

SOLID BLOCKING (JB)

Joist Blocking is pre-cut to fit securely between joists to prevent joist rotation. Joist Blocking is a one piece system in lieu of the typical 3 piece detail offering an economical alternative to installing conventional clips and solid web members.

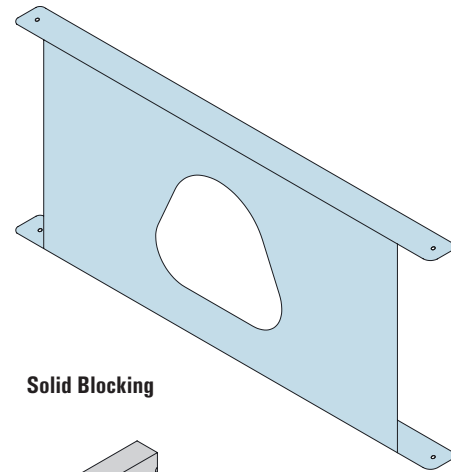
MATERIAL: 16 ga (54 mil) 50ksi

FINISH: Galvanized – G90

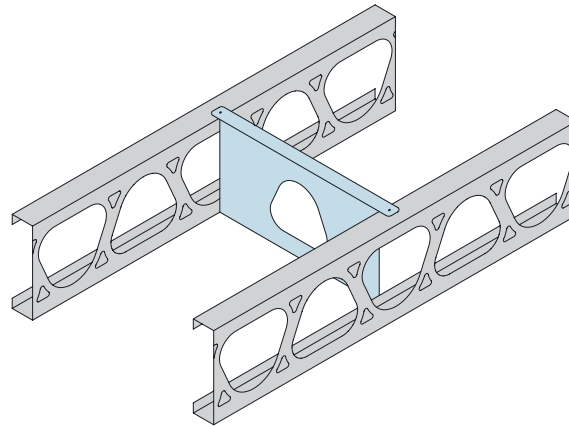
INSTALLATION:

- Position the pre-cut Joist Blocking to fit securely between the joists.
- (4) #10 - 16 screws are required to secure the blocking to the joist flanges using the pre-punched holes.
- Solid blocking should be installed 7' o.c. maximum along the joist length.
- Fits up to 2" flange joist product.
- Blocking for 2-1/2" and 3" flanges available as a special order.

Model No.	Size	Spacing (o.c.)	Box Quantity
800JB-12	8"	12	10
925JB-12	9-1/4"	12	10
1000JB-12	10"	12	10
1125JB-12	11-1/4"	12	10
1200JB-12	12"	12	10
1400JB-12	14"	12	10
800JB-16	8"	16	10
925JB-16	9-1/4"	16	10
1000JB-16	10"	16	10
1125JB-16	11-1/4"	16	10
1200JB-16	12"	16	10
1400JB-16	14"	16	10
800JB-24	8"	24	10
925JB-24	9-1/4"	24	10
1000JB-24	10"	24	10
1125JB-24	11-1/4"	24	10
1200JB-24	12"	24	10
1400JB-24	14"	24	10



Solid Blocking



WEB STIFFENER (JS)

Web Stiffeners are used to provide reinforcement of joist webs to prevent crippling. Web reinforcement is often required by design to enhance the load capacity of joists. Web stiffeners are installed on the inside or outside of the joist.

MATERIAL: 16 ga (54 mil) 50ksi

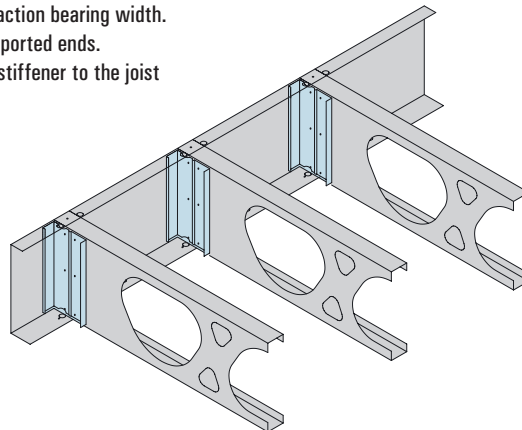
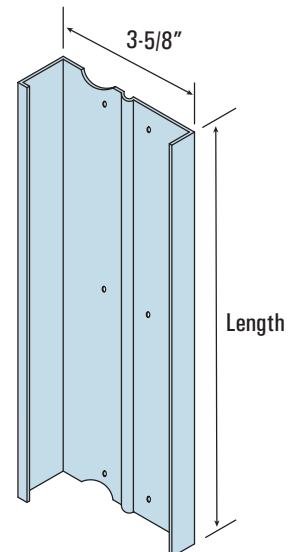
FINISH: Galvanized – G90

