

# StiffClip® LB

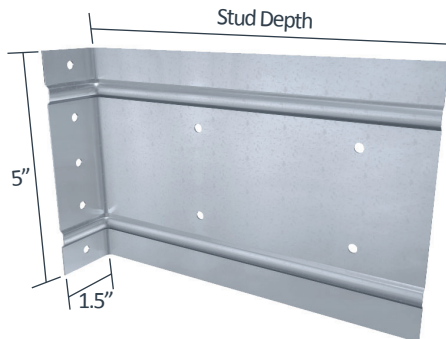
Spandrel Wall Bypass



### 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 LB Allowable Loads

| StiffClip® LB, Recommended Allowable Load (lbs): F1 & F2 |                      |                    |                  |                            |                                      |                    |                |                |                            |                |  |                |
|--|----------------------|--------------------|------------------|----------------------------|--------------------------------------|--------------------|----------------|----------------|----------------------------|----------------|--|----------------|
| Stud   |                      | F1 Allowable Loads |                  |                            |                                      | F2 Allowable Loads |                |                |                            |                |  |                |
|  |                      | LB362              | LB600            | LB800 (Standard 2" Offset) | LB1000 & LB1200 (Standard 2" Offset) | LB362 & LB600      |                |                | LB800 (Standard 2" Offset) |                | LB1000 (Standard 2" & 4" Offset) & LB1200 (Standard 2" Offset) |                |
| Thickness Mils (ga)                                      | Yield Strength (ksi) | w/3 #12 Screws     | w/3-4 #12 Screws | w/3-4 #12 Screws           | w/3 #12 Screws                       | w/2 #12 Screws     | w/3 #12 Screws | w/4 #12 Screws | w/3 #12 Screws             | w/4 #12 Screws | w/3 #12 Screws   | w/4 #12 Screws |
|  |                      | Pattern 2          | Patterns 2 & 3   | Patterns 4 & 5             | Pattern 12                           | Pattern 1          | Pattern 2      | Pattern 3      | Pattern 4                  | Pattern 5      | Pattern 12   | Pattern 13     |
| 33 (20)  | 33                   | 190                | 191              | 182                        | 190                                  | 377                | 565            | 754            | 565                        | 754            | 565  | 752            |
| 33 (20)  | 50                   | 275                | 275              | 182                        | 275                                  | 544                | 817            | 1,089          | 817                        | 1,089          | 816  | 1,062          |
| 43 (18)  | 33                   | 248                | 248              | 182                        | 248                                  | 561                | 841            | 1,122          | 841                        | 1,122          | 840  | 1,062          |
| 43 (18)  | 50                   | 359                | 359              | 182                        | 359                                  | 810                | 1,215          | 1,620          | 1,215                      | 1,620          | 1,062  | 1,062          |
| 54 (16)  | 33                   | 312                | 312              | 182                        | 312                                  | 789                | 1,183          | 1,577          | 1,183                      | 1,577          | 1,062  | 1,062          |
| 54 (16)  | 50                   | 450                | 450              | 182                        | 450                                  | 1,139              | 1,709          | 1,811          | 1,709                      | 1,811          | 1,062  | 1,062          |
| 68 (14)  | 50                   | 568                | 536              | 182                        | 532                                  | 1,610              | 1,811          | 1,811          | 1,811                      | 1,811          | 1,062  | 1,062          |
| 97 (12)  | 50                   | 768                | 536              | 182                        | 532                                  | 1,698              | 1,811          | 1,811          | 1,811                      | 1,811          | 1,062  | 1,062          |
| Max Allowable Clip Load                                  |                      | 768                | 536              | 182                        | 532                                  | 1,811              |                |                | 1,811                      |                | 1,062  |                |

