CLIP EXPRESS™ PRODUCT CATALOG

CLIPS, CONNECTORS & FRAMING HARDWARE

STRONGER THAN STEEL™
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.

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</table>
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.
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).

**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.
## OVERVIEW

**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)**

<table>
<thead>
<tr>
<th>Material thickness (mils)</th>
<th>Yield strength Fy (ksi)</th>
<th>Bearing (lbs)</th>
<th>Pullover (lbs)</th>
<th>PAF (Shank Dia.=0.145, Head Dia.=0.3”) Min. Embedment 3/4”</th>
<th>PAF (Shank Dia.=0.145, Head Dia.=0.3”) Min. Embedment 1”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Shear</td>
<td>Tension</td>
<td>Shear</td>
<td>Tension</td>
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<tr>
<td>33</td>
<td>33</td>
<td>203</td>
<td>234</td>
<td>95</td>
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<td>265</td>
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<td>333</td>
<td>382</td>
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<tr>
<td>68</td>
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<td>480</td>
<td>552</td>
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<td>50</td>
<td>604</td>
<td>695</td>
<td>95</td>
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<tr>
<td>118</td>
<td>50</td>
<td>729</td>
<td>838</td>
<td>95</td>
<td>70</td>
</tr>
</tbody>
</table>

**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” | PAF (Shank Dia.=0.145, Head Dia.=0.3”) 1/4” | PAF (Shank Dia.=0.145, Head Dia.=0.3”) 3/8” | PAF (Shank Dia.=0.145, Head Dia.=0.3”) 1/2” | PAF (Shank Dia.=0.145, Head Dia.=0.3”) 3/4” |
|---------------------------|------------------------|--------------|----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                           |                        | Shear        | Tension        | Shear | Tension | Shear | Tension | Shear | Tension | 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      |
| 68                        | 50                     | 480          | 552            | 425  | 455      | 620   | 800     | 680   | 810      | 605   | 850      | 545   | 500      |
| 97                        | 50                     | 604          | 695            | 425  | 455      | 620   | 800     | 680   | 810      | 605   | 850      | 545   | 500      |
| 118                       | 50                     | 729          | 838            | 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.

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**Minimum Fastener Spacing and Edge Distances:**

- **Cold-Formed Steel**
  - Minimum Slab Thickness: 3”4”

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**Minimum Fastener Spacing and Edge Distances:**

- **Cold-Formed Steel**
  - Minimum Slab Thickness: 3”4”

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**Powder-Actuated Fasteners in Concrete**

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**Powder-Actuated Fasteners in Steel**

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

<table>
<thead>
<tr>
<th>Material thickness (mils)</th>
<th>Design thickness (in)</th>
<th>Material Strength</th>
<th>Fillet Weld</th>
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<tr>
<td></td>
<td></td>
<td>Fy (ksi)</td>
<td>Fu (ksi)</td>
<td>Longitudinal (lbs)</td>
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<td></td>
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<tr>
<td>Values for a single one (1) inch weld</td>
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<td></td>
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<tr>
<td>43 0.0451 33 45</td>
<td>619</td>
<td>864</td>
<td>544</td>
<td>663</td>
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<tr>
<td>43 0.0451 50 65</td>
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<td>1247</td>
<td>785</td>
<td>958</td>
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<td>Values for a single three (3) inch weld</td>
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<td>2591</td>
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</table>

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.
Overview

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 0.145” 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.
   - #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 Aktiengesellschaft 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.
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.
Overview

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.

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.

<table>
<thead>
<tr>
<th>Gauge</th>
<th>Mils</th>
<th>Design thickness</th>
<th>Minimum thickness</th>
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<td>0.0188&quot;</td>
<td>0.0179&quot;</td>
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<tr>
<td>20 DW</td>
<td>30</td>
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<tr>
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<tr>
<td>12</td>
<td>97</td>
<td>0.1017&quot;</td>
<td>0.0966&quot;</td>
</tr>
</tbody>
</table>

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.

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.

Available for overnight delivery
Call 866-638-1908
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

clarkdietrich.com
1. FastClip™ Slide Clip
   pages 16-17

2. Extended FastClip™ Slide Clip
   pages 18-19

3. FastHook FastClip™
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5. Fast Strut™
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6. QuickClip™
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   pages 26-27

clarkdietrich.com

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)**

**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.

**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.

**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”

**FastClip™ SLIDE CLIPS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
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</thead>
<tbody>
<tr>
<td>FCSC</td>
<td>14/68</td>
<td>1-1/2 x 3-1/2 x 4-1/2</td>
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<td>FCSC</td>
<td>14/68</td>
<td>1-1/2 x 5-1/2 x 4-1/2</td>
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</table>

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

**NOTES**

- All technical content of this literature is effective 4/9/12 and supersedes all previous information.
- Pub. No. CD-ClipExpress 4/12
- clarkdietrich.com
- U.S. Patent No. 6,688,069
### Location Options with (2) Anchors

### Location Options with (3) Anchors

### Location Options with (4) Anchors

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

<table>
<thead>
<tr>
<th>Anchor type</th>
<th>Stud thickness and yield strength</th>
<th>No. anchors to structure</th>
<th>Allowable load (lbs)</th>
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<tr>
<td>Buildex #12-24 Tek 5 Self-Drilling Screws to 3/16&quot; Steel</td>
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#### 5-1/2" FastClip™ ALLOWABLE LOADS (LBS)

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</tbody>
</table>

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*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)

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 CLIPS

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Design thickness (in)</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bucket</th>
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<td>FCEC</td>
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<td>1-7/8 x 8 x 4-3/4</td>
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<td>FCEC</td>
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<td>68</td>
<td>0.0713</td>
<td>1-7/8 x 12 x 4-3/4</td>
</tr>
</tbody>
</table>

Includes 80 FastClip deflection screws per bucket.