INSTALLATION:

- Web stiffeners are centered within the load or reaction bearing width.
- Web stiffeners require full bearing along their supported ends.
- (4-6) #10 - 16 screws are required to attach the stiffener to the joist web using pre-punched holes.

Model No.	Size	Box Quantity
8JS-362	8"	24
925JS-362	9 1/4"	24
10JS-362	10"	24
1125JS-362	11 1/4"	24
12JS-362	12"	24
14JS-362	14"	24

Web Stiffener





REINFORCING & SKEWABLE ANGLE (LS)

LS angles are load rated and provide the correct thickness and number of fasteners the specifier is looking for compared with field fabricated clip angles. General utility reinforcing angles with multiple uses. LS—Field-adjustable angles attach members at intersecting angles.

MATERIAL: LS – 18 ga (43 mil) 33ksi

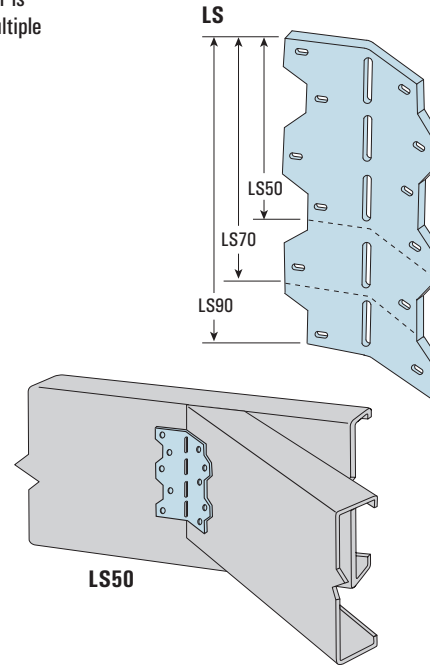
FINISH: Galvanized – G90

INSTALLATION:

- Use all specified fasteners.
- LS—field-skewable; bend one time only.
- Joist must be constrained against rotation when using a single S/LS per connection.

Model No.	Length	Screws	Allowable Loads (100)				
			33 mil (20ga)		43 mil (18ga)		54 mil (16ga)
			F1	F2	F1	F1	F1
LS50	4-7/8"	4 – #10	200	–	420	500	–
LS70	6-3/8"	6 – #10	465	–	630	715	–
LS90	9"	10 – #10	795	–	1050	1740	–

Notes:
 1. Tabulated loads are governed by tests and may not be increased.
 2. Loads are for one part only.



COILED STRAP (CS)

CS are continuous utility straps which can be cut to length on the job site. Packaged in lightweight (about 40 pounds) cartons.

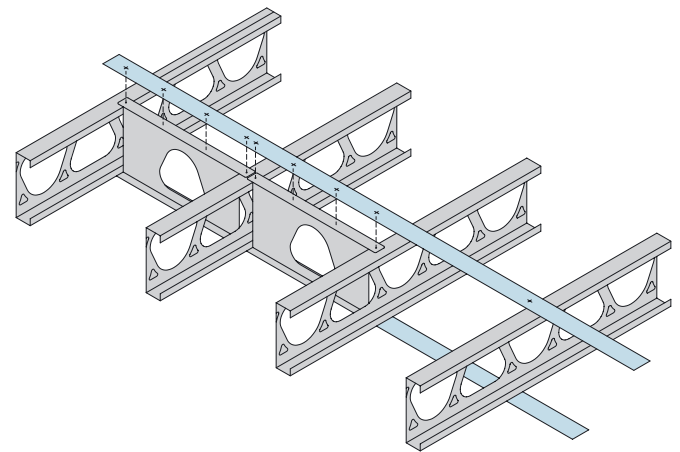
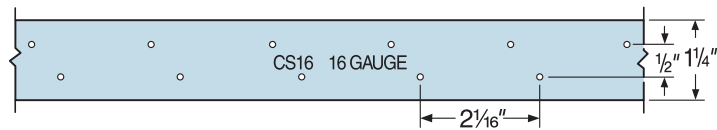
MATERIAL: 33 mil (20 ga), 43 mil (18 ga) & 54 mil (16 ga)

