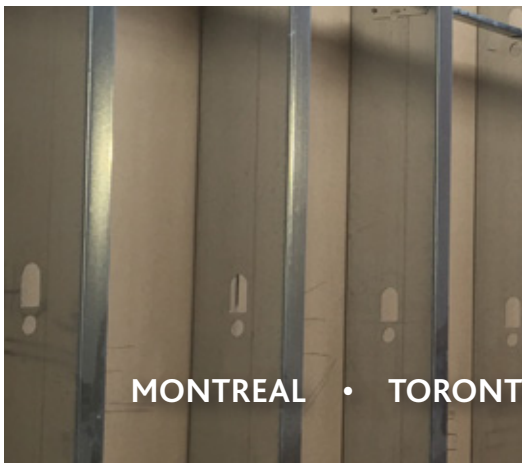




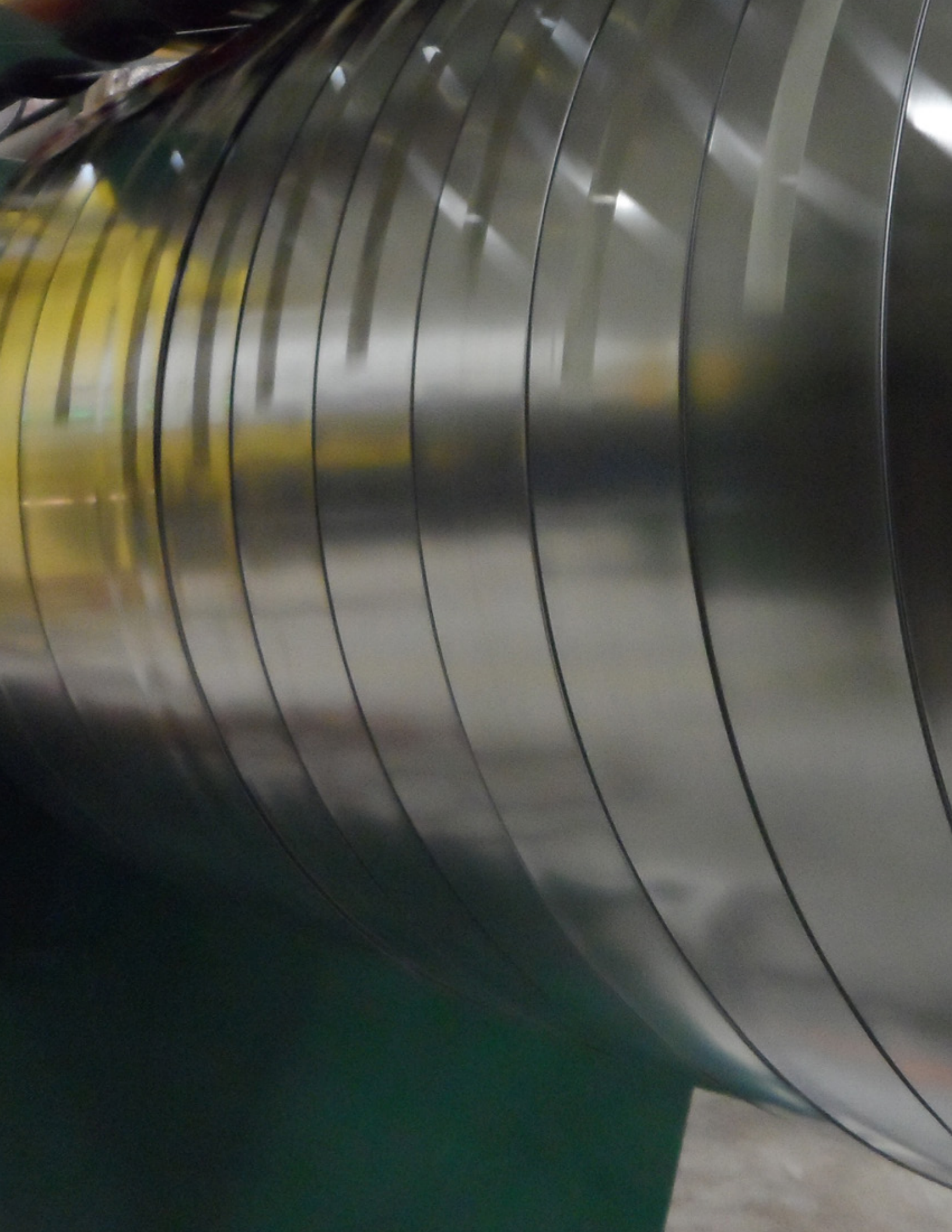
SOLUTIONS FOR COLD-FORMED STEEL FRAMING

THE STRENGTH WITHIN



BAILEY®

MONTREAL • TORONTO • CALGARY • EDMONTON • VANCOUVER





SOLUTIONS

The Bailey Clip Shop offers a complete line of clips and connectors for Cold-Formed Steel (CFS) Framing and other applications within the construction industry.

Our products are designed to meet every project's need as they have been rigorously tested, and engineered to meet or exceed all building code requirements.

Please contact any Bailey office across Canada for assistance with finding a product that satisfies your specific project needs.



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TOP DEFLECTION CLIP



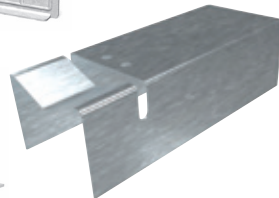
WEBSLIDE CLIP



EXTENDED FASTCLIP™



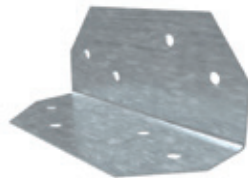
FAST STRUT™



HORIZONTAL FLANGE ATTACHMENT CLIP



HYBRID BYPASS CLIP



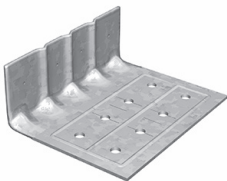
UNIVERSAL BRIDGING CLIP



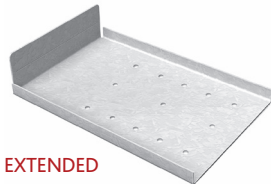
FASTBRIDGE™ CLIP



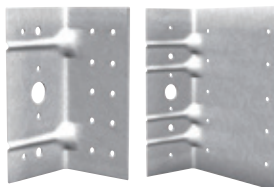
JOIST END-ANGLE CLIP



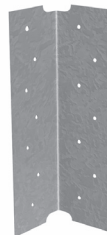
UNI-CLIP™ END CLIP



EXTENDED UNI-CLIP™



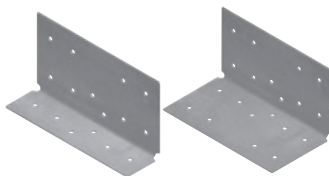
EASYCLIP™ D & T-SERIES™



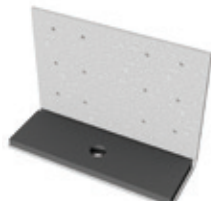
EASYCLIP™ E-SERIES™



EASYCLIP™ S-SERIES™



SWIFTCLIP™ 3"X3" LA AND LE-SERIES™



MOMENT CLIP™ (MC SERIES)



INTRODUCTION



HISTORY

Founded in 1950 by Sam Bailey, Bailey Metal Products Ltd. is a family owned and operated Canadian company. The Bailey Group of Companies is recognized as the industry leader, offering building solutions to both the commercial framing and drywall finishing residential markets.

With seven locations across Canada, our manufacturing capacity and national presence ensures that our customers, across the country, have the products they require quickly. Bailey production facilities are strategically located within 90% of Canadian job sites. We constantly work to deliver high quality, innovative and valuable products. Servicing contractors and builders is our long-standing and enduring commitment.

SERVICES & CAPABILITIES

Every day Bailey employees serve customers across Canada providing service that meets the exacting standards of our customers. Through facilities housing state of the art equipment, along with our highly skilled operators and technicians, we create innovative, high quality products that meet or exceed all applicable industry codes and standards. The inkjet stamp of approval our products exhibit, guarantees the quality and code compliancy we are known for in the industry.

As more stringent demands on systems for fire, acoustics and structure emerge; Bailey continues to lead the industry with a proactive approach to research, development and manufacturing. Our technical support and product quality is world class. Our team stands ready to provide products and technical support that meet your building team's needs. We love to collaborate to satisfy your sound, structural or other performance requirements.

QUALITY ASSURANCE

Our wide selection of products and systems are designed to offer flexibility and choice without compromising on quality and high standards. Bailey's material sourcing and manufacturing is conducted with utmost care and attention to quality. Our clip products are designed and produced to meet Canadian building codes.

PROCESSING

Steel service centers and a variety of metal and industrial product markets have come to trust Bailey Metal Processing for their coil slitting and related metal processing services. With two processing facilities strategically located across the country to better serve the Canadian marketplace, we're committed to providing our customers with a range of processing services at great value.

DISTRIBUTION

Our number one priority is customer satisfaction. At Bailey, we pride ourselves on providing exceptional service. Bailey strives to ensure that our distribution and transportation capabilities are designed to deliver the results our customer's demand; quality materials and services when you need them. Bailey Metal products are available at leading distributors and retailers across Canada.

We are committed to innovation, ensuring that we deliver quality, value added products to our customers. Our dedication to this formula drives our company and is the reason why Bailey Metal Products is the largest manufacturing capacity and national presence ensures that our customers, across the country, have the products they require. Bailey Metal Products strives to ensure that our distribution and transportation capabilities are designed to deliver the results our customer's demand; quality materials and services when you need them.

PRODUCT

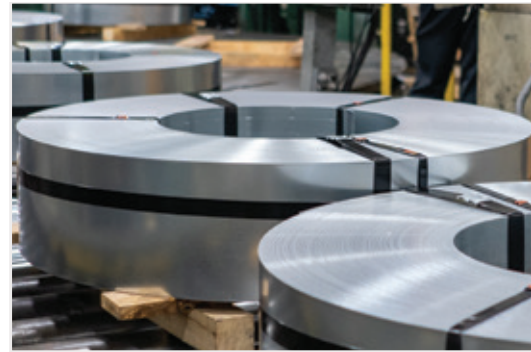
All Bailey steel framing products are manufactured to national Bailey standard manufacturing specifications. Galvanized coating as per building code standards. Custom Clip/Connector orders may require minimum quantity and set-up charges. Special packaging requirements, other than our standard packaging configuration, may incur additional charges and longer lead times. Refer to Inside Sales at Bailey for more details and specifics based on your request.

DELIVERY AND LEAD TIMES

Delivery dates and times are approximate only and Bailey Metal Products Limited makes no guarantee or warranty of deliver date (s) and or time (s).

PRODUCT RETURNS

No goods are returnable without written authorization (RMA) and must be in full and original packaging. PO/invoice numbers are required before written authorization (RMA) can be provided. All products returned must be in saleable condition and are subject to inspection and a 20% restocking charge will apply. Special or custom Clip/Connector products are NOT returnable.



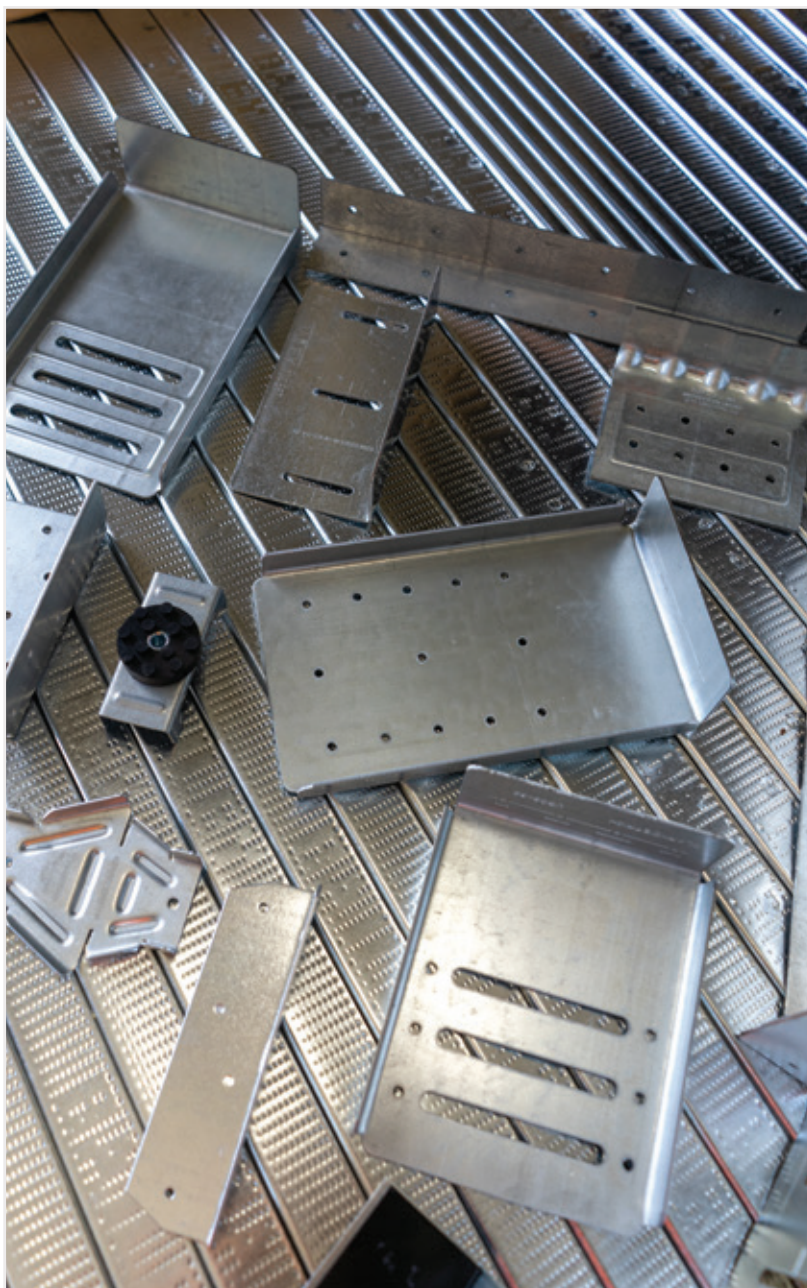
CLAIMS

In order to submit a claim for either damage or short shipment of material on delivery, Bailey must receive notification in writing within 24 hours of the date of receipt. Picture proof and documentation on drivers BOL required.

