SIMPSON Strong-Tie

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# SSC Steel-Stud Connectors

SSC steel-stud connectors are versatile utility clips ideal for a variety of stud-to-stud and stud-to-structure applications in cold-formed steel construction. The clips have been designed to enable easy installation on the open side of studs or joists with flanges up to 3" long and return lips up to 3/4". A wide pattern of strategic fastener locations allows the SSC to accommodate a variety of traditional and custom designs.

## Features:

- Pre-punched holes reduce installation cost by eliminating predrilling
- Intuitive fastener hole positions ensure accurate clip installation in accordance with design, support a wide range of design and application requirements, and provide installation flexibility.
- Angle lengths accommodate either hard-side or soft-side attachment for joists and studs with return lips up to 3/4"*
- 4" leg length enables soft-side connections or studs with flanges up to 3"
- Also suitable for u-channel bridging

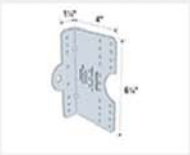
* SSC2.25 clips will accommodate 2" wide flange and 5/8" stiffener lips.

**Material:** LSSC – 54 mil (50 ksi); SSC – 68 mil (50 ksi); MSSC – 97 mil (50 ksi)

**Finish:** Galvanized (G90)

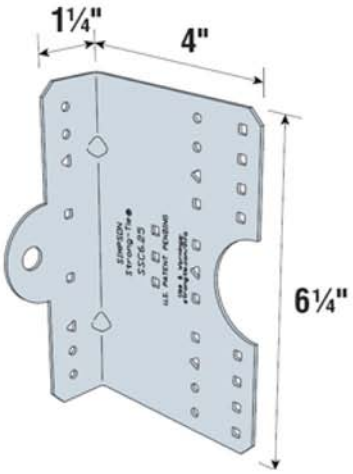
## Packaging/Ordering Information:

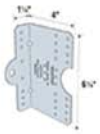
| Model Number | Ordering SKU | Package Quantity |
|---|---|---|
| LSSC6.25 | LSSC6.25-R30 | Bucket of 30 |
| SSC6.25 | SSC6.25-R30 | |
| MSSC6.25 | MSSC6.25-R30 | |
| LSSC4.25 | LSSC4.25-R50 | Bucket of 50 |
| SSC4.25 | SSC4.25-R50 | |
| MSSC4.25 | MSSC4.25-R50 | |
| SSC2.25 | SSC2.25-R125 | Bucket o 125 |
| MSSC2.25 | MSSC2.25-R90 | Bucket of 90 |

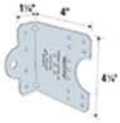


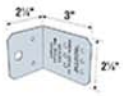
Product images
Installation images
Allowable Loads:
- Steel-to-Steel
- Bypass Framing
- Headers
- U-Channel Bridging
- Base of Jamb
- Rafters
- Kneewall

Code Reports
Drawings
Related Categories
Fliers
Help for downloads





SSC6.25
(LSSC6.25, MSSC6.25 similar)

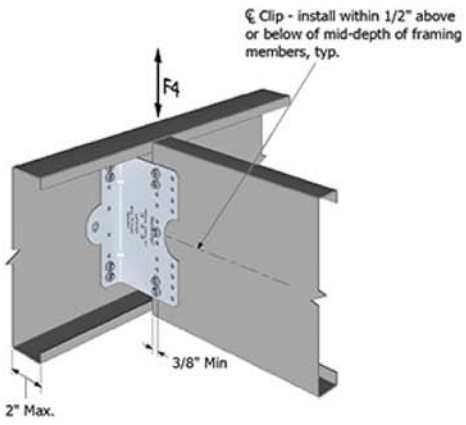

SSC4.25
(LSSC4.25, MSSC4.25 similar)


SSC2.25
(MSSC2.25 similar)

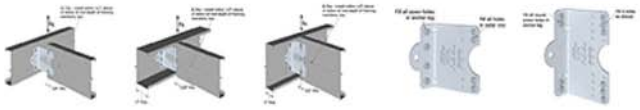
## Installation Images:

▲top

roll over images below to see larger image




Steel-to-Steel



Typical SSC Installation

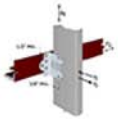
SSC Installation with Supported Member Fasteners in Outer Row

SSC Installation with Supported Member Fasteners in Inner Row

SSC4.25 Outer Fastener Pattern (LSSC4.25 and MSSC4.25 Similar)

