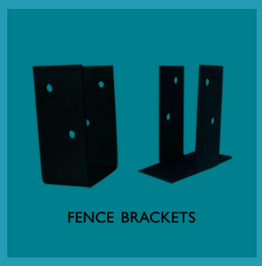
STANDARD & CUSTOM MADE

CSS CONNECTORS



FOR WOOD & CONCRETE STRUCTURES

Canada Scaffold has full manufactufing facilities to provide its customers with specialty and custom one-off products, in addition to standard type connectors. made in British Columbia, Canada.

SINCE 1974

CANADA SCAFFOLD

SAFETY INTEGRITY VALUE

TABLE OF CONTENTS

Tabulated Factored Resistances are for the defined specific applications of properly installed products. Improper loading, product alteration, changes of installation procedures, or deviations from recommended applications will affect connector load-carrying capacity.

GENERAL NOTES

1. The load resistance values presented in this catalogue have been evaluated in accordance with *Limit States Design* approach and are shown in the tables as *Factored Resistance.*
2. Some model configurations may differ from those shown in this catalogue. Contact CSS for details.
3. Follow proper installation procedures to obtain tabulated factored resistance for CSS products.
4. Do not overload. When loading, factored load shall not exceed the tabulated factored resistance; otherwise this will affect the hangers carrying capacity.
5. Changes and modifications to specified CSS products will jeopardize the connection.
6. Exposure to corrosive fire-retardant chemicals, fertilizers, or other substances will corrode the steel and lose load-carrying capacity.

LIMIT STATES DESIGN

The Limit States Design approach is to provide adequate resistance to certain limit states, namely strength and serviceability.

The National Building Code of Canada (NBCC) applies factors of safety to both the resistance side and the load side of the design equation. The design criterion to be satisfied then becomes the following:

factored resistance ≥ factored load effect

The factored resistance takes into account the nominal resistance, variability of dimensions and material properties, workmanship, type of failure and uncertainty in the prediction of resistance.
The factored load effect is calculated in accordance with the NBCC by multiplying the actual loads on the structure (specific loads) by load factors that account for the variability of the load.

INSTRUCTION TO DESIGNER

1. Factored resistance for tested hangers is determined in accordance with Supplement No. 1-74 to CSA 086.1-94 as the lesser of the following:
   - Average load causing 3 mm ($^{1}/_{8}$") deflection of the joist hanger.
   - Minimum ultimate capacity of joist hanger.
2. Factored resistance based on calculations :
   - Wood and fasteners in accordance with CSA 086.1-94.
   - Metal components in accordance with CSA S16.1.
   - Concrete anchors in accordance with CSA A23.3-94.2
3. Loads are based on CSA 084.1-94 The factored resistance is given in the tables for two durations of loading:
   - Standard term (designed as a **normal** in the tables). Example: floor and roof loads due to occupancy, snow load and dead load.
   - Short term (designed as **uplift** in the tables) applies those conditions of loading where the duration of the specified loads is not expected to last more than seven days continuously or cumulatively throughout the life of the structure. The factored resistance for uplift in the tables has been increased by 15 % and applies to wind and earthquake load. Not further increase allowed.
4. The factored resistances are based on dry service conditions $\mathbf{K_S = 1.0}$ and treatment factor $\mathbf{K_T = 1.0}$ (lumber not treated with a fire retardant).

5. The factored resistances are based on following specified strength of materials:

Material	Compressive Strength f_{cp} [Mpa]	
	D.Fir	SPF
Sawn Lumber	7.0	5.3
Glulam	7.0	5.8
SCL	7.0	-

6. Wood shear is not considered in the loads given in tables. Reduce factored capacity of hanger when wood shear is limiting. A qualified designer should verify wood member capacities when specifying connectors.
7. Verify that the dimensions of the supporting member are adequate to receive the specified fasteners.
8. Some connections may cause cross-grain tension or bending of the lumber during loading if not effective reinforced. Use an additional mechanical reinforcement if required.
9. CSS products use steel, which meets ASTM A36 Standard.
10. Finish:
    - G90 galvanized products (up to 10 gauge)
    - Welded products are prime coated for corrosion protection, galvicon paint or H.D. galvanizing are also available on request
    - H.D. galvanized or powder coated on request
11. Fasteners:
    - Nails – factored resistance in accordance with CSA 086.1-94 (10.9).
    - Bolts – factored resistance is based on A307 bolts (ASTM specification) and calculated in accordance with CSA 086.1-94 (10.4).
    - Lag-screws – factored resistance is based on material conforming to the requirements of ANSI/ASME Standard B 18.2.1 and calculated in accordance with CSA 086.1-94 (10.6).
12. All dimensions are in inches.

INSTRUCTION TO INSTALLER

1. All specified in the tables fasteners must be installed in order to achieve tabulated factored resistance.
2. Bolt holes shall be a minimum of $^1/_{32}$" and a maximum of $^1/_{16}$" larger than the diameter of the bolt to be installed.
3. Lag screws:
    - The lead hole for the shank shall have the same diameter as the shank and the same depth as the length of the unthreaded shank.
    - The lead hole for the threaded portion shall have a diameter equal to 60-75 % of the shank diameter for Douglas Fir-Larch species, and 40-70 % of the shank diameter for less dense species.
      The larger percentage figure in each range shall apply to screws of the greater diameters.
      The length of the lead hole shall be at least equal to the length of the threaded portion.
    - The threaded portion of the screw shall be inserted in its lead hole by turning with a wrench, not by driving.
    - Soap or other lubricant, not petroleum based, may be used on the screws or in the lead hole to facilitate insertion and prevent damage to the screw.
4. Do not load the connection before all specified fasteners are installed.
5. Use proper safety equipment during connector installation.
6. Nail guns may be used to install connectors, as long as the specified nails are used and properly installed in the nail holes. CSS recommends guns with nail hole-locating mechanisms. Always follow the gun manufacturer's instruction and use appropriate safety equipment.
7. Unless otherwise noted, CSS products may not be cut or bend to facilitate installation. Field modification may weaken steel and effect connector's factored resistance.

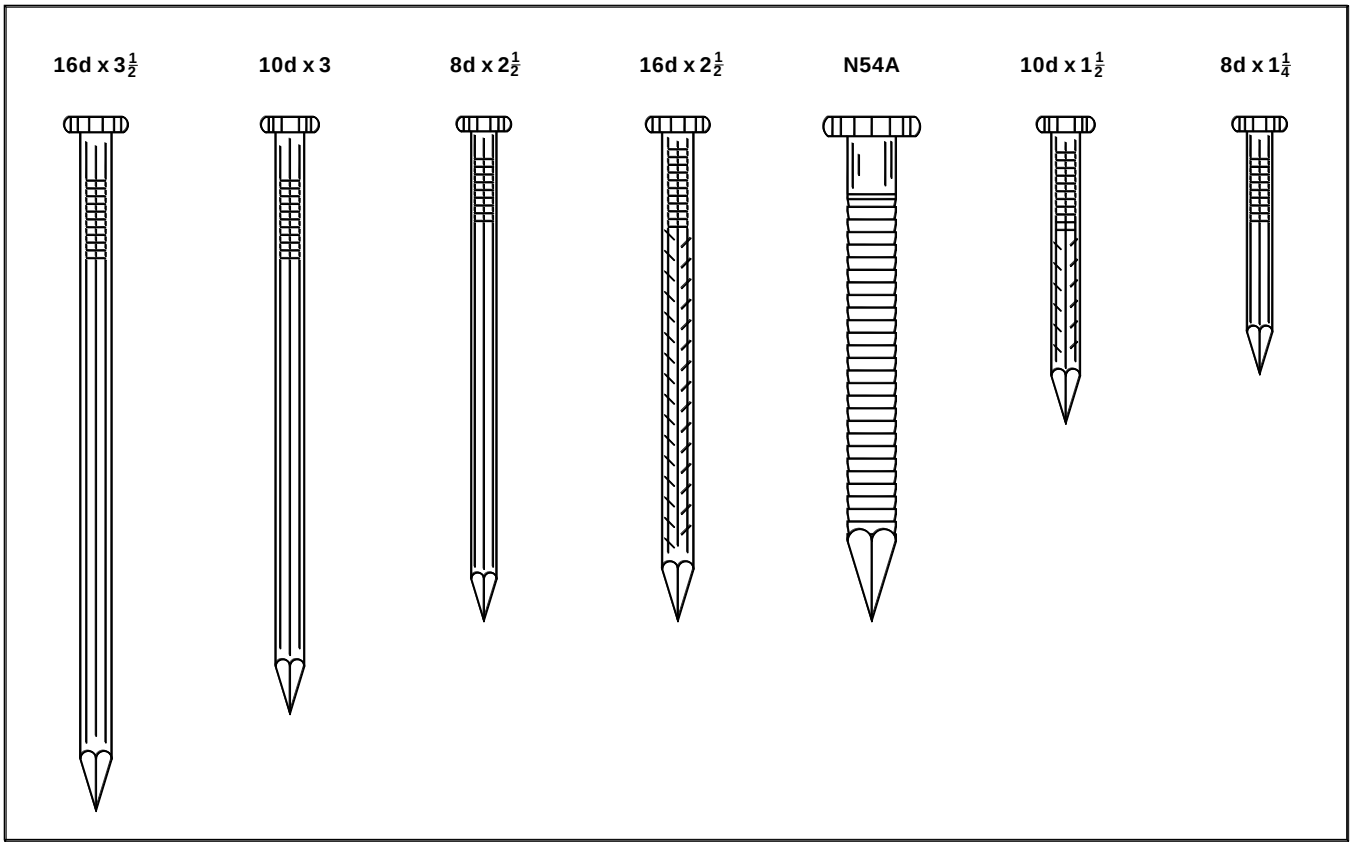
CUSTOM CONNECTOR SERVICE

CSS will fabricate products for unusual framing needs, which require the use of custom connectors.
Our Engineering Department will provide drawings and load rating for uncommon custom connectors.

NAILS FOR CSS CONNECTORS

Nail Type	Catalogue Designation	Description (gauge x length)	Nail Diameter	Comments
8d x $2^1/_2$"	8d	11 ga x $2^1/_2$"	0.131"	$2^1/_2$" Common Nail
8d x $1^1/_4$"	8d x $1^1/_4$"	11 ga x $1^1/_4$"	0.131"	$1^1/_4$" Joist Hanger Nail
10d x $1^1/_2$"	10d x $1^1/_2$"	9 ga x $1^1/_2$"	0.148"	$1^1/_2$" Joist Hanger Nail
10d x 3"	10d	9 ga x 3"	0.148"	3" Common Nail
16d x$2^1/_2$"	16d x$2^1/_2$"	8 ga x$2^1/_2$"	0.162"	$2^1/_2$" Joist Hanger Nail
16d x$3^1/_2$"	16d	8 ga x$3^1/_2$"	0.162"	$3^1/_2$" Common Nail
N54A	N54A	3 ga x$2^1/_2$"	0.250"	CSS Stock

(*) N54A nails with annular ring.



GAUGE TABLE

Gauge Number	Cold and Hot Rolled Steeel Sheets		Galvanized Steel Sheets	
	Inches	M/M	Inches	M/M
3	0.2391	6.073	-	-
7	0.1793	4.554	-	-
10	0.1345	3.416	0.1382	3.51
12	0.1046	2.656	0.1084	2.753
14	0.0747	1.897	0.0785	1.9939
16	0.0598	1.518	0.0635	1.6129
18	0.0478	1.214	0.0516	1.31
20	0.0359	0.911	0.0396	1.005
22	0.0299	0.759	0.0336	0.853
24	0.0239	0.607	0.0276	0.701

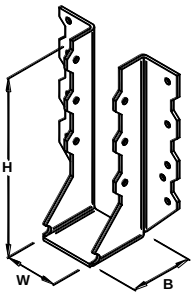
ALPHABETICAL INDEX

CS LOW COST JOIST HANGERS

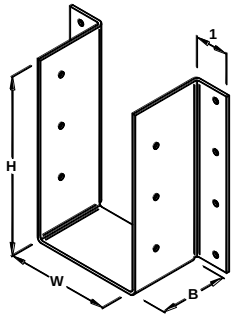
Designed as a support for 2 x lumber size.
MATERIAL: 22 ga. and 18 ga. for CS 210-3
FINISH: Galvanized
FASTENERS: 10d Nails

Model	Joist Size	Ga.	Dimensions			Fasteners		Factored Resistance [lbs]			
			W	H	B	Header	Joist	D.FIR		SPF	
								Normal	Uplift	Normal	Uplift
CS 24	2x4	22	$1^9/_{16}$	$3^1/_4$	$1^3/_4$	6 -10d	3 -10d x $1^1/_2$	1,416	453	1,012	324
CS 26	2x6			$5^1/_4$		10 -10d	6 -10d x $1^1/_2$	1,690	906	1,330	647
CS 210	2x10			8		10 -10d	8 -10d x $1^1/_2$	2,360	1,208	1,686	863
CS 24-2	2-2x4		$3^1/_8$	$3^1/_4$	$1^7/_8$	8 -10d	4 -10d	1,888	944	1,349	674
CS 26-2	2-2x6			$5^1/_4$	$1^7/_8$	8 -10d	6 -10d	1,888	1,416	1,349	1,012
CS 210-2	2-2x10			8	$1^3/_4$	10 -10d	8 -10d	2,360	1,888	1,686	1,349
CS 210-3	3-2x10	18	$4^3/_4$	8	2	20 -10d	8 -10d	4,720	1,888	3,372	1,349

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.

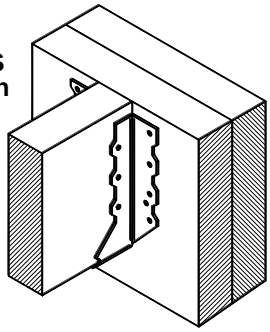


CS 26



CS 26-2

Typical CS Installation



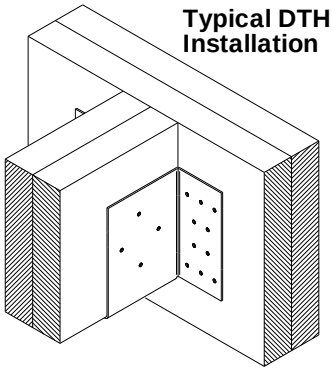
STH / DTH DEEP SEAT HANGERS

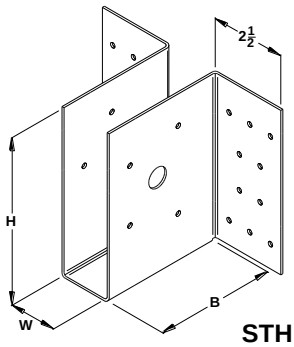
Face mount truss or beam hanger.
MATERIAL: 18 ga.
FINISH: Galvanized
FASTENERS: 10d Nails

Model	Joist Size	Dimensions			Fasteners		Factored Resistance [lbs]			
		W	H	B	Header	Joist	D.FIR		SPF	
							Normal	Uplift	Normal	Uplift
STH	2 x 6 ÷ 8	$1^9/_{16}$	$5^1/_4$	$3^1/_2$	20 -10d	8 -10d x $1^1/_2$	3,101	1,628	2,215	1,165
DTH	2-2 x 6 ÷ 8	$3^1/_8$	$5^1/_4$	$3^1/_2$		8 -10d	3,101	1,628	2,215	1,165

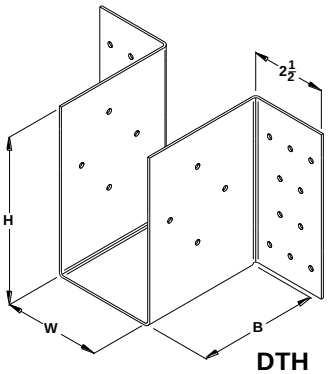
1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.