LIMITED WARRANTY

Any warranties, either expressed or implied, will be limited to the replacement of any defective goods. In no circumstance will Bailey Metal Products Limited be responsible beyond the cost of goods purchased.

The Seller warrants that the title to the goods sold shall be free of any encumbrances and will conform, subject to standard manufacturing tolerances, to the descriptions and specifications printed and/or referenced in the product brochures applicable to the goods published by the Seller (the "Technical Data"). The Technical Data are intended as design aids to the design professional and should not be used to replace the judgement of a qualified engineer or architect. Anyonemaking use of the Technical Data shall assume any and all risk from such use. Although employees of the Seller are available for consultation the selection of goods and required specifications, they are not authorized to warrant the suitability of any goods for any particular use or application. The Buyer shall be solely responsible for determining the adequacy of the goods for any and all intended uses of the goods.



Caution: The load tables and other product performance data contained in the Technical Data are valid only if the goods are installed in accordance with the instructions and specifications printed and/or referenced in the Technical Data. In the case of any discrepancy between the printed and referenced information in the Technical Data the printed information shall prevail.

The load tables and other product performance data contained in the Technical Data are not valid if other products are substituted for any products available for purchase from the Seller.

The warranty set forth in this Section is in lieu of and excludes all other warranties, express or implied, by operation of law or otherwise, including any warranty of law or otherwise, including any warranty of merchantability or fitness for the Buyer's particular purpose. Under no circumstance shall the Seller be under any other liability and in particular shall not be liable for any consequential or indirect losses including any financial losses.

Force Majeure: Seller shall not be liable for damages or delays in performance due to circumstances beyond its reasonable control, including without limitation, any priority system established by any governmental agency, fires, floods, storms and other acts of God, labor disruptions (including strikes, lockouts, and slowdowns), terrorism, war, shortages of materials, lack of transportation, inability to procure power, supplies or raw materials, severe weather conditions, substantial increase in price of power, raw materials or supplies, and failure of performance of subcontractors and/or suppliers for similar reasons. Failure of Seller to perform for these reasons aforesaid shall not be grounds for Purchaser's cancellation of an order but the delivery date shall be extended accordingly.

FASTENERS

DRILL POINT SCREW GENERAL INFORMATION

For penetrating heavier gauge studs up to 68 mils, Drill Points make the ideal fastener. Hard drilling flutes start fast and remove chips quickly. Rapid thread-cutting adds to ease of a total drill, tap and seat fastening.

BUGLE HEAD

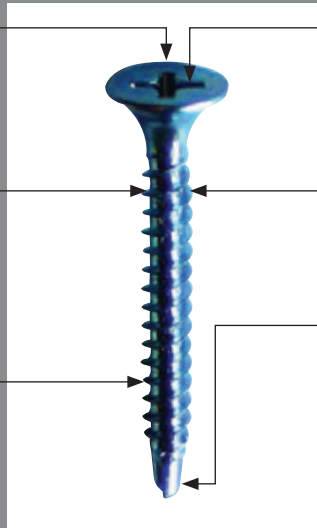
The Drill Point features a curved bugle head with a smooth rim for proper compression of board paper without tearing. This gives greater holding power without damage to the gypsum core.

HARDENING

Drill Point screws are hardened under quality assurances to provide consistently hardened drill flutes that will not dull or burn. All Drill Point screws are manufactured to IFI standards with a case hardening of Rockwell C52-58.

PLATING

Zinc is standard plating on all bugle Drill Points. These finishes are anticorrosive coated.



PHILLIPS RECESS

Our snug fitting #2 Phillips recess is precisely centered on all Drill Point screws to hold straight for fast driving without "wobble," yet is designed for easy bit removal without breaking the bit away.













THREADS

Drill Point's sharp threads enter material up to 68 mils and consistently cut mating threads with minimum pressure, reducing operator fatigue.

DRILLING FLUTES

Sharply formed flutes allow immediate drilling action without walking. Penetration starts with a quick curl of material and continues with excellent chip relief for maximum drilling depth. The flute also provides low driving torque for operator ease. Point is perfectly concentric to minimize drag of trailing flute.

TYPE OF DRILL POINT SCREWS WITH SELF-DRILLING FLUTES

DESCRIPTION		LENGTH	APPLICATION
BUGLE PHILLIPS  		No. 6 Screw 1", 1 1/4", 1 5/8", 2"	For attaching Drywall to metal studs up to 68 mils. Also used for attaching plywood, insulation board, etc. up to 68 mils.
PAN FRAMING  		No. 7 Screw 7/16"	One of the finest stud framing screws available for attaching track to studs of up to 68 mils.
WAFER  		No. 8 Screw 1/2"	An excellent screw available for attaching expanded metal lath to studs of up to 68 mils.
PAN PHILLIPS  		No. 8 Screw 1/2" No. 10 Screw 3/4"	For attaching up to 68 mils studs to track, studs to door frames, light boxes to studs, etc.
HEX WASHER HEAD (HWH) STAINLESS  		No. 10 Screw 3/4"	SS Brickties to steel stud.
HEX WASHER HEAD (HWH)  		No. 10 Screw 3/4", 1 1/4"	Metal to metal connections up to double thickness of 68 mils.

FASTENERS

SCREW CONNECTION CALCULATIONS AND LOAD TABLES

Design Capacities for Sheet Metal Screws in Lightweight Steel Framing Applications

This Technical Product Data Sheet provides the factored resistance of connections made with sheet metal screws calculated in accordance with CAN/CSA-S136-16 North American Specification for the Design of Cold Formed Steel Structural Members. This data is intended as a guide to help simplify the design of these connections.¹

Material Properties

Calculations are based on the mechanical properties of the lightweight steel framing components listed in Table 1, and the properties of the screws listed in Table 2.

Factored Resistance of Screwed Connections

The factored resistance of screwed connections is a function of the failure type, screw size and sheet properties. Listed in Table 3 are the factored resistance values for the various limits. The minimum value of the controlling limit state will govern.



Table 1: Design Thickness and Mechanical Properties of LSF Components

Thickness Designation (mils)	Design Thickness, t (mils)	Strength	
		Yield, F_y (MPa)	Ultimate, F_u (MPa)
33	0.879	230	310
43	1.146	230	310
54	1.438	345	450
68	1.811	345	450
97	2.583	345	450

Table 2: Nominal Diameter and Strength of Screws²

Number Designator for Screw	Nominal Diameter, d (mm)	Nominal Shear Strength, F_{ts} (kN)	Nominal Tension Strength, F_{ts} (kN)
#6 – 20	3.56	3.34	5.72
#8 – 18	4.06	4.45	6.87
#10 – 16	4.83	6.23	8.61
#12 – 14	5.33	8.90	12.36
1/4 – 14	6.35	11.57	18.06

1. While the material is believed to be technically correct and in accordance with recognized practice at the time of publication, it does not obviate the need to determine its suitability for a given situation. Neither the Canadian Sheet Steel Building Institute nor its Members warrant or assume any liability for the suitability of the material for any general or particular purpose.
2. These values were taken from the ITW Buildex product catalogue for TEKS self-drilling, self-tapping screws and may not be appropriate for other screw types or products from other screw manufacturers.

FASTENERS

SCREW CONNECTION CALCULATIONS AND LOAD TABLES

Design Equations for Shear (S136 Clause J4.3)

Connection Shear Limited by Tilting and Bearing (S136 Clause J4.3.1):

For $t_2 / t_1 \leq 1.0$,

P_{ns} equals the smallest of;

$$P_{ns} = 4.2(t_2^3 d)^{1/2} F_{u2}$$

$$P_{ns} = 2.7 t_1 d F_{u1}$$

$$P_{ns} = 2.7 t_2 d F_{u2}$$

For $t_2 / t_1 \geq 2.5$,

P_{ns} equals the smallest of;

$$P_{ns} = 2.7 t_1 d F_{u1}$$

$$P_{ns} = 2.7 t_2 d F_{u2}$$

For t_2 / t_1 values between 1.0 & 2.5, P_{ns} is determined through linear interpolation

End Distance (S136 Clause J4.3.2): Another mode of failure is the possibility of a single screw tearing out from the end of the connected sheet; however, this mode will not govern if $e \geq 1.7d$.

Shear in Screws (S136 Clause J4.3.3): The nominal shear resistance of the screw is taken as P_{ss} .

Design Equations for Tension (S136 Clause J4.4)

Pull-Out (S136 Clause J4.4.1):

$$P_{not} = 0.85 t_c d F_{u2}$$

Pull-Over (S136 Clause J4.4.2):

$$P_{nov} = 1.5 t_1 d_w F_{u1}$$

Tension in Screws (S136 Clause J4.4.3): The nominal tensile resistance of the screw is taken as P_{ts} .

Combined Shear and Pull-Over (S136 Clause J4.5.1)

For connections subjected to a combination of both shear and tension forces, the following interaction equation applies.

$$\frac{\bar{Q}}{P_{ns}} + 0.71 \frac{\bar{T}}{P_{nov}} \leq 1.10 \phi \quad \text{where, } \phi = 0.55$$

The shear/pull-over interaction equation is valid for connections that meet the following limits: **1.** $0.724 \text{ mm} \leq t_1 \leq 1.13 \text{ mm}$ **2.** #12 and #14 self-drilling screws with or without washers **3.** $d_w \leq 19.1 \text{ mm}$ **4.** $F_{u1} \leq 483 \text{ MPa}$ **5.** $t_2 / t_1 \geq 2.5$

For eccentrically loaded connections that produce a non-uniform pullover force on the fastener, the nominal pull-over resistance shall be taken as 50% of P_{nov} .

Combined Shear and Pull-Out (S136 Clause J4.5.2)

For connections subjected to a combination of both shear and pull-out forces, the following interaction equation applies.

$$\frac{\bar{V}}{P_{nv}} + \frac{\bar{T}}{P_{not}} \leq 1.15 \phi$$

where, $\phi = 0.50$

The shear/pull-out interaction equation is valid for connections that meet the following limits:

- (1) $0.754 \text{ mm} \leq t_1 \leq 1.84 \text{ mm}$
- (2) #8, #10, #12 or #14 self drilling screws with or without washers
- (3) $F_{u2} \leq 834 \text{ MPa}$
- (4) $1.0 \leq F_u / F_y \leq 1.62$

Combined Shear and Tension (S136 Clause J4.5.3)

For connections subjected to a combination of both shear and tension forces, the following interaction equation applies.

$$\frac{\bar{V}}{P_{nv}} + \frac{\bar{T}}{P_{not}} \leq 1.13 \phi$$

where, $\phi = 0.40$

Rupture (S136 Clause J6)

The other failure mode that must be considered is the block tear-out of a group of fasteners.

Symbols	
$d =$	Nominal screw diameter
$d_w =$	Larger of the screw head diameter or washer diameter
$e =$	Distance from the centre of the fastener to the end of the connected sheet
$F_{u1} =$	Tensile strength of member in contact with screw head
$F_{u2} =$	Tensile strength of member not in contact with screw head
$P_{nov} =$	Nominal pull-over resistance per screw
$P_{ss} =$	Nominal shear resistance of screw as reported by manufacturer or determined by independent laboratory testing
$P_{ts} =$	Nominal tension resistance of screw as reported by manufacturer or determined by independent laboratory testing
$\bar{Q} = V_f =$	Factored shear force in connection
$t_1 =$	Thickness of member in contact with screw head
$t_2 =$	Thickness of member not in contact with screw head
$t_c =$	Lesser of depth of penetration and thickness t_2
$\bar{T} = T_f =$	Factored tensile force in connection

FASTENERS

SCREW CONNECTION CALCULATIONS AND LOAD TABLES

Table 3: Factored Resistances of Screwed Connections (kN)

Using the Tables: For shear loading, the lesser of ϕP_{ss} or ϕP_{ns} governs. For tension loading the lesser of ϕP_{ts} , ϕP_{not} or ϕP_{nov} governs.
Check P_{ss} and P_{ts} for different screw types or manufacture.

