

# StiffClip® AL

Multi-Directional Load Resistant Angle



### Material Composition

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.

The attachment of StiffClip to the primary structure may be made with PAFs, screw/bolt anchors or weld and is dependent upon the base material (steel or concrete) and the design configuration.



### StiffClip AL Allowable Loads

StiffClip® AL, Recommended Allowable Load (lbs): F1 Load Directions									
Screw Patterns with #12 Screws	AL362			AL600			AL800		
	2 Screws	3 Screws	4 Screws	2 Screws	3 Screws	4 Screws	2 Screws	4 Screws	6 Screws
33mil (20ga), 33ksi Stud	95	190	190	95	190	190	95	190	285
33mil (20ga), 50ksi Stud	138	276	276	138	276	276	138	276	414
43mil (18ga), 33ksi Stud	124	248	248	124	248	248	124	248	372
43mil (18ga), 50ksi Stud	179	358	358	179	358	358	179	358	537
54mil (16ga), 33ksi Stud	156	312	312	156	312	312	156	312	468
54mil (16ga), 50ksi Stud	225	450	450	225	450	450	225	450	675
68mil (14ga), 50ksi Stud	284	568	568	284	568	568	284	568	852
97mil (12ga), 50ksi Stud	405	810	810	405	810	810	405	810	1,215
118mil (10ga), 50ksi Stud	494	975	975	494	866	866	494	988	1,482
<b>Max Allowable Clip Load</b>	<b>975</b>			<b>866</b>			<b>1,768</b>		

StiffClip® AL, Recommended Allowable Load (lbs): F2 Load Directions									
Screw Patterns with #12 Screws	AL362			AL600			AL800		
	2 Screws	3 Screws	4 Screws	2 Screws	3 Screws	4 Screws	2 Screws	4 Screws	6 Screws
33mil (20ga), 33ksi Stud	376	516	752	376	530	752	376	752	1,128
33mil (20ga), 50ksi Stud	544	747	1,088	544	767	1,088	544	1,088	1,632
43mil (18ga), 33ksi Stud	560	769	1,120	560	789	1,120	560	1,120	1,680
43mil (18ga), 50ksi Stud	810	1,112	1,470	810	1,142	1,620	810	1,620	2,430
54mil (16ga), 33ksi Stud	788	1,082	1,470	788	1,111	1,576	788	1,576	2,364
54mil (16ga), 50ksi Stud	1,138	1,470	1,470	1,138	1,604	2,091	1,138	2,276	2,516
68mil (14ga), 50ksi Stud	1,434	1,470	1,470	1,434	2,021	2,091	1,434	2,516	2,516
97mil (12ga), 50ksi Stud	1,434	1,470	1,470	1,434	2,021	2,091	1,434	2,516	2,516
118mil (10ga), 50ksi Stud	1,434	1,470	1,470	1,434	2,021	2,091	1,434	2,516	2,516
<b>Max Allowable Clip Load</b>	<b>1,470</b>			<b>2,091</b>			<b>2,516</b>		

StiffClip® AL, Recommended Allowable Load (lbs): F3 Load Directions									
Screw Patterns with #12 Screws	AL362			AL600			AL800		
	2 Screws	3 Screws	4 Screws	2 Screws	3 Screws	4 Screws	2 Screws	4 Screws	6 Screws
33mil (20ga), 33ksi Stud	255	407	510	324	495	648	345	690	985
33mil (20ga), 50ksi Stud	369	589	738	469	716	938	499	999	1,425
43mil (18ga), 33ksi Stud	380	606	760	483	737	965	514	1,028	1,467
43mil (18ga), 50ksi Stud	550	877	1,100	698	1,066	1,396	743	1,487	2,122
54mil (16ga), 33ksi Stud	535	853	1,070	679	1,037	1,358	723	1,446	2,064
54mil (16ga), 50ksi Stud	772	1,232	1,545	981	1,498	1,961	1,044	2,089	2,981
68mil (14ga), 50ksi Stud	973	1,553	1,947	1,236	1,888	2,471	1,316	2,632	3,756
97mil (12ga), 50ksi Stud	973	1,553	1,947	1,236	1,888	2,471	1,316	2,632	3,756
118mil (10ga), 50ksi Stud	973	1,553	1,947	1,236	1,888	2,471	1,316	2,632	3,756
<b>Max Allowable Clip Load</b>	<b>2,458</b>			<b>3,015</b>			<b>6,128</b>		