Typical DTH Installation





STH



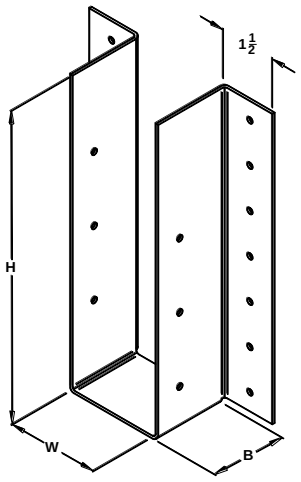
DTH

JH FACE MOUNT JOIST HANGERS

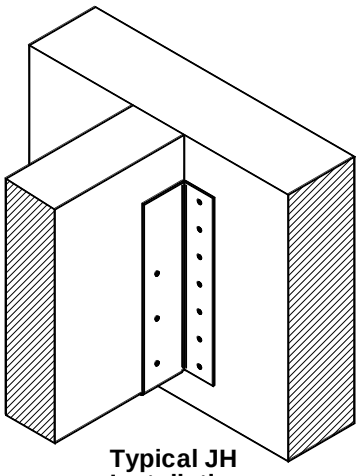
Designed as a support for 2 x lumber size.
MATERIAL: 16 GA.
FINISH: Galvanized
FASTENERS: 16d and 10d nails

Model	Joist Size	Dimensions			Fasteners		Factored Resistance [lbs]			
							D.FIR		SPF	
		W	H	B	Header	Joist	Normal	Uplift	Normal	Uplift
JH 26	2x6	$1^{9}/_{16}$	$4^{1}/_{2}$	2	6 -16d	4 -10d x $1^{1}/_{2}$	1,730	923	1,215	659
JH 28	2x8		$6^{1}/_{4}$	2	12 -16d	6 -10d x $1^{1}/_{2}$	3,453	1,384	2,428	989
JH210	2x10		$8^{1}/_{4}$	2	14 -16d	6 -10d x $1^{1}/_{2}$	3,640	1,384	2,704	989
JH 212	2x12		$10^{1}/_{4}$	$2^{1}/_{2}$	16 -16d	6 -10d x $1^{1}/_{2}$	4,249	1,384	3,165	989
JH 214	2x14		$12^{1}/_{4}$	$2^{1}/_{2}$	18 -16d	8 -10d x $1^{1}/_{2}$	4,651	1,846	3,439	1,318
JH 36	3x6	$2^{9}/_{16}$	$4^{1}/_{2}$	2	6 -16d	4 -10d x $1^{1}/_{2}$	1,730	923	1,215	659
JH 38	3x8		$6^{1}/_{4}$	2	12 -16d	6 -10d x $1^{1}/_{2}$	3,453	1,384	2,428	989
JH 310	3x10		$8^{1}/_{4}$	2	14 -16d	6 -10d x $1^{1}/_{2}$	4,025	1,384	2,830	989
JH 312	3x12		$10^{1}/_{4}$	$2^{1}/_{2}$	16 -16d	6 -10d x $1^{1}/_{2}$	4,610	1,384	3,240	989
JH 314	3x14		$12^{1}/_{4}$	$2^{1}/_{2}$	18 -16d	8 -10d x $1^{1}/_{2}$	5,170	1,846	3,640	1,318
JH 46	4x6	$3^{9}/_{16}$	$4^{1}/_{2}$	2	6 -16d	4 -10d	1,730	1,085	1,215	775
JH 48	4x8		$6^{1}/_{4}$	2	12 -16d	6 -10d	3,453	1,628	2,428	1,163
JH 410	4x10		$8^{1}/_{4}$	2	14 -16d	6 -10d	4,025	1,628	2,830	1,163
JH 412	4x12		$10^{1}/_{4}$	$2^{1}/_{2}$	16 -16d	6 -10d	4,610	1,628	3,240	1,163
JH 414	4x14		$12^{1}/_{4}$	$2^{1}/_{2}$	18 -16d	8 -10d	5,170	2,172	3,640	1,551
JH 66	6x6	$5^{9}/_{16}$	$4^{1}/_{2}$	2	6 -16d	4 -10d	1,730	1,085	1,215	775
JH 68	6x8		$6^{1}/_{4}$	2	12 -16d	6 -10d	3,453	1,628	2,428	1,163
JH 610	6x10		$8^{1}/_{4}$	2	14 -16d	6 -10d	4,025	1,628	2,830	1,163
JH 612	6x12		$10^{1}/_{4}$	$2^{1}/_{2}$	16 -16d	6 -10d	4,610	1,628	3,240	1,163
JH 614	6x14		$12^{1}/_{4}$	$2^{1}/_{2}$	18 -16d	8 -10d	5,170	2,172	3,640	1,551
JH 26-2	2-2x6	$3^{1}/_{8}$	$4^{1}/_{2}$	2	6 -16d	4 -10d	1,730	1,085	1,215	775
JH 28-2	2-2x8		$6^{1}/_{4}$	2	12 -16d	6 -10d	3,453	1,628	2,428	1,163
JH 210-2	2-2x10		$8^{1}/_{4}$	2	14 -16d	6 -10d	4,025	1,628	2,830	1,163
JH 212-2	2-2x12		$10^{1}/_{4}$	$2^{1}/_{2}$	16 -16d	6 -10d	4,610	1,628	3,240	1,163
JH 214-2	2-2x14		$12^{1}/_{4}$	$2^{1}/_{2}$	18 -16d	8 -10d	5,170	2,172	3,640	1,551

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. Sizes for rough lumber are available.



JH 310

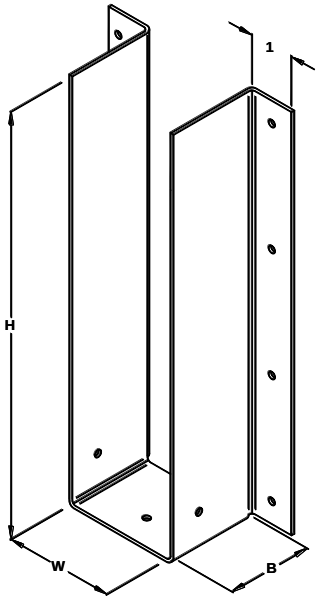


Typical JH Installation

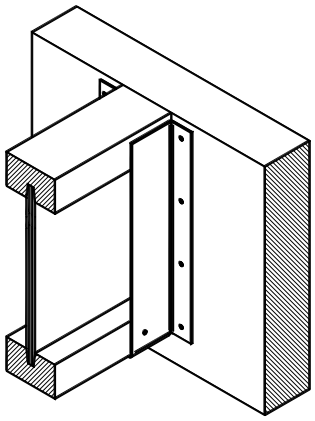
SJH "I" JOIST HANGERS

Face mount hanger designed as a support for "I" joists.
MATERIAL: See table
FINISH: Galvanized

Model	Ga	Dimensions			Fasteners		Factored Resistance (lbs)			
						Joist	D.FIR		SPF	
		W	H	B	Header	10dx1 1/2"	Normal	Uplift	Normal	Uplift
SJH 159.5	18	1 9/16	9 1/2	2	8-10d	2	1,888	461	1,349	329
SJH 1511.9	18		11 7/8	2	10-10d		2,360	461	2,023	329
SJH 179.5	18	1 13/16	9 1/2	2	8-10d	2	1,888	461	1,349	329
SJH 1711.9	18		11 7/8	2	10-10d		2,360	461	2,023	329
SJH 1714	16		13 3/4	2 1/2	14-10d		3,304	461	2,360	329
SJH 1716	16		15 3/4	2 1/2	16-10d		3,777	461	2,698	329
SJH 239.5	18	2 3/8	9 1/2	2	8-10d		1,888	461	1,349	329
SJH 2311.9	18		11 7/8	2	10-10d		2,360	461	2,023	329
SJH 2314	16		13 3/4	2 1/2	14-10d		3,304	461	2,360	329
SJH 2316	16		15 3/4	2 1/2	16-10d		3,777	461	2,698	329
SJH 259.5	18	2 9/16	9 1/4	2	8-10d	2	1,888	461	1,349	329
SJH 2511.9	18		11 1/4	2	10-10d		2,360	461	2,023	329
SJH 2512.5	18		12 1/4	2	10-10d		2,360	461	2,023	329
SJH 2514	16		13 3/4	2 1/2	14-10d		3,304	461	2,360	329
SJH 2516	16		15 3/4	2 1/2	16-10d		3,777	461	2,698	329
SJH 2518	16		17 3/4	2 1/2	22-10d		5,193	461	3,709	329
SJH 359.5	18	3 9/16	9 1/4	2	8-10d	2	1,888	461	1,349	329
SJH 3511.5	18		11 1/4	2	10-10d		2,360	461	2,023	329
SJH 3512.5	18		12 1/4	2	10-10d		2,360	461	2,023	329
SJH 3514	16		13 3/4	2 1/2	14-10d		3,304	461	2,360	329
SJH 3516	16		15 3/4	2 1/2	16-10d		3,777	461	2,698	329
SJH 3518	16		17 3/4	2 1/2	22-10d		5,193	461	3,709	329
Double Models										
SJH 2-159.5	16	3 1/8	9 1/2	2 1/2	14-16d	2	4,028	461	2,832	329
SJH 2-1511.9	16		11 7/8	2 1/2	16-16d		4,604	461	3,237	329
SJH 2-179.5	16	3 9/16	9 1/2	2 1/2	14-16d	2	4,028	461	2,832	329
SJH 2-1711.9	16		11 7/8	2 1/2	16-16d		4,604	461	3,237	329
SJH 2-1714	16		13 3/4	2 1/2	18-16d		5,179	461	3,642	329
SJH 2-1716	16		15 3/4	2 1/2	20-16d		5,755	461	4,046	329
SJH 2-239.5	16	4 3/4	9 1/2	2 1/2	14-16d	2	4,028	461	2,832	329
SJH 2-2311.9	16		11 7/8	2 1/2	16-16d		4,604	461	3,237	329
SJH 2-2314	16		13 3/4	2 1/2	18-16d		5,179	461	3,642	329
SJH 2-2316	16		15 3/4	2 1/2	20-16d		5,755	461	4,046	329
SJH 2-259.5	16	5 1/8	9 1/4	2 1/2	14-16d	2	4,028	461	2,832	329
SJH 2-2511.9	16		11 1/4	2 1/2	16-16d		4,604	461	3,237	329
SJH 2-2512.5	16		12 1/4	2 1/2	16-16d		4,604	461	3,237	329
SJH 2-2514	16		13 3/4	2 1/2	18-16d		5,179	461	3,642	329
SJH 2-2516	16		15 3/4	2 1/2	20-16d		5,755	461	4,046	329
SJH 2-2518	16		17 3/4	2 1/2	20-16d		5,755	461	4,046	329



SJH 259.5



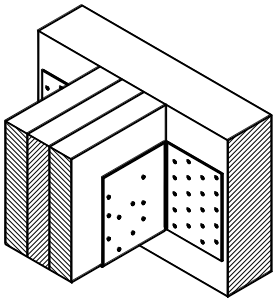
Typical SJH Installation

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. Other sizes are available upon request.
5. Optional seat hole is provided for pre-attachment of hanger to joist.

HGH HEAVY GIRDER HANGERS

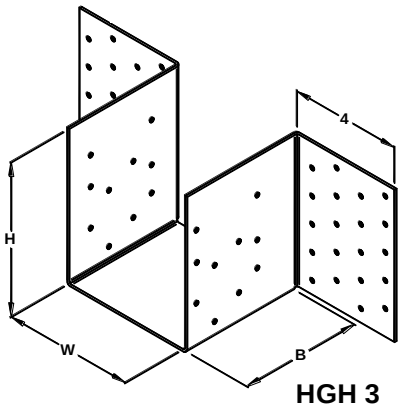
Designed for heavy girder and truss connections.
MATERIAL: See table
FINISH: Galvanized
FASTENERS: 10d nails

Model	Joist Size	Ga	Dimensions			Fasteners		Factored Resistance (lbs)			
			W	H	B	Header	Joist	D.FIR		SPF	
								Normal	Uplift	Normal	Uplift
HGH 1	2 x 6 ÷ 8	14	$1^{9}/_{16}$	$5^{1}/_{2}$	$4^{3}/_{8}$	40 -10d	20 -10d x$1^{1}/_{2}$	7,969	3,530	5,384	2,520
HGH 2	2-2 x 6 ÷ 8		$3^{1}/_{8}$	$5^{1}/_{2}$	$4^{3}/_{8}$		20 -10d	7,969	3,530	5,384	2,520
HGH 3	3-2 x 6 ÷ 8		$4^{3}/_{4}$	$5^{1}/_{2}$	$4^{3}/_{8}$			7,969	3,530	5,384	2,520
HGH 4	4-2 x 6 ÷ 8	12	$6^{1}/_{4}$	$5^{1}/_{2}$	$4^{3}/_{8}$			7,969	3,530	5,384	2,520



Typical HGH Installation

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.

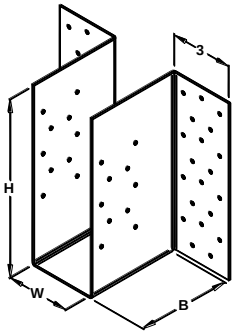


HGH 3

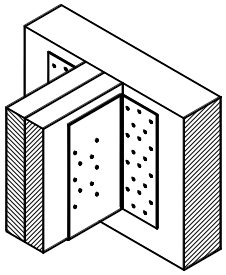
HTH/MHTH HEAVY SCL JOIST HANGERS

Face mount deep seat hanger for Sawn Lumber and Structural Composite Lumber (Parallam and Microllam).
MATERIAL: See table
FINISH: Galvanized
FASTENERS: Nails

Model	Joist Size	Ga	Dimensions			Fasteners		Factored Resistance (lbs)			
			W	H	B	Header	Joist	D.FIR		SPF	
								Normal	Uplift	Normal	Uplift
HSTH	2 x 10 ÷12	14	$1^{9}/_{16}$	$8^{1}/_{2}$	$3^{1}/_{2}$	40 -16d	20 -10d X$1^{1}/_{2}$	9,215	3,530	6,065	2,520
HDTH	2-2 x 10 ÷12		$3^{1}/_{8}$	$8^{1}/_{2}$	$3^{3}/_{4}$		20 -10d	9,690	3,530	6,410	2,520
HTTH	3-2 x 10 ÷12		$4^{3}/_{4}$	$8^{1}/_{2}$	$3^{3}/_{4}$			9,690	3,530	6,410	2,520
HQTH	4-2 x 10 ÷12	12	$6^{1}/_{4}$	$8^{1}/_{2}$	$4^{3}/_{8}$			9,690	3,530	6,410	2,520
HFTH	5-2 x 10 ÷12		$7^{3}/_{4}$	$8^{1}/_{2}$	$4^{3}/_{8}$			9,690	3,530	6,410	2,520
Structural Composite Lumber (Parallam and Microllam)								PSL		LVL	
MHSTH	$1^{3}/_{4}$ x H	14	$1^{13}/_{16}$	$8^{1}/_{2}$	$3^{1}/_{4}$	40 -16d	20 -10d X$1^{1}/_{2}$	9,340	3,530	9,690	3,530
MHDTH	$3^{1}/_{2}$ x H		$3^{9}/_{16}$	$8^{1}/_{2}$	$3^{3}/_{4}$		20 -10d	9,690	3,530	9,690	3,530
MHTTH	$5^{1}/_{4}$ x H		$5^{3}/_{8}$	$8^{1}/_{2}$	$3^{3}/_{4}$			9,690	3,530	9,690	3,530
MHQTH	7 x H	12	$7^{1}/_{8}$	$8^{1}/_{2}$	$4^{3}/_{8}$			9,690	3,530	9,690	3,530
MHFTH	$8^{3}/_{4}$ x H	12	9	$8^{1}/_{2}$	$4^{3}/_{8}$			9,690	3,530	9,690	3,530



HDTH (MHDTH similar)

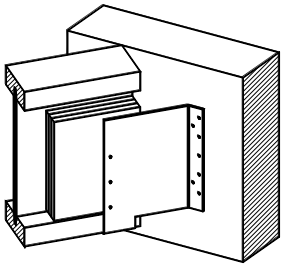


Typical HTH Installation

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. MHTH is designed for Structural Composite Lumber.
5. PSL – parallel strand lumber (Parallam)
   LVL – laminated veneer lumber (Microllam).

SKR/L SKEWED JOIST HANGERS

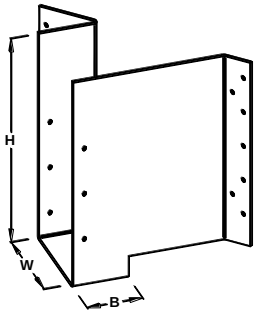
Designed to use with 45º skew joists.
MATERIAL: 16 ga.
FINISH: Galvanized
FASTENERS: 10d and 16d nails



1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Skewed hangers will accommodate a 40º to 50º skew range.
3. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
4. All fasteners must be installed to obtain tabulated factored resistance.
5. SKR-skewed right; SKL-skewed left.
6. Web stiffeners are required for "I"-joist applications

Model	Joist Size	Dimensions			Fasteners		Factored Resistance [lbs]			
							D.FIR		SPF	
		W	H	B	Header	Joist	Normal	Uplift	Normal	Uplift
SKR/L 26	2x6 - 8	$1^{9}/_{16}$	5	2	6 -16d	6-10dx$1^{1}/_{2}$	1,726	1,062	1,214	759
SKR/L 210	$1^{1}/_{2}$x$9^{1}/_{2}$ -12		$8^{1}/_{8}$	2	10 -16d	10-10dx$1^{1}/_{2}$	2,877	1,770	2,023	1,265
SKR/L 179.5	$1^{3}/_{4}$x$9^{1}/_{2}$ -14	$1^{13}/_{16}$	$9^{1}/_{4}$	2	8 -16d	8-10dx$1^{1}/_{2}$	2,302	1,416	1,618	1,012
SKR/L 1711	$1^{3}/_{4}$x$11^{7}/_{8}$ -16		10	2	10 -16d	10-10dx$1^{1}/_{2}$	2,877	1,770	2,023	1,265
SKR/L 239.5	$2^{5}/_{16}$x$9^{1}/_{2}$ -14	$2^{3}/_{8}$	9	$2^{1}/_{2}$	14 -16d	6-10dx$1^{1}/_{2}$	4,028	1,062	2,832	759
SKR/L 2314	$2^{5}/_{16}$x14 -16		$12^{1}/_{2}$	$2^{1}/_{2}$	18 -16d	8-10dx$1^{1}/_{2}$	5,179	1,416	3,642	1,012
SKR/L 310	$2^{1}/_{2}$x$9^{1}/_{4}$ -14	$2^{9}/_{16}$	9	$2^{1}/_{2}$	14 -16d	6-10dx$1^{1}/_{2}$	4,028	1,062	2,832	759
SKR/L 314	$2^{1}/_{2}$x14 -16		$12^{1}/_{2}$	$2^{1}/_{2}$	18 -16d	8-10dx$1^{1}/_{2}$	5,179	1,416	3,642	1,012
SKR/L 46	4x6 - 8	$3^{9}/_{16}$	5	$2^{1}/_{2}$	8 -16d	6-10d	2,302	1,062	1,618	759
SKR/L 410	$3^{1}/_{2}$x$9^{1}/_{4}$ -14		9	$2^{1}/_{2}$	14 -16d	6-10d	4,028	1,062	2,832	759
SKR/L 414	$3^{1}/_{2}$x$12^{1}/_{2}$ -18		$12^{1}/_{2}$	$2^{1}/_{2}$	18 -16d	8-10d	5,179	1,416	3,642	1,012
SKR/L 2-26	2 -2x6 - 8	$3^{1}/_{8}$	5	$2^{1}/_{2}$	8 -16d	6-10d	2,302	1,062	1,618	759
SKR/L 2-210	2 -$1^{1}/_{2}$x$9^{1}/_{2}$ -12		9	$2^{1}/_{2}$	14 -16d	6-10d	4,028	1,062	2,832	759

Typical SKL Installation ("I" Joist Application)

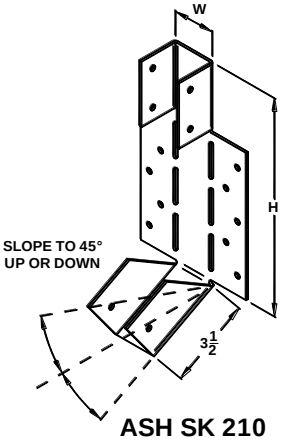


SKL 310

ASH SK ADJUSTABLE SLOPE AND SKEWED HANGERS

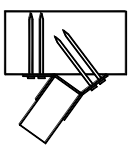
All models are skew and slope adjustable on the job site.
MATERIAL: 18 ga.
FINISH: Galvanized
FASTENERS: 10d and 16d nails

Model	Joist Width	Ga.	Dimensions		Fasteners		Factored Resistance [lbs]			
							D.FIR		SPF	
			W	H	Header	Joist	Normal	Uplift	Normal	Uplift
ASH SK 26	$1^{1}/_{2}$	18	$1^{9}/_{16}$	$4^{7}/_{8}$	6 -10d	6 -10dx$1^{1}/_{2}$	1903	923	1359	659
ASH SK 28	$1^{1}/_{2}$		$1^{9}/_{16}$	$7^{1}/_{8}$	10 -10d	6 -10dx$1^{1}/_{2}$	1903	923	1359	659
ASH SK 210	$1^{1}/_{2}$		$1^{9}/_{16}$	$8^{1}/_{2}$	10 -10d	6 -10dx$1^{1}/_{2}$	1903	923	1359	659
ASH SK 125	$1^{3}/_{4}$		$1^{13}/_{16}$	$8^{1}/_{2}$	10 -10d	6 -10dx$1^{1}/_{2}$	1903	923	1359	659
ASH SK 135	$2^{5}/_{16}$		$2^{3}/_{8}$	$8^{1}/_{2}$	10 -10d	6 -10dx$1^{1}/_{2}$	1903	923	1359	659
ASH SK 310	$2^{1}/_{2}$	16	$2^{9}/_{16}$	$8^{1}/_{2}$	14 -16d	12 -10dx$1^{1}/_{2}$	3801	1384	2715	988
ASH SK 2-210	3		$3^{1}/_{8}$	$8^{1}/_{2}$	14 -16d	12 -10dx$1^{1}/_{2}$	3801	1384	2715	988
ASH SK 410	$3^{1}/_{2}$		$3^{9}/_{16}$	$8^{1}/_{2}$	14 -16d	12 -10dx$1^{1}/_{2}$	3801	1384	2715	988
ASH SK 3-210	$4^{5}/_{8}$	14	$4^{3}/_{4}$	9	24 -16d	16 -10dx$1^{1}/_{2}$	4250	1384	3036	988

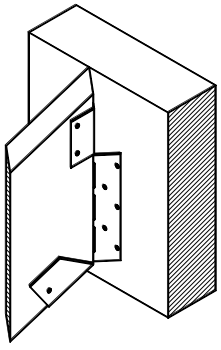


ASH SK 210

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Factored Resistance for normal load is for sloped option only.
3. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
4. All fasteners must be installed to obtain tabulated factored resistance.
5. Other sizes are available upon request.
6. Web stiffeners are required for "I"-joist applications.