#6-20 Screw		$\phi P_{ss} = 1.34 \text{ kN}$					$\phi P_{ts} = 2.29 \text{ kN}$					$\phi = 0.40$				
		Tilting and Bearing (ϕP_{ns})					Tension									
							Pull-Out (ϕP_{not})					Pull-Over (ϕP_{nov})*				
		CFS framing member thickness (mils)														
		33	43	54	68	97	33	43	54	68	97	33	43	54	68	97
Connector thickness (mils)	33	0.180	1.05	1.05	1.05	1.05	0.330	0.430	0.783	0.986	1.41	1.30	1.30	1.30	1.30	1.30
	43	0.180	1.21	1.37	1.37	1.37	0.330	0.430	0.783	0.986	1.41	1.69	1.69	1.69	1.69	1.69
	54	0.180	1.21	2.46	2.49	2.49	0.330	0.430	0.783	0.986	1.41	3.08	3.08	3.08	3.08	3.08
	68	0.180	1.21	2.46	3.13	3.13	0.330	0.430	0.783	0.986	1.41	3.88	3.88	3.88	3.88	3.88
	97	0.180	1.21	2.46	3.13	4.47	0.330	0.430	0.783	0.986	1.41	5.54	5.54	5.54	5.54	5.54

#8-18 Screw		$\phi P_{ss} = 1.78 \text{ kN}$					$\phi P_{ts} = 2.75 \text{ kN}$					$\phi = 0.40$				
		Tilting and Bearing (ϕP_{ns})					Tension									
							Pull-Out (ϕP_{not})					Pull-Over (ϕP_{nov})*				
		CFS framing member thickness (mils)														
		33	43	54	68	97	33	43	54	68	97	33	43	54	68	97
Connector thickness (mils)	33	0.865	1.19	1.19	1.19	1.19	0.376	0.490	0.893	1.12	1.60	1.30	1.30	1.30	1.30	1.30
	43	0.865	1.29	1.56	1.56	1.56	0.376	0.490	0.893	1.12	1.60	1.69	1.69	1.69	1.69	1.69
	54	0.865	1.29	2.63	2.84	2.84	0.376	0.490	0.893	1.12	1.60	3.08	3.08	3.08	3.08	3.08
	68	0.865	1.29	2.63	3.57	3.57	0.376	0.490	0.893	1.12	1.60	3.88	3.88	3.88	3.88	3.88
	97	0.865	1.29	2.63	3.57	5.10	0.376	0.490	0.893	1.12	1.60	5.54	5.54	5.54	5.54	5.54

#10-16 Screw		$\phi P_{ss} = 2.49 \text{ kN}$					$\phi P_{ts} = 3.44 \text{ kN}$					$\phi = 0.40$				
		Tilting and Bearing (ϕP_{ns})					Tension									
							Pull-Out (ϕP_{not})					Pull-Over (ϕP_{nov})*				
		CFS framing member thickness (mils)														
		33	43	54	68	97	33	43	54	68	97	33	43	54	68	97
Connector thickness (mils)	33	0.943	1.41	1.42	1.42	1.42	0.447	0.583	1.06	1.34	1.91	1.30	1.30	1.30	1.30	1.30
	43	0.943	1.40	1.85	1.85	1.85	0.447	0.583	1.06	1.34	1.91	1.69	1.69	1.69	1.69	1.69
	54	0.943	1.40	2.87	3.38	3.38	0.447	0.583	1.06	1.34	1.91	3.08	3.08	3.08	3.08	3.08
	68	0.943	1.40	2.87	4.05	4.25	0.447	0.583	1.06	1.34	1.91	3.88	3.88	3.88	3.88	3.88
	97	0.943	1.40	2.87	4.05	6.06	0.447	0.583	1.06	1.34	1.91	5.54	5.54	5.54	5.54	5.54

FASTENERS

SCREW CONNECTION CALCULATIONS AND LOAD TABLES



#12-14 Screw		$\phi P_{ss} = 3.56 \text{ kN}$					$\phi P_{ts} = 4.94 \text{ kN}$					$\phi = 0.40$				
		Tilting and Bearing (ϕP_{ns})					Tension									
							Pull-Out (ϕP_{not})					Pull-Over (ϕP_{nov})*				
		CFS framing member thickness (mils)														
		33	43	54	68	97	33	43	54	68	97	33	43	54	68	97
Connector thickness (mils)	33	0.991	1.49	1.57	1.57	1.57	0.494	0.644	1.17	1.48	2.11	1.30	1.30	1.30	1.30	1.30
	43	0.991	1.48	2.05	2.05	2.05	0.494	0.644	1.17	1.48	2.11	1.69	1.69	1.69	1.69	1.69
	54	0.991	1.48	3.01	3.72	3.72	0.494	0.644	1.17	1.48	2.11	3.08	3.08	3.08	3.08	3.08
	68	0.991	1.48	3.01	4.25	4.69	0.494	0.644	1.17	1.48	2.11	3.88	3.88	3.88	3.88	3.88
	97	0.991	1.48	3.01	4.25	6.69	0.494	0.644	1.17	1.48	2.11	5.54	5.54	5.54	5.54	5.54

#1/4-14 Screw		$\phi P_{ss} = 4.63 \text{ kN}$					$\phi P_{ts} = 7.22 \text{ kN}$					$\phi = 0.40$				
		Tilting and Bearing (ϕP_{ns})					Tension									
							Pull-Out (ϕP_{not})					Pull-Over (ϕP_{nov})*				
		CFS framing member thickness (mils)														
		33	43	54	68	97	33	43	54	68	97	33	43	54	68	97
Connector thickness (mils)	33	1.08	1.68	1.87	1.87	1.87	0.588	0.767	1.40	1.76	2.51	1.30	1.30	1.30	1.30	1.30
	43	1.08	1.61	2.44	2.44	2.44	0.588	0.767	1.40	1.76	2.51	1.69	1.69	1.69	1.69	1.69
	54	1.08	1.61	3.29	4.44	4.44	0.588	0.767	1.40	1.76	2.51	3.08	3.08	3.08	3.08	3.08
	68	1.08	1.61	3.29	4.64	5.59	0.588	0.767	1.40	1.76	2.51	3.88	3.88	3.88	3.88	3.88
	97	1.08	1.61	3.29	4.64	7.91	0.588	0.767	1.40	1.76	2.51	5.54	5.54	5.54	5.54	5.54

* Tabulated values assume $d_w = 7.94 \text{ mm}$. For d_w larger than 7.94 mm, multiply tabulated P_{nov} values by $(\text{actual } d_w) / 7.94$. The limit of $d_w \leq 19.1 \text{ mm}$ also applies.

Note: The product information and the data in this report was provided by the Canadian Sheet Steel Building Institute (CSSBI).

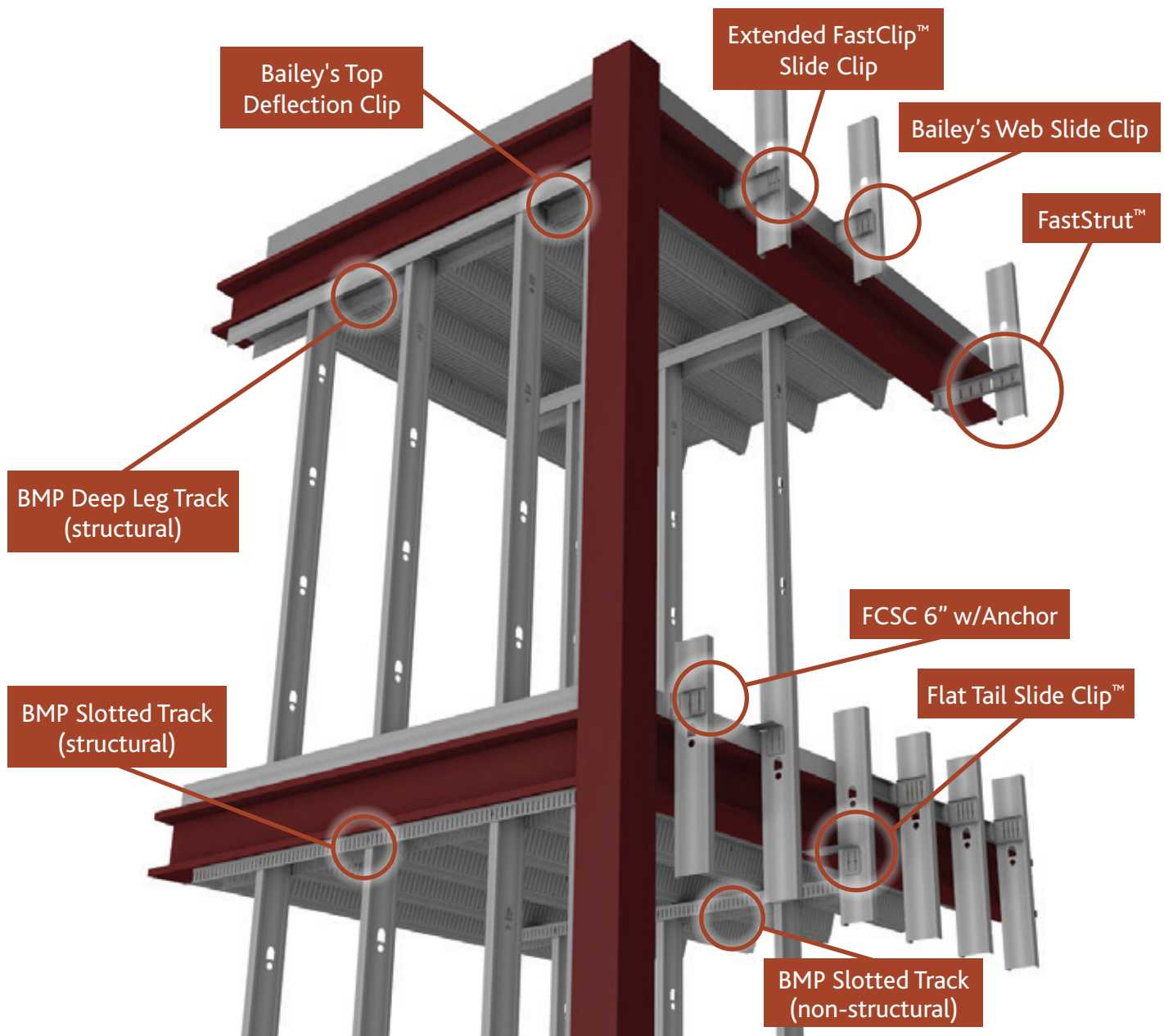






DEFLECTION CONNECTORS

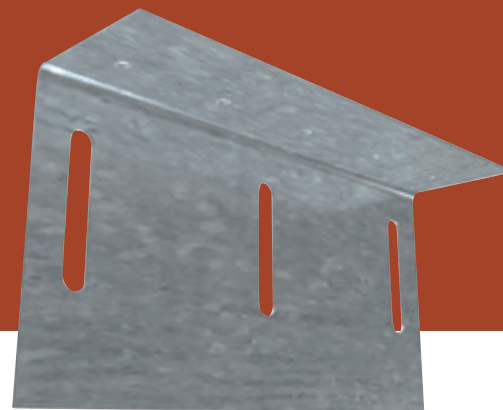
These connectors are typically used for bypass walls and infill walls subject to deflection. In the case of bypass walls, studs can span multiple floors requiring a strong connection back to the main structure. Head-of-wall deflection in infill walls could also require the use of a clip to strengthen against lateral loads allowing for deflection of the structural members above them.



TOP DEFLECTION CLIP

TDC 350 / TDC 587

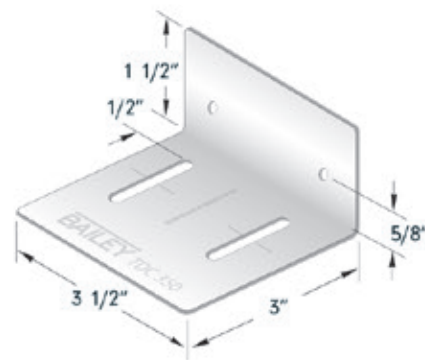
TDC 587



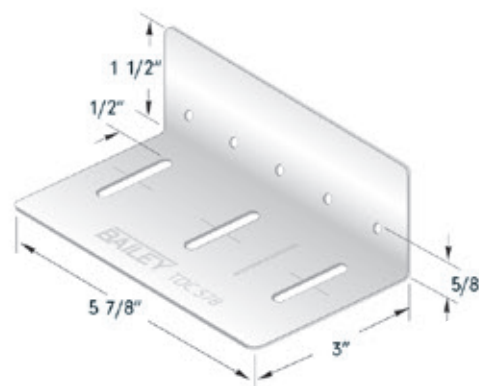
Used on exterior curtain wall studs to allow for building structure deflection at the top of the wall.

Bailey Top Deflection Clips can also be used for non-load bearing interior wall requirements.

- Allows for up to 1.5" deflection (0.75" in each direction)
- Available in two sizes with two slots to accommodate three 5/8" and 4" studs or three slots to accommodate 6" and 8" studs
- Designed with pre-punched holes to ensure correct fastening locations
- Can be used with **Bailey Slotted Track** where required
- For wider wall assemblies or larger deflection allowance (up to 2-1/2"), please contact your Bailey regional office and inquire about the **Fast Top (FTC)** connector



TOP DEFLECTION CLIP TDC 350



TOP DEFLECTION CLIP TDC 587

BAILEY TDC 350 AND TDC 587 PROPERTIES

Product Identification	Base Steel Thickness			Size		Weight*	Mass*	Yield Strength** ksi	Coating***	Packaging Pcs/Ctn
	Mils	Design		in.	mm	lb	kg			
TDC 350	68	0.0713	1.81	1.5x3x3.5	38.1x76.2x88.9	0.301	0.137	50	G90	25
TDC 587				1.5x3x5.87	38.1x76.2x149	0.506	0.229			

* Weight is based on design steel thickness of net section. ** Meets ASTM A1003: Specification for Steel Sheet, Carbon, Metallic and Nonmetallic-Coated for Cold-Formed Framing Members. *** Meets ASTM A653: Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

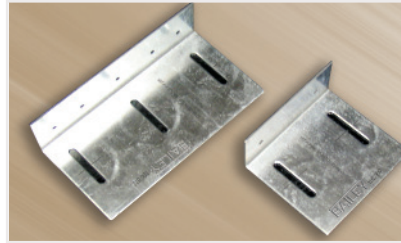
TOP DEFLECTION CLIP

TDC 350 / TDC 587



INSTALLATION

The **Bailey TDC 350** or **TDC 587 Deflection Clip** can be attached to the structure using power actuated fasteners (PAF), screws, concrete anchors or by welding, depending on the base material of the structure and as specified by the engineer of record and outlined on the engineered shop drawings.