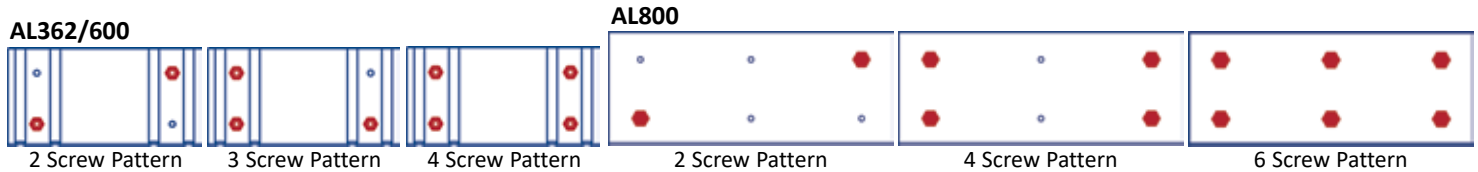


**\*\*Important notes for StiffClip AL Allowable Load tables continued on next page.**

**Notes:**

1. StiffClip AL is tested to resist loads in horizontal, vertical, and lateral directions.
2. Allowable load tables incorporate eccentric loading of fasteners attached 3/4" from the heel of the clip. Values with welded connection may increase.
3. Allowable loads are for attachment through 3" leg only. Attachment through 1-1/2" leg should be engineered. Reference Material Composition above for calculation purposes.
4. Loads listed reflect force in a single direction. When multiple loads react on the connection, it is the responsibility of the designer to check the interaction of forces.
5. Torsional effects are considered on screw group for F2 and F3 allowable loads. It is assumed that half of the torsional moment is taken by the connection in the short leg and half is taken by the connection in the long leg of StiffClip AL.
6. Allowable loads have not been increased for wind, seismic, or other factors.
7. All guide holes may not require fasteners. Number of fasteneres used is to be determined by designer.
8. Stiffening ribs are not present in StiffClip AL800.
9. For LRFD strengths contact TSN technical services.

**Screw Patterns**



**Nomenclature**

StiffClip AL is available for various stud depths. To specify, multiply stud depth by 100.\*

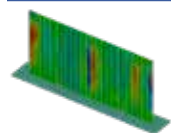
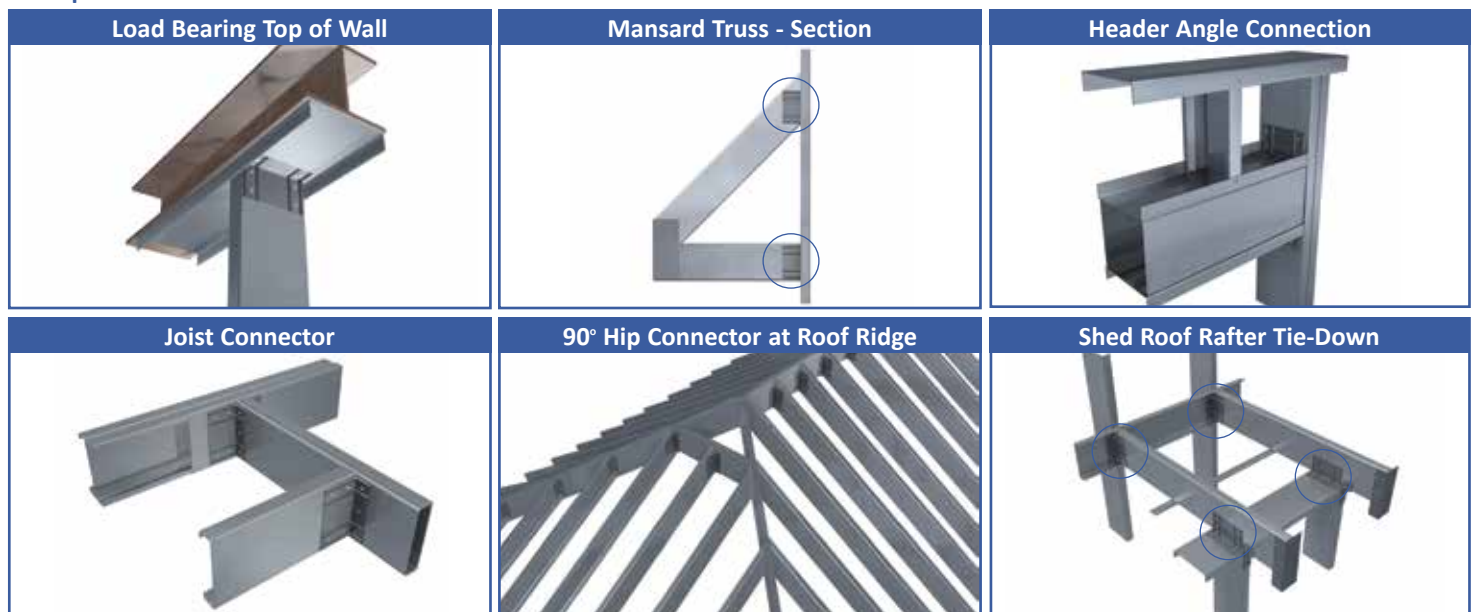
**Example:** 6" stud depth

**Designate:** StiffClip® AL600

\* The AL362 fits 3 5/8" and 4" member depths

\*\* Stiffening ribs are not present in the AL800.

**Example Details**



StiffClip HE Series  
 Blast and Seismic Design Data  
[www.steelnetwork.com](http://www.steelnetwork.com)

\*\* For more information or to review a copy of this report, please visit our website at <http://www.steelnetwork.com/light-steel-framing-design-resources>