U.S. Patent No. 6,688,069
**EXTENDED FastClip™ ALLOWABLE LOADS (LBS)**

<table>
<thead>
<tr>
<th>Anchor type</th>
<th>Stud thickness and yield strength</th>
<th>No. anchors to structure</th>
<th>Allowable load (lbs)</th>
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<tr>
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</table>

*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.
FastHook FastClip™ (FHCL, FHCR)

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.

FastClip Deflection Screw

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

<table>
<thead>
<tr>
<th>FastHook FastClip™ SLIDE CLIPS</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
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<tbody>
<tr>
<td>FHCL</td>
<td>Gauge</td>
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<td>Design thickness (in)</td>
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<tr>
<td>FHCR</td>
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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”

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.

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 indicates 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 Aktiengesellschaft Corporation.

<table>
<thead>
<tr>
<th>Flat Tail Slide Clip™ ALLOWABLE LOADS (LBS)</th>
<th>Clip</th>
<th>Stud Reference</th>
<th>Allowable Load w/3 Screws (lbs)</th>
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</thead>
<tbody>
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<td>Clip type Anchor type</td>
<td>Clip</td>
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<tr>
<td>(2) Welds 1-5/8” E60xx</td>
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<td>14</td>
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<td>485</td>
</tr>
<tr>
<td>4 Buildex #12-24 Self-Drilling Screws to 3/16” Steel</td>
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<td>16</td>
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<td>4 Hilti 0.157” X-U Powder-Actuated Fasteners to 3/16” Steel</td>
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<td>16</td>
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<tr>
<td>12</td>
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<td>447</td>
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<tr>
<td>(2) Kwik-Cons II (3000psi normal weight concrete)</td>
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</tr>
<tr>
<td>12</td>
<td>97</td>
<td>253</td>
<td>241</td>
</tr>
</tbody>
</table>

Includes 80 FastClip deflection screws per bucket.
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.

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
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<tr>
<td>FS12</td>
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<td>FS15</td>
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<tr>
<td>Custom lengths</td>
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Includes 55 FastClip deflection screws per carton.

U.S. Patent No. 6,688,069
### FS12, FS15 and Custom Lengths Allowable Loads (LBS)

<table>
<thead>
<tr>
<th>Stud thickness and yield strength</th>
<th>Slip allowance (in)</th>
<th>Welded direct to structural steel</th>
<th>Mechanically Anchored</th>
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<tr>
<td></td>
<td>Number of anchors</td>
<td>PAF in steel (FS=5)</td>
<td>PAF in steel (FS=10)</td>
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<td>546 2 546 290 546 269</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>546 3 546 343 546 232</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.25</td>
<td>546 2 546 294 546 294</td>
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<td>1522 3 686 343 963 269</td>
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<td>1.25</td>
<td>1522 2 513 257 720 232</td>
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<tr>
<td>16ga (54mil) 33ksi</td>
<td>0.75</td>
<td>1612 2 579 290 789 269</td>
<td></td>
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<tr>
<td></td>
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<td>1612 3 686 343 963 269</td>
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<td>1.25</td>
<td>1612 2 513 257 720 232</td>
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<tr>
<td>16ga (54mil) 50ksi</td>
<td>0.75</td>
<td>1705 2 579 290 789 269</td>
<td></td>
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<td></td>
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<td>1705 3 686 343 963 269</td>
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<td>1.25</td>
<td>1705 2 513 257 720 232</td>
<td></td>
</tr>
<tr>
<td>14ga (68mil) 33ksi</td>
<td>0.75</td>
<td>1792 2 579 290 789 269</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1792 3 686 343 963 269</td>
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<td>1.25</td>
<td>1792 2 513 257 720 232</td>
<td></td>
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<tr>
<td>14ga (68mil) 50ksi</td>
<td>0.75</td>
<td>1978 2 579 290 789 269</td>
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<td></td>
<td></td>
<td>1978 3 686 343 963 269</td>
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<td>1.25</td>
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</tr>
<tr>
<td>12ga (97mil) 33ksi</td>
<td>0.75</td>
<td>2481 2 579 290 789 269</td>
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<td>1.25</td>
<td>2481 2 513 257 720 232</td>
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</tr>
<tr>
<td>12ga (97mil) 50ksi</td>
<td>0.75</td>
<td>2997 2 579 290 789 269</td>
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<td></td>
<td>2997 3 686 343 963 269</td>
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<td>1.25</td>
<td>2997 2 513 257 720 232</td>
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<td></td>
<td></td>
<td>2997 3 587 294 760 232</td>
<td></td>
</tr>
</tbody>
</table>

**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 3000 psi normal weight concrete.
5. For 3/4” deflection, center the proprietary 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 Aktiengesellschaft Corporation.
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™ (QC-Series™)**

**Curtain Wall/Bypass**

**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.

**Typical Construction Details**

**QuickClip™ (10 GA) ALLOWABLE LOADS**

<table>
<thead>
<tr>
<th>Stud type/Flange width</th>
<th>Stud gauge</th>
<th>Min. thickness (in)</th>
<th>Yield strength/Fy (ksi)</th>
<th>Allowable load (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>162 (3-5/8&quot;)</td>
<td>20</td>
<td>0.0329</td>
<td>33</td>
<td>277</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>0.0428</td>
<td>33</td>
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<tr>
<td></td>
<td>16</td>
<td>0.0538</td>
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<td>722</td>
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<td>0.0677</td>
<td>50</td>
<td>837</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>0.0966</td>
<td>50</td>
<td>837</td>
</tr>
<tr>
<td>200 (2&quot;)</td>
<td>20</td>
<td>0.0329</td>
<td>33</td>
<td>84</td>
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<td>14</td>
<td>0.0677</td>
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<td>293</td>
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<tr>
<td></td>
<td>12</td>
<td>0.0966</td>
<td>50</td>
<td>444</td>
</tr>
</tbody>
</table>

**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.

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

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”

