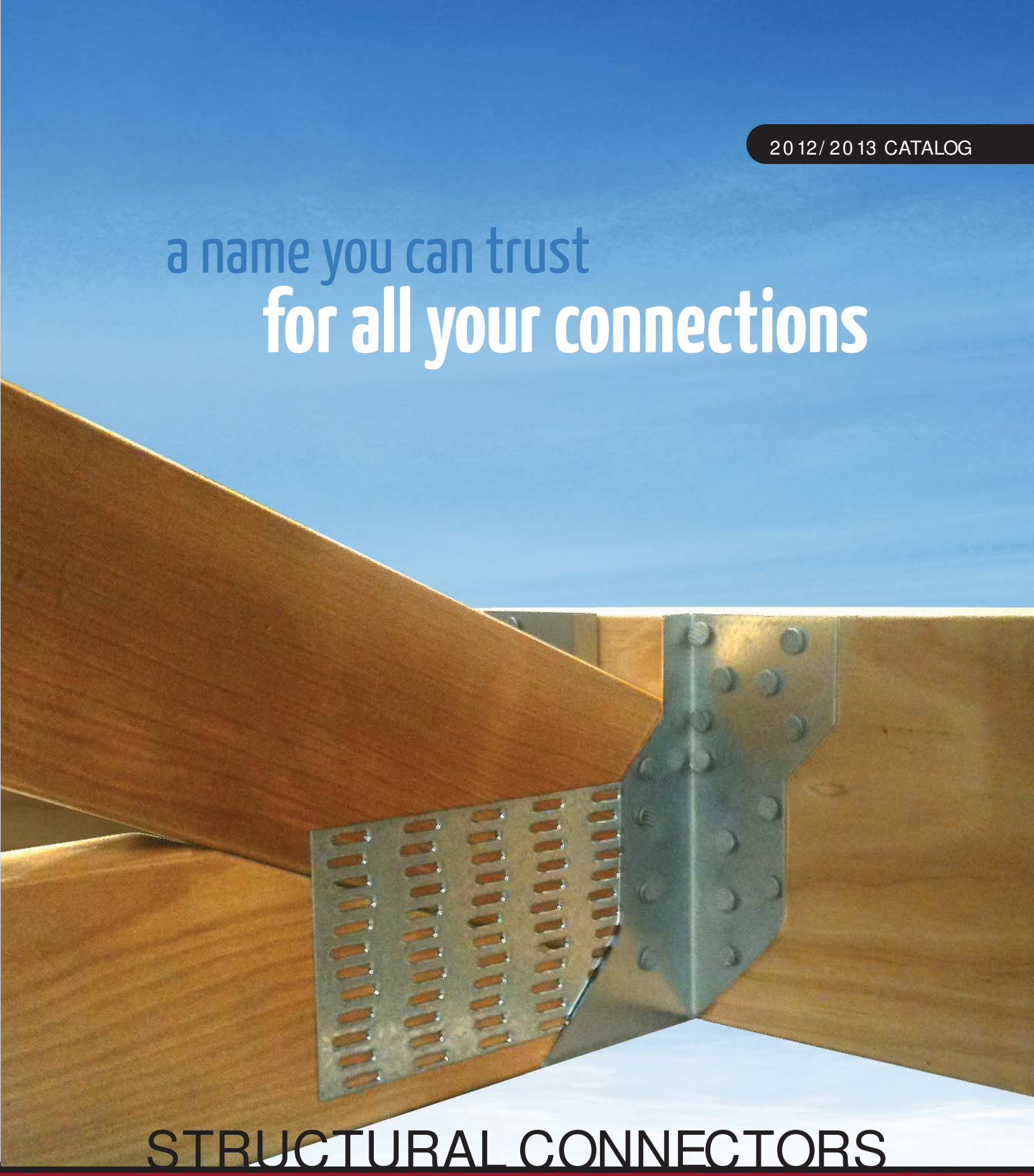
2012/2013 CATALOG

a name you can trust

for all your connections



STRUCTURAL CONNECTORS

ITW BCG Hardware
a division of ITW Building Components Group

It's time to get more out of the efforts you put into the design and build process. It's time to shake things up – to look at construction hardware in a whole new light. ITW Building Components Group is proud to introduce a complete line of construction hardware and software solutions based on our extensive engineering expertise - all designed to create more value for you!

Building professionals consistently look to component industry experts to supply the critical structural information they need to specify hardware - in fact we have been calling out loads to specify custom and stock hangers for more than 40 years. So while this is just the start of our new brand of hardware you can rest easy knowing our experts have experience to get the job done. Designing structural connections is the lifeblood of what we do. The addition of our own line of hardware will allow us to spend the extra time needed to build better connections and software solutions that encompass more of the entire structure, to simplify and speed overall construction.

And that is just the start! As part of ITW, our complete line of construction products offers a unique opportunity to be involved in every major part of the building industry. We now have the resources to realign existing business tools and create the missing links to tie together all the parts and all the players - to deliver on the promise of BIM and whole house design. By working with select experts in and outside of the ITW family of companies, we are able to offer a distinctive value unmatched by any other. Our direct connections to Cullen hardware, Paslode/Duofast and other strategic partners have allowed us to fast-track a complete line of code approved construction hardware products - and we have no intention of slowing down.

For nearly 100 years, our parent company Illinois Tool Works (ITW), has been providing game changing end-user and business to business products and services. By staying customer focused we have become exceedingly good at creating customer value. You can be sure that we will bring all of our industry knowledge forward as we craft new and better solutions for the building industry. Our simple goal is to offer you more - Connections for your Digital Life.

NOTE: Certain products manufactured by KC Metal Products, Inc. for ITW Building Components Group. All references in this catalog to "KC Metals" or "KC" shall apply equally and shall refer to KC Metal Products, Inc., doing business as KC South Metals.

EVALUATIONS

A wide range of code authorities evaluates these connectors, including:

ICC - International Code Council

Evaluation Service Report 2929 - Joist Hangers/Panelized Roof Hangers/Joist and Purlin Hangers/Heavy Structural Hardware/ Anchors and Straps/Post Anchors/Post Caps/Anchors and Clips/Angles/Tie Straps/ Foundation Hardware

Evaluation Service Report 2860 - Wall Bracing/Bridging/Coil Strapping

Evaluation Service Report 2930 - Wood I-Joist Hangers/Truss Hangers/Straps

Evaluation Service Report 5033 - KCAB ***SUPERSPEED*** Anchor Bolts/Anchor Downs/Strap Anchors/Wall Anchors/Retrofit Connectors

Evaluation Service Report 2860 - Anchor Down Screw Type/Embossed Tie Straps/Roof Diaphragm Kip Straps

Other Code Acceptance:
City of Los Angeles **No. RR24197** and **25209**/Fabricators License **No. 00986**.
Meets the California Division of Architects (OSA), FHA and HUD Standards.
For easy identification of the company, all parts are stamped with **ITW BCG** ICC Number, Part Number and/or Series Number/Label and Bar Code.

GAGE TABLE
U.S. Standard Steel Gage Equivalents in Nominal Dimensions[1]

GALVANIZED STEEL			GALVANIZED STEEL		
GAGE	IN DECIMALS[2]	IN APPROXIMATE FRACTIONS	GAGE	IN DECIMALS[2]	IN APPROXIMATE FRACTIONS
3	—	—	3	0.239" (6.0 mm)	¼"
7	—	—	7	0.179" (4.5 mm)	3⁄16"
10	0.138" (3.5 mm)	⅛"	10	0.134" (3.4 mm)	⅛"
11	0.123 (3.1 mm)	⅛"	11	0.120" (3.0 mm)	⅛"
12	0.108" (2.7 mm)	3⁄32"	12	0.105" (2.6 mm)	3⁄32"
14	0.078" (2.0 mm)	3⁄32"	14	0.075" (1.9 mm)	1⁄16"
16	0.063" (1.6 mm)	1⁄16"	16	0.060" (1.5 mm)	1⁄16"
18	0.052" (1.3 mm)	1⁄16"	18	0.048" (1.2 mm)	1⁄16"
20	0.040" (1.0 mm)	1⁄32"	20	0.036" (0.9 mm)	1⁄32"
22	0.034" (0.8 mm)	1⁄32"	22	0.030" (0.7 mm)	1⁄32"

[1] The actual steel dimensions will vary from nominal dimensions according to industry tolerances
[2] mm = millimeters

ENGINEER'S AND ARCHITECTS GUIDE

GENERAL NOTES

1. ITW BCG reserves the right to change specifications, deign and models without notice or liability for such changes.
2. No authorization is made for product modification. If the product is not to the customers' requirements or specifications, the factory should be contacted in time to allow for correction or replacement.
3. Critical fabrication, welding and inspection techniques preclude acceptance of SUPERSPEED® connectors product change or adulteration by others without written permission from authorized factory personnel. This is necessary to guarantee the ultimate in quality and product performance. In the event of product design or fabrication disparity, contact ITW BCG immediately. The factory is not liable for cost or performance of products modified by others.
4. For unusual supporting conditions or loading, excessive wood shrinkage hostile environment situations or abnormal erection requirements, please provide special product detailing and/or discuss with the factory.
5. Design loads given are based on the 2006 I-Codes (IBC) and the 2005 National Design Specifications (N.D.S.). Other code agencies and/or editions of the IBC may use different design loads.
6. Safe design loads in this catalog are based on the lower value of:
A. The ultimate tested load, divided by appropriate safety factor.
B. Load-producing 1/8" deflection.
C. Fastener values in accordance with the code.
D. Seat-bearing loads are based on the 2006 IBC. All of the design loads have been performed and documented by an independent testing laboratory in accordance with the ICC testing standards. Loads deflection and seating of joist in hanger is based upon installation using proper nails where required and first-class workmanship.
7. Unless otherwise noted, dimensions are in inches and design loads are in pounds. 8d, 10d, and 16d signify common nails. All reference to nominal lumber sizes relates to dressed or S4S dimensions.
8. Unless otherwise noted, allowable design loads are given are for use with Group II, specific gravity 0.50 for Douglas fir-Larch used under dry conditions. Design loads for other wood species must be adjusted according to the code.
9. Wood shear is not considered in the loads given; reduce allowable design loads when wood shear is limiting.
10. All catalog (code) design loads assume proper installation with the specified fasteners or nails. Install all fasteners before loading connection. verify whether the support member dimensions can receive the specified nails.
11. For table and ICC uniformity, normal loads are basic design values with a 0% increase suitable for floor loading. Two-month snow duration loading for roofs is 1.15 times the normal load (a 15% increase). Maximum loads already include a 25% increase for seven-day construction and may be used for roofs in areas where there is no ground snow. Uplift loads have been increased by 33⅓% where applicable for wind and seismic stresses.
12. Where applicable, "maximum" uplift/tension load values listed indicate a 33⅓% increase. IBC has not recognized the 60% increases taken by some manufacturers. Please contact factory for these values.
13. Certain products have revised calculated design loads based on the 2006 IBC Values. In some cases, the evaluation reports may not reflect the increased values due to lag time in revision of the reports. Evaluation reports may be pending on some items.
14. Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nails holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.
15. Unless otherwise noted, bending steel in the field may cause fractures at the bend line. Fractured steel will not carry load and must be replaced.
16. All references to bolts or machine bolts (MBs) are for structural quality through bolts equal to or better than American Society of Testing and Materials ASTM Standard A307 Grade A.

SPECIFICATION:
Items shall have an evaluation report where indicated and be equal in design,quality and specifications to those manufactured by KC® Metals SUPRSPEED® connectors, San Jose and Riverside, California.

EVALUATION INFORMATION

ICC — International Code Council of Building Officials
5360 South Workman Mill Road
Whittier, California 90601
Phone: (562) 699-0543
Fax: (562) 695-4694
www.icc-es.org
Evaluation Service Report Nos. **2929**, **2860**, **2930**, **5033**, **2860**

DSA — Department of the State Architects
1300 "I" Street, Suite 800
Sacramento, California 95814
Phone: (916) 445-0783
Fax: (916) 327-3371
(916) 445-3521
www.dsa.dgs.ca.gov

LA City — City of Los Angeles
Department of Building and Safety
411 City Hall
Los Angeles, CA 90012
Phone: (213) 485-2376
Fax: (213) 847-0985
www.ladbs.org
Report Nos. **24197** and **25209**/Division 91
Fabricators License No. **00986**

The following conditions must be met to receive item evaluation/acceptance on wood hangers and framing devices.

- Tests conducted under the supervision of an ICC recognized independent testing laboratory having adequate experience and equipment to conduct such tests.
- Descriptive literature, detailed drawings, calculations and load test reports must be submitted. With this information, the connectors are designed with a safe, sound load in accordance with the Uniform Building Code.
- All welding is performed by welders certified to UBC standards and is quarterly inspected by an ICC recognized quality control agency.
- Quality control manual requiring each product to be individually inspected in all phases of manufacturing including first piece and in-process inspections conducted before and after painting.
- Material description, including material mill certifications (ASTM designation) available upon request. Only prime quality steel is used, and all steel is ordered based on strength, thickness, formability, weldability and finish.
- All connectors and anchors manufactured by KC® have barcode label and are stamped with the KC® Metal Products, Inc. logo and the model designation.
- Annual evaluation/acceptance payment fee and annual document reexamination required.

CORROSION RESISTANCE

Three corrosion resistance coatings are offered for products which require extra corrosion resistance. Deterioration will occur more quickly when hangers and straps are exposed to corrosive environments. Products are available in the standard galvanized material or painted with gray paint. If you require additional protection, all parts are also available with G-Max (G185) triple zinc coating, hot dip galvanized coating or manufactured from stainless material. Fasteners used must also be considered when exposed to a corrosive environment. Please contact the factory for pricing and availability on these processes.

Hot Dip Galvanizing:

All products are available with a hot dip galvanized coating. This coating is applied after manufacture. The zinc content of the galvanization process is generally between 1.1 and 2.3 ounces per square foot of surface area. The actual thickness will vary with the material thickness of the part. This process provides the needed extra protection for adverse weather conditions.

Stainless Steel:

The best protection from adverse conditions is found in the use of stainless steel for manufacture. Type 316 stainless steel is used. It is recommended that stainless steel fasteners be used in conjunction with these specially manufactured hardware items.

G-MAX Triple Zinc Coating:

The standard coating requirement for ICC approved connectors is (G60). 60 oz of zinc per square foot of surface area. The standard coating requirement for connectors is (G90) .90 oz. of zinc per square foot of surface area. This is a 50% increase over ICC galvanized requirements. G-Max (G185) or 3 times the ICC coating requirement. This triple zinc coating is available on many items in the KCMP product line.

FASTENING IDENTIFICATION

TRIANGLE

Triangle shaped holes are provided in some hangers for use to achieve the maximum load values. Both round and triangle holes must be filled in order to achieve these "max" values.

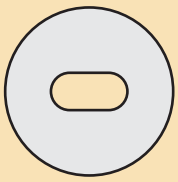
DIAMOND

Diamond shaped holes are provided in some hangers for temporarily holding the fasteners to the joist or header during the installation process. Also as optional nailing for increasing uplift.

SPEED PRONG

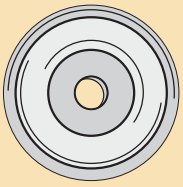
Speed prongs are found in many fasteners to provide faster and easier installation. These prongs act to hold the connector in place during the installation process.

SLOTTED



Slotted holes allow easier nailing when placement conditions are tight. In some cases, slotted holes can be placed in horizontally ("slant nailing" or vertically ("positive angle nailing"), depending on your requirements

EMBOSSED



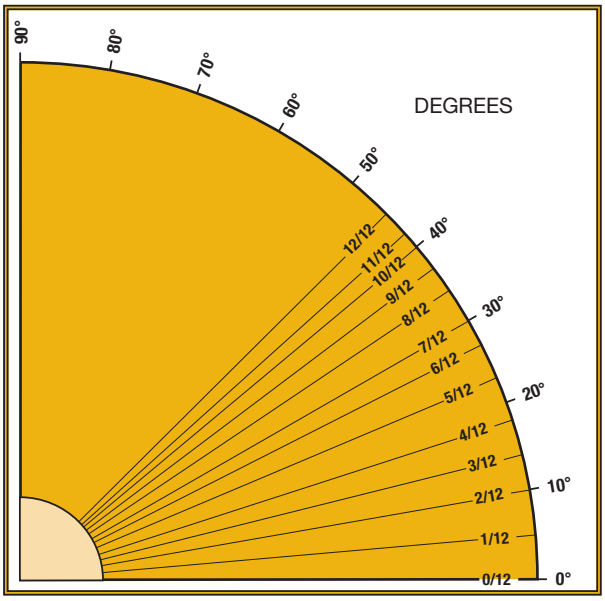
Embossed holes are used on certain straps enabling installation with a power activated gun, allowing faster and less expensive installation. Specify "**SS**" ***SUPERSPEED*** after the callout to indicate the embossed hole pattern.

PITCH CONVERSION

Roof Slope Conversion Chart

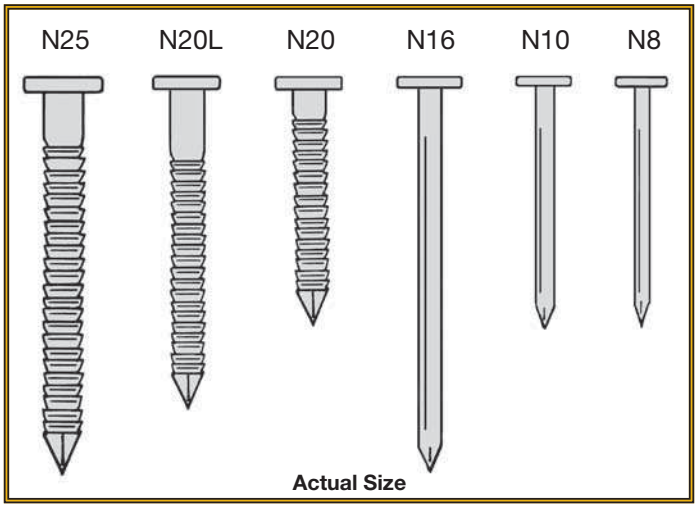
If Common Rafter Roof Pitch is . . .		Then Hip/Valley Rafter Roof Pitch becomes . . .	
Rise/Run	Slope	Rise/Run	Slope
1/12	5	1/17	3
2/12	10	2/17	7
3/12	14	3/17	10
4/12	18	4/17	13
5/12	23	5/17	16
6/12	27	6/17	19
7/12	30	7/17	22
8/12	34	8/17	25
9/12	37	9/17	28
10/12	40	10/17	30
11/12	42	11/17	33
12/12	45	12/17	35

Use this conversion table only for hip/valley rafters that are skewed 45° right or left. All others will cause the slope to change from that listed above. Slope rounded to the nearest degree



NAIL CONVERSION / SIZES

Catalog Nail	Replacement Nail	Design Load Adjustment Factor
16d Common	10d x 1½	0.64
16d Common	10d Common/12d Common	0.84
16d Common	16d Sinker	0.84
16d Common	16d x 2½ (N16)	1.00
10d Common/12d Common	10d x 1½	0.77
10d Common/12d Common	16d Sinker	1.00
8d Common	8d x 1½	0.80
8d x 1½	8d x 1½	0.86
10d Hard	10d Common	0.64
10d Hard	10d x 1½	0.52
16d Hard	10d Hand	0.84
16d Hard	16d Common	0.65
16d Hard	10d Common	0.54



Our 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.

PRODUCT CODE	REF NO.	DESCRIPTION	METRIC EQUIVALENT (mm)	FINISH	FASTENERS PER 50 LBS CARTON	DOUG FIR-LARCH/SO PINE DESIGN LOAD (LBS)		
						LIGHT GAGE		3 GAGE
						SHEAR (100)	GAGE	SHEAR (100)
N8	N8	(8d) 10¼ ga x 1½" Smooth Shank	3.3 x 38.1	HDG	7600	86	14	105
N10	N10	(10d) 9 ga x 1½" Smooth Shank	3.3 x 38.1	HDG	5900	92	14	112
N16	N16	(16d) 8 ga x 2½" Smooth Shank	4.1 x 63.5	BRIGHT	3150	134	18	187
N20L	N20AN	(20d) 0.192 x 2⅛" Annular Ring	4.9 x 54.0	BRIGHT	2750	145	14	174
N20	N20A	(20d) .192 x 1¾" Annular Ring	4.9 x 44.5	BRIGHT	3150	119	14	140
N25	N54A	.250 x 2½" Annular Ring	6.4 x 63.5	BRIGHT	1350	167	14	188
	10d Common	(10d) 0.148 x 3" Annular Ring	3.8 x 76.2	BRIGHT	3350	112	18	158
	16d Sinker	0.148 x 3¼" Smooth Shank	3.8 x 82.6	GV	3050	112	18	158
	12d Common	0.148 x 3¼" Smooth Shank	3.8 x 82.6	BRIGHT	3050	112	18	158
	16d Common	0.162 x 3½" Smooth	4.1 x 88.9	BRIGHT	4400	134	14	187
	10d Hardened	0.148 x 2½" Smooth	3.8 x 63.5	BRIGHT	NA	175	12	210
	16d Hardened	0.162 x 3½" Smooth	4.1 x 63.5	BRIGHT	NA	207	12	245

CATEGORY LISTING

REFERENCE NUMBER ALPHABETICAL LISTING

JOIST HANGERS

E

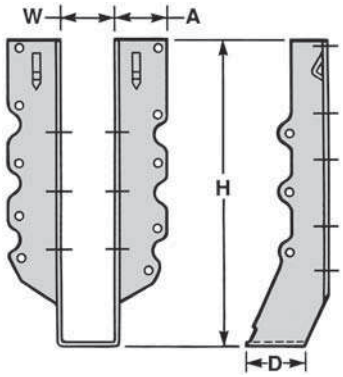
ECONOMY JOIST HANGERS

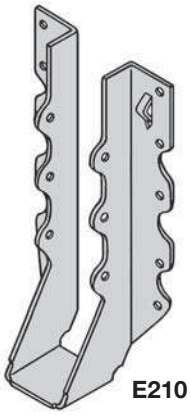
Design Features . . combine greater strength with maximum economy. ***SUPERSPEED*** prongs secure **E** hangers to header for fast, easy nailing.

• **Joist sizes . .** 2 x 4 to 2 x 14.

Material . . 18 ga. galvanized steel.

Special . . economical price and ease-of-use make these an ideal hanger for the do-it-yourself market.





E210

S
SR

STANDARD JOIST HANGERS (ROUGH)

Design Features . . provide proper balance between load-carrying capacity of hanger and the joist it supports. Hanger configuration changes for heavy-duty **S66** and **S610**.

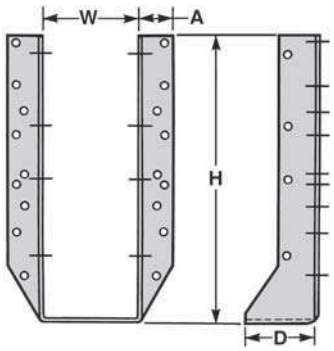
• **Joist sizes . .** 2xs, 3xs, 4xs, 6xs, double 2xs and triple 2xs . . also available on special order for rough beam sizes.

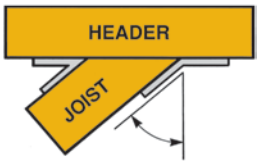
• To order rough sizes, add **R** to stock no. (Example: **SR26**)

Material . . 16 ga. galvanized steel. Meets specifications for schools and public buildings.

Loads . . can be increased with the use of 16d nails in header for **S24**, **S26** and **S210**. See Economy hangers for load specifications.

Skewed and Sloped Hangers . . are available, specify angle (67½° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.

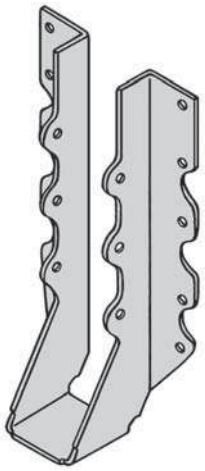




Top View - Skewed Left

Skewed Left

Typical Design for S24, S26, S210 and S214



SSL
SSR
MSL
MSR

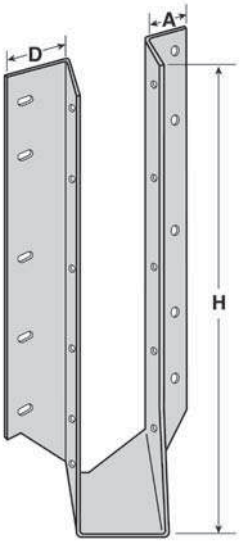
STANDARD SKEWED HANGERS (45°)
MEDIUM SKEWED HANGERS (45°)

Design Features . . standard and medium skewed hangers are offered to promote further standardization and construction economies, and to provide compatibility with the ***SUPERSPEED*** lline of **S** standard and **H** heavy joist hangers.

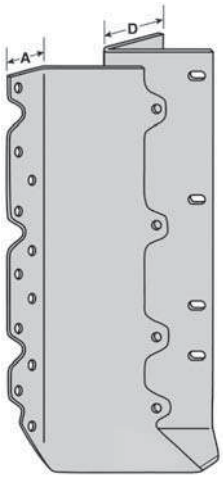
• **Joist sizes . .** 2xs, 3xs, 4xs and double 2xs.
SSL/**SSR** – 16 ga. galvanized steel.
MSL/**MSR** – 14 ga. galvanized steel.

Loads . . larger seat-bearing and designed direct nailing provide proper installation of all nails into joist hangers.

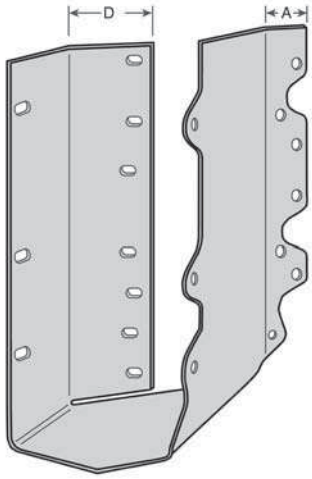
Special . . skewed hangers are labor savers. No angle butt-cuts are required. Reversed flanges are available in the **SSL**/**SSR** and **MSL**/**MSR** hangers furnished with one flange turned in while the other remains out.



SSL210



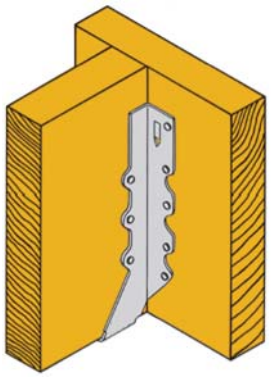
MSR



SSL410R
(Reversed Flange)

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

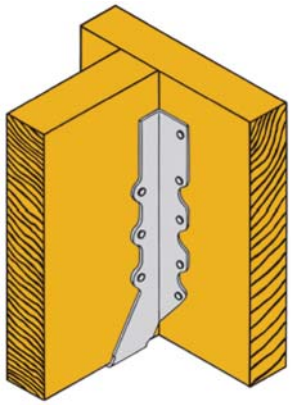
PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		(HEADER) DESIGN LOAD				UPLIFT LBS
			A	D	W	H	HEADER	JOIST	10D		16D		
									NORMAL LBS	MAX LBS	NORMAL LBS	MAX LBS	
E24	LU24	2 x 4 to 2 x 6	1⅛	1½	1⁹⁄₁₆	3	4-16d	2-10d x 1½	450	560	535	670	250
E26	LU26	2 x 6 to 2 x 10	1⅛	1½	1⁹⁄₁₆	4¾	6-16d	4-10d x 1½	670	840	805	1005	500
E28	LU28	2 x 8 to 2 x 12	1⅛	1½	1⁹⁄₁₆	6¼	8-16d	6-10d x 1½	895	1120	1070	1340	750
E210	LU210	2 x 10 to 2 x 14	1⅛	1½	1⁹⁄₁₆	7³⁄₄	10-16d	6-10d x 1½	1120	1400	1340	1675	750
											BONUS LOADS WITH 16D NAILS		



S
SR

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	®REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
S24	U24	2 x 4	1⅛	1½	1⁹⁄₁₆	3	4-10d	2-10d x 1½	450	565	255
S26	U26	2 x 6 to 2 x 10	1⅛	1½	1⁹⁄₁₆	4¾	6-10d	4-10d x 1½	680	850	505
S210	U210	2 x 6 to 2 x 14	1⅛	1½	1⁹⁄₁₆	7¹³⁄₁₆	10-10d	6-10d x 1½	1130	1415	760
S214	U214	2 x 14 to 2 x 16	1⅛	2	1⁹⁄₁₆	10	12-16d	8-10d x 1½	1355	1695	1265
S34	U34	3 x 4 to 3 x 6	1⅛	2	2⁹⁄₁₆	3⅜	4-16d	2-10d x 1½	540	675	300
S36	U36	3 x 6 to 3 x 10	1⅛	2	2⁹⁄₁₆	5⅜	8-16d	4-10d x 1½	1080	1350	605
S310	U310	3 x 10 to 3 x 14	1⅛	2	2⁹⁄₁₆	8⅞	14-16d	6-10d x 1½	1890	2365	905
S314	U314	3 x 14 to 3 x 16	1⅛	2	2⁹⁄₁₆	10⅜	16-16d	6-10d x 1½	2160	2700	905
S44	U44	4 x 4 to 4 x 6	1⅛	2	3⁹⁄₁₆	2⅞	4-16d	2-10d	540	675	300
S46	U46	4 x 6 to 4 x 10	1⅛	2	3⁹⁄₁₆	4⅞	8-16d	4-10d	1080	1350	605
S410	U410	4 x 10 to 4 x 14	1⅛	2	3⁹⁄₁₆	8⅜	14-16d	6-10d	1890	2365	905
S414	U414	4 x 14 to 4 x 16	1⅛	2	3⁹⁄₁₆	10	16-16d	6-10d	2160	2700	905
S66	U66	6 x 6 to 6 x 8	1⅛	2	5½	5	8-16d	4-10d	1080	1350	605
S610	U610	6 x 10	1⅛	2	5½	8½	14-16d	6-10d	1890	2365	905
S24-2	U24-2	(2) 2 x 4 to (2) 2 x 6	1⅛	2	3⅛	3	4-16d	2-10d	540	675	300
S26-2	U26-2	(2) 2 x 6 to (2) 2 x 10	1⅛	2	3⅛	5	8-16d	4-10d	1080	1350	605
S210-2	U210-2	(2) 2 x 10 to (2) 2 x 14	1⅛	2	3⅛	8	14-16d	6-10d	1890	2365	905
S26-3	U26-3	(3) 2 x 6 to (3) 2 x 10	1⅛	2	4¹¹⁄₁₆	5	8-16d	4-10d	1080	1350	605
S210-3	U210-3	(3) 2 x 10 to (3) 2 x 14	1⅛	2	4¹¹⁄₁₆	8½	14-16d	6-10d	1890	2365	905

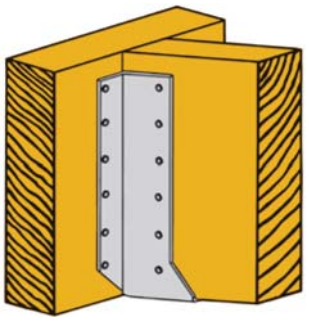


S210

SSL
SSR
MSL
MSR

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
SSL/SSR24	SUL/SUR24	2 x 4	1⅛	1⅜	1⁹⁄₁₆	3⅛	4-16d	4-10d x 1½	540	675	505
SSL/SSR26	SUL/SUR26	2 x 6 to 2 x 10	1⅛	1⅜	1⁹⁄₁₆	5	6-16d	6-10d x 1½	810	1015	760
SSL/SSR210	SUL/SUR210	2 x 10 to 2 x 14	1⅛	1⅜	1⁹⁄₁₆	8⅛	10-16d	10-10d x 1½	1350	1690	1265
SSL/SSR214	SUL/SUR214	2 x 14 to 2 x 16	1⅛	1⅜	1⁹⁄₁₆	10	12-16d	12-10d x 1½	1620	2025	1520
SSL/SSR36	SUL/SUR36	3 x 6 to 3 x 10	1¼	2³⁄₁₆	2⁹⁄₁₆	5¼	8-16d	4-16d x 2½	1080	1350	720
SSL/SSR310	SUL/SUR310	3 x 10 to 3 x 14	1¼	2³⁄₁₆	2⁹⁄₁₆	9	14-16d	6-16d x 2½	1890	2365	1080
SSL/SSR314	SUL/SUR314	3 x 14 to 3 x 16	1¼	2³⁄₁₆	2⁹⁄₁₆	13	18-16d	8-16 x 2½	2430	3040	1440
SSL/SSR46	SUL/SUR46	4 x 6 to 4 x 10	1¼	2³⁄₁₆	3⁹⁄₁₆	4¾	8-16d	4-16d	1080	1350	720
SSL/SSR410	SUL/SUR410	4 x 10 to 4 x 14	1¼	2³⁄₁₆	3⁹⁄₁₆	8½	14-16d	6-16d	1890	2365	1080
SSL/SSR414	SUL/SUR414	4 x 14 to 4 x 16	1¼	2³⁄₁₆	3⁹⁄₁₆	12½	18-16d	8-16d	2430	3040	1440
MSL/MSR36	HSUL/HSUR36	3 x 6 to 3 x 10	1¼	2³⁄₁₆	2⁹⁄₁₆	5¼	12-16d	4-16d x 2½	1630	2040	720
MSL/MSR310	HSUL/HSUR310	3 x 10 to 3 x 14	1¼	2³⁄₁₆	2⁹⁄₁₆	9	20-16d	6-16d x 2½	2720	3400	1080
MSL/MSR314	HSUL/HSUR314	3 x 14 to 3 x 16	1¼	2³⁄₁₆	2⁹⁄₁₆	13	26-16d	8-16d x 2½	3535	4420	1440
MSL/MSR46	HSUL/HSUR46	4 x 6 to 4 x 10	1¼	2³⁄₁₆	3⁹⁄₁₆	4¾	12-16d	4-16d	1630	2040	720
MSL/MSR410	HSUL/HSUR410	4 x 10 to 4 x 14	1¼	2³⁄₁₆	3⁹⁄₁₆	8½	20-16d	6-16d	2720	3400	1080
MSL/MSR414	HSUL/HSUR414	4 x 14 to 4 x 16	1¼	2³⁄₁₆	3⁹⁄₁₆	12½	26-16d	8-16d	3535	4420	1440
SSL/SSR26-2	SUL/SUR26-2	(2) 2 x 6 to (2) 2 x 10	1¼	2³⁄₁₆	3⅛	4¹⁵⁄₁₆	8-16d	4-16d x 2½	1080	1350	720
SSL/SSR210-2	SUL/SUR210-2	(2) 2 x 10 to (2) 2 x 14	1¼	2³⁄₁₆	3⅛	8¹¹⁄₁₆	14-16d	6-16d x 2½	1890	2365	1080
SSL/SSR214-2	SUL/SUR214-2	(2) 2 x 14 to (2) 2 x 16	1¼	2³⁄₁₆	3⅛	12¹¹⁄₁₆	18-16d	8-16d x 2½	2430	3040	1440
MSL/MSR26-2	HSUL/HSUR26-2	(2) 2 x 6 to (2) 2 x 10	1¼	2³⁄₁₆	3⅛	4¹⁵⁄₁₆	12-16d	4-16d x 2½	1630	2040	720
MSL/MSR210-2	HSUL/HSUR210-2	(2) 2 x 10 to (2) 2 x 14	1¼	2³⁄₁₆	3⅛	8¹¹⁄₁₆	20-16d	6-16d x 2½	2720	3400	1080
MSL/MSR214-2	HSUL/HSUR214-2	(2) 2 x 14 to (2) 2 x 16	1¼	2³⁄₁₆	3⅛	12¹¹⁄₁₆	26-16d	8-16d x 2½	3535	4420	1440



SSR214

LS LIGHT SLOPED HANGERS

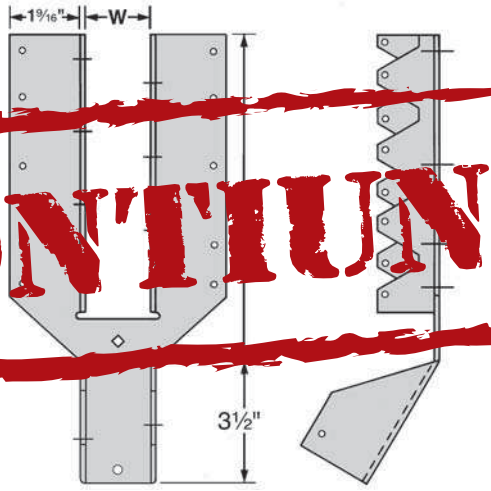
Design Features . . used on existing structures to increase strength for the attachment of joists to headers. Slip the hanger into place and adjust the seat (sloped either up or down). Use the hole in the bottom of the seat to set the h... joist ... to the header flanges or ...e for new construction needs. These hangers ...er complete installation flexibility before, during ...after joists are erected.

Joist ...es ...2xs

Materi... ... g...nized ...

Loads ...arg... seat ...aring and ...esig... direct ...ling ... proper installation of all nails into ...t hangers.

S...cial . . the **LS** eliminates slope hanger mix-... u... and de... ... including, ...⁄12 pitch).



LS210

LSS LIGHT SLOPED/SKEWED HANGERS

Design Features . . combination sloped skewed hangers offer further standardization and construction economy. They also provide compatibility with the ***SUPERSPEED*** line of **S** standard joist hangers. **LSS** hangers can be used to connect rafters to ridge beams in vaulted roof structures.

• **Joist sizes . .** 2xs, 3xs, 4xs, double 2x-s and wood I-joist sizes.

Material . . 18 ga., 16 ga., and 14 ga. galvanized steel.

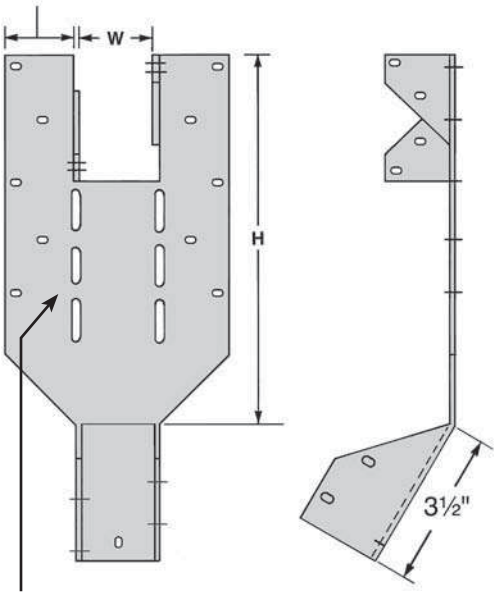
Loads . . larger seat-bearing and designed direct nailing provide proper installation of all nails into joist hangers.

Special . . LSS eliminates skewed and sloped hanger mix-ups and delays (any slope up or down, to and including, a 12⁄12 pitch and any skew right or left up to 45°).

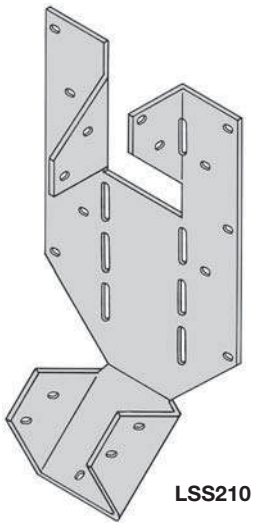
Ordering/Specifying Information . . The **LSS5.12** must be factory skewed 0° to 45°. It may be field sloped to 45°. (**LSS4.12** and **LSS3510-2** are similar)

Configurations of some models may differ from those shown.

A Flange



Slotted Holes Are Provided for Skewable Field Bending Application



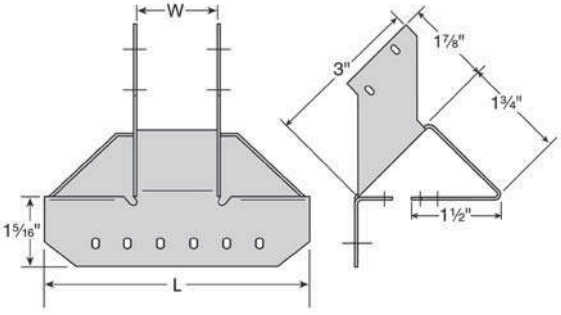
LSS210

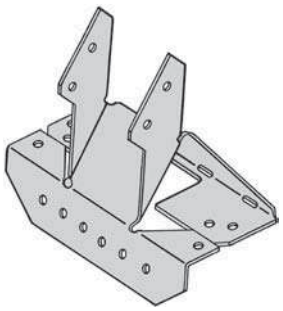
SSC SLOPED SEAT CONNECTORS

Design Features . . allow fastening of solid and wood I-joists to the plate at any slope from 1:12 to 6:12. The **SSC** eliminates the need for costly rafter notching, bevel plates and toe-nailing. Install twelve nails to the plate and four to the joist.

Material . . 18 ga. galvanized steel.

Special . . the **SSC** was developed for wood I-joist beams to eliminate the need for bird cuts in the bottom chord.





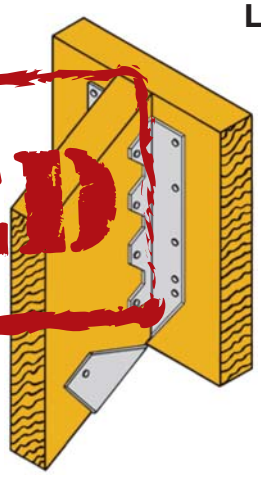
SSC2

LS

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD/ SLOPE ONLY		UPLIFT LBS
		WIDTH	HEIGHT		JOIST	NORMAL LBS	MAXIMUM LBS	
LS26	2 X 6	1⁹⁄₁₆	5	6-10d	7-10d x 1½	670	835	835
LS28	2 X 8	1⁹⁄₁₆			-10d x 1½	8	1005	1005
LS21	2			0-10	1 x 1½	11	1400	1

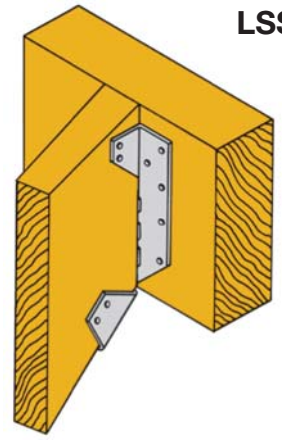
DISCONTINUED

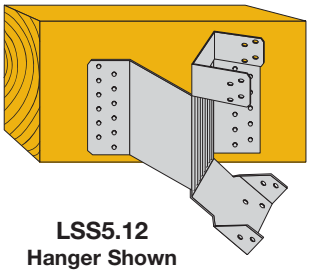


LSS

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

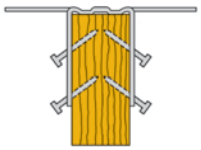
PRODUCT CODE	REF NO	MATERIAL	JOIST SIZE	DIMENSIONS (INCHES)		"A" FLANGE	NAIL SCHEDULE		DESIGN LOAD (LBS)				
									SLOPE ONLY		SKEW ONLY		UPLIFT LBS
				WIDTH	HEIGHT		HEADER	JOIST	NORMAL	MAXIMUM	NORMAL	MAXIMUM	
LSS26	LSU26	18	1½	1⁹⁄₁₆	4⅞	1⁹⁄₁₆	6-10d	5-10d x 1½	670	835	670	840	635
LSS28	LSSU28	18	1½	1⁹⁄₁₆	7⅛	1⁹⁄₁₆	10-10d	5-10d x 1½	1005	1005	985	985	635
LSS210	LSSU210	18	1½	1⁹⁄₁₆	8½	1⁹⁄₁₆	10-10d	9-10d x 1½	1120	1400	1120	1390	1140
LSS25	LSSUI25	18	1¾	1¹³⁄₁₆	8½	1⁹⁄₁₆	10-10d	9-10d x 1½	1120	1400	1120	1390	1140
LSS2.06	LSSUI2.06	18	2	2¹⁄₁₆	8½	1¾	10-10d	7-10d x 1½	1110	1390	995	1205	730
LSS2.1	LSSU2.1	18	2¹⁄₁₆	2⅛	8½	1¾	10-10d	7-10d x 1½	1110	1390	995	1205	730
LSS35	LSSIU35	18	2⁵⁄₁₆	2⅜	8½	1⅝	10-10d	7-10d x 1½	1110	1390	995	1205	730
LSS310	LSSUH310	16	2½	2⁹⁄₁₆	8½	3⅛	18-16d	12-10d x 1½	2295	2295	1600	1600	1150
LSS210-2	LSSU210-2	16	3	3⅛	8½	2⅞	18-16d	12-10d x 1½	2430	3035	1625	1625	1150
LSS410	LSSU410	16	3½	3⁹⁄₁₆	8½	2⅝	18-16d	12-10d x 1½	2430	3035	1625	1625	1150
LSS4.12	LSSU4.12	14	4	4⅛	9	2¼	24-16d	16-10d x 1½	3215	4020	2300	2300	1150
LSS4.28	LSSU4.28	14	4⅛	4¼	9	2⅜	24-16d	16-10d x 1½	3215	4020	2300	2300	1150
LSS3510-2	LSSU3510-2	14	4¾	4¾	8⅞	3⅝	24-16d	16-10d x 1½	3215	4030	2300	2300	1150
LSS5.12	LSSU5.12	14	5	5⅛	9	2¼	24-16d	16-10d x 1½	3215	4030	2300	2300	1150



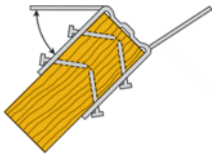


LSS5.12 Hanger Shown Skewed Right

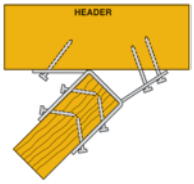
Installation Sequence



Step 1
Nail hanger to joist. Install the seat nail first.



Step 2
Skew flange to form acute angle. The other flange should then be bent back. Form hanger to fit your skewed angle.

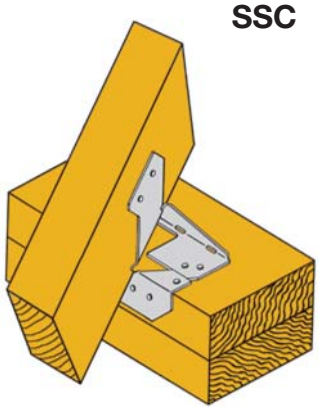


Step 3
Attach hanger to the header. Nail the acute angle side first. Nails must be installed at an angle.

SSC

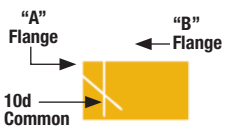
For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
		W	L	PLATE	RAFTER	NORMAL LBS	MAX LBS	
SSC2	VPA2	1⁹⁄₁₆	3½	12-10d	4-10d x 1½	1430	1790	250
SSC25	VPAI25	1¹³⁄₁₆	3½	12-10d	4-10d x 1½	1430	1790	250
SSC35	VPAI35	2⅜	4½	12-10d	4-10d x 1½	1430	1790	250
SSC3	VPA3	2⁹⁄₁₆	4½	12-10d	4-10d x 1½	1430	1790	250
SSC4	VPA4	3⁹⁄₁₆	5½	12-10d	4-10d x 1½	1430	1790	250

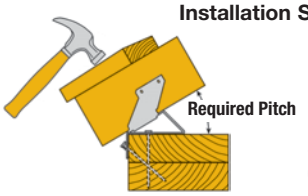


SSC2

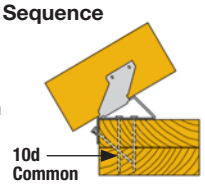
Installation Sequence



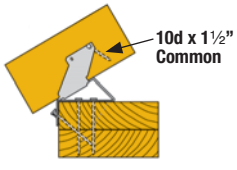
Step 1
Nail top nails to plate first. Second, Install nails to top plate (outside wall) at a slight angle to prevent splitting.



Step 2
Adjust joist rafter with a hammer to seat "B" flange to the right pitch.



Step 3
Nail "B" Flange nails in nail holes, straight down to lock the required pitch.



Step 4
Use 10d x 1½ nails for the joist rafter (4) to prevent splitting. Nail at slight angle.

STP

STANDARD TRUSS PLATED HANGERS

Design Features . . provide proper balance between load-carrying capacity of hanger and the truss it supports.

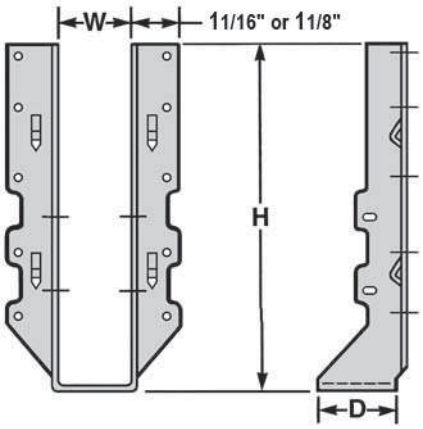
• **Joist sizes . .** 2xs, 3xs, 4xs, double 2xs, and triple 2xs.

Material . . 18 ga. galvanized steel.

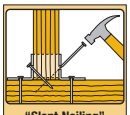
Loads . . seat dimension (see table) provides solid larger seat-bearing area. New higher loads possible with only common nails.

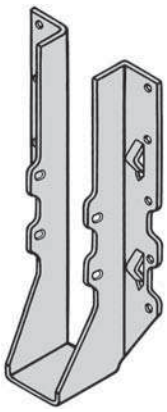
Special . . greater strength combined with economical price and ease-of-nailing make these an ideal hanger for the competitive construction trade.

Skewed and Sloped Hangers . . not available in **STP** series. See **SSR**/**SSL** or **S** series hangers, pages 8 and 9.



STP210





HTP HTPR

HEAVY TRUSS PLATED HANGERS

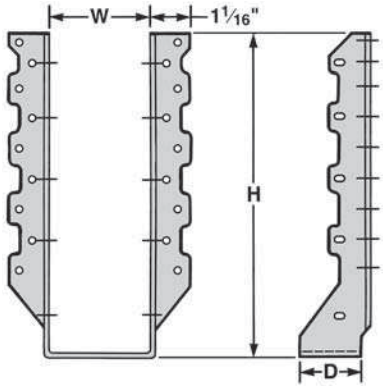
Design Features . . constant dimensional accuracy and precision controlled 90° angles assure proper joist bearing (flat seat) and header connection alignment. Two design styles are available with standard or reversed flanges (turned inward).

• **Joist sizes . .** 4xs and double 2xs.

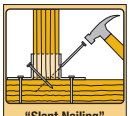
Material . . 14 ga. galvanized steel.

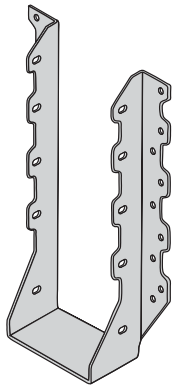
Loads . . 2" seat dimension provides solid larger seat-bearing area. New higher loads possible with only common nails.

Skewed and Sloped Hangers . . not available in **HTP** series. See **MSL**/**MSR** series, pages 8 and 9 or **H** series, pages 16 and 17.



HTP412





HTPTF HTPTFR

HEAVY TRUSS PLATED TOP FLANGE HANGERS

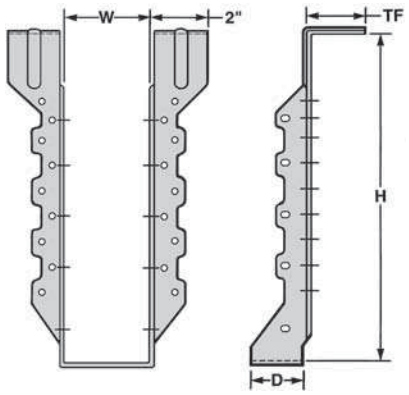
Design Features . . with the addition of a top flange, the heavy truss hanger meets or exceeds specifications for schools and public buildings, where strength, support, and safety are prime requirements. Two design styles are available with standard or reversed flanges (turned inward).

• **Joist sizes . .** 4xs and double 2xs.

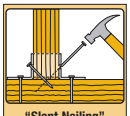
Material . . 14 ga. galvanized steel.

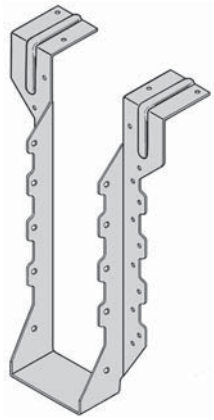
Special . . greater strength combined with economical price and ease-of-nailing make these an ideal hanger for the competitive construction trade.

Skewed and Sloped Hangers . . not available in **HTPTF** series. See **HTF** series, pages 18 and 19.



HTPTF414





HDTP

HEAVY-DUTY TRUSS PLATED HANGERS

Design Features . . HDTP universal face-mount hanger is designed for wood plate trusses and heavily loaded members.

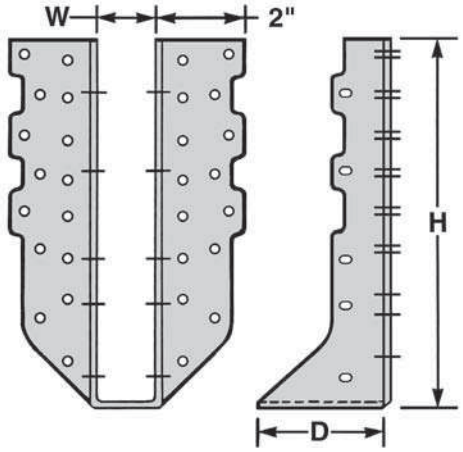
• **Joist sizes . .** 2xs, 4xs, double 2xs, triple 2xs, and quad 2xs.

Material . . HDTP2x – 16 ga. galvanized steel. **HDTP4x**, 2x-2 – 14 ga. galvanized steel.

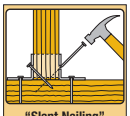
Loads . . 3" seat dimension provides the greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.

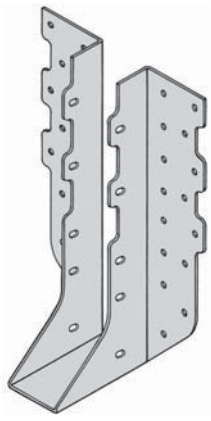
Special . . larger header flange and joist seat make this hanger very easy to install with common nails.

Skewed and Sloped Hangers . . (see page 43).



HDTP210

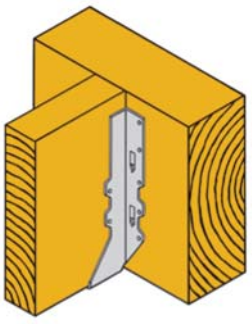




STP

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
STP24	LUS24	2 x 4	1¾	1⁹⁄₁₆	3	4-10d	2-10d	640	800	465
STP26	LUS26	2 x 6, 8	1¾	1⁹⁄₁₆	4¾	6-10d	4-10d	1055	1320	930
STP28	LUS28	2 x 8, 10	1¾	1⁹⁄₁₆	6⅝	8-10d	4-10d	1275	1595	930
STP210	LUS210	2 x 10, 12, 14	1¾	1⁹⁄₁₆	7¹³⁄₁₆	10-10d	4-10d	1500	1875	930
STP24-2	LUS24-2	(2) 2 x 4	2	3⅛	3⅛	4-16d	2-16d	765	880	465
STP26-2	LUS26-2	(2) 2 x 6, 8	2	3⅛	5⅛	8-16d	4-16d	1450	1810	1140
STP28-2	LUS28-2	(2) 2 x 8	2	3⅛	7	12-16d	6-16d	2215	2765	1710
STP28-3	LUS28-3	(3) 2 x 8, 10, 12	2	4⅝	6¼	12-16d	6-16d	2215	2765	1710
STP210-2	LUS210-2	(2) 2 x 10, 12	2	3⅛	9	16-16d	8-16d	3025	3780	2070
STP214-2	LUS214-2	(2) 2 x 14	2	3⅛	10¹⁵⁄₁₆	20-16d	10-16d	3150	3940	2585
STP44	LUS44	4 x 4	2	3⁹⁄₁₆	3	4-16d	2-16d	765	880	465
STP46	LUS46	4 x 6, 8	2	3⁹⁄₁₆	4¾	8-16d	4-16d	1450	1810	1140
STP48	LUS48	4 x 8	2	3⁹⁄₁₆	6¾	12-16d	6-16d	2215	2765	1710
STP410	LUS410	4 x 10, 12, 14	2	3⁹⁄₁₆	8¾	16-16d	8-16d	3025	3780	2070
STP414	LUS414	4 x 12, 14	2	3⁹⁄₁₆	10¾	20-16d	10-16d	3150	3940	2585

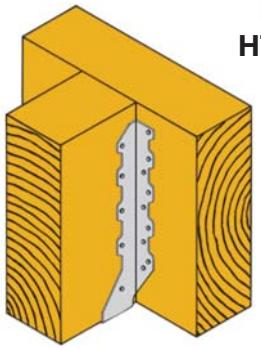


STP210

HTP
HTPR

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTP26-2	HUS26-2	(2) 2 x 6	2	3⅛	5⁵⁄₁₆	8-16d	4-16d	1550	1940	1080
HTP28-2	HUS28-2	(2) 2 x 8	2	3⅛	7⁵⁄₁₆	12-16d	6-16d	2325	2905	1620
HTP210-2	HUS210-2	(2) 2 x 10	2	3⅛	9⁵⁄₁₆	16-16d	8-16d	3105	3880	2160
HTP212-2	HUS212-2	(2) 2 x 12	2	3⅛	10¾	20-16d	10-16d	3875	4040	2560
HTP46	HUS46	4 x 6	2	3⁹⁄₁₆	5	8-16d	4-16d	1550	1940	1080
HTP48	HUS48	4 x 8	2	3⁹⁄₁₆	7	12-16d	6-16d	2325	2905	1620
HTP410	HUS410	4 x 10	2	3⁹⁄₁₆	9	16-16d	8-16d	3105	3880	2160
HTP412	HUS412	4 x 12	2	3⁹⁄₁₆	10⁹⁄₁₆	20-16d	10-16d	3875	4040	2560

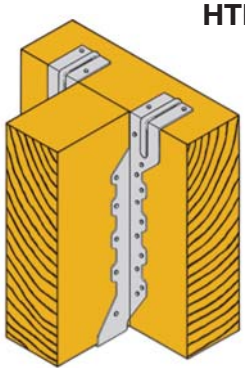


HTP412

HTPTF
HTPTFR

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTPTF26-2	HUS26-2TF	(2) 2 x 6	2	3⅛	5⅜	2½	10-16d	4-16d	2900	3015	1080
HTPTF28-2	HUS28-2TF	(2) 2 x 8	2	3⅛	7¼	2½	12-16d	6-16d	3500	3900	1620
HTPTF210-2	HUS210-2TF	(2) 2 x 10	2	3⅛	9¼	2½	16-16d	8-16d	3590	4200	2160
HTPTF212-2	HUS212-2TF	(2) 2 x 12	2	3⅛	11⅛	2½	20-16d	10-16d	4475	5000	2855
HTPTF214-2	HUS214-2TF	(2) 2 x 14	2	3⅛	13⅛	2½	24-16d	10-16d	4790	5315	2855
HTPTF46	HUS46TF	4 x 6	2	3⁹⁄₁₆	5⅜	2½	10-16d	4-16d	2900	3015	1080
HTPTF48	HUS48TF	4 x 8	2	3⁹⁄₁₆	7¼	2½	12-16d	6-16d	3500	3900	1620
HTPTF410	HUS410TF	4 x 10	2	3⁹⁄₁₆	9¼	2½	16-16d	8-16d	3590	4200	2160
HTPTF412	HUS412TF	4 x 12	2	3⁹⁄₁₆	11⅛	2½	20-16d	10-16d	4475	5000	2855
HTPTF414	HUS414TF	4 x 14	2	3⁹⁄₁₆	13⅛	2½	24-16d	10-16d	4790	5315	2855

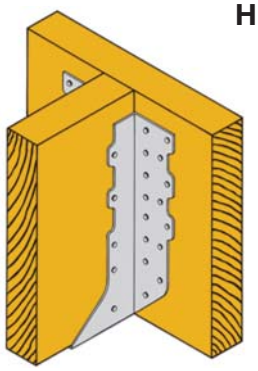


HTPTF414

HDTP

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
HDTP26	HUS26	2 X 6, 8	3	1⅝	5⅛	14-16d	6-16d	2565	3205	1620
HDTP28	HUS28	2 X 8, 10	3	1⅝	7	22-16d	8-16d	3585	3775	2160
HDTP210	HUS210	2 X 10, 12	3	1⅝	9	30-16d	10-16d	3775	4025	2855
HDTP26-2	HHUS26-2	(2) 2 X 6 truss	3	3⅝	5 1/2	14-16d	6-16d	2580	3225	1620
HDTP28-2	HHUS28-2	(2) 2 X 8 truss	3	3⅝	7	22-16d	8-16d	3885	4885	2160
HDTP210-2	HHUS210-2	(2) 2 x 10 truss	3	3⅝	9	30-16d	10-16d	5190	5945	2855
HDTP210-3	HHUS210-3	(3) 2 x 10 truss	3	4¹¹⁄₁₆	9	30-16d	10-16d	5190	5945	2855
HDTP210-4	HHUS210-4	(4) 2 x 10 truss	3	6⅛	9	30-16d	10-16d	5190	5945	2855
HDTP46	HHUS46	4 x 6 truss	3	3⅝	5⁵⁄₁₆	14-16d	6-16d	2580	3225	1620
HDTP48	HHUS48	2 x 8 truss	3	3⅝	7	22-16d	8-16d	3885	4885	2160
HDTP410	HHUS410	4 x 10 truss	3	3⅝	9	30-16d	10-16d	5190	5945	2855



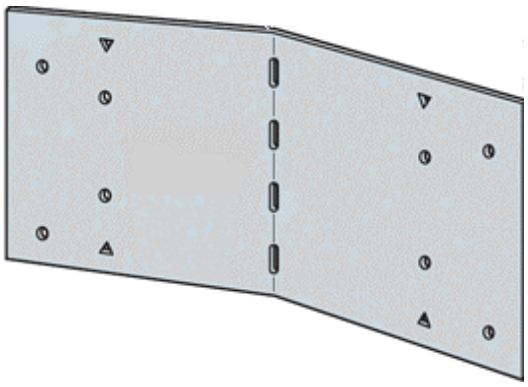
HDTP210

KTJC37 HEAVY DUTY JOIST AND TRUSS HANGERS

Design Features . . KTJC37 universal face-mount hanger is designed for wood plate trusses and heavily loaded members.

- **Joist sizes . .** 2xs, 4xs, douuble 2xs, triple 2xs,6x and 8xs.
- **PBL or LVL sizes . . KTJC37** available in $2^{3}/_{4}$" and $7^{1}/_{4}$" widths.
- **Glulam sizes . . KTJC37** available in $3^{1}/_{8}$" and $5^{1}/_{8}$" widths.

Material . . KTJC37 16 ga. galvanized steel.
Loads . . 4" and 5" seat dimension provides greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.
Special . . larger header flange and joist seat make this hanger very easy to install with common nails.

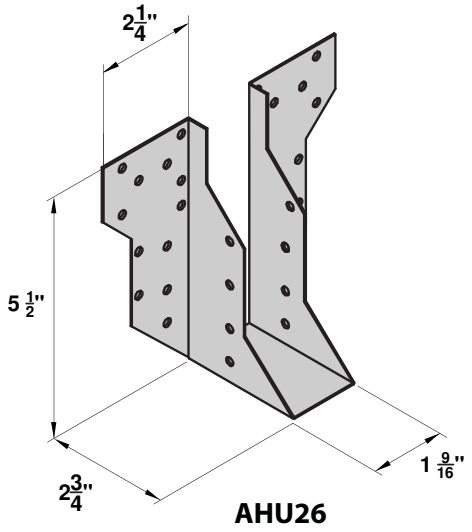


AHU MEDIUM DUTY TRUSS & JOIST HANGER

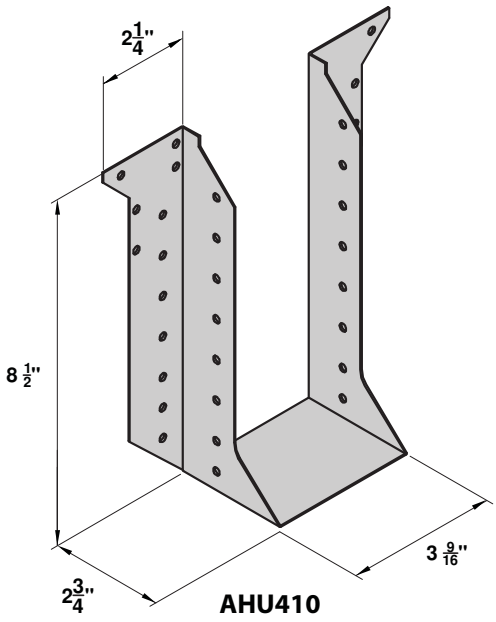
$2^{3}/_{4}$" seat depth

- **Joist sizes . .** available for single, double, and 4x joist sizes

Material . . AHU 18 ga. galvanized steel.



AHU26



AHU410

KTJC37

PRODUCT CODE	REF NO	CARRYING MEMBER	CARRIED MEMBER	ALLOWABLE LOADS		
				0°	1°-60°	61°-67.5°
KTJC37 (MIN)	TJC37	4-8dx1-1/2	4-8dx1-1/2	340	300	320
KTJC37 (MAX)	TJC37	6-8dx1-1/2	6-8dx1-1/2	580	485	425

WEIGHT = .39 lbs

AHU

Southern Pine (0.55 Specific Gravity)															
PRODUCT CODE	Hanger Dimensions (in)			Supported Member		Supporting Member		Allowable Load (lbs)[1]							
								Downward				Upward			
	Clear Width	Overall Height	Overall Depth	Min. Heel Height (in)	Fasteners	Size	Fasteners	Load Duration Factor				Load Duration Factor			
								1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
AHU26	1 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x1.5"	(2) 2x6	(24) 0.162"x3.5"	3005	3155	3260	3350	1025	1175	1280	1305
AHU28	1 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x1.5"	(2) 2x8	(24) 0.162"x3.5"	3515	3745	3895	4375	1535	1765	1915	2060
AHU210	1 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x1.5"	(2) 2x10	(24) 0.162"x3.5"	3655	4200	4535	5250	2045	2350	2555	3270
AHU26-2	3 7/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	3350	3350	3350	3350	1025	1175	1280	1305
AHU28-2	3 7/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	3655	4200	4375	4375	1535	1765	1915	2060
AHU210-2	3 7/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	3655	4200	4565	5845	2045	2350	2555	3270
AHU46	3 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	3350	3350	3350	3350	1025	1175	1280	1305
AHU48	3 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	3655	4200	4375	4375	1535	1765	1915	2060
AHU410	3 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	3655	4200	4565	5845	2045	2350	2555	3270

Douglas Fir-Larch (0.50 Specific Gravity)															
PRODUCT CODE	Hanger Dimensions (in)			Supported Member		Supporting Member		Allowable Load (lbs)[1]							
								Downward				Upward			
	Clear Width	Overall Height	Overall Depth	Min. Heel Height (in)	Fasteners	Size	Fasteners	Load Duration Factor				Load Duration Factor			
								1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
AHU26	1 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x1.5"	(2) 2x6	(24) 0.162"x3.5"	3350	3350	3350	3350	945	1085	1180	1305
AHU28	1 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x1.5"	(2) 2x8	(24) 0.162"x3.5"	3365	3870	4210	4375	1415	1625	1770	2060
AHU210	1 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x1.5"	(2) 2x10	(24) 0.162"x3.5"	3365	3870	4210	5385	1885	2170	2355	3015
AHU26-2	3 7/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	3350	3350	3350	3350	945	1085	1180	1305
AHU28-2	3 7/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	3365	3870	4210	4375	1415	1625	1770	2060
AHU210-2	3 7/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	3365	3870	4210	5385	1885	2170	2355	3015
AHU46	3 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	3350	3350	3350	3350	945	1085	1180	1305
AHU48	3 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	3365	3870	4210	4375	1415	1625	1770	2060
AHU410	3 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	3365	3870	4210	5385	1885	2170	2355	3015

Spruce-Pine-Fir (0.42 Specific Gravity)															
PRODUCT CODE	Hanger Dimensions (in)			Supported Member		Supporting Member		Allowable Load (lbs)[1]							
								Downward				Upward			
	Clear Width	Overall Height	Overall Depth	Min. Heel Height (in)	Fasteners	Size	Fasteners	Load Duration Factor				Load Duration Factor			
								1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
AHU26	1 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x1.5"	(2) 2x6	(24) 0.162"x3.5"	2565	2685	2765	3050	810	930	1010	1295
AHU28	1 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x1.5"	(2) 2x8	(24) 0.162"x3.5"	2890	3150	3270	3695	1215	1395	1520	1945
AHU210	1 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x1.5"	(2) 2x10	(24) 0.162"x3.5"	2890	3320	3610	4345	1620	1860	2025	2590
AHU26-2	3 7/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	2890	3320	3350	3350	810	930	1010	1295
AHU28-2	3 7/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	2890	3320	3610	4375	1215	1395	1520	1945
AHU210-2	3 7/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	2890	3320	3610	4620	1620	1860	2025	2590
AHU46	3 9/16	5 1/2	2 3/4	3.88	(8) 0.148"x3.0"	(2) 2x6	(24) 0.162"x3.5"	2890	3320	3350	3350	810	930	1010	1295
AHU48	3 9/16	6 1/2	2 3/4	5.88	(12) 0.148"x3.0"	(2) 2x8	(24) 0.162"x3.5"	2890	3320	3610	4375	1215	1395	1520	1945
AHU410	3 9/16	8 1/2	2 3/4	7.88	(16) 0.148"x3.0"	(2) 2x10	(24) 0.162"x3.5"	2890	3320	3610	4620	1620	1860	2025	2590

General Notes:
Product Steel Gauge: 18
1. Products in this table are in compliance with ANSI/TPI 1-2007, Section 7.5.3.3.

HRQ

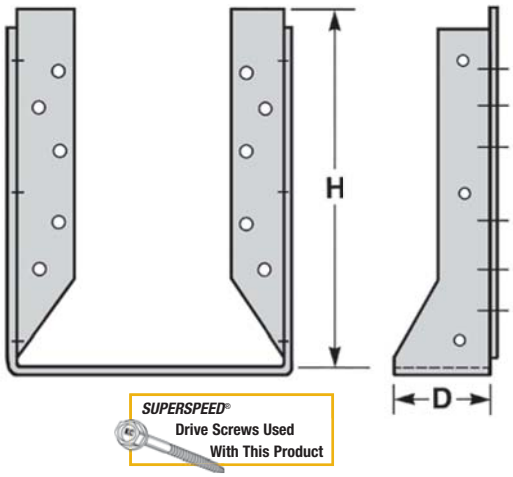
HEAVY REVERSE JOIST HANGERS QUICK (DRIVE SCREW)

Design Features . . HRQ universal face-mount hanger with reversed face flanges (turned in) is designed for structural composite lumber or heavy lumber beams. This hanger is designed for installation on posts or header connections.

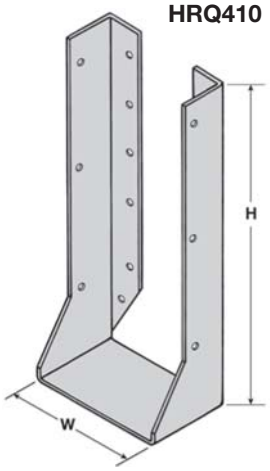
- **Joist sizes . .** 3xs, 4xs, 6xs, double 2xs, and triple 2xs . . also available on special order for rough beam and Glulam sizes. When ordering, specify the W, D and H dimensions.

Material . . 14 ga. galvanized steel.

Loads . . 3" seat dimension provides greater seat bearing area than the "H" heavy hanger. The addition of ***SUPERSPEED*** Drive Screws SDS ¼x2½ (included with product) gives this hanger almost two (2) times greater load value than the stock '**H**' heavy Hanger (16d nailing) with less fasteners.



HRQ410



HDTPQ

HEAVY HEAVY-DUTY TRUSS PLATED HANGERS QUICK (DRIVE SCREW)

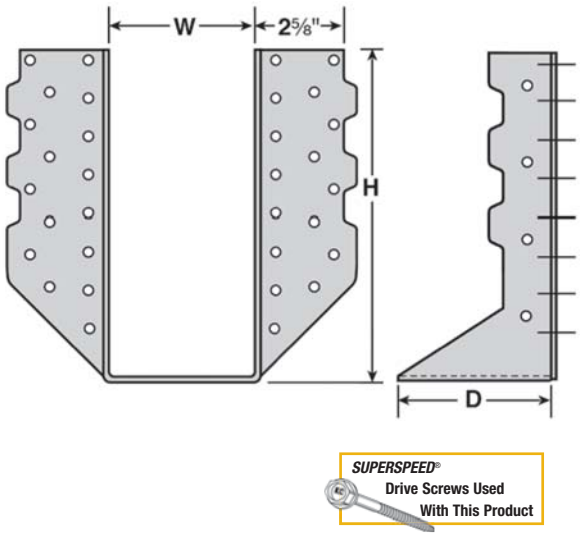
Design Features . . HHDTPQ universal face-mount hanger is very similar to the **HHDTP** hanger except that it is fastened to wood header members and to multi-ply girder trusses with the use of ***SUPERSPEED*** drive screws.

- **Joist sizes . .** (2) 2x Ply
  (3) 2x Ply
  (4) 2x Ply
  4 x Girder
- Special sizes made to order.

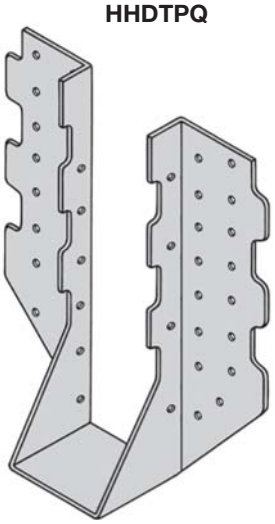
Material . . HHDTPQ 12 ga. galvanized steel.

Loads . . 4" seat dimension provides greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.

Special . . larger header flange and joist seat make this hanger very easy to install with the ***SUPERSPEED*** drive screws for faster and easier installation compared to common nails.



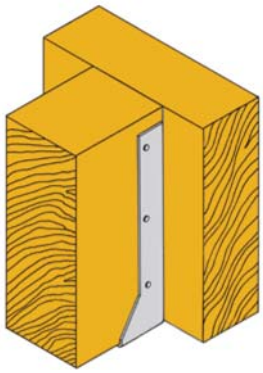
HHDTPQ



HRQ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			KC® SUPERSPEED® SDS 1/4" DRIVE SCREWS		DESIGN LOAD		UPLIFT LBS 133%
			D	W	H	CARRYING MEMBER	CARRIED MEMBER	NORMAL LBS 100%	MAX LBS 125%	
HRQ310	HUCQ310-SDS	3 x 10	3	2 9/16	9	(8) ¼ x 2½	(4) ¼ x 2½	2315	2315	1810
HRQ210-2	HUCQ210-2-SDS	(2) 2 x 10	3	3¼	9	(12) ¼ x 2½	(6) ¼ x 2½	3600	3600	2250
HRQ410	HUCQ410-SDS	4 x 10	3	3 9/16	9	(12) ¼ x 2½	(6) ¼ x 2½	3600	3600	2250
HRQ412	HUCQ412-SDS	4 x 12	3	3 9/16	11	(14) ¼ x 2½	(6) ¼ x 2½	4110	4110	2250
HRQ210-3	HUCQ210-3-SDS	(3) 2 x 10	3	4⅝	9	(12) ¼ x 2½	(6) ¼ x 2½	3600	3600	2250
HRQ610	HUCQ610-SDS	6 x 10	3	5½	9	(12) ¼ x 2½	(6) ¼ x 2½	3600	3600	2250
HRQ612	HUCQ612-SDS	6 x 12	3	5½	11	(14) ¼ x 2½	(6) ¼ x 2½	4110	4110	2250

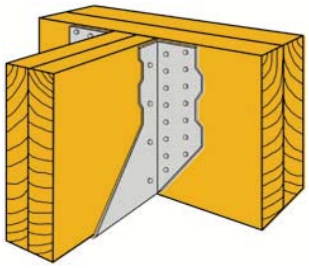


HRQ410

HHDTPQ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			KC® SUPERSPEED® SDS 1/4" DRIVE SCREWS		DESIGN LOAD		UPLIFT LBS 133%
			D	W	H	CARRYING MEMBER	CARRIED MEMBER	NORMAL LBS 100%	MAX LBS 125%	
HHDTPQ26-2	HGUQ26-2	(2) 2 x PLY	4	3 7/16	5	(12) ¼ x 3	(4) ¼ x 3	3710	4635	1645
HHDTPQ28-2	HGUQ28-2	(2) 2 x PLY	4	3 7/16	7	(20) ¼ x 3	(6) ¼ x 3	6180	7725	2465
HHDTPQ210-2	HGUQ210-2	(2) 2 x PLY	4	3 7/16	9	(28) ¼ x 3	(8) ¼ x 3	7750	7750	3285
HHDTPQ26-3	HGUQ26-3	(3) 2 x PLY	4	5⅛	5⅛	(12) ¼ x 4½	(4) ¼ x 4½	3710	4635	1645
HHDTPQ28-3	HGUQ28-3	(3) 2 x PLY	4	5⅛	7⅛	(20) ¼ x 4½	(6) ¼ x 4½	6180	7725	2465
HHDTPQ210-3	HGUQ210-3	(3) 2 x PLY	4	5⅛	9⅛	(28) ¼ x 4½	(8) ¼ x 4½	8650	9790	3285
HHDTPQ26-4	HGUQ26-4	(4) 2 x PLY	4	6 1 1/16	5 5/16	(12) ¼ x 6	(4) ¼ x 6	3710	4635	1645
HHDTPQ28-4	HGUQ28-4	(4) 2 x PLY	4	6 1 1/16	7 5/16	(20) ¼ x 6	(6) ¼ x 6	6180	7725	2465
HHDTPQ210-4	HGUQ210-4	(4) 2 x PLY	4	6 1 1/16	9 5/16	(28) ¼ x 6	(8) ¼ x 6	8650	10600	3285
HHDTPQ46	HGUQ46	4 x GIRDER	4	3⅝	4⅞	(12) ¼ x 3	(4) ¼ x 3	3710	4635	1645
HHDTPQ48	HGUQ48	4 x GIRDER	4	3⅝	6⅞	(20) ¼ x 3	(6) ¼ x 3	6180	7725	2465
HHDTPQ410	HGUQ410	4 x GIRDER	4	3⅝	8⅞	(28) ¼ x 3	(8) ¼ x 3	7750	7750	3285



HHDTPQ 210-2

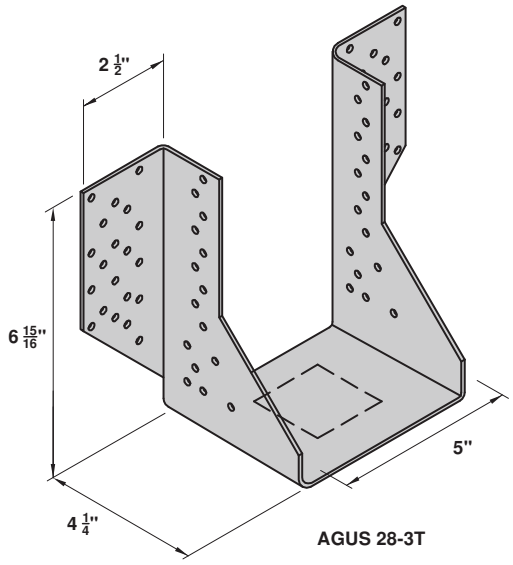
AGUS

HEAVY DUTY JOIST AND TRUSS HANGERS

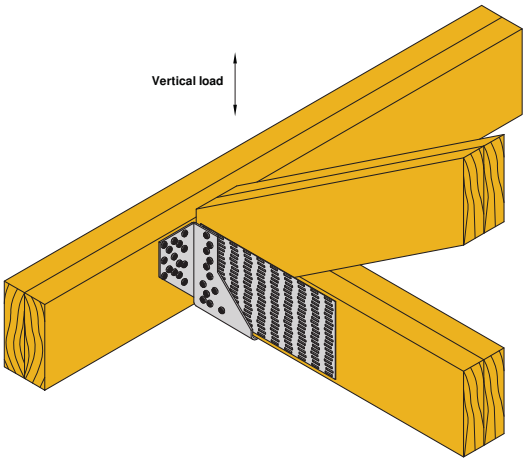
Design Features . . AGUS universal face-mount hanger is designed for wood plate trusses and heavily loaded members.

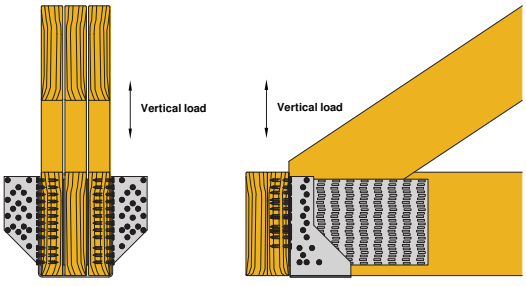
- **Joist and Truss sizes . .** 2xs, 4xs, double 2xs, triple 2xs, 6x and 8xs.
- **SCL (LVL) sizes . . AGUS** available for $2^{3}/_{4}$" and $7^{1}/_{4}$" widths.
- **Glulam sizes . . AGUS** available for $3^{1}/_{8}$" and $5^{1}/_{8}$" widths.

Material . . AGUS 12 ga. galvanized steel.
Loads . . 4" and 5" seat dimension provides greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.
Special . . larger header flange and joist seat make this hanger very easy to install with common nails.



AGUS 28-3T





Spruce Pine Fir (0.42 Specific Gravity)																	
PRODUCT CODE	SUPPORTED MEMBER	PRODUCT GAUGE	HANGER DIMENSION			COMMON NAIL TYPE FASTNERS				ALLOWABLE DOWNWARD LOADS				ALLOWABLE UPWARD LOADS			
			CLEAR WIDTH (in)	OVERALL HEIGHT (in)	OVERALL DEPTH (in)	JOIST		HEADER		LOAD DURATION FACTOR				LOAD DURATION FACTOR			
						SIZE	QTY	SIZE	QTY	1	1.15	1.25	1.6	1	1.15	1.25	1.6
AGUS26	1 1/2	12	1 5/8	5 7/16	4 1/4	0.148"x1.5"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS28	1 1/2	12	1 5/8	6 15/16	4 1/4	0.148"x1.5"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS210	1 1/2	12	1 5/8	8 15/16	4 1/4	0.148"x1.5"	38	0.162"x3.5"	50	6580	7565	8060	8865	4280	4920	5035	5035
AGUS212	1 1/2	12	1 5/8	10 15/16	4 1/4	0.148"x1.5"	46	0.162"x3.5"	60	7890	8670	9185	9240	5180	5960	6475	6475
AGUS26-2	3	12	3 1/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS28-2	3	12	3 1/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS210-2	3	12	3 1/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	6580	7565	8225	8865	4280	4920	5035	5035
AGUS212-2	3	12	3 1/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	7895	9080	9240	9240	5180	5960	6475	6475
AGUS26-2T	3	12	3 7/16	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS28-2T	3	12	3 7/16	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS210-2T	3	12	3 7/16	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	6580	7565	8225	8865	4280	4920	5035	5035
AGUS212-2T	3	12	3 7/16	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	7895	9080	9240	9240	5180	5960	6475	6475
AGUS46	3 1/2	12	3 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS48	3 1/2	12	3 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS410	3 1/2	12	3 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	6580	7565	8225	8865	4280	4920	5035	5035
AGUS412	3 1/2	12	3 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	7895	9080	9240	9240	5180	5960	6475	6475
AGUS26-3	4 1/2	12	4 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS28-3	4 1/2	12	4 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS210-3	4 1/2	12	4 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	6580	7565	8225	8865	4280	4920	5035	5035
AGUS212-3	4 1/2	12	4 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	7895	9080	9240	9240	5180	5960	6475	6475
AGUS26-3T	4 1/2	12	5	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	3945	4540	4935	5035	2700	2700	2700	2700
AGUS28-3T	4 1/2	12	5	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	5265	6050	6580	7410	3380	3485	3485	3485
AGUS210-3T	4 1/2	12	5	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	6580	7565	8225	8865	4280	4920	5035	5035
AGUS212-3T	4 1/2	12	5	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	7895	9080	9240	9240	5180	5960	6475	6475

Douglas Fir-Larch (0.50 Specific Gravity)																	
PRODUCT CODE	SUPPORTED MEMBER	PRODUCT GAUGE	HANGER DIMENSION			COMMON NAIL TYPE FASTNERS				ALLOWABLE DOWNWARD LOADS				ALLOWABLE UPWARD LOADS			
			CLEAR WIDTH (in)	OVERALL HEIGHT (in)	OVERALL DEPTH (in)	JOIST		HEADER		LOAD DURATION FACTOR				LOAD DURATION FACTOR			
						SIZE	QTY	SIZE	QTY	1	1.15	1.25	1.6	1	1.15	1.25	1.6
AGUS26	1 1/2	12	1 5/8	5 7/16	4 1/4	0.148"x1.5"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS28	1 1/2	12	1 5/8	6 15/16	4 1/4	0.148"x1.5"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS210	1 1/2	12	1 5/8	8 15/16	4 1/4	0.148"x1.5"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS212	1 1/2	12	1 5/8	10 15/16	4 1/4	0.148"x1.5"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475
AGUS26-2	3	12	3 1/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS28-2	3	12	3 1/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS210-2	3	12	3 1/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS212-2	3	12	3 1/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475
AGUS26-2T	3	12	3 7/16	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS28-2T	3	12	3 7/16	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS210-2T	3	12	3 7/16	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS212-2T	3	12	3 7/16	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475
AGUS46	3 1/2	12	3 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS48	3 1/2	12	3 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS410	3 1/2	12	3 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS412	3 1/2	12	3 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475
AGUS26-3	4 1/2	12	4 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS28-3	4 1/2	12	4 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS210-3	4 1/2	12	4 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS212-3	4 1/2	12	4 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475
AGUS26-3T	4 1/2	12	5	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4560	5035	5035	5035	2700	2700	2700	2700
AGUS28-3T	4 1/2	12	5	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6085	6995	7410	7410	3485	3485	3485	3485
AGUS210-3T	4 1/2	12	5	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	7605	8745	8865	8865	4945	5035	5035	5035
AGUS212-3T	4 1/2	12	5	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9125	9240	9240	9240	5985	6475	6475	6475

Southern Pine (0.55 Specific Gravity)																	
PRODUCT CODE	SUPPORTED MEMBER	PRODUCT GAUGE	HANGER DIMENSION			COMMON NAIL TYPE FASTNERS				ALLOWABLE DOWNWARD LOADS				ALLOWABLE UPWARD LOADS			
			CLEAR WIDTH (in)	OVERALL HEIGHT (in)	OVERALL DEPTH (in)	JOIST		HEADER		LOAD DURATION FACTOR				LOAD DURATION FACTOR			
						SIZE	QTY	SIZE	QTY	1	1.15	1.25	1.6	1	1.15	1.25	1.6
AGUS26	1 1/2	12	1 5/8	5 7/16	4 1/4	0.148"x1.5"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS28	1 1/2	12	1 5/8	6 15/16	4 1/4	0.148"x1.5"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS210	1 1/2	12	1 5/8	8 15/16	4 1/4	0.148"x1.5"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS212	1 1/2	12	1 5/8	10 15/16	4 1/4	0.148"x1.5"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475
AGUS26-2	3	12	3 1/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS28-2	3	12	3 1/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS210-2	3	12	3 1/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS212-2	3	12	3 1/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475
AGUS26-2T	3	12	3 7/16	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS28-2T	3	12	3 7/16	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS210-2T	3	12	3 7/16	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS212-2T	3	12	3 7/16	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475
AGUS46	3 1/2	12	3 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS48	3 1/2	12	3 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS410	3 1/2	12	3 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS412	3 1/2	12	3 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475
AGUS26-3	4 1/2	12	4 5/8	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS28-3	4 1/2	12	4 5/8	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS210-3	4 1/2	12	4 5/8	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS212-3	4 1/2	12	4 5/8	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475
AGUS26-3T	4 1/2	12	5	5 7/16	4 1/4	0.148"x3.0"	24	0.162"x3.5"	30	4925	5035	5035	5035	2700	2700	2700	2700
AGUS28-3T	4 1/2	12	5	6 15/16	4 1/4	0.148"x3.0"	30	0.162"x3.5"	40	6565	7410	7410	7410	3485	3485	3485	3485
AGUS210-3T	4 1/2	12	5	8 15/16	4 1/4	0.148"x3.0"	38	0.162"x3.5"	50	8210	8865	8865	8865	5035	5035	5035	5035
AGUS212-3T	4 1/2	12	5	10 15/16	4 1/4	0.148"x3.0"	46	0.162"x3.5"	60	9240	9240	9240	9240	6455	6475	6475	6475

H
HR

HEAVY JOIST HANGERS

Design Features . . constant dimensional accuracy and precision controlled 90° angles assure proper joist bearing (flat seat) and header connection and alignment. This design reliability is the result of using positive-control dies, automated machinery, skilled operators, and prime quality galvanized steel. Two design styles are available for application and load-bearing flexibility.