Typical ASH SK Installation

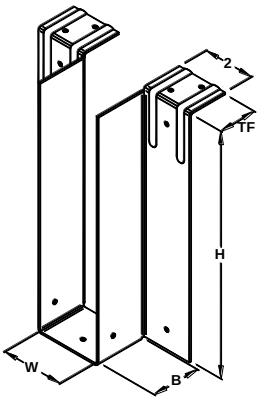


SJHTF "I" JOIST HANGERS

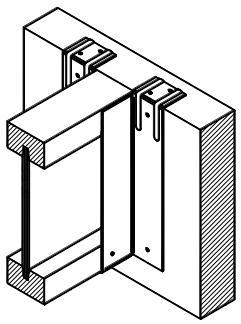
Top mount hanger designed as a support for "I" joists.
MATERIAL: See table
FINISH: Galvanized
FASTENERS: Nails – see table

Model	Joist Size	Ga	Dimensions				Fasteners		Factored Resistance lbs			
			W	H	B	TF	Header	Joist	D.Fir		SPF	
									Normal	Uplift	Normal	Uplift
SJH 159.5 TF	$1^1/_2$ x $9^1/_2$	18	$1^9/_{16}$	$9^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 1511.9 TF	$1^1/_2$ x $11^7/_8$	18		$11^7/_8$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 179.5 TF	$1^3/_4$ x $9^1/_2$	18	$1^{13}/_{16}$	$9^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 1711.9 TF	$1^3/_4$ x $11^7/_8$	18		$11^7/_8$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 1714 TF	$1^3/_4$ x 14	16		14	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 1716 TF	$1^3/_4$ x 16	16		16	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 239.5 TF	$2^5/_{16}$ x $9^1/_2$	18	$2^3/_8$	$9^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2311.9 TF	$2^5/_{16}$ x $11^7/_8$	18		$11^7/_8$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2314 TF	$2^5/_{16}$ x 14	16		14	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 2316 TF	$2^5/_{16}$ x 16	16		16	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 259.25 TF	$2^1/_2$ x $9^1/_4$	18	$2^9/_{16}$	$9^1/_4$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 259.5 TF	$2^1/_2$ x $9^1/_2$	18		$9^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2511.25 TF	$2^1/_2$ x $11^1/_4$	18		$11^1/_4$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2511.5 TF	$2^1/_2$ x $11^1/_2$	18		$11^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2511.9 TF	$2^1/_2$ x $11^7/_8$	18		$11^7/_8$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2512.5 TF	$2^1/_2$ x $12^1/_2$	18		$12^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 2514 TF	$2^1/_2$ x 14	16		14	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 2516 TF	$2^1/_2$ x 16	16		16	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 2518 TF	$2^1/_2$ x 18	16		18	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 359.25 TF	$3^1/_2$ x $9^1/_4$	18	$3^9/_{16}$	$9^1/_4$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 359.5 TF	$3^1/_2$ x $9^1/_2$	18		$9^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 3511.25 TF	$3^1/_2$ x $11^1/_4$	18		$11^1/_4$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 3511.5 TF	$3^1/_2$ x $11^1/_2$	18		$11^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 3511.9 TF	$3^1/_2$ x $11^7/_8$	18		$11^7/_8$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 3512.5 TF	$3^1/_2$ x $12^1/_2$	18		$12^1/_2$	2	$1^1/_2$	8-10d	2-10d x$1^1/_2$"	2,367	461	1,756	329
SJH 3514 TF	$3^1/_2$ x14	16		14	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 3516 TF	$3^1/_2$ x16	16		16	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329
SJH 3518 TF	$3^1/_2$ x18	16		18	$2^1/_2$	$2^1/_2$	8-16d	2-10d x$1^1/_2$"	3,250	461	2,759	329

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. Other sizes are available upon request.
5. Optional seat hole is provided for pre-attachment of hanger to joist



SJH 259.5 TF



Typical SJHTF Installation

SJHTF "I" JOIST HANGERS (CONTINUED...)

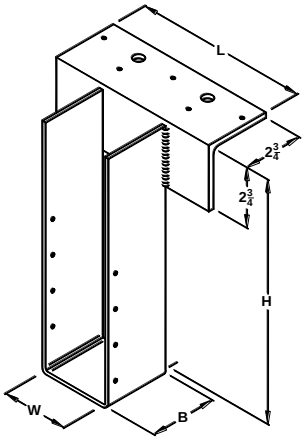
Model	Joist Size	Ga	Dimensions				Fasteners		Factored Resistance [lbs]			
			W	H	B	TF	Header	Joist	D.FIR:		SPF	
									Normal	Uplift	Normal	Uplift
Double Models												
SJH 2-159.5 TF	2 -1 1/2 x9 1/2	16	3 1/8	9 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-1511.9 TF	2 -1 1/2 x11 7/8	16		11 7/8	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-179.5 TF	2 -1 3/4 x 9 1/2	16	3 9/16	9 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-1711.9 TF	2 -1 3/4 x 11 7/8	16		11 7/8	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-1714 TF	2 -1 3/4 x 14	16		13 3/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-1716 TF	2 -1 3/4 x 16	16		15 3/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-239.5 TF	2 -2 5/16 x 9 1/2	16	4 3/4	9 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2311.9 TF	2 -2 5/16 x 11 7/8	16		11 7/8	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2314 TF	2 -2 5/16 x 14	16		13 3/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2316 TF	2 -2 5/16 x 16	16		15 3/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-259.25 TF	2 -2 1/2 x 9 1/4	16	5 1/8	9 1/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-259.5 TF	2 -2 1/2 x 9 1/2	18		9 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2511.25 TF	2 -2 1/2 x 11 1/4	18		11 1/4	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2511.5 TF	2 -2 1/2 x 11 1/2	18		11 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2511.9 TF	2 -2 1/2 x 11 7/8	16		11 7/8	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2512.5 TF	2 -2 1/2 x 12 1/2	16		12 1/2	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2514 TF	2 -2 1/2 x 14	16		14	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2516 TF	2 -2 1/2 x 16	16		16	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329
SJH 2-2518 TF	2 -2 1/2 x 18	16		18	2 1/2	2 1/2	8-16d	2-10d x1 1/2"	3,250	461	2,759	329

PH PURLIN HANGERS

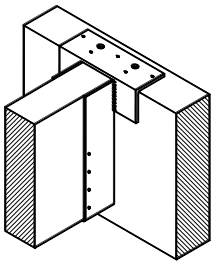
Designed for beam to beam, beam to masonry or beam to steel beam connections.
MATERIAL: See table
FINISH: Prime Paint
FASTENERS: 10d and 16d Common Nails

Model	Joist Size	Ga		Dimensions				Fasteners		Factored Resistance [lbs]			
		Stirrup	Top Flange	W	B	H	L	Header	Joist	D.FIR		SPF	
										Normal	Uplift	Normal	Uplift
PH 210	2x10	12	12	$1^5/_8$	$2^1/_2$	$9^1/_4$	7	5 -16d	8 -10d x $1^1/_2$	3,505	670	2,605	250
PH 212	2x12					$11^1/_4$				3,505	670	2,605	250
PH 214	2x14					$13^1/_4$				3,505	670	2,605	250
PH 210-2	2-2x10	10	7	$3^1/_8$	3	$9^1/_4$	8	5 -16d	8 -10d	5,959	670	4,631	250
PH 212-2	2-2x12					$11^1/_4$				5,959	670	4,631	250
PH 214-2	2-2x14					$13^1/_4$				5,959	670	4,631	250
PH 310	3x10	10	7	$2^5/_8$	3	$9^1/_4$	8	5 -16d	8 -10d x $1^1/_2$	5,959	670	4,631	250
PH 312	3x12					$11^1/_4$				5,959	670	4,631	250
PH 314	3x14					$13^1/_4$				5,959	670	4,631	250
PH 316	3x16					$15^1/_4$				5,959	670	4,631	250
PH 410	4x10	10	3	$3^5/_8$	3	$9^1/_4$	10	5 -16d	8 -10d	7,445	670	5,637	250
PH 412	4x12					$11^1/_4$				7,445	670	5,637	250
PH 414	4x14					$13^1/_4$				7,445	670	5,637	250
PH 416	4x16					$15^1/_4$				7,445	670	5,637	250
PH 610	6x10	10	3	$5^5/_8$	3	$9^1/_4$	10	5 -16d	8 -10d	7,445	670	5,637	250
PH 612	6x12					$11^1/_4$				7,445	670	5,637	250
PH 614	6x14					$13^1/_4$				7,445	670	5,637	250
PH 616	6x16					$15^1/_4$				7,445	670	5,637	250

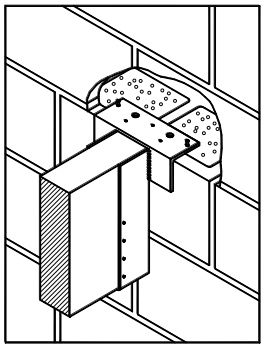
1. PH series requires only top nailing into header.
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. Hangers may be welded to steel headers with $1^1/_2$" long fillet welds (weld size equal to thickness of the top flange).
5. For beam to masonry connection, two 16d double-headed nails must be installed through the top flange and embeded in the grouted wall. Two holes allow free flow of concrete.
6. PH are available in special sizes.



PH 212-2



Typical PH Installation



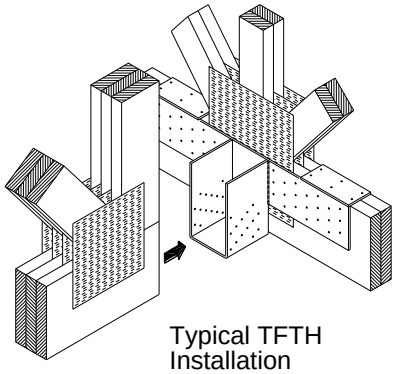
PH Masonry Option

TFTH HEAVY TRUSS HANGER

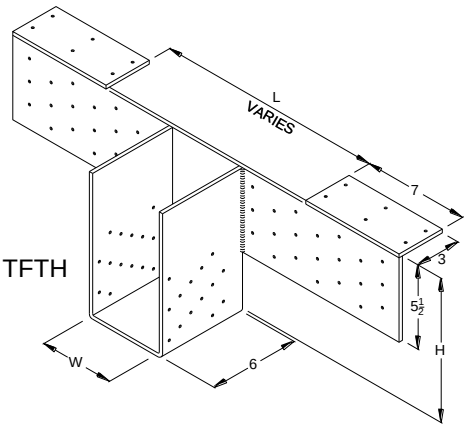
Designed to use for girder or truss-to-truss connections.
MATERIAL: 3 ga.
FINISH: Prime Paint
FASTENERS: Nails

Model	Dimensions		Fasteners			Factored Resistance [lbs]			
			Header		Joist	D.FIR		SPF	
	W	H	Face	Top		Normal	Uplift	Normal	Uplift
TFTH 2-26	$3^1/_4$	$5^1/_2$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850
TFTH 2-28		$7^1/_4$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850
TFTH 2-210		$9^1/_4$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850
TFTH 3-26	5	$5^1/_2$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850
TFTH 3-28		$7^1/_4$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850
TFTH 3-210		$9^1/_4$	40 -16d	12 -10d	28 -10d	17,950	8,200	14,030	5,850

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. The top flange opening (14") can be changed upon request.
3. Models without back plate are available.
4. Dimension H can be changed upon request.
5. Custom models are available.



Typical TFTH Installation

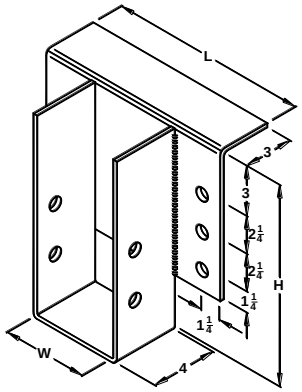


LBH/MBH/EH BEAM AND GLULAM HANGERS

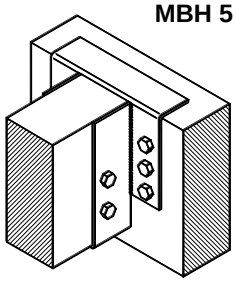
Designed to support heavy timber and glulam beams.
MATERIAL: 3 ga.
FINISH: Prime Paint
FASTENERS: Bolts

Model	Joist Size	Dimensions			Fasteners		Factored Resistance [lbs]			
							D.FIR		SPF	
		W	L	Min H	Header	Joist	Normal	Uplift	Normal	Uplift
LBH 3	$3^1/_8$ x h	$3^1/_4$	12	Spec.	4 -$^3/_4$"	2 -$^3/_4$"	13,555	4,945	11,330	4,240
LBH 5	$5^1/_8$ x h	$5^1/_4$			4 -$^3/_4$"	2 -$^3/_4$"	13,555	6,255	11,330	5,505
LBH 7	$6^3/_4$ x h	$6^7/_8$			4 -$^3/_4$"	2 -$^3/_4$"	13,555	6,255	11,330	5,505
MBH 5	$5^1/_8$ x h	$5^1/_4$	12	Spec.	6 -$^3/_4$"	2 -$^3/_4$"	16,275	7,960	13,915	6,875
MBH 7	$6^3/_4$ x h	$6^7/_8$			6 -$^3/_4$"	2 -$^3/_4$"	16,275	9,385	13,915	8,945
EH 5	$5^1/_8$ x h	$5^1/_4$	$11^3/_4$	Spec.	8 -1"	2 -1"	23,425	9,850	19,600	8,400
EH 7	$6^3/_4$ x h	$6^7/_8$	$13^1/_2$		8 -1"	2 -1"	24,435	12,875	20,300	11,010
EH 9	$8^3/_4$ x h	$8^7/_8$	$15^1/_2$		8 -1"	2 -1"	25,805	16,570	21,310	14,190

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
3. All fasteners must be installed to obtain tabulated factored resistance.
4. The hanger may be attached to steel header by $^3/_{16}$" x $2^1/_2$" fillet welds at each end of the header angle to obtain the tabulated resistance. Uplift Factored Resistance does not apply to this weld-on application.
5. Factored Resistance for bolts is based on supporting member (header) thickness of minimum 3".
6. MBH are available in special sizes.