### Slide Clip™ (SD) Connections

**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™ (14GA, 50KSI) Allowable Loads

<table>
<thead>
<tr>
<th>Stud type/Flange width</th>
<th>Stud gauge</th>
<th>Min. thickness (in)</th>
<th>Stud Fy (ksi)</th>
<th>Allowable Welded Clip Capacity (lb)</th>
<th>Allowable Capacity Using Mechanical Fasteners (lb)</th>
<th>Buildex 12-24, 15 TEK screws</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fully welded</td>
<td>Partially welded</td>
<td>Using a Safety Factor of 5</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3/16”</td>
</tr>
<tr>
<td>137 (1-3/8”)</td>
<td>20</td>
<td>0.0329</td>
<td>33</td>
<td>595</td>
<td>296</td>
<td>216</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>16</td>
<td>0.0538</td>
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<td>0.0677</td>
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<td>595</td>
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<td>0.0966</td>
<td>33</td>
<td>595</td>
<td>296</td>
<td>216</td>
</tr>
<tr>
<td>162 (1-5/8”)</td>
<td>20</td>
<td>0.0329</td>
<td>33</td>
<td>595</td>
<td>296</td>
<td>216</td>
</tr>
<tr>
<td></td>
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<td>0.0428</td>
<td>33</td>
<td>595</td>
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<td>216</td>
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<tr>
<td></td>
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<td>0.0538</td>
<td>33</td>
<td>595</td>
<td>296</td>
<td>216</td>
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<td>14</td>
<td>0.0677</td>
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<td>595</td>
<td>296</td>
<td>216</td>
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<td>595</td>
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<td>250 (2-1/2”)</td>
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<td>12</td>
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<td>595</td>
<td>296</td>
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<tr>
<td>300 (3”)</td>
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<td>173</td>
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<td>173</td>
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<td>185</td>
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<td>16</td>
<td>0.0538</td>
<td>33</td>
<td>207</td>
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<td>247</td>
</tr>
<tr>
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<td>12</td>
<td>0.0966</td>
<td>33</td>
<td>595</td>
<td>296</td>
<td>216</td>
</tr>
</tbody>
</table>

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.
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.

**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.

**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

---

**Fast Top™ CLIPS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gauge</td>
<td>Mils</td>
<td>Design thickness (in)</td>
</tr>
<tr>
<td>FTC3</td>
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<td>68</td>
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</tr>
<tr>
<td>FTC5</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
</tr>
</tbody>
</table>

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

---

U.S. Patent No. 6,688,069  
SLP-TRK® is a registered trademark of Brady Construction Innovations.
### FTC3 Allowable Loads (LBS)

<table>
<thead>
<tr>
<th>Stud thickness and yield strength</th>
<th>Slip allowance (in)</th>
<th>Welded direct to structural steel</th>
<th>Mechanically Anchored</th>
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<tbody>
<tr>
<td>20ga (33mil) 33ksi</td>
<td>0.75</td>
<td>259</td>
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<tr>
<td></td>
<td>1.25</td>
<td>259</td>
<td>259 252 259 206</td>
</tr>
<tr>
<td>18ga (43mil) 33ksi</td>
<td>0.75</td>
<td>259</td>
<td>259 252 259 241</td>
</tr>
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<td></td>
<td>1.25</td>
<td>259</td>
<td>259 252 259 206</td>
</tr>
<tr>
<td>16ga (54mil) 33ksi</td>
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<tr>
<td></td>
<td>1.25</td>
<td>259</td>
<td>259 252 259 206</td>
</tr>
</tbody>
</table>

**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 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 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.

### FTC5 Allowable Loads (LBS)

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<tr>
<th>Stud thickness and yield strength</th>
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</thead>
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<td>20ga (33mil) 33ksi</td>
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<td>386 317 386 386</td>
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<td></td>
<td>1.25</td>
<td>386</td>
<td>386 317 386 386</td>
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<tr>
<td>18ga (43mil) 33ksi</td>
<td>0.75</td>
<td>386</td>
<td>386 317 386 386</td>
</tr>
<tr>
<td></td>
<td>1.25</td>
<td>386</td>
<td>386 317 386 386</td>
</tr>
<tr>
<td>16ga (54mil) 33ksi</td>
<td>0.75</td>
<td>386</td>
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<td></td>
<td>1.25</td>
<td>386</td>
<td>386 317 386 386</td>
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</table>

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

Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.
*For demonstration purposes only. Simpson® Holdowns should be installed where strapping and gusset connect.
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.

<table>
<thead>
<tr>
<th>Uni-Clip™ END CLIP</th>
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</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
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U.S. Patent No. 6,688,069
### Uni-Clip™ ALLOWABLE LOADS (LBS)

<table>
<thead>
<tr>
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<th>Stud thickness and yield strength</th>
<th>No. anchors to structure</th>
<th>Number/Configuration of Screws to Stud Framing</th>
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<td></td>
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<td>8 Screws</td>
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<tr>
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<td>F1</td>
</tr>
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<td>529</td>
</tr>
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<td>1560</td>
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</table>

*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 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.

---

**Uni-Clip™ ALLOWABLE LOADS (LBS)**

**Location Options with (4) Screws**
- **Option A**
- **Option B**
- **Option C**

**Location Options with (8) Screws**

**Location Options with (2) Anchors**

**Location Options with (3) Anchors**

**Location Options with (4) Anchors**
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.

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<th>Product code</th>
<th>Thickness</th>
<th>Design thickness (in)</th>
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## Rigid Connections

**Extended Uni-Clip™ Allowable Loads (Kips)**

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<td>Hilti X-U</td>
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</table>

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

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

clarkdietrich.com
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

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# Rigid Connections

## Allowable Shear Load Table

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<th>18-ga (43mil 33ksi)</th>
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### 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.
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.
The technical content of this literature is effective 4/9/12 and supersedes all previous information.

**Rigid Connections**

### E-Series™ Support Clips Allowable Clip Capacities (LBS)

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<th>Product Code</th>
<th>No. of Screws to Steel Framing</th>
<th>Stud Thickness and Yield Strength</th>
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**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.

For 14ga (68mil), 50ksi.

