CLIP EXPRESS℠ PRODUCT CATALOG

ClarkDietrich™
BUILDING SYSTEMS

CLIPS, CONNECTORS & FRAMING HARDWARE

CONNECTIONS PLAY A VITAL ROLE. AND SO DOES PEACE OF MIND.

ClarkDietrich Clip Express℠ stands alone in the industry. The vast lineup of products, quick delivery service and philosophy are unique in every respect—and especially in sum total. That's because Clip Express was created to give our customers an unmatched level of confidence.

EVERYTHING YOU NEED FROM ONE CONVENIENT SOURCE.

We know that having the right products, at the right time, and at the right price is absolutely essential to getting the job done. Clip Express is a single source for the industry's widest and most cost-effective array of rigid, deflection, bridging, and general-purpose clips, connectors, supports and framing hardware for commercial and residential light-gauge steel framing.

CONSISTENT, HIGH-QUALITY PRODUCTS.

When you design or specify by ClarkDietrich product name or number, you get fully engineered and rigorously tested systems and connectors—the same precision-formed products each and every time. It's exactly the kind of thing you'd expect from a partner like ClarkDietrich. The products we manufacture—like FastClip™ Slide Clips and Fast Top™ Clips—are created specifically to work as a system. It's an approach that leads to enhanced performance on the job.

VALUE THAT CONTRIBUTES TO YOUR BOTTOM LINE.

While you may find a cheaper price than ClarkDietrich, you won't find a lower overall cost or better value. We offer unmatched service through numerous plants and engineering offices—and nationwide product availability. From technical assistance to complete engineering services, we've truly put together an incredible array of resources to help you be successful on any project. This catalog is a great example. It's one of the most comprehensive light gauge steel connector, clip, support and framing hardware manuals or resources available.

CONNECTIONS YOU CAN COUNT ON.

If getting what you want, when and how you want it is a must, ClarkDietrich Clip Express is ready to deliver. In fact, a wide array of shipping options is available, from standard ground to overnight. If we get your order today, you can get it tomorrow.

Count on ClarkDietrich to deliver products, systems and services that keep your costs down and productivity up.

Need help with product selection, ordering, scheduling, delivery, or anything else? Call the Clip Express sales team at 866-638-1908.

Need Product Submittals? Use SubmittalPro® at clarkdietrich.com.

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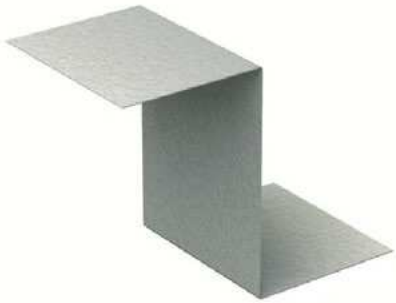
Custom-Fabricated Specialty Products

When the job calls for a connection, clip or support that doesn't exist in this catalog, ClarkDietrich can create whatever you need. We can custom fabricate just about any shape, bend, angle or specialty framing clip, connector or support to your exact specification. Manufactured using precision cutting and forming equipment, a diverse selection of specialized sizes and shapes is available—including prepunched holes and/or specialized slots. Simply submit your dimensioned drawings to your ClarkDietrich representative, and we'll do the rest!

Note: The performance and installation of custom-made products is the sole responsibility of the design professional and engineer of record. Any customer ordering a custom-fabricated clip, connector or support shall indemnify, defend and hold harmless ClarkDietrich and ClarkDietrich Engineering Services for any loss or damage arising in whole or in part.



MATERIAL SPECIFICATIONS

Gauge: 25 gauge (18mil)
Design Thickness: 0.0188 inches
Coating: G40 or equivalent
Yield Strength: 33ksi
ASTM: C645, A653/A653M

Gauge: 20 gauge (33mil)
Design Thickness: 0.0346 inches

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90 or CP60
Must be specified at the time of order placement.
Yield Strength: 50ksi or 33ksi
Must be specified at the time of order placement.
ASTM: A653/A653M, C955

INSTALLATION

Will vary based upon application. Consult the engineer of record.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.
Pub. No. CD-ClipExpress 4/12

Fastening Options

Connections can be made using a variety of fastening options. It is critical to specify the proper fastener to ensure the proper performance of the connections in light-gauge (cold-formed) steel construction. The most common and widely used connection methods are screw connections, powder-actuated fastener connections and weld connections. Each type of connection method has various advantages and disadvantages. Therefore, we provide data for the most common types so you can choose your preferred connection method.

SCREW CONNECTIONS

Self-drilling screws—These high-strength fasteners are used if the connection is multiple thicknesses of 33mil steel or thicker. One of the more common self-drilling screws is a #10-16 x 5/8 HWH SD (#10 diameter shaft, 16 threads per inch, 5/8 length, hex washer head self-drilling screw).

AISI CALCULATED ALLOWABLE LOADS FOR SCREW CONNECTION

Material thickness (mils)	Design thickness (in)	Material Strength		#8-18 HWH Screw Dia. = 0.160		#10-16 HWH Screw Dia. = 0.190		#12-14 HWH Screw Dia. = 0.210		1/4"-14 HWH Screw Dia. = 0.240	
		Fy (ksi)	Fu (ksi)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)
33	0.0346	33	45	162	71	177	84	186	93	199	106
43	0.0451	33	45	241	92	263	109	277	121	296	138
54	0.0566	33	45	333	115	370	137	389	152	416	173
	0.0566	50	65	333	167	467	198	562	219	600	250
68	0.0713	33	45	—	—	467	173	550	191	588	218
	0.0713	50	65	—	—	467	249	667	276	849	315
97	0.1017	33	45	—	—	467	246	667	272	867	311
	0.1017	50	65	—	—	467	356	667	393	867	450
118	0.1242	33	45	—	—	—	—	667	333	867	380
	0.1242	50	65	—	—	—	—	667	480	867	549

AISI CALCULATED ALLOWABLE BEARING & PULLOVER FOR SCREWS

Material thickness (mils)	Design thickness (in)	Material Strength		#8-18 Screw Shank = 0.160 Head = 0.250		#10-16 Screw Shank = 0.190 Head = 0.375		#12-14 Screw Shank = 0.210 Head = 0.375		1/4"-14 Screw Shank = 0.240 Head = 0.500	
		Fy (ksi)	Fu (ksi)	Bearing (lbs)	Pullover (lbs)	Bearing (lbs)	Pullover (lbs)	Bearing (lbs)	Pullover (lbs)	Bearing (lbs)	Pullover (lbs)
33	0.0346	33	45	224	195	266	292	294	292	336	389
43	0.0451	33	45	292	254	347	381	384	381	438	507
54	0.0566	33	45	367	318	436	478	481	478	550	637
		50	65	530	460	629	690	695	690	795	920
68	0.0713	33	45	—	—	549	602	606	602	693	802
		50	65	—	—	792	869	876	869	1001	1159
97	0.1017	33	45	—	—	783	858	865	858	989	1144
		50	65	—	—	1130	1239	1249	1239	1428	1653
118	0.1242	33	45	—	—	—	—	1056	1048	1207	1397
		50	65	—	—	—	—	1526	1514	1744	2018

Notes:

1 All values were calculated using the 2001 AISI Specification w/2004 supplement.
2 Charts are based on Buildex TEK2 HWH screw capacities. All screws must meet minimum criteria outlined.
3 Shear strength for #8, #10, #12, and 1/4" screws must be greater than or equal to 1000 lbs, 1400 lbs, 2000 lbs and 2600 lbs respectively.
4 Tension strength for #8, #10, #12, and 1/4" screws must be greater than or equal to 1545 lbs, 1936 lbs, 2778 lbs and 4060 lbs respectively.
5 The minimum head diameter for #8 screws is 1/4". The minimum head diameter for #10 and #12 screws is 3/8". The minimum head diameter for 1/4" screws is 1/2".
6 Screw ultimate shear capacity is based on Buildex® DATA as a minimum.
7 Buildex is a registered trademark of Illinois Tool Works, Inc.

FastClip™ deflection screws—Many of the ClarkDietrich deflection clips include our proprietary FastClip fastener that has been specifically designed to provide friction-free deflection. These fasteners eliminate drag, binding or resistance that can often occur with common fasteners.

FastClip™ Deflection Screw	
Average Ultimate Shear	2400 lbs
NASPEC 2007 ASD Factor of Safety	3.0
Average Allowable Shear Load	800 lbs

POWDER-ACTUATED FASTENERS

Powder-actuated, or low-velocity driven fasteners, are commonly used to attach cold-formed steel framing members to concrete or structural steel supports. PAF pins are used for permanent attachments and are the most common type used for cold-formed construction.

POWDER-ACTUATED FASTENERS ALLOWABLE LOADS

In normal weight concrete (lbs)

Material thickness (mils)	Yield strength Fy (ksi)	Bearing (lbs)	Pullover (lbs)	PAF (Shank Dia.=0.145", Head Dia.=0.3") Min. Embedment 3/4"						PAF (Shank Dia.=0.145", Head Dia.=0.3") Min. Embedment 1"					
				2000psi		3000psi		4000psi		2000psi		3000psi		4000psi	
				Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension
33	33	203	234	95	70	110	90	125	110	140	90	160	120	185	155
43	33	265	304	95	70	110	90	125	110	140	90	160	120	185	155
54	33	333	382	95	70	110	90	125	110	140	90	160	120	185	155
	50	480	552	95	70	110	90	125	110	140	90	160	120	185	155
68	33	418	481	95	70	110	90	125	110	140	90	160	120	185	155
	50	604	695	95	70	110	90	125	110	140	90	160	120	185	155
97	33	597	686	95	70	110	90	125	110	140	90	160	120	185	155
	50	863	992	95	70	110	90	125	110	140	90	160	120	185	155
118	33	729	838	95	70	110	90	125	110	140	90	160	120	185	155
	50	1054	1211	95	70	110	90	125	110	140	90	160	120	185	155

POWDER-ACTUATED FASTENERS ALLOWABLE LOADS

In structural steel (lbs)

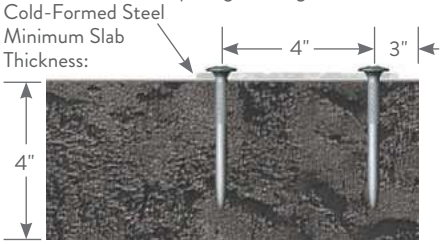
Material thickness (mils)	Yield strength Fy (ksi)	Bearing (lbs)	Pullover (lbs)	PAF (Shank Dia.=0.145", Head Dia.=0.3")									
				3/16"		1/4"		3/8"		1/2"		3/4"	
				Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension
33	33	203	234	425	455	620	800	680	810	605	850	545	500
43	33	265	304	425	455	620	800	680	810	605	850	545	500
54	33	333	382	425	455	620	800	680	810	605	850	545	500
	50	480	552	425	455	620	800	680	810	605	850	545	500
68	33	418	481	425	455	620	800	680	810	605	850	545	500
	50	604	695	425	455	620	800	680	810	605	850	545	500
97	33	597	686	425	455	620	800	680	810	605	850	545	500
	50	863	992	425	455	620	800	680	810	605	850	545	500
118	33	729	838	425	455	620	800	680	810	605	850	545	500
	50	1054	1211	425	455	620	800	680	810	605	850	545	500

Notes:

1 Bearing and pullover values were calculated using the 2001 AISI Specification w/2004 supplement.

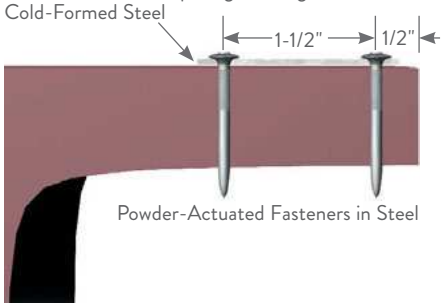
2 See General Note #6 on page 9 for additional information.

Minimum Fastener Spacing and Edge Distances:
Cold-Formed Steel
Minimum Slab Thickness:



Powder-Actuated Fasteners in Concrete

Minimum Fastener Spacing and Edge Distances:
Cold-Formed Steel



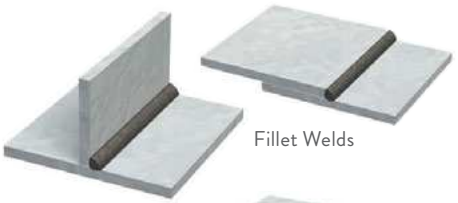
Powder-Actuated Fasteners in Steel

Pub. No. CD-ClipExpress 4/12

Fastening Options

WELDED CONNECTIONS

Fillet welds—Used to make lap joints, corner joints and T-joint connections. Weld metal is deposited in a corner formed by the fit-up of the two members and penetrates and fuses with the base metal to form the joint.



Flare welds—Used to join rounded or curved pieces.

- A Flare Bevel groove weld is commonly used to join a rounded or curved piece to a flat piece.
- A Flare V groove weld is commonly used to join two rounded or curved parts.

Note: For graphical clarity, the weld illustrations do not show the penetration of the welded material. Weld penetration is critical in determining the quality of the weld.

AISI ALLOWABLE LOADS FOR WELDED CONNECTIONS

Material thickness (mils)	Design thickness (in)	Material Strength		Fillet Weld		Flare Groove Weld	
		Fy (ksi)	Fu (ksi)	Longitudinal (lbs)	Transverse (lbs)	Longitudinal (lbs)	Transverse (lbs)
Values for a single one (1) inch weld							
43	0.0451	33	45	619	864	544	663
	0.0451	50	65	895	1247	785	958
54	0.0566	33	45	822	1084	682	832
	0.0566	50	65	1188	1566	985	1202
68	0.0713	33	45	1082	1365	859	1048
	0.0713	50	65	1563	1972	1241	1514
97	0.1017	33	45	1480	1480	1226	1480
	0.1017	50	65	1480	1480	1480	1480
118	0.1242	33	45	1808	1808	1497	1808
	0.1242	50	65	1808	1808	1808	1808
Values for a single two (2) inch weld							
43	0.0451	33	45	998	1727	1087	1326
	0.0451	50	65	1442	2495	1570	1915
54	0.0566	33	45	1253	2168	1364	1664
	0.0566	50	65	1809	3131	1971	2404
68	0.0713	33	45	1578	2731	1719	2096
	0.0713	50	65	2279	3944	2483	3028
97	0.1017	33	45	2884	2961	2452	2961
	0.1017	50	65	2961	2961	2961	2961
118	0.1242	33	45	3616	3616	2994	3616
	0.1242	50	65	3616	3616	3616	3616
Values for a single three (3) inch weld							
43	0.0451	33	45	1497	2591	1631	1989
	0.0451	50	65	2163	3742	2356	2873
54	0.0566	33	45	1879	3251	2047	2496
	0.0566	50	65	2714	4697	2956	3605
68	0.0713	33	45	2367	4096	2578	3144
	0.0713	50	65	3419	5916	3724	4542
97	0.1017	33	45	3376	4441	3678	4441
	0.1017	50	65	4441	4441	4441	4441
118	0.1242	33	45	4987	5424	4491	5424
	0.1242	50	65	5424	5424	5424	5424

Notes:

1 All values were calculated using the 2001 AISI Specification w/2004 supplement (Section E2).

2 Fxx values were based off of Fxx >= 70ksi and that Fxx > Fu.

3 Values include a factor of safety that varies depending on the AISI code calculation used.

4 Longer weld values can be found by following the AISI Specification or by calling Technical Services at 888-437-3244; however, using multiples of lengths shown for longer welds may result in incorrect values.

5 Weld values listed are based on a minimum effective throat of .707 times the design thickness.

General Notes

1. Install products per installation instructions detailed in this catalog.
2. Install all connectors and fasteners before load application.
3. Do not modify, change or alter any connector in this catalog.
4. Do not bend connectors unless they are specifically designed to be bent. Connectors that are not designed to be bent may fracture. Fractured steel will not carry load and must be replaced. Connectors that are designed to be bent shall only be bent one time.
5. Install fasteners per the manufacturer's instructions.
6. Load tables have been developed using the following fastener data:
   - Powder-Actuated Fastener (PAF)–Minimum shank diameter of .0145" with a minimum head diameter of 0.300" placed in 3/16" steel minimum. All PAF pins must have a 5.0 safety factor and an allowable capacity greater than the values shown in the allowable load charts herein, either as a single pin or in multiples per each chart.
   - Hilti* Kwik-Con II–Reference 2011 Edition of the Hilti North American Product Technical Guide, Volume 2, page 340.
   - #10-16 Screws–Capacities as calculated according to the AISI North American Specification for the Design of Cold-Formed Steel Members. The ultimate nominal screw shear capacity must be 1400# or greater.
   - For additional allowable load tables and fastener options, please visit clarkdietrich.com.
7. Tabular footnotes must be followed and supercede general notes when in conflict.
8. Fasteners other than those specified may be substituted with the approval of the engineer of record.
9. Allowable loads and material data listed in this catalog supercedes all information in previous publications.
10. Allowable loads, in some cases, have been increased by one-third per allowable codes. It is important to verify that the actual installation meets the requirements to allow the one-third increase. If not, the engineer of record should adjust the loads down.
11. Listed loads are the maximum monotonic design loads to be applied to the connection based on testing or calculations. Load tables have been developed using Allowable Stress Design methodologies.
12. Allowable loads are the maximum forces applied in one direction only. When loads are applied in multiple directions, the engineer of record is responsible for verifying the maximum capabilities based on an appropriate interaction equation.
13. Where maximum movements (deflections) are specified, they are the total movement in both directions. The fastener positioning and size will affect the amount of allowable movement.
14. ClarkDietrich strongly recommends the following language be included in plans and specifications: "ClarkDietrich connectors were utilized in developing the plans and specifications for this project. Before substituting another brand, the engineer of record must verify the load capacities and approve the substitution in writing."

*Hilti is a registered trademark of the Hilti Aktiengeseilschaft Corporation.

WARNING: Handling of these products without the proper use of hand and eye protection may result in injury.

How To Use This Catalog

This catalog is designed to help you select the right product or system for your construction applications. It is divided into seven major sections, with each one featuring a detailed building cutaway showcasing the products included in that section:

- Deflection Clips and Connections
- Rigid Connections
- Floor Framing Clips, Stiffeners, Supports and Hangers
- Bridging, Bracing and Backing Systems
- Roof and Truss Connections
- Specialty Clips and Fasteners and Drywall Finishing Products

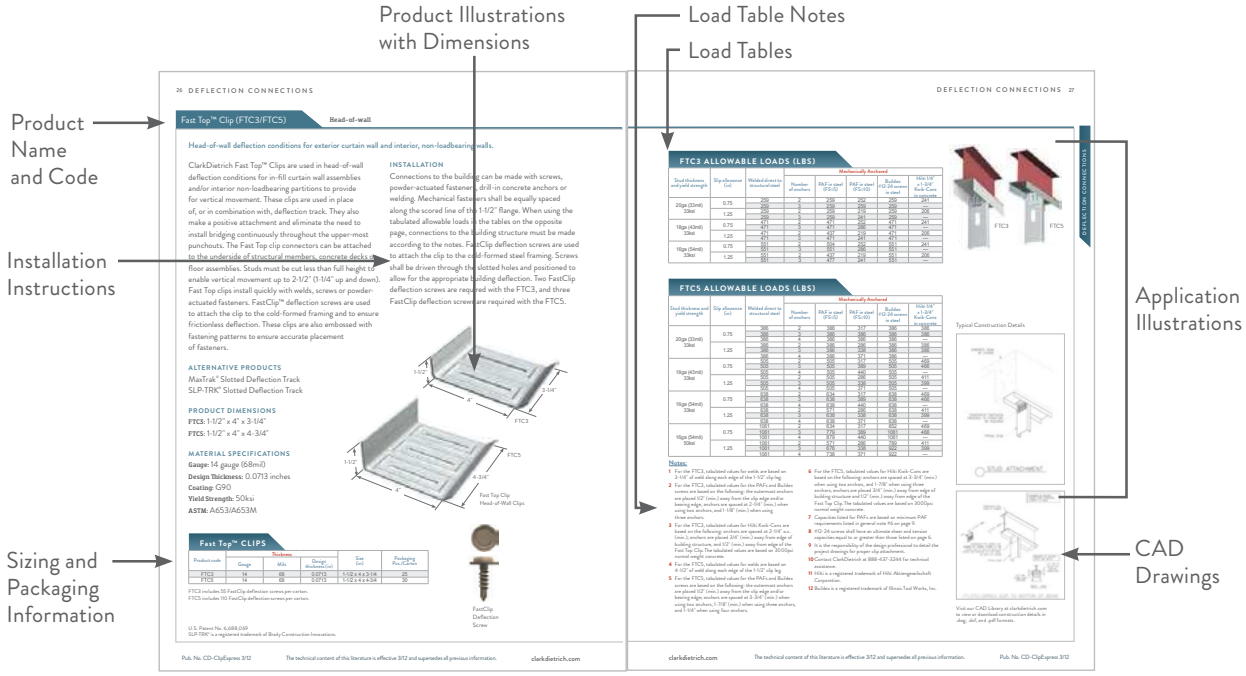
Example: Detailed building cutaway.

COMPREHENSIVE INDEX

At the back of the catalog, you'll find a quick reference index to our complete product offering. This index includes common names and product names, as well as common acronyms, to help you quickly find exactly what you're looking for.

PRODUCT PAGES

Each product page includes: an extensive product overview, features and benefits, detailed fastening instructions and patterns, in addition to the information shown below.



NOT ALL LOAD TABLES ARE CREATED EQUAL

It is critical that the allowable load tables for clips, connectors and fasteners are interpreted correctly—especially when comparing clip performance for a "ClarkDietrich or equal" specification. The allowable load for a clip assembly is governed by the capacity of the clip, plus the method of attachment to the structure. The ClarkDietrich tables include the attachment to the structure and not simply the clip capacity alone. When attaching a clip to the structure, the overall capacity can often be lower than the published value for the clip alone. Load tables that ignore the attachment to the structure essentially *imply that the clip or connector must be welded* to achieve the stated values. More often than not, clips and connectors will not be welded, based on installation quality and efficiency.

That's why ClarkDietrich publishes values for the most common attachment methods—so the designer or engineer can have confidence that all load requirements have been satisfied. For example, the tabulated values ClarkDietrich provides for the FastClip™ includes data for commonly used PAFs and Buildex* screws.

*Buildex is a registered trademark of Illinois Tool Works, Inc.

Example: ClarkDietrich allowable load table.

Anchor type	Stud thickness and yield strength	No. anchors to structure	Allowable load (lbs)
Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16" Steel	20ga (33mil) 33ksi	2	587
		3	587
		4	587
	18ga (43mil) 33ksi	2	852
		3	852
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852
PAF to 3/16" Steel*	20ga (33mil) 33ksi	2	511
		3	587
		4	587
	18ga (43mil) 33ksi	2	511
		3	767
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852

Product Information

PRODUCT LABELING

The majority of the connectors listed in this catalog are identified using a very simple alphanumeric product code system. Each clip, connector or support is clearly embossed with an identifiable code so the installer can easily identify and use the proper connection hardware. For the engineer or architect, the embossed markings provide a very easy way to field verify that the correct connector or hanger is used.

PACKAGING

The majority of clips are packaged in distinct, easy-to-spot, blue buckets. Each bucket is clearly labeled with the product code, gauge, size, length, dimensions, piece counts, and any special markings as requested. Based on order quantity, buckets will be packed in skids for easy handling. Each skid will be clearly identified with master skid labels that display the same information as the buckets.

CLIP EXPRESS® Available for overnight delivery
Call 866-638-1908

PROTECTIVE COATINGS

Coating designations for the clip and connector products in this catalog are displayed in the material specification section for each product. Special coatings are available on request. For more information, please contact your sales representative.

STEEL THICKNESS

The steel thickness of a connector, clip, support or hanger is referenced in terms of gauge or mils. The mil thickness measures the uncoated base metal material, and is a key contributor to the strength of the product.

Note: All products comply with ASTM standards and federal specifications as shown in the Code Approvals and Performance Standards in the back of this catalog. Minimum thickness is 95% of the design thickness, per AISI code. One mil is equivalent to 1/1000 (0.001) of an inch. So, a 20 gauge stud measuring the minimum uncoated base metal at 0.030 inches is 30 mils thick.

STEEL THICKNESS

		Thickness	
Gauge	Mils	Design thickness	Minimum thickness
25	18	0.0188"	0.0179"
20 DW	30	0.0312"	0.0296"
20 STR	33	0.0346"	0.0329"
18	43	0.0451"	0.0428"
16	54	0.0566"	0.0538"
14	68	0.0713"	0.0677"
12	97	0.1017"	0.0966"

YIELD STRENGTH (FY/PSI OR KSI)

The majority of clips, connectors, supports and framing hardware are manufactured from mill-certified, ASTM A1003 Structural Grade 50 Type H steel. KSI = kips/square inch = 1,000 lbs

METRIC SPECIFICATIONS

At your request, ClarkDietrich will provide "soft" metric conversions on its products and systems to help specifiers match metric design sizes. In addition, some products are available with hard metric dimensions from selected manufacturing facilities.

Support and Services

CLARKDIETRICH ENGINEERING SERVICES

Smarter engineering and technical expertise. It's support that extends beyond the structure itself.

From the initial design phase to jobsite installation, we are all about providing inventive, yet practical and hands-on know-how to help you think outside the box—or to help you just get it done.

ClarkDietrich Engineering Services is a full-service consulting firm that believes strongly in value engineering and customer input. Our engineering fees and lead times are competitive, and our customer service exceeds the industry standard with consistent point-of-contact through our regional project managers.

We offer Building Information Modeling (BIM) services that include specialty engineering collaborative design. We support the BIM movement by offering add-on tools that allow our products, and the rich data attached to them, to quickly be imported into digital designs. Our team is also comprised of LEED®-certified professionals to consult on sustainable building design.

- Electronically sealed shop drawings and calculations
- Preliminary sizing and pre-bid engineering pricing
- Reference plan on large projects
- Detailed wall sections, full elevation opening design and C-stud truss design

Our technical services team provides immediate response to questions ranging from general installation to detailed specification requirements, and can deliver one-day turnaround on technical sizing. We are experts on industry standards such as AISI, ASTM and SFIA. Our team also supports our online product submittal system, SubmittalPro,® and our design/engineering software is available as a free download from www.clarkdietrich.com.

- Product support and typical member sizing
- Framing detail recommendations
- Compliance and industry standards, such as AISI, ASTM and SFIA
- Engineering software and product submittal support
- LEED requirements support

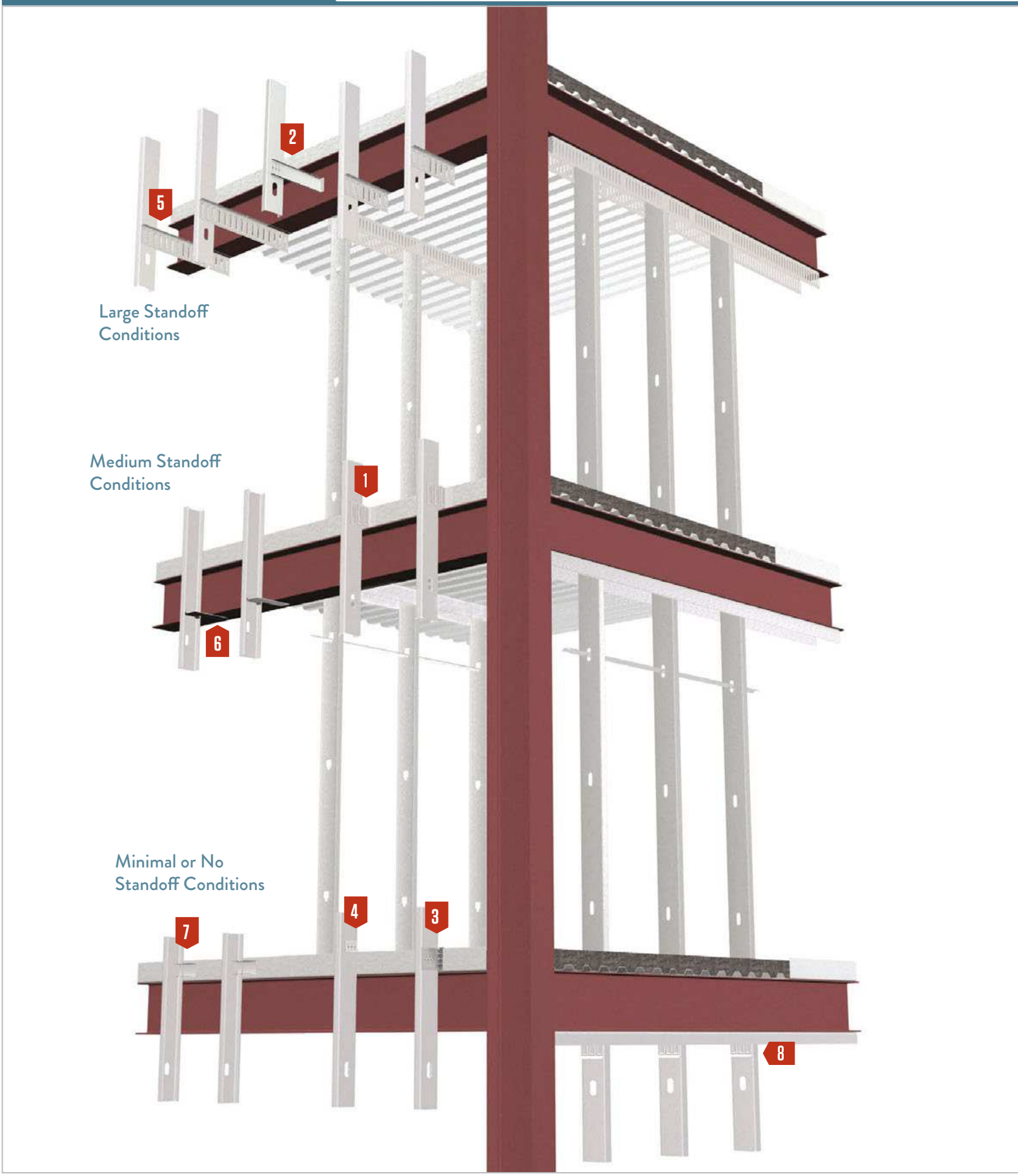
ClarkDietrich Engineering Services

Toll-Free Phone: 877.832.3206
Toll-Free Fax: 877.832.3208
Technical Services: 888.437.3244
Email: engineering@clarkdietrich.com

CENTRAL Crown Point, IN
NORTHEAST Bristol, CT
SOUTHEAST McDonough, GA
SOUTHEAST Roswell, GA
WEST Carlsbad, CA

The technical content of this literature is effective 4/9/12 and supersedes all previous information. Pub. No. CD-ClipExpress 4/12

Product Detail



1 **FastClip™ Slide Clip**
pages 16-17

2 **Extended FastClip™ Slide Clip**
pages 18-19

3 **FastHook FastClip™**
page 20

4 **Flat Tail Slide Clip™**
page 21

5 **Fast Strut™**
pages 22-23

6 **QuickClip™**
page 24

7 **Slide Clip™**
page 25

8 **Fast Top™ Clip**
pages 26-27

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

FastClip™ Slide Clip (FCSC)

Curtain Wall/Bypass

Vertical building movement up to 3".

ClarkDietrich FCSC deflection clips are used to attach exterior curtain wall studs to the building structure and provide for vertical building movement independent of the cold-formed steel framing. A ClarkDietrich FastClip™ deflection clip installs quickly with screws or powder-actuated fasteners, and provides adjustable standoff to ensure a plumb wall plane. FastClip deflection screws are provided with each clip to ensure friction-free sliding. Each clip is also embossed with fastening patterns to ensure accurate placement of fasteners.

ALTERNATIVE PRODUCTS

Fast Strut™
QuickClip™
Slide Clip™

PRODUCT DIMENSIONS

3-1/2" FastClip: 1-1/2" x 3-1/2" x 4-1/2"
5-1/2" FastClip: 1-1/2" x 5-1/2" x 4-1/2"

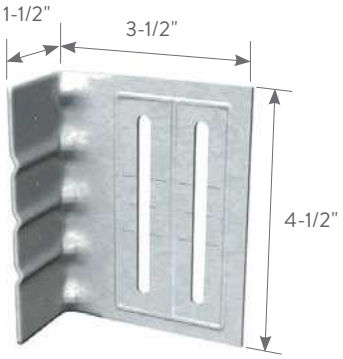
MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

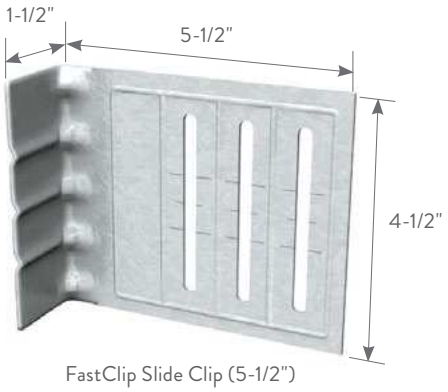
INSTALLATION

Connections to the building can be made with screws, powder-actuated fasteners or drill-in concrete anchors. Mechanical fasteners shall be located on the embossed marks given on the scored line of the 1-1/2" flange. Two or three FastClip deflection screws (based upon clip size) are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.

FastClip Deflection Screw



FastClip Slide Clip (3-1/2")



FastClip Slide Clip (5-1/2")

FastClip™ SLIDE CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
FCSC	14	68	0.0713	1-1/2 x 3-1/2 x 4-1/2	25
FCSC	14	68	0.0713	1-1/2 x 5-1/2 x 4-1/2	25

3-1/2" FCSC includes 55 FastClip deflection screws per carton.
5-1/2" FCSC includes 80 FastClip deflection screws per carton.

U.S. Patent No. 6,688,069

Location Options with (2) Anchors

Location Options with (3) Anchors

(4) Anchors

Location Options with (2) Anchors

Location Options with (3) Anchors

(4) Anchors

3-1/2" FastClip™ ALLOWABLE LOADS (LBS)

Anchor type	Stud thickness and yield strength	No. anchors to structure	Allowable load (lbs)
Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16" Steel	20ga (33mil) 33ksi	2	587
		3	587
		4	587
	18ga (43mil) 33ksi	2	852
		3	852
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852
PAF to 3/16" Steel*	20ga (33mil) 33ksi	2	511
		3	587
		4	587
	18ga (43mil) 33ksi	2	511
		3	767
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852

5-1/2" FastClip™ ALLOWABLE LOADS (LBS)

Anchor type	Stud thickness and yield strength	No. anchors to structure	Allowable load (lbs)
Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16" Steel	20ga (33mil) 33ksi	2	689
		3	689
		4	689
	18ga (43mil) 33ksi	2	852
		3	852
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852
PAF to 3/16" Steel*	20ga (33mil) 33ksi	2	510
		3	689
		4	689
	18ga (43mil) 33ksi	2	510
		3	765
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852

*See general note #6 on page 9 for the definition of PAF, minimum requirements and other additional information.

Notes:

1 The 1/3 stress increase for wind shall not be used.

2 Attach building anchors to the structure according to the manufacturer's instructions. Anchors shall be installed through the embossments on the scored line of the clip as shown on the drawings above. In no case shall anchors be installed more than 3/4" from the bend on the short leg of the clip. In cases of discrepancy between this information and the design engineer's details, the design engineer's details shall be followed.

3 It is the responsibility of the design professional to detail the project drawings for proper clip installation.

4 For connections to concrete, or other technical assistance, contact ClarkDietrich at 888-437-3244.

5 Buildex is a registered trademark of Illinois Tool Works, Inc.

Extended FastClip™ Slide Clip (FCEC)

Curtain Wall/Bypass

Vertical building movement up to 3", and commonly used for large standoff conditions.

ClarkDietrich FCEC deflection clips are used to attach exterior curtain wall studs to the building structure and provide for vertical building movement independent of the cold-formed steel framing. The clips are available in standard lengths of 6," 8," 10" and 12" and are ideal for medium to larger standoff conditions. Extended FastClip™ deflection clips install quickly with screws, welds or powder-actuated fasteners, and provide adjustable standoff to ensure a plumb wall plane. FastClip deflection screws are provided with each clip to ensure friction-free sliding.

ALTERNATIVE PRODUCTS

Fast Strut™

PRODUCT DIMENSIONS

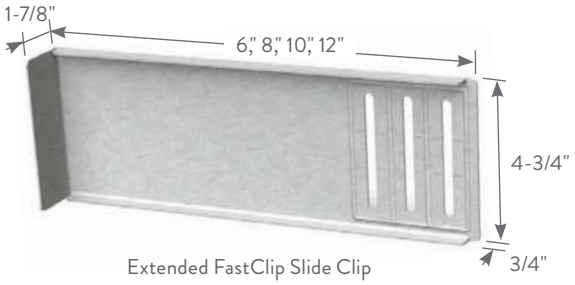
6" Extended FastClip: 1-7/8" x 6" x 4-3/4"
8" Extended FastClip: 1-7/8" x 8" x 4-3/4"
10" Extended FastClip: 1-7/8" x 10" x 4-3/4"
12" Extended FastClip: 1-7/8" x 12" x 4-3/4"

MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Connections to the building can be made with screws, welds, powder-actuated fasteners or drill-in concrete anchors. Mechanical fasteners shall be located on the embossed marks given on the scored line of the 1-7/8" flange. Three FastClip deflection screws are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.



Extended FastClip Slide Clip

EXTENDED FastClip™ SLIDE CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
FCEC	14	68	0.0713	1-7/8 x 6 x 4-3/4	25
FCEC	14	68	0.0713	1-7/8 x 8 x 4-3/4	25
FCEC	14	68	0.0713	1-7/8 x 10 x 4-3/4	25
FCEC	14	68	0.0713	1-7/8 x 12 x 4-3/4	25

Includes 80 FastClip deflection screws per bucket.

U.S. Patent No. 6,688,069

EXTENDED FastClip™ ALLOWABLE LOADS (LBS)

Anchor type	Stud thickness and yield strength	No. anchors to structure	Allowable load (lbs)
Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16" Steel	20ga (33mil) 33ksi	2	689
		3	689
		4	689
	18ga (43mil) 33ksi	2	852
		3	852
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852
PAF to 3/16" Steel*	20ga (33mil) 33ksi	2	689
		3	689
		4	689
	18ga (43mil) 33ksi	2	510
		3	765
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852

*See general note #6 on page 9 for the definition of PAF, minimum requirements and other additional information.

Notes:

1 The 1/3 stress increase for wind shall not be used.

2 Attach building anchors to the structure according to the manufacturer's instructions. Anchors shall be installed through the embossments on the scored line of the clip as shown to the right. In no case shall anchors be installed more than 3/4" from the bend on the short leg of the clip. In cases of discrepancy between this information and the design engineer's details, the design engineer's details shall be followed.