MBH 5



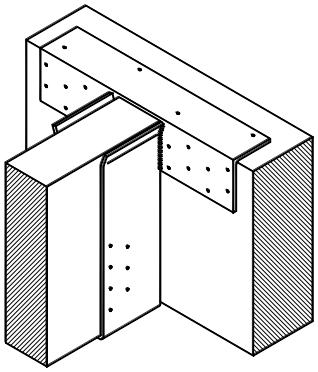
Typical MBH Installation

TJ TOP MOUNT SCL HANGER

Designed for use with Structural Composite Lumber (SCL).
MATERIAL: See Table
FINISH: Prime Paint
FASTENERS: Nails

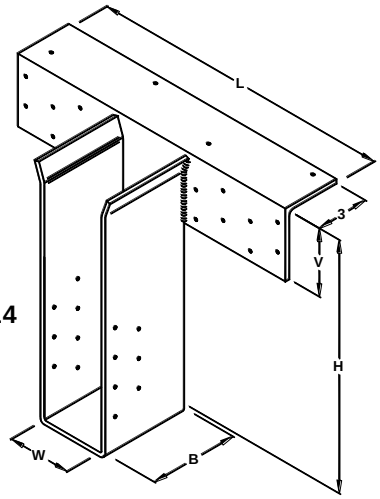
Model	Joist Size	Ga.	Dimensions					Fasteners			Factored Resistance: [lbs]		
			W	H	B	L	V	Top Flange	Face Nails	Joist Nails	Normal PSL	Normal LVL	Uplift
TJ 9	$1^3/_4$ x $9^1/_2$	7	$1^7/_8$	$9^1/_2$	4	8	3	4 -16d	6 -16d	10-10dx$1^1/_2$	7,691	9,641	2,307
TJ 11	$1^3/_4$ x $11^7/_8$			$11^7/_8$							7,691	9,641	2,307
TJ 14	$1^3/_4$ x14			14							7,691	9,641	2,307
TJ 2.69-9	$2^{11}/_{16}$ x $9^1/_2$	3	$2^3/_4$	$9^1/_2$	4	14	4	4 -16d	10 -16d	12-10dx$1^1/_2$	11,146	14,142	2,307
TJ 2.69-11	$2^{11}/_{16}$ x $11^7/_8$			$11^7/_8$							11,146	14,142	2,307
TJ 2.69-14	$2^{11}/_{16}$ x14			14							11,146	14,142	2,307
TJ 2.69-16	$2^{11}/_{16}$ x16			16							11,146	14,142	2,307
TJ 2.69-19	$2^{11}/_{16}$ x19			19							11,146	14,142	2,307
TJ 2-9	$3^1/_2$ x $9^1/_2$	3	$3^5/_8$	$9^1/_2$	5	17	4	4 -16d	16 -16d	14 -16d	18,241	23,114	4,633
TJ 2-11	$3^1/_2$ x $11^7/_8$			$11^7/_8$							18,241	23,114	4,633
TJ 2-14	$3^1/_2$ x14			14							18,241	23,114	4,633
TJ 2-16	$3^1/_2$ x16			16							18,241	23,114	4,633
TJ 2-18	$3^1/_2$ x18			18							18,241	23,114	4,633
TJ 2-19	$3^1/_2$ x19			19							18,241	23,114	4,633
TJ 3-9	$5^1/_4$ x $9^1/_2$	3	$5^3/_8$	$9^1/_2$	5	22	5	6 -16d	16 -16d	14 -16d	22,471	28,597	4,633
TJ 3-11	$5^1/_4$ x $11^7/_8$			$11^7/_8$							22,471	28,597	4,633
TJ 3-14	$5^1/_4$ x14			14							22,471	28,597	4,633
TJ 3-16	$5^1/_4$ x16			16							22,471	28,597	4,633
TJ 3-18	$5^1/_4$ x18			18							22,471	28,597	4,633
TJ 4-9	7 x $9^1/_2$	3	$7^1/_4$	$9^1/_2$	5	24	5	6 -16d	16 -16d	14 -16d	24,096	30,779	4,633
TJ 4-11	7 x $11^7/_8$			$11^7/_8$							24,096	30,779	4,633
TJ 4-14	7 x14			14							24,096	30,779	4,633
TJ 4-16	7 x16			16							24,096	30,779	4,633
TJ 4-18	7 x18			18							24,096	30,779	4,633

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. SCL Factored Resistance is based on the same lumber of joist and header.
3. PSL (Parallam) Factored Resistance can be used for D.Fir sawn lumber, glulam and LSL (Timber Strands).
4. LVL (Microllam) Factored Resistance is based on specified compression perpendicular to grain of 1365 psi.
5. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
6. All fasteners must be installed to obtain tabulated factored resistance.



Typical TJ Installation

TJ 2-14

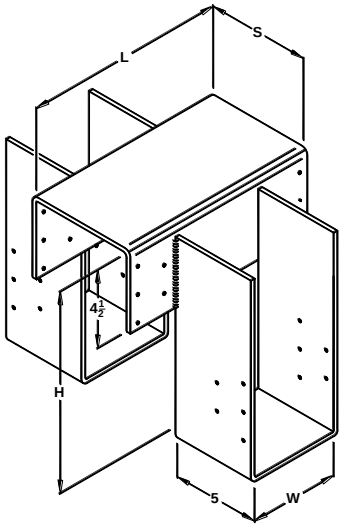


GSH BEAM AND GLULAM SADDLE HANGERS

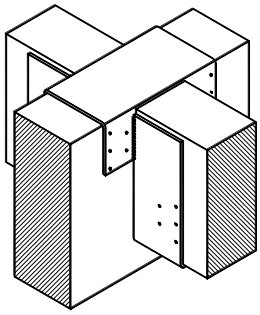
Designed to support heavy glulam and SCL beams.
MATERIAL: 3 ga.
FINISH: Prime Paint
FASTENERS: Nails

Model	Dimensions				Fasteners		Factored Resistance (lbs)				
							D.FIR & SCL		SPF		
									Normal		
	W	S	L	H	Header	Joist	Normal	Uplift	Sawn	Glulam	Uplift
GSH 3-5	$3^1/_4$	$5^1/_4$	$9^3/_4$	Spec.	10-16d	10-10d	14,543	2,360	10,909	11,780	1,696
GSH 3-7		$6^7/_8$					14,543	2,360	10,909	11,780	1,696
GSH 3-9		$8^7/_8$					14,543	2,360	10,909	11,780	1,696
GSH 5-5	$5^1/_4$	$5^1/_4$	$11^3/_4$	Spec.	10-16d	10-16d	23,181	2,877	17,310	18,845	2,023
GSH 5-7		$6^7/_8$					23,181	2,877	17,310	18,845	2,023
GSH 5-9		$8^7/_8$					23,181	2,877	17,310	18,845	2,023
GSH 7-5	$6^7/_8$	$5^1/_4$	$13^1/_2$	Spec.	10-16d	10-16d	29,271	2,877	22,008	23,894	2,023
GSH 7-7		$6^7/_8$					29,271	2,877	22,008	23,894	2,023
GSH 7-9		$8^7/_8$					29,271	2,877	22,008	23,894	2,023
GSH 9-5	$8^7/_8$	$5^1/_4$	$15^1/_2$	Spec.	10-16d	10-16d	29,271	2,877	25,552	27,803	2,023
GSH 9-7		$6^7/_8$					29,271	2,877	27,861	29,271	2,023
GSH 9-9		$8^7/_8$					29,271	2,877	27,861	29,271	2,023

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Factored Resistance is based on the same lumber of joist and header.
3. Factored Resistance is for the same load conditions on both sides of the hanger.
4. Factored Resistance is for one side of the hanger.
5. Number of nails is for one side of the hanger.
6. Verify that dimensions of wood members are adequate to transfer tabulated factored loads.
7. All fasteners must be installed to obtain tabulated factored resistance.
8. Specify H dimension.



GSH 5-5



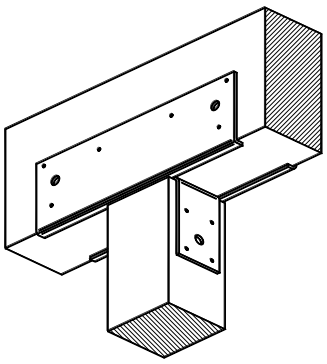
Typical GSH Installation

PC POST CAPS

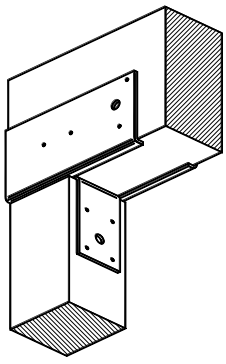
PC Post Caps provide connections for post-beam combinations in the medium load requirements.
MATERIAL: 12 ga. (PC-16 – 16 ga.)
FINISH: Galvanized
FASTENERS: 16d × $3^1/_2$" ($3^1/_2$" common nails)

Model	Dimensions							Fasteners (16d x $3^1/_2$" Nails)			Factored Resistance (lbs)					
											D.FIR			SPF		
								Surfaces			Uplift	Lateral		Uplift	Lateral	
	Post Size	W1	W2	L1	L2	L3	H	A	B	C	PC/EPC	PC	EPC	PC/EPC	PC	EPC
PC 44	4 x 4	$3^9/_{16}$	$3^9/_{16}$	$2^{11}/_{16}$	11	$7^3/_8$	$3^1/_2$	4	6	4	2,300	3,970	2,647	1,618	2,791	1,861
PC 44-16	4 x 4	$3^9/_{16}$	$3^9/_{16}$	$2^{11}/_{16}$	11	$7^3/_8$	$3^1/_2$	4	6	4	1,840	3,970	2,647	1,294	2,791	1,861
PC 46	4 X 6	$3^9/_{16}$	$5^1/_2$	$2^{11}/_{16}$	13	$9^1/_4$	$3^1/_2$	4	6	4	2,300	3,970	2,647	1,618	2,791	1,861
PC 46-16	4 X 6	$3^9/_{16}$	$5^1/_2$	$2^{11}/_{16}$	13	$9^1/_4$	$3^1/_2$	4	6	4	1,840	3,970	2,647	1,294	2,791	1,861
PC 48	4 X 8	$3^9/_{16}$	$7^1/_2$	$2^{11}/_{16}$	15	$11^1/_4$	$3^1/_2$	4	8	6	2,300	5,294	3,970	1,618	3,722	2,791
PC 48-16	4 X 8	$3^9/_{16}$	$7^1/_2$	$2^{11}/_{16}$	15	$11^1/_4$	$3^1/_2$	4	8	6	1,840	5,294	3,970	1,294	3,722	2,791
PC 64	6 X 4	$5^1/_2$	$3^9/_{16}$	$4^9/_{16}$	11	$7^3/_8$	$3^1/_2$	4	6	4	2,300	3,970	2,647	1,618	2,791	1,861
PC 64-16	6 X 4	$5^1/_2$	$3^9/_{16}$	$4^9/_{16}$	11	$7^3/_8$	$3^1/_2$	4	6	4	1,840	3,970	2,647	1,294	2,791	1,861
PC 66	6 X 6	$5^1/_2$	$5^1/_2$	$4^9/_{16}$	13	$9^1/_4$	$3^1/_2$	4	6	6	2,300	3,970	3,970	1,618	2,791	2,791
PC 66-16	6 X 6	$5^1/_2$	$5^1/_2$	$4^9/_{16}$	13	$9^1/_4$	$3^1/_2$	4	6	6	1,840	3,970	3,970	1,294	2,791	2,791
PC 68	6 X 8	$5^1/_2$	$7^1/_2$	$4^9/_{16}$	15	$11^1/_4$	$3^1/_2$	4	8	6	2,300	5,294	3,970	1,618	3,722	2,791
PC 610	6 X 10	$5^1/_2$	$9^1/_2$	$4^9/_{16}$	17	$13^1/_4$	$3^1/_2$	4	8	6	2,300	5,294	3,970	1,618	3,722	2,791
PC 84	8 X 4	$7^1/_2$	$3^9/_{16}$	$6^1/_2$	11	$7^3/_8$	$3^3/_4$	4	6	6	2,300	3,970	3,970	1,618	2,791	2,791
PC 86	8 X 6	$7^1/_2$	$5^1/_2$	$6^1/_2$	13	$9^1/_4$	$3^3/_4$	4	6	6	2,300	3,970	3,970	1,618	2,791	2,791
PC 88	8 X 8	$7^1/_2$	$7^1/_2$	$6^1/_2$	15	$11^1/_4$	$3^3/_4$	4	8	6	2,300	5,294	3,970	1,618	3,722	2,791

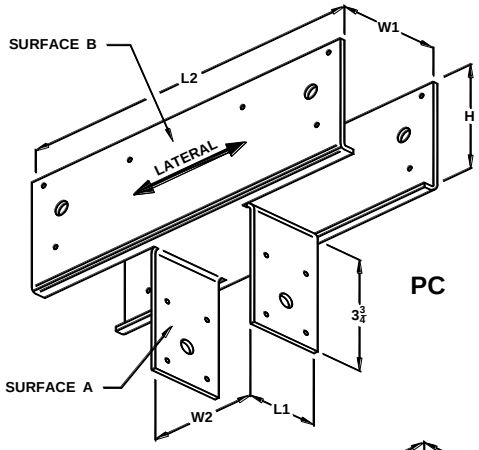
1. Factored Resistance for lateral load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Lateral Load Resistance is in the direction of the beam's axis for continuous beams. If the beams are joined over post, the Lateral Resistance shall be reduced by 50 %.
3. Bolt holes provide optional installation with $^1/_2$" bolts.
4. EPC – End Column Cap.

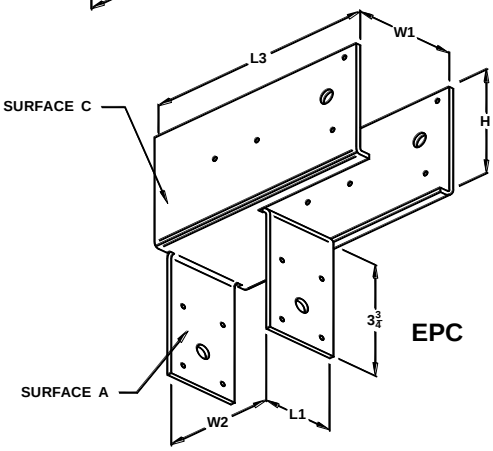


Typical PC Installation



Typical EPC Installation



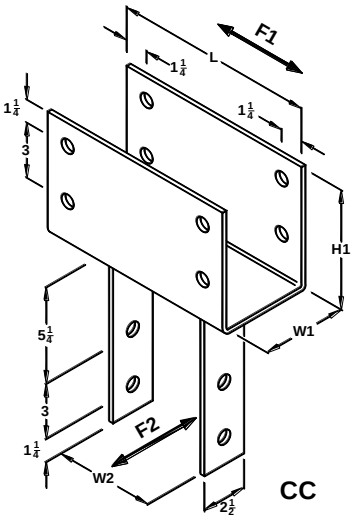


CC COLUMN CAPS

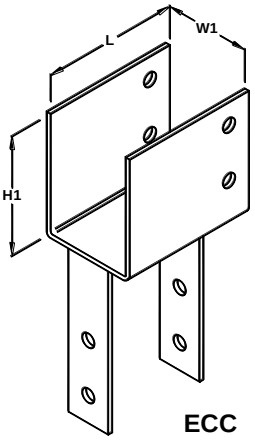
Column Caps are used for heavy-duty column to beam connections.
MATERIAL: See table
FINISH: Corrosion resistant primer
FASTENERS: Bolts

Model	Ga	Dimensions			L		Bolts		Factored Resistance [lbs]							
									D.FIR				SPF			
		W1	W2	H1	CC	ECC	Beam	Post	Normal	Uplift	F1	F2	Normal	Uplift	F1	F2
CC 3 1/4-4	7	3 1/4	3 5/8	6 1/2	11	7 1/2	4 - 5/8	2 - 5/8	26,751	4,630	7,823	4,631	22,255	4,249	7,283	3,956
CC 3 1/4-6	7	3 1/4	5 1/2	6 1/2	11	7 1/2	4 - 5/8	2 - 5/8	26,751	4,630	7,823	6,969	22,255	4,249	7,283	6,227
CC 44	7	3 5/8	3 5/8	6 1/2	11	7 1/2	4 - 5/8	2 - 5/8	30,348	4,630	7,823	4,631	24,953	4,249	7,283	3,956
CC 46	7	3 5/8	5 1/2	6 1/2	11	8 1/2	4 - 5/8	2 - 5/8	31,247	4,630	7,823	6,969	25,852	4,249	7,283	6,227
CC 5 1/4-4	3	5 1/4	3 5/8	8	13	9 1/2	4 - 3/4	2 - 3/4	44,060	7,194	11,083	5,328	36,192	6,159	10,318	4,563
CC 5 1/4-6	3	5 1/4	5 1/2	8	13	9 1/2	4 - 3/4	2 - 3/4	59,347	7,194	11,083	8,407	49,231	6,159	10,318	7,194
CC 5 1/4-8	3	5 1/4	7 1/2	8	13	9 1/2	4 - 3/4	2 - 3/4	59,347	7,194	11,083	9,756	49,231	6,159	10,318	9,149
CC 64	7	5 1/2	3 5/8	6 1/2	11	7 1/2	4 - 5/8	2 - 5/8	46,308	6,744	7,823	4,631	37,991	6,272	7,283	3,956
CC 66	7	5 1/2	5 1/2	6 1/2	11	7 1/2	4 - 5/8	2 - 5/8	49,006	6,744	7,823	6,969	40,689	6,272	7,283	6,227
CC 68	7	5 1/2	7 1/2	6 1/2	11	9 1/2	4 - 5/8	2 - 5/8	49,006	6,969	7,823	9,734	40,689	6,497	7,283	9,149
CC 6-7 1/8	7	5 1/2	7 1/8	6 1/2	11	9 1/2	4 - 5/8	2 - 5/8	49,006	6,969	7,823	9,734	40,689	6,497	7,283	9,149
CC 7 1/8-4	3	7 1/8	3 5/8	8	13	10 1/2	4 - 3/4	2 - 3/4	59,796	7,194	11,083	5,328	47,657	6,159	10,318	4,563
CC 7 1/8-6	3	7 1/8	5 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	73,959	7,194	11,083	8,407	61,370	6,159	10,318	7,194
CC 7 1/8-7 1/8	3	7 1/8	7 1/8	8	13	10 1/2	4 - 3/4	2 - 3/4	73,959	9,869	11,083	9,869	61,370	9,149	10,318	9,149
CC 74	3	6 7/8	3 5/8	8	13	10 1/2	4 - 3/4	2 - 3/4	57,773	7,194	11,083	5,328	47,432	6,159	10,318	4,563
CC 76	3	6 7/8	5 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	72,610	7,194	11,083	8,407	60,246	6,159	10,318	7,194
CC 77	3	6 7/8	6 7/8	8	13	10 1/2	4 - 3/4	2 - 3/4	72,610	9,869	11,083	9,869	60,246	9,149	10,318	9,149
CC 78	3	6 7/8	7 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	72,610	9,869	11,083	9,869	60,246	9,149	10,318	9,149
CC 86	3	7 1/2	5 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	79,130	7,194	11,083	8,407	65,642	6,159	10,318	7,194
CC 88	3	7 1/2	7 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	79,130	9,869	11,083	9,869	65,642	9,149	10,318	9,149
CC 96	3	8 7/8	5 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	93,517	7,194	11,083	8,407	77,556	6,159	10,318	7,194
CC 98	3	8 7/8	7 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	93,517	9,869	11,083	9,869	77,556	9,149	10,318	9,149
CC 106	3	9 1/2	5 1/2	8	13	10 1/2	4 - 3/4	2 - 3/4	100,260	7,194	11,083	8,407	83,176	6,159	10,318	7,194

1. Factored Resistance for normal load is based on beam bearing and column compressive resistance.
2. Column size assumed W1 x W2; no buckling considered.
3. Normal load and Uplift apply to CC only.
4. Factored Resistance for Uplift and Lateral Load (F1 and F2) is increased by 15 % for short-term load duration (wind, earthquake).
5. Uplift Factored Resistance is lesser of column bolts resistance and beam bolts resistance (one beam only) for vertical load.
6. It is assumed that beams are joined over column.
7. ECC – End Column Cap.
8. CCC – Cross Column Cap.
9. ECCLL (ECCRL) – L Column Cap Left (Right). ECCL is an ECC End Column Cap with beam seat top flush.
10. Straps are centred upon the top unless otherwise specified.
11. Column straps may be rotated 90° on special orders where W1 is greater than W2.
12. Any W2 dimension may be specified in combination with any column cap size given.