Stock No. Design Configuration

H ( ) Standard

HR( ) Reversed face flange (turned in) for 3xs and larger joist sizes

Custom **H** hangers are available on special order with face flange configurations to suit a variety of special applications. New additional triangle nailing gives higher load values for the larger load requirements. Achieve your extra margin of safety without using **N20** nails, which may split the wood.

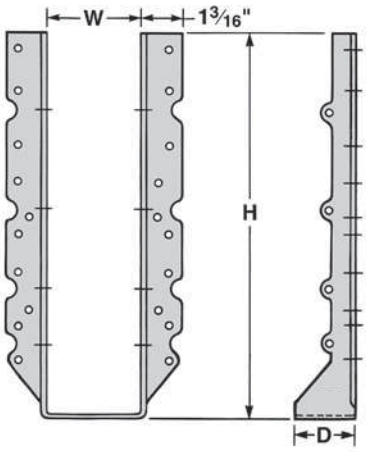
- **Joist sizes . .** 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs and triple 2xs . . also available on special order for rough beam and glulam sizes. When ordering, specify the **W**, **D** and **H** dimensions.

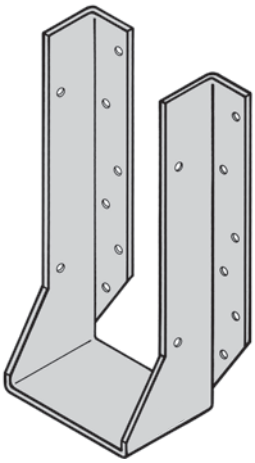
Material . . 14 ga. galvanized steel. Stainless steel joist hangers are available for **H** (16 ga. austenitic nickel chromium stainless steel). Type 304 is a special order only.

Loads . . nailing schedule and design load capacities are consistent with those obtained in independent laboratory tests. The new nailing schedule designated by triangle shaped holes produces increased load values. This additional nailing replaces the obsolete **HD** hangers. The values listed as "max" on the item table correspond to the **HD** load values shown in the ICC Evaluation Service Report 2929.

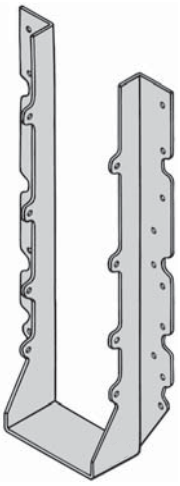
Special . . modified **H** hangers can be obtained with one flange turned inside, with both flanges in the same direction as the joist side, or with only one flange bent and one unbent for asymmetrical designs. Specify rights and lefts.

Skewed and Sloped Hangers . . (see page 43) available, specify angle (67½° max.) and whether left or right, up or down. Not available in **HR( )** reversed flange styles. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

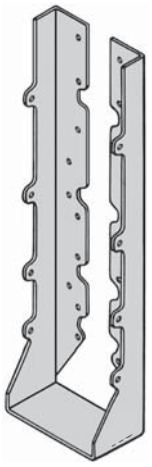




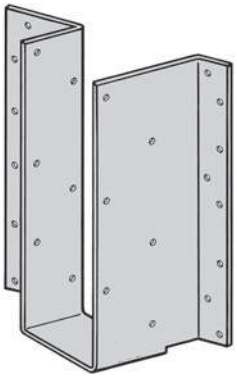
CUSTOM "H" HANGER



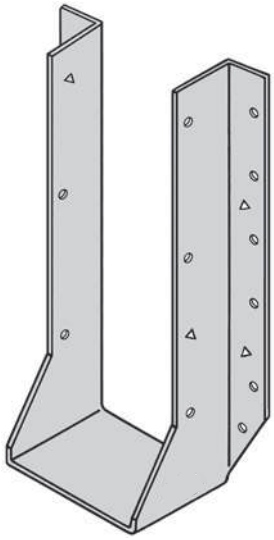
H416



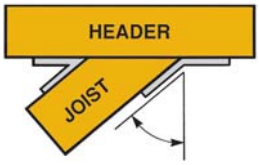
HR416 REVERSED



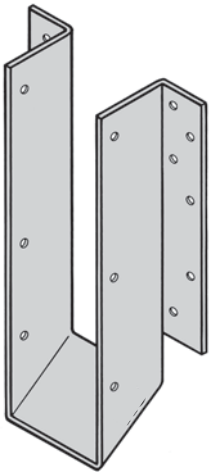
SKEWED LEFT



"H" Hanger with Triangle Nailing (Max Type Nailing)



Top View – Skewed Left

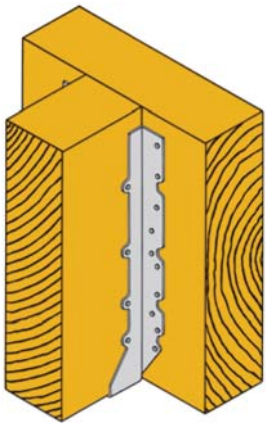


SLOPED DOWN

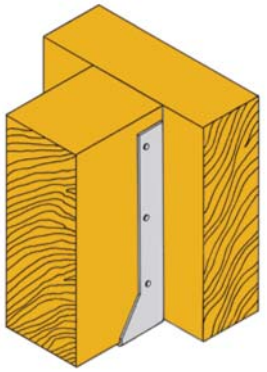
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
H24/H26	HU24/HU26	2 x 4 / 2 x 6	2	1 9/16	3 1/16	4-16d	2-10d x 1 1/2	545	680	260
H28	HU28	2 x 8	2	1 9/16	5 1/4	6-16d	4-10d x 1 1/2	815	1020	515
H210	HU210	2 x 10	2	1 9/16	7 1/4	8-16d	4-10d x 1 1/2	1090	1360	515
H212	HU212	2 x 12	2	1 9/16	9 3/8	10-16d	6-10d x 1 1/2	1360	1700	775
H214	HU214	2 x 14	2	1 9/16	10 1/8	12-16d	6-10d x 1 1/2	1630	2040	775
H216	HU216	2 x 16	2	1 9/16	13	18-16d	8-10d x 1 1/2	2450	3060	1035
H34	HU34	3 x 4	2	2 9/16	3	4-16d	2-10d x 1 1/2	545	680	260
H36	HU36	3 x 6	2	2 9/16	5	8-16d	4-10d x 1 1/2	1090	1360	515
H38	HU38	3 x 8	2	2 9/16	6 3/4	10-16d	4-10d x 1 1/2	1360	1700	515
H310	HU310	3 x 10	2	2 9/16	8 3/8	14-16d	6-10d x 1 1/2	1905	2380	775
H312	HU312	3 x 12	2	2 9/16	10 1/8	16-16d	6-10d x 1 1/2	2175	2720	775
H314	HU314	3 x 14	2	2 9/16	11 7/8	18-16d	8-10d x 1 1/2	2450	3060	1035
H316	HU316	3 x 16	2	2 9/16	13 5/8	20-16d	8-10d x 1 1/2	2720	3400	1035
H44	HU44	4 x 4	2	3 9/16	3	4-16d	2-10d	545	680	305
H46 min	HU46 min	4 x 6	2	3 9/16	5	8-16d	4-10d	1090	1360	615
H46 max	HU46 max	4 x 6	2 1/2	3 9/16	5	12-16d	6-10d	1630	2040	920
H48 min	HU48 min	4 x 8	2	3 9/16	6 5/8	10-16d	4-10d	1360	1700	615
H48 max	HU48 max	4 x 8	2 1/2	3 9/16	6 5/8	14-16d	6-10d	1905	2380	920
H410 min	HU410 min	4 x 10	2	3 9/16	8 3/8	14-16d	6-10d	1905	2380	920
H410 max	HU410 max	4 x 10	2 1/2	3 9/16	8 3/8	18-16d	10-10d	2450	3060	1535
H412 min	HU412 min	4 x 12	2	3 9/16	10 3/8	16-16d	6-10d	2175	2720	920
H412 max	HU412 max	4 x 12	2 1/2	3 9/16	10 3/8	22-16d	10-10d	2990	3740	1535
H414 min	HU414 min	4 x 14	2	3 9/16	11 7/8	18-16d	8-10d	2450	3060	1225
H414 max	HU414 max	4 x 14	2 1/2	3 9/16	11 7/8	24-16d	12-10d	3265	4080	1840
H416 min	HU416 min	4 x 16	2	3 9/16	13 5/8	20-16d	8-10d	2720	3400	1225
H416 max	HU416 max	4 x 16	2 1/2	3 9/16	13 5/8	26-16d	12-10d	3535	4420	1840
H66 min	HU66 min	6 x 6	2	5 1/2	5 1/8	8-16d	4-16d	1090	1360	725
H66 max	HU66 max	6 x 6	2 1/2	5 1/2	5 1/8	12-16d	6-16d	1630	2040	1090
H68 min	HU68 min	6 x 8	2	5 1/2	6 5/8	10-16d	4-16d	1360	1700	725
H68 max	HU68 max	6 x 8	2 1/2	5 1/2	6 5/8	14-16d	6-16d	1905	2380	1090
H610 min	HU610 min	6 x 10	2	5 1/2	8 3/8	14-16d	6-16d	1905	2380	1090
H610 max	HU610 max	6 x 10	2 1/2	5 1/2	8 3/8	18-16d	8-16d	2450	3060	1450
H612 min	HU612 min	6 x 12	2	5 1/2	10 1/8	16-16d	6-16d	2175	2720	1090
H612 max	HU612 max	6 x 12	2 1/2	5 1/2	10 1/8	22-16d	8-16d	2990	3740	1450
H614 min	HU614 min	6 x 14	2	5 1/2	11 7/8	18-16d	8-16d	2450	3060	1450
H614 max	HU614 max	6 x 14	2 1/2	5 1/2	11 7/8	24-16d	12-16d	3265	4080	2175
H616 min	HU616 min	6 x 16	2	5 1/2	13 5/8	20-16d	8-16d	2720	3400	1450
H616 max	HU616 max	6 x 16	2 1/2	5 1/2	13 5/8	26-16d	12-16d	3535	4420	2175
H88 min	HU88 min	8 x 8	2	7 1/2	6 5/8	10-16d	4-16d	1360	1700	725
H88 max	HU88 max	8 x 8	2 1/2	7 1/2	6 5/8	14-16d	6-16d	1905	2380	1090
H810 min	HU810 min	8 x 10	2	7 1/2	8 3/8	14-16d	6-16d	1905	2380	1090
H810 max	HU810 max	8 x 10	2 1/2	7 1/2	8 3/8	18-16d	8-16d	2450	3060	1450
H812 min	HU812 min	8 x 12	2	7 1/2	10 1/8	16-16d	6-16d	2175	2720	1090
H812 max	HU812 max	8 x 12	2 1/2	7 1/2	10 1/8	22-16d	8-16d	2990	3740	1450
H814 min	HU814 min	8 x 14	2	7 1/2	11 7/8	18-16d	8-16d	2450	3060	1450
H814 max	HU814 max	8 x 14	2 1/2	7 1/2	11 7/8	24-16d	12-16d	3265	4080	2175
H816 min	HU816 min	8 x 16	2	7 1/2	13 5/8	20-16d	8-16d	2720	3400	1450
H816 max	HU816 max	8 x 16	2 1/2	7 1/2	13 5/8	26-16d	12-16d	3535	4420	2175
H24-2	HU24-2	(2) 2 x 4	2	3 1/8	3 1/8	4-16d	2-10d	545	680	305
H26-2 min	HU26-2 min	(2) 2 x 6	2	3 1/8	5 1/8	8-16d	4-10d	1090	1360	615
H26-2 max	HU26-2 max	(2) 2 x 6	2 1/2	3 1/8	5 1/8	12-16d	6-10d	1630	2040	920
H28-2 min	HU28-2 min	(2) 2 x 8	2	3 1/8	6 3/4	10-16d	4-10d	1630	1700	615
H28-2 max	HU28-2 max	(2) 2 x 8	2 1/2	3 1/8	6 3/4	14-16d	6-10d	1905	2380	920
H210-2 min	HU210-2 min	(2) 2 x 10	2	3 1/8	8 1/2	14-16d	6-10d	1905	2380	920
H210-2 max	HU210-2 max	(2) 2 x 10	2 1/2	3 1/8	8 1/2	18-16d	10-10d	2450	3060	1535
H212-2 min	HU212-2 min	(2) 2 x 12	2	3 1/8	10 1/4	16-16d	6-10d	2175	2720	920
H212-2 max	HU212-2 max	(2) 2 x 12	2 1/2	3 1/8	10 1/4	22-16d	10-10d	2990	3740	1535
H214-2 min	HU214-2 min	(2) 2 x 14	2	3 1/8	12	18-16d	8-10d	2450	3060	1225
H214-2 max	HU214-2 max	(2) 2 x 14	2 1/2	3 1/8	12	24-16d	12-10d	3265	4080	1840
H216-2 min	HU216-2 min	(2) 2 x 16	2	3 1/8	13 3/4	20-16d	8-10d	2720	3400	1225
H216-2 max	HU216-2 max	(2) 2 x 16	2 1/2	3 1/8	13 3/4	26-16d	12-10d	3535	4420	1840
H26-3 min	HU26-3 min	(3) 2 x 6	2	4 11/16	5 1/8	8-16d	4-10d	1090	1360	615
H26-3 max	HU26-3 max	(3) 2 x 6	2 1/2	4 11/16	5 1/8	12-16d	6-10d	1630	2040	920
H28-3 min	HU28-3 min	(3) 2 x 8	2	4 11/16	6 3/4	10-16d	4-10d	1360	1700	615
H28-3 max	HU28-3 max	(3) 2 x 8	2 1/2	4 11/16	6 3/4	14-16d	6-10d	1905	2380	920
H210-3 min	HU210-3 min	(3) 2 x 10	2	4 11/16	8 3/8	14-16d	6-10d	1905	2380	920
H210-3 max	HU210-3 max	(3) 2 x 10	2 1/2	4 11/16	8 3/8	18-16d	10-10d	2450	3060	1535
H212-3 min	HU212-3 min	(3) 2 x 12	2	4 11/16	10 1/4	16-16d	6-10d	2175	2720	920
H212-3 max	HU212-3 max	(3) 2 x 12	2 1/2	4 11/16	10 1/4	22-16d	10-10d	2990	3740	1535
H214-3 min	HU214-3 min	(3) 2 x 14	2	4 11/16	12	18-16d	8-10d	2450	3060	1225
H214-3 max	HU214-3 max	(3) 2 x 14	2 1/2	4 11/16	12	24-16d	12-10d	3265	4080	1840
H3.25/12 min	HU3.25/12 min	3 1/8	2	3 1/4	10 1/8	16-16d	6-10d	2175	2720	920
H3.25/12 max	HU3.25/12 max	3 1/8	2 1/2	3 1/4	11 3/4	24-16d	12-10d	3265	4080	1840
H3.25/16 min	HU3.25/16 min	3 1/8	2	3 1/4	13 5/8	20-16d	8-10d	2720	3400	1225
H3.25/16 max	HU3.25/16 max	3 1/8	2 1/2	3 1/4	13 5/8	26-16d	12-10d	3535	4420	1840
H5.25/12 min	HU5.25/12 min	5 1/8	2	5 1/4	10 1/8	16-16d	6-16d	2175	2720	1090
H5.25/12 max	HU5.25/12 max	5 1/8	2 1/2	5 1/4	10 1/8	22-16d	8-16d	2990	3740	1450
H5.25/16 min	HU5.25/16 min	5 1/8	2	5 1/4	13 5/8	20-16d	8-16d	2720	3400	1450
H5.25/16 max	HU5.25/16 max	5 1/8	2 1/2	5 1/4	13 5/8	26-16d	12-16d	3585	4420	2175

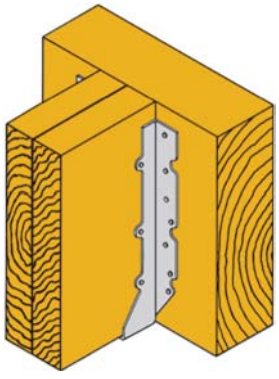
H
HR



H416



HR610



H210-2

HTF
HTFR

HEAVY TOP FLANGE JOIST HANGERS

Design Features . . the addition of a top flange meets specifications for schools and public buildings, where added strength, support, and safety are prime requirements. Two design styles are available for applications and load-bearing flexibility.

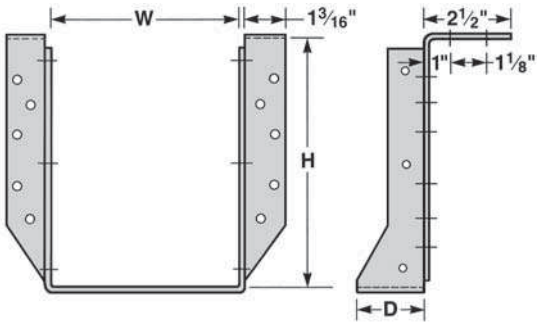
Stock No.	Design Configuration
HTF ( )	Standard
HTF ( ) R	Reversed face flange (turned in) for 3xs and larger joist sizes

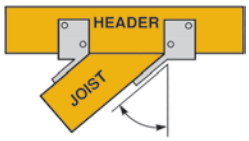
- **Joist sizes . .** 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs, triple 2xs, 3⅛" and 5⅛" glulam . . also available on special order for rough beam and larger glulam sizes. When ordering, specify the **W**, **D** and **H** dimensions.

Material . . 12 ga. galvanized steel.

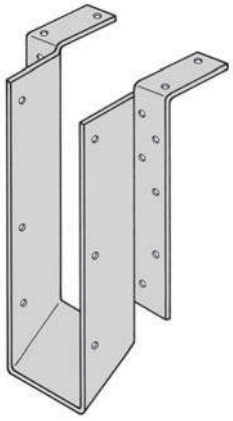
Loads . . two-plane nailing schedule offers extra support and load strength where mechanical vibration is a factor.

Skewed and Sloped Hangers . . (see page 43) available, specify angle (67½° max.) and whether left or right, up or down. Not available in **HTF( )R** reversed flange styles. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

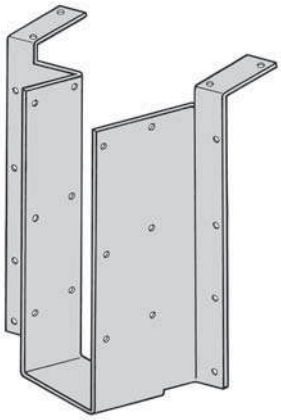




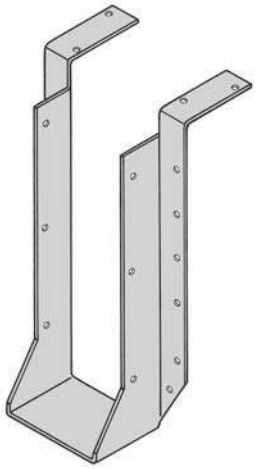
Top View – Skewed Left



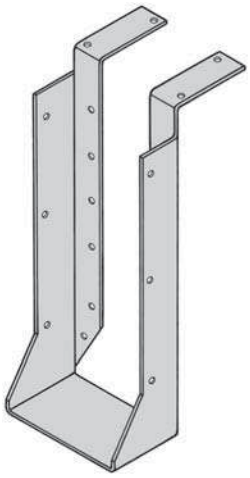
Sloped Down



Skewed Left



HTF412



HTFR412 (Reversed)

PANELIZED ROOF HANGERS

PH
PHG
PHLTF
PHGLTF

PANEL HANGERS/PANEL HANGERS GRIP LOCK

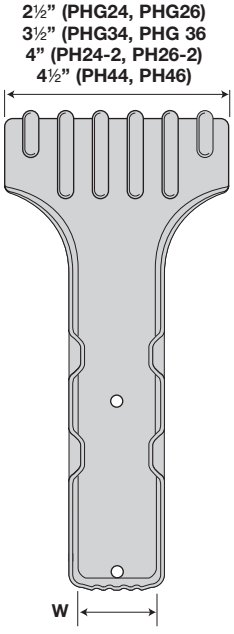
Design Features . . are specifically engineered for the panelized roof construction industry where it is standard procedure to nail through the (plywood) sheathing and through the **PHG** hanger top flange, using one 10d x 2⅛" nail placed in the middle third of the top flange, no closer than ¼" from the back edge of the hanger. The seat nail is non-structural and does not contribute to the load value. **PHG** – vertical grooves grip the stiffener without nails for faster, more economical prefabricated panels. Grip-lock panel hanger will not fall off during transportation or installation.

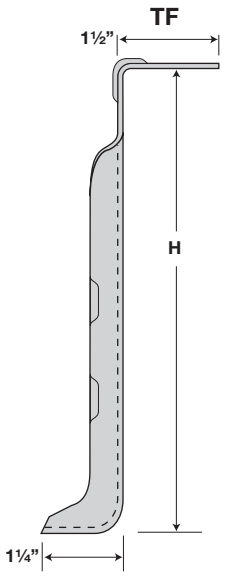
- **Joist sizes . .** 2xs, double 2xs, 3xs and 4xs.

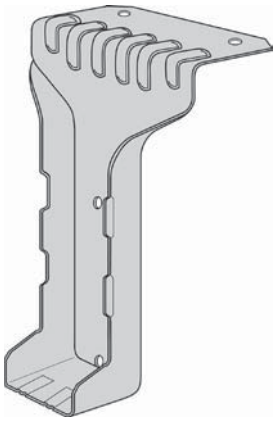
Material . . 18 ga. galvanized steel.

Loads . . based on independent laboratory test results conforming to codes.

Long Top Flange Hangers . . available only in 2x4 and 2x6 style to order and identified as **PHG-LTF** (example **PHG26** with long top flange, specify as **PHG26LTF**).





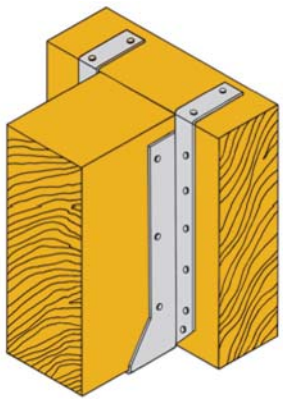


PHG26LTF

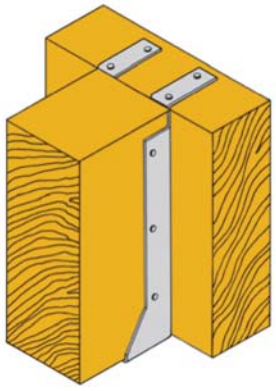
For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS
			D	W	H	TF	FACE	JOIST	NORMAL LBS	MAX LBS	
HTF24	HU24TF	2 x 4	2	1 9/16	3 1/2	4-16d	2-16d	2-10d x 1 1/2	2090	2100	260
HTF26	HU26TF	2 x 6	2	1 9/16	5 3/8	4-16d	6-16d	4-10d x 1 1/2	2310	2420	580
HTF28	HU28TF	2 x 8	2	1 9/16	7 1/4	4-16d	6-16d	4-10d x 1 1/2	2335	2420	580
HTF210	HU210TF	2 x 10	2	1 9/16	9 1/4	4-16d	8-16d	4-10d x 1 1/2	2335	2420	580
HTF212	HU212TF	2 x 12	2	1 9/16	11 1/8	4-16d	10-16d	6-10d x 1 1/2	2530	2690	870
HTF214	HU214TF	2 x 14	2	1 9/16	13 1/8	4-16d	12-16d	6-10d x 1 1/2	3000	3160	870
HTF216	HU216TF	2 x 16	2	1 9/16	15 1/8	4-16d	14-16d	8-10d x 1 1/2	3215	3435	1310
HTF34	HU34TF	3 x 4	2	2 9/16	3 1/2	4-16d	4-16d	2-10d x 1 1/2	3000	3285	515
HTF36	HU36TF	3 x 6	2	2 9/16	5 3/8	4-16d	6-16d	4-10d x 1 1/2	3295	3900	555
HTF38	HU38TF	3 x 8	2	2 9/16	7 1/4	4-16d	8-16d	4-10d x 1 1/2	3900	4000	775
HTF310	HU310TF	3 x 10	2	2 9/16	9 1/4	4-16d	10-16d	6-10d x 1 1/2	4170	4360	775
HTF312	HU312TF	3 x 12	2	2 9/16	11 1/8	4-16d	12-16d	6-10d x 1 1/2	4335	4715	1035
HTF314	HU314TF	3 x 14	2	2 9/16	13 1/8	4-16d	14-16d	8-10d x 1 1/2	4715	5430	1310
HTF316	HU316TF	3 x 16	2	2 9/16	15 1/8	4-16d	16-16d	8-10d x 1 1/2	4715	5430	1310
HTF44	HU44TF	4 x 4	2	3 9/16	3 1/2	4-16d	4-16d	2-10d	3000	3285	330
HTF46	HU46TF	4 x 6	2	3 9/16	5 3/8	4-16d	6-16d	4-10d	3285	3645	655
HTF48	HU48TF	4 x 8	2	3 9/16	7 1/4	4-16d	8-16d	4-10d	3570	4000	655
HTF410	HU410TF	4 x 10	2	3 9/16	9 1/4	4-16d	10-16d	6-10d	4150	4360	985
HTF412	HU412TF	4 x 12	2	3 9/16	11 1/8	4-16d	12-16d	6-10d	4550	5105	985
HTF414	HU414TF	4 x 14	2	3 9/16	13 1/8	4-16d	14-16d	8-10d	4830	5075	1310
HTF416	HU416TF	4 x 16	2	3 9/16	15 1/8	4-16d	16-16d	8-10d	5050	5430	1310
HTF66	HU66TF	6 x 6	2	5 1/2	5 3/8	4-16d	6-16d	4-10d	3410	3530	760
HTF68	HU68TF	6 x 8	2	5 1/2	7 1/4	4-16d	8-16d	4-10d	3570	3830	760
HTF610	HU610TF	6 x 10	2	5 1/2	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF612	HU612TF	6 x 12	2	5 1/2	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF614	HU614TF	6 x 14	2	5 1/2	13 1/8	4-16d	14-16d	8-10d	4830	5450	1525
HTF616	HU616TF	6 x 16	2	5 1/2	15 1/8	4-16d	16-16d	8-10d	5105	5795	1525
HTF88	—	8 x 8	2	7 1/2	7 1/4	4-16d	8-16d	4-10d	3570	3830	760
HTF810	—	8 x 10	2	7 1/2	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF812	—	8 x 12	2 1/2	7 1/2	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF814	—	8 x 14	2 1/2	7 1/2	13 1/8	4-16d	14-16d	8-10d	4830	5405	1525
HTF816	—	8 x 16	2 1/2	7 1/2	15 1/8	4-16d	16-16d	8-10d	5105	5795	1525
HTF24-2	HU24-2TF	(2) 2 x 4	2	3 1/8	3 1/2	4-16d	4-16d	2-10d	3000	3285	330
HTF26-2	HU26-2TF	(2) 2 x 6	2	3 1/8	5 3/8	4-16d	6-16d	4-10d	3725	3400	655
HTF28-2	HU28-2TF	(2) 2 x 8	2	3 1/8	7 1/4	4-16d	8-16d	4-10d	3900	4000	655
HTF210-2	HU210-2TF	(2) 2 x 10	2	3 1/8	9 1/4	4-16d	10-16d	6-10d	4170	4360	985
HTF212-2	HU212-2TF	(2) 2 x 12	2	3 1/8	11 1/8	4-16d	12-16d	6-10d	4325	4880	985
HTF214-2	HU214-2TF	(2) 2 x 14	2 1/2	3 1/8	13 1/8	4-16d	14-16d	8-10d	4335	5075	1310
HTF216-2	HU216-2TF	(2) 2 x 16	2 1/2	3 1/8	15 1/8	4-16d	16-16d	8-10d	4715	5430	1310
HTF210-3	HU210-3TF	(3) 2 x 10	2	4 11/16	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF212-3	HU212-3TF	(3) 2 x 12	2 1/2	4 11/16	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF214-3	HU214-3TF	(3) 2 x 14	2 1/2	4 11/16	13 1/8	4-16d	14-16d	8-10d	4835	5050	1525
HTF216-3	HU216-3TF	(3) 2 x 16	2 1/2	4 11/16	15 1/8	4-16d	16-16d	8-10d	5050	5145	1525
HTF3.25/12	HU3.25/12TF	3 1/8	2 1/2	3 1/4	12	4-16d	12-16d	6-10d	4325	4880	1145
HTF3.25/16.5	HU3.25/16.5TF	3 1/8	2 1/2	3 1/4	16 1/2	4-16d	16-16d	8-10d	5050	5430	1525
HTF5.25/12	HU5.25/12TF	5 1/8	2 1/2	5 1/4	12	4-16d	12-16d	6-16d	4550	5105	1145
HTF5.25/16.5	HU5.25/16.5TF	5 1/8	2 1/2	5 1/4	16 1/2	4-16d	16-16d	8-16d	5105	5795	1525

HTF
HTFR



HTF412



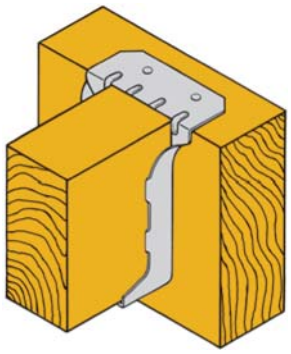
HTFR412 Reversed

PANELIZED ROOF HANGERS

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD	
			W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS
PH24LTF	—	2 x 4	1 9/16	3 1/2	1 1/2	2-10d	1-10d	685	685
PH24-2	F24-2	(2) 2 x 4	3 1/8	3 1/2	1 3/16	2-10d	2-10d	820	820
PH26LTF	—	2 x 6	1 9/16	5 3/8	1 1/2	2-10d	1-10d	685	685
PH26-2	F26-2	(2) 2 x 6	3 1/8	5 3/8	1 3/16	2-10d	2-10d	820	820
PH34	F34	3 x 4	2 9/16	3 1/2	1 3/16	2-10d	1-10d	820	820
PH36	F36	3 x 6	2 9/16	5 3/8	1 3/16	2-10d	1-10d	820	820
PH44	F44	4 x 4	3 9/16	3 1/2	1 3/16	2-10d	1-10d	1000	1000
PH46	F46	4 x 6	3 9/16	5 3/8	1 3/16	2-10d	1-10d	1000	1000
PHG24	F24N	2 x 4	1 9/16	3 1/2	1 3/16	2-10d	Grip	605	605
PHG24LTF	HF24N	2 x 4	1 9/16	3 1/2	1 1/2	2-10d	Grip	685	685
PHG26	F26N	2 x 6	1 9/16	5 3/8	1 3/16	2-10d	Grip	605	605
PHG26LTF	HF26N	2 x 6	1 9/16	5 3/8	1 1/2	2-10d	Grip	685	685
PHG34	F34N	3 x 4	2 9/16	3 1/2	1 3/16	2-10d	Grip	820	820
PHG36	F36N	3 x 6	2 9/16	5 3/8	1 3/16	2-10d	Grip	820	820
PHG44	—	4 x 4	3 9/16	3 1/2	1 3/16	2-10d	Grip	1000	1000
PHG46	—	4 x 6	3 9/16	5 3/8	1 3/16	2-10d	Grip	1000	1000

PH
PHG
PHLTF
PHGLTF



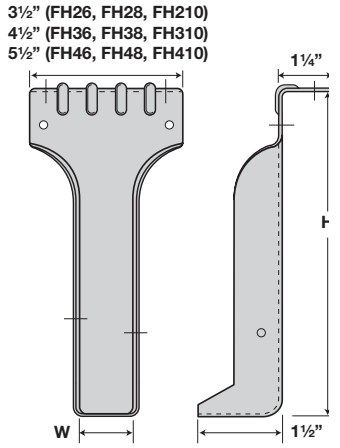
PHG24

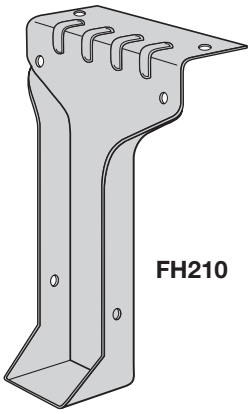
FH FORMED HANGERS

Design Features . . both the **FH** top flange hangers are designed for labor-saving, fast joist seating. The key to this 25%-50% faster installation is the dimension and angle accuracy, the result of positive control dies and 1-piece design. The resultant flat seat assures a perfect ceiling, and the ⅛" single thickness expands hanger use to floor construction with increased load-carrying capacities.

- **Joist sizes . .** 2 x 6 to 2 x 10
  3 x 6 to 3 x 10
  4 x 6 to 4 x 10

Material . . FH - 18 ga. galvanized steel.





FH210

JOIST AND PURLIN HANGERS

RS RSO RSH RSG RSGH ROOF STRUCTURE JOIST AND PURLIN HANGERS

Design Features . . the **RS** series provide the architect and builder with a wide variety of product sizes and load capacities in 14 ga., 12 ga. galvanized or 3⁄16" prime quality steel. The series is designed primarily for use in panelized roof construction. One-piece design from positive control dies also incorporates easy access, full side flanges for added support . . increased bearing areas (**D** and **TF**) for greater load capacity. There are no elongated holes.

Material . . 14 ga. and 12 ga. heavy-coated galvanized steel or 3⁄16" prime quality steel. Weldable, non-toxic hot roll sheet is available for steel fabricators.
RS2x – 14 ga. galvanized steel.
RS3x, 4x, 6x – 12 ga. galvanized steel.
RSO4x – 12 ga. galvanized steel.
RSH, **RSG**, **RSGH** – 3⁄16" prime quality steel.
Nails . . RSH, RSG and RSGH N25, furnished.
Finish . . RSH, **RSG** and **RSGH** ***SUPERSPEED*** gray paint.

Design Dimensions . . H is sized to account for normal joist shrinkage. Specify if special **H** dimensions are required. **W** dimensions listed are for dressed timber widths as noted. **W** dimensions for **RSH**, **RSG** and **RSGH** in glulam sizes will be slightly oversize to facilitate erection. Laminated and other special hangers are made to order. The standard **H** dimensions found in the adjoining tables have an allowance to compensate for common shrinkage conditions. Specify if **W** dimensions are required.

Loads . . average ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Uplift Values . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC. (HNP) Hayward Nail Pattern is also available for additional uplift. To order Uplift sizes add "U" to stock No. (example **RSU616**).

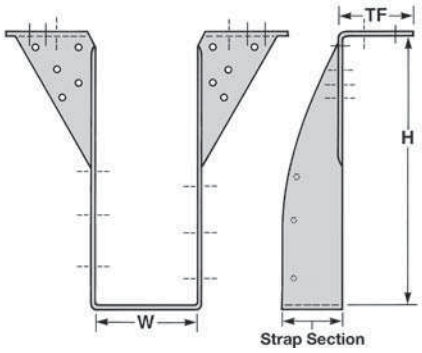
Welding . . on saddle hangers (illus.) is done by ***SUPERSPEED*** certified welders.

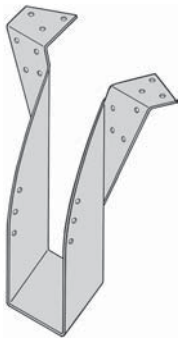
Saddle Hangers . . are available and made to the engineer's specifications. They may be used for most conditions except at end wall and are especially recommended for nailer (sleeper) applications. Specify **S** dimensions as well as **W** and **H** dimensions.

Skewed Hangers . . (see page 43)

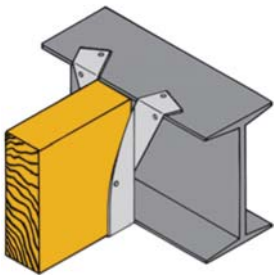
Sloped Hangers . . available, specify angle and whether sloped up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.

This series may be used for weld-on applications. The minimum required weld to the top flanges is ⅛" x 2" fillet weld to each side of each top flange tab. Distribute the weld equally on both top flanges. Weld-on applications produce the maximum design loads listed. Uplift loads do not apply to this application.

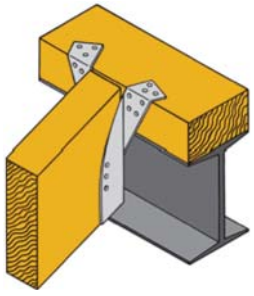




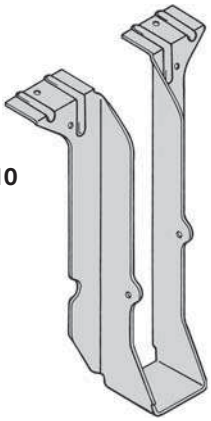
Sloped Down



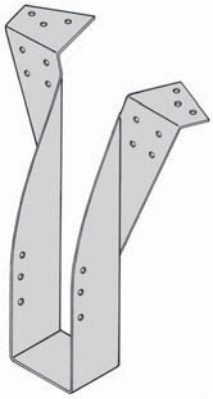
Weld-On Application Optional Installation with Code-Approved Power Actuated Systems



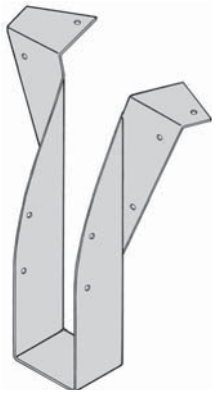
Nailer (Sleeper) Application



RS210



RS414

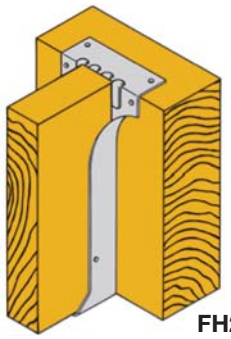


RSH414

FH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
FH26	—	2 x 6	1 9/16	5 3/8	4-16d	2-10d x 1 1/2	1210	1260	150
FH28	—	2 x 8	1 9/16	7 1/4	4-16d	2-10d x 1 1/2	1210	1260	150
FH210	—	2 x 10	1 9/16	9 1/4	4-16d	2-10d x 1 1/2	1210	1260	150
FH36	—	3 x 6	2 9/16	5 3/8	4-16d	2-10d	1210	1260	295
FH38	—	3 x 8	2 9/16	7 1/4	4-16d	2-10d	1210	1260	295
FH310	—	3 x 10	2 9/16	9 1/4	4-16d	2-10d	1210	1260	295
FH46	—	4 x 6	3 9/16	5 3/8	4-16d	2-10d	1210	1260	295
FH48	—	4 x 8	3 9/16	7 1/4	4-16d	2-10d	1210	1260	295
FH410	—	4 x 10	3 9/16	9 1/4	4-16d	2-10d	1210	1260	295



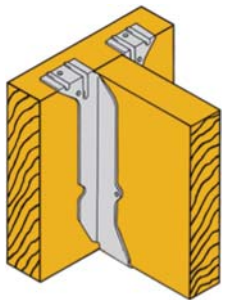
FH210

JOIST AND PURLIN HANGERS

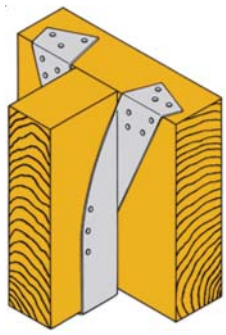
RS
RSO
RSH
RSG
RSGH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

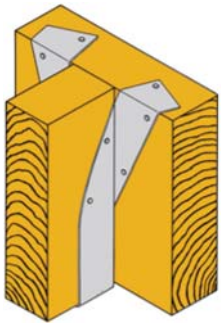
PRODUCT CODE	REF NO	JOIST	DIMENSIONS (INCHES)				NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS
			D	W	TF	H	TF	FACE	JOIST	NORMAL LBS	MAX LBS	
RS26	LB26	2 x 6	1 1/2	1 9/16	1 3/8	5 3/8	2-16d	2-16d	2-10d x 1 1/2	1575	1575	195
RS28	LB28	2 x 8	1 1/2	1 9/16	1 3/8	7 1/4	2-16d	2-16d	2-10d x 1 1/2	1575	1575	195
RS210	LB210	2 x 10	2	1 9/16	1 3/8	9 1/4	2-16d	2-16d	2-10d x 1 1/2	1835	1960	195
RS212	LB212	2 x 12	2	1 9/16	1 3/8	11 1/8	2-16d	2-16d	2-10d x 1 1/2	1835	1960	195
RS214	LB214	2 x 14	2	1 9/16	1 1/2	13 1/8	2-16d	2-16d	2-10d x 1 1/2	1835	1960	195
RS216	LB216	2 x 16	2	1 9/16	1 1/2	15 1/8	2-16d	2-16d	2-10d x 1 1/2	1835	1960	195
RS38	B38	3 x 8	2 1/2	2 9/16	2 1/2	7 1/4	6-16d	8-16d	6-16d x 2 1/2	3800	3800	1010
RS310	B310	3 x 10	2 1/2	2 9/16	2 1/2	9 1/4	6-16d	8-16d	6-16d x 2 1/2	3800	3800	1010
RS312	B312	3 x 12	2 1/2	2 9/16	2 1/2	11 1/8	6-16d	8-16d	6-16d x 2 1/2	3800	3800	1010
RS314	B314	3 x 14	2 1/2	2 9/16	2 1/2	13 1/8	6-16d	8-16d	6-16d x 2 1/2	3800	3800	1010
RS316	B316	3 x 16	2 1/2	2 9/16	2 1/2	15 1/8	6-16d	8-16d	6-16d x 2 1/2	3800	3800	1010
RS48	B48	4 x 8	2 1/2	3 9/16	2 1/2	7 1/4	6-16d	8-16d	6-16d	3800	3800	1010
RS410	B410	4 x 10	2 1/2	3 9/16	2 1/2	9 1/4	6-16d	8-16d	6-16d	3800	3800	1010
RS412	B412	4 x 12	2 1/2	3 9/16	2 1/2	11 1/8	6-16d	8-16d	6-16d	3800	3800	1010
RS414	B414	4 x 14	2 1/2	3 9/16	2 1/2	13 1/8	6-16d	8-16d	6-16d	3800	3800	1010
RS416	B416	4 x 16	2 1/2	3 9/16	2 1/2	15 1/8	6-16d	8-16d	6-16d	3800	3800	1010
RS412HNP	—	4 x 12	2 1/2	3 9/16	2 1/2	11 1/8	2-16d	4-16d	6-16d	4210	4210	1010
RS414HNP	—	4 x 14	2 1/2	3 9/16	2 1/2	13 1/8	2-16d	4-16d	6-16d	4210	4210	1010
RS416HNP	—	4 x 16	2 1/2	3 9/16	2 1/2	15 1/8	2-16d	4-16d	6-16d	4210	4210	1010
RSO412	HB412	4 x 12	3	3 9/16	2 1/2	11 1/8	2-16d	4-16d	6-16d	4300	4300	1010
RSO414	HB414	4 x 14	3	3 9/16	2 1/2	13 1/8	2-16d	4-16d	6-16d	4335	4335	1010
RSO416	HB416	4 x 16	3	3 9/16	2 1/2	15 1/8	2-16d	4-16d	6-16d	4335	4335	1010
RS68	B68	6 x 8	2 1/2	5 1/2	2 1/2	7 1/4	4-16d	6-16d	6-16d	4200	4200	1010
RS610	B610	6 x 10	2 1/2	5 1/2	2 1/2	9 1/4	4-16d	6-16d	6-16d	4200	4200	1010
RS612	B612	6 x 12	2 1/2	5 1/2	2 1/2	11 1/8	4-16d	6-16d	6-16d	4200	4200	1010
RS614	B614	6 x 14	2 1/2	5 1/2	2 1/2	13 1/8	4-16d	6-16d	6-16d	4200	4200	1010
RS616	B616	6 x 16	2 1/2	5 1/2	2 1/2	15 1/8	4-16d	6-16d	6-16d	4200	4200	1010
RSH412	HHB412	4 x 12	3	3 9/16	2 1/2	11 1/8	2-N25	2-N25	2-N25	4300	4300	530
RSH414	HHB414	4 x 14	3	3 9/16	2 1/2	13 1/8	2-N25	4-N25	4-N25	5135	5135	1055
RSH416	HHB416	4 x 16	3	3 9/16	2 1/2	15 1/8	2-N25	4-N25	4-N25	5135	5135	1055
RSH68	HHB68	6 x 8	2	5 1/2	2 1/2	7 1/4	2-N25	2-N25	2-N25	4300	4300	530
RSH610	HHB610	6 x 10	2	5 1/2	2 1/2	9 1/4	2-N25	2-N25	2-N25	4300	4300	530
RSH612	HHB612	6 x 12	3	5 1/2	2 1/2	11 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH614	HHB614	6 x 14	3	5 1/2	2 1/2	13 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH616	HHB616	6 x 16	3	5 1/2	2 1/2	15 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH812	HHB812	8 x 12	3	7 1/2	2 1/2	11 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH814	HHB814	8 x 14	3	7 1/2	2 1/2	13 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH816	HHB816	8 x 16	3	7 1/2	2 1/2	15 1/8	4-N25	6-N25	6-N25	6235	6235	1585
RSH3	HHB3	3 1/8 x Specify	3	3 1/4	2 1/2	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSH5	HHB5	5 1/8 x Specify	3	5 1/4	2 1/2	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSH7	HHB7	6 3/4 x Specify	3	6 7/8	2 1/2	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSG3	GB3	3 1/8 x Specify	3 1/2	3 1/4	2 1/2	Specify	4-N25	10-N25	6-N25	7215	7490	1585
RSG5	GB5	5 1/8 x Specify	3 1/2	5 1/4	2 1/2	Specify	4-N25	10-N25	6-N25	7370	8005	1585
RSG7	GB7	6 3/4 x Specify	3 1/2	6 7/8	2 1/2	Specify	4-N25	10-N25	6-N25	7370	8005	1585
RSGH5	HGB5	5 1/8 x Specify	4	5 1/4	2 1/2	Specify	4-N25	12-N25	6-N25	7885	8520	1585
RSGH7	HGB7	6 3/4 x Specify	4	6 7/8	2 1/2	Specify	4-N25	12-N25	6-N25	7885	8520	1585



RS210



RS414



RSH414

R
RA
RH
RHF
RHG
RHGF

ROOF JOIST/PURLIN HANGERS

Design Features . . of the **R** series offer a wide application flexibility, particularly to the panelized construction industry, including seven different versions:
(1) Standard versions
(2) Skewed versions
(3) Offset versions
(4) Saddle versions
(5) Seat sloped versions
(6) Top flange angled down versions
(7) Top flange open/closed versions

Additional design features provide easier, faster installation and greater load capacities and strength:

- Superior flange design
- Higher load values
- Stirrup design fully maximizes metal surface area where it is vital to construction needs.
  R – 2xs, 3xs and 4xs.
  RA – 3xs, 4xs, 6xs and double 2xs.
  RH – 4xs, 6xs and 8xs.
  RHG – glulam sizes.

Material . . 12 ga., 3⁄16" and ¼" prime quality steel.
R and **RA** series – 12 ga. and 3⁄16" steel.
RH series – 12 ga., 3⁄16" and ¼" steel.

Loads . . maximum ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three. All nail holes must be filled with correct nails to achieve **design loads!**

Uplift Values . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC. (HNP) Hayward Nail Pattern is also available for additional uplift. To order Uplift sizes add "U" to stock No. (example **RHU616**).

Finish . . ***SUPERSPEED*** Gray paint.

Design Dimensions . . H is sized to account for normal joist shrinkage. Specify if special **H** dimensions are required. **W** dimensions listed are for dressed timber widths as noted. Specify if special **W** dimensions are required.

Ordering/Specifying Information:

Skewed . . add SK to stock no., direction and angle of skew. (Example: **R210X SKL 30°**, **R** = Right, **L** = Left)

Offset . . add **OS** to stock no. and direction of offset, left or right. (Example: **R210X 0SL**, **R** = Right, **L** = Left)

Saddle . . add **S** to stock no. and width of supporting beams. (Example: **R210X S** = 5¼)

Sloped Seat . . add **SL** to stock no. and angle of slope (up or down). (Example: **R210XSLU15°**, **D** = Down, **U** = Up)

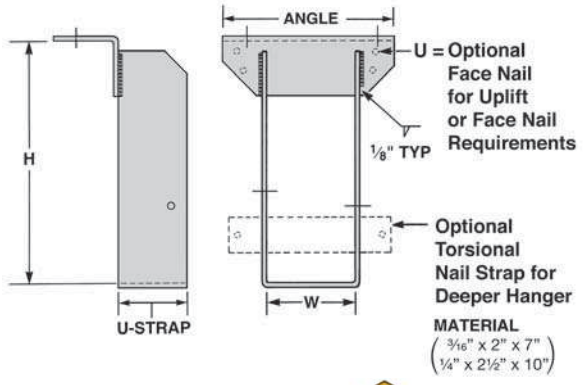
Top Flange Angled Down . . add **TFD** to stock no., direction and angle. (Example: **R210X TFDL15°**, **R** = Right, **L** = Left)

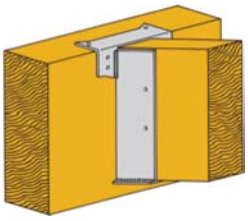
Top Flange Open . . add **TFO** to stock no. and angle. (Example: **R210X TFO20°**, **C** = Closed, **O** = Open)

Any of the above are available in a combination hanger. (Example: Offset right, skewed 45° left, sloped down 15°). (**R210X OSR/SKL45°/SLD15°**).

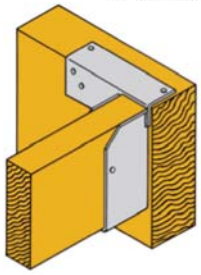
Skewed and Sloped Hangers . . available, specify angle (5O° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

Hangers may be welded to steel headers with ⅛" for **R**, 3⁄16" for **RA**, and ¼" for **RH** by 1½" fillet welds located at each end of the top flange. Weld-on applications produce maximum design load listed. Uplift loads do not apply to this application.

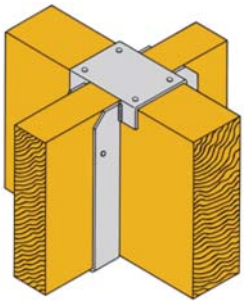




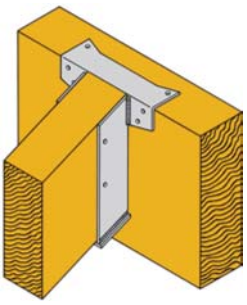
Skewed Right (Welded)



Top Flange Offset Pictured Left

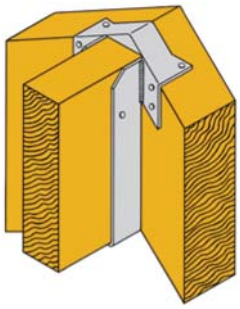


Saddle Version

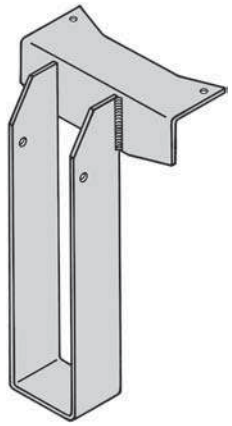


Sloped Down (Welded)

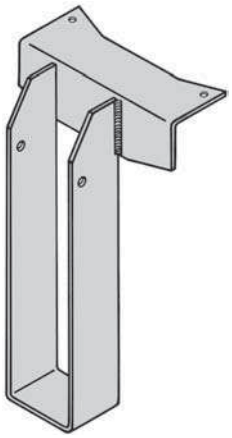
Angled Down Right
H = High Side



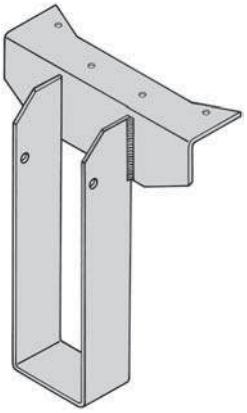
Double Angled



R410



RA414



RH414

TOP MOUNT HANGERS

TR

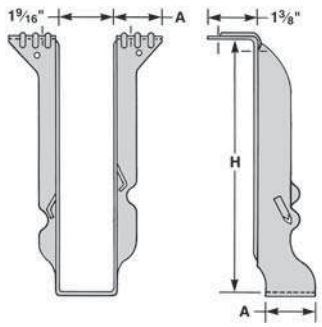
Design Features . . provide economical production framing with potential additional savings when hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connections. Top flange design provides automatic self-jigging.

- **Joist sizes . .** 2 x 4 through 2 x 16.

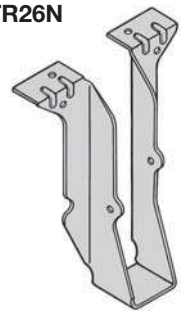
Material . . 18 ga. galvanized steel.

Prongs . . no joist nailing . . provide faster, easier installation.

Special . . for pole barn construction, use the **TR24N** or the **TR26N** with nailing into the joist, as needed.



TR26N



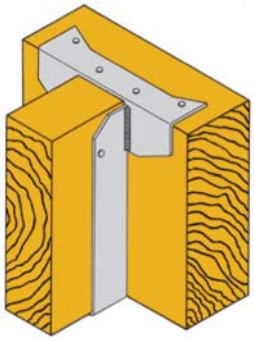
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	MATERIAL (INCHES)		DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD	
			ANGLE	"U" STRAP	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS
R26	W26	2 x 6	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	5⅜	2-10d	2-10d x 1½	2365	2365
R28	W28	2 x 8	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	7¼	2-10d	2-10d x 1½	2365	2365
R210	W210	2 x 10	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	9¼	2-10d	2-10d x 1½	2365	2365
R212	W212	2 x 12	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	11⅞	2-10d	2-10d x 1½	2365	2365
R214	W214	2 x 14	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	13⅞	2-10d	2-10d x 1½	2365	2365
R216	W216	2 x 16	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	1 9/16	15⅞	2-10d	2-10d x 1½	2365	2365
R38	W38	3 x 8	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	2 9/16	7¼	2-10d	2-10d x 1½	2365	2365
R310	W310	3 x 10	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	2 9/16	9¼	2-10d	2-10d x 1½	2365	2365
RA312	WNP312	3 x 12	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	2 9/16	11⅞	2-10d	2-10d x1½	3175	3175
RA314	WNP314	3 x 14	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	2 9/16	13⅞	2-10d	2-10d x 1½	3175	3175
RA316	WNP316	3 x 16	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	2 9/16	15⅞	2-10d	2-10d x 1½	3175	3175
RA26-2	WNP26-2	(2) 2 x 6	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	5⅜	2-10d	2-10d	3175	3175
RA28-2	WNP28-2	(2) 2 x 8	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	7¼	2-10d	2-10d	3175	3175
RA210-2	WNP210-2	(2) 2 x 10	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	9¼	2-10d	2-10d	3175	3175
RA212-2	WNP212-2	(2) 2 x 12	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	11⅞	2-10d	2-10d	3175	3175
RA214-2	WNP214-2	(2) 2 x 14	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	13⅞	2-10d	2-10d	3175	3175
RA216-2	WNP216-2	(2) 2 x 16	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3⅛	15⅞	2-10d	2-10d	3175	3175
R46	W46	4 x 6	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	3 9/16	5⅜	2-10d	2-10d	2365	2365
R48	W48	4 x 8	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	3 9/16	7¼	2-10d	2-10d	2365	2365
R410	W410	4 x 10	2¼ x 2¼ x 12 ga x 6½	2½ x 12 ga	3 9/16	9¼	2-10d	2-10d	2365	2365
RA412	WNP412	4 x 12	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3 9/16	11⅞	2-10d	2-10d	3175	3175
RA414	WNP414	4 x 14	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3 9/16	13⅞	2-10d	2-10d	3175	3175
RA416	WNP416	4 x 16	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3 9/16	15⅞	2-10d	2-10d	3175	3175
RA412HNP	-	4 x 12	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	3 9/16	11⅞	6-10d	4-10d	4085	4085
RA414HNP	-	4 x 14	2¼ x 2 ¼ x 7 ga x 7	2½ x 12 ga	3 9/16	13⅞	6-10d	4-10d	4085	4085
RA416HNP	-	4 x 16	2¼ x 2 ¼ x 7 ga x 7	2½ x 12 ga	3 9/16	15⅞	6-10d	4-10d	4085	4085
RH46	HW46	4 x 6	2½ x 3¼ x ¼ x 10	2½ x 12 ga	3 9/16	5⅜	4-10d	2-10d	4120	4120
RH48	HW48	4 x 8	2½ x 3¼ x ¼ x 10	2½ x 12 ga	3 9/16	7¼	4-10d	2-10d	4120	4120
RH410	HW410	4 x 10	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	9¼	4-10d	2-10d	5320	5320
RH412	HW412	4 x 12	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	11⅞	4-10d	2-10d	5320	5320
RH414	HW414	4 x 14	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	13⅞	4-10d	2-10d	5320	5320
RH416	HW416	4 x 16	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	15⅞	4-10d	2-10d	5320	5320
RHF412	-	4 x 12	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	11⅞	6-10d	2-10d	5335	5335
RHF414	-	4 x 14	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	13⅞	6-10d	2-10d	5335	5335
RHF416	-	4 x 16	2½ x 3¼ x ¼ x 10	3 x 12 ga	3 9/16	15⅞	6-10d	2-10d	5335	5335
RA66	WNP66	6 x 6	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	5½	5⅜	2-10d	2-10d	3270	3270
RA68	WNP68	6 x 8	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	5½	7¼	2-10d	2-10d	3270	3270
RA610	WNP610	6 x 10	2¼ x 2¼ x 7 ga x 7	2½ x 12 ga	5½	9¼	2-10d	2-10d	3270	3270
RH66	HW66	6 x 6	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	5⅜	4-10d	2-10d	5320	5320
RH68	HW68	6 x 8	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	7¼	4-10d	2-10d	5320	5320
RH610	HW610	6 x 10	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	9¼	4-10d	2-10d	5320	5320
RH612	HW612	6 x 12	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	11⅞	4-10d	2-10d	5320	5320
RH614	HW614	6 x 14	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	13⅞	4-10d	2-10d	5320	5320
RH616	HW616	6 x 16	2½ x 3¼ x ¼ x 10	2½ x 12 ga	5½	15⅞	4-10d	2-10d	5320	5320
RH86	HW86	8 x 6	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	5⅜	4-10d	2-10d	5320	5320
RH88	HW88	8 x 8	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	7¼	4-10d	2-10d	5320	5320
RH810	HW810	8 x 10	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	9¼	4-10d	2-10d	5320	5320
RH812	HW812	8 x 12	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	11⅞	4-10d	2-10d	5320	5320
RH814	HW814	8 x 14	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	13⅞	4-10d	2-10d	5320	5320
RH816	HW816	8 x 16	2½ x 3¼ x ¼ x 10	2½ x 7 ga	7½	15⅞	4-10d	2-10d	5320	5320
RHF2.5	-	2½ x Specify	2½ x 3¼ x ¼ x 10	3 x 12 ga	2 9/16	Specify	6-16d	2-10d	4900	4900
RHF3.125	-	3⅛ x Specify	2½ x 3¼ x ¼ x 10	3 x 12 ga	3¼	Specify	6-16d	2-10d	5750	5750
RHF5.125	-	5⅛ x Specify	2½ x 3¼ x ¼ x 10	3 x 12 ga	5¼	Specify	6-16d	2-10d	5750	5750
RHG2.5	HW2.5	2½ x Specify	2½ x 3¼ x ¼ x 10	3¾ x 12ga	2 9/16	Specify	4-16d	2-10d	5665	5665
RHG3.125	HW3.125	3⅛ x Specify	2½ x 3¼ x ¼ x 10	3¾ x 12ga	3¼	Specify	4-16d	2-10d	5665	5665
RHG5.125	HW5.125	5⅛ x Specify	2½ x 3¼ x ¼ x 10	2½ x 12ga	5¼	Specify	4-16d	2-10d	5665	5665
RHGF2.5	-	2½ x Specify	2½ x 3¼ x ¼ x 10	3¾ x 12ga	2 9/16	Specify	8-16d	2-10d	6070	6070
RHGF3.125	-	3⅛ x Specify	2½ x 3¼ x ¼ x 10	3¾ x 12ga	3¼	Specify	8-16d	2-10d	6885	6885
RHGF5.125	-	5⅛ x Specify	2½ x 3¼ x ¼ x 10	3¾ x 12ga	5¼	Specify	8-16d	2-10d	6885	6885

R
RA
RH
RHF
RHG
RHGF

R410

RA414

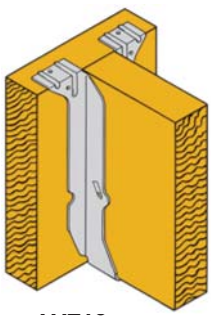


RH414

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
TR24N	PF24	2 X 4	1½	3 3/16	4-16d	2-10d x 1½	1305	1305	255
TR26N	PF26	2 X 6	1½	5⅜	4-16d	2-10d x 1½	1370	1370	255
TR26	JB26	2 X 6	1½	5⅜	4-16d	2 prongs	1370	1370	-
TR28	JB28	2 X 8	1½	7¼	4-16d	2 prongs	1370	1370	-
TR210	JB210	2 X 10	2	9¼	4-16d	2 prongs	1475	1610	-
TR212	JB212	2 X 12	2	11⅞	6-16d	2 prongs	1745	1945	-
TR214	JB214	2 X 14	2	13⅞	6-16d	2 prongs	1745	1945	-
TR216	JB216	2 X 16	2	15⅞	6-16d	2 prongs	1745	1945	-

TR



LHJT

LIGHT HIP/JACK TRUSS HANGERS

Design Features . . a hip/jack connection which is a single, non-welded formation for use with a lighter-loaded double girder truss. Specify left or right.

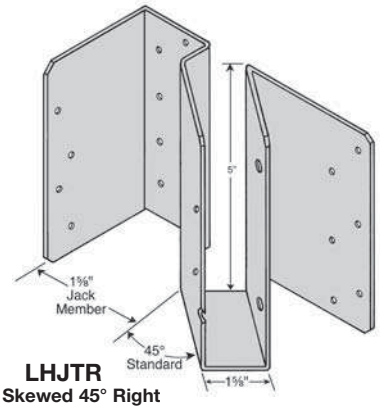
Material . . 18 ga. galvanized steel.

Special . . features of the **LHJT** include:

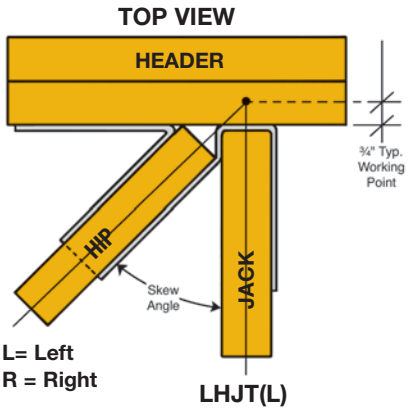
- Distributes 75% of the total load to the hip member.

Installation . . use all specified fasteners

- Must be attached to a double girder truss for required nail penetration.
- All multiple members must be fastened together to act as a single unit.



LHJTR
Hip Skewed 45° Right



L= Left
R = Right

LHJT(L)

LMTH

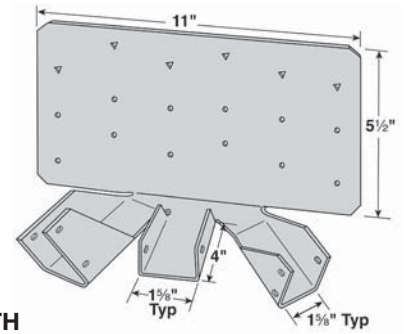
LIGHT MULTIPLE TRUSS HANGERS

Design Features . . a single-piece connector designed to carry multiple truss members off girder trusses with 2x4 or 2x6 bottom chords.

Material . . 16 ga. galvanized steel.

Installation . . use all specified fasteners

- The total load must be symmetrically distributed about the centerline to avoid eccentric loading of the connector.
- Fill round holes for girder trusses with 2x4 bottom chords.
- Fill round and triangle holes for girder trusses with 2x6 bottom chords.



LMTH

MHJT

MEDIUM HIP/JACK TRUSS HANGERS

Design Features . . a hip/jack connection which is a single, non-welded formation for use with a heavier-loaded double girder truss.

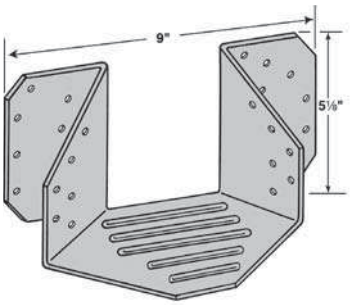
Material . . 14 ga. galvanized steel.

Special . . features of the **MHJT** include:

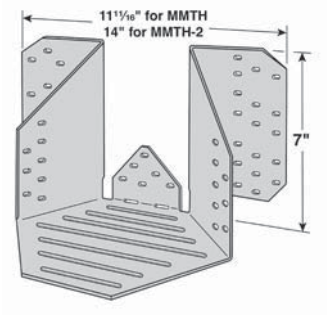
- Distributes 75% of the total load to the hip member.
- **MHJT** is for either right or left. No hanger mix-ups

Installation . . use all specified fasteners

- Must be attached to a double girder truss for required nail penetration.
- All multiple members must be fastened together to act as a single unit.



MHJT



MMTH/MMTH-2

MMTH MMTH-2

MULTIPLE MEDIUM TRUSS HANGERS

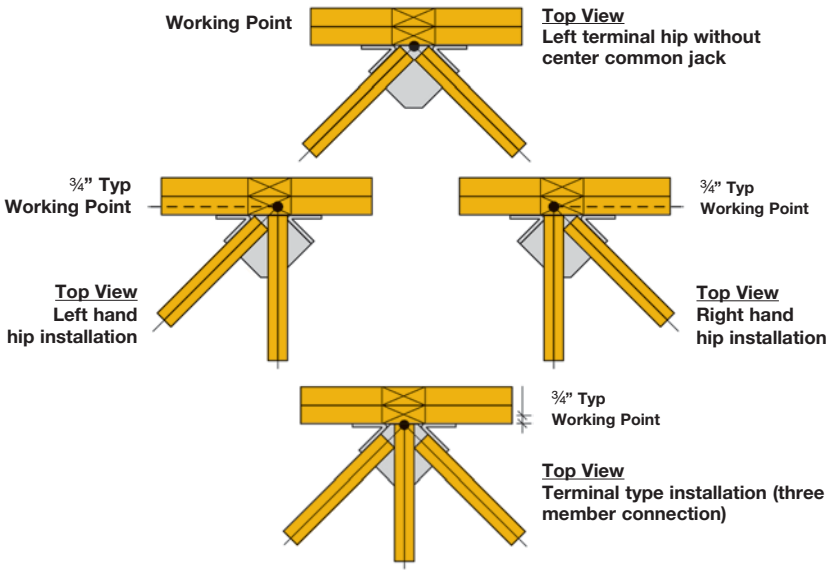
Design Features . . a multiple truss connection which is a single, non-welded formation for use with medium to high load capacity hangers.

Material . . 12 ga. galvanized steel.

Installation . . all multiple members must be fastened together to act as a single unit.

- Distribute 40% of total load to each hip member and 20% to the jack for terminal installation.
- Distribute 75% of the total load to the hip member and 25% to the jack for left or right-hand hip installation.
- Use 10d x 1½" nails with 0.67 of the design loads.
- For code-required minimum nail penetration, attach to a double girder truss.

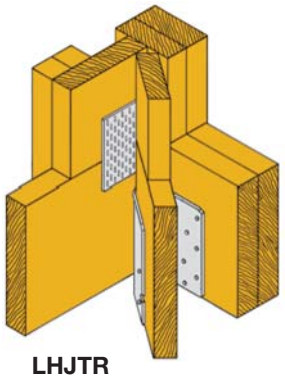
Typical Installation for MHJT/MMTH/MMTH-2



LHJT

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	NAIL SCHEDULE	DESIGN LOAD (LBS)				UPLIFT LBS (133%)
		HEADER	FLOOR (100%)	ROOF			
		12-10d		SNOW (115%)	CONST (125%)	WIND (133%)	
LHJT (R/L)	LTHJR/L	HIP					
		4-10d x 1½	1140	1310	1425	1450	485
		JACK					
		4-10d x 1½	365	420	455	485	315

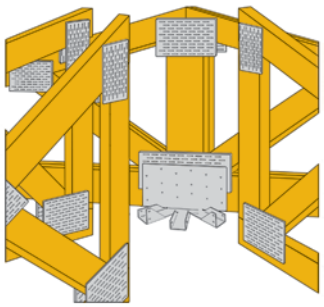


LHJTR

LMTH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

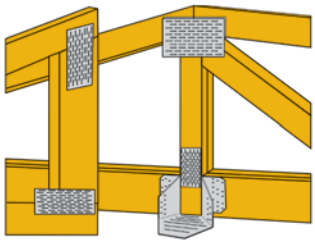
PRODUCT CODE	REF NO	HEADER	NAIL SCHEDULE			DESIGN LOAD (LBS)						UPLIFT LBS (133%)	
						FLOOR (100%)		ROOF					
								SNOW (115%)		CONST (125%)			
			HEADER	HIPS (TOTAL)	JACK	HIP	JACK	HIP	JACK	HIP	JACK	HIP	JACK
LMTH	LTHMA	1 ply 2 x 4	12-10d x 1½	6-10d x 1½	2-10d x 1½	465	115	560	125	560	125	65	25
		2 ply 2 x 4	12-10d	6-10d x 1½	2-10d x 1½	610	130	650	160	680	160	65	25
		1 ply 2 x 6	18-10d x 1½	6-10d x 1½	2-10d x 1½	640	140	640	145	640	145	65	25
		2 ply 2 x 6	18-10d	6-10d x 1½	2-10d x 1½	975	210	1120	230	1120	250	90	35



MHJT

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

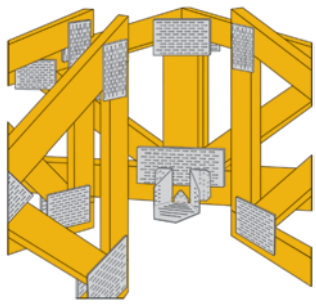
PRODUCT CODE	REF NO	NAIL SCHEDULE	DESIGN LOAD (LBS)				UPLIFT LBS (133%)
		HEADER	FLOOR (100%)	ROOF			
		20-16D		SNOW (115%)	CONST (125%)	WIND (133%)	
MHJT	THJA26	HIP					
		6-10d x 1½	2295	2380	2440	2490	735
		JACK					
		4-10d x 1½	750	795	810	830	250



MMTH
MMTH-2

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

RIGHT OR LEFT HAND HIP INSTALLATION (TWO MEMBER CONNECTION)						DESIGN LOAD (LBS)						UPLIFT LBS (133%)	
PRODUCT CODE	REF NO	HEADER	NAIL SCHEDULE			FLOOR (100%)		ROOF					
								SNOW (115%)		CONST (125%)			
			CARRYING MEMBER	HIP	JACK	HIP	JACK	HIP	JACK	HIP	JACK	HIP	JACK
MMTH	MTHM	2 ply 2 x 4	22-16d	8-10d x 1½	4-10d x 1½	2430	800	2440	815	2440	815	845	305
		2 ply 2 x 6	34-16d	8-10d x 1½	4-10d x 1½	2915	950	2915	950	2915	950	845	305
		2 ply 2 x 8	42-16d	8-10d x 1½	4-10d x 1½	3400	1105	3400	1105	3400	1105	845	305
MMTH-2	MTHM-2	2 ply 2 x 6	39-16d	8-10d x 1½	4-10d x 1½	2915	950	2915	950	2915	950	845	305
		2 ply 2 x 8	47-16d	8-10d x 1½	4-10d x 1½	3400	1120	3400	1120	3400	1120	845	305
TERMINAL TYPE INSTALLATION (THREE MEMBER CONNECTION)													
MMTH	MTHM	2 ply 2 x 4	22-16d	16-10d x 1½	4-10d x 1½	1280	640	1470	735	1560	780	775	435
		2 ply 2 x 6	34-16d	16-10d x 1½	4-10d x 1½	1900	950	1900	950	1900	950	775	435
		2 ply 2 x 8	42-16d	16-10d x 1½	4-10d x 1½	2210	1105	2210	1105	2210	1105	775	435
MMTH-2	MTHM-2	2 ply 2 x 6	39-16d	16-10d x 1½	4-10d x 1½	1900	950	1900	950	1900	950	775	435
		2 ply 2 x 8	47-16d	16-10d x 1½	4-10d x 1½	2550	1275	2550	1275	2550	1275	775	435



MTHTF2
MTHTF2-2

MULTIPLE TRUSS HANGER TOP FLANGE

Design Features . . The **MTHTF** hanger is the largest capacity nail-on hanger available. This is a welded hanger designed to carry up to three trusses intersecting at one point into a double-ply girder truss. The top flange is notched at the center to accommodate vertical and diagonal web members in the girder truss.

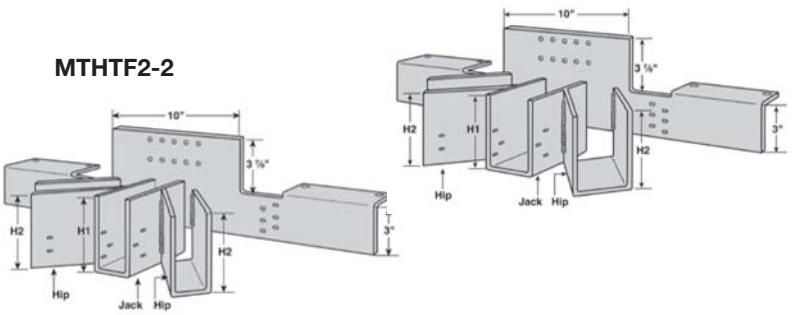
Material . .
- **MTHTF2** – top flange 3 ga. steel, stirrup 11 ga. steel.
- **MTHTF2N** – top flange 3 ga. steel, stirrup 11 ga. steel.
- **MTHTF2-2** – top flange 3 ga. steel, stirrup 7 ga. steel.
- **MTHTF2-2N** – top flange 3 ga. steel, stirrup 7 ga. steel.

Finish . . ***SUPERSPEED*** gray paint.

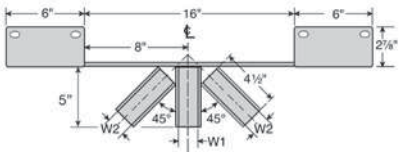
Installation . . Distribute the total load evenly about the centerline to avoid an eccentric loading condition.
- Multiple members must be fastened together by means other than the connector, to act as a single unit.
- For **MTHTF2** and **MTHTF2N**, a minimum 2 x 6 vertical member is required. For **MTHTF2-2** and **MTHTF2-2N**, a minimum of 2 x 8 vertical member is required.
- Bottom cord of header member must be a minimum of a 2 x 6.

Options . . For larger bottom cord, increase H_1 and H_2 accordingly. Maximum skew of hip stirrups is 45 degrees. For **MTHTF2**, maximum W_1 and W_2 is 3⁷⁄₁₆ inch. W_1 and W_2 must be the same.

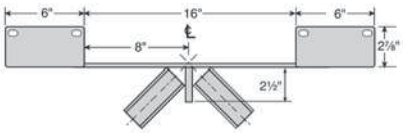
MTHTF2-2



Top View
MTHTF2-2 Similar



Top View
MTHTF2-N Similar



TGH2 (R/L)

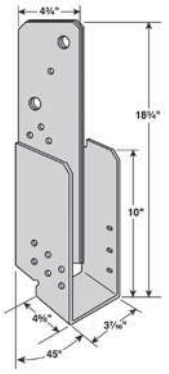
TRUSS GIRDER HANGERS SKEWED

Design Features . . for use with skewed multiple member girder truss conditions., specify right (R) or left (L).

Fastener Schedule . .
- Carrying member, 2-¾ MB and 4-l0d nails.
- Carried member, 9-10d nails.

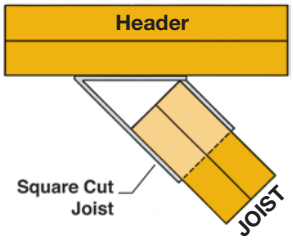
Material . . 10 gage galvanized steel.

Installation . . use all specified fasteners.
- Face nails are required to center the **TGH2 R/L** to the vertical carrying member.
- 2 x 6 is the minimum vertical carrying member.
- The total load must be evenly distributed about the centerline to avoid eccentric loading.
- 2 x 8 is the maximum bottom chord carrying member to allow for the minimum bolt end distance. 2 x 10 bottom cord take 0.62 of the design load.



TGH2R (RIGHT)
Truss Girder Hanger (Skewed) TGH2 (R/L)

Skewed Right



TGH
TGHH
TGHW

TRUSS GIRDER HANGERS

Design Features . . a hanger designed to carry multiple member girder trusses, (2) 2 x 6, (3) 2 x 6 and (4) 2 x 6. Filler blocks must be used for this application.

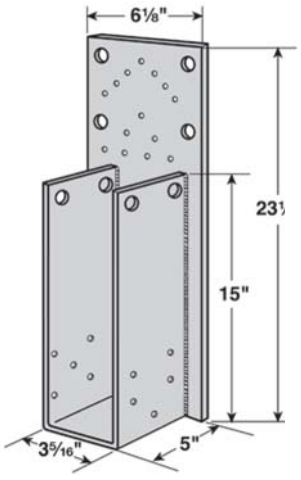
Material . . ¼" steel.

Finish . . ***SUPERSPEED*** gray paint.

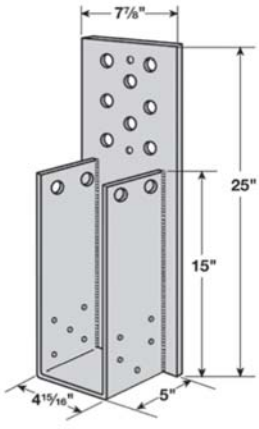
Special . . features of the **TGH** include:
- Minimum vertical carrying member size is 2 x 6 for the **TGH2** or the **TGH3** and 2 x 8 for the **TGH4**.
- Maximum bottom chord is 2 x 8.
- The **TGH** must be bolted to the center of the vertical carrying member.
- 10–10d must be used in the carried member. Uplift may be increased with extra nails; however, a filler block must be used.
- Bolts may be used with 10–10d nails for higher uplift values.
- All multiple members must be fastened together to act as a single unit.

Skewed Hangers . . available, specify angle (50° max) and whether left or right. Due to the infinite variety of custom orders, skewed hangers are not evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

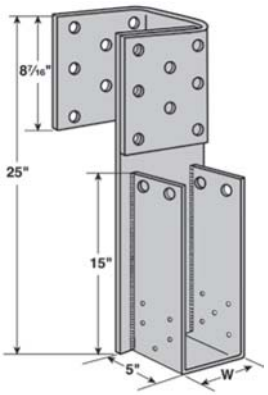
TGH2



TGHH3



TGHW



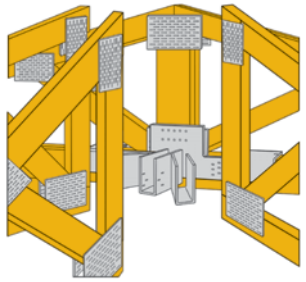
Optional

SUPERSPEED
Drive Screws Used With This Product

MTHTF2
MTHTF2-2

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

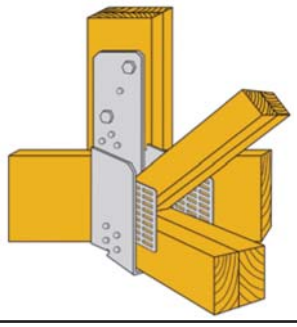
PRODUCT CODE	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD (LBS)						UPLIFT LBS	
						FLOOR (100%)		ROOF					
								SNOW (115%)		CONST (125%)			
		W1 & W2	H1 & H2	HEADER	JOISTS	HIP	JACK	HIP	JACK	HIP	JACK	HIP	JACK
MTHTF2	MSCPT2	1⅝	5¼	26-16d	18-10d x 1½	3215	1600	3215	1600	3215	1600	765	380
MTHTF2N	MSCPT2N	1⅝	5¼	26-16d	14-10d x 1½	4015	—	4015	—	4015	—	765	—
MTHTF2-2	MSCPT2-2	3⁵⁄₁₆	5¼	30-16d	20-10d	3600	1805	3600	1805	3600	1805	765	380
MTHTF2-2N	MSCPT2-2N	3⁵⁄₁₆	5¼	30-16d	14-10d	4505	—	4505		4505	—	765	—



TGH2
(R/L)

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

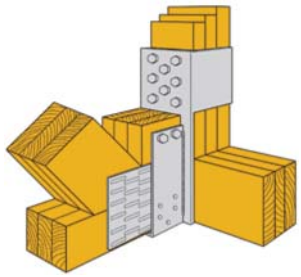
PRODUCT CODE	REF NO	NAIL & BOLT SCHEDULE			LENGTH OF BOLT IN CARRYING MEMBER	DESIGN LOAD (LBS)				UPLIFT (133%)
		CARRYING MEMBER		CARRIED MEMBER		FLOOR (100%)	SNOW (115%)	CONST (125%)	WIND (133%)	
		BOLTS	NAILS							
TGH2 (R/L)	THG2AR/L	2-¾ MB	4-10d	9-10d	1½	1390	1560	1735	1890	1590
					3	2790	3210	3490	3710	
					4½	3035	3490	3795	4035	
					6	3035	3490	3795	4035	



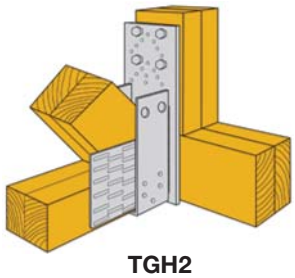
TGH
TGHH
TGHW

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	WIDTH (W)	NAIL & BOLT SCHEDULE		LENGTH OF BOLT IN CARRYING MEMBER (INCHES)	DESIGN LOAD (LBS)				UPLIFT
			CARRIED MEMBER	CARRYING MEMBER		FLOOR (100%)	SNOW (115%)	CONST (125%)	WIND (133%)	
TGH2	THGB2	3⁵⁄₁₆	10-10d & 2-¾ MB	4-¾ MB	1½	3045	3500	3805	4050	8020
					3	5670	6520	7090	7540	
					4½	6245	7180	7805	8305	
					6	6245	7180	7805	8305	
TGH2	THGB2	3⁵⁄₁₆	10-10d & 2-¾ MB	19-SDS ¼ x 3	3	6480	7450	8100	8615	8020
					4½	6480	7450	8100	8615	
					6	6480	7450	8100	8615	
TGHH2	THGBH2	3⁵⁄₁₆	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	10340	10750	10750	10750	
					6	10340	10750	10750	10750	
TGH3	THGB3	4¹⁵⁄₁₆	10-10d & 2-¾ MB	4-¾ MB	1½	3045	3500	3805	4050	8020
					3	5670	6520	7090	7540	
					4½	6245	7180	7805	8305	
					6	6245	7180	7805	8305	
TGH3	THGB3	4¹⁵⁄₁₆	10-10d & 2-¾ MB	19-SDS ¼ x 3	3	6480	7450	8100	8615	8020
					4½	6480	7450	8100	8615	
					6	6480	7450	8100	8615	
TGHH3	THGBH3	4¹⁵⁄₁₆	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	12490	12490	12490	12490	
					6	12490	12490	12490	12490	
TGHH4	THGBH4	6⁹⁄₁₆	10-10d & 2-¾ MB	4-¾ MB	3	5670	6520	7090	7540	7540
					4½	6245	7180	7805	8305	8020
					6	6245	7180	7805	8305	
TGHH4	THGBH4	6⁹⁄₁₆	10-10d & 2-¾ MB	6-¾ MB	3	8505	9780	9780	9780	8020
					4½	9780	9780	9780	9780	
					6	9780	9780	9780	9780	
TGHH4	THGBH4	6⁹⁄₁₆	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	12490	14360	14360	14360	
					6	12490	14360	14360	14360	
TGHW3	THGW3	4¹⁵⁄₁₆	10-10d & 2-¾ MB	8-¾ MB	4½	21900	21900	21900	21900	
					6	21900	21900	21900	21900	
TGHW4	THGW4	6⁹⁄₁₆	10-10d & 2-¾ MB	8-¾ MB	4½	24225	24225	24225	24225	



TGHW3



TGH2

ATH
ATHSL
ATHSR

ADJUSTABLE TRUSS HANGERS

Design Features . . the hanger's long header straps can be field bent to the required height of the truss. The joist side flanges have round holes so that the nails can be driven straight into the joist and regular nailing straight into the header flange. This hanger has been designed and developed for the truss plated industry.

• **Joist sizes . .** 2xs, 4xs and double 2xs.

Material . . 18 ga. and 16 ga. galvanized steel.

