

# VertiClip® SLS

## Bypass Structure

### Material Composition

ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340 MPa) minimum yield strength, 65ksi (450 MPa) 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 VertiClip 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.



US Patents #5,467,566 & #5,906,080

### VertiClip SLS Allowable (Unfactored) Loads<sup>1</sup>

| VertiClip® SLS, Recommended Allowable Load (lbs): F1 |                      |                   |                     |                     |                     |                     |                     |
|--|----------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Stud   |                      | SLS362/400-9, -12 | SLS600-12           | SLS600-15, -18, -20 | SLS600-24           | SLS800-12           | SLS800-15, 18, -20  |
| Thickness Mils (ga)                                  | Yield Strength (ksi) | w/2 #12 screws    | w/2 or 3 #12 screws | w/2 or 3 #12 screws | w/2 or 3 #12 screws | w/2 or 3 #12 screws | w/2 or 3 #12 screws |
| 33 (20)  | 33                   | 95                | 95                  | 95                  | 95                  | 95                  | 95                  |
| 33 (20)  | 50                   | 124               | 138                 | 130                 | 100                 | 138                 | 125                 |
| 43 (18)  | 33                   | 124               | 124                 | 124                 | 100                 | 124                 | 124                 |
| 43 (18)  | 50                   | 124               | 164                 | 130                 | 100                 | 141                 | 125                 |
| 54 (16)  | 33                   | 124               | 156                 | 130                 | 100                 | 141                 | 125                 |
| 54 (16)  | 50                   | 124               | 164                 | 130                 | 100                 | 141                 | 125                 |
| 68 (14)  | 50                   | 124               | 164                 | 130                 | 100                 | 141                 | 125                 |
| 97 (12)  | 50                   | 124               | 164                 | 130                 | 100                 | 141                 | 125                 |
| <b>Max Allowable Clip Load</b>                       |                      | <b>124</b>        | <b>164</b>          | <b>130</b>          | <b>100</b>          | <b>141</b>          | <b>125</b>          |

| VertiClip® SLS, Recommended Allowable Load (lbs): F2 |                      |                   |                |                |                     |                |                |                |                         |                |
|--|----------------------|-------------------|----------------|----------------|---------------------|----------------|----------------|----------------|-------------------------|----------------|
| Stud   |                      | SLS362/400-9, -12 | SLS600-12      |                | SLS600-15, -18, -20 |                | SLS600-24      |                | SLS800-12, -15, 18, -20 |                |
| Thickness Mils (ga)                                  | Yield Strength (ksi) | w/2 #12 screws    | w/2 #12 screws | w/3 #12 screws | w/2 #12 screws      | w/3 #12 screws | w/2 #12 screws | w/3 #12 screws | w/2 #12 screws          | w/3 #12 screws |
| 33 (20)  | 33                   | 377               | 377            | 565            | 377                 | 565            | 377            | 565            | 377                     | 565            |
| 33 (20)  | 50                   | 544               | 544            | 817            | 544                 | 817            | 544            | 817            | 544                     | 817            |
| 43 (18)  | 33                   | 561               | 561            | 841            | 561                 | 841            | 561            | 841            | 561                     | 841            |
| 43 (18)  | 50                   | 810               | 810            | 1,215          | 810                 | 1,215          | 810            | 1,215          | 810                     | 1,215          |
| 54 (16)  | 33                   | 789               | 789            | 1,183          | 789                 | 1,183          | 789            | 1,183          | 789                     | 1,183          |
| 54 (16)  | 50                   | 1,139             | 1,139          | 1,709          | 1,139               | 1,709          | 1,139          | 1,709          | 1,139                   | 1,709          |
| 68 (14)  | 50                   | 1,245             | 1,610          | 2,070          | 1,610               | 2,122          | 1,610          | 1,896          | 1,610                   | 1,816          |
| 97 (12)  | 50                   | 1,245             | 1,698          | 2,070          | 1,698               | 2,122          | 1,698          | 1,896          | 1,698                   | 1,816          |
| <b>Max Allowable Clip Load</b>                       |                      | <b>1,245</b>      | <b>2,070</b>   |                | <b>2,122</b>        |                | <b>1,896</b>   |                | <b>1,816</b>            |                |

### Notes:

- Ver. Clip SLS series is designed to support horizontal loads and should not be used in axial-load-bearing wall construction.
- Allowable loads have not been increased for wind, seismic, or other factors.
- #12 screws are provided with each Step Bushing.
- Return lip added for clips longer than 20".
- Allowable load tables incorporate eccentric loading of fasteners. Values with welded connection may increase.
- Fasten within 3/4" from the angle heel (centerline of the 1 1/2" leg) to minimize eccentric load transfer.
- Minimum 3" of SLS required for attachment to structure to steel and 5.5" min. with concrete.
- Total vertical deflection of up to 1/2" (3/4" up and 3/4" down). Deflection requirements greater than 3/4" up and down are available.

<sup>1</sup> For LRFD Design Strengths refer to ICC-ESR-2049.

### Load Direction



The Steel Network, Inc.

Nomenclature

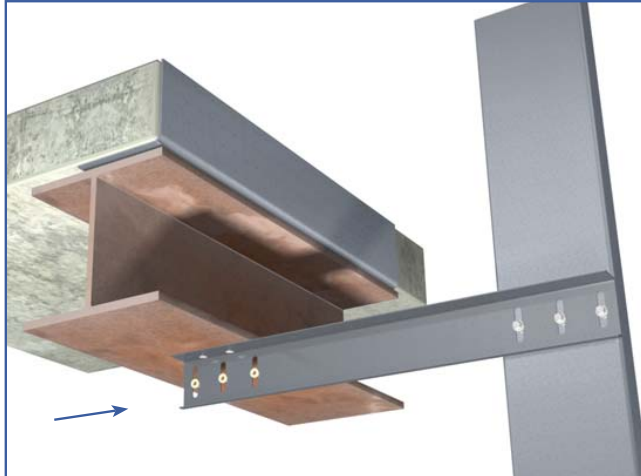
VertiClip SLS is designated by stud depth and clip length required. Clip length includes a minimum of 3" for steel (5.5" for concrete) of clip material for attachment to structure added to stud depth, plus the distance of the stud from the structure.

**Example:** 6" stud, 6" tolerance, 3" to structure

**Designate:** VertiClip® SLS600-15

\* Use of strengthening ribs and return bends varies with each clip.

Example Details



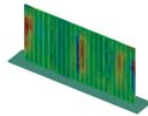
Return lip added for clips longer than 20" (up to 36")



VertiClip SLS at jamb (studs facing each other).



VertiClip SLS600-12  
ICC-ESR-2049



VertiClip SLS Series  
Blast and Seismic Design data