510	F26
H10	18	8-8dx1½	8-8dx1½	—	995	590	275	—	850	505	235	—	H17, F16
H10A	18	9-10dx1½	9-10dx1½	—	1140	590	285	—	1015	505	285	—	H17, L18, F25
H10S ¹⁰	18	8-8dx1½	8-8dx1½ ¹⁰	8-8d	1010	660	215	550	870	570	185	475	IP1, L18, F25
H10-2	18	6-10d	6-10d	—	760	455	395	—	655	390	340	—	H17, F16
H11Z	18	6-16dx2½	6-16dx2½	—	830	525	760	—	715	450	655	—	170
H14	18	1 12-8dx1½	13-8d	—	1350	515	265	—	1050	480	245	—	IP1, L18, F25
		2 12-8dx1½	15-8d	—	1350	515	265	—	1050	480	245	—	
TSP	16	9-10dx1½	6-10dx1½	—	740	310	190	—	635	265	160	—	170
		9-10dx1½	6-10d	—	890	310	190	—	765	265	160	—	

1. Loads have been increased 60% for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate (exception: connectors installed such that nails on opposite sides don't interfere).
3. Allowable DF/SP uplift load for stud to bottom plate installation (see detail 15) is 400 lbs. (H2.5); 390 lbs. (H2.5A); 360 lbs. (H4) and 310 lbs. (H8). For SPF/HF values multiply these values by 0.86.
4. Allowable loads in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members.
5. When cross-grain bending or cross-grain tension cannot be avoided in the members, mechanical reinforcement to resist such forces may be considered.

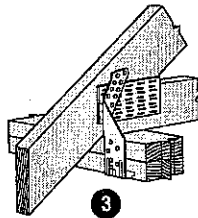
6. Hurricane Ties are shown installed on the outside of the wall for clarity and assume a minimum overhang of 3½" installation on the inside of the wall is acceptable (see General Instructions for the Installer notes on page 22). For uplift Continuous Load Path, connections in the same area (i.e. truss to plate connector and plate to stud connector) must be on same side of the wall.
7. Southern Pine allowable uplift loads for H10A = 1340 lbs. and for H14 = 1465 lbs.
8. Refer to technical bulletin T-HTIEBEARING for H1, H10, H10S, H10-2, H11Z, H14 allowable bearing enhancement loads (see page 214 for details).
9. H10S can have the stud offset a maximum of 1" from rafter (center to center) for a reduced uplift of 890 lbs. (DF/SP), and 765 lbs. (SPF).
10. H10S nails to plates are optional for uplift but required for lateral loads.
11. NAILS: 16dx2½ = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long, 8d = 0.131" dia. x 2½" long, 8dx1½ = 0.131" dia. x 1½" long. See page 24-25 for other nail sizes and information.



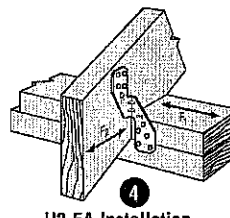
1 H1 Installation



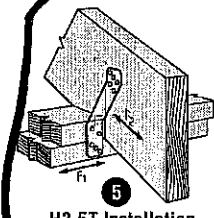
2 H2A Installation (H2 similar)



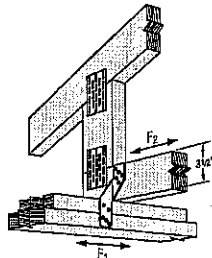
3 TSP Installation



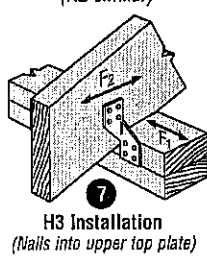
4 H2.5A Installation (Nails into both top plates) (H2.5 similar)



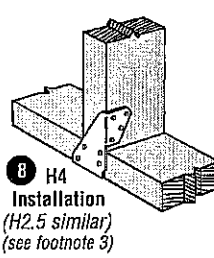
5 H2.5T Installation (Nails into both top plates)



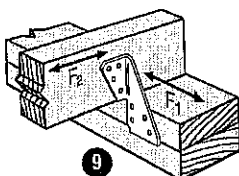
6 H2.5T Installation



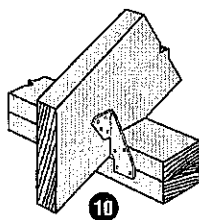
7 H3 Installation (Nails into upper top plate)



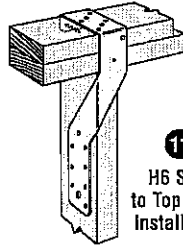
8 H4 Installation (H2.5 similar) (see footnote 3)