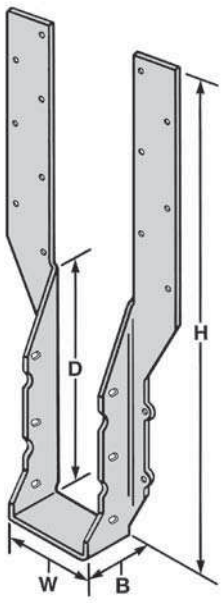
Loads . . nailing schedule and design load capacities are consistent with those obtained in independent laboratory tests.

Special . . the **ATH** series offers a wide application flexibility, particularly to the truss plated industry, including five different versions:

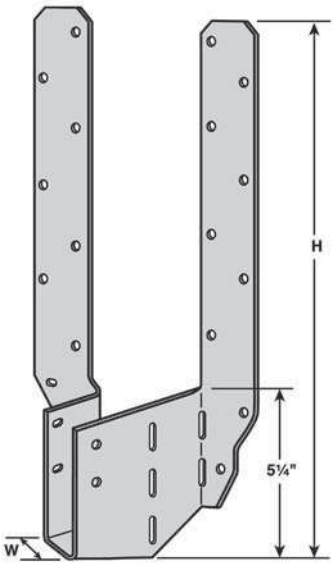
(1) Ceiling hanger
(2) Universal or face mount hanger
(3) Top flange hanger
(4) Top flange over the back hanger
(5) Skewed hanger at 45° (right & left)

Stocked skewed hangers are designed for standardization and construction economies, and to provide compatibility with the **ATH** hanger hardware line.

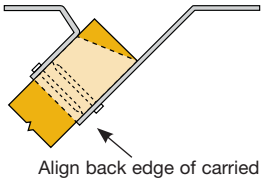
ATH418



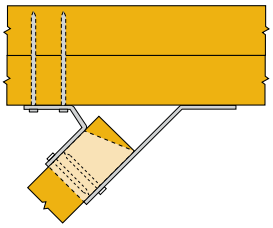
ATHSL218



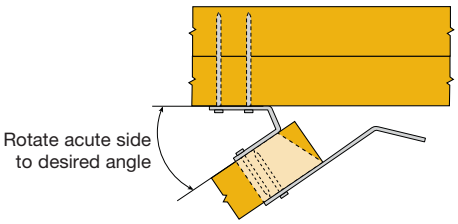
ATHIS (L & R) ATHS (L & R) Installation Sequence



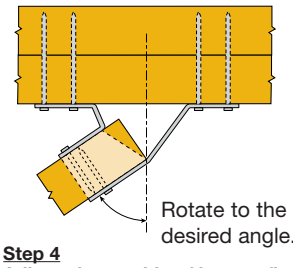
Step 1
Install carried member into the seat of the hanger. Secure with 4 10d x 1½ nails.



Step 2
Install 10d nails into header on the acute angle side first.



Step 3
Adjust acute side of hanger to the desired angle.



Step 4
Adjust obtuse side of hanger flush with the carrying member. Install 10d nails into header on obtuse side.

ATHI
ATHISL
ATHISR

ADJUSTABLE TRUSS HANGERS I-JOIST

Design Features . . designed for the wood I-joists industry, the **ATHI** has long header straps that can be field-bent to the required height of the truss. Positive angle nailing helps eliminate splitting of the I-joist's bottom chord.

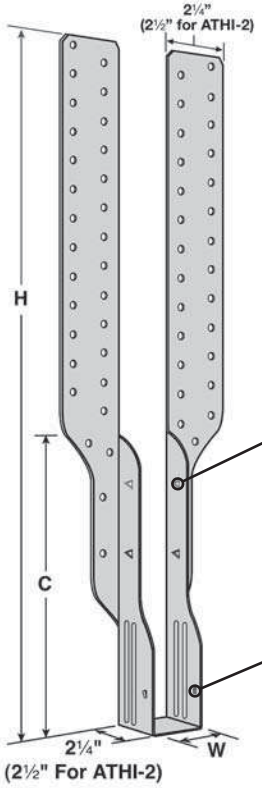
Material . . **ATHI-2** – 14 ga. galvanized steel.
ATHI – 18 ga. galvanized steel.

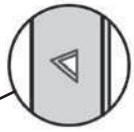
Special . . stocked skewed hangers are designed for standardization and construction economies, and to provide compatibility with the **ATHI** hanger hardware line. (**ATHI 1.81/22 only**)

Installation . . ATHI-2 hangers are available in widths between 3 and 5¼ inches. Specify width at time of order.

- Use all specified nails indicated in the table. Verify that the header dimensions will accommodate the specified nails.
- These hangers require the use of web stiffeners.
- 20 face nails for **ATHI**, and 30 face nails for **ATHI-2** achieves maximum table load.
- When less than the maximum number of nails listed are used, allowable load must be reduced for each nail eliminated.
- For minimum nailing configuration, hanger strap must be field bent over top of header a minimum of 2½ inches.

ATHI





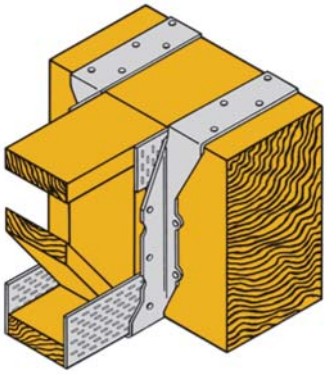
Triangle Holes Provided for Optional High Uplift Values.

Angle Nailing to Prevent Wood from Splitting and SuperSpeed® Installation

ATH
ATHSL
ATHSR

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

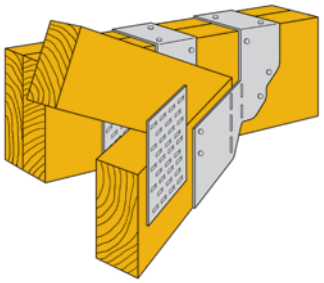
PRODUCT CODE	REF NO	JOIST SIZE	MATERIAL	DIMENSIONS (INCHES)				NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS
				B	D	W	H	HEADER TOP	HEADER FACE	JOIST	NORMAL LBS	MAX LBS	
ATH29	THA29	2 x 6	18 ga gal	2¼	5⅛	1⅝	9 11/16	4-10d	4-10d	4-10d x 1½	1920	2015	485
ATH213	THA213	2 x 6	18 ga gal	1¾	5½	1⅝	13 5/16	2-10d	4-10d	4-10d x 1½	1920	2015	485
ATH218	THA218	2 x 6	18 ga gal	1¾	5½	1⅝	17 3/16	2-10d	4-10d	4-10d x 1½	1920	2015	485
ATH218-2	THA218-2	(2) 2 x 10	16 ga gal	1¾	8¼	3⅛	17 11/16	2-16d	4-16d	6-16d x 2½	2805	3010	1080
ATH222-2	THA222-2	(2) 2 x 10	16 ga gal	1¾	8	3⅛	22¼	2-16d	4-16d	6-16d x 2½	2805	3010	1080
ATH413	THA413	4 x 6	18 ga gal	1¾	4½	3⅝	13 5/16	2-10d	4-10d	4-10d	2665	2655	595
ATH418	THA418	4 x 10	16 ga gal	1¾	8	3⅝	17½	2-16d	4-16d	6-16d	2805	3010	1080
ATH422	THA422	4 x 10	16 ga gal	1¾	8	3⅝	22	2-16d	4-16d	6-16d	2805	3010	1080
ATH422R	THAC422	4 x 10	16 ga gal	1¾	7⅞	3⅝	22	2-16d	4-16d	6-16d	2805	3010	1080
ATH426	THA426	4 x 2 Truss	14 ga gal	2½	7⅞	3⅝	26	2-16d	4-16d	6-16d	2805	3010	1080
ATH426R	THAC426	4 x 2 Truss	14 ga gal	2½	7⅞	3⅝	26	2-16d	4-16d	6-16d	2805	3010	1080
ATH422-2	THA422-2	(2) 4 x 2 Truss	14 ga gal	2½	9¾	7¼	22 11/16	4-16d	4-16d	6-16d	3080	3080	1080
ATH426-2	THA426-2	(2) 4 x 2 Truss	14 ga gal	2½	9¾	7¼	22 11/16	4-16d	4-16d	6-16d	3080	3080	1080
ATH426-2R	THAC426-2	(2) 4 x 2 Truss	14 ga gal	2½	9¾	7¼	22 11/16	4-16d	4-16d	6-16d	3080	3080	1080



ATH418

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	NAIL SCHEDULE			DESIGN LOAD (LBS)			UPLIFT (133%)
		TOP	FACE	JOIST	LVL/DF/SP SPECIES HEADER FLOOR (100%)	LVL/DF/SP SPECIES HEADER SNOW (115%)	LVL/DF/SP SPECIES HEADER ROOF (125%)	
FACTORY SKEW 45°								
ATHSL/R 218 Min	THASL/R218 Min	4-10d	6-10d	4-10d x 1½	1430	1430	1430	350
ATHSL/R 218 Max	THASL/R218 Max	-	14-10d	4-10d x 1½	1430	1430	1430	350
ATHSL/R 218-2 Min	THASL/R218-2 Min	4-10d	6-10d	4-10d x 1½	1430	1430	1430	350
ATHSL/R 218-2 Max	THASL/R218-2 Max	-	12-10d	4-10d x 1½	1350	1430	1430	350
FIELD SKEW 46° TO 84°								
ATHSL/R 218 Min	THASL/R 218 Min	4-10d	6-10d	4-10d x 1½	1215	1215	1215	350
ATHSL/R 218 Max	THASL/R 218 Max	-	12-10d	4-10d x 1½	1215	1215	1215	350
ATHSL/R 218-2 Min	THASL/R 218-2 Min	4-10d	6-10d	4-10d x 1½	1215	1215	1215	350
ATHSL/R 218-2 Max	THASL/R 218-2 Max	-	12-10d	4-10d x 1½	1215	1215	1215	350



ATHSL218

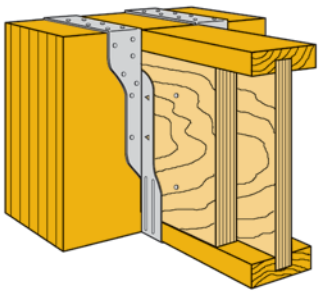
ATHI
ATHISL
ATHISR

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST DIMENSIONS (INCHES)		HANGER DIMENSIONS (INCHES)		
		WIDTH	DEPTH	W	H	C
ATHI 222	THAI 222	1½	9¼ -14	1 9/16	22⅞	9⅜
ATHI 1.68/22	THAI 1.68/22	1⅝	9¼ -14	1 11/16	22¾	9 5/16
ATHI 1.81/22	THAI 1.81/22	1¾	9¼ -14	1 13/16	22¾	9¼
ATHI 3522	THAI 3522	2¼ to 2 5/16	9¼ -14	2 5/16	22½	9
ATHI 322	THAI 322	2½	9¼ -14	2 9/16	22⅜	8⅞
ATHI 2.68/22	THAI 2.68/22	2⅝	9¼ -14	2 11/16	22¼	8 13/16
ATHI 422	THAI 422	3½	9¼ -14	3 9/16	21⅞	8⅜
ATHI-2	THAI-2	3 to 5¼	9¼ -14	3⅛ to 5 5/16	22 11/16	8 13/16

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE (NAILING OPTIONS)	REF NO	NAIL SCHEDULE (INCHES)			DESIGN LOAD (LBS) LVL/DF/SP SPECIES HEADER			UPLIFT (133%)
		TOP	FACE	JOIST	FLOOR (100%)	SNOW (115%)	FLOOR (125%)	
ATHI Min	THAI Min	4-10d x 1½	2-10d x 1½	2-10d x 1½	1475	1475	1475	_
		4-10d	2-10d	2-10d x 1½	1805	1805	1805	_
ATHI Max	THAI Max	_	20-10d	2-10d x 1½	2245	2280	2280	215
ATHI-2 Min	THAI-2 Min	4-10d	2-10d	2-10d x 1½	2195	2195	2195	_
ATHI-2 Max	THAI-2 Max	_	30-10d	2-10d x 1½	3445	3960	3960	215



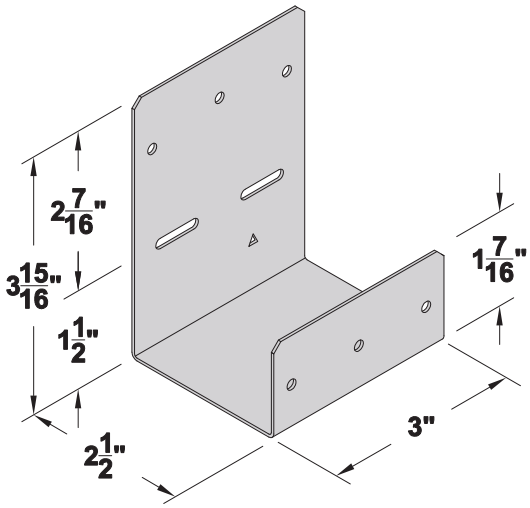
ATHI

LSC

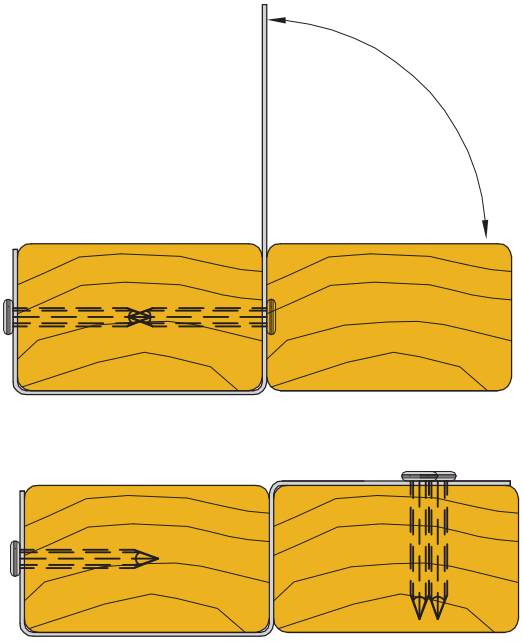
LOAD SHARE CLIP

Design Features . . This innovative connector has been designed and engineered to quickly and easily join open web floor trusses to help transfer a concentrated load from one truss to the next.

Material . . ASTM A653 SQ33. Fy=33ksi, Fu=45ksi. 18 ga. galvanized steel.



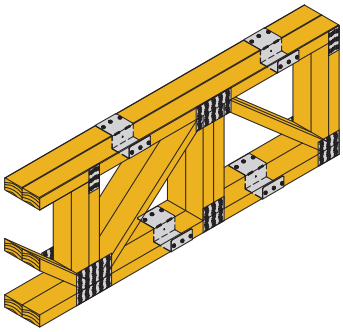
LSC 32



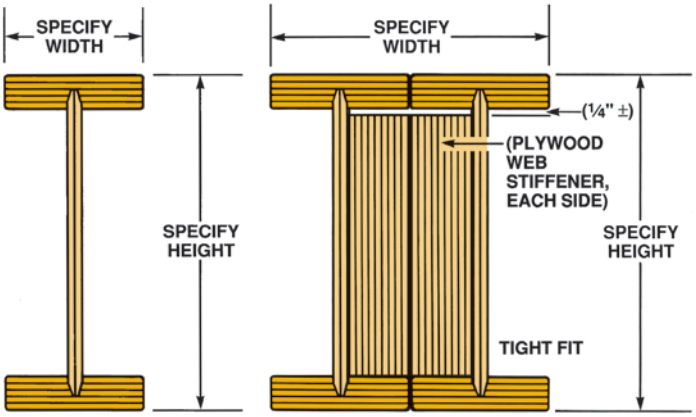
LSC

PRODUCT CODE	REF NO	DIMENSIONS (in)				LOADED MEMBER SIZE	LOAD SHARING MEMBER SIZE	ALLOWABLE GRAVITY LOADS POUNDS				UPLIFT LOADS 133% & 160%
		W	H	B	H1			100%	115%	125%	133%	
LSC32		2-9/16	3-1/2	3	2	(4)10dx1-1/2	(3)10d	750	750	750	750	0
LSC32-2		2-9/16	5	3	2	(4)10dx1-1/2	(3)10d	750	750	750	750	0
LSC42		3-9/16	4-1/2	3	3	(4)10d	(3)10d	750	750	750	750	0
LSC42-2		3-9/16	6	3	3	(4)10d	(3)10d	750	750	750	750	0

NOTES:
1. Tabular values are based on the unit stresses for Southern Pine lumber. Adjust values for other species in accordance with the '91 NDS.
2. 10d nails are common wire nails having a diameter of 0.148 inch and a length of 3 inches 10d x 1-1/2 nails have a diameter of 0.148 inch and a length of 1-1/2 inches.
3. Determine the appropriate number of clips required. Concentrated loads may require several clips located at or near the concentrated load.
4. Install on the loaded member prior to final positioning. After the loaded member has been brought to it's final position, drive the remaining 3 nails into the sharing member.
5. Code Compliance: Engineer's Seal.



ORDERING INFORMATION FOR WOOD I-JOIST CONNECTORS



Ordering information . . .

- Select style or type of hanger. (Example: **RA** style or **RS** type)
- Specify series or width. (Example: 35 Series = 2⅜")
- Specify height in inches. (Example: 18 = 18")

Specify . . .

RA – hanger style or type load.
RA35 – – hanger series (width).
RA – – 18 hanger height (inches).
RA3518

Wood I-Joist Sizes

Single:		Double: (-2)	
2 Series (2x)	W = 1⅜"	2 Series-2 (2x)	W = 3⅛"
25 Series	W = 1¹³⁄₁₆"	25 Series-2	W = 3⁹⁄₁₆"
2.06 Series	W = 2⅛"	2.06 Series	W = 4⅛"
35 Series	W = 2⅜"	35 Series-2	W = 4¹³⁄₁₆"
3 Series (3x)	W = 2⁹⁄₁₆"	3 Series-2 (3x)	W = 5⅛"
4 Series (4x)	W = 3⁹⁄₁₆"	4 Series-2 (4x)	W = 7⅛"

DESIGNER AND INSTALLER INSTRUCTIONS

A. Refer to the wood I-joist manufacturer's product catalog for the wood I-joist series given in the table for wood I-joist sizes.

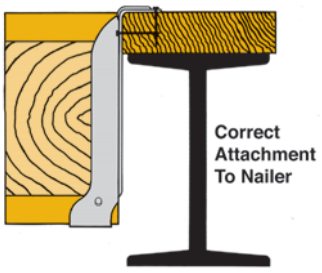
B. Determine that the top plate will take the required nails as shown in the catalog tables. Contact the wood I-joist or engineering wood beam producer for nailing limitations when laminated engineered lumber is used as top plates and nails penetrate parallel to the glue line.

C. With the many types of wood I-joists available, **the design loads given are hanger design loads** attached to Douglas fir, larch or southern pine top plates and **do not reflect the design load of the wood I-joist**. Loads must be reduced where wood shear capacity or seat-bearing and joist nailing result in lower values. Contact your wood I-joist manufacturer's representative for wood I-joist allowable loads.

D. For proper web stiffener requirements (web stiffeners and backing blocks may not always be required) recommended nailing and nail limitations, refer to the wood I-joist manufacturer's installation instructions. Follow all requirements for blocking, wood stiffeners, fillers and temporary bracing.

E. Do not allow workers on the framing system until all hangers, blocking and bracing have been nailed and installed.

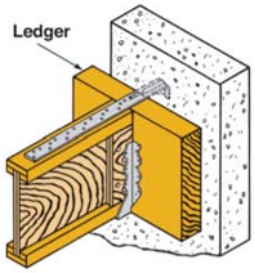
COMMON INSTALLATION ERRORS WITH USE OF A NAILER



What are Nailers and Ledgers?

A wood nailer is a plate which attaches to the wall support. A nailer may be used in conjunction with a steel I-beam, concrete block wall, stem wall or other support. The beams, joist and sheathing then attach to the nailer. When choosing a nailer, consider installation requirements, job needs and available resources.

A ledger is similar to a nailer, however, the wide dimension of a ledger is vertical rather than horizontal, as with the nailer.

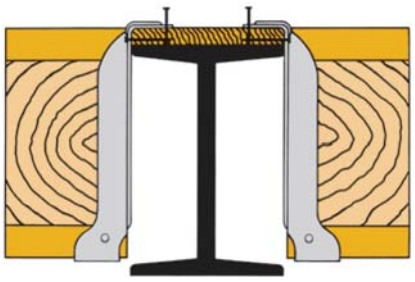


Nailer too Thin . . .

If the selected nailer is too thin, the following may occur:

1. The nails will not penetrate fully.
2. Room will not allow use of all face nails required for certain hangers.
3. Splits in the nailer will result from nails penetrating through the I-beam.

Note: Substitution of shorter nails reduces the allowable load values.

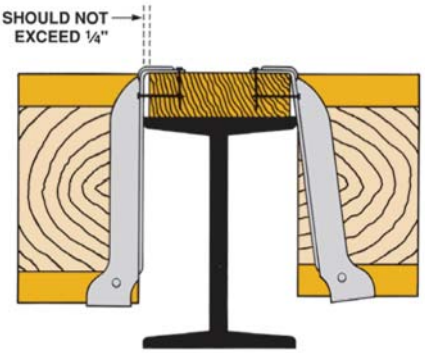


Nailer too Narrow . . .

If the selected nailer is too narrow, the following will be necessary:

1. The hanger must be cantilevered out for clearance or
2. The hanger must be tilted back for top flange support.

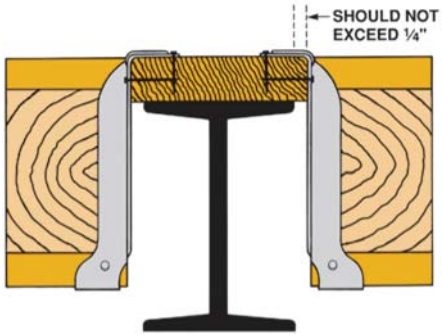
Note: Nailer should not be more than 1/4" narrower or load values will be greatly reduced.



Nailer too Wide . . .

Cross-grain bending may result if the nailer is wider than the I-beam.

Note: An overhang of more than 1/4" is not recommended.

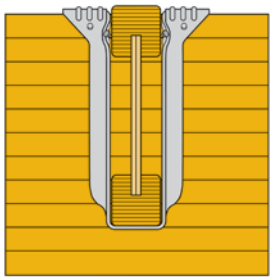


* Warning: Do not allow the joist hanger to contact the steel I-beam or the concrete wall. This may cause squeaking noises.

INSTALLATION ERRORS FOR TOP MOUNT HANGERS

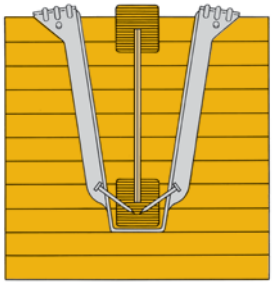
Toe Nailed I-Joist

Do not toe nail wood I-joist to headers prior to installing hangers of any type. Toe nailing results in improper hanger installation resulting in gaps and a loose connection, and is a major cause of squeaks.



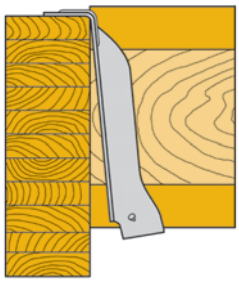
Hanger Over-Spread on Glu-lam Header

Top flanges spread wider than the wood I-joist can raise the wood I-joist above the header. This condition can cause squeaky floors.



Hanger Not Plumb

A hanger cantilevered out from the header can also cause floor squeaking.



ENGINEERED WOOD PRODUCT SIZES

LVL and PSL

Laminated veneer lumber (**LVL**) is engineered with sheets of thin veneer structurally bonded together to make headers and beams which span much longer distances and support heavier loads than ordinary lumber. **LVL** headers and beams are available in the following sizes:

Parallel strand lumber (**PSL**) is made from long, thin strands of wood structurally bonded together in a process to make large cross section beams and columns. **PSL** headers and beams are available in the following sizes:

PSL columns and posts are available in the following sizes:

W = 1 3/16"	W = 2 3/4"	W = 3 5/16"	W = 5 3/8"	W = 7 1/8"
1¾ x 7	2 11/16 x 9½	3½ x 3½	5¼ x 5¼	7 x 7
1¾ x 9¼	2 11/16 x 11⅞	3½ x 5¼	5¼ x 7	7 x 9¼
1¾ x 9½	2 11/16 x 14	3½ x 7	5¼ x 9¼	7 x 11¼
1¾ x 11¼		3½ x 9½	5¼ x 11¼	7 x 14
1¾ x 11⅞		3½ x 11¼	5¼ x 11⅞	7 x 16
1¾ x 12		3½ x 11⅞	5¼ x 12	7 x 18
1¾ x 14		3½ x 12	5¼ x 14	
1¾ x 16		3½ x 14	5¼ x 16	
1¾ x 18		3½ x 16	5¼ x 18	
		3½ x 18		

SUPERSPEED DRIVE SCREW INSTALLATION FOR LVL

Installation:

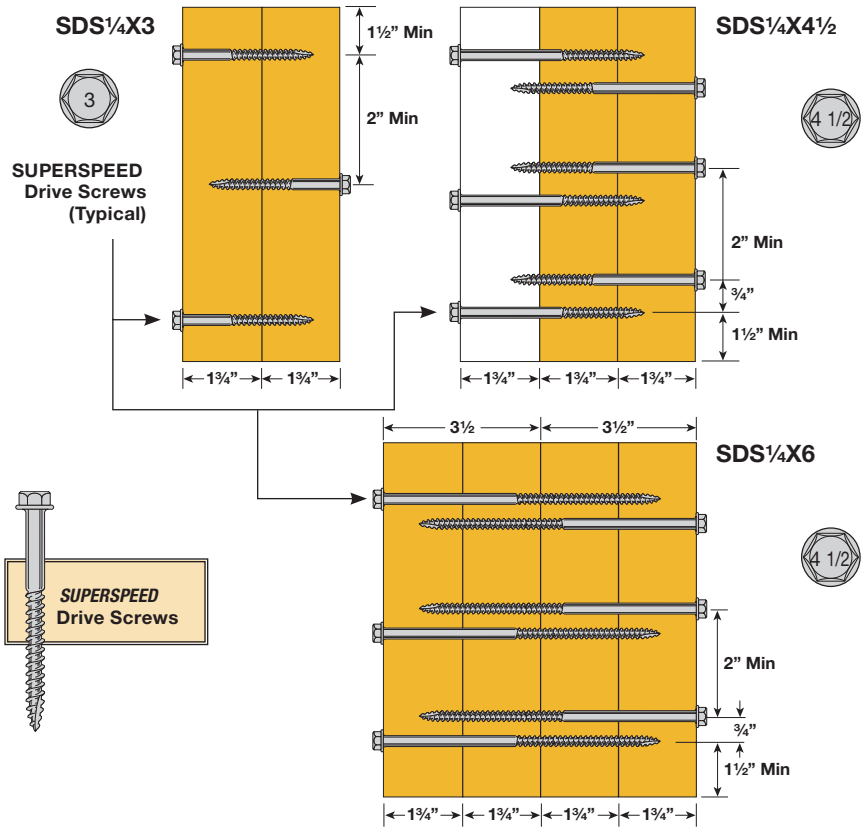
- Pre drilling in **LVL** is not required.
- Install with minimum 5.5 amp variable speed drill.
- Drive screw head washer flush with wood surface, Do not overdrive screws.
- Offset screws that overlap minimum 3/4" on center.

Design:

- Apply adjustment factors per 2001 NDS.
- Loads are for **LVL** & **PSL** material Douglas Fir-Larch (G = 0.5)
- Spacing along length of beam (Parallel to grain) minimum 6 inches. End distance minimum 4 inches.
- Table loads are screw capacity to transfer load between plies. Built-up **LVL/PSL** capacity may be less. Check with manufacturers.
- Provide adequate Lateral Bracing against tension due to side framing into main beam.

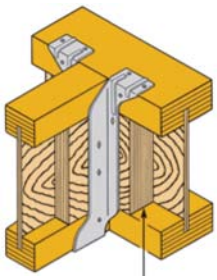
Max Allowable Loads (LBS per Linear ft.)

Framing Combination	12" OC	16" OC	24" OC
2 - 1¾"	1450	1080	725
3 - 1¾"	2075	1555	1040
4 - 1¾"	1900	1425	950
2 - 3½"			
1 - 3½" + 2 - 1¾"			



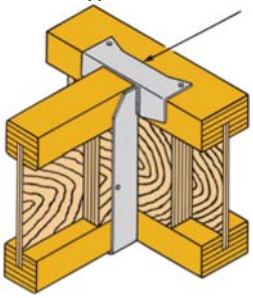
TOP MOUNT HANGERS

Onto Wood I-Joists . . .



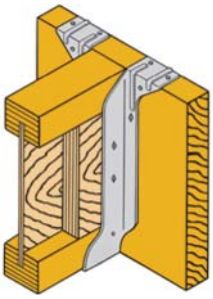
Backing blocks are usually required when the wood I-joist is a support member.

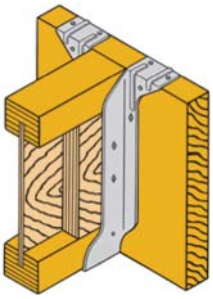
The bent angles forming the hanger support are limited to 7 ga.



- ❑ The maximum size nail permitted into the edge or face of the joist's top flange is limited to a 10d (9 ga.), with a length of 1½" to prevent splitting.

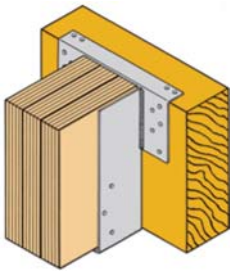
Onto Laminated Veneer Lumber (LVL) or Dimension Lumber . . .

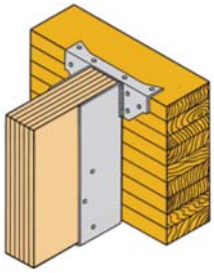




- ❑ Nailing into the narrow face of LVL/Laminated Veneer Lumber (up to 1¾" thickness), PSL/Parallel Strand Lumber (Parallam®) or dimension lumber (2x_), headers and beams is limited to 16d (8 ga.) or smaller nails. (Consult the engineered wood beam manufacturer.)

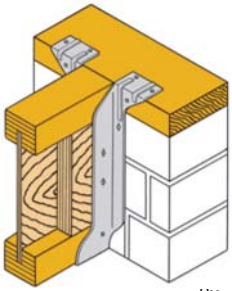
Onto Glu-lam or Heavy Timber Beams . . .



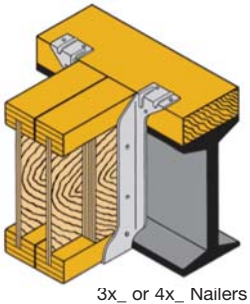


- ❑ Nailing into the face and top of the glu-lam or heavy timber beams is limited to that which prevents splitting of the support member.

onto Nailers . . .



2x_ Nailers

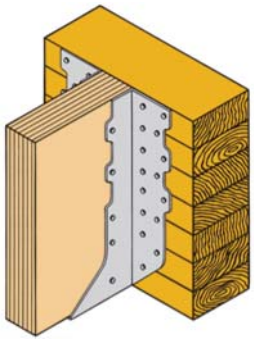


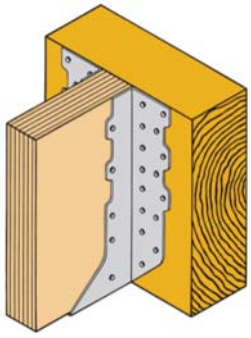
3x_ or 4x_ Nailers

- ❑ For 2x_ nailers measuring 1½" thick, the top flange nails are limited to 10d (9 ga.) by 1½" long.
- ❑ Nailing on 3x_ or 4 x_ nailers is limited to 20d (6 ga.) by 2 1/2" long or smaller nailers.

FACE MOUNT HANGERS

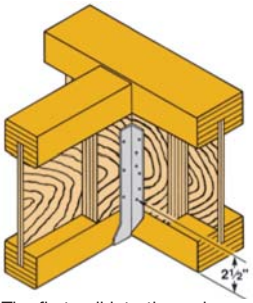
Onto Glu-lam or Heavy Timber Beams . . .





- ❑ Nailing into the face of glu-lam or heavy timber beams is limited to what prevents splitting of the wood support member.

onto Wood I-Joists . . .

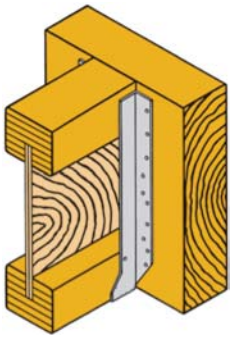


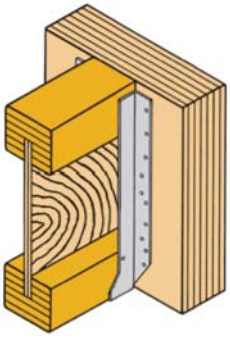
The first nail into the web area of the support joist should be positioned high enough (2½"±).

- ❑ The maximum size in the web area of the support joist is limited to 16d (8 ga.) to prevent damage to the support joists, web material and splitting of the backer block material.
- ❑ Backing blocks are required on both sides of the supporting members.
- ❑ Nails must fully penetrate the joist web.

Minimum length	1½" widths to 1¾"
	2½" widths to 3½"
Maximum size	16d

Onto Laminated Veneer Lumber (LVL) or Dimensional Lumber . . .





- ❑ Nailing into the wide face of LVL or PSL (up to 1¾" thickness) or dimensional lumber (2x_), headers and beams is limited to 20d (6 ga.) or smaller nails.

To Design a Quality Floor System

1. Using a deeper joist will reduce deflection.
2. Load sharing will be improved by using thicker floor sheathing and/or reducing on-center spacing of joists.
3. Improved floor stiffness and prevention of floor squeaking will be achieved through use of adhesives to permanently bond sheathing to the joist and use of screws rather than nails.
4. Ceilings which are directly applied, bridging, bottom chord stripping or full depth blocking will improve floor design.
5. Critical concerns are quality workmanship in the field and proper storage of construction materials before use. The job also must have full joist bearing, level supports, floor sheathing properly installed and care in use and installation of fasteners.

TOP MOUNT HANGERS (Shear Walls)

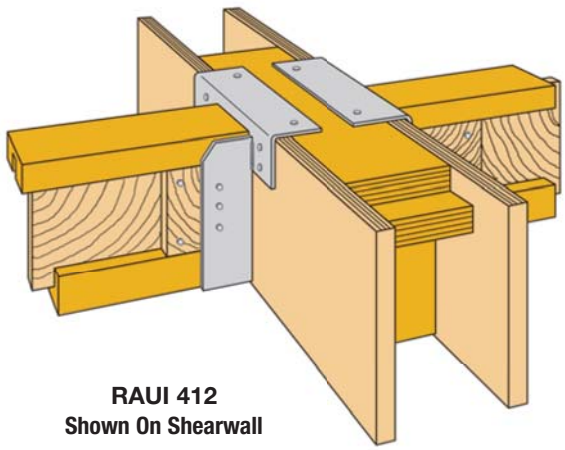
The following table lists Top Flange hangers which are suitable for installation on shearwalls with adjustments to allowable loads where appropriate. Face mount hangers are not suitable for this type of installation.

Please note:

1) The shearwall must be correctly nailed to the top plates, and studs, prior to installation of the hanger.
2) The table design load is for a maximum of ⅝" inch plywood.
3) The plywood edge must bear fully on the underside of the hanger top flange.

HANGER TYPE	NAIL SCHEDULE			DESIGN LOAD (LBS)	
	HEADER NAILING (1)		JOIST NAILING		
	TOP	FACE		DOWN (1)	UPLIFT (2)
TR	4-10d	2-10d	2-10d x 1½"	1200	245
TR	4-16d	2-16d	2-10d x 1½"	1650	245
MTR	4-16d	2-16d	2-10d x 1½"	2300	245
HTR	4-16d	6-16d	2-10d x 1½"	3125	245
R/RI	2-10d	- - - -	2-10d x 1½"	2350	- - - -
RA/RAI	2-16d	- - - -	2-10d x 1½"	3175	- - - -
RAU/RAUI	2-16d	4-16d	6-10d x 1½"	3850	750 (3)
RH/RHI	4-16d	- - - -	2-10d x 1½"	4175	- - - -
RHU/RHUI	4-16d	4-16d	6-10d x 1½"	4500	750 (3)

1) Design downloads may not be increased for duration.
2) Uplift loads are @ 133% duration for wind or earthquake, reduce uplift loads for cantilever conditions. Uplift on some hangers may be increased with the use of alternate joist nailing. Refer to table on relevant hanger for alternate nailing uplift.
3) Uplift on **RAU**/**RHU** style hangers is for 18 inch depth maximum and must be adjusted for deeper depths.
4) All **R**/**RI**, **RA**/**RAU**, **RH**/**RHU** welded Style hangers require the use of web stiffeners for correct joist nailing. 10d commons may be used for joist nailing of welded style hangers where the width is a minimum of 3 inches.
5) Reference to 10d and 16d are for common nails. Use of 16d sinkers achieves the same allowable load as 10d commons. Please refer to the nail schedule table for correct dimensions of nails.



RAUI 412
Shown On Shearwall

LOAD VALUE INFORMATION

Allowable load values are based on current UBC criteria and governed by the following:

1. The allowable wood bearing perpendicular to the grain and/or the allowable load for fasteners. The area, in square inches, that the hanger bears on the wood is calculated, and this area is multiplied times the allowable load perpendicular to the grain for the specified species of wood (usually Douglas fir-Larch). The allowable load value for the specified fasteners (nails or bolts) is added to this value. Sometimes the allowable load value of the fasteners governs the allowable load: i.e.: face mounted hangers ("**E**", "**H**", or "**S**"), the allowable lateral value for the header nails may govern. Three (3) test assemblies are required to be tested with the lowest value governing.
2. Test load at which ⅛" (.125") of hanger-supported deflection was measured. This value is found by using dial indicators. This is a device, which measures movement to within .001". For comparison purposes, an average piece of typing paper is .004" thick. The dial indicators are placed on the wood member next to the metal hanger. This method more accurately measures movement in an actual application condition.
3. Test ultimate load divided by an appropriate safety factor, which is usually 3. After ⅛" deflection is reached during the load process, the dial indicators are removed to prevent them from being damaged. Loading continues until actual failure of the test assembly occurs. This is known as the "ultimate". Actual failure may be caused by wood (joist or header), metal connector or fastener failure. This supports the importance of the use of proper fasteners. The lowest test ultimate is then divided by the appropriate safety factor thus determining the allowable test load. The safety factor is generally a factor of "3" (as per ICC criteria), but this number sometimes varies.

Example: Lowest load value = 3000 lbs.
Safety factor = 3
Maximum allowable load = $\frac{3000 \text{ lbs.}}{3}$ = 1000 lbs.

The lowest load derived from the proceeding information is the allowable normal load (100%). This load may also be the maximum load as well. The calculated load values may be increased for the duration of the load according to code. Test loads, however, may never be increased, nor may the duration of the load increase exceed any test governed load.

Load Percentages

100% ..... Full time duration.....“Usual normal”
115% ..... 2 month maximum duration
125% ..... 7 day maximum duration.....“Usual maximum”
133% ..... Wind/seismic loading .....“Usual uplift/strap tension”

To Compute the Allowable Hanger Load for Wood I-Joists

Nails into the side of the joist can be used to reduce the required bearing length only if the joist requires web stiffeners. Nails into the bottom flange of joist that do not require web stiffeners do not decrease the required bearing length.
The 100% load capacity for a hanger is the lesser of the 100% hanger **load capacity or the allowable joist-bearing value in the hanger.**

Product Application Assurance

1. An essential component for assessing hanger compatibility is the ***compatibility calculations*** (the difference between solid sawn lumber and wood I-joists). This incompatibility will have a lower capacity for most typical bearing conditions.
2. Considerable concern is the basic issue of compatibility. The nail size and location dramatically affect the combined performance of the wood I-joists and hangers.
3. Suitability of the supporting member is not limited to large solid-sawn or glulam beams - other support members can be (A.) wood I-joists, (B.) laminated veneer lumber or (C.) 2x - solid sawn member.

TOP MOUNT HANGERS (Self-Jigging) and (Grip Lock™)

ISU

FACE MOUNT HANGERS (SELF-JIGGING TO HEADER)

Design Features . . The **ISU** series hanger is a modified face mount and top mount flange hanger engineered for shallow flange and standard flange wood I-joist (1⅛" and 1½") flange thickness. The new **ISU** self jigging locator tabs (top flange) for face mount hangers, no more measuring for height of hanger and wood I-joist. Just locate hanger to the header and get ready to nail the hanger flange first, and then second, push the wood I-joist into the hanger joist section (joist nails are not required) "***SUPERSPEED***® "**Grip Lock**™"" is the fastening system - no squeaks!

If nails are required for wood I-joist bottom flange use tabs as a guide for angle nailing.

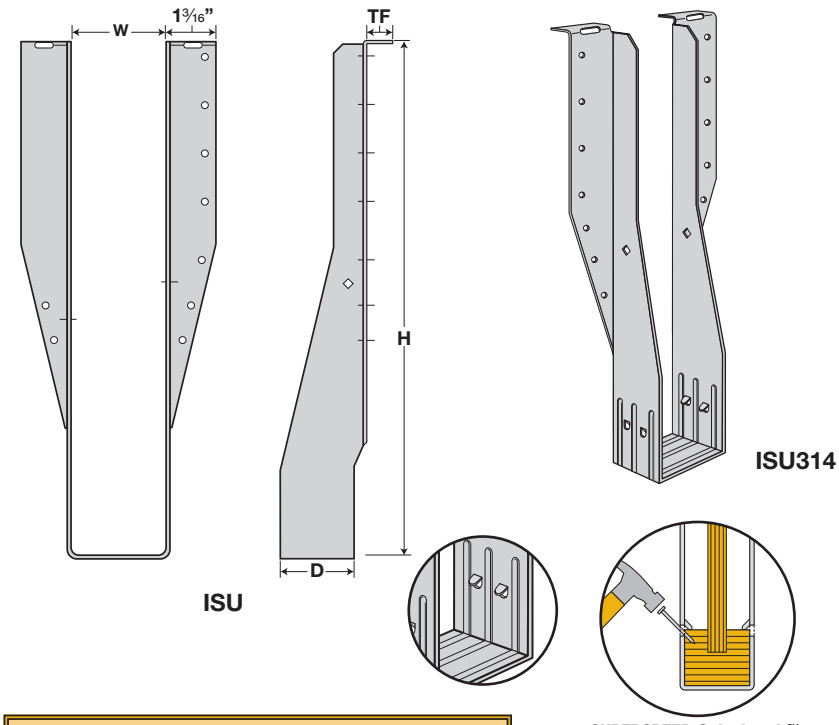
Some hanger series have triangle holes in header for (minimum and maximum) nailing and design loads.

Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connection: guarantee uniformity and high quality.

WOOD I-JOIST SIZES
1.56 series (2x) – W = 1⅜"
1.81series – W = 1¹³⁄₁₆"
2.06 series – W = 2⅛"
2.37 series – W = 2⅜"
2.56 series (3x) – W = 2⅝"
3.56 series (4x) – W = 3⅝"

Material . . 2" section – 18 ga. galvanized steel.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.



ISU

ISU314

SUPERSPEED **Grip Lock**™
Seat Secures Wood I-joists in Position Without Nails.
(Optional Shown with Nails)

IMPORTANT
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

TRS

TOP MOUNT HANGERS (GRIP LOCK™ TO WOOD I-JOIST)

The **TRS** series hanger is a cross design style between the hybrid **SUI** series and the standard **TR** series. The **TRS** hangers are designed and engineered for shallow flange and standard flange I-joist (1⅛" and 1½") flange thickness. **KC® Metal Products** has combined both hangers to create the new **TRS** series hanger. This new **TRS** hanger is a fast (self jigging) and **high load** value hanger at a value price using economy engineering for the construction framing labor force.

The top flange sets the height for the **TRS** hanger and the wood I-joist. First nail top flange down into header, secound, nail header face nails, third, push wood I-joist into place. (No joist nails are required). ***SUPERSPEED***® "**Grip Lock**™"" is the fastening system - no squeaks!

If nails are required for wood I-joist bottom flange use tabs as a guide for angle nailing.

Some hanger series have triangle holes in header for (minimum and maximum) nailing and design loads.

Design Features . . Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flange for accurate header connections.

WOOD I-JOIST SIZES
1.56 series (2x) – W = 1⅜"
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2.06 series – W = 2⅛"
2.37 series – W = 2⅜"
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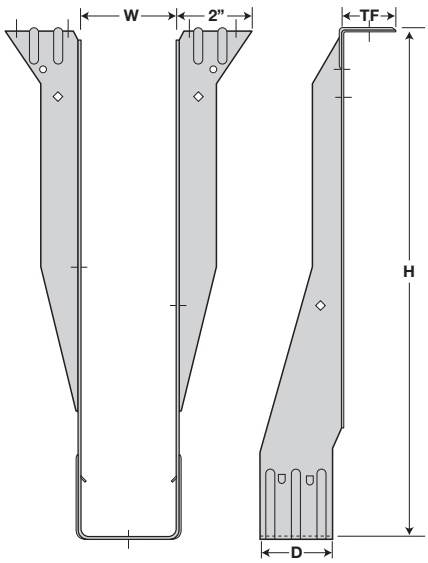
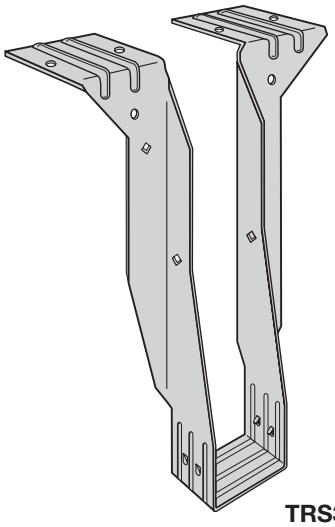
Material . . 2" section – 18 ga. galvanized steel.

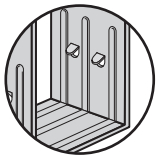
Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

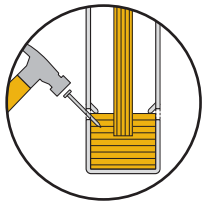


TRS



TRS314





SUPERSPEED **Grip Lock**™
Seat Secures Wood I-joists in Position Without Nails.
(Optional Shown with Nails)

IMPORTANT
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

TOP MOUNT HANGERS (Self-Jigging) AND (Grip Lock™)

ISU

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

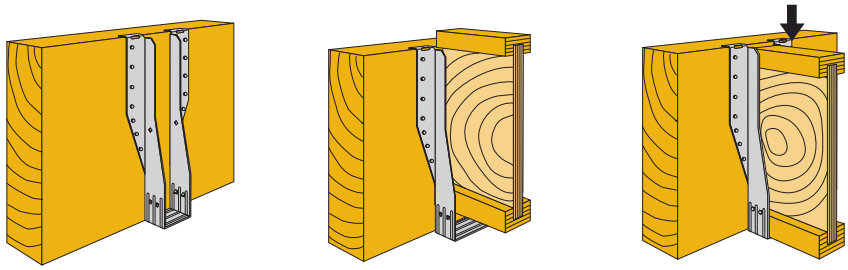
PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
ISU - - 9.5	IUS - - 9.5	2	Specify	9½	⅜	8-10d	—	935	1170	75
ISU - - 11.88	IUS - - 11.88	2	Specify	11⅞	⅜	10-10d	—	1170	1465	75
ISU - - 14 (Min)	IUS - - 14 (Min)	2	Specify	14	⅜	12-10d	—	1405	1755	75
ISU - - 14 (Max)	IUS - - 14 (Max)	2	Specify	14	⅜	14-10d	—	1640	1980	75
ISU - - 16 (Min)	IUS - - 16 (Min)	2	Specify	16	⅜	14-10d	—	1640	1980	75
ISU - - 16 (Max)	IUS - - 16 (Max)	2	Specify	16	⅜	16-10d	—	1870	1980	75

Optional Joist Nailing

a) Add 2-10d x 1½ into joist flange = 240 lbs uplift

b) Add 4-10d x 1½ with web fillers = 480 lbs uplift

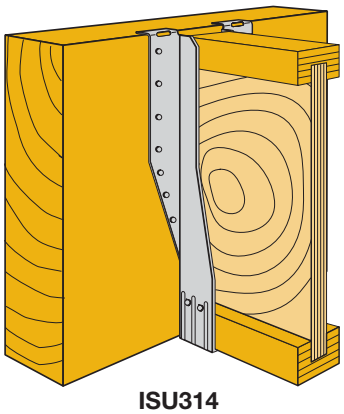
ISU Installation Sequence



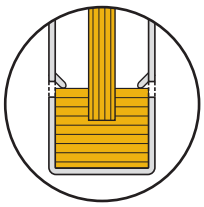
Step1
Attach the ISU to the header

Step 2
Slide the wood I-joist downward into the ISU until it rests above seat

Step 3
Firmly push or snap the wood I-joist fully into the ISU



ISU314
Typical ISU Installation



SUPERSPEED **Grip Lock™**
Seat Secures Wood I-joists in Position Without Nails.

TRS

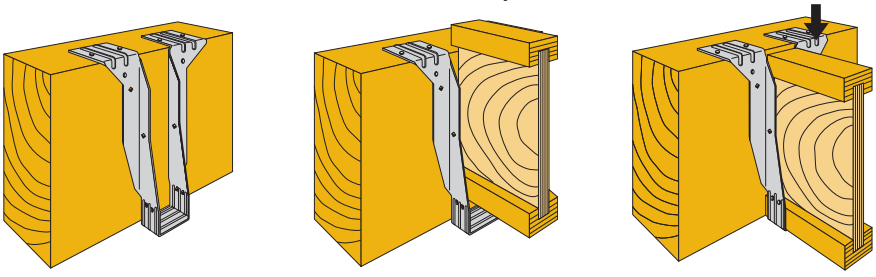
For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE			DESIGN LOAD				UPLIFT LBS 133%
		D	W	H	TF	TOP FLANGE	FACE	JOIST	DF/SP LVL	PSL	LSL	SPF	
TRS - - 9.5	ITS - - 9.5	2	Specify	9½	1⁷⁄₁₆	4-10d x 1½	2-10d x 1½	—	1445	1245	1625	1140	105
TRS - - 11.88	ITS - - 11.88	2	Specify	11⅞	1⁷⁄₁₆	4-10d	2-10d	—	1550	1365	1780	1150	105
TRS - - 14	ITS - - 14	2	Specify	14	1⁷⁄₁₆	4-16d	2-16d	—	1785	1735	1905	1230	105
TRS - - 16	ITS - - 16	2	Specify	16	1⁷⁄₁₆	4-10d	4-10d	4-10d x 1½	1960	1595	1885	1230	615
						4-16d	4-16d	4-10d x 1½	1960	1735	1905	1230	615
						4-10d	4-10d	4-10d x 1½	1960	1595	1885	1230	615
						4-16d	4-16d	4-10d x 1½	1960	1735	1905	1240	615

ALTERNATIVE NAIL SCHEDULE

PRODUCT CODE	CARRYING MEMBER	NAIL SCHEDULE		DESIGN LOAD	UPLIFT LBS 133%
		HEADER	JOIST		
TRS (ITS)	2x Nailer	6-10d x 1½	—	1260	105
	2x Nailer	6-10d x 1½	2-10d x 1½	1260	310
	2-2x Nailer	6-10d	—	1260	105
	2-2x Nailer	8-10d	4-10d x 1½	1745	615
	3x Nailer	6-16d x 2½	—	1500	105
	3x Nailer	8-16d x 2½	4-10d x 1½	1540	615
	4x Nailer	6-16d	—	1525	105
	4x Nailer	8-16d	4-10d x 1½	1925	615

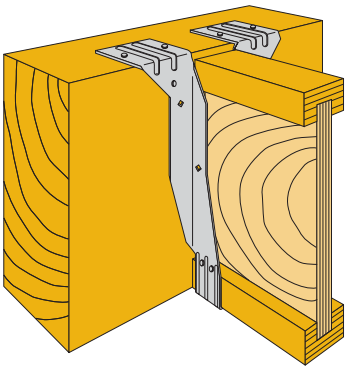
TRS Installation Sequence



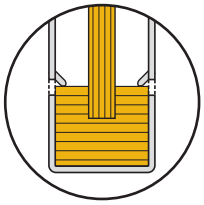
Step1
Attach the TRS to the header

Step 2
Slide the wood I-joist downward into the TRS until it rests above seat

Step 3
Firmly push or snap the wood I-joist fully into the TRS



TRS314
Typical TRS Installation



SuperSpeed Grip Lock
Seat Secures Wood I-joists in Position Without Nails.

TR — TOP MOUNT HANGERS (Light/Top Flange)

TR TOP MOUNT HANGERS

Design Features . . the **TR** series hangers are used primarily for residential purposes . . they are economical hangers designed especially for the smaller wood I-joist sizes and are used for light wood I-joist loading. They also provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connection: guarantee uniformity and high quality. Top flange design provides automatic self-jigging.

Wood I-Joist Sizes

2 series (2x) – W = 1⅜"
__ series – W = 1¹³⁄₁₆"
2.06 series W = 2⅛"
35 series – W = 2⅜"
3 series (3x) – W = 2⁹⁄₁₆"
4 series (4x) – W = 3⅛"

Material . . 2" section – 18 ga. galvanized steel.

Nails . . requires only 6 or 8 nails to install, compared to the old style hangers which are very labor intensive.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
TR29.5	ITT29.5	2	1⁹⁄₁₆	9½	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR211.88	ITT211.88	2	1⁹⁄₁₆	11⅞	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR9.5	ITT9	2	1¹³⁄₁₆	9½	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR11.88	ITT11	2	1¹³⁄₁₆	11⅞	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR14	ITT14	2	1¹³⁄₁₆	14	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR16	ITT16	2	1¹³⁄₁₆	16	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR - - 10	ITT - - 10	2	Specify	Specify	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR - - 12	ITT - - 12	2	Specify	Specify	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR - - 14	ITT - - 14	2	Specify	Specify	1⅜	6-10d	2-10d x 1½	1695	1695	245
TR - - 16	ITT - - 16	2	Specify	Specify	1⅜	6-10d	2-10d x 1½	1695	1695	245

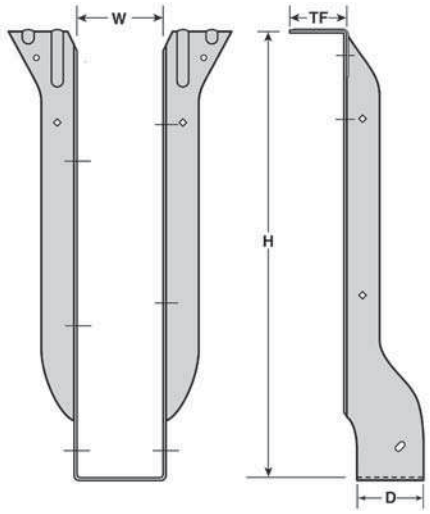
ALTERNATE NAILING SCHEDULE

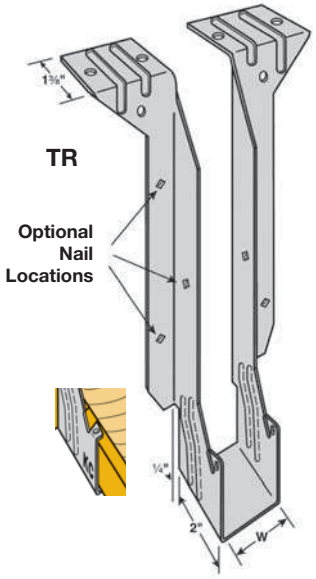
PRODUCT CODE	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
TR (ITT)	2x Nailer	4-10d x 1½	2-10d x 1½	2-10d x 1½	1200	1200	245
	3x Nailer	4-16d x 2½	2-16d x 2½	2-10d x 1½	1600	1600	245
	2-2x Nailer	4-10d	2-10d	2-10d x 1½	1200	1200	245
	4x Nailer	4-10d	2-10d	2-10d x 1½	1695	1695	245
	2x Ledger	4-10d x 1½	4-10d x 1½	4-10d x 1½	1385	1385	485
	3x Ledger	4-16d x 2½	4-16d x 2½	4-10d x 1½	1695	1695	485
	4x Ledger	4-10d	4-10d	4-10d x 1½	1695	1695	485

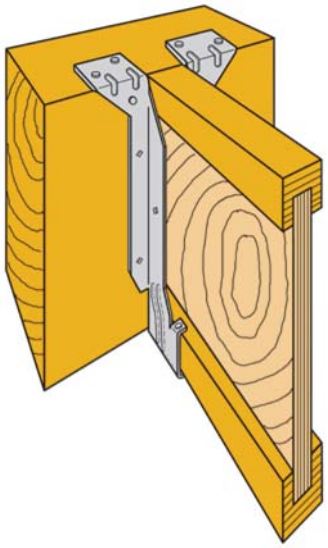
Note: Web stiffeners required for more than 2-joist nails.

CAUTION
When web stiffeners are used, do not bend tabs.

Typical Detailing for the TR, MTR and HTR Hangers



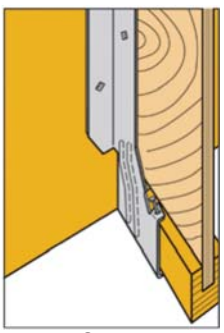




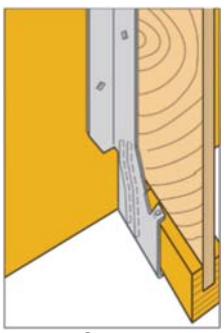
Typical TR Installation

TR Installation Sequence

Step 1
With a hammer, bend the tab.



Step 2
To prevent the wood from splitting, hammer the nail in at an angle.



Step 3
The tab is correctly installed now.

Use a 10d x 1½" nail.

MTR — MEDIUM TOP MOUNT HANGERS (Top Flange)

MTR MEDIUM TOP MOUNT HANGERS

Design Features . . the **MTR** series hangers are used for both residential and commercial purposes . . this series is fully die-formed for uniform high quality. The **MTR** hangers are especially used for mid-load and mid-height range (9½" – 20"). These hangers provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flange for accurate header connections. Top flange design provides automatic self-jigging.

Wood I-Joist Sizes

__series – W = 1 13/16"
35 series – W = 2⅜"
3 series (3x) – W = 2 5/16"
4 series (4x) – W = 3 5/16"
4.28 series – W = 4 9/32"
5.12 series (4x) – W = 5⅛"

Material . . 2½" section – 16 ga. galvanized steel.

Nails . . requires only 8 or 14 nails to install, compared to the old style hangers which are very labor intensive. For uplift requirement or different header requirements, see the alternate nailing table schedule.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

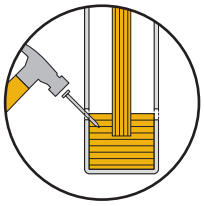
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
MTR - - 9.5	MIT - - 9.5	2½	Specify	9½	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 11.88	MIT - - 11.88	2½	Specify	11⅞	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 14	MIT - - 14	2½	Specify	14	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 16	MIT - - 16	2½	Specify	16	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 18	MIT - - 18	2½	Specify	18	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 20	MIT - - 20	2½	Specify	20	2¼	6-16d	2-10d x 1½	2720	2720	245

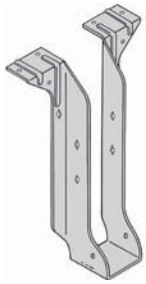
ALTERNATE NAILING SCHEDULE

PRODUCT CODE	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
MTR (MIT)	2x NAILER	4-10d x 1½	2-10d x 1½	2-10d x 1½	1685	1685	245
	3x NAILER	4-16d x 2½	2-16d x 2½	2-10d x 1½	2400	2400	245
	2-2x NAILER	4-10d	2-10d	2-10d x 1½	1685	1685	245
	4x NAILER	4-16d	2-16d	2-10d x 1½	2400	2400	245
	3x LEDGER	4-16d x 2½	4-16d x 2½	4-10d x 1½	2720	2720	485
	4x LEDGER	4-16d	4-16d	6-10d x 1½	2720	2720	720

Note: Web stiffeners required for more than 2-joist nails.

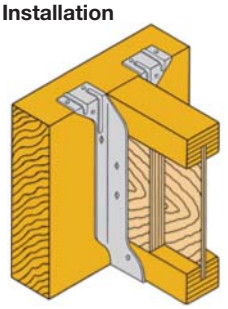


ANGLE NAILING MINIMIZES WOOD SPLITTING OF THE WOOD I-JOIST FLANGES, WHILE PERMITTING SUPERSPEED® NAILING FROM



MTR
Diamond holes in the joist flange allow optional nailing for uplift

MTR
Typical Installation



HTR — HEAVY TOP MOUNT HANGERS (Top Flange)

HTR HEAVY TOP MOUNT HANGERS

Design Features . . the **HTR** series hangers are used primarily for commercial construction purposes . . this series is fully die-formed for uniform high quality. The **HTR** hangers are especially used for heavy-load and larger-height range (18" – 26"). These hangers provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flange for accurate header connections. Top flange design provides automatic self-jigging.

WOOD I-JOIST SIZES

35 series – W = 2⅜"
3 series (3x) – W = 2 5/16"
4 series (4x) – W = 3 5/16"

Material . . 3" section – 16 ga. galvanized steel.

Nails . . requires only 12 or 16 nails to install, compared to the old style hangers which are very labor intensive.

Special . . for uplift requirement or different header requirements, see the alternate nailing table schedule.

Uplift, add 2 – N9/10d x 1½ = 580 lbs

Uplift, add 4 – N9/10d x 1½ = 870 lbs

Note . . web stiffeners and backing blocks may be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

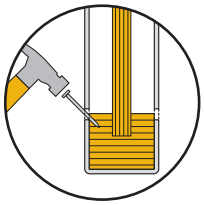
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	Dimensions (inches)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTR - - 18	HIT - - 18	3	Specify	18	2⅜	10-16d	2-10d x 1½	3535	3535	245
HTR - - 20	HIT - - 20	3	Specify	20	2⅜	10-16d	2-10d x 1½	3535	3535	245
HTR - - 22	HIT - - 22	3	Specify	22	2⅜	10-16d	2-10d x 1½	3535	3535	245
HTR - - 24	HIT - - 24	3	Specify	24	2⅜	10-16d	2-10d x 1½	3535	3535	245
HTR - - 26	HIT - - 26	3	Specify	26	2⅜	10-16d	2-10d x 1½	3535	3535	245

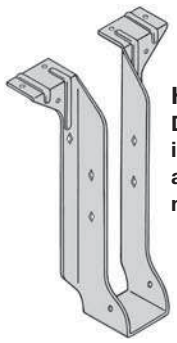
ALTERNATIVE NAILING SCHEDULE

PRODUCT CODE	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
HTR (HIT)	3x NAILER	4-16d x 2½	6-16d x 2½	2-10d x 1½	3000	3000	245
	2-2x NAILER	4-10d	6-10d	2-10d x 1½	2735	2735	245
	4x NAILER	4-16d	6-16d	2-10d x 1½	3200	3200	245
	4x LEDGER	4-16d	6-16d	4-10d x 1½	3535	3535	485
	4x LEDGER	4-16d	6-16d	6-10d x 1½	3535	3535	730

Note: Web stiffeners required for more than 2-joist nails.

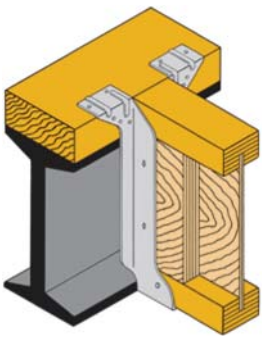


ANGLE NAILING MINIMIZES WOOD SPLITTING OF THE WOOD I-JOIST FLANGES, WHILE PERMITTING SUPERSPEED® NAILING FROM A BETTER ANGLE



HTR
Diamond holes in the joist flange allow optional nailing for uplift

HTR
Typical installation on 3x nailer mounted on a steel beam



RS-TYPE JOIST HANGERS FOR WOOD I-JOIST

RSL
RS/
RSI
RSO/
RSOI
RSV

JOIST AND PURLIN HANGERS

Design Features . . of the **RS** series provide the architect and builder with a wide variety of product sizes and load capacities in 14 ga., 12 ga. galvanized quality steel. This series is designed primarily for use in the panelized roof construction and the wood I-joist industry. One-piece design from positive control dies also incorporates easy access, full side flanges for added support. . increased bearing areas (**D** and **TF**) for greater load capacity. There are no elongated holes.

WOOD I-JOIST SIZED			
Single:		**Double: (-2)**	
2 series (2x)	W = 1⁹⁄₁₆"	**2 series (2x)**	W = 3⅛"
25 series	W = 1¹³⁄₁₆"	**25 series**	W = 3⁹⁄₁₆"
2.06 series	W = 2¹⁄₁₆"	**2.06 series**	W = 4⅛"
35 series	W = 2⅜"	**35 series**	W = 4¹³⁄₁₆"
3 series (3x)	W = 2⁹⁄₁₆"	**3 series (3x)**	W = 5⅛"
4 series (4x)	W = 3⁹⁄₁₆"	**4 series (4x)**	W = 7⅛"

Material . . 14 ga. and 12 ga. heavy –coated galvanized steel: Weldable, non-toxic hot roll sheet is available for steel fabricators.

RSL, RSV – 14 ga. galvanized steel.

RS, **RSI**, **RSO** and **RSOI** – 12 ga. galvanized steel

Installation . . all models may be used on wood I-joist, glu-lam or headers. **RSL**, **RS, RSV** models only may be nailed upon standard wood plates and nailers which are securely installed over metal, masonry, or concrete. **RSO** models require wood beams or other supports that provide full-face nailing surfaces. The **RS** series requires the following minimum fillet welds to each tab: 12 ga., ⅛" x 2". All models may be used for weld-on applications. Welding eliminates all top and face nailing requirements. Verify with the manufacturer when nails may be installed parallel to the glue line. The header may not be able to receive the necessary nails, as required by the specific hanger. Each ledger application must be evaluated for top flange dimensions, nail length and nail placement.

Design Dimensions . . H is designed to account for full wood I-joist heights. Specify if special **H** dimensions are required. **W** dimensions listed are for standard wood I-joist size widths as noted. **W** dimensions will be slightly oversized to facilitate erection. Specify if **W** dimensions are required.

Loads . . average ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Special . . web stiffeners are required on all wood I-joist shown in this table.

Uplift Values . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC.

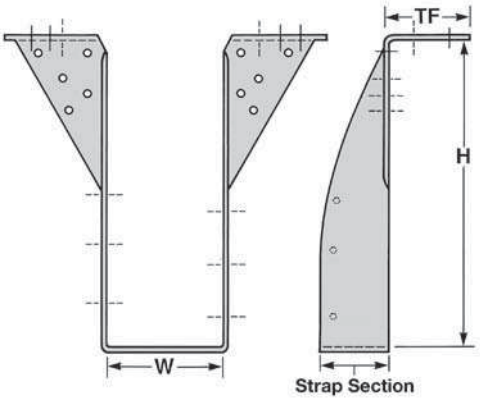
Welding . . on saddle hangers is done by certified welders.

Saddle Hangers . . are available and made to the engineer's specifications. They may be used for most conditions except at end wall and are especially recommended for nailer (sleeper) applications. Specify **S** dimensions as well as **W** and **H** dimensions.

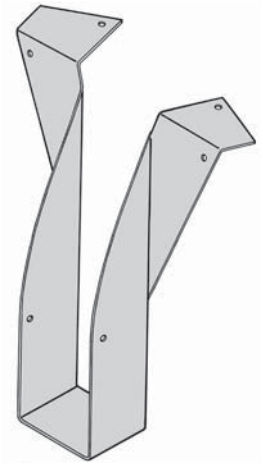
Skewed Hangers . . (see page 43) are available in the **RS** series. See the **R** series for skewed requirements.

Sloped Hangers . . are available . . specify angle or whether sloped up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

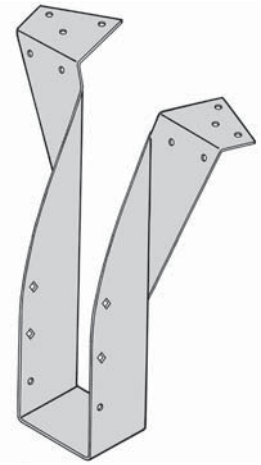
Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.



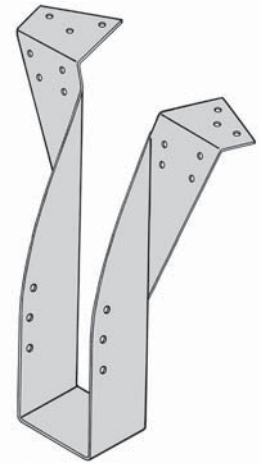
Top Flange Length (Inches)	
RSL	1⅜
RSV	2½
RS/RSI	2½
RSO/RSOI	3



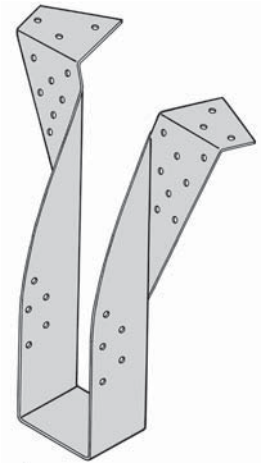
RSL



RSV



RS/RSI



RSO/RSOI

IMPORTANT

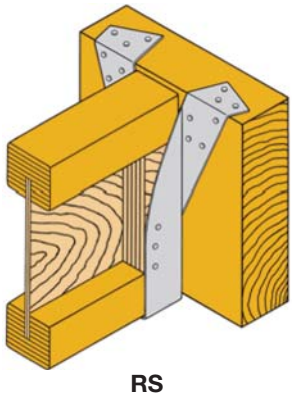
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

RS-TYPE JOIST HANGERS FOR WOOD I-JOIST

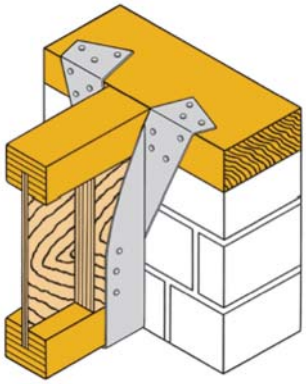
RSL
RS/RSI
RSO/RSOI
RSV

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	NAIL SCHEDULE			DESIGN LOAD (LBS)						UPLIFT LBS
		HEADER			HEADER TYPE						
		TOP	FACE	JOIST[1]	LVL	PSL	LSL	DF/SP	SPF	I-JOIST	
RSL	—	2-10d x 1½	4-10d x 1½	2-10d x 1½	2175	2175	2175	2175	2175	1415	265
		2-10d	4-10d	2-10d x 1½	2745	2745	2745	2745	2745	—	265
		2-16d	4-16d	2-10d x 1½	3265	3200	3200	3265	3200	—	265
		4-10d x 1½	4-10d x 1½	4-10d x 1½	2175	2175	2175	2175	2175	1415	530
		4-10d	4-10d	4-10d x 1½	2745	2745	2745	2745	2745	—	530
		4-16d	4-16d	4-10d x 1½	3265	3265	3265	3265	3265	—	530
RSV (Min)	LBV (Min)	6-10d x 1½	4-10d x 1½	2-10d x 1½	2305	2305	2305	2305	2305	1510	265
		6-10d	4-10d	2-10d x 1½	2305	2700	1700	2700	2305	—	265
		6-16d	4-16d	2-10d x 1½	3265	3265	3265	3265	3265	—	265
RSV (Max)	LBV (Max)	6-10d x 1½	4-10d x 1½	6-10d x 1½	2305	2305	2305	2305	2305	1510	530
		6-10d	4-10d	6-10d x 1½	2305	2700	2700	2700	2305	—	655
		6-16d	4-16d	6-10d x 1½	3265	3265	3265	3265	3265	—	770
RS RSI	B	6-10d	8-10d	6-10d x 1½	3620	3025	3865	3865	2550	—	825
		6-16d	8-16d	6-16d x 2½	4200	3515	4550	4105	3000	—	1150
RSO/RSOI	HB	6-16d	16-16d	10-16d x 2½	5905	4945	6735	6105	4000	—	2140



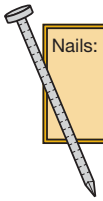
RS
Typical Installation
Wood I-Joist to
Wood Header



RS
Typical Installation
Wood I-Joist to
Wood Nailer on
Masonry Wall

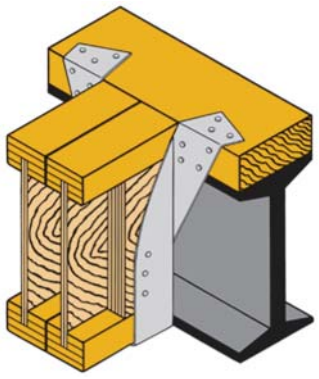
the *ONLY* APPROVED EQUAL™

STRAP SECTION	HANGER TYPE
	PRODUCT CODE
2"	RSL 35/RSL 35-2
	RSL 3x/RSL 3x -2
	RSL 2x-2
	RSL 4x
	RSL 25-2
	RSL 4.12
	RSL 5.31
2½"	RSV/RS 35/RS-2
	RSV/RSI 3x/RSI 3x-2
	RSV/RS 2.68
	RSV/RS 2x-2
	RSV/RSI 4x/RSI 4x-2
	RSV/RS 5.31
	RSV/RS 5.50
2½"	RS 35/RS 35-2
	RSI 3x/RSI 3x-2
	RS 2.68
	RS 2x-2
	RSI 4x/RSI 4x-2
	RS 5.31
	RS 5.50
3"	RSV 2x
	RS 2x
	RSV 1.68
	RS 25
	RSV 25
3½"	RSO 35/RSO 35-2
	RSOI 3x/RSOI 3x-2
	RSOI 4x/RSOI 4x-2
	RSO 5.50



Nails: 16d = 0.162" Dia. x 3½" Long
16d x 2½ = 0.162" Dia. x 2½" Long
10d = 0.148" Dia. x 3" Long
10d x 1½ = 0.148" Dia. x 1½" Long

ALTERNATE NAILING SCHEDULE				
PRODUCT CODE	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)
		WOOD NAILER	HEADER	
RSL	—	2x	6-10d x 1½	2175
		2-2x	6-10d	2175
		3x	6-16d x 2½	3000
		4x	6-16d	3265
RSV	LBV	2x	10-10d x 1½	2305
		2-2x	10-10d	2305
		3x	10-16d x 2½	2700
		4x	10-16d	2700
RS/RSI	B	2-2x	14-10d	3865
		3x	14-16d x 2½	3865
		4x	14-16d	3865
RSO/RSOI	HB	4x	22-16d	5905



RS
Typical Installation
Wood I-Joist (Double) to
Wood Nailer on
Steel "I"-Beam

WELD-TYPE JOIST HANGERS FOR WOOD I-JOIST

R/RI
RA/RAI
RAU
RH/RHI
RHU
RM/RMI
RMU

ROOF STRUCTURE JOIST AND PURLIN HANGERS

Design Features . . of the R series offer a wide application flexibility, particularly to the panelized construction and wood I-joist industry, including seven different versions:

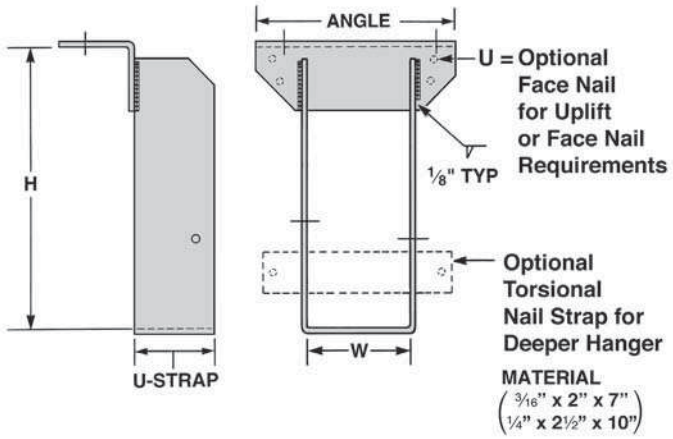
(1) Standard versions
(2) Saddle versions
(3) Offset versions
(4) Skewed versions
(5) Top Flange Down versions
(6) Top Flange Open/Closed versions
(7) Seat Sloped versions

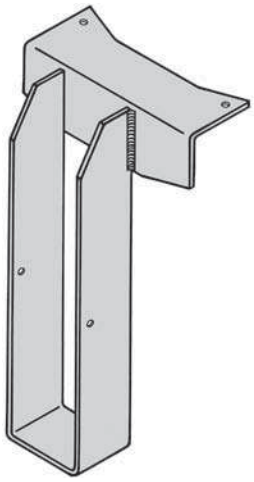
Additional design features provide easier, faster installation, greater load capacities and strength:

- Superior flange design
- Higher load values
- Stirrup design fully maximizes metal surface area where it is vital to construction needs
- Uplift nailing on special order

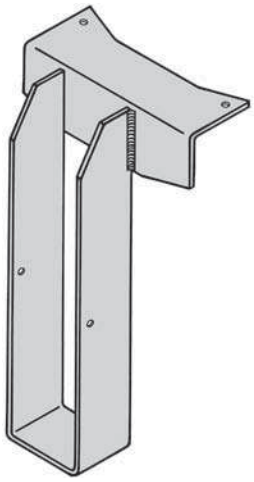
WOOD I-JOIST SIZED			
Single:		**Double: (-2)**	
2 series (2x)	W = 1 9/16"	**2 series (2x)**	W = 3 1/8"
25 series	W = 1 13/16"	**25 series**	W = 3 9/16"
2.06 series	W = 2 1/16"	**2.06 series**	W = 4 1/8"
35 series	W = 2 3/8"	**35 series**	W = 4 13/16"
3 series (3x)	W = 2 9/16"	**3 series (3x)**	W = 5 1/8"
4 series (4x)	W = 3 9/16"	**4 series (4x)**	W = 7 1/8"

Material . . 12 ga., 3/16" and 1/4" prime quality steel.
R/RI and **RA/RAI**: 12 ga. and 3/16" steel.
RH and **RHI**: 12 ga. and 3/16" and 1/4" steel.
Nails . . see table.
Loads . . tested load values are from independent laboratory tests® conducted in accordance with code criteria, with a minimum safety factor of three.
Finish . . ***SUPERSPEED*** gray paint.
Design Dimensions . . H is sized for wood I-joist heights.
Ordering/Specifying Information:
Saddle . . add **S** to stock no. and width of supporting beams.
(Example: **RI410**x **S** = **5**1/4)
Offset Top Flange . . add **OS** to stock no. and direction of offset left or right.
(Example: **RI 410x**, **R** = Right, **L** = Left)
Skewed . . add **SK** to stock no. and direction and degree of skew.
(Example: **RI410X SKL 30°**, **R** = Right, **L** = Left)
Top Flange Down. . add **TFD** to stock no. and direction and angle.
(Example: **RI 410X TFDL 15°**, **R** = Right, **L** = Left)
Top Flange Open . . add **TF** to stock no. and degree.
(Example: **RI410x TFO 20°**, **O** = Open, **C** = Closed)
Seat Sloped . . add **SL** to stock no. and direction of slope (up or down).
(Example: **RI410x SLD15°**, **D** = Down, **U** = Up)
Any of the above are available in a combination hanger.
(Example: **RI410 Offset right, skewed 45° left, sloped down 20° pitch**)
RI410x OSR/SKL 45°/SLD 20°
Skewed and Sloped Hangers . . (see page 43) are available, specify angle and whether left or right, up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.
Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each. Laminated ledgers must be properly evaluated by the designer. A solid wall backing and ledgers at least 3x must be used to attain load values. Hangers used to support multi-ply joist; the joist must be fastened together to act as a single member before installation into the hanger.

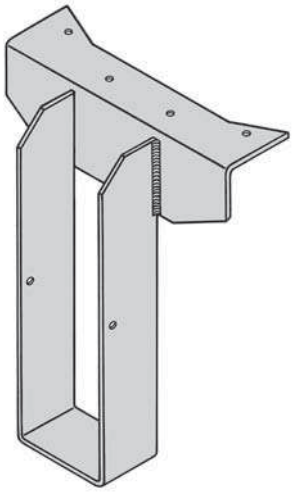




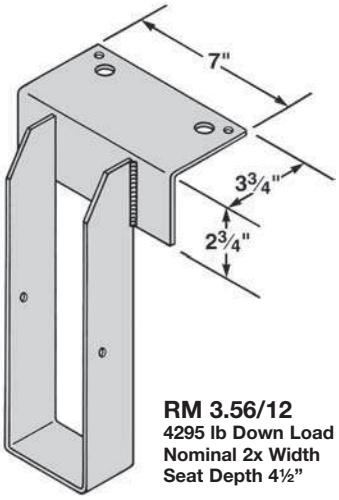
R/RI



RA/RAI



RH/RHI



RM 3.56/12
4295 lb Down Load
Nominal 2x Width
Seat Depth 4½"

IMPORTANT
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

WELD-TYPE JOIST HANGERS FOR WOOD I-JOIST

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

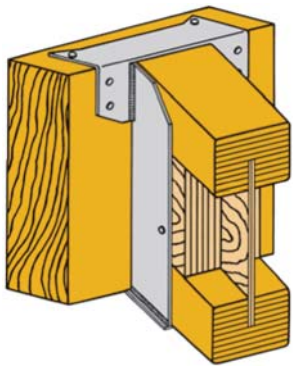
PRODUCT CODE	REF NO	JOIST SIZES		NAIL SCHEDULE			DESIGN LOAD (LBS) HEADER TYPE				UPLIFT LBS
		WIDTH	DEPTH	TOP	FACE	JOIST	LVL	PSL	LSL	DF/SP	
R/RI	W/WI	1½ to 7½	3½ to 30	2-10d x 1½	—	2-10d x 1½	1775	1775	1775	1775	—
		1½ to 7½	3½ to 30	2-10d	—	2-10d x 1½	2365	2100	2100	2365	—
		1½ to 7½	3½ to 30	2-16d	—	2-10d x 1½	2365	2365	2365	2365	—
RM	WM	1½ to 7½	3½ to 30	2-16d x DPLX	—	2-10d x 1½	—	—	—	—	—
RMU	WMU	1½ to 7½	9 to 18	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	700
		1½ to 7½	18½ to 22½	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	700
		1½ to 7½	23 to 28	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	650
RA/RAI	WP/WPI	1½ to 7½	3½ to 30	2-10d x 1½	—	2-10d x 1½	2880	2880	—	2880	—
		1½ to 7½	3½ to 30	2-10d	—	2-10d x 1½	3270	3270	3270	3270	—
		1½ to 7½	3½ to 30	2-16d	—	2-10d x 1½	4045	4045	4045	4045	—
RAU	WPU	1¾ to 5½	7¼ to 18	2-16d	4-16d	6-10d x 1½	4730	4730	4215	4215	775
		1¾ to 5½	13½ to 22½	2-16d	4-16d	6-10d x 1½	4730	4730	4215	4215	650
		1¾ to 5½	23 to 28	2-16d	4-16d	8-10d x 1½	4730	4730	4215	4215	800
RH/RHI	HW/HWI	1½ to 7½	3½ to 32	4-10d	—	2-10d x 1½	4555	4555	4555	5195	—
		1½ to 7½	9 to 18	4-16d	—	2-10d x 1½	5320	5320	5320	5320	—
RHU	HWU	1¾ to 3⁹⁄₁₆	7¼ to 18	4-16d	4-16d	6-10d x 1½	6470	5636	5630	6470	775
		1¾ to 3⁹⁄₁₆	18½ to 22½	4-16d	4-16d	6-10d x 1½	6470	5636	5630	6470	775
		1¾ to 3⁹⁄₁₆	23 to 28	4-16d	4-16d	8-10d x 1½	6470	5636	5630	6470	1020
		1¾ to 3⁹⁄₁₆	28½ to 32	4-16d	4-16d	8-10d x 1½	6470	5636	5630	6470	1020
		4¾ to 7⅛	7¼ to 18	4-16d	4-16d	6-10d x 1½	6035	5636	5630	6085	775
		4¾ to 7⅛	18½ to 22½	4-16d	4-16d	6-10d x 1½	6035	5636	5630	6085	775
		4¾ to 7⅛	23 to 28	4-16d	4-16d	8-10d x 1½	6035	5636	5630	6085	1020
		4¾ to 7⅛	28½ to 32	4-16d	4-16d	8-10d x 1½	6035	5636	5630	6085	1020

"U" STRAP SECTION	PRODUCT CODE
2½"	R 2x / RA 2x-2 / RM 2x -2
	R 25
	R 35 / RA 35 / RA 35-2 / RH 35-2 / RM 35-2
	RI 3x / RAI 3x / RAI 3x-2 / RHI 3x-2
	RM 3.56
	RI 4x / RAI 4x / RAI 4x-2 / RHI 4x / RHI 4x-2 / RMI 4x-2
	RA 5.31 / RH 5.31
	RA 5.50 / RH 5.50 / RM 5.50
3"	RA 25
	RM 35
	RM 3x
	RAU 3.56 / RHU 3.56
	RAU 5.50 / RHU 5.50
	RAU 5.62
	RHU 7.12
3¾"	RA 2x / RH 2x-2
	RAU 25 / RM 25
	RAU 2.75
	RH 35
	RHI 3x

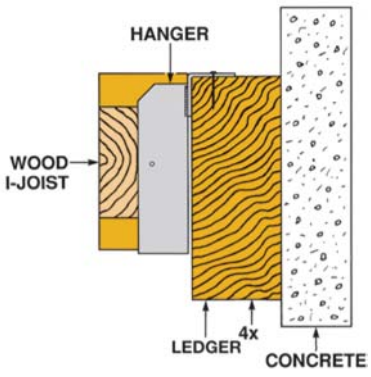
ALTERNATIVE NAILING SCHEDULE						
	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS) HEADER TYPE		UPLIFT LBS
		WOOD NAILER	HEADER (TOP FLANGE)	DF/SP	SPF	
R/RI	W	2X	2-10d x 1½	1600	1600	—
		3X	2-16d x 2½	1890	1890	—
		2-2X	2-10d	1775	1775	—
		4X	2-10d	2200	2200	—
RA/RAI	WP	2X	2-10d x 1½	2530	2500	—
		3X	2-16d x 2½	3005	2520	—
		2-2X	2-10d	3260	3255	—
		4X	2-10d	3270	3255	—
RAU/RAIU	WPU	3X	8-16d x 2½	3000	2520	775
		2-2X	8-10d	3270	3270	700
RH/RHI	HW	4X	4-16d	5320		
RHU/RHIU	HWU	2-2X	8-16d x 2½	5650		700

PRODUCT CODE	ANGLE
R/RI =	2¼" x 2¼" x 12 ga x 6½"
RA/RAI =	2¼" x 2¼" x 7 ga x 7"
RH/RHI =	2½" x 3¼" x ¼" x 10"

* When width is greater than 6½", length of angle is 8"

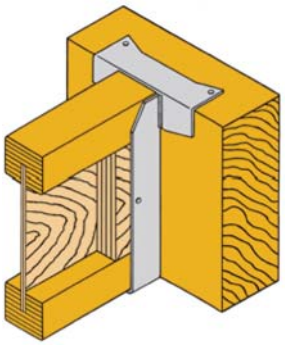


R
Typically Installed, Sloped Down and Skewed Left (Welded)

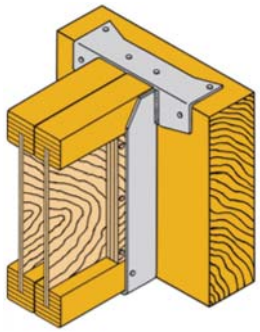


RH
Typical Ledger Installation

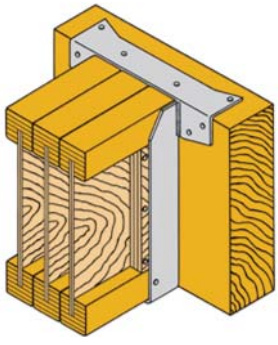
R/RI
RA/RAI
RAU
RH/RHI
RHU
RM/RMI
RMU



RI410
Typical Installation



RA2514-2
Typical Installation (Double)



RH2514-3
Typical Installation (Triple)

U-TYPE UNIVERSAL JOIST HANGERS FOR WOOD I-JOIST

SI
MUI

JOIST HANGERS

Design Features . . constant dimensional accuracy and precision controlled 90° angles ensure proper wood I-joist bearing (flat seat) and header connection and alignment. This design reliability is the result of **KC® Metal** using positive-control dies, automated machinery, skilled operators and prime quality galvanized steel. Two design styles are available for application and load bearing flexibility.