- Using #10-16 self-drilling screws.
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 CLIPS

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<td>1-1/2 x 1-1/2 x 11</td>
<td>70</td>
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### EasyClip™ S-Series™ SUPPORT CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

<table>
<thead>
<tr>
<th>Clip</th>
<th>No. of screws to steel framing (l)</th>
<th>Stud Thickness and Yield Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20ga (33mil) 33ksi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F1</td>
</tr>
<tr>
<td>S543</td>
<td>3</td>
<td>295 (205)</td>
</tr>
<tr>
<td>S545</td>
<td>2</td>
<td>317 (317)</td>
</tr>
<tr>
<td>S547</td>
<td>5</td>
<td>651 (651)</td>
</tr>
<tr>
<td>S549</td>
<td>7</td>
<td>1029 (1029)</td>
</tr>
<tr>
<td>S541</td>
<td>9</td>
<td>679 (679)</td>
</tr>
<tr>
<td>S683</td>
<td>6</td>
<td>1015 (1015)</td>
</tr>
<tr>
<td>S685</td>
<td>5</td>
<td>1785 (1785)</td>
</tr>
<tr>
<td>S681</td>
<td>7</td>
<td>295 (295)</td>
</tr>
<tr>
<td>S687</td>
<td>8</td>
<td>317 (317)</td>
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<td>S689</td>
<td>9</td>
<td>651 (651)</td>
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<tr>
<td>S973</td>
<td>2</td>
<td>1029 (1029)</td>
</tr>
<tr>
<td>S975</td>
<td>4</td>
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<tr>
<td>S979</td>
<td>8</td>
<td>1785 (1785)</td>
</tr>
</tbody>
</table>

**Notes:**
- Screw Capacity Notes:
  1. The tabulated values indicate 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 structural members 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:**
- F1 and F2 values in parentheses are maximum shear and tension capacities when the clips are welded to the base structure (min 316”-36ksi steel).
- Listed weld capacities are computed assuming an E70XX welding rod or wire.
- 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”

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
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

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Design thickness (in)</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bucket</th>
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<tbody>
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<td>U543</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
<td>1-1/2 x 1-1/2 x 3-3/8</td>
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<tr>
<td>U545</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
<td>1-1/2 x 1-1/2 x 5-3/4</td>
</tr>
<tr>
<td>U547</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
<td>1-1/2 x 1-1/2 x 7-3/4</td>
</tr>
<tr>
<td>U549</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
<td>1-1/2 x 1-1/2 x 9-3/4</td>
</tr>
<tr>
<td>U683</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
<td>1-1/2 x 1-1/2 x 3-3/8</td>
</tr>
<tr>
<td>U685</td>
<td>14</td>
<td>68</td>
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<td>1-1/2 x 1-1/2 x 5-3/4</td>
</tr>
<tr>
<td>U687</td>
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</tr>
<tr>
<td>U689</td>
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<td>68</td>
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<td>1-1/2 x 1-1/2 x 9-3/4</td>
</tr>
<tr>
<td>U973</td>
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<td>0.1017</td>
<td>1-1/2 x 1-1/2 x 3-3/8</td>
</tr>
<tr>
<td>U975</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>1-1/2 x 1-1/2 x 5-3/4</td>
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<tr>
<td>U977</td>
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<td>97</td>
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<td>1-1/2 x 1-1/2 x 7-3/4</td>
</tr>
<tr>
<td>U979</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>1-1/2 x 1-1/2 x 9-3/4</td>
</tr>
</tbody>
</table>

Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.
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.
The technical content of this literature is effective 4/9/12 and supersedes all previous information.

EasyClip™ B-Series™ CLIP ANGLES

<table>
<thead>
<tr>
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<tr>
<td>B547</td>
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<td>1-1/2 x 1-1/2 x 7-1/4</td>
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</tr>
<tr>
<td>B549</td>
<td>14/68</td>
<td>1-1/2 x 1-1/2 x 3</td>
<td>200</td>
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<tr>
<td>B685</td>
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<td>1-1/2 x 1-1/2 x 5-1/4</td>
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<tr>
<td>B687</td>
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<td>1-1/2 x 1-1/2 x 7-1/4</td>
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<tr>
<td>B689</td>
<td>14/68</td>
<td>1-1/2 x 1-1/2 x 9-1/4</td>
<td>100</td>
</tr>
<tr>
<td>B973</td>
<td>12/97</td>
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<td>200</td>
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<tr>
<td>B975</td>
<td>12/97</td>
<td>1-1/2 x 1-1/2 x 5-1/4</td>
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<tr>
<td>B977</td>
<td>12/97</td>
<td>1-1/2 x 1-1/2 x 7-1/4</td>
<td>100</td>
</tr>
<tr>
<td>B979</td>
<td>12/97</td>
<td>1-1/2 x 1-1/2 x 9-1/4</td>
<td>80</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Thickness</th>
<th>2” x 2” x 3-3/8”</th>
<th>2” x 2” x 5-3/4”</th>
<th>2” x 2” x 7-3/4”</th>
<th>2” x 2” x 9-3/4”</th>
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<tbody>
<tr>
<td>X543</td>
<td>16</td>
<td>54</td>
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<tr>
<td>X547</td>
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<td>X549</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
<td>2 x 2 x 9-3/4</td>
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<tr>
<td>X683</td>
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<td>68</td>
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<td>2 x 2 x 3-3/8</td>
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<tr>
<td>X685</td>
<td>14</td>
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<tr>
<td>X687</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
<td>2 x 2 x 7-3/4</td>
</tr>
<tr>
<td>X689</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
<td>2 x 2 x 9-3/4</td>
</tr>
<tr>
<td>X973</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>2 x 2 x 3-3/8</td>
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<tr>
<td>X975</td>
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<td>97</td>
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<tr>
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<td>97</td>
<td>0.1017</td>
<td>2 x 2 x 7-3/4</td>
</tr>
<tr>
<td>X979</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>2 x 2 x 9-3/4</td>
</tr>
</tbody>
</table>