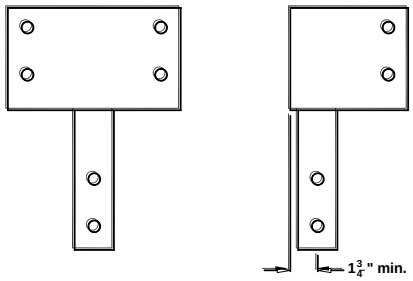


CC

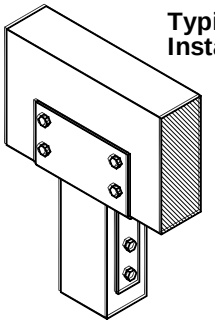


ECC

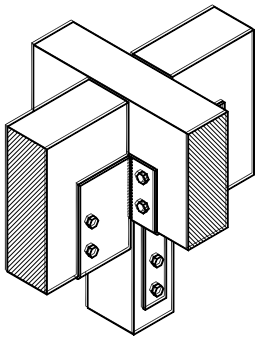
CC COLUMN CAPS (CONTINUED…)



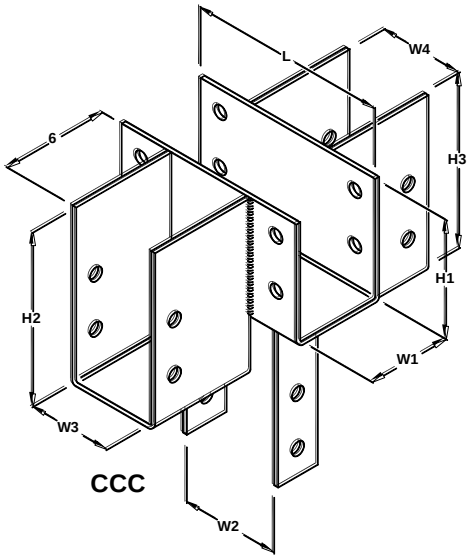
OPTION WITH STRAPS ROTATED 90°



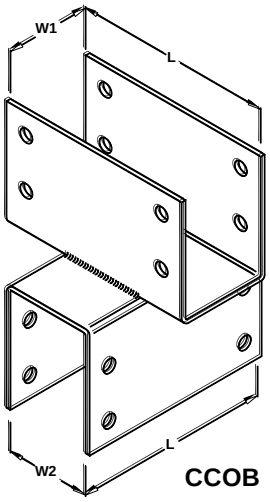
Typical CC Installation



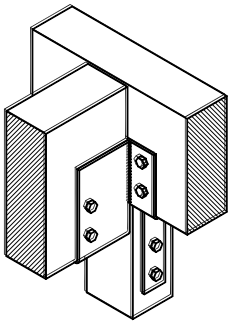
Typical CCC Installation



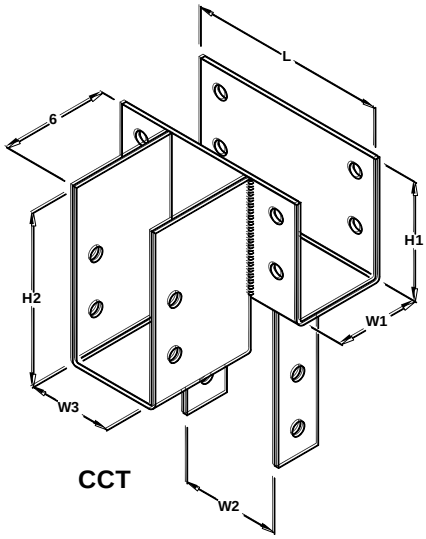
CCC



CCOB



Typical CCT Installation



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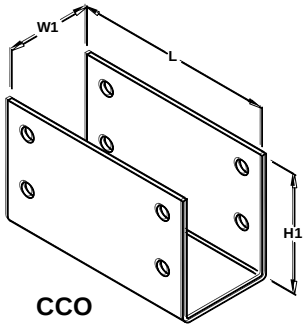
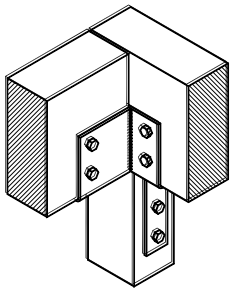
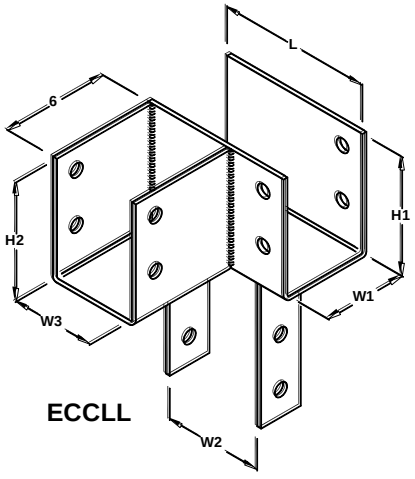


CCO



Typical ECCLL Installation



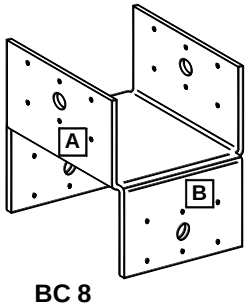
ECCLL

BC POST CAP/BASE

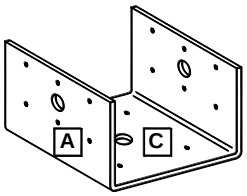
Dual purpose BC Post Cap/Base combination can be used for light post-cap or post–base connections.
MATERIAL: 18 ga.
FINISH: Galvanized
FASTENERS: 16d × $3^1/_2$" ($3^1/_2$" common nails)

Model	Dimensions						Fasteners (total)			Factored Resistance [lbs]			
							Surface			D.FIR.		SPF	
	W1	W2	L1	L2	H1	H2	A	B	C	Lateral	Uplift	Lateral	Uplift
POST CAP APPLICATION													
BC 4	$3^9/_{16}$	$3^9/_{16}$	$3^3/_8$	$3^3/_8$	3	3	3	3	-	1,726	1,990	1,214	1,396
BC 46	$3^9/_{16}$	$5^1/_2$	$5^1/_2$	$3^1/_2$	$2^1/_2$	$3^1/_2$	3	6	-	1,726	1,990	1,214	1,396
BC 6	$5^1/_2$	$5^1/_2$	$5^1/_2$	$5^1/_2$	$3^3/_8$	$3^3/_8$	6	6	-	3,452	3,970	2,428	2,790
BC 8	$7^1/_2$	$7^1/_2$	$7^1/_2$	$7^1/_2$	4	4	6	6	-	3,452	3,970	2,428	2,790
BC 4R	4	4	4	4	3	3	6	6	-	3,452	3,970	2,428	2,790
BC 46R	4	6	6	4	3	3	6	6	-	3,452	3,970	2,428	2,790
BC 6R	6	6	6	6	3	3	6	6	-	3,452	3,970	2,428	2,790
BC 8R	8	8	8	8	4	4	6	6	-	3,452	3,970	2,428	2,790
POST BASE APPLICATION													
BC 40	$3^9/_{16}$	-	$3^3/_8$	-	3	-	3	-	4	887	-	623	-
BC40R	4	-	4	-	3	-	6	-	4	887	-	623	-
BC 460	$3^9/_{16}$	-	$5^1/_2$	-	$2^1/_2$	-	3	-	4	887	-	623	-
BC 460R	4	-	6	-	3	-	6	-	4	887	-	623	-
BC 60	$5^1/_2$	-	$5^1/_2$	-	$3^3/_8$	-	6	-	4	887	-	623	-
BC 60R	6	-	6	-	3	-	6	-	4	887	-	623	-
BC 80	$7^1/_2$	-	$7^1/_2$	-	4	-	6	-	4	887	-	623	-
BC 80R	8	-	8	-	4	-	6	-	4	887	-	623	-

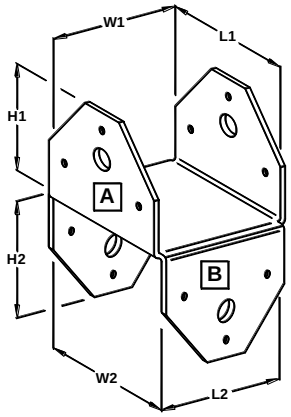
1. Factored Resistance for Uplift and Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Lateral Load Resistance is in the direction of the beam's axis and it is assumed that beams are joined over column.



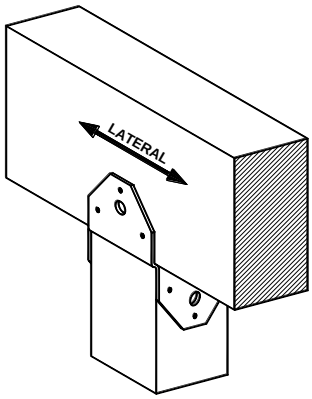
BC 8



BC 80 BASE



BC 4

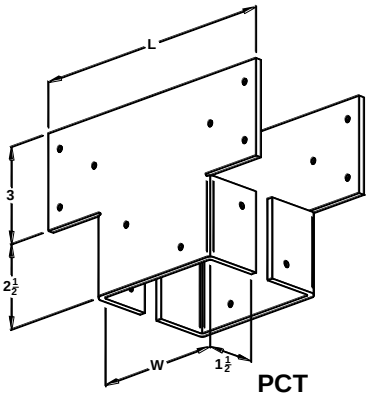


Typical BC Installation

PCT POST CAPS

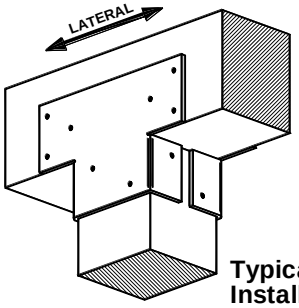
Post Caps can be installed before, during and after beams are erected.
MATERIAL: See table
FINISH: Galvanized
FASTENERS: 16d × $3^1/_2$" ($3^1/_2$" common nails)

Model	Post Size	Ga	Dimensions		Fasteners (16d x $3^1/_2$" Nails)		Factored Resistance [lbs]			
							D.Fir		SPF	
			W	L	Beam	Post	Uplift	Lateral	Uplift	Lateral
PCT 4	4 X 4	18	$3^9/_{16}$	$6^1/_2$	12	8	2,647	1,985	1,861	1,396
PCT 4R	4 X 4 (R)	18	4	7	12	8	2,647	1,985	1,861	1,396
PCTE 4	4 X 4	18	-	$4^1/_2$	8	6	1,985	1,324	1,396	931
PCT 6	6 X 6	18	$5^1/_2$	$8^1/_2$	12	8	2,647	1,985	1,861	1,396
PCT 6R	6 X 6 (R)	18	6	9	12	8	2,647	1,985	1,861	1,396
PCTE 6	6 X 6	18	-	$6^1/_2$	8	6	1,985	1,324	1,396	931
PCT 8R	8 X 8 (R)	16	8	13	12	8	2,647	1,985	1,861	1,396

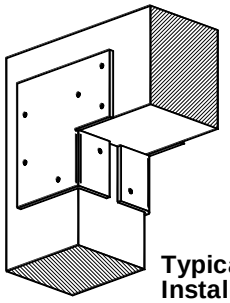


PCT

1. Factored Resistance for Uplift and Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Lateral Load Resistance is in the direction of the beam's axis.
3. Loads apply only when used in pairs.
4. PCTE – End Column Cap.
5. PCTR – for rough sizes of lumber.



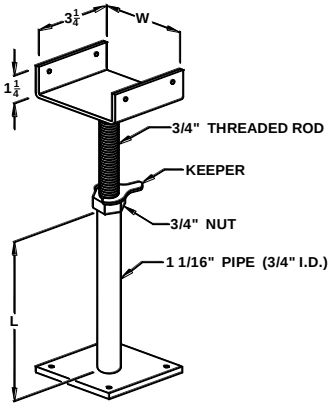
Typical PCT Installation


Typical EPCT Installation

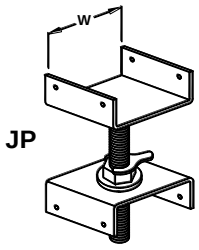
JP/J FLOOR BEAM LEVELER

Provides precise height and levelling for columns and floor beams.
MATERIAL: 10 ga. saddle and 3 ga. base for J.
FINISH: Prime paint
FASTENERS: 16d × $3^1/_2$" ($3^1/_2$" common nails)

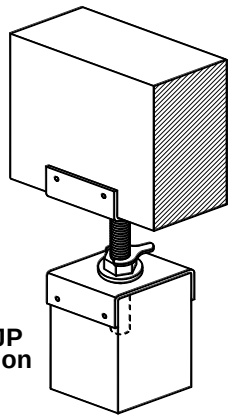
Model	Dimensions				Factored Resistance (Compression) [lbs]
	Variable Heights	L	Threaded Length	W	
JP 44	2	-	$4^3/_4$	$3^9/_{16}$	13,330
J 57	5 - 7	5	4		13,330
J 813	8 - 13	8	8		13,330
J 1116	11 - 16	11			13,330
J 1318	13 - 18	13			13,330
J 1621	16 - 21	16			13,330
J 2126	21 - 26	21			13,330



J



JP


Typical JP Installation

1. Variation of sizes is available upon request.
2. Do not apply lifting forces.
3. Check bearing resistance of beam.
4. JP-Jack Pier.

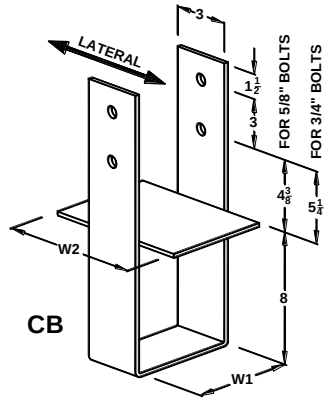
CB COLUMN BASE

CB Column Bases are used for post and column conditions requiring high structural strength and durable performance.

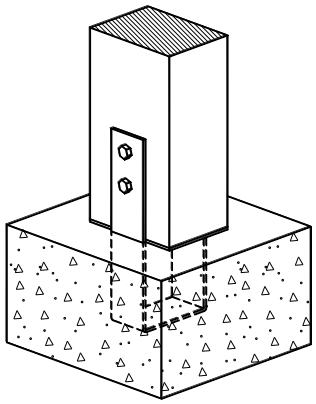
MATERIAL: See table
FINISH: Prime paint
FASTENERS: Bolts

Model	Post Size	Ga.	Dimensions		Bolts	Factored Resistance [lbs]			
			W1	W2		D.FIR		SPF	
						Lateral	Uplift	Lateral	Uplift
CB 44	4x4	7	$3^{9}/_{16}$	$3^{9}/_{16}$	2 - $^{5}/_{8}$"	5,325	6,179	4,808	5,532
CB 46	4x6		$3^{9}/_{16}$	$5^{1}/_{2}$		5,325	6,179	4,808	5,532
CB 48	4x8		$3^{9}/_{16}$	$7^{1}/_{2}$		5,325	6,179	4,808	5,532
CB 66	6x6		$5^{9}/_{16}$	$5^{1}/_{2}$		6,411	7,833	5,739	7,290
CB 68	6x8	3	$5^{9}/_{16}$	$7^{1}/_{2}$		6,411	7,833	5,739	7,290
CB 610	6x10		$5^{9}/_{16}$	$9^{1}/_{2}$		6,411	7,833	5,739	7,290
CB 612	6x12		$5^{9}/_{16}$	$11^{1}/_{2}$		6,411	7,833	5,739	7,290
CB 88	8x8		$7^{9}/_{16}$	$7^{1}/_{2}$	2 - $^{3}/_{4}$"	9,513	11,090	8,505	10,315
CB 810	8x10		$7^{9}/_{16}$	$9^{1}/_{2}$		9,513	11,090	8,505	10,315
CB 812	8x12		$7^{9}/_{16}$	$11^{1}/_{2}$		9,513	11,090	8,505	10,315
CB 1010	10x10		$9^{9}/_{16}$	$9^{1}/_{2}$		9,513	11,090	8,505	10,315
CB 1012	10x12		$9^{9}/_{16}$	$11^{1}/_{2}$		9,513	11,090	8,505	10,315
CB 1212	12x12		$11^{9}/_{16}$	$11^{1}/_{2}$		9,513	11,090	8,505	10,315

1. Factored Resistance for Uplift and Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Check the edge distance for concrete embedment (designed by others).



CB

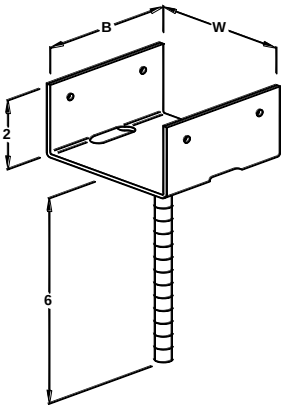

Typical CB Installation

CPR CARPORT BRACKET

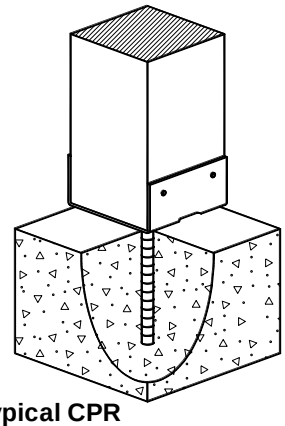
Medium duty post base designed to be embeded into wet concrete.