Stock No.	Design Configuration
S/SI( )	Standard
MUI	Standard
MUIR( )	Reversed face flange (turned in) for 2⁹⁄₁₆" NET and larger joist sizes

Wood I-Joist Sizes

S/SI	*MUI*
2 series (2x) W = 1⁹⁄₁₆"	**1.56** series (2x) W = 1⁹⁄₁₆"
__series W = 2¹⁄₁₆"	**1.81** series W = 1¹³⁄₁₆"
35 series W = 2⅜"	**2.06** series W = 2¹⁄₁₆"
3 series (3x) W = 2⁹⁄₁₆"	**2.37** series W = 2⅜"
4 series (4x) W = 3⁹⁄₁₆"	**2.56** series (3x) W = 2⁹⁄₁₆"
	3.56 series (4x) W = 3⁹⁄₁₆"
	4.12 series – W = 4⅛"
	4.28 series – W = 4³²⁄₃₂"
	4.75 series – W = **4**¾ "
	5.12 series – W = **5**⅛"

Material . . 18 ga. galvanized steel for **SI** joist hangers and 16 ga. galvanized steel for **MUI** joist hangers meets the specifications for schools and other public buildings.

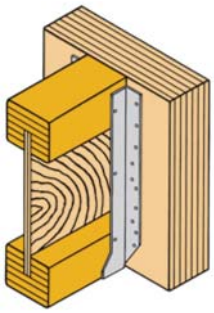
Loads . . nailing schedule and design load capabilities are consistent with those obtained in independent laboratory tests.

Design Features . . MUI hangers are designed for high loaded commercial wood I-joist applications without web stiffeners that are usually required. There are optional joist nails for a total uplift load of 940 lbs. using 1½" 10d nails.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

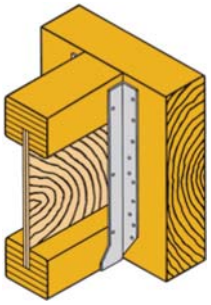
IMPORTANT

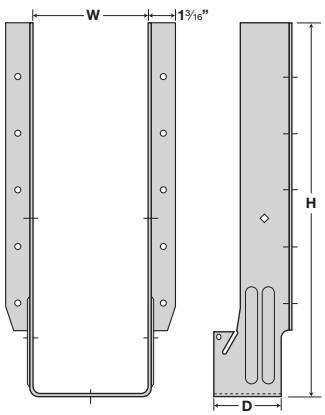
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Product catalog of the engineered wood I-joist manufacturer)



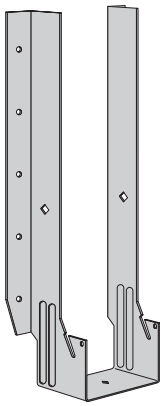
MUI416

Onto Laminated Veneer Lumber (LVL) or Dimensional Lumber

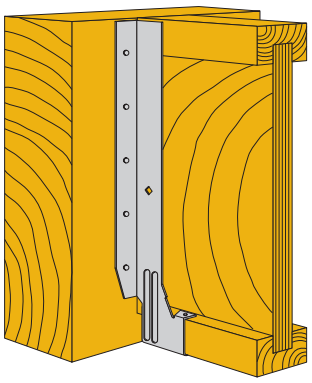




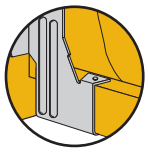
SI



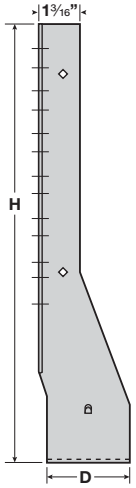
SI

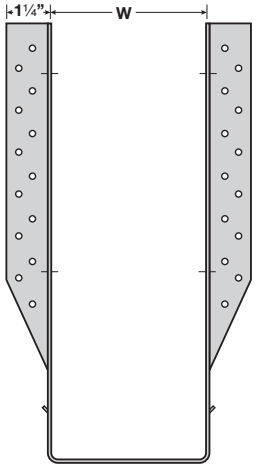


SI316

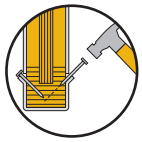


Bend tab into the bottom flange and fasten with 10d x 1½" nails when web stiffeners are not used to help reduce floor squeaks.



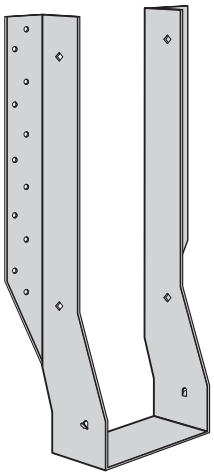


MUI



Positive Angle Nailing

Angle Nailing Minimizes Wood Splitting of the Wood I-joist Flanges, While Permitting **SUPERSPEED** Nailing from a Better Angle



MUI

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
		D	W	H	WOOD I-JOIST	HEADER	JOIST	NORMAL LBS	MAX LBS	
SI..9*	IUT..9	2	Specify	9	Specify	8-10d	2-10d x 1½	890	1110	245
SI..10	IUT..10	2	Specify	9	Specify	8-10d	2-10d x 1½	890	1110	245
SI..11*	IUT..11	2	Specify	11⅛	Specify	10-10d	2-10d x 1½	1110	1390	245
SI..12	IUT..12	2	Specify	11⅞	Specify	10-10d	2-10d x 1½	1110	1390	245
SI..14	IUT..14	2	Specify	13¾	Specify	14-10d	2-10d x 1½	1555	1945	245
SI..16	IUT..16	2	Specify	15¾	Specify	16-10d	2-10d x 1½	1775	2220	245
MUI..9	MIU..9	2½	Specify	9	Specify	16-16d	2-10d x 1½	2270	2840	245
MUI..11	MIU..11	2½	Specify	11	Specify	20-16d	2-10d x 1½	2880	3135	245
MUI..14	MIU..14	2½	Specify	13¼	Specify	22-16d	2-10d x 1½	3170	3550	245
MUI..16	MIU..16	2½	Specify	15¼	Specify	24-16d	2-10d x 1½	3455	3550	245
MUI..18	MIU..18	2½	Specify	17¼	Specify	26-16d	2-10d x 1½	3745	4045	245
MUI..20	MIU..20	2½	Specify	19½	Specify	28-16d	2-10d x 1½	4030	4060	245

* 2 Series (2x) W = 1⁹⁄₁₆	SI 2.9	SI 211
* __ Series (2x) W = 1¹³⁄₁₆	SI 9	SI 11
* 2.06 Series (2x) W = 2¹⁄₁₆	SI 2.06/9	SI 2.06/11

HEAVY-DUTY HANGERS (Double/Triple Wood I-Joists)

BHV BHSV BEAM HANGERS

Design Features . . seven versions to meet all specifications.

(1) Standard versions
(2) Saddle versions
(3) Offset versions
(4) Skewed versions
(5) Top Flange Down versions
(6) Top Flange Open/Closed versions
(7) Seat Sloped versions

The top flange nails are placed to avoid damage to the laminated headers. Nailers and ledgers must be 4x or larger, or should be evaluated by the designer. All fasteners must be used to achieve load values; verify that the header can receive all fasteners.

WOOD I-JOIST SIZES	
Single:	***Double:***
2 series (2x) W = 1⅜"	**2** series (2x) W = 3⅛"
25 series W = 1³⁄₁₆"	**25** series W = 3⅜"
35 series W = 2⅜"	**35** series W = 4³⁄₁₆"
3 series (3x) W = 2⅝"	**3** series (3x) W = 5⅛"
4 series (4x) W = 3⅝"	**4** series (4x) W = 7⅛"

Applications . . BHV and **BHSV** heavy-duty hangers accommodate typical structural requirements for that extra heavy load . . . these hangers are used for longer spans which require greater loads that satisfy the safety factor for sound building requirements. For weld-on **BHV** applications, the minimum required weld is a ³⁄₁₆" x 2½" fillet weld at each end of the header angle; **BHSV** requires a ¼" x 2½" fillet weld at each end.

Nails . . use 16d common nails.

Finish . . ***SUPERSPEED*** gray paint.

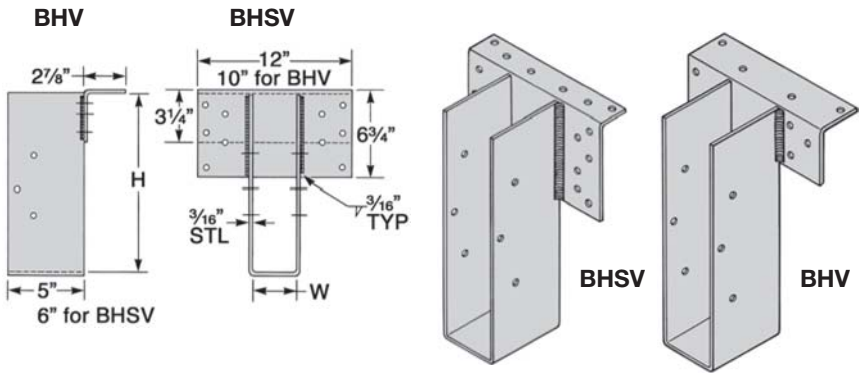
Skewed and Sloped Hangers . . available, specify angle (50° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

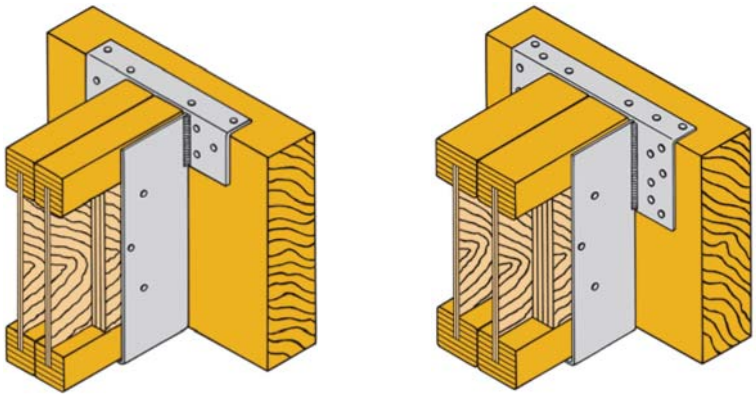
Options Available . . The **BHV** and **BHSV** hangers can be sloped and/or skewed. See the **R** series for ordering requirements.

Note . . web stiffeners are normally required for double joist installation. Consult the engineered wood I-joist manufacturer for web stiffener requirements and recommended nailing schedule.

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)		DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		ANGLE	U-STRAP	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
BHV	GLTV	2⅞ x 3⅛ x ¼ x 10	5 x 7 ga	Specify	Specify	10-16d	6-16d	7360	7360	1370
BHSV	HGLTV	2⅞ x 6¾ x ¼ x 12	6 x 7 ga	Specify	Specify	18-16d	6-16d	10780	10780	1370





BHV
Typical Double Installation

BHSV
Typical Double Installation

HBHQ HEAVY BEAM HANGERS (SCREW TYPE)

Design Feaures . . The **HBHQ** is a high capacity screw type (***SUPERSPEED*** SDS ¼ Drive Screws). **Top Flange Hanger** designed for use with **LVL** and **PSL** engineered wood products. The SDS screws provide for a lower profile compared to standard through bolts.

Material. . Stirrup 7 ga. steel
Top Flange ¼" steel

Finish . . ***SUPERSPEED*** gray paint.

Welding . . is done by certified welders.

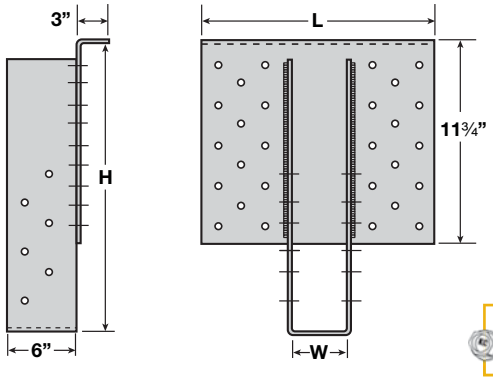
Specials. . Available in standard width sizes and special height sizes. ***SUPERSPEED*** (¼ x 3 SDS) Drive Screws are furnished for all holes in the **HBHQ** hanger.

Applications . . all multiple hangers must be fastened together to act as one unit. Multiple header members may require additional fasteners at **HBHQ** header flange. Number and location of ***SUPERSPEED*** SDS1/4 drive screws to be the design responsibility of engineer of record.

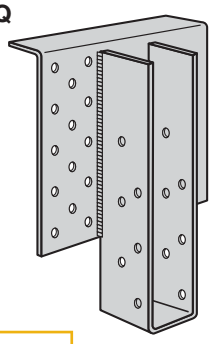
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)			*SUPERSPEED* SDS ¼ DRIVE SCREWS		DESIGN LOAD HEADER TYPE		UPLIFT LBS 133%
		W	H 11" Min	L	CARRYING BEAM (HEADER)	SUPPORTED BEAM (PURLIN)	DF/WL LBS	PSL LBS	
HBHQ 3.62	EGQ3.62-SDS3	3⅝	Specify	18	28-SDS¼-3	12-SDS¼-3	19800	18680	6365
HBHQ 5.50	EGQ5.50-SDS3	5½	Specify	18	28-SDS¼-3	12-SDS¼-3	19800	18680	6365
HBHQ 7.25	EGQ7.25-SDS3	7¼	Specify	18	28-SDS¼-3	12-SDS¼-3	19800	18680	6365

HBHQ



HBHQ



STEEL STUD HARDWARE

SCREWS

SCREWS

Design Features . . most structural hardware items can be converted for use with light gage steel construction. The hole patterns may differ slightly from those products manufactured for use in general wood construction. No.10 screws are general fasteners for steel construction. To achieve stated loads, shear capacity must be equal to or greater than the table value.

DESCRIPTION	FINISH	LOAD
#10 x 1" Hex	Zinc	330
#10 x 1" Philips	Zinc	330
#10 x 1½" Philips	Zinc	330

SCREWS

ST/CA ST/CAS

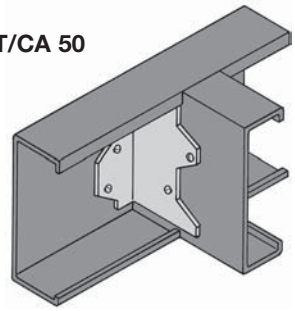
CLIP ANCHORS/SKEWED

Design Features . . the **ST/CA** and **ST/CAS** angles are multi-use reinforcing angles and can be field skewed to a maximum of 135°.

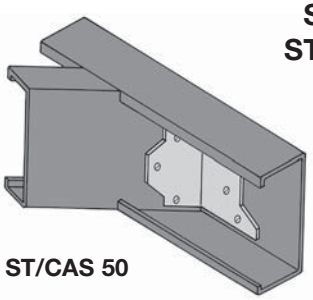
Material . . 18 ga. and 16 ga. galvanized steel.

Installation . . all specified fasteners must be used to achieve design loads.

ST/CA 50



ST/CA ST/CAS



ST/CAS 50

ST/WA ST/WAH14

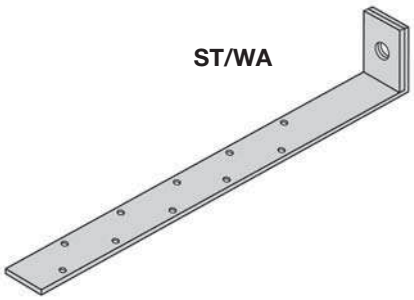
WALL ANCHORS

Design Features . . three wall anchor configurations are available for use in steel stud construction. The **ST/WA** and **ST/WAM14** are suited for both retrofit and new construction.

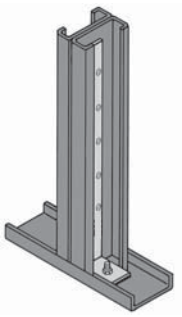
Material . . 14 ga. and 12 ga. galvanized steel.

Installation . . all specified fasteners must be used to achieve design loads.

ST/WA



ST/WA



ST/AD

ANCHOR DOWNS

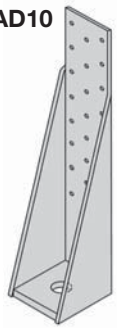
Design Features . . three configurations are available for easy steel stud installation. The narrow width accommodates inside dimensions of steel studs, while the lessened heights will not interfere with knockouts.

Material . . ST/AD8, 10 ga. body with ⅜" base; **ST/AD10**, **ST/AD15**, 7 ga. with ½" base.

Installation . . all specified fasteners must be used to achieve design loads. The anchor bolt is ⅞" x (**ST/AD8**) and 1" x (**ST/AD10** and **ST/AD15**). Length specified by the engineer.

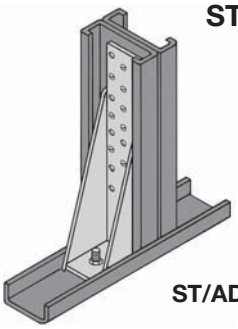
Finish . . ***SUPERSPEED*** gray paint.

ST/AD10



PRODUCT CODE	DIMENSIONS (INCHES)		SCREWS #10 TO STUD
	W	H	
ST/AD8	2½	13⅞	24
ST/AD10	2½	16⅛	30
ST/AD15	2¾	21½	48

ST/AD



ST/AD10

ST/AD ST/RS

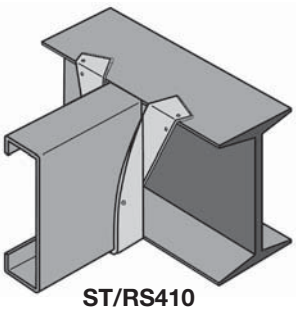
ROOF HANGERS

Design Features . . both the **ST/R** and **ST/RS** style hangers can be adapted for steel stud use. The **ST/R** hangers provide top and bottom channel support, while the **RS** hangers achieve required loads through seat-bearing.

Material . . ST/R, 12 ga. steel stirrup; **ST/RS**, 14 ga. and 12 ga. galvanized steel.

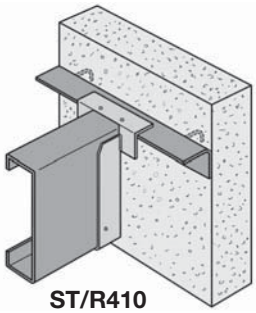
Installation . . both hanger styles can be welded to steel headers. The **ST/R** style can be sloped and/or skewed, while the **ST/RS** can be sloped as needed.

Finish . . ***SUPERSPEED*** gray paint.



ST/RS410

ST/R ST/RS



ST/R410

NOTE

These items are a sampling of the product which can be converted for steel stud usage. Please contact factory for additional information.

SKEWED OR SLOPED JOIST HANGERS

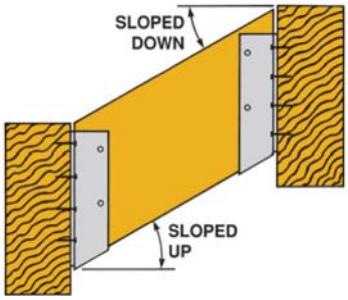
S **STANDARD JOIST HANGERS**
(Pages 8 and 38)

H **HEAVY JOIST HANGERS**
(Pages 16 and 38)

HTF **HEAVY TOP FLANGE JOIST HANGERS**
(Page 18)

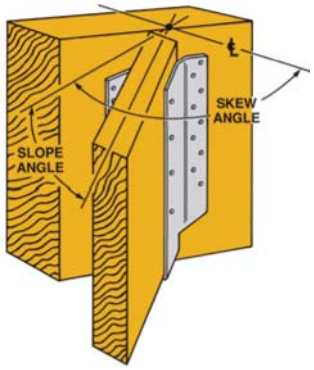
Design Features . . skewed hangers, sloped hangers and combination skewed and sloped hangers are also manufactured from 1-piece prime galvanized steel (no welded parts).

LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	Skewed	100
Down	Sloped	100
Down	Combination	80
Uplift	*Skewed	75
*Greater than 15%		



Specify Degrees Sloped Up or Sloped Down (30° Maximum)

H210
Sloped Up/Sloped Down (1-Piece Design)



H210
Skewed Left – Sloped Down (1-Piece Formed Design) No Welds

R **ROOF HANGERS**
(Pages 22 and 23)

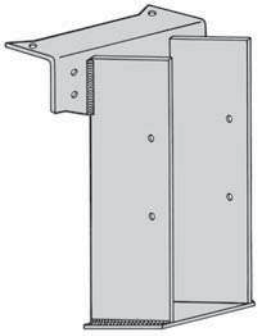
RA **ROOF ANGLED HANGERS**
(Pages 22 and 23)

RH **ROOF HEAVY HANGERS**
(Pages 22 and 23)

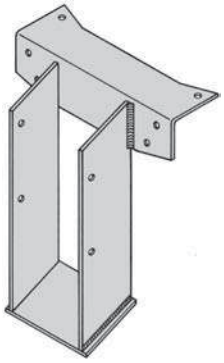
RHG **ROOF HEAVY GLU-LAM HANGERS**
(Pages 22 and 23)

Design Features . . the normal manufacturing technique for custom or modified **R** series hangers is a 3-piece welded design. The seat is welded to the two side flanges.

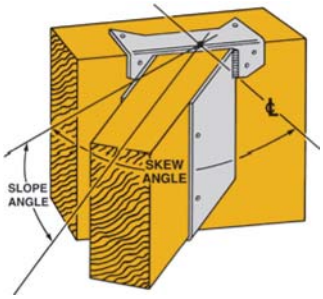
Load Direction	Variation	% of Design Load
Down	Skewed	100
Down	Sloped	100
Down	Combination	100
Down	Offset	50
Down	Ridge	100



RA412
Skewed Right (Welded)



RA412
Sloped Down (Welded)



RA412
Skewed Left – Sloped Down (1-Piece "U" Strap Design Welded to Top Flange Angle)

IMPORTANT

KC® Metal Products, Inc. can also provide 1-piece hangers for skewed, sloped and skewed and sloped combination hangers when appearance is important in exposed project construction.

RS **ROOF STRUCTURE**
(Pages 20 and 21)

RSO **ROOF STRUCTURE OREGON (UPLIFT)**
(Pages 20 and 21)

RSH **ROOF STRUCTURE HEAVY**
(Pages 20 and 21)

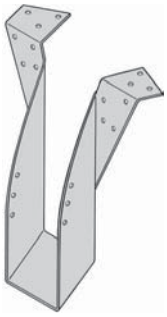
RSG **ROOF STRUCTURE GLU-LAM**
(Pages 20 and 21)

RSGH **ROOF STRUCTURE**
(Pages 20 and 21)

Design Features . . the **RS** series hangers can only be sloped. For the skewed series, see the above **R** series.

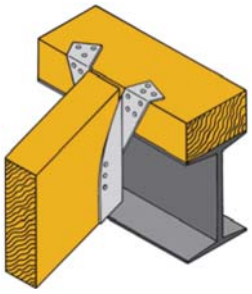
Material . . 1-piece galvanized or prime quality steel.

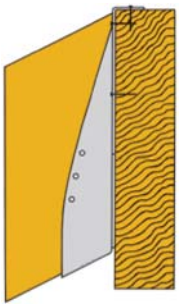
LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	Sloped 1° to 30°	100
Down	Sloped 31° to 45°	80



RS412
Sloped Down (1-Piece Design)

RS412
4X Nailer on I-Beam





RS412
Sloped Down

We can manufacture almost any type of hanger for your needs. Just simply state:

(1) the type of hanger	Example: Heavy (H).
(2) the size of the hanger	Example: 4 x 12 (H412).
(1) the modifications) that is needed	Example: Modifications skewed (H412 skewed right 30°) Modifications sloped down 1/12 pitch (H412 skewed right 30°, sloped down 1/12 pitch).

For additional modified hanger types, ask for our Technical Manual.

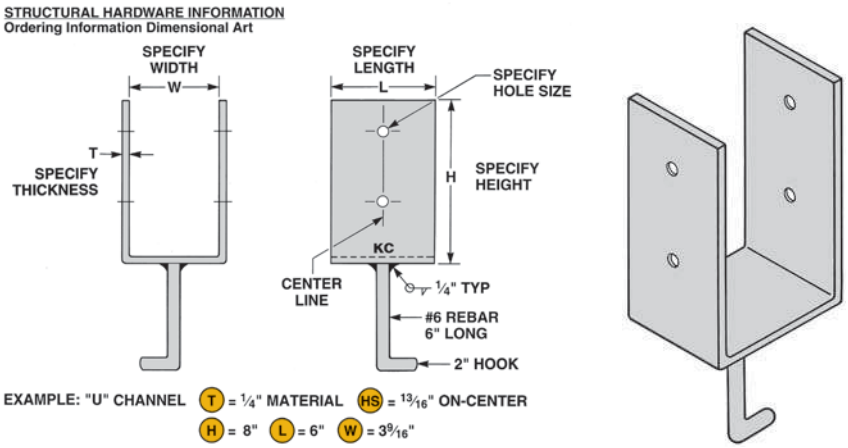
STRUCTURAL HARDWARE SPECIALS

ORDERING INFORMATION

STANDARD HOLE SPACING

Bolt Size (Inches)	Edge Spacing (Inches)	Hole Size (Inches)	Location
½	1	9/16	2" O.C.
5/8	1¼	11/16	2½" O.C.
¾	1½	13/16	3" O.C.
7/8	1¾	15/16	3½" O.C.
1	2	1 1/16	4" O.C.
1⅛	2¼	1 3/16	4½" O.C.
1¼	2½	1 5/16	5" O.C.
Note: T = Thickness W = Inside Width		L = Length H = Height HS = Hole Size	

Additional Ordering Information . . the ornamental style hanger is available with any special item.



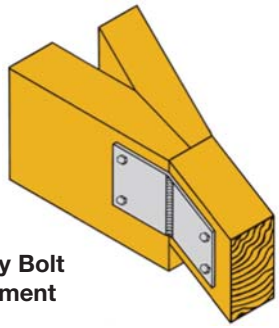
HIP HARDWARE

Design Features . . used to make hip, rafter and ridge connections . . precision made to the customer's specifications.

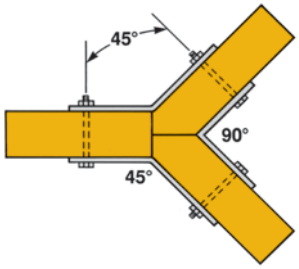
Material . . specify.

Finish . . ***SUPERSPEED*** gray paint.

Ordering Information . . specify ridge and hip sizes. Provide slope in degrees or in pitch. Give hip/ridge connection in degrees. Provide a plan detail.



Specify Bolt Placement

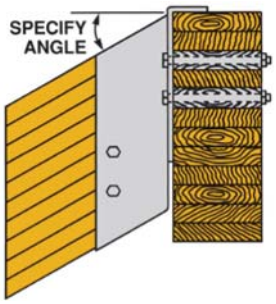


Hip Connectors

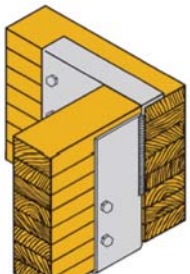
SKEWED, OFFSET OR SLOPED HARDWARE

Design Features . . available in any combination or style (see page 45).

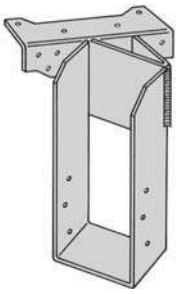
PRODUCT CODE	DIRECTION OF DOWN LOAD (LBS)		
	SLOPE	SKEW	*OFFSET
BH	6500	6550	60%
BHS	9165	10670	45%
LBH	9665	10000	6500
MBH	9665	10000	6500
HBH	9665	14250	6500
Note:*Offset load shown in % of standard, or in lbs.			



LBH
Sloped Down



LBH
Top Flange Offset Left



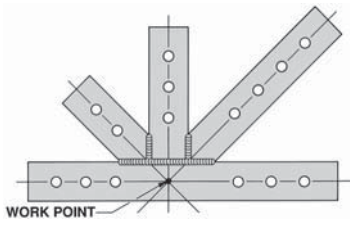
BH
Skewed Left
(B Style)

TRUSS HARDWARE

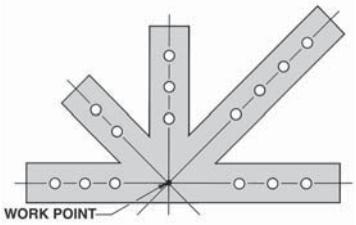
Design Features . . available in either a 1-piece or welded design.

Ordering Information . . a template must be supplied.

Horizontal Truss



Welded (Both Sides)



1-Piece Design

HANGER OPTIONS GENERAL NOTES

The following options and adjustments factors are applicable only on hangers manufactured by **ITW BCG Hardware.**

Testing of modified hangers is done using the same basic criteria as is used for testing standard hangers submitted for ICC recognition. In some cases testing of all options available for a specific hanger simultaneous may not be possible. In these cases the option that produces the lowest allowable load is used to determine the adjustment factor required.

The supporting member (header) is always assumed fixed during actual installation. Horizontal forces resulting in sloped hanger geometry must be resisted by additional components in the structural system.

MATERIAL: The gage of steel used in the manufacture of modified hangers may vary from that specified for non-modified hangers depending on the manufacturing process. The number and location of fasteners may vary from non-modified hangers.

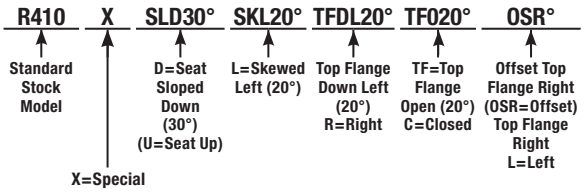
FINISH: Hangers which require welding, to accommodate various options will be painted after fabrication. Non-galvanized hangers may be hot-dipped galvanized after fabrication if specified at time of order; specify HDG.

CODES: Due to the infinite number of variations possible, modified hangers do not have specific ICC recognition. The basic hanger is used with adjustments to allowable load where applicable.

ALLOWABLE LOADS: For multiple options existing on the same hanger, use the adjustment factor that provides for the lowest allowable load.

INSTALLATIONS:

1) The number of fasteners provided for may be more than specified for non-modified hangers. All fasteners must be used to achieve allowable loads
2) For skewed type “A” hangers joist ends must be bevel-cut. For skewed type “B” hangers joist ends may be butt-cut.
3) Sloped seat top flange hangers must be backed.
4) Non-standard nails specified are provided with product.



PRODUCT CODE	SKEWED SEAT (MAXIMUM)	SLOPED SEAT (MAXIMUM)	SKEWED & SLOPED SEAT	SLOPED TOP FLANGE	OPEN TOP FLANGE	CLOSED TOP FLANGE	OFFSET TOP FLANGE	SADDLE HANGER	RIDGE HANGER	REVERSED OR CONCEALED FLANGE	UPLIFT	WELDABILITY	NON-BACKED (Backing reduces possible joist rotation)	BEVEL CUT JOIST	SQUARE (BUTT) CUT JOIST
BH/BHV	50°	45	•	•			•				•	•	•	•	
BHC											•	•		•	
BHS/BHSV	50°	45		•			•				•	•	•	•	
GH	45°							•						•	
H	67½°	45	•							•	•	•			•
HBH	45°	45												•	
HDTP	45°	45	•								•			•	
HHDTP	45°													•	•
HSH	50°	45		•			•	•			•	•		•	
HTF	45°	45	•							•	•				•
HTP										•				•	
HTPTF										•				•	
LBH	45°	45					•							•	
LSS	45°	45	•								•				•
MBH	45°	45					•							•	
MBHG	45°														•
MSR/L	45°										•				•
R/RI	84°	45	•	•	•	•	•	•	•			•	•	•	•
RA/R/RI	84°	45	•	•	•	•	•	•	•			•	•	•	•
RH/RHI	84°	45	•	•	•		•	•	•			•	•	•	•
RHU	45°	45	•								•			•	
RM/RMI	45°	45	•				•				•		•	•	
RS/RSI		45	•	•	•	•		•			•	•	•	•	
RSG		45						•			•	•		•	
RSGH		45						•			•	•		•	
RSH		45						•			•	•		•	
RSL		45	•	•				•			•	•	•	•	
RSO/RSOI		45	•					•			•	•	•	•	
RU/RAU	45°	45	•								•			•	
S	6½°	45	•								•				•
SH	50°	45	•	•			•	•			•	•		•	
SSR/L	45°										•				•
TGH/TGHH	45°	45													•

BH
BHS
LBH
MBH
HBH

BEAM HANGERS

Design Features . . five versions to meet all specifications.

SERIES STEEL	MATERIALS		TOP FLANGE DIMENSIONS
	TOP FLANGE	STIRRUP	
BH	¼" Steel	3/16" x 5" Steel	2½" x 3¼"
BHS	¼" Steel	3/16" x 5" Steel	2½" x 6¼"
LBH	3/16" Steel	3/16" x 6" Steel	2½" x 7½"
MBH	3/16" Steel	3/16" x 6" Steel	2½" x 10½"
HBH	¼" Steel	3/16" x 6" Steel	2½" x 18"

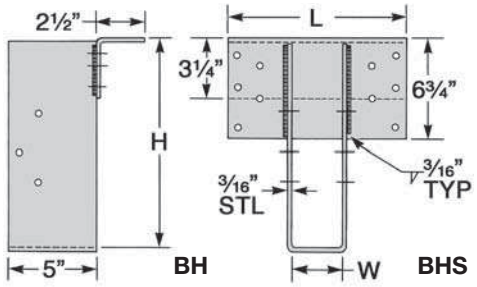
Applications . . BH and **BHS** heavy-duty hangers accommodate typical structural requirements for timber and glu-lam beams. Also available without top flange. **LBH**, **MBH** and **HBH** hangers accommodate heavy beam loads where the conditions will not permit a saddle hanger. These hangers are recommended for use in place of **BH** and **BHS** where **H** dimension exceeds 22".

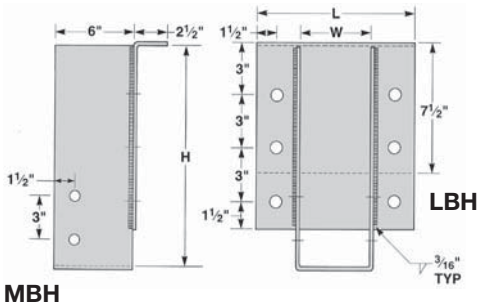
Nails . . N25, furnished.

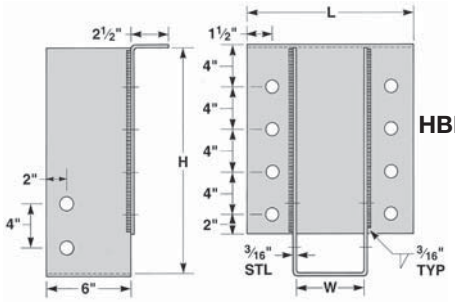
Finish . . ***SUPERSPEED*** gray paint.

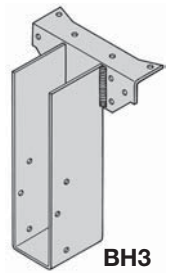
Skewed and Sloped Hangers . . (see page 43) available, specify angle (50° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.

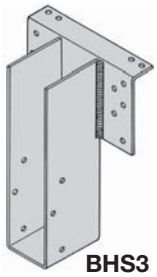
Note . . all holes into "U" straps will have **N25** (¼" x 2½"), ¾" machine bolts or 1" machine bolts in lower ⅓ of the material section of the "U" strap.

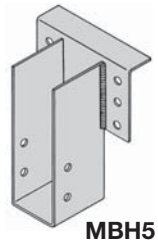


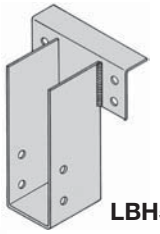





BH3


BHS3


MBH5


LBH5


HBH5

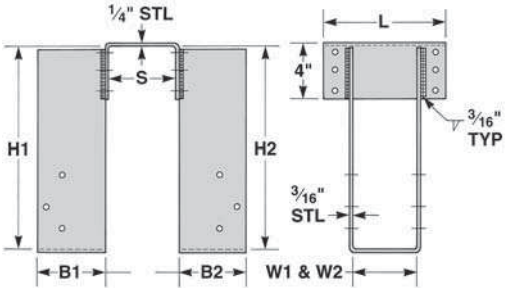
SH

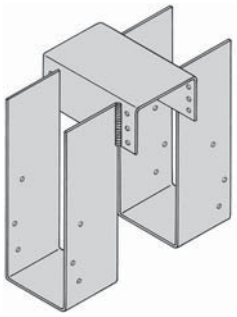
SADDLE HANGERS

Design Features . . positive control dies and prime quality ¼" and 3/16" steel meet structural requirements and provide added installation ease for glu-lam beams. Where **H** dimension exceeds 30", the **HSH** saddle hanger is recommended.

Nails . . N25, furnished.

Finish . . ***SUPERSPEED*** gray paint.




SH55

SHT
HSHT

SADDLE HANGERS/SEISMIC TIES

Design Features . . tested and approved seismic tie provisions can be added to any **SH** or **HSH** as listed in the tables.

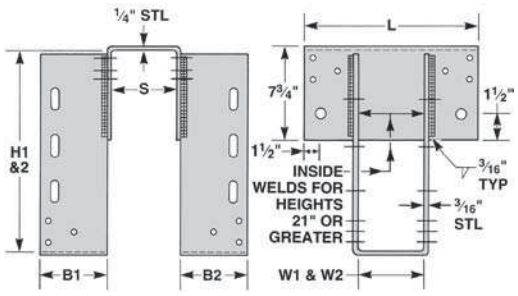
Nails . . N25, furnished.

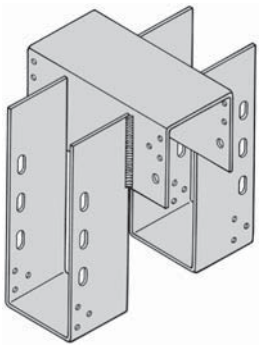
Finish . . ***SUPERSPEED*** gray paint.

Note . . the ¾" MB bolts should be located in the upper half of the 13/16" x 1½" slotted holes.

Ordering/Specifying Information . . SHT/HSHT: After selecting the model of **SH** or **HSH** as required for vertical loading requirements, simply change the designation to **SHT** or **HSHT** to obtain seismic tie model.

Special . . the "Min Depth H1 & H2" column in the load value table indicates the minimum height available in a standard configuration. If the required height is less than the minimum, tabs will be welded to each side of the bucket. The horizontally aligned slotted holes (similar to the **HHC3T** tabs) allow the required bolt installation.

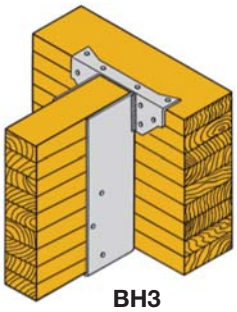



SHT55

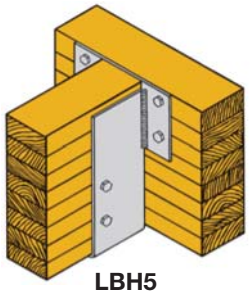
BH BHS LBH MBH HBH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

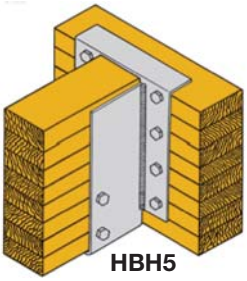
PRODUCT CODE	REF NO	DIMENSIONS (INCHES)			NAIL & BOLT SCHEDULE		DESIGN LOAD		
		W	H	L	CARRYING BEAM (HEADER)	SUPPORTED BEAM (PURLIN)	UPLIFT LBS	NORMAL LBS	MAX LBS
BH3	GLT3	3¼	Specify	10	10-N25	6-N25	1900	8020	8020
BH5	GLT5	5¼	Specify	10	10-N25	6-N25	1900	8500	8500
BH6	GLT6	5½	Specify	10	10-N25	6-N25	1900	8500	8500
BH7	GLT7	6⅞	Specify	12	10-N25	6-N25	1900	8580	9245
BH75	GLT75	7½	Specify	12	10-N25	6-N25	1900	8580	9245
BHS3	HGLT3	3¼	Specify	12	16-N25	6-N25	1900	11590	11940
BHS5	HGLT5	5¼	Specify	12	16-N25	6-N25	1900	12750	12750
BHS7	HGLT7	6⅞	Specify	12	16-N25	6-N25	1900	12750	12750
BHS9	HGLT9	8⅞	Specify	14	16-N25	6-N25	1900	12750	12750
LBH3	LEG3	3¼	Specify	12	4-¾ MB	2-¾ x 5 MB	3250	12855	13725
LBH5	LEG5	5¼	Specify	12	4-¾ MB	2-¾ x 7 MB	4640	12855	13725
LBH7	LEG7	6⅞	Specify	12	4-¾ MB	2-¾ x 9 MB	4640	12855	13725
MBH5	MEG5	5¼	Specify	12	6-¾ MB	2-¾ x 7 MB	4640	14595	15900
MBH7	MEG7	6⅞	Specify	12	6-¾ MB	2-¾ x 9 MB	4640	14595	15900
HBH5	EG5	5¼	Specify	12	8-1 MB	2-1 x 7 MB	6145	18300	20580
HBH7	EG7	6⅞	Specify	13½	8-1 MB	2- 1 x 9 MB	7625	19665	21945
HBH9	EG9	8⅞	Specify	15½	8-1 MB	2-1 x 11 MB	7625	21425	23705



BH3



LBH5
(No Top Flange)

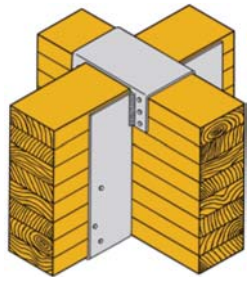


HBH5

SH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	W1 & W2	DIMENSIONS (INCHES)			H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE		UPLIFT EACH SIDE LBS
			S	L	B1 & B2		CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS	
SH35	GLS35	3¼	5¼	6	5 x 3⁄16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH37	GLS37	3¼	6⅞	6	5 x 3⁄16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH39	GLS39	3¼	8⅞	6	5 x 3⁄16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH55	GLS55	5¼	5¼	9	5 x 3⁄16 stl	Specify	12-N25	12-N25	14410	14410	1585
SH57	GLS57	5¼	6⅞	9	5 x 3⁄16 stl	Specify	12-N25	12-N25	14410	14410	1585
SH77	GLS77	6⅞	6⅞	12	5 x 3⁄16 stl	Specify	12-N25	12-N25	16835	16835	1585
SH79	GLS79	6⅞	8⅞	12	5 x 3⁄16 stl	Specify	12-N25	12-N25	16835	16835	1585



SH55

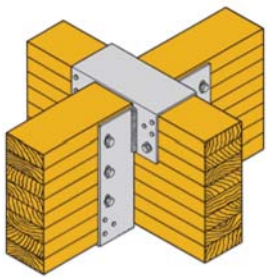
SHT HSHT

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	W1 & W2	DIMENSIONS (INCHES)			MIN DEPTH H1 & H2	H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE	
			S	L	B1 & B2			CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS
SHT35	GLST35	3¼	5¼	10⅛	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT37	GLST37	3¼	6⅞	10⅛	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT39	GLST39	3¼	8⅞	10⅛	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT55	GLST55	5¼	5¼	12⅛	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	14410	14410
SHT57	GLST57	5¼	6⅞	12⅛	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	14410	14410
SHT77	GLST77	6⅞	6⅞	13¾	6½ x 3⁄16 stl	9	Specify	12-N25	12-N25	16835	16835

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	W1 & W2	DIMENSIONS (INCHES)			MIN DEPTH H1 & H2	H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE	
			S	L	B1 & B2			CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS
HSHT5	HGLST5	5¼	Specify	12⅛	6½ x 3⁄16 stl	18	Specify	28-N25	16-N25	16835	16835
HSHT7	HGLST7	6⅞	Specify	13¾	6½ x 3⁄16 stl	18	Specify	28-N25	16-N25	16835	16835
HSHT9	HGLST9	8 ⅞	Specify	15¾	6½ x 3⁄16 stl	18	Specify	28-N25	16-N25	16835	16835



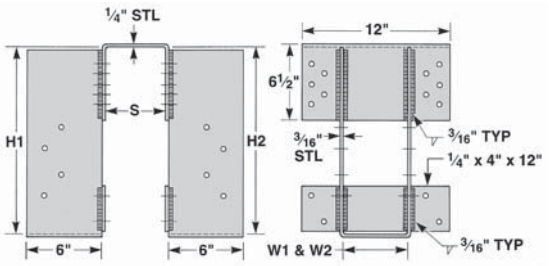
SHT55

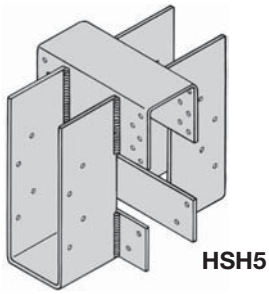
HSH HEAVY SADDLE HANGERS

Design Features . . accommodate heavier loads than the **SH** saddle hanger.

Finish . . ***SUPERSPEED*** gray paint.

Ordering/Specifying Information . . when specifying H1 and H2 dimensions, measure from underside of top channel to top of seat.





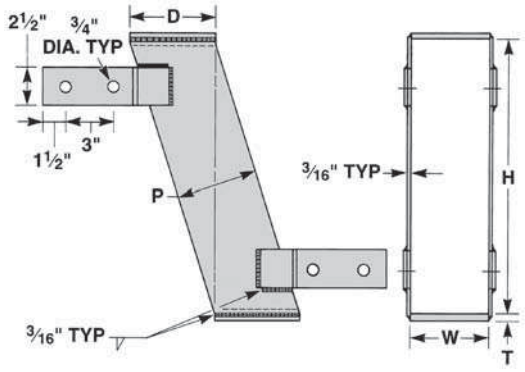
HHC HHC3 HEAVY HINGE CONNECTORS

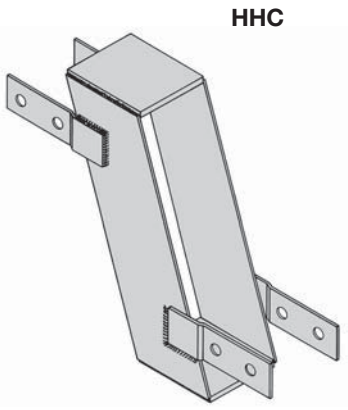
Design Features . . support the bottom end of a glu-lam beam on the top of another supporting glu-lam beam of the same width and having the same top elevation. Seismic straps can be welded to side plate when H dimension is less than the minimum height requirement. Erection nail holes are provided for easy installation.

Material . . bearing plate: ¾", 1", 1¼" and 1½" steel. Welded to side plate of 3/16" steel.

Finish . . ***SUPERSPEED*** gray paint.

Ordering/Specifying Information . . all **HHC** using three bolts should be ordered and identified as **HHC3** (Example: **HHC5-9** with three bolts, specify as **HHC359**).





HHCT HHCM HEAVY HINGE CONNECTOR TABS

Design Features . . standardized seismic ties on hinge connector. The **HHCT** standardized is the most commonly ordered **HHC** special. While the **HHC3T** design (as illustrated) is recommended, further modified alternates are available. **HHCM** design has slotted seismic ties as opposed pairs at the middle (centerline) of the **HHC**. **T** design denotes slotted tabs at top for **HHC**. **M** design denotes slotted tabs at middle (centerline) of **HHC**.

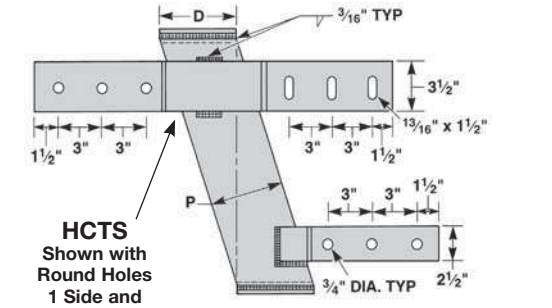
Finish . . ***SUPERSPEED*** gray paint.

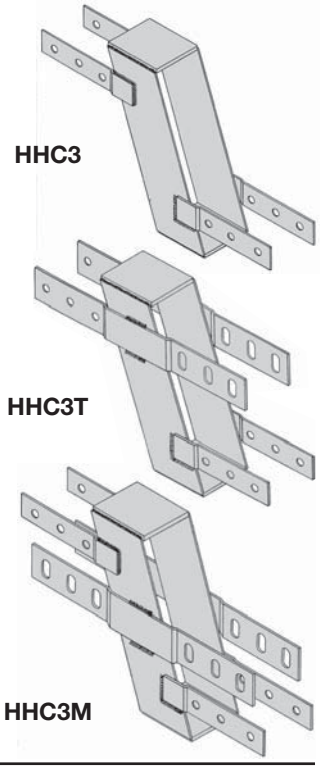
Specify . . H dimension.

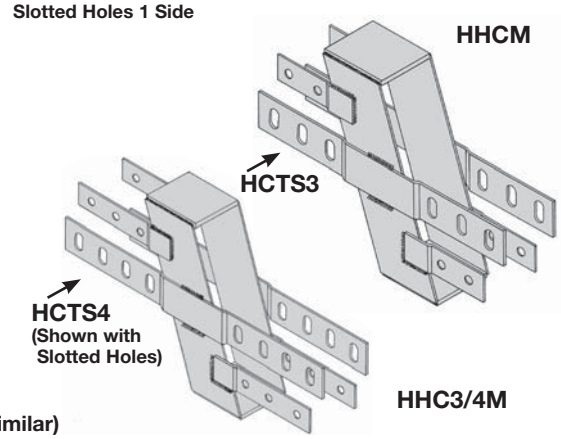
Note . . machine bolts should be located in the top half on the slotted holes. See the **HHC** table for minimum three bolt tabs height design. Available in higher load values by increasing the D dimension. Contact factory for details.

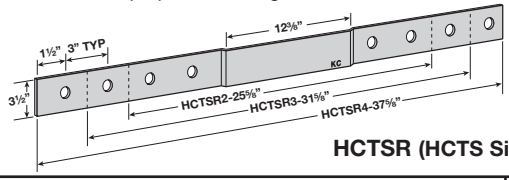
Ordering/Specifying Information . . all **HHCM** using four bolts in middle strap should be ordered and identified as **HHC3/4M** (Example: **HHC5-9** with three bolt tabs and four bolt center straps, specify as **HHC3/4M59**).

Special . . if the depth of the glu-lam is smaller than the minimum listed, adjust allowable load in direct proportion to height.









HCTSR (HCTS Similar)

CPT CROSS PURLIN TIES

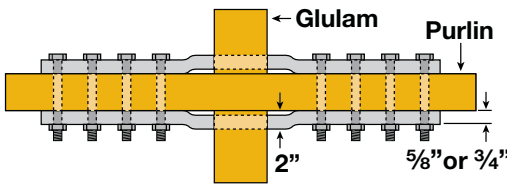
Design Features . . Supports purlins on either side of a glu-lam beam to resist seismic forces. The heavy square bar section works in both tension and compression. Designed for installation in pairs, the heavy square bar helps with drilling alignment. Offset in center section provides clearance for purlin hanger stirrups. Requires a 2½" hole through the glu-lam beam for installation.

Installation . . Hanger seat depth 4" are for **CPT 18** and **CPT 23**.

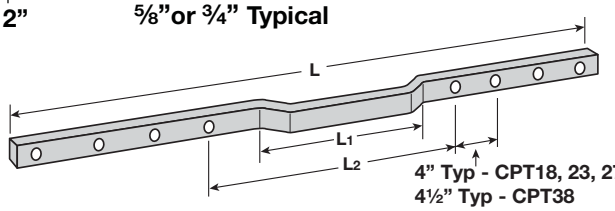
Hanger Seat depth 6" are for **CPT 27** and **CPT 38**.

Material . . ⅝" & ¾" Bar Stock

Finish . . ***SUPERSPEED*** Gray Paint



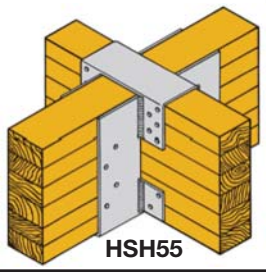
Top View
Installed in Pairs



HSH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD EACH SIDE		UPLIFT EACH SIDE LBS
		W1 & W2	S	H1 & H2	CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS	
HSH5	HGLS5	5¼	Specify	Specify	28-N25	16-N25	16835	16835	2110
HSH7	HGLS7	6⅞	Specify	Specify	28-N25	16-N25	16835	16835	2110
HSH9	HGLS9	8⅞	Specify	Specify	28-N25	16-N25	16835	16835	2110

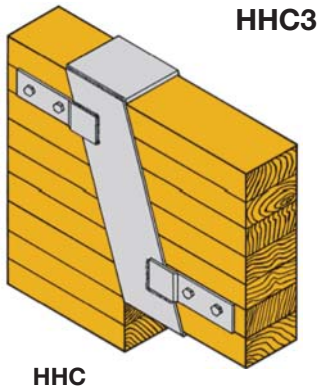


HSH55

HHC
HHC3

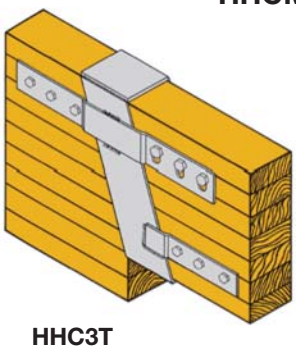
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MIN H DIMENSIONS		DIMENSIONS (INCHES)				BOLT SCHEDULE		DESIGN LOAD (LBS)	
		@ 560 PSI	@ 650 PSI	T	D	W	P	HHC 4-¾ MB	HHC3 6-¾ MB	@ 560 PSI NORMAL	@ 650 PSI NORMAL
HHC55	HCA55	14¾	16	¾	5	5¼	5	¾ x 7 MB		14350	16660
HHC56	HCA56	19	21	¾	6	5¼	6	¾ x 7 MB		17220	19990
HHC57	HCA57	23½	26	¾	7	5¼	6	¾ x 7 MB		20090	23320
HHC59	HCA59	35¼	40	¾	9	5¼	6	¾ x 7 MB		25830	29980
HHC75	HCA75	17¾	19½	1	5	6⅞	5	¾ x 9 MB		18900	21940
HHC76	HCA76	23	25½	1	6	6⅞	6	¾ x 9 MB		22680	26325
HHC77	HCA77	29¼	33	1	7	6⅞	7	¾ x 9 MB		26460	30715
HHC79	HCA79	35¾	40½	1	9	6⅞	7	¾ x 9 MB		34020	39490
HHC95	HCA95	21¼	23½	1¼	5	8⅞	5	¾ x 11 MB		24500	28440
HHC96	HCA96	28	31½	1¼	6	8⅞	6	¾ x 11 MB		29400	34125
HHC97	HCA97	36¼	41	1¼	7	8⅞	7	¾ x 11 MB		34300	39815
HHC99	HCA99	56	64	1¼	9	8⅞	8	¾ x 11 MB		44100	51190
HHC115	HCA115	26	20½	1½	5	10⅞	5	¾ x 13 MB		30100	34940
HHC116	HCA116	35	27	1½	6	10⅞	6	¾ x 13 MB		36120	41925
HHC117	HCA117	40	34½	1½	7	10⅞	7	¾ x 13 MB		36970	48915
HHC119	HCA119	40	53½	1½	9	10⅞	8	¾ x 13 MB		28865	56690
HHC355	HCA355	11¾	12½	¾	5	5¼	5	¾ x 7 MB		14350	16660
HHC356	HCA356	14½	16	¾	6	5¼	6	¾ x 7 MB		17220	19990
HHC357	HCA357	17¾	19½	¾	7	5¼	6	¾ x 7 MB		20090	23320
HHC359	HCA359	25½	28½	¾	9	5¼	6	¾ x 7 MB		25830	29980
HHC375	HCA375	13¾	15	1	5	6⅞	5	¾ x 9 MB		18900	21940
HHC376	HCA376	17¼	19	1	6	6⅞	6	¾ x 9 MB		22680	26325
HHC377	HCA377	21½	24	1	7	6⅞	7	¾ x 9 MB		26460	30715
HHC379	HCA379	31½	35½	1	9	6⅞	7	¾ x 9 MB		34020	39490
HHC395	HCA395	16	17½	1¼	5	8⅞	5	¾ x 11 MB		24500	28440
HHC396	HCA396	20¾	23	1¼	6	8⅞	6	¾ x 11 MB		29400	34125
HHC397	HCA397	26	29	1¼	7	8⅞	7	¾ x 11 MB		34300	39815
HHC399	HCA399	39¼	44½	1¼	9	8⅞	8	¾ x 11 MB		44100	51190
HHC3115	HCA3115	20	20½	1½	5	10⅞	5	¾ x 13 MB		30100	34940
HHC3116	HCA3116	26	27	1½	6	10⅞	6	¾ x 13 MB		36120	41925
HHC3117	HCA3117	33	34½	1½	7	10⅞	7	¾ x 13 MB		42140	48915
HCA3119	HCA3119	40	53½	1½	9	10⅞	8	¾ x 13 MB		42865	56690



HHC

HHCT
HHCM



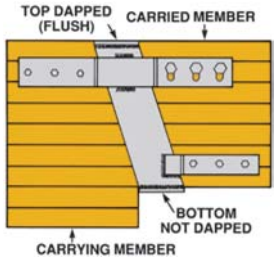
HHC3T

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	BOLT SCHEDULE	STRAP SIZE MATERIAL WIDTH (INCHES)		BOLTS (TOTAL)	DESIGN LOAD MAX (LBS) HORIZONTAL LOAD
HCTS2	HCST2	2-¾ MB	3/16 STL	3½	4-¾ MB	9535
HCTS3	HCST3	3-¾ MB	3/16 STL	3½	6-¾ MB	13790
HCTS4	HCST4	4-¾ MB	¼ STL	3½	8-¾ MB	17920

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

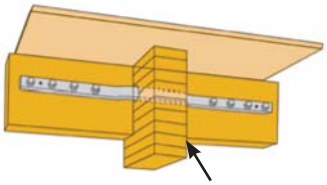
PRODUCT CODE	REF NO	MATERIAL (INCHES)	STRAP SIZE (INCHES)	BOLT SCHEDULE	LOCATION	UBC BOLT CODE VALUES	
						3½ W = LBS	5½ W = LBS
HHC3T	HC3T	3/16 STL	3½ x 12½	3-¾ MB	4" Center of Bolts from Top	10440	13730



CPT

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	TUBE THICKNESS	TOTAL LENGTH L	L_1	L_2	NO AND SIZE OF BOLT	DESIGN LOAD PER PAIR OF CPTS (LBS)						
							STEEL TENSION	STEEL COMPRESSION	BOLTS (DOUBLE SHEAR) (133%) LENGTH OF BOLT IN PURLIN				
									3⅛"	3½"	5⅛"	5½"	6¾"
CPT18	PCT18	⅛"	38"	14"	17¾"	8-⅝ MB	24665	19170	14365	15925	15925	15905	15875
CPT23	PCT23	⅛"	33"	14"	17¾"	10-⅝ MB	24665	19170	17720	19710	19710	19685	19600
CPT27	PCT27	3/16"	42"	19½"	23½"	12-⅝ MB	39665	28680	20715	23090	23665	23685	23550
CPT38	PCT38	3/16"	50"	19½"	23½"	12-¾ MB	39665	28680	24260	27530	33750	33815	33500



CPT18

For clarity, hanger not shown

BS
BSH
BST

BEAM SEATS

Design Features . . three different configurations for use over pilasters to provide bearing plate and connections for beams and glu-lam beams.

PROD CODE	Tabs	Reinforcing Dowels
BS	Single Bolt Alternate Two Bolts	Two, ¾" x 12"
BSH	Sloped	Three, ¾" x 12"
BST	Combination	Two, ¾" x 12"

(1) The **BSH** models may be ordered to sizes shown in the **BS** table having lesser bearing dimensions and bearing values, but providing these beam-tie values.

(2) The **BST-5**¼ is a WT4 WF8.5 Split-"T". The **BST-6**½ is a WT4 WF12.0 Split-"T".

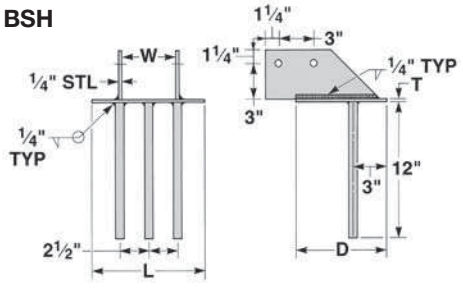
(3) These values must be reduced 50% for uninspected installations.

(4) Values may be increased for short-term, except where otherwise limited.

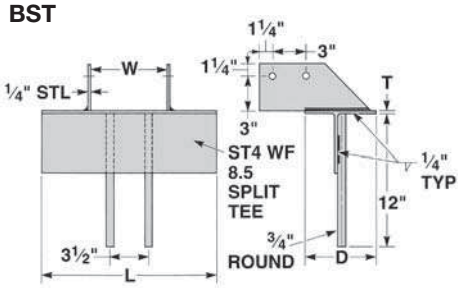
Material . . ¼", 5⁄16" and ⅜" steel with erection nails provided for easy installation.

Finish . . ***SUPERSPEED*** gray paint.

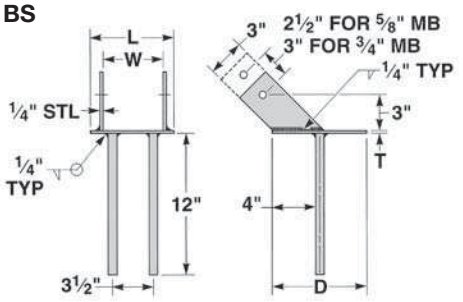
BSH

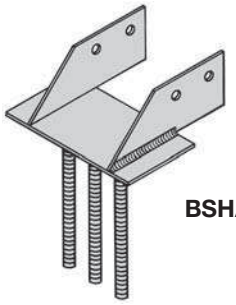


BST

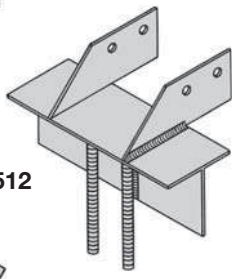


BS

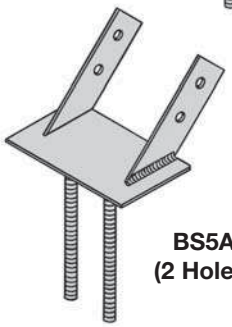




BSHA



BST512



BS5A
(2 Holes)

ANCHORS AND STRAPS

WA
WAH
WAI
WAL
WAM
WAW

WALL ANCHORS/WASHERS

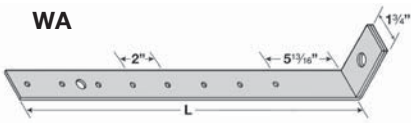
Design Features . . four configurations meet a variety of size and load specifications. The wall anchors are for repair work (upgrading to new code values) or as a substitute for a strap anchor (which is set in concrete). The wall anchor washers are made from ⅜" steel, 6" x 6". They secure the outside of walls to the roof or floor with a ¾" all-thread or a ¾" bolt.

Materlal . . 16 ga., 12 ga. and 11 ga. galvanized steel, ⅜" plate, ***SUPERSPEED*** gray paint.

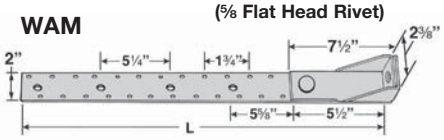
Loads . . hole patterns and locations are staggered and sized for l0d and 16d nails. The **WAL** anchor, with 3" spacing, is acceptable for wood l-joist use when l0d nailing is used.

Special . . the wall anchors are especially designed for true anchorage alignment over joists or purlins by bolting into concrete walls or foundations. The 1-piece design and seat thickness afford extra added strength. The **WAW** is the recommended washer for use with the **WA** wall anchors.

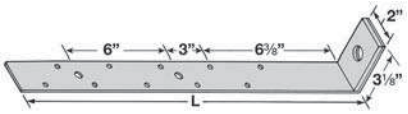
WA



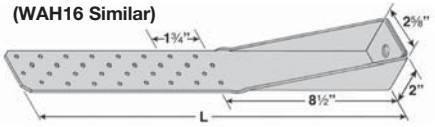
WAM (⅝ Flat Head Rivet)



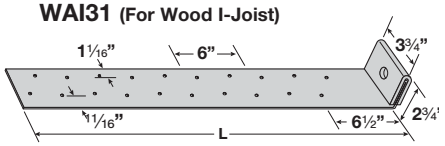
WAL34

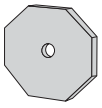


WAH
(WAH16 Similar)



WAI31 **(For Wood I-Joist)**





WAW
(¾" x 6" x 6" Washer)

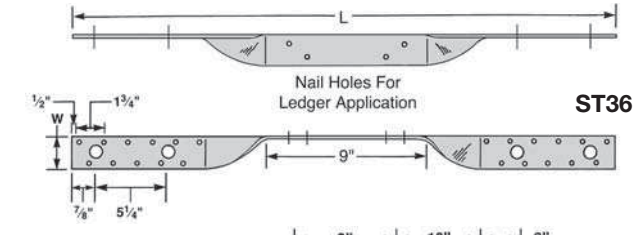
ST
GST

STRAP TIES/GLU-LAM STRUT TIES

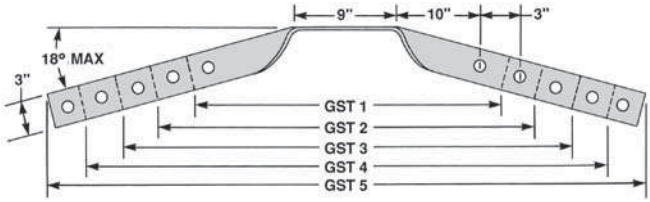
Design Features . . of the **ST** series make it ideal for tying purlins intersecting at a glu-lam beam . . cross-member seismic tying the **ST** is also used for anchoring purlins to ledgers. Bolt and nail loads may not be combined. The **GST** series is designed to bridge over carrier beams and tie two opposing purlins with a minimum width of 4" nominal . . thus creating a drag strut or chord tie. It is also a high value cross-member seismic tie.

Series	Materials	Finish
ST	12 Ga. Galvanized Steel	—
GST	¼" Steel	Painted

Finish . . GST ***SUPERSPEED*** gray paint



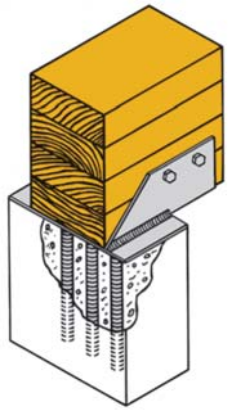
ST36



BS
BSH
BST

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

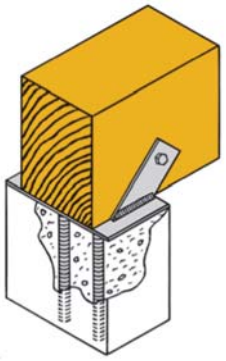
PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				BOLT SIZE	DESIGN LOAD		
		T	D	W	L		MASONRY @ 170 psi LBS	MASONRY @ 340 psi LBS	CONCRETE @ 650 psi LBS
BS5A	GLB5A	¼	5	5¼	7	⅝ x 7 MB	4465	8925	16405
BS5B	GLB5B	⅜	6	5¼	7	⅝ x 7 MB	5355	10710	19690
BS5C	GLB5C	⅜	7	5¼	7	⅝ x 7 MB	6250	12500	22970
BS5D	GLB5D	⅜	8	5¼	7	⅝ x 7 MB	7140	14280	26250
BS7A	GLB7A	¼	5	6⅞	9	¾ x 9 MB	5950	11900	21875
BS7B	GLB7B	⅜	6	6⅞	9	¾ x 9 MB	7140	14280	26250
BS7C	GLB7C	⅜	7	6⅞	9	¾ x 9 MB	8330	16660	30625
BS7D	GLB7D	⅜	8	6⅞	9	¾ x 9 MB	9520	19040	35000



BSHA

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)				BOLT SIZE	DESIGN LOAD (LBS)						DESIGN BOLT LOAD LBS HORIZ
							MASONRY @ 170 PSI LBS	MASONRY @ 340 PSI LBS	ON CONCRETE WITH GLU-LAM SIZES				
		T	D	W	L				5⅛	6¾	8¾	10¾	
BSHA	HGLBA	¼	5	Specify	10	2-¾ MB	9400	18750	11530	15190	19690	—	9535
BSHB	HGLBB	⅜	6	Specify	10	2-¾ MB	11280	22500	13840	16225	23625	—	9535
BSHC	HGLBC	⅜	7	Specify	10	2-¾ MB	13160	26250	16140	21260	27560	—	9535
BSHD	HGLBD	⅜	8	Specify	10	2-¾ MB	15040	30000	18450	24300	31500	—	9535
BST512	GLBT512	5⁄16	5¼	Specify	12	2-¾ MB	11845	23625	12110	15945	20670	—	9535
BST612	GLBT612	⅜	6½	Specify	12	2-¾ MB	14665	29250	14990	19745	25595	—	9535
BST516	GLBT516	5⁄16	5¼	Specify	16	2-¾ MB	15790	31500	121110	15945	20670	25395	9535
BST616	GLBT616	⅜	6½	Specify	16	2-¾ MB	19550	39000	14990	19745	25595	31445	9535
BST520	GLBT520	5⁄16	5¼	Specify	20	2-¾ MB	19740	39375	121110	15945	20670	25395	9535
BST620	GLBT620	⅜	6½	Specify	20	2-¾ MB	24440	48750	14990	19745	25995	31445	9535



BS5A

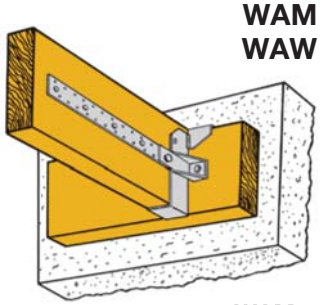
ANCHORS AND STRAPS

WA
WAH
WAI
WAL
WAM
WAW

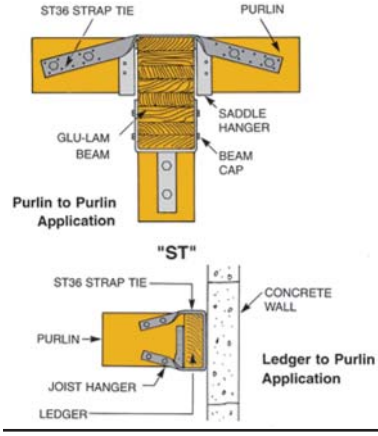
For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)		DIMENSIONS (INCHES)	NAIL & BOLT SCHEDULE			DESIGN LOAD (MAX)	
		STRAP	BASE THICKNESS	LENGTH	PURLIN		BASE	NAIL LBS	BOLT LBS
WA	LTT19	16 ga gal	¼ stl	19⅛	*8-16d	—	¾	1440	—
WAI31	LTTI31	18 ga gal	¼ stl	31	18-10d x 1½	—	⅝	1880	—
WAL34 ○	LTT20B	12 ga gal	5⁄16 stl	20	10-16d	2-½ MB	¾	1920	1250
WAH16	HTTI6	11 ga gal	½ stl	16	*18-16d	—	⅝	4800	—
WAH	HTT22	11 ga gal	½ stl	22	*32-16d	—	⅝	5460	—
WAM	MTT28B	12 ga gal	⅜ stl	27 11⁄16	24-16d	4-½ MB	¾	4605	2505
WAW	RP6	—	⅜ stl	6 x 6	—	—	¾	—	—

* 16d sinkers should be used for full table values. If a ½" or ⅝" Anchor bolt is used, add a ○ standard cut washer to the seat.



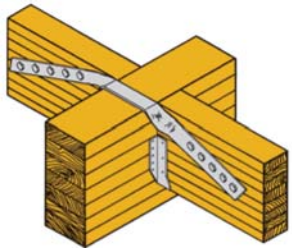
WAM



ST
GST

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)	NAIL & BOLT SCHEDULE		DESIGN LOAD MAX (LBS)	
		LENGTH			BOLT	NAIL
ST36	SA36	36	22-16d	4-½ MB	1300	1585
GST1	HSA32	32	—	2-¾ MB	2090	—
GST2	HSA41	38	—	4-¾ MB	4175	—
GST3	HSA50	44	—	6-¾ MB	6260	—
GST4	HSA59	50	—	8-¾ MB	8350	—
GST5	HSA68	56	—	10-¾ MB	10435	—



GST5

DST

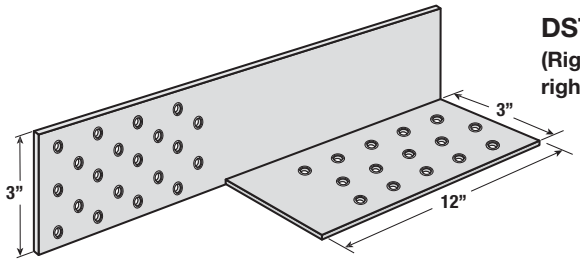
DRAG STRUT TIES

Design Features . . installation is easy with 16d common nails. Embossed for nail guns.

Material . . 10 gage steel.

Finish . . galvanized.

Ordering Information . . specify right or left handed part.



DST4

(Right hand DST shown: specify right or left hand when ordering)

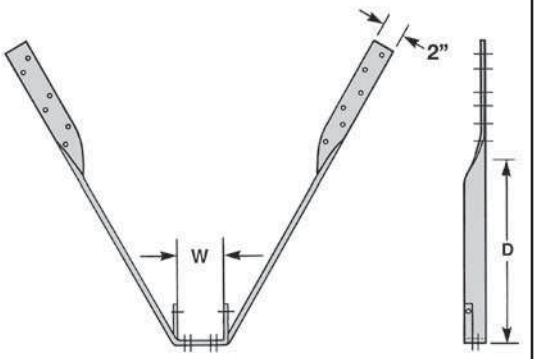
KB

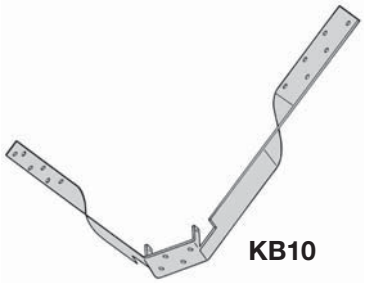
KNEE BRACES

Design Features . . make these nail-only braces up to 65% easier to install . . provide lateral resistance at beam bottom . . add more square inches of seat-bearing for greater load capacity . . are adjustable for field bending. Design loads at 45° are for tension only. Base tabs provide stabilizing action for the beam and ease of nailing to the beam sides, rather than nailing up into the bottom of the beam.

Material . . 12 ga. galvanized steel.

Nails . . N25, furnished.





KB10

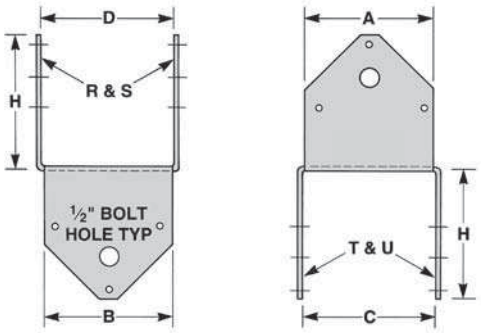
POST CAPS

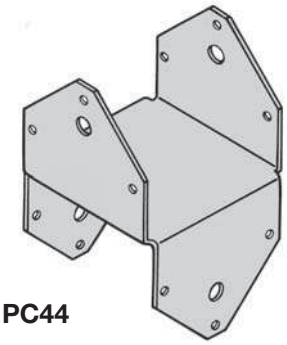
PC

POST CAPS

Design Features . . clean, new 1-piece design looks better, has no spot welds to break loose . . have a dual purpose application as post cap and post base . . ½" bolt holes are provided for heavy-duty post beam requirements or for reinforcing bar when set in concrete. Post caps are also available on special order for rough beam sizes.

Material . . 18 ga. galvanized steel.





PC44

PB
EPB
LEPB4

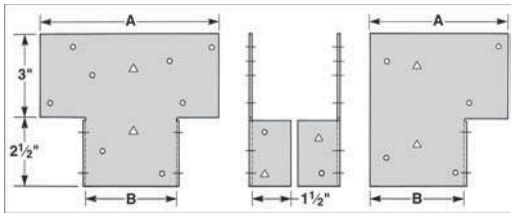
POST BEAM CAPS

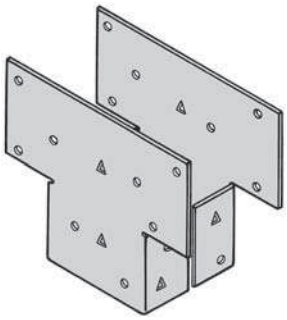
Design Features . . offer complete installation flexibility before, during or after beams are erected . . all corners are enclosed for added structural strength and a clean, neat appearance. **EPB** . . end post beam cap can be specified as **EPB4**, **EPB6**, etc. **PB** . . post beam caps should be used in pairs (see illustration). Post beam caps are also available on special order for rough beam sizes.

Material . . 18 ga. galvanized steal.

Loads . . nail hole pattern and location are staggered and sized for 16d nails; optional triangle holes are or maximum nailing loads.

Special . . The new **LEPB4** is a universal product that eliminates the need for right and left hand parts and can also be used for 4x and 6x timbers with high load capacity.





PB4

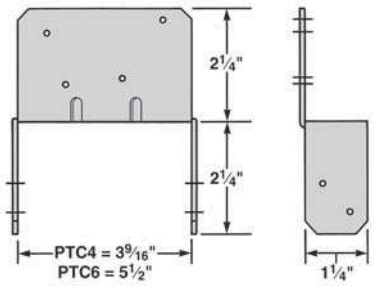
PTC

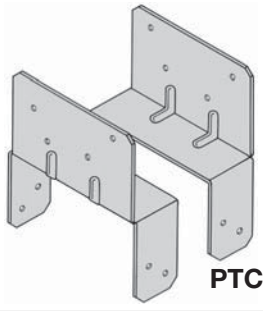
POST TIE CAPS

Design Features . . used to tie 4x posts to 3" members (**PTC4**), or 6x posts to 3" members (**PTC6**).

Material . . PTC4, 18 ga. galvanized steel; **PTC6**, 16 ga. galvanized steel.

Installation . . used in pairs . . makes **PTC** adjustable.

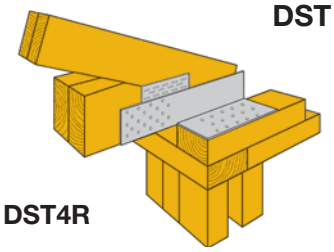




PTC4

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	LENGTH (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS) (133%)	
				COMPRESS	TENSION
DST4	DSC4	24	44-16D	5015	5015

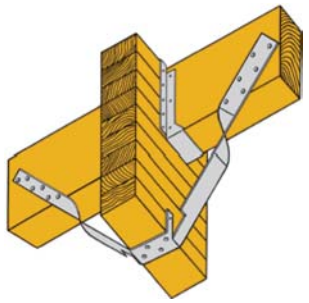


DST

DST4R

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		LENGTH (FEET)	NAIL SCHEDULE	DESIGN LOAD AT 45°	
			D	W			NORMAL LBS	MAX LBS
KB5	VB5	12 ga gal	10-15	Specify	5	16-N25	15570	1570
KB7	VB7	12 ga gal	15-22½	Specify	7	16-N25	1570	1570
KB8	VB8	12 ga gal	22½-28½	Specify	8	16-N25	1570	1570
KB10	VB10	12 ga gal	28½-36	Specify	10	16-N25	1570	1570
KB12	VB12	12 ga gal	36-42	Specify	12	16-N25	1570	1570



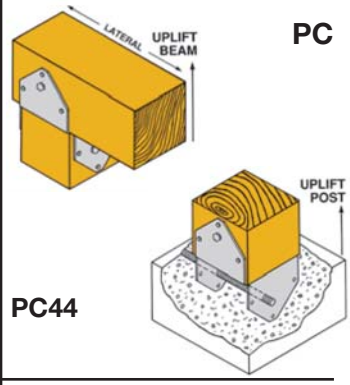
KB

KB10

POST CAPS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)					NAIL SCHEDULE		DESIGN LOAD	
				A	B	C	D	H	R & S	T & U	UPLIFT LBS	LATERAL LBS
PC44	BC4	4 x 4	18 ga gal	3¼	3¼	3⁹⁄₁₆	3⁹⁄₁₆	3	6-16d	6-16d	980	1005
PC46	BC46	4 x 6	18 ga gal	5¼	3¼	5½	3⁹⁄₁₆	3⅛	6-16d	10-16d	980	1005
PC66	BC6	6 x 6	18 ga gal	5⅜	5⅜	5½	5½	3¾	10-16d	10-16d	1340	1675
PC88	BC8	8 x 8	18 ga gal	7	7	7½	7½	4	12-16d	12-16d	1965	2010
PC44R	BC4R	Rough 4 x 4	18 ga gal	3¼	3¼	4	4	2¾	6-16d	6-16d	980	1005

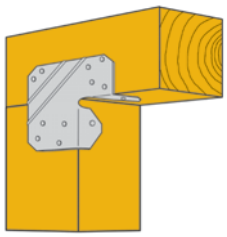


PC

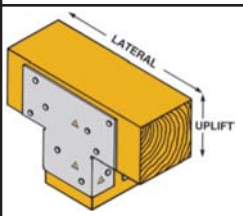
PC44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD	
				A	B	BEAM	POST	UPLIFT	LATERAL LBS
PB4	AC4	4 x —	18 ga gal	6½	3⁹⁄₁₆	MIN 12-16d	8-16d	1430	715
						MAX 14-16d	14-16d	2500	1070
PB6	AC6	6 x —	18 ga gal	8½	5½	MIN 12-16d	8-16d	1430	715
						MAX 14-16d	14-16d	2500	1070
EPB4	ACE4	End 4X	18 ga gal	5	3⁹⁄₁₆	MIN 8-16d	6-16d	1070	715
						MAX 10-16d	10-16d	1785	1070
EPB6	ACE6	End 6X	18 ga gal	7	5½	MIN 8-16d	6-16d	1070	715
						MAX 10-16d	10-16d	1785	1070
LEPB4	LCE4	4X & 6X End	18 ga gal	5⅜	3	14-16d	10-16d	1800	1425



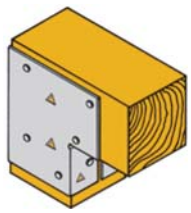
LEPB4



PB
EPB
LEPB4

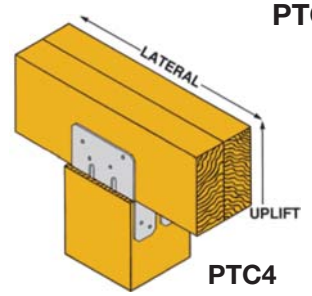
PB4

EPB4
(Left Hand
Side Shown)



For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)	
		BEAM	POST	UPLIFT	LATERAL
PTC4	LPC4	8-10d	8-10d	990	495
PTC6	LPC6	8-10d	8-10d	990	495



PTC

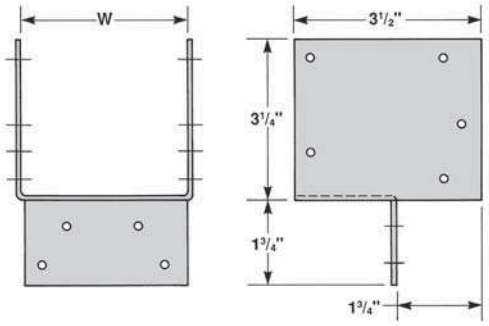
PTC4

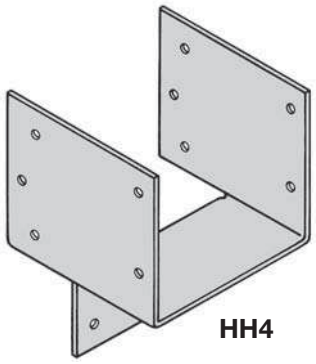
MC
HH

MULLION CLIPS/HEADER HANGERS

Design Features . . offers greater economy in installing door and window headers with faster, more accurate installation that strengthens the frame and eliminates toe-nailing and the need for cripples. **HH** hangers can also be used for other cross-member detail applications. In addition, design features provide dimensional accuracy for metal support of vertical or lateral loads at the window sill member and at the post or mullion member. Dimensional accuracy is also provided for fast, accurate framing for fence construction and other framing applications. For added strength, clip nails are in three dimensions.

Material . . 18 ga. galvanized steal.





HH4

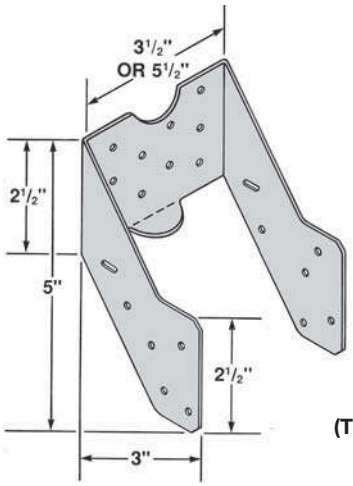
TCB

TRUSS CLIP BASES

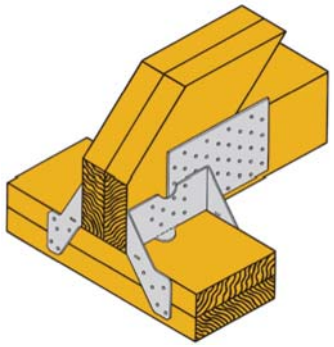
Design Features . . comes in two sizes which will work with any quantity of girder plys. The truss or girder load is transferred by the **TCB** to the plate for conditions with limited bearing. An added benefit is extra uplift provided. The **TCB** replaces the lower load-transfer systems.