| StiffClip® LB, Recommended Allowable Load (lbs): F3 |                      |                |                |                |                            |                |                |                            |                |                |                 |                   |                |                |  |
|---|----------------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------------------|----------------|----------------|-----------------|-------------------|----------------|----------------|--|
| Stud  |                      | LB362          |                |                | LB600 (Standard 1" Offset) |                |                | LB800 (Standard 2" Offset) |                |                |                 | LB800 (4" Offset) |                |                |  |
| Thickness Mils (ga)                                 | Yield Strength (ksi) | 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/3 #12 Screws             | w/4 #12 Screws | w/6 #12 Screws | w/10 #12 Screws | w/4 #12 Screws    | w/6 #12 Screws | w/8 #12 Screws |  |
|   |                      | Pattern 1      | Pattern 2      | Pattern 3      | Pattern 1                  | Pattern 2      | Pattern 3      | Pattern 4                  | Pattern 5      | Pattern 6      | Pattern 7       | Pattern 8         | Pattern 9      | Pattern 10     |  |
| 33 (20)   | 33                   | 235            | 350            | 468            | 251                        | 377            | 503            | 332                        | 441            | 534            | 793             | 259               | 331            | 417            |  |
| 33 (20)   | 50                   | 340            | 506            | 678            | 362                        | 544            | 727            | 479                        | 637            | 773            | 1,149           | 376               | 479            | 604            |  |
| 43 (18)   | 33                   | 350            | 522            | 697            | 373                        | 561            | 749            | 494                        | 656            | 795            | 1,182           | 386               | 493            | 622            |  |
| 43 (18)   | 50                   | 506            | 753            | 1,009          | 539                        | 810            | 1,082          | 713                        | 948            | 1,150          | 1,710           | 559               | 713            | 899            |  |
| 54 (16)   | 33                   | 493            | 733            | 981            | 524                        | 789            | 1,053          | 694                        | 923            | 1,119          | 1,663           | 544               | 693            | 875            |  |
| 54 (16)   | 50                   | 711            | 1,059          | 1,417          | 757                        | 1,139          | 1,521          | 1,002                      | 1,269          | 1,616          | 2,401           | 785               | 1,001          | 1,263          |  |
| 68 (14)   | 50                   | 1,006          | 1,498          | 2,004          | 1,071                      | 1,610          | 1,792          | 1,269                      | 1,269          | 2,286          | 3,397           | 1,111             | 1,417          | 1,561          |  |
| 97 (12)   | 50                   | 1,061          | 1,579          | 2,114          | 1,129                      | 1,698          | 1,792          | 1,269                      | 1,269          | 2,411          | 3,583           | 1,172             | 1,494          | 1,561          |  |
| Max Allowable Clip Load                             |                      | 2,658          |                |                | 1,792                      |                |                | 1,269                      |                | 3,863          |                 |                   | 1,561          |                |  |

**\*\*StiffClip LB Allowable Load tables and important notes continued on next page.**

### Nomenclature

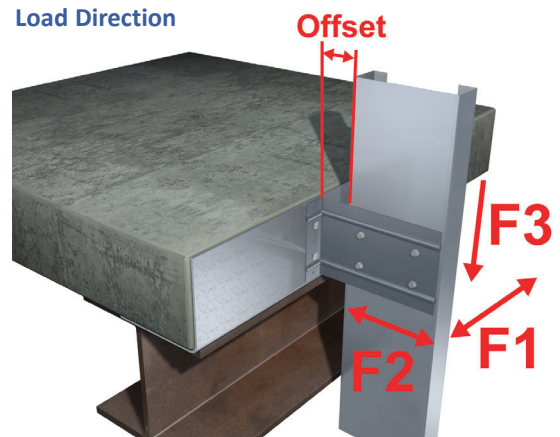
StiffClip LB is available for various stud depths. To specify, multiply stud depth by 100.

**Example:** 6" stud depth  
**Designate:** StiffClip® LB600

| StiffClip® LB, Recommended Allowable Load (lbs): F3 |                      |                             |                |                |                             |                |                |                    |                |                 |
|---|----------------------|-----------------------------|----------------|----------------|-----------------------------|----------------|----------------|--------------------|----------------|-----------------|
| Stud  |                      | LB1000 (Standard 2" Offset) |                |                | LB1200 (Standard 2" Offset) |                |                | LB1000 (4" Offset) |                |                 |
| Thickness Mils (ga)                                 | Yield Strength (ksi) | 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/4 #12 Screws     | w/6 #12 Screws | w/10 #12 Screws |
|   |                      | Pattern 11                  | Pattern 12     | Pattern 13     | Pattern 11                  | Pattern 12     | Pattern 13     | Pattern 14         | Pattern 15     | Pattern 16      |
| 33 (20)   | 33                   | 203                         | 364            | 406            | 211                         | 381            | 421            | 290                | 410            | 602             |
| 33 (20)   | 50                   | 294                         | 525            | 588            | 305                         | 550            | 610            | 419                | 593            | 871             |
| 43 (18)   | 33                   | 302                         | 541            | 605            | 314                         | 566            | 627            | 431                | 610            | 896             |
| 43 (18)   | 50                   | 438                         | 782            | 875            | 454                         | 818            | 907            | 624                | 883            | 1,192           |
| 54 (16)   | 33                   | 426                         | 761            | 851            | 441                         | 796            | 883            | 607                | 859            | 1,192           |
| 54 (16)   | 50                   | 615                         | 1,099          | 1,229          | 637                         | 1,150          | 1,275          | 876                | 1,192          | 1,192           |
| 68 (14)   | 50                   | 869                         | 1,554          | 1,739          | 902                         | 1,627          | 1,803          | 1,192              | 1,192          | 1,192           |
| 97 (12)   | 50                   | 917                         | 1,639          | 1,793          | 951                         | 1,715          | 1,899          | 1,192              | 1,192          | 1,192           |
| <b>Max Allowable Clip Load</b>                      |                      | <b>1,793</b>                |                |                | <b>1,899</b>                |                |                | <b>1,192</b>       |                |                 |