SSC6.25 Outer Fastener Pattern (LSSC6.25 and MSSC6.25 Similar)

Bypass Framing



Typical SSC Installation

U-Channel Bridging

Typical SSC4.25 Installation

## Allowable Loads:

SSC Steel Stud Connectors: Steel-to-Steel

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| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Framing Member Depth (in.) | Fasteners | | | Allowable F4 Loads (lbs.)[3] | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Minimum Member Thickness | | | Maximum Connector Load[4] |
| | | | | Pattern[2] | Carried Member | Carrying Member | 33 mil (20 ga.) | 43 mil (18 ga.) | 54 mil (16 ga.) | |
| SSC2.25 | 68 (14) | 2¼ | 3⅝ | Min. | 3 - #10 | 2 - #10 | 165 | 225 | 345 | 690 |
| MSSC2.25 | 97 (12) | 2¼ | 3⅝ | Min. | 3 - #10 | 2 - #10 | 165 | 225 | 345 | 690 |
| LSSC4.25 | 54 (16) | 4¼ | 6 | Min. | 2 - #10 | 2 - #10 | 215 | 440 | 675 | 1615 |
| | | | | Max. | 5 - #10 | 4 - #10 | 215 | 440 | 725 | |
| | | | | Outer | 4 - #10 | 4 - #10 | 200 | 310 | 520 | |
| SSC4.25 | 68 (14) | 4¼ | 6 | Min. | 2 - #10 | 2 - #10 | 355 | 525 | 890 | 1615 |
| | | | | Max. | 5 - #10 | 4 - #10 | 365 | 600 | 1005 | |
| | | | | Outer | 4 - #10 | 4 - #10 | 235 | 330 | 625 | |
| MSSC4.25 | 97 (12) | 4¼ | 6 | Min. | 2 - #10 | 2 - #10 | 355 | 525 | 890 | 1615 |
| | | | | Max. | 5 - #10 | 4 - #10 | 365 | 600 | 1005 | |
| | | | | Outer | 4 - #10 | 4 - #10 | 235 | 330 | 625 | |
| LSSC6.25 | 54 (16) | 6¼ | 8 | Min. | 4 - #10 | 4 - #10 | 265 | 660 | 1190 | 2590 |
| | | | | Max. | 7 - #10 | 6 - #10 | 265 | 660 | 1190 | |
| | | | | Outer | 6 - #10 | 4 - #10 | 270 | 375 | 695 | |
| SSC6.25 | 68 (14) | 6¼ | 8 | Min. | 4 - #10 | 4 - #10 | 385 | 720 | 1190 | 2590 |
| | | | | Max. | 7 - #10 | 6 - #10 | 385 | 720 | 1190 | |
| | | | | Outer | 6 - #10 | 4 - #10 | 270 | 460 | 725 | |
| MSSC6.25 | 97 (12) | 6¼ | 8 | Min. | 4 - #10 | 4 - #10 | 385 | 720 | 1190 | 2590 |
| | | | | Max. | 7 - #10 | 6 - #10 | 385 | 720 | 1365 | |
| | | | | Outer | 6 - #10 | 4 - #10 | 270 | 460 | 725 | |

1. For additional information, see General Notes for Utility Clips.
2. Min. fastener quantity and load values - fill all round holes; Max. fastener quantity and load values - fill all round and triangular holes; Outer fastener quantity and load values - see illustrations for fastener placement.
3. Maximum allowable load for connector that may not be exceeded when designing custom installations. Designer is responsible for member and fastener design.

## SSC Steel Stud Connectors: Bypass Framing

| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Fasteners[2] | | Allowable Loads (lbs.) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 33 mil (20 ga.) | | | | 43 mil (18 ga.) | | | | 54 mil (16 ga.) | | | |
| | | | Anchorage[3] | Stud | F1[4] | F2 | F3 | F4 | F1[4] | F2 | F3 | F4 | F1[4] | F2 | F3 | F4 |
| SSC4.25 | 68 (14) | 4¼ | 3 - #12 or 3 - PDPAT | 4 - #10 | 40 | 705 | 705 | 160 | 40 | 870 | 1050 | 220 | 40 | 935 | 1210 | 220 |
| MSSC4.25 | 97 (12) | 4¼ | 3 - #12 or 3 - PDPAT | 4 - #10 | 105 | 705 | 705 | 170 | 105 | 1050 | 1050 | 220 | 105 | 1385 | 1210 | 220 |

1. For additional information, see General Notes for Utility Clips.
2. See illustrations for fastener placement.
3. Allowable loads are based on anchors installed in minimum 3/16" thick structural steel with $F_y$ = 36 ksi.
4. Allowable loads based on in-plane loads applied at the centroid of the fasteners to the stud, with no rotational restraint of stud.