MATERIAL: 12 ga.
FINISH: See Table
FASTENERS: 16d × $3^{1}/_{2}$" ($3^{1}/_{2}$" common nails)

Model	Post Size	Finish	Dimensions		Nails	Lateral Factored Resistance [lbs]	
			W	B		D.FIR	SPF
CPR 44PC	4X4	Powder Coated	$3^{9}/_{16}$	$3^{1}/_{2}$	4 -16d	1,150	821
CPR 46PC	4X6		$3^{9}/_{16}$	$5^{1}/_{2}$		1,150	821
CPR 66PC	6X6		$5^{9}/_{16}$	$5^{1}/_{2}$		1,150	821
CP 44RPC	4X4(R)		$4^{1}/_{8}$	4		1,150	821
CP 66RPC	6X6(R)		$6^{1}/_{8}$	6		1,150	821
CP 88	8X8	Galv.	$7^{9}/_{16}$	$7^{1}/_{2}$		1,150	821
CP 88R	8X8(R)	Galv.	$8^{1}/_{8}$	8		1,150	821



CPR


Typical CPR Installation

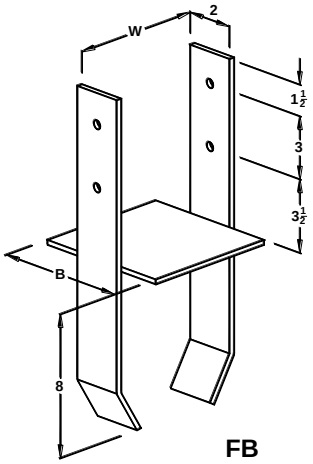
1. Factored Resistance for Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Powder Coated finish is recommended for treated wood applications.
3. CPR allows 1" clearance above concrete.
4. Other sizes are available upon request.

FB FENCE BRACKET

FB Fence Brackets are used for fence post applications.
MATERIAL: 7 ga.
FINISH: Prime paint
FASTENERS: $^3/_8$" Machine Bolts

Model	Post Size	Ga.	Dimensions		Bolts	Factored Resistance [lbs]			
			W	B		D.FIR		SPF	
						Lateral	Uplift	Lateral	Uplift
FB 44	4X4	7	$3^9/_{16}$	$3^1/_2$	2 -$^3/_8$"	2,585	3,878	2,405	3,619
FB 44R	4X4(R)		$4^1/_8$	4		2,585	3,878	2,405	3,619
FB 66	6X6		$5^9/_{16}$	$5^1/_2$		2,585	3,878	2,405	3,619
FB 66R	6X6(R)		$6^1/_8$	6		2,585	3,878	2,405	3,619
FB 88	8x8		$7^9/_{16}$	$7^1/_2$		2,585	3,878	2,405	3,619
FB 88R	8x8(R)		$8^1/_8$	8		2,585	3,878	2,405	3,619

1. Factored Resistance for Uplift and Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Check the edge distance for concrete embedment (designed by others).
3. Available in other sizes upon request.



FB

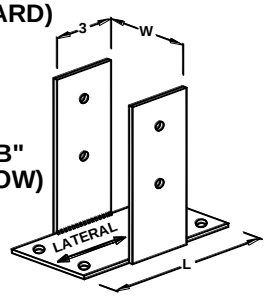
FBK FENCE BRACKET

FBK are used for fence post applications.
MATERIAL: 3 ga.
FINISH: Prime paint
FASTENERS: $^1/_2$" Machine Bolts or $^1/_2$" x $3^1/_2$" Lag Screws

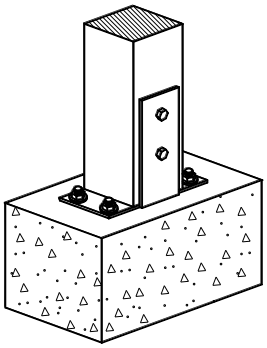
Model	Post Size	Ga.	Dimensions			Bolts (Screws)	Factored Resistance [lbs]			
			W	B	L		D.FIR		SPF	
							Lateral	Uplift	Lateral	Uplift
$^1/_2$" Machine Bolts										
FBK 44	4X4	3	$3^9/_{16}$	6	8	2 -$^1/_2$"	2,248	3,372	2,091	3,147
FBK 44R	4X4(R)		$4^1/_8$	6	8		2,248	3,372	2,091	3,147
FBK 66	6X6		$5^9/_{16}$	8	10		2,248	3,372	2,091	3,147
FBK 66R	6X6(R)		$6^1/_8$	8	10		2,248	3,372	2,091	3,147
$^1/_2$" x $3^1/_2$" Lag Screws										
FBK 44	4X4	3	$3^9/_{16}$	6	8	4 -$^1/_2$"	1,720	2,569	1,302	1,951
FBK 44R	4X4(R)		$4^1/_8$	6	8		1,720	2,569	1,302	1,951
FBK 66	6X6		$5^9/_{16}$	8	10		1,720	2,569	1,302	1,951
FBK 66R	6X6(R)		$6^1/_8$	8	10		1,720	2,569	1,302	1,951

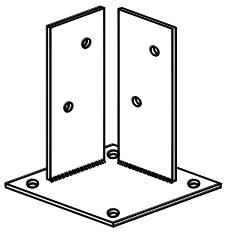
1. Factored Resistance for Uplift and Lateral Load can be increased by 15 % for short-term load duration (wind, earthquake).
2. Check the edge distance for concrete embedment (designed by others).
3. Available in other sizes upon request.
4. Option with Machine Bolts is preferable (shrinkage of lumber).
5. Base Plate comes with $^9/_{16}$ " hole.

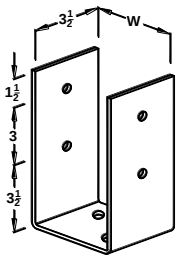
FBK - "A" (STANDARD)



FBK - "B" (NARROW)


Typical FBK Installation


FBK - CORNER (Lag Screws only)



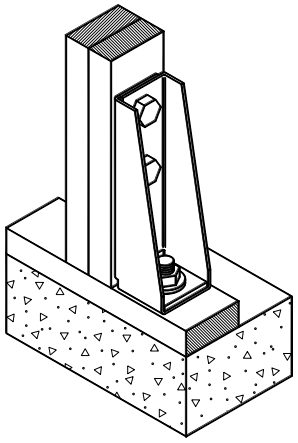
FBK - "C" TYPE

HDA HOLD-DOWNS

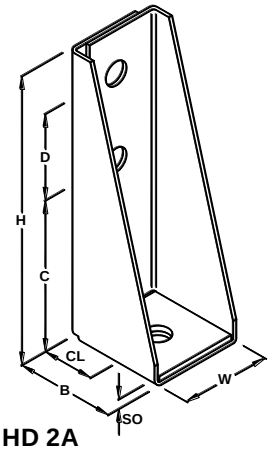
Hold-downs are used to transfer tension and shear loads between floors, shear walls and anchor studs to foundations.
MATERIAL: See table
FINISH: Galvanized or prime painted (welded models).
FASTENERS: Bolts

Model	Material		Dimensions							Bolts		Factored Resistance - Uplift [lbs] Studs thickness [in]				
	Body Ga	Base Ga	H	C	D	W	B	SO	CL	Anchor	Studs	1 1/2"	3"	4 1/2"	6"	7 1/2"
D.Fir																
HD 2A	14	10	8 3/8	4 5/8	2 1/2	2 5/8	2 7/8	1/4	1 5/8	5/8"	2 - 5/8"	1,078	2,223	3,464	3,645	3,645
HD 5A	12	3	9 1/2	5 1/4	3	3 7/16	3 3/4	7/16	2	3/4"	2 - 3/4"	1,396	2,921	4,214	5,455	5,455
HD 6A	10	3	11	6 1/4	3 1/2	3 3/16	3 1/4	7/16	1 7/8	7/8"	2 - 7/8"	1,758	3,257	4,938	6,773	7,575
HD 8A	10	3	14 1/2	6 1/4	3 1/2	3 3/16	3 3/8	7/16	1 7/8	7/8"	3 - 7/8"	2,352	4,343	6,566	9,022	10,341
HD 10A	10	3	18	6 1/4	3 1/2	3 3/16	3 3/8	7/16	1 7/8	7/8"	4 - 7/8"	2,895	5,274	8,014	11,013	12,720
SPF																
HD 2A	14	10	8 3/8	4 5/8	2 1/2	2 5/8	2 7/8	1/4	1 5/8	5/8"	2 - 5/8"	1,008	2,016	3,309	3,490	3,490
HD 5A	12	3	9 1/2	5 1/4	3	3 7/16	3 3/4	7/16	2	3/4"	2 - 3/4"	1,318	2,689	3,826	5,196	5,196
HD 6A	10	3	11	6 1/4	3 1/2	3 3/16	3 1/4	7/16	1 7/8	7/8"	2 - 7/8"	1,680	3,025	4,524	6,127	7,213
HD 8A	10	3	14 1/2	6 1/4	3 1/2	3 3/16	3 3/8	7/16	1 7/8	7/8"	3 - 7/8"	2,249	4,033	6,023	8,195	8,950
HD 10A	10	3	18	6 1/4	3 1/2	3 3/16	3 3/8	7/16	1 7/8	7/8"	4 - 7/8"	2,766	4,938	7,368	10,005	12,125

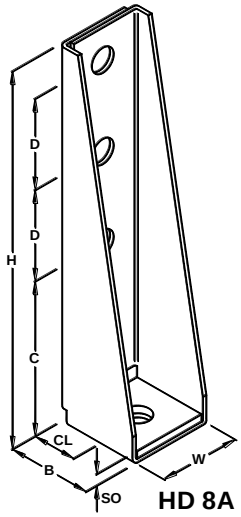
1. Factored resistance is based on parallel to grain loading in accordance with CSA 086.1-94.
2. Factored resistance is increased by 15 % for short term load duration (wind, earthquake).
3. “C” is the required minimum distance from the end of the stud to the centre of the first hole.
4. Wood member must have adequate load carrying capacity at the critical net section.
5. The anchor bolts between the concrete and hold down shall have sufficient embedments to resist the tabulated loads.
6. Bolts holes shall be a minimum of 1/32" and maximum of 1/16" larger than the diameter of the bolt to be installed.
7. Standard washers are required for anchor and stud bolts.



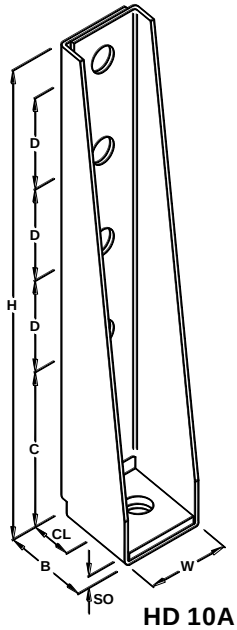
Typical HDA Installation



HD 2A (HD 5A and HD 6A similar)



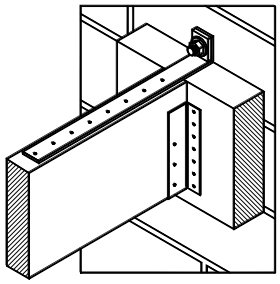
HD 8A



HD 10A

TT TENSION TIES

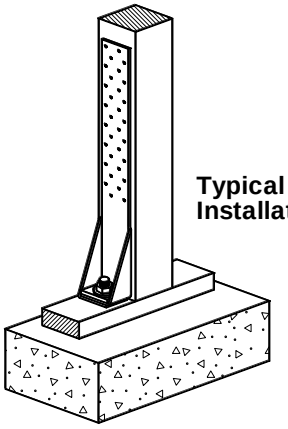
Provide wood-to-concrete and wood-to-masonry connections for retrofit or new constructions.
MATERIAL: See table
FINISH: Galvanized
FASTENERS: See table



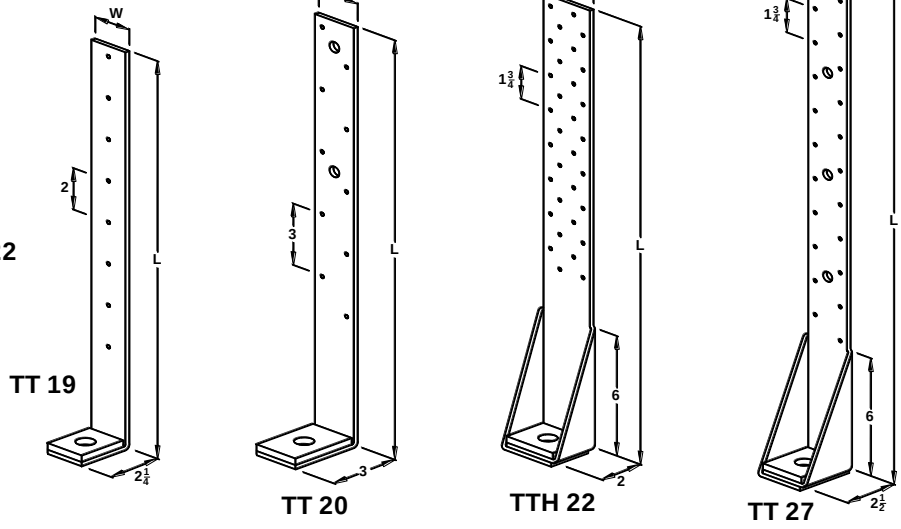
Typical TT 19 Installation

Model	Ga.		Dimensions		Fasteners			Factored Tensile Resistance (lbs)			
								D.FIR		SPF	
	Strap	Base Plate	W	L	Anchor Bolt	Nails	Bolts	Nails	Bolts	Nails	Bolts
TT 19	16	3	$1^3/_4$	19	$^3/_4$"	8 -16d	-	2,647	-	1,861	-
TT 20	12		2	20	$^5/_8$"	10 -16d	2 -$^1/_2$"	3,309	2,499	2,327	2,405
TT 27		7	$2^1/_8$	27	$^5/_8$"	24 -16d	4 -$^1/_2$"	7,126	3,956	5,010	3,807
TTH 16			$2^1/_2$	16	$^5/_8$"	18 -16d	-	5,956	-	4,188	-
TTH 22			$2^1/_2$	22	$^5/_8$"	32 -16d	-	8,834	-	7,445	-

1. Factored Tensile Resistance has been increased by 15 % for short-term load duration (wind, earthquake).
2. Designer must specify anchor bolt embedment.
3. Factored Resistance for bolts is based on $1^1/_2$" lumber thickness.
4. For nails connections minimum lumber thickness is 3".



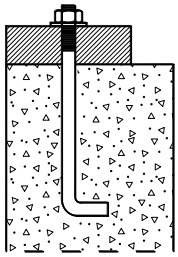
Typical TTH 22 Installation



AB ANCHOR BOLTS

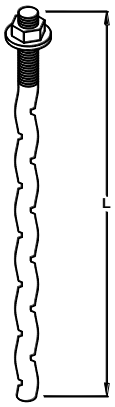
MATERIAL: Round bars
FINISH: Bare metal

Model	Dimensions	
	D	L
AB $^1/_2$ X6 L(C)	$^1/_2$	6
AB $^1/_2$ X8 L(C)		8
AB $^1/_2$ X10 L(C)		10
AB $^1/_2$ X12 L(C)		12
AB $^5/_8$ X6 L(C)	$^5/_8$	6
AB $^5/_8$ X8 L(C)		8
AB $^5/_8$ X10 L(C)		10
AB $^5/_8$ X12 L(C)		12
AB $^3/_4$ X6 L(C)	$^3/_4$	6
AB $^3/_4$ X8 L(C)		8
AB $^3/_4$ X10 L(C)		10
AB $^3/_4$ X12 L(C)		12

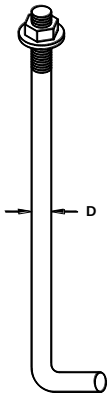


Typical AB Installation

1. All anchor bolts c/w nuts & washers.
2. ABL - “L” shaped anchor bolt.
3. ABC – crimped anchor bolt.
4. Other sizes are available.



AB - crimped



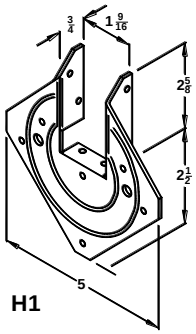
AB - "L" shaped

H HURRICANE TIES

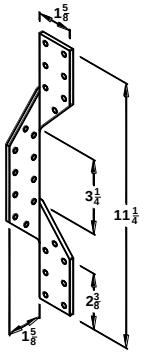
Designed to provide wind and seismic ties for trusses and rafters.
MATERIAL: 18 ga.
FINISH: Galvanized
FASTENERS: See table

Model	Ga.	Fasteners			Factored Resistance [lbs]			
					D.FIR		SPF	
		Rafter	Plate	Stud	Uplift	F	Uplift	F
H 1	20	4 -10d x1$^1/_2$	4 -10d	-	853	751	598	526
H 2	18	7 -8d	-	7 -8d	689	-	432	-
H 2.5	18	5 -8d	7 -8d	-	681	-	580	-
H 3	20	5 -8d	5 -8d	-	681	-	580	-
H4	18	4 -8d	4 -8d	-	545	-	464	-
H5	18	4 -8d	4 -8d	-	545	-	464	-
H6	18	-	8 -8d	8 -8d	787	-	494	-
H10	18	8 -8d x1$^1/_4$	8 -8d	-	1279	1025	897	711
H10-2	18	6 -10d x1$^1/_2$	6 -10d	-	960	776	672	533

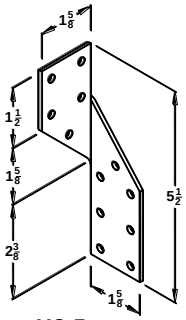
1. Factored Resistance for Uplift and Lateral Load has been increased by 15 % for short-term load duration (wind, earthquake).
2. Factored Resistance is for one anchor.
3. Minimum rafter thickness of 2$^1/_2$" must be used when anchors are installed on both sides of the rafter.



