

# StiffClip® HE

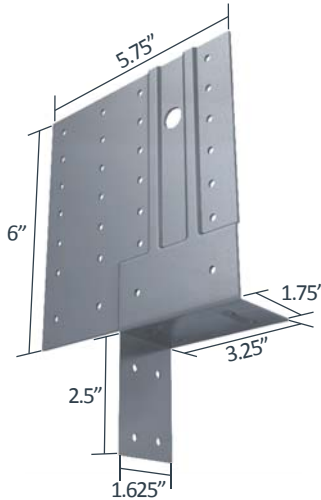
Header Connector



### Material Composition

**HE(L):** ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340MPa) minimum yield strength, 65ksi (450MPa) minimum tensile strength, 43mil minimum thickness (18 gauge, 0.0451" design thickness) with ASTM A653/A653M G90 (Z275) hot dipped galvanized coating.

**HE(H):** ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340MPa) minimum yield strength, 65ksi (450MPa) minimum tensile strength, 68mil minimum thickness (14 gauge, 0.0713" design thickness) with ASTM A653/A653M G90 (Z275) hot dipped galvanized coating.



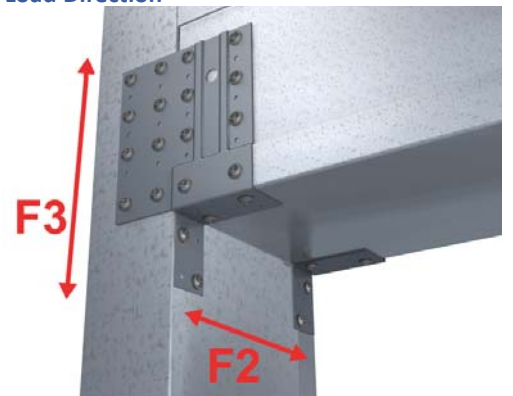
US Patent #7,634,889

### StiffClip HE Allowable Loads: Screw Fasteners

StiffClip® HE Recommended Allowable Load for a Single Clip (lbs): F3												
Stud		HE(L)						HE(H)				
Thickness Mils (ga)	Yield Strength (ksi)	w/8 #10 screws	w/12 #10 screws	w/16 #10 screws	w/20 #10 screws	w/24 #10 screws	w/28 #10 screws	w/8 #10 screws	w/12 #10 screws	w/16 #10 screws	w/20 #10 screws	w/28 #10 screws
33 (20)	33	536	708	873	1,090	1,239	1,340	536	708	873	1,090	1,239
33 (20)	50	774	1,021	1,259	1,573	1,787	1,933	774	1,021	1,259	1,573	1,787
43 (18)	33	797	1,052	1,297	1,620	1,841	1,991	797	1,052	1,297	1,620	1,841
43 (18)	50	1,151	1,520	1,873	2,340	2,659	2,876	1,151	1,520	1,873	2,340	2,659
54 (16)	33	1,121	1,480	1,824	2,279	2,590	2,801	1,121	1,480	1,824	2,279	2,590
54 (16)	50	1,518	2,004	2,470	3,066	3,066	3,066	1,618	2,136	2,633	3,289	3,738
68 (14)	50	1,518	2,004	2,470	3,066	3,066	3,066	2,012	2,656	3,274	4,090	4,648
97 (12)	50	1,518	2,004	2,470	3,066	3,066	3,066	2,012	2,656	3,274	4,090	4,648
<b>Max Allowable Clip Load</b>		<b>1,518</b>	<b>2,004</b>	<b>2,470</b>	<b>3,066</b>	<b>3,066</b>	<b>3,066</b>	<b>2,012</b>	<b>2,656</b>	<b>3,274</b>	<b>4,090</b>	<b>4,648</b>

