

## PRODUCT APPLICATION

StiffClip® AL is a versatile, multi-purpose rigid connection for use in a wide variety of applications. Pre-drilled holes facilitate quick and accurate fastener placement to structure and/or framing members. Stiffeners in each angle leg add to overall clip strength. StiffClip AL is tested to resist loads in 3 separate directions: horizontal, vertical, and lateral (see Load Direction, p. 62 for clip orientation). Use of mill-certified steel, combined with tested load values ensures construction professionals will achieve optimal structural performance.

## MATERIAL COMPOSITION

Steel: ASTM A653/A653M, Grade 50 (340), 50ksi (340MPa) minimum yield strength, 65ksi (450MPa) minimum tensile strength, G-90 (Z275) hot-dipped galvanized coating. Material thickness: 68mil (14ga, .0713" design thickness).

**Allowable load tables incorporate eccentric loading of PAF fasteners. Values with welded connection may increase.**

The attachment of the 1.5" leg of StiffClip AL to other light gauge members is dependent on screw allowable loads and material composition of the member, and is to be designed by others.

Note:

- ◆ For PAF's, fasten within 3/4" from the angle heel (centerline of the 1 1/2" leg).
- ◆ All guide holes do not require fasteners. Number of fasteners used is to be determined by designer.

## STIFFCLIP AL NOMENCLATURE

StiffClip AL is available in 3 sizes. The AL362 fits 3 5/8" and 4" member depths, the AL600 fits 6" member depths, and the AL800 fits 8" member depths.

## QUANTITY / ORDER INFORMATION

Designation	Qty/Box	Lbs/Box	Pcs/Skid	Lbs/Skid
AL362	100	35	4500	1575
AL600	100	35	4500	1575
AL800	50	41	2250	1845

## STIFFCLIP AL INSTALLATION



Four #12 screws are attached to member through pre-drilled guide holes in the 3" leg. Attach short (1.5") leg to structure/member either utilizing the pre-drilled guide holes or with weld (attachment through short leg is engineered by others). If pre-drilled holes are not able to be utilized, follow fastener manufacturer recommendations for screw placement.



## STIFFCLIP AL VALUE

- ◆ Guide holes for fast and accurate connections
- ◆ Stiffeners for additional strength
- ◆ Manufactured from mill-certified, 50ksi steel
- ◆ No labor spent cutting scrap angle
- ◆ Used in a variety of applications
- ◆ Extensively tested (reduces liability concerns associated with use of untested, miscellaneous untraceable material)