## SSC Steel Stud Connectors: Headers

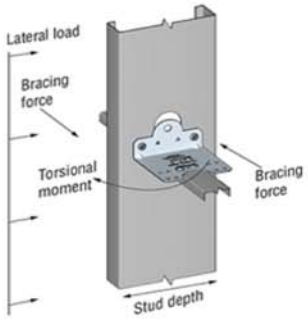
| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Jamb Stud Depth (in.) | Fasteners | | | Jamb & Header Thickness mil (ga.) | Allowable F3 Loads (lbs.) | | Allowable F4 Loads (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pattern[2] | Jamb | Header | | Nested Stud & Track Header | Back to Back Header[3] | |
| LSSC4.25 | 54 (16) | 4¼ | 6 | Max. | 5 - #10 | 4 - #10 | 33 (20) | 140 | 455 | 215 |
| | | | | | | | 43 (18) | 220 | 660 | 440 |
| SSC4.25 | 68 (14) | 4¼ | 6 | Max. | 5 - #10 | 4 - #10 | 54 (16) | 375 | 1055 | 1005 |
| | | | | | | | 68 (14) | 570 | 1055 | 1005 |
| LSSC6.25 | 54 (16) | 6¼ | 8 | Max. | 7 - #10 | 6 - #10 | 33 (20) | 160 | 455 | 265 |
| | | | | | | | 43 (18) | 250 | 730 | 660 |
| SSC6.25 | 68 (14) | 6¼ | 8 | Max. | 7 - #10 | 6 - #10 | 54 (16) | 410 | 1110 | 1190 |
| | | | | | | | 68 (14) | 640 | 1110 | 1190 |

1. For additional information, see General Notes for Utility Clips.
2. Fill all round and triangular holes.
3. Designer is responsible for checking web crippling of the header and reducing allowable loads accordingly.

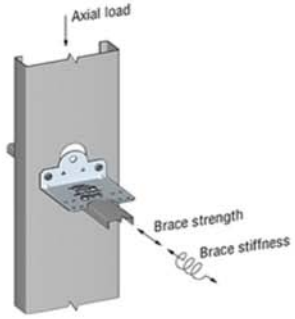
## SSC Steel Stud Connectors: U-Channel Bridging

| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Stud Depth (in.) | Stud Thickness mil (ga.) | Fasteners[2] | | Laterally Loaded C-Stud | Axially Loaded C-Stud | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Stud | Bridging | Allowable Torsional Moment[3] (in.-lbs.) | Allowable Brace Strength[3, 4] (lbs.) | Brace Stiffness[5] (lbs. / in.) |
| SSC4.25 | 68 (14) | 4¼ | 6 | 54 (16) | 2 - #10 | 2 - #10 | 655 | 280 | 2045 |
| | | | | 68 (14) | 2 - #10 | 2 - #10 | 805 | 335 | 2305 |
| | | | | 97 (12) | 2 - #10 | 2 - #10 | 920 | 660 | 4230 |

1. For additional information, see General Notes for Utility Clips.
2. See illustrations for fastener placement.
3. Allowable loads are for use when utilizing Allowable Stress Design methodology. For LRFD loads, multiply the tabulated ASD values by 1.6.
4. 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.
5. Tabulated stiffness values apply to both ASD and LRFD designs.




Laterally loaded C-stud




Axially loaded C-stud

### How to Use SSC U-Channel Bridging 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 flange force for bracing using equation D3.2.1-3
Step 2: Multiply result by stud depth to obtain torsional moment
Step 3: Verify that tabulated allowable torsional moment exceeds torsional moment from Step 2 for the stud thickness 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: Verify that tabulated allowable brace strength exceeds strength from Step 2 and that tabulated brace stiffness exceeds stiffness from Step 3 for the stud thickness 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.