FINISH: Galvanized – G90

INSTALLATION:

- Use all specified fasteners.
- Refer to the applicable code for minimum edge and end distances.
- The table shows the maximum allowable loads and the screws required to obtain them. See footnote #1. Fewer screws may be used; reduce the allowable load by the code lateral load for each fastener subtracted from each end.

Coiled Strap



Typical CS installation as a floor-to-floor tie

Model No.	Length	Material Thickness (mil/ga)	Width	Fasteners (Total)			Allowable Tension Loads	
				Rafter/Stud/Joist Thickness			33 mil (20ga), 43 mil (18ga) & 54 mil (16ga)	
				33 mil (20ga)	43 mil (18ga)	54 mil (16ga)	(100)	(133)
CS16	150'	54 (16ga)	1-1/4"	18 – #10	12 – #10	8 – #10	1550	2065
CS18	200'	43 (18ga)	1-1/4"	14 – #10	10 – #10	6 – #10	1235	1645
CS20	250'	33 (20ga)	1-1/4"	12 – #10	8 – #10	6 – #10	945	1260

Notes:
 1. Use half of the fasteners in each member being connected to achieve the listed loads.
 2. For CS straps: End Length (inches) = 1/2 total fasteners + 1".
 3. Total Cut Length = End Length + Clear Span + End Length.
 4. For a reduced number of screws, allowable load = (#screws used/#screws in table) x table load.
 5. Loads are based on lesser of steel strap capacity and 2001 AISI NASPEC fastener calculation.
 6. Tabulated loads shown at (100) do not include steel stress increase.
 Tabulated loads shown at (133) include a 1/3 stress increase on the steel.

JOIST FRAMING CONNECTORS

S/LBV HANGER



Precision forming with manufacturing quality control provides dimensional accuracy and helps ensure proper bearing area and connection. S/LBV flanges encapsulate the top flange of the joist.

MATERIAL: S/LBV – 14 ga (68 mil) 50ksi

FINISH: Galvanized – G90

INSTALLATION:

- S/LBV may be used for weld-on applications; a minimum of 1/8" x 2" fillet weld on each top flange is required. Distribute the weld equally on both top flanges. Consult the code for special considerations when welding galvanized steel. Uplift loads do not apply.

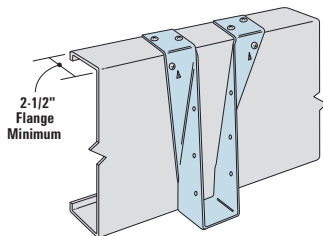
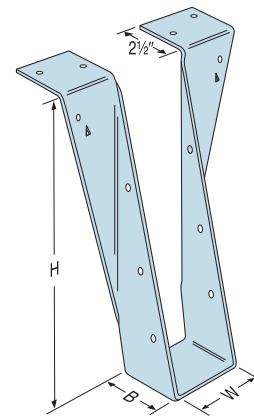
OPTIONS:

- Skew only: S/LBV series can be factory skewed to a maximum of 45 degrees.

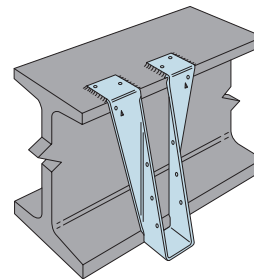
Model No.	Dimensions			Screws			Allowable Down Loads (100)	
	W	H	B	Top	Face	Joist	68 mil (14ga)	Welded
S/LBV	1-9/16" to 5-1/2"	6" to 20"	2-1/4"	4 -#10	2-#10	3-#10	2870	—
				4 -#10	2-#10	3-#10	2025	—
				Weld	—	3-#10	—	2865

Notes:
 1. Tabulated loads are governed by tests and may not be increased.
 2. Designer shall insure that the joist member adequately transfers load to the hanger.
 Steel header must be braced to prevent buckling per Designer specification.

