

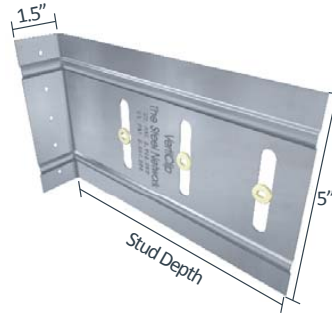
# VertiClip® SLB

Bypass Slab

## 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 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 SLB Allowable (Unfactored) Loads<sup>1</sup>

VertiClip® SLB, Recommended Allowable Load (lbs): F1 & F2											
Stud		F1 Load Direction			F2 Load Direction						
		SLB362/400	SLB600	SLB800	SLB362/400	SLB600		SLB800		SLBxxx-10, SLBxxx-12, SLB1000 & SLB1200	
Thickness Mils (ga)	Yield Strength (ksi)	w/2 #12 Screws	w/2-3 #12 Screws	w/2-3 #12 Screws	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
33 (20)	33	95	95	95	376	377	565	376	564	376	564
33 (20)	50	138	138	118	544	544	817	544	817	544	817
43 (18)	33	124	124	118	560	561	841	560	840	560	840
43 (18)	50	179	179	118	810	810	1,215	810	1,215	810	933
54 (16)	33	156	156	118	788	789	1,183	788	1,182	788	933
54 (16)	50	225	225	118	1,140	1,139	1,567	1,140	1,600	933	933
68 (14)	50	227	227	118	1,600	1,567	1,567	1,600	1,600	933	933
97 (12)	50	227	227	118	1,600	1,567	1,567	1,600	1,600	933	933
Max Allowable Clip Load		227	227	118	1,600	1,567		1,600		933	

## Notes:

- 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.
- Fasteners attaching clip to structure should be installed symmetrically around the center line of the clip. The allowable load of the clip may be reduced if fasteners are not installed symmetrically.
- Guide holes in the 1 1/2" leg measure 0.172" in diameter for SLB362, 0.141" in diameter for SLB600 and SLB800.
- Total vertical deflection of up to 2" (1" up and 1" down). Deflection requirements greater than 1" up and down are available.
- VertiClip SLB 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. Load requirements don't always justify use of a third screw.
- Three slots are standard in 6" and higher web depths to accommodate construction tolerances. Use of a 3rd screw and bushing is dependent upon load configuration. 250 and 362/400 sizes have only 2 slots and 2 screws.
- Use of strengthening ribs and return bends varies with each clip.

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

## Load Direction



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## Nomenclature

VertiClip SLB is designated by multiplying stud depth by 100.

**Example:** 6" stud.

**Designate:** VertiClip® SLB600

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

\*\* The VertiClip SLB600-10 and 600-12 accommodate an even greater construction tolerance of studs from structure.

The VertiClip SLB600-10 is 10" in depth and the VertiClip SLB600-12 is 12" in depth with slot spacings designed for a 6" stud

## Example Details



Standard offset of stud from the heel of the clip should not exceed 1.0". Step Bushings and Screws may be installed in the middle and outer slots of SLB600 or 800 to accommodate greater building tolerances. Note that this may affect the F1 and F2 allowable load capacity and may require a row of bridging at a maximum distance of 12" of the connection to resist stud torsional effects. Call TSN Tech Support for test data and recommendations.



The VertiClip SLB600-10 and 600-12 accommodate an even greater construction tolerance of studs from structure and are now standard products. The VertiClip SLB600-10 is 10" in depth with slot spacing designed for a 6" stud, and the VertiClip SLB600-12 is 12" in depth with slot spacing designed for a 6" stud.