**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.
### Typical Construction Details

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

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

<table>
<thead>
<tr>
<th>Stud Thickness and Yield Strength</th>
<th>X543</th>
<th>X545</th>
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<th>X549</th>
<th>X683</th>
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<th>X689</th>
<th>X973</th>
<th>X975</th>
<th>X977</th>
<th>X979</th>
</tr>
</thead>
<tbody>
<tr>
<td>20g (33mil) 33ksi</td>
<td>F1</td>
<td>F2</td>
<td>F3</td>
<td>F1</td>
<td>F2</td>
<td>F3</td>
<td>F1</td>
<td>F2</td>
<td>F3</td>
<td>F1</td>
<td>F2</td>
<td>F3</td>
</tr>
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<td>20ga (33mil) 33ksi</td>
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<td>210</td>
<td>45</td>
<td>105</td>
<td>210</td>
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<td>105</td>
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<td>45</td>
<td>105</td>
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<td>18ga (43mil) 33ksi</td>
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<td>102</td>
<td>152</td>
<td>36</td>
<td>102</td>
<td>152</td>
<td>36</td>
<td>102</td>
<td>152</td>
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<td>99</td>
<td>152</td>
<td>27</td>
<td>99</td>
<td>152</td>
<td>27</td>
<td>99</td>
<td>152</td>
<td>27</td>
<td>99</td>
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<td>145</td>
<td>22</td>
<td>83</td>
<td>145</td>
<td>22</td>
<td>83</td>
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</tr>
<tr>
<td>12ga (97mil) 60ksi</td>
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<td>18</td>
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<td>79</td>
<td>129</td>
<td>18</td>
<td>79</td>
<td>129</td>
</tr>
</tbody>
</table>

**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.

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

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bucket</th>
</tr>
</thead>
<tbody>
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<td>16</td>
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</tr>
<tr>
<td>A546</td>
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<td>54</td>
<td>0.0566</td>
</tr>
<tr>
<td>A683</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
</tr>
<tr>
<td>A686</td>
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## EasyClip™ A-Series™ END CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

<table>
<thead>
<tr>
<th>Clip</th>
<th>No. of screws to steel framing (1)</th>
<th>Stud Thickness and Yield Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>18ga (43mil) 33ksi</td>
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<tr>
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<td>F1</td>
<td>F2</td>
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<td>A543</td>
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<td>6</td>
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<tr>
<td></td>
<td>10</td>
<td>885 (885)</td>
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<td>12</td>
<td>1062 (1062)</td>
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<tr>
<td>A683</td>
<td>4</td>
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<td></td>
<td>6</td>
<td>531 (472)</td>
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<td>A686</td>
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<tr>
<td></td>
<td>12</td>
<td>1062 (1062)</td>
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</tbody>
</table>

### 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. 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.

**Using #10–16 self-drilling screws**

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.

---

1. **JAMR ANCHORAGE**
2. **STUD ANCHORAGE**
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.
### Rigid Connections

#### EasyClip™ D-Series™ Anchor Clips and T-Series™ Tall Anchor Clips

<table>
<thead>
<tr>
<th>Product code</th>
<th>Stud thickness (gauge)</th>
<th>Stud grade (ksi)</th>
<th>F1 (Shear), (lbs)</th>
<th>F2 (Tension), (lbs)</th>
<th>M (Moment), (in-lbs)</th>
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<td>4 (10-16 Screws)</td>
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<td>D683</td>
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<td>33</td>
<td>374</td>
<td>465</td>
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<td>18 (43)</td>
<td>33</td>
<td>556</td>
<td>692*</td>
<td>986*</td>
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<td>1107*</td>
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<td>556</td>
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<td>986*</td>
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<td>556</td>
<td>692*</td>
<td>986*</td>
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<td>1389*</td>
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<td>33</td>
<td>556</td>
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<tr>
<td>T975</td>
<td>20 (33)</td>
<td>50</td>
<td>828</td>
<td>1133*</td>
<td>1786*</td>
</tr>
</tbody>
</table>

**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. A “*” in the shear column indicates that the shear capacity is limited to 642 lbs for D683 and T683 clips, 971 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 642 lbs for D683 and T683 clips, 971 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 3.
4. A “%” in the shear column indicates that the shear capacity is limited to 970 lbs when using 1/2” x 2-1/4” Hilti® Kwik-Bolts to 3000 psi concrete as shown in Figure 1.
5. A “*” in the shear column indicates that the shear capacity is limited to 706 lbs for 3” clips, and 2231 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. It is the responsibility of the designer to properly detail connections on the contract drawings.
10. Use a linear interaction equation for connections involving any combination of F1, F2, and M.
11. Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

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clarkdietrich.com
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 (HD Series)

<table>
<thead>
<tr>
<th>Product code</th>
<th>Simpson code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging</th>
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<td>S/HD10S</td>
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<td>0.1242</td>
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<tr>
<td>HD15</td>
<td>S/HD15S</td>
<td>7</td>
<td>170</td>
<td>0.1790</td>
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</table>

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

ICBO ER #5275 recognized
**SIMPSON® Strong-Tie® HD8, HD10, HD15 HOLDOWNS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Simpson reference</th>
<th>Found. anchor diameter</th>
<th>Stud fasteners</th>
<th>ASD</th>
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<td>S/HD8S</td>
<td>7/8</td>
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<td>2-43 (2-18ga)</td>
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<td></td>
<td></td>
<td></td>
<td>2-54 (2-16ga)</td>
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<td></td>
<td></td>
<td>Steel Fixture</td>
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<tr>
<td>HD10</td>
<td>S/HD10S</td>
<td>7/8</td>
<td>22 – #14</td>
<td>2-33 (2-20ga)</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>2-43 (2-18ga)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-54 (2-16ga)</td>
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<td>Steel Fixture</td>
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<tr>
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<td>S/HD15S</td>
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<td>30 – #14</td>
<td>2-43 (2-18ga)</td>
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<td>2-54 (2-16ga)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Steel Fixture</td>
</tr>
</tbody>
</table>

**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**

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

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<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
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<tbody>
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<tr>
<td>SLTT</td>
<td>12 x 97</td>
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<td>20</td>
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</table>