LOAD CAPACITIES

	Stud Identification	Stud Steel Properties		Service Limit Load	Ultimate Load	LSD Factored Load Resistance
		Mils	Yield Strength (ksi)	lb	lb	
TDC 350	362 S 162 - 33	33	33	896	896	427
	362 S 162 - 43	43	33	1322	1346	641
	362 S 162 - 54	54	50	1582	1940	924
	362 S 162 - 68	68	50	1546	2317	1104
TDC 587	600 S 162 - 33	33	33	1068	1068	509
	600 S 162 - 43	43	33	2036	2036	970
	600 S 162 - 54	54	50	2983	2983	1421
	600 S 162 - 68	68	50	3525	4110	1958

TABLE NOTES:

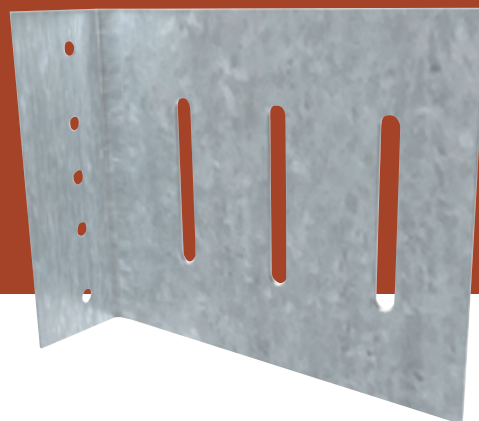
- Clip capacity loads were obtained from tests performed under the supervision of Dr. R. M. Schuster, P. Eng.
- Above loads are based on using #12 screws and following the installation instructions
- The service limit load was recorded at 1/8" deflection according to the Research Note published by LGSEA on CFS "Testing and Establishing Design Values for Clips" by Roger LaBoube, P.E., Ph.D., February 2002
- Minimum gap required between the top of the stud and the TDC is 0.75" or as specified by the engineer of record
- Ultimate loads are based the maximum clip resistance
- LSD factored load resistances were derived according to section F1.1 of CSA S136-16
- Anchoring the TDC to the structure is the responsibility of the engineer of record



WEBSLIDE CLIP

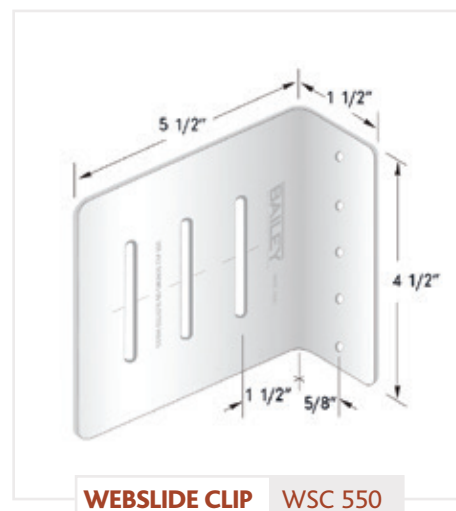
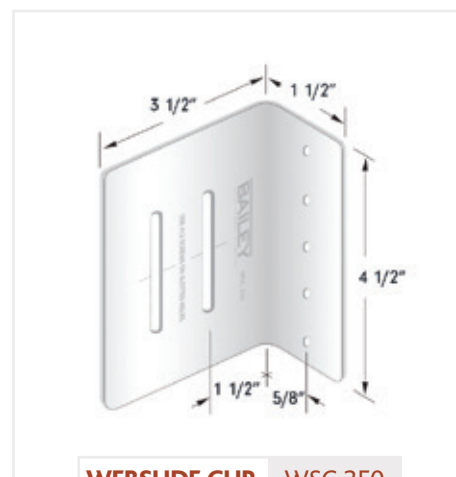
WSC 350 / WSC 550

WSC 550



Used with exterior curtain wall steel studs, specifically in by-pass applications.

- Accommodates standoff situations where required
- Allows up to 2.50" vertical movement (1.25" in each direction)
- Available in two sizes with two slots to accommodate three 5/8" or 4" studs and three slots to accommodate 6" or 8" studs
- Designed with pre-punched holes to ensure correct fastening locations
- For wider wall assemblies or larger deflection allowance (up to 2-1/2"), please contact your Bailey regional office and inquire about the **FastClip Slide Clip (FCSC)** connector



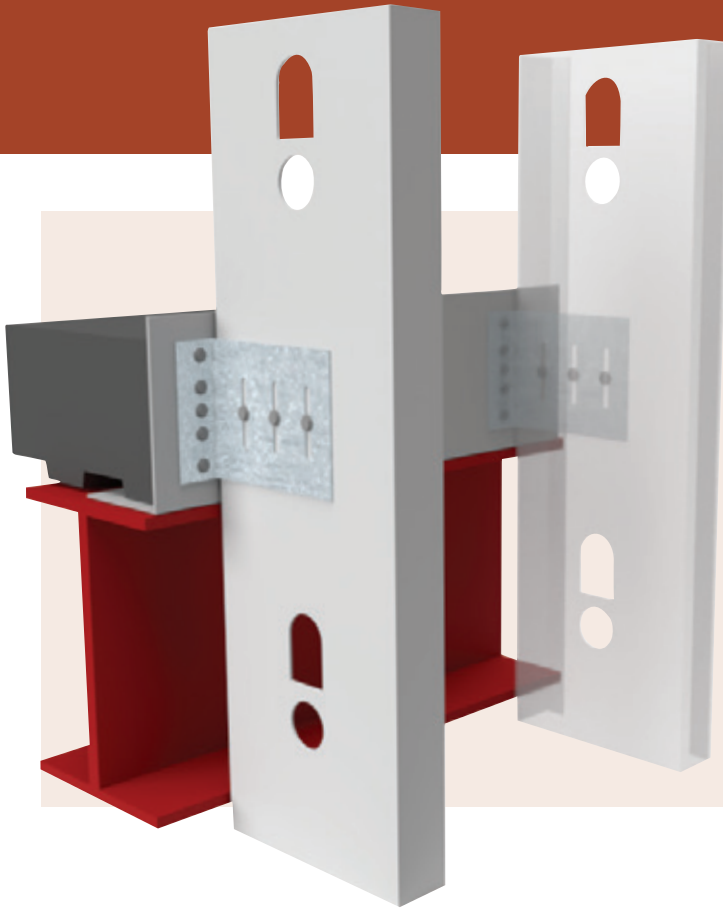
BAILEY WSC 350 AND WSC 550 PROPERTIES

Product Identification	Base Steel Thickness			Size		Weight*	Mass*	Yield Strength** ksi	Coating***	Packaging Pcs/Ctn
	Mils	Design		in.	mm	lb	kg			
WSC 350	97	0.102	2.58	1.5x4.5x3.5	38.1x114x88.9	0.614	0.279	50	G90	25
WSC 550				1.5x4.5x5.5	38.1x114x139	0.506	0.390			

* Weight is based on design steel thickness of net section. ** Meets ASTM A1003: Specification for Steel Sheet, Carbon, Metallic and Nonmetallic-Coated for Cold-Formed Framing Members. *** Meets ASTM A653: Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

WEBSLIDE CLIP

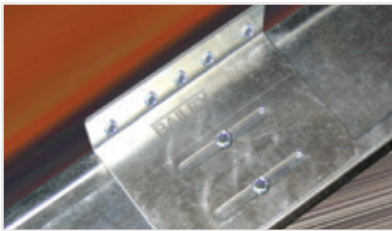
WSC 350 / WSC 550



INSTALLATION

The **WSC 350** or **WSC 550 Deflection Clip** can be attached to the structure using power actuated fasteners (PAF), screws, concrete anchors or by welding, dependant upon the base material of the structure and as specified by the engineer of record and as outlined on the engineered shop drawings.

When stand-off bridging is required, an additional steel stud should be used to bridge the distance.



LOAD CAPACITIES

	Stud Identification	Stud Steel Properties		Service Limit Load	Ultimate Load	LSD Factored Load Resistance
		Mils	Yield Strength (ksi)	lb	lb	
WSC 350	362 S 162 - 33	33	33	831	831	396
	362 S 162 - 43	43	33	1272	1272	606
	362 S 162 - 54	54	50	1640	2136	1017
	362 S 162 - 68	68	50	1682	3148	1499
WSC 550	600 S 162 - 33	33	33	1128	1128	537
	600 S 162 - 43	43	33	1614	1954	930
	600 S 162 - 54	54	50	1730	3049	1453
	600 S 162 - 68	68	50	1582	3411	1624

TABLE NOTES:

- Clip capacity loads were obtained from tests performed under the supervision of Dr. R. M. Schuster, P. Eng.
- Above loads are based on using #12 screws and following the installation instructions
- The service limit load was recorded at 1/8" deflection according to the Research Note published by LGSEA on CFS "Testing and Establishing Design Values for Clips" by Roger LaBoube, P.E., Ph.D., February 2002
- Ultimate loads are based the maximum clip resistance
- LSD factored load resistances were derived according to section F1.1 of CSA S136-16
- Anchoring the Bailey WSC Clip to the structure is the responsibility of the engineer of record

EXTENDED FAST CLIP™

FCEC



Provides for vertical building movement up to 3" and is commonly used for large standoff conditions.

EXTENDED FastClip™ (FCEC) 68mils (14ga) deflection clips (8" clip is available in 14ga & 12ga) 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.

- Eliminates shims and scabs.
- Vertical movement up to 3" (1-1/2" up and 1-1/2" down)
- Specially designed to simplify welding installation
- Fast, one-piece universal installation. No left or right handed clips
- FastClip™ Deflection Screws (included) provide frictionless slip connections
- Custom and longer lengths available
- U.S. Patent No. 6,688,069

FastClip™ 14GA system meets Intertek CCRR-0208 in compliance with the 2018, 2015 & 2012 International Building Code® (IBC) and International Residential Code® (IRC).

Meets SFIA Certification for Manufacturing Compliance Program for Connectors for Cold-Formed Steel Construction.



PRODUCT DATA & ORDERING INFORMATION

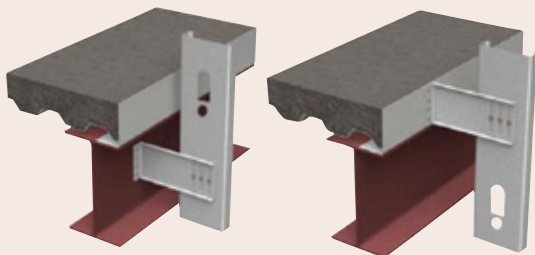
Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Pcs./Ctn.
CLIP-FCECX6	14	68	0.0713	1-7/8" x 6" x 4-3/4"	25
CLIP-FCECX8	14	68	0.0713	1-7/8" x 8" x 4-3/4"	25
CLIP-FCECX8-97	12	97	0.1017	1-7/8" x 8" x 4-3/4"	25
CLIP-FCECX10	14	68	0.0713	1-7/8" x 10" x 4-3/4"	25
CLIP-FCECX12	14	68	0.0713	1-7/8" x 12" x 4-3/4"	25

Includes 80 FastClip deflection screws per box
Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating

*EXTENDED FastClip™ (FCEC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich EXTENDED FastClip™ (FCEC) is a trademark of ClarkDietrich.

EXTENDED FAST CLIP™

FCEC



EXTENDED FAST CLIP™ INSTALLATION



LOCATION OPTIONS WITH (2) ANCHORS



LOCATION OPTIONS WITH (3) ANCHORS



(4) ANCHORS

EXTENDED FAST CLIP™ ALLOWABLE LOADS (LBS)

Anchor Type	Stud Thickness and Yield Strength	No. Anchors to Structure	Allowable Load (lbs)
BUILDEX #12-24 TEK 5 SELF-DRILLING	20ga (33mil) 33ksi	2	689
		3	689
		4	689
	18ga (43mil) 33ksi	2	852
		3	852
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
PAFTO 3/16" STEEL*	20ga (33mil) 33ksi	2	689
		3	689
		4	689
	18ga (43mil) 33ksi	2	510
		3	765
		4	852
	16ga (54mil) 50ksi	2	852
		3	852
		4	852
	14ga (68mil) 50ksi	2	852
		3	852
		4	852
	12ga (97mil) 50ksi	2	852
		3	852
		4	852

TABLE NOTES:

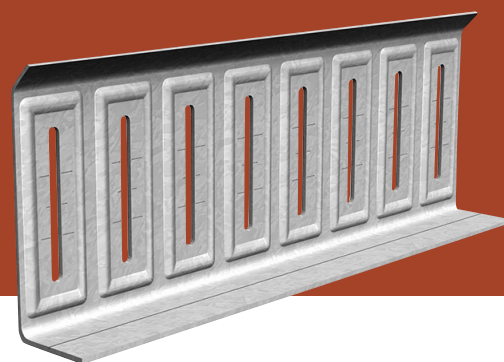
- The 1/3 stress increase for wind shall not be used.
- Attach building anchors to the structure according to the manufacturer's instructions. Anchors shall be installed through the embossments on the scored line of the clip as shown to the right. In no case shall anchors be installed more than 3/4" 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.
- It is the responsibility of the design professional to detail the project drawings for proper clip installation.

*EXTENDED FastClip™ (FCEC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich EXTENDED FastClip™ (FCEC) is a trademark of ClarkDietrich.