3 It is the responsibility of the design professional to detail the project drawings for proper clip installation.

4 For connections to concrete, or other technical assistance, contact ClarkDietrich at 888-437-3244.

5 Buildex is a registered trademark of Illinois Tool Works, Inc.

Location Options with (2) Anchors

Location Options with (3) Anchors

(4) Anchors

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

FastHook FastClip™ (FHCL, FHCR)

Curtain Wall/Bypass

Enables faster installation by eliminating the need for temporary clamps.

Revolutionary new FastHook technology allows the installer to *temporarily* hang clip in place on pour stop or perimeter angle, freeing both hands for the installation of permanent fasteners. ClarkDietrich FastHook deflection clips are used to attach exterior curtain wall studs to the building structure and provide for up to 3" of vertical building movement independent of the cold-formed steel framing. Permits up to 2" of standoff from the primary frame. Available in right-hand and left-hand (shown) versions, please specify when ordering.

ALTERNATIVE PRODUCTS

Fast Strut™
Slide Clip™

PRODUCT DIMENSIONS

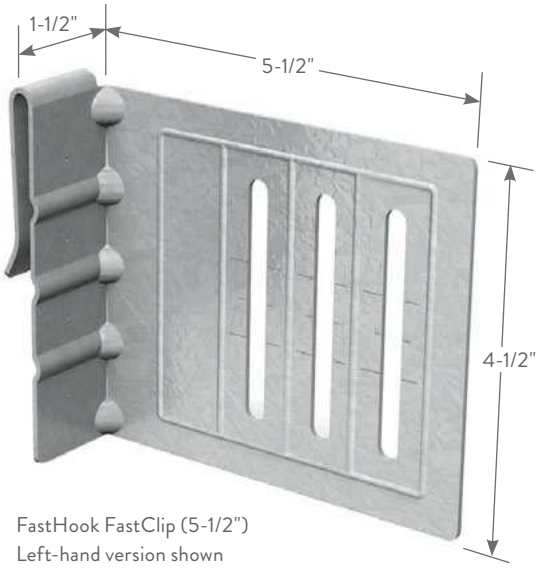
1-1/2" x 5-1/2" x 4-1/2"

MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

The FastHook FastClip™ is placed on the structural angle prior to the slab being poured. The permanent connection to the building must be made with screws, welds, powder-actuated fasteners or drill-in concrete anchors, per design. Mechanical fasteners shall be located on the embossed marks given on the scored line of the 1-1/2" flange. Three FastClip deflection screws (based upon clip size) are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.



FastHook FastClip (5-1/2")
Left-hand version shown

FastClip
Deflection Screw

FastHook FastClip™ SLIDE CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
FHCL	14	68	0.0713	1-1/2 x 5-1/2 x 4-1/2	25
FHCR	14	68	0.0713	1-1/2 x 5-1/2 x 4-1/2	25

FHCL = FastHook FastClip, Left
FHCR = FastHook FastClip, Right
Includes 80 FastClip deflection screws per bucket.

Flat Tail Slide Clip™ (FTSC)

Curtain Wall/Bypass

Allows for vertical building movement and provides up to 3" of horizontal standoff.

ClarkDietrich's Flat Tail Slide Clip™ is used to attach exterior curtain wall studs to the building structure and provide for 2-1/4" vertical building movement independent of the cold-formed steel framing. A Flat Tail Slide Clip provides variable standoff and eliminates the need for shims or additional framing components. The clip easily fastens to the floor/ceiling beam and is secured to the stud with ClarkDietrich proprietary deflection screws. The clip restricts lateral movement, but enables the curtain wall system to move vertically. One clip accommodates all stud flanges.

ALTERNATIVE PRODUCTS

Fast Strut™
Slide Clip™
FastClip™ Slide Clip

PRODUCT DIMENSIONS

Length: 11"
Width: 3"
Height: 3-1/2"

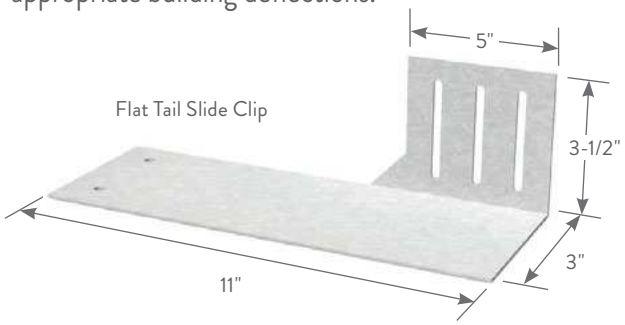
FastClip
Deflection Screw

MATERIAL SPECIFICATIONS

Gauge: 10 gauge (118mil)
Design Thickness: 0.124 inches
Coatings: G90
Yield Strength: 50ksi
ASTM: A653/ A653M

INSTALLATION

Connection to the building can be made with screws, powder-actuated fasteners, Buildex Tapcons or by welding. Mechanical fasteners shall be located in the pilot holes. Three FastClip deflection screws are used to attach the clip to the cold-formed steel framing, providing frictionless slip connectors. Screws shall be driven through the slotted holes and positioned to allow for appropriate building deflections.



Flat Tail Slide Clip™ ALLOWABLE LOADS (LBS)

Clip type	Anchor type	Clip		Stud Reference		Allowable Load w/3 Screws (lbs)	
		Gauge	Mils	Gauge	Mils	Concentric	Eccentric
FTSC	Weld (Fillet) (2) Welds 1-5/8" E60xx	10	118	18	43	505	323
				16	54	616	393
				14	68	713	456
				12	97	759	485
	(4) Buildex #12-24 Self-Drilling Screws to 3/16" Steel	10	118	18	43	440	370
				16	54	440	370
				14	68	440	370
				12	97	440	370
	(4) Hilti 0.157" X-U Powder-Actuated Fasteners to 3/16" Steel	10	118	18	43	547	447
				16	54	547	447
				14	68	547	447
				12	97	547	447
	(2) Kwik-Cons II (3000psi normal weight concrete)	10	118	18	43	253	241
				16	54	253	241
				14	68	253	241
				12	97	253	241

Notes:

1. The Flat Tail Slide Clip is not recommended for use in seismically active areas.
2. Weld capacities based on (1) 1.625" long welds to the structural steel on each side of the Flat Tail Slide Clip. Use E60XX electrodes.
3. Allowable loads have not been increased for wind, seismic, or other factors.
4. Capacities are based on the use of three ClarkDietrich proprietary screws between clip and stud.
5. The length of the Flat Tail Slide Clip is 11."
6. Concentric configuration indicates proprietary screws centered in the slots of FTSC leg.
7. Eccentric configuration indicated proprietary screws placed at 1-1/8" from the center of the slots.
8. Buildex and Tapcon are registered trademarks of Illinois Tool Works, Inc.
9. Hilti X-U PAFs shown in table may not be substituted without prior approval from ClarkDietrich Engineering Services.
10. Hilti is a registered trademark of the Hilti Aktiengeseilschaft Corporation.

Flat Tail Slide Clip™

Product code	Thickness			Stud width (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
FTSC	10	118	0.1242	3-5/8–8	25

Includes 80 FastClip deflection screws per bucket.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Fast Strut™ (FS12, FS15, FS18, FS20, FS22, FS24)

Curtain Wall/Bypass

Commonly used for large standoff conditions.

The ClarkDietrich Fast Strut™ curtain wall connector employs the FastClip™ technology for curtain wall stud attachment and is commonly used when large standoff conditions exist. Fast Strut products are available in standard lengths of 12-1/4" and 15-1/4" and custom lengths of 18", 20", 22" and 24" long to allow framing attachment well beyond the perimeter of the structural steel—or when the spandrel beams are set back from the edge of the structure. Fast Struts are attached to the underside of structural members with screws, welds or powder-actuated fasteners. Studs are plumbed and secured with propriety screws for friction-free deflection. Each clip is also embossed with fastening patterns to ensure accurate placement of fasteners.

ALTERNATIVE PRODUCTS

FastClip™ Slide Clip

PRODUCT DIMENSIONS

FS12: 4" x 1-1/2" x 12-1/4"
FS15: 4" x 1-1/2" x 15-1/4"
Extended Lengths: 4" x 1-1/2" x 18", 20", 22" and 24"

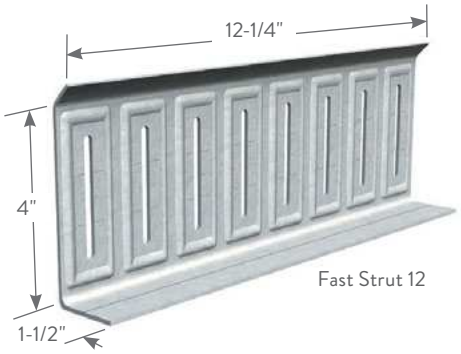
MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

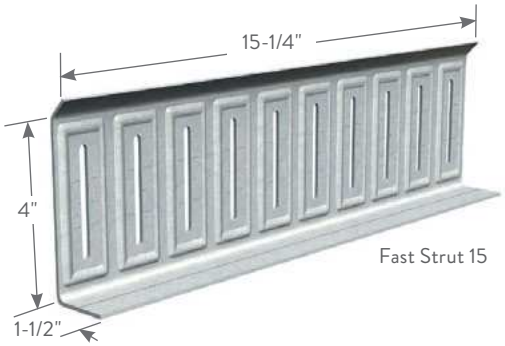
INSTALLATION

Connections to the building can be made with screws, powder-actuated fasteners, drill-in concrete anchors or welding. Mechanical fasteners shall be equally spaced along the scored line of the 1-1/2" flange. The Fast Strut must engage the building structure a minimum of 4". When using the tabulated allowable loads indicated in the table on the opposite page, connections to the building structure must be made according to the notes. Three FastClip deflection screws are used to attach the Fast Strut to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.

FastClip Deflection Screw



Fast Strut 12



Fast Strut 15

Fast Strut™ 12, 15, 18, 20, 22 AND 24

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
FS12	14	68	0.0713	4 x 1-1/2 x 12-1/4	10
FS15	14	68	0.0713	4 x 1-1/2 x 15-1/4	10
Custom lengths	14	68	0.0713	per customer specs	10

Includes 55 FastClip deflection screws per carton.

U.S. Patent No. 6,688,069

FS12, FS15 AND CUSTOM LENGTHS ALLOWABLE LOADS (LBS)

Stud thickness and yield strength	Slip allowance (in)	Welded direct to structural steel	Mechanically Anchored				
			Number of anchors	PAF in steel (FS=5)	PAF in steel (FS=10)	Buildex #12-24 screws in steel	Hilti 1/4"x1-3/4" Kwik-Cons in concrete
20ga (33mil) 33ksi	0.75	546	2	546	290	546	269
		546	3	546	343	546	—
	1.25	546	2	513	257	546	232
		546	3	546	294	546	—
18ga (43mil) 33ksi	0.75	1522	2	579	290	789	269
		1522	3	686	343	963	—
	1.25	1522	2	513	257	720	232
		1522	3	587	294	760	—
16ga (54mil) 33ksi	0.75	1612	2	579	290	789	269
		1612	3	686	343	963	—
	1.25	1612	2	513	257	720	232
		1612	3	587	294	760	—
16ga (54mil) 50ksi	0.75	1705	2	579	290	789	269
		1705	3	686	343	963	—
	1.25	1705	2	513	257	720	232
		1705	3	587	294	760	—
14ga (68mil) 33ksi	0.75	1792	2	579	290	789	269
		1792	3	686	343	963	—
	1.25	1792	2	513	257	720	232
		1792	3	587	294	760	—
14ga (68mil) 50ksi	0.75	1978	2	579	290	789	269
		1978	3	686	343	963	—
	1.25	1978	2	513	257	720	232
		1978	3	587	294	760	—
12ga (97mil) 33ksi	0.75	2481	2	579	290	789	269
		2481	3	686	343	963	—
	1.25	2481	2	513	257	720	232
		2481	3	587	294	760	—
12ga (97mil) 50ksi	0.75	2997	2	579	290	789	269
		2997	3	686	343	963	—
	1.25	2997	2	513	257	720	232
		2997	3	587	294	760	—

Notes:

1 Except when welding, tabulated values require a minimum of 4" of structure engagement. For other conditions or technical assistance, contact ClarkDietrich at 888-437-3244.

2 The tabulated values for welds are based on the following weld lengths: use 4-1/2" of weld along each edge of the 1-1/2" FastStrut leg for 20, and 18 gauge, use 5-1/2" along each edge for 16 and 14 gauge, use 6-1/2" along each edge for 12 gauge. Use E70XX (min.) electrodes. (Note that the welded values may require more than 4" of structure engagement.)

3 Tabulated values for PAFs and Buildex screws are based on the following: fasteners are spaced at 3" o.c. (min.) when using two anchors, and 1-1/2" o.c. (min.) when using three anchors; anchors are placed 1/2" (min.) away from the edge of the building structure, and 1/2" (min.) away from edge of the Fast Strut.

4 Tabulated values for Hilti Kwik-Cons are based on the following: anchors are spaced at 2-3/4" o.c. (min.), anchors are placed 3/4" (min.) away from edge of building structure and 1/2" (min.) away from edge of Fast Strut.The tabulated values are based on 3000psi normal weight concrete.

5 For 3/4" deflection, center the propriety screws along the top most hash mark. For 1-1/4" deflection, center the screws along the center hash mark.

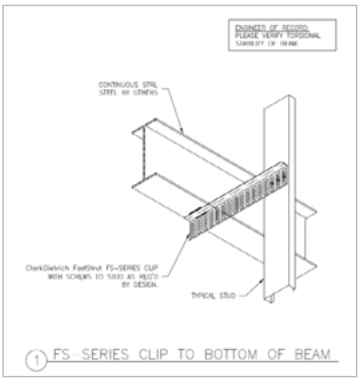
6 Capacities listed for PAFs are based on minimum PAF requirements listed in General Note #6 on page 9.

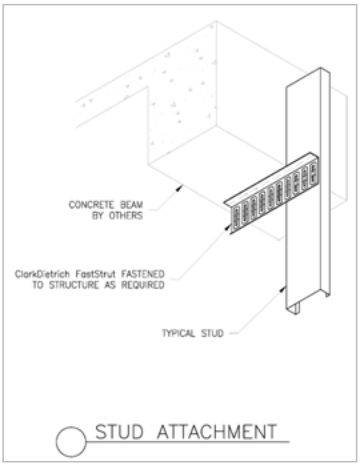
7 It is the responsibility of the design professional to detail the project drawings for proper clip attachment.

8 Buildex is a registered trademark of Illinois Tool Works, Inc.

9 Hilti is a registered trademark of Hilti Aktiengeseilschaft Corporation.

Typical Construction Details





Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

QuickClip™ (QC-Series™) — Curtain Wall/Bypass

Vertical building movement, and up to 3" of horizontal standoff.

ClarkDietrich QuickClip™ vertical slide clips are used to attach exterior curtain wall studs to the building structure and provide for vertical building movement independent of the cold-formed steel framing. A QuickClip slide clip provides variable standoff and eliminates the need for shims or additional framing components. The QuickClip slide clip simply rotates into place and fastens to the floor/ceiling beam. The clips restrict lateral movement, but enable the structure to move vertically.

ALTERNATIVE PRODUCTS

Fast Strut,™ Slide Clip,™ FastClip™ Slide Clip, Flat Tail Slide Clip™

PRODUCT DIMENSIONS

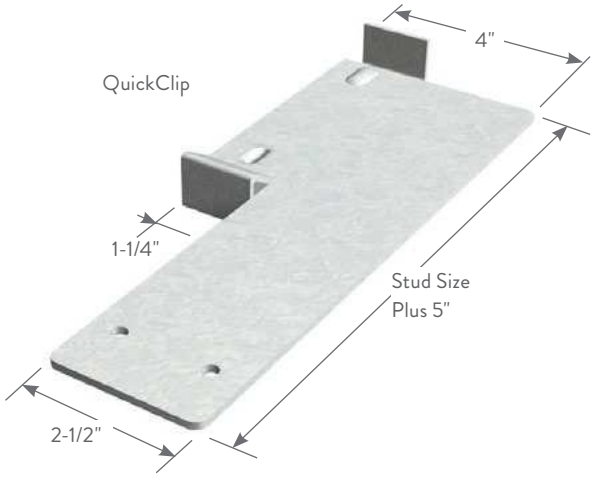
Length: Stud size plus 5"
Width: 2-1/2" tail, 4" overall
Flange Support Tabs: 1-1/4" x 15/16"

MATERIAL SPECIFICATIONS

Gauge: 10 gauge (118mil)
Design Thickness: 0.124 inches
Coating: CP60 per ASTM C955
ASTM: A653/A653M, C955

INSTALLATION

Insert QuickClip into open side of C-stud at a diagonal and slide to horizontal support. Rotate clip to horizontal position, engaging tabs. Plumb/align stud and fasten clip to horizontal support as determined by others.



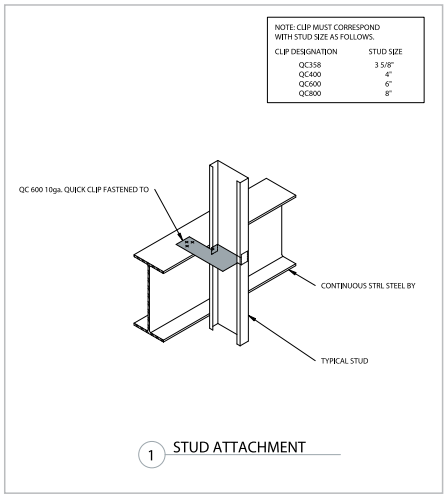
QuickClip™

Product code	Thickness			Stud width (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
QC3	10	118	0.1242	3-5/8	50
QC4	10	118	0.1242	4	50
QC6	10	118	0.1242	6	50
QC8	10	118	0.1242	8	40

QuickClip™ (10 GA) ALLOWABLE LOADS

Stud type/Flange width	Stud gauge	Min. thickness (in)	Yield strength/Fy (ksi)	Allowable load (lbs)
162 (3-5/8")	20	0.0329	33	277
	18	0.0428	33	469
	16	0.0538	33	476
			50	722
	14	0.0677	33	754
			50	837
	12	0.0966	33	837
			50	837
200 (2")	20	0.0329	33	84
	18	0.0428	33	151
	16	0.0538	33	166
			50	252
	14	0.0677	33	293
			50	444
	12	0.0966	33	702
			50	837

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

Notes:

1 Tabulated values do not include the 1/3 stress increase.
2 The QuickClip is not recommended for use in areas controlled by seismic.
3 Tabulated values are based on 1" of weld to the structural steel on each side of the QuickClip. Use E70XX electrodes.
4 For technical service, call ClarkDietrich at 888-437-3244.

U.S. Patent No. 5,836,133 of B&D Industries, Inc.

Slide Clip™ (SD)

Curtain Wall/Bypass

Edge-of-slab deflection clip for curtain wall framing.

ClarkDietrich SD slide clips are used to attach exterior curtain wall studs to the building structure and provide for vertical building movement independent of the cold-formed steel framing. SD slide clips are used in bypass framing situations and are normally welded or otherwise fastened to the vertical leg of a structural angle at the floor or roof edge.

ALTERNATIVE PRODUCTS

FastClip™ Slide Clip, Fast Strut,™ QuickClip™

PRODUCT DIMENSIONS

2-3/8" x 5"

MATERIAL SPECIFICATIONS

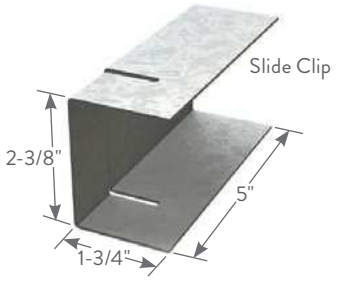
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Position Slide Clip™ slot over C-stud flange and return. If a standoff exists, a secondary member must be installed. Secure the Slide Clip to the primary building frame with screws, welds or powder-actuated fasteners.



Slide Clip™

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
SD	14	68	0.0713	2-3/8 x 5	50
SD	12	97	0.1017	2-3/8 x 5	50

Slide Clip™ (14GA, 50KSI) ALLOWABLE LOADS

Stud type/flange width	Stud gauge	Min. thickness (in)	Stud Fy (ksi)	Allowable Welded Clip Capacity (lb)		Allowable Clip Capacity Using Mechanical Fasteners (lb)								Buildex 12-24, T5 TEK screws
						PAF to Steel								
						Using a Safety Factor of 5				Using a Safety Factor of 10				
						Steel Thickness (in)								
				Fully welded	Partially welded	3/16"	1/4"	3/8"	1/2"	3/16"	1/4"	3/8"	1/2"	
137 (1-3/8")	20	0.0329	33	595	298	216	216	216	216	135	191	216	216	271
	18	0.0428	33	595	298	216	216	216	216	135	191	216	216	271
	16	0.0538	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
	14	0.0677	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
	12	0.0966	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
162 (1-5/8")	20	0.0329	33	380	298	216	216	216	216	135	191	216	216	271
	18	0.0428	33	402	298	216	216	216	216	135	191	216	216	271
	16	0.0538	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
	14	0.0677	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
	12	0.0966	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
200 (2")	20	0.0329	33	173	173	173	173	173	173	135	173	173	173	173
	18	0.0428	33	183	183	183	183	183	183	135	183	183	183	183
	16	0.0538	33	289	289	216	216	216	216	135	191	216	216	271
			50	437	298	216	216	216	216	135	191	216	216	271
	14	0.0677	33	457	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
	12	0.0966	33	595	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
250 (2-1/2")	20	0.0329	33	100	100	100	100	100	100	100	100	100	100	100
	18	0.0428	33	106	106	106	106	106	106	106	106	106	106	106
	16	0.0538	33	167	167	167	167	167	167	135	167	167	167	167
			50	253	253	216	216	216	216	135	191	216	216	253
	14	0.0677	33	265	265	216	216	216	216	135	191	216	216	265
			50	401	298	216	216	216	216	135	191	216	216	271
	12	0.0966	33	539	298	216	216	216	216	135	191	216	216	271
			50	595	298	216	216	216	216	135	191	216	216	271
300 (3")	20	0.0329	33	70	70	70	70	70	70	70	70	70	70	70
	18	0.0428	33	74	74	74	74	74	74	74	74	74	74	74
	16	0.0538	33	118	118	118	118	118	118	118	118	118	118	118
			50	178	178	178	178	178	178	135	178	178	178	178
	14	0.0677	33	186	186	186	186	186	186	135	186	186	186	186
			50	282	282	216	216	216	216	135	191	216	216	271
	12	0.0966	33	379	298	216	216	216	216	135	191	216	216	271
			50	574	298	216	216	216	216	135	191	216	216	271

12 gauge Slide Clip data available on request.

Notes:

1 A fully welded clip is welded across the top flange, bottom flange and side.

2 A partially welded clip is welded across the top and side only.

3 A 1/3 stress increase has not been used for the tabulated clip capacity for mechanical fasteners.

4 A mechanically fastened Slide Clip requires (3) fasteners total: (2) fasteners dimensionally placed horizontally 3/8" maximum from the slot and vertically equally spaced and (1) additional fastener placed horizontally 3/8" maximum from the edge of the Slide Clip and vertically centered on the clip.

5 Buildex is a registered trademark of Illinois Tool Works, Inc.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Fast Top™ Clip (FTC3/FTC5)

Head-of-wall

Head-of-wall deflection conditions for exterior curtain wall and interior, non-loadbearing walls.

ClarkDietrich Fast Top™ Clips are used in head-of-wall deflection conditions for in-fill curtain wall assemblies and/or interior non-loadbearing partitions to provide for vertical movement. These clips are used in place of, or in combination with, deflection track. They also make a positive attachment and eliminate the need to install bridging continuously throughout the upper-most punchouts. The Fast Top clip connectors can be attached to the underside of structural members, concrete decks or floor assemblies. Studs must be cut less than full height to enable vertical movement up to 2-1/2" (1-1/4" up and down). Fast Top clips install quickly with welds, screws or powder-actuated fasteners. FastClip™ deflection screws are used to attach the clip to the cold-formed framing and to ensure frictionless deflection. These clips are also embossed with fastening patterns to ensure accurate placement of fasteners.

ALTERNATIVE PRODUCTS

MaxTrak® Slotted Deflection Track
SLP-TRK® Slotted Deflection Track

PRODUCT DIMENSIONS

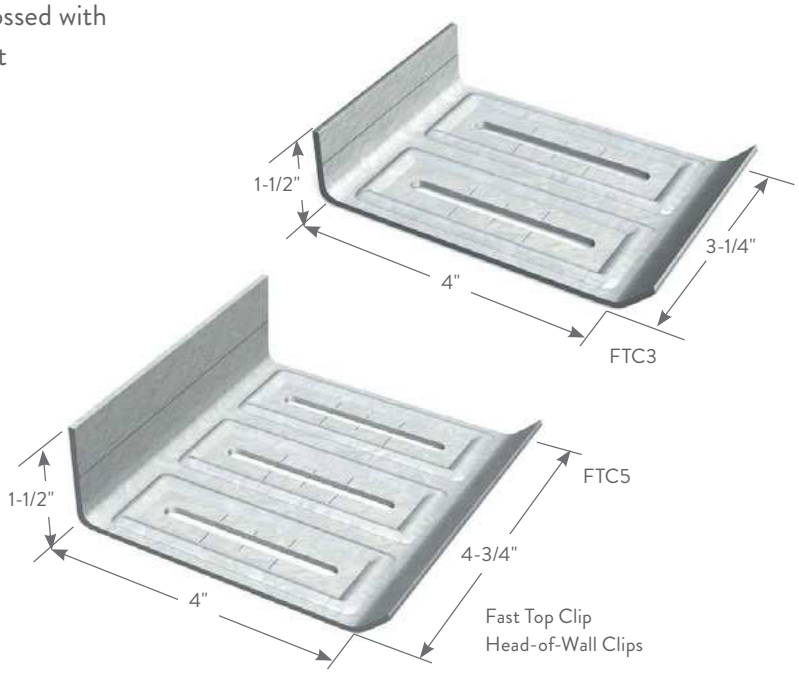
FTC3: 1-1/2" x 4" x 3-1/4"
FTC5: 1-1/2" x 4" x 4-3/4"

MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Connections to the building can be made with screws, powder-actuated fasteners, drill-in concrete anchors or welding. Mechanical fasteners shall be equally spaced along the scored line of the 1-1/2" flange. When using the tabulated allowable loads in the tables on the opposite page, connections to the building structure must be made according to the notes. FastClip deflection screws are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection. Two FastClip deflection screws are required with the FTC3, and three FastClip deflection screws are required with the FTC5.



Fast Top Clip
Head-of-Wall Clips

Fast Top™ CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
FTC3	14	68	0.0713	1-1/2 x 4 x 3-1/4	25
FTC5	14	68	0.0713	1-1/2 x 4 x 4-3/4	30

FTC3 includes 55 FastClip deflection screws per carton.
FTC5 includes 110 FastClip deflection screws per carton.

FastClip
Deflection
Screw

U.S. Patent No. 6,688,069
SLP-TRK® is a registered trademark of Brady Construction Innovations.

FTC3 ALLOWABLE LOADS (LBS)

Stud thickness and yield strength	Slip allowance (in)	Welded direct to structural steel	Mechanically Anchored				
			Number of anchors	PAF in steel (FS=5)	PAF in steel (FS=10)	Buildex #12-24 screws in steel	Hilti 1/4" x 1-3/4" Kwik-Cons in concrete
20ga (33mil) 33ksi	0.75	259	2	259	252	259	241
		259	3	259	259	259	—
	1.25	259	2	259	219	259	206
		259	3	259	241	259	—
18ga (43mil) 33ksi	0.75	471	2	471	252	471	241
		471	3	471	286	471	—
	1.25	471	2	437	219	471	206
		471	3	471	241	471	—
16ga (54mil) 33ksi	0.75	551	2	504	252	551	241
		551	3	551	286	551	—
	1.25	551	2	437	219	551	206
		551	3	477	241	551	—

FTC5 ALLOWABLE LOADS (LBS)

Stud thickness and yield strength	Slip allowance (in)	Welded direct to structural steel	Mechanically Anchored				
			Number of anchors	PAF in steel (FS=5)	PAF in steel (FS=10)	Buildex #12-24 screws in steel	Hilti 1/4" x 1-3/4" Kwik-Cons in concrete
20ga (33mil) 33ksi	0.75	386	2	386	317	386	386
		386	3	386	386	386	386
		386	4	386	386	386	—
	1.25	386	2	386	286	386	386
		386	3	386	338	386	386
		386	4	386	371	386	—
18ga (43mil) 33ksi	0.75	505	2	505	317	505	469
		505	3	505	389	505	466
		505	4	505	440	505	—
	1.25	505	2	505	286	505	411
		505	3	505	338	505	399
		505	4	505	371	505	—
16ga (54mil) 33ksi	0.75	638	2	634	317	638	469
		638	3	638	389	638	466
		638	4	638	440	638	—
	1.25	638	2	571	286	638	411
		638	3	638	338	638	399
		638	4	638	371	638	—
16ga (54mil) 50ksi	0.75	1061	2	634	317	852	469
		1061	3	779	389	1061	466
		1061	4	879	440	1061	—
	1.25	1061	2	571	286	789	411
		1061	3	676	338	922	399
		1061	4	738	371	922	—

Notes:

1 For the FTC3, tabulated values for welds are based on 3-1/4" of weld along each edge of the 1-1/2" clip leg.

2 For the FTC3, tabulated values for the PAFs and Buildex screws are based on the following: the outermost anchors are placed 1/2" (min.) away from the clip edge and/or bearing edge, anchors are spaced at 2-1/4" (min.) when using two anchors, and 1-1/8" (min.) when using three anchors.

3 For the FTC3, tabulated values for Hilti Kwik-Cons are based on the following: anchors are spaced at 2-1/4" o.c. (min.); anchors are placed 3/4" (min.) away from edge of building structure, and 1/2" (min.) away from edge of the Fast Top Clip. The tabulated values are based on 3000psi normal weight concrete.

4 For the FTC5, tabulated values for welds are based on 4-1/2" of weld along each edge of the 1-1/2" clip leg.

5 For the FTC5, tabulated values for the PAFs and Buildex screws are based on the following: the outermost anchors are placed 1/2" (min.) away from the clip edge and/or bearing edge; anchors are spaced at 3-3/4" (min.) when using two anchors, 1-7/8" (min.) when using three anchors, and 1-1/4" when using four anchors.

6 For the FTC5, tabulated values for Hilti Kwik-Cons are based on the following: anchors are spaced at 3-3/4" (min.) when using two anchors, and 1-7/8" when using three anchors; anchors are placed 3/4" (min.) away from edge of building structure and 1/2" (min.) away from edge of the Fast Top Clip. The tabulated values are based on 3000psi normal weight concrete.

7 Capacities listed for PAFs are based on minimum PAF requirements listed in general note #6 on page 9.

8 #12-24 screws shall have an ultimate shear and tension capacities equal to or greater than those listed on page 6.

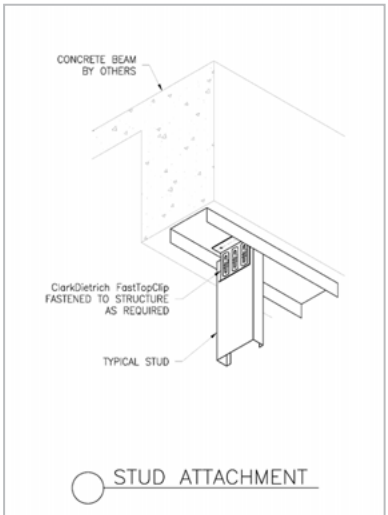
9 It is the responsibility of the design professional to detail the project drawings for proper clip attachment.

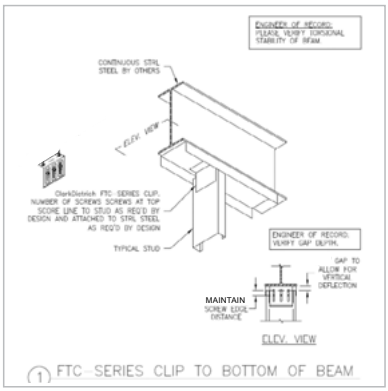
10 Contact ClarkDietrich at 888-437-3244 for technical assistance.

11 Hilti is a registered trademark of Hilti Aktiengeseilschaft Corporation.

12 Buildex is a registered trademark of Illinois Tool Works, Inc.

Typical Construction Details





Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

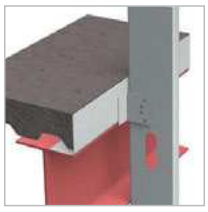
Product Detail

*For demonstration purposes only. Simpson® Holdowns should be installed where strapping and gusset connect.

1 **Uni-Clip™ End Clip and Extended Uni-Clip™**
pages 30-33

2 **SwiftClip™ L-Series™ Support Clip**
pages 34-35

3 **EasyClip™ E-Series™ Support Clip**
pages 36-37



4 **EasyClip™ S-Series™ Support Clip**
pages 38-39

5 **EasyClip™ U-Series™ Clip Angle**
pages 40-41

6 **EasyClip™ B-Series™ Clip Angle**
pages 42-43

7 **EasyClip™ X-Series™ Clip Angle**
pages 44-45

8 **EasyClip™ A-Series™ End Clip**
pages 46-47

9 **EasyClip™ D-Series™ Anchor Clip**
pages 48-49

10 **EasyClip™ T-Series™ Tall Anchor Clip**
pages 48-49

11 **Simpson® Strong-Tie® Holdown**
pages 50-51

12 **Simpson® Strong-Tie® Tension Tie**
pages 52-53

13 **Gusset Plates**
pages 54-57

14 **H-Series™ Universal Header Hanger**
pages 58-59

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

Uni-Clip™ End Clip (UCEC)

For numerous rigid framing connections and conditions, including two-axis loading, shear and tension.

ClarkDietrich's Uni-Clip™ end clip is a universal framing clip used to attach and support numerous rigid framing conditions. The Uni-Clip framing clip has a stiffened corner that provides superior design values. Embossed fastening patterns ensure easy, accurate placement of screws or powder-actuated fasteners. Designed to transfer large horizontal and vertical loads, this clip is ideal for most rigid connections, including shear, tension and two-axis loading.

ALTERNATIVE PRODUCTS

EasyClip™ D-Series™ Anchor Clip
EasyClip™ T-Series™ Tall Anchor Clip
EasyClip™ E-Series™ Support Clip

PRODUCT DIMENSIONS

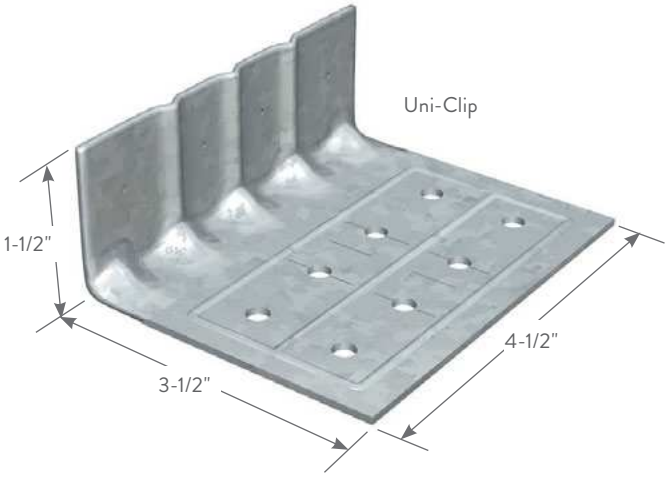
3-1/2" x 1-1/2" x 4-1/2"

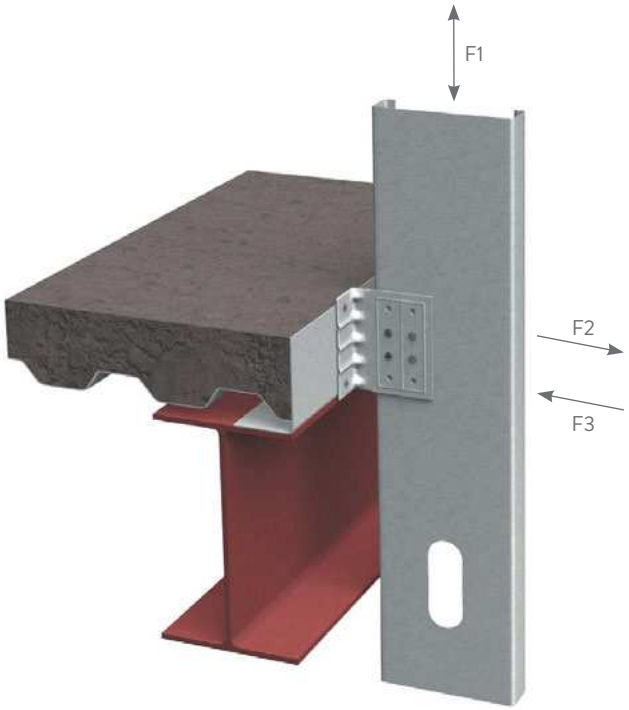
MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Uni-Clip end clips are attached to cold-formed steel framing members using #10 minimum self-drilling screws driven through the clip holes into the steel framing. Follow the required fastener and anchor placement patterns to achieve the allowable load. Connections to the primary building frame can be made with powder-actuated fasteners, screws or welds per design requirement.