Material . . 18 ga. galvanized steel.

Installation . . the **TCB**s must be installed in pairs.



TCB4
(TCB6 Similar)



TCB6
Two TCB Bases Installed with a Two-Ply Girder Truss

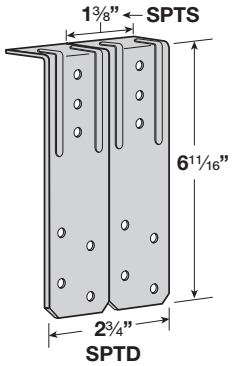
SPT
SPTH
SPTR
SPTS
SPTD

STUD PLATE TIES

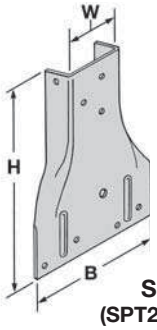
Design Features . . SPTs are used for wind resistance or seismic conditions. The Stud Plate Ties fasten the bottom plate or the top plate (double plate) to the studs.

Material . . SPTH18 ga. galvanized steel. All other parts 20 ga. galvanized steel.

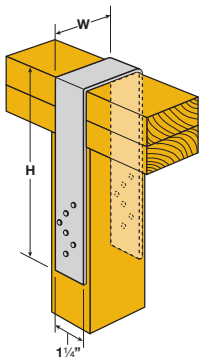
Installation . . use all specified fasteners. Nails must be installed into the plate before the stud. **SPT4**, **SPT6** and **SPT8** wrap completely around the double top plates. **SPTR** (Stud Plate Tie Reversible) has locating lines which aid in placement on single bottom plate or double top plate conditions.



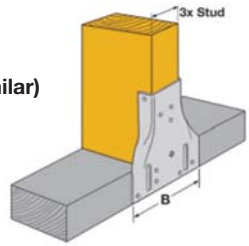
SPTD



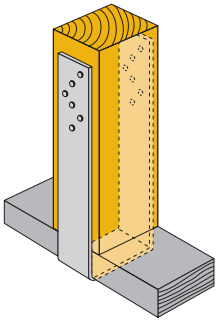
SPT1
(SPT2 Similar)



SPT4/6/8
SPTH4/6/8
(Over Top Plates)

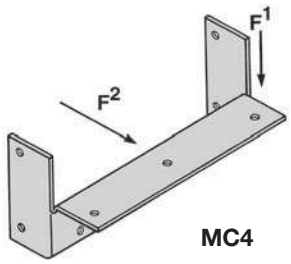


SPT5
(SPT3 Similar)



SPT4/6/8
SPTH4/6/8
(Under Bottom Plates)

MC

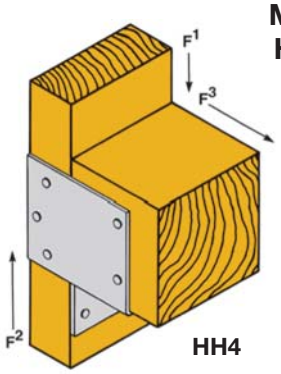


MC4

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIM W (INCHES)	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)	
				B or C	D or E	F^1	F^2
MC4	FC4	3 9/16	18 ga gal	2-16d	2-16d	800	265
MC6	FC6	5 1/2	18 ga gal	3-16d	2-16d	935	400

HH



HH4

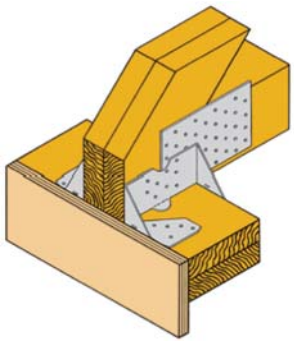
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIM W (INCHES)	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)		
				STUD MULLION	HEADER	F^1	F^2	F^3
HH4	HH4	3 9/16	18 ga gal	10-16d	4-16d	1205	535	535
HH6	HH6	5 1/2	18 ga gal	12-16d	6-16d	1605	805	805

TCB

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	NUMBER OF RAFTER PLYS	NAIL SCHEDULE		DESIGN LOAD (LBS)		
				RAFTER	PLATE	UPLIFT	ROOF	
							SNOW	CONST
TCB4	TBE4	2 x 4	1	20-10d x 1 1/2	20-10d x 1 1/2	990	2140	2325
			2 or more	20-10d	20-10d	990	2570	2800
TCB6	TBE6	2 x 6	1	20-10d x 1 1/2	20-10d x 1 1/2	990	2140	2325
			2 or more	20-10d	20-10d	990	2570	2800



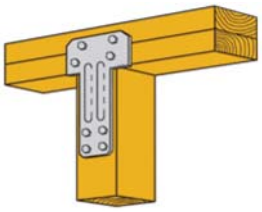
TCB6
Alternate Installation for a Pre-sheathed Shear Wall Condition

SPT
SPTH
SPTR
SPTS
SPTD

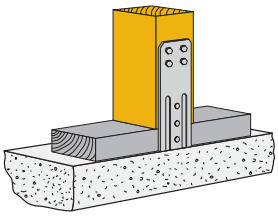
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD (LBS)
		W	B	H	STUD	PLATE	UPLIFT (133%)
SPT1	SP1	1 9/16	3 1/2	5 1/16	6-10d	4-10d	595
SPT2	SP2	1 9/16	3 1/2	6 5/8	6-10d	6-10d	895
SPT3	SP3	2 9/16	4 1/2	6 5/8	6-10d	6-10d	895
SPT4	SP4	3 9/16	1 1/4	7 1/16	6-10d x 1 1/2	—	735
SPT5	SP5	2 9/16	4 1/2	5 1/16	6-10d	4-10d	595
SPT6	SP6	5 9/16	1 1/4	7 3/4	6-10d x 1 1/2	—	735
SPT8	SP8	7 5/16	1 1/4	8 5/16	6-10d x 1 1/2	—	735
SPTH4	SPH4	3 9/16	1 1/4	8 3/8	10-10d x 1 1/2	—	1240
					12-10d x 1 1/2	—	1365
SPTH6	SPH6	5 9/16	1 1/4	9 1/4	10-10d x 1 1/2	—	1240
					12-10d x 1 1/2	—	1365
SPTH8	SPH8	7 5/16	1 1/4	8 3/8	10-10d x 1 1/2	—	1240
					12-10d x 1 1/2	—	1365
SPTR (1)	RPS4(1)	1 3/8	2 1/8	4 1/2	4-8d x 1 1/2	4-8d x 1 1/2	325
SPTR (2)	RSP4(2)	1 3/8	2 1/8	4 1/2	4-8d x 1 1/2	4-8d x 1 1/2	455
SPTS (1)	SSP (1)	1 3/8	1 1/8	6 11/16	4-10d x 1 1/2	1-10d x 1 1/2	325
					4-10d	1-10d	420
SPTS (2)	SSP (2)	1 3/8	1 1/8	6 11/16	4-10d x 1 1/2	3-10d x 1 1/2	350
					4-10d	3-10d	435
SPTD (1)	DSP (1)	2 3/4	1 1/8	6 11/16	8-10d x 1 1/2	2-10d x 1 1/2	545
					8-10d	2-10d	600
SPTD (2)	DSP (2)	2 3/4	1 1/8	6 11/16	8-10d x 1 1/2	6-10d x 1 1/2	775
					8-10d	6-10d	825

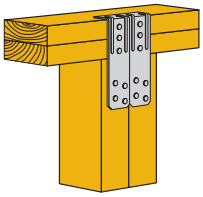
(1) = SINGLE PLATE (2) = DOUBLE PLATE



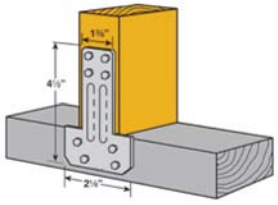
SPTR
Stud to Double Top Plate (2)



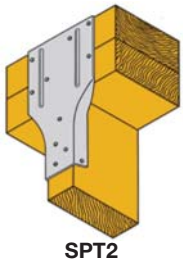
SPTS (1)



SPTD (2)



Stud to Single Bottom Plate (1)



SPT2

BC
EBC
BCO
BCOB
BCC
BCT
EBCL
BCQ
EBCQ

BEAM CAPS

Design Features . . eleven configurations provide complete application flexibility.

Stock No.	Design Configuration
BC	Standard beam cap
BC/EBC@90°	Standard or end beam caps; post straps may be rotated 90° on special order, when beam is larger than post
EBC	End beam cap
EBC9/EBC10	Use four beam bolts
BCO	Beam cap for welding to square tubes, pipes and other columns
BCOB	Cross beam connector, the result of back-to-back welding of two beam caps
BCC	Center beam caps with 3⁄16" stirrups (2) welded to cap
BCT	"T" beam caps with 3⁄16" stirrups (1) welded to cap
EBCL	"L" beam cap offset right or left with 3⁄16" stirrups (1) welded to cap
BCQ EBCQ	**NEW . . this design uses *SUPERSPEED* Drive Screws to provide faster installation and maintain the wood cross section. The SDS screws provide for a lower profile compared to standard through bolts. BCQ supplied with *SUPERSPEED* SDS 1⁄4" x 2" Drive Screws.**

To specify screw type beam caps use the letter "Q" after any style beam cap stock number. Example: BC5¼–6 now is BCQ 5¼–6. "Q" stands for quick installation.

Material . . BC, **BCQ, EBC** and **EBCQ** sizes: 3¼", 4X and 6X are 3⁄16" steel. All other sizes are ¼" steel.

Finish . . ***SUPERSPEED*** gray paint.

Loads . . BCC, **BCT** and **EBCL** series: the side stirrups maximum allowable down load may not exceed 40% of the design load specified in the table for the standard product, and cannot exceed 10,665 lbs. The total sum of the loads may not exceed the design load table value . .

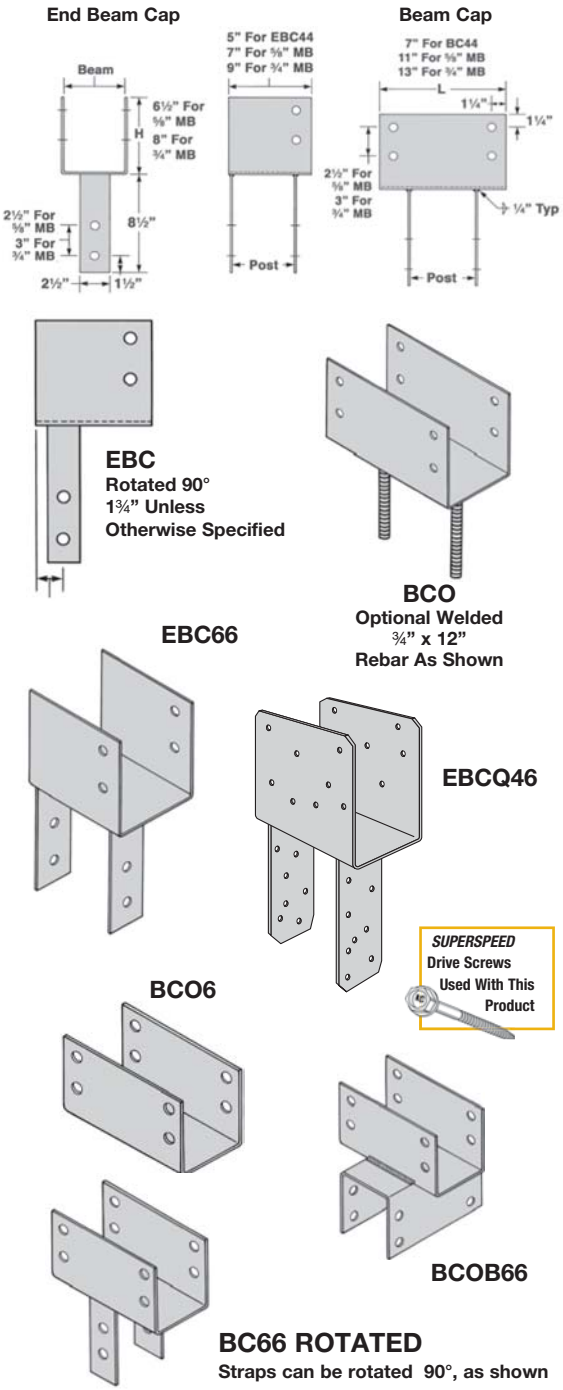
Special . . also available in width of 7⅛" for use with **LVL** and **PSL** engineered wood products.

Ordering/Specifying Information . . examples follow:

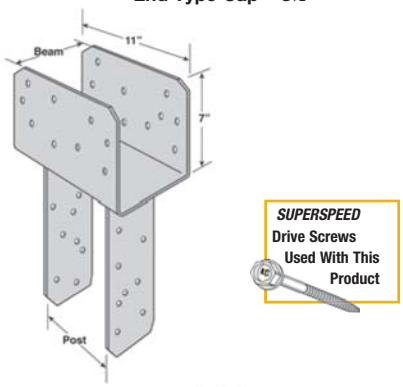
BC46 – beam is the first number, 4 (3⁹⁄16"); post is the second number, 6 (5½").

BCC66 – W3 & 4 = 6 (5½") and H2 & H3 = 6½" is a **BC66** beam cap with 6 (5½") beams on each side with all beam seats flush.

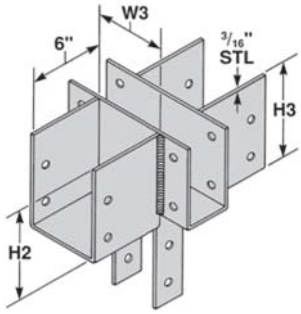
EBCL66L – **W3** = 4 (3⁹⁄16"), **H2** = 8 is an **EBC66** end beam cap with a 4x (3⁹⁄16") beam on the left side (specify beam L for left side beam stirrup). The stirrup seat is 1½" below the cap seat. Specify the height of the stirrup from the top of the cap. The minimum H for the stirrup is 6½". The L dimensions may vary depending on W3.



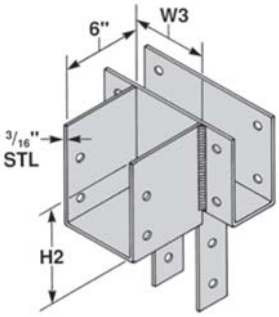
BCQ46 **End Type Cap = 8½"**



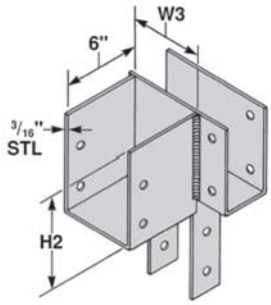
BCC



BCT



EBCL _ _ (L)



SC
ESC

SPLICE CAPS

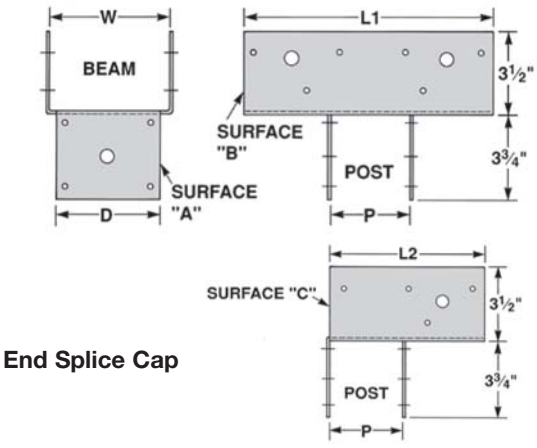
Design Features . . two convenient configurations, as listed below.

Stock No.	Design Configuration
SC	Standard splice cap
ESC	End splice cap

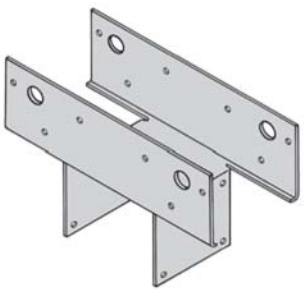
SC series meets specifications for beam-over-post connections or where splice occurs. Greater nail edge distances provide higher load values. Bolt holes provide optional installation with ½" bolts.

Material . . 12 ga. galvanized steel. To order 16 ga. galvanized steel, add 16 to stock no. (Example: **SC44-16**).

Ordering Information . . Example: **SC46**, beam is the first number, 4 (3⁹⁄16"); post is the second number, 6 (5½").



End Splice Cap

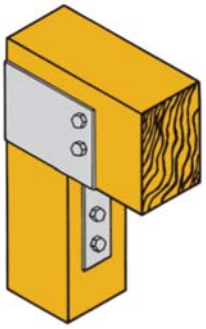


SC66

BC
EBC
BCO
BCOB
BCC
BCT
EBCL
BCQ
EBCQ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

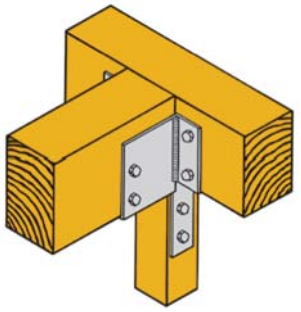
PRODUCT CODE	REF NO	DIMENSIONS (INCHES)						BOLT SCHEDULE		DESIGN LOAD (LBS)		
		BEAM WIDTH (INCHES)	POST WIDTH (INCHES)	MATERIAL (INCHES)	L		H			DOWN		BC UPLIFT (133%)
					BC	EBC		BEAM BOLTS (INCHES)	POST BOLTS (INCHES)	BC (100%)	EBC (100%)	
BC44	CC44	3 3/16	3 3/16	3/16 stl	7	5	4	2-5/8 x 5 MB	2-5/8 x 5 MB	15310	7655	3265
BC3 1/4-4	CC3 1/4-4	3 1/4	3 3/16	3/16 stl	11	7	6 1/2	4-5/8 x 5 MB	2-5/8 x 5 MB	19250	9625	5745
BC3 1/4-6	CC3 1/4-6	3 1/4	5 1/2	3/16 stl	11	7	6 1/2	4-5/8 x 5 MB	2-5/8 x 7 MB	19250	9625	5745
BC5 1/4-4	CC5 1/4-4	5 1/4	3 3/16	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 5 MB	37310	18655	8210
BC5 1/4-6	CC5 1/4-6	5 1/4	5 1/2	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 7 MB	37310	18655	8210
BC5 1/4-8	CC5 1/4-8	5 1/4	7 1/2	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 9 MB	37310	18655	8210
BC46	CC46	3 3/16	5 1/2	3/16 stl	11	7	6 1/2	4-5/8 x 5 MB	2-5/8 x 7 MB	24060	12030	5745
BC48	CC48	3 3/16	7 1/2	3/16 stl	11	9	6 1/2	4-5/8 x 5 MB	2-5/8 x 9 MB	24060	12030	5745
BC64	CC64	5 1/2	3 3/16	3/16 stl	11	7	6 1/2	4-5/8 x 7 MB	2-5/8 x 5 MB	37810	18905	5745
BC66	CC66	5 1/2	5 1/2	3/16 stl	11	7	6 1/2	4-5/8 x 7 MB	2-5/8 x 7 MB	37810	18905	5745
BC6-7 1/8	CC6-7 1/8	5 1/2	7 1/4	3/16 stl	11	9	6 1/2	4-5/8 x 7 MB	2-5/8 x 9 MB	37810	18905	5745
BC68	CC68	5 1/2	7 1/2	3/16 stl	11	9	6 1/2	4-5/8 x 7 MB	2-5/8 x 9 MB	37810	18905	5745
BC74	CC74	6 7/8	3 3/16	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 5 MB	49140	24570	8210
BC76	CC76	6 7/8	5 1/2	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	49140	24570	8210
BC77	CC77	6 7/8	6 7/8	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	49140	24570	8210
BC78	CC78	6 7/8	7 1/2	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	49140	24570	8210
BC7 1/8 - 4	CC 7 1/8 - 4	7 1/4	3 3/16	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 5 MB	49140	24570	8210
BC7 1/8 - 6	CC 7 1/8 - 6	7 1/4	5 1/2	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	49140	24570	8210
BC7 1/8 - 7 1/8	CC7 1/8 - 7 1/8	7 1/4	7 1/4	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	60935	30460	8210
BC86	CC86	7 1/2	5 1/2	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	60935	30460	8210
BC88	CC88	7 1/2	7 1/2	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	60935	30460	8210
BC96	CC96	8 7/8	5 1/2	1/4 stl	13	9	8	4-3/4 x 11 MB	2-3/4 x 7 MB	63700	31850	8210
BC98	CC98	8 7/8	7 1/2	1/4 stl	13	9	8	4-3/4 x 11 MB	2-3/4 x 9 MB	63700	31850	8210
BC106	CC106	9 1/2	5 1/2	1/4 stl	13	9	8	4-3/4 x 12 MB	2-3/4 x 7 MB	77185	38590	8210



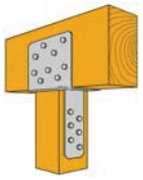
EBC66

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)					FASTENER SCHEDULE		DESIGN LOAD (LBS)			
		BEAM WIDTH (INCHES)	POST WIDTH (INCHES)	L		H	SUPERSPEED SDS 1/4 x 2 DRIVE SCREWS		DOWN		UPLIFT	
				BCQ	EBCQ		BEAM	POST	BCQ (100%)	EBCQ (100%)	BCQ (133%)	EBCQ (133%)
BCQ44	CCQ44	3 3/16	3 3/16	11	8 1/2	7	16	14	24065	18595	5975	5975
BCQ3 1/4-4	CCQ3 1/4-4	3 1/4	3 3/16	11	8 1/2	7	16	14	19250	14875	5975	5975
BCQ3 1/4-6	CCQ3 1/4-6	3 1/4	5 1/2	11	8 1/2	7	16	14	19250	14875	5975	5975
BCQ5 1/4-4	CCQ5 1/4-4	5 1/4	3 3/16	11	8 1/2	7	16	14	31570	24395	6350	6350
BCQ5 1/4-6	CCQ5 1/4-6	5 1/4	5 1/2	11	8 1/2	7	16	14	31570	24395	6350	6350
BCQ5 1/4-8	CCQ5 1/4-8	5 1/4	7 1/2	11	8 1/2	7	16	14	31570	24395	6350	6350
BCQ46	CCQ46	3 3/16	5 1/2	11	8 1/2	7	16	14	24065	18595	5975	5975
BCQ48	CCQ48	3 3/16	7 1/2	11	8 1/2	7	16	14	24065	18595	5975	5975
BCQ64	CCQ64	5 1/2	3 3/16	11	8 1/2	7	16	14	37815	29220	5975	5975
BCQ66	CCQ66	5 1/2	5 1/2	11	8 1/2	7	16	14	37815	29220	5975	5975
BCQ6-7 1/8	CCQ6-7 1/8	5 1/2	7 1/4	11	8 1/2	7	16	14	37815	29220	5975	5975
BCQ68	CCQ68	5 1/2	7 1/2	11	8 1/2	7	16	14	37815	29220	5975	5975
BCQ74	CCQ74	6 7/8	3 3/16	11	8 1/2	7	16	14	41580	32130	6350	6350
BCQ76	CCQ76	6 7/8	5 1/2	11	8 1/2	7	16	14	41580	32130	6350	6350
BCQ77	CCQ77	6 7/8	6 7/8	11	8 1/2	7	16	14	41580	32130	6350	6350
BCQ78	CCQ78	6 7/8	7 1/2	11	8 1/2	7	16	14	41580	32130	6350	6350
BCQ7 1/8 - 4	CCQ7 1/8 - 4	7 1/4	3 3/16	11	8 1/2	7	16	14	57750	42840	6350	6350
BCQ7 1/8 - 6	CCQ7 1/8 - 6	7 1/4	5 1/2	11	8 1/2	7	16	14	57750	42840	6350	6350
BCQ7 1/8 - 7 1/8	CCQ7 1/8 - 7 1/8	7 1/4	7 1/4	11	8 1/2	7	16	14	57750	42840	6350	6350
BCQ86	CCQ86	7 1/2	5 1/2	11	8 1/2	7	16	14	51565	39845	6350	6350
BCQ88	CCQ88	7 1/2	7 1/2	11	8 1/2	7	16	14	51565	39845	6350	6350
BCQ96	CCQ96	8 7/8	5 1/2	11	8 1/2	7	16	14	53900	41650	6350	6350
BCQ98	CCQ98	8 7/8	7 1/2	11	8 1/2	7	16	14	53900	41650	6350	6350
BCQ106	CCQ106	9 1/2	5 1/2	11	8 1/2	7	16	14	65315	50470	6350	6350

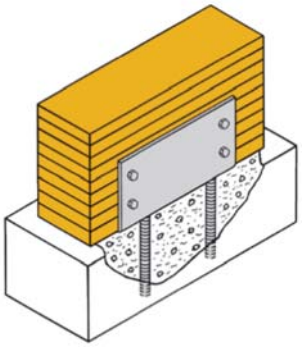


BCT64



BCQ46

SUPERSPEED Drive Screws Used With This Product

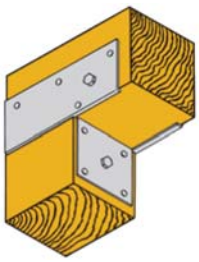


BC0 5 1/4
Set into Concrete Column or Masonry Wall
(Optional Welded 3/4" x 12" Rebar As Shown)

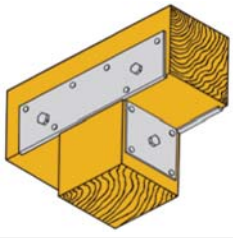
SC
ESC

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	BEAM WIDTH (INCHES)	POST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE			DESIGN LOAD LBS				
										UPLIFT SC/ESC (133%)	BEAM UPLIFT		LATERAL	
				D	L1	L2	A	B	C		SC (133%)	ESC (133%)	SC (133%)	ESC (133%)
SC44	PC44	3 3/16	4 x 4	2 3/4	11	7 3/8	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC44-16	PC44-16	3 3/16	4 x 4	2 3/4	11	7 3/8	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC46	PC46	3 3/16	4 x 6	2 3/4	13	9 1/4	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC46-16	PC46-16	3 3/16	4 x 6	2 3/4	13	9 1/4	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC48	PC48	3 3/16	4 x 8	2 3/4	15	11 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC48-16	PC48-16	3 3/16	4 x 8	2 3/4	15	11 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC64	PC64	5 1/2	4 x 6	4 5/8	11	7 3/8	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC64-16	PC64-16	5 1/2	4 x 6	4 5/8	11	7 3/8	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC66	PC66	5 1/2	6 x 6	4 5/8	13	9 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC66-16	PC66-16	5 1/2	6 x 6	4 5/8	13	9 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC68	PC68	5 1/2	6 x 8	4 5/8	15	11 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC84	PC84	7 1/2	4 x 8	6 1/2	11	7 3/8	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC86	PC86	7 1/2	6 x 8	6 1/2	13	9 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1125	2255
SC88	PC88	7 1/2	8 x 8	6 1/2	15	11 1/4	4-16d	6-16d	4-16d	1500	2250	2255	1500	2255



ESC66



SC66

POST ANCHORS

HA HAQ HEAVY ANCHORS

Design Features . . accommodate heavy column bases and rough-sawn posts, glu-lam timbers or heavy-duty fence construction where high structural values and durable performance are part of the specifications. Anchors should be set in position before pouring concrete. Erection nail holes are provided to speed up installation. These anchors are now available in width of 7⅛" for use with **LVL** and **PSL** engineered wood products.

Material . . HA44 through **HA612**, ⅜" steel; **HA7** through **HA1212**, ¼" steel. **HAQ**, 7 ga. galvanized steel. Values have 33⅓% seismic increase included in the design loads.

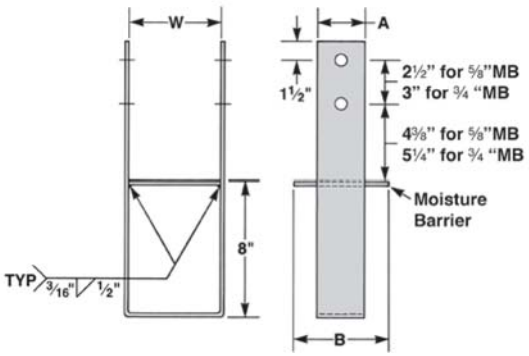
Moisture Barrier Material . . HA44 through **HA9**, 7 ga. steel. Larger sizes have ¼" moisture bearing.

Finish . . ***SUPERSPEED*** gray paint.

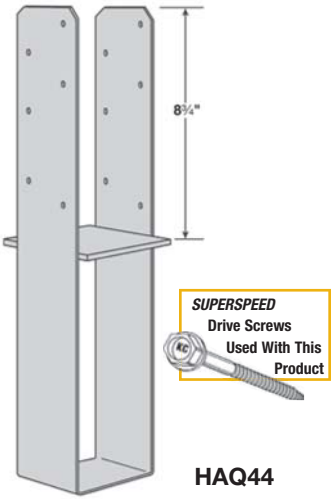
Special Finish . . HA44, HA46 and **HA66** galvanized steel.

Ordering/Specifying Information . . to specify screw type use "**Q**" after regular stock number of **HA**. Example: **HA44** now is **HAQ44**.

SUPERSPEED Drive Screws (SDS ¼ x 2) wood screws (12) included with product.



HA



HAQ44

HAS HASQ HEAVY ANCHORS/STAND-OFF

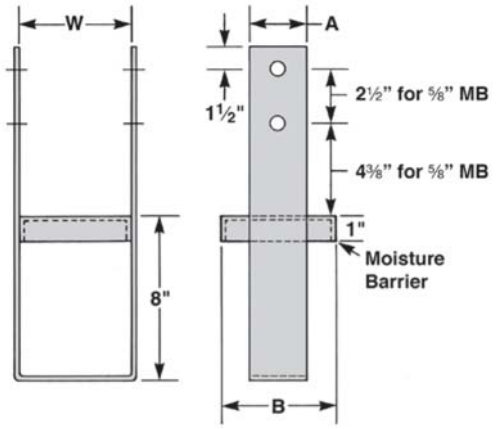
Design Features . . the **HAS** post anchor is very similar to the **HA** heavy anchor (above) except that it is used where a situation or application is needed for sanitation and moisture conditions. This anchor provides the builder with a medium-duty and low cost post anchor that can be embedded into concrete up to 7". The **HAS** also features a moisture-barrier plate that is four-sided. The stand-off plate is located 1" in height above concrete floors or decks when set in concrete. **UBC** requires an off-the-concrete post anchor when they are supporting permanent structures which are exposed to the weather.

Material . . 12 ga. galvanized steel base and 10 ga. galvanized steel strap.

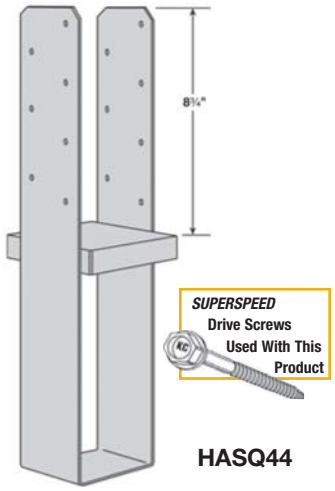
Special . . the **HAS** reduces the potential for decay at post and column ends.

Ordering/Specifying Information . . to specify screw type use "**Q**" after regular stock number of **HAS**. Example: **HAS44** now is **HASQ44**.

SUPERSPEED Drive Screws (**SDS** ¼ x 2) wood screws (14) included with product.



HAS

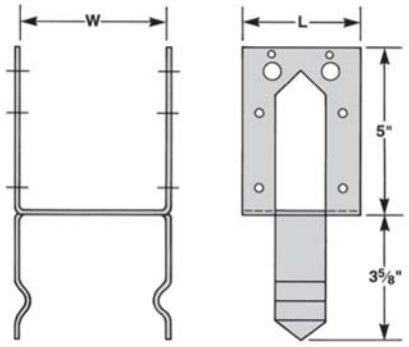


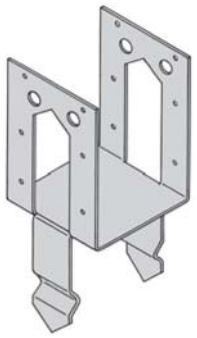
HASQ44

PA POST ANCHORS

Design Features . . when placed into wet concrete (after screeding), these post base anchors provide both lateral and uplift resistance – they will not pull out due to offset legs. Pointed ends provide for fast, easy setting and alignment. They also eliminate the need for bolts or other inserts. The seat is flush-mounted to the concrete. The post anchors are also available in rough post sizes.

Material . . 12 ga. galvanized steel.





PA44

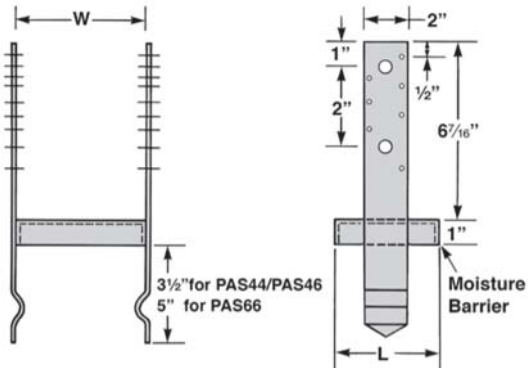
PAS POST ANCHORS/STAND-OFF

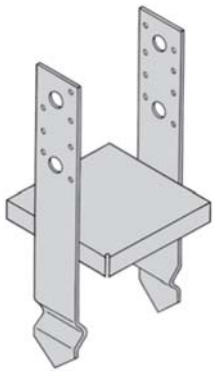
Design Features . . the **PAS44** is very similar to the HAS heavy anchor stand-off (above) except that it can be embedded into concrete slabs, floor or deck to 4x = 3½ 6x = 5". The **PAS** has the same moisture-barrier feature and provides a 1" stand-off plate height.

Material . . 12 ga. galvanized steel base and 12 ga. galvanized steel strap.

Installation . . use 14-16d nails for full load values. For 4x post size, use 2-½" x 4½" MB; for 6x post size, use 2-½" x 6½" MB.

Special . . economical price and ease-of-use make these ideal post anchors for the do-it-yourself market.



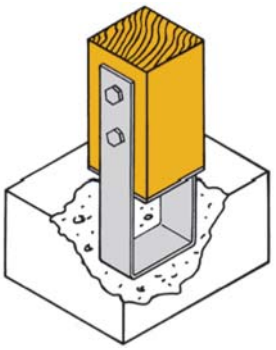


PAS44

HA
HAQ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL (INCHES)	DIMENSIONS (INCHES)			*SUPERSPEED* DRIVE SCREWS OR BOLT SCHEDULE	DESIGN LOAD UPLIFT (LBS)
				A	B	W		
HA44	CB44	4 x 4	3/16 stl	2	3 9/16	3 9/16	2-5/8 x 5 MB	5745
HA46	CB46	4 x 6	3/16 stl	2	5 1/2	3 9/16	2-5/8 x 5 MB	5745
HA48	CB48	4 x 8	3/16 stl	2	7 1/2	3 9/16	2-5/8 x 5 MB	5745
HA5	CB5	5 1/8	3/16 stl	2 1/2	Specify	5 1/4	2-5/8 x 6 MB	5745
HA66	CB66	6 x 6	3/16 stl	2 1/2	5 1/2	5 1/2	2-5/8 x 7 MB	5745
HA68	CB68	6 x 8	3/16 stl	2 1/2	7 1/2	5 1/2	2-5/8 x 7 MB	5745
HA7	CB7	6 3/4	1/4 stl	2 1/2	Specify	6 7/8	2-5/8 x 7 MB	8345
HA7 1/8 - 4	CB7 1/8 - 4	7 1/8 x 4	1/4 stl	2 1/2	3 9/16	7 1/4	2-3/4 x 9 MB	8345
HA7 1/8 - 6	CB7 1/8 - 6	7 1/8 x 6	1/4 stl	2 1/2	5 1/2	7 1/4	2-3/4 x 9 MB	8345
HA7 1/8 - 8	CB7 1/8 - 8	8 1/8 x 8	1/4 stl	2 1/2	7 1/2	7 1/4	2-3/4 x 9 MB	8345
HA86	CB86	8 x 6	1/4 stl	2 1/2	5 1/2	7 1/2	2-3/4 x 9 MB	8345
HA88	CB88	8 x 8	1/4 stl	2 1/2	7 1/2	7 1/2	2-3/4 x 9 MB	8345
HA9	CB9	8 3/4	1/4 stl	2 1/2	Specify	8 7/8	2-3/4 x 11 MB	8345
HA1010	CB1010	10 x 10	1/4 stl	2 1/2	9 1/2	9 1/2	2-3/4 x 11 MB	8345
HA1012	CB1012	10 x 12	1/4 stl	2 1/2	11 1/2	9 1/2	2-3/4 x 11 MB	8345
HA1212	CB1212	12 x 12	1/4 stl	2 1/2	11 1/2	11 1/2	2-3/4 x 13 MB	8345
HAQ44	CBQ44	4 x 4	3/16 stl	2	3 9/16	3 9/16	12-SDS 1/4 x 2	5125
HAQ46	CBQ46	4 x 6	3/16 stl	2	5 1/2	3 9/16	12-SDS 1/4 x 2	5125
HAQ66	CBQ66	6 x 6	3/16 stl	2	5 1/2	5 1/2	12-SDS 1/4 x 2	5125

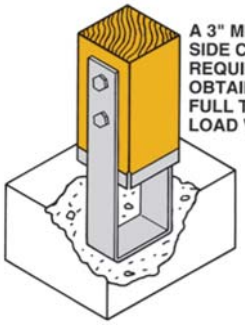


HA44

HAS
HASQ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			SUPERSPEED DRIVE SCREWS OR BOLT SCHEDULE	DESIGN LOAD	
				A	B	W		UPLIFT LBS	DOWN LBS
HAS44	CBS44	4 x 4	10 ga gal	2	3 9/16	3 9/16	2-5/8 x 5 MB	5665	9665
HAS46	CBS46	4 x 6	10 ga gal	2	5 1/2	3 9/16	2-5/8 x 5 MB	5665	10000
HAS66	CBS66	6 x 6	10 ga gal	2	5 1/2	5 1/2	2-5/8 x 7 MB	5665	13000
HASQ44	CBSQ44	4 x 4	10 ga gal	2	3 9/16	3 9/16	14-SDS 1/4 x 2	5665	9665
HASQ46	CBSQ46	4 x 6	10 ga gal	2	5 1/2	3 9/16	14-SDS 1/4 x 2	5665	10000
HASQ66	CBSQ66	6 x 6	10 ga gal	2	5 1/2	5 1/2	14-SDS 1/4 x 2	5665	13000

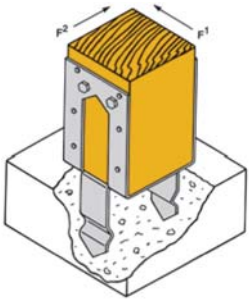


HAS44

PA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE	BOLT SCHEDULE (INCHES)	DESIGN LOAD (LBS)			
							12-16D NAILS			2-1/2 MB
			W	L			UPLIFT (133%)	F1 (133%)	F2 (133%)	UPLIFT (133%)
PA44	PB44	4 x 4	3 9/16	3	12-16d	2-1/2 x 5 MB	2300	1725	2240	3625
PA46	PB46	4 x 6	5 1/2	3	12-16d	2-1/2 x 7 MB	2300	1725	2240	3625
PA66	PB66	6 x 6	5 1/2	5	12-16d	2-1/2 x 7 MB	2300	1725	2240	3625
PA44R	PB44R	Rough 4 x 4	4	3	12-16d	2-1/2 x 5 MB	2300	1725	2240	3625
PA46R	PB46R	Rough 4 x 6	6	3	12-16d	2-1/2 x 7 MB	2300	1725	2240	3625
PA66R	PB66R	Rough 6 x 6	6	5	12-16d	2-1/2 x 7 MB	2300	1725	2240	3625

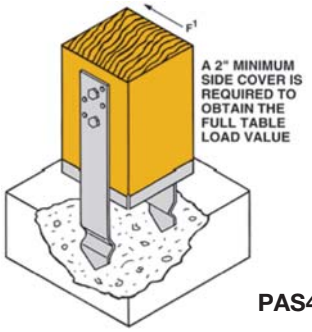


PA44

PAS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	DIMENSIONS (INCHES)		DESIGN LOAD (LBS)				
					UPLIFT (133%)		F1 (133%)		DOWN (100%)
			W	L	NAILS	BOLTS	NAILS	BOLTS	
PAS44	PBS44	4 x 4	3 9/16	3 9/16	2690	3640	2015	2240	6665
PAS46	PBS46	4 x 6	3 9/16	5 1/2	2690	3640	2015	2240	9335
PAS66	PBS66	6 x 6	5 1/2	5 1/2	2690	3625	2015	2240	11655

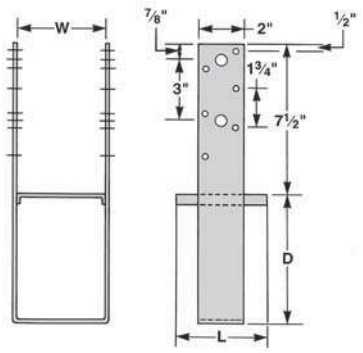


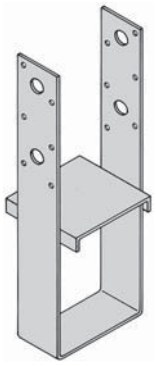
PAS44

PAM POST ANCHORS MEDIUM

Design Features . . are similar to the **HA** heavy anchor (previous page), and provide builders with a medium-duty, low cost post anchor that can be embedded into concrete up to 7" to meet the needs of carports, patios, porches and breezeways. Moisture-barrier plate can be removed for added installation flexibility. The post can be nailed or bolted to meet code requirements.

Material . . PAM, 12 ga. galvanized steel.





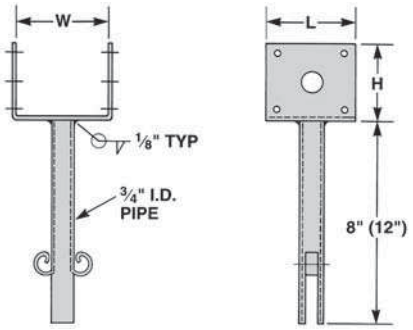
PAM44

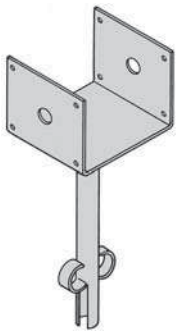
EA ELEVATED ANCHORS

Design Features . . provide an economical, elevated post base for applications where sanitation and moisture conditions dictate an off-the-concrete post anchor. Anchors should be embedded in fresh concrete immediately after screeding with the post seat not exceeding 3" above the concrete. The ¾" I. D. pipe has anti-rotation and a withdrawal lock at the base. The standard depth is 8". To special order the 12", specify by adding 12 after the stock no. (example: **EA44** with 12" pipe, specify as **EA44-12**).

Material . . 12 ga. steel.

Finish . . ***SUPERSPEED*** gray paint.





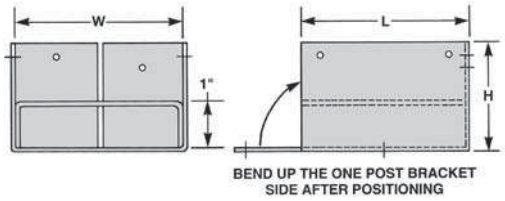
EA44

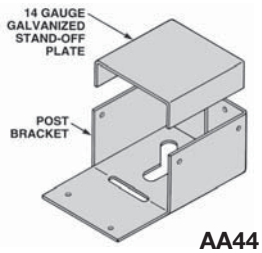
AA ADJUSTABLE ANCHORS

Design Features . . provide fully-adjustable post base plus moisture and sanitary protection . . also used for new construction or remodeling applications where damp rot is a problem. Bending slot provides greater ease of installation. For an easy adjustment to a previously set ½" concrete fastener (or bolt and cement insert), use the slotted hole. Also available in rough post sizes.

Material . . 18 ga. and 16 ga. galvanized steel with a 14 ga. galvanized stand-off plate.

Special . . stand-off plate provides flat-end bearing area for posts and keeps the post end 1 3/16" above the surface moisture.



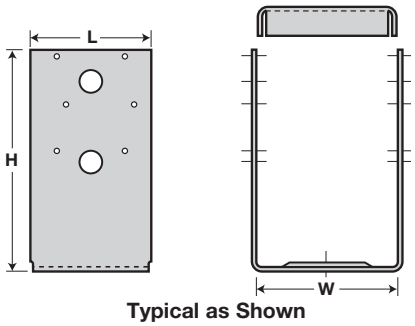


AA44

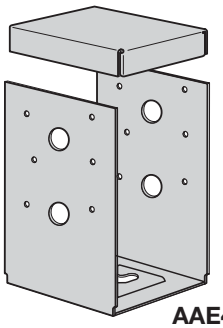
AAEL ADJUSTABLE ANCHORS/ECONOMY

Design Features . . the **AAEL** is very similar to the **AA** adjustable anchor (above) except for the added feature of a four-sided stand-off plate that increases the down-load support and provides an attractive appearance while meeting the code-required 1" stand-off. The **AAE44L** provides higher uplift capacity because of extended sides with extra bolts and nailing schedules. The **AAEL** anchors are also available in rough lumber sizes.

Material . . 16 ga. and 12 ga. galvanized steel with a 12 ga. galvanized stand-off plate.



Typical as Shown



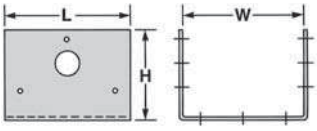
AAE44L

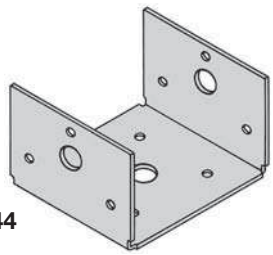
DA DAS DECK ANCHORS/STAND-OFF

Design Features . . the **DA** eliminates toe-nailing of the post or column to a flat surface. The bottom plate ½" bolt hole can be set to concrete with a ½" bolt, cement nails or "gun" inserts. The **DA** is available in rough post sizes. The **DAS** stand-off is used to lessen post decay at concrete or masonry floors.

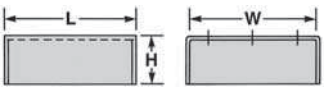
Material . . DA, 18 ga. galvanized steel; **DAS**, 10 ga. galvanized steel.

Special . . The **DAS** is available in rough lumber sizes. It can be attached with nails before post installation.



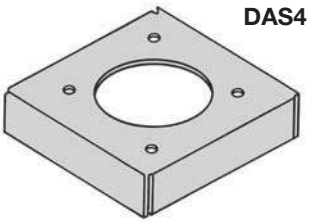


DA44



DAS

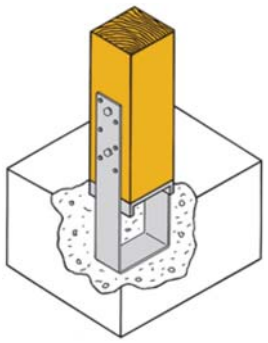
DAS4



For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	BOLT SCHEDULE (INCHES)	DESIGN LOAD (LBS)	
									UPLIFT (133%)	
				D	W	L			NAILS	BOLTS
PAM44	LCB44	4 x 4	12 ga gal	6½	3⁹⁄₁₆	3⁹⁄₁₆	12-16d	2-½ x 4½ MB	2300	3625
PAM46	LCB46	4 x 6	12 ga gal	6½	3⁹⁄₁₆	5½	12-16d	2-½ x 4½ MB	2300	3625
PAM66	LCB66	6 x 6	12 ga gal	5½	5½	5½	12-16d	2-½ x 6½ MB	2300	3625
PAM44R	—	4 x 4	12 ga gal	6½	4	4	12-16d	2-½ x 4½ MB	2300	3625
PAM46R	—	4 x 6	12 ga gal	6½	4	6	12-16d	2-½ x 4½ MB	2300	3625
PAM66R	—	6 x 6	12 ga gal	5½	6	6	12-16d	2-½ x 6½ MB	2300	3625

PAM

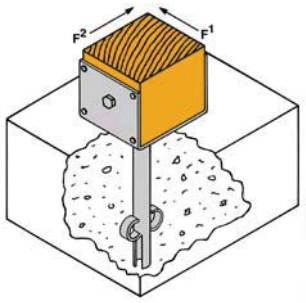


PAM44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE	BOLT SCHEDULE	DESIGN LOAD (LBS)			
		W	H	L			UPLIFT (133%)	F¹ (133%)	F² (133%)	DOWN (100%)
EA44	EPB44	3⁹⁄₁₆	2¼	3	8-16d	1-½ x 4½ MB	1535	1150	1150	3465
EA46	EPB46	5½	3	3	8-16d	1-½ x 6½ MB	1535	1150	1150	3465
EA66	EPB66	5½	3	5	12-16d	1-½ x 6½ MB	2300	1725	1725	3465
EA44-12	EPB44-12	3⁹⁄₁₆	2¼	3	8-16d	1-½ x 4½ MB	1535	1150	1150	3465
EA46-12	EPB46-12	5½	3	3	8-16d	1-½ x 6½ MB	1535	1150	1150	3465
EA66-12	EPB66-12	5½	3	5	12-16d	1-½ x 6½ MB	2300	1725	1725	3465

EA

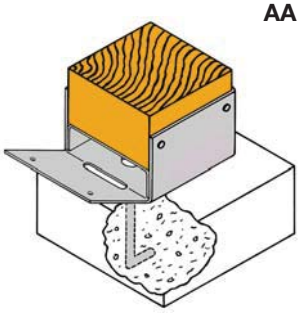


EA44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD		
				L	W	H		UPLIFT LBS	LATERAL LBS	DOWN LBS
AA44	AB44	4 x 4	18 ga gal	3⁹⁄₁₆	3⁹⁄₁₆	2⅞	8-10d	1195	590	4165
AA46	AB46	4 x 6	16 ga gal	5½	3⁹⁄₁₆	2⅞	10-10d	1505	755	6165
AA66	AB66	6 x 6	16 ga gal	5½	5½	2⅞	12-10d	1810	905	11665
AA44R	AB44R	Rough 4 x 4	16 ga gal	4	4	2⅞	8-10d	1195	590	4165
AA46R	AB46R	Rough 4 x 6	16 ga gal	6	4	2⅞	10-10d	1505	755	6165
AA66R	AB66R	Rough 6 x 6	16 ga gal	6	6	2⅞	12-10d	1810	905	11665

AA

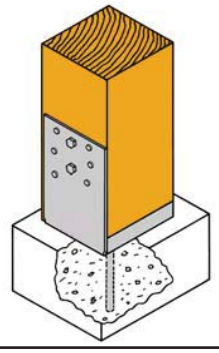


AA44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL		DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
			BASE	STRAP	L	W	H		UPLIFT LBS	DOWN LBS
AAE44L	ABU44	4 x 4	12 ga gal	12 ga gal	3	3⁹⁄₁₆	5½	12-16d	2290	6665
AAE46L	ABU46	4 x 6	12 ga gal	12 ga gal	5	3⁹⁄₁₆	7	12-16d	2290	10335
AAE66L	ABU66	6 x 6	12 ga gal	12 ga gal	5	5½	6	12-16d	2290	15000
AAE88L	ABU88	8 X 8	14 ga gal	12 ga gal	7	7½	7	18-16d	2290	15870

AAEL



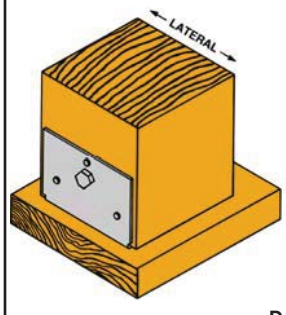
AAEL44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
				L	W	H		UPLIFT LBS	LATERAL LBS
DA44	BC40	4 x 4	18 ga gal	3	3⁹⁄₁₆	2⅞	10-16d	535	535
DA46	BC460	4 x 6	18 ga gal	3	5½	2⅞	12-16d	535	535
DA66	BC60	6 x 6	18 ga gal	5	5½	2⅞	16-16d	535	535
DA88	BC80	8 x 8	18 ga gal	7	7½	2⅞	16-16d	535	535

PRODUCT CODE	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
				L	W	H		UPLIFT LBS	DOWN LBS
DAS4	APS4	4 x 4	10 ga gal	3¼	3¼	1	—	—	900
DAS5	APS5	5 x 5	10 ga gal	4⅜	4⅜	1	—	—	1200
DAS6	APS6	6 x 6	10 ga gal	5⅛	5⅛	1	—	—	1300
DAS8	APS8	8 x 8	10 ga gal	8	8	1¼	—	—	3000
DAS10	APS10	10 x 10	10 ga gal	9¾	9¾	1½	—	—	3800
DAS12	APS12	12 x 12	10 ga gal	11¾	11¾	1½	—	—	4800

DA
DAS



DA44

FA3 FA6 FAL FALW — FRAMING ANCHORS

Design Features . . FA6 anchors provide the builder with the industry's most versatile framing anchor including:

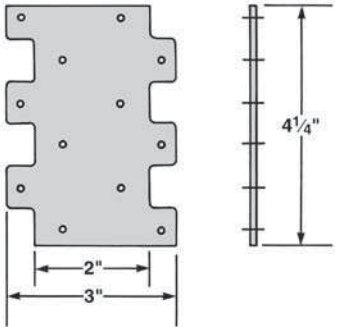
- Prongs – permit faster and easier installation.
- Bending slots – make accurate bends for all 2- and 3-way anchoring ties on the job.

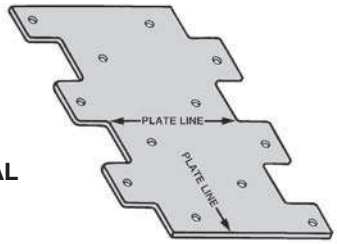
FA3 anchors have been designed especially for use on 2 x 4, 2 x 3 and 3 x 4 framing.

Material . . 18 and 20 ga. galvanized steel.

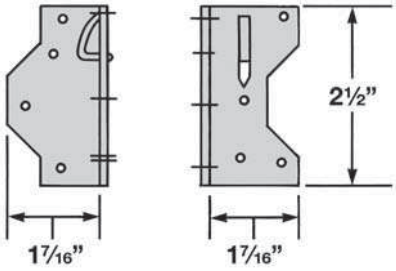
Loads . . (shown with directional arrow) are normal with 25% increase for maximum, and are based on laboratory tests.

Special . . the **FAL** and **FAL5** anchor provides a plate to transfer the shear force to the blocking connection or rim joist from the top plate. The improved nail pattern helps prevent splitting of the wood members for both single/double top plate situations.

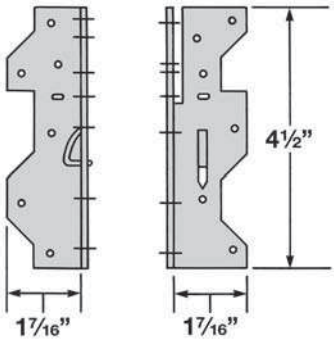




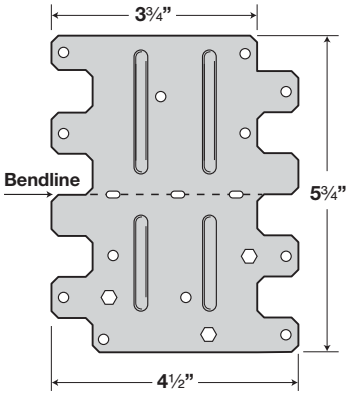
FAL



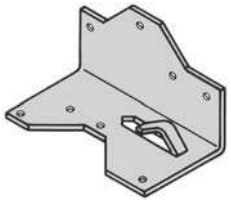
FA3

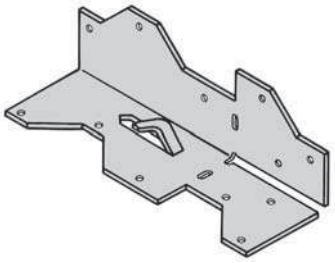


FA6

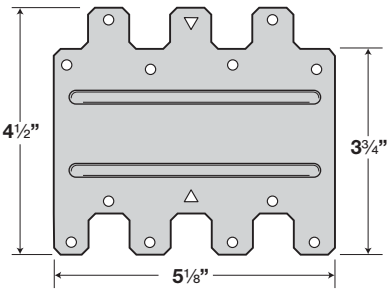


FALW





The **FALW** Lateral Wall Framing Clip is designed with locator bending slots to aid proper installation to transfer shear loads between the top wall plates and the roof diaphram. The **FALW** can be used on wood or masonry walls the roof pitches can be adjusted from 1:12 to 12:12.



FAL5

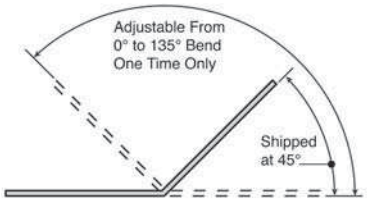
CA CAS — CLIP ANCHORS/SKEWED

Design Features . . CA versatile reinforcing angles for a multi-purpose anchor around the job. These are generically known as **TECO**™ clips. They can be nailed to concrete slabs to hold posts or studs, or for high uplift conditions. Holes are staggered to eliminate wood splitting and to permit installation on both sides of the timber. The **CAS** is a clip anchor that can be field skewable from 0° to 135°. (Holes are slotted)

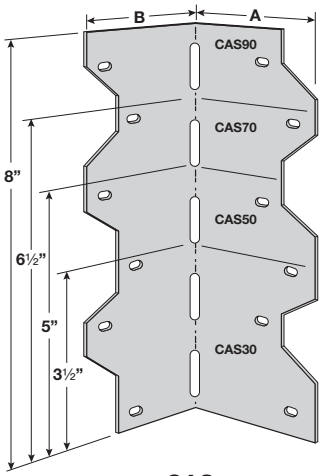
Lengths . . CA, **CAS** – 2½", 4½", 6½" and 8½".

Material . . 18 ga. galvanized steel.

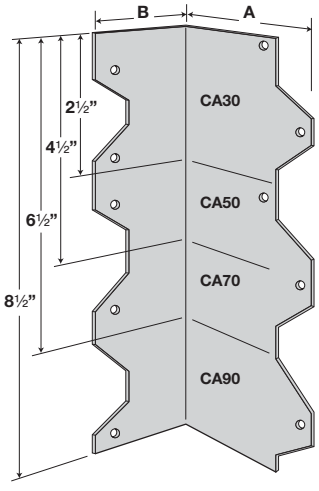
TOP VIEW



CAS
Top View



CAS



CA

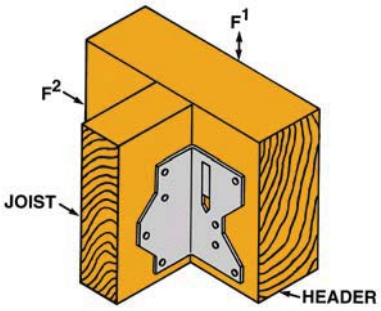
ANCHORS AND CLIPS (WOOD-TO-WOOD)

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

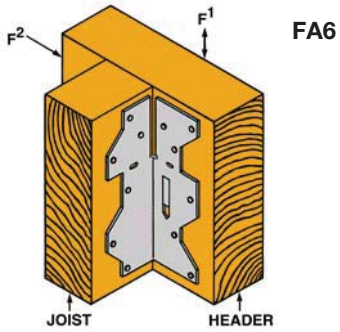
PRODUCT CODE	REF NO	MATERIAL	NAIL SCHEDULE	DIRECTION OF LOAD	DESIGN LOAD NORMAL LBS	DESIGN LOAD MAX LBS
FA3	A34	18 ga gal	8-8d	F^1	355	455
				F^2	355	455
FA6	A35	18 ga gal	12-8d	A^1, E	265	335
				C^1	265	335
				A^2	265	335
				C^2	265	335
				D	265	355
				F^1	535	670
				F^2	535	670
FAL	LTP4	20 ga gal	12-8d	G	535	670
				H	445	445
				J	265	265
FAL5	LTP5	20 ga gal	12-8d	G	535	670
				H	445	445
				J	265	265
FALW	RBC	20 ga gal	12-10d x 1½	1 45° to 90°	440	440
				2 0° to 45°	490	490

FA3
FA6
FAL
FALW

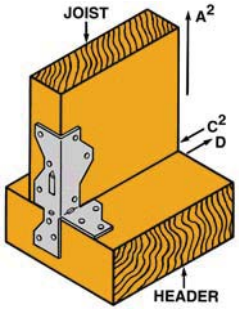
FA3

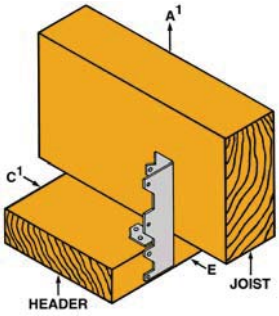


FA6

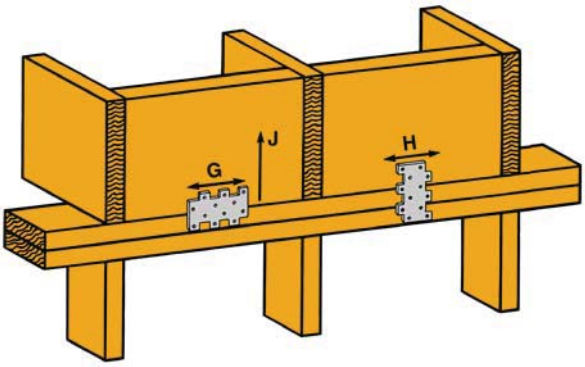


FA6

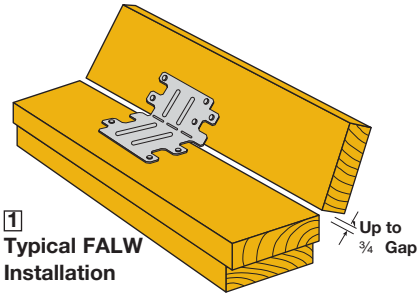




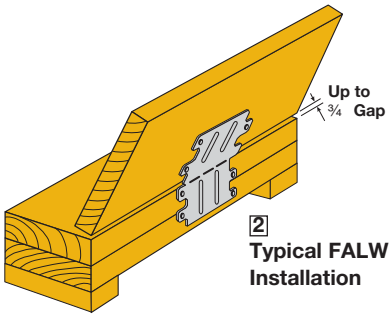
FA6



FAL
FAL5



1 Typical FALW Installation

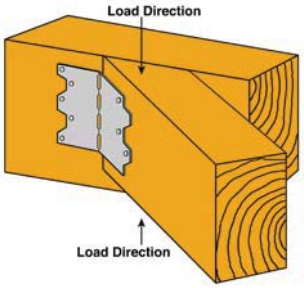


2 Typical FALW Installation

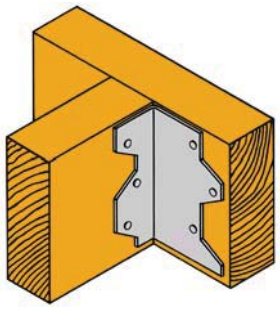
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES) A	DIMENSIONS (INCHES) B	DIMENSIONS (INCHES) L	NAIL SCHEDULE	DESIGN LOAD NORMAL LBS	DESIGN LOAD MAX LBS
CA30	L30	18 ga gal	2⅜	1⅜	2½	4-10d	220	275
CA50	L50	18 ga gal	2⅜	1⅜	4½	6-10d	330	415
CA70	L70	18 ga gal	2⅜	1⅜	6½	8-10d	440	550
CA90	L90	18 ga gal	2⅜	1⅜	8½	10-10d	550	690
CAS30	LS30	18 ga gal	2⅜	2⅜	3½	6-10d	330	415
CAS50	LS50	18 ga gal	2⅜	2⅜	5	8-10d	440	550
CAS70	LS70	18 ga gal	2⅜	2⅜	6½	10-10d	550	690
CAS90	LS90	18 ga gal	2⅜	2⅜	8	12-10d	660	825

CA
CAS



CAS50



CA50

HT HURRICANE TIES

Design Features . . eliminate expensive, time consuming rafter notching . . provide wind and seismic ties for trusses and rafters . . fulfill specifications for resistance to lateral and uplift conditions . . also for general purpose tie use, strongback or attachments where one member crosses another . . **HT2.5N** is designed for tying rafter or truss to the top of two plates. The eighteen design configurations include:

(1) **HT1**, **HT10**A, **HT10R**, **HT10-2**, **HT11**, and **HT14** are one direction. The **HT10-2** attaches a 2-ply rafter or a ceiling joist and rafter to the top plate.

(2) **HT2** – combination.

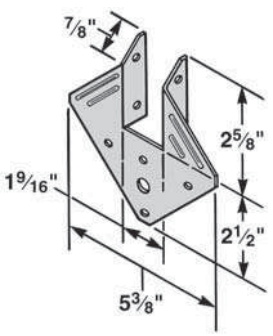
(3, 4) **HT3, HT2.5** and **HT2.5T** – manufactured in pairs for right and left hand use.

(5, 6) **HT4** and **HT5** – a new design that provides higher allowable loads and requires fewer nails. The new hurricane ties allow for installation on the inside of the member without interfering with the sheet rock, or for installation on the outside of the member without interfering with the sheathing material. The **HT5** is designed to tie the top of two wall plates to the rafter.

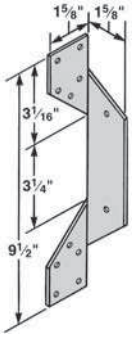
(7) **HT6**, **HT7** and **HT8** – the largest of all hurricane ties, made from heavy 16 and 18 ga. galvanized steel for high load capacity, and used to tie joists, studs, trusses, plates and all other wood members.

(8) **HT2/90°** and **HT4/90°** – these ties connect the joist or rafter to a double top plate at a 45° angle. Manufactured sizes allow for both 2x and 4x conditions. After attaching the **HT2/90°** or **HT4/90°** to a double top plate, install the rafter at any slope up to 45° and finish nailing.

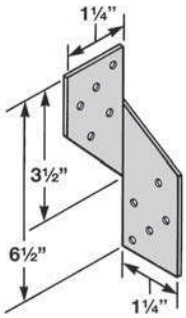
Material . . 18 ga. and 16 ga. galvanized steel.



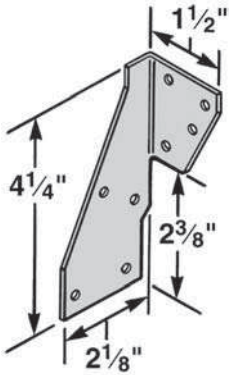
HT1



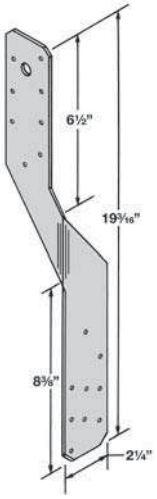
HT2



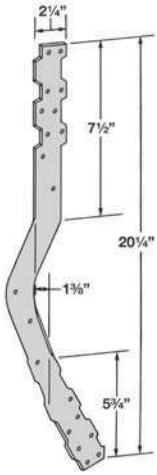
HT2.5
(See New HA Series)



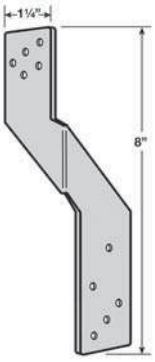
HT5
(HT4 Similar)



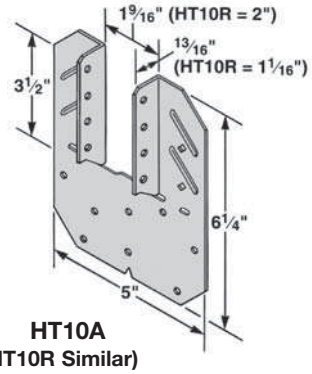
HT6



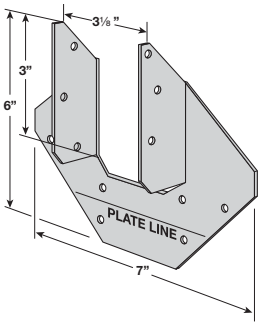
HT7



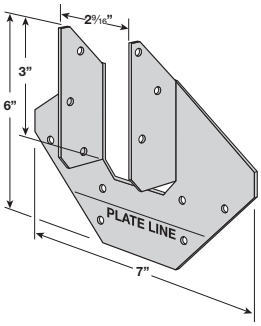
HT8



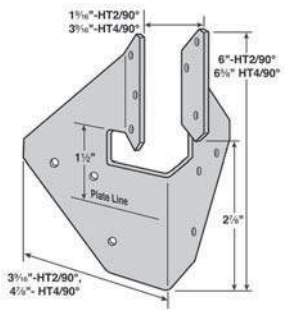
HT10A
(HT10R Similar)



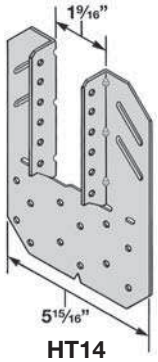
HT10-2



HT11



HT2/90°
(HT4/90° Similar)



HT14

TC TCL TCD TCH TRUSS CLIPS

Design Features . . permit easy, fast tying of trusses to non-load-bearing walls. Vertical slotted hole allows vertical movement for quick and simple truss seating under a full, dead load condition.

Material . . 18 ga. galvanized steel.

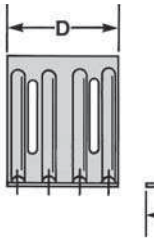
Installation . . TC –2 nails to plate, 1 into slot.

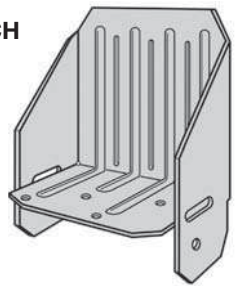
TCL – 2 nails to plate, 1 into slot.

TCD – 4 nails to plate, 2 into slots.

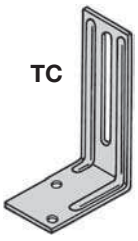
TCL is used when a longer leg is needed to reach a truss or rafter because of separation from a non-bearing top plate. Lower truss chord can be attached to either side of the upstanding leg. Nails must be installed at the middle of the slot.

TCH – has a 2⅛" slot to accommodate the movement of commercial trusses for high lateral capacity.



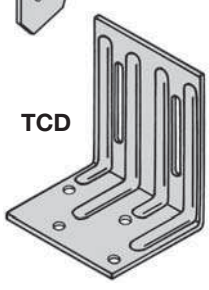


TCH



TC

TCL



TCD

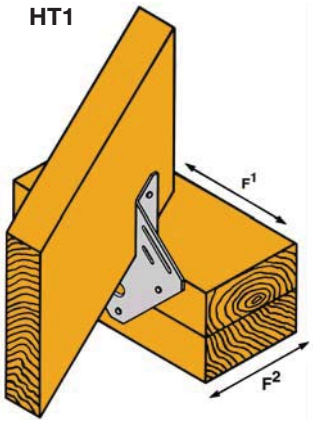
HT

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

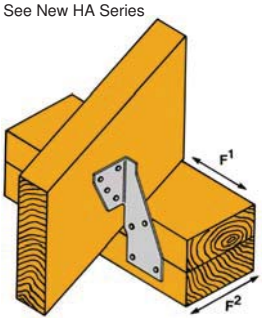
PRODUCT CODE	REF NO	MATERIAL	NAIL SCHEDULE			DESIGN LOAD (LBS)		
						UPLIFT (160%)	LATERAL	
			RAFTER	PLATES	STUD		F^1 (160%)	F^2 (160%)
HT1	H1	18 ga gal	6-8d x 1½	4-8d	—	585	490	170
HT2A	H2A	18 ga gal	5-8d x 1½	2-8d x 1½	5-8d x 1½	595	140	65
HT2/90°	HCP2	18 ga gal	6-10d x 1½	6-10d x 1½	—	645	315	—
HT2.5	H2.5	18 ga gal	5-8d	5-8d	—	475	170	170
*HT2.5A	H2.5A	18 ga gal	5-8d	5-8d	—	600	110	110
HT2.5T	H2.5T	18 ga gal	5-8d	5-8d	—	615	170	170
HT3	H3	18 ga gal	4-8d	4-8d	—	475	170	170
HT4	H4	18 ga gal	4-8d	4-8d	—	365	170	170
HT4/90°	HCP4	18 ga gal	8-10d	8-10d	—	1005	315	—
HT5	H5	18 ga gal	4-8d	4-8d	—	475	130	170
HT6	H6	16 ga gal	—	8-8d	8-8d	955	715	—
HT7	H7	16 ga gal	4-8d	2-8d	8-8d	990	475	—
HT8	H8	18 ga gal	5-10d x 1½	5-10d x 1½	—	745	—	—
HT10	H10	18 ga gal	8-8d x 1½	8-8d x 1½	—	1000	590	525
HT10R	H10R	18 ga gal	8-8d x 1½	8-8d x 1½	—	1000	590	525
HT10-2	H10-2	18 ga gal	6-10d	6-10d	—	760	590	430
HT11	H11Z	18 ga gal	6-16d x 2½	6-16d x 2½	—	850	590	775
HT14	H14	18 ga gal	12-8d x 1½	13 x 8d	—	1375	530	270
			12-8d x 1½	15 x 8d	—	1375	530	270

* See New HA Series

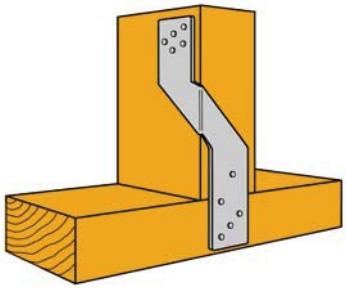
HT1



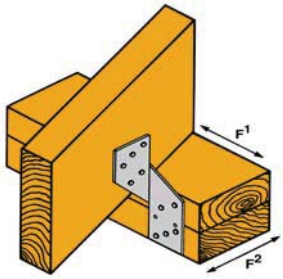
HT5
(HT4 Similar)



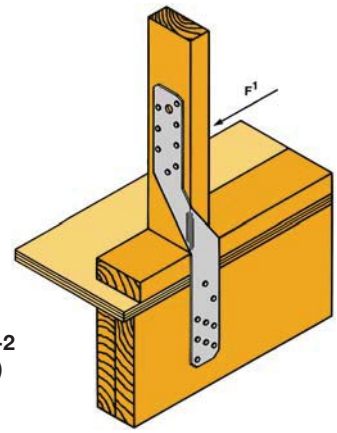
HT8



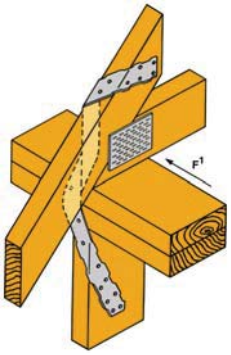
HT2.5
(HT2.5A & HT2.5T Similar)

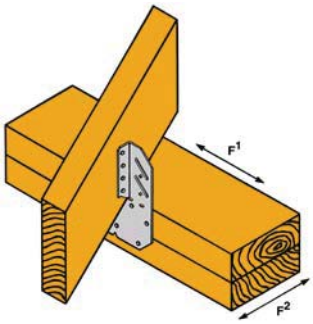


HT6



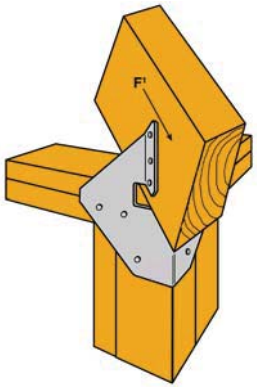
HT7





HT10A
(HT10R, HT10-2
HT11 Similar)

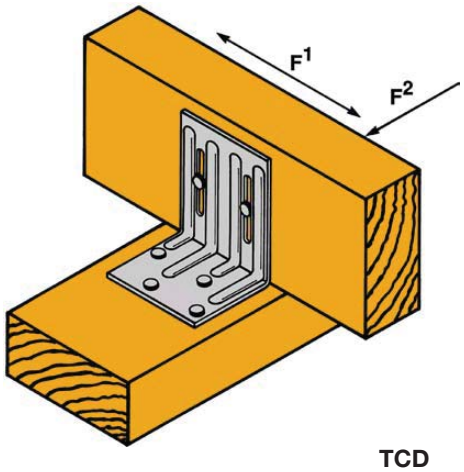
HT2/90°
(HT4/90° Similar)



TC TCL TCD TCH

For Product Substitutions . . . the ONLY APPROVED EQUAL™

PROD. CODE	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD (LBS) MAX (133%)			
							WITHOUT GAP		WITH GAP	
		D	W	H	TRUSS	PLATE	F^1	F^2	F^1	F^2
TC	STC	1¼	1⅞	2¾	1-8d	2-8d	85	110	40	40
TCL	STCT	1¼	1⅞	4¼	1-8d	2-8d	—	—	—	—
TCD	DTC	2½	1¾	2¾	2-8d	4-8d	215	215	110	110
TCH	HTC4	3⁹⁄₁₆	2	3½	3-10d	6-10d	395	315	100	315



TCD

ANGLES AND BRACES

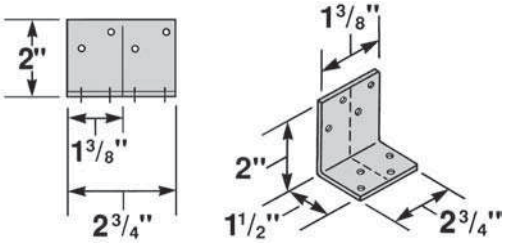
LL
ML

LIGHT ANGLES/MEDIUM ANGLES

Design Features . . MLs provide fast, accurate bolting of two intersecting wood members (reinforcing intersection joints). **LL**s are versatile reinforcing angles that are nailed to reinforce intersecting wood members.

Material . . 18 ga. galvanized and 12 ga. galvanized steel, depending upon size and load requirements.

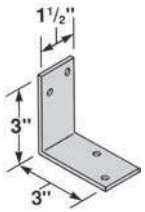
Special . . medium angles are designed for standardization and construction economies, and to provide compatibility with the ***SUPERSPEED*** structural hardware line.



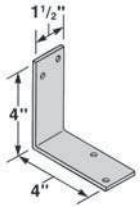
LL

LL21–23

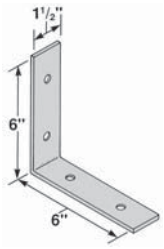
ML24



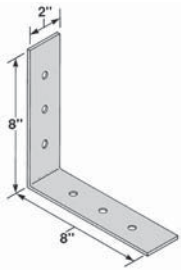
ML33



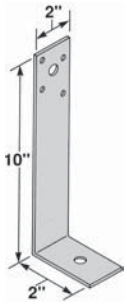
ML44



ML66



ML88



ML210

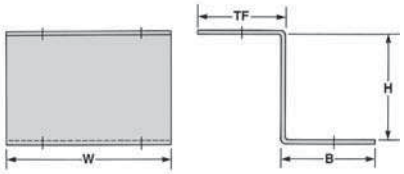
ZH

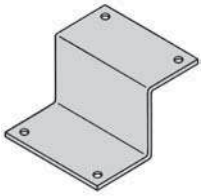
"Z" HANGERS (CLIPS)

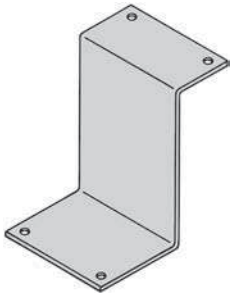
Design Features . . ZH24 hangers are used for flat-blocking between joists or trusses to complete diaphragm nailing. **ZH241**, **ZH261** and **ZH44** hangers are used to support joists when they are skewed to eliminate toe-nailing for faster installation. They require fewer nails.

Material . . 28 ga., 18 ga., and 12 ga. galvanized steel.

Special . . ZH2428 and **ZH3428** hangers are made from 28 ga. galvanized steel. For installation savings, the **ZH**s are normally nailed or stapled to the stiffeners (joist) first and then used for flat-blocking between the joists or trusses to complete diaphragm nailing.




ZH24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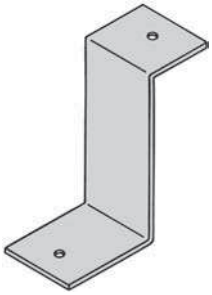
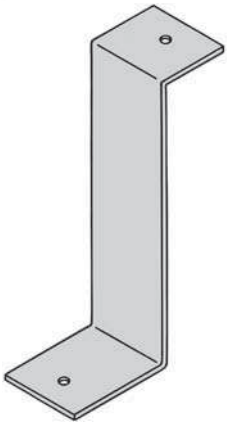

ZH241


ZH261

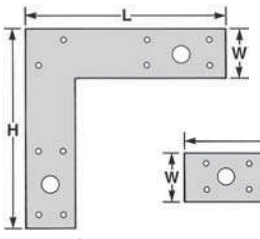
T
TH
L
LH

"L"/"T" BRACES

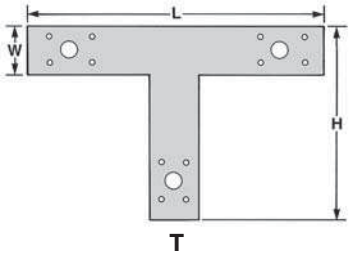
Design Features . . inexpensive braces are ideal for gates, patios covers, joining posts and columns to headers, beams and other applications where added reinforcement is needed. Braces may be bolted for heavy-duty applications.

Material . . light and medium-duty use, 14 ga. galvanized steel; heavy-duty use, 3⁄16" steel.

Finish . . TH and **LH** ***SUPERSPEED*** gray paint.



L



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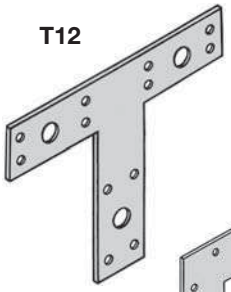
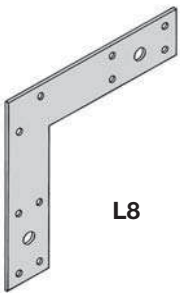
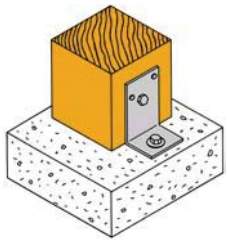



L8

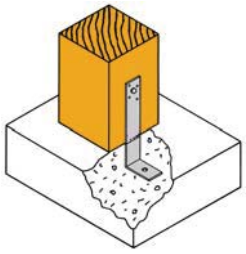
LL
ML

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)			NAIL AND BOLT SCHEDULE	DESIGN LOAD	
			L1	L2	W		PARALLEL TO GRAIN LBS	PERPENDICULAR TO GRAIN LBS
LL21	A21	18 ga gal	1½	2	1⅜	4-10d	250	250
LL23	A23	18 ga gal	1½	2	2¾	8-10d	505	505
ML33	A33	12 ga gal	3	3	1½	8-10d	650	345
ML44	A44	12 ga gal	4	4	1½	8-10d	650	345
ML66	A66	12 ga gal	6	6	1½	4-⅜ MB	—	—
ML88	A88	12 ga gal	8	8	2	6-⅜ MB	—	—
ML24	A24	12 ga gal	2	4	2	2-½ MB	—	—
ML210	A311	12 ga gal	2	10	2	2 -½ MB	—	—



ML24



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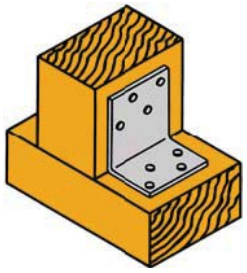
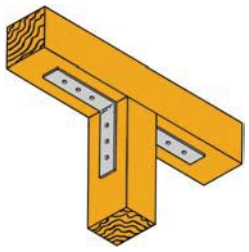


LL23

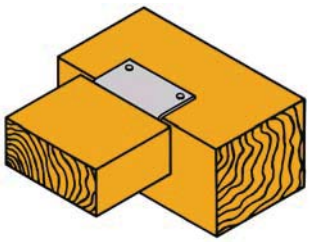


ML88

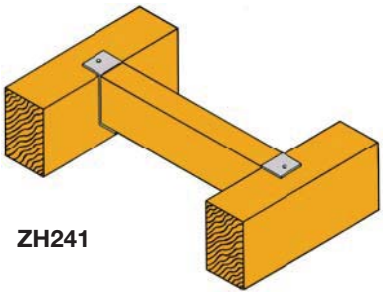
ZH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

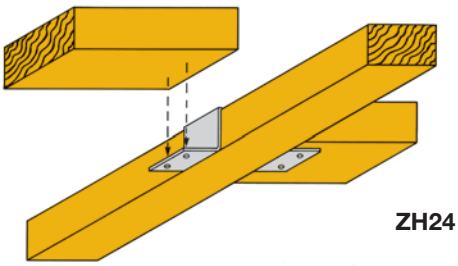
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD LBS
			B	W	H	TF	BLOCKING	JOIST	
ZH24	Z2	18 ga gal	1⅜	2½	1⁹⁄₁₆	1⅜	2-10d	2-10d	—
ZH241	Z4	12 ga gal	2	1½	3⁷⁄₁₆	1⅜	1-16d	1-16d	545
ZH261	Z6	12 ga gal	2	1½	5⅜	1⅜	1-16d	1-16d	545
ZH44	Z44	12 ga gal	2	2⅜	3⁹⁄₁₆	1⅜	2-10d	2-10d	415
ZH2428	Z28	28 ga gal	1⅜	2⁵⁄₁₆	1⁹⁄₁₆	1⅜	Staple	Staple	—
ZH3428	Z38	28 ga gal	1⅜	2⁵⁄₁₆	2⁹⁄₁₆	1⅜	Staple	Staple	—



ZH24



ZH241

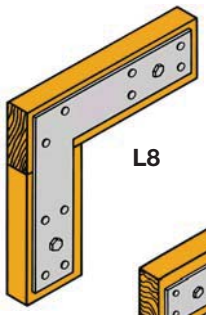


ZH24

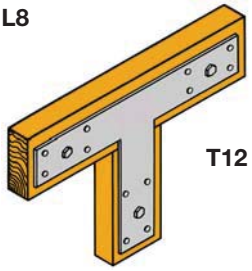
T
TH
L
LH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)			NAIL SCHEDULE		BOLT SCHEDULE	DESIGN LOAD	
			W	H	L	HORIZ	VERT		NAILS LBS	BOLTS LBS
T6	66T	14 ga gal	1½	5	6	4-16d	2-16d	3-½ MB	545	465
T12	128T	14 ga gal	2	8	12	8-16d	4-16d	3-½ MB	545	465
T1212	1212T	14 ga gal	2	12	12	8-16d	4-16d	3-½ MB	545	465
TH12	1212HT	³⁄₁₆ stl	2½	12	12	—	—	6-⅝ MB	—	1860
TH16	1616HT	³⁄₁₆ stl	2½	16	16	—	—	6-⅝ MB	—	1860
L6	66L	14 ga gal	1½	6	6	2-16d	2-16d	2-½ MB	545	465
L8	88L	14 ga gal	2	8	8	4-16d	4-16d	2-½ MB	545	585
L1212	1212L	14 ga gal	2	12	12	4-16d	4-16d	2-½ MB	545	585
LH12	1212HL	³⁄₁₆ stl	2½	12	12	—	—	4-⅝ MB	—	1230
LH16	1616HL	³⁄₁₆ stl	2½	16	16	—	—	4-⅝ MB	—	1230



L8



T12

HL
HLG

HEAVY ANGLES/GUSSETS

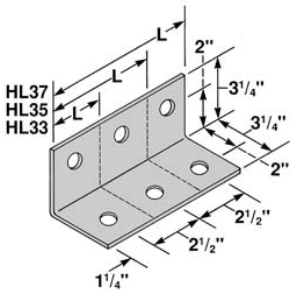
Design Features . . provide fast, accurate bolting of two intersecting wood members (reinforcing intersection joints). Erection nail holes are provided for easy installation.