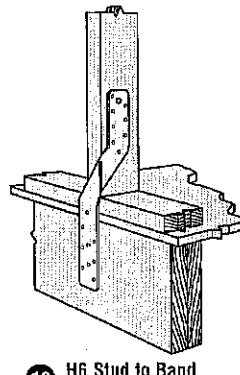
9 H4 Installation (Nails into upper top plate)



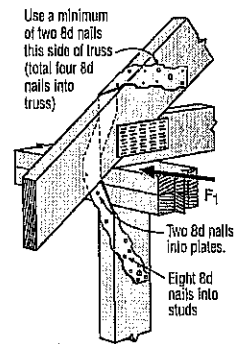
10 H5 Installation (Nails into both top plates)



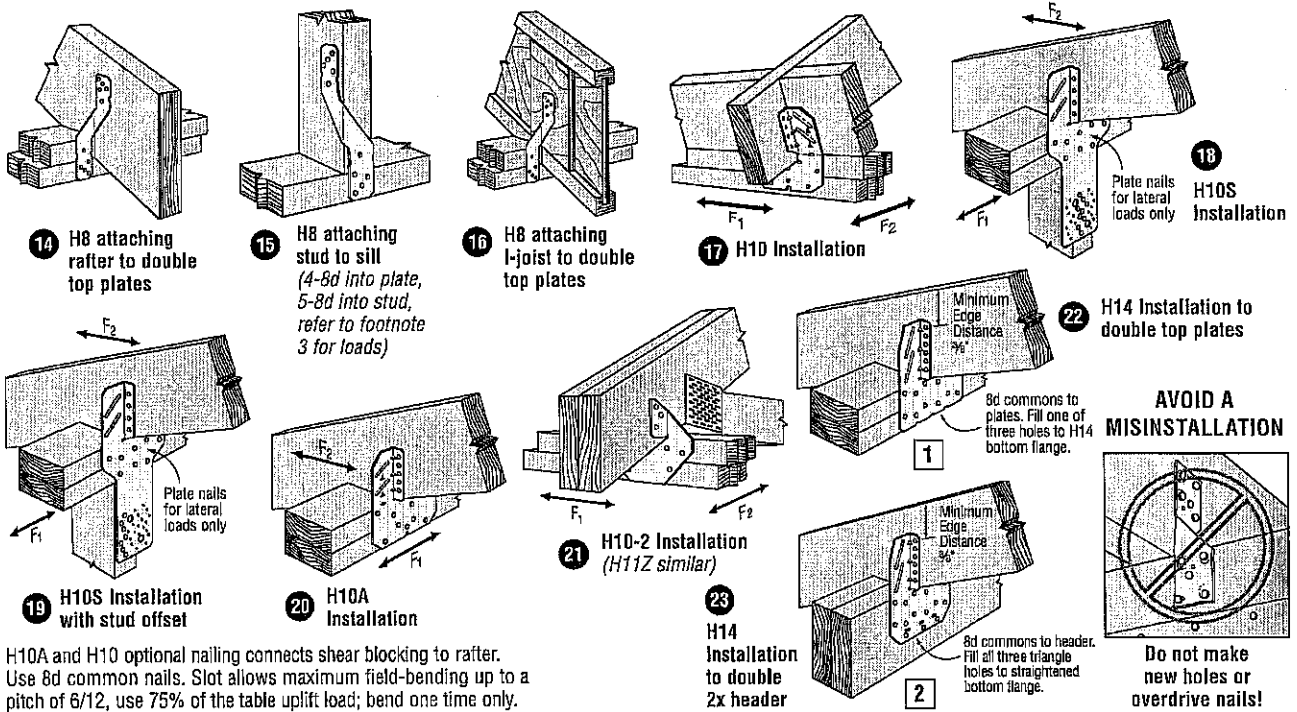
11 H6 Stud to Top Plate Installation



12 H6 Stud to Band Joist Installation



13 H7Z Installation



Considerations for Hurricane Tie Selection

1. What is the uplift load?
2. What is the parallel-to-plate load?
3. What is the perpendicular-to-plate load?
4. What is the species of wood used for the rafter and the top plates?
(Select the load table based on the lowest performing species of wood.)
5. Will the hurricane tie be nailed into both top plates or the upper top plate only?
6. What load or loads will the hurricane tie be taking?