FAST STRUT™

FS12 / FS15 / FS18 / FS20 / FS24

FS12

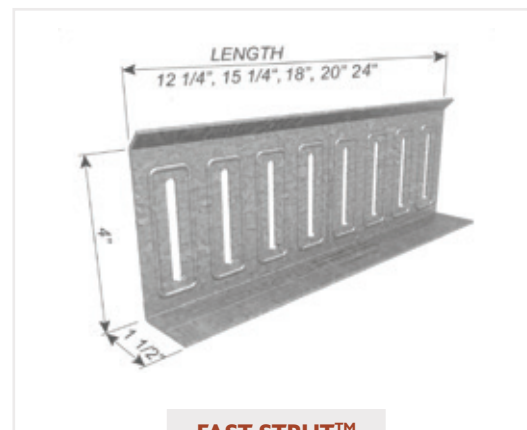


Used for large standoff conditions.

Fast Strut™ curtain-wall connector employs the **Fast Clip™** technology for curtain-wall stud attachment and is commonly used when large stand-off conditions exist.

Fast Strut™ products are available in standard lengths of 12-1/4" and 15-1/4" and custom lengths of up to 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. Struts are attached to the underside of structural members with screws, welds, or powder-actuated fasteners. **FastClip™ Deflection Screws** are provided with each strut to ensure friction-free sliding. Each strut is also embossed with fastening patterns to ensure accurate placement of fasteners.

- Vertical movement up to 2-1/2" (1-1/4" up and 1-1/4" down).
- Allows for standoff from the primary frame.
- **FastClip™ Deflection Screws** (included) provide frictionless slip connection.



FAST STRUT™



FAST STRUT™ INSTALLATION

PRODUCT DATA & ORDERING INFORMATION

Product code	Gauge	Mils	Design Thickness (in)	Size (in)	Pcs./Ctn.
CLIP-FS12	14	68	0.0713	4 x 1-1/2 x 12-1/4	10
CLIP-FS15	14	68	0.0713	4 x 1-1/2 x 15-1/4	10
CLIP-FS18	14	68	0.0713	4 x 1-1/2 x 18	10
CLIP-FS20	14	68	0.0713	4 x 1-1/2 x 20	10
CLIP-FS24	14	68	0.0713	4 x 1-1/2 x 24	10

Includes 80 FastClip deflection screws per box
Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating

*FastStrut™ (FS12, FS15, FS18, FS20, FS24) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich FastStrut™ is a trademark of ClarkDietrich.



FAST STRUT™

FS12 / FS15 / FS18 / FS20 / FS24

FS12, FS15 AND CUSTOM LENGTHS ALLOWABLE LOADS (LBS)

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

TABLE NOTES:

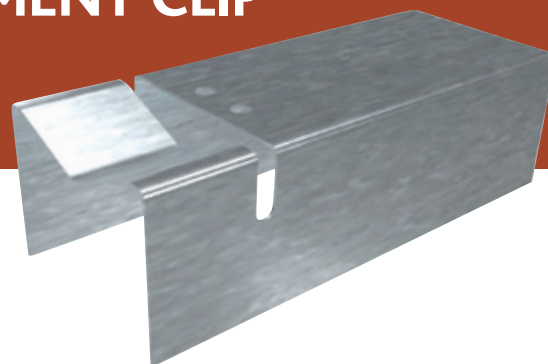
- Except when welding, tabulated values require a minimum of 4" of structure engagement. For other conditions or technical assistance, contact Bailey Metal Products 800-668-2154.
- The tabulated values for welds are based on the following weld lengths: use 4-1/2" of weld along each edge of the 1-1/2" 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.)
- 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.
- Tabulated values for Hilti Kwik-Cons are based on the following: anchors are spaced at 2-3/4" o.c. (min.), anchors are placed 3/4" (min.) away from edge of building structure and 1/2" (min.) away from edge of Fast Strut. The tabulated values are based on 3000psi normal weight concrete.
- For 3/4" deflection, center the propriety screws along the top most hash mark. For 1-1/4" deflection, center the screws along the center hash mark.
- Capacities listed for PAFs are based on minimum PAF requirements listed in General Note #6 on page 9.
- It is the responsibility of the design professional to detail the project drawings for proper clip attachment.
- Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

*FastStrut™ (FS12, FS15, FS18, FS20, FS24) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich FastStrut™ is a trademark of ClarkDietrich.

HORIZONTAL FLANGE ATTACHMENT CLIP

HFA CLIP

HFA CLIP



BAILEY HFA CLIP is a low cost method to accommodate the vertical deflection in exterior by-pass curtain wall conditions.

- Allows for vertical movement of the structure independent from the exterior curtain wall framing
- Eliminates the need for mechanical fastening between the clip and the steel stud
- If the design requires a stand off distance, an additional steel stud should be used to eliminate the stand-off and establish the connection



HORIZONTAL FLANGE ATTACHMENT CLIP



BAILEY HFA CLIP PROPERTIES

Product Identification	Base Steel Thickness			Size		Weight*	Mass*	Yield Strength** ksi	Coating***	Packaging Pcs/Ctn
	Mils	Design		in.	mm	lb	kg			
		in.	mm							
Bailey HFA Clip	68	0.0713	1.81	2x5	50.8x127	0.526	0.238	50	G90	50

* Weight is based on design steel thickness of net section. ** Meets ASTM A1003: Specification for Steel Sheet, Carbon, Metallic and Nonmetallic-Coated for Cold-Formed Framing Members. *** Meets ASTM A653: Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

HORIZONTAL FLANGE ATTACHMENT CLIP

HFA CLIP



INSTALLATION

Connect the **Bailey HFA Clip** to the steel stud flange, then attach to the building structure adequately using suitable screws, PAF or welds as per the engineer of record, designs and shop drawings. If a stand-off situation exists between the studs and the structure, use an additional stud to bridge the distance.



HFA CLIP	Stud Identification	Stud Steel Properties		Service Limit Load	Ultimate Load	LSD Factored Load Resistance
		Mils	Yield Strength (ksi)	lb	lb	lb
	362 S 162 - 33	33	33	409	964	459
	362 S 162 - 43	43	33	524	1272	606
	362 S 162 - 54	54	50	734	1362	649
	362 S 162 - 68	68	50	828	1448	689
	600 S 162 - 33	33	33	378	1274	607
	600 S 162 - 43	43	33	542	1343	639
	600 S 162 - 54	54	50	746	1410	671
	600 S 162 - 68	68	50	851	1450	690

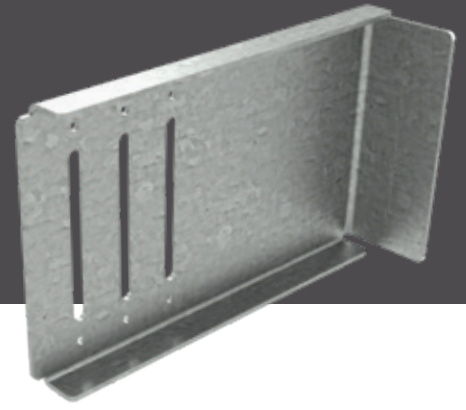
TABLE NOTES:

- Clip capacity loads were obtained from tests performed under the supervision of Dr. R. M. Schuster, P. Eng.
- Above loads are based on using #12 screws and following the installation instructions
- The service limit load was recorded at 1/8" deflection according to the Research Note published by LGSEA on CFS "Testing and Establishing Design Values for Clips" by Roger LaBoube, P.E., Ph.D., February 2002
- Ultimate loads are based the maximum clip resistance
- LSD factored load resistances were derived according to section F1.1 of CSA S136-16
- Anchoring the Bailey WSC Clip to the structure is the responsibility of the engineer of record

HYBRID BYPASS CLIP

HBP

HBP CLIP



Provides either a rigid connection or vertical building movement up to 3".

Hybrid Bypass Clips are used to attach exterior curtain wall studs to the building structure and provide either a rigid connection or deflecting connection 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. **Hybrid Bypass Clips** install quickly with screws, welds or powder-actuated fasteners, and provide adjustable standoff to ensure a plumb wall plane. For deflection application, proprietary deflection screws are provided with each clip to ensure friction-free sliding.

- Eliminates shims and scabs
- Provides vertical movement up to 3" (1-1/2" up and 1-1/2" down) when installed as a deflection application
- Specially designed to simplify welding installation
- Fast, one-piece universal installation.
- Proprietary deflection screws provide frictionless slip connections. One bag (80 screws) included
- No left or right handed clips



HYBRID BYPASS CLIP (HBP)

PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Pcs./ Bucket
CLIP-HBP6-68	14	68	0.0713	1-7/8 x 6 x 4-7/8	25
CLIP-HBP8-68	14	68	0.0713	1-7/8 x 8 x 4-7/8	25
CLIP-HBP10-68	14	68	0.0713	1-7/8 x 10 x 4-7/8	25
CLIP-HBP12-68	14	68	0.0713	1-7/8 x 12 x 4-7/8	25

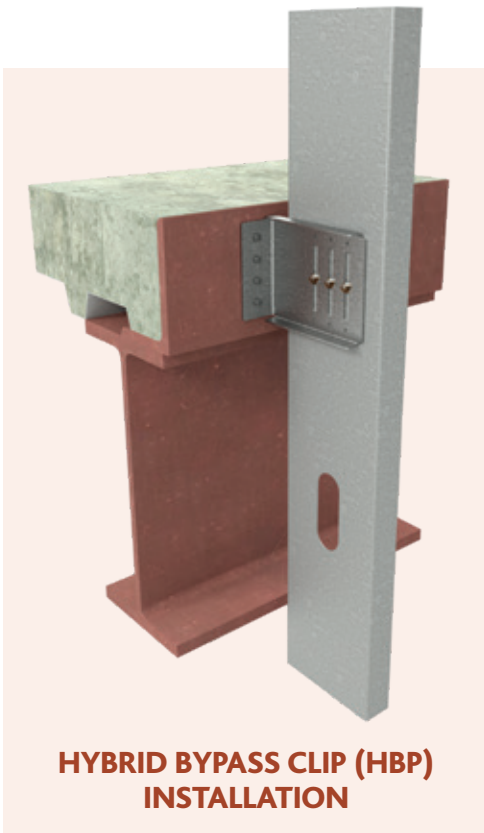
Includes 80 FastClip deflection screws per box
 Material Structural Grade 50 Type H (ST50H), 50ksi
 Coating G90 (Z275) hot-dipped galvanized coating

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.



HYBRID BYPASS CLIP

HBP



INSTALLATION

Connections to the building can be made with screws, welds powder-actuated fasteners. Mechanical fasteners shall be located on the embossed marks given on the scored line of the 1-7/8" flange. 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 attached drawings. 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.

FOR A RIGID CONNECTION:

Attach the Universal Bypass Clip to cold-formed steel framing members using (6) #10-16 minimum self-drilling screws (not included) for the 14ga clip.

FOR A RIGID CONNECTION:

Attach the Universal Bypass Clip to the cold-formed steel framing using (3) #14 proprietary deflection screws (included) through the (3) slotted holes and positioned to allow for the appropriate building deflection.

PROPRIETARY DEFLECTION SCREWS:

Deflection clips include our proprietary deflection 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.

HYBRID BYPASS CLIP DEFLECTION DATA SHEET

ATTACHMENT TO STRUCTURAL: **DESIGNED BY OTHERS**
ATTACHMENT TO STUD: **AS A DEFLECTION CONNECTION**

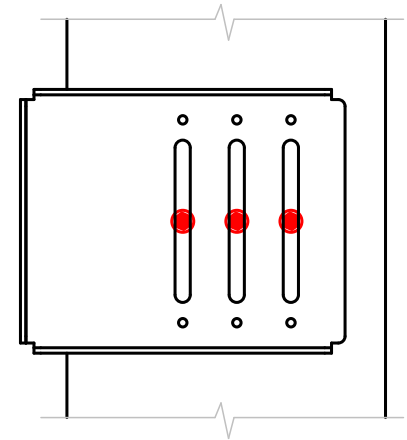
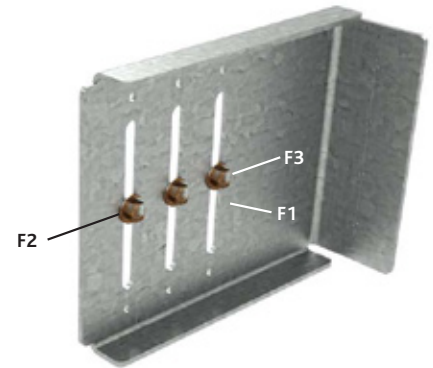
HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE

HBP - 12ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	260	1535	1680
	68mil (14ga) 50ksi	280	1535	1680
	97mil (12ga) 50ksi	280	1535	1680
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	225	1525	1685
	68mil (14ga) 50ksi	225	1525	1685
	97 mil (12ga) 50ksi	225	1525	1685
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	185	1490	1630
	68mil (14ga) 50ksi	185	1490	1630
	97 mil (12ga) 50ksi	185	1490	1630
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1490	1630
	68mil (14ga) 50ksi	90	1490	1630
	97 mil (12ga) 50ksi	90	1490	1630

HBP - 14ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	255	1280	1430
	68mil (14ga) 50ksi	255	1280	1430
	97mil (12ga) 50ksi	255	1280	1430
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	190	1235	1340
	68mil (14ga) 50ksi	190	1235	1340
	97 mil (12ga) 50ksi	190	1235	1340
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	150	1185	1325
	68mil (14ga) 50ksi	150	1185	1325
	97 mil (12ga) 50ksi	150	1185	1325
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1190	1300
	68mil (14ga) 50ksi	90	1190	1300
	97 mil (12ga) 50ksi	90	1190	1300