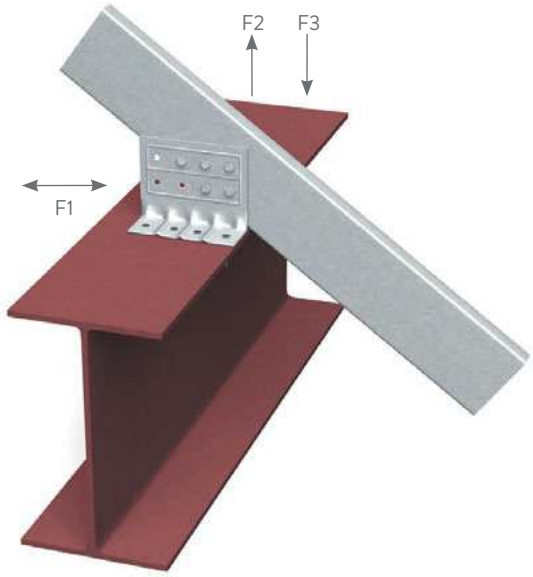




Uni-Clip™ END CLIP

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
UCEC	14	68	0.0713	3-1/2 x 1-1/2 x 4-1/2	25

U.S. Patent No. 6,688,069



Location Options with (4) Screws

Option A

Option B

Option C

Location Options with (8) Screws

Location Options with (2) Anchors

Uni-Clip™ ALLOWABLE LOADS (LBS)

Anchor type	Stud thickness and yield strength	No. anchors to structure	Number/Configuration of Screws to Stud Framing											
			8 Screws			4 Screws (Option A)			4 Screws (Option B)			4 Screws (Option C)		
			F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3
Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16" Steel	20ga (33mil) 33ksi	2	529	1121	1121	192	561	561	177	561	561	272	561	561
		3	529	1121	1121	192	561	561	177	561	561	272	561	561
		4	529	1121	1121	192	561	561	177	561	561	272	561	561
	18ga (43mil) 33ksi	2	784	1227	1664	285	832	832	263	832	832	404	832	832
		3	784	1664	1664	285	832	832	263	832	832	404	832	832
		4	784	1664	1664	285	832	832	263	832	832	404	832	832
	16ga (54mil) 33ksi	2	1105	1227	1889	402	920	1172	371	1172	1172	569	1172	1172
		3	1105	1841	1889	402	1172	1172	371	1172	1172	569	1172	1172
		4	1105	2345	1889	402	1172	1172	371	1172	1172	569	1172	1172
	16ga (54mil) 50ksi	2	1370	1227	1889	568	920	1417	523	1227	1209	804	1227	1655
		3	1560	1841	1889	568	1380	1417	523	1655	1209	804	1655	1655
		4	1560	2454	1889	568	1655	1417	523	1655	1209	804	1655	1655
PAF to 3/16" Steel*	20ga (33mil) 33ksi	2	529	511	1121	192	383	561	177	511	561	272	511	561
		3	529	767	1121	192	561	561	177	561	561	272	561	561
		4	529	1022	1121	192	561	561	177	561	561	272	561	561
	18ga (43mil) 33ksi	2	784	511	1664	285	383	832	263	511	832	404	511	832
		3	784	767	1664	285	575	832	263	767	832	404	767	832
		4	784	1022	1664	285	767	832	263	832	832	404	832	832
	16ga (54mil) 33ksi	2	1105	511	1889	402	383	1172	371	511	1172	569	511	1172
		3	1105	767	1889	402	575	1172	371	767	1172	569	767	1172
		4	1105	1022	1889	402	767	1172	371	1022	1172	569	1022	1172
	16ga (54mil) 50ksi	2	1117	511	1889	568	383	1417	523	511	1209	804	511	1655
		3	1560	767	1889	568	575	1417	523	767	1209	804	767	1655
		4	1560	1022	1889	568	767	1417	523	1022	1209	804	1022	1655

*See general note #6 on page 9 for the definition of PAF, minimum requirements and other additional information.

Location Options with (3) Anchors

Location Options with (3) Anchors

Location Options with (4) Anchors

Notes:

1 The 1/3 stress increase for wind shall not be used.

2 Attach the Uni-Clip to the stud framing using Buildex #10-16 (min.) self-drilling screws.

3 When using 2 anchors, use the outer-most marks on the short leg of the clips for anchor placement.

4 Attach building anchors to the structure according to the manufacturer's instructions. Anchors shall be installed through the embossments on the scored line of the 1-1/2" leg of the clip.

5 When using #12-24 for clips that have load combinations of F1, F2 and F3, use a linear interaction for combinations of F1 and F3, and a squared interaction for combinations of F1 and F2. When using PAFs, use a linear interaction for combinations of F1 and F3, and for combinations of F1 and F2.

6 Capacities listed for PAFs are based on minimum PAF requirements listed in General Note #6 on page 9.

7 It is the responsibility of the design professional to detail the project drawings for proper clip installation.

8 For connections to concrete, or other technical assistance, contact ClarkDietrich at 888-437-3244.

9 Buildex is a registered trademark of Illinois Tool Works Inc.

Extended Uni-Clip™ (UXRC)

The Extended Uni-Clip™ connects exterior studs to the primary structure of the building, while resisting horizontal and vertical loads.

ClarkDietrich's Extended Uni-Clip™ rigid framing clip is used to attach exterior wall studs to the structure of the building. Designed to resist horizontal and vertical loads, the extended rigid clips install easily with screws, powder-actuated fasteners, or welds. This clip is ideal for all medium and large standoff conditions.

PRODUCT DIMENSIONS

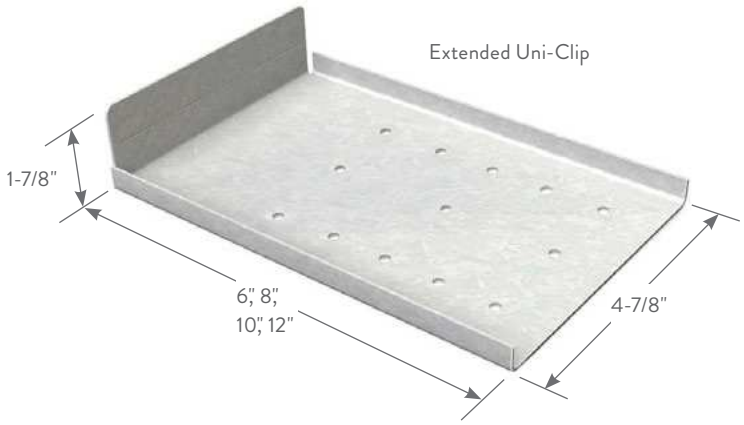
6" Extended Uni-Clip: 1-7/8" x 4-7/8" x 6"
8" Extended Uni-Clip: 1-7/8" x 4-7/8" x 8"
10" Extended Uni-Clip: 1-7/8" x 4-7/8" x 10"
12" Extended Uni-Clip: 1-7/8" x 4-7/8" x 12"

MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mils)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50 ksi
ASTM: A653/A653M

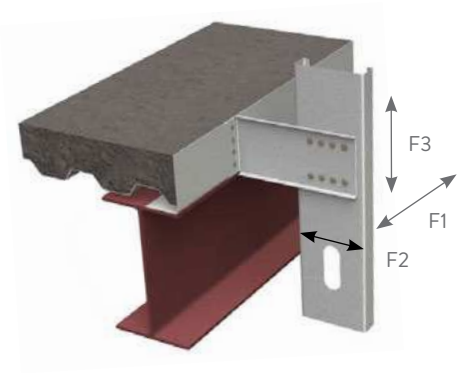
INSTALLATION

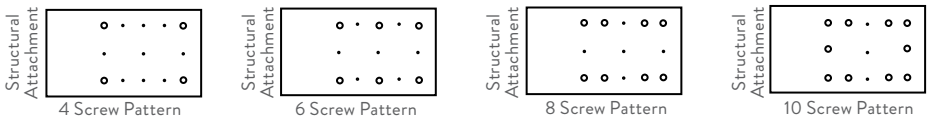
Attach the Extended Uni-Clip rigid clips to cold-formed steel framing members using #12 minimum self-drilling screws driven through the clip holes into the steel framing. Follow the required fastener placement patterns to achieve the allowable load. Connections to the primary building frame can also be made with powder-actuated fasteners or welds per design requirement.



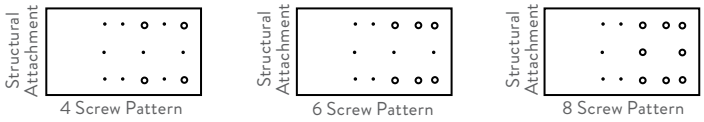
EXTENDED Uni-Clip™

Product code	Thickness			Size (in)	Packaging Pcs./ Bucket
	Gauge	Mils	Design thickness (in)		
UXRC	14	68	0.0713	1-7/8 x 4-7/8 x 6	25
UXRC	14	68	0.0713	1-7/8 x 4-7/8 x 8	25
UXRC	14	68	0.0713	1-7/8 x 4-7/8 x 10	25
UXRC	14	68	0.0713	1-7/8 x 4-7/8 x 12	25





8" UXRC Screw Pattern—2" Offset



8" UXRC Screw Pattern—4" Offset

EXTENDED Uni-Clip™ ALLOWABLE LOADS (KIPS)

Base connection	Stud thickness gauge (mils)	Stud fy (ksi)	8" Extended Uni-Clip															
			2" Offset												4" Offset			
			F1 Load (kips)				F2 Load (kips)				F3 Load (kips)				F3 Load (kips)			
			4 screws	6 screws	8 screws	10 screws	4 screws	6 screws	8 screws	10 screws	4 screws	6 screws	8 screws	10 screws	4 screws	6 screws	8 screws	
Weld (Fillet/Flare Groove)	20 (33)	33	0.381	0.453	0.453	0.453	0.754	1.131	1.508	1.884	0.310	0.435	0.572	0.686	0.214	0.306	0.363	
	18 (43)	33	0.453	0.453	0.453	0.453	1.122	1.683	2.243	2.278	0.462	0.647	0.851	1.022	0.318	0.456	0.540	
	16 (54)	33	0.453	0.453	0.453	0.453	1.577	2.278	2.278	2.278	0.649	0.909	1.196	1.436	0.447	0.640	0.759	
	16 (54)	50	0.453	0.453	0.453	0.453	2.278	2.278	2.278	2.278	0.938	1.313	1.728	2.075	0.645	0.925	1.097	
	14 (68)	50	0.453	0.453	0.453	0.453	2.278	2.278	2.278	2.278	1.098	1.538	2.022	2.278	0.756	1.083	1.284	
	12 (97)	50	0.453	0.453	0.453	0.453	2.278	2.278	2.278	2.278	1.098	1.538	2.022	2.278	0.756	1.083	1.284	
(4) #12-24 (3/16" steel)	20 (33)	33	0.301	0.301	0.301	0.301	0.754	1.131	1.256	1.256	0.310	0.435	0.572	0.686	0.214	0.306	0.363	
	18 (43)	33	0.301	0.301	0.301	0.301	1.122	1.256	1.256	1.256	0.462	0.647	0.851	1.022	0.318	0.456	0.540	
	16 (54)	33	0.301	0.301	0.301	0.301	1.256	1.256	1.256	1.256	0.649	0.909	1.196	1.436	0.447	0.640	0.759	
	16 (54)	50	0.301	0.301	0.301	0.301	1.256	1.256	1.256	1.256	0.938	1.313	1.728	1.864	0.645	0.925	1.097	
	14 (68)	50	0.301	0.301	0.301	0.301	1.256	1.256	1.256	1.256	1.098	1.538	1.864	1.864	0.756	1.083	1.284	
	12 (97)	50	0.301	0.301	0.301	0.301	1.256	1.256	1.256	1.256	1.098	1.538	1.864	1.864	0.756	1.083	1.284	
(4) Hilti X-U (3/16" steel)	20 (33)	33	0.301	0.301	0.301	0.301	0.754	0.875	0.875	0.875	0.310	0.435	0.572	0.686	0.214	0.306	0.363	
	18 (43)	33	0.301	0.301	0.301	0.301	0.875	0.875	0.875	0.875	0.462	0.647	0.851	1.022	0.318	0.456	0.540	
	16 (54)	33	0.301	0.301	0.301	0.301	0.875	0.875	0.875	0.875	0.649	0.909	1.196	1.436	0.447	0.640	0.759	
	16 (54)	50	0.301	0.301	0.301	0.301	0.875	0.875	0.875	0.875	0.938	1.313	1.728	1.864	0.645	0.925	1.097	
	14 (68)	50	0.301	0.301	0.301	0.301	0.875	0.875	0.875	0.875	1.098	1.538	1.864	1.864	0.756	1.083	1.284	
	12 (97)	50	0.301	0.301	0.301	0.301	0.875	0.875	0.875	0.875	1.098	1.538	1.864	1.864	0.756	1.083	1.284	
(4) Hilti X-U (1" embedment in 3000 psi concrete)	20 (33)	33	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.310	0.435	0.572	0.686	0.214	0.306	0.363	
	18 (43)	33	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.462	0.647	0.747	0.747	0.318	0.456	0.540	
	16 (54)	33	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.649	0.747	0.747	0.747	0.447	0.640	0.747	
	16 (54)	50	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.747	0.747	0.747	0.747	0.645	0.747	0.747	
	14 (68)	50	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.747	0.747	0.747	0.747	0.747	0.747	0.747	
	12 (97)	50	0.301	0.301	0.301	0.301	0.360	0.360	0.360	0.360	0.747	0.747	0.747	0.747	0.747	0.747	0.747	
(2) Kwik-Cons II (1-3/4" embedment in 3000 psi concrete)	20 (33)	33	0.301	0.301	0.301	0.301	0.754	0.922	0.922	0.922	0.310	0.435	0.572	0.686	0.214	0.306	0.363	
	18 (43)	33	0.301	0.301	0.301	0.301	0.922	0.922	0.922	0.922	0.462	0.647	0.851	1.022	0.318	0.456	0.540	
	16 (54)	33	0.301	0.301	0.301	0.301	0.922	0.922	0.922	0.922	0.649	0.909	1.160	1.160	0.447	0.640	0.759	
	16 (54)	50	0.301	0.301	0.301	0.301	0.922	0.922	0.922	0.922	0.938	1.160	1.160	1.160	0.645	0.925	1.097	
	14 (68)	50	0.301	0.301	0.301	0.301	0.922	0.922	0.922	0.922	1.098	1.160	1.160	1.160	0.756	1.083	1.160	
	12 (97)	50	0.301	0.301	0.301	0.301	0.922	0.922	0.922	0.922	1.098	1.160	1.160	1.160	0.756	1.083	1.160	

6", 10", and 12" tables are available at clarkdietrich.com.

Notes:

1 Capacities listed in the table/notes assume that no load reductions are required for spacing or edge distance of Hilti X-U pins in steel, Kwik-Cons, or screws. Load reductions are enforced for spacing or edge distance of Hilti X-U in concrete.

2 Weld capacities are calculated for 2" long weld assuming 1" from the edges on the outer radius of the bend.

3 Allowable loads have not been increased for wind, seismic, or other factors.

4 The F1 values are calculated based on the moment capacity of the clip cross section.

5 Capacities are based on the use of #12 screws to clip-stud interface.

6 The embedment depth of Kwik-Cons in 3000psi normal weight concrete is 1-3/4". The embedment depth of Hilti X-U in 3000psi normal weight concrete is 1".

7 The Hilti X-U pins and #12-24 screws are embedded in 3/16" structural steel.

8 Torsional effects are considered on screw group for F3 allowable loads.

9 Use a linear interaction equation for connections involving any combination of F1, F2, and F3.

10 Hilti is a registered trademark of the Hilti Akfiengeseilchaft Corporation.

11 Hilti X-U PAFs shown in table may not be substituted without prior approval from ClarkDietrich Engineering Services.

SwiftClip™ L-Series™ Support Clip

Support for the most demanding applications.

SwiftClip™ L-Series™ support clips are used in multiple construction projects, specifically in conjunction with structural studs and track. The L-shaped clips fit between the stud flanges, so that shorter length clips do not need to be ordered. These labor time-savers include prepunched holes for quicker screw attachments, and are punched to accommodate for CRC lateral bracing connections.

ALTERNATIVE PRODUCTS

EasyClip™ E-Series™ Support Clip
EasyClip™ S-Series™ Support Clip
EasyClip™ U-Series™ Clip Angle
EasyClip™ X-Series™ Clip Angle
EasyClip™ A-Series™ End Clip
EasyClip™ B-Series™ Clip Angle

PRODUCT DIMENSIONS

See chart below for available sizes.

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

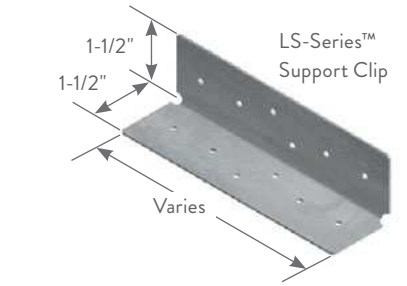
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

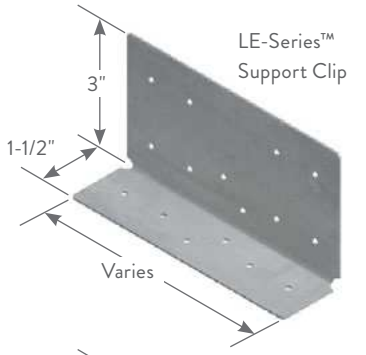
Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

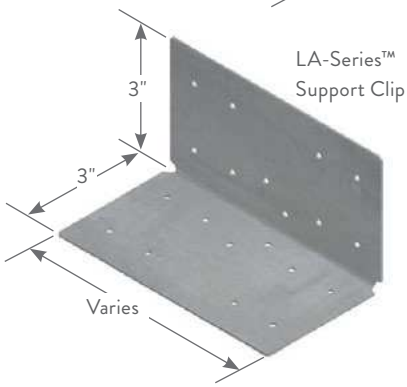
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

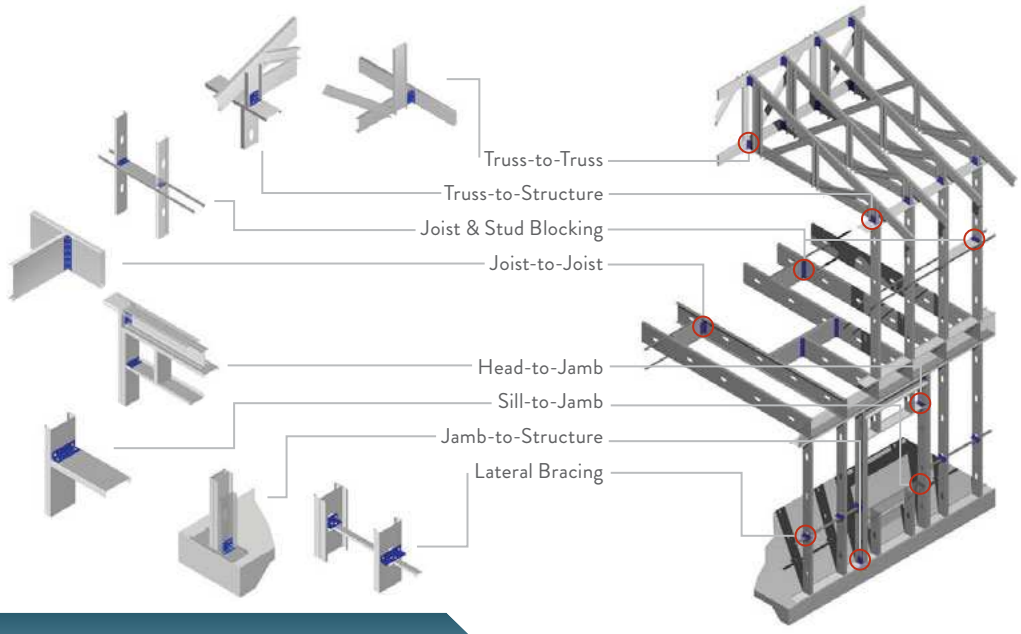
SwiftClip™ L-Series™ SUPPORT CLIPS

Product code	Thickness			Size (in)	Common application	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)			
LS543	16	54	0.0566	1-1/2 x 1-1/2 x 3-1/4	CRC/Openings	300
LS683	14	68	0.0713		Openings	300
LS973	12	97	0.1017		Openings	200
LS545	16	54	0.0566	1-1/2 x 1-1/2 x 5-1/2	CRC/Openings/Joists	200
LS685	14	68	0.0713		Openings/Joists	200
LS975	12	97	0.1017		Openings/Joists	100
LS547	16	54	0.0566	1-1/2 x 1-1/2 x 7-1/4	CRC/Openings/Joists	150
LS687	14	68	0.0713		Openings/Joists	100
LS977	12	97	0.1017		Openings/Joists	100
LS549	16	54	0.0566	1-1/2 x 1-1/2 x 9-1/4	Joists	100
LS689	14	68	0.0713		Joists	100
LS979	12	97	0.1017		Joists	50
LS541	16	54	0.0566	1-1/2 x 1-1/2 x 11-1/4	Joists	100
LS681	14	68	0.0713		Joists	50
LS971	12	97	0.1017		Joists	50
LS5413	16	54	0.0566	1-1/2 x 1-1/2 x 13-1/4	Joists	50
LS6813	14	68	0.0713		Joists	50
LS9713	12	97	0.1017		Joists	25
LE543	16	54	0.0566	1-1/2 x 3 x 3-1/4	Fixed/Joists/Trusses	100
LE683	14	68	0.0713		Fixed/Joists/Trusses	100
LE973	12	97	0.1017		Fixed/Joists/Trusses	50
LE545	16	54	0.0566	1-1/2 x 3 x 5-1/2	Fixed/Joists/Trusses	100
LE685	14	68	0.0713		Fixed/Joists/Trusses	100
LE975	12	97	0.1017		Fixed/Joists/Trusses	50
LE547	16	54	0.0566	1-1/2 x 3 x 7-1/4	Fixed/Joists/Trusses	100
LE687	14	68	0.0713		Fixed/Joists/Trusses	50
LE977	12	97	0.1017		Fixed/Joists/Trusses	50
LA543	16	54	0.0566	3 x 3 x 3-1/4	Joists/Trusses	100
LA683	14	68	0.0713		Joists/Trusses	100
LA973	12	97	0.1017		Joists/Trusses	50
LA545	16	54	0.0566	3 x 3 x 5-1/2	Joists/Trusses	100
LA685	14	68	0.0713		Joists/Trusses	50
LA975	12	97	0.1017		Joists/Trusses	50
LA547	16	54	0.0566	3 x 3 x 7-1/4	Joists/Trusses	50
LA687	14	68	0.0713		Joists/Trusses	50
LA977	12	97	0.1017		Joists/Trusses	50









ALLOWABLE SHEAR LOAD TABLE

Product code	No. of screws/leg	Stud Thickness (Yield Strength)				
		20ga (33mil) 33ksi	18ga (43mil) 33ksi	16ga (54mil) 50ksi	14ga (68mil) 50ksi	12ga (97mil) 50ksi
LS543	2	294	438	777	777	777
	4	437	651	1154	1154	1154
LS683	2	294	438	777	777	777
	4	437	651	1154	1154	1154
LS973	2	294	438	777	777	777
	4	437	651	1154	1154	1154
LS545	2	333	496	880	880	880
	4	619	921	1635	1635	1635
LS685	2	333	496	880	880	880
	4	619	921	1635	1635	1635
LS975	2	333	496	880	880	880
	4	619	921	1635	1635	1635
LS547	4	651	968	1718	1718	1718
	6	966	1438	2551	2551	2551
LS687	4	651	968	1718	1718	1718
	6	966	1438	2551	2551	2551
LS977	4	651	968	1718	1718	1718
	6	966	1438	2551	2551	2551
LS549	4	670	997	1768	1768	1768
	6	1007	1498	2658	2658	2658
LS689	4	670	997	1768	1768	1768
	6	1007	1498	2658	2658	2658
LS979	4	670	997	1768	1768	1768
	6	1007	1498	2658	2658	2658
LS541	4	681	1013	1798	1798	1798
	6	1013	1508	2675	2675	2675
LS681	4	681	1013	1798	1798	1798
	6	1013	1508	2675	2675	2675
LS971	4	681	1013	1798	1798	1798
	6	1013	1508	2675	2675	2675
LS5413	4	688	1024	1816	1816	1816
	6	1020	1518	2694	2694	2694
LS6813	4	688	1024	1816	1816	1816
	6	1020	1518	2694	2694	2694
LS9713	4	688	1024	1816	1816	1816
	6	1020	1518	2694	2694	2694

Notes:

1 Shear values for clips are based on attachment to cold-formed steel members. Attachment to other substrates must be designed separately.

2 Place the first two screws in each leg in the outermost screw holes. Place the next two screws (if needed) in center holes next to the CRC holes (diagonal). The next screws (if needed) are placed moving from the outermost holes toward the center, symmetrically.

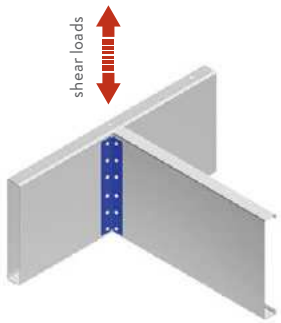
3 Shear values are based on the tilting bearing modes of failure Eq. E4.3.1-1, E4.3.1-2.

4 Allowable screw shear is based on a factor of safety of 3.0. #10 screws (0.19" min. diameter) must have minimum ultimate shear strength of 1400 lbs.

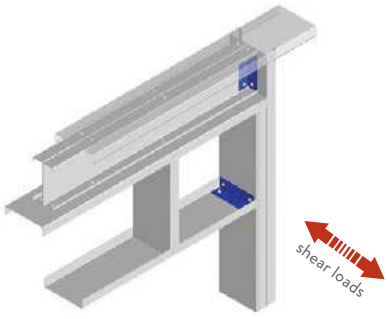
5 Screws must have three threads exposed after installation.

6 It is the responsibility of the design engineer to detail the attachment of clips and verify their capacity meets the application. This table is intended for use by qualified engineers.

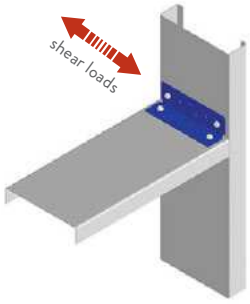
7 For technical assistance or additional load charts contact ClarkDietrich at 888-437-3244.



Joist-to-Joist Connections



Head-to-Jamb Connections



Sill-to-Jamb Connections

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

EasyClip™ E-Series™ Support Clip

Long leg accommodates greater standoff for rigid connections.

ClarkDietrich EasyClip™ E-Series™ support clips are primarily used for rigid stand-off connections. The 4" wide leg provides extra length to achieve stand-off connections up to 3". The EasyClip E-Series support clips are also commonly used in bypass wall conditions, a variety of floor framing applications including solid and ladder blocking attachments and joist-to-joist connections, and to secure rafter framing to the primary structure. Available in a variety of lengths and gauges, these clips are prepunched for faster and more accurate fastener placement.

ALTERNATIVE PRODUCTS

Uni-Clip™
EasyClip™ D-Series™ Anchor Clip
EasyClip™ T-Series™ Tall Anchor Clip
SwiftClip™ LE-Series™ Support Clip

PRODUCT DIMENSIONS

1-1/2" x 4" x 3"
1-1/2" x 4" x 5"
1-1/2" x 4" x 7"
1-1/2" x 4" x 9"
1-1/2" x 4" x 11"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

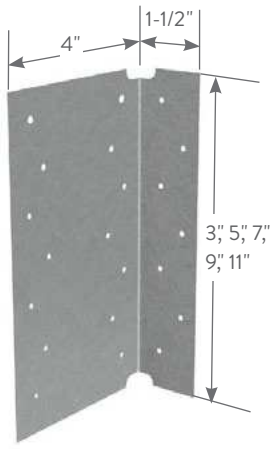
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

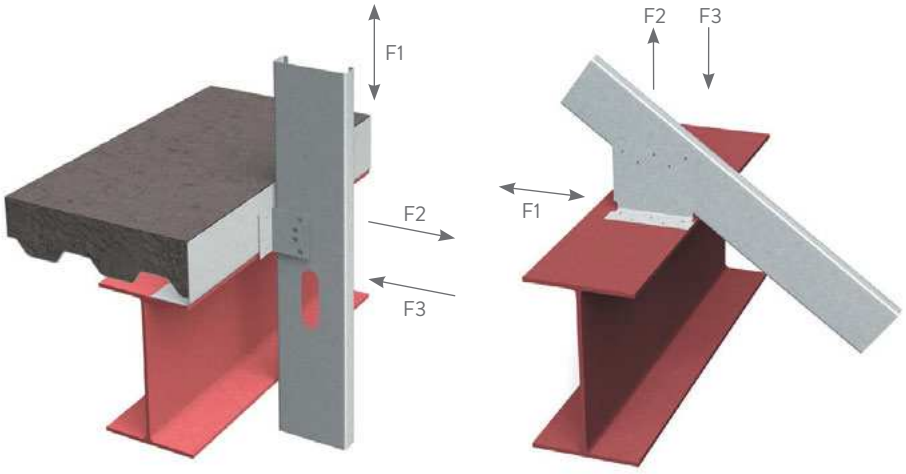
EasyClip E-Series support clips are attached to the cold-formed steel (CFS) framing members using #10 minimum self-drilling screws driven through the clip holes into the steel framing. When not filling all holes, install fasteners symmetrically starting at the top and bottom edges and move toward the center of the clip. Clip can also be welded to the CFS framing. Connections to the building frame can be made with powder-actuated fasteners, drill-in concrete anchors or welding. When using the tabular values for a welded clip, provide a full weld to the structure, top to bottom, along the outside of the clip. A 3/4" minimum weld on the outside edge of the 1-1/2" leg is also required to control warping or to hold the clip in place before final welding.

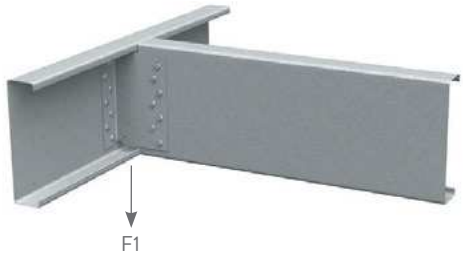


EasyClip E-Series
Support Clip

EasyClip™ E-Series™ SUPPORT CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
E543	16	54	0.0566	4 x 1-1/2 x 3	100
E545	16	54	0.0566	4 x 1-1/2 x 5	100
E547	16	54	0.0566	4 x 1-1/2 x 7	100
E549	16	54	0.0566	4 x 1-1/2 x 9	50
E541	16	54	0.0566	4 x 1-1/2 x 11	50
E683	14	68	0.0713	4 x 1-1/2 x 3	100
E685	14	68	0.0713	4 x 1-1/2 x 5	100
E687	14	68	0.0713	4 x 1-1/2 x 7	80
E689	14	68	0.0713	4 x 1-1/2 x 9	50
E681	14	68	0.0713	4 x 1-1/2 x 11	50
E973	12	97	0.1017	4 x 1-1/2 x 3	50
E975	12	97	0.1017	4 x 1-1/2 x 5	50
E977	12	97	0.1017	4 x 1-1/2 x 7	50
E979	12	97	0.1017	4 x 1-1/2 x 9	50
E971	12	97	0.1017	4 x 1-1/2 x 11	40





The table values are valid only when screws are used along the outside line of the prepunched holes as shown.

E-Series™ SUPPORT CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

Using #10-16 self-drilling screws

Product code	No. of screws to steel framing	Stud Thickness and Yield Strength								
		20ga (33mil) 33ksi			18ga (43mil) 33ksi			16ga (54mil) 50ksi		
		F1	F2	F3	F1	F2	F3	F1	F2	F3
E543	3	101 (101)	210 (531)	507	150 (150)	210 (788)	507	266 (155)	210 (1195)	507
E545	2	176 (176)	354 (354)	354	261 (261)	371 (525)	525	463 (453)	371 (933)	811
	5	251 (251)	371 (885)	885	372 (372)	371 (1313)	912	625 (479)	371 (2105)	912
E547	4	380 (380)	531 (708)	708	564 (564)	531 (1050)	1050	1002 (970)	531 (1867)	1347
	7	455 (455)	531 (1239)	1239	675 (675)	531 (1838)	1318	1169 (960)	531 (3015)	1318
E549	4	477 (477)	692 (708)	708	707 (707)	692 (1050)	1050	1257 (1257)	692 (1867)	1753
	9	706 (706)	692 (1593)	1593	1048 (1048)	692 (2363)	1724	1862 (1576)	692 (3925)	1724
E541	6	727 (727)	852 (1062)	1062	1079 (1079)	852 (1576)	1576	1918 (1918)	852 (2800)	2053
	11	995 (995)	852 (1947)	1947	1476 (1476)	852 (2889)	2130	2623 (2301)	852 (4835)	2130
E683	3	101 (101)	333 (531)	531	150 (150)	333 (788)	788	266 (196)	333 (1400)	1011
E685	2	176 (176)	354 (354)	354	261 (261)	525 (525)	525	463 (463)	587 (933)	933
	5	251 (251)	587 (885)	885	372 (372)	587 (1313)	1313	661 (602)	587 (2333)	1817
E687	4	380 (380)	708 (708)	708	564 (564)	841 (1050)	1050	1002 (1002)	841 (1867)	1867
	7	455 (455)	841 (1239)	1239	675 (675)	841 (1838)	1838	1200 (1200)	841 (3267)	2625
E689	4	477 (477)	708 (708)	708	707 (707)	1050 (1050)	1050	1257 (1257)	1095 (1867)	1867
	9	706 (706)	1095 (1593)	1593	1048 (1048)	1095 (2363)	2363	1862 (1862)	1095 (4200)	3434
E681	6	727 (727)	1062 (1062)	1062	1079 (1079)	1349 (1576)	1576	1918 (1918)	1349 (2800)	2800
	11	995 (995)	1349 (1947)	1947	1476 (1476)	1349 (2889)	2889	2623 (2623)	1349 (5133)	4244
E973	3	101 (101)	531 (531)	531	150 (150)	679 (788)	788	266 (266)	679 (1400)	1400
E975	2	176 (176)	354 (354)	354	261 (261)	525 (525)	525	463 (463)	933 (933)	933
	5	251 (251)	885 (885)	885	372 (372)	1196 (1313)	1313	661 (661)	1196 (2333)	2333
E977	4	380 (380)	708 (708)	708	564 (564)	1050 (1050)	1050	1002 (1002)	1713 (1867)	1867
	7	455 (455)	1239 (1239)	1239	675 (675)	1713 (1838)	1838	1200 (1200)	1713 (3267)	3267
E979	4	477 (477)	708 (708)	708	707 (707)	1050 (1050)	1050	1257 (1257)	1867 (1867)	1867
	9	706 (706)	1593 (1593)	1593	1048 (1048)	2229 (2363)	2363	1862 (1862)	2229 (4200)	4200
E971	6	727 (727)	1062 (1062)	1062	1079 (1079)	1576 (1576)	1576	1918 (1918)	2746 (2800)	2800
	11	995 (995)	1947 (1947)	1947	1476 (1476)	2746 (2889)	2889	2623 (2623)	2746 (5133)	5133

Notes:

Screw Capacity Notes:

1 The tabulated value indicates the number of screws in a single clip leg attached to the cold-formed steel (CFS) framing.

2 Screws shall be attached in a symmetric manner, starting at the outside holes. See screw options on opposite page and above for examples.

3 The allowable values for F1 are based only on the shear capacity of the 4" clip leg attached to the CFS framing. The capacity of the attachment to other materials and structures must be checked separately.

4 The allowable values for F2 assume mechanical fasteners are attached to the structure using the 1-1/2" leg, and are along the vertical centerline of the clip leg. Mechanical fasteners to other materials and structures must be checked separately.

5 This table is intended for use by qualified engineers only. It is the responsibility of the engineer to verify that the tabulated values apply to a specific connection application.

6 When clips have combinations of F1, F2, and F3, use a linear interaction for combinations of F1 and F3, and a squared interaction for combinations of F1 and F2.

7 The screw diameter must be 0.19" (min) for #10 screws.

8 The ultimate screw shear strength must be a minimum of 1400 lbs for #10 screws.

9 Screws must be long enough so at least 3 exposed threads are visible after installation.

10 Allowable loads have not been increased 33% for wind or seismic.

11 For connections made to 14ga (68mil) and 12ga (97mil), use the tabulated values for 16ga (54mil), 50ksi.

12 Contact ClarkDietrich Technical Services at 888-437-3244 for assistance.

Weld Capacity Notes:

1 F1 and F2 values in parentheses are maximum shear and tension capacities when the clips are welded to the base structure (min 3/16" — 36ksi)

2 Listed weld capacities are computed assuming an E70XX welding rod or wire.

3 The clips are to be welded to the structure along the back corner along the complete length of the clip. When secondary welds are used to hold the clip in place, they are not used in capacity calculations.

EasyClip™ S-Series™ Support Clip

For rigid connection applications not requiring a long leg.

ClarkDietrich EasyClip™ S-Series™ support clips are commonly used for rigid connections in window and door framing, joist, bypass or other miscellaneous connections to secure one framing member to another, or to secure framing members to the structural frame. This high-performance, multi-use utility clip is ideal for corner reinforcements, stair openings, and numerous support applications. Available in a variety of lengths and gauges, EasyClip S-Series clips are prepunched for faster and more accurate fastener placement.

ALTERNATIVE PRODUCTS

EasyClip™ U-Series™ Clip Angle
EasyClip™ X-Series™ Clip Angle
EasyClip™ D-Series™ Anchor Clip
EasyClip™ B-Series™ Clip Angle
SwiftClip™ LS-Series™ Support Clip

PRODUCT DIMENSIONS

1-1/2" x 1-1/2" x 3"
1-1/2" x 1-1/2" x 5"
1-1/2" x 1-1/2" x 7"
1-1/2" x 1-1/2" x 9"
1-1/2" x 1-1/2" x 11"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

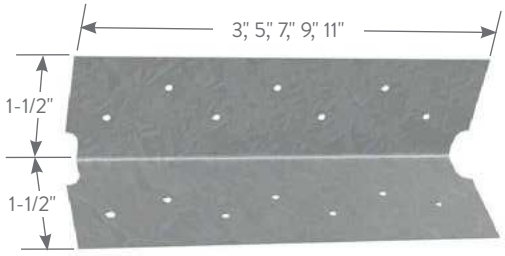
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

EasyClip S-Series support clips are attached to the cold-formed steel (CFS) framing members using #10 minimum self-drilling screws driven through the clip holes into the steel framing. When not filling all holes, install fasteners symmetrically starting at the top and bottom edges and move toward the center of the clip. Clip can also be welded to the CFS framing. Connections to the building frame can be made with powder-actuated fasteners, drill-in concrete anchors or welding. When using the tabular values for a welded clip, provide a full weld to the structure, top to bottom, along the outside of the clip. A 3/4" minimum weld on the outside edge of the 1-1/2" leg is also required to control warping or to hold the clip in place before final welding.