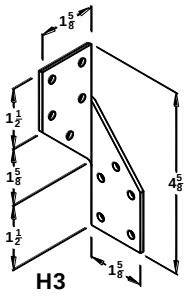
H1



H2



H2.5



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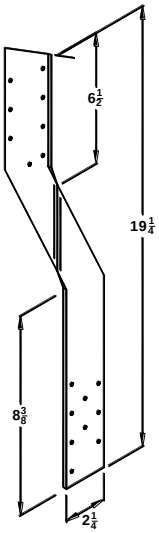
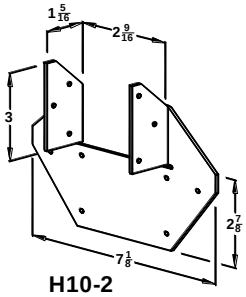
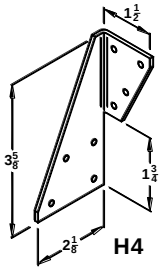


H6



H10-2



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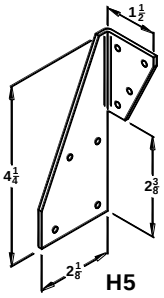
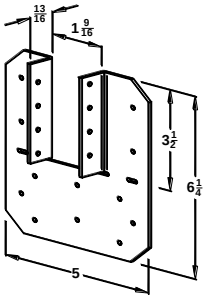
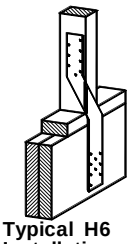
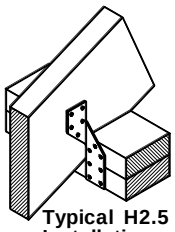


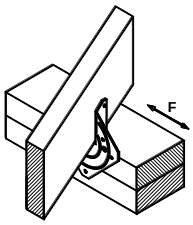
H5



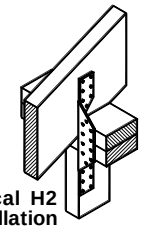
H10

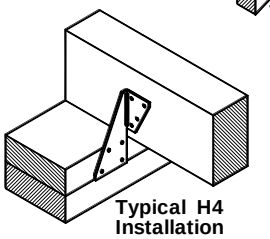

Typical H6 Installation

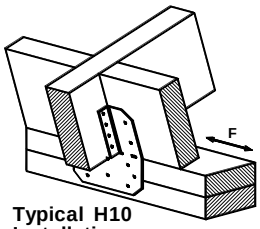

Typical H2.5 Installation



Typical H1 Installation


Typical H2 Installation


Typical H4 Installation

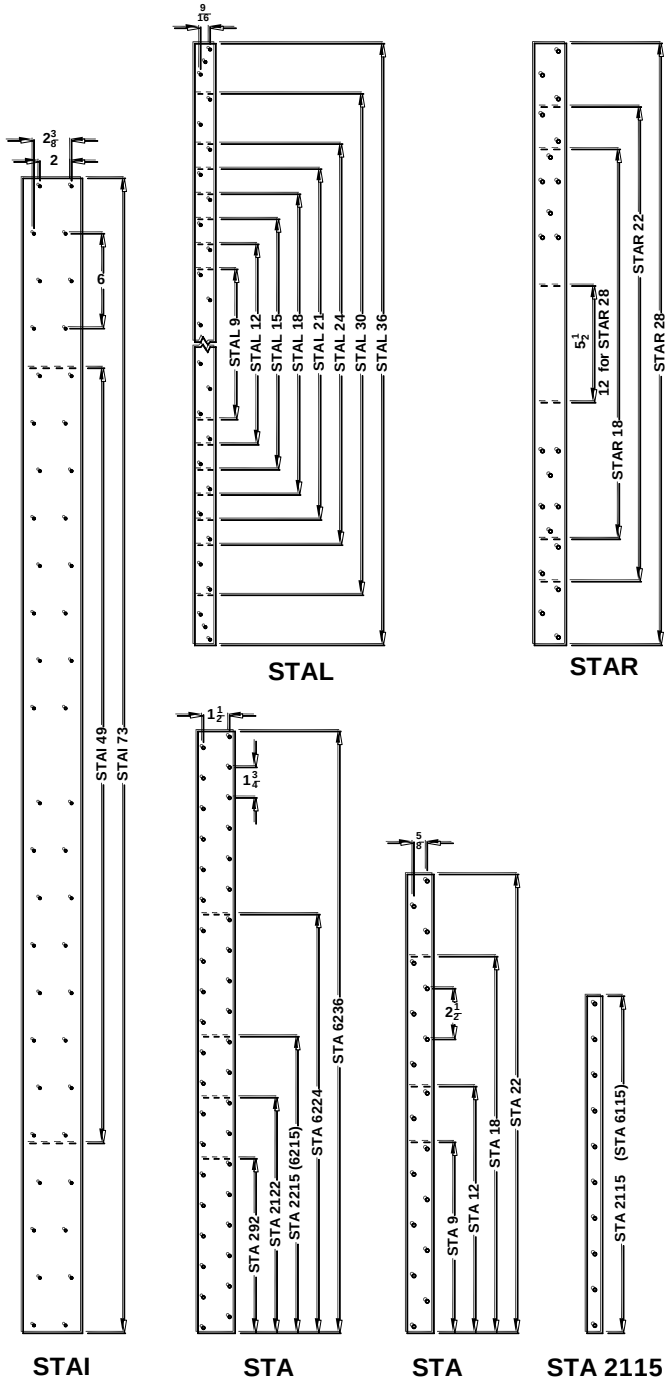


Typical H10 Installation (H10-2 similar)

STA STRAP TIES

Used for multi-purpose connection for wall intersection ties and plate splices.
MATERIAL: See table
FINISH: Galvanized or Prime Painted (10,7,3 ga.)
FASTENERS: See table

Model	Ga.	Dimensions W	Dimensions L	Nails	Factored Tensile Resistance [lbs] D.FIR	Factored Tensile Resistance [lbs] SPF
STAR 18	16	1 1/2	18 3/8	12 -16d	1,985	1,396
STAR 22			22 3/8	16 -16d	2,171	1,551
STAR 28			28 3/8	12 -16d	1,985	1,396
STA 2115	20	3/4	16 3/8	10 -16d	877	877
STA 292		2 1/8	10	12 -16d	1,985	1,396
STA 2122			13 1/2	16 -16d	2,487	1,861
STA 2215			17	20 -16d	2487	2327
STA 6115	18	3/4	16 3/8	10 -16d	1,170	1,163
STA 9	16	1 1/4	9	8 -16d	1,323	931
STA 12			11 5/8	10 -16d	1,654	1,163
STA 18			17 3/4	14 -16d	2,316	1,629
STA 22			21 5/8	18 -16d	2438	2094
STA 6215		2 1/8	17	20 -16d	3,309	2,327
STA 6224			24	28 -16d	4,144	3,257
STA 6236	14		34 1/2	40 -16d	5,179	4,653
STAL 9	20	1 1/4	9	8 -10d	1,085	775
STAL 12			12	10 -10d	1,357	969
STAL 15			15	12 -10d	1,462	1,163
STAL 18	18		18	14 -10d	1,900	1,357
STAL 21			21	16 -10d	1,949	1,449
STAL 24	16		24	18 -10d	2,438	1,745
STAL 30	14		30	22 -10d	2,596	2,132
STAL 36			36	26 -10d	3,046	2,520
STAI 49	18	3 3/4	49	32 -10d	4,343	3,102
STAI 73			73	48 -10d	5,849	4,153
CSTA 28	14	3	28 1/4	36 -16d	5,956	4,188
CSTA 40			40 1/4	54 -16d	7,311	6,282
CSTA 52			52 1/4	70 -16d	7,311	7,311
CSTA 66	12		65 3/4	88 -16d	10,236	10,236
CSTA 78			77 3/4	88 -16d	10,236	10,236
STMI 26	12	2 1/8	26	26 -10d	3,529	2,520
STMI 36			36	36 -10d	4,886	3,490
STMI 48			48	48 -10d	6,515	4,653
STMI 60			60	60 -10d	7,251	5,817
STMI 72			72	72 -10d	7,251	6,980
STAF 6	12	1 1/2	6 1/2	8 -16d	1,326	932
STAF 9			9	8 -16d	1,326	932
STAF 12			11 5/8	8 -16d	1,326	932
STAF 18			17 3/4	8 -16d	1,326	932
STAF 24			23 7/8	8 -16d	1,326	932
STAF 30			30	8 -16d	1,326	932
STAM 27	12	2 1/8	27	30 -16d	4,963	3,490
STAM 37			37 1/2	42 -16d	6,174	4,886
STAM 48			48	46 -16d	6,174	5,351
STAM 60	10		60	56 -16d	7,941	6,515
STAM 72			72	56 -16d	7,941	6,515



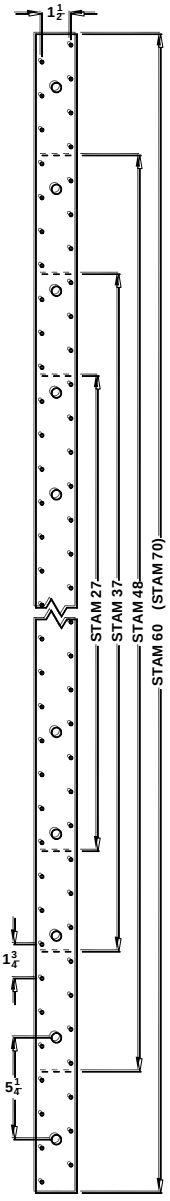
STA (CONTINUED...)

MODELS WITH BOLTS

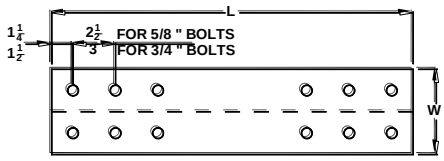
Model	Ga	Dimensions W	Dimensions L	Machine Bolts	Factored Tensile Resistance [lbs] D.FIR	Factored Tensile Resistance [lbs] SPF
STAM 27	12	$2^1/_8$	27	4 -$^1/_2$"	2,453	2,278
STAM 37			$37^1/_2$	6 -$^1/_2$"	3,680	3,417
STAM 48			48	8 -$^1/_2$"	3,986	3,702
STAM 60	10		60	10 -$^1/_2$"	4,662	4,329
STAM 72			72	10 -$^1/_2$"	4,662	4,329
STAH 2	7	$2^1/_2$	$21^1/_4$	6 -$^5/_8$"	4,641	4,315
STAH 5		5	$21^1/_4$	12 -$^5/_8$"	7,426	6,904
STAH 3	3	3	$25^1/_2$	6 -$^3/_4$"	5,826	5,583
STAH 6		6	$25^1/_2$	12 -$^3/_4$"	9,321	8,782

FLOOR-TO-FLOOR CLEAR SPAN (CL)

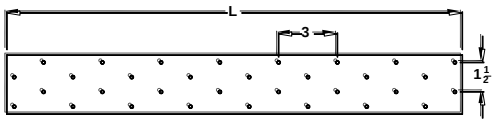
Model	CL	Nails	Factored Tensile Resistance [lbs] D.FIR	Factored Tensile Resistance [lbs] SPF
CSTA 28	18	12 -16d	1,985	1,396
	16	16 -16d	2,647	1,861
CSTA 40	18	28 -16d	4,633	3,257
	16	36 -16d	5,956	4,188
CSTA 52	18	44 -16d	7,280	5,119
	16	48 -16d	7,311	5,584
CSTA 66	18	64 -16d	10,236	7,445
	16	68 -16d	10,236	7,911
CSTA 78	18	80 -16d	10,236	9,307
	16	80 -16d	10,236	9,307
STAM 37	18	20 -16d	3,309	2,327
	16	22 -16d	3,640	2,559
STAM 48	18	32 -16d	5,294	3,723
	16	34 -16d	5,625	3,955
STAM 60	18	46 -16d	7,610	5,351
	16	48 -16d	7,941	5,584
STAM 72	18	56 -16d	7,941	6,515
	16	56 -16d	7,941	6,515
STMI 36	18	14 -10d	1,900	1,357
	16	16 -10d	2,172	1,551
STMI 48	18	26 -10d	3,529	2,520
	16	28 -10d	3,800	2,714
STMI 60	18	38 -10d	5,157	3,684
	16	40 -10d	5,429	3,878
STMI 72	18	50 -10d	6,786	4,847
	16	52 -10d	7,057	5,041



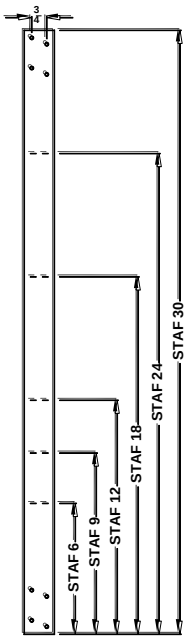
STAM



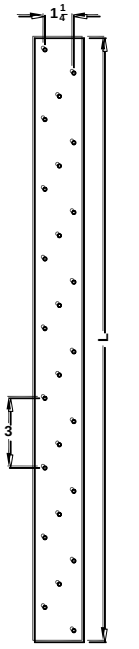
STAH



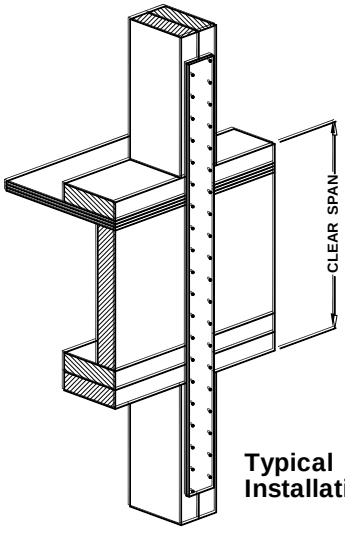
CSTA



STAF



STMI 26

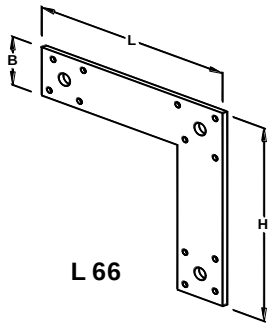


Typical STA Installation

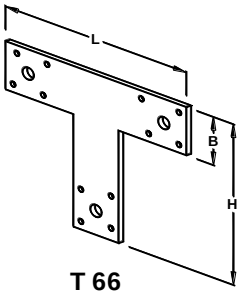
1. Factored Tensile Resistance has been increased by 15 % for short-term load duration (wind, earthquake).
2. Lateral Resistance is based on the minimum of fasteners or steel capacities.
3. Tabulated quantity of fasteners indicates a total number of fasteners on each strap.
4. Factored Resistance for bolted option is based on parallel-to-grain loading and minimum member thickness: STAM – $2^1/_2$", STAH 2 and STAH 5 – 4", STAH 3 and STAH 6 – $4^1/_2$".
5. Factored Resistance for bolts is based on 7d (bolt diam.) minimum end distance.
6. Factored Resistance for nails and bolts shall not be combined.
7. STAR – notching plate for plumbing placed in partitions.

T/L T&L STRAPS

Designed to join beams with columns and for other applications where additional reinforcement is required.
MATERIAL: See table
FINISH: Galvanized (7ga) or Prime Paint (7ga)
FASTENERS: See table



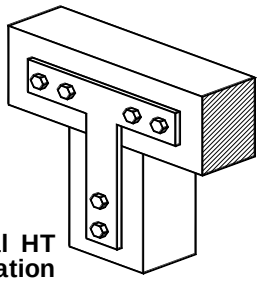
L 66



T 66

1. Factored Resistance for Uplift has been increased by 15 % for short-term load duration (wind, earthquake).
2. Uplift Resistance for bolts (shear) is based on $3^1/_2$" member thickness.
3. Do not combine bolts and nails to reach higher Factored Resistance.

Model	Ga.	Dimensions			Fasteners		Factored Uplift Resistance [lbs]			
							D.FIR		SPF	
		L	H	B	Nails	Bolts	Nails	Bolts	Nails	Bolts
66 L	14	6	6	$1^1/_2$	12 -10d	3 -$^3/_8$"	1,086	692	776	665
88 L		8	8	2	12 -10d	3 -$^1/_2$"	1,086	1,072	776	1,031
1212 L		12	12	2	12 -10d	3 -$^1/_2$"	1,086	1,072	776	1,031
66 T		6	5	$1^1/_2$	12 -10d	3 -$^3/_8$"	1,086	692	776	665
128 T		12	8	2	12 -10d	3 -$^1/_2$"	1,086	1,072	776	1,031
1212 T		12	12	2	12 -10d	3 -$^1/_2$"	1,086	1,072	776	1,031
1212 HL	7	12	12	$2^1/_2$	-	6 -$^5/_8$"	-	2,918	-	2,736
1616 HL		16	16	$2^1/_2$	-	6 -$^5/_8$"	-	2,918	-	2,736
1212 HT		12	12	$2^1/_2$	-	6 -$^5/_8$"	-	2,918	-	2,736
1616 HT		16	16	$2^1/_2$	-	6 -$^5/_8$"	-	2,918	-	2,736



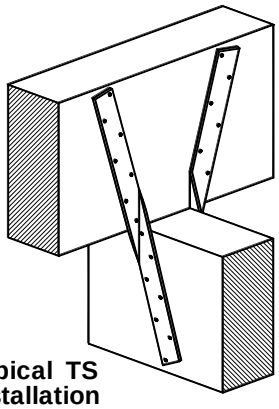
Typical HT Installation

TS TWIST STRAPS

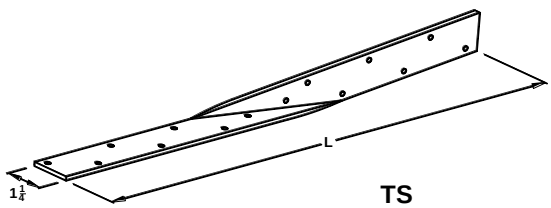
Used to secure joists to a strong back and similar structural applications.
MATERIAL: 16 ga.
FINISH: Galvanized
FASTENERS: 16d × $3^1/_2$" nails

Model	Ga.	Dimensions		Total number of nails	Factored Tensile Resistance [lbs]	
		W	L		D.FIR	SPF
TS 9	16	$1^1/_4$	9	8	1,326	931
TS 12			12	10	1,654	1,163
TS 18			18	14	1,811	1,629
TS 22			22	18	1,811	1,811

