SUBH Bridging Connectors

SIMPSON
Strong-Tie
®

Simplified Design and Installation Through Innovation

Simpson Strong-Tie® SUBH and MSUBH wall stud bridging connectors for cold-formed steel (CFS) framing offer a compact profile that allows standard 1⅝" studs to be sistered directly against adjacent studs. The LSUBH connector provides the same installation benefits of the SUBH/MSUBH connectors, and is suitable for many wind- and load-bearing situations where the load demand is light to moderate. Many applications require only one screw, greatly reducing labor costs and increasing productivity.

VALUE ENGINEERED ✓

This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

Features:

• Tested to include stud-web strength and stiffness in the tabulated design values

• Design values ensure compliance with AISI S100 Sections D3.2.1 and D3.3 for axially and laterally loaded studs

• Flexible design solutions for web thicknesses of 33 mil (20 ga.) through 97 mil (12 ga.) and stud sizes from 3⅝" to 8"

• MSUBH accommodates back-to-back built-up members ranging from 33 mil (20 ga.) to 54 mil (16 ga.)

Material: LSUBH3.25 – 33 mil (20 ga.); SUBH3.25 – 43 mil (18 ga.); MSUBH3.25 – 68 mil (14 ga.)
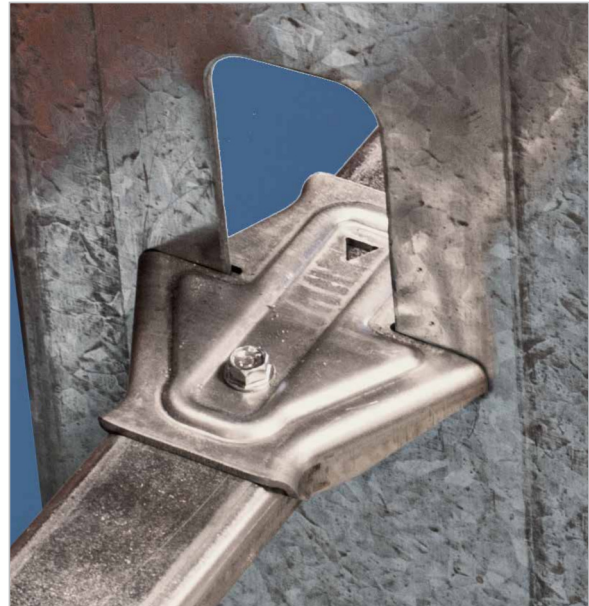
Finish: Galvanized (G90)

Installation:

• See pages 54 through 56.

Codes: See page 11 for Code Report Reference Key Chart.

Ordering Information:

LSUBH3.25 and SUBH3.25-R150 (Bucket of 150),
MSUBH3.25-R100 (Bucket of 100)

Compact Geometry
Facilitates efficient installation in industry-standard 1.5" web knockouts

Web Slots
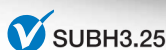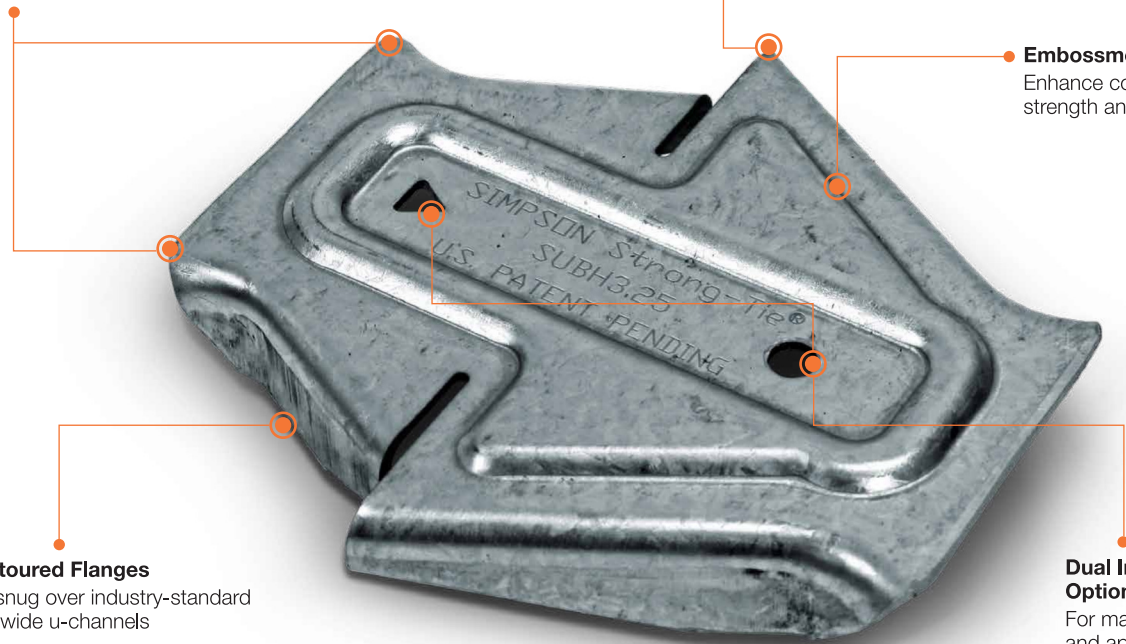Offers strong rotational resistance without the use of screws