Material . . 3/16" and 1/4" steel, depending upon size and load requirements.

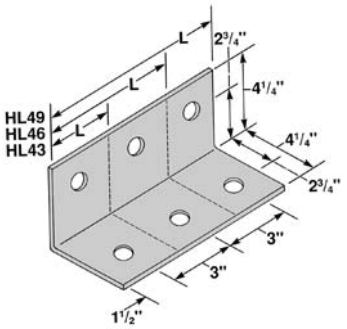
Finish . . HL, **HLG** ***SUPERSPEED*** gray paint.

Special . . heavy angles are designed for standardization and construction economies, and to provide compatibility with the ***SUPERSPEED*** structural hardware line.

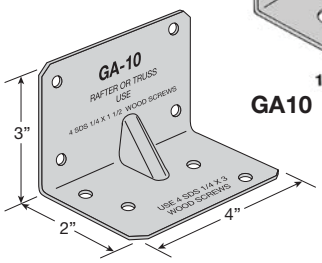
Ordering Information . . for gusset, add **G** to stock no. (Example: **HL79G**)



HL33–37
Style



HL43–49
Style



GA10

GA

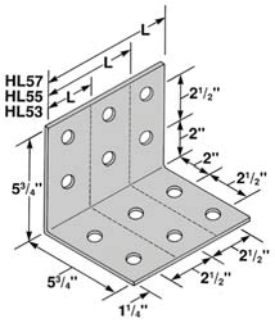
GUSSETS

Design Features . . a 1-piece design provides 3-way connection (top-bottom-side) for variety of applications. Erection nail holes are provided to speed up installation.

Material . . 12 ga. galvanized steel.

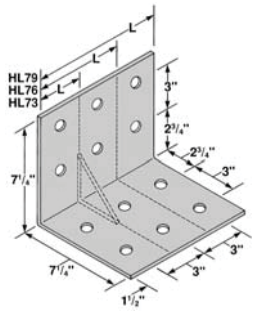
Special . . The **GA10** attaches to truss gables and can be installed into wood (***SUPERSPEED*** Drive Screws are provided). This provides greater lateral wind resistance.

Options . . Special sizes can be made to order.



HL53–57
Style

SUPERSPEED
Drive Screws Used
With This Product



HL73–79
Style
(Shown with Gusset)

GTH
GTL
GTM

GIRDER TIES

Design Features . . this series provides three different design configurations for light, medium, and high uplift resistance. Uplift resistance is for wood frame and concrete block construction for all three models.

GTH . . can be installed on trusses and beams with top chord slopes for 3/12 to 9/12.

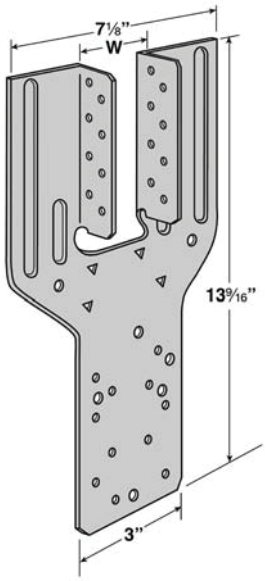
Material . . **GTL** – 14 ga. galvanized steel.
GTM – 12 ga. galvanized steel.
GTH – 7 ga. steel.

Finish . . ***SUPERSPEED*** gray paint.

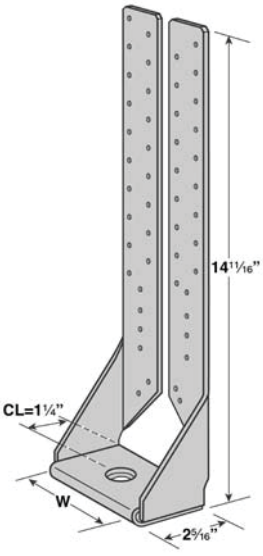
Installation . . 2-ply girder or beam, shimming is required when using **GTH3** model; fasten to act as one unit.

Option . . special sizes can be made to order. Products can be altered for use with ***SUPERSPEED*** Drive Screws as fastening applications.

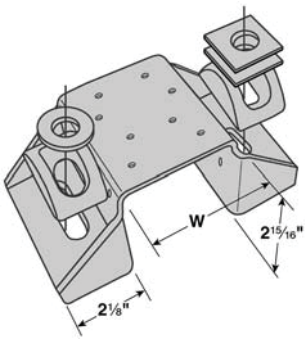
GTL2



GTM



GTH2
(GTH3, GTH4 Similar)



Wood Installation
Bearing washers BW58 (four) are required if 5/8" diameter bolts are used (washers not included).

Concrete Installation
Cut washers 3/4" diameter (two) are required if C\v" diameter bolts are used (washers not included).

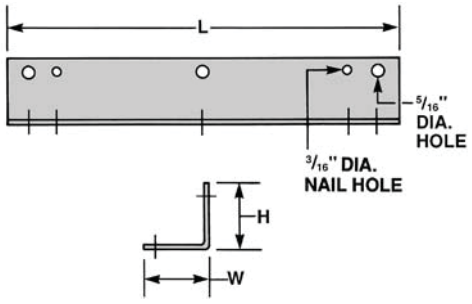
STA

STAIR TREAD ANGLES

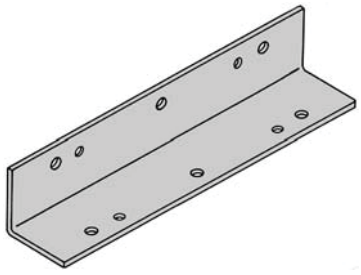
Design Features . . provide the builder with a faster, more structurally sound method for stair tread installation . . 5/16" diameter holes for 1/4" lag bolts, or ***SUPERSPEED*** Drive Screws 1/4 **SDS** x length desired. Erection nail holes are provided for easy installation . . eliminate the costly conventional notched supports. Two sizes are available, **STA9** and **STA10**.

Material . . 12 ga. galvanized steel.

STA



STA9



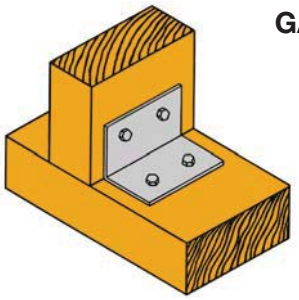
HL HLG GA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

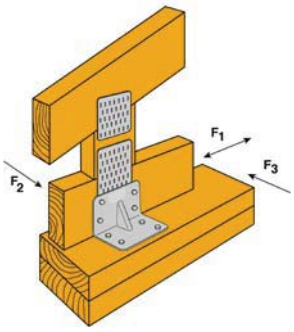
PRODUCT CODE	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		OPTIONAL PLATE GUSSET PER ANGLE	BOLT SCHEDULE	DESIGN LOAD	
			W	L			PARALLEL TO GRAIN LBS	PERPENDICULAR TO GRAIN LBS
HL33	HL33	3/16 stl	3¼	2½	—	2-⅝ MB	1075	565
HL35	HL35	3/16 stl	3¼	5	—	4-⅝ MB	2150	1130
HL37	HL37	3/16 stl	3¼	7½	—	6-⅝ MB	3225	1695
HL53	HL53	3/16 stl	5¾	2½	—	4-⅝ MB	2150	1130
HL55	HL55	3/16 stl	5¾	5	—	8-⅝ MB	4300	2260
HL57	HL57	3/16 stl	5¾	7½	—	12-⅝ MB	6450	3390
HL43	HL43	¼ stl	4¼	3	—	2-¾ MB	1565	645
HL46	HL46	¼ stl	4¼	6	—	4-¾ MB	3130	1290
HL49	HL49	¼ stl	4¼	9	—	6-¾ MB	4695	1935
HL73	HL73	¼ stl	7¼	3	—	4-¾ MB	3130	1290
HL76	HL76	¼ stl	7¼	6	—	8-¾ MB	6260	2580
HL79	HL79	¼ stl	7¼	9	—	12-¾ MB	9390	3870
HL35G	HL35G	3/16 stl	3¼	5	1	4-⅝ MB	2150	1130
HL37G	HL37G	3/16 stl	3¼	7½	2	6-⅝ MB	3225	1695
HL55G	HL55G	3/16 stl	5¾	5	1	8-⅝ MB	4300	2260
HL57G	HL57G	3/16 stl	5¾	7½	2	12-⅝ MB	6450	3390
HL46G	HL46G	¼ stl	4¼	6	1	4-¾ MB	3130	1290
HL49G	HL49G	¼ stl	4¼	9	2	6-¾ MB	4695	1935
HL76G	HL76G	¼ stl	7¼	6	1	8-¾ MB	6260	2580
HL79G	HL79G	¼ stl	7¼	9	2	12-¾ MB	9390	3870

PRODUCT CODE	REF NO	MATERIAL	SUPERSPEED DRIVE SCREWS		DESIGN LOAD (LBS)			
			TO RAFTERS/TRUSS	TO PLATES	UPLIFT	F[1]	F[2]	F[3]
GA10	HGA10	12 ga gal	4-SDS ¼ x 1½	4-SDS ¼ x 3	440	1170	950	785

HL46



GA10



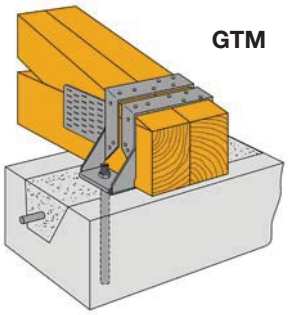
Double Top Plate Installation

GTH GTL GTM

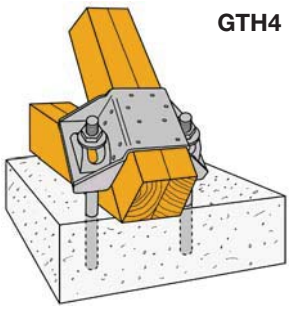
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)		WIDTH	O.C. DIM BETWEEN ANCHORS	NAIL & BOLT SCHEDULE			DESIGN LOAD (MAX LBS) (UPLIFT)
		STRAP	BASE THICKNESS			TO CONCRETE	TO WOOD	TO GIRDER	
GTL2	LGT2	14 ga gal	—	3⅛	—	—	14-16d x 2½"	14-16d x 2½"	2235
GTM	MGT	12 ga gal	⅝	3¾	—	⅝	—	22-10d	4010
GTH2	HGT-2	7 ga	½	3 5/16	5¾	¾	⅝	8-10d	9685
GTH3	HGT-3	7 ga	½	4 15/16	7⅜	¾	⅝	8-10d	9685
GTH4	HGT-4	7 ga	½	6 9/16	9	¾	⅝	16-10d	9685

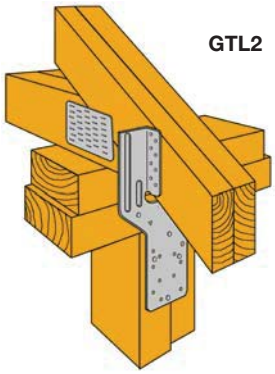
GTM



GTH4



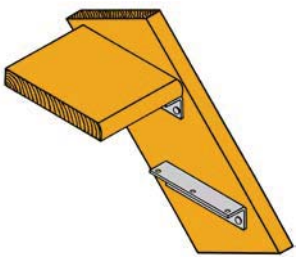
GTL2



STA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)			LAG BOLTS	DESIGN LOAD (LAG BOLTS)
			W	H	L	SUPERSPEED DRIVE SCREWS	NORMAL LBS
STA9	TA9	12 ga gal	1½	1½	9	6-¼ x 3 LAG	585
						6-SDS ¼ x 3	
STA10	TA10	12 ga gal	1½	1½	10	8-¼ x 3 LAG	780
						8-SDS ¼ x 3	



STA9

SAI
SA
SAT
SAMT
HSA
HSAT
CSAI
MSAI

STRAP ANCHORS

Design Features . . meet specifications for a variety of "wood-to-concrete or masonry" applications, including seismic anchorage for concrete walls-to-floor or roof diaphragms. For anchor down use, the **SA**/**HSA** series has a 1-piece design – no separate anchors are required. The required embedment is also shorter than for the **AD**/**ADA** series. This makes the strap anchor and heavy strap anchor ideal items for the competitive construction trade. The **SA** series and the **HSA** series are considered unsatisfactory where any of the following exist:

- A horizontal cold joint between the slab and the foundation wall or footing beneath, unless provisions are made to transfer the load.
- They are installed in slabs poured over foundation walls formed of concrete block.
- The members being anchored are less than 3½" wide (wood splitting may occur when nailed).

Minimum concrete strength must be 2000 psi for the allowable design loads. Listed values are verified by test using a safety factor of three.

SAI

The **SAI** is designed especially for wood I-Joist; nail spacing minimizes wood splitting (10d x 1½" nails 3" on-center).

SA/SAT

The standard straight strap anchor attaches to the top of the purlin; it must be embedded 4". The minimum edge distance is 5". The **SAT** provides a 90° twist in the strap; it attaches to the side of the purlin. It must be embedded 4". The minimum edge distance is 5".

SA51/SA68

The **SA51**/**SA68** has a range of nails from a minimum of 9–16d to a maximum of 24–16d. Extra nail holes are provided. Loads can be calculated according to the code up to a maximum of 4610 lbs.

HSA 10KIPS

Heavy loaded strap anchor made from 10 ga. galvanized steel by 3" section. This strap anchor is the heaviest anchor manufactured in the industry. Use for commercial trusses and glu-lam construction.

HSA 10KIPS

Heavy loaded strap anchor made from 10 ga. galvanized steel by 3" section. This strap anchor is the heaviest anchor manufactured in the industry. Use for commercial trusses and glu-lam construction.

HSA/HSAT

The heavy strap anchor is embedded 6" for the **HSA28** and 8¼" for the **HSA35**. The minimum edge distance is 5". The **HSAT** provides a 90° twist in the strap and it attaches to the side of the purlin. The **HSA** and the **HSAT** have an increased metal cross section and hook depth to provide a load-carrying capacity above design loads of the standard **SA** series.

CSAI

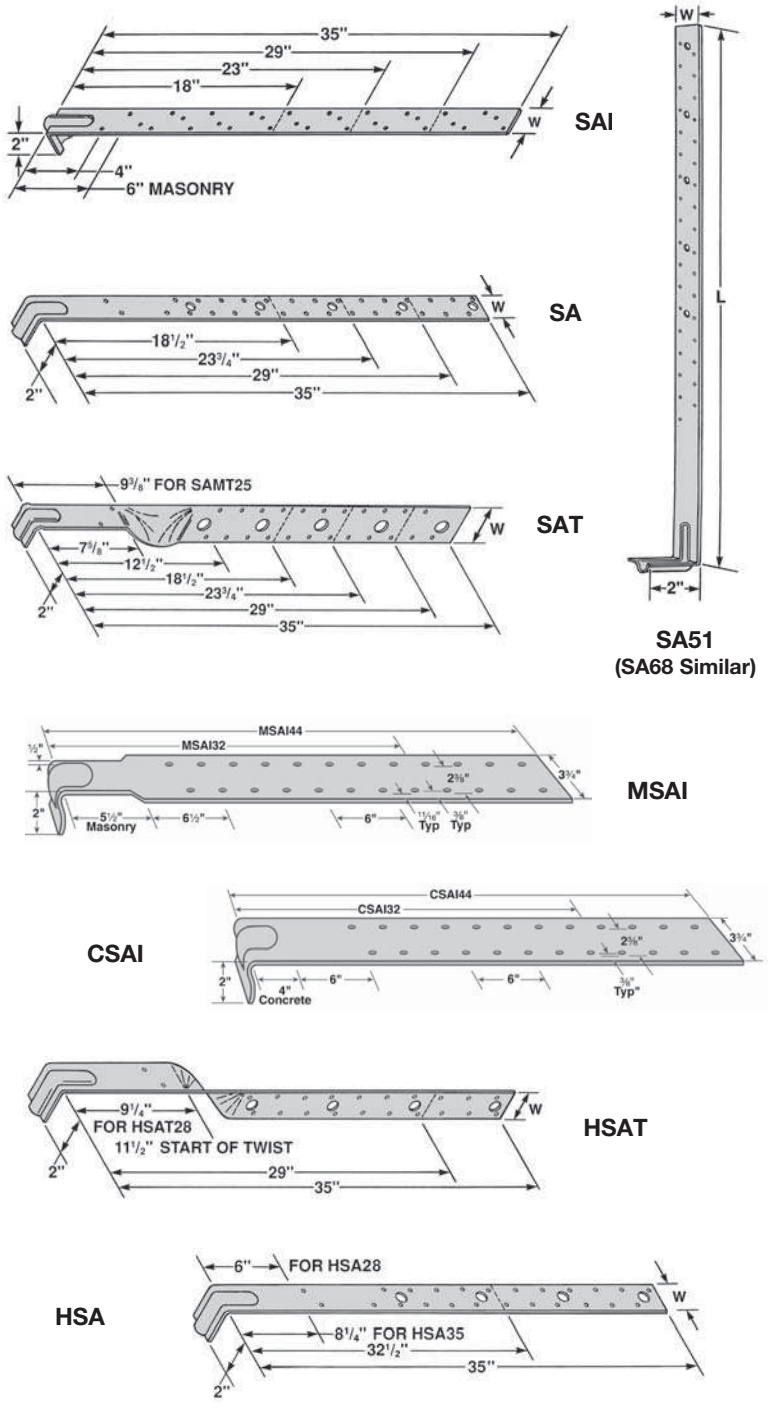
The **CSAI** is designed for concrete embedments and may be used on a wide variety of composite wood products including 3½" wide wood I-joists and open web trusses.

MSAI

The **MSAI** is designed for masonry unit block wall construction and may be used on a wide variety of composite wood products including 3½" wide wood I-joists and open web trusses. The masonry embedment line on the **MSAI** allows for 4" of grout embedment in a standard 8" concrete masonry unit.

Note: The **CSAI** is manufactured from 18 ga. galvanized steel which can be installed with air gun nailers. This eliminates the high labor cost of hand nailing.

Material . . HSA 10KIP/**HSA**/**HSAT** – 10 ga. galvanized steel.
SA/**SAI**/**SAT**/**SAMT** – 12 ga. galvanized steel.
CSAI – 18 ga. galvanized steel.
MSAI – 14 ga. galvanized steel.



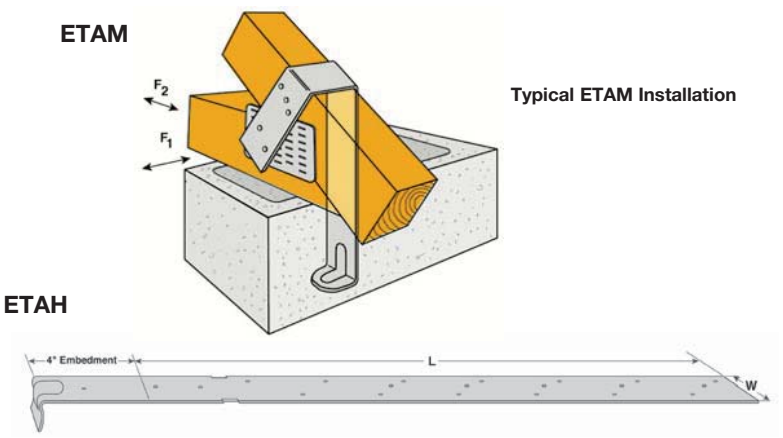
ETAM
ETAH
ETAHH

EMBEDDED TRUSS ANCHORS

Design Features . . meet engineered specifications to properly attach roof trusses to masonry or concrete walls. All embedded truss anchors have been thoroughly tested by an ICC approved independent testing laboratory. **ETA**s can be used with one-, two-, or three-ply trusses with staggered nail pattern to offer increased uplift load capacity. All embedment is 4" into a poured concrete bond beam or block wall that is grouted. The minimum center-to-center spacing is 8" for all products.

Warning . . do not drive nails through the truss plate on the opposite side of the truss; this can force the plate off the truss.

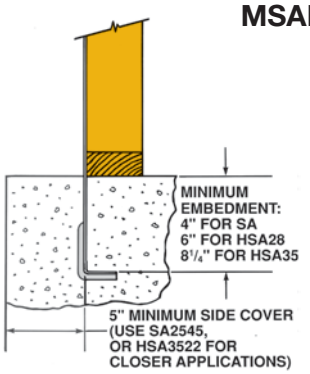
Material . . ETAM – 18 ga. galvanized steel. **ETAH** – 16 ga. galvanized steel. **ETAHH** – 14 ga. galvanized steel.



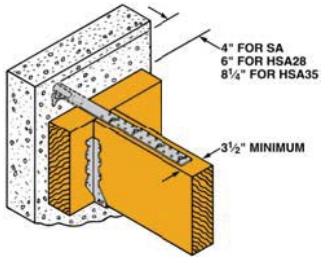
For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL AND BOLT SCHEDULE		DESIGN LOAD (LBS)			
							NAILS		BOLTS	
			W	L			NORMAL	MAX (133%)	NORMAL	MAX (133%)
SA18	PA18	12 ga gal	2	18½	12-16d	2-½ MB	1730	2305	1360	1815
SA23	PA23	12 ga gal	2	25¾	18-16d	3-½ MB	2590	3455	2040	2720
SA28	PA28	12 ga gal	2	29	24-16d	4-½ MB	3455	4610	2720	3625
SA35	PA35	12 ga gal	2	35	24-16d	4-½ MB	3455	4610	2720	3625
SA51	PA51	12 ga gal	2	51	9-16d	—	1270	1690	—	—
SA68	PA68	12 ga gal	2	68	9-16d	—	1270	1690	—	—
SAI18	PAI18	12 ga gal	2	18	14-10d x 1½	—	1455	1940	—	—
SAI23	PAI23	12 ga gal	2	23	19-10d x 1½	—	1975	2635	—	—
SAI28	PAI28	12 ga gal	2	28	23-10d x 1½	—	2600	3465	—	—
SAI35	PAI35	12 ga gal	2	35	23-10d x 1½	—	3015	4020	—	—
SAT18	PAT18	12 ga gal	2	18½	8-16d	2-½ MB	1150	1535	1360	1815
SAT23	PAT23	12 ga gal	2	23¾	14-16d	3-½ MB	2015	2690	2040	2720
SAT28	PAT28	12 ga gal	2	29	20-16d	4-½ MB	3455	4610	2720	3625
SAT35	PAT35	12 ga gal	2	35	20-16d	4-½ MB	3455	4610	2720	3625
HSA28	HPA28	10 ga gal	2 1/16	31¼	24-16d	4-½ MB	3650	4865	2740	3655
HSA35	HPA35	10 ga gal	2 1/16	35	29-16d	4-½ MB	4410	5875	2740	3655
HSAT28	HPAT28	10 ga gal	2 1/16	29	18-16d	3-½ MB	2735	3650	2055	2740
HSAT35	HPAT35	10 ga gal	2 1/16	35	22-16d	3-½ MB	3345	4460	2055	2740
SAMT25	PATM25	12 ga gal	2	25⅜	14-16d	3-½ MB	2015	2690	2040	2720
CSAI32	CPAI32	18 ga gal	3¾	32	16-10d x 1½	—	1455	1940	—	—
CSAI44	CPAI44	18 ga gal	3¾	44	24-10d x 1½	—	2185	2910	—	—
MSAI32	MPAI32	14 ga gal	3¾	32	16-10d x 1½	—	1470	1960	—	—
MSAI44	MPAI44	14 ga gal	3¾	44	24-10d x 1½	—	2205	2865	—	—
HSA10KIP	**—**	**10 ga gal**	**3**	**48**	**38-16d (hard)**	**—**	**8095**	**10765**	**—**	**—**

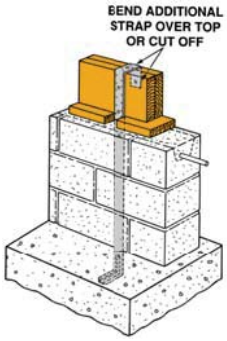
SAI
SA
SAT
SAMT
HSA
HSAT
CSAI
MSAI



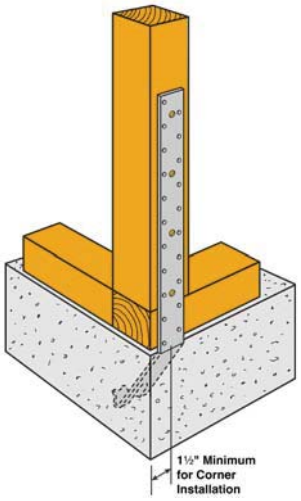
SA
Stud to Foundation



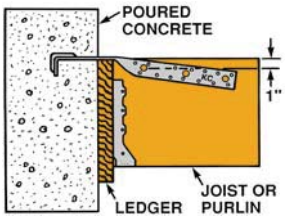
SA/HSA
Purlin to Wall



SA51

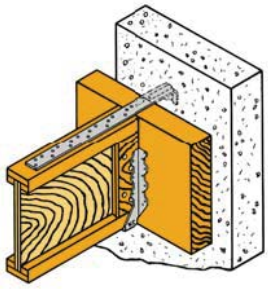


(Full Table Values)
See Note On Page 70



SAT23

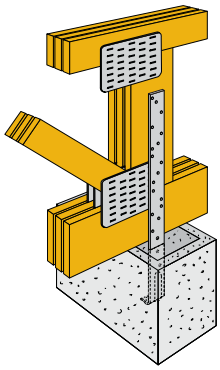
SAI23
Wall I-Joist to Wall



For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE 1 PLY TRUSS	DESIGN LOAD UPLIFT LBS	NAIL SCHEDULE 2 OR 3 PLY TRUSS	DESIGN LOAD UPLIFT LBS	LATERAL DESIGN LOAD (LBS)	
			L	W					F[1]	F[2]
ETAM16	META16	18 ga gal	12	1⅛	12 -10d x 1½	1465	10-16d	1500	340	650
ETAM18	META18	18 ga gal	14	1⅛	14 -10d x 1½	1600	10-16d	1600	340	650
ETAM20	META20	18 ga gal	16	1⅛	14 -10d x 1½	1600	10-16d	1600	340	650
ETAM22	META22	18 ga gal	18	1⅛	14 -10d x 1½	1600	10-16d	1600	340	650
ETAM24	META24	18 ga gal	20	1⅛	14 -10d x 1½	1600	10-16d	1600	340	650
ETAH16	HETA16	16 ga gal	12	1⅛	11 -10d x 1½	1345	11-16d	1900	340	745
ETAH20	HETA20	16 ga gal	16	1⅛	10 -10d x 1½	1245	10-16d	1830	340	745
					12 -10d x 1½	1495	12-16d	1905	340	745
					14 -10d x 1½	1745	12-16d	1905	340	745
					16 -10d x 1½	1905	12-16d	1905	340	745
ETAH24	HETA24	16 ga gal	20	1⅛	16 -10d x 1½	1905	12-16d	1905	340	745
ETAHH16	HHETA16	14 ga gal	12	1⅛	12 -10d x 1½	1510	12-16d	2235	340	745
ETAHH20	HHETA20	14 ga gal	16	1⅛	17 -10d x 1½	2140	15-16d	2380	340	745
ETAHH24	HHETA24	14 ga gal	20	1⅛	21 -10d x 1½	2380	15-16d	2380	340	745

ETAM,
ETAH,
ETAHH



HSA
SSAD
SA

STRAP ANCHORS

■ **HSA3522/HSA3522-2P**

The **HSA3522** (heavy loads) is designed to be installed at the edge of the concrete form. Installation nail holes are provided to allow nailing to the form. By using this method, a 1" deeper embedment is guaranteed. It is pre-bent to control the 10" embedment at the required 22° angle; therefore, the field bending is not necessary on the **HSA3522**. The **HSA3522-2P** is used in two-pour foundations and in 4x's to reduce the problem of wood splitting. When 2x's and 3x's are used, fill every other nail hole with a 16d nail or use a 10d x 1½" nail in every nail hole. A reduction in load will result from this nailing.

■ **SSAD**

The NEW **SSAD *SUPERSPEED*** strap anchor down is used for an anchor down condition with 2 – 2x lumber. Embossed holes provide for use with gun nail applications. Nail holes are engineered for use on 1½" members; this reduces the possibility of wood splitting.

■ **SA2545**

The **SA2545** is pre-bent to control the embedment at the required angle. It is designed to simplify and speed up installation.

- Install before pouring concrete by nailing to the form.
- Insert the strap after the concrete is poured. When the concrete has cured, bend the strap to the stud and attach by nailing.

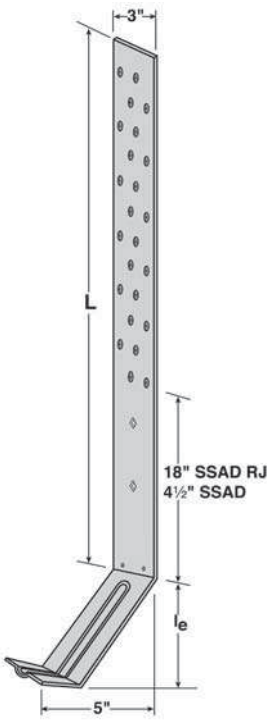
Material . .

HSA3522/HSA3522-2P – 10 ga. galvanized steel.

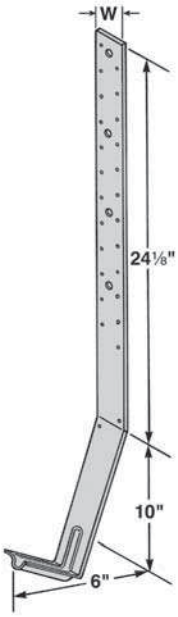
SA2545/SSAD – 12 ga. galvanized steel.

LSSAD – 14 ga. galvanized steel.

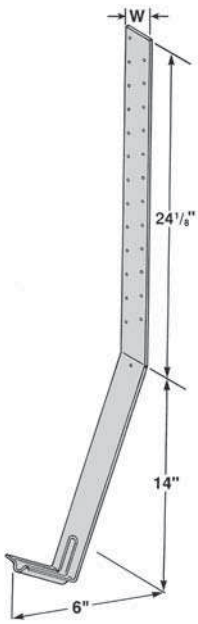
SSAD

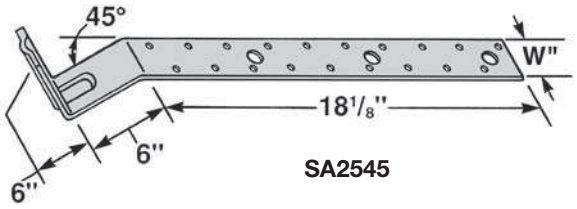


HSA3522



HSA3522-2P





SA2545

NOTE

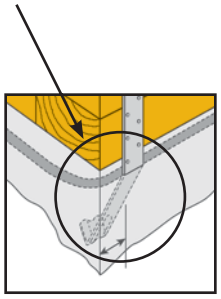
The **SA2545**, **HSA3522** and **HSA3522-2P** are specifically designed for installation in concrete footings and attachment to a stud or post. The anchor may be installed where a horizontal cold joint exists between the slab and the footing or foundation wall, provided it is hooked around a minimum No. 4 reinforcement bar in the shear cone. The minimum embedment depths into the concrete footing for the **SA2545**, and **HSA3522** are 6 inches and 10 inches respectively.

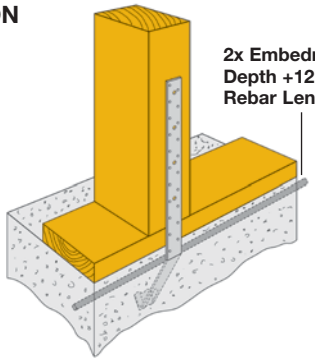
SINGLE POUR INSTALLATION

CAUTION

Misinstallation!

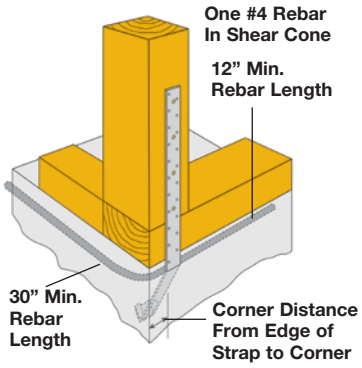
Spalling may occur when strap anchors are bent to a horizontal position and then straightened for installation to framing. This practice may require an adjustment to allowable loads and applies to both single and double pour applications.





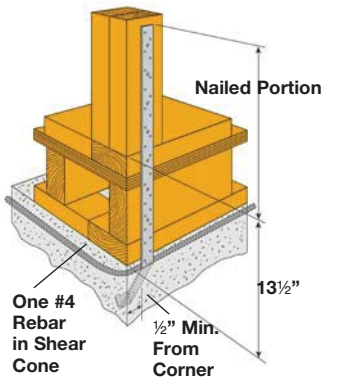
Installation 1

Typical HSA3522 Single Pour Edge Installation



Installation 2

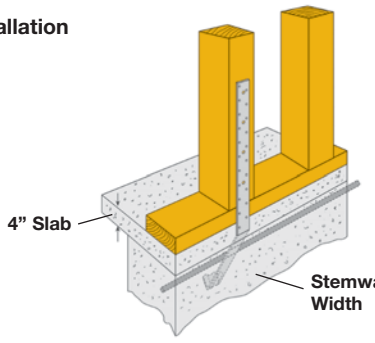
Typical HSA3522 Single Pour Corner and Endwall Installation



Installation 3

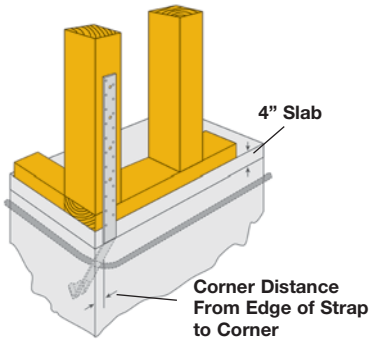
Typical HSA3522 Single Pour Rim Joist Installation

Double Pour Installation



Installation 4

Typical HSA3522-2P Double Pour Edge Installation. Unless noted, install others with bend embedment line at cold joint between slab and foundation



Installation 5

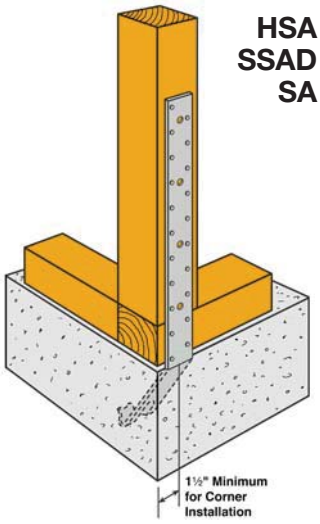
Typical HSA3522-2P Double Pour Corner Installation

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MIN STEM WALL (INCH)	STRAP LENGTH		L_e (INCH)	NAIL SCHEDULE	DESIGN LOAD (LBS) MAX (133%)								
							EDGE DISTANCE								
			STD MODEL	RIM JOIST MODEL			½"	1½"	L_e	½"	1½"	L_e	½"	1½"	L_e
							2000 PSI CONCRETE			2500 PSI CONCRETE			3000 PSI CONCRETE		
LSSAD8 / LSSAD8RJ	LSTHD8 / LSTHD8RJ	6	21⅝	35⅛	8	24-16d Sinker	1945	1945	1945	1945	1945	2430	2040	2190	2920
SSAD8 / SSAD8RJ	STHD8 / STHD8RJ	6	21⅝	35⅛	8	24-16d Sinker	1805	2085	2780	2255	2605	3475	2710	3125	4170
SSAD10 / SSAD10RJ	STHD10 / STHD10RJ	6	23⅛	36⅝	10	28-16d Sinker	2300	2525	3285	2875	3160	4105	3450	3790	4925
SSAD14 / SSAD14RJ	STHD14 / STHD14RJ	6	31⅝	39⅝	14	38-16d Sinker	4075	4365	5820	5095	5455	5820	5820	5820	5820
LSSAD8 / LSSAD8RJ	LSTHD8 / LSTHD8RJ	8	21⅝	35⅝	8	24-16d Sinker	2000	2000	2000	2500	2500	2500	3000	3000	3000
SSAD8 / SSAD8RJ	STHD8 / STHD8RJ	8	21⅝	35⅛	8	24-16d Sinker	2605	2805	4005	3255	3505	5005	3905	4100	5820
SSAD10 / SSAD10RJ	STHD10 / STHD10RJ	8	23⅛	36⅝	10	28-16d Sinker	3040	3270	4675	3800	3925	5820	4560	4710	5820
SSAD14 / SSAD14RJ	STHD14 / STHD14RJ	8	31⅝	39⅝	14	38-16d Sinker	4255	4580	5820	5320	5725	5820	5800	5820	5820

SSAD14RJ uses 30-16d sinkers max. Allowable load @ L_e = 5010 @ 133%. L_e = Length Embedment

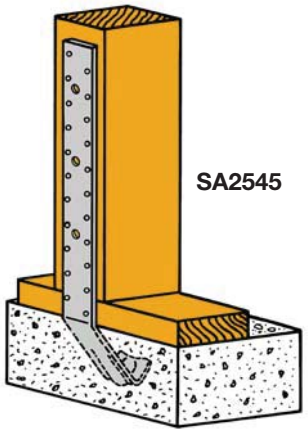
HSA SSAD SA



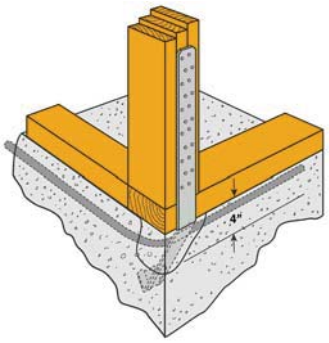
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

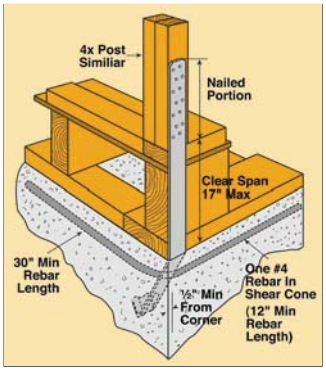
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		MIN STEM WALL (INCH)	Le (INCH)	NAIL SCHEDULE	DESIGN LOAD (LBS) MAX (133%)			
								2000 PSI		2500 PSI	
			W	L				END DISTANCE			
								½"	8"	½"	8"
SINGLE POUR											
SA2545	PAHD42	12 ga gal	2	25⅜	6	6½	12-16d	1160	2320	1450	2320
					8		18-16d	1160	3350	1450	3350
HSA3522	HPAHD22	10 ga gal	2⅛	35	6	10	16-16d	1405	3350	1535	3350
					8		24-16d	2110	4865	2300	5030
DOUBLE POUR											
SA2545	PAHD42	12 ga gal	2	25⅜	6	6½	12-16d	1160	2320	1450	2320
					8		12-16d	1160	2320	1450	2320
HSA3522	HPAHD22	10 ga gal	2⅛	35	6	10	16-16d	1405	3350	1755	3350
					8		19-16d	2010	3985	2515	3985
HSA3522-2P	HPAHD22-2P	10 ga gal	2⅛	39	6	14	16-16d	2460	3350	2460	3350
					8		24-16d	2460	4865	2460	5030

HSA3522 or HSA3522-2P

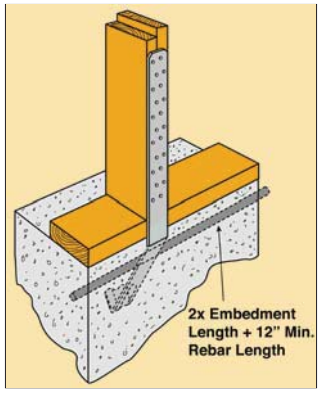


SA2545

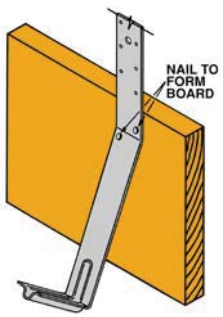




SSAD14RJ
Rim Joist Application



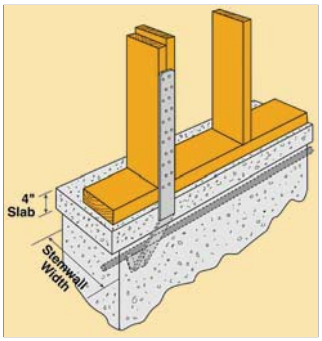
SSAD
Edge Installation



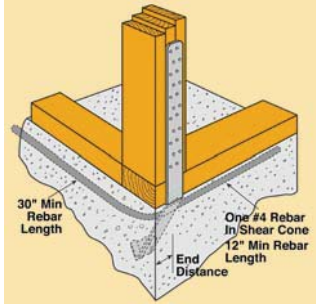
Installation to Forms

SPALLING LOAD REDUCTION

Spalling may occur when strap anchors are bent to a horizontal position and then straightened for installation to framing. This practice may require an adjustment to allowable loads and applies to both single and double pour applications.



SSAD14
Two Pour Installation



Corner SSAD Installation on 3-2x studs (for 2 pour, see footnote 4).

AD
ADA
ADA
ADB

ANCHOR DOWNS

Design Features . . offer the builder a lighter anchor down device with greater load capacity at a more affordable price . . applications include:

- **AD/ADA/ADB Series . .** no standard washer requirement with anchorage bolts. Washer location is indicated on item drawings.
- **ADA Series . .** no more inspection problems, as the **ADA** series has a load transfer plate formed and pressed into to the base.
- Uses include anchoring vertical wood members to foundation to resist uplifts due to overturning.
- Installation can be made horizontally for seismic ties.

PRODUCT CODE	WASHER SIZES OUTSIDE DIAMETER (INCHES)	MATERIAL
AD2	1¾	10 ga
AD5	2	9 ga
AD6	2½	8 ga
AD7	2¾	8 ga
AD9	2¾	8 ga
AD12	2¾	8 ga
AD15	3	8 ga

Fourteen configurations meet a variety of size and load specifications, with the location of the anchor down on the stud (D) measured at 7x's the diameter of the bolt above the plate or the self-jigging. Minimum required distance is automatically maintained.

Material . . 3⁄16", ¼" and ⅜" steel, depending on size and load requirements.

Finish . . AD, AD14A and **AD20A** ***SUPERSPEED*** gray paint.

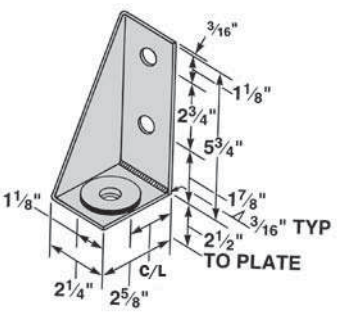
Finish . .ADA and **ADB** 7 ga. galvanized steel.

Loads . . have been increased by 33⅓% for seismic applications.

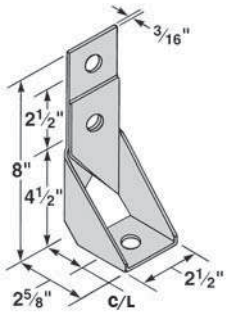
Special . . features of the **ADA/ADB** include:

- **ADB** series requires no load transfer plate due to increased thickness of body part.
- Single piece design results in higher capacity.
- Load transfer plate eliminates the need for seat washer.
- Stud or post bolts are factory lined-up by welding (**AD14A** where the straps overlap). This reduces labor costs and damage to the machine bolt threads; more importantly, the weld acts to unite the parts as a single unit.
- Self-jigging design allows for flush surface installation to insure code-required 7 bolt diameter spacing from the end of the member.
- There are fewer inspection problems.
- Anchor down may be used to transfer tension loads between floors, to the purlins to masonry or concrete, to the wood wall sections to vertical concrete or masonry or used for overturn requirements and either applications to transfer tension loads.

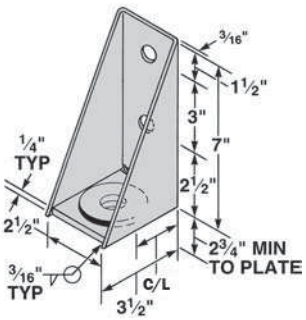
Anchor bolt nuts, should be finger-tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



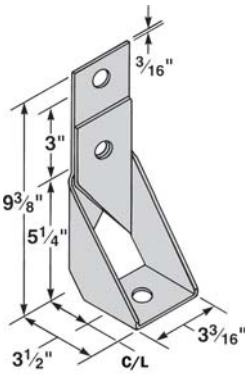
AD2



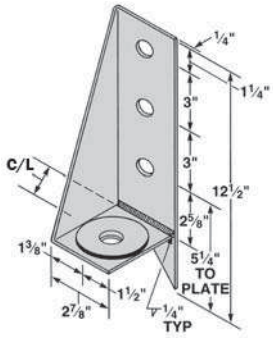
AD2B



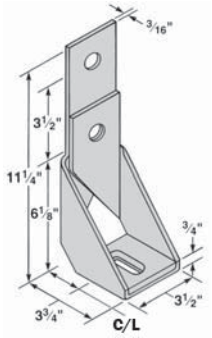
AD5



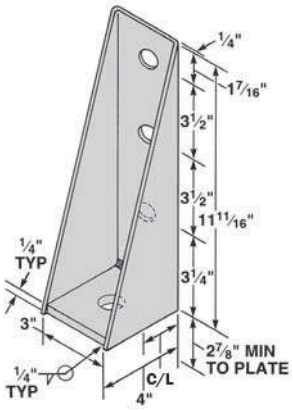
AD5B



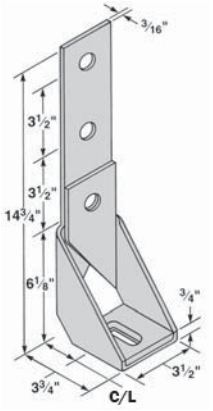
AD6



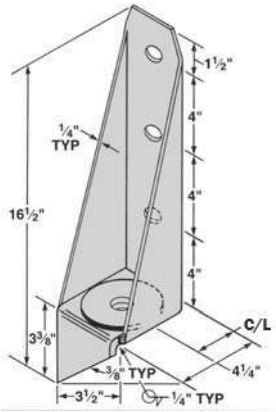
AD6A



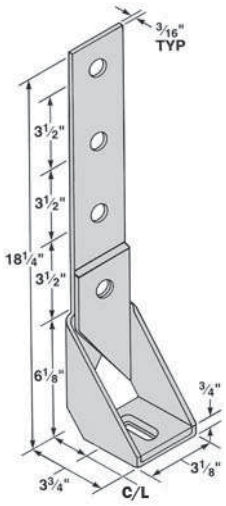
AD7



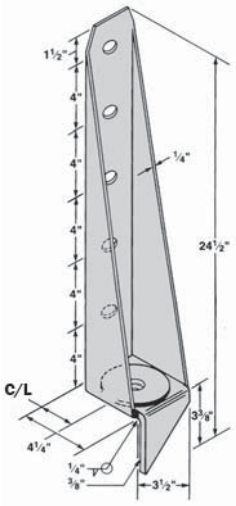
AD8A



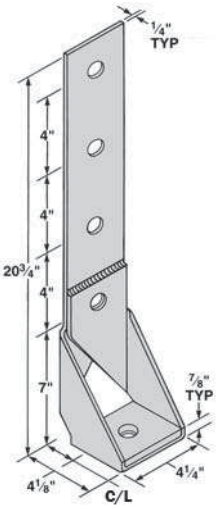
AD9
(AD12 Typical)



AD10A



AD15

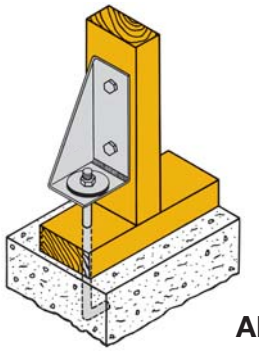


AD20A
(AD14A Typical/W = 3½")

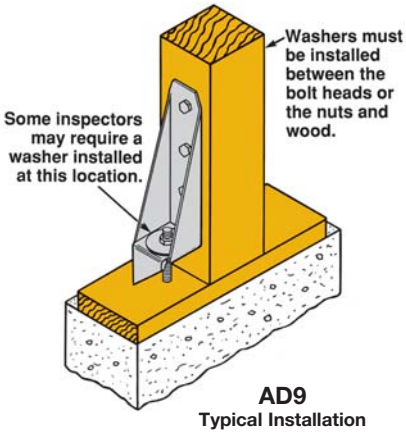
For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	C/L	HEIGHT (INCHES)	BOLT SCHEDULE		DESIGN LOAD (LBS) 160% STUD THICKNESS (INCHES)					
					TO STUD	TO CONCRETE	1½	2½	3	3½	4½	5½
AD2	HD2	7 ga	1-3/8	5¼	2-5/8 MB	1-5/8 AB	1630	2625	2855	2855	2850	2845
AD2B	HD2A	7 ga	1-11/16	8	2-5/8 MB	1-5/8 AB	1630	2625	2855	2855	2850	2845
AD5	HD5	7 ga	2-1/8	6 5/16	2-3/4 MB	1-3/4 AB	1940	3140	3745	4080	4070	4060
AD5B	HD5A	7 ga	2-3/8	9⅜	2-3/4 MB	1-3/4 AB	1930	3140	3760	4095	4085	4075
AD6	HD6	3 ga	1-7/8	12½	3-3/4 MB	1-1 AB	2850	4685	5685	6235	5165	6135
AD6A	HD6A	7 ga	1-3/4	11¼	2-7/8 MB	1-7/8 AB	2245	3650	4385	5090	5520	5505
AD7	HD7	3 ga	2-1/8	11 11/16	3-7/8 MB	1-1 1/8 AB	3325	5400	6485	7595	8255	8200
AD8A	HD8A	7 ga	2-1/8	14¾	3-7/8 MB	1-7/8 AB	3190	5355	6490	7630	8075	8025
AD9	HD9	3 ga	2-1/8	16½	3-1 MB	1-1 1/8 AB	—	—	—	8560	10760	10665
AD10A	HD10A	7 ga	2-1/8	18¼	4-7/8 MB	1-7/8 AB	3905	6830	8375	9755	10440	10320
AD12	HD12	3 ga	2-1/8	20½	4-1 MB	1-1 1/8 AB	—	—	—	10975	13950	13755
AD14A	HD14A	3 ga	2-1/4	20¾	4-1 MB	1-1 AB	—	—	—	10975	13950	13755
AD15	HD19/ HD15	3 ga	2-1/8	24½	5-1 MB	1-1 1/4 AB	—	—	—	—	—	19725

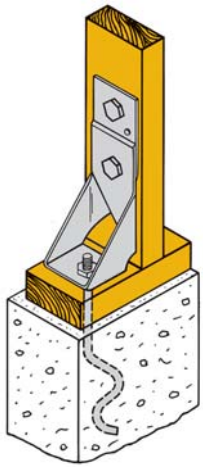
AD
ADA
ADB



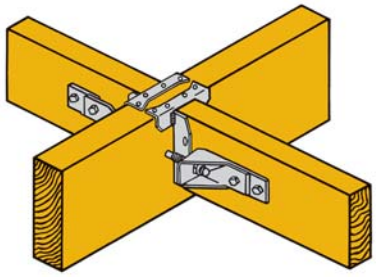
AD2



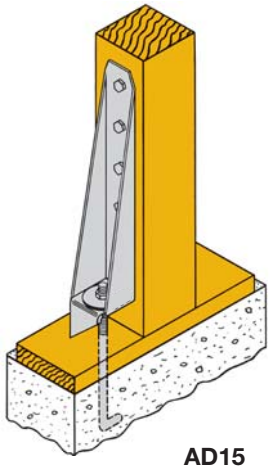
AD9
Typical Installation



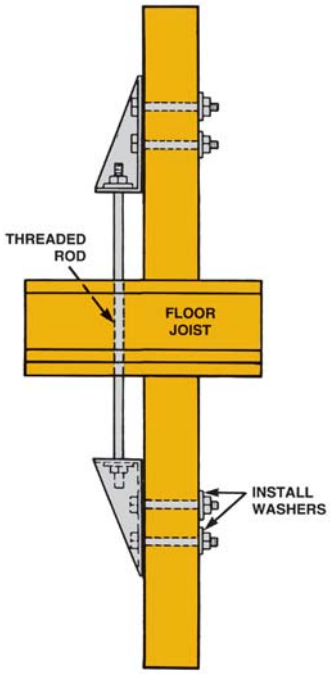
AD5B



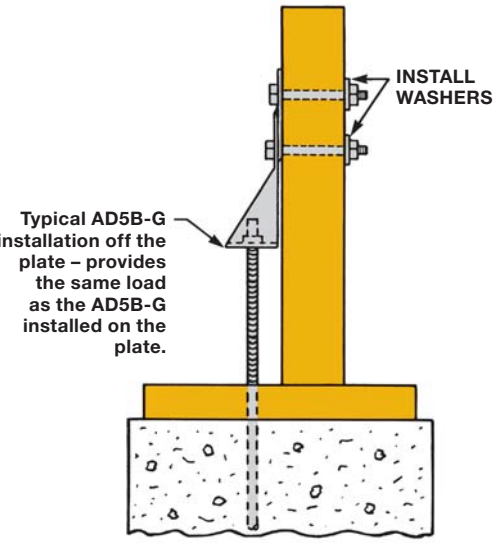
AD5B
Typical Horizontal Installation



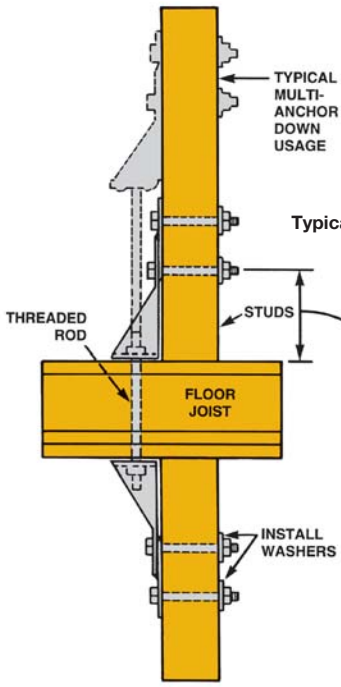
AD15



AD2
Typical Tie Between Floors



AD5B
Typical Installation



AD5B
Typical Tie Between Floors

To get the full load capacity stated in the table, the minimum bolt end distance for all anchor downs is 7 times the stud bolt diameter. This distance is automatically designed into all KCMP anchor downs. The bolt end distance may be increased as necessary without affecting the load capacity provided that the anchor nut is not over-torqued which could split the stud.

ANCHOR DOWNS (Screw Type)

ADST
ADG

SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **ADST** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation . . ideal for retrofit applications. Heavy loaded anchor downs **ADG**, Anchor Down Screw Types, are tension products used to connect framing members to either concrete, using a suitable anchor bolt, or span between other framing members using threaded rods. For raised installation **ADG** anchor downs require a nut on both site of load transfer plate.

The new **ADG** heavy duty anchor down combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

ADG 8-SDS3	8KIPS
ADG12-SDS3	10KIPS
ADG15-SDS3	15KIPS

Material . . 12 ga. galvanized steel **. . ADST**
7 ga. galvanized steel **. . ADG**
⅜" x 2½" x 2½" sq. washer hot dipped galvanized **. . ADG15**

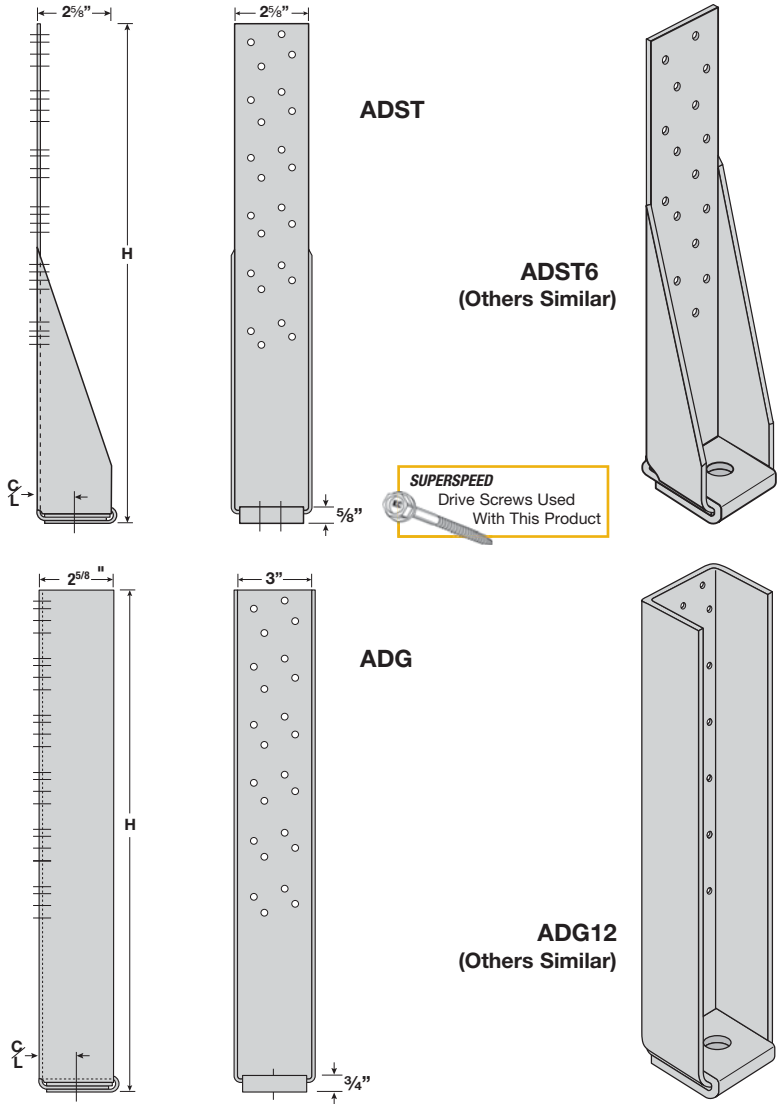
Finish . . Galvanized steel

Special . . the **ADG10-SDS3** anchor down can be used with the **KCAB36** anchor bolt. ***SUPERSPEED*** Drive Screws are best installed with a low speed, or variable speed. ½" drill and a ⅜" hex head driver.

Loads . . design loads are based on capacity of special screws (***SUPERSPEED*** Drive Screws) ¼" x 3 inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

Special . . ***SUPERSPEED*** Drive Screws are furnished with the **ADG** Anchor Down for ***SUPERSPEED*** labor saving installation.

Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



ADC

ANCHOR DOWN CONCENTRIC

Design Features . . offer the builder a new style anchor down concentric to eliminate bending on the stud. Easier and faster to install using ***SUPERSPEED*** Drive Screws which are included with the product and not the old style bolts which are not included and are labor intensive sometimes missed sized or ordered wrong.

1. Easier Installation
2. High design Loads
3. Lower cost of installing product

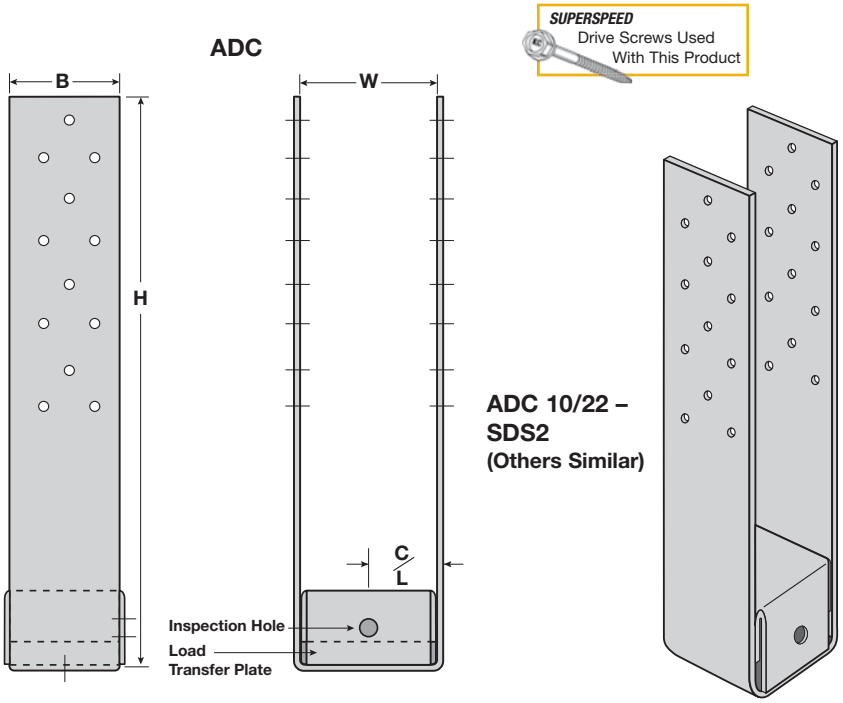
Material . . 10 ga. galvanized steel (strap and base) ¾" steel washer (slotted ⅜" for adjustment)

Sizes . . for 2-2X, 4X and 2-2 x 6 members. (Members must be installed centered for use as post)

Loads . . ADC Anchor Down Concentric has two design load capacities which have been increased by 33⅓% of seismic applications.

Special . . ADC Anchor Down Concentric can be used with product line of ***SUPERSPEED*** anchor bolts.

Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.

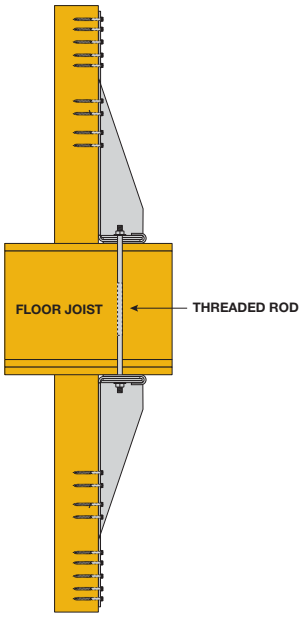


ANCHOR DOWNS (Screw Type)

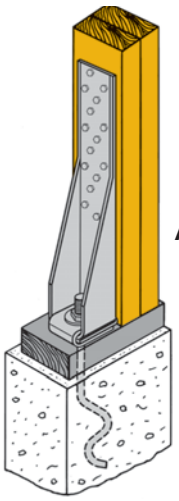
ADST
ADG

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

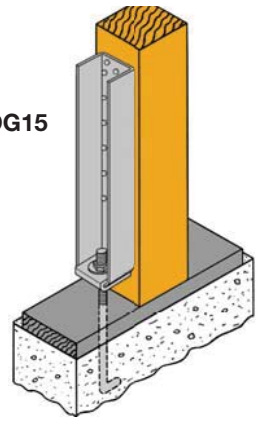
PRODUCT CODE	REF NO	HEIGHT (INCHES)	MATERIAL	FASTENER SCHEDULE			DESIGN LOAD (LBS)	DEFLECTION @ 80% OF DESIGN LOAD (INCH)	DEFLECTION @ 90% OF DESIGN LOAD (INCH)	DEFLECTION @ 100% OF DESIGN LOAD (INCH)
				ANCHOR BOLT DIAMETER (INCHES)	CENTER LINE DIMENSIONS	SUPERSPEED SDS ¼ X 3 DRIVE SCREWS				
ADST2	HDU2/PHD2	9⅜	12 ga	⅝	1⅜	10	4095	.021	.029	.038
ADST5	HDU4/HDU5/ PHD5	11⅜	12 ga	⅝	1⅜	14	5735	.026	.034	.043
ADST6	PHD6	13⅜	12 ga	⅞	1⅜	18	7370	.026	.033	.041
ADG8	HDU8/HDQ8	15¼	7 ga	⅞	1¼	22	9300	.030	.040	.042
ADG12	HDU11/HHDQ11	18½	7 ga	1	1½	24	13200	.040	.045	.050
ADG15	HDU14/HHDQ14	18½	7 ga	1	1½	30	16325	.070	.073	.080



ADST2
Typical Tie Between Floor

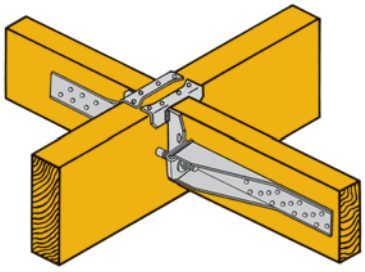


ADST5

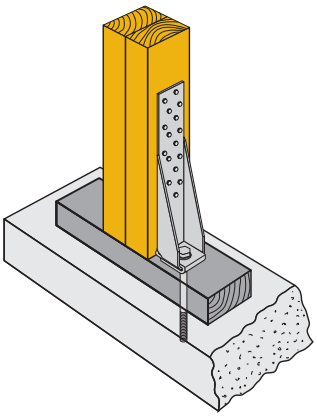


ADG15

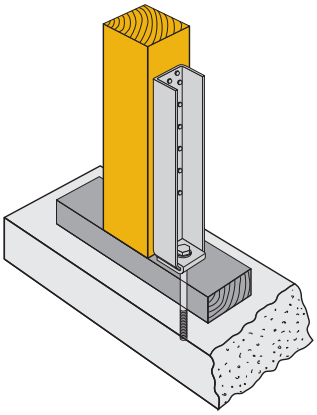
SUPERSPEED
Drive Screws Used With This Product



ADST6
Typical Horizontal Installation



ADST6

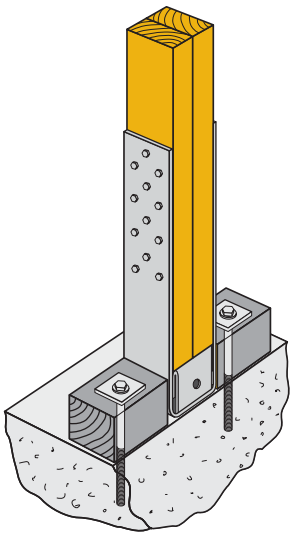


ADG8

SUPERSPEED
Drive Screws Used With This Product

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	DIMENSIONS (INCHES)				FASTENER SCHEDULE		DESIGN LOAD		
			W	H	B	C/L	ANCHOR BOLT DIAMETER (INCHES)	*SUPERSPEED* SDS ¼ X 2 DRIVE SCREWS	TENSION (133%) LBS	CONCRETE @2500 PSI LBS	ANCHOR DOWN DEFLECTION @ 100% (INCHES)
ADC 5/22-SDS2	HDC 5/22-SDS 2.5	2-2 x 4	3⅛	9⅜	3	1⁹⁄₁₆	⅝	12	4870	7460	.032
ADC 5/4-SDS2	HDC 5/4-SDS 2.5	4 x 4	3⁹⁄₁₆	9⅜	3	1¹³⁄₁₆	⅝	12	4870	9060	.032
ADC 10/22-SDS2	HDC 10/22-SDS 2.5	2-2 x 4	3⅛	14⅜	3	1⁹⁄₁₆	⅞	24	9665	7460	.075
ADC 10/4-SDS2	HDC 10/4-SDS 2.5	4 x 4	3⁹⁄₁₆	14⅛	3	1¹³⁄₁₆	⅞	24	9665	9060	.075



ADC10/22-SDS2

SDS

SUPERSPEED DRIVE SCREWS

Design Features . . ***SUPERSPEED*** Drive Screws, **SDS** ¼ x 3, are best installed using a ½" drive variable speed drill, 5.5 amps or larger, with a ⅜" hex head driver. Screws are designed to be self drilling. Predrilling may be necessary depending on the type, condition, and moisture content of the wood.

Allowable loads are for **ASTM A570** Grade 33 steel side plates.

SUPERSPEED® DRIVE SCREWS

Screw Head Identification
SDS ¼ x 3 Shown

BW

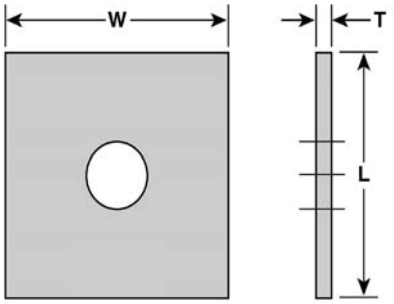
BEARING WASHERS (SQUARE)

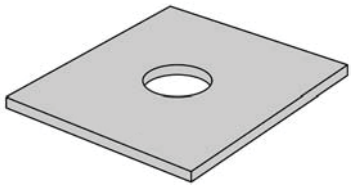
Design Features . . one of the oldest and simplest but still the most important item used in wood construction . . used to act as a buffer between nut/bolt head and wood.

Special . . BW Washers are designed for standardization and construction economies, and to provide compatibility with the ***SUPERSPEED*** structural hardware line. Standard **BW**s can be used with threaded rod, two nuts and washers to act as an anchor bolt for uplift resistance.

Material . . specify any size or thickness.

Sizes . . specify length or width and bolt sizes (round or slotted). Holes are sized 1⁄16" over bolt size for clearance.





BW1
(⅜" X 3½" X 3½")

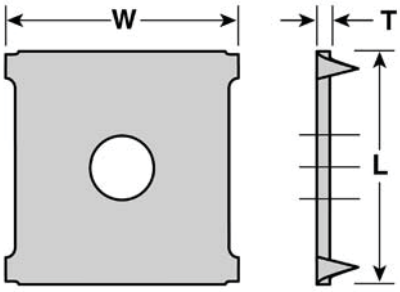
MSP

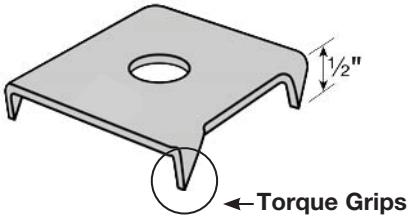
MUDSILL PLATE WASHERS

Design Features . . New **MSP** Mudsill plate replaces traditional washers and provides stronger connections. The **MSP** improves the bolt to wood connection by gripping the mudsill. Oversized anchor bolt holes may allow the house to shift up to ¼" before the bolt begins to restrain movement. Damage and possible failure of the structure can be reduced by using a **MSP** mudsill plate. The **MSP** works by transferring the load from the anchor bolt through the gripper prongs on the **MSP** and into the mudsill.

Sizes . . ½" and ⅝" – diameter of anchor bolt.

Material . . 14 ga. galvanized steel.





FSTL
FST

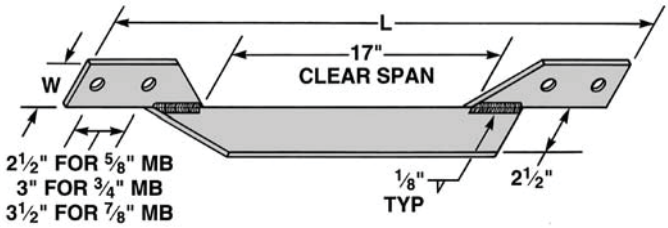
FLOOR STRAP TIES

Design Features . . the floor strap ties are especially designed for use as a tension tie for floor-to-floor application. The **FST** takes the place of two comparably sized **AD**s or **ADA**s and the threaded rod, resulting in construction economies and labor-saving installation.

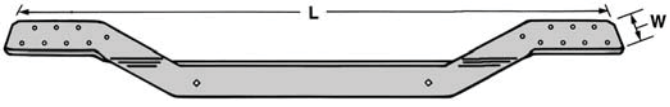
Material . . 16 ga. galvanized, 12 ga. and ¼" steel.

Finish . . ***SUPERSPEED*** gray paint.

Special . . the **FST** standard model has a clear span of 17" so it will accommodate up to a12" joist. The clear span can be increased with increases to overall lengths. If wood is subject to shrinkage, specify slotted bolt holes in the **FST**. The **FSTL** should not be used if wood shrinkage is expected between floors.



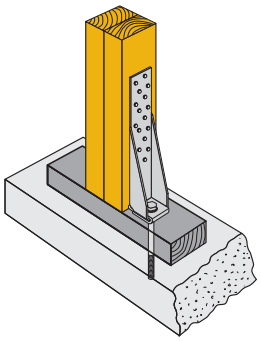
FST



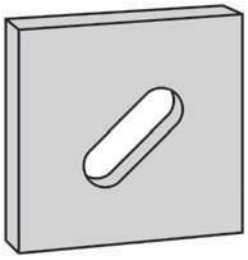
FSTL

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	SUPERSPEED DRIVE SCREW	FINISH (PLATED)	DESIGN LOAD (LBS)			
				10 GAGE SHEAR (100%)	7 GAGE SHEAR (100%)	3 GAGE SHEAR (100%)	¼ PLATE SHEAR (100%)
SDS ¼ x 1½	SDS ¼ x 1½	¼ x 1½ Wood Screw	Zinc	251	247	251	252
SDS ¼ x 1¾	SDS ¼ x 1¾	¼ x 1¾ Wood Screw	Zinc	297	297	301	302
SDS ¼ x 2	SDS ¼ x 2	¼ x 2 Wood Screw	Zinc	312	321	338	341
SDS ¼ x 2½	SDS ¼ x 2½	¼ x 2½ Wood Screw	Zinc	312	321	338	341
SDS ¼ x 3	SDS ¼ x 3	¼ x 3 Wood Screw	Zinc	312	321	338	341
SDS ¼ x 4½	SDS ¼ x 4½	¼ x 4½ Wood Screw	Zinc	312	321	338	341
SDS ¼ x 6	SDS ¼ x 6	¼ x 6 Wood Screw	Zinc	312	321	338	341



ADST6G
Used with SDS ¼ x 3 Drive Screws



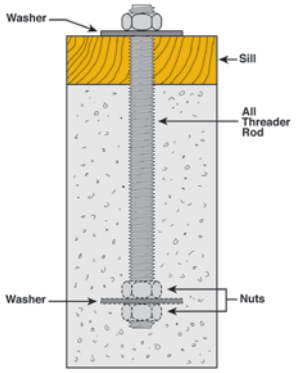
BWS
(Slotted Hole)

For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		BOLT DIAMETER (INCHES)
			W	L	
LBW ½	LBP ½	9/64	2	2	½
LBW ⅝	LPB ⅝	9/64	2	2	⅝
LBWS ½	LBPS ½	9/64	3	3	½
LBWS ⅝	LBPS ⅝	9/64	3	3	⅝
BW ½ - 3	BP ½ - 3	¼	3	3	½
BW ⅝ - 3	BP ⅝ - 3	¼	3	3	⅝
BWS ½ - 3	BPS ½ - 3	¼	3	3	½
BWS ⅝ - 3	BPS ⅝ - 3	¼	3	3	⅝
BW ½	BP ½	3/16	2	2	½
BW ⅝ - 2	BP ⅝-2	3/16	2	2	⅝
BW ¾ - 2	—	3/16	2	2	¾
BW ⅝ SKT*	BP ⅝-SKT	¼	4	2	⅝
BW ⅝	BP ⅝	¼	2½	2½	⅝
BW ¾	BP ¾	5/16	2¾	2¾	¾
BW ⅞	BP ⅞	5/16	3	3	⅞
BW 1	BP 1	⅜	3½	3½	1

* BW ⅝ SKT sold as kit.

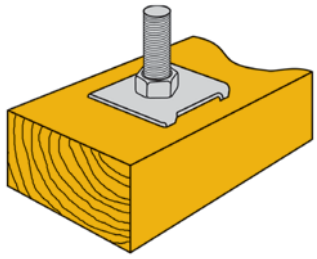
BW



For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	MATERIAL (T)	DIMENSIONS (INCHES)		BOLT DIAMETER (INCHES
		W	L	
MSP ½	14 ga gal	2	2	½
MSP ⅝	14 ga gal	2	2	⅝

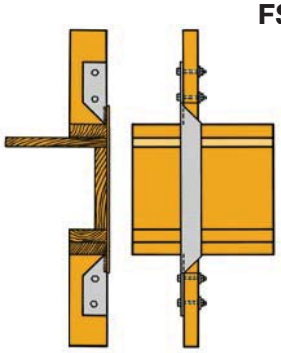
MSP



For Product Substitutions . . . the ***ONLY*** APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		BOLT SCHEDULE TO STUD	DESIGN LOAD (LBS)				
						STUD THICKNESS (INCHES)				
			W (MAX)	L		1½	2	2½	3	3½
FSTL	LFTA	16 ga gal	2¼	38⅜	16-10d	—	1210	1210	1210	1210
FST2	FTA2	12 ga	3	37½	4-⅝ MB	1575	3470	3810	3810	3810
FST5	FTA2	12 ga	3½	45½	4-¾ MB	1880	3120	3750	4080	4080
FST7	FTA7	¼ STL	3½	56	6-⅞ MB	3620	5600	6640	7700	7700

FSTL
FST



FST5

KCAB *SUPERSPEED* ANCHOR BOLTS

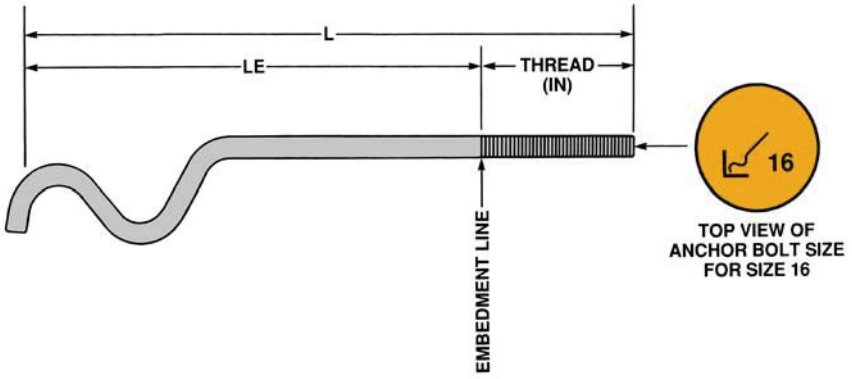
Design Features . . the ***SUPERSPEED*** anchor bolts are designed to be installed with the **AD**, **ADG**, **ADAG**, and **ADBG** series anchor downs. The load capacity has been tested. Installation is achieved before the pour, using a device to hold the **KCAB** diagonally at approximately 45° from the wall. Minimum concrete compression strength is 2500 psi and requires no special foundation concrete inspection. Standard nuts and washers are required, but not supplied. **KCAB** bolts can be used for two-pour systems.

Material . . ⅝" and ⅞" rod.

Finish . . KCABs may be special ordered with hot dip galvanized coating.

Special . . features of the **KCAB**s include:

- Rolled threads for greater tensile strength.
- Threaded section serves as embedment line for use during installation.
- Stamp for post-pour identification and orientation of an anchor placement.
- Design shape to reduce interference with rebar and concrete side bursting.



KCAB16
(Other Similar)

KCAB36 anchor bolt can be used with AD6A-G, AD8A-G, AD10A-G, ADG8, ADST-G.

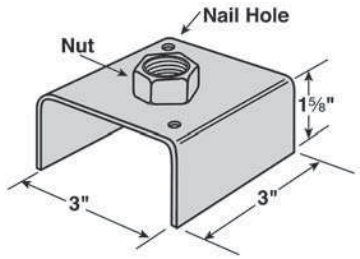
ABC ANCHOR BOLT CHAIRS

Design Features . . allows the anchor bolt or all-thread rod to be secured before the concrete is poured. The **ABC** also allows proper alignment of the anchor bolts before wall framing. Anchor bolts will no longer be dislodged by vibrations from power equipment.

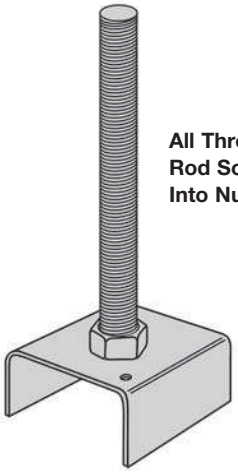
Material . . base 14 ga. steel.

Special . . various lengths of anchor bolts or all-thread rod are available (specify **AB** or **ATR**). Custom sizes of the base are also available.

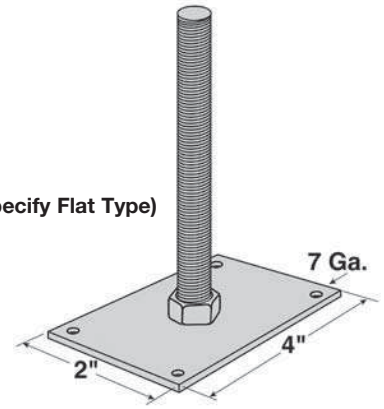
PRODUCT CODE	BOLT DIMENSIONS (INCHES)	
	DIAMETER	L
ABC1212	½	12
ABC5812	⅝	12
ABC3412	¾	12
ABC-CUSTOM	Specify	Specify



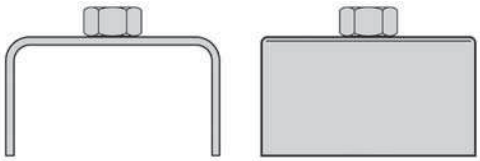
ABC



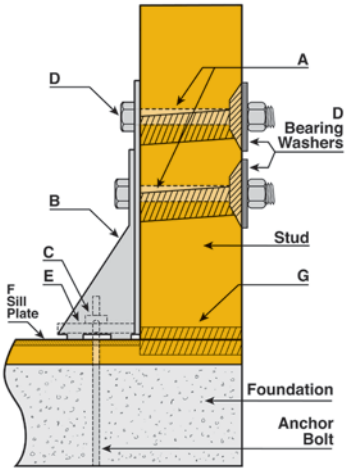
All Thread Rod Screwed Into Nut and Chair



(Specify Flat Type)



CAUSES FOR ANCHOR DOWN DEFLECTION:



A. Per 97 NDS section 8.1.2.1 bolt holes are to be 1/16 inch larger than bolt diameter. This can cause deflection until the bolt seats in the hole. Increasing the bolt hole diameter will lead to an increase in deflection. Using **ADST** screw type anchor downs eliminates this potential source of deflection.

B. Installation of Anchor Downs on only one side of the stud creates an eccentric condition which at maximum load can cause additional deflection of the post.

C. Anchor bolts can loosen especially during the cyclic loads as in earthquakes. Using thread adhesives or nuts with nylon locking inserts can reduce loosening.

D. Post bolts installed and not tightened or post bolts which become loose as a result of wood post shrinkage will cause additional deflection under load. Using bearing plates against the wood helps create a stronger connection on the post. Using **ADST** screw type anchor downs reduces this potential source of deflection.

E. Anchor downs which have been subjected to high loads caused by earthquakes or wind may have been deflected causing a loose connection.

F. Wood shrinkage at the base of the Anchor Down, sill plates, rim joist, etc. can cause anchor bolts to become loose, which may require retightening.

G. Compression forces from normal dead and live loads as well as overturning forces from wind or earthquakes may cause the wood at the post ends, sill plates, etc. to crush resulting in gaps and additional deflection.

ANCHOR BOLTS AND HOLDERS

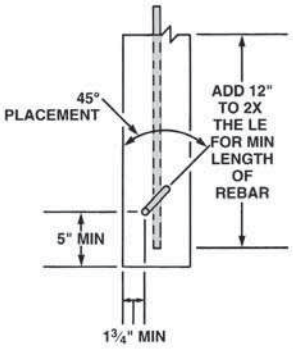
KCAB

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

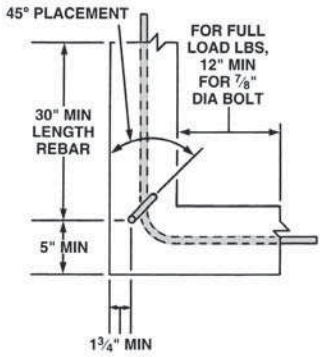
PRODUCT CODE	REF NO	DIA (INCHES)	L (INCHES)	LE (INCHES)	THREAD (INCHES)	DESIGN LOAD (LBS)			
						6" CONCRETE STEMWALL		8" CONCRETE STEMWALL	
						END CONDITION	CENTER CONDITION	END CONDITION	CENTER CONDITION
KCAB16	SSTB®16	5/8	17	12	5	4265	4600	4765	4765
KCAB20	SSTB®20	5/8	21	16	5	5200	5200	5200	5200
KCAB24	SSTB®24	5/8	25	20	5	5200	5200	5200	5200
KCAB28	SSTB®28	7/8	29	24	5	—	—	9335	10165
KCAB34	SSTB®34	7/8	34	26	6	—	—	9335	10165
KCAB36	SSTB®36	7/8	36	28	8	—	—	9335	10165

the *ONLY* APPROVED EQUAL™

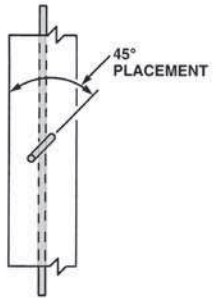
ANCHOR DOWN STK NO	2X, 3X, 2-2X SILL PLATES	
	MONO - POUR	TWO - POUR
AD2B-G	KCAB16	KCAB20
AD5B-G	KCAB20	KCAB24
AD6A-G	KCAB28	KCAB34
AD8A-G	KCAB28	KCAB34
AD10A-G	KCAB28	KCAB34



END WALL CONDITION

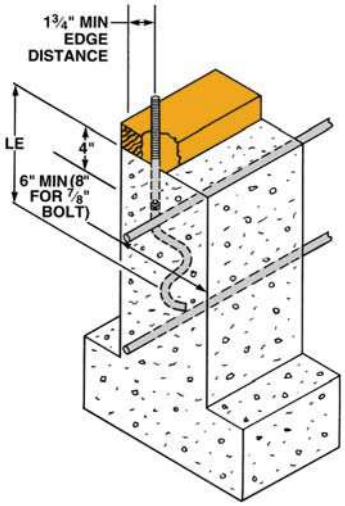


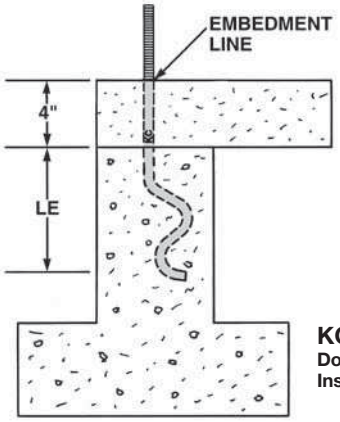
CORNER CONDITION



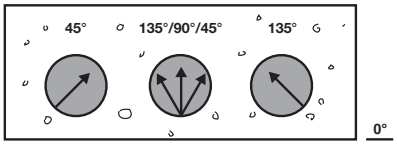
CONTINUOUS STEM WALL CONDITION

KCAB AND REBAR PLACEMENT

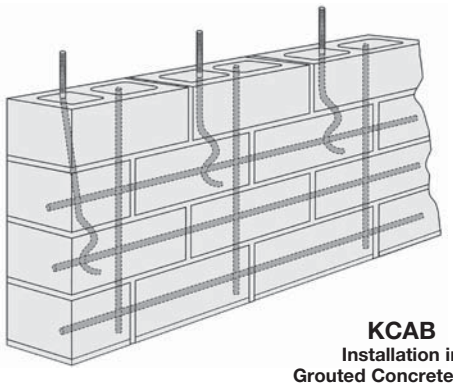




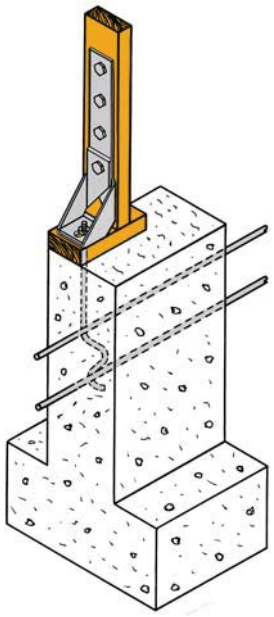
KCAB16
Double Pour Installation



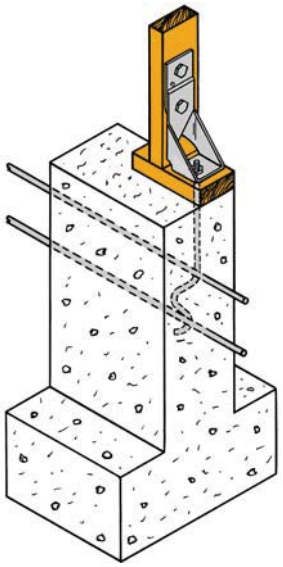
Plan View of KCAB Placement in Concrete Stemwall



KCAB
Installation in Grouted Concrete Block



AD10A-G
(Shown with KCAB)



AD5B-G
(Shown with KCAB)

SSW SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **SSW** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation.