1. Factored Resistance has been increased by 15 % for short-term load duration (wind, earthquake).



Typical TS Installation

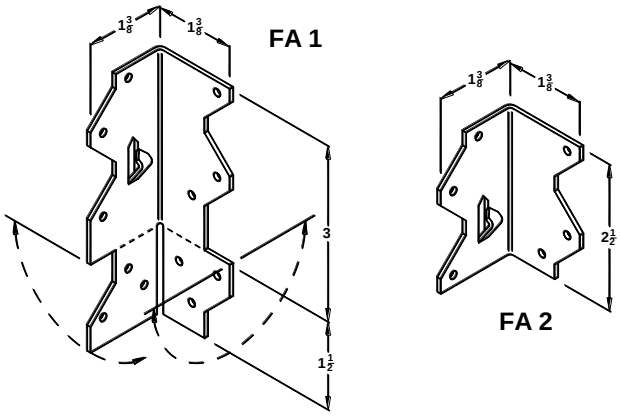


TS

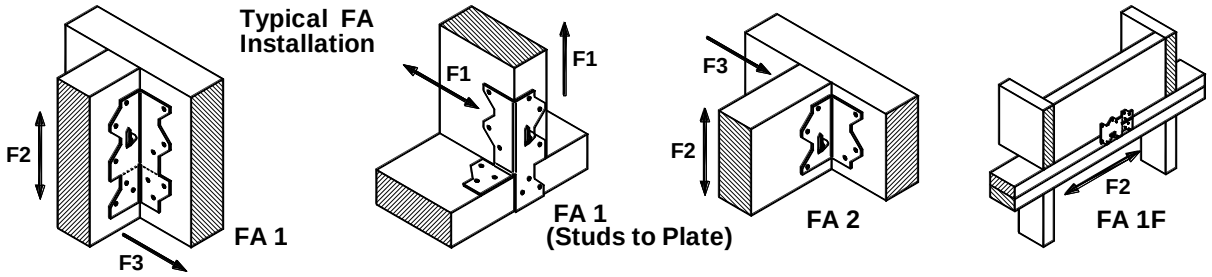
FA FRAMING ANCHORS

Multipurpose anchor designed for 2-and 3-way anchoring with many combinations of installation.
MATERIAL: 20 ga.
FINISH: Galvanized
FASTENERS: 8d (11ga) × $1^1/_4$" nails

Model	Direction of Load	Nails 8d x $1^1/_4$" (total)	Factored Resistance (lbs) D.FIR 100%	D.FIR 115%	SPF 100%	SPF 115%
FA1	F1	12	360	414	252	290
	F2		719	827	504	580
	F3		539	620	378	435
FA1F	F2		742	853	519	598
FA2	F2	6	562	646	394	452
	F3		495	569	346	398



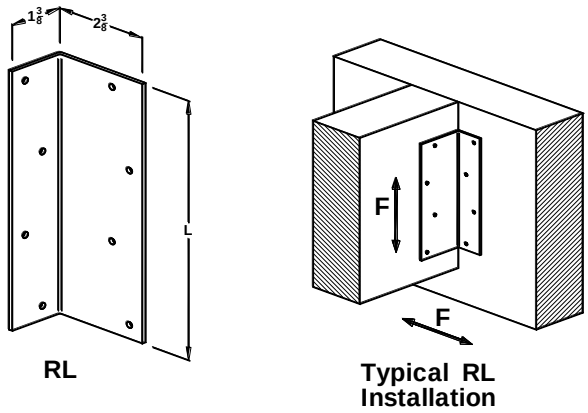
1. Factored Resistance has been increased by 15 % for short-term load duration (wind, earthquake).
2. Factored Resistance is for one anchor. When anchors are installed on each side of the joist, minimum joist thickness is 3".
3. FA1F – flat version of FA1.
4. 18 ga. models are available.



RL REINFORCING ANGLES

Used for reinforcing of intersecting members.
MATERIAL: 16 ga.
FINISH: Galvanized
FASTENERS: 10d × 3" (3" common nails)

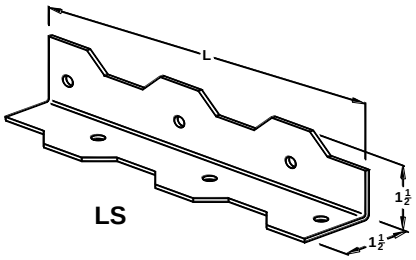
Model	L	Nails	Factored Resistance (lbs) D.FIR 100%	D.FIR 115%	SPF 100%	SPF 115%
RL 30	3	6 -10d	696	801	494	569
RL 40	4	6 -10d	696	801	494	569
RL 70	7	8 -10d	944	1,086	675	776
RL 90	9	10 -10d	1,169	1,344	831	956



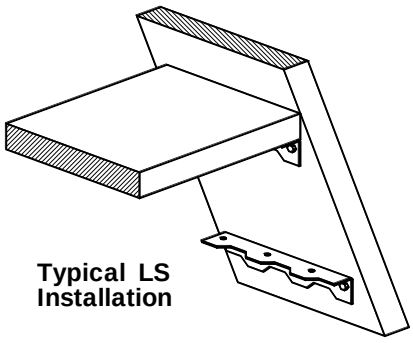
1. Factored Resistance has been increased by 15 % for short-term load duration (wind, earthquake).
2. Factored Resistance is for single angle.
3. Use a minimum lumber thickness of 3".
4. Load values are for conditions F.

LS STAIRCASE ANGLES

Designed for staircase construction.
LS eliminate conventional notched supports.
MATERIAL: 12 ga.
FINISH: Galvanized
FASTENERS: $^1/_4$" lag screws



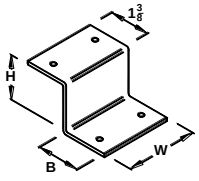
LS


Typical LS Installation

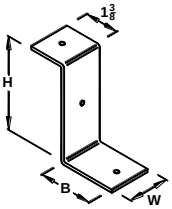
Model	L	Fasteners (Lags)		Factored Resistance for Normal Load (lbs)	
		Stringer	Tread	D.FIR	SPF
LS 8	8	3-$^1/_4$ x $1^1/_2$	3-$^1/_4$ x $1^1/_2$	432	331
LS 9	9	3-$^1/_4$ x $1^1/_2$	3-$^1/_4$ x $1^1/_2$	432	331
LS 10	10	3-$^1/_4$ x $1^1/_2$	3-$^1/_4$ x $1^1/_2$	432	331

A/Z A&Z CLIPS

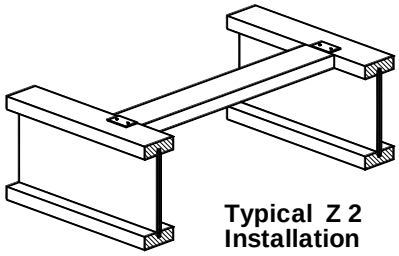
Z2 clips are used for securing 2x4 flat blocking between joists or trusses which provides support for drywall or sheathing.
Z4 & Z6 clips are commonly used to support skewed
fit-in joists.
MATERIAL: See table
FINISH: Galvanized
FASTENERS: See table



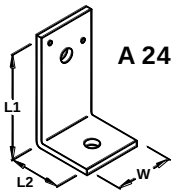
Z 2



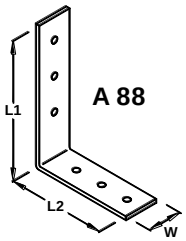
Z 4


Typical Z 2 Installation

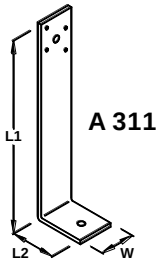
Model	Ga.	Dimensions			Nails
		H	B	W	
Z 2	20	$1^1/_2$	$1^3/_8$	$2^5/_{16}$	4 -10dx$1^1/_2$
Z 4	12	$3^7/_{16}$	2	$1^1/_2$	2 -16d
Z 6	12	$5^3/_8$	2	$1^1/_2$	2 -16d
Z 28	28	$1^9/_{16}$	$1^3/_8$	$2^5/_{16}$	10dx$1^1/_2$
Z 38	28	$2^9/_{16}$	$1^3/_8$	$2^5/_{16}$	10dx$1^1/_2$
Z 44	12	$3^1/_2$	2	$2^1/_2$	4 -16d



A 24



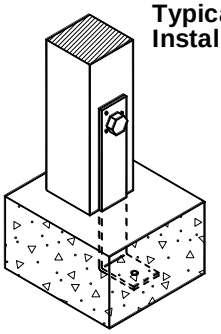
A 88

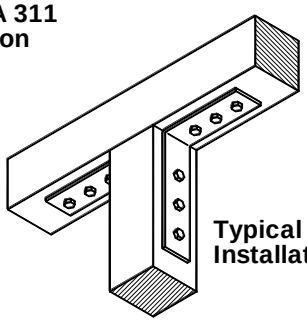


A 311

Model	Ga.	Dimensions			Fasteners		
		L1	L2	W	Base	Post	
					Bolts	Bolts	Nails
A 24	12	4	2	$2^1/_2$	1 -$^1/_2$"	1 -$^1/_2$"	2 -10d
A 66		6	6	$1^1/_2$	2 -$^3/_8$"	2 -$^3/_8$"	-
A 88		8	8	2	3 -$^3/_8$"	3 -$^3/_8$"	-
A 311		11	$3^5/_8$	2	1 -$^1/_2$"	1 -$^1/_2$"	4 -10d

1. A 311 can be embedded into concrete.

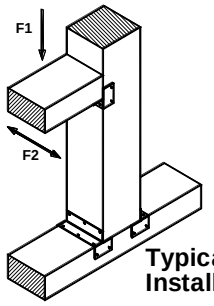

Typical A 311 Installation


Typical A 88 Installation

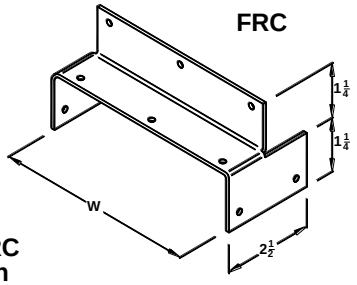
FRC FRAMING CLIP

Designed to connect framing members in many applications.
MATERIAL: 16 ga.
FINISH: Galvanized
FASTENERS: 10d nails

Model	W	Nails	Factored Resistance lbs			
			D.FIR		SPF	
			F1	F2	F1	F2
FRC 4	$3^5/_8$	8 -10d	1,416	472	1,011	337
FRC 6	$5^1/_2$	10 -10d	1,652	708	1,180	506
FRC 8	$7^1/_2$	12 -10d	1,888	944	1,345	674



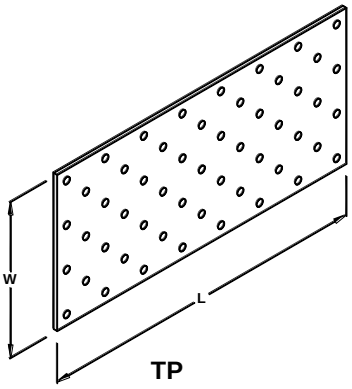
Typical FRC Installation



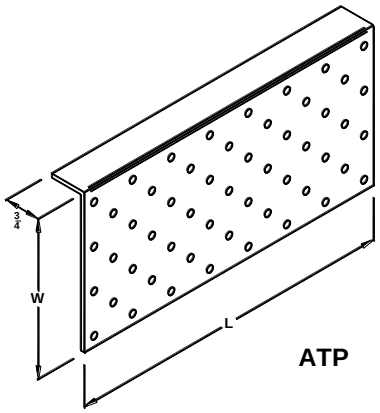
TP NAILING PLATES

Used to join flat surfaces of two or more wood members.
ATP are flanged to provide additional support.
MATERIAL: 20 ga.
FINISH: Galvanized
FASTENERS: 8d nails

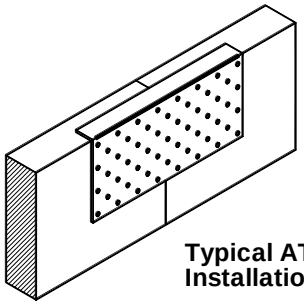
Model	Dimensions		Number of Nail Holes
	W	L	
TP 15	$1^1/_2$	$5^1/_2$	17
ATP 37	$3^1/_2$	$7^1/_2$	53
ATP 39	$3^1/_2$	$9^1/_2$	67
TP 35	$3^1/_2$	$5^1/_2$	39
TP 37	$3^1/_2$	$7^1/_2$	53
TP 39	$3^1/_2$	$9^1/_2$	67
TP 311	$3^1/_2$	$11^1/_2$	81
TP 45	$4^1/_2$	$5^1/_2$	50
TP 47	$4^1/_2$	$7^1/_2$	68
TP 49	$4^1/_2$	$9^1/_2$	86
TP 411	$4^1/_2$	$11^1/_2$	104
TP 413	$4^1/_2$	$13^1/_2$	122
TP 415	$4^1/_2$	$15^1/_2$	140
TP 57	$5^1/_2$	$7^1/_2$	61
ATP 57	$5^1/_2$	$7^1/_2$	61
ATP 59	$5^1/_2$	$9^1/_2$	105



TP



ATP


Typical ATP Installation

RT STRAP TIES

Used for forms and footings.
MATERIAL: High tensile steel
FINISH: Cold rolled steel
FASTENERS: 16d × $3^1/_2$" ($3^1/_2$"common nails)

Model	Wall thickness
RT 6	6
RT 8	8
RT 10	10
RT 12	12

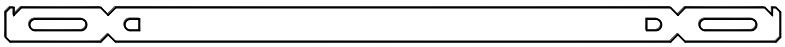
RT

1. Other sizes are available upon request.

SW SPEED WALL TIES

Used for forms and footings.
MATERIAL: High tensile steel
FINISH: Cold rolled steel

Model	Wall thickness
SW 6	6
SW 8	8
SW 10	10
SW 12	12



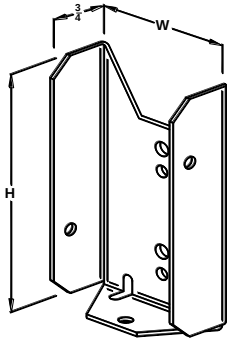
SW

1. Other sizes are available upon request.

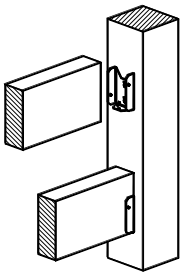
FC FENCE CLIPS

Designed to fasten cross members to fence posts.
MATERIAL: 22 ga.
FINISH: Galvanized
FASTENERS: 8d nails or #6 wood screws

Model	Member size	W
FC 24D	2x4	19/16
FC 24R	2x4(R)	2



FC

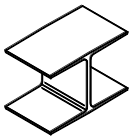


Typical FC Installation

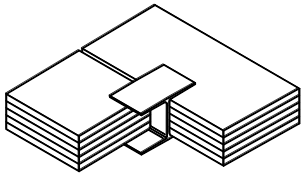
PCL PLYWOOD CLIPS

Extruded aluminum edges for joining plywood sheets.
MATERIAL: Aluminum

Model	Plywood Thickness
PCL 3/8	3/8
PCL 7/16	7/16
PCL 1/2	1/2
PCL 5/8	5/8
PCL 3/4	3/4



PCL

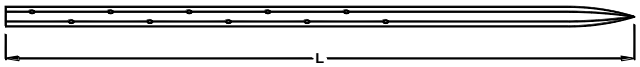


Typical PCL Installation

STK STAKES

For use as screed post, curb and gutter stakes or nailer stakes.

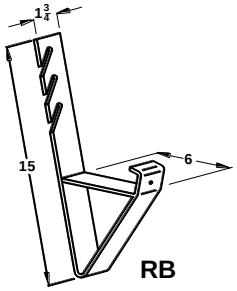
Model	Dimensions	
	Dia.	Length
STK 18	3/4"	18
STK 24		24
STK 30		30
STK 36		36



STK

RB ROOF BRACKETS

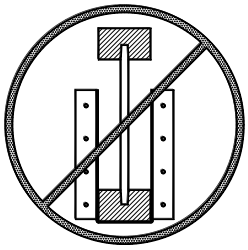
Used for attaching a working platform to the roof.
MATERIAL: 10 ga.
FINISH: Prime Paint
FASTENERS: 16d Nails



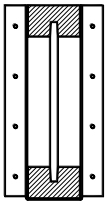
RB

"I" JOISTS HANGERS – Installation

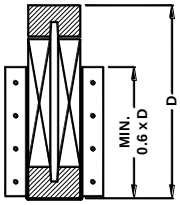
I - JOISTS



Top and bottom joist flanges must be laterally restrained to prevent rotation.

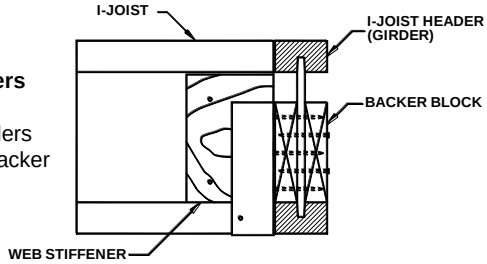


No web stiffener installed
Hanger sides laterally support the top flange of I-joist. Additional lateral restraint may be required for deep joists.

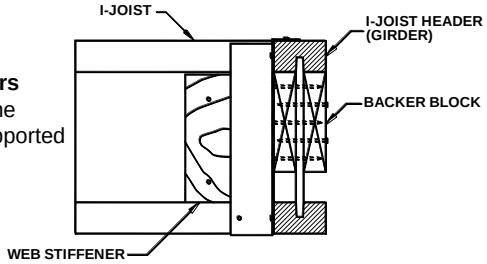


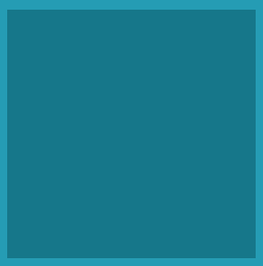
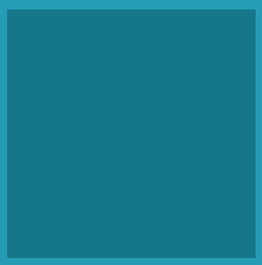
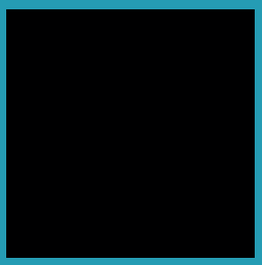
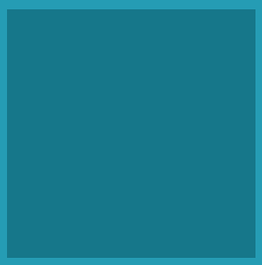
Web stiffener required

Face mount hangers
Hanger nails must extend past the girders web member into backer blocks.



Top mount hangers
The top flange of the girdrer must be supported by backer blocks.



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