U.S. Patent No. 5,467,570 of Simpson Strong-Tie Company, Inc.
Simpson® and Simpson Strong-Tie® are registered trademarks of the Simpson Strong-Tie® Company, Inc.
ICBO ER #5275 recognized
### SIMPSON® Strong-Tie® TENSION TIES

<table>
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<tr>
<th>Product code</th>
<th>Simpson reference</th>
<th>Dimensions</th>
<th>Fasteners</th>
<th>Allowable tension loads (lbs)</th>
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<td>SLTY</td>
<td>S/LTY20</td>
<td>W (in) 2</td>
<td>H (in) 20</td>
<td>CL (in) 1-1/2</td>
</tr>
</tbody>
</table>

**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.

*Simpson” and Simpson Strong-Tie” are registered trademarks of the Simpson Strong-Tie” Company, Inc.
GP-Series unpunched gusset plates are also used to facilitate connections between chord members for in-plane framing.

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

**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.

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

G-Series™ Punched Gusset Plates

<table>
<thead>
<tr>
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<td>68</td>
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</tr>
</tbody>
</table>

Typical Construction Details

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

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bucket</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gauge</td>
<td>Mils</td>
<td>Design thickness (in)</td>
</tr>
<tr>
<td>H436</td>
<td>18</td>
<td>43</td>
<td>0.0451</td>
</tr>
<tr>
<td>H546</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
</tr>
<tr>
<td>H686</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
</tr>
</tbody>
</table>
**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.

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

SIMPSON® Strong-Tie® JOIST HANGERS

<table>
<thead>
<tr>
<th>Product code</th>
<th>Simpson reference</th>
<th>Thickness</th>
<th>Design thickness (in)</th>
<th>Packaging Pcs./Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/JCT8-14</td>
<td>S/JCT</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
</tr>
<tr>
<td>S/JCT</td>
<td>S/HJCT</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
</tr>
</tbody>
</table>

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

**SIMPSON® Strong-Tie® JOIST HANGERS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Simpson reference</th>
<th>Fasteners</th>
<th>Allowable ASD Loads</th>
<th>Fasteners</th>
<th>Allowable ASD Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Steel Header</td>
<td>Wood Header</td>
<td>Steel Header</td>
<td>Wood Header</td>
</tr>
<tr>
<td></td>
<td></td>
<td>54 mil (16ga)</td>
<td>Joist</td>
<td>Uplift</td>
<td>Down</td>
</tr>
<tr>
<td>SJCT</td>
<td>SJCT (min)</td>
<td>1 – #10</td>
<td>2 – #10</td>
<td>4 – #10</td>
<td>940</td>
</tr>
<tr>
<td>SJCT</td>
<td>SJCT (max)</td>
<td>1 – #10</td>
<td>4 – #10</td>
<td>6 – #10</td>
<td>1435</td>
</tr>
<tr>
<td>SH/JCT</td>
<td>SH/JCT (min)</td>
<td>2 – #10</td>
<td>4 – #14</td>
<td>6 – #14</td>
<td>1510</td>
</tr>
<tr>
<td>SH/JCT</td>
<td>SH/JCT (max)</td>
<td>2 – #10</td>
<td>8 – #14</td>
<td>9 – #14</td>
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<tr>
<td>SJCT</td>
<td>SJCT (min)</td>
<td>1 – #10</td>
<td>2 – #10</td>
<td>4 – #10</td>
<td>940</td>
</tr>
<tr>
<td>SJCT</td>
<td>SJCT (max)</td>
<td>1 – #10</td>
<td>4 – #10</td>
<td>6 – #10</td>
<td>940</td>
</tr>
<tr>
<td>SH/JCT</td>
<td>SH/JCT (min)</td>
<td>2 – #10</td>
<td>4 – #10</td>
<td>6 – #14</td>
<td>1510</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>BRIDLE HANGERS</th>
<th>Thickness</th>
<th>Depth (H) (in)</th>
<th>Width (W) (in)</th>
<th>Packaging Pcs./Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>Gauge</td>
<td>Mils</td>
<td>Design thickness (in)</td>
<td></td>
</tr>
<tr>
<td>CDBV</td>
<td>14</td>
<td>68</td>
<td>0.0713</td>
<td>2 25 8 10 12 14 2 25 25 25</td>
</tr>
<tr>
<td>CDMB</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>2 25 8 10 12 14 2 25 25 25</td>
</tr>
</tbody>
</table>

Double-wide hangers available on request.
Other style hangers are available.
Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.
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.

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.

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 PLATES

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bucket</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDSP 18</td>
<td>43</td>
<td>0.0451</td>
<td>4 x 6</td>
</tr>
<tr>
<td>TDSP 16</td>
<td>54</td>
<td>0.0566</td>
<td>4 x 6</td>
</tr>
</tbody>
</table>

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

FIELD SKEWABLE TradeReady® RIM TRACK SPLICE PLATES

<table>
<thead>
<tr>
<th>Product code</th>
<th>TDSP gauge</th>
<th>Framing material gauge</th>
<th>Framing material yield (ksi)</th>
<th>Tension F4 (lbs)</th>
<th>Shear F1 (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDSP</td>
<td>18</td>
<td>20</td>
<td>33</td>
<td>560</td>
<td>437</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 or thicker</td>
<td>33</td>
<td>832</td>
<td>650</td>
</tr>
<tr>
<td>TDSP</td>
<td>16</td>
<td>20</td>
<td>33</td>
<td>560</td>
<td>437</td>
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<td>33</td>
<td>832</td>
<td>650</td>
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<td>33</td>
<td>1172</td>
<td>915</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1312</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Joist depth (in)</th>
<th>o.c. spacing (in)</th>
<th>Use product</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-1/4</td>
<td>12</td>
<td>T20</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>T20</td>
</tr>
<tr>
<td>9-1/4</td>
<td>12</td>
<td>T20</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>T20</td>
</tr>
<tr>
<td>11-1/4</td>
<td>12</td>
<td>T20</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>T27</td>
</tr>
<tr>
<td>7-1/4</td>
<td>16</td>
<td>T27</td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>T27</td>
</tr>
<tr>
<td>9-1/4</td>
<td>16</td>
<td>T27</td>
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<td>16</td>
<td>T27</td>
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<td>11-1/4</td>
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<td>T36</td>
</tr>
<tr>
<td>12</td>
<td>24</td>
<td>T36</td>
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</table>