The new ***SUPERSPEED*** Shear Wall combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

SSW-SDS3	15KIPS

Material . . 7 ga. galvanized steel **. . SSW** ⅜" x 2½" x 2½" sq. washer hot dipped galvanized**.**

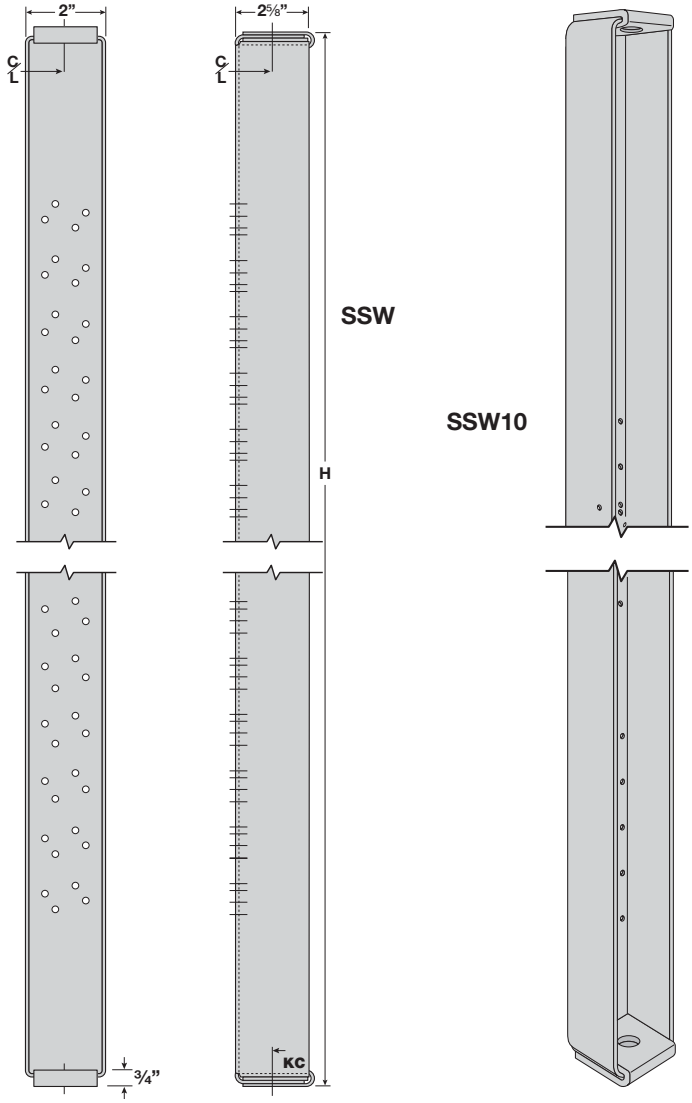
Finish . . Galvanized steel

Special . . ***SUPERSPEED*** Drive Screws are best installed with a low speed, or variable speed. ½" drill and a ⅜" hex head driver.

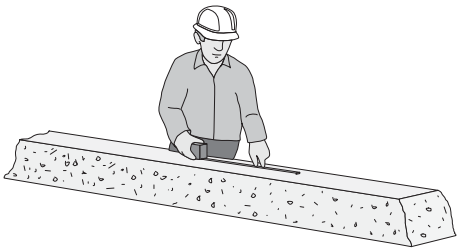
Loads . . design loads are based on capacity of special screws (***SUPERSPEED*** Drive Screws) ¼" x 3 inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

Special . . ***SUPERSPEED*** Drive Screws are furnished with the **SSW** Shear Wall for ***SUPERSPEED*** labor saving installation.

Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



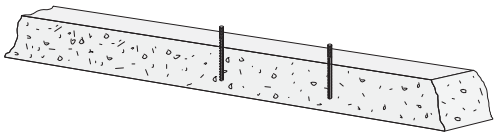
The **NEW** full height "SSW" ***SUPERSPEED*** Shear Wall gives the professional framer ***SUPERSPEED*** easy field assembly of shear walls both standard and special widths. each "SSW", shear wall has a tested capacity of 15,000 pounds in both tension and compression. No more adjusting window and door openings to accomodate pre-manufactured shear walls.



Installation 1

Layout for anchor bolt placement.

Note: Verify width to heigth ratio per current code.



Installation 2

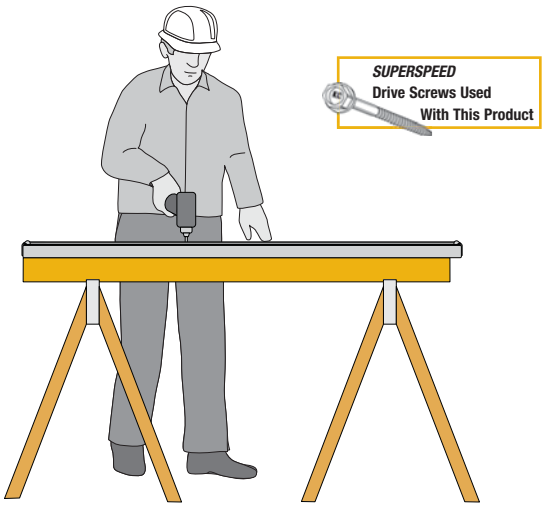
Install 7/8" diameter anchor bolt into foundation at time concrete is poured per designer.

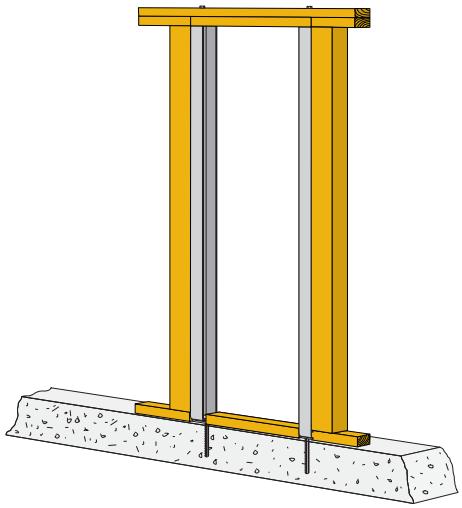
Note: Foundation and anchor bolt configuration is designer's responsility.

SUPERSPEED SHEAR WALLS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	HEIGHT (INCHES)	DIA (INCHES)	NUMBER OF BOLTS IN TOP OF WALL	FASTENER SCHEDULE			DESIGN LOAD (LBS)	DEFLECTION OF DESIGN LOAD (INCHES)	DEFLECTION OF DESIGN LOAD (INCHES)	DEFLECTION OF DESIGN LOAD (INCHES)
				ANCHOR BOLTS DIAMETER (INCHES)	CENTER LINE DIMENSIONS	*SUPERSPEED* SDS ¼ x 3 DRIVE SCREWS				
SSW 7	78	7 GA	2 – ⅞ MB	12	1½	60	15560	.070	.073	.080
SSW 8	93¼	7 GA	2 – ⅞ MB	16	1½	60	15560	.070	.073	.080
SSW 9	105¼	7 GA	2 – ⅞ MB	20	1½	60	15560	.0700	.073	.080
SSW 10	117¼	7 GA	2 – ⅞ MB	24	1½	60	15560	.070	.073	.080
SSW 12	141¼	7 GA	2 – ⅞ MB	26	1½	60	15560	.070	.073	.080





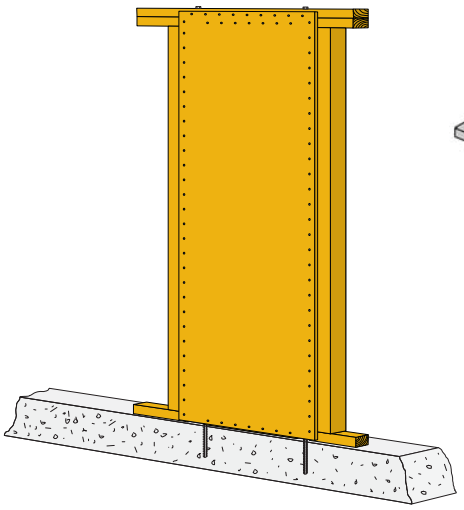
Installation 3

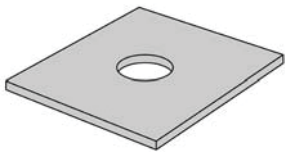
Using variable speed drill, install "SSW" Shear Wall standards to wood framing posts with provided ***SUPERSPEED*** SDS 1/4 x 3 drive screws. Install screws using a ½" drive variable speed drill, 5.5 amps or larger and a ⅜" hex head driver.

Installation 4

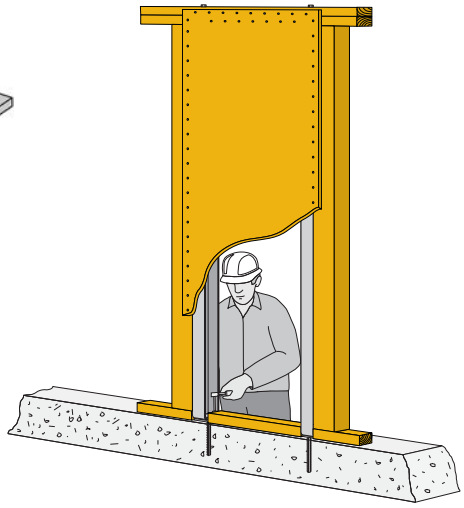
Install SSW Shear Wall with attached posts along with regular framing. Square walls and nail shear panels prior to tightening anchor bolt nuts.

Note: Install standards on each side of shear wall. Bolt through top plates with 7/8" diameter machine bolt and 2-BW 7/8 plate washer.





BW1
(5⁄16" x 3½" x 3½")



Installation 5

Install siding and/or plywood and nail as specified.

Note: Frame shear wall with minimum 1 - 4 x 4 against each standard.

Installation 6

Anchor bolt nuts should be finger tight. With a wrench, tighten anchor bolt nuts 1/3 - 1/2 turn after nut contacts with KCMP "SSW" as stated by ASTH test standards for anchor bolts. Consider possible wood shrinkage.

SUPERSPEED EMBOSSED TIE STRAPS

TS SS
3XTS SS
MTS SS
3XMTS SS
MTSI SS
MTSC SS

EMBOSSED TIE STRAPS

Design Features . . The **TS SS** and **3XTS SS** straps are designed to transfer tension forces between two framing members using nails. The **TS** Series are designed for use with a nominal 4X framing member and the **3XTS** are designed for use with a nominal 3X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **MTS SS, 3XMTS SS** and **MTSI SS** straps are designed to transfer tension forces between framing members using nails. The **MTS** series are designed for use with a nominal 4X framing member and the **3XMTS** are designed for use with a nominal 3X framing member. The **MTSI** series are designed with a nail pattern to accommodate various composite wood I-Joist products. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

NO HAMMER™

Special . . It all started with a simple idea of forming an embossment around each metal connector nail hole. The embossment, along with the proper nail gun nose adapter, aligns many commonly used nail guns over the metal connector nail holes. Installing these connectors with a nail gun makes installation up to five times faster than the old style hand nail connectors.

Material . . 16 ga, 14 ga, 12 ga, and 10 ga. galvanized steel.

INSTALLATION SAFETY NOTE:

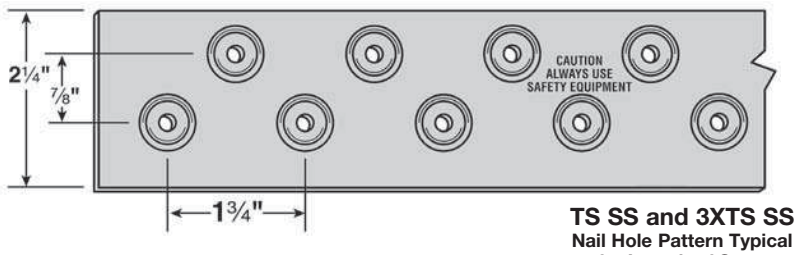
Important

Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nail holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.

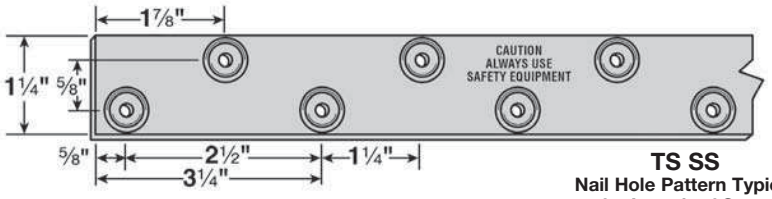
FLOOR-TO-FLOOR CLEAR SPAN TABLE

PRODUCT CODE	CLEAR SPAN	TOTAL # NAILS	DESIGN LOAD TENSION (LBS) 133%
MTSC28	18	12-16d Sinker	925
	16	16-16d Sinker	1230
MTSC40	18	28-16d Sinker	2155
	16	32-16d Sinker	2460
MTSC52	18	44-16d Sinker	3385
	16	48-16d Sinker	3695
MTSC66	18	64-16d Sinker	5035
	16	68-16d Sinker	5350
MTSC78	18	80-16d Sinker	6295
	16	82-16d Sinker	6450
MTS37	18	20-16d	1930
	16	22-16d	2125
MTS48	18	32-16d	3135
	16	34-16d	3330
MTS60	18	46-16d	4810
	16	48-16d	5020
MTS72	18	56-16d	5850
	16	56-16d	5850
MTSI36	18	14-10d x 1½	900
	16	16-10d x 1½	1030
MTSI48	18	26-10d x 1½	1675
	16	28-10d x 1½	1805
MTSI60	18	38-10d x 1½	2450
	16	40-10d x 1½	2580
MTSI72	18	50-10d x 1½	3220
	16	52-10d x 1½	3350

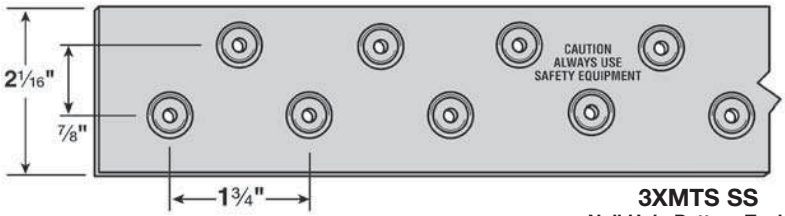
(See Page 91 for Design Loads)



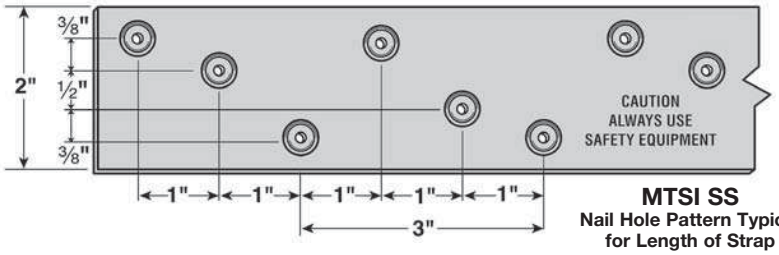
TS SS and 3XTS SS
Nail Hole Pattern Typical for Length of Strap



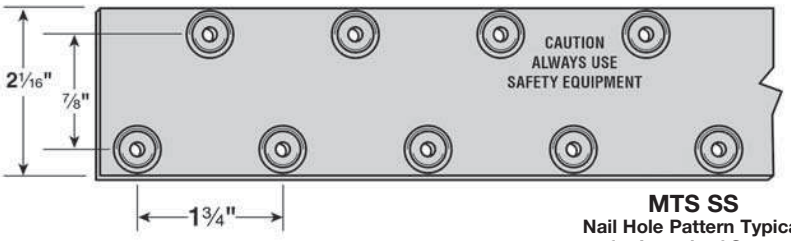
TS SS
Nail Hole Pattern Typical for Length of Strap



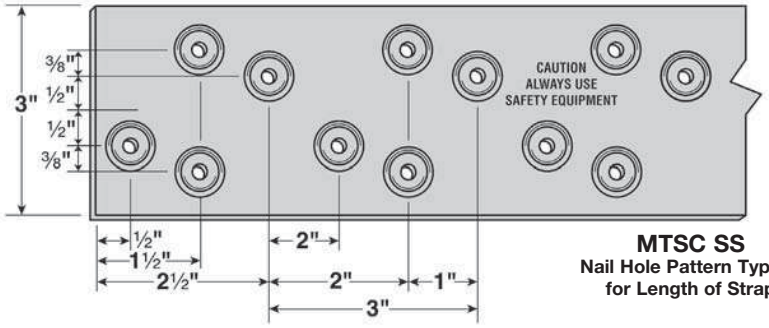
3XMTS SS
Nail Hole Pattern Typical for Length of Strap



MTSI SS
Nail Hole Pattern Typical for Length of Strap



MTS SS
Nail Hole Pattern Typical for Length of Strap



MTSC SS
Nail Hole Pattern Typical for Length of Strap

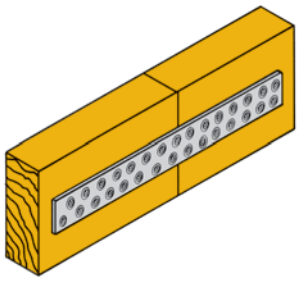
(See Page 85 for Design Loads)

SUPERSPEED EMBOSSED TIE STRAPS

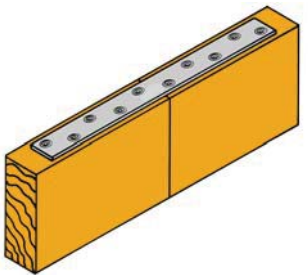
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	WIDTH/LENGTH MATERIAL	TOTAL # NAILS	DESIGN LOAD (LBS)		NET SECTION LOAD	DESIGN LOAD (LBS)		
			NAIL	LOAD (100%)		NAIL USED	(100%)	(133%)
TS17SS (embossed)	2¼" x 21" 16 ga gal	24	10d	123	3950 lbs @ 100% Duration	10d	1480	1970
			16d	147		16d	1765	2350
			10d Hardened	176		10d Hardened	2115	2815
			16d Hardened	210		16d Hardened	2520	3350
TS24SS (embosseed)	2¼" x 26¼" 16 ga gal	30	10d	123	3950 lbs @ 100% Duration	10d	1850	2460
			16d	147		16d	2205	2935
			10d Hardened	175		10d Hardened	2645	3520
			16d Hardened	210		16d Hardened	3150	3950
TS36SS (embossed)	2¼" x 36¾" 14 ga gal	42	10d	128	4800 lbs @ 100% Duration	10d	2700	3590
			16d	154		16d	3225	4290
			10d Hardened	180		10d Hardened	3790	4800
			16d Hardened	213		16d Hardened	4490	4800
3XTS17SS (embossed)	2¼" x 21" 16 ga gal	24	10d	123	3950 lbs @ 100% Duration	10d	1480	1970
			16d	147		16d	1765	2350
			10d Hardened	176		10d Hardened	2115	2815
			16d Hardened	210		16d Hardened	2520	3350
3XTS24SS (embossed)	2¼" x 26¼" 16 ga gal	30	10d	123	3950 lbs @ 100% Duration	10d	1850	2460
			16d	147		16d	2205	2935
			10d Hardened	176		10d Hardened	2645	3520
			16d Hardened	210		16d Hardened	3150	3950
3XTS36SS (embossed)	2¼" x 36¾" 14 ga gal	42	10d	128	4800 lbs @ 100% Duration	10d	2700	3590
			16d	154		16d	3225	4290
			10d Hardened	180		10d Hardened	3790	4800
			16d Hardened	213		16d Hardened	4490	4800
MTS27SS (embossed)	2$^{1}/_{16}$" x 26¾" 12 ga gal	30	10d	141	5345 lbs @ 100% Duration	10d	2120	2820
			16d	164		16d	2455	3265
			10d Hardened	187		10d Hardened	2805	3730
			16d Hardened	220		16d Hardened	3300	4390
MTS37SS (embossed)	2$^{1}/_{16}$" x 37½" 12 ga gal	42	10d	141	5345 lbs @ 100% Duration	10d	2970	3950
			16d	164		16d	3440	4575
			10d Hardened	187		10d Hardened	3925	5225
			16d Hardened	220		16d Hardened	4620	5345
MTS48SS (embossed)	2$^{1}/_{16}$" x 47¼" 12 ga gal	54	10d	141	5345 lbs @ 100% Duration	10d	3815	5075
			16d	164		16d	4420	5345
			10d Hardened	187		10d Hardened	5050	5345
			16d Hardened	220		16d Hardened	5345	5345
MTS60SS (embossed)	2$^{1}/_{16}$" x 57¾" 10 ga gal	66	10d	158	6980 lbs @ 100% Duration	10d	5215	6935
			16d	181		16d	5975	6980
			10d Hardened	199		10d Hardened	6575	6980
			16d Hardened	232		16d Hardened	6980	6980
MTS72SS (embossed)	2$^{1}/_{16}$" x 68¼" 10 ga gal	78	10d	158	6980 lbs @ 100% Duration	10d	6165	6980
			16d	181		16d	6980	6980
			10d Hardened	199		10d Hardened	6980	6980
			16d Hardened	232		16d Hardened	6980	6980
3XMTS27SS (embossed)	2$^{1}/_{16}$" x 26¼" 12 ga gal	30	10d	141	5345 lbs @ 100% Duration	10d	2120	2820
			16d	164		16d	2455	3265
			10d Hardened	187		10d Hardened	2805	3730
			16d Hardened	220		16d Hardened	3300	4390
3XMTS37SS (embossed)	2$^{1}/_{16}$" x 36¾" 12 ga gal	42	10d	141	5345 lbs @ 100% Duration	10d	2970	3950
			16d	164		16d	3440	4575
			10d Hardened	187		10d Hardened	3925	5225
			16d Hardened	220		16d Hardened	4620	5345
3XMTS48SS (embossed)	2$^{1}/_{16}$" x 47¼" 12 ga gal	54	10d	141	5345 lbs @ 100% Duration	10d	3815	5075
			16d	164		16d	4420	5345
			10d Hardened	187		10d Hardened	5050	5345
			16d Hardened	220		16d Hardened	5345	5345
3XMTS60SS (embossed)	2$^{1}/_{16}$" x 57¾" 10 ga gal	66	10d	158	6980 lbs @ 100% Duration	10d	5215	6935
			16d	181		16d	5975	6980
			10d Hardened	199		10d Hardened	6575	6980
			16d Hardened	232		16d Hardened	6980	6980
3XMTS72SS (embossed)	2$^{1}/_{16}$" x 68¼" 10 ga gal	78	10d	158	6980 lbs @ 100% Duration	10d	6165	6980
			16d	181		16d	6980	6980
			10d Hardened	199		10d Hardened	6980	6980
			16d Hardened	232		16d Hardened	6980	6980
MTSI26SS (embossed)	2$^{1}/_{16}$" x 26" 12 ga gal	26	10d x 1½	141	5345 lbs @ 100% Duration	10d x 1½	1840	2445
			10d	141		10d	1840	2445
MTSI36SS (embossed)	2$^{1}/_{16}$" x 36" 12 ga gal	36	10d x 1½	141	5345 lbs @ 100% Duration	10d x 1½	2545	3385
			10d	141		10d	2545	3385
MTSI48SS (embossed)	2$^{1}/_{16}$" x 48" 12 ga gal	48	10d x 1½	141	5345 lbs @ 100% Duration	10d x 1½	3395	4510
			10d	141		10d	3395	4510
MTSI60SS (embossed)	2$^{1}/_{16}$" x 60" 12 ga gal	60	10d x 1½	141	5345 lbs @ 100% Duration	10d x 1½	4240	5345
			10d	141		10d	4240	5345
MTSI72SS (embossed)	2$^{1}/_{16}$" x 72" 10 ga gal	72	10d x 1½	158	6980 lbs @ 100% Duration	10d x 1½	5690	6980
			10d	158		10d	5690	6980

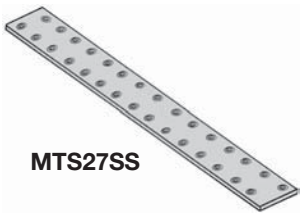
TS SS
3XTS SS
MTS SS
3XMTS SS
MTSI SS
MTSC SS



MTS27SS



TS121SS



MTS27SS

TS17SS

SUPERSPEED EMBOSSED DIAPHRAGM STRAPS

CNS
3XCNS
CNSI
CNS KIP
3XCNS KIP

CALIFORNIA NAIL STRAPS EMBOSSED TIE STRAPS AND DIAPHRAGM STRAPS

Design Features . . The **CNS** and **3XCNS** straps are designed to transfer tension forces between framing members using nails. The **CNS** series are designed for use with a nominal 4X framing member and the **3XCNS** are designed for use with a nominal 3X framing member. The **CNSI** series are designed with a nail pattern to accommodate various wood I-Joist products. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **CNS KIP** and **3XCNS KIP** straps are designed to transfer tension forces between two framing members using nails. The **CNS KIP** series are designed for use with a nominal 4X framing member and the **3XCNS KIP** are designed for use with a nominal 3X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired. This series of straps are designed for use with hardened steel gun nails, blending yield strength of 200Ksi, readily available to the roof erectors.

The **CNS KIP** and **3XCNS KIP** straps are designed primarily for use on horizontal diaphragms. The heavy gage steel combined with a wide cross section and use of hardened gun nails gives much higher loads than other available straps. All products are embossed for use with nail guns. Embossing not only guides the nail into the strap opening, but surrounds the nail head, greatly reducing the potential for tearing of the roofing materials minimizing potential leaks.

NO HAMMER™

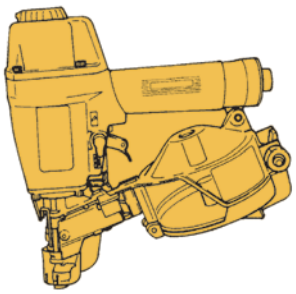
Special . . It all started with a simple idea of forming an embossment around each metal connector nail hole. The embossment, along with the proper nail gun nose adapter, aligns many commonly used nail guns over the metal connector nail holes. Installing these connectors with a nail gun makes installation up to five times faster than the old style hand nail connectors.

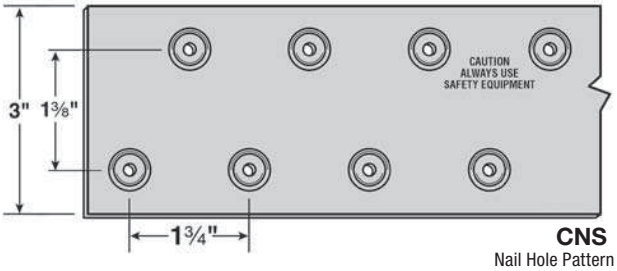
Material . . 12 ga. and 10 ga. galvanized steel. Specially ordered high yield strength galvanized steel.

INSTALLATION SAFETY NOTE:

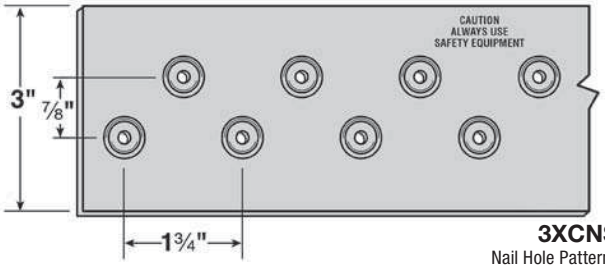
Important

Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nail holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.

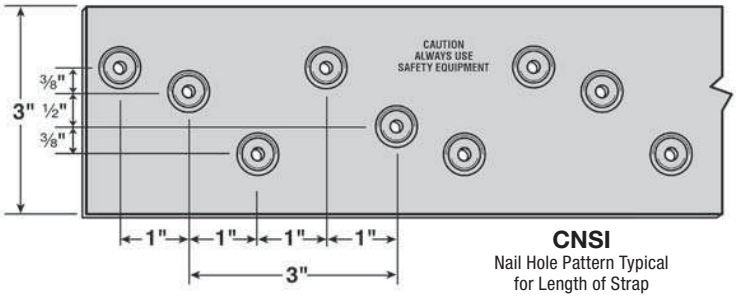




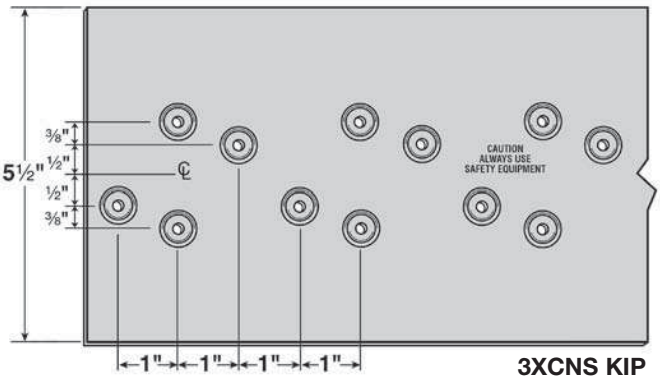
CNS
Nail Hole Pattern Typical for Length of Strap



3XCNS
Nail Hole Pattern Typical for Length of Strap

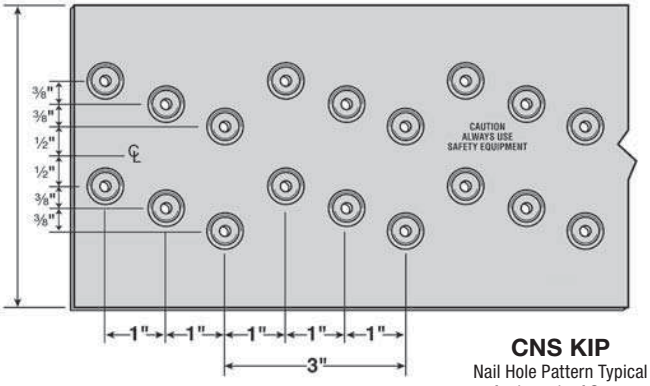


CNSI
Nail Hole Pattern Typical for Length of Strap



Minimum 3X Framing Member

3XCNS KIP
Nail Hole Pattern Typical for Length of Strap



Minimum 4X Framing Member

CNS KIP
Nail Hole Pattern Typical for Length of Strap

SUPERSPEED EMBOSSED DIAPHRAGM STRAPS

CNS
3XCNS
CNSI
CNS KIP
3XCNS KIP

For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	WIDTH/LENGTH MATERIAL (INCHES)	TOTAL # NAILS	DESIGN LOAD (LBS)		NET SECTION LOAD	DESIGN LOAD (LBS)		
			NAIL	LOAD (100%)		NAIL USED	(100%)	(133%)
CNS48 (embossed)	3" x 48" 12 ga gal	54	10d	141	7785 lbs @ 100% Duration	10d	3815	5075
			16d	164		16d	4420	5880
			10d Hardened	187		10d Hardened	5050	6715
			16d Hardened	220		16d Hardened	5945	7785
CNS60 (embossed)	3" x 60⅝" 12 ga gal	68	10d	141	7785 lbs @ 100% Duration	10d	4805	6395
			16d	164		16d	5570	7405
			10d Hardened	187		10d Hardened	6360	7785
			16d Hardened	220		16d Hardened	7485	7785
CNS72 (embossed)	3" x 72" 10 ga gal	80	10d	158	10165 lbs @ 100% Duration	10d	6320	8410
			16d	181		16d	7240	9610
			10d Hardened	199		10d Hardened	7995	10165
			16d Hardened	232		16d Hardened	9300	10165
CNS96 (embossed)	3" x 96" 10 ga gal	108	10d	158	10165 lbs @ 100% Duration	10d	8535	10165
			16d	181		16d	9775	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
CNS112 (embossed)	3" x 112" 10 ga gal	126	10d	158	10165 lbs @ 100% Duration	10d	9960	10165
			16d	181		16d	10165	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
3XCNS48 (embossed)	3" x 47¼" 12 ga gal	54	10d	141	7785 lbs @ 100% Duration	10d	3815	5075
			16d	164		16d	4420	5880
			10d Hardened	187		10d Hardened	5050	6715
			16d Hardened	220		16d Hardened	5945	7785
3XCNS60 (embossed)	3" x 57¾" 12 ga gal	66	10d	141	7785 lbs @ 100% Duration	10d	4665	6205
			16d	164		16d	5405	7190
			10d Hardened	187		10d Hardened	6170	7785
			16d Hardened	220		16d Hardened	7265	7785
3XCNS72 (embossed)	3" x 73½" 10 ga gal	84	10d	158	10165 lbs @ 100% Duration	10d	6640	8830
			16d	181		16d	7605	10110
			10d Hardened	199		10d Hardened	8370	10165
			16d Hardened	232		16d Hardened	9765	10165
3XCNS96 (embossed)	3" x 94½" 10 ga gal	108	10d	158	10165 lbs @ 100% Duration	10d	8535	10165
			16d	181		16d	9775	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
3XCNS112 (embossed)	3" x 110¼" 10 ga gal	126	10d	158	10165 lbs @ 100% Duration	10d	9960	10165
			16d	181		16d	10165	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
CNSI48 (embossed)	3" x 48" 12 ga gal	48	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	3395	4510
			10d	141		10d	3395	4510
			16d	164		16d	3930	5230
			10d Hardened	187		10d Hardened	4490	5970
			16d Hardened	220		16d Hardened	5285	7025
CNSI60 (embossed)	3" x 60" 12 ga gal	60	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	4240	5640
			10d	141		10d	4240	5640
			16d	164		16d	4915	6535
			10d Hardened	187		10d Hardened	5610	7460
			16d Hardened	220		16d Hardened	6605	7785
CNSI72 (embossed)	3" x 72" 12 ga gal	72	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	5090	6770
			10d	141		10d	5090	6770
			16d	164		16d	5895	7785
			10d Hardened	187		10d Hardened	6730	7785
			16d Hardened	220		16d Hardened	7785	7785
CNSI132 (embossed)	3" x 90" 12 ga gal	90	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	6360	7785
			10d	141		10d	6360	7785
			16d	164		16d	7370	7785
			10d Hardened	187		10d Hardened	7785	7785
			16d Hardened	220		16d Hardened	7785	7785
CNSI32 (embossed)	3" x 132" 12 ga gal	132	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	7785	7785
			10d	141		10d	7785	7785
			16d	164		16d	7785	7785
			10d Hardened	187		10d Hardened	7785	7785
			16d Hardened	220		16d Hardened	7785	7785

STRAP DETAILS				NAIL SPECS		TOTAL NAILS	(100%) NET SECTION LOAD (LBS)	DESIGN LOAD (LBS)					
PRODUCT CODE	STEEL GAGE	STRAP SIZE	CROSS SECTION	NAIL	LOAD (LBS)			NO CLEAR SPAN		6" CLEAR SPAN		12" CLEAR SPAN	
								(100%)	(133%)	(100%)	(133%)	(100%)	(133%)
CNS10KIP	12 Gage	5½" x 54"	.55 Sq Inch	10d Hard	187	108	14270	10095	13430	8970	11930	7850	10440
				16d Hard	220	108		11885	14270	10560	14045	9245	12295
CNS12KIP	12 Gage	5½" x 60"	.55 Sq Inch	10d Hard	187	120	14270	11220	14270	10100	13435	8975	11935
				16d Hard	220	120		13205	14270	11885	14270	10535	14050
3XCNS10KIP	12 Gage	5½" x 78"	.55 Sq Inch	10d Hard	187	104	14270	9725	12930	8975	11935	8230	10945
				16d Hard	220	104		11445	14270	10565	14050	9495	12625
3XCNS12KIP	12 Gage	5½" x 90"	.55 Sq Inch	10d Hard	187	120	14270	11220	14270	10354	13770	9725	12935
				16d Hard	220	120		13205	14270	12325	14270	11445	14270
CNS15KIP	10 Gage	5½" x 72"	.68 Sq Inch	16d Hard	232	144	18635	16740	18635	15340	18635	13950	18550
CNS18KIP	10 Gage	6½" x 90"	.82 Sq Inch	16d Hard	232	180	22025	20925	22025	20400	22025	18945	22025
CNS20KIP	10 Gage	7½" x 96"	.95 Sq Inch	16d Hard	232	192	25415	22320	25415	20925	25415	19530	25415

TIE STRAPS AND BRACING

TS
TSA
LTSA
LTSI
FHA
HPS
HTS
MTS
MTSI
MTSC

TIE STRAPS

Design Features . . provide the builder with a complete range of tie straps to meet a variety of application and design load conditions and specifications.

Series	Installation	Bolt Pattern	Material	Finish
LTSA/ TS/ TSA	Nails	—	20, 18, 16, or 14 ga	Galv.
LTSI	Nails	—	18 ga	Galv.
MTS/ MTSI	Nails or Bolts	Single	12 or 10 ga	Galv.
HTS	Bolts	Single or Double Row (Glu-lam Beams)	3/16" or 1/4" Steel	*SUPERSPEED* Gray
FHA	Nails	—	12 ga	Galv.
HPS	Bolts	Single or Double	7 ga	Galv.
MTSC	Nails	—	16 or 14 ga	Galv.

Applications . .

TS series – tying rafters and ridge beam together, securing rafters to plate, anchoring studs to sill, framing over girders and bearing portions, joining continuous headers at corners.

MTSI series – the strap is engineered with 3" nail spacing specifically for wood I-joists.

MTS series – designed to provide positive connections at wall intersections and ridge ties when top plates are cut. See Page 80 and 81 for **3X MTS** Straps for less than 4X members.

HTS series – designed for high stress situations.

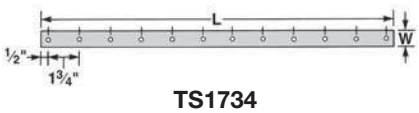
FHA series – approved multipurpose straps.

LTSA/TSA series – tie strap is designed for use on a 1½" member. The 3" center-to-center nail spacing reduces the possibility of wood splitting.

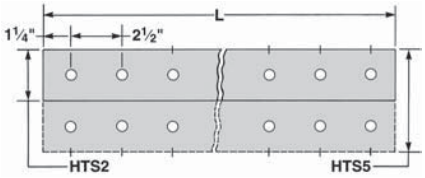
HPS series – This is a heavy piling strap which connects wood pilings to floor girders in elevated structures.

LTSI series – designed for attachment to open wood chord web trusses. The 6" on-center staggered spacing eliminates the chance for wood grain splitting. **Note** . . the **LTSI** is manufactured from 18 ga. galvanized steel which can be installed with air gun nailers. This eliminates the high labor cost of hand nailing.

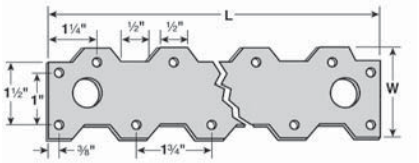
MTSC series – nail holes are counter sunk for sinker nail heads offered in 2 different strap sizes of gage material. Counter sunk holes for lower profile nailing with 16d sinkers.



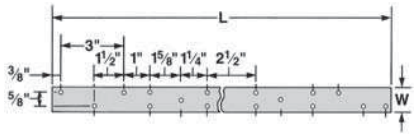
TS1734



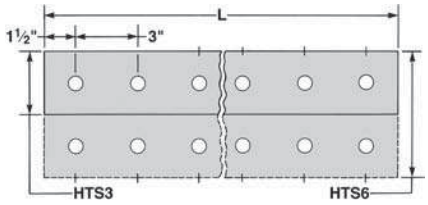
HTS2 **HTS5**
(HPS418 Typical)



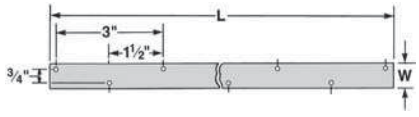
TS9-TS36



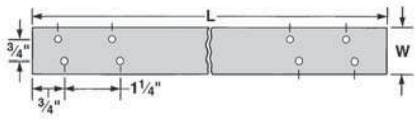
TS91 - TS221



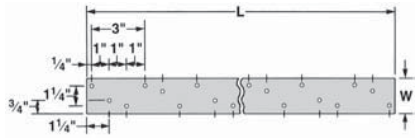
HTS3 **HTS6**
(HPS720 Typical)



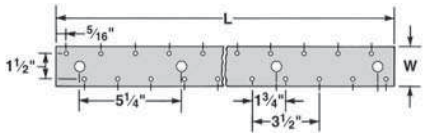
TSA9 -TSA36



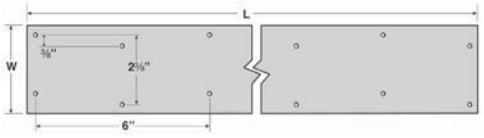
FHA9 - FHA30



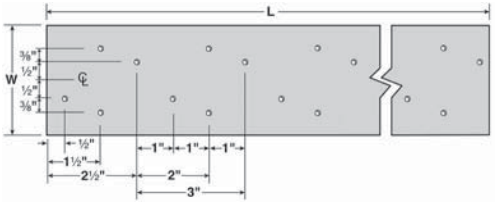
MTSI26 - MTSI72



MTS27 - MTS72



LTSI49 – LTSI73



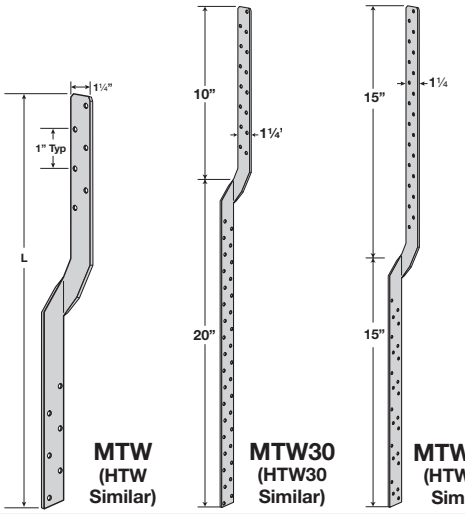
MTSC28–MTSC78

TW
MTW
HTW

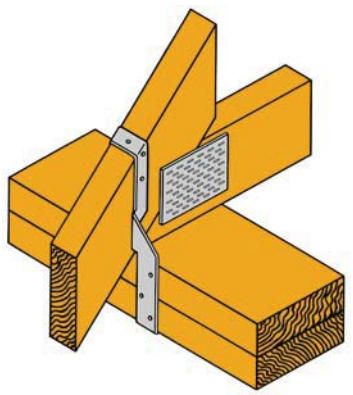
TWIST STRAPS

Design Features . . provide for fast, simple hanging of joists at right angles and for securing joists to a strongback. The 6" diagonal 90° bend in the middle of the strap permits nailing to the side of the supported joist and to the side of the crossing support member above it. **TW**s can be used singly or in pairs, depending upon load requirements. Equal number of right and left hand straps are supplied in each carton. For the **MTW**s, (supplied in pieces, not pairs), the 3" bend in the middle of the straps stops interference at the transition points.

Material . . TW/MTW – 16 ga. galvanized steel.
HTW – 14ga. galvanized steel.



MTW (HTW Similar) **MTW30** (HTW30 Similar) **MTW30C** (HTW30C Similar)



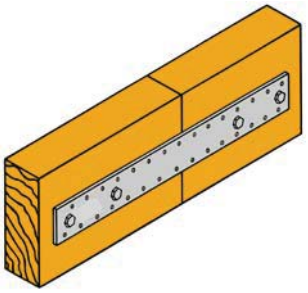
MTW16

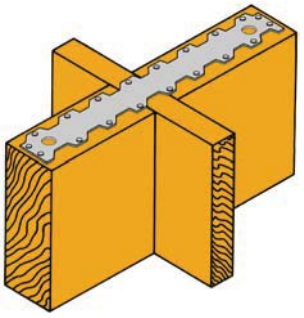
TIE STRAPS AND BRACING

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

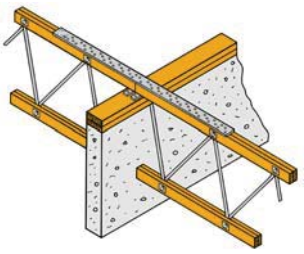
PRODUCT CODE	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		NAIL & BOLT SCHEDULE		DESIGN LOAD (NAILS)		DESIGN LOAD (BOLTS)	
			W	L			NORMAL LBS	MAX LBS	NORMAL LBS	MAX LBS
TS9	ST292	20 ga gal	2 1/16	9 1/4	12-16d	—	835	1110	—	—
TS12	ST2122	20 ga gal	2 1/16	12 3/4	16-16d	—	1110	1480	—	—
TS1720	ST2215	20 ga gal	2 1/16	16 1/4	20-16d	—	1390	1850	—	—
TS17	ST6215	16 ga gal	2 1/16	16 1/4	20-16d	—	1425	1895	—	—
TS24	ST6224	16 ga gal	2 1/16	23 1/4	29-16d	—	2540	2540	—	—
TS36	ST6236	14 ga gal	2 1/16	33 3/4	40-16d	—	3005	3845	—	—
TS91	ST9	16 ga gal	1 1/4	9	8-16d	—	570	755	—	—
TS121	ST12	16 ga gal	1 1/4	11 5/8	10-16d	—	710	945	—	—
TS181	ST18	16 ga gal	1 1/4	17 3/4	14-16d	—	995	1325	—	—
TS221	ST22	16 ga gal	1 1/4	21 5/8	18-16d	—	1420	1420	—	—
TS1734	ST2115	20 ga gal	3/4	17	12-16d	—	660	660	—	—
MTSI26	MSTI26	12 ga gal	2	26	26-10d x 1 1/2	—	1790	2380	—	—
MTSI36	MSTI36	12 ga gal	2	36	36-10d x 1 1/2	—	2475	3295	—	—
MTSI48	MSTI48	12 ga gal	2	48	48-10d x 1 1/2	—	3300	4390	—	—
MTSI60	MSTI60	12 ga gal	2	60	60-10d x 1 1/2	—	4125	5080	—	—
MTSI72	MSTI72	12 ga gal	2	72	72-10d x 1 1/2	—	4950	5080	—	—
MTS27	MST27	12 ga gal	2	27	30-16d	4-1/2 MB	2360	3195	1355	1800
MTS37	MST37	12 ga gal	2	37 1/2	42-16d	6-1/2 MB	3305	4475	1900	2525
MTS48	MST48	12 ga gal	2	48	50-16d	8-1/2 MB	3835	5190	2305	3065
MTS60	MST60	10 ga gal	2 1/16	60	66-16d	8-1/2 MB	4825	6495	2810	3740
MTS72	MST72	10 ga gal	2 1/16	72	66-16d	8-1/2 MB	4825	6495	2810	3740
HTS2	HST2	3/16 stl	2 1/2	21 1/4	—	6-5/8 MB	—	—	3270	4350
HTS3	HST3	1/4 stl	3	25 1/2	—	6-3/4 MB	—	—	4810	6400
HTS5	HST5	3/16 stl	5	21 1/4	—	12-5/8 MB	—	—	6675	8875
HTS6	HST6	1/4 stl	6	25 1/2	—	12-3/4 MB	—	—	9625	12890
FHA6	FHA6	12 ga gal	1 7/16	6 3/8	8-16d	—	615	815	—	—
FHA9	FHA9	12 ga gal	1 7/16	9	8-16d	—	615	815	—	—
FHA12	FHA12	12 ga gal	1 7/16	11 5/8	8-16d	—	615	815	—	—
FHA18	FHA18	12 ga gal	1 7/16	17 3/4	8-16d	—	615	815	—	—
FHA24	FHA24	12 ga gal	1 7/16	23 7/8	8-16d	—	615	815	—	—
FHA30	FHA30	12 ga gal	1 7/16	30	8-16d	—	615	815	—	—
LTSA9	LSTA9	20 ga gal	1 1/4	9	8-10d	—	465	620	—	—
LTSA12	LSTA12	20 ga gal	1 1/4	12	10-10d	—	585	775	—	—
LTSA15	LSTA15	20 ga gal	1 1/4	15	12-10d	—	700	930	—	—
LTSA18	LSTA18	20 ga gal	1 1/4	18	14-10d	—	815	1085	—	—
LTSA21	LSTA21	20 ga gal	1 1/4	21	16-10d	—	930	1235	—	—
LTSA24	LSTA24	20 ga gal	1 1/4	24	18-10d	—	1050	1235	—	—
LTSA30	LSTA30	18 ga gal	1 1/4	30	22-10d	—	1315	1640	—	—
LTSA36	LSTA36	18 ga gal	1 1/4	36	26-10d	—	1435	1640	—	—
TSA9	MSTA9	18 ga gal	1 1/4	9	8-16d	—	475	635	—	—
TSA12	MSTA12	18 ga gal	1 1/4	12	10-10d	—	600	795	—	—
TSA15	MSTA15	18 ga gal	1 1/4	15	12-10d	—	720	955	—	—
TSA18	MSTA18	18 ga gal	1 1/4	18	14-10d	—	840	1115	—	—
TSA21	MSTA21	18 ga gal	1 1/4	21	16-10d	—	955	1270	—	—
TSA24	MSTA24	18 ga gal	1 1/4	24	18-10d	—	1075	1430	—	—
TSA30	MSTA30	16 ga gal	1 1/4	30	22-10d	—	1355	1805	—	—
TSA36	MSTA36	16 ga gal	1 1/4	36	26-10d	—	1605	2050	—	—
HPS218	PS218	7 ga gal	2	18	—	4-3/4 MB	—	—	3185	4235
HPS418	PS418	7 ga gal	4	18	—	4-3/4 MB	—	—	3185	4235
HPS720	PS720	7 ga gal	7	20	—	8-1/2 MB	—	—	2305	3065
MTSC28	MSTC28	16 ga gal	3	28 1/4	36-16d Sinkers	—	2220	2950	—	—
MTSC40	MSTC40	16 ga gal	3	40 1/4	52-16d Sinkers	—	3205	4265	—	—
MTSC52	MSTC52	16 ga gal	3	52 1/4	62-16d Sinkers	—	3825	4745	—	—
MTSC66	MSTC66	14 ga gal	3	65 3/4	76-16d Sinkers	—	5715	5860	—	—
MTSC78	MSTC78	14 ga gal	3	77 3/4	76-16d Sinkers	—	5715	5860	—	—
LTSI49	LSTI49	18 ga gal	3 3/4	49	32-10d x 1 1/2	—	1885	2510	—	—
LTSI73	LSTI73	18 ga gal	3 3/4	73	48-10d x 1 1/2	—	2835	3770	—	—

TS
TSA
LTSA
LTSI
FHA
HPS
HTS
MTS
MTSI
MTSC





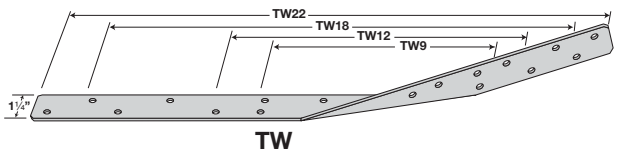
TS1720



LTSI73

the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS)
		L		
TW9	TS9	9	8-16d	540
TW12	TS12	11 5/8	10-16d	675
TW18	TS18	17 3/4	14-16d	945
TW22	TS22	21 5/8	18-16d	1215

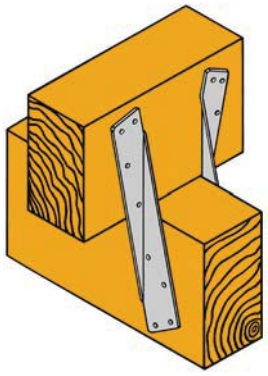


TW

the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS)
		L		
MTW12	MTS12	12	14-10d	1050
MTW16	MTS16	16	14-10d	1050
MTW18	MTS18	18	14-10d	1050
MTW20	MTS20	20	14-10d	1050
MTW30	MTS30	30	14-10d	1050
MTW30C	MTS30C	30	14-10d	1050
HTW16	HTS16	16	16-10d	1260
HTW20	HTS20	20	20-10d	1450
HTW24	HTS24	24	20-10d	1450
HTW28	HTS28	28	20-10d	1450
HTW30	HTS30	30	20-10d	1450
HTW30C	HTS30C	30	20-10d	1450

TW
MTW
HTW

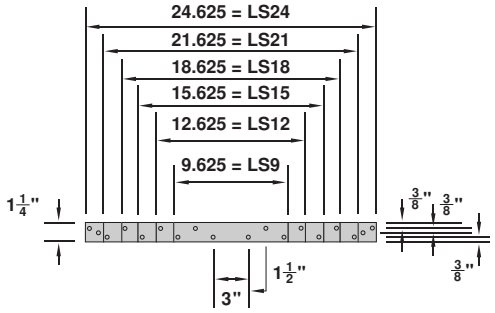


LS

STRAPS

Design Features . . manufactured to resist tension load when attached to solid sawn or structural composite lumber metal plate connected trusses, framing members and wall members. LS Straps are $1^{1}/_{4}$" wide and available in lengths from $9^{5}/_{8}$" to $39^{5}/_{8}$". Three holes are located at $^{3}/_{4}$" on center, in a diagonal pattern, at each end of the strap. Remaining holes are punched at $1^{1}/_{2}$" on center, in a diagonal pattern. At mid length of each strap is a 3" long section with no holes.

Material . . manufactured from mill certified steel coil manufactured to ASTM A653 SS Grade 40 or better, 20 gauge with G90 coating, with a minimum uncoated thickness of steel = 0.0329 in. and Fu = 55 ksi.



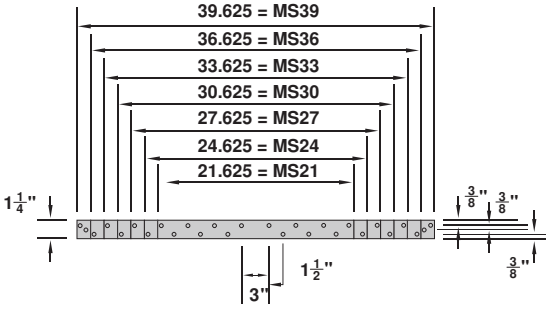
LS SERIES

MS

STRAPS

Design Features . . manufactured to resist tension load when attached to solid sawn or structural composite lumber metal plate connected trusses, framing members and wall members. MS Straps are $1^{1}/_{4}$" wide and available in lengths from $9^{5}/_{8}$" to $39^{5}/_{8}$". Three holes are located at $^{3}/_{4}$" on center, in a diagonal pattern, at each end of the strap. Remaining holes are punched at $1^{1}/_{2}$" on center, in a diagonal pattern. At mid length of each strap is a 3" long section with no holes.

Material . . manufactured from mill certified steel coil manufactured to ASTM A653 SS Grade 50 Class 1 or better, 16 gauge with G90 coating, with a minimum uncoated thickness of steel = 0.0538 in. Fy = 55 ksi and Fu = 65 ksi.

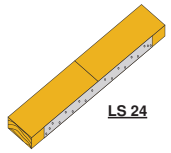


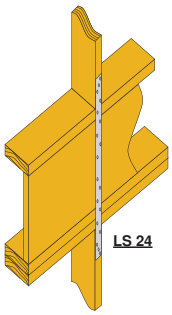
MS SERIES

LS

PRODUCT CODE	REF NO	STRAP DIMENSIONS (IN) WIDTH	STRAP DIMENSIONS (IN) LENGTH	FASTENERS (EACH END)	SOUTHERN PINE (0.55 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6	DOUGLAS FIR-LARCH (0.50 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6	SPRUCE-PINE-FIR (0.42 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6
LS9	LSTA9	1 1/4	9 5/8	(4) 0.131"x2.5"	410	475	515	660	380	435	475	605	325	375	405	520
				(4) 0.148"x1.5"	495	570	620	795	460	525	575	735	395	450	490	630
				(4) 0.148"x3.0"	495	570	620	795	460	525	575	735	395	450	490	630
				(4) 0.162"x3.5"	595	685	745	915	550	630	685	875	470	540	590	750
LS12	LSTA12		12 5/8	(5) 0.131"x2.5"	515	590	645	825	475	545	595	760	405	470	510	650
				(5) 0.148"x1.5"	620	715	775	915	575	660	715	915	490	565	615	785
				(5) 0.148"x3.0"	620	715	775	915	575	660	715	915	490	565	615	785
				(5) 0.162"x3.5"	745	855	915	915	685	790	855	915	590	675	735	915
LS15	LSTA15		15 5/8	(6) 0.131"x2.5"	615	710	770	915	570	655	710	910	490	560	610	780
				(6) 0.148"x1.5"	745	860	915	915	690	790	860	915	590	680	735	915
				(6) 0.148"x3.0"	745	860	915	915	690	790	860	915	590	680	735	915
				(6) 0.162"x3.5"	895	915	915	915	820	915	915	915	705	810	880	915
LS18	LSTA18		18 5/8	(7) 0.131"x2.5"	720	830	900	915	665	765	830	915	570	655	710	910
				(7) 0.148"x1.5"	870	915	915	915	800	915	915	915	690	790	860	915
				(7) 0.148"x3.0"	870	915	915	915	800	915	915	915	690	790	860	915
				(7) 0.162"x3.5"	915	915	915	915	915	915	915	915	825	915	915	915
LS21	LSTA21		21 5/8	(8) 0.131"x2.5"	825	915	915	915	760	870	915	915	650	750	815	915
				(8) 0.148"x1.5"	915	915	915	915	915	915	915	915	785	905	915	915
				(8) 0.148"x3.0"	915	915	915	915	915	915	915	915	785	905	915	915
				(8) 0.162"x3.5"	915	915	915	915	915	915	915	915	915	915	915	915
LS24	LSTA24		24 5/8	(9) 0.131"x2.5"	915	915	915	915	855	915	915	915	735	840	915	915
				(9) 0.148"x1.5"	915	915	915	915	915	915	915	915	885	915	915	915
				(9) 0.148"x3.0"	915	915	915	915	915	915	915	915	885	915	915	915
				(9) 0.162"x3.5"	915	915	915	915	915	915	915	915	915	915	915	915

NOTES: Product Steel Gauge: 20.


LS 24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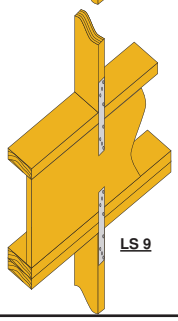
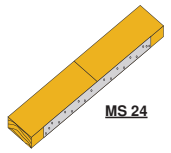
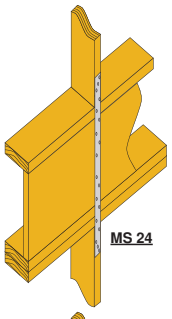

LS 9

MS

PRODUCT CODE	REF NO	STRAP DIMENSIONS (IN) WIDTH	STRAP DIMENSIONS (IN) LENGTH	FASTENERS (EACH END)	SOUTHERN PINE (0.55 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6	DOUGLAS FIR-LARCH (0.50 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6	SPRUCE-PINE-FIR (0.42 SPECIFIC GRAVITY) ALLOWABLE UPWARD LOAD (LBS) LOAD DURATION FACTOR 1.0	1.15	1.25	1.6
MS21	MSTA21	1 1/4	21 5/8	(8) 0.131"x2.5"	865	995	1080	1385	800	920	1000	1280	690	790	860	1100
				(8) 0.148"x1.5"	1040	1195	1300	1660	960	1100	1200	1535	825	950	1030	1320
				(8) 0.148"x3.0"	1040	1195	1300	1660	960	1100	1200	1535	825	950	1030	1320
				(8) 0.162"x3.5"	1230	1415	1540	1765	1135	1305	1420	1765	975	1125	1220	1565
MS24	MSTA24		24 5/8	(9) 0.131"x2.5"	975	1120	1215	1555	900	1035	1125	1440	775	890	965	1240
				(9) 0.148"x1.5"	1170	1345	1460	1765	1080	1240	1350	1725	930	1065	1160	1485
				(9) 0.148"x3.0"	1170	1345	1460	1765	1080	1240	1350	1725	930	1065	1160	1485
				(9) 0.162"x3.5"	1385	1595	1730	1765	1280	1470	1600	1765	1100	1265	1375	1760
MS27	-		27 5/8	(10) 0.131"x2.5"	1080	1245	1350	1730	1000	1150	1250	1600	860	990	1075	1375
				(10) 0.148"x1.5"	1300	1490	1620	1765	1200	1380	1495	1765	1030	1185	1290	1650
				(10) 0.148"x3.0"	1300	1490	1620	1765	1200	1380	1495	1765	1030	1185	1290	1650
				(10) 0.162"x3.5"	1540	1765	1765	1765	1420	1635	1765	1765	1220	1405	1525	1765
MS30	MSTA30		30 5/8	(11) 0.131"x2.5"	1190	1370	1485	1765	1100	1265	1375	1755	945	1085	1180	1515
				(11) 0.148"x1.5"	1425	1640	1765	1765	1320	1515	1645	1765	1135	1305	1415	1765
				(11) 0.148"x3.0"	1425	1640	1765	1765	1320	1515	1645	1765	1135	1305	1415	1765
				(11) 0.162"x3.5"	1695	1765	1765	1765	1565	1765	1765	1765	1345	1545	1680	1765
MS33	-		33 5/8	(12) 0.131"x2.5"	1295	1490	1620	1765	1200	1380	1500	1765	1030	1185	1290	1650
				(12) 0.148"x1.5"	1555	1765	1765	1765	1435	1655	1765	1765	1235	1420	1545	1765
				(12) 0.148"x3.0"	1555	1765	1765	1765	1435	1655	1765	1765	1235	1420	1545	1765
				(12) 0.162"x3.5"	1765	1765	1765	1765	1705	1765	1765	1765	1465	1685	1765	1765
MS36	MSTA36		36 5/8	(13) 0.131"x2.5"	1405	1615	1755	1765	1300	1495	1625	1765	1115	1285	1395	1765
				(13) 0.148"x1.5"	1685	1765	1765	1765	1555	1765	1765	1765	1340	1540	1675	1765
				(13) 0.148"x3.0"	1685	1765	1765	1765	1555	1765	1765	1765	1340	1540	1675	1765
				(13) 0.162"x3.5"	1765	1765	1765	1765	1765	1765	1765	1765	1590	1765	1765	1765
MS39	-		39 5/8	(14) 0.131"x2.5"	1515	1740	1765	1765	1400	1610	1745	1765	1205	1385	1505	1765
				(14) 0.148"x1.5"	1765	1765	1765	1765	1675	1765	1765	1765	1445	1660	1765	1765
				(14) 0.148"x3.0"	1765	1765	1765	1765	1675	1765	1765	1765	1445	1660	1765	1765
				(14) 0.162"x3.5"	1765	1765	1765	1765	1765	1765	1765	1765	1710	1765	1765	1765

NOTES: Product Steel Gauge: 16.


MS 24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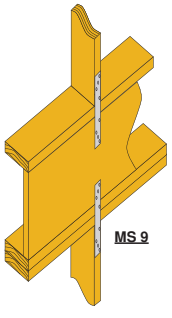
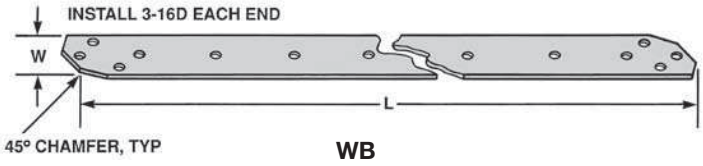

MS 9

WB WBA WALL BRACING

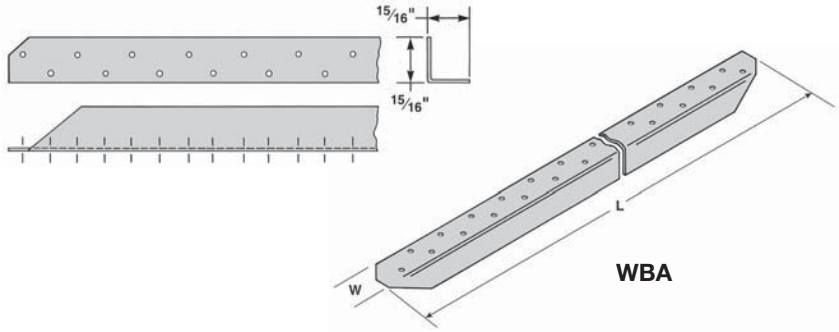
Design Features . . for use on internal or external walls . . a faster and more economical method to prevent racking of walls . . eliminate cutting or "letting in" of wood braces . . installed in pairs, in a V-fashion with different lengths available upon request . . does not serve as a replacement for load-bearing shearwall components.

Material . . 16 and 18 ga. galvanized steel.

Evaluation . . code evaluated for value in tension equal to 1 x 4 let-in bracing.



WB



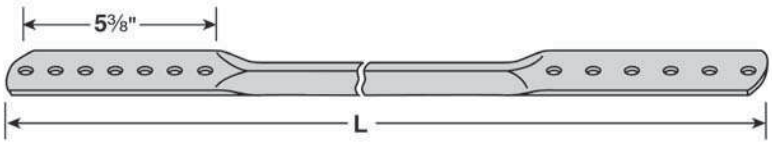
WBA

XB TENSION BRIDGING

Design Features . . provide the builder with an inexpensive, nail-type bridging for truss type wood I-joists. There are nine lengths from which to choose. All have seven nail holes per end, two of which must be used (4-10d).

Material . . XB, 18 ga. galvanized steel.

Special . . other sizes available are the **XB30**, **XB42**, **XB48**, **XB54**, **XB56** and **XB60**.



XB

RCS RETROFIT COIL STRAPS

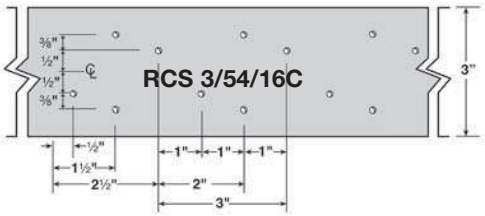
Design Features . . used to secure or wrap existing buildings for seismic upgrade, to tie water heaters to floors and walls and for utility purposes such as hanging pipes from rafters, studs or joists . . packaged in 16" X 16" carton.

Applications . . the **RCS3/40/12** provides a heavy-duty strap, while the **RCS3/52/14** gives you an optional medium-duty strap. All straps can be cut to length. **RCS3/54/16C** nail holes are counter sunk to provide easy installation for 16d-sinkers for lower nailing profile. Triangle nail holes provide optional nailing for the **RCS 3/40/12**, and **RCS 3/52/14**.

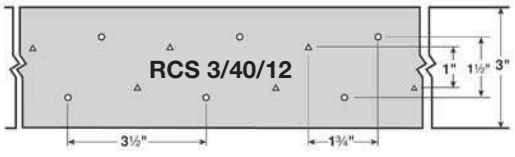
Material . . 22ga., 20ga., 18ga., 16ga., 14ga. and 12 ga. galvanized steel.

Note . . design loads are based on the assumption that one half of the specified number of nails are installed in each of the two members connected.

RCS 150/16
RCS 100/14
RCS 200/18
RCS 250/20
RCS 300/22



RCS 3/54/16C



RCS 3/40/12
RCS 3/52/14

WBA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

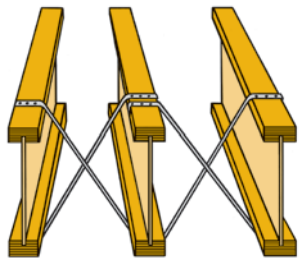
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS		NAIL SCHEDULE
			W	L	
WB10	WB106	16 ga gal	1¼"	9' 5⅝"	1.4 o.c. - 8d
WB12	WB126	16 ga gal	1¼"	11' 3⅜"	1.4 o.c. - 8d
WB14	WB146	16 ga gal	1¼"	14' 3"	1.4 o.c. - 8d
WBA10	CWB108	18 ga gal	13/16"	9' 3"	Each End 2 - 8d
WBA12	CWB126	18 ga gal		11' 3¾"	2 - 8d
WBA14	CWB146	18 ga gal		14' 3"	2 - 8d

WB12

XB

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™
Tension Bridging for I-Joist

JOIST HEIGHT	JOIST SPACING (INCHES)								
	12	16	19.2	24	30	32	36	42	48
9½"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
10"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
11⅞"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
12"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
14"	XB27	XB27	XB27	XB36	XB36	XB42	XB42	XB48	XB54
16"	XB27	XB27	XB30	XB36	XB42	XB42	XB42	XB48	XB54
18"	XB27	XB30	XB30	XB36	XB42	XB42	XB48	XB54	XB56
20"	XB30	XB30	XB36	XB36	XB42	XB42	XB48	XB54	XB56
22"	XB30	XB36	XB36	XB36	XB42	XB42	XB48	XB54	XB56
24"	XB36	XB36	XB36	XB42	XB42	XB48	XB48	XB54	XB56
26"	XB36	XB36	XB36	XB42	XB48	XB48	XB48	XB54	XB60
28"	XB36	XB36	XB42	XB42	XB48	XB48	XB54	XB54	XB60
30"	XB36	XB42	XB42	XB42	XB48	XB48	XB54	XB56	XB60
32"	XB42	XB42	XB42	XB42	XB48	XB48	XB54	XB56	XB60

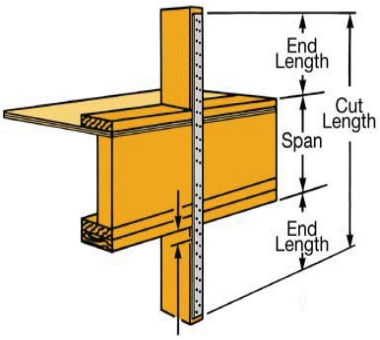


XB36

RCS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS			NAIL SCHEDULE	DESIGN LOAD		NAIL SPACING ON CENTER (IN A ROW)
			TOTAL LENGTH (FEET)	END LENGTH (INCHES)	CUT LENGTH (INCHES)		NORMAL LBS 100%	MAX LBS 133%	
RCS3/40/12	CMST12	12 ga gal	40	39	78 + Span	84-16d	6945	9235	1¾
				89	178 + Span	100-10d			3½
				178	356 + Span	100-10d			7
RCS3/52/14	CMST14	14 ga gal	52½	30	60 + Span	66-16d	4960	6490	1¾
				68	136 + Span	76-10d			3½
				136	272 + Span	76-10d			7
RCS3/54/16C	CMSTC16	16 ga gal	54	23	46 + Span	56-16d Sinkers	3450	4585	1½
				45	90 + Span	56-16d Sinkers			3
RCS100/14	CS14	14 ga gal	100	16	32 + Span	30-10d	1930	2490	2 1/16
RCS150/16	CS16	16 ga gal	150	14	28 + Span	28-8d	1325	1705	2 1/16
				11	22 + Span	22-10d			
RCS200/18	CS18	18 ga gal	200	11	22 + Span	22-8d	1065	1370	2 1/16
				9	18 + Span	18-10d			
RCS250/20	CS20	20 ga gal	250	9	18 + Span	18-8d	865	1030	2 1/16
				7	14 + Span	14-10d			
RCS300/22	CS22	22 ga gal	300	7	14 + Span	14-8d	670	845	2 1/16
				5½	11 + Span	12-10d			



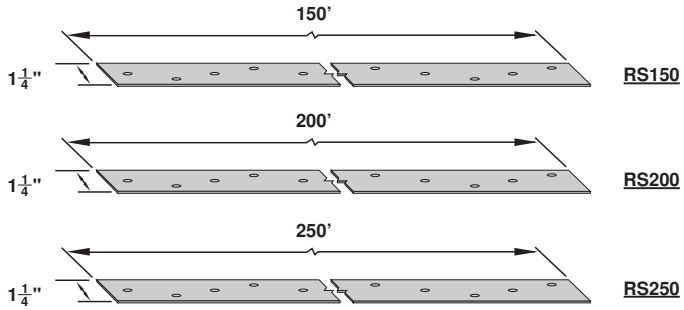
Provides Code-Required Minimum End Distance: ⅞" for Douglas Fir and Larch Using 8d Nails

RS

ROLLED STRAPS

Design Features . . manufactured to resist tension load when attached to solid sawn or structural composite lumber metal plate connected trusses, framing members and wall members. RS Rolled Strapping are $1^{1}/_{4}$" wide with holes punched at $1^{1}/_{4}$" on center, in a staggered pattern. Strapping is manufactured in continuous rolls of 250 feet for 20 gauge, 200 feet for 18 gauge and 150 feet for 16 gauge.

Material . . RS250 is manufactured from mill certified steel coil manufactured to ASTM A653 SS Grade 40 or better, 20 gauge with G90 coating, with a minimum uncoated thickness of steel = 0.0329 in. and Fu = 55 ksi.
RS200 is manufactured from mill certified steel coil manufactured to ASTM A653 SS Grade 50 Class 1 or better, 18 gauge with G90 coating, with a minimum uncoated thickness of steel = 0.0428 in., Fy = 55 ksi and Fu = 65 ksi.
RS150 is manufactured from mill certified steel coil manufactured to ASTM A653 SS Grade 50 Class 1 or better, 16 gauge with G90 coating, with a minimum uncoated thickness of steel = 0.0538 in., Fy = 55 ksi and Fu = 65 ksi.



PRODUCT CODE	REF NO	STRAP DIMENSIONS (IN)		FASTENERS (EACH END)	SOUTHERN PINE (0.55 SPECIFIC GRAVITY)				DOUGLAS FIR-LARCH (0.50 SPECIFIC GRAVITY)				SPRUCE-PINE-FIR (0.42 SPECIFIC GRAVITY)			
					ALLOWABLE UPWARD LOAD (LBS)											
		WIDTH	MIN. LENGTH		LOAD DURATION FACTOR				LOAD DURATION FACTOR				LOAD DURATION FACTOR			
					1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
RS150	CS16	1 1/4	6 1/4	(2) 0.131"x1.5"	215	250	270	345	200	230	250	320	170	200	215	275
				(2) 0.148"x1.5"	260	300	325	415	240	275	300	385	205	235	260	330
				(2) 0.162"x2.5"	310	355	385	495	285	325	355	455	245	280	305	390
			8 3/4	(3) 0.131"x1.5"	325	375	405	520	300	345	375	480	260	295	320	415
				(3) 0.148"x1.5"	390	450	485	625	360	415	450	575	310	355	385	495
				(3) 0.162"x2.5"	460	530	575	740	425	490	535	680	365	420	460	585
			11 1/4	(4) 0.131"x1.5"	430	495	540	690	400	460	500	640	345	395	430	550
				(4) 0.148"x1.5"	520	595	650	830	480	550	600	765	410	475	515	660
				(4) 0.162"x2.5"	615	710	770	985	570	655	710	910	490	560	610	780
			13 3/4	(5) 0.131"x1.5"	540	620	675	865	500	575	625	800	430	495	535	690
				(5) 0.148"x1.5"	650	745	810	1040	600	690	750	960	515	595	645	825
				(5) 0.162"x2.5"	770	885	960	1230	710	815	890	1135	610	700	765	975
			16 1/4	(6) 0.131"x1.5"	650	745	810	1040	600	690	750	960	515	595	645	825
				(6) 0.148"x1.5"	780	895	975	1245	720	825	900	1150	620	710	775	990
				(6) 0.162"x2.5"	925	1060	1155	1480	850	980	1065	1365	735	845	915	1175
			18 3/4	(7) 0.131"x1.5"	755	870	945	1210	700	805	875	1120	600	690	750	965
				(7) 0.148"x1.5"	910	1045	1135	1455	840	965	1050	1340	720	830	900	1155
				(7) 0.162"x2.5"	1080	1240	1345	1725	995	1145	1245	1590	855	985	1070	1370
			21 1/4	(8) 0.131"x1.5"	865	995	1080	1385	800	920	1000	1280	690	790	860	1100
				(8) 0.148"x1.5"	1040	1195	1300	1660	960	1100	1200	1535	825	950	1030	1320
				(8) 0.162"x2.5"	1230	1415	1540	1960	1135	1305	1420	1820	975	1125	1220	1565
			23 3/4	(9) 0.131"x1.5"	975	1120	1215	1555	900	1035	1125	1440	775	890	965	1240
				(9) 0.148"x1.5"	1170	1345	1460	1870	1080	1240	1350	1725	930	1065	1160	1485
				(9) 0.162"x2.5"	1385	1595	1730	1960	1280	1470	1600	1960	1100	1265	1375	1760
			26 1/4	(10) 0.131"x1.5"	1080	1245	1350	1730	1000	1150	1250	1600	860	990	1075	1375
				(10) 0.148"x1.5"	1300	1490	1620	1960	1200	1380	1495	1915	1030	1185	1290	1650
				(10) 0.162"x2.5"	1540	1770	1925	1960	1420	1635	1775	1960	1220	1405	1525	1955
			28 3/4	(11) 0.131"x1.5"	1190	1370	1485	1905	1100	1265	1375	1755	945	1085	1180	1515
				(11) 0.148"x1.5"	1425	1640	1785	1960	1320	1515	1645	1960	1135	1305	1415	1815
				(11) 0.162"x2.5"	1695	1950	1960	1960	1565	1795	1955	1960	1345	1545	1680	1960
			31 1/4	(12) 0.131"x1.5"	1295	1490	1620	1960	1200	1380	1500	1915	1030	1185	1290	1650
				(12) 0.148"x1.5"	1555	1790	1945	1960	1435	1655	1795	1960	1235	1420	1545	1960
				(12) 0.162"x2.5"	1850	1960	1960	1960	1705	1960	1960	1960	1465	1685	1830	1960
			33 3/4	(13) 0.131"x1.5"	1405	1615	1755	1960	1300	1495	1625	1960	1115	1285	1395	1790
				(13) 0.148"x1.5"	1685	1940	1960	1960	1555	1790	1945	1960	1340	1540	1675	1960
				(13) 0.162"x2.5"	1960	1960	1960	1960	1845	1960	1960	1960	1590	1825	1960	1960
			36 1/4	(14) 0.131"x1.5"	1515	1740	1890	1960	1400	1610	1745	1960	1205	1385	1505	1925
				(14) 0.148"x1.5"	1815	1960	1960	1960	1675	1930	1960	1960	1445	1660	1805	1960
				(14) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1710	1960	1960	1960
			38 3/4	(15) 0.131"x1.5"	1620	1865	1960	1960	1500	1720	1870	1960	1290	1485	1610	1960
				(15) 0.148"x1.5"	1945	1960	1960	1960	1795	1960	1960	1960	1545	1780	1930	1960
				(15) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1830	1960	1960	1960
			41 1/4	(16) 0.131"x1.5"	1730	1960	1960	1960	1600	1835	1960	1960	1375	1580	1720	1960
				(16) 0.148"x1.5"	1960	1960	1960	1960	1915	1960	1960	1960	1650	1895	1960	1960
				(16) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1955	1960	1960	1960
			43 3/4	(17) 0.131"x1.5"	1840	1960	1960	1960	1695	1950	1960	1960	1460	1680	1825	1960
				(17) 0.148"x1.5"	1960	1960	1960	1960	1960	1960	1960	1960	1750	1960	1960	1960
				(17) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960
			46 1/4	(18) 0.131"x1.5"	1945	1960	1960	1960	1795	1960	1960	1960	1545	1780	1935	1960
				(18) 0.148"x1.5"	1960	1960	1960	1960	1960	1960	1960	1960	1855	1960	1960	1960
				(18) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960
			48 3/4	(19) 0.131"x1.5"	1960	1960	1960	1960	1895	1960	1960	1960	1635	1880	1960	1960
				(19) 0.148"x1.5"	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960
				(19) 0.162"x2.5"	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960	1960

NOTES: Product Steel Gauge: 16
Overall Length of Rolled Strap (ft): 150

PRODUCT CODE	REF NO	STRAP DIMENSIONS (IN)		FASTENERS (EACH END)	SOUTHERN PINE (0.55 SPECIFIC GRAVITY)				DOUGLAS FIR-LARCH (0.50 SPECIFIC GRAVITY)				SPRUCE-PINE-FIR (0.42 SPECIFIC GRAVITY)			
					ALLOWABLE UPWARD LOAD (LBS)											
		WIDTH	MIN. LENGTH		LOAD DURATION FACTOR				LOAD DURATION FACTOR				LOAD DURATION FACTOR			
					1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
RS200	CS18	1 1/4	6 1/4	(2) 0.131"x1.5"	210	245	265	340	195	225	245	310	165	190	210	270
				(2) 0.148"x1.5"	255	290	320	405	235	270	295	375	200	230	250	320
				(2) 0.162"x2.5"	305	350	380	485	280	320	350	445	240	275	300	385
			8 3/4	(3) 0.131"x1.5"	315	365	395	505	290	335	365	465	250	290	315	400
				(3) 0.148"x1.5"	380	440	475	610	350	405	440	560	300	345	375	485
				(3) 0.162"x2.5"	455	520	570	725	420	480	525	670	360	415	450	575
			11 1/4	(4) 0.131"x1.5"	420	485	525	675	390	450	485	625	335	385	420	535
				(4) 0.148"x1.5"	510	585	635	815	470	540	585	750	405	465	505	645
				(4) 0.162"x2.5"	605	695	755	970	560	640	700	895	480	550	600	765
			13 3/4	(5) 0.131"x1.5"	525	605	660	845	485	560	610	780	420	480	525	670
				(5) 0.148"x1.5"	635	730	795	1015	585	675	730	935	505	580	630	805
				(5) 0.162"x2.5"	755	870	945	1210	700	805	870	1115	600	690	750	960
			16 1/4	(6) 0.131"x1.5"	635	730	790	1015	585	670	730	935	500	575	625	805
				(6) 0.148"x1.5"	760	875	955	1220	705	810	880	1125	605	695	755	965
				(6) 0.162"x2.5"	910	1045	1135	1455	835	965	1045	1340	720	825	900	1150
			18 3/4	(7) 0.131"x1.5"	740	850	925	1180	680	785	850	1090	585	675	730	935
				(7) 0.148"x1.5"	890	1025	1110	1425	820	945	1025	1310	705	810	880	1125
				(7) 0.162"x2.5"	1060	1220	1325	1560	975	1125	1220	1560	840	965	1050	1340
			21 1/4	(8) 0.131"x1.5"	845	970	1055	1350	780	895	975	1245	670	770	835	1070
				(8) 0.148"x1.5"	1015	1170	1270	1560	935	1080	1170	1500	805	925	1005	1290
				(8) 0.162"x2.5"	1210	1395	1515	1560	1115	1285	1395	1560	960	1100	1200	1535
			23 3/4	(9) 0.131"x1.5"	950	1090	1185	1520	875	1005	1095	1400	750	865	940	1205
				(9) 0.148"x1.5"	1145	1315	1430	1560	1055	1215	1320	1560	905	1040	1130	1450
				(9) 0.162"x2.5"	1365	1560	1560	1560	1255	1445	1560	1560	1080	1240	1350	1560
			26 1/4	(10) 0.131"x1.5"	1055	1215	1320	1560	975	1120	1215	1555	835	960	1045	1340
				(10) 0.148"x1.5"	1270	1460	1560	1560	1170	1345	1465	1560	1005	1155	1260	1560
				(10) 0.162"x2.5"	1515	1560	1560	1560	1395	1560	1560	1560	1200	1380	1495	1560
			28 3/4	(11) 0.131"x1.5"	1160	1335	1450	1560	1070	1230	1340	1560	920	1060	1150	1470
				(11) 0.148"x1.5"	1400	1560	1560	1560	1290	1480	1560	1560	1105	1275	1385	1560
				(11) 0.162"x2.5"	1560	1560	1560	1560	1535	1560	1560	1560	1320	1515	1560	1560
			31 1/4	(12) 0.131"x1.5"	1265	1455	1560	1560	1170	1345	1460	1560	1005	1155	1255	1560
				(12) 0.148"x1.5"	1525	1560	1560	1560	1405	1560	1560	1560	1210	1390	1510	1560
				(12) 0.162"x2.5"	1560	1560	1560	1560	1560	1560	1560	1560	1435	1560	1560	1560
			33 3/4	(13) 0.131"x1.5"	1370	1560	1560	1560	1265	1455	1560	1560	1085	1250	1360	1560
				(13) 0.148"x1.5"	1560	1560	1560	1560	1525	1560	1560	1560	1310	1505	1560	1560
				(13) 0.162"x2.5"	1560	1560	1560	1560	1560	1560	1560	1560	1555	1560	1560	1560
			36 1/4	(14) 0.131"x1.5"	1475	1560	1560	1560	1360	1560	1560	1560	1170	1345	1465	1560
				(14) 0.148"x1.5"	1560	1560	1560	1560	1560	1560	1560	1560	1410	1560	1560	1560
				(14) 0.162"x2.5"	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560
			38 3/4	(15) 0.131"x1.5"	1560	1560	1560	1560	1460	1560	1560	1560	1255	1440	1560	1560
				(15) 0.148"x1.5"	1560	1560	1560	1560	1560	1560	1560	1560	1510	1560	1560	1560
				(15) 0.162"x2.5"	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560
			41 1/4	(16) 0.131"x1.5"	1560	1560	1560	1560	1555	1560	1560	1560	1340	1540	1560	1560
				(16) 0.148"x1.5"	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560
				(16) 0.162"x2.5"	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560	1560

NOTES: Product Steel Gauge: 18
Overall Length of Rolled Strap (ft): 200

PRODUCT CODE	REF NO	STRAP DIMENSIONS (IN)		FASTENERS (EACH END)	SOUTHERN PINE (0.55 SPECIFIC GRAVITY)				DOUGLAS FIR-LARCH (0.50 SPECIFIC GRAVITY)				SPRUCE-PINE-FIR (0.42 SPECIFIC GRAVITY)			
					ALLOWABLE UPWARD LOAD (LBS)											
		WIDTH	MIN. LENGTH		LOAD DURATION FACTOR				LOAD DURATION FACTOR				LOAD DURATION FACTOR			
					1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
RS250	CS20	1 1/4	6 1/4	(2) 0.131"x1.5"	205	235	255	330	190	220	235	305	165	185	205	260
				(2) 0.148"x1.5"	250	285	310	400	230	265	285	365	195	225	245	315
				(2) 0.162"x2.5"	300	340	370	475	275	315	345	440	235	270	295	375
			8 3/4	(3) 0.131"x1.5"	310	355	385	495	285	325	355	455	245	280	305	390
				(3) 0.148"x1.5"	375	430	465	595	345	395	430	550	295	340	370	470
				(3) 0.162"x2.5"	445	515	560	715	410	475	515	660	355	405	440	565
			11 1/4	(4) 0.131"x1.5"	410	475	515	660	380	435	475	605	325	375	405	520
				(4) 0.148"x1.5"	495	570	620	795	460	525	575	735	395	450	490	630
				(4) 0.162"x2.5"	595	685	745	950	550	630	685	875	470	540	590	750
			13 3/4	(5) 0.131"x1.5"	515	590	645	825	475	545	595	760	405	470	510	650
				(5) 0.148"x1.5"	620	715	775	995	575	660	715	915	490	565	615	785
				(5) 0.162"x2.5"	745	855	930	1015	685	790	855	1015	590	675	735	940
			16 1/4	(6) 0.131"x1.5"	615	710	770	990	570	655	710	910	490	560	610	780
				(6) 0.148"x1.5"	745	860	935	1015	690	790	860	1015	590	680	735	945
				(6) 0.162"x2.5"	895	1015	1015	1015	820	945	1015	1015	705	810	880	1015
			18 3/4	(7) 0.131"x1.5"	720	830	900	1015	665	765	830	1015	570	655	710	910
				(7) 0.148"x1.5"	870	1000	1015	1015	800	925	1005	1015	690	790	860	1015
				(7) 0.162"x2.5"	1015	1015	1015	1015	960	1015	1015	1015	825	945	1015	1015
			21 1/4	(8) 0.131"x1.5"	825	945	1015	1015	760	870	950	1015	650	750	815	1015
				(8) 0.148"x1.5"	995	1015	1015	1015	915	1015	1015	1015	785	905	985	1015
				(8) 0.162"x2.5"	1015	1015	1015	1015	1015	1015	1015	1015	940	1015	1015	1015
			23 3/4	(9) 0.131"x1.5"	925	1015	1015	1015	855	980	1015	1015	735	840	915	1015
				(9) 0.148"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	885	1015	1015	1015
				(9) 0.162"x2.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
			26 1/4	(10) 0.131"x1.5"	1015	1015	1015	1015	950	1015	1015	1015	815	935	1015	1015
				(10) 0.148"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	985	1015	1015	1015
				(10) 0.162"x2.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
			28 3/4	(11) 0.131"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	895	1015	1015	1015
				(11) 0.148"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
				(11) 0.162"x2.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
			31 1/4	(12) 0.131"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	975	1015	1015	1015
				(12) 0.148"x1.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015
				(12) 0.162"x2.5"	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015

NOTES: Product Steel Gauge: 20
Overall Length of Rolled Strap (ft): 250

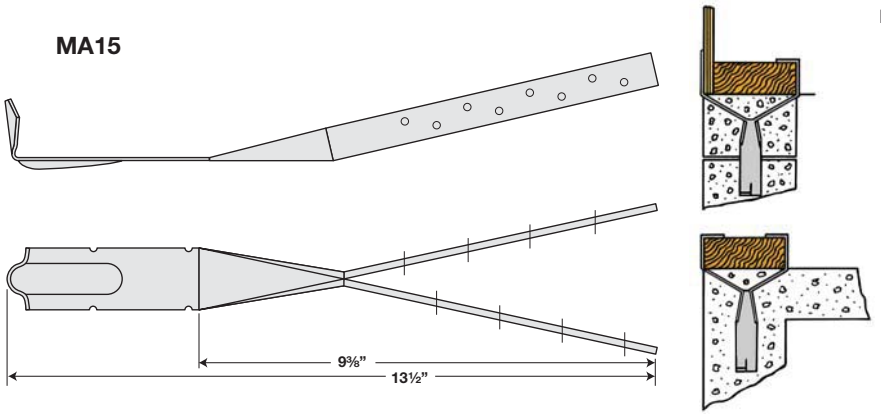
MA

MUDSILL ANCHORS

Design Features . . provide a faster, more economical and secure method for anchoring wood framing to masonry or concrete. MAs replace old-fashioned foundation bolts and nuts with a precision-formed anchor that can be pre-nailed to sill (for setting into screeded concrete) or positioned in concrete for easy addition of sill later. Complete flexibility is also provided by bendable top arms that can fit 2 x 4, 2 x 6 sills, or bent out of the way during construction. Design of anchors eliminates any movement due to shrinkage.