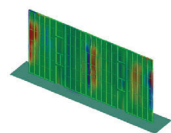
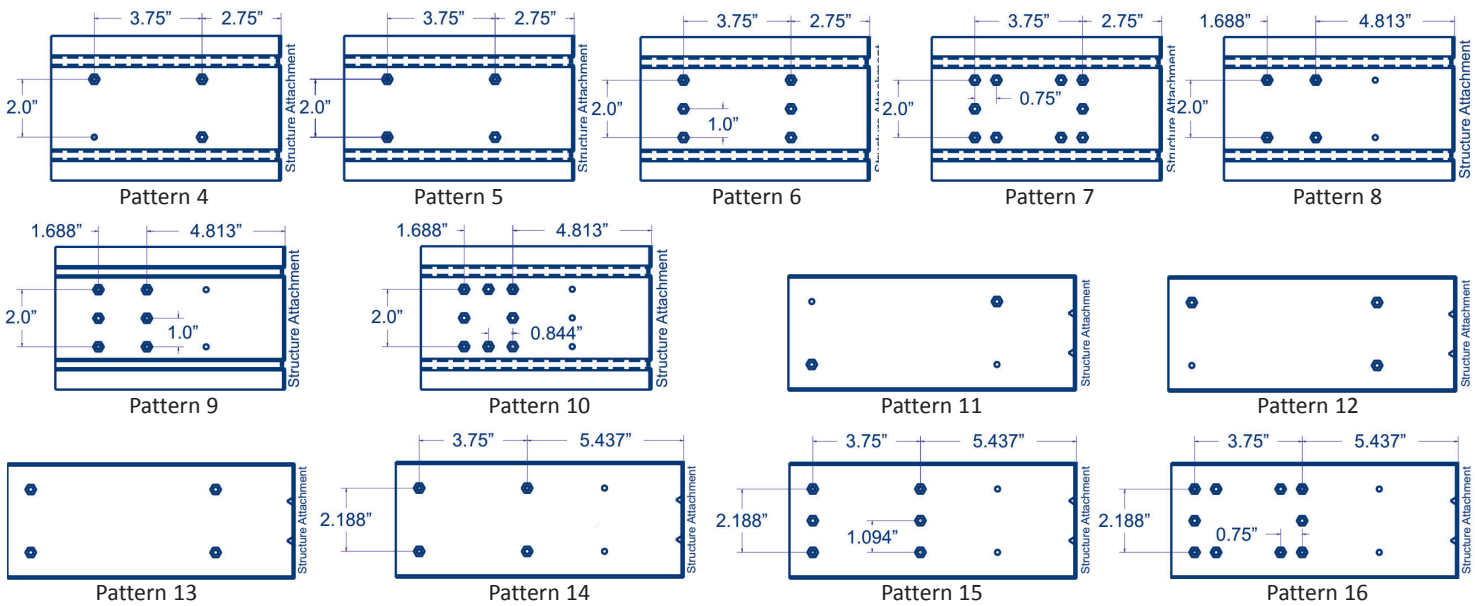
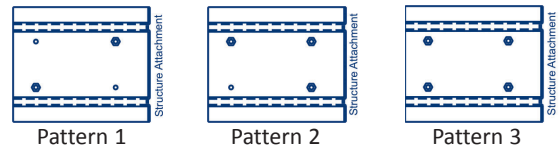
**Notes:**

- Allowable load tables incorporate eccentric loading of fasteners. Values with a welded connection may increase.
- Fasten within 3/4" from the angle heel (centerline of the 1 1/2" leg) to minimize eccentric load transfer.
- StiffClip LB resists horizontal and vertical loads.
- Allowable loads have not been increased for wind, seismic, or other factors.
- 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.
- Torsional effects are considered on screw group for 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.
- Design loads consider loads on the clip and #12 screw fasteners to the stud web.
- Strengthening ribs are present in 3 5/8", 6", and 8" sizes. StiffClip LB's 10" and 12" sizes contain 1/2" return lips on the top and bottom of the leg attaching to the stud for increased stiffness.



**Screw Patterns**

**\*\*Important Consideration:** Pattern diagrams indicate fastener placement only. Each standard StiffClip LB product comes with 4 predrilled guide holes shown in Patterns 1, 2, & 3. Alternate patterns can be implemented in the field or requested from TSN as a custom part.



StiffClip LB Series  
Blast and Seismic Design Data  
www.steelnetwork.com

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