(3) #14 DEFLECTION SCREW PATTERN
SHOWN IN A HBP6 CLIP

TABLE NOTES:

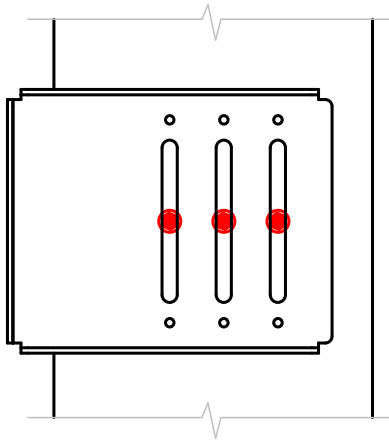
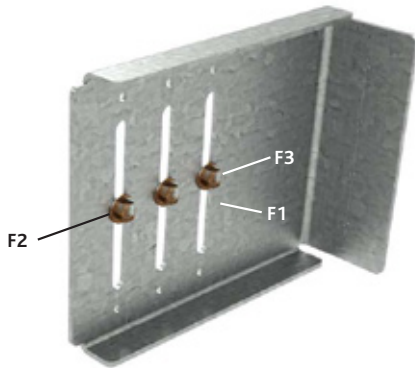
1. Allowable loads (ASD) listed represent the capacity of the clip to the stud only. (framing connection).
2. Allowable Loads have not been increased for the wind, seismic, or other factors.
3. An 1/8-in service deflection load limit was applied to clips resisting F2 and F3 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
4. For Deflection connection, one #14 shouldered screw (CLIP-HBP Deflection Screw) shall be installed per slot - placed at the center. (#14 Deflection Screws are provided with each Hybrid Bypass Clip).
5. Listed capacities are based on the maximum screw pattern. For maximum screw pattern, fill #14 Deflection screws in each slot for a Deflection Clip.
6. It is the responsibility of the design professional to design the attachment of the clips to the structure and verify that their capacity meets the requirements of the intended application.
7. Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP DEFLECTION DATA SHEET

ATTACHMENT TO STRUCTURAL: **WELDED**
ATTACHMENT TO STUD: **AS A DEFLECTION CONNECTION**

HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE



(3) #14 DEFLECTION SCREW PATTERN
SHOWN IN A HBP6 CLIP

HBP - 12ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	260	1535	1680
	68mil (14ga) 50ksi	280	1535	1680
	97mil (12ga) 50ksi	280	1535	1680
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	225	1535	1685
	68mil (14ga) 50ksi	225	1535	1685
	97mil (12ga) 50ksi	225	1535	1685
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	185	1535	1630
	68mil (14ga) 50ksi	185	1535	1630
	97mil (12ga) 50ksi	185	1535	1630
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1535	1630
	68mil (14ga) 50ksi	90	1535	1630
	97mil (12ga) 50ksi	90	1535	1630

HBP - 14ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	255	1275	1430
	68mil (14ga) 50ksi	255	1275	1430
	97mil (12ga) 50ksi	255	1275	1430
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	190	1275	1340
	68mil (14ga) 50ksi	190	1275	1340
	97mil (12ga) 50ksi	190	1275	1340
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	150	1275	1325
	68mil (14ga) 50ksi	150	1275	1325
	97mil (12ga) 50ksi	150	1275	1325
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1275	1300
	68mil (14ga) 50ksi	90	1275	1300
	97mil (12ga) 50ksi	90	1275	1300

TABLE NOTES:

- Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
- For Deflection clip, one #14 shouldered screw (CLIP-HBP Deflection Screw) shall be installed per slot - placed at the center. Clip gauge-specific #14 HBP Deflection Screws are provided with each Hybrid Bypass Clip.
- Listed capacities are based on the maximum screw pattern. For maximum screw pattern, fill #14 Deflection screws in each slot for a Deflection Clip.
- The Allowable loads listed for welds are based on the following weld lengths: (2) Welds - 1" along back of short leg clip bend (each weld equally distanced from center of clip)
- Use E70XX (min.) electrodes.
- It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
- Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP DEFLECTION DATA SHEET

ATTACHMENT TO STRUCTURAL: **(4) #12-24 FASTENERS**
ATTACHMENT TO STUD: **AS A DEFLECTION CONNECTION**

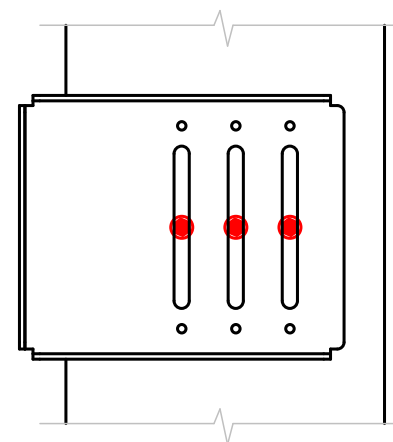
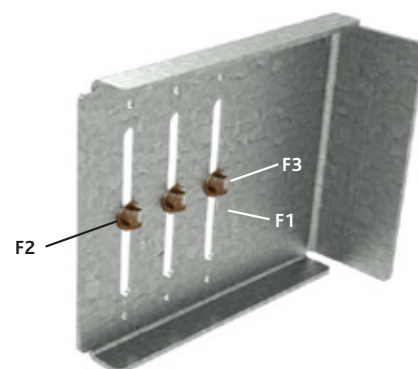
HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE

HBP - 12ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	260	1535	1680
	68mil (14ga) 50ksi	280	1535	1680
	97mil (12ga) 50ksi	280	1535	1680
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	225	1525	1685
	68mil (14ga) 50ksi	225	1525	1685
	97mil (12ga) 50ksi	225	1525	1685
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	185	1490	1630
	68mil (14ga) 50ksi	185	1490	1630
	97mil (12ga) 50ksi	185	1490	1630
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1490	1630
	68mil (14ga) 50ksi	90	1490	1630
	97mil (12ga) 50ksi	90	1490	1630

HBP - 14ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	255	1280	1430
	68mil (14ga) 50ksi	255	1280	1430
	97mil (12ga) 50ksi	255	1280	1430
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	190	1235	1340
	68mil (14ga) 50ksi	190	1235	1340
	97mil (12ga) 50ksi	190	1235	1340
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	150	1185	1325
	68mil (14ga) 50ksi	150	1185	1325
	97mil (12ga) 50ksi	150	1185	1325
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1190	1300
	68mil (14ga) 50ksi	90	1190	1300
	97mil (12ga) 50ksi	90	1190	1300



(3) #14 DEFLECTION SCREW PATTERN
SHOWN IN A HBP6 CLIP

TABLE NOTES:

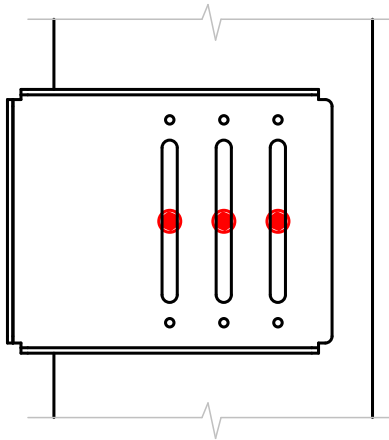
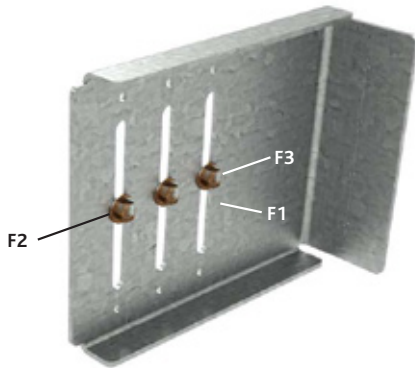
1. Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
2. An 1/8-in service deflection load limit was applied to clips resisting F2 and F3 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
3. For Deflection clip, one #14 shouldered screw (CLIP-HBP Deflection Screw) shall be installed per slot - placed at the center. Clip gauge-specific #14 UBC Deflection Screws are provided with each Hybrid Bypass Clip.
4. Listed capacities are based on the maximum screw pattern. For maximum screw pattern, fill #14 Deflection screws in each slot for a Deflection Clip.
5. #12-24 Fasteners shall be used for attachment to 3/16" steel structure. (4) Fastener configuration shall be used. Screws should be placed at indentations scribed on the short leg of the HBP clip.
6. The minimum edge distance for each fastener type shall comply with the fastener manufacturer's recommendation.
7. It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
8. Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP DEFLECTION DATA SHEET

ATTACHMENT TO STRUCTURAL: **(4) 0.157" PAFs**ATTACHMENT TO STUD: **AS A DEFLECTION CONNECTION**

HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE



(3) #14 DEFLECTION SCREW PATTERN
SHOWN IN A HBP6 CLIP

HBP - 12ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	260	1535	1680
	68mil (14ga) 50ksi	280	1535	1680
	97mil (12ga) 50ksi	280	1535	1680
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	225	1525	1685
	68mil (14ga) 50ksi	225	1525	1685
	97mil (12ga) 50ksi	225	1525	1685
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	185	1490	1630
	68mil (14ga) 50ksi	185	1490	1630
	97mil (12ga) 50ksi	185	1490	1630
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1490	1630
	68mil (14ga) 50ksi	90	1490	1630
	97mil (12ga) 50ksi	90	1490	1630

HBP - 14ga (As a DEFLECTION Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)		
		F1 (In-Plane) w/ (3) #14	F2 (Tension) w/ (3) #14	F3 (Compression) w/ (3) #14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	255	1280	1430
	68mil (14ga) 50ksi	255	1280	1430
	97mil (12ga) 50ksi	255	1280	1430
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	190	1235	1340
	68mil (14ga) 50ksi	190	1235	1340
	97mil (12ga) 50ksi	190	1235	1340
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	110	605	605
	43mil (18ga) 33ksi	140	905	905
	54mil (16ga) 50ksi	150	1185	1325
	68mil (14ga) 50ksi	150	1185	1325
	97mil (12ga) 50ksi	150	1185	1325
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	90	605	605
	43mil (18ga) 33ksi	90	905	905
	54mil (16ga) 50ksi	90	1190	1300
	68mil (14ga) 50ksi	90	1190	1300
	97mil (12ga) 50ksi	90	1190	1300

TABLE NOTES:

- Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
- An 1/8-in service deflection load limit was applied to clips resisting F2 and F3 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
- For Deflection clip, one #14 shouldered screw (CLIP-HBP Deflection Screw) shall be installed per slot - placed at the center. Clip gauge-specific #14 HBP Deflection Screws are provided with each Hybrid Bypass Clip.
- Listed capacities are based on the maximum screw pattern. For maximum screw pattern, fill #14 Deflection screws in each slot for a Deflection Clip.
- 0.157" Hilti X-U PAFs shall be used for attachment to 3/16" steel structure. (4) Fastener configuration shall be used. PAFs should be placed at indentations scribed on the short leg of the HBP clip.
- Capacities considered for Hilti PAFs are based on fastener strengths listed in ICC ESR-2269.
- It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
- Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP RIGID DATA SHEET

ATTACHMENT TO STRUCTURAL: **DESIGNED BY OTHERS**
ATTACHMENT TO STUD: **RIGID CONNECTION W/ (6) SCREWS**

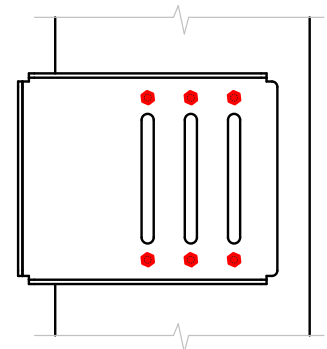
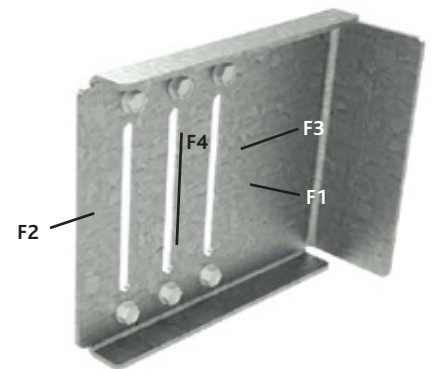
HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE

HBP - 12ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	425
	43mil (18ga) 33ksi	245	1680	1680	630
	54mil (16ga) 50ksi	265	2115	2540	1230
	68mil (14ga) 50ksi	265	2115	2540	1230
	97mil (12ga) 50ksi	265	2115	2540	1230
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	310
	43mil (18ga) 33ksi	240	1680	1680	460
	54mil (16ga) 50ksi	240	2115	2315	885
	68mil (14ga) 50ksi	240	2115	2315	885
	97 mil (12ga) 50ksi	240	2115	2315	885
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	245
	43mil (18ga) 33ksi	225	1680	1680	360
	54mil (16ga) 50ksi	225	2115	2055	690
	68mil (14ga) 50ksi	225	2115	2055	690
	97 mil (12ga) 50ksi	225	2115	2055	690
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	200
	43mil (18ga) 33ksi	195	1680	1680	295
	54mil (16ga) 50ksi	195	2115	2055	605
	68mil (14ga) 50ksi	195	2115	2055	630
	97 mil (12ga) 50ksi	195	2115	2055	630