EasyClip S-Series Support Clip

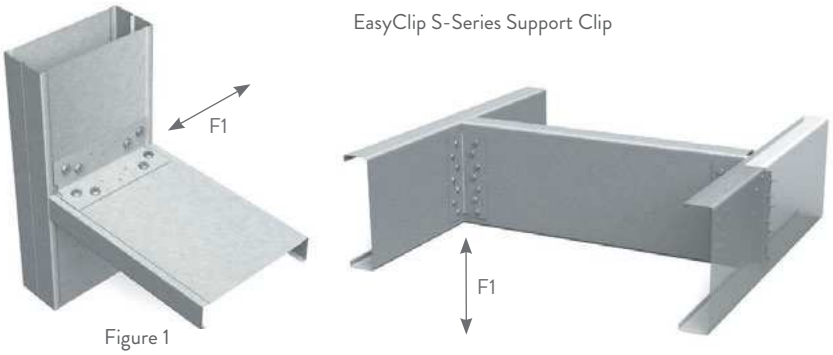
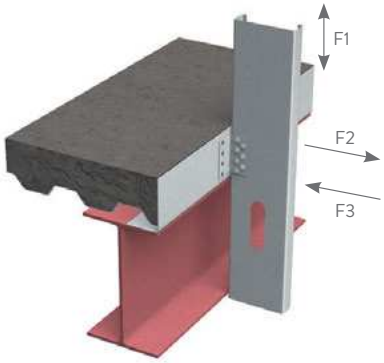


Figure 1



EasyClip™ S-Series™ SUPPORT CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./ Bucket
	Gauge	Mils	Design thickness (in)		
S543	16	54	0.0566	1-1/2 x 1-1/2 x 3	400
S545	16	54	0.0566	1-1/2 x 1-1/2 x 5	200
S547	16	54	0.0566	1-1/2 x 1-1/2 x 7	100
S549	16	54	0.0566	1-1/2 x 1-1/2 x 9	100
S541	16	54	0.0566	1-1/2 x 1-1/2 x 11	100
S683	14	68	0.0713	1-1/2 x 1-1/2 x 3	200
S685	14	68	0.0713	1-1/2 x 1-1/2 x 5	200
S687	14	68	0.0713	1-1/2 x 1-1/2 x 7	100
S689	14	68	0.0713	1-1/2 x 1-1/2 x 9	100
S681	14	68	0.0713	1-1/2 x 1-1/2 x 11	100
S973	12	97	0.1017	1-1/2 x 1-1/2 x 3	200
S975	12	97	0.1017	1-1/2 x 1-1/2 x 5	150
S977	12	97	0.1017	1-1/2 x 1-1/2 x 7	100
S979	12	97	0.1017	1-1/2 x 1-1/2 x 9	80
S971	12	97	0.1017	1-1/2 x 1-1/2 x 11	70

EasyClip™ S-Series™ SUPPORT CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

Using #10-16 self-drilling screws

Clip	No. of screws to steel framing (1)	Stud Thickness and Yield Strength								
		20ga (33mil) 33ksi			18ga (43mil) 33ksi			16ga (54mil) 50ksi		
		F1	F2	F3	F1	F2	F3	F1	F2	F3
S543	3	295 (295)	210 (531)	531	437 (437)	210 (788)	788	777 (555)	210 (1195)	1400
S545	2	317 (317)	354 (354)	354	470 (470)	371 (525)	525	835 (835)	371 (933)	933
	5	651 (651)	371 (885)	885	965 (965)	371 (1313)	1313	1716 (1460)	371 (2105)	2333
S547	4	653 (653)	531 (708)	708	969 (969)	531 (1050)	1050	1722 (1722)	531 (1867)	1867
	7	1029 (1029)	531 (1239)	1239	1526 (1526)	531 (1838)	1838	2712 (2456)	531 (3015)	3267
S549	4	679 (679)	692 (708)	708	1007 (1007)	692 (1050)	1050	1790 (1790)	692 (1867)	1867
	9	1408 (1408)	692 (1593)	1593	2090 (2090)	692 (2363)	2363	3714 (3452)	692 (3925)	4200
S541	6	1015 (1015)	852 (1062)	1062	1505 (1505)	852 (1576)	1576	2675 (2675)	852 (2800)	2800
	11	1785 (1785)	852 (1947)	1947	2648 (2648)	852 (2889)	2889	4706 (4432)	852 (4835)	5133
S683	3	295 (295)	333 (531)	531	437 (437)	333 (788)	788	777 (699)	333 (1400)	1400
S685	2	317 (317)	354 (354)	354	470 (470)	525 (525)	525	835 (835)	587 (933)	933
	5	651 (651)	587 (885)	885	965 (965)	587 (1313)	1313	1716 (1716)	587 (2333)	2333
S687	4	653 (653)	708 (708)	708	969 (969)	841 (1050)	1050	1722 (1722)	841 (1867)	1867
	7	1029 (1029)	841 (1239)	1239	1526 (1526)	841 (1838)	1838	2712 (2712)	841 (3267)	3267
S689	4	679 (679)	708 (708)	708	1007 (1007)	1050 (1050)	1050	1790 (1790)	1095 (1867)	1867
	9	1408 (1408)	1095 (1593)	1593	2090 (2090)	1095 (2363)	2363	3714 (3714)	1095 (4200)	4200
S681	6	1015 (1015)	1062 (1062)	1062	1505 (1505)	1349 (1576)	1576	2675 (2675)	1349 (2800)	2800
	11	1785 (1785)	1349 (1947)	1947	2648 (2648)	1349 (2889)	2889	4706 (4706)	1349 (5133)	5133
S973	3	295 (295)	531 (531)	531	437 (437)	679 (788)	788	777 (777)	679 (1400)	1400
S975	2	317 (317)	354 (354)	354	470 (470)	525 (525)	525	835 (835)	933 (933)	933
	5	651 (651)	885 (885)	885	965 (965)	1196 (1313)	1313	1716 (1716)	1196 (2333)	2333
S977	4	653 (653)	708 (708)	708	969 (969)	1050 (1050)	1050	1722 (1722)	1713 (1867)	1867
	7	1029 (1029)	1239 (1239)	1239	1526 (1526)	1713 (1838)	1838	2712 (2712)	1713 (3267)	3267
S979	4	679 (679)	708 (708)	708	1007 (1007)	1050 (1050)	1050	1790 (1790)	1867 (1867)	1867
	9	1408 (1408)	1593 (1593)	1593	2090 (2090)	2229 (2363)	2363	3714 (3714)	2229 (4200)	4200
S971	6	1015 (1015)	1062 (1062)	1062	1505 (1505)	1576 (1576)	1576	2675 (2675)	2746 (2800)	2800
	11	1785 (1785)	1947 (1947)	1947	2648 (2648)	2746 (2889)	2889	4706 (4706)	2746 (5133)	5133

Notes:

Screw Capacity Notes:

1 The tabulated value indicates the number of screws in a single clip leg attached to the cold-formed steel (CFS) framing.

2 Screws shall be attached in a symmetric manner, starting at the outside holes and moving to the center. Reference Figure 1 on opposite page.

3 The allowable values for F1 are based only on the shear capacity of the clip leg attached to the CFS framing. The capacity of the attachment to other materials and structures must be checked separately.

4 The allowable values for F2 assume mechanical fasteners are attached to the structure, and are along the vertical centerline of the clip leg. Mechanical fasteners to other materials and structures must be checked separately.

5 The screw diameter must be 0.19" (min.) for #10 screws.

6 The ultimate screw shear strength must be a minimum of 1400 lbs for #10 screws.

7 When clips have combinations of F1, F2, and F3, use a linear interaction for combinations of F1 and F3, and a squared interaction for combinations of F1 and F2.

8 Screws must be long enough so that at least three exposed threads are visible after installation.

9 Allowable loads have not been increased 33% for wind or seismic.

10 For connections made to 14 gauge (68mil) and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi.

11 It is the responsibility of the design professional to detail the drawings for proper clip attachment.

12 Contact ClarkDietrich at 888-437-3244 for technical assistance.

Weld Capacity Notes:

1 F1 and F2 values in parentheses are maximum shear and tension capacities when the clips are welded to the base structure (min 3/16"—36ksi steel).

2 Listed weld capacities are computed assuming an E70XX welding rod or wire.

3 The clips are to be welded to the structure along the back corner and along the complete length of the clip. When secondary welds are used to hold the clip in place, they are not used in capacity calculations.

EasyClip™ U-Series™ Clip Angle

Secures U-channel (cold-rolled channel) to framing members for lateral bridging, miscellaneous rigid connections, and multipurpose reinforcing supports.

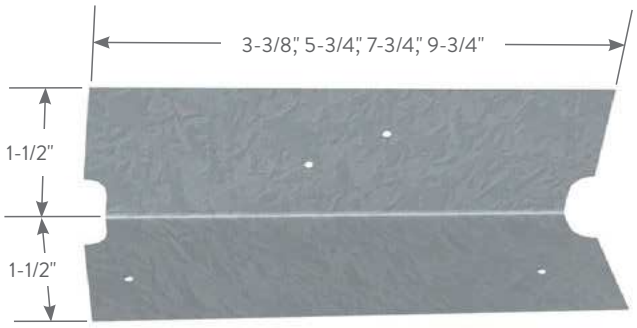
ClarkDietrich EasyClip™ U-Series™ clip angles are used to secure U-channel to wall studs for lateral bridging or for miscellaneous rigid connections. U-channel is passed through the stud knockout and an EasyClip U-Series clip is screw-attached or welded to provide a rigid connection. Available in a variety of lengths and gauges, EasyClip U-Series clips are prepunched for faster and more accurate fastener placement. U-Series clip angles and U-channel should not be used in bridging applications when the stud width exceeds 6".

ALTERNATIVE PRODUCTS

EasyClip™ X-Series™ Clip Angle
EasyClip™ B-Series™ Clip Angle
SwiftClip™ LS-Series™ Support Clip
Spazzer® 5400 and Spazzer® 9200 Spacer Bars

PRODUCT DIMENSIONS

1-1/2" x 1-1/2" x 3-3/8"
1-1/2" x 1-1/2" x 5-3/4"
1-1/2" x 1-1/2" x 7-3/4"
1-1/2" x 1-1/2" x 9-3/4"



EasyClip U-Series Clip Angle

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strenght: 50ksi
ASTM: A653/A653M

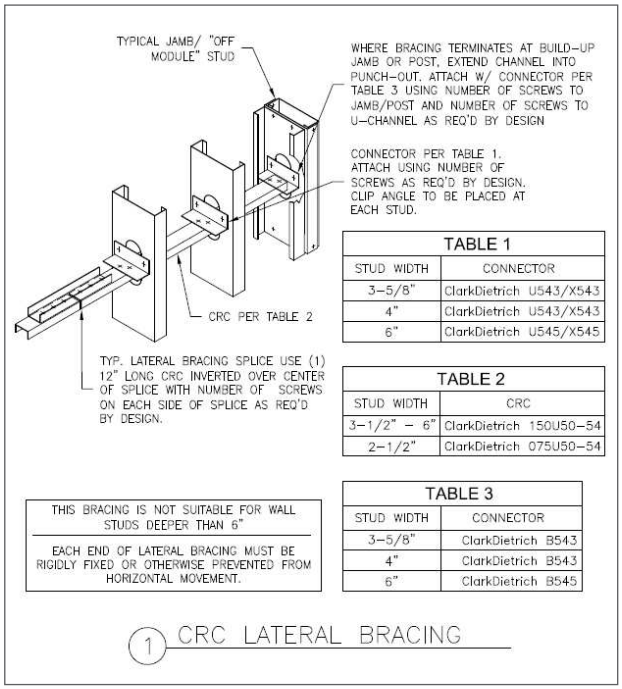
INSTALLATION

U-Channel is inserted into the stud punchout (as specified by design) and rotated into place. U-Series clip angles are attached horizontally to the outside or hard side of the cold-formed steel (CFS) framing members. The clip must be firmly seated against the web of the U-channel. The clip should not be more than 1/4" less than the cold-formed framing member. U-Series clips are fastened using #10 minimum self-drilling screws driven through the clip holes into the steel framing. Clips may also be welded to the CFS framing.

EasyClip™ U-Series™ CLIP ANGLES

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
U543	16	54	0.0566	1-1/2 x 1-1/2 x 3-3/8	400
U545	16	54	0.0566	1-1/2 x 1-1/2 x 5-3/4	200
U547	16	54	0.0566	1-1/2 x 1-1/2 x 7-3/4	100
U549	16	54	0.0566	1-1/2 x 1-1/2 x 9-3/4	100
U683	14	68	0.0713	1-1/2 x 1-1/2 x 3-3/8	200
U685	14	68	0.0713	1-1/2 x 1-1/2 x 5-3/4	170
U687	14	68	0.0713	1-1/2 x 1-1/2 x 7-3/4	100
U689	14	68	0.0713	1-1/2 x 1-1/2 x 9-3/4	100
U973	12	97	0.1017	1-1/2 x 1-1/2 x 3-3/8	200
U975	12	97	0.1017	1-1/2 x 1-1/2 x 5-3/4	130
U977	12	97	0.1017	1-1/2 x 1-1/2 x 7-3/4	100
U979	12	97	0.1017	1-1/2 x 1-1/2 x 9-3/4	80

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.
Pub. No. CD-ClipExpress 4/12

EasyClip™ B-Series™ Clip Angle

Secures U-channel in back-to-back framing applications and is also used for various miscellaneous rigid connections.

ClarkDietrich EasyClip™ B-Series™ clip angles are used to secure U-channel to wall studs in back-to-back framing applications and for various miscellaneous rigid connections. The shorter length of the B-Series clip enables the clip to be installed inside the C-shape. The B-Series clip can also be used to secure lateral bridging on single studs where the clip is preferred to be inside the C-shape. In a variety of lengths and gauges, B-Series clips are prepunched for faster and more accurate fastener placement. B-Series clip angles and U-channels should not be used in lateral bridging when stud width exceeds 6".

ALTERNATIVE PRODUCTS

EasyClip™ X-Series™ Clip Angle
SwiftClip™ LS-Series™ Support Clip
Spazzer® 5400 and Spazzer® 9200 Spacer Bars

PRODUCT DIMENSIONS

1-1/2" x 1-1/2" x 3"
1-1/2" x 1-1/2" x 5-1/4"
1-1/2" x 1-1/2" x 7-1/4"
1-1/2" x 1-1/2" x 9-1/4"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

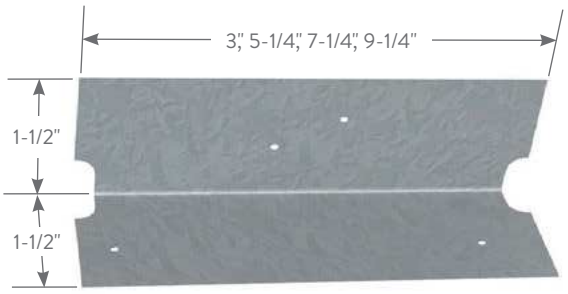
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

EasyClip B-Series clip angles are attached to the cold-formed steel (CFS) framing members using #10-16 minimum self-drilling screws driven through the clip holes into the steel framing. Clips may also be welded to the CFS framing. The proper clip length is 3/4" shorter than the stud width when used in back-to-back framing connections.

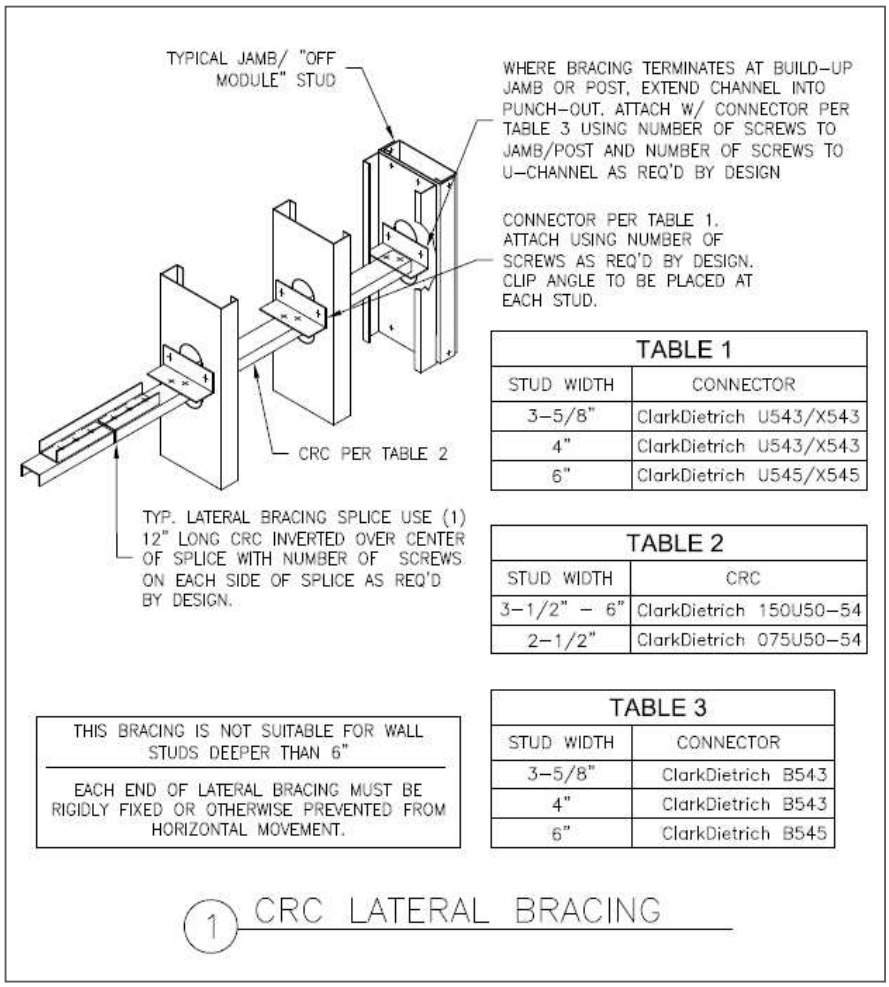


EasyClip B-Series Clip Angle

EasyClip™ B-Series™ CLIP ANGLES

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
B543	16	54	0.0566	1-1/2 x 1-1/2 x 3	400
B545	16	54	0.0566	1-1/2 x 1-1/2 x 5-1/4	200
B547	16	54	0.0566	1-1/2 x 1-1/2 x 7-1/4	100
B549	16	54	0.0566	1-1/2 x 1-1/2 x 9-1/4	100
B683	14	68	0.0713	1-1/2 x 1-1/2 x 3	200
B685	14	68	0.0713	1-1/2 x 1-1/2 x 5-1/4	170
B687	14	68	0.0713	1-1/2 x 1-1/2 x 7-1/4	100
B689	14	68	0.0713	1-1/2 x 1-1/2 x 9-1/4	100
B973	12	97	0.1017	1-1/2 x 1-1/2 x 3	200
B975	12	97	0.1017	1-1/2 x 1-1/2 x 5-1/4	130
B977	12	97	0.1017	1-1/2 x 1-1/2 x 7-1/4	100
B979	12	97	0.1017	1-1/2 x 1-1/2 x 9-1/4	80

Typical Construction Details



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The technical content of this literature is effective 4/9/12 and supersedes all previous information.
Pub. No. CD-ClipExpress 4/12

EasyClip™ X-Series™ Clip Angle

Secures U-channel (cold-rolled channel) framing members for lateral bridging, or secure one framing member to another for rigid connections.

ClarkDietrich EasyClip™ X-Series™ clip angles are used to secure U-channel to wall studs for lateral bridging. U-Channel is passed through the stud knockout and an EasyClip X-Series clip is screw attached or welded to provide a rigid connection. X-Series clip angles and U-channel should not be used in lateral bridging when stud width exceeds 6."

ALTERNATIVE PRODUCTS

EasyClip™ U-Series™ Clip Angle
EasyClip™ S-Series™ Support Clip
SwiftClip™ LS-Series™ Support Clip
Spazzer® 5400 and Spazzer® 9200 Spacer Bars

PRODUCT DIMENSIONS

2" x 2" x 3-3/8"
2" x 2" x 5-3/4"
2" x 2" x 7-3/4"
2" x 2" x 9-3/4"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

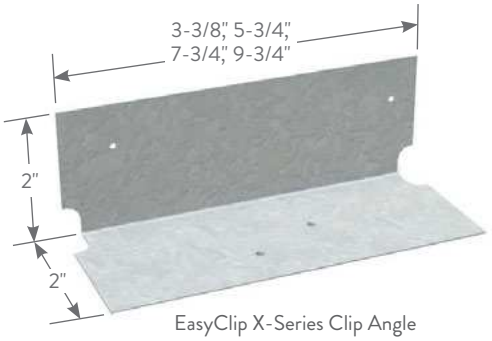
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

EasyClip X-Series Clip Angles are attached to cold-formed steel (CFS) framing members using #10 minimum self-drilling screws driven through the clip holes into the steel framing. Four pilot clip holes are provided and should be filled when this clip is used in a bridging application. This clip should not be more than 1/4" less in width than the cold-formed framing member.

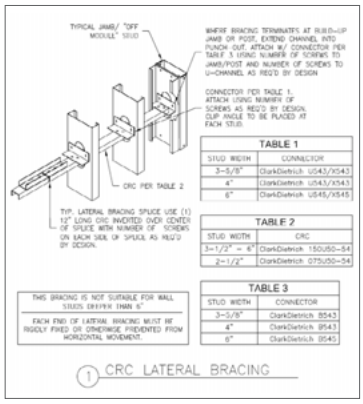


EasyClip X-Series Clip Angle

EasyClip™ X-Series™ CLIP ANGLES

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
X543	16	54	0.0566	2 x 2 x 3-3/8	200
X545	16	54	0.0566	2 x 2 x 5-3/4	170
X547	16	54	0.0566	2 x 2 x 7-3/4	100
X549	16	54	0.0566	2 x 2 x 9-3/4	100
X683	14	68	0.0713	2 x 2 x 3-3/8	200
X685	14	68	0.0713	2 x 2 x 5-3/4	100
X687	14	68	0.0713	2 x 2 x 7-3/4	100
X689	14	68	0.0713	2 x 2 x 9-3/4	80
X973	12	97	0.1017	2 x 2 x 3-3/8	100
X975	12	97	0.1017	2 x 2 x 5-3/4	100
X977	12	97	0.1017	2 x 2 x 7-3/4	60
X979	12	97	0.1017	2 x 2 x 9-3/4	60

Typical Construction Details



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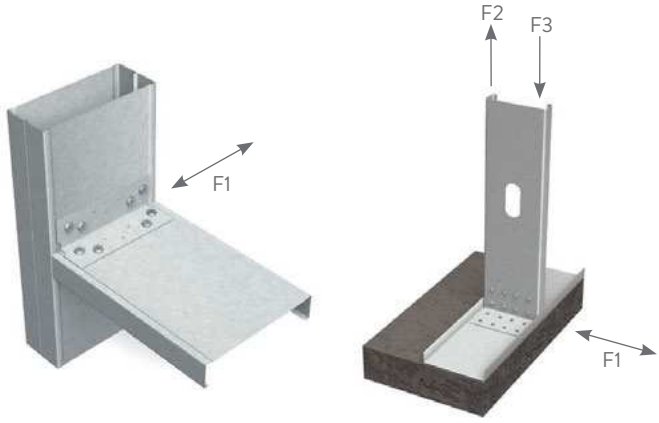


EasyClip™ X-Series™ CLIP ANGLES ALLOWABLE CLIP CAPACITIES (LBS)

Using #10-16 self-drilling screws

Product code	No. of screws to steel framing	Stud Thickness and Yield Strength								
		20ga (33mil) 33ksi			18ga (43mil) 33ksi			16ga (54mil) 50ksi		
		F1	F2	F3	F1	F2	F3	F1	F2	F3
X543	4	390 (390)	150 (531)	531	578 (578)	150 (788)	788	1028 (904)	150 (1400)	1400
X545	3	449 (449)	231 (531)	531	666 (666)	231 (788)	788	1184 (1184)	231 (1400)	1400
	5	677 (677)	231 (885)	885	1004 (1004)	231 (1313)	1313	1785 (1785)	231 (2333)	2333
	7	974 (974)	231 (1239)	1239	1445 (1445)	231 (1838)	1838	2568 (1810)	231 (2617)	3267
X547	5	761 (761)	311 (885)	885	1130 (1130)	311 (1313)	1313	2007 (2007)	311 (2333)	2333
	7	1031 (1031)	311 (1239)	1239	1529 (1529)	311 (1838)	1838	2718 (2718)	311 (3267)	3267
	9	1298 (1298)	311 (1593)	1593	1926 (1926)	311 (2363)	2363	3423 (2789)	311 (3527)	4200
X549	7	1102 (1102)	391 (1239)	1239	1635 (1635)	391 (1838)	1838	2905 (2905)	391 (3267)	3267
	9	1397 (1397)	391 (1593)	1593	2072 (2072)	391 (2363)	2363	3682 (3682)	391 (4200)	4200
	11	1690 (1690)	391 (1947)	1947	2508 (2508)	391 (2889)	2889	4457 (3779)	391 (4437)	5133
X683	4	390 (390)	238 (531)	531	578 (578)	238 (788)	788	1028 (1028)	238 (1400)	1400
X685	3	449 (449)	365 (531)	531	666 (666)	365 (788)	788	1184 (1184)	365 (1400)	1400
	5	677 (677)	365 (885)	885	1004 (1004)	365 (1313)	1313	1785 (1785)	365 (2333)	2333
	7	974 (974)	365 (1239)	1239	1445 (1445)	365 (1838)	1838	2568 (2278)	365 (3267)	3267
X687	5	761 (761)	492 (885)	885	1130 (1130)	492 (1313)	1313	2007 (2007)	492 (2333)	2333
	7	1031 (1031)	492 (1239)	1239	1529 (1529)	492 (1838)	1838	2718 (2718)	492 (3267)	3267
	9	1298 (1298)	492 (1593)	1593	1926 (1926)	492 (2363)	2363	3423 (3423)	492 (4200)	4200
X689	7	1102 (1102)	619 (1239)	1239	1635 (1635)	619 (1838)	1838	2905 (2905)	619 (3267)	3267
	9	1397 (1397)	619 (1593)	1593	2072 (2072)	619 (2363)	2363	3682 (3682)	619 (4200)	4200
	11	1690 (1690)	619 (1947)	1947	2508 (2508)	619 (2889)	2889	4457 (4457)	619 (5133)	5133
X973	4	390 (390)	485 (531)	531	578 (578)	485 (788)	788	1028 (1028)	485 (1400)	1400
X975	3	449 (449)	531 (531)	531	666 (666)	743 (788)	788	1184 (1184)	743 (1400)	1400
	5	677 (677)	743 (885)	885	1004 (1004)	743 (1313)	1313	1785 (1785)	743 (2333)	2333
	7	974 (974)	743 (1239)	1239	1445 (1445)	743 (1838)	1838	2568 (2568)	743 (3267)	3267
X977	5	761 (761)	885 (885)	885	1130 (1130)	1002 (1313)	1313	2007 (2007)	1002 (2333)	2333
	7	1031 (1031)	1002 (1239)	1239	1529 (1529)	1002 (1838)	1838	2718 (2718)	1002 (3267)	3267
	9	1298 (1298)	1002 (1593)	1593	1926 (1926)	1002 (2363)	2363	3423 (3423)	1002 (4200)	4200
X979	7	1102 (1102)	1239 (1239)	1239	1635 (1635)	1260 (1838)	1838	2905 (2905)	1260 (3267)	3267
	9	1397 (1397)	1260 (1593)	1593	2072 (2072)	1260 (2363)	2363	3682 (3682)	1260 (4200)	4200
	11	1690 (1690)	1260 (1947)	1947	2508 (2508)	1260 (2889)	2889	4457 (4457)	1260 (5133)	5133

Notes:

Screw Capacity Notes:

1 The tabulated value indicates the number of screws in a single clip leg attached to the cold-formed steel (CFS) framing.

2 Screws shall be attached in a symmetric manner starting at the top and bottom and moving toward the center.

3 The allowable values for F1 are based only on the shear capacity of the clip leg attached to the CFS framing. The capacity of the attachment to other materials and structures must be checked separately.

4 The allowable values for F2 assume mechanical fasteners are attached to the structure, and are located no more than 1" away from the angle bend. Mechanical fasteners to other materials and structures must be checked separately.

5 This table is intended for use by qualified engineers only. It is the responsibility of the engineer to verify that the tabulated values apply to a specific connection application.

6 When clips have combinations of F1, F2 and F3, use a linear interaction for combinations of F1 and F3, and a squared interaction for combinations of F1 and F2.

7 Allowable loads have not been increased 33% for wind or seismic.

8 For connections made to 14ga (68mil) and 12ga (97mil), use the tabulated values for 16ga (54mil), 50ksi.

9 It is the responsibility of the design professional to detail the drawings for proper clip attachment.

10 Contact ClarkDietrich Technical Services at 888-437-3244 for assistance.

Weld Capacity Notes:

1 F1 and F2 values in parentheses are maximum shear and tension capacities when the clips are welded to the base structure (min 3/16"—36ksi steel).

2 Listed weld capacities are computed assuming an E70XX welding rod or wire.

3 The clips are to be welded to the structure along the back corner along the complete length of the clip. When secondary welds are used to hold the clip in place, they are not used in capacity calculations.

EasyClip™ A-Series™ End Clip

For knee-wall connections or to reinforce jamb stud connections at the primary frame.

ClarkDietrich EasyClip™ A-Series™ end clips are most commonly used to reinforce connections in knee-wall applications or to reinforce jamb stud connections to the primary frame. These clips are unpunched as the specific application will determine the appropriate number and placement of fasteners.

ALTERNATIVE PRODUCTS

EasyClip™ D-Series™ Anchor Clip
EasyClip™ T-Series™ Tall Anchor Clip
SwiftClip™ LA-Series™ Support Clip

PRODUCT DIMENSIONS

3" x 3" x 3"
3" x 3" x 6"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

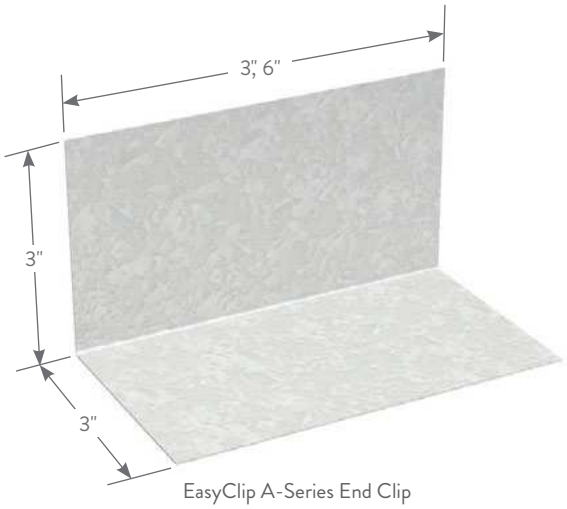
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

EasyClip A-Series end clips are attached to cold-formed steel (CFS) framing members using #10 minimum self-drilling screws. Clips can also be welded to the CFS framing. Connections to the building frame can be made with powder-actuated fasteners, drill-in concrete anchors or welding. When using the tabular values for a welded clip, provide a full weld to the structure, top to bottom, along the outside of the clip. A 3/4" minimum weld to the outside edge of the 3" leg is also recommended to control warping or to hold the clip in place before final welding.



EasyClip A-Series End Clip

EasyClip™ A-Series™ END CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
A543	16	54	0.0566	3 x 3 x 3	100
A546	16	54	0.0566	3 x 3 x 6	100
A683	14	68	0.0713	3 x 3 x 3	100
A686	14	68	0.0713	3 x 3 x 6	100
A973	12	97	0.1017	3 x 3 x 3	100
A976	12	97	0.1017	3 x 3 x 6	50

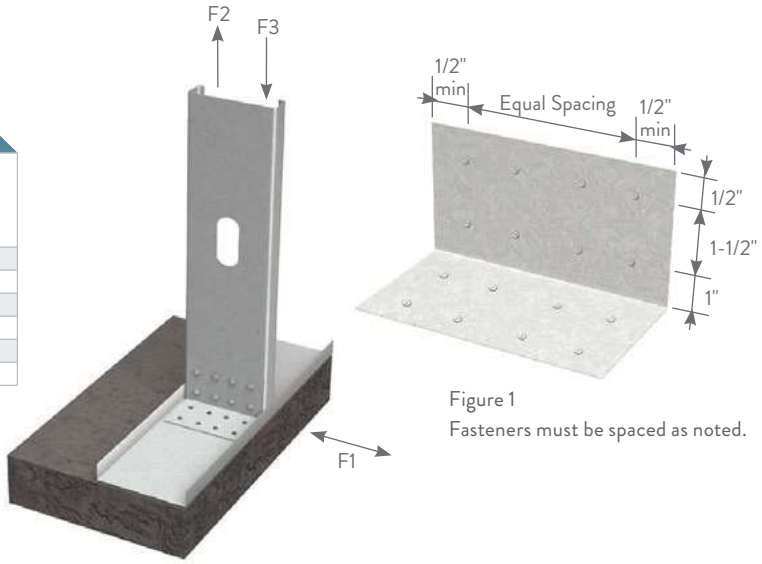


Figure 1
Fasteners must be spaced as noted.

EasyClip™ A-Series™ END CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

Using #10-16 self-drilling screws

Clip	No. of screws to steel framing (1)	Stud Thickness and Yield Strength								
		20ga (33mil) 33ksi			18ga (43mil) 33ksi			16ga (54mil) 50ksi		
		F1	F2	F3	F1	F2	F3	F1	F2	F3
A543	4	354 (354)	120 (708)	708	525 (375)	120 (1050)	1050	775 (375)	120 (1365)	1381
	6	531 (375)	120 (1062)	1062	775 (375)	120 (1365)	1381	775 (375)	120 (1365)	1381
A546	6	531 (531)	241 (1062)	1062	788 (788)	241 (1576)	1576	1400 (1355)	241 (2730)	2800
	8	708 (708)	241 (1416)	1416	1050 (1050)	241 (2101)	2101	1867 (1355)	241 (2730)	3452
	10	885 (885)	241 (1770)	1770	1313 (1313)	241 (2626)	2626	2333 (1355)	241 (2730)	3452
	12	1062 (1062)	241 (2124)	2124	1576 (1355)	241 (2730)	3151	2634 (1355)	241 (2730)	3452
A683	4	354 (354)	190 (708)	708	525 (472)	190 (1050)	1050	933 (472)	190 (1718)	1867
	6	531 (472)	190 (1062)	1062	788 (472)	190 (1576)	1576	1149 (472)	190 (1718)	2353
A686	6	531 (531)	381 (1062)	1062	788 (788)	381 (1576)	1576	1400 (1400)	381 (2800)	2800
	8	708 (708)	381 (1416)	1416	1050 (1050)	381 (2101)	2101	1867 (1705)	381 (3436)	3733
	10	885 (885)	381 (1770)	1770	1313 (1313)	381 (2626)	2626	2333 (1705)	381 (3436)	4667
	12	1062 (1062)	381 (2124)	2124	1576 (1576)	381 (3151)	3151	2800 (1705)	381 (3436)	5600
A973	4	354 (354)	388 (708)	708	525 (525)	388 (1050)	1050	933 (673)	388 (1867)	1867
	6	531 (531)	388 (1062)	1062	788 (673)	388 (1576)	1576	1400 (673)	388 (2451)	2800
A976	6	531 (531)	775 (1062)	1062	788 (788)	775 (1576)	1576	1400 (1400)	775 (2800)	2800
	8	708 (708)	775 (1416)	1416	1050 (1050)	775 (2101)	2101	1867 (1867)	775 (3733)	3733
	10	885 (885)	775 (1770)	1770	1313 (1313)	775 (2626)	2626	2333 (2333)	775 (4667)	4667
	12	1062 (1062)	775 (2124)	2124	1576 (1576)	775 (3151)	3151	2800 (2432)	775 (4903)	5600

Notes:

Screw Capacity Notes:

1 The tabulated value indicates the number of screws in a single clip leg attached to the cold-formed steel (CFS) framing.

2 Screws shall be attached in a symmetric manner starting at the top and bottom moving to the center, see Figure 1 opposite page.

3 The allowable values for F1 are based only on the shear capacity of the clip leg attached to the CFS framing. The capacity of the attachment to other materials and structures must be checked separately.

4 The allowable values for F2 assume mechanical fasteners are attached to the structure and are located no more than 1" away from the angle bend. Mechanical fasteners to other materials and structures must be checked separately.

5 This table is intended for use by qualified engineers only. It is the responsibility of the engineer to verify that the tabulated values apply to a specific connection application.

6 When clips have combinations of F1, F2 and F3, use a linear interaction for combinations of F1 and F3, and a squared interaction for combinations of F1 and F2.

7 Allowable loads have not been increased 33% for wind or seismic.

8 For connections made to 14 gauge. (68mil) and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi.

9 It is the responsibility of the design professional to detail the drawings for proper clip attachment.

10 Contact ClarkDietrich at 888-437-3244 for technical assistance.

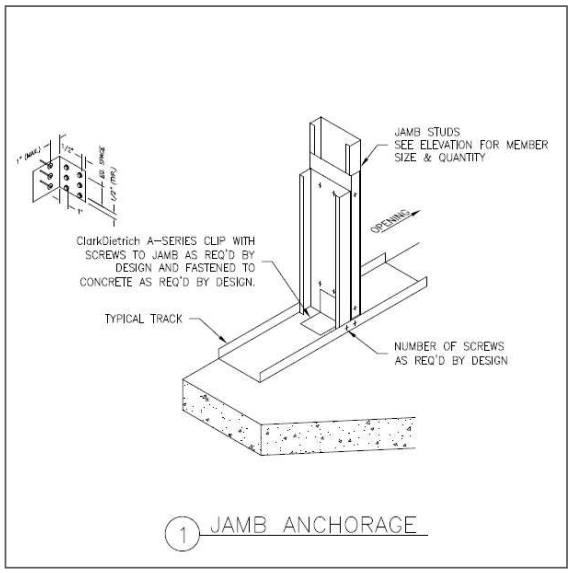
Weld Capacity Notes:

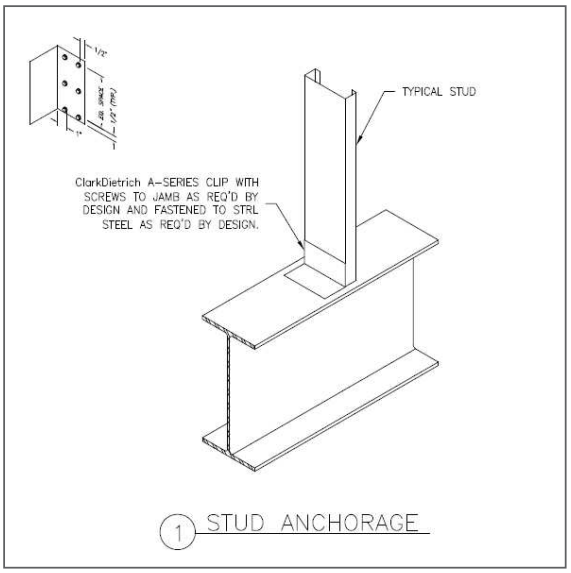
1 F1 and F2 values in parentheses are maximum shear and tension capacities when the clips are welded to the base structure (min. 3/16"—36ksi steel).

2 Listed weld capacities are computed assuming an E70XX welding rod or wire.

3 The clips are to be welded to the structure along the back corner along the complete length of the clip. When secondary welds are used to hold the clip in place, they are not used in capacity calculations. 3/4" min. secondary weld as required to control warping or to hold clip in place before final welding.

Typical Construction Details





Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

EasyClip™ D-Series™ Anchor Clip/EasyClip™ T-Series™ Tall Anchor Clip

Cost-effective tie-down solutions for knee walls, shear walls and truss connections.

ClarkDietrich EasyClip™ D-Series™ anchor clips and T-Series™ tall anchor clips are high-performance, cost-effective solutions for knee wall-to-foundation connections, light-duty shear wall-to-foundation connections and truss-to-wall connections. These multi-application clips feature reinforced stiffening ribs that provide superior design values for maximum performance. The EasyClip D-Series anchor clips and T-Series tall anchor clips are designed to resist horizontal, torsional and vertical (uplift) loads. These clips are prepunched with a series of attachment holes including anchor bolt, kwik-con and screw holes, for efficient and accurate fastener placement.