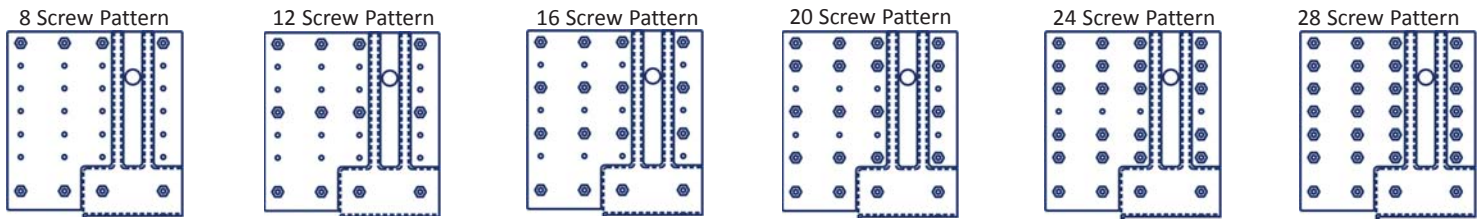
StiffClip® HE Recommended Allowable Load for a Single Clip (lbs): F2							
Stud		HE(L)			HE(H)		
Thickness Mils (ga)	Yield Strength (ksi)	w/4 #10 screws	w/6 #10 screws	w/8 #10 screws	w/4 #10 screws	w/6 #10 screws	w/8 #10 screws
33 (20)	33	199	299	399	199	299	399
33 (20)	50	287	431	575	287	431	575
43 (18)	33	296	444	592	296	444	592
43 (18)	50	428	627	627	428	641	855
54 (16)	33	417	625	627	417	625	833
54 (16)	50	564	627	627	601	902	1,088
68 (14)	50	564	627	627	747	1,088	1,088
97 (12)	50	564	627	627	747	1,088	1,088
<b>Max Allowable Clip Load</b>		<b>564</b>	<b>627</b>	<b>627</b>	<b>747</b>	<b>1,088</b>	<b>1,088</b>

### Load Direction

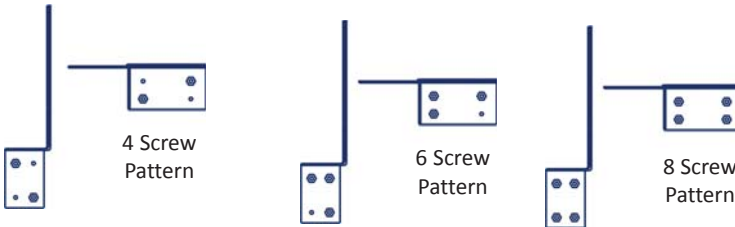


- Notes:**
- Torsional effects are considered on screw group for F2 & F3 allowable loads. It is assumed that half of the torsional moment is taken by the connection to the structure and half is taken by the connection to the stud.
  - Attachment to stud is made with screws symmetrically placed. All guide holes may not require fasteners. Fastener amount determined by designer.
  - Allowable loads have not been increased for wind, seismic, or other factors.
  - The minimum combination of steel thickness and yield strength must be used when determining the maximum design load.
  - Design loads listed consider both loads on the clip and the #10 screws as they are fastened to the steel beam and column members.
- \* Refer to screw patterns on the following page.

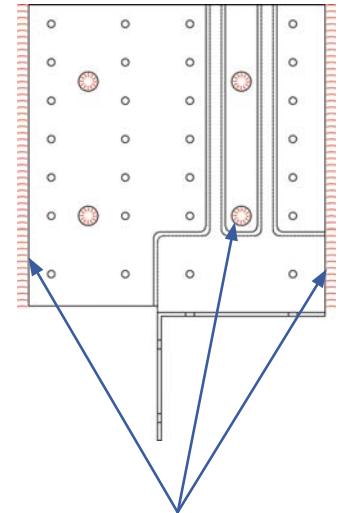
**Screw Patterns for F3 Load Tables**



**Screw Patterns for F2 Load Tables**



**Weld Diagram**



1/8" weld around four 0.375" diameter holes, with 1/8" welds along each side.

**Allowable Loads: Welded Connection**

StiffClip® HE Recommended Allowable Load for a Single Clip (lbs): F3		
Stud		HE(H)
Thickness Mils (ga)	Yield Strength (ksi)	Weld used to Header and Post Combined
54 (16) and thicker	50	4,177

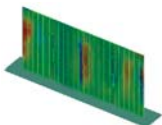
**Notes:**

- Welded values do not apply to 43mil (18ga) StiffClip HE.
- HE(H) with welds around the perimeter of four .375" diameter holes and along each side of the clip. Weld size not to exceed double the material thickness of the header or jamb, or 1/8"; and care should be taken to not burn through the material.

**Nomenclature**

StiffClip HE is available in two thicknesses. The StiffClip HE(L) is 43mil (18ga), and the StiffClip HE(H) is 68mil (14ga).

\* Clips are packaged as pairs. Four StiffClip HE clips are used at each opening: two left-hand and two right-hand clips attach the complete header to the jamb.



StiffClip HE Series  
Blast and Seismic Design data  
www.steelnetwork.com

\*\* For more information or to review a copy of this report, please visit our website at <http://www.steelnetwork.com/Site/TechnicalData>