### TENSION BRACING

<table>
<thead>
<tr>
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<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Bundle</th>
</tr>
</thead>
<tbody>
<tr>
<td>T20</td>
<td>20, 33</td>
<td>3/4 x 20</td>
<td>50</td>
</tr>
<tr>
<td>T27</td>
<td>20, 33</td>
<td>3/4 x 27</td>
<td>50</td>
</tr>
<tr>
<td>T36</td>
<td>20, 33</td>
<td>3/4 x 36</td>
<td>50</td>
</tr>
</tbody>
</table>
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.
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**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS5</td>
<td>18</td>
<td>4-7/8</td>
<td>100</td>
</tr>
<tr>
<td>SLS7</td>
<td>18</td>
<td>6-3/8</td>
<td>50</td>
</tr>
</tbody>
</table>

ICBO ER #5275 recognized

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.

**SIMPSON® Strong-Tie® SKEWABLE ANGLES**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Simpson reference</th>
<th>Length (in)</th>
<th>Fasteners</th>
<th>Allowable Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>F1</td>
<td>F2</td>
</tr>
<tr>
<td>SLS5</td>
<td>SLS50</td>
<td>4-7/8</td>
<td>4 – #10</td>
<td>500</td>
</tr>
<tr>
<td>SLS7</td>
<td>SLS70</td>
<td>6-3/8</td>
<td>6 – #10</td>
<td>760</td>
</tr>
</tbody>
</table>

**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.
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

EXCELLENT REINFORCEMENT AT CRITICAL LOAD POINTS TO PREVENT WEB CRIPPLING.

**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 Stiffeners**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Size (in)</th>
<th>Thickness</th>
<th>Design thickness (in)</th>
<th>Size (in)</th>
<th>Packaging</th>
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<tr>
<td>QTWS</td>
<td>3-1/2</td>
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<td>97</td>
<td>0.1017</td>
<td>Dependent on order quantity</td>
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<tr>
<td>QTWS</td>
<td>6</td>
<td>12</td>
<td>97</td>
<td>0.1017</td>
<td>Dependent on order quantity</td>
</tr>
</tbody>
</table>

*Dimension is nominal size. Actual product is shorter to fit inside joist.*
### ALLOWABLE WEB CRIPPLING LOADS (LBS)

<table>
<thead>
<tr>
<th>Joist size (in)</th>
<th>Joist gauge (mils)</th>
<th>P2 (ksi)</th>
<th>3-1/2˝ Web Stiffer Cond. 1</th>
<th>3-1/2˝ Web Stiffer Cond. 2</th>
<th>3-1/2˝ Web Stiffer Cond. 3</th>
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<td>5.932</td>
<td>6.403</td>
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<td>16 (54)</td>
<td>33</td>
<td>5.457</td>
<td>6.155</td>
<td>5.924</td>
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<td>5.615</td>
<td>6.761</td>
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<td>5.443</td>
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<td>5.294</td>
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<td>33</td>
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<td>5.954</td>
<td>6.571</td>
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<td>5.457</td>
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<td>7.319</td>
<td>6.547</td>
<td>8.867</td>
<td>8.076</td>
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</table>

**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 clarkdietrich.com

Bridging, Bracing & Backing

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

<table>
<thead>
<tr>
<th>Product code</th>
<th>Gauge</th>
<th>Mils</th>
<th>Design thickness (in)</th>
<th>Size (in)</th>
<th>Packaging</th>
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</thead>
<tbody>
<tr>
<td>SPZD</td>
<td>20</td>
<td>33</td>
<td>0.0346</td>
<td>7/8 x 7/8 x 50</td>
<td>N/A</td>
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</tbody>
</table>

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

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

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.

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

Spazzer® 5400 SPACER BAR

<table>
<thead>
<tr>
<th>Product code</th>
<th>Thickness</th>
<th>Size (in)</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gauge</td>
<td>Mils</td>
<td>Design thickness (in)</td>
</tr>
<tr>
<td>SPZS</td>
<td>16</td>
<td>54</td>
<td>0.0566</td>
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</tbody>
</table>

| Spazzer® Bar Guard™ AND Spazzer® GROMMET |

<table>
<thead>
<tr>
<th>Product code</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
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</thead>
<tbody>
<tr>
<td>SPBG</td>
<td>3-1/4 x 1-5/8</td>
<td>100</td>
</tr>
<tr>
<td>SPGR</td>
<td>1-1/2 x 4</td>
<td>100</td>
</tr>
</tbody>
</table>

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.

### 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.

<table>
<thead>
<tr>
<th>Spazzer® Bar Fly Clip</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
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</thead>
<tbody>
<tr>
<td>SFLY</td>
<td>1 x 1-1/4 x 1</td>
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</tbody>
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<table>
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<th>Spazzer® BAR FLY CLIP</th>
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<tbody>
<tr>
<td>Product code</td>
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<tr>
<td>------------</td>
</tr>
<tr>
<td>SFLY</td>
</tr>
</tbody>
</table>
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”

**FastBack™ BACKING SYSTEM**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Width (in)</th>
<th>Length (in)</th>
<th>Packaging Pcs./Carton</th>
</tr>
</thead>
<tbody>
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<td>FBBC</td>
<td>1-1/4</td>
<td>5-1/8</td>
<td>100</td>
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<tr>
<td>FBBC</td>
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<td>10-1/4</td>
<td>100</td>
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**Dricon® WOOD BACKING**

<table>
<thead>
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<th>Packaging Pcs./Skid</th>
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<td>FBW</td>
<td>10-1/4</td>
<td>22-1/2</td>
<td>360</td>
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</table>

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

**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.

Dricon® FRT Wood complies with or has been granted the following:
- AWPA C20/C27
- AWPA P17 (FR-1)
- FR-5
- 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.