ALTERNATIVE PRODUCTS

EasyClip™ A-Series™ End Clip
SwiftClip™ LA-Series™ Support Clip
Uni-Clip™

PRODUCT DIMENSIONS

EasyClip D-Series:
2" x 2" x 3-1/2"
2" x 2" x 5-1/2"

EasyClip T-Series:
2" x 4" x 3-1/2"
2" x 4" x 5-1/2"

MATERIAL SPECIFICATIONS

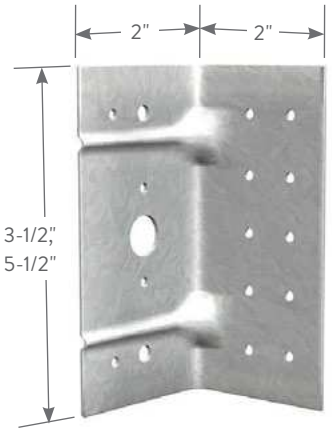
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

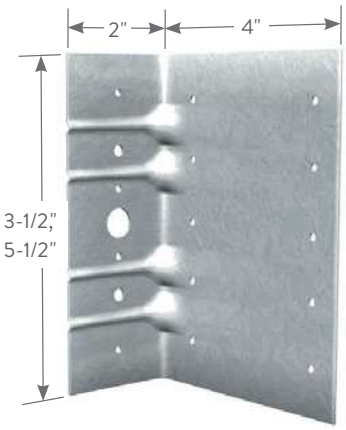
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Install EasyClip D-Series and T-Series anchor clips by attaching the screw hole only leg to the web of the stud, joist, rafter or track with the applicable number of fasteners (screws or welds). Secure bottom leg (anchor bolt hole) to structure using prepunched holes provided with appropriate fastener type and number of fasteners according to design based on load requirements.



EasyClip D-Series Anchor Clip



EasyClip T-Series Tall Anchor Clip

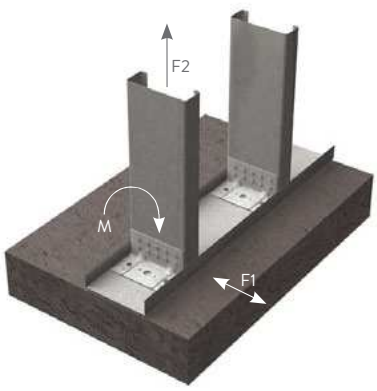
EasyClip™ D-Series™ ANCHOR CLIPS AND T-Series™ TALL ANCHOR CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
D683	14	68	0.0713	2 x 2 x 3-1/2	40
T683	14	68	0.0713	2 x 4 x 3-1/2	40
D685	14	68	0.0713	2 x 2 x 5-1/2	40
T685	14	68	0.0713	2 x 4 x 5-1/2	40
D973	12	97	0.1017	2 x 2 x 3-1/2	40
T973	12	97	0.1017	2 x 4 x 3-1/2	40
D975	12	97	0.1017	2 x 2 x 5-1/2	40
T975	12	97	0.1017	2 x 4 x 5-1/2	40

EasyClip™ D-Series™ ANCHOR CLIPS AND T-Series™ TALL ANCHOR CLIPS

Allowable loads (lbs)

Product code	Stud thickness gauge (mils)	Stud Fy (ksi)	F1 (Shear), (lbs)			F2 (Tension), (lbs)			M(Moment), (in-lbs)	
			Number of #10-16 Screws to Stud						Kwik-Cons/ screws	1/2" Dia. Kwik-Bolts
			4	6	10	4	6	10		
D683	20 (33)	33	374	466	664*	444	444	444	1418	1068
	18 (43)	33	556	692*	986*#	444	444	444	1675	1068
	16 (54)	33	783*	974*#	1389*#	444	444	444	1675	1068
	16 (54)	50	1107*#	1377*#	1962*#	444	444	444	1675	1068
D973	20 (33)	33	374	466	664	560	840	889	1418	1418
	18 (43)	33	556	692	986*	832	889	889	2107*	2054
	16 (54)	33	783	974*	1389*#	889	889	889	2447*	2054
	16 (54)	50	1107*	1377*#	1962*#	889	889	889	2447*	2054
T683	20 (33)	33	280	383	604	444	444	444	1787*	1106
	18 (43)	33	416	569	897	444	444	444	2072*	1106
	16 (54)	33	586	802*	1264*#	444	444	444	2072*	1106
	16 (54)	50	828*	1133*#	1786*#	444	444	444	2072*	1106
T973	20 (33)	33	280	383	604	560	840	889	1787*	1787
	18 (43)	33	416	569	897	832	889	889	2527*	2110
	16 (54)	33	586	802	1264*	889	889	889	2527*	2110
	16 (54)	50	828	1133*	1786*#	889	889	889	2527*	2110
D685	20 (33)	33	456	599	879	560	698	698	2019	2019
	18 (43)	33	677	890	1306*	698	698	698	2865*	2234
	16 (54)	33	954	1254*	1839*#	698	698	698	2865*	2234
	16 (54)	50	1348*	1772*	2599*#%	698	698	698	2865*	2234
D975	20 (33)	33	456	599	879	560	840	889	2019	2019
	18 (43)	33	677	890	1306*	832	889	889	2999*	2999
	16 (54)	33	954	1254*	1839*#	889	889	889	3477*	3167
	16 (54)	50	1348*	1772*	2599*#%	889	889	889	3477*	3167
T685	20 (33)	33	337	445	678	560	698	698	2298*	1968
	18 (43)	33	501	661	1008*	698	698	698	3415*	1968
	16 (54)	33	706	931	1420*	698	698	698	3509*	1968
	16 (54)	50	997*	1316*	2006*#%	698	698	698	3509*	1968
T975	20 (33)	33	337	445	678	560	840	889	2298*	2298
	18 (43)	33	501	661	1008*	832	889	889	3415*	3059
	16 (54)	33	706	931	1420*	889	889	889	4416*	3059
	16 (54)	50	997*	1316*	2006*#%	889	889	889	4416*	3059



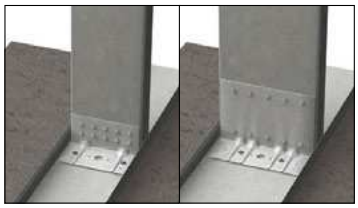


Figure 1 Kwik-Cons

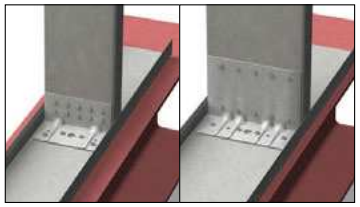


Figure 2 #12-24 screws

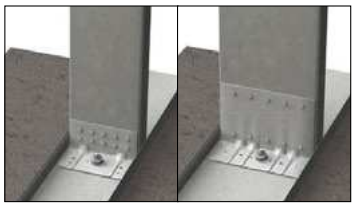


Figure 3 Kwik-Bolts

Notes:

1 Capacities listed in the table/notes assume that no load reductions are required for spacing or edge distance of Kwik-Cons, screws, or Kwik-Bolts.

2 An " * " in the shear column indicates that the shear capacity is limited to 642 lbs for D683 and T683 clips, 917 lbs for D973 and T973 clips, and 994 lbs for D685, D975, T685, and T975 clips when using 1/4" x 1-3/4" Hilti® Kwik-Cons to 3000 psi concrete as shown in Figure 1.

3 A " # " in the shear column indicates that the shear capacity is limited to 963 lbs for D683 and T683 clips, 1374 lbs for D973 and T973 clips, and 1816 lbs for D685, D975, T685, and T975 clips when using #12-24 self tapping screws to 3/16" A36 steel as shown in Figure 2.

4 A " % " in the shear column indicates that the shear capacity is limited to 1970 lbs when using 1/2" x 2-1/4" Hilti Kwik-Bolts to 3000 psi concrete as shown in Figure 3.

5 A " * " in the moment column indicates that moment capacity is limited to 1706 in.-lb. for 3" clips, and 2231 in.-lbs for 5" clips when using 1/4" x 1-3/4" Hilti-Cons to 3000 psi concrete as shown in Figure 1.

6 Tabulated moment capacity is limited to a serviceability of 0.02 radians, or 1.1 degrees of rotation at the connection.

7 For 20 and 18 gauge studs, the tabulated moment capacity is based on 18 gauge minimum base track, with (1) #10-16 screw at each track leg to stud flange. For 16 gauge and heavier studs, the base track shall be 14 gauge minimum.

8 Tabulated moment capacity is based on a stud to clip connection using (6) #10-16 screws.

9 For single bolt connections, rotational restraint must be provided by the base track.

10 For 14 gauge (68mil) and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi studs.

11 It is the responsibility of the designer to properly detail connections on the contract drawings.

12 Use a linear interaction equation for connections involving any combination of F1, F2, and M.

13 Hilti is a registered trademark of Hilti Aktiengeseilschaft Corporation.

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

Simpson® Strong-Tie® Holdown (HD Series)

Secure and hold down shear walls to the structure foundation.

Simpson® Strong-Tie® holdowns provide cost-effective shear wall attachment and are used to transfer tension loads between floors or from structural members to the foundation. Two-piece welded construction comes in three sizes for optimal performance. Installation is made easy with prepunched holes.

ALTERNATIVE PRODUCTS

Simpson® Strong-Tie® Tension Tie
EasyClip™ T-Series™ Tall Anchor Clip

PRODUCT DIMENSIONS

HD8: 2-5/16" x 11"
HD10: 2-5/16" x 13-1/2"
HD15: 2-7/16" x 17"

MATERIAL SPECIFICATIONS

Gauge: 10 gauge (118mil)
10 gauge has 3/8" bearing plate
Design Thickness: 0.124 inches

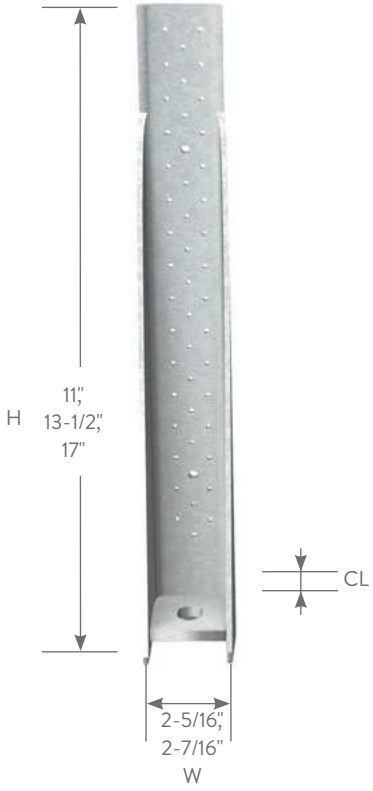
Gauge: 7 gauge (170mil)
7 gauge has 1/2" bearing plate
Uncoated Steel Thickness: 0.179 inches

Coating: G90
ASTM: A570, A653/A653M, A1011

INSTALLATION

Install the Simpson HD holdowns using SSTB anchor bolts or alternate anchorage calculated to resist the tension load for your specific application. Use steel nylon locking nuts or thread adhesive to minimize the chance of nut spin. Secure the HD holdown to the steel framing member by filling all the prepunched holes with #10 screws.

Reference section R603.7.2 of the International Residential Code (IRC) for holdown requirements in residential applications. Consult the engineer of record for commercial applications.



Simpson Strong-Tie Holdown

SIMPSON® Strong-Tie® HOLDOWNS

Product code	Simpson reference	Thickness			Size (in)	Packaging
		Gauge	Mils	Design thickness (in)		
HD8	S/HD8S	10	118	0.1242	2-5/16 x 11	Dependent on Order Quantity
HD10	S/HD10S	10	118	0.1242	2-5/16 x 13-1/2	
HD15	S/HD15S	7	170	0.1790	2-7/16 x 17	

ICBO ER #5275 recognized

SIMPSON® Strong-Tie® HD8, HD10, HD15 HOLDOWNS

Product code	Simpson reference	Fasteners		Stud member thickness mil (ga)	ASD	
		Found. anchor diameter	Stud fasteners		Tension load (lbs)	Deflection at ASD load
HD8	S/HD8S	7/8	17 – #14	2-33 (2-20ga)	7335	0.120
				2-43 (2-18ga)	8750	0.086
				2-54 (2-16ga)	8855	0.106
				Steel Fixture	10840	0.053
HD10	S/HD10S	7/8	22 – #14	2-33 (2-20ga)	7400	0.122
				2-43 (2-18ga)	11120	0.112
				2-54 (2-16ga)	12220	0.096
				Steel Fixture	12375	0.043
HD15	S/HD15S	1	30 – #14	2-43 (2-18ga)	12110	0.096
				2-54 (2-16ga)	13500	0.110
				Steel Fixture	15810	0.043

Notes:

1 Designer shall specify the foundation anchor material type, length, embedment and configuration. Tabulated loads may exceed anchor bolt ASTM A36 or A307 tension capacities.

2 Stud design by specifier. Tabulated loads are based on a minimum stud thickness for faster connection.

3 1/4" self-drilling screws can be substituted for #14.

4 Deflection at ASD loads includes fastener slip, holdown elongation and anchor bolt elongation (L=4").

5 Simpson® and Simpson Strong-Tie® are trademarks of the Simpson Strong-Tie Company, Inc.

Sources of deflection at the shear wall holdown connections:

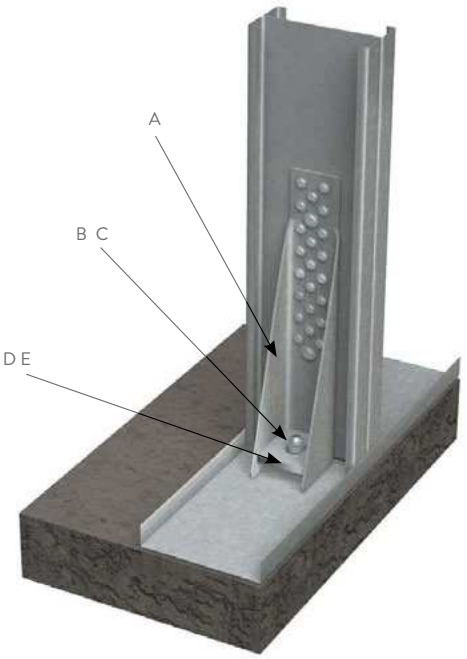
A Eccentricity in stud—when a holdown is installed on only one side of the stud, an eccentricity exists during loading that can cause additional movement in the shearwall system.

B Nut spin—unrestrained anchor bolt nuts can spin loose during cyclic loading: the use of steel nylon locking nuts or thread adhesive may prevent nut spin.

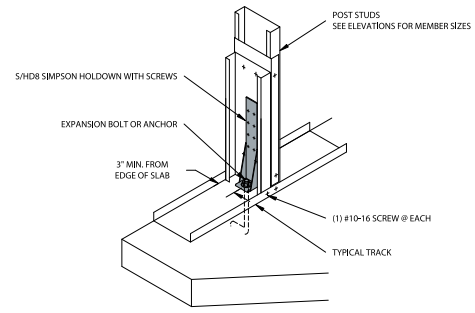
C Lack of nut tightening—additional movement can occur when nuts are not tightened sufficiently.

D Deflection of the holdown—deflection can occur in the holdown under load caused by stresses due to earthquake or high wind.

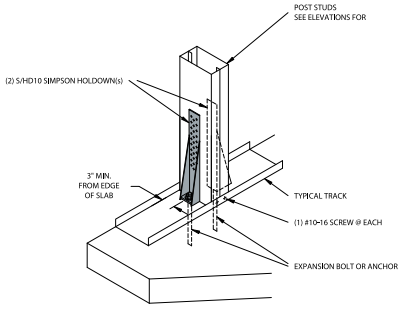
E Vertical deflection at the holdown seat caused by stud rotation—lateral displacement at the top of the wall rotates the stud around its base causing the holdown base plate to displace vertically.



Typical Construction Details



1 POST ANCHORAGE



1 POST ANCHORAGE

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Simpson® Strong-Tie® Tension Tie (HT14/SLTT)

Single-piece tension ties for shear wall anchorage for light to medium uplift requirements.

Simpson® Strong-Tie® tension ties are designed to provide an economical option for light to medium uplift requirements. Ideal for retrofit or new construction, HT14 tension ties provide high-strength, post-pour, concrete-to-steel connections.

ALTERNATIVE PRODUCTS

Simpson® Strong-Tie® Holdown
EasyClip™ D-Series™ Anchor Clip
EasyClip™ T-Series™ Tall Anchor Clip

PRODUCT DIMENSIONS

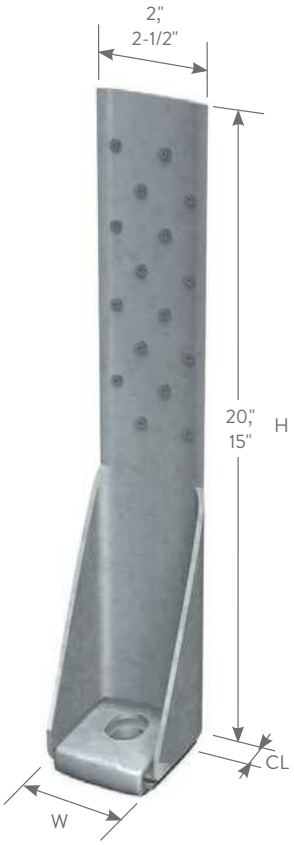
HT14: 2-1/2" x 15"
SLTT: 2" x 20"

MATERIAL SPECIFICATIONS

Gauge: 11 gauge (114mil)
Uncoated Steel Thickness: 0.120 inches
Coating: G90
ASTM: A653/A653M

INSTALLATION

Install the Simpson Strong-Tie tension tie using SSTB anchor bolts or alternate anchorage calculated to resist the tension load for your specific application. Use steel nylon locking nuts or thread adhesive to minimize the chance of nut spin. No washers are required. Secure the HT14 tension tie to the steel framing member by filling all the prepunched holes with the specified number and type of screw.



Simpson Strong-Tie Tension Tie

SIMPSON® Strong-Tie® TENSION TIES

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
HT14	11	114	0.120	2-1/2 x 15	10
SLTT	12	97	0.102	2 x 20	20

SIMPSON® Strong-Tie® TENSION TIES

Product code	Simpson reference	Dimensions			Fasteners		Allowable tension loads (lbs)
		W (in)	H (in)	CL (in)	Anchor dia. (in)	Screws	
HT14	S/HTT14	2-1/2	15	1-1/4	5/8	14 – #10	4385
SLTT	S/LTT20	2	20	1-1/2	1/2	8 – #10	1200

Notes:

1 The designer shall specify the anchor embedment and configuration. See SSTB anchor bolts.

2 Allowable loads have been increased 33% for wind or earthquake loading with no further increase allowed.

3 Allowable loads apply to 20 gauge members.

4 Multiply the loads shown by 0.75 when a 33% increase for wind or earthquake loading is not allowed by the design standard being used or when the 0.75 load combination factor in AISI Section A5.1.3 (1996 edition) is not allowed.

5 See S/HD notes regarding deflection at highest allowable design load.

6 Simpson® and Simpson Strong-Tie® are trademarks of the Simpson Strong-Tie® Company, Inc.

GP-Series™ Unpunched Gusset Plate

Use in conjunction with X-bracing in load-bearing shear wall assemblies to resist racking under wind and seismic loads.

Gusset plates and diagonal tension strapping components are used in combination to provide shear wall (racking restraint) for light-gauge, load-bearing framing under wind and seismic loads. Resisting uplift and shear forces, they are normally installed on both sides of the wall directly over the framing members.

CAUTION: Racking loads are first transferred to the roof or floor decking and then to the shear walls (X-bracing). The X-bracing then relies on a proper anchorage to the foundation to resist uplift and shear forces. In order for the system to function properly, the load path from the roof or floor deck to the shear walls to the foundation must be complete. This normally requires additional bracing, blocking, track and rim splices, drag struts, uplift anchors and heavy-duty foundations.

STANDARD PRODUCT DIMENSIONS

6" x 6"
6" x 12"
12" x 12"
Custom sizes, shapes, and gauges available.

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

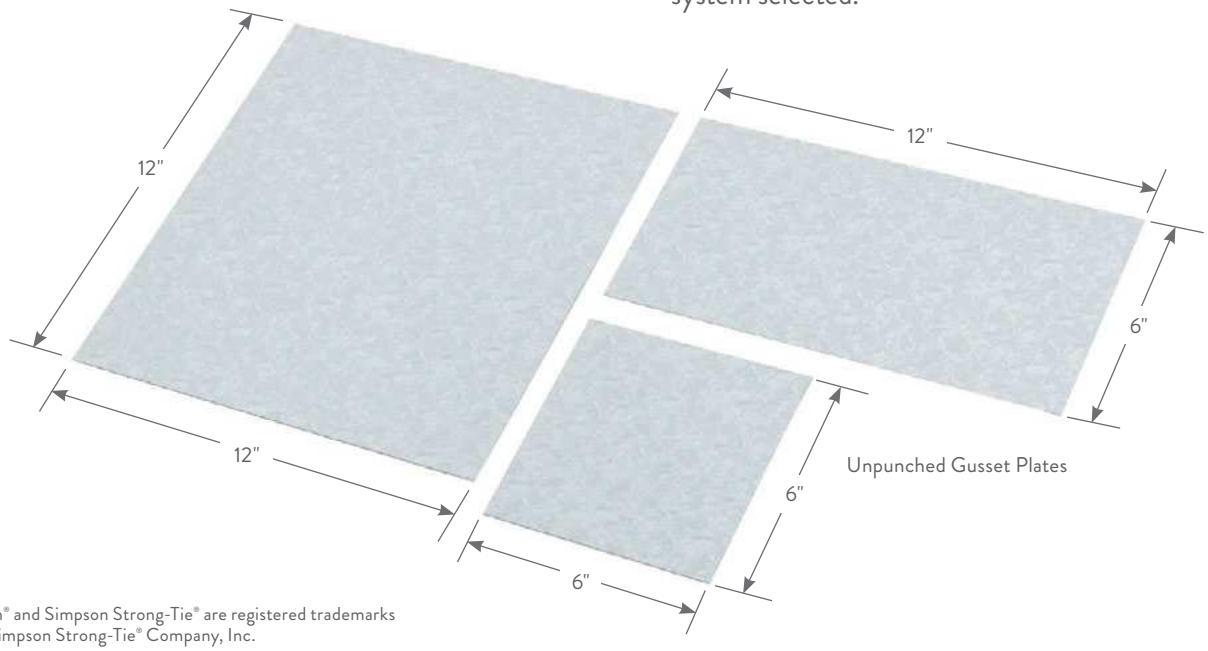
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

Straps are positioned diagonally from the bottom track to the top track. In order to resist load in each direction, an X-configuration should be used. At a minimum, double studs are positioned at ends of the X-brace to serve as compression studs. Straps are either attached directly to the compression studs or are attached via gusset plates. Compression studs must be anchored to the foundation, normally with Simpson®* uplift anchors. For multi-story construction, the uplift loads can be extremely high. It is recommended that the services of a qualified professional engineer be used to verify the applicability of the system selected.



Unpunched Gusset Plates

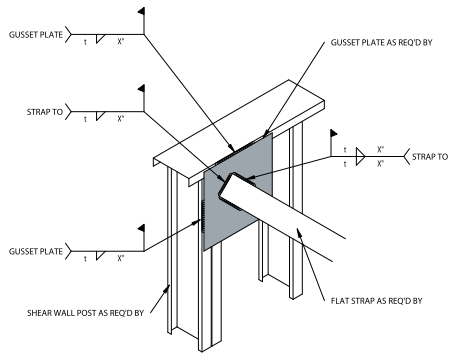
*Simpson® and Simpson Strong-Tie® are registered trademarks of the Simpson Strong-Tie® Company, Inc.

UNPUNCHED GUSSET PLATES FOR SHEAR WALL BRACING

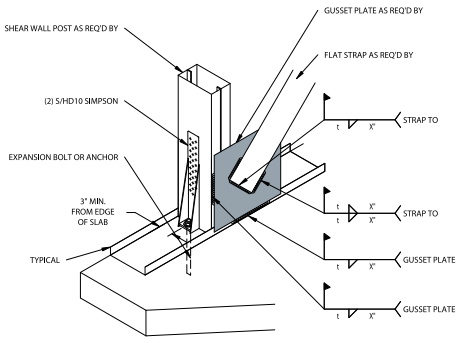
Product code	Thickness			Plate size (in)	Packaging Pcs.
	Gauge	Mils	Design thickness (in)		
GP	16	54	0.0566	6 x 6	25
				6 x 12	25
				12 x 12	25
	12	97	0.1017	6 x 6	25
				6 x 12	25
				12 x 12	25

GP-Series unpunched gusset plates are also used to facilitate connections between chord members for in-plane framing.

Typical Construction Details



1 SHEAR WALL TOP CONNECTION



1 SHEAR WALL BASE CONNECTION

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Pub. No. CD-ClipExpress 4/12

G-Series™ Punched Gusset Plate

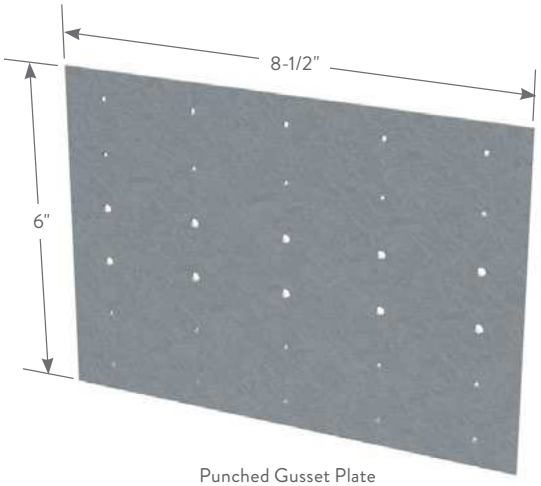
A multipurpose connector used for a variety of framing connections.

G-Series™ punched gusset plates come with multi-hole shapes for proper fastening to achieve desired performance. Used in a variety of framing connections—including roof framing, header framing and shear wall applications—the gusset plates eliminate angled cutting. Prepunched for easier, faster attachments, the gusset plates adapt to multiple configurations and varying construction tolerances.

CAUTION: Racking loads are first transferred to the roof or floor decking and then to the shear walls (X-bracing). The X-bracing then relies on a proper anchorage to the foundation to resist uplift and shear forces. In order for the system to function properly, the load path from the roof or floor deck to the shear walls to the foundation must be complete. This normally requires additional bracing, blocking, track and rim splices, drag struts, uplift anchors and heavy-duty foundations.

PRODUCT DIMENSIONS

6" x 8-1/2"



Punched Gusset Plate

MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Coating: G90
Yield Strength: 33ksi for 18 gauge
50ksi for 14 & 16 gauge
ASTM: A653/A653M

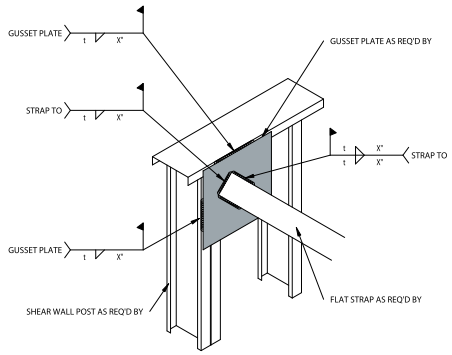
INSTALLATION

Straps are positioned diagonally from the bottom track to the top track. In order to resist load in each direction, an X-configuration should be used. At a minimum, double studs are positioned at ends of the X-brace to serve as compression studs. Straps are either attached directly to the compression studs or are attached via gusset plates. Compression studs must be anchored to the foundation, normally with Simpson®* uplift anchors. For multi-story construction, the uplift loads can be extremely high. It is recommended that the services of a qualified professional engineer be used to verify the applicability of the system selected.

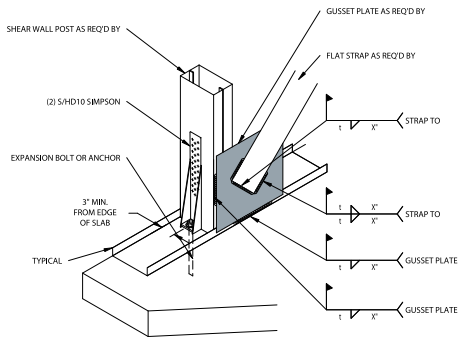
G-Series™ PUNCHED GUSSET PLATES

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
G436	18	43	0.0451	6 x 8-1/2	50
G546	16	54	0.0566	6 x 8-1/2	50
G686	14	68	0.0713	6 x 8-1/2	50

Typical Construction Details



1 SHEAR WALL TOP CONNECTION



1 SHEAR WALL BASE CONNECTION

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H-Series™ Universal Header Hanger

Connect box headers to jambs or beams to columns.

The H-Series™ universal header hanger is used to connect box headers to jambs or beams to columns and transfer large vertical loads. This universal hanger is designed so one part can be used for either side of the connection. The hanger also features a support tab for proper alignment and easy installation.

The H-Series hanger is also prepunched with a series of round, square and triangle holes to ensure proper fastener placement for specified loads.

ALTERNATIVE PRODUCTS

HDS® Framing System, HDSC Header Bracket, GP-Series™ Unpunched Gusset Plate

PRODUCT DIMENSIONS

6" x 8-1/2"

MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches

Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches

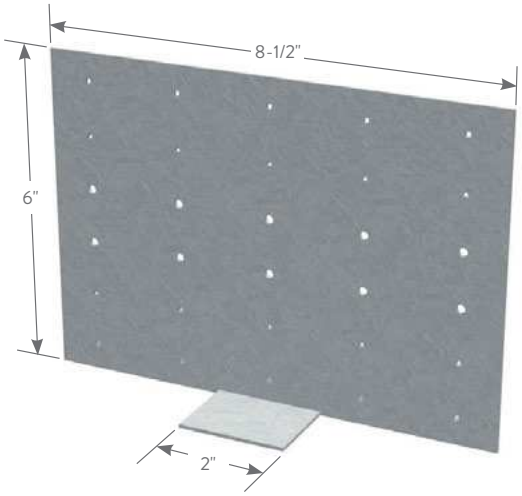
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Coating: G90
Yield Strength: 33ksi for 18 gauge
50ksi for 14 & 16 gauge
ASTM: A653/A653M

INSTALLATION

Install the H-Series universal header hanger to the jamb studs with the required number of screws as needed to achieve required loading. Normally two connectors are required, one on each side of the header.

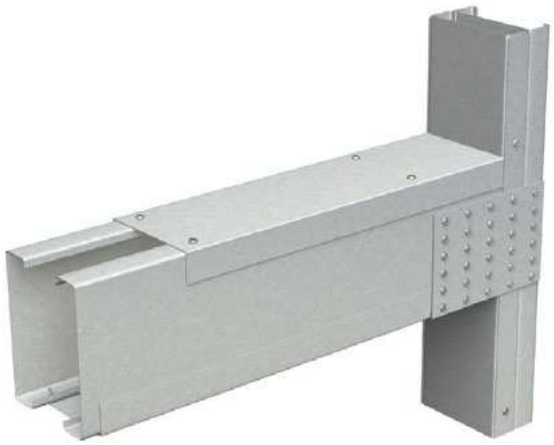
Position header on header support tabs and secure header to header hanger with number of fasteners required by design.



H-Series Universal Header Hanger

H-Series™ UNIVERSAL HEADER HANGERS

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
H436	18	43	0.0451	6 x 8-1/2	50
H546	16	54	0.0566	6 x 8-1/2	50
H686	14	68	0.07131	6 x 8-1/2	50



SCREW OPTIONS

(10) Screws
(6) at Header (4) at Jamb

(20) Screws
(12) at Header (8) at Jamb

(30) Screws
(18) at Header (12) at Jamb

ALLOWABLE LOADING CHART FOR SINGLE CONNECTORS

Connector	Framing gauge (mils)	Framing Fy (ksi)	10 Screws		20 Screws		30 Screws	
			Jamb capacity	Header capacity	Jamb capacity	Header capacity	Jamb capacity	Header capacity
H436 Using #10"-16" Screws	20 (33)	33	561	307	1121	507	1361	637
	18 (43)	33	832	455	1361	753	1361	945
	16 (54)	33	832	455	1361	753	1361	945
		50	832	455	1361	753	1361	945
	14 (68)	33	832	455	1361	753	1361	945
		50	832	455	1361	753	1361	945
	12 (97)	33	832	455	1361	753	1361	945
		50	832	455	1361	753	1361	945
H546 Using #10"-16" Screws	20 (33)	33	561	307	1121	507	1682	637
	18 (43)	33	832	455	1664	753	2496	945
	16 (54)	33	1172	641	2345	1061	2634	1332
		50	1682	919	2634	1522	2634	1910
	14 (68)	33	1655	905	2634	1498	2634	1880
		50	1682	919	2634	1522	2634	1910
	12 (97)	33	1682	919	2634	1522	2634	1910
		50	1682	919	2634	1522	2634	1910
H686 Using 1/4"-14" Screws	20 (33)	33	630	344	1260	570	1890	716
	18 (43)	33	935	511	1870	846	2805	1062
	16 (54)	33	1318	720	2635	1193	3821	1497
		50	1997	1091	3821	1807	3821	2268
	14 (68)	33	1860	1017	3720	1684	3821	2113
		50	2818	1541	3821	2551	3821	3201
	12 (97)	33	2818	1541	3821	2551	3821	3201
		50	2818	1541	3821	2551	3821	3201

Notes:

1 To determine the connection capacity, use the minimum value from the jamb and header columns. For instance, using an H686 for the 30-screw option with a 16 gauge, 50ksi jamb stud and a 12 gauge, 50ksi header, the allowable load per plate is 3201 lbs (i.e., the minimum of 3821 lbs for the jamb and 3201 lbs for the header).

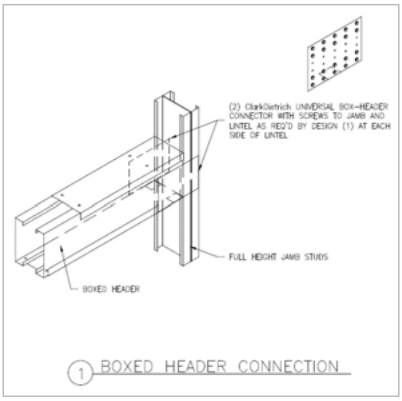
2 For the H436 and the H546, the tabulated capacity is based on #10-16 screws with an ultimate screw shear capacity of 1400 lbs per screw. For the H686, the tabulated capacity is based on 1/4"-14 screws with an ultimate screw shear capacity of 2600 lbs per screw.

3 H436 connectors are 33ksi, H546 and H686 connectors are 50ksi.

4 Reference figures above for screw placement of the 10-, 20- and 30-screw options.

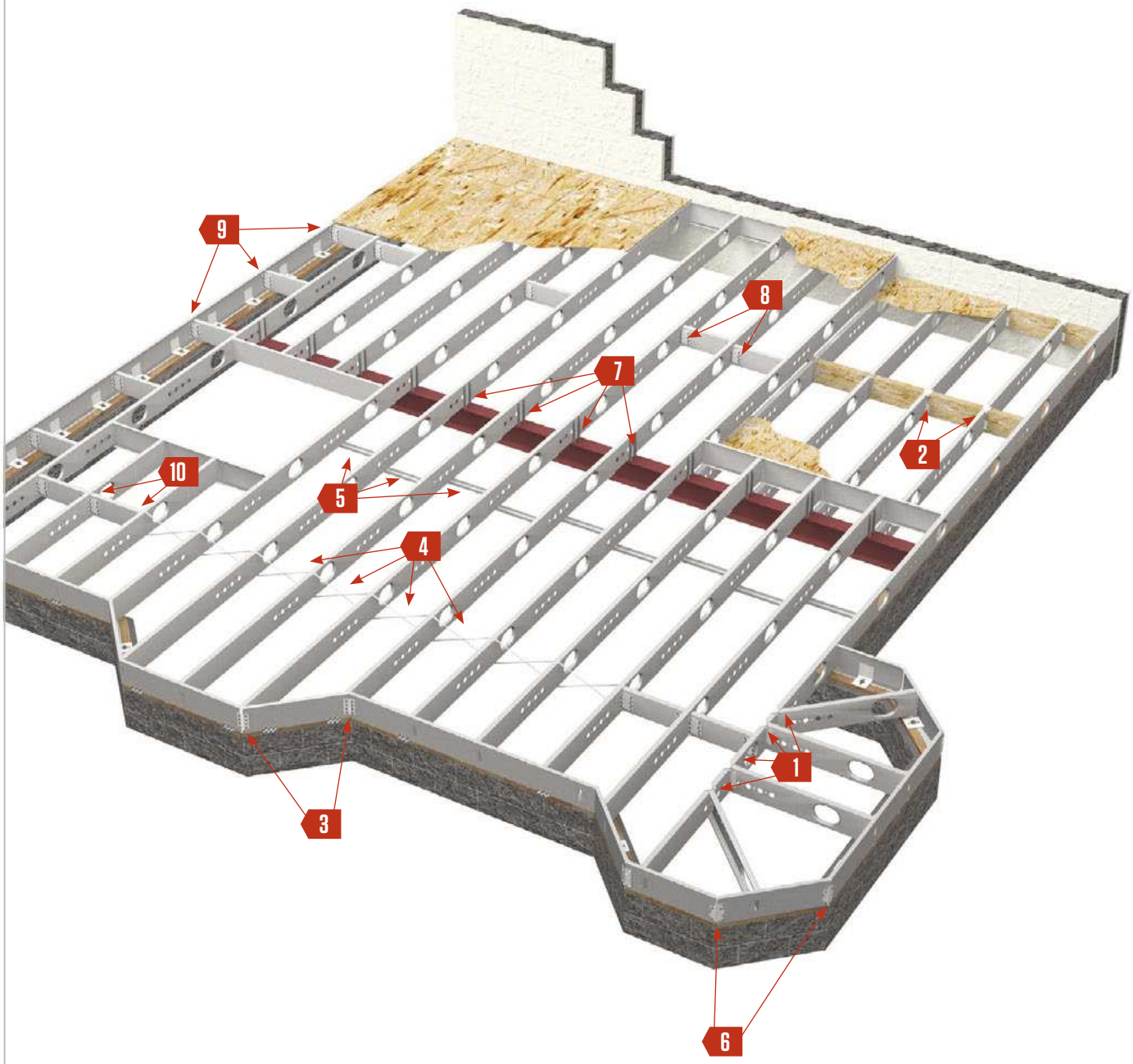
5 Values are based on a minimum of (2) back-to-back jamb studs as shown above.

Typical Construction Details



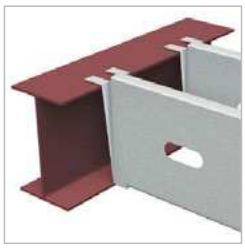
Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

Product Detail



1 Simpson® Strong-Tie® Joist Hanger
pages 62-63

2 Bridle Hanger
pages 64-65



3 Field Skewable TradeReady® Rim Track Splice Plate
pages 66-67

4 Tension Bracing
page 68

5 TradeReady® Structural Blocking
page 69

6 Simpson Strong-Tie® Skewable Angle
pages 70-71

7 EasyClip™ QuickTwist™ Web Stiffener
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10 EasyClip™ S-Series™ Support Clip
pages 38-39

Pub. No. CD-ClipExpress 4/12

Simpson® Strong-Tie® Joist Hanger (S/JCT8-14 and S/HJCT)

"One size fits all" flexibility and accommodates 8"–14" deep floor joists.