S/LBV Hanger



S/LBV installation with a CFS steel header



S/LBV are acceptable for weld-on applications

S/BA HANGER



The S/BA top-flange hanger is a cost-effective alternative to heavier, special-order hangers. The S/BA is value engineered and tested to achieve higher allowable loads and increased performance. It may be fastened with screws or powder actuated fasteners or welded to the header, providing more design options and greater versatility.

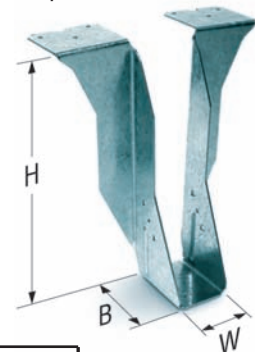
MATERIAL:

68 mil (14 ga) FINISH: Galvanized

INSTALLATION:

- Use all specified fasteners. See General Notes in the Cold-Formed Steel Connectors catalog (C-CFS).
- S/BA may be used for weld-on applications. The minimum required weld to the top flanges is 1/8" x 2" fillet weld to each side of each top flange tab. Consult the AWS Structural Welding Code for special considerations when welding galvanized steel.
- S/BA may be installed using powder-actuated fasteners. A 0.157" x 5/8," powder-actuated fastener shall be installed using the appropriate level of powder load so the entire pointed portion of the fastener penetrates through the steel. A powder-actuated fastener with a "tophat" crush sleeve is recommended in case the head of the fastener is not fully flush with the connector.
- Uplift loads do not apply.

S/BA



S/BA Series Model No.	W (in)	H (in)
S/BA2.12/8	2-1/8"	8
S/BA2.12/10		10
S/BA2.12/12		12
S/BA2.12/14		14
S/BA4.18/8	4-3/16"	8
S/BA4.18/10		10
S/BA4.18/12		12
S/BA4.18/14		14

Model No.	Dimensions			Fasteners		Allowable Downloads
	W	H	B	Top	Joist	
S/BA - Screw ⁷	See table	See table	3	6-#10Screws	1-#10	3290
S/BA - Weld				1/8" x 2" Weld	1-#10	2920
S/BA - P.A.T. fasteners ⁶				6-P.A.T. fasteners ^{4,5,6}	1-#10	2685

Notes:
 1. Tabulated loads are governed by tests and may not be increased. Refer to the Cold-Formed Steel Connectors catalog (C-CFS) for additional information.
 2. Designer shall ensure that the joist member adequately transfers load to the hanger.
 3. Steel header by Designer.
 4. Powder-actuated fasteners may be installed in up to 3/8" steel. Steel header shall have minimum Fy = 36,000 psi.
 5. Loads are based on using the Simpson Strong-Tie® PDPAT-62KP powder-actuated fastener and a minimum Red (level 5) powder load.
 6. Installations of powder-actuated fasteners may vary due to, but not limited to, the type of powder-actuated tool, cleanliness of tool, type of powder load and steel.
 7. Allowable loads are based on testing with a minimum of 2-1/2" flange supporting member, and CFS thickness of 68 mil (14 ga) for header and joist.

LEDGER CONNECTOR SYSTEM (ICFVL)

The ICFVL Ledger connector System is engineered to solve the challenges of mounting steel ledgers to insulated concrete form (ICF) walls. Simpson's ICF component of the system, the ICFVL, is designed to provide both vertical and lateral, in-plane performance. The System is still quick, versatile and easy to use but now provides so much more! There are many benefits over traditional anchor bolting, including better on center spacing in most cases, faster installation.

Simpson's ICFVL is made from galvanized, 14 gauge steel. The embedded legs are embossed for additional stiffness and the hole allows for concrete to flow through and around the connector. The exposed flange on the face of the ICF provides a structural surface for mounting a steel ledger.