Not Designed for . . installation in slabs poured over concrete block foundation walls or use where a horizontal cold joint exists between the slab and the footing or the foundation beneath it.

Material . . 18 ga. galvanized steel.

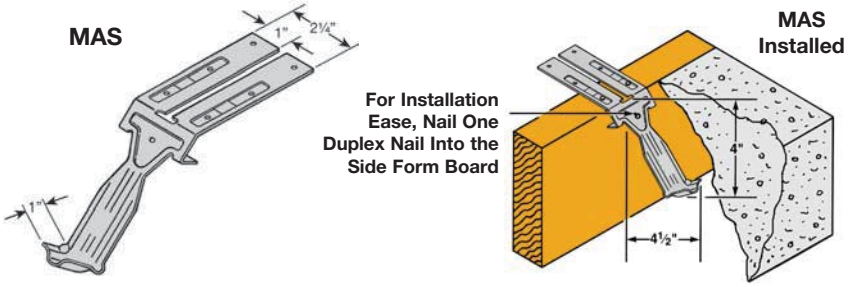


MAS

MUDSILL ANCHORS SINGLESIDE

Design Features . . install before pouring the concrete by nailing to the form or after the pour by inserting the **MAS** into the concrete. There is fast and simple nail attachment. Only six code-spaced nails are needed to drive into to the mudsill or directly to the stud (see **MA** above for more information).

Material . . 16 ga. galvanized steel.



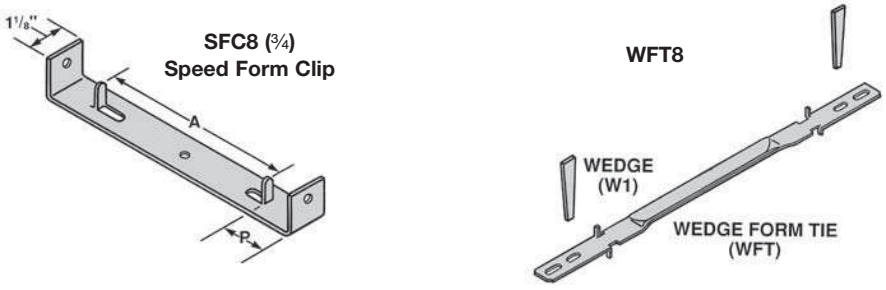
SFC
WFT
W

SPEED FORM CLIPS/ WEDGE FORM TIES

Design Features . . rigid, die-form design to assure a straight, true concrete wall without bulge or loss of concrete . . provide a faster form erection without nails (not recommended for use on walls over 4 feet high) . . the inside slot is for 1x lumber, the outside slot is for 2x lumber.

Material . . WFT, 18 ga. galvanized steel; **SFC**, 11 ga. steel.

Wedge . . 3½" x 14 ga. galvanized steel.



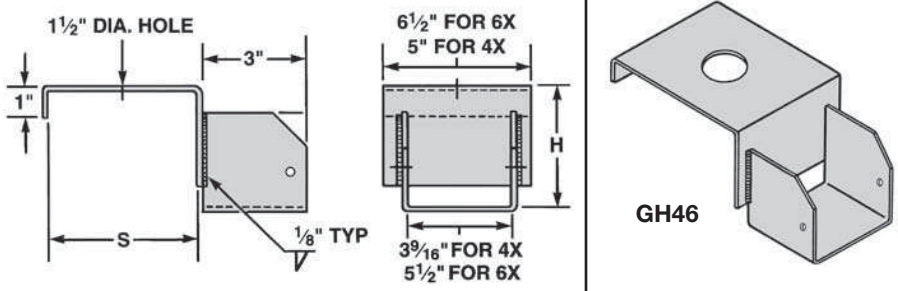
GH
GHD

GIRDER HANGERS

Design Features . . provide sturdy support for floor girder beams using the concrete foundation wall as the supporting element . . eliminate need for pockets or inserts in the foundation wall . . no pier at the foundation wall is needed . . a 1½" hole is provided in the top for a foundation bolt (not required for a design load) . . also available for 3x mudsill application. The girder hanger can be ordered for skewed conditions. H = girder height mudsill thickness.

Material . . 12 ga. steel.

Finish . . *SUPERSPEED* gray paint.

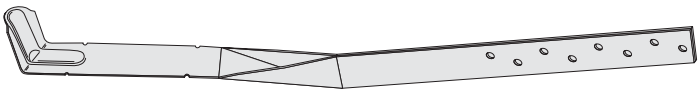


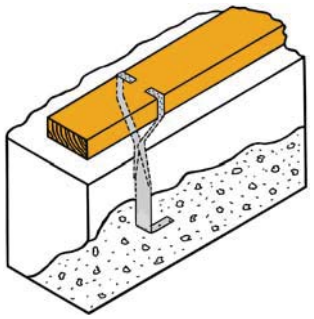
MA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	PLATE MATERIAL	PLATE SIZE	DIMENSIONS (INCHES) L	MAX SPACING (IN FEET)	NAIL SCHEDULE MUDSILL TOP	NAIL SCHEDULE MUDSILL SIDE	DESIGN LOAD PARALLEL TO PLATE LBS	DESIGN LOAD PERP TO PLATE LBS	DESIGN LOAD UPWARD TENSION LBS
MA15	MAB	18 ga gal	Pressure Treated Coast Region Douglas Fir, Larch or Southern Pine	2 x 4	13½	3.25	4-10d x 1½	2-10d x 1½	510	500	570
				2 x 6	13½	3.25	4-10d x 1½	2-10d x 1½	510	500	570
			Foundation Grade Redwood	2 x 4	13½	3.25	4-10d x 1½	2-10d x 1½	410	410	455
				2 x 6	13½	3.25	4-10d x 1½	2-10d x 1½	410	410	455

MA15

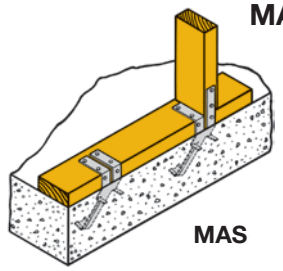




MAS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	PLATE MATERIAL	PLATE SIZE	MAX SPACING (IN FEET)	NAIL SCHEDULE MUDSILL TOP	NAIL SCHEDULE MUDSILL SIDE	DESIGN LOAD PARALLEL TO PLATE LBS	DESIGN LOAD PERP TO PLATE LBS	DESIGN LOAD UPWARD TENSION LBS
MAS	MAS	16 ga gal	Pressure Treated Coast Region Douglas Fir, Larch or Southern Pine	2 x 4	4.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 6	4.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 8	3.5	2-10d x 1½	2-10d x 1½	720	940	990
			Foundation Grade Redwood	2 x 4	3.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 6	3.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 8	2.5	2-10d x 1½	2-10d x 1½	720	940	990



MAS

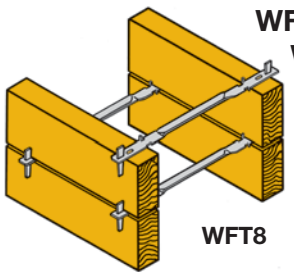
SFC WFT W

. . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	MATERIAL	DIMENSIONS (INCHES) A	P	P	P	P
SFC6	11 ga	6	¾	1⅛	1⁹⁄₁₆	Specify
SFC8	11 ga	8	¾	1⅛	1⁹⁄₁₆	Specify
SFC10	11 ga	10	¾	1⅛	1⁹⁄₁₆	Specify
SFC12	11 ga	12	¾	1⅛	1⁹⁄₁₆	Specify
SFC14	11 ga	14	¾	1⅛	1⁹⁄₁₆	Specify
SFC16	11 ga	16	¾	1⅛	1⁹⁄₁₆	Specify

. . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	SIZE (INCHES)
WFT6	WT6	18 ga gal	6
WFT8	WT8	18 ga gal	8
WFT10	WT10	18 ga gal	10
WFT12	WT12	18 ga gal	12
W1	W1	14 ga gal	3.5

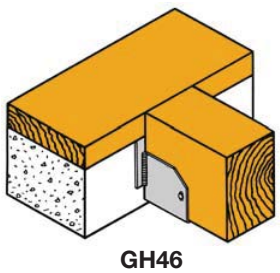


WFT8

GH GHD

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	GIRDER SIZE	MATERIAL	DIMENSIONS (INCHES) 2X PLATE H	3X PLATE H	S	NAIL SCHEDULE	DESIGN LOAD (LBS)
GH46	GH46	4 x 6	12 ga	4	3	6	4-16d	3170
GH46-8	GH46-8	4 x 6	12 ga	4	3	8	4-16d	3170
GH48	GH48	4 x 8	12 ga	6	5	6	4-16d	3170
GH48-8	GH48-8	4 x 8	12 ga	6	5	8	4-16d	3170
GH66	GH66	6 x 6	12 ga	4	3	6	4-16d	3170
GH66-8	GH66-8	6 x 6	12 ga	4	3	8	4-16d	3170
GH68	GH68	6 x 8	12 ga	6	5	6	4-16d	3170
GH68-8	GH68-8	6 x 8	12 ga	6	5	8	4-16d	3170



GH46

RETROFIT CONNECTORS

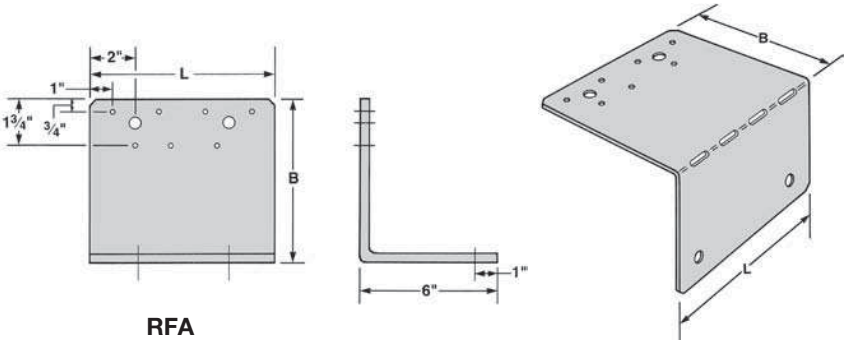
RFA

RETROFIT FOUNDATION ANGLES

Design Features . . eliminates vertical drilling into the mudsill for an anchor bolt that is to be used in a retrofit application. The **RFA** just needs to be nailed to the mudsill for retrofit needs or standards. The **RFA** must not be used more than 1 foot from the end of the mudsill, maximum spacing then is 2½ feet on-center.

Material . . 12 ga. galvanized steel.

Special . . four sizes to fit 6 inch and 8 inch mudsills . . two regular sizes and two sizes for extra heavy-duty applications . . slotted bending holes are provided for conditions where the foundation does not line-up to the joists.



RFA

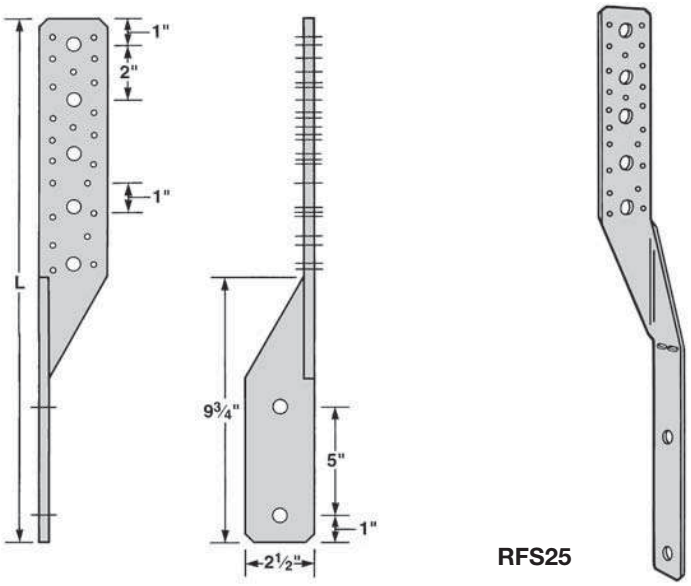
RFP RFS

RETROFIT FOUNDATION PLATES/STRAPS

Design Features . . the **RFS** provides the builder with either nail or bolt holes for stud or floor joist connections. The 9⁄16" holes in the lower flange are for ½" retrofit bolts used to connect the **RFS** to concrete foundation walls. The **RFP** provides lateral load resistance by connecting the mudsill to the foundation.

Material . . 12 ga. and 7 ga. galvanized steel.

Special . . slotted bending holes are provided for conditions where the foundation does not line-up to the joists. The foundation straps are designed especially for true anchorage alignment to studs or floor joists by nailing; then bolting into concrete walls or foundations. A shim should be used if space between the plate and the sill is more than 3⁄16" but less than 1½". If the space is greater, use the **RFA** series.



RFS25

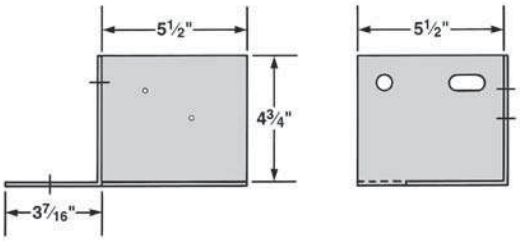
RPA

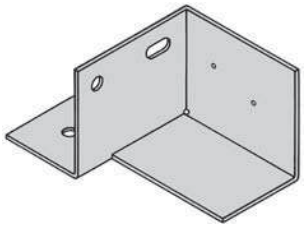
RETROFIT POST ANCHORS

Design Features . . allows exact column placement after the concrete has been set. The **RPA66** is used for either new or retrofit conditions with either surfaced or rough 6xs. The **RPA66** is installed in pairs.

Material . . 10 ga. galvanized steel.

Special . . two 16d nail holes are to be used for placement while drilling bolt holes. The **RPA66** should not be used for applications such as fences.





RPA66

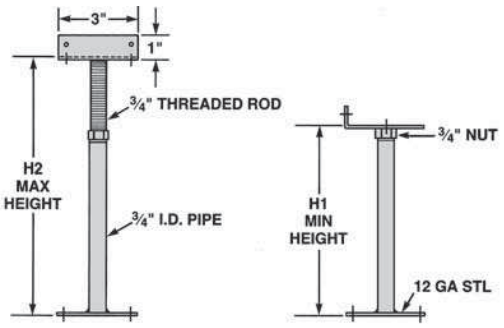
FJ

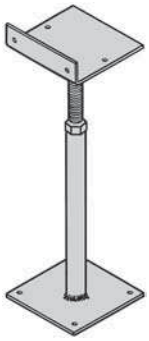
FLOOR JACKS

Design Features . . provide precise height and leveling for floor beams from 5" to 21" with infinitely adjustable settings within this range for a perfect fit. The standard design is welded 12 ga. steel.

Material . . Seat – 12 ga. steel, ¾" threaded steel rod.

- Do not use **FJ**s for dynamic jacking of structures, such as houses.



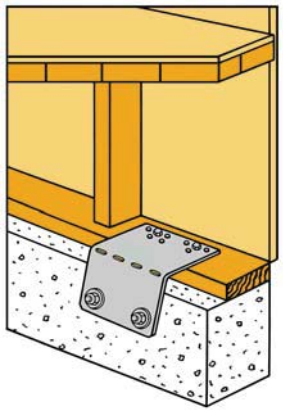


FJ1318

RFA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

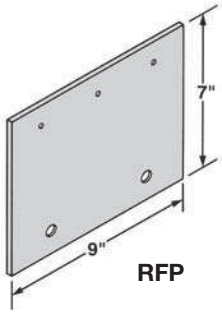
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL & BOLT SCHEDULE		DESIGN LOAD (LBS)		
					ANCHOR BOLTS (INCHE)	PLATE	PARALLEL TO PLATE	PERPENDICULAR TO PLATE	
			L	B				INTO PLATE	AWAY FROM PLATE
RFA86	FA6	12 ga gal	8	5	2-½	7-10d x 1½	725	725	725
RFA88	FA8	12 ga gal	8	7	2-½	7-10d x 1½	725	725	725
RFA136	HFA6	12 ga gal	13	5	3-½	11-10d x 1½	1145	1145	1145
RFA138	HFA8	12 ga gal	13	7	3-½	11-10d x 1½	1145	1145	1145



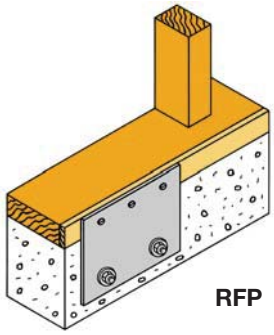
RFP
RFS

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

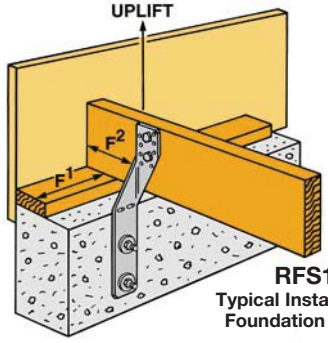
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (LENGTH INCHES)	NAIL & BOLT SCHEDULE		DESIGN LOAD (LBS)			
				ANCHOR BOLT (INCH)	STUD JOIST	NAILS (UPLIFT)	BOLT (UPLIFT)	F^1	F^2
RFP	FAP	7 ga gal	9	—	3-¼ x 2½ lag	—	—	960	385
RFS19	FJA	12 ga gal	19½	2-½	8-10d x 1½	1110	760	—	—
RFS25	FSA	12 ga gal	25½	2-½	8-10d x 1½	1110	1110	—	—



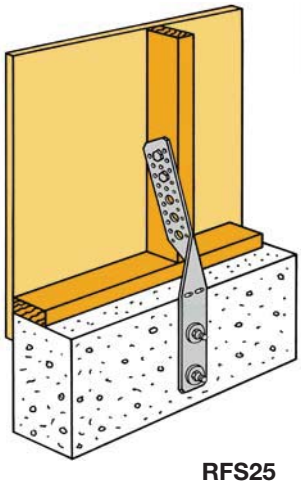
RFP



RFP



RFS19
Typical Installation of Foundation to Joist

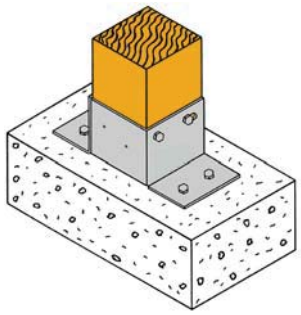


RFS25

RPA

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	BOLT SCHEDULE		DESIGN LOAD (LBS)
		ANCHOR	POST	UPLIFT
RPA66	CBA66	4-¾	2-⅝ MB	3000



FJ

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD (LBS)
		H1	H2	BASE	ANGLE	
FJ57	J57	5	7	4-16d	4-16d	3670
FJ813	J813	8	13	4-16d	4-16d	3670
FJ1116	J1116	11	16	4-16d	4-16d	3670
FJ1318	J1318	13	18	4-16d	4-16d	3670
FJ1621	J1621	16	21	4-16d	4-16d	3670
FJ2126	J2126	21	26	4-16d	4-16d	3670

FJ1318

ORNAMENTAL CONNECTORS

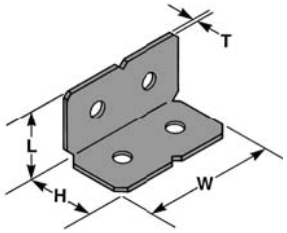
OA
OS
OHS

ANGLES/STRAPS

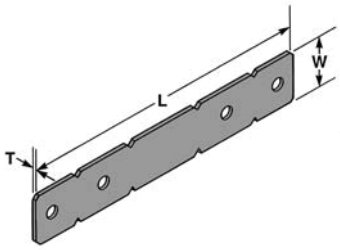
Design Features . . rustic notched ornamental hardware appearance that is highly functional. Provide fast and accurate bolting of two intersecting wood members (reinforcing the intersection joints). Erection nail holes are provided for easy installation.

Material . . 12 ga. and 7 ga. prime quality steel.

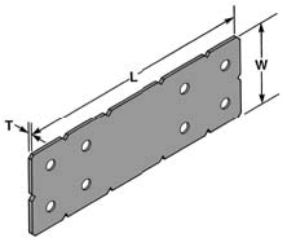
Finish . . ***SUPERSPEED*** black paint.



OA36



OHS



OHS195

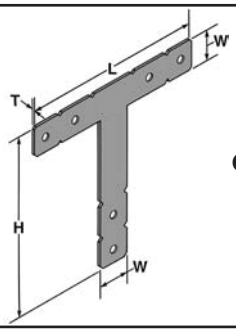
OL
OLH
OT
OTH

"L"/"T" BRACES

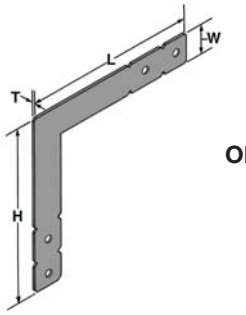
Design Features . . rustic notched ornamental appearance that is highly functional. These inexpensive braces are ideal for gates, patio covers, joining posts and columns to headers and beams and other applications where added reinforcement is needed. Braces may be bolted for heavy-duty applications. Erection nail holes are provided for easy installation.

Material . . 12 ga. and 7 ga. prime quality steel.

Finish . . ***SUPERSPEED*** black paint.



OT/OTH



OL/OLH

OH

HANGERS

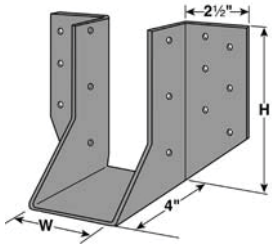
Design Features . . rustic ornamental appearance that is highly functional. The a hangers provide extra margin of safety. The basic design style is for heavy-duty hanger applications where ***SUPERSPEED*** Drive Screws are recommended. Erection nail holes are provided for safety and easy installation.

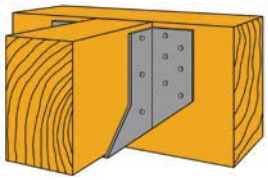
- **Joist Sizes . .** 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs, 3⅛" and 5⅛" glu-lam . . also available on special order for rough beam sizes.

Material . . 12 ga. prime quality steel.

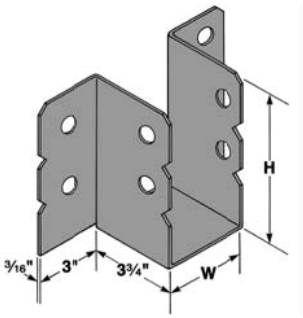
Special . . Ornamental hangers can be manufactured using 3⁄16" steel and ¾" ø machine bolts with notched ornamental appearance.

Finish . . ***SUPERSPEED*** black paint.





OH68 – SDS3



OH610
(Shown with ¾ Ø MB Holes)

OBC
OEBC

BEAM CAPS

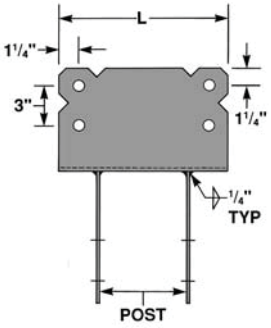
Design Features . . rustic notched ornamental appearance that is highly functional. Four configurations provide complete flexibility – please specify.

(1) **OBC** – Standard ornamental beam caps.
(2) **OEBC** – Ornamental end beam caps.
(3) **OBCO** – Ornamental beam caps for welding to pipe or other column.
(4) **OBCOB** – Ornamental cross beam connectors, the result of back-to-back welding to two beam caps.

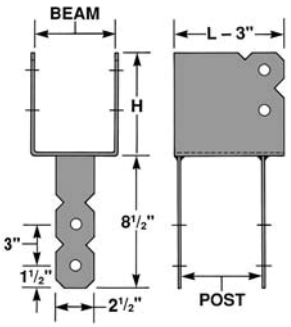
Material . . ¼" prime quality steel.

Finish . . ***SUPERSPEED*** black paint.

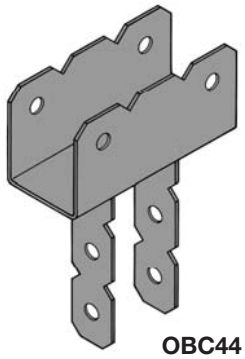
Ordering Information . . Example: **OBC46**, beam is the first number 4 (3 9⁄16"); post is the second number, 6 (5 ½").



Beam Cap



End Beam Cap



OBC44

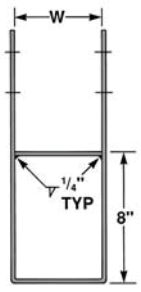
OHA

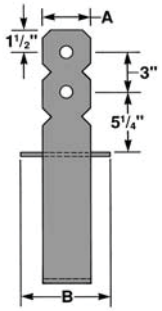
HEAVY ANCHORS

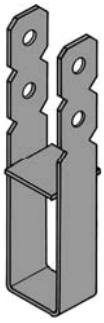
Design Features . . rustic notched ornamental appearance that is highly functional. Accommodates heavy column bases, rough-sawn posts. glu-lam timbers or heavy-duty fence construction where high structural values and durable performance are part of the specifications. Anchors shall be set in position before pouring concrete. Erection nail holes are provided to speed up installation.

Material . . ¼" prime quality steel.

Finish . . ***SUPERSPEED*** black paint.





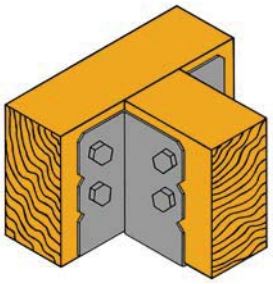


OHA44

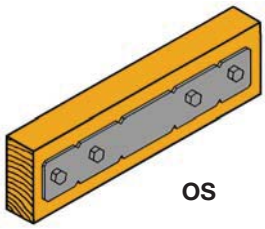
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (T)	DIMENSIONS (INCHES)			BOLT SCHEDULE	DESIGN LOAD (LBS)
			W	H	L		
OA33	OHA33	7 ga	3	3¼	3¼	2-¾ MB	1840
OA36	OHA36	7 ga	6	3¼	3¼	4-¾ MB	3675
OS	OS	12 ga	2½	—	12	4-½ MB	1590
OHS	OHS	7 ga	2½	—	12	4-⅝ MB	1720
OHS135	OHS135	7 ga	6	—	13	4-¾ MB	4550
OHS195	OHS195	7 ga	6	—	19½	8-¾ MB	9100

OA
OS
OHS



OA36

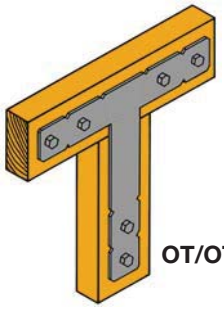


OS

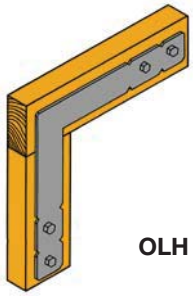
For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL (T)	DIMENSIONS (INCHES)			BOLT SCHEDULE
			W	H	L	
OL	OL	12 ga	2	12	12	4-½ MB
OLH	OHL	7 ga	2½	12	12	4-⅝ MB
OT	OT	12 ga	2	12	12	6-½ MB
OTH	OHT	7 ga	2½	12	12	6-⅝ MB

OL
OLH
OT
OTH



OT/OTH

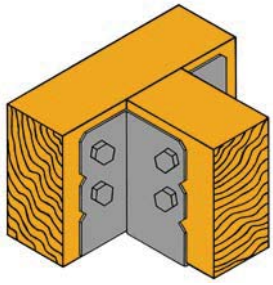


OLH

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		KC® SUPERSPEED® DRIVE SCREWS ¼ x 3		DESIGN LOAD (LBS)			
			W	H	HEADER	JOIST	UPLIFT (133%)	FLOOR (100%)	SNOW (115%)	ROOF (125%)
OH46-SDS3	OHU46-SDS3	4 X 6	3⁹⁄₁₆	5	6	4	1640	1850	2130	2315
OH48-SDS3	OHU48-SDS3	4 X 8	3⁹⁄₁₆	6¾	8	6	2465	2470	2840	3085
OH410-SDS3	OHU410-SDS3	4 X 10	3⁹⁄₁₆	8¾	12	6	2465	3705	4260	4630
OH412-SDS3	OHU412-SDS3	4 X 12	3⁹⁄₁₆	10¾	12	8	3285	3705	4260	4630
OH414-SDS3	OHU414-SDS3	4 X 14	3⁹⁄₁₆	12¾	14	10	4105	4320	4970	5400
OH66-SDS3	OHU66-SDS3	6 X 6	5½	5	6	4	1640	1850	2130	2315
OH68-SDS3	OHU68-SDS3	6 X 8	5½	7	12	6	2465	3705	4260	4630
OH610-SDS3	OHU610-SDS3	6 X 10	5½	9	14	6	2465	4320	4970	5400
OH612-SDS3	OHU612-SDS3	6 X 12	5½	11	16	8	3285	4940	5680	6175
OH614-SDS3	OHU614-SDS3	6 X 14	5½	13	18	10	4105	5555	6390	6945

OH

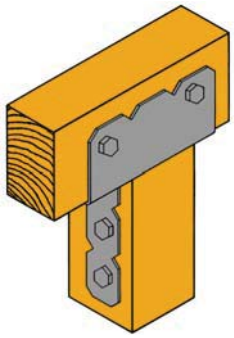


OH610
(Shown with ¾ Ø MB)

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	BEAM WIDTH	POST SIZE (INCHES)	MATERIALS (INCHES)	DIMENSIONS (INCHES)		BOLT SCHEDULE		DESIGN LOAD	
					H	L	BEAM BOLTS	POSTS BOLTS (INCHES)	UPLIFT LBS	DOWN (LBS)
OBC44	OCC44	3⁹⁄₁₆	3⁹⁄₁₆	¼ STL	4½	9	2-¾ x 5 MB	2-¾ x 5 MB	3360	12250
OBC46	OCC46	3⁹⁄₁₆	5½	¼ STL	7½	9	4-¾ x 5 MB	2-¾ x 7 MB	6720	19250
OBC66	OCC66	5½	5½	¼ STL	7½	12	4-¾x 7 MB	2-¾ x 7 MB	9440	30250
OBC68	OCC68	5½	7½	¼ STL	7½	12	4-¾ x 7 MB	2-¾ x 9 MB	9440	37540
OBC88	OCC88	7½	7½	¼ STL	7½	12	4-¾ x 9 MB	2-¾ x 9 MB	9440	37540

OBC
OEBC

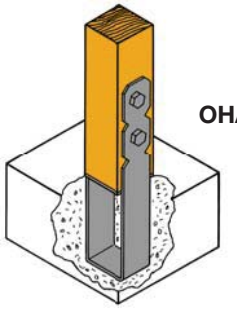


OBC44

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	POST SIZE	MATERIALS (INCHES)	DIMENSIONS (INCHES)			BOLT SCHEDULE	DESIGN LOAD UPLIFT (LBS)
				A	B	W		
OHA44	OCB44	4 x 4	¼ STL	3	3⁹⁄₁₆	3⁹⁄₁₆	2-¾ x 5 MB	5030
OHA46	OCB46	4 x 6	¼ STL	3	5½	3⁹⁄₁₆	2-¾ x 5 MB	5030
OHA48	OCB48	4 x 8	¼ STL	3	7½	3⁹⁄₁₆	2-¾ x 5 MB	5030
OHA66	OCB66	6 x 6	¼ STL	3	5½	5½	2-¾ x 7 MB	5030
OHA68	OCB68	6 x 8	¼ STL	3	7½	5½	2-¾ x 7 MB	5030
OHA88	OCB88	8 x 8	¼ STL	3	7½	7½	2-¾ x 9 MB	7230
OHA810	OCB810	8 x 10	¼ STL	3	9½	7½	2-¾ x 11 MB	7230

OHA



OHA44

SPECIAL AND CUSTOM JOIST HANGERS

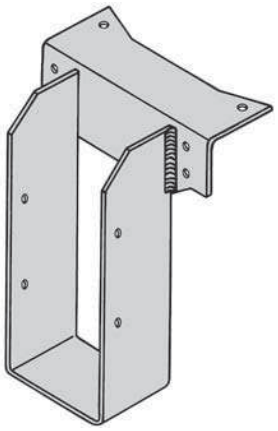
HNP UPLIFT (U)

HAYWARD NAIL PATTERN OR UPLIFT HANGERS

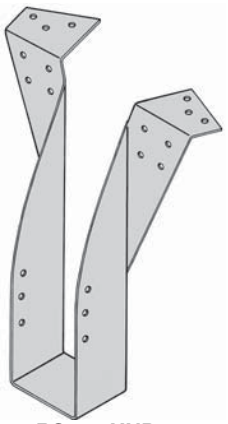
Design Features . . both the **R** or the **RS** series can be modified for the **HNP** uplift . . provides header or face nailing with additional purlin nailing. Recommended for areas that require additional nailing for higher uplift loads. A torsional rotation strap may also be supplied to modify the **R** or the **RS** series hangers and is recommended to counter rotation problems for hangers 18" and deeper. The strap also acts as a stiffener to eliminate buckling in the "U" strap. **HNP** modifications have been tested by independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Loads . . for the **RS4HNP**, see pages 20 and 21; for the **RA4HNP**, see pages 22 and 23.

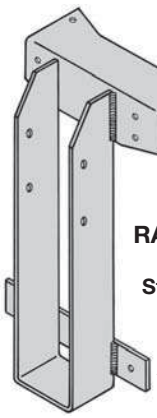
Ordering Information . . to order hangers other than **HNP**, start with stock no. **RH** 3.25/19½, add "U" after standard stock description **RHU** 3.25/19½ for uplift call out.



RA412-HNP
Accepted with 10d Nails or Plywood Nails



RS414-HNP
16d Nails for Both Header and Joist



RAU 3.25/H = 19½"
With Torsional Strap – 10d Nails or Plywood Nails

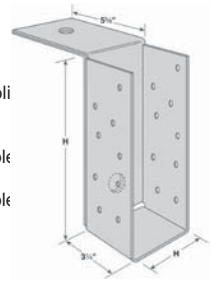
← **Material**
(3/16" x 2" x 7"
¼" x 2½" x 10")

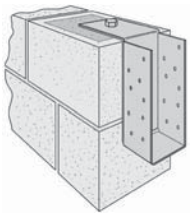
MBHG

MASONRY BEAM HANGERS GALVANIZED

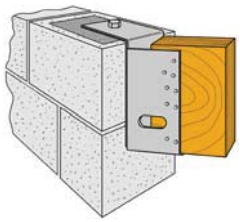
Design Features . . the **MBHG** is a single piece, non-welded connector available for soli sawn, truss and engineered wood products. The only skew for the **MBHG** is a standard 45° either right or left. The maximum allowable download is 3505 lbs and 1585 lbs uplift for height 7.25. For all other models, use the table listed download and uplift.

Material . . 10 ga. galvanized steel.





MBHG
Typical Applications



MBHGR
Skewed Right 45°

PRODUCT CODE	REF NO	FASTENERS			SOLID CONCRETE DESIGN LOADS (LBS)		GROUTED CMU DESIGN LOADS (LBS)	
		HEADER		JOIST	UPLIFT	MAX DOWN LOAD	UPLIFT	MAX DOWN LOAD
		TOP	FACE		(133)		(133)	
MBHG	MBHA	1-ATR ¾ x 8	1-ATR¾ x 8	18-10d	3180	6065	3180	5500
MBHG with H = 7¼	MBHA with H = 7¼	1-ATR ¾ x 8	1-ATR¾ x 4¾	18-10d	2000	4410	2000	4410

MODEL NUMBER	DIMENSIONS	
	W	D
MBHG3.12/9.25	3⅛	9¼
MBHG3.12/11.25	3⅛	11¼
MBHG3.56/7.25	3⁹⁄₁₆	7¼
MBHG3.56/9.25	3⁹⁄₁₆	9¼
MBHG3.56/11.25	3⁹⁄₁₆	11¼
MBHG3.56/11.88	3⁹⁄₁₆	11⅞
MBHG3.56/14	3⁹⁄₁₆	14
MBHG3.56/16	3⁹⁄₁₆	16
MBHG3.56/18	3⁹⁄₁₆	18
MBHG5.50/7.25	5½	7¼
MBHG5.50/9.25	5½	9¼
MBHG5.50/11.25	5½	11¼
MBHG5.50/11.88	5½	11⅞
MBHG5.50/14	5½	14
MBHG5.50/16	5½	16
MBHG5.50/18	5½	18

RM

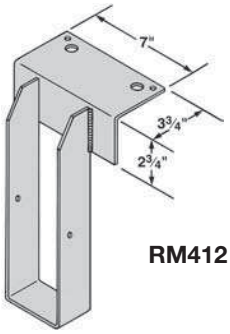
MASONRY HANGERS

Design Features . . duplex nails installed in the top flange act as anchorage into an 8" concrete block or concrete wall construction.

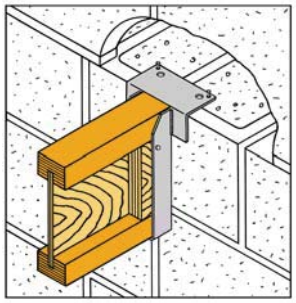
Loads . . generally the same as for the **R** or **RA** hangers (pages 22 and 23).

LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	SKEWED	100
Down	SLOPED	100
Down	COMBINATION	100
Down	OFFSET	50

Finish . . ***SUPERSPEED*** gray paint.

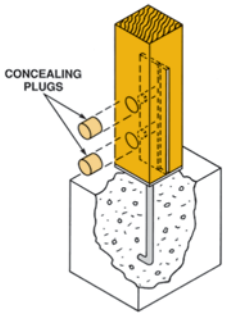


RM412



RM412
Typical Application (Masonry)

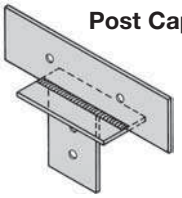
CONCEALED HARDWARE



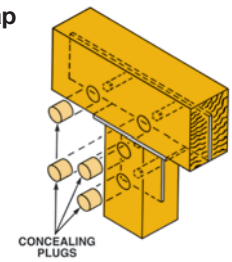
Concrete to Post

Post Anchor (Square Post)

Post Anchor (Round Post)



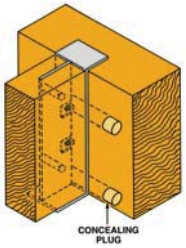
Post Cap



Post to Beam

Purlin Hanger

Purlin to Header



For Added Corrosion Resistance
We will hot-dip galvanize your order for those jobs which call out for that extra protection. In addition, all items are available in stainless steel material.

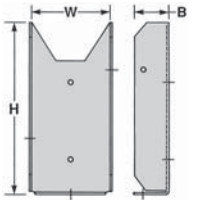
FB — FENCE BRACKETS

Design Features . . provide a secure fit for the connection of 2 x 4 fence boards to post . . easier to plan and build . . holes are sized to #6 wood screws or 8d nails.

Material . . 20 ga. galvanized steel.

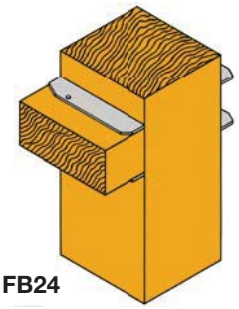
For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	
			B	W	H	JOIST	HEADER
FB24	FB24	20 ga gal	¾	1 9/16	3½	3-8d x 1½	2-8d



FB24

FB



FB24

CFA SBS SBB — CONCRETE FORM ANGLES/ SHELF BRACKETS

Design Features . . your shelf storage can be limited only by size — not weight . . recommended for your heaviest shelf requirements. These are used for window ledge brackets, counter supports and anywhere the shelf bracket must do a complete job.

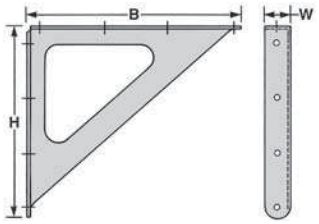
Material . . 18 ga. and 16 ga. galvanized steel.

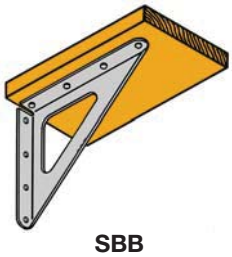
Special . . the **CFA** angle is used for tilt-up perimeter forming. The nail hole placement allows gun nailing while the 18 ga. embossment insures substantial re-use life. The larger **SBB** can be used for garage shelving where heavier loads are required. The **SBB** can also be used as supports for kitchen to outside area pass-through counters.

Installation . . full strength will result from correct attachment to stud, header, or other solid surface with #12 wood screws, 1/4" lag bolts or N20 annular ring shank nails.

For Product Substitutions . . . the ONLY APPROVED EQUAL™

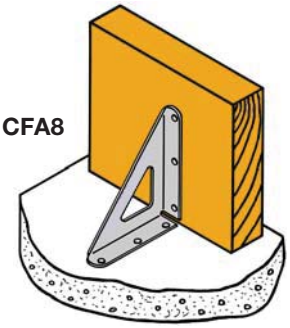
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)			NO. 12 SCREW OR N20	
			B	W	H	STUD	HEADER
CFA8	CFA	18 ga gal	5 3/16	⅞	6 5/16	3	3
SBS8	CF	18 ga gal	6 5/16	⅞	5 3/16	3	3
SBB	SBV	16 ga gal	11	1	9	4	4





SBB

CFA SBS SBB



CFA8

SP — SAFETY PLATES

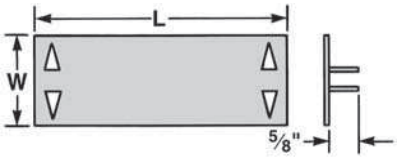
Design Features . . handy, nailless plate protects electrical and water lines that penetrate framing members . . prevent accidental nailing into pipes and wiring.

Material . . 20 ga. and 16 ga. galvanized steel.

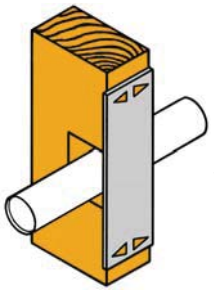
Special . . prongs eliminate the need for nailing. The **SP25-16** is 16 ga. galvanized steel to conform to the National Electrical Code.

For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)	
			W	L
SP25	—	20 ga gal	1¾	5
SP2516	NS2	16 ga gal	1¾	5



SP



SP25

PC — STEEL PLYWOOD/ SHEATHING CLIPS

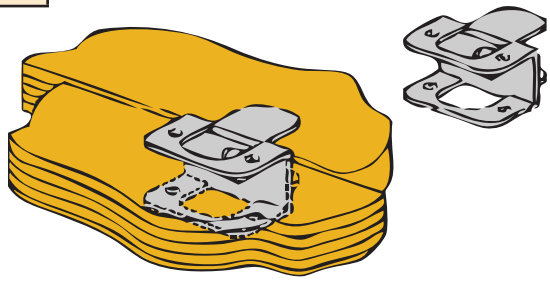
Design Features . . Fast and easy - just slip over the sheathing edge. Eliminates unreliable wood blocking.

Material . . 20 ga. galvanized steel.

For Product Substitutions . . . the ONLY APPROVED EQUAL™

PRODUCT CODE	REF NO	PRODUCT GAUGE
PC38	PSCL 3/8	3/8"
PC716	PSCL 7/16	7/16"
PC1532	PSCL 15/32	15/32"
PC12	PSCL 1/2	1/2"
PC1932	PSCL 19/32	19/32"
PC58	PSCL 5/8	5/8"
PC34	PSCL 3/4	3/4"

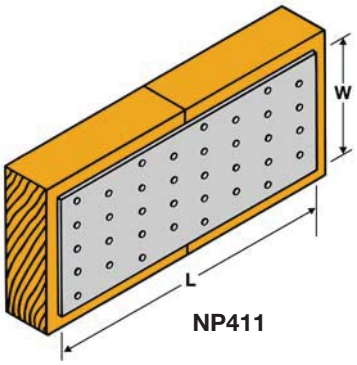
PC



NP NPA NAIL PLATES

Design Features . . designed to provide positive connections at wall intersections and ridge ties when the top plates are cut . . also used for truss repairs or construction and splice applications on wood-to-wood splices. **NPA** nail plates are flanged to provide added support value.

Material . . 20 ga. galvanized steel.



NP411

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE
			W	L	
NP15	TP15	20 ga gal	1 13/16	5	13-8d
NPA37	TPA37	20 ga gal	3½	7	28-8d
NPA39	TPA39	20 ga gal	3½	9	36-8d
NP35	TP35	20 ga gal	3⅛	5	23-8d
NP37	TP37	20 ga gal	3⅛	7	32-8d
NP39	TP39	20 ga gal	3⅛	9	41-8d
NP311	TP311	20 ga gal	3⅛	11	50-8d
NP45	TP45	20 ga gal	4 7/64	5	30-8d
NP47	TP47	20 ga gal	4 7/64	7	42-8d
NP49	TP49	20 ga gal	4 7/64	9	54-8d
NP411	TP411	20 ga gal	4 7/64	11	66-8d
NP57	TP57	20 ga gal	5¾	7	60-8d
NPA57	TPA57	20 ga gal	5	7	40-8d

RPS RETROFIT/REINFORCED PLATE STRAPS

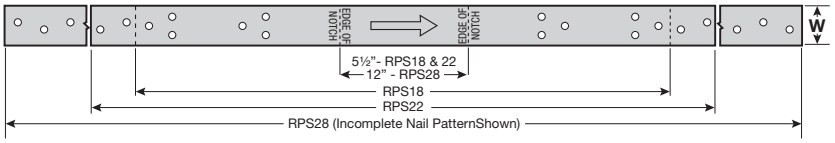
Design Features . . the **RPS** Retrofit/ Reinforced plate straps are installed over framing members which water pipes and electrical wiring must pass through. The **RPS** straps help prevent nails from piercing the water pipes and electrical wiring. The straps can be used on single or double 2X members..

Material . . 16 ga. galvanized steel.

Special . . These straps meet the code requirement of IBC, IRC, UBC, and the City of Los Angeles.

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

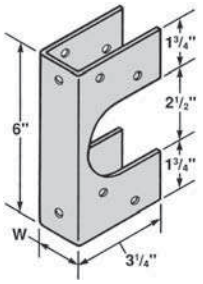
PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE	NOTCH WIDTH	DESIGN LOAD (LBS) (133%)
			W	L			
RPS18	RPS18	16 ga gal	1½	18 5/16	12-16d	≤ 5½"	1160
RPS22	RPS22	16 ga gal	1½	22 5/16	12-16d	≤ 5½"	1160
			1½	22 5/16	16-16d		1565
RPS28	RPS28	16 ga gal	1½	28 5/16	12-16d	≤ 12"	1160
			1½	28 5/16	16-16d		1565



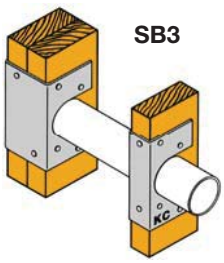
SB STUD BRACES

Design Features . . reinforce rafters, studs and joists that have been drilled or notched during construction for pipes, especially where a large portion of member has been removed. Stud brace (**SB**) can be used for repairing bottom and top plates without interfering with the studs.

Material . . 18 ga. galvanized steel.



SB1.5



SB3

SB1.5

For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

PRODUCT CODE	REF NO	MATERIAL	DIMENSIONS WIDTH (INCHES)	NAIL SCHEDULE	APPLICATION	DESIGN LOAD (LBS)	
						NORMAL	MAX (125%)
SB1.5	SS1.5	18 ga gal	1 9/16	12-10d x 1½	Single	570	570
SB2.5	SS2.5	18 ga gal	2 9/16	12-10d x 1½	Single	570	570
SB3	SS3	18 ga gal	3⅛	12-10d	Double	790	790
SB4.5	SS4.5	18 ga gal	4½	14-10d	Triple	790	790

RR RAFTER RIDGE CONNECTORS

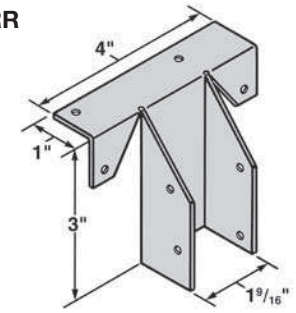
Design Features . . universal all-purpose connector for tying rafters to ridge beams or ledges.

• Joist Sizes . . 2 x 4 to 2 x 6.

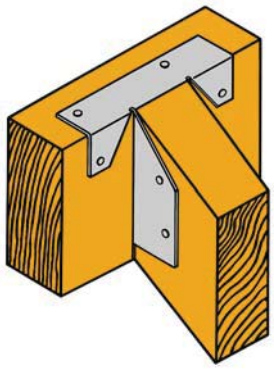
Material . . 18 ga. galvanized steel.

Special . . the top flange can be flattened out and the **RR** can be used to provide a rafter-to-face connector. The connectors can be used with any rafter slope and any rafter width (2" normal width).

RR



RR



For Product Substitutions . . . the *ONLY* APPROVED EQUAL™

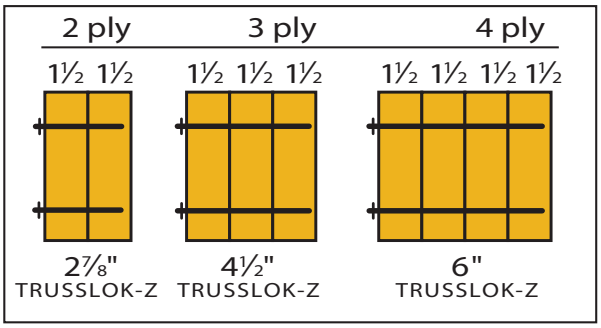
PRODUCT CODE	REF NO	JOIST SIZE	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)		UPLIFT LBS
				HEADER	JOIST	NORMAL	MAX	
RR	RR	2 x 4	18 ga gal	4-10d	4-10d x 1½	375	370	465

TRUSSLOK-Z SCREW INSTALLATION

INSTALLATION PROCEDURE

- Install using a 1/2" corded or 18 volt cordless drill.
- Bring underside of washer head flush with wood surface. Do not countersink.
- Chose correct TrussLok-Z length. See chart below.
- Always refer to truss manufacturer's engineering specifications for fastening patterns.

TrussLok-Z Selection Guide

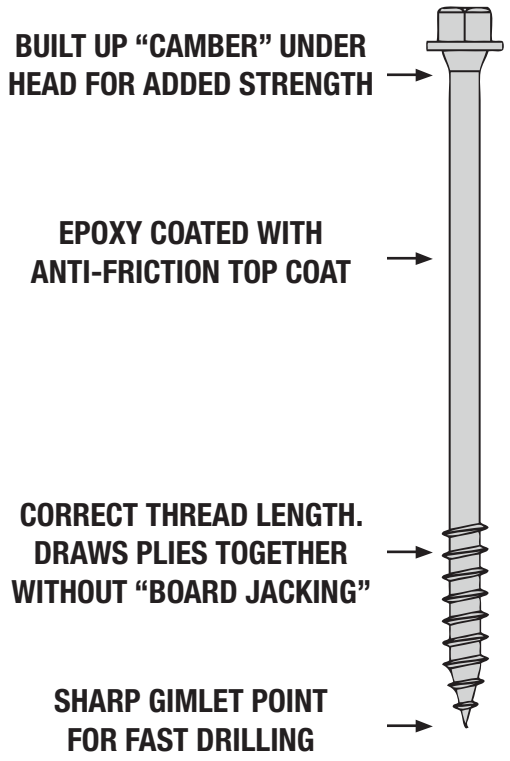


For complete design values and engineering data, available through ICC-ES, see report ESR #1078 at www.icc-es.org.

A Professional Engineer (PE) is responsible for designing all connections, which include end/edge minimums and the number and location of all fasteners to meet local and national building codes as well as wood truss manufactuerer's engineering requirements.

Photograph showing the TrussLok-Z usage should not be used as a reference for fastening patterns.

PRODUCT FEATURES



PART NUMBER	QUANTITY PER BOX	SCREW LENGTH	THREADING
FMTSZ278-50	50	2⅞"	1⅜"
FMTSZ412-50	50	4½"	1⅜"
FMTSZ006-50	50	6"	1⅜"
FMTSZ278-500	500	2⅞"	1⅜"
FMTSZ412-250	250	4½"	1⅜"
FMTSZ006-250	250	6"	1⅜"

Many factors are evaluated before an allowable load is derived for a structural connector. One important factor is the testing. This testing will then be compared with the calculations per the governing code to determine the capacity of the connector when properly installed. The information being presented here is to provide the user and or specifier of structural hardware with the facts regarding testing done by **ITW BCG Hardware** on its structural wood connectors. Those interested should obtain and review a copy of **AC13, ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES**, published by ICC and available on their web site.

There are a number of critical factors to look for when reviewing a test for legitimacy;

1) Typically a test assembly will have **2** wood connectors assembled with the relevant wood members in a symmetrical pattern (**see Figure 1**). This arrangement will require that the load applied by the test machine be divided by **2** to achieve an allowable load for each connector.
2) The **1/8** inch gap between the ends of the member simulating the joist and the sides of the member simulating the header is critical. This gap is important to minimize any friction between joist/hanger and header which would give an unrealistic value to the typical connection. The **1/8** inch gap must be maintained throughout the test duration because as **one side** of the assembly deflects the **opposite side** will contact the header at the bottom giving an **unrealistic** value. **ITW BCG Hardware** will typically use a piece of **1/8** inch **Teflon** between the end of the joist/hanger and the header to both maintain the **1/8** inch gap as well as reduce the friction.
3) Both **ASTM-D1761** and **AC13** specify that the load bearing block used on top of the joist simulator be **1/2** the span of the joist. This block length will insure that the effects of bending in the solid sawn joist member will be reflected on the connectors tested capacity.
4) A critical element to a proper test is the **preload**. **Preloads** are applied to the test assembly to seat the wood and connectors in a realistic manner to simulate actual installed conditions. Current criteria requires that the preload be between **5** and **20** percent of the ultimate load. The **preload** should always be indicated on any properly conducted test. Once the **preload** has been applied the load is removed and the dial indicators are **reset** before loading begins. **Excessive preload** will yield **unrealistic values** for the connector because they will **pre-deflect** the connectors to a point above any **actual field installation**.
5) One of the criteria used to evaluate a connectors capacity, based on testing, is the amount of load required to deflect the joist simulator **1/8** inch in relation to the header simulator. This measurement is usually accomplished with the

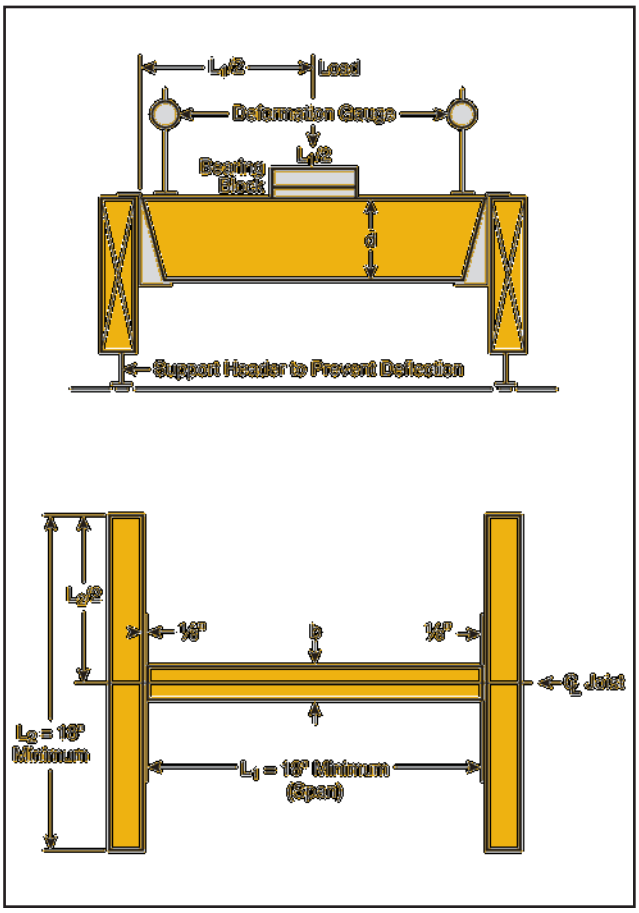
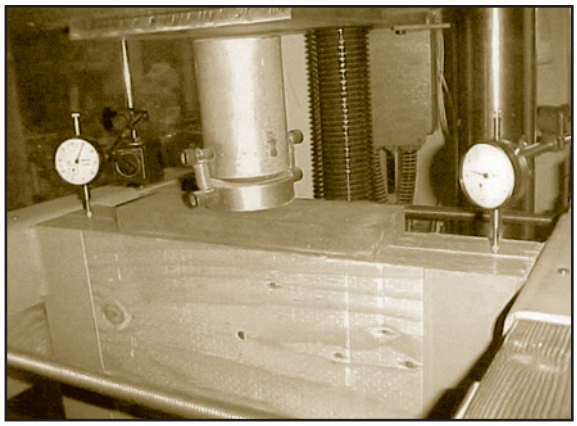
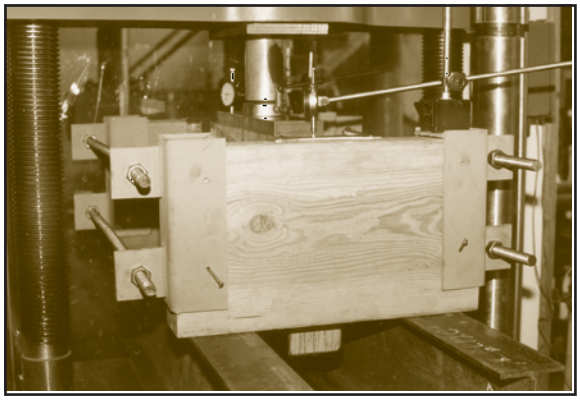


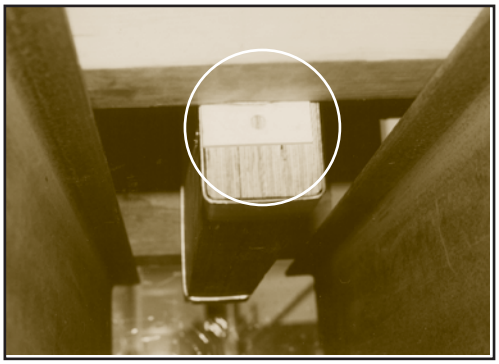
Figure 1



Typical Test Set-Up



Typical Test Set-Up



Test Set-Up
Note ⅛" Teflon Spacer

use of dial indicators accurate to **.001** inch placed at each end of the joist simulator. The dial indicators are generally located on the **top of the joist** to prevent damage in the event of an early failure of the assembly. A number of readings are taken at set intervals to establish a load verses deflection curve. The interval that the readings are taken is usually based on an estimation of the connectors allowable load capacity with **10** readings yielding a reasonable deflection curve. After the **1/8** inch deflection has been established based on the dial indicator readings the indicators are removed and loading continues until the ultimate capacity of the assembly is reached.

6) Once the ultimate capacity of the test assembly has been determined the load will be divided by **2** because there are two connectors per assembly. This load is now the ultimate tested load for each connector. It is a requirement per **AC13** that when **3** tests have been run that no individual test can vary by more than 20% from the average of all **3** tests otherwise **3 additional tests are required**. The lowest, **NOT** the average, ultimate load per connector must be divided by a safety factor of **3** to determine the connectors allowable capacity based on testing.
7) Another very important part of a correctly conducted test is the **failure mode**, what was the significant element of the test assembly that contributed to the ultimate load. In the very large number of tests conducted using **ITW BCG** manufactured product the failure mode can be anything from wood crushing and or splitting, to actual connector failure, or as is very often the case the fasteners, **nails**, **bolts**, **screws**, used to connect the hanger to the wood will break or pull out. As can be seen from this it is very important that the fasteners specified, both size and quantity be used for the connector to perform in a manner consistent with the allowable loads published. It is also very important that **all of the correct fasteners be installed before the connection is subjected to any load**.

As is evident from the preceding discussion and review of the figures the mere presence of a test does not mean that the test has been done correctly or that it necessarily reflects actual field use of a connector. Tests performed on products manufactured by **ITW BCG Hardware** are done by an independent laboratory, accredited by **ICC** evaluation service. **ITW BCG Hardware does no testing at our own facility for the determination of published allowable loads**.

CALIFORNIA ANCHOR DOWN SYSTEM

ADST
ADG
CADS

SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **ADST** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation . . ideal for retrofit applications. Heavy loaded anchor downs **ADG**, Anchor Down Screw Types, are tension products used to connect framing members to either concrete, using a suitable anchor bolt, or span between other framing members using threaded rods. For raised installation **ADG** anchor downs require a nut on both site of load transfer plate.

The new **ADG** heavy duty anchor down combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

ADG 8-SDS3	8KIPS
ADG12-SDS3	10KIPS
ADG15-SDS3	15KIPS

Material . . 12 ga. galvanized steel **. . ADST**
7 ga. galvanized steel **. . ADG**
⅜" x 2½" x 2½" sq. washer hot dipped galvanized **. . ADG15**

Finish . . Galvanized steel

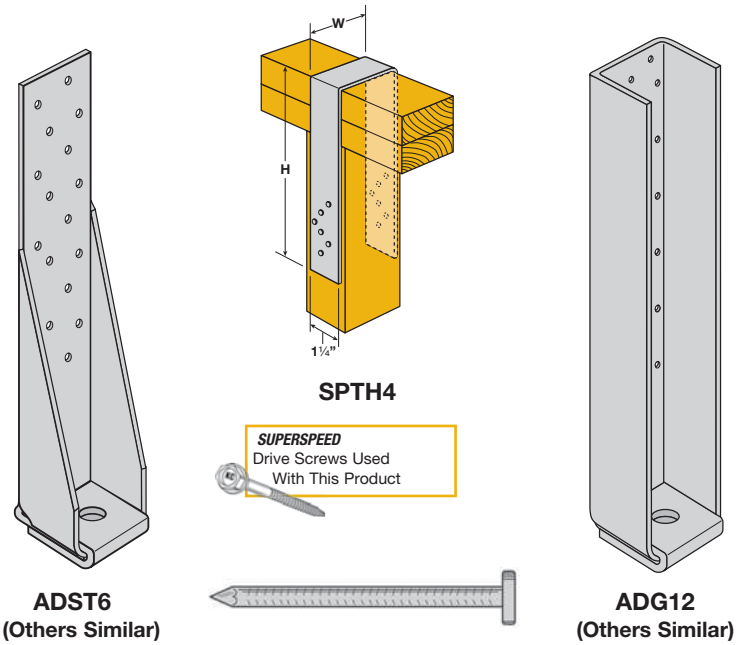
Special . . ***SUPERSPEED*** Drive Screws are best installed with a low speed, or variable speed. ½" drill and a ⅜" hex head driver.

Loads . . design loads are based on capacity of special screws (***SUPERSPEED*** Drive Screws) 1/4" x 3 inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

Special . . ***SUPERSPEED*** Drive Screws are furnished with the **ADG** Anchor Down for ***SUPERSPEED*** labor saving installation.

The **KC-SSTDS** System is designed to provide for a continuous load path for multi-story resistance to overturning and uplift to high winds or earthquake events.

The system utilizes multiple components as well as readily available wood framing members. These products are stocked and thus available for quick turnaround, no more expensive delays waiting for special hardware to bexpanufactured.



ADST6
(Others Similar)

SPTH4

ADG12
(Others Similar)

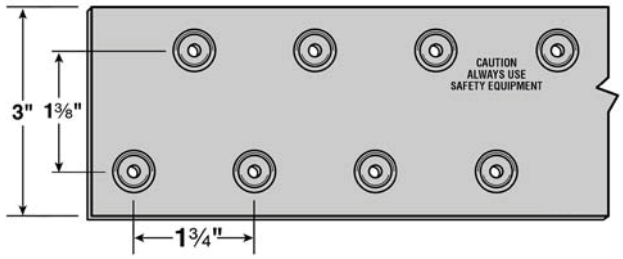
CNS
CNSI
CNS KIP

CALIFORNIA NAIL STRAPS EMBOSSED TIE STRAPS AND DIAPHRAGM STRAPS

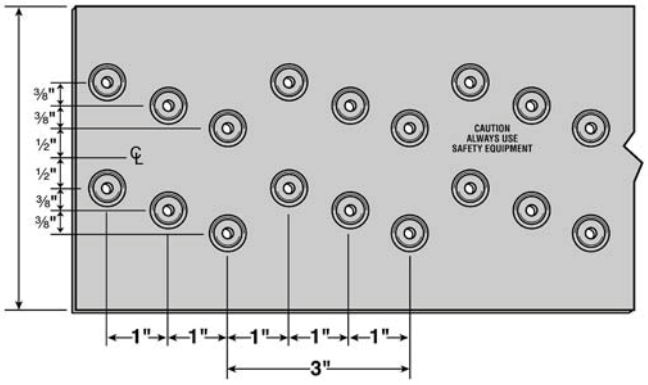
Design Features . . The **CNS** straps are designed to transfer tension forces between framing members using nails. The **CNS** series are designed for use with a nominal 4X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **CNS KIP** straps are designed to transfer tension forces between two framing members using nails. The **CNS KIP** series are designed for use with a nominal 4X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired. This series of straps are designed for use with hardened steel gun nails, blending yield strength of 200Ksi, readily available to the roof erectors.

The **CNS KIP** straps are designed primarily for use on vertical framing. The heavy gage steel combined with a wide cross section and use of hardened gun nails gives much higher loads than other available straps. All products are embossed for use with nail guns.



CNS
Nail Hole Pattern Typical for Length of Strap



CNS KIP
Nail Hole Pattern Typical for Length of Strap

CADS43
California Anchor Down System

Provides for continuous load path for 4 stories.
ICC-ESR 2860 — CNS Straps.

FLOOR LEVEL	MODEL NUMBER	WOOD POST SIZE	FASTENER SCHEDULE	ALLOWABLE TENSION LOADS	
				100%	133%
4th Floor	1 Each CNS72	4 x 6	80–16d X 2½" Hard 40-Per Floor	6830	9110
3rd Foor	1 Each CNS72	4 x 6	80–16d X 2½" Hard 40-Per Floor	6830	9110
2nd Floor	1 Each CNS10KIP	4 x 8	108–16d X 2½" Hard 54-Per Floor	8720	11595
1st Floor	2 Each* ADG8	4 x 10	22–SDS¼X3SS Per ADG5	13540	18010

* See #1) Below

1) **ADG8** attachment to concrete foundation requires minimum 2 – ⅞" diameter anchor bolts. Anchor bolt and concrete design are the responsibility of the engineer of record.

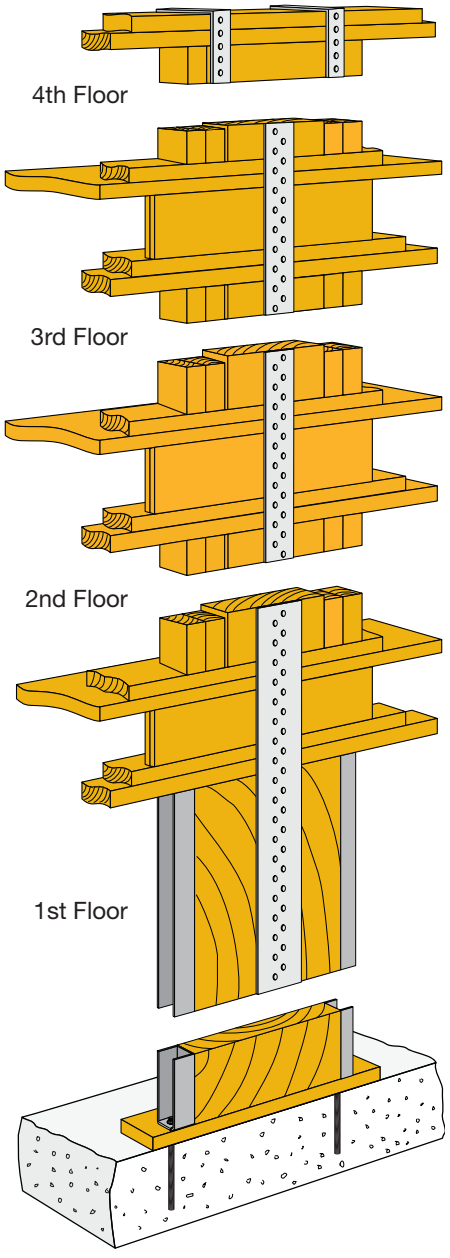
2) Wood post material to be Douglas Fir Larch specific gravity of 0.50. Barrier material is required between base of ADG8 and pressure treated wood contact. Fasten 2 x 4 studs on 2nd, 3rd, and 4th floor to wood posts.

3) ***SUPERSPEED*** SDS1/4X3 Drive Screws are special heat treated screws supplied with the ADST5G. Install screws using a ½" drive variable speed drill, 5.5 amps or larger and a ⅜" hex head driver.

4) 16d x 2½" hardened nails are 0.162 inch diameter x 2½" long with a bending yield strength of 200 Ksi (supplied).

Note: Concrete design is the responsibility of Engineer of Record.

2 – SPTH4 Top Plates to Studs



2012 ADDENDUM

a name you can trust

for all your connections

STRUCTURAL CONNECTORS

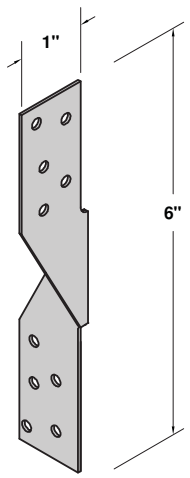
ITW BCG Hardware
a division of ITW Building Components Group

HA

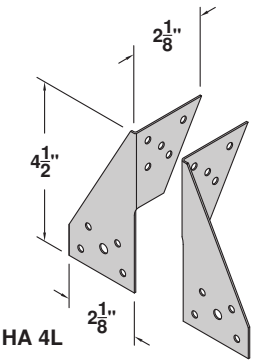
HURRICANE ANCHOR CLIPS

Design Features . . The HA anchor series is manufactured to attach metal plate connected trusses, framing members and wall members, made of solid sawn or structural composite lumber; to solid sawn or structrual composit lumber wall members. The **HA4** products are available in a left (**HA4L**) and right (**HA4R**) style. The **HA2.5** product may be used on either or both sides for the supported member. The HA anchors resists upward load, lateral load perpendicular to the supported truss or framing member. Attachment is required to the lower portion of the supported truss or framing member, and the top plates of the supporting wall, or wall stud and anchored sill (bottom) plate(s).

Material . . 18 ga. galvanized steel.

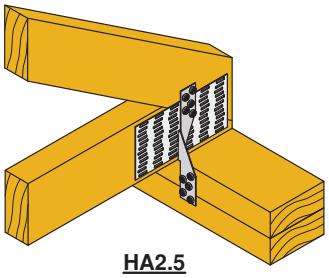


HA2.5

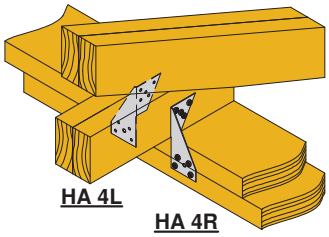


HA 4L

HA 4R



HA2.5



HA 4L HA 4R

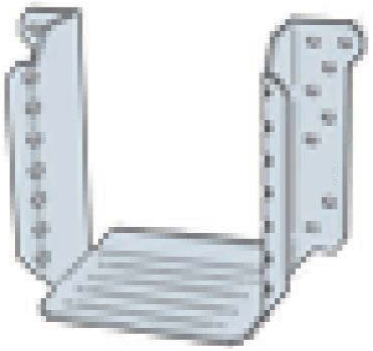
Spruce-Pine-Fir (0.42 Specific Gravity)																		
PRODUCT CODE	Overall Dimensions		Common Nail Type Fasteners				Allowable Upward Loads (lbs)				Allowable Lateral Loads (lbs)				Allowable Thrust Loads (lbs)			
	Width (in)	Height (in)	Joist Size	Joist Quantity	Wall Plate Size	Wall Plate Quantity	Load Duration Factor				Load Duration Factor				Load Duration Factor			
							1	1.15	1.25	1.6	1	1.15	1.25	1.6	1	1.15	1.25	1.6
HA2.5	1	6	0.131"x1.5"	5	0.131"x1.5"	5	420	485	525	675	150	175	190	240	140	140	140	140
HA2.5	1	6	0.131"x1.5"	5	0.131"x2.5"	5	420	485	525	675	150	175	190	240	140	140	140	140
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x1.5"	10	840	965	1050	1345	510	510	510	510	275	275	275	275
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x2.5"	10	840	965	1050	1345	510	510	510	510	275	275	275	275
HA4	2.125	4.5	0.131"x1.5"	5	0.131"x2.5"	4	335	385	420	540	150	175	190	190	195	195	195	195
HA4	2.125	4.5	0.148"x1.5"	5	0.148"x3.0"	4	405	465	505	650	160	185	190	190	195	195	195	195
HA4	2.125	4.5	0.131"x1.5"	5	0.148"x1.5"	4	405	465	505	650	150	175	190	190	130	150	160	195

Douglas Fir-Larch (0.50 Specific Gravity)																		
PRODUCT CODE	Overall Dimensions		Common Nail Type Fasteners				Allowable Upward Loads (lbs)				Allowable Lateral Loads (lbs)				Allowable Thrust Loads (lbs)			
	Width (in)	Height (in)	Joist Size	Joist Quantity	Wall Plate Size	Wall Plate Quantity	Load Duration Factor				Load Duration Factor				Load Duration Factor			
							1	1.15	1.25	1.6	1	1.15	1.25	1.6	1	1.15	1.25	1.6
HA2.5	1	6	0.131"x1.5"	5	0.131"x1.5"	5	490	565	610	785	230	255	255	255	140	140	140	140
HA2.5	1	6	0.131"x1.5"	5	0.131"x2.5"	5	490	565	610	785	230	255	255	255	140	140	140	140
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x1.5"	10	980	1125	1225	1565	510	510	510	510	275	275	275	275
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x2.5"	10	980	1125	1225	1565	510	510	510	510	275	275	275	275
HA4	2.125	4.5	0.131"x1.5"	5	0.131"x2.5"	4	390	450	490	625	190	190	190	190	195	195	195	195
HA4	2.125	4.5	0.148"x1.5"	5	0.148"x3.0"	4	470	540	590	755	190	190	190	190	195	195	195	195
HA4	2.125	4.5	0.131"x1.5"	5	0.148"x1.5"	4	470	540	590	755	190	190	190	190	195	195	195	195

Southern Pine (0.55 Specific Gravity)																		
PRODUCT CODE	Overall Dimensions		Common Nail Type Fasteners				Allowable Upward Loads (lbs)				Allowable Lateral Loads (lbs)				Allowable Thrust Loads (lbs)			
	Width (in)	Height (in)	Joist Size	Joist Quantity	Wall Plate Size	Wall Plate Quantity	Load Duration Factor				Load Duration Factor				Load Duration Factor			
							1	1.15	1.25	1.6	1	1.15	1.25	1.6	1	1.15	1.25	1.6
HA2.5	1	6	0.131"x1.5"	5	0.131"x1.5"	5	530	610	665	850	255	255	255	255	140	140	140	140
HA2.5	1	6	0.131"x1.5"	5	0.131"x2.5"	5	530	610	665	850	255	255	255	255	140	140	140	140
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x1.5"	10	1060	1220	1325	1700	510	510	510	510	275	275	275	275
"(2)HA2.5 (1 each face)"	1	6	0.131"x1.5"	10	0.131"x2.5"	10	1060	1220	1325	1700	510	510	510	510	275	275	275	275
HA4	2.125	4.5	0.131"x1.5"	5	0.131"x2.5"	4	425	490	530	680	190	190	190	190	195	195	195	195
HA4	2.125	4.5	0.148"x1.5"	5	0.148"x3.0"	4	510	590	640	820	190	190	190	190	195	195	195	195
HA4	2.125	4.5	0.131"x1.5"	5	0.148"x1.5"	4	510	590	640	820	190	190	190	190	195	195	195	195

General Notes:

1. Allowable Load Capacities based on Species and Load Duration Factor as permitted by applicable building code.
2. HA Products are made from 18 gauge steel.



PRODUCT CODE	HANGER WIDTH (in)	HANGER HEIGHT (in)	NUMBER OF NAILS			ALLOWABLE LOAD		
			CARRYING MEMBER	HIP	JACK	100%	125%	Uplift (160)
KTHJU26	5-1/8	5-3/8	16-10D	4-10D	4-10D	2350	2350	645

HIP/JACK TRUSS HANGER

KTHJU

Design Features . . The **KTHJU** accomodates left or right hand hip for 45 degree skew. Allowable loads are total for hip/jack combination.
Material . . 12 ga. galvanized steel.

PRODUCT CODE	HANGER WIDTH (in)	HANGER HEIGHT (in)	VERTICAL WEB	FASTENERS		DESIGN LOAD	
				FACE	JOIST	Uplift (160)	Roof (125)
KTHGQ2	3-5/16	16	2X8	(28)1/4X3	(10) 1/4X3	3600	10200
KTHGQ2	3-5/16	16	2X8	(28)1/4X3	(14) 1/4X3	4535	12470
KTHGQH2	3-5/16	25	2X10	(28)1/4X3	(12) 1/4X3	3875	12470
KTHGQH2	3-5/16	25	2X10	(28)1/4X3	(26) 1/4X3	9900	12470
KTHGQ3	4-15/16	16	2X8	(28)1/4X4.5	(10) 1/4X4.5	3600	10200
KTHGQ3	4-15/16	16	2X8	(28)1/4X4.5	(14) 1/4X4.5	4535	12470
KTHGQH3	4-15/16	25	2X10	(38)1/4X4.5	(12) 1/4X4.5	3875	14980
KTHGQH3	4-15/16	25	2X10	(38)1/4X4.5	(26) 1/4X4.5	9900	15500
KTHGQH4	6-9/16	25	2X12	(40)1/4X6	(12) 1/4X6	3875	16900
KTHGQH4	6-9/16	25	2X12	(40)1/4X6	(26) 1/4X6	9900	16900

General Notes:
1. KTHGQ min. bottom cord depth is 2X8. KTHGQH2 and 3 min. bottom cord depth is 2X10. KTHGQH4 min. bottom cord depth is 2X12.
2. Allowable loads may not be increased for load duration.
3. Supplied screws (SDS screws) must penetrate all plies of supporting girder truss, last ply min. 1" penetration. Min. of 2-2X supporting girder truss.
4. Pre-drilling required through truss plates maximum 5/32 drill bit.

TRUSS GIRDER HANGERS

KTHGQ
KTHGQH

Design Features . . the **KTHGQ** and **KTHGQH** are easier to install than bolted connections. The **KTHGQ** and **KTHGQH** are more economical than bolted connections.
Material . . 18 ga. galvanized steel.
Special . . the **KTHGQ** and **KTHGQH** install with screws (included).

PRODUCT CODE	REF NO	ANCHOR DIAMETER	FASTENERS (SDS SCREWS)	MIN. WOOD THICKNESS	ALLOWABLE LOAD	
					100%	125%
DDQ2	DTT2	1/2"	8-1/4 X 1.5	1.5	1825	1825
				3	2000	2000
DDQ2G	DTT2Z	1/2"	8-1/4 X 3	3	2145	2145

DECK TENSION TIES

DDQ2
DDQ2G

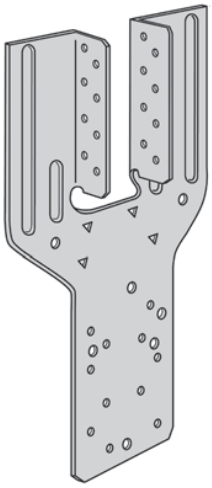
Design Features . . the **DDQ** is designed to meet code requirements for attaching handrail and guardrail post connections for decks. The **DDQ** laterally ties deck to the house.
Material . . 14 ga. galvanized steel.
Special . . screws included.

GTL

GIRDER TIE DOWNS

Design Features . . the **GTL** is a retro fit girder tie down, has a high load capacity, screws included, installed on inside or outside of the wall.

Material . . 12 ga. galvanized steel.



PRODUCT CODE	FASTENERS		ALLOWBLE UPLIFT LOAD
	GIRDER	WALL	Uplift (160)
GTL3	12-sds3	4-3/8x5 Titen HD	3285
GTL4	16-sds3	4-3/8x5 Titen HD	3285

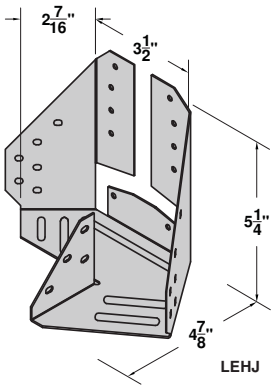
General Notes:
1. SDS 1/4x3" screws included.
2. Weight = (GTL3) 4.15 pounds (GTL4) 5.75 pounds

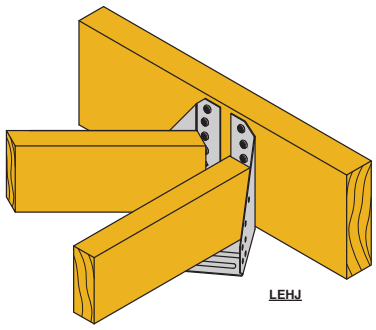
LEHJ

LIGHT TRUSS END/HIP JACK HANGER

Design Features . . the LEHJ accommodates an end jack and a right or left hip jack. Made from high strength steel, this hanger offers a high load capacity while requiring only half as many fasteners in the header. It is designed to be installed with the same length fastener in all members (10d x 1-1/2") unlike competitive products which require 3" fasteners in the header to achieve the stated loads.

Material . . 18 ga. galvanized steel.





PRODUCT CODE	Minimum Supporting Member	Minimum Supported End and Hip Jack Height (in)	Overall Dimensions			Common Nail Type Fasteners			
			Width (in)	Height (in)	Depth (in)	Size	Quantity		
							End Jack	Hip Jack	Header
LEHJ	2x6	3.50	7.76	5.25	4.875	0.148"x1.5"	4	6	10

Specie		Allowable Loads (lbs)											
		End Jack				Hip Jack				Total			
		Load Duration Factor				Load Duration Factor				Load Duration Factor			
		1	1.15	1.25	1.6	1	1.15	1.25	1.6	1	1.15	1.25	1.6
Southern Pine (0.55 Specific Gravity)	downward	365	365	365	365	955	955	955	955	1265	1320	1320	1320
	upward	105	105	105	105	390	390	390	390	490	490	490	490
Douglas Fir-Larch (0.50 Specific Gravity)	downward	365	365	365	365	955	955	955	955	1165	1320	1320	1320
	upward	105	105	105	105	390	390	390	390	490	490	490	490
Spruce-Pine-Fir (0.42 Specific Gravity)	downward	365	365	365	365	955	955	955	955	1000	1150	1250	1320
	upward	105	105	105	105	390	390	390	390	490	490	490	490

General Notes:
1. Allowable Load Capacities based on species and load duration factor as permitted by applicable building code.
2. Products shown in table are made of 18 gauge steel.

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