The Simpson® Strong-Tie® joist hanger provides maximum installation flexibility. This universal hanger can be used for 8"–14" deep wood or steel framing members. The hanger is easily field skewable and can accommodate up to 45° attachments. Floor joists can be attached from either side or easily doubled up. Each hanger is prepunched with various shaped holes for fast, easy and accurate fastener placement. Round holes are used for minimum loads, and both round and triangle holes are used for maximum loads. The S/JCT joist hanger is typically used to hang joists from wood, glue-lams, light-gauge steel or structural steel I-beams.

ALTERNATIVE PRODUCTS

CDBV Bridle Hanger
CDMB Bridle Hanger

PRODUCT DIMENSIONS

3-1/8" x 2-1/4" x 8"

MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

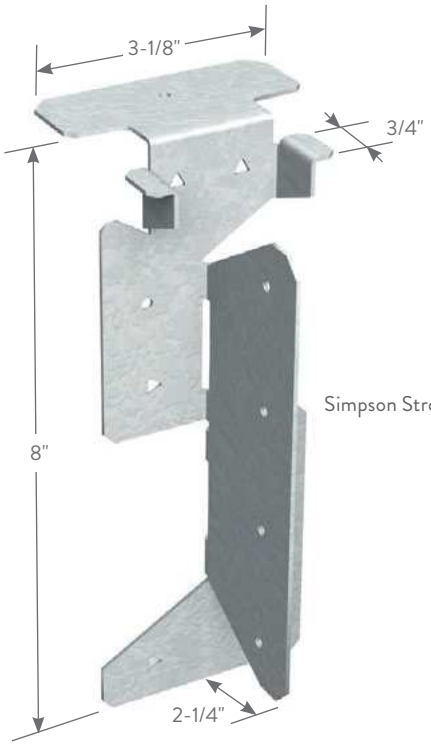
Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
ASTM: A653/A653M

INSTALLATION

Attach hanger with specified fasteners. Use round holes for minimum load; use round and triangle holes for maximum load. May be used for weld-on applications. The minimum required weld to the top flange is 1/8" x 2-1/2" fillet weld to each side of top flange.

S/JCT8-14
Weld-On Installation with an I-Beam



Simpson Strong-Tie Joist Hanger

SIMPSON® Strong-Tie® JOIST HANGERS

Product code	Simpson reference	Thickness		Design thickness (in)	Packaging Pcs./Carton
		Gauge	Mils		
S/JCT	S/JCT8-14	14	68	0.0713	50
S/JCT	S/HJCT	12	97	0.1017	50

S/JCT8-14
Double Joist Installation

S/JCT8-14
Skewed 45° Installation

S/JCT8-14
Installation with a Steel Header

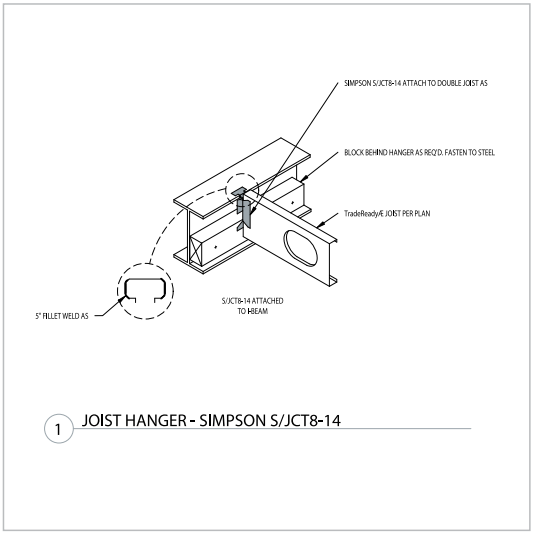
SIMPSON® Strong-Tie® JOIST HANGERS

Product code	Simpson reference	Fasteners			Allowable ASD Loads[1]		Fasteners			Allowable ASD Loads[2]	
		Steel Header		Joist	54 mil (16ga)		Wood Header		Joist	Uplift (160)	Down (100)
		Top	Face		Uplift	Down	Top	Face			
Straight Hanger											
S/JCT	S/JCT (min)	1 – #10	2 – #10	4 – #10	940	1195	1-10d	2-10d	4 – #10	565	945
S/JCT	S/JCT (max)	1 – #10	4 – #10	6 – #10	1435	2105	1-10d	4-10d	6 – #10	960	1465
S/HJCT	S/HJCT (min)	2 – #10	4 – #14	6 – #14	1510	2920	2-10d	4-SDS 1/4 x 3	6 – #14	1210	2625
S/HJCT	S/HJCT (max)	2 – #10	8 – #14	9 – #14	1670	3855	2-10d	8-SDS 1/4 x 3	9 – #14	1475	2980
Skewed Hanger											
S/JCT	S/JCT (min)	1 – #10	2 – #10	4 – #10	940	1135	1-10d	2-10d	4 – #10	395	845
S/JCT	S/JCT (max)	1 – #10	4 – #10	6 – #10	940	1185	1-10d	4-10d	6 – #10	790	1300
S/HJCT	S/HJCT (min)	2 – #10	4 – #10	6 – #14	1510	2305	2-10d	4-SDS 1/4 x 3	6 – #14	1210	1935

Notes:

1 Allowable loads for CFS headers are based on a single 54mil (16ga) steel.
2 Allowable loads for wood headers are based on 4x10 minimum DFL, specific gravity = 0.50.
3 Steel header must be braced to prevent web buckling per designer specification.
4 Steel joist shall be laterally braced per designer specification.
5 Screws shall be installed using joist hanger holes screwing through the hanger into the joist.
6 Backing in the steel beam cavity is not required behind the hanger for loads listed.
7 For joists with up to a 0.50" gap (short cut) use an adjustment factor of 0.87.
8 For joists with a 0.50" to 0.90" gap (short cut) use an adjustment factor of 0.75.
9 Simpson® and Simpson Strong-Tie® are registered trademarks of the Simpson Strong-Tie® Company, Inc.

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

Bridle Hanger (CDBV, CDMB)

Attach floor joists to structural steel beams or wood ledgers.

Bridle hangers are commonly used to attach light-gauge C-joists to structural steel beams or wood ledgers. Connections can be made with screws, powder-actuated fasteners, drill-in concrete anchors or welding. Single- and double-wide bridle hangers are also available in other widths and depths.

ALTERNATIVE PRODUCTS

S/JCT8-14 hanger

PRODUCT DIMENSIONS

2" x 8"
2" x 10"
2" x 12"
2" x 14"
*Available in other sizes

MATERIAL SPECIFICATIONS

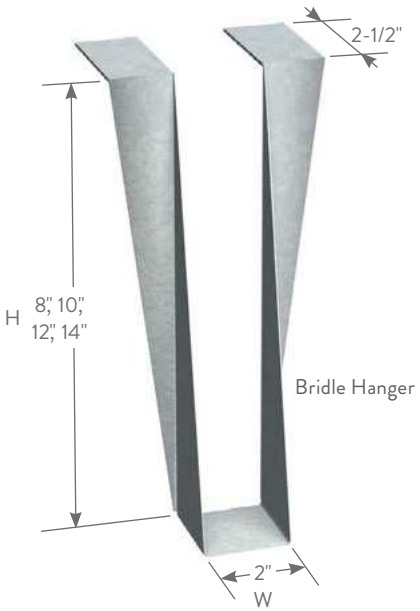
Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches

Coating: G90
ASTM: A653/ A653M

INSTALLATION

Attach bridle hanger to the primary frame as specified. When welding the hanger to the primary frame, a minimum of 1/8" x 2" fillet weld on each top flange is required. Distribute the weld equally on both top flanges. Uplift loads do not apply to weld-on applications. Place joist into hanger and secure with fasteners. If bridle hanger is less than beam depth, provide back blocking.

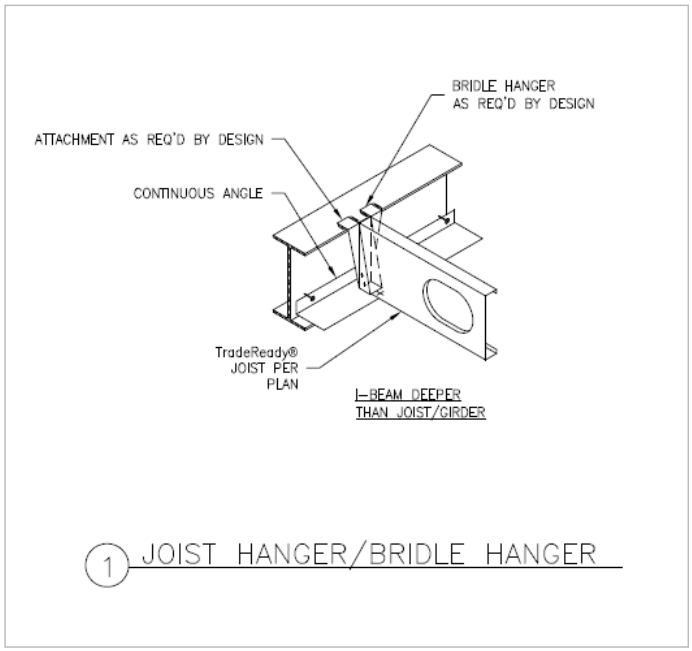


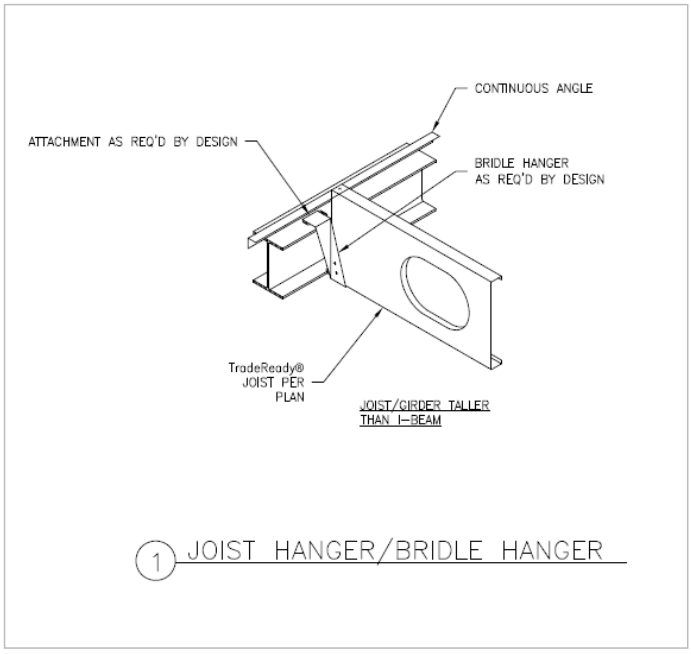
BRIDLE HANGERS

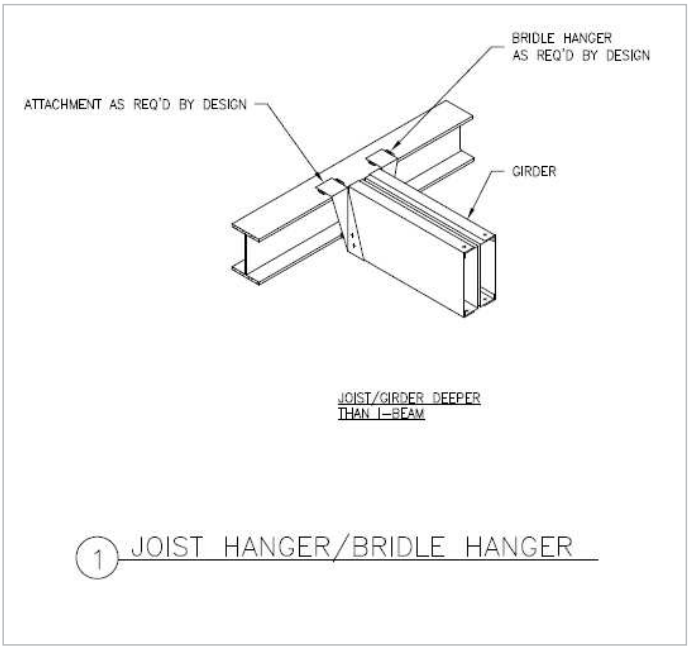
Product code	Thickness			Depth (H) (in)	Width (W) (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)			
CDBV	14	68	0.0713	8	2	25
				10	2	25
				12	2	25
				14	2	25
CDMB	12	97	0.1017	8	2	25
				10	2	25
				12	2	25
				14	2	25

Double-wide hangers available on request.
Other style hangers are available.

Typical Construction Details







Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

The technical content of this literature is effective 4/9/12 and supersedes all previous information. Pub. No. CD-ClipExpress 4/12

Field Skewable TradeReady® Rim Track Splice Plate (TDSP)

Ideal for splicing rim joist and is easily field skewable for off-angle rim joist connections.

The ClarkDietrich field skewable TradeReady® rim track splice plate provides an easy and efficient method for splicing TradeReady rim. This prepunched plate is also ideal for connecting and reinforcing the rim at bay or bow window details. The center of the plate allows for easy one-time field bending from 0° to 135°.

CAUTION: This plate can only be bent one time.

ALTERNATIVE PRODUCTS

Simpson® Strong-Tie® Skewable Angle

PRODUCT DIMENSIONS

4" x 6" (Can be bent to 2" x 2" x 6")

MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches
Yield Strength: 33ksi

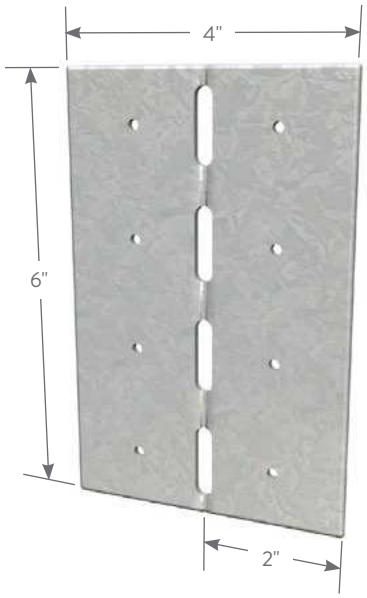
Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches
Yield Strength: 50ksi

Coating: G90
ASTM: A653/A653M

INSTALLATION

For splicing connections, align center slots in splice plate over the joint of the rim joists. Secure splice plate by filling all prepunched screw holes with #10 screws.

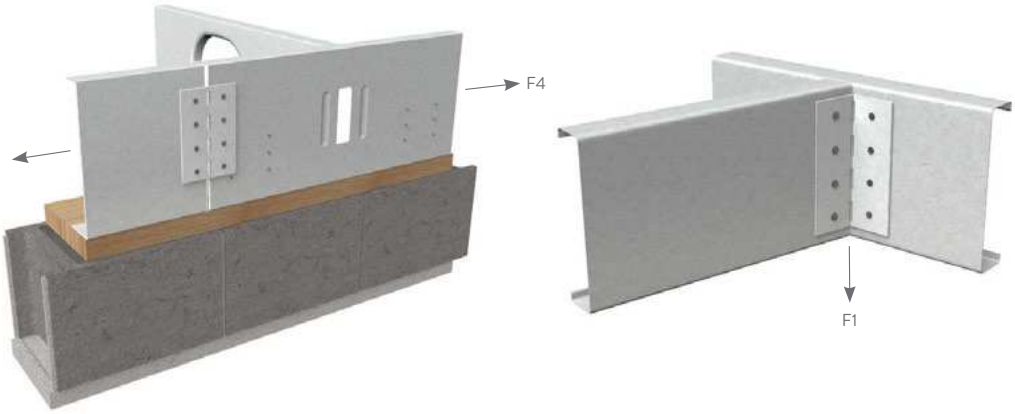
For off-angle connections, field bend (ONE TIME ONLY) to the required degree so the plate fits securely over the two adjoining members. Secure field skewable plate by filling all prepunched screw holes with #10 screws.



Field Skewable TradeReady Rim Track Splice Plate

FIELD SKEWABLE TradeReady® RIM TRACK SPLICE PLATES

Product code	Thickness			Size (in)	Packaging Pcs./Bucket
	Gauge	Mils	Design thickness (in)		
TDSP	18	43	0.0451	4 x 6	100
TDSP	16	54	0.0566	4 x 6	100



FIELD SKEWABLE TradeReady® RIM TRACK SPLICE PLATES

Allowable loads

Product code	TDSP gauge	Framing material gauge	Framing material yield (ksi)	Tension F4 (lbs)	Shear F1 (lbs)
TDSP	18	20	33	560	437
		18 or thicker	33	832	650
TDSP	16	20	33	560	437
		18	33	832	650
		16 or thicker	33	1172	915
			50	1680	1312

Notes:

1 Screws shall be attached in the pre-drilled holes provided.

2 The allowable values for F1 and F4 are to be used only when the clip leg is attached to the CFS framing. The screw pattern must be as shown above. The capacity of the attachment to other materials and structures must be checked separately.

3 This table is intended for use by qualified engineers only. It is the responsibility of the engineer to verify that the tabulated values apply to a specific connection application.

4 The screw diameter must be 0.19" (min.) for #10 screws.

5 The ultimate screw shear strength must be a minimum of 1400 lbs. for #10 screws.

6 Screws must be long enough so that at least three exposed threads are visible after installation.

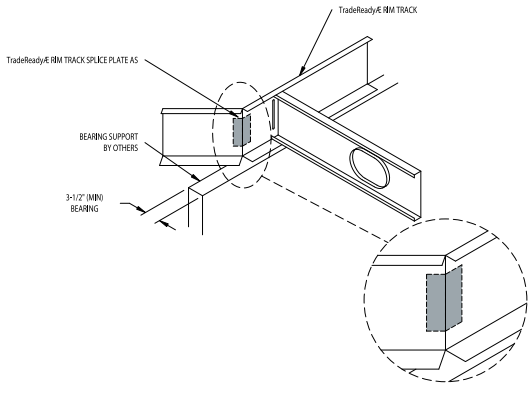
7 Allowable loads have not been increased 33% for wind or seismic.

8 For connections made to 14 gauge (68mil), and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi, when using TDSP (16 gauge). Similarly when TDSP (18 gauge) is used with thicker base materials, the values for 18 gauge x 33ksi are to be used.

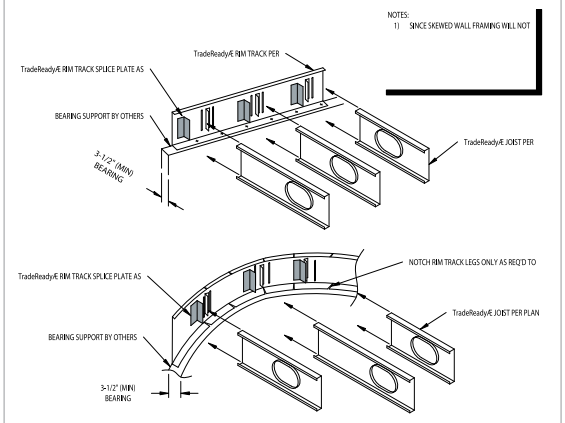
9 It is the responsibility of the design professional to detail the drawings for proper clip attachment.

10 Contact ClarkDietrich at 888-437-3244 for technical assistance.

Typical Construction Details



1 TradeReady RIM TRACK SPLICE PLATE



1 TradeReady RIM TRACK SPLICE PLATE

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Tension Bracing (CDTB)

In lieu of block and strap, prevents flange rotation and supports joist flanges in compression.

Tension bracing is used to prevent joist compression, flange lateral movement, and rotation. These tension ties are used as an alternative to the multiple components of traditional block and strapping. Tension ties are traditionally used with wood framing, but can also be used with conventional C-joists.

The tension bridging has a right-angled section with flattened ends 1-inch wide, with prepunched screw holes at each end. As a general rule, floor bracing or bridging is installed at 8' o.c. maximum. Tension bracing fits 1-5/8" to 3" flanges.

ALTERNATIVE PRODUCTS

TradeReady® Structural Blocking

PRODUCT DIMENSIONS

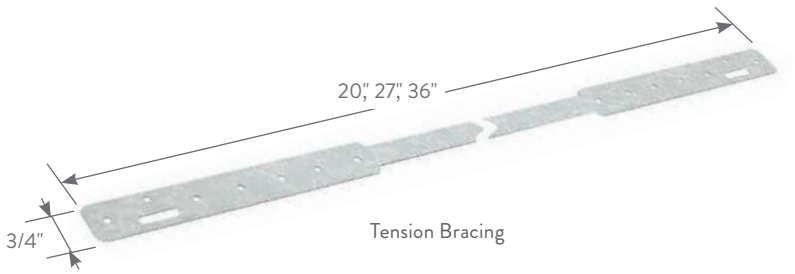
T20: 3/4" x 20"
T27: 3/4" x 27"
T36: 3/4" x 36"

MATERIAL SPECIFICATIONS

Gauge: 20 gauge (33mil)
Design Thickness: 0.0346 inches
Coating: G90
ASTM: A653/A653M

INSTALLATION

Tension bracing is secured to the top of the first joist and to the bottom of the next joist. The process is reversed so an "X" is formed in each joist bay. Tension bracing must be installed in pairs using two #10 screws at each end. The process is repeated in each joist bay.



TENSION BRACING SELECTOR GUIDE

Joist depth (in)	o.c. spacing (in)	Use product
7-1/4	12	T20
8	12	
9-1/4	12	
10	12	
11-1/4	12	
12	12	
7-1/4	16	T27
8	16	
9-1/4	16	
10	16	
11-1/4	16	
12	16	
9-1/4	24	T36
10	24	
11-1/4	24	
12	24	

TENSION BRACING

Product code	Thickness			Size (in)	Packaging Pcs./Bundle
	Gauge	Mils	Design thickness (in)		
T20	20	33	0.0346	3/4 x 20	50
T27	20	33	0.0346	3/4 x 27	50
T36	20	33	0.0346	3/4 x 36	50

TradeReady® Structural Blocking (TDSB)

Pre-cut structural blocking that installs easily to the underside of the joists to prevent joist rotation.

TradeReady® structural blocking is the third component of the TradeReady steel floor system. Prepunched for quick attachment, structural blocking is pre-cut to fit securely between the underside of the floor joists to prevent joist rotation. Structural blocking is an economical alternative to cross bracing, X-bracing or strapping.

CAUTION: In order to prevent joist rolling, the TDSB blocking must be tied into the structure or otherwise braced against lateral movement.

NOTE: TDSB blocking is not required if sheathing is applied to the joists top and bottom.

PRODUCT DIMENSIONS

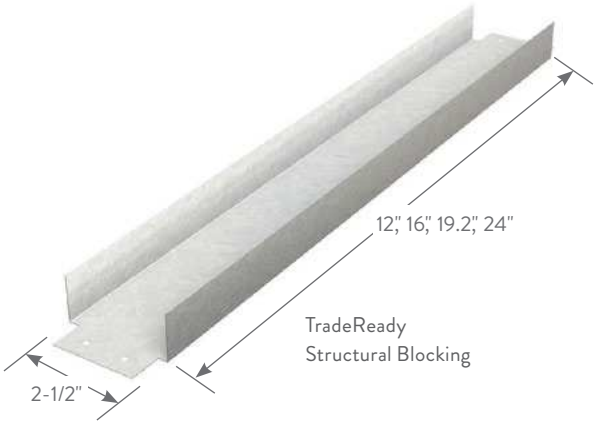
2-1/2" x 12"
2-1/2" x 16"
2-1/2" x 19.2"
2-1/2" x 24"

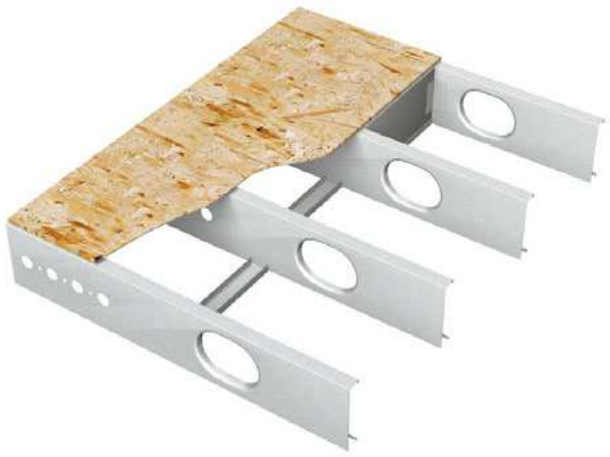
MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches
Coating: CP60 per ASTM C955
ASTM: A653/A653M, C955

INSTALLATION

A continuous row of TradeReady structural blocking should be installed every 8' o.c. maximum and staggered for easy attachment. Blocking is secured to each joist flange using two #10 screws at each end.





TradeReady® STRUCTURAL BLOCKING

Product code	Thickness			Size (in)	Packaging Pcs./Bundle
	Gauge	Mils	Design thickness (in)		
TDSB	18	43	0.0451	2-1/2 x 12	10
TDSB	18	43	0.0451	2-1/2 x 16	10
TDSB	18	43	0.0451	2-1/2 x 19.2	10
TDSB	18	43	0.0451	2-1/2 x 24	10

Simpson® Strong-Tie® Skewable Angle (SLS5/SLS7)

For rigid and off-angle attachments of joist-to-joist, joist-to-hip beam, or to other structural steel members.

Simpson® Strong-Tie® skewable angles are used to make rigid attachments of joist-to-joist or joist-to-other-miscellaneous framing. This clip is ideal for making off-angle attachments. It is easily field bent from 0° to 135°.

CAUTION: This clip can only be bent one time.

PRODUCT DIMENSIONS

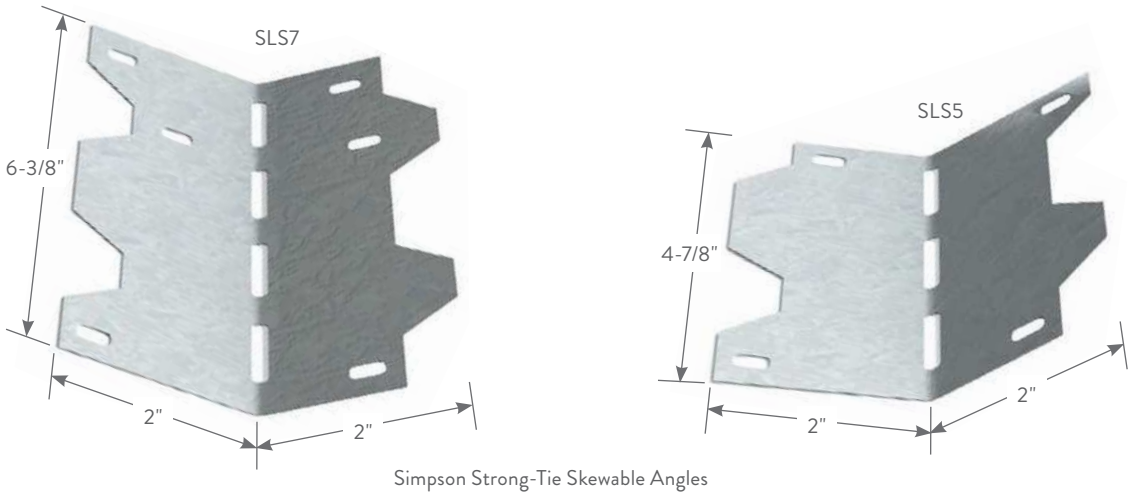
SLS5: 2" x 2" x 4-7/8"
SLS7: 2" x 2" x 6-3/8"

MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches
Coating: G90
ASTM: A653/A653M

INSTALLATION

Use all specified fasteners. S/LS—field-skewable; bend one time only. Joist must be constrained against rotation when using a single S/LS per connection.

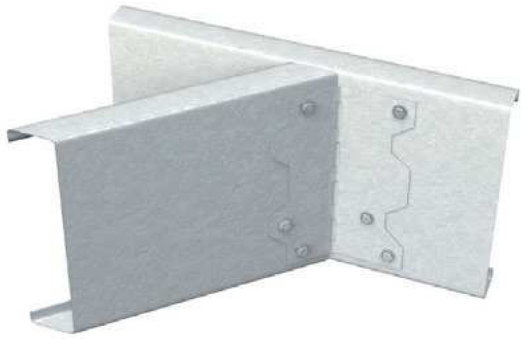


Simpson Strong-Tie Skewable Angles

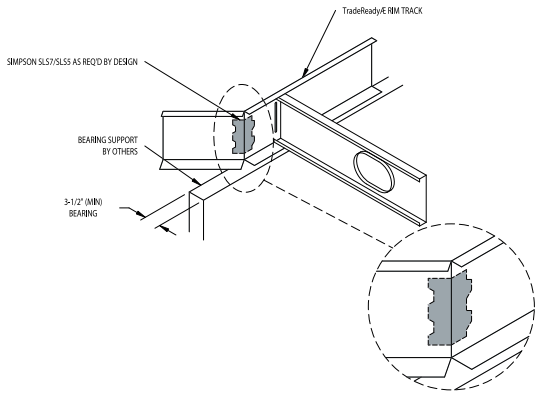
SIMPSON® Strong-Tie® SKEWABLE ANGLES

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
SLS5	18	43	0.0451	4-7/8	100
SLS7	18	43	0.0451	6-3/8	50

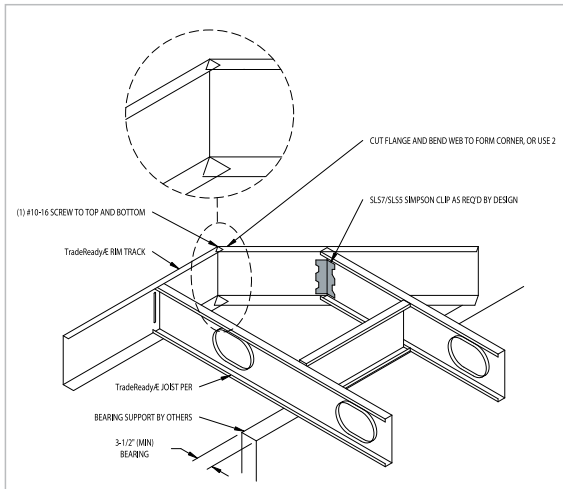
ICBO ER #5275 recognized



Typical Construction Details



1 SKEWED RIM - SLS5/SLS7 CLIP



1 CANTILEVER - SKEWED RIM - S-LS70 CLIP

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SIMPSON® Strong-Tie® SKEWABLE ANGLES

Product code	Simpson reference	Length (in)	Fasteners	Allowable Loads	
				F1	F2
SLS5	S/LS50	4-7/8	4 – #10	500	—
SLS7	S/LS70	6-3/8	6 – #10	760	—

Notes:

1 No load duration increase allowed.

2 Loads are for one part only.

3 Simpson® and Simpson Strong-Tie® are trademarks of the Simpson Strong-Tie® Company, Inc.

EasyClip™ QuickTwist™ Web Stiffener (QTWS)

Excellent reinforcement at critical load points to prevent web crippling.

ClarkDietrich EasyClip™ QuickTwist™ web stiffeners are used to provide reinforcement of joist webs to prevent crippling. Web reinforcement is often required by design to enhance the load capacity of joists. The unique design of QTWS allows the installer to easily insert the stiffener on the inside of the joist *after* the joist is installed. This stiffener eliminates the need to pre-insert traditional web stiffeners prior to joist installation. The one-piece assembly is easily rotated in-place for a tight fit.

PRODUCT DIMENSIONS

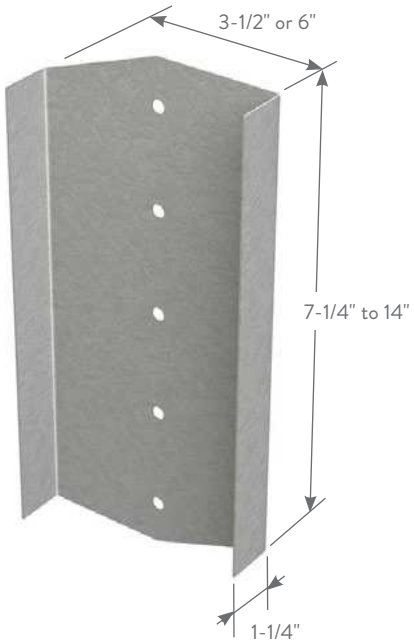
3-1/2" x 7-1/4"–14" x 1-1/4"
6" x 7-1/4"–14" x 1-1/4"

MATERIAL SPECIFICATIONS

Gauge: 12 gauge (97mil)
Design Thickness: 0.1017 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

INSTALLATION

The unique design of the EasyClip QuickTwist web stiffener allows it to be easily rotated in-place for a tight fit between flanges. The web stiffener shall be secured to the web of the joint with (3) #10-16 screws. Screws shall be driven through the top, bottom and middle prepunched holes as shown in the illustrations.

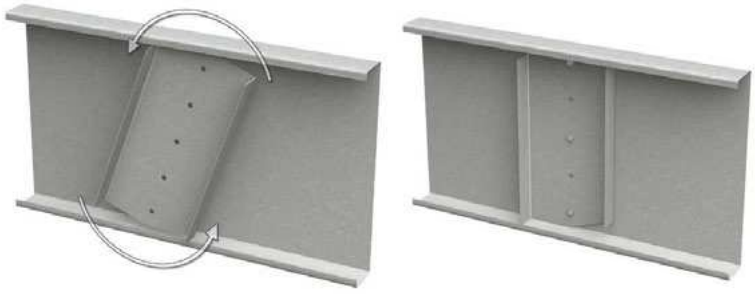


EasyClip QuickTwist
Web Stiffener

EasyClip™ QuickTwist™ WEB STIFFENERS

Product code	Size (in)	Thickness			Size* (in)	Packaging
		Gauge	Mils	Design thickness (in)		
QTWS	3-1/2	12	97	0.1017	7.25 8.00 9.25 10.00 11.25 12.00 14.00	Dependent on order quantity
QTWS	6	12	97	0.1017	7.25 8.00 9.25 10.00 11.25 12.00 14.00	Dependent on order quantity

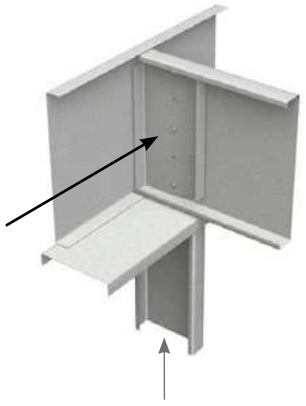
*Dimension is nominal size. Actual product is shorter to fit inside joist.



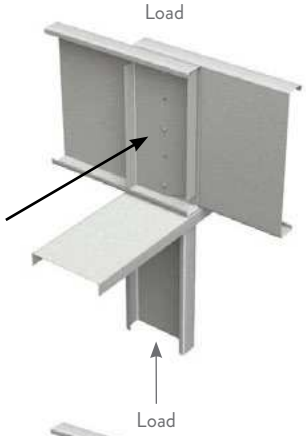
ALLOWABLE WEB CRIPPLING LOADS (LBS)

Joist size (in)	Joist gauge (mils)	Fy (ksi)	3-1/2" Web Stiffener			6" Web Stiffener		
			Cond. 1	Cond. 2	Cond. 3	Cond. 1	Cond. 2	Cond. 3
7.25	18 (43)	33	5,360	5,781	5,659	5,932	6,403	6,265
	16 (54)	33	5,457	6,155	5,924	6,042	6,817	6,558
		50	5,574	6,632	6,282	6,177	7,351	6,959
	14 (68)	33	5,615	6,761	6,346	6,220	7,482	7,021
		50	5,813	7,550	6,921	6,447	8,359	7,660
	12 (97)	33	6,074	8,524	7,559	6,733	9,401	8,340
		50	6,509	10,222	8,759	7,224	11,267	9,659
8	18 (43)	33	5,350	5,752	5,645	5,920	6,370	6,249
	16 (54)	33	5,443	6,116	5,905	6,027	6,773	6,537
		50	5,553	6,573	6,253	6,153	7,285	6,926
	14 (68)	33	5,596	6,708	6,320	6,200	7,424	6,992
		50	5,786	7,470	6,882	6,416	8,270	7,617
	12 (97)	33	6,045	8,438	7,516	6,700	9,307	8,293
		50	6,465	10,092	8,694	7,174	11,124	9,588
9.25	18 (43)	33	5,334	5,707	5,623	5,902	6,320	6,224
	16 (54)	33	5,422	6,056	5,875	6,002	6,706	6,503
		50	5,521	6,481	6,208	6,116	7,182	6,876
	14 (68)	33	5,568	6,626	6,279	6,167	7,332	6,947
		50	5,742	7,345	6,820	6,366	8,132	7,548
	12 (97)	33	5,999	8,304	7,450	6,649	9,159	8,220
		50	6,396	9,888	8,594	7,096	10,900	9,477
10	16 (54)	33	5,410	6,021	5,858	5,988	6,667	6,484
		50	5,503	6,429	6,182	6,095	7,124	6,847
	14 (68)	33	5,552	6,579	6,256	6,148	7,280	6,922
		50	5,718	7,275	6,785	6,338	8,053	7,510
	12 (97)	33	5,973	8,228	7,412	6,619	9,076	8,179
		50	6,356	9,773	8,537	7,052	10,773	9,415
11.25	16 (54)	33	5,391	5,967	5,831	5,966	6,606	6,454
		50	5,474	6,347	6,141	6,062	7,032	6,802
	14 (68)	33	5,526	6,505	6,220	6,119	7,198	6,881
		50	5,679	7,163	6,730	6,294	7,929	7,448
	12 (97)	33	5,932	8,108	7,353	6,573	8,943	8,114
		50	6,294	9,590	8,447	6,981	10,573	9,316
12	16 (54)	33	5,380	5,936	5,816	5,954	6,571	6,437
		50	5,457	6,300	6,118	6,043	6,979	6,775
	14 (68)	33	5,511	6,463	6,199	6,102	7,151	6,858
		50	5,657	7,099	6,699	6,268	7,858	7,413
	12 (97)	33	5,908	8,039	7,319	6,547	8,867	8,076
		50	6,258	9,486	8,395	6,941	10,458	9,259
14	14 (68)	33	5,474	6,356	6,146	6,060	7,033	6,800
		50	5,601	6,937	6,619	6,204	7,678	7,325
	12 (97)	33	5,849	7,865	7,233	6,480	8,677	7,982
		50	6,169	9,223	8,265	6,840	10,169	9,116

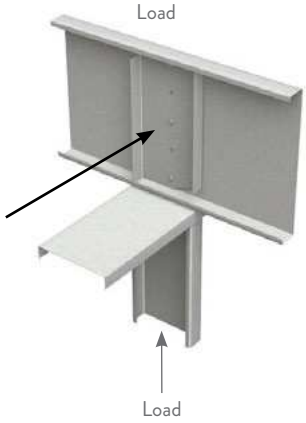
CONDITION 1
(3) #10-16 screws, top, bottom, and middle holes



CONDITION 2
(3) #10-16 screws, top, bottom, and middle holes



CONDITION 3
(3) #10-16 screws, top, bottom, and middle holes



Notes:

1 The tabulated values indicate the total allowable web crippling capacities of a ClarkDietrich joist of the listed size, stiffened with the QuickTwist web stiffener.