HBP - 14ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	395
	43mil (18ga) 33ksi	215	1450	1575	590
	54mil (16ga) 50ksi	255	1450	1590	1055
	68mil (14ga) 50ksi	255	1450	1590	1055
	97mil (12ga) 50ksi	255	1450	1590	1055
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	290
	43mil (18ga) 33ksi	215	1450	1405	430
	54mil (16ga) 50ksi	220	1450	1405	770
	68mil (14ga) 50ksi	220	1450	1405	770
	97 mil (12ga) 50ksi	220	1450	1405	770
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	225
	43mil (18ga) 33ksi	190	1450	1385	340
	54mil (16ga) 50ksi	190	1450	1385	605
	68mil (14ga) 50ksi	190	1450	1385	605
	97 mil (12ga) 50ksi	190	1450	1385	605
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	160	1060	1060	185
	43mil (18ga) 33ksi	160	1430	1285	280
	54mil (16ga) 50ksi	160	1430	1285	495
	68mil (14ga) 50ksi	160	1430	1285	495
	97 mil (12ga) 50ksi	160	1430	1285	495



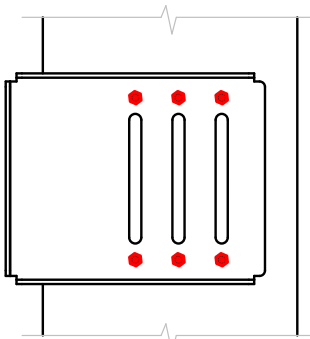
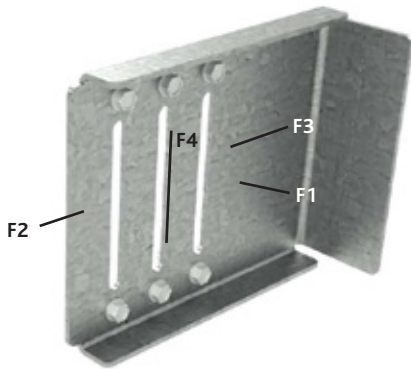
12GA CLIP: (6) #12-14 SCREWS
14GA CLIP: (6) #10-16 SCREWS
SHOWN IN A HBP6 CLIP

TABLE NOTES:

1. Allowable loads (ASD) listed represent the capacity of the clip to the stud only. (Framing Connection)
2. Allowable Loads have not been increased for the wind, seismic, or other factors.
3. An 1/8-in service deflection load limit was applied to clips resisting F2, F3 and F4 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
4. Listed capacities are based on the maximum screw pattern. For maximum screw pattern for a Rigid Clip, fill screws in (6) round holes.
5. For 12ga Rigid clip, (6) #12-14 screws shall be installed in the pilot holes.
6. For 14ga Rigid clip, (6) #10-16 screws shall be installed in the pilot holes.
7. It is the responsibility of the design professional to design the attachment of the clips to the structure and verify that their capacity meets the requirements of the intended application.
8. Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP RIGID DATA SHEET

ATTACHMENT TO STRUCTURAL: **WELDED**ATTACHMENT TO STUD: **RIGID CONNECTION W/ (6) SCREWS****HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE**

12GA CLIP: (6) #12-14 SCREWS
14GA CLIP: (6) #10-16 SCREWS
SHOWN IN A HBP6 CLIP

HBP - 12ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	425
	43mil (18ga) 33ksi	245	1680	1680	630
	54mil (16ga) 50ksi	265	2110	2540	1230
	68mil (14ga) 50ksi	265	2110	2540	1230
	97mil (12ga) 50ksi	265	2110	2540	1230
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	310
	43mil (18ga) 33ksi	240	1680	1680	460
	54mil (16ga) 50ksi	240	2110	2315	885
	68mil (14ga) 50ksi	240	2110	2315	885
	97 mil (12ga) 50ksi	240	2110	2315	885
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	245
	43mil (18ga) 33ksi	225	1680	1680	360
	54mil (16ga) 50ksi	225	2110	2055	690
	68mil (14ga) 50ksi	225	2110	2055	690
	97 mil (12ga) 50ksi	225	2110	2055	690
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	200
	43mil (18ga) 33ksi	195	1680	1680	295
	54mil (16ga) 50ksi	195	2110	2055	605
	68mil (14ga) 50ksi	195	2110	2055	630
	97 mil (12ga) 50ksi	195	2110	2055	630

HBP - 14ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	395
	43mil (18ga) 33ksi	215	1575	1575	590
	54mil (16ga) 50ksi	255	1755	1590	1055
	68mil (14ga) 50ksi	255	755	1590	1055
	97mil (12ga) 50ksi	255	1755	1590	1055
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	290
	43mil (18ga) 33ksi	215	1575	1405	430
	54mil (16ga) 50ksi	220	1675	1405	770
	68mil (14ga) 50ksi	220	1675	1405	770
	97 mil (12ga) 50ksi	220	1675	1405	770
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	225
	43mil (18ga) 33ksi	190	1575	1385	340
	54mil (16ga) 50ksi	190	1675	1385	605
	68mil (14ga) 50ksi	190	1675	1385	605
	97 mil (12ga) 50ksi	190	1675	1385	605
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	160	1060	1160	185
	43mil (18ga) 33ksi	160	1575	1285	280
	54mil (16ga) 50ksi	160	1675	1285	495
	68mil (14ga) 50ksi	160	1675	1285	495
	97 mil (12ga) 50ksi	160	1675	1285	495

TABLE NOTES:

- Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
- Listed capacities are based on the maximum screw pattern. For maximum screw pattern for a Rigid Clip, fill screws in (6) round holes.
- For 12ga Rigid clip, (6) #12-14 screws shall be installed in the pilot holes.
- For 14ga Rigid clip, (6) #10-16 screws shall be installed in the pilot holes.
- The Allowable loads listed for welds are based on the following weld lengths:
- (2) Welds - 1" along back of short leg clip bend (each weld equally distanced from center of clip).
- Use E70XX (min.) electrodes.
- It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
- Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

HYBRID BYPASS CLIP RIGID DATA SHEET

ATTACHMENT TO STRUCTURAL: **(4) #12-24 FASTENERS**
 ATTACHMENT TO STUD: **RIGID CONNECTION W/ (6) SCREWS**

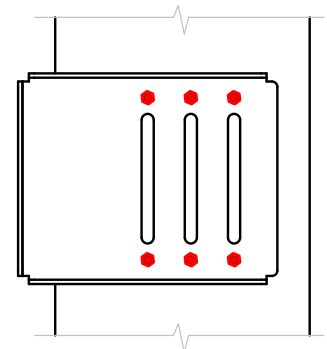
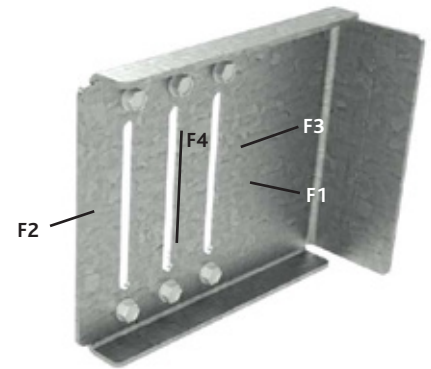
HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE

HBP- 12ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	425
	43mil (18ga) 33ksi	245	1680	1680	630
	54mil (16ga) 50ksi	265	2115	2540	1230
	68mil (14ga) 50ksi	265	2115	2540	1230
	97mil (12ga) 50ksi	265	2115	2540	1230
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	310
	43mil (18ga) 33ksi	240	1680	1680	460
	54mil (16ga) 50ksi	240	2115	2315	885
	68mil (14ga) 50ksi	240	2115	2315	885
	97mil (12ga) 50ksi	240	2115	2315	885
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	245
	43mil (18ga) 33ksi	225	1680	1680	360
	54mil (16ga) 50ksi	225	2115	2055	690
	68mil (14ga) 50ksi	225	2115	2055	690
	97mil (12ga) 50ksi	225	2115	2055	690
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	200
	43mil (18ga) 33ksi	195	1680	1680	295
	54mil (16ga) 50ksi	195	2115	2055	605
	68mil (14ga) 50ksi	195	2115	2055	630
	97mil (12ga) 50ksi	195	2115	2055	630

HBP - 14ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	395
	43mil (18ga) 33ksi	215	1450	1575	590
	54mil (16ga) 50ksi	255	1450	1590	1055
	68mil (14ga) 50ksi	255	1450	1590	1055
	97mil (12ga) 50ksi	255	1450	1590	1055
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	290
	43mil (18ga) 33ksi	215	1450	1405	430
	54mil (16ga) 50ksi	220	1450	1405	770
	68mil (14ga) 50ksi	220	1450	1405	770
	97mil (12ga) 50ksi	220	1450	1405	770
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	225
	43mil (18ga) 33ksi	190	1450	1385	340
	54mil (16ga) 50ksi	190	1450	1385	605
	68mil (14ga) 50ksi	190	1450	1385	605
	97mil (12ga) 50ksi	190	1450	1385	605
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	160	1060	1060	185
	43mil (18ga) 33ksi	160	1430	1285	280
	54mil (16ga) 50ksi	160	1430	1285	495
	68mil (14ga) 50ksi	160	1430	1285	495
	97mil (12ga) 50ksi	160	1430	1285	495



12GA CLIP: (6) #12-14 SCREWS
 14GA CLIP: (6) #10-16 SCREWS
 SHOWN IN A HBP6 CLIP

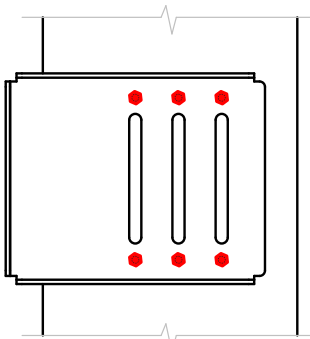
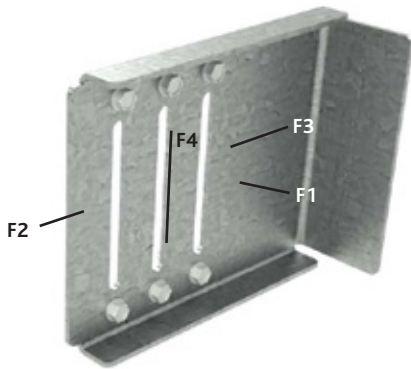
TABLE NOTES:

1. Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
2. An 1/8-in service deflection load limit was applied to clips resisting F2, F3 and F4 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
3. Listed capacities are based on the maximum screw pattern. For maximum screw pattern for a Rigid Clip, fill screws in (6) round holes.
4. For 12ga Rigid clip, (6) #12-14 screws shall be installed in the pilot holes.
5. For 14ga Rigid clip, (6) #10-16 screws shall be installed in the pilot holes.
6. #12-24 Fasteners shall be used for attachment to steel structure. (4) Fastener configuration shall be used. Screws should be placed at indentations scribed on the short leg of the UBC clip.
7. The minimum edge distance for each fastener type shall comply with the fastener manufacturer's recommendation.
8. It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
9. Nominal or LRFD loads are available upon request.

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HYBRID BYPASS CLIP RIGID DATA SHEET

ATTACHMENT TO STRUCTURAL: (4) 0.157" PAFs

ATTACHMENT TO STUD: **RIGID CONNECTION W/ (6) SCREWS****HYBRID BYPASS CLIP (HBP) – DESIGN GUIDE**

12GA CLIP: (6) #12-14 SCREWS
14GA CLIP: (6) #10-16 SCREWS
SHOWN IN A HBP6 CLIP

HBP - 12ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	425
	43mil (18ga) 33ksi	245	1680	1680	630
	54mil (16ga) 50ksi	265	2000	2540	1230
	68mil (14ga) 50ksi	265	2000	2540	1230
	97mil (12ga) 50ksi	265	2000	2540	1230
CLIP-HBP8-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	310
	43mil (18ga) 33ksi	240	1680	1680	460
	54mil (16ga) 50ksi	240	2000	2315	885
	68mil (14ga) 50ksi	240	2000	2315	885
	97mil (12ga) 50ksi	240	2000	2315	885
CLIP-HBP10-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	245
	43mil (18ga) 33ksi	225	1680	1680	360
	54mil (16ga) 50ksi	225	2000	2055	690
	68mil (14ga) 50ksi	225	2000	2055	690
	97mil (12ga) 50ksi	225	2000	2055	690
CLIP-HBP12-97 97mil (12ga)	33mil (20ga) 33ksi	190	1130	1130	200
	43mil (18ga) 33ksi	195	1680	1680	295
	54mil (16ga) 50ksi	195	2000	2055	605
	68mil (14ga) 50ksi	195	2000	2055	630
	97mil (12ga) 50ksi	195	2000	2055	630

HBP - 14ga (As a RIGID Connection)

Clip Designation	Stud Gauge (mils) Yield Strength	ASD ALLOWABLE LOADS (LBS)			
		F1 (In-Plane) w/ (6) #12-14	F2 (Tension) w/ (6) #12-14	F3 (Compression) w/ (6) #12-14	F4 (Shear) w/ (6) #12-14
CLIP-HBP6-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	395
	43mil (18ga) 33ksi	215	1450	1575	590
	54mil (16ga) 50ksi	255	1450	1590	1055
	68mil (14ga) 50ksi	255	1450	1590	1055
	97mil (12ga) 50ksi	255	1450	1590	1055
CLIP-HBP8-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	290
	43mil (18ga) 33ksi	215	1450	1405	430
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	97mil (12ga) 50ksi	220	1450	1405	770
CLIP-HBP10-68 68mil (14ga)	33mil (20ga) 33ksi	165	1060	1060	225
	43mil (18ga) 33ksi	190	1450	1385	340
	54mil (16ga) 50ksi	190	1450	1385	605
	68mil (14ga) 50ksi	190	1450	1385	605
	97mil (12ga) 50ksi	190	1450	1385	605
CLIP-HBP12-68 68mil (14ga)	33mil (20ga) 33ksi	160	1430	1285	280
	43mil (18ga) 33ksi	160	1430	1285	495
	54mil (16ga) 50ksi	160	1430	1285	495
	68mil (14ga) 50ksi	160	1430	1285	495
	97mil (12ga) 50ksi	160	1430	1285	495

TABLE NOTES:

- Allowable Loads (ASD) have not been increased for the wind, seismic, or other factors.
- An 1/8-in service deflection load limit was applied to clips resisting F2, F3 and F4 loads. In accordance with ICC AC 261, service deflection limit was not applied to clips resisting F1 loads.
- Listed capacities are based on the maximum screw pattern. For maximum screw pattern for a Rigid Clip, fill screws in (6) round holes.
- For 12ga Rigid clip, (6) #12-14 screws shall be installed in the pilot holes.
- For 14ga Rigid clip, (6) #10-16 screws shall be installed in the pilot holes.
- 0.157" Hilti X-U PAFs shall be used for attachment to steel structure. (4) Fastener configuration shall be used. PAFs should be placed at indentations scribed on the short leg of the UBC clip.
- Capacities considered for Hilti PAFs are based on fastener strengths listed in ICC ESR-2269.
- It is the responsibility of the design professional to verify that the connection design meets the requirements of the intended application.
- Nominal or LRFD loads are available upon request.