When a connector is loaded simultaneously in more than one direction, the allowable load must be evaluated as shown here. For all connectors use the following equation:

$$\frac{\text{Design Uplift/Allowable Uplift} + \text{Design Lateral Parallel to Plate} / \text{Allowable Lateral Parallel to Plate} + \text{Design Lateral Perpendicular to Plate} / \text{Allowable Lateral Perpendicular to Plate}}{1.0} < 1.0$$

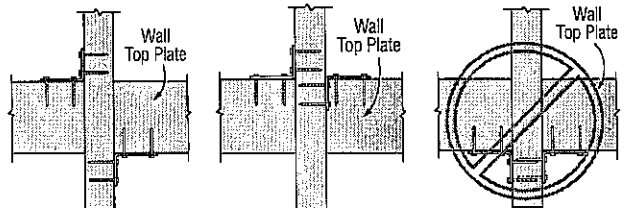
The three terms in the unity equation are due to the possible directions that exist to generate force on a connector. The number of terms that must be considered for simultaneous loading is at the sole discretion of the Designer and is dependent on their method of calculating wind forces and the utilization of the connector within the structural system.

As an alternate, certain roof to wall connectors (embedded truss anchors, pages 161 and 162, seismic and hurricane ties, pages 173-175, and twist straps, page 177) can be evaluated using the following: The design load in each direction shall not exceed the published allowable load in that direction multiplied by 0.75.

7. Select hurricane tie based on performance, application, installed cost and ease of installation.

Hurricane Tie Installations to Achieve Twice the Load (Top View)

Both connectors shall be same model.



Install diagonally across from each other for minimum 2x truss.

Products can be on the same side of the wall provided they are configured as shown.

Nailing into both sides of a single ply 2x truss may cause the wood to split.

VB Knee Braces

The VB provides lateral resistance force at the bottom of beams when installed approximately 45° or more to the vertical plane.

MATERIAL: 12 gauge **FINISH:** Galvanized

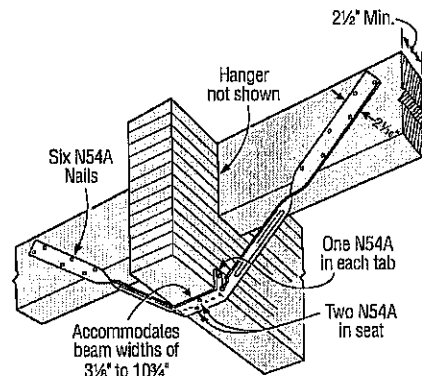
INSTALLATION: • Use specified fasteners. See General Notes.

• 16-N54A fasteners are included with the brace.

CODES: See page 20 for Code Reference Key Chart.

Model No.	H (Beam Depth)	L	Fasteners (Total)	Allowable Tension Loads ¹		Code Ref.
				Floor (100)	Roof (125)	
VB5	10" - 15"	5'	16-N54A	990	1240	115, L7
VB7	15" - 22½"	7'	16-N54A	990	1240	
VB8	22½" - 28½"	8'	16-N54A	990	1240	
VB10	28½" - 36"	10'	16-N54A	990	1240	
VB12	36" - 42"	12'	16-N54A	990	1240	

1. Roof loads have been increased 25% with no further increase allowed.



Typical VB Installation

H Seismic & Hurricane Ties

The hurricane tie series features various configurations of wind and seismic ties for trusses and rafters.

The H16 series has a presloped seat of 5/12 for double trusses.

The presloped 5/12 seat of the H16 provides for a tight fit and reduced deflection. The strap length provides for various truss height up to a maximum of 13 1/2" (H16 series). Minimum heel height for H16 series is 4".

The HGA10 attaches to gable trusses and provides good lateral wind resistance. The HS24 attaches the bottom chord of a truss or rafter at pitches from 0/12 to 4/12 to double 2x4 top plates. Double shear nailing allows for higher lateral resistance.

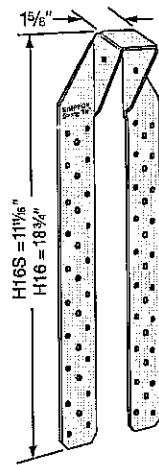
MATERIAL: See table

FINISH: Galvanized. See Corrosion Information, page 18-19.

INSTALLATION: • Use all specified fasteners. See General Notes.

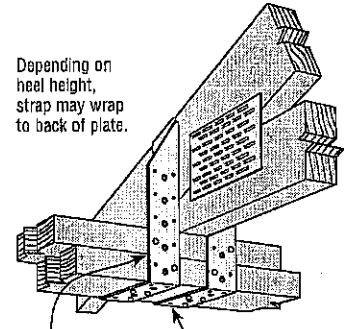
- HGA10KT: sold as a kit with (10) HGA10 connectors. SDS screws are included.
- HS24 requires slant nailing only when bottom chord of truss or rafter has no slope.

CODES: See page 20 for Code Reference Key Chart.