MATERIAL: ICFVL – 14 ga (68 mil) 50ksi

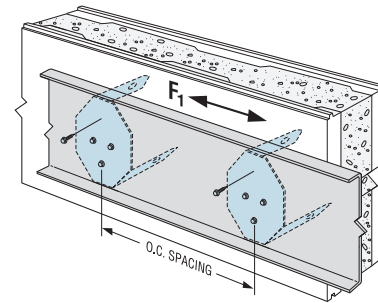
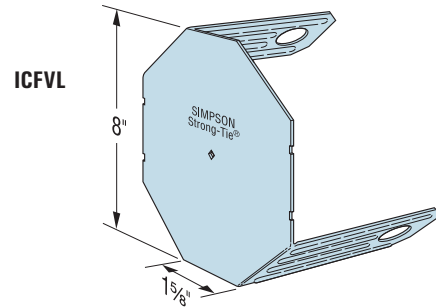
FINISH: Galvanized – G90

Ledger Type	Fasteners	Allowable Loads (lbs)	
		Download (100/115/125)	Lateral F1 (133/160)
Steel	4 – #14" x 3/4"	1660	1525

- Notes:
1. Loads apply to ICF foam thicknesses of 2-5/8" or less.
 2. Alternately, #14 x 3/4" fastener may be used.
 3. Tabulated loads may not be increased.
 4. Concrete $f'c = 2500$ psi minimum.
 5. When combining download and lateral loads, Designer shall evaluate as follows: Design Download/Allowable Lateral Load + Design Lateral Load/Allowable Lateral Load ≤ 1 .

Ledger Type	ICFVL Spacing to Replace Anchor Bolts (in.)							
	1/2" Dia. Anchors at:				5/8" Dia. Anchors at:			
	12" o.c.	24" o.c.	36" o.c.	48" o.c.	12" o.c.	24" o.c.	36" o.c.	48" o.c.
68 mils (0.068")	11	22	33	44	9	18	27	36
54 mils (0.054")	15	30	45	48	12	24	36	48

- Notes:
1. The Designer may specify different spacing based on the load requirements.
 2. For steel ledgers, the 68 mil ledger spacing is closer than the 54 mil ledger because the calculated load of a bolt is higher in a thicker piece of steel.
 3. Steel ledger values are based on steel. $F_u = 60$ ksi.



FRAMING PLATE (LTP5)

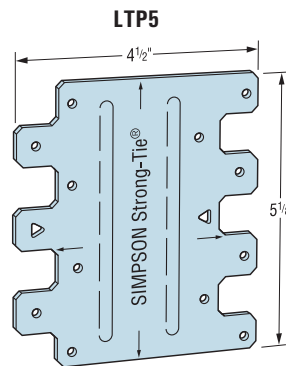
The LTP5 spans subfloor at the top of the blocking or rim joist. The embossments enhance performance and allows for design flexibility.

MATERIAL: LTP5 – 20 ga (33 mil) 33ksi

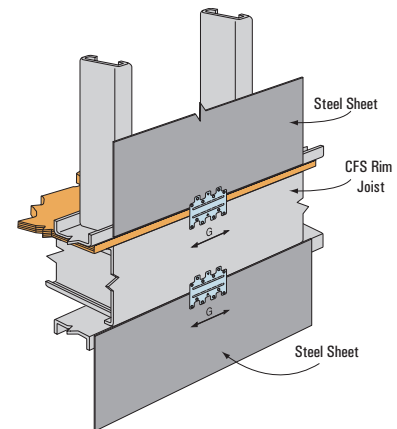
FINISH: Galvanized – G90

INSTALLATION:

- Use all specified fasteners.



LTP5 Installation



Model No.	Type of Connection	Direction of Load	Fasteners		Allowable Loads 43 mil (18ga)	
			To Rim Joist	To Plates & Shearwall	(100)	(133)
			1		7 – #10	7 – #10
LTP5	2	G	7 – #10	7 – #10	1110	1110
	3		7-8D X 1-1/2	7 – #10	625	730

- Notes:
1. Tabulated loads shown at (100) do not include steel stress increase. Tabulated loads shown at (133) include a 1/3 increase on the steel.
 2. Allowable loads are for one anchor.
 3. When anchors are installed on each side of joist, the minimum joist thickness is 3".
 4. Allowable loads are based on steel (stud & sheet) of 43 mil (18ga) minimum.

STEEL JOIST HANGER (S/HJCT)



New improved higher load capacity joist hangers. The increased thickness of the S/HJCT increases the allowable load capacity to use with joists. Joist can be attached from either side or doubled up. This hanger can be used with either steel or wood headers.