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

<table>
<thead>
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<th>Length (in)</th>
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<td>D16F*</td>
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<td>250</td>
</tr>
<tr>
<td>D24F*</td>
<td>5-1/8</td>
<td>48</td>
<td>250</td>
</tr>
<tr>
<td>D16C**</td>
<td>5-1/8</td>
<td>48</td>
<td>250</td>
</tr>
<tr>
<td>D24C**</td>
<td>5-1/8</td>
<td>48</td>
<td>250</td>
</tr>
</tbody>
</table>

*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

<table>
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<tr>
<th>Product code</th>
<th>Shear load max. (lbs)</th>
<th>Norm. load max. (lbs)</th>
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<td>814</td>
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<tr>
<td>D24F</td>
<td>725</td>
<td>418</td>
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<tr>
<td>D16C</td>
<td>814</td>
<td>516</td>
</tr>
<tr>
<td>D24C</td>
<td>725</td>
<td>418</td>
</tr>
</tbody>
</table>

**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.

U.S. Patent No. 6,705,056 of Daniel W. Tollenaar
Danback® is a trademark of Daniel W. Tollenaar. Dricon® is a registered trademark of Arch Wood Protection, Inc.
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 \textsuperscript{®} 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 (62910-9)
- 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.
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
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.

Place the SH2 and 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

<table>
<thead>
<tr>
<th>Product code</th>
<th>Gauge</th>
<th>Mils</th>
<th>Design thickness (in)</th>
<th>Size (in)</th>
<th>Packaging Pcs./Carton</th>
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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.

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.
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
8 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
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

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### Drop ‘N Lock™ CLIPS

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<td>Gauge</td>
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### Drop ‘N Lock™ CLIPS ALLOWABLE LOADS (LBS)

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Notes:
1. Interior clip loads are based on using #8 screws.
Typical Construction Details

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

### Drop 'N Lock™ CLIPS

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### Drop 'N Lock™ CLIPS ALLOWABLE LOADS (LBS)

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

**Notes:**
1. For combined directional loads, an interaction equation is recommended: $H_{actual}/H_{allow} + V_{actual}/V_{allow} \leq 1.0$.
2. Screws in slots have no load value.
3. Exterior clip loads are based on using #10 screws.
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**

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<td>7-7/8 x 3-1/16 x 2</td>
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* Sold in pairs.
## HDSC HEADER BRACKETS ALLOWABLE LOADS (LBS)

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</table>

*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: \((F1/F1)^2+(F2/F2)^2\leq1.0\).  
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.

**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

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

U.S. Patent Nos. 6,799,408 and 7,178,304 of Brady Construction Innovations.
### ProX Clip Allowable Values

**Without insert installed, #8 screw**

<table>
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<th>ProX outer widths (in)</th>
<th>ProX thickness (mils)</th>
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<th>Number of screws attaching ProX outer to clip</th>
<th>Allowable Values (lbs)</th>
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For SI: 1 inch = 25.4 mm, 1 mil = 0.0254 mm, 1 lb = 4.45 N.

### ProX Clip Allowable Values

**Without insert installed, #10 screw**

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

**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.

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

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<tr>
<td>AB63</td>
<td>2 x 2 x 2-1/2</td>
<td>0.063</td>
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</table>
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.

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.

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.

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<th>GROMMETS</th>
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Grommet for 3-1/2” and Wider Studs
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.

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.

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

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

Resilient Sound Isolation Clip
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.

**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.

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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 CAPS

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<td>Bullnose to 90° transition cap 3/4”</td>
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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.

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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.

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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®

Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.
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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**Pub. No. CD-ClipExpress 4/12** The technical content of this literature is effective 4/9/12 and supersedes all previous information.
ClarkDietrich Clip Express™ Product Displays

ClarkDietrich is committed to providing the product data, application details and hands-on tools necessary to help our customers select the best part for a specific design challenge.

For those dealers willing to commit resources to a stocking program for ClarkDietrich clip products, we offer the opportunity for the co-op development of Clip Express Product Displays. These displays provide dealers and contractors with the opportunity to visualize how many of our products can be used in a variety of applications. For more information, please contact the Clip Express sales team at 866.638.1908.

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Warranty
Our products are manufactured in accordance with company standards and/or industry standards, as applicable. All ClarkDietrich Building Systems products are covered by our standard warranty which is contained in our Standard Terms and Conditions of Sale and which will be provided upon request. Generally, we warrant our products will be free from defects in material and workmanship at the time of shipment, subject to the limitations stated in the warranty. Unless specifically agreed in writing by us with respect to specific orders, we do not make any warranty of merchantability or fitness for a particular purpose. The buyer is responsible to assure that buyer orders the appropriate product for any applicable code or specification requirements.

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**Clip Express**™ **CODE APPROVALS AND PERFORMANCE STANDARDS**

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 CB41/C1063: Veneer and plaster accessories
    - ASTM C1047: Beads and trims—metal-paper-vinyl
  - **Material specifications**
    - ASTM A1003 (NS33, ST33H, ST50H): Structural steel
    - 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
  - Additional code approvals
    - UL 263 “Fire Tests of Building Construction and Materials”
    - ASTM C1063
    - ASTM A653
    - ASTM A1003 (NS33, ST33H, ST50H)

- **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

- **LEED® Credit MR 2**
  - 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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ClarkDietrich intends this information to be accurate, informative, and helpful as a selection guide for choosing ClarkDietrich Building System products. However, this information is only to be used for guidance and is not intended to replace the design, drawings, specifications, and decisions of a professional architect or engineer.

ClarkDietrich Building Systems or its affiliates shall not be responsible for incidental or consequential damages, directly or indirectly sustained, nor for loss caused by application of our products for other than their intended uses. Our liability is limited to replacement of defective products. Claims shall be deemed waived unless they are made to us in writing within thirty (30) days of the date a problem was or reasonably should have been discovered.

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