Embossments
Enhance connector strength and stiffness

Contoured Flanges
Fits snug over industry-standard 1.5" wide u-channels

Dual Installation Options
For maximum design and application flexibility

DISTRIBUTED BY
MARINO\WARE®

✓ **SUBH3.25**
(LSUBH3.25 and MSUBH3.25 Similar)
U.S. Patent 8,813,456

How to Use Bridging Connector Allowable Load Table

The tabulated strength and stiffness values are for use with Sections D3.2.1 and D3.3 of the 2007 edition of AISI North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100-2007) as follows:

Bracing Design for Laterally Loaded C-Studs

Step 1: Calculate required bracing force for each flange using equation D3.2.1-3

Step 2: Multiply result by stud depth to obtain torsional moment

Step 3: Select connector with tabulated allowable torsional moment that exceeds torsional moment from Step 2 for the stud depth and gauge required
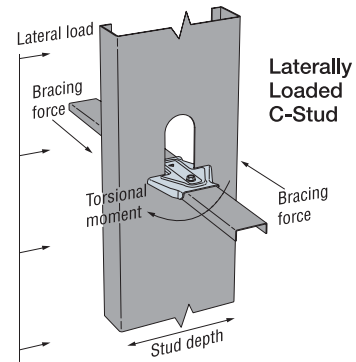
Bracing Design for Axially Loaded C-Studs

Step 1: Calculate required LRFD brace strength using equation D3.3-1

Step 2: Divide result by 1.5 for ASD design[1]

Step 3: Calculate required brace stiffness using equation D3.3-2

Step 4: Select connector with tabulated allowable brace strength that exceeds strength from Step 2 and tabulated brace stiffness that exceeds stiffness from Step 3 for the stud depth and gauge required
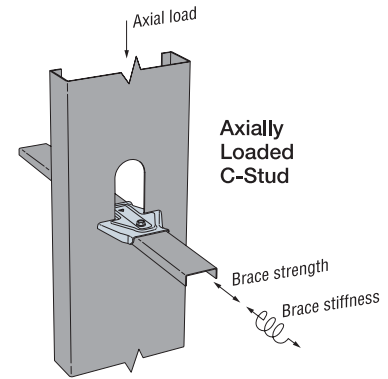
1. Page III-54 of the 2008 edition of the AISI Cold-Formed Steel Design Manual states that equation D3.3-1 is applicable to LRFD design, and recommends dividing the result by 1.5 for ASD design.

SUBH Bridge Clip Connector – Strength and Stiffness

Model No.	Stud Depth	Stud Thickness mils (ga.)	Laterally Loaded C-Stud Allowable Torsional Moment[1] (in.-lbs.)		Axially Loaded C-Stud Allowable Brace Strength[1,2] (lbs.)		Brace Stiffness[3] (lbs./in.)		Code Ref.
			Min	Max	Min	Max	Min	Max	
LSUBH3.25	3.625	33 (20)	215	330	155	275	2300	2685	160
		43 (18)	230	370	175	310	5075	7585	
		54 (16)	225	370	195	345	5075	8100	
SUBH3.25	3.625	33 (20)	320	345	230	370	1450	1985	IP1, L2
		43 (18)	355	430	255	420	2780	4035	
		54 (16)	420	455	290	475	2925	3975	
MSUBH3.25	3.625	54 (16)	550	800	435	630	3440	4015	
		68 (14)	640	860	485	695	4040	6145	
		97 (12)	670	860	515	770	6860	14265	
LSUBH3.25	6.00	33 (20)	225	330	120	140	670	730	160
		43 (18)	250	395	155	285	1010	2075	
		54 (16)	265	395	180	330	1025	2565	
SUBH3.25	6.00	33 (20)	275	385	110	110	605	605	IP1, L2
		43 (18)	295	525	230	250	1050	1205	
		54 (16)	350	550	275	415	1130	1700	
MSUBH3.25	6.00	54 (16)	565	895	385	430	1630	1695	
		68 (14)	655	925	455	620	1860	2655	
		97 (12)	690	960	505	765	4070	4090	
LSUBH3.25	8.00	43 (18)	235	375	135	135	815	815	160
		54 (16)	250	375	180	260	1130	1130	
SUBH3.25	8.00	43 (18)	255	570	190	190	505	535	IP1, L2
		54 (16)	325	605	250	300	895	1025	
MSUBH3.25	8.00	54 (16)	545	890	270	270	1025	1045	
		68 (14)	635	925	435	455	1400	1400	
		97 (12)	665	955	545	545	2465	2465	

IN STOCK (LSUBH3.25 rows), IN STOCK (SUBH3.25 rows)

1. Allowable loads are for use when utilizing Allowable Stress Design methology. For LRFD loads multiply the ASD tabulated values by 1.6.
2. Allowable brace strengths are based on ultimate test load divided by a safety factor. Serviceability limit is not considered, as brace stiffness requirements are given in section D3.3 of AISI S100-2007. Contact Simpson Strong-Tie if nominal brace strength is required.
3. Tabulated stiffness values apply toboth ASD and LRFD designs.
4. Allowable loads consider bridging connection only. It is responsibility of the Designer to verify the strength and serviceability of the framing members.
5. Min. fastener quantity and tabulated values – fill round hole (1 screw total); Max. fastener quantity and tabulated values – fill round and triangle holes (2 screws total).

DISTRIBUTED BY MARINO WARE