The Steel Network, Inc.

# 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.







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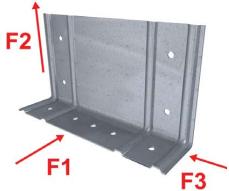
StiffClip AL Allowable Loads

StiffClip® AL, Recommended Allowable Load (lbs): F1 & F2													
St	:ud	F1 Load Direction			F2 Load Direction								
Thickness Mils (ga)	Yield Strength (ksi)	AL362	AL600	AL800	AL362			AL600			AL800		
		w/3 #12 Screws	w/3 #12 Screws	w/4 #12 Screws	w/2 #12 Screws	w/3 #12 Screws	w/4 #12 Screws	w/2 #12 Screws	w/3 #12 Screws	w/4 #12 Screws	w/2 #12 Screws	w/4 #12 Screws	w/6 #12 Screws
33 (20)	33	191	191	191	377	490	754	377	463	752	377	754	1,131
33 (20)	50	275	275	275	544	708	1,089	544	670	1,089	544	1,089	1,633
43 (18)	33	248	248	248	561	729	1,122	560	690	1,120	561	1,122	1,683
43 (18)	50	359	359	359	810	1,053	1,470	810	997	1,620	810	1,620	2,430
54 (16)	33	312	312	312	789	1,025	1,470	788	970	1,577	789	1,577	2,366
54 (16)	50	450	450	450	1,139	1,470	1,470	1,138	1,401	2,091	1,139	2,278	2,516
68 (14)	50	567	567	567	1,470	1,470	1,470	1,610	1,981	2,091	1,610	2,516	2,516
97 (12)	50	809	809	809	1,470	1,470	1,470	1,698	2,089	2,091	1,698	2,516	2,516
118 (10)	50	856	856	856	1,470	1,470	1,470	1,698	2,089	2,091	1,698	2,516	2,516
Max Allowable Clip Load		975	866	1,768	1,470			2,091			2,516		

AL800

StiffClip® AL, Recommended Allowable Load (lbs): F3											
Stu	d	F3 Load Direction									
	Yield Strength (ksi)	AL362			AL600			AL800			
Thickness Mils (ga)		w/2 #12 Screws	w/3 #12 Screws	w/4 #12 Screws	w/2 #12 Screws	w/3 #12 Screws	w/4 #12 Screws	w/2 #12 Screws	w/4 #12 Screws	w/6 #12 Screws	
33 (20)	33	256	409	511	324	495	650	347	692	987	
33 (20)	50	370	591	738	468	716	939	501	999	1,426	
43 (18)	33	381	609	760	482	737	967	516	1,029	1,469	
43 (18)	50	551	879	1,098	697	1,065	1,398	745	1,487	2,123	
54 (16)	33	536	856	1,069	678	1,037	1,360	726	1,447	2,066	
54 (16)	50	775	1,236	1,543	980	1,498	1,965	1,048	2,090	2,984	
68 (14)	50	1,095	1,747	2,182	1,385	2,118	2,778	1,482	2,955	4,219	
97 (12)	50	1,155	1,842	2,301	1,460	2,233	2,929	1,562	3,116	4,449	
118 (10)	50	1,155	1,842	2,301	1,460	2,233	2,929	1,562	3,116	4,449	
Maximum A		2,458		3,015			6,128				





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

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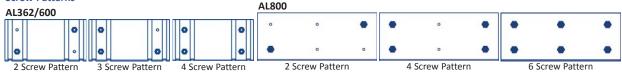


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#### Notes:

- Allowable load tables incorporate eccentric loading of fasteners attached 3/4" from the heel of the clip. Values with welded connection may increase.
- The attachment of the 1.5" leg of StiffClip AL is dependent on the allowable loads of the fasteners, and is to be designed by others.
- Fasten within 3/4" from the angle heel (centerline of the 11/2" leg).
- All guide holes may not require fasteners. Number of fasteners used is to be determined by designer.
- Stiffening ribs are not present in the AL800.
- StiffClip AL is tested to resist loads in horizontal, vertical, and lateral directions.
- 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.
- Allowable loads are for attachment through 3" leg only. Attachment through 1.5" leg should be engineered. (See material composition above for calculation purposes.)
- Allowable loads have not been increased for wind, seismic, or other factors.
- 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.

## **Screw Patterns**



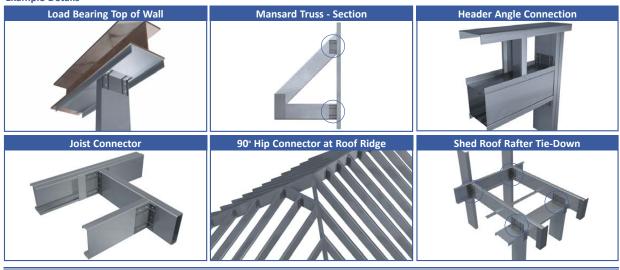
### Nomenclature

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**





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

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