2 The joist flanges must be fastened to the support at the bearing location.

3 The 3-1/2" web stiffeners are to be used with bearing widths of 3-1/2" to 5-1/2" in the direction of the joist. The 6" web stiffeners are to be used with bearing widths 6" and greater, in the direction of the joist. A minimum-bearing dimension of 3" in the direction perpendicular to the joist is assumed.

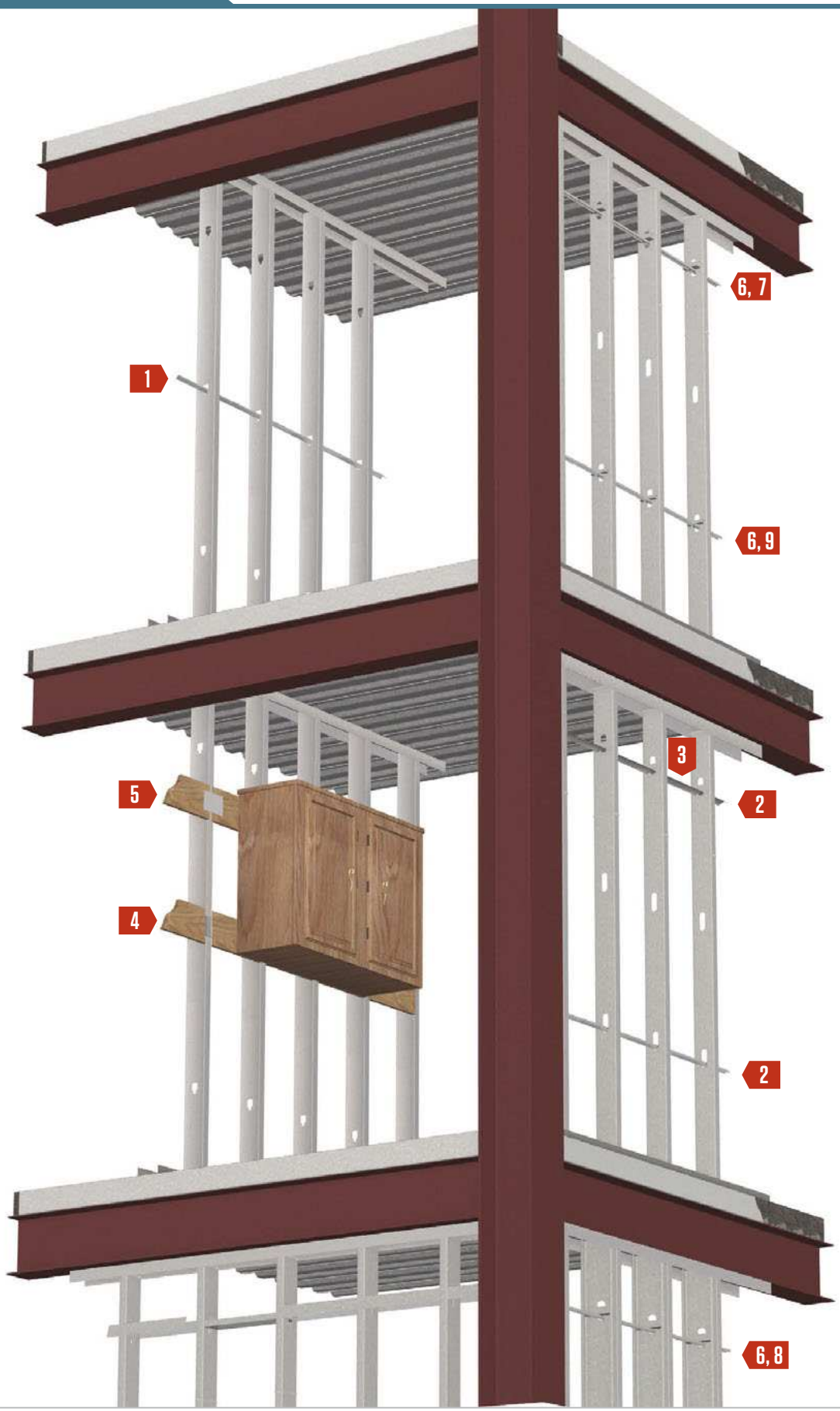
4 Use (3) #10 screws to attach the QuickTwist web stiffener to the joist. Drive screws through the top, bottom, and middle prepunched holes.

5 This table is intended for use by qualified engineers only. It is the responsibility of the engineer to verify that the QuickTwist web stiffener configuration and tabulated values apply to a specific web crippling application.

6 Contact ClarkDietrich at 888-437-3244 for technical assistance.

The technical content of this literature is effective 4/9/12 and supersedes all previous information. Pub. No. CD-ClipExpress 4/12

Product Detail



1 Spazzer® 9200 Spacer Bar
page 76

2 Spazzer® 5400 Spacer Bar
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3 Spazzer® Bar Fly Clip
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4 FastBack™ Backing System
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5 Danback® Flexible Wood Backing Plate
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6 SwiftClip™ L-Series™ Support Clip
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7 EasyClip™ U-Series™ Clip Angle
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The technical content of this literature is effective 4/9/12 and supersedes all previous information.
Pub. No. CD-ClipExpress 4/12

Spazzer® 9200 Spacer Bar (SPZD)

Facilitates the rapid erection of interior, non-load-bearing, nonstructural studs into a rigid, accurately laid out gridwork.

The TradeReady® Spazzer® 9200 spacer bar is a prenotched, 20-gauge, galvanized steel spacer and bridging bar. The Spazzer 9200 bar facilitates rapid erection of studs into a rigid, accurately laid out gridwork that has excellent resistance to stud rotation and displacement. Hanging drywall is also faster and easier because the Spazzer 9200 bar eliminates the bow that often occurs in tall interior studs. TradeReady Spazzer 9200 bar is a 20-gauge bar that is 50" long and prenotched to hold studs rigidly on 16" or 24" centers. The slots have been pre-engineered to hold studs in place by utilizing "shear" to bridge studs into a rigid gridwork. Eliminates clip angles and saves up to 40% in combined labor and material costs.

ALTERNATIVE PRODUCTS

U-Channel with EasyClip™ U-Series™ Clip Angle
U-Channel with SwiftClip™ LS-Series™ Support Clip
Spazzer® 5400 Spacer Bar

PRODUCT DIMENSIONS

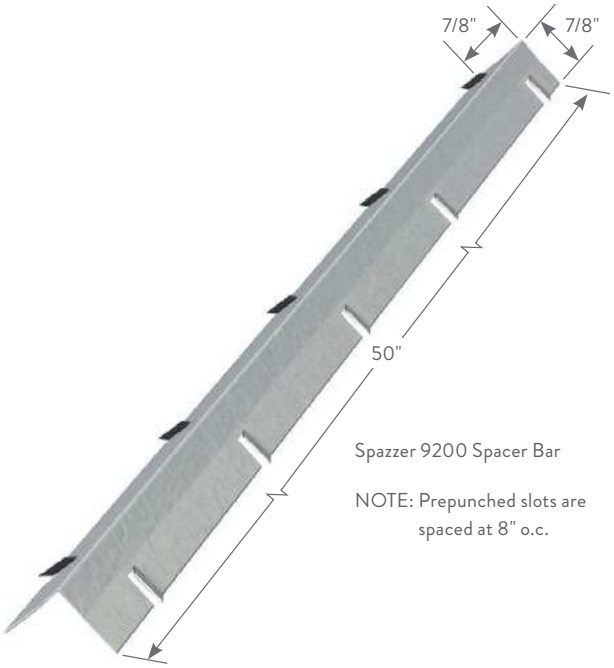
7/8" x 7/8" x 50"

MATERIAL SPECIFICATIONS

Gauge: 20 gauge (33mil)
Design Thickness: 0.0346 inches
Coating: G40 or equivalent
Yield Strength: 33ksi
ASTM: C645, A653/A653M

INSTALLATION

Insert the prenotched, 50" Spazzer bar through the appropriate stud punchouts and rotate the bridging bar to engage or grip the stud. Use the prenotched slots to automatically lay out studs on 16" or 24" centers. Press the Spazzer bar firmly into place. Overlap the last slot with the next piece of Spazzer and continue to repeat the process.



Spazzer 9200 Spacer Bar

NOTE: Prepunched slots are spaced at 8" o.c.

Spazzer® 9200 SPACER BAR

Product code	Thickness			Size (in)	Packaging	
	Gauge	Mils	Design thickness (in)		Pcs./ Bundle	Pcs./ Skid
SPZD	20	33	0.0346	7/8 x 7/8 x 50	N/A	1350

U.S. Patent Nos. 5,784,850 and 6,021,618

Spazzer® 5400 Spacer Bar (SPZS), Bar Guard™ (SPBG) & Grommet (SPGR)

Engineered to facilitate the rapid erection of exterior curtain wall framing.

ClarkDietrich TradeReady® Spazzer® 5400 spacer bar is a pre-notched, 16-gauge, galvanized steel spacer and bridging bar, engineered to facilitate the rapid, efficient erection of exterior curtain wall framing, load-bearing walls and high interior partitions constructed of structural studs. Until now, most bridging in steel studs was accomplished with cold-rolled channel that required bridging clips or welding. The Spazzer bridging bar is equipped with proprietary prepunched slots that reduce installation costs up to 40% and provide excellent torsional and lateral stud restraint. The Spazzer Bar Guard™ retainer clip or the Spazzer Snap-In Grommet should be used to secure the Spazzer bar when used in load-bearing applications.

ALTERNATIVE PRODUCTS

U-Channel with EasyClip™ U-Series™ or B-Series™ Clip Angles, U-Channel with SwiftClip™ LS-Series™ Support Clip, Block and Strap

PRODUCT DIMENSIONS

1-1/4" x 1-1/4" x 50"

MATERIAL SPECIFICATIONS

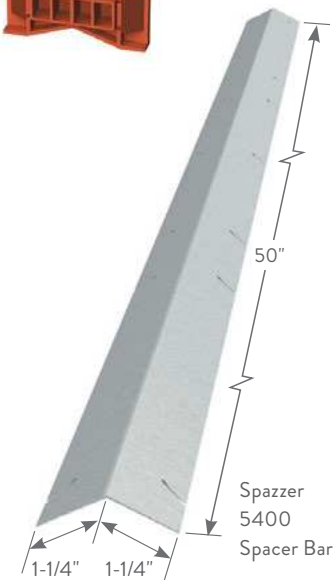
Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches
Coating: CP60 per ASTM C955
Yield Strength: 50ksi
ASTM: A653/A653M, C955

LOAD-BEARING WALL INSTALLATION

The TradeReady Spazzer 5400 bar is passed through the stud knockouts and rotated 90° into position, engaging each side of the knockout. For load-bearing studs, the Spazzer 5400 bar guard bar retainer clip and the Spazzer snap-in grommet both require screws to keep the bar in place. The TradeReady Spazzer 5400 bar should be installed at a maximum 4' o.c. vertically or per specification, and should not be used in studs over 6" wide.

NON-LOAD-BEARING WALL INSTALLATION

The TradeReady Spazzer 5400 bar is passed through the stud knockouts and rotated 90° into position, engaging each side of the knockout. For 20 gauge studs, the Spazzer 5400 bar guard retainer clip and the Spazzer snap-in grommet both require screws to keep the bar in place. The TradeReady Spazzer 5400 bar should be installed at maximum 5' o.c. vertically or per specification, and should not be used in studs over 6" wide.



Spazzer® 5400 SPACER BAR

Product code	Thickness			Size (in)	Packaging	
	Gauge	Mils	Design thickness (in)		Pcs./Bundle	Pcs./Skid
SPZS	16	54	0.0566	1-1/4 x 1-1/4 x 50	N/A	680

Spazzer® Bar Guard™ AND Spazzer® GROMMET

Product code	Size (in)	Packaging Pcs./Carton
SPBG	3-1/4 x 1-5/8	100
SPGR	1-1/2 x 4	100

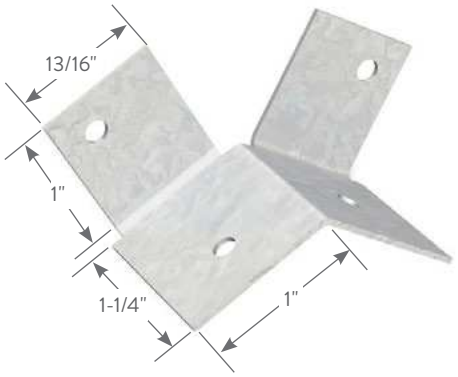
U.S. Patent No. 6,708,460 and other patents pending

Spazzer® Bar Fly Clip (SFLY)

A prepunched clip that eliminates the need for cutting and bending when using the Spazzer® 5400 Spacer Bar to facilitate rapid installation of exterior curtain wall framing.

The Spazzer bar fly clip is a secure, fast and efficient way to finish a wall section when using the TradeReady® Spazzer 5400 spacer bar to facilitate the rapid erection of curtain wall or load-bearing framing. Traditionally, at the end of a section, the Spazzer bar would need to be cut and bent to keep the bar in place. With the new Spazzer bar fly clip, installation is as easy as fastening the prepunched clip to the stud and the Spazzer bar. The excess Spazzer bar is cut and installation is complete.

The Spazzer fly clip is the perfect solution for installing off module studs with the 5400 series Spazzer bar. Simply cut the Spazzer bar just short of the stud web, and use the Spazzer fly clip to quickly connect the Spazzer bar to the face of the stud with self-drilling framing screws.



Spazzer Bar Fly Clip

Spazzer® BAR FLY CLIP

Product code	Size (in)	Packaging Pcs./Carton
SFLY	1 x 1-1/4 x 1	100

ALTERNATIVE PRODUCTS

Traditional cutting and bending

PRODUCT DIMENSIONS

1" x 1-1/4" x 1"

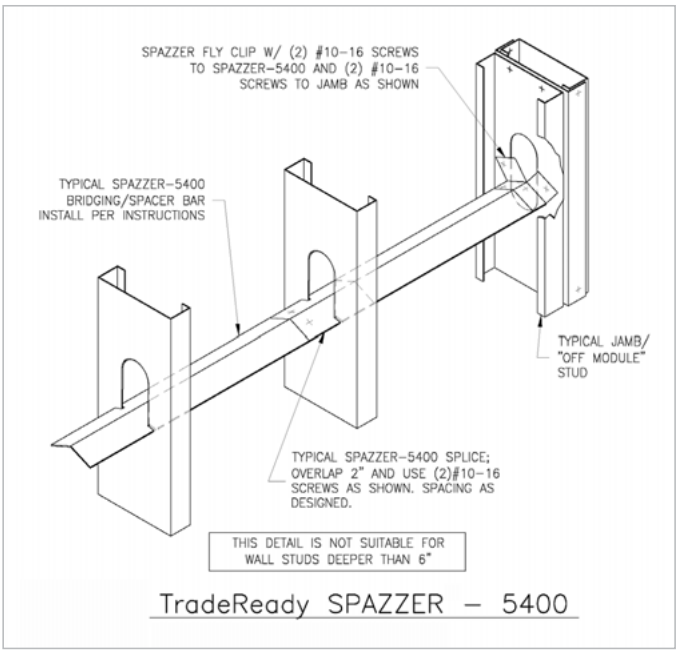
MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

LOAD-BEARING WALL INSTALLATION

The TradeReady Spazzer 5400 spacer bar is passed through the stud knockouts and rotated 90° into position, engaging each side of the knockout. In load-bearing applications, some type of attachment is required to keep the bar in place—the Spazzer bar fly clip is an optimum solution. The TradeReady Spazzer 5400 bar should be installed at a maximum 4' o.c. vertically or per specifications. The Spazzer bar should not be used in studs over 6" wide.

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

FastBack™ Backing System (FBBC)

Reduces finishing time with no exposed fasteners on the face of the product.

The FastBack™ backing system features a universal design that works with studs in either direction—concealing fasteners on the face of the product. The system creates an interlocked design between the stud and track for baseboard backing installations; and a cutaway design allows backing and bracing to be installed all the way to the floor. Pre-cut and fire-rated, the Dricon® Wood Backing is sized to fit 12," 16" and 24" o.c. spacing. Available for overnight delivery.

PRODUCT DIMENSIONS

1-1/4" x 5-1/8"
1-1/4" x 10-1/4"

INSTALLATION

Rotate the FastBack clip over the flange of the stud until it sits flush. Fasten into place using drywall screws in the pre-drilled holes. Place wood onto tabs and fasten into place using standard drywall screws.

FastBack Backing System

FastBack™ BACKING SYSTEM

Product code	Width (in)	Length (in)	Packaging Pcs./Carton
FBBC	1-1/4	5-1/8	100
FBBC	1-1/4	10-1/4	100

Dricon® WOOD BACKING

Product code	Width (in)	Length (in)	Packaging Pcs./Skid
FBW	5-1/8	10-1/2	720
FBW	5-1/8	14-1/2	540
FBW	5-1/8	22-1/2	360
FBW	10-1/4	10-1/2	720
FBW	10-1/4	14-1/2	540
FBW	10-1/4	22-1/2	360

Dricon® is a registered trademark of Arch Wood Protection, Inc.

Dricon® FRT Wood complies with or has been granted the following:

AWPA C20/C27
AWPA P17 (FR-1)
FR-S
NER-303 (BOCA, ICBO, SBCCI)
EPA Registration (62190-9)
UL Building Materials Directory
UL Recognized Component
NYC MEA 199-81-M
NYC MEA 200-81-M
Factory Mutual Class I Roof Deck
City of Los Angeles (RR 25122)
FHA Minimum Property Standard #2600
HUD Materials Release (1261)
California State Fire Marshal
State of Wisconsin
QPL

All are subject to revision, reexamination.

U.S. Patent No. 7,882,676 of Jeffrey Thomas Ellis
Dricon is a registered trademark of Arch Wood Protection, Inc.

Danback® Flexible Wood Backing Plate (D16, 24)

Reduce steel stud backing installation time by up to 90%.

Backing steel studs has always been a difficult, costly and time-consuming job. The Danback® Flexible Wood Backing System, featuring Dricon® fire-retardant treated wood (FRT), has made wood backing installation easy and economical—eliminating cutting, notching, ripping and routing.

Danback provides superior connection shear and pullout strength to support and meet even some of the heaviest loading conditions. Simply snap, flex and screw Danback into place. The patented hinge design actually flexes around the stud and snaps into place for a perfect fit—every time.

Dricon FRT is pressure-treated wood that is chemically treated to reduce the flamespread and smoke development. Dricon is a Class A fire retardant; it is EPA registered, NER approved (NER-303) and complies with all national codes including the 2003 International Building Code (IBC) and the 2003 International Residential Code Council (ICC).

Danback flexible wood backing is available with FSC-certified lumber and may contribute LEED® points to your project.

Danback® FLEXIBLE WOOD BACKING PLATES

Product code	Width (in)	Length (in)	Packaging Pcs./Skid
D16F*	5-1/8	48	250
D24F*	5-1/8	48	250
D16C**	5-1/8	48	250
D24C**	5-1/8	48	250

*F = fire-treated plywood. D16 = 16" o.c. spacing. D24 = 24" o.c. spacing.
Trimables available for off-module spacing in small bucket or bulk quantities.
**FSC-certified lumber available on request, which can contribute to LEED® points on your project.
Contact ClarkDietrich LEED professionals at 888-437-3244 for more information.
FSC chain-of-custody # BV-COC-008121

ULTIMATE LOAD VALUE

Product code	Shear load max. (lbs)	Norm. load max. (lbs)
D16F	814	516
D24F	725	418
D16C	814	516
D24C	725	418

Notes:

1 Listed load values are maximum test load values.
2 Designers must apply design safety factors appropriate for intended use.
3 Tabulated loads do not include the contribution of gypsum board or other wall sheathing.

Easy installation.

Snap starter edge into the open side of the stud flange.

HINT: Start with the first full bay. Use Danback Trimables for off-module bays.

Flex Danback flexible wood backing around stud flange using the flexible connector plate.

Repeat the process.

Overlap connector plates when using in long backing runs.

Secure each plate to the stud flange using two small pan or wafer head screws.

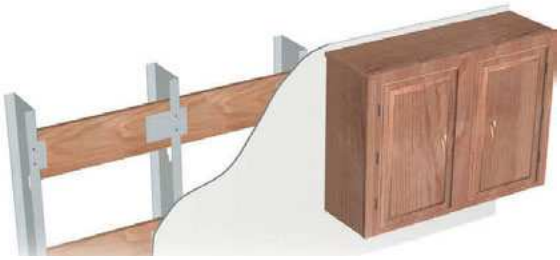
Commonly used in: hospitals, medical centers, schools, hotels/motels, assisted living, condominiums, and others.

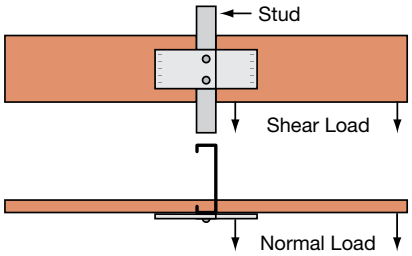
Danback trimables for off-module backing.

Connector plates included with trimables.

Use Danback trimables for off-module bays:

Cut to required length. Secure connector plate to the trimmed edge. Leave 1-1/4" extended over the trimmed edge. Fasten the plate to Danback using three small pan or wafer-head screws.





The perfect backing solution for: cabinets, shelves, counters, sinks, handrails, chalkboards, towel and shower bars, or other wall-mounted fixtures that require heavy-duty backing.

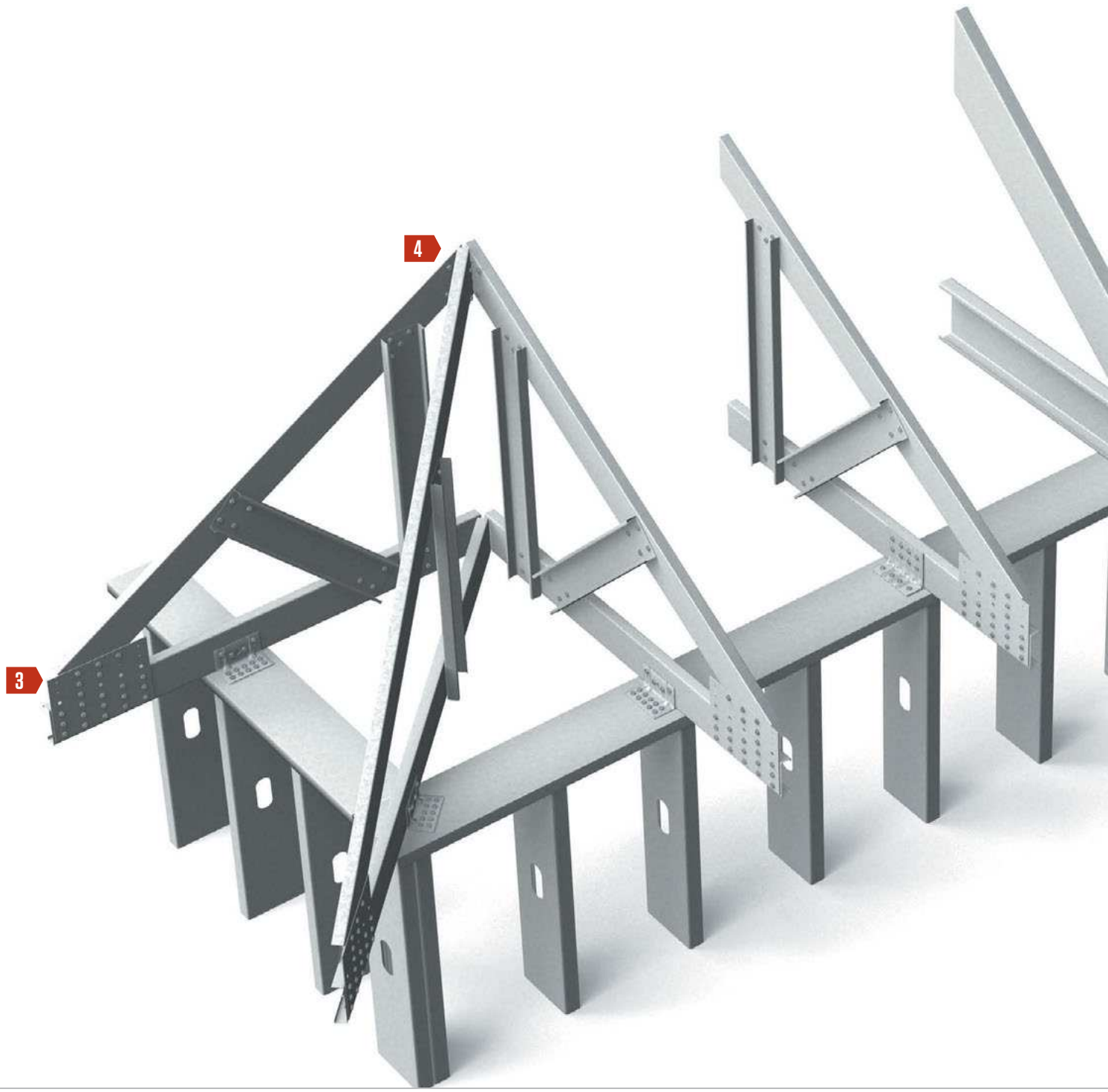
Dricon® FRT Wood complies with or has been granted the following:

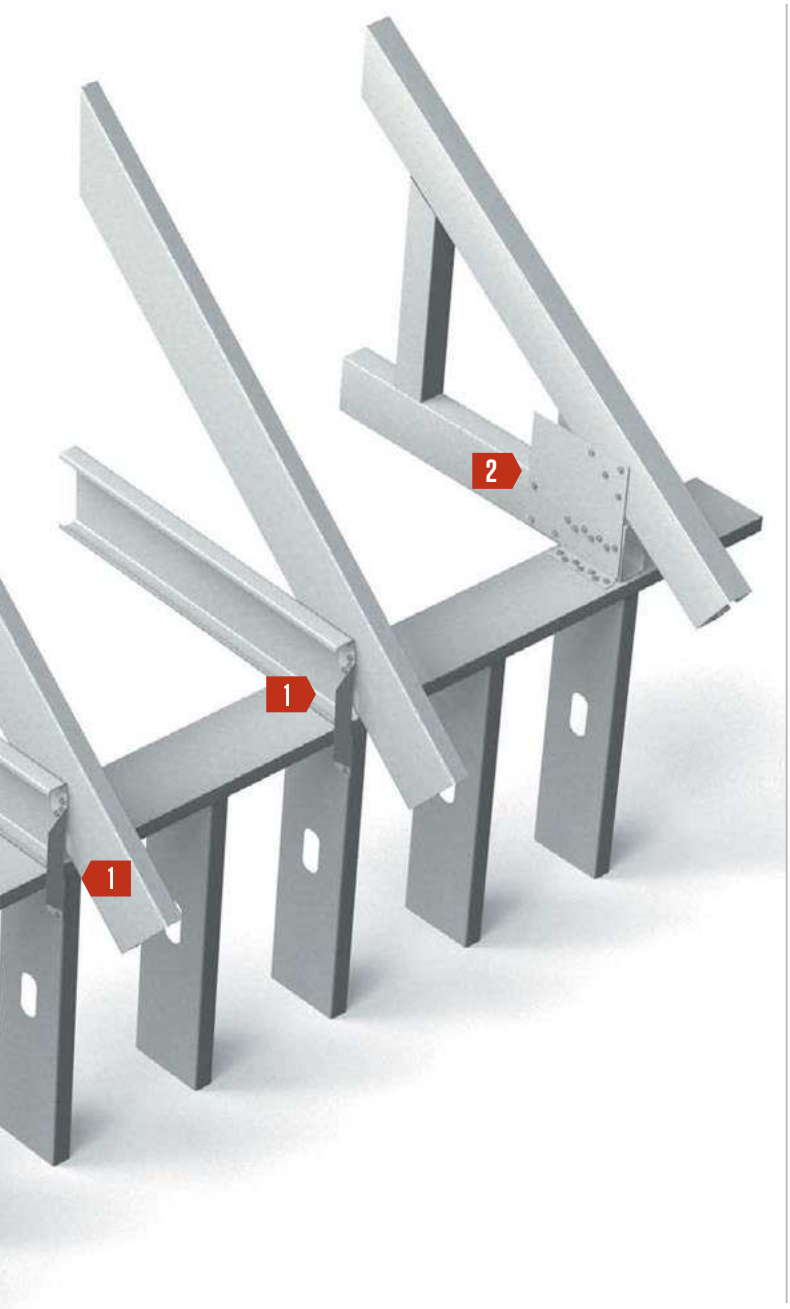
AWPA C20/C27
AWPA P17 (FR-1)
FR-S
NER-303 (BOCA, ICBO, SBCCI)
EPA Registration (62190-9)
UL Building Materials Directory
UL Recognized Component
NYC MEA 199-81-M
NYC MEA 200-81-M
Factory Mutual Class I Roof Deck
City of Los Angeles (RR 25122)
FHA Minimum Property Standard #2600
HUD Materials Release (1261)
California State Fire Marshal
State of Wisconsin
QPL

All are subject to revision, reexamination.

The technical content of this literature is effective 4/9/12 and supersedes all previous information. Pub. No. CD-ClipExpress 4/12

Product Detail





1 Simpson® Strong-Tie® Seismic and Hurricane Clips
pages 84-85

2 GP-Series™ Unpunched Gusset Plate
pages 54-55

3 G-Series™ Punched Gusset Plate
pages 56-57

4 Field Skewable TradeReady® Rim Track Splice Plate
pages 66-67

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

Simpson® Strong-Tie® Seismic and Hurricane Clips (SH2/SH2.5)

Attach and tie trusses and rafters to building structure.

Simpson® Strong-Tie® seismic and hurricane clips are designed to provide wind and seismic resistance for trusses and rafters. Quick and efficient, these versatile products can also be used for general tie-down purposes, strong back attachments and as all-purpose ties where one member crosses another. The SH2 seismic and hurricane tie is formed from a flat plate into an A-shaped section. The plate has a right-angle bend along its longitudinal axis to permit straddling a top plate. The SH2.5 is a twisted strap tie that is used to attach a rafter to the side of the top plate. Both ties are shipped in equal quantities of separate rights and lefts.

ALTERNATIVE PRODUCTS

EasyClip™ T-Series™ Tall Anchor Clip
EasyClip™ E-Series™ Support Clip

PRODUCT DIMENSIONS

SH2: 1-9/16" x 9-7/16" x 1-9/16"
SH2.5: 1-9/16" x 5-7/16" x 1-9/16"

MATERIAL SPECIFICATIONS

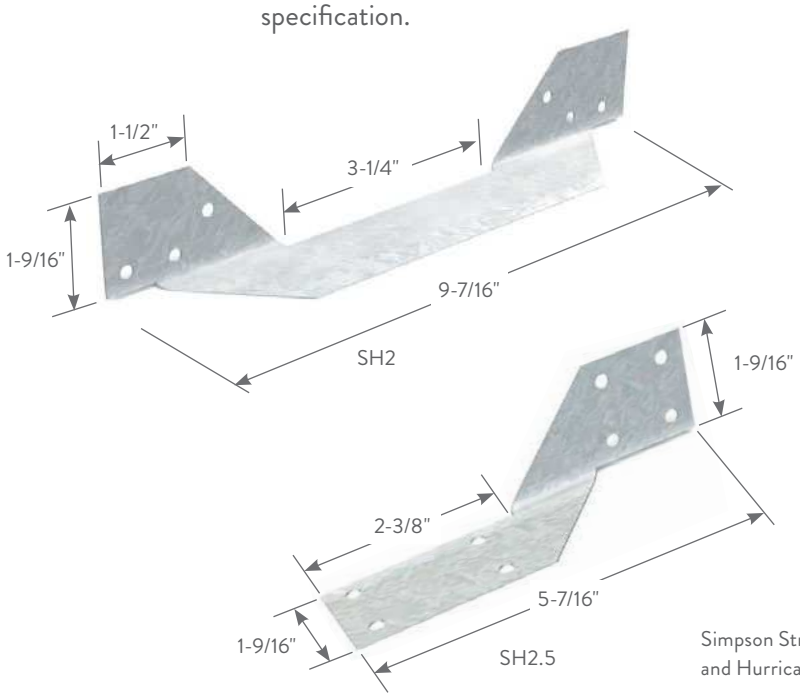
Gauge: 18 gauge (43mil)
Design Thickness: 0.0451 inches
Coating: G90
ASTM: A653/A653M

INSTALLATION

Place the SH2 tie so one end fits flush against the roof framing member and the other fits flush against the web of the wall stud. Attach the SH2 to the side of the rafter at the top and to the sides of the stud immediately below the top plate at the bottom. Fill all prepunched holes with a minimum of #10 self-drilling screws.

Place the SH2.5 so the top fits securely against the roof framing member and the bottom fits securely against the top plate and flange of the wall stud. Attach the rafter at the top and to the sides of the top plate and stud immediately below at the bottom. Fill all prepunched holes with a minimum #10 self-drilling screws.

Reference section R 603.8.3.2 of the International Residential Code (IRC) or the engineer of records specification.

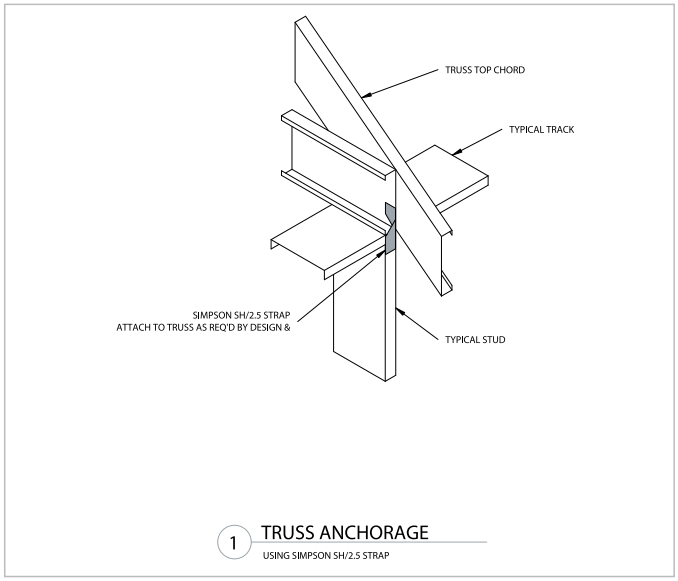


Simpson Strong-Tie Seismic and Hurricane Clips

SIMPSON® Strong-Tie® SEISMIC AND HURRICANE CLIPS

Product code	Thickness			Size (in)	Packaging Pcs./Carton
	Gauge	Mils	Design thickness (in)		
SH2	18	43	0.0451	1-9/16 x 9-7/16 x 1-9/16	100
SH2.5	18	43	0.0451	1-9/16 x 5-7/16 x 1-9/16	100

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

SH2

SIMPSON® Strong-Tie® SEISMIC AND HURRICANE CLIPS

Product code	Simpson reference	Fasteners			Max. Allowable Loads		
		To rafters	To plates	To studs	Uplift (133)	Lateral	
						F1 (133)	F2 (133)
SH2	S/H2	3 – #10	—	3 – #10	330	—	—
SH2.5	S/H2.5	4 – #10	—	4 – #10	415	75	105

Notes:

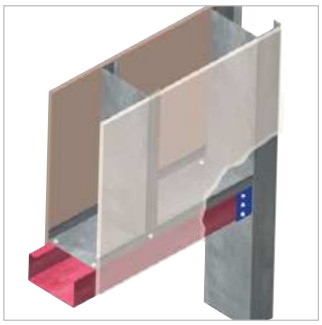
1 Loads have been increased 33% for wind or earthquake loading; no further increase allowed.

2 Multiply the loads shown by 0.75 when a 33% increase for wind or earthquake loading is not allowed by the design standard being used or when the 0.75 load combination factor in AISI Section A5.1.3 (1996 edition) is not allowed.

3 Simpson® and Simpson Strong-Tie® are trademarks of the Simpson Strong-Tie® Company, Inc.

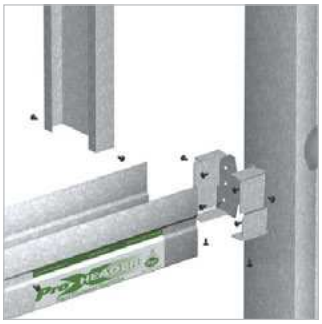
Product Detail

1 Drop 'N Lock™ Clip for RedHeader RO™
pages 88-89

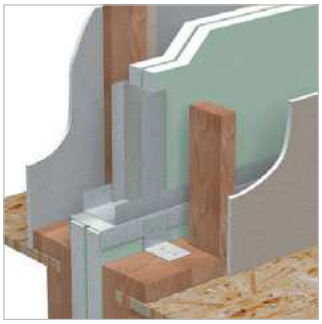


2 HDSC Header Bracket for HDS® Framing System
pages 90-91

3 ProX Clip for ProX Header® System
pages 92-93



4 Aluminum Burn Clip
page 94

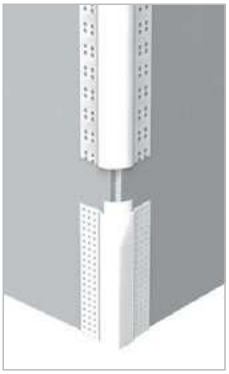


5 Grommets for Stud Knockouts
page 95

6 Resilient Sound Isolation Clip
page 96

7 Metal Furring Channel Clip
page 97

8 Vinyl 3/4" Bullnose to 90° Transition Cap
page 98



9 Vinyl 2-Way Inside 90° Corner Cap 3/4"
page 99

10 Vinyl 3-Way 90° Corner Cap 3/4"
page 99

The technical content of this literature is effective 4/9/12 and supersedes all previous information.

Pub. No. CD-ClipExpress 4/12

Drop 'N Lock™ Clip (CDNL)

For use with the RedHeader RO™ rough opening system.

The Drop 'N Lock™ Clip is what makes RedHeader RO™ the easiest rough opening framing system to install. Prepunched slots allow for vertical field adjustments before fully attaching the clip, through the prepunched holes, to the RedHeader RO jamb stud. The "box-style" clip design makes it easy to drop the header into place and allows for one-man installation, even on large header spans. The Drop 'N Lock clip is the same width as the jamb stud, which is the key to getting a flush header stud-to-jamb stud connection. Material build-up at this connection is also reduced allowing for a smooth drywall finish and eliminating additional labor costs for finishing at the door or window frame when conventional rough opening framing systems are used.