MATERIAL: S/HJCT – 12 ga (97 mil) 50ksi

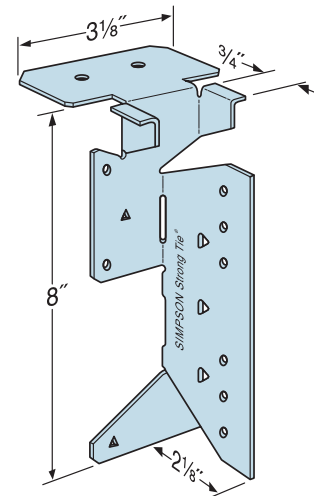
FINISH: Galvanized – G90

INSTALLATION:

- Attach hanger with specified fasteners.
- Use round holes for minimum load, use round and triangle holes for maximum load.
- May be used for weld-on applications. The minimum required weld to the top flange is 1/8" x 2-1/2" fillet weld to each side of top flange. Consult the code for special considerations when welding galvanized steel.

FEATURES:

- Uni-directional: Joist can be attached from left or right.
- One size fits joists 8" through 14" deep.
- Optional holes for additional load capacity.
- Simplicity of design.
- Quick and easy installation.
- Field skewable up to 45 degrees left or right.
- Backing in steel beam cavity is not required behind the hanger.



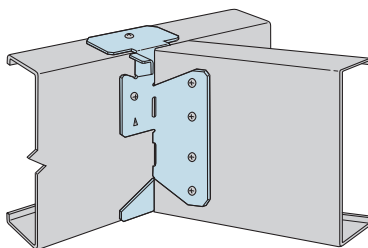
S/HJCT

Model No.	Screws		Joist	Allowable Load ^{1,2}	
	Steel Header			Uplift (100)	Down (100)
	Top	Face			
Steel Header: Straight Hanger					
S/HJCT (min)	2 -#10	4 -#14	6 -#14	1510	2920
S/HJCT (max)	2 -#10	8 -#14	9 -#14	1670	3855
Steel Header: Skewed Hanger					
S/HJCT (min)	2 -#10	4 -#14	6 -#14	1510	2305
Welded to Steel Beam – Straight Hanger					
S/HJCT (min)	1/8" x 2-1/2" fillet weld to each side of top flange		4 -#14	–	1450
Attached to Masonry – Straight Hanger					
S/HJCT (min)	2 – 1/4" x 2-1/4" Titen	4 – 1/4" x 2-1/4" Titen	6 -#14	710	1785

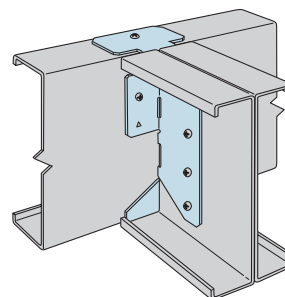
Notes:

1. Allowable loads for CFS headers are based on a single 54 mil (16ga) steel.
2. Steel header must be braced to prevent web buckling per designer specification.
3. Steel joist shall be laterally braced per Designer specification.
4. Screws shall be installed using joist hanger holes screwing through the hanger into the joist.
5. Tabulated loads may not be increased.
6. For joists with up to a 0.50" gap (short cut) use an adjustment factor of 0.87.
7. For joists with a 0.50" to 0.90" gap (short cut) use an adjustment factor of 0.75.

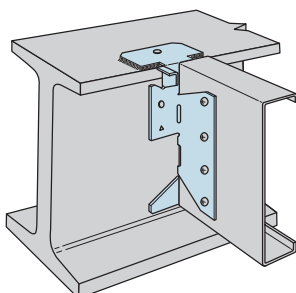
Joist Framing Connectors



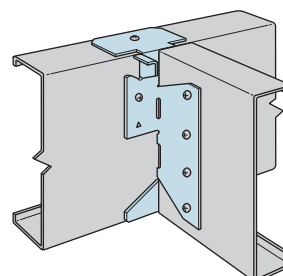
S/HJCT Skewed 45 Degrees Installation



S/HJCT Double Joist Installation



S/HJCT Weld-On Installation with an I-Beam.



S/HJCT Installation With a CFS Steel Header