### EXAMPLE DETAILS

**LOAD BEARING TOP OF WALL**



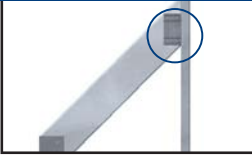
**HEADER ANGLE CONNECTION**



**90° HIP CONNECTOR AT ROOF RIDGE**



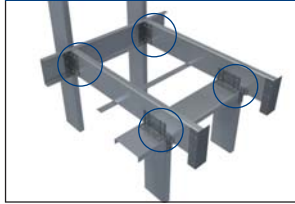
**MANSARD TRUSS - SECTION**



**JOIST CONNECTOR**

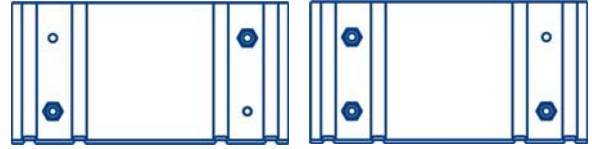


**SHED ROOF RAFTER TIE-DOWN**



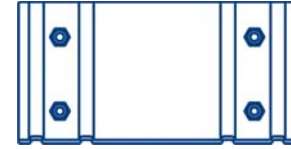
### SCREW PATTERN DIAGRAMS

#### AL362/600



2 Screw Pattern

3 Screw Pattern



4 Screw Pattern

#### AL800



2 Screw Pattern



4 Screw Pattern



6 Screw Pattern

### ALLOWABLE LOADS

#### AL362 StiffClip AL Thickness = 14ga (68mils)

Stud Thickness Mils (ga)	Fy (Yield) Stud (ksi)	F1 w/ 3 Screws (kips)	F2 w/ 2 Screws (kips)	F2 w/ 3 Screws (kips)	F2 w/ 4 Screws (kips)	F3 w/ 2 Screws (kips)	F3 w/ 3 Screws (kips)	F3 w/ 4 Screws (kips)
33 (20)	33	0.191	0.377	0.564	0.752	0.256	0.409	0.511
33 (20)	50	0.275	0.544	0.817	1.089	0.370	0.591	0.738
43 (18)	33	0.248	0.560	0.840	1.120	0.381	0.608	0.760
43 (18)	50	0.359	0.810	1.215	1.217	0.551	0.879	1.098
54 (16)	33	0.312	0.788	1.182	1.217	0.536	0.856	1.069
54 (16)	50	0.450	1.138	1.217	1.217	0.775	1.236	1.543
68 (14)	50	0.568	1.217	1.217	1.217	1.095	1.747	2.182
97 (12)	50	0.734	1.217	1.217	1.217	1.155	1.842	2.301

Maximum F1 clip capacity = 0.734 kips; Maximum F2 clip capacity = 1.217 kips; Maximum F3 clip capacity = 2.804 kips

#### AL600 StiffClip AL Thickness = 14ga (68mils)

Stud Thickness Mils (ga)	Fy (Yield) Stud (ksi)	F1 w/ 3 Screws (kips)	F2 w/ 2 Screws (kips)	F2 w/ 3 Screws (kips)	F2 w/ 4 Screws (kips)	F3 w/ 2 Screws (kips)	F3 w/ 3 Screws (kips)	F3 w/ 4 Screws (kips)
33 (20)	33	0.191	0.377	0.564	0.752	0.324	0.495	0.650
33 (20)	50	0.275	0.544	0.817	1.089	0.468	0.716	0.939
43 (18)	33	0.248	0.560	0.840	1.120	0.482	0.737	0.967
43 (18)	50	0.359	0.810	1.215	1.620	0.697	1.065	1.398
54 (16)	33	0.312	0.788	1.182	1.577	0.678	1.037	1.360
54 (16)	50	0.450	1.138	1.707	2.091	0.980	1.498	1.965
68 (14)	50	0.568	1.610	2.091	2.091	1.385	2.118	2.778
97 (12)	50	0.810	1.698	2.091	2.091	1.460	2.233	2.929

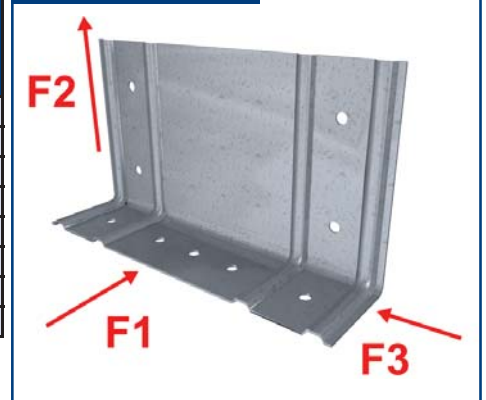
Maximum F1 clip capacity = 0.866 kips; Maximum F2 clip capacity = 2.091 kips; Maximum F3 clip capacity = 3.015 kips

#### AL800 StiffClip AL Thickness = 14ga (68mils)

Stud Thickness Mils (ga)	Fy (Yield) Stud (ksi)	F1 w/ 4 Screws (kips)	F2 w/ 2 Screws (kips)	F2 w/ 4 Screws (kips)	F2 w/ 6 Screws (kips)	F3 w/ 2 Screws (kips)	F3 w/ 4 Screws (kips)	F3 w/ 6 Screws (kips)
33 (20)	33	0.191	0.377	0.754	1.131	0.347	0.692	0.987
33 (20)	50	0.275	0.544	1.089	1.633	0.501	0.999	1.426
43 (18)	33	0.248	0.561	1.122	1.683	0.516	1.029	1.469
43 (18)	50	0.359	0.810	1.620	2.430	0.745	1.487	2.123
54 (16)	33	0.312	0.789	1.577	2.366	0.726	1.447	2.066
54 (16)	50	0.450	1.139	2.278	2.516	1.048	2.090	2.984
68 (14)	50	0.567	1.610	2.516	2.516	1.482	2.955	4.219
97 (12)	50	0.809	1.698	2.516	2.516	1.562	3.116	4.449

Maximum F1 clip capacity = 2.570 kips; Maximum F2 clip capacity = 3.034 kips; Maximum F3 clip capacity = 13.587 kips

### LOAD DIRECTION



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 on previous page for calculation purposes.)
- ◆ Allowable loads have not been increased for wind, seismic, or other factors.
- ◆ Torsional effects are considered on screw group for F3 allowable loads.