H16 and H16S

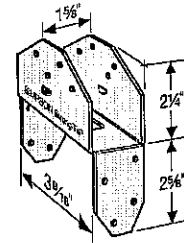
Presloped at 5/12. Truss/Rafter Pitch of 3/12 to 7/12 is acceptable



Install 4-10dx1 1/2 to inside edge of 2x
Install 6-10dx1 1/2 to face of 2x

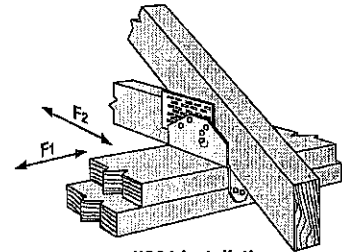
H16 Installation

Model No.	Ga	Fasteners			DF/SP Allowable Loads ¹			SPF/HF Allowable Loads ¹			Code Ref.
		To Rafters/Truss	To Plates	To Studs	Uplift	Lateral (160)		Uplift	Lateral (160)		
					(160)	F ₁	F ₂	(160)	F ₁	F ₂	
HGA10KT	14	4-SDS 1/4"x1 1/2"	4-SDS 1/4"x3"	—	695	1165	940 ⁵	500	840	675	F26
HS24	18	8-8dx1 1/2 & 2-8d slant	8-8d	—	605 ³	645 ³	1025 ³	520 ³	555 ³	880 ³	I17, F16
H15	Discontinued - See H10S, H14 or H16										
H15-2	Discontinued - See LGT2 or H16-2										
H16	18	2-10dx1 1/2	10-10dx1 1/2	—	1470	—	—	1265	—	—	F26
H16S	18	2-10dx1 1/2	10-10dx1 1/2	—	1470	—	—	1265	—	—	
H16-2	18	2-10dx1 1/2	10-10dx1 1/2	—	1470	—	—	1265	—	—	
H16-2S	18	2-10dx1 1/2	10-10dx1 1/2	—	1470	—	—	1265	—	—	



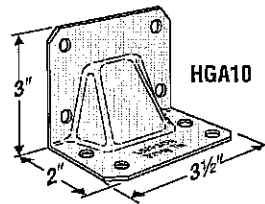
HS24

U.S. Patents 5,603,580

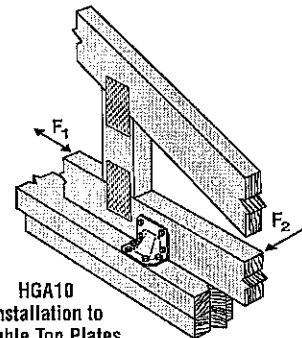


HS24 Installation

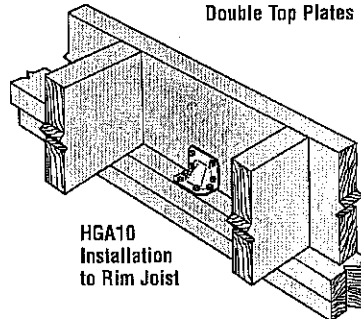
1. Loads have been increased for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
2. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
3. HS24 DF/SP allowable loads without slant nailing are 605 lbs. (uplift), 590 lbs. (F₁), 640 lbs. (F₂). For SPF/HF loads multiply these values by 0.86.
4. For H16-2S, S = short.
5. Allowable loads in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members. Additional shear transfer elements shall be considered where there may be effects of cross grain bending or tension.
6. HGA10 F₂ load is for load acting toward the connector. For load away from the connector, allowable load is 760 lbs. DF/SP and 495 lbs. SPF/HF.
7. **NAILS:** 10dx1 1/2 = 0.148" dia. x 1 1/2" long, 8d = 0.131" dia. x 2 5/8" long, 8dx1 1/2 = 0.131" dia. x 1 1/2" long. See page 24-25 for other nail sizes and information.



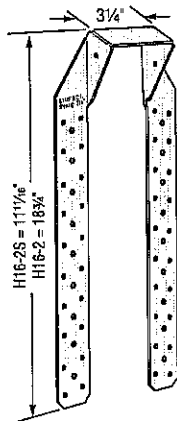
HGA10



HGA10 Installation to Double Top Plates



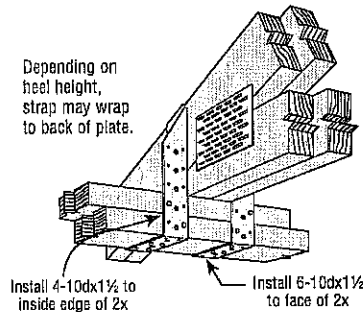
HGA10 Installation to Rim Joist



H16-2 and H16-2S

Presloped at 5/12. Pitch of 3/12 to 7/12 is acceptable

Depending on heel height, strap may wrap to back of plate.



H16-2 Installation