## SSC Steel Stud Connectors: Base of Jamb

| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Stud Member Depth (in.) | Fasteners | | Stud Thickness mil (ga.) | Allowable F4 Load (lbs.) |
|---|---|---|---|---|---|---|---|
| | | | | Anchor Dia. | Stud Fasteners[4] | | |
| SSC2.25 | 68 (14) | 2¼ | 3⅝ | ⅜ | 3-#10 | 33 (20) | 390 |
| | | | | | | 43 (18) | 605 |
| | | | | | | 54 (16) | 940 |
| SSC4.25 | 68 (14) | 4¼ | 6 | ⅜ | 5-#10 | 33 (20) | 420 |
| | | | | | | 43 (18) | 685 |
| | | | | | | 54 (16) | 975 |
| SSC6.25 | 68 (14) | 6¼ | 8 | ⅜ | 7-#10 | 33 (20) | 470 |
| | | | | | | 43 (18) | 715 |
| | | | | | | 54 (16) | 1020 |

1. For additional information, see General Notes for Utility Clips.
2. Allowable loads are based on minimum 33 mil (20 ga.) track for 33 mil (20 ga.) and 43 mil (18 ga.) studs, and minimum 43 mil (18 ga.) track for 16 ga. studs, with one #10 screw into each stud flange.
3. Allowable loads assume adequate torsional bracing is provided. Bracing design is the reponsibility of the Designer.

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## SSC Steel Stud Connectors: Rafters

| Model No. | Connector Material Thickness mil (ga.) | L (in.) | Fasteners[2] | | Allowable Loads (lbs.) | | |
|---|---|---|---|---|---|---|---|
| | | | Anchorage to Steel[3] | Supported Member | 43 mil (18 ga.) | | |
| | | | | | F2 | F3 | F4 |
| SSC4.25 | 68 (14) | 4¼ | 2 - #12 | 5 - #10 | 710 | 1075 | 595 |
| | | | 4 PDPAT | 5 - #10 | 1020 | 1075 | 630 |
| MSSC4.25 | 97 (12) | 4¼ | 2 - #12 | 5 - #10 | 710 | 1335 | 595 |
| | | | 4 PDPAT | 5 - #10 | 1025 | 1335 | 815 |

1. For additional information, see General Notes for Utility Clips.
2. See illustrations for fastener placement.
3. Allowable loads are based on anchors installed in minimum 3/16" thick structural steel with $F_y$ = 36 ksi.
4. Allowable loads are based on a 6" deep member. For deeper members, Designer must consider web crippling of the member and reduce loads accordingly.

## SSC Steel Stud Connectors: Kneewall

See MSSC Kneewall Connectors

## Code Reports (PDFs):

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| | | | | | LEGACY REPORTS | | |
|---|---|---|---|---|---|---|---|
| | IAPMO UES ER | ICC-ES ESR | CITY OF LOS ANGELES | STATE OF FLORIDA | ICC-ES NER | ICC-ES ER | ICC-ES ES |
| LSSC | See specific model numbers for code listings. | | | | | | |
| LSSC4.25 | No code listing. Please contact us for test data. | | | | | | |
| LSSC6.25 | No code listing. Please contact us for test data. | | | | | | |
| MSSC | See specific model numbers for code listings. | | | | | | |
| MSSC2.25 | No code listing. Please contact us for test data. | | | | | | |
| MSSC4.25 | No code listing. Please contact us for test data. | | | | | | |
| MSSC6.25 | No code listing. Please contact us for test data. | | | | | | |
| SSC | See specific model numbers for code listings. | | | | | | |
| SSC2.25 | No code listing. Please contact us for test data. | | | | | | |
| SSC4.25 | No code listing. Please contact us for test data. | | | | | | |
| SSC6.25 | No code listing. Please contact us for test data. | | | | | | |

## Drawings:

To download drawings, right-click or Ctrl-click on the link, then choose "Save Target As..."

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Download the Simpson Strong-Tie® AutoCAD® Menu, which allows you to insert Ortho views directly into your AutoCAD drawing.

| | ORTHOGRAPHIC | PERSPECTIVE |
|---|---|---|
| LSSC | None for this model | None for this model |
| LSSC4.25 | LSSC4.25 front view: DWG \| DXF<br>LSSC4.25 left view: DWG \| DXF | LSSC4.25: DWG \| DXF |
| LSSC6.25 | LSSC6.25 front view: DWG \| DXF<br>LSSC6.25 left view: DWG \| DXF | LSSC6.25: DWG \| DXF |
| MSSC | None for this model | None for this model |