PRODUCT DIMENSIONS

3-5/8" x 3"
4" x 3"
6" x 3"
8" x 3"

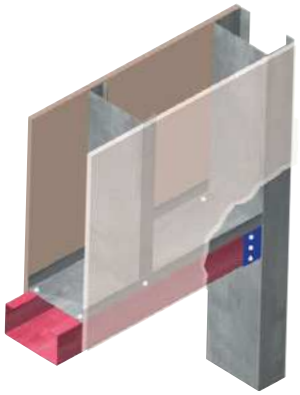
MATERIAL SPECIFICATIONS

Interior Framing Gauge: 20 gauge (33mil)
Design Thickness: 0.0346 inches

Exterior Framing Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches

Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

Drop 'N Lock Clip



Drop 'N Lock™ CLIPS — Interior Framing

Product code	Thickness			Size (in)	Pcs./Box
	Gauge	Mils	Design thickness (in)		
CDNL333	20	33	0.0346	3-5/8	24
CDNL334	20	33	0.0346	4	24
CDNL336	20	33	0.0346	6	24
CDNL338	20	33	0.0346	8	16

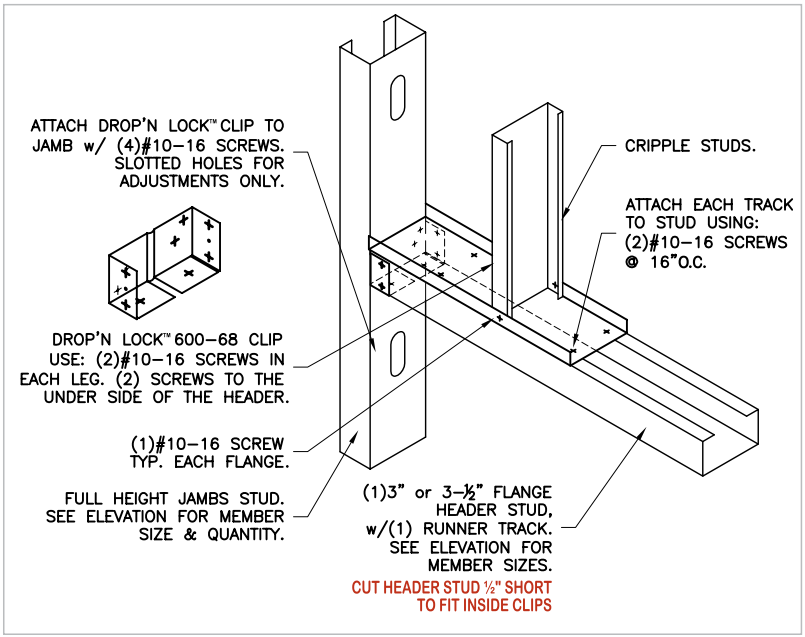
Drop 'N Lock™ CLIPS ALLOWABLE LOADS (LBS) — Interior Framing

Product code	Size (in)	Gauge	Mils	Screw pattern	Header or Jamb Material (Min. Thickness)			
					20ga (33mil)		18ga (43mil)	
					Horizontal	Vertical	Horizontal	Vertical
CDNL333	3-5/8	20	33	2/2	180	250	180	250
				4/6	445	592	445	592
CDNL334	4	20	33	2/2	199	273	199	273
				4/6	462	569	462	569
CDNL336	6	20	33	2/2	192	285	192	285
				4/6	413	593	413	593
CDNL338	8	20	33	2/2	8" members not available in 20ga		213	324
				4/6			601	663

Notes:

1 Interior clip loads are based on using #8 screws.

Typical Construction Details



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Drop 'N Lock™ CLIPS — Exterior Framing

Product code	Thickness			Size (in)	Pcs./Box
	Gauge	Mils	Design thickness (in)		
CDNL683	14	68	0.0713	3-5/8	24
CDNL684	14	68	0.0713	4	24
CDNL686	14	68	0.0713	6	24
CDNL688	14	68	0.0713	8	16

Drop 'N Lock™ CLIPS ALLOWABLE LOADS (LBS) — Exterior Framing

Product code	Size (in)	Gauge	Mils	Screw pattern	Header or Jamb Material (Min. Thickness)					
					20ga (33mil) & 18ga (43mil)		16ga (54 mil)		14ga (68mil) & 12ga (97mil)	
					Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
CDNL683	3-5/8	14	68	2/2	227	447	486	625	593	717
				4/6	565	1089	1196	1803	1232	1837
CDNL684	4	14	68	2/2	296	470	503	565	578	745
				4/6	589	1060	929	1807	1227	1644
CDNL686	6	14	68	2/2	193	303	529	501	610	672
				4/6	630	958	1239	1765	1568	1908
CDNL688	8	14	68	2/2	275*	321*	533	496	594	688
				4/6	880*	1542*	1211	1785	1315	1875

*8" members not available in 20ga (33mil) thickness.

Notes:

1 For combined directional loads, an interaction equation is recommended: Hactual/Hallow + Vactual/Vallow <= 1.0.

2 Screws in slots have no load value.

3 Exterior clip loads are based on using #10 screws.

HDSC Header Bracket (HDSC)

For use with the Heavy-Duty Stud (HDS®) Framing System.

The HDSC header bracket is the perfect complement to the HDS Framing System. This simple, yet innovative header bracket turns a two-person curtain wall header installation into a one-person job. This unique, prepunched clip also eliminates surface head fastener buildup that can create finishing challenges. Let the light-gauge framings experts at ClarkDietrich help you incorporate this cutting-edge framing assembly into your next project.

PRODUCT DIMENSIONS

3-1/2" x 3-1/16" x 2"
3-7/8" x 3-1/16" x 2"
5-7/8" x 3-1/16" x 2"
7-7/8" x 3-1/16" x 2"

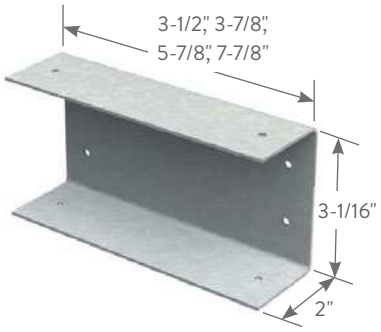
MATERIAL SPECIFICATIONS

Gauge: 14 gauge (68mil)
Design Thickness: 0.0713 inches
Coating: G90
Yield Strength: 50ksi
ASTM: A653/A653M

HDSC HEADER BRACKET

Product code	Thickness			Size (in)	Fits HDS system size (in)
	Gauge	Mils	Design thickness (in)		
HDSC	14	68	0.0713	3-1/2 x 3-1/16 x 2	3-5/8
HDSC	14	68	0.0713	3-7/8 x 3-1/16 x 2	4
HDSC	14	68	0.0713	5-7/8 x 3-1/16 x 2	6
HDSC	14	68	0.0713	7-7/8 x 3-1/16 x 2	8

* Sold in pairs.



HDSC Header Bracket

HDSC HEADER BRACKETS ALLOWABLE LOADS (LBS)

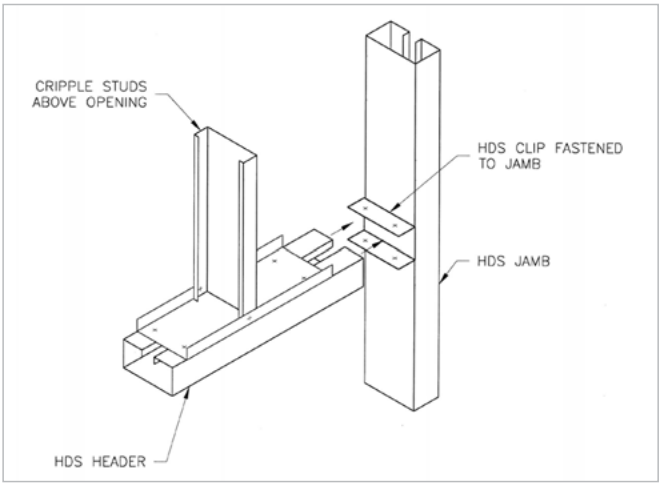
Product code	Size (in)	Jamb/Head Gauge			F1 (lbs)		F2 (lbs)	
		Gauge	Mils	Fy	Jamb	Head	Jamb	Head
HDSC	3-1/2	20	33	33	560	453	560	449
		18	43	33	832	673	832	713
		16	54	33	1172	948	890	890
				50	1680	1359	890	890
		14	68	33	1656	1339	890	890
				50	1680	1359	890	890
		12	97	33	1680	1359	890	890
				50	1680	1359	890	890
HDSC	3-7/8	20	33	33	560	453	560	449
		18	43	33	832	673	832	713
		16	54	33	1172	948	890	890
				50	1680	1359	890	890
		14	68	33	1656	1339	890	890
				50	1680	1359	890	890
		12	97	33	1680	1359	890	890
				50	1680	1359	890	890
HDSC	5-7/8	20	33	33	560	501	560	449
		18	43	33	832	744	832	713
		16	54	33	1172	1048	1172	1064
				50	1680	1503	1493	1493
		14	68	33	1656	1481	1493	1493
				50	1680	1503	1493	1493
		12	97	33	1680	1503	1493	1493
				50	1680	1503	1493	1493
HDSC	7-7/8	20*	33	33	560	501	560	449
		18	43	33	832	744	832	713
		16	54	33	1172	1048	1172	1064
				50	1680	1503	1493	1493
		14	68	33	1656	1481	1493	1493
				50	1680	1503	1493	1493
		12	97	33	1680	1503	1493	1493
				50	1680	1503	1493	1493

*Indicates that the h/t exceeds 200. Web stiffeners are required at bearing points. No holes in the web are permitted.

Notes:

1. Screws shall be #10-16 Buildex® or equivalent, with an ultimate shear capacity per screw of 1400#.
2. Table to be used by qualified engineers only.
3. To determine the capacity of any given connection, compare the jamb and head values, and use the minimum. For example, if a 16 gauge, 50ksi jamb is used with a 3.625" HDS 18 gauge, 33ksi head, the design value for F1 is the minimum value of 1680# for the jamb and 682# for the head. Therefore, the design value is 682#.
4. For F1 and F2 occurring at the same time, use the squared interaction equation: (f1/F1)^2+(f2/F2)^2<=1.0.
5. Buildex® is a registered trademark of Illinois Tool Works, Inc.

Typical Construction Details



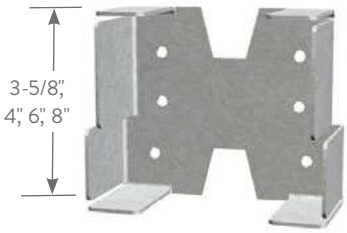
Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

ProX Clip (PXTC)

For use with the ProX Header® System.

The Brady ProX Header® System provides a direct solution to the many problems associated with traditional headers that have troubled architects, engineers, contractors and inspectors for decades. ProX Header is a superior and cost-effective alternative to the limited span capabilities of a single track and the excessive build-up of traditional box headers. The ProX Header is designed for all interior and exterior door and window wall openings in the 3 to 12 foot wide range.

The ProX clip's offset tabs enable the ProX header to "snap" and hold itself in place during installation. After installation, all screw connections remain flush and ready for a smooth drywall finish.



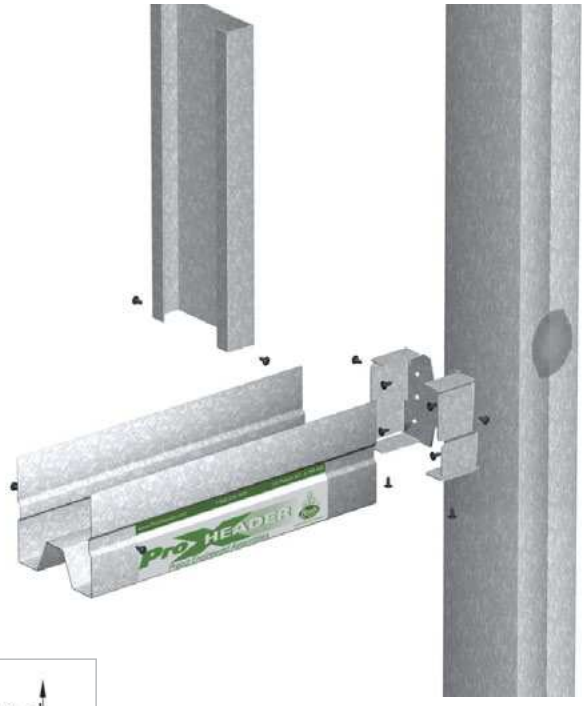
ProX Clip

PRODUCT DIMENSIONS

3-5/8" x 1-1/2"
4" x 1-1/2"
6" x 1-1/2"
8" x 1-1/2"

MATERIAL SPECIFICATIONS

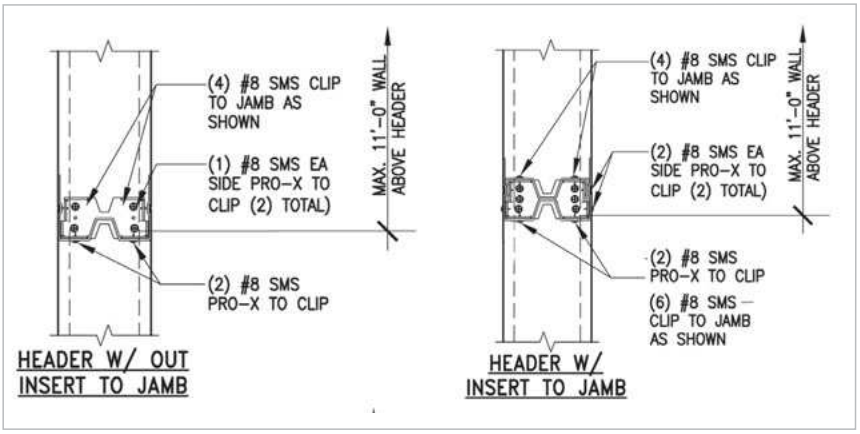
Gauge: 16 gauge (54mil)
Design Thickness: 0.0566 inches
Coating: CP60 per ASTM C955
Yield Strength: 50ksi
ASTM: A653/A653M, C955



ProX CLIP

Product code	Thickness			Size
	Gauge	Mils	Design thickness (in)	
PXTC	16	54	0.0566	3-5/8 x 1-1/2
				4 x 1-1/2
				6 x 1-1/2
				8 x 1-1/2

Typical Construction Details



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U.S. Patent Nos. 6,799,408 and 7,178,304 of Brady Construction Innovations

ProX CLIP ALLOWABLE VALUES

Without insert installed, #8 screw

ProX outer widths (in)	ProX thickness (mils)	Number of fasteners attaching ProX clip to vertical rough opening support	Number of screws attaching ProX outer to clip	Allowable Values (lbs)	
				$V_{vertical}$	$V_{horizontal}$
3.625	33	4	4	400	472
	43	4	4	573	492
	54	4	4	726	514
	68	4	4	726	514
4.000	33	4	4	400	523
	43	4	4	573	690
	54	4	4	783	719
	68	4	4	783	719
6.000	33	6	4	492	538
	43	6	4	704	709
	54	6	4	963	921
	68	6	4	963	921
8.000	33	6	4	492	538
	43	6	4	704	709
	54	6	4	963	921
	68	6	4	963	921

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254mm, 1 lb = 4.45 N.

ProX CLIP ALLOWABLE VALUES

Without insert installed, #10 screw

ProX outer widths (in)	ProX thickness (mils)	Number of fasteners attaching ProX clip to vertical rough opening support	Number of screws attaching ProX outer to clip	Allowable Values (lbs)	
				$V_{vertical}$	$V_{horizontal}$
3.625	33	4	4	442	483
	43	4	4	631	506
	54	4	4	793	531
	68	4	4	793	531
4.000	33	4	4	442	558
	43	4	4	631	711
	54	4	4	861	734
	68	4	4	861	734
6.000	33	6	4	544	574
	43	6	4	775	759
	54	6	4	1014	989
	68	6	4	1014	989
8.000	33	6	4	544	574
	43	6	4	775	759
	54	6	4	1014	989
	68	6	4	1014	989

For SI: 1 inch = 25.4 mm, 1 mil = 0.0254mm, 1 lb = 4.45 N.

Notes:

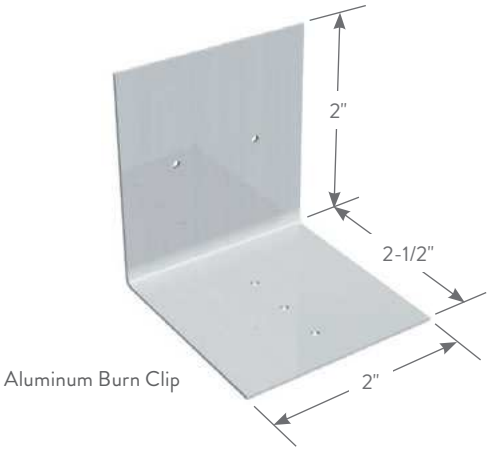
1 Jamb member thickness to match or exceed ProX Header thickness.
2 Locate the screws from clip to jamb at the four corner holes of the clip when supporting a ProX Header without insert.
3 Maximum gap between end of header and jamb to be 1/4 inch.
4 All clips are 54mil.
5 Values may not be increased by 33% for load combinations involving wind or seismic.
6 ProX Header® is a registered trademark of Brady Construction Innovations.

Aluminum Burn Clip (AB)

Melting away under intense heat, clips allow a fire-damaged structure to collapse while keeping the firewall barrier in place, protecting adjacent units.

ClarkDietrich aluminum burn clips are used as part of the H-Stud area separation wall assembly and are designed to melt and break away when exposed to fire. The clips are used to hold the area separation wall assembly in place at the floor roof and truss line between adjacent units.

Should a fire break out in one unit, the aluminum burn clips on the fire-ridden side of the area separation wall will melt, allowing the wall structure for that side to collapse. Without pulling the area separation wall down, the burn clips on the non-fire side will remain intact, and hold the area separation wall in place as a barrier to contain the fire within the unit of origin.



Aluminum Burn Clip

PRODUCT DIMENSIONS

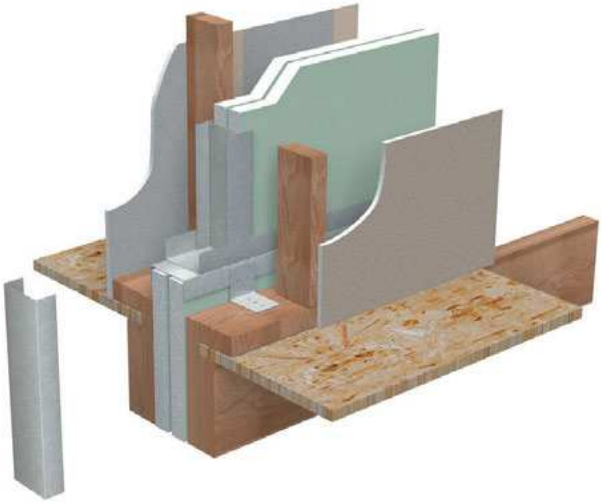
2" x 2" x 2-1/2"

MATERIAL SPECIFICATIONS

Clips are manufactured using aluminum alloy. Standard product manufactured with .050 material. Extra-heavy duty product (AB63) manufactured with .063 material is available on request.

INSTALLATION

Attach an aluminum burn clip to the completed area separation wall assembly. One clip should be located at each H-stud on both sides of the wall. Attach the aluminum burn clip to the H-stud with screws, not nails. Attach to the adjacent framing with Type-W or Type-S screws.



ALUMINUM BURN CLIPS

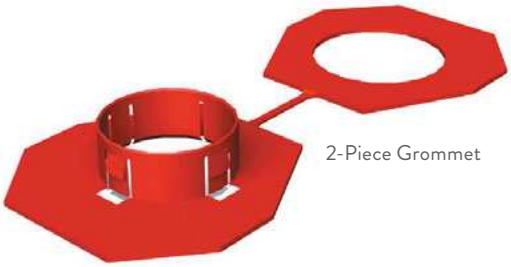
Product code	Size (in)	Thickness (in)	Packaging Pcs./Bucket
AB	2 x 2 x 2-1/2	0.050	500
AB63	2 x 2 x 2-1/2	0.063	500

*AB63 meets requirements of ICC-ES Legacy Report 92-19.

Grommets for Stud Knockouts (GROM)

Protect and isolate electrical wiring and plumbing from contacting metal.

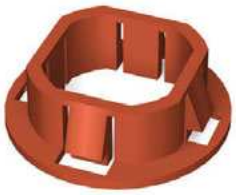
Grommets snap easily into stud knockouts and are used to protect electrical wiring and plumbing lines from contacting metal. They also help to prevent and eliminate pipe rattle. Grommets are commonly used in residential construction when metal conduit is not required by building code.



2-Piece Grommet

INSTALLATION

Install grommets in all stud knockouts where wiring and plumbing lines will be inserted. Use the snap-in bushing grommet for 1-5/8" and 2-1/2" wall studs and the standard grommet for all wall studs 3-1/2" and wider.



Snap-In Bushing

Install the snap-in bushing by pressing the bushing into the stud knockout. Make sure to engage the bushing lips to secure into place.

Install the standard grommet by first opening the grommet as illustrated above. Insert one side of the grommet through the knockout. Snap the grommet together so it engages with the metal sandwiched between the two plastic sides.

Grommet for 3-1/2" and Wider Studs

GROMMETS

Product code	Size (in)	Description	Pcs./Carton
GROM	3/4	For 1-5/8" and 2-1/2" studs	100
	1-1/2	For 3-1/2" and wider studs	100

Resilient Sound Isolation Clip (RSIC-1®)

A low-cost, high-performance, noise control solution.

The resilient sound isolation clip is used in conjunction with drywall furring channel to fasten gypsum wallboard to various wall and floor-ceiling designs and applications, while simultaneously providing acoustical separation (decoupling). This significantly reduces the amount of impact and airborne sound filtering from rooms above, below and alongside. The RSIC-1 has been acoustically tested, and adds 15 to 20 STC points and 15 to 20 IIC points to most assemblies, reducing the noise transfer by 75% to 100%. Ideal for condos, apartments, hotels, motels, theaters—or any structure where noise control is a concern—RSIC-1 easily attaches to wood, steel or concrete.

WALL INSTALLATION

For one or two layers of 5/8" gypsum board RSIC-1 shall be installed at a maximum of 48" on center (horizontal). Fasten to substrate with a fastener approved for a minimum pullout and shear of 120 lbs. Ensure the internal metal ferrule is tight to the substrate. Locate the first row of RSIC-1 clips within 3" from the floor and within 6" from the ceiling. Snap 25ga., 7/8"drywall furring channel into clips. Install gypsum board leaving a 1/4" minimum gap around floor perimeter. Use shims to ensure proper installation and do not remove until all fasteners are installed based on the assembly. Caulk around the entire perimeter of the gypsum board. Use fire- and smoke-rated acoustical sealant where required.

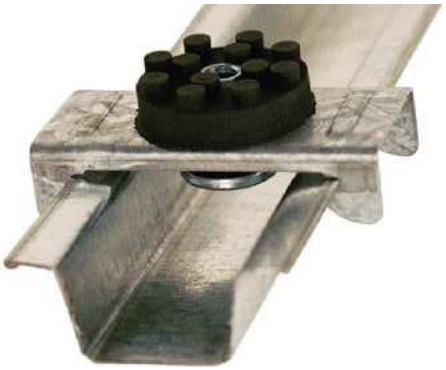
Steel Framing Members
Fire Resistance Classification
See UL Fire Resistance Directory
Fire R16638

UL and UL Classified are trademarks of Underwriters Laboratories, Inc.

CEILING INSTALLATION

For one or two layers of 5/8" gypsum board RSIC-1 shall be installed at a maximum of 48" on center (horizontal). Fasten to substrate with a fastener approved for a minimum pullout and shear of 120 lbs. Ensure the internal metal ferrule is tight to the substrate. Locate the first row of RSIC-1 clips within 8" from the wall at each end of the run. Snap 25ga., 7/8" drywall furring channel into clips. Install gypsum board leaving a 1/4" minimum gap ceiling perimeter. Caulk around the entire perimeter of the gypsum board. Use fire- and smoke-rated acoustical sealant where required.

Resilient Sound Isolation Clip



RESILIENT SOUND ISOLATION CLIP

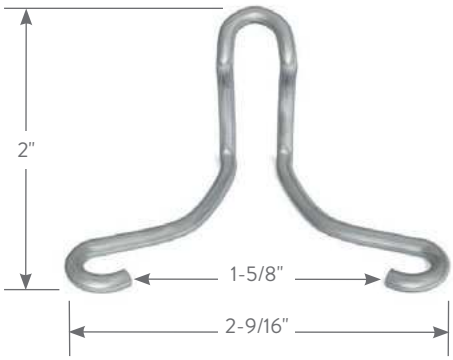
Product code	Pcs./Bucket
RSIC-1	200

U.S. Patent No. 6,267,347 of PAC International, Inc.
The RSIC-1 clip is a registered trademark of MTEC, LLC.

Metal Furring Channel Clip (MFCC)

Quickly facilitates the attachment of metal furring channel to 1-1/2" U-channel in ceiling assemblies.

ClarkDietrich metal furring channel clips are made of galvanized wire and used to attach metal furring channels to 1-1/2" U-channels in ceiling gridwork. Clips must be installed on alternating sides of the 1-1/2" channels. Use tie wire when clips cannot be alternated. Clips should only be used when single-layer gypsum or single-layer veneer plaster base is used.



Metal Furring Channel Clip

MATERIAL SPECIFICATIONS

MFCC, made of corrosion-resistant galvanized wire, are used in attaching metal channels to 1-1/2" cold-rolled channel ceiling grillwork. For use with gypsum panels or with single-layer veneer gypsum plaster base. See illustrations.

INSTALLATION

MFCC must be attached on alternate sides of the 1-1/2" U-channels. Use tie wire when clips cannot be alternated.

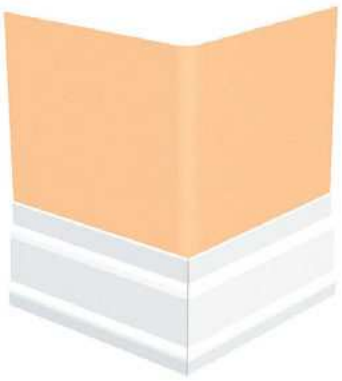
METAL FURRING CHANNEL CLIP

Product code	Pcs./Carton
MFCC	500

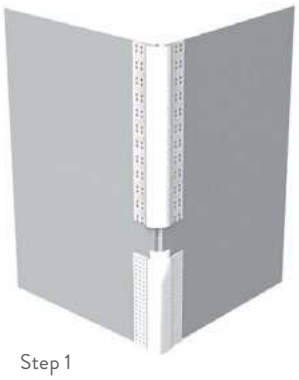
Vinyl 3/4" Bullnose to 90° Transition Cap (M859)

Transition rounded bullnose corners to 90° for easy baseboard and crown molding installation.

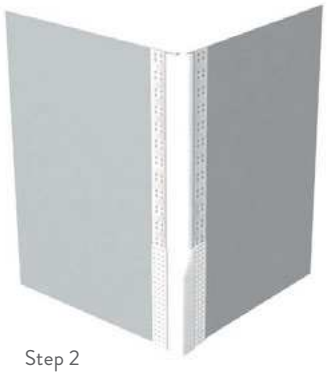
ClarkDietrich vinyl 3/4" bullnose to 90° transition caps simplify installation of baseboard or crown molding corners into 3/4" bullnose systems. Quick and easy to install, this product eliminates corner gaps and the need for time-consuming caulking and filling. Can be used with metal, vinyl or paper-faced 3/4" bullnose corner bead for transition onto baseboard or crown molding up to 4-1/2" wide.



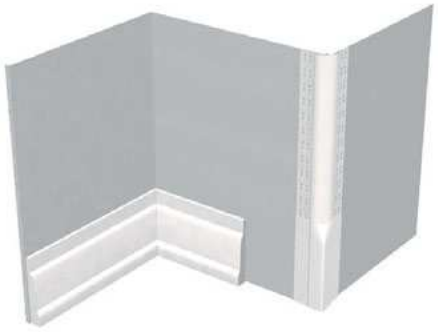
Vinyl 3/4"
Bullnose to 90° Transition Cap



Step 1



Step 2



Step 3

VINYL 3/4" BULLNOSE TO 90° TRANSITION CAPS

Product code	Size radius (in)	Style	Packaging	
			Pcs./Box	Cartons/Skid
M859	3/4	Bullnose to 90° transition cap 3/4"	50	25

Vinyl 90° Corner Caps 3/4" (M285/M385)

For a professional finish where two bullnose corners meet at 90°

ClarkDietrich vinyl 2-way inside 90° corner caps 3/4" provide the ideal component to transition bullnose corner beads to a crisp finish where inside corners intersect at 90°. Examples of applications include windows, closets, doorways, skylights, etc.

Easy to install, this component provides a cost-effective alternative to time-consuming mitering of corners. Caps are also rust-proof and dent-resistant.

Vinyl 2-Way Inside 90° Corner Cap 3/4"

VINYL 2-WAY INSIDE 90° CORNER CAPS 3/4"

Product code	Size radius (in)	Style	Packaging	
			Pcs./Box	Cartons/Skid
M285	3/4	Plastic 2-way corner cap	50	25

For a professional finish where three 3/4" bullnose corners meet at 90°

ClarkDietrich vinyl 3-way 90° corner caps 3/4" provide the ideal solution to finish corners quickly and efficiently at three-way 90° 3/4" bullnose intersections. This corner cap features extended tabs for easier alignment and a professional finish, and it works well with both metal and vinyl bullnose corner beads.

The M385 bullnose corner cap eliminates the need for special corner bead applications and time-consuming mitering. These easy-to-install corner caps are a huge labor saver.

Vinyl 3-Way 90° Corner Cap 3/4"

VINYL 3-WAY 90° CORNER CAPS 3/4"

Product code	Size radius (in)	Style	Packaging	
			Pcs./Box	Cartons/Skid
M385	3/4	Plastic 3-way corner cap	50	25

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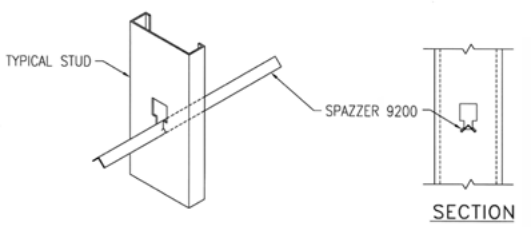
Product Detail

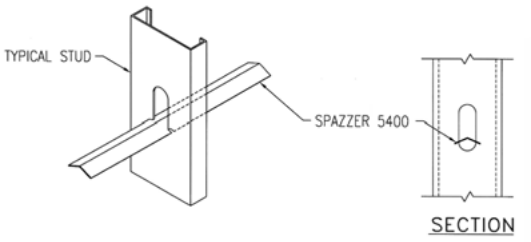
Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

Bridging Details

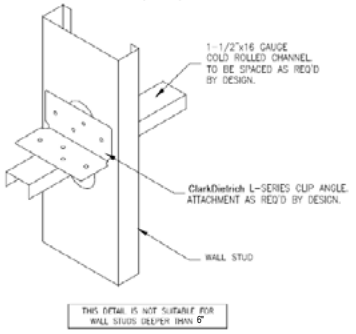
Spazzer® 9200 Bridging



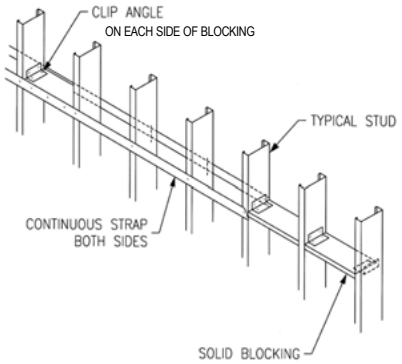
Spazzer 5400 Bridging



U-Channel Bridging Connection

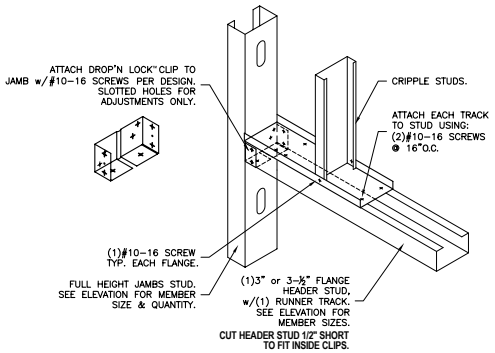


Block and Strap Bridging

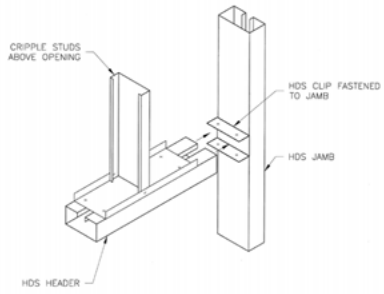


Header Details

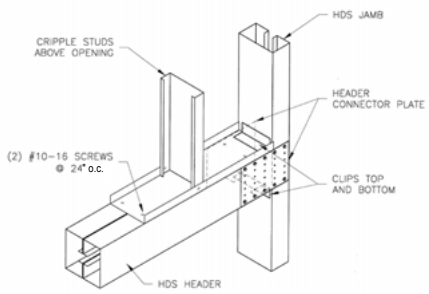
Curtain Wall RedHeader RO™ Header & Jamb



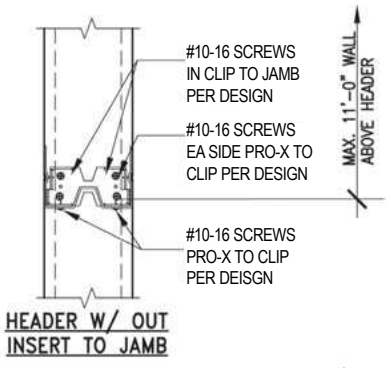
Curtain Wall HDS® Header & Jamb



Load-Bearing HDS Header & Jamb



Curtain Wall ProX Header®



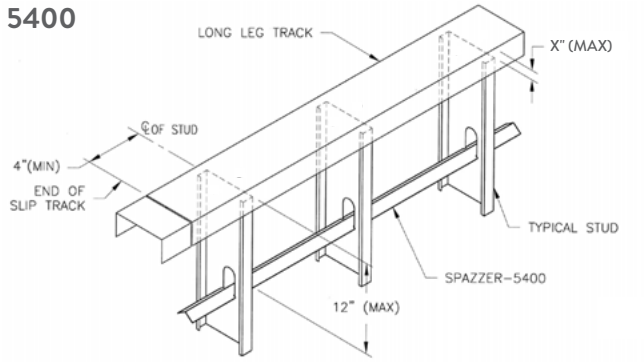
#10-16 SCREWS IN CLIP TO JAMB PER DESIGN

#10-16 SCREWS EA SIDE PRO-X TO CLIP PER DESIGN

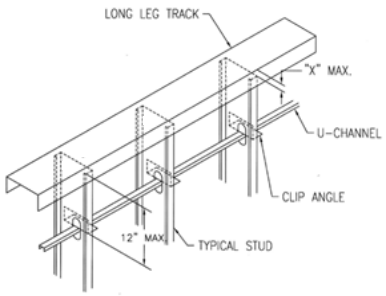
#10-16 SCREWS PRO-X TO CLIP PER DEISGN

Head-of-Wall Deflection Details

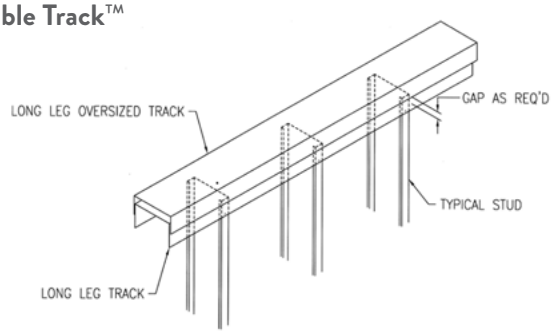
Long Leg Track with Spazzer® 5400



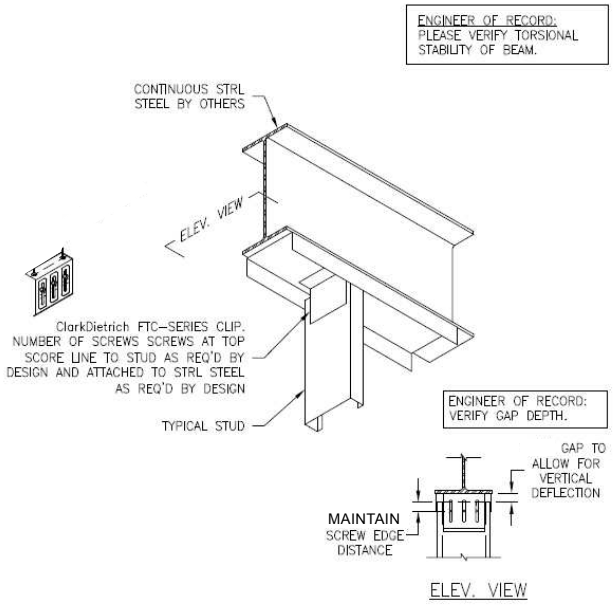
Long Leg Track with U-Channel



Double Track™



Long Leg Track with Fast Top™ Clip



Details shown in this brochure are for example only. The engineer of record on the project is responsible for the design of the connection to the structure. Additional connection details can be found at clarkdietrich.com.

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Product Name Index

Product Code Index

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Clip Express℠ DISPLAY PROGRAM

ClarkDietrich Clip Express℠ Product Displays

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ClarkDietrich Clip Express℠ products meet or exceed these applicable performance standards.

AISI "North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 w/2004 Supplement"

ASTM American Society for Testing and Materials

Product specifications

ASTM C645	Non-structural steel framing members
ASTM C955	Load-bearing steel framing
ASTM C847	Plastering steel products
ASTM C841/C1063	Veneer and plaster accessories
ASTM C1047	Beads and trims–metal–paper–vinyl

Material specifications

ASTM A1003 (NS33, ST33H, ST50H)

ASTM A653	Zinc-coated hot-dip process
ASTM A653/B69	Veneer and plaster accessories

Protective coating standards

ASTM C645	Non-structural steel framing members
ASTM C955	Load-bearing steel framing
ASTM A653	Zinc-coated hot-dip process
ASTM C1063	Veneer and plaster accessories
ASTM C1047	Beads and trims–metal–paper–vinyl

UL® Underwriters Laboratories testing standard

UL 263 "Fire Tests of Building Construction and Materials"

Additional code approvals

International Building Code

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Construction Waste Management (Up to 2 points)

ClarkDietrich products are manufactured from cold-formed steel. Steel is 100% recyclable, which helps divert debris from the waste stream. The contribution to LEED must be calculated by the contractor based on weight or volume.

LEED Credit MR 4 Recycled Content (Up to 3 points)

ClarkDietrich's steel products have a minimum of 25.5% post-consumer recycled content, and 6.8% pre-consumer. If you wish to report a higher number for your project or seek Credit MR 5 regional materials, please contact Tech Services at 888-437-3244 or www.clarkdietrich.com.

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