*Hybrid Bypass Clips (HBP) / Universal Bypass Clips (UBC) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems.

RIGID CONNECTORS



Uni-Clip™ End Clip
w/ anchor

Uni-Clip™
End Clip

Extended Uni-Clip™
(UXRC)

Bailey's Universal
Bridging Clip (UBC)

Bailey's Backer Bar

EasyClip S-Series

Universal
Header
Bracket

EasyClip
E-Series

RedHeader
Pro™
Brackets

Pony Wall

CD
Holddown

Moment Clips

EasyClip™ D-Series™
or T-Series™



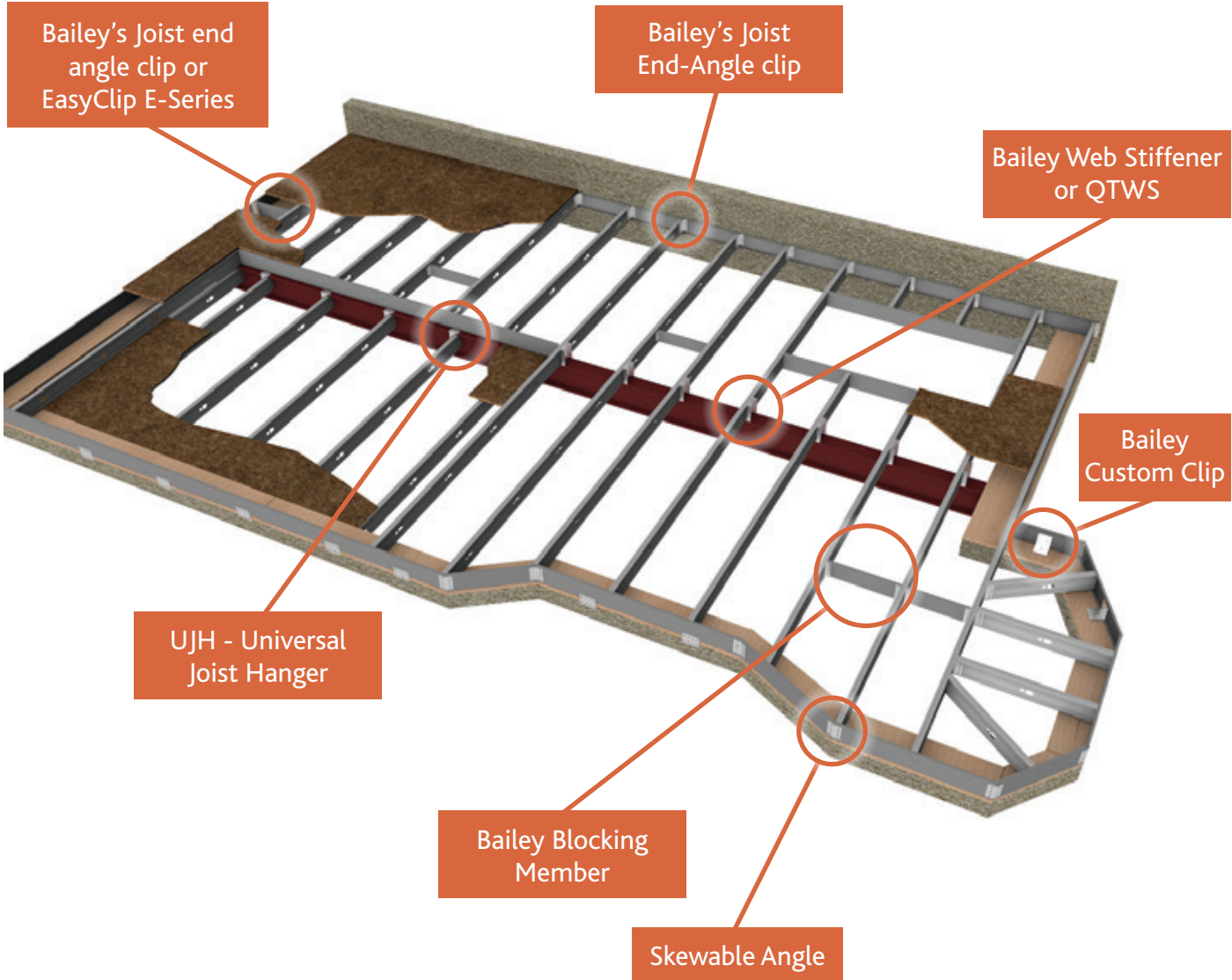
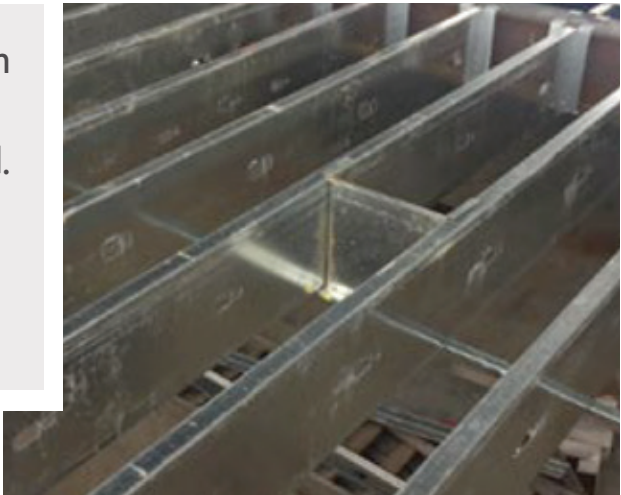
Meant to be used for loadbearing infill walls, bypass walls with no deflection, knee walls, and shear walls.

Connectors in these applications transfer loads from one member to another while restricting movement.



RIGID CONNECTORS

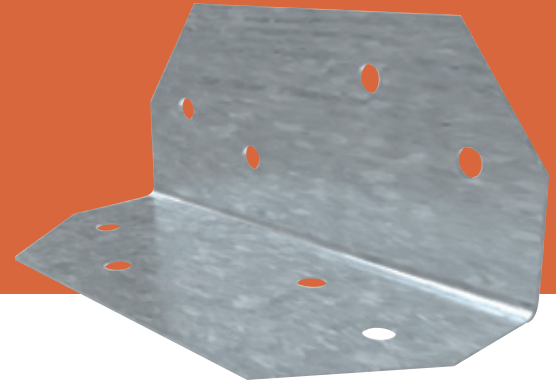
Rigid connectors are also used for connection of light-gauge steel floor systems. Typically used when 8" or wider studs/joists are required. These connectors are mostly used in low to mid-rise buildings, institutional, residential, commercial, and industrial.



UNIVERSAL BRIDGING CLIP

UBC 365 / UBC 600 / UBC 800

UNIVERSAL BRIDGING CLIP



The **Bailey Universal Bridging Clip** is a unique patented design engineered for rapid, economic installation with Bailey bridging channel in both curtain and loadbearing steel stud designs. Installs rapidly with #8 or #10 screws in prepunched holes.



BAILEY UBC 365, UBC 600 AND UBC 800 PROPERTIES

Product Identification	Base Steel Thickness			Size		Weight*	Mass*	Yield Strength** ksi	Coating***	Packaging Pcs/Ctn
	Mils	Design		in.	mm	lb	kg			
		in.	mm							
UBC 365	54	0.0566	1.438	1.5x3.65x1.5	38.1x92.7x38.1	0.131	0.0593	50	G90	100
UBC 600				1.5x6x1.5	38.1x152x38.1	0.234	0.106			
UBC 800				1.5x8x1.5	38.1x203x38.1	0.326	0.148			

* Weight is based on design steel thickness of net section. ** Meets ASTM A1003: Specification for Steel Sheet, Carbon, Metallic and Nonmetallic-Coated for Cold-Formed Framing Members. *** Meets ASTM A653: Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

PRODUCT DATA & ORDERING INFORMATION

Product Identification	Stud Bridging Clip	Clip Length
UBC 365	4"	3 1/4"
UBC 600	6"	5 1/2"
UBC 800	8"	7 1/2"



UNIVERSAL BRIDGING CLIP

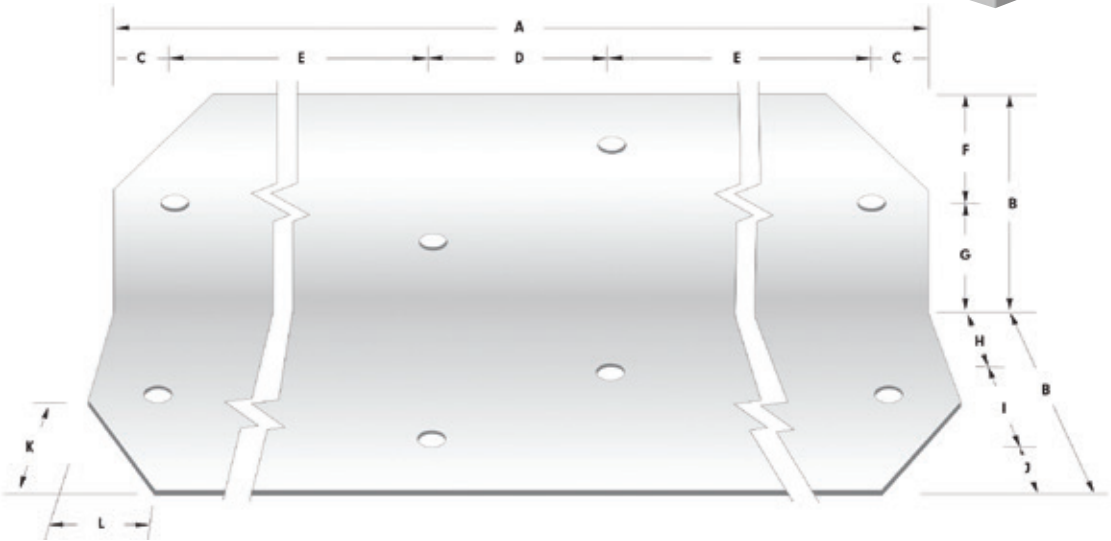
UBC 365 / UBC 600 / UBC 800

RIGID

INSTALLATION

The **Bailey Universal Bridging Clip** is unique in that it can be easily installed onto the inside or outside of the stud.

The angled corners make it easy to rotate into position and works well for all stud flange heights. The convenient, pre-punched holes allow for easy installation using hex head screws. The additional holes give greater flexibility for special connections for headers and sills, as well as framing around door and window openings.



BAILEY PATENTED UNIVERSAL BRIDGING CLIP (UBC) DIMENSIONS

CLIP DIMENSIONS (in.)

Product Identification	A	B	C	D	E	F	G	H	I	J	K	L
UBC 365	3.25	1.5	0.4375	1.0	0.6875	0.75	0.75	0.5	0.625	0.375	0.75	0.5625
UBC 600	5.5	1.5	0.4375	1.0	1.8125	0.75	0.75	0.5	0.625	0.375	0.75	0.5625
UBC 800	7.5	1.5	0.4375	1.0	2.8125	0.75	0.75	0.5	0.625	0.375	0.75	0.5625

*For more bridging solutions please refer to Fastbridge (page 40) or our Bent Tab Stud product.

FASTBRIDGE™

FB33 / FB43 / FB68

FASTBRIDGE™



Used to secure u-channel to wall studs for lateral bracing.

The **FastBridge** clip is used to secure u-channel to structural or non-structural wall studs when used in load-bearing, curtain wall or drywall framing applications.

The wall stud friction fit design allows for as little as one screw for the connection to the U-Channel.

The **FastBridge** clip is a stiffened, G90 galvanized steel clip that's tested and designed to facilitate the rapid, efficient installation of 1-1/2" U-Channel lateral bracing for exterior curtain wall framing, loadbearing walls or interior partitions constructed of structural or non-structural studs.

U.S. Patent No. D692,746 - Canadian Patent No. 152,547

The **FastBridge** clip is available in three versions:

- **(FB33) 20-gauge light-duty clip**
for use with 20-16 gauge structural studs
- **(FB43) 18-gauge light-duty clip**
for use with 20-16 gauge structural studs
- **(FB68) 14-gauge heavy-duty clip**
for use with 16-12 gauge structural studs

PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Yield Strength	Design Thickness (in)	Min. Thickness (in)	Knockout Size	Packaging pcs./ Bucket	Designed To Use With
CLIP-FB33	20	33	33ksi	0.0346	0.0329	1-1/2"	200	20-16 Ga. Structural and Non-structural studs
CLIP-FB43	18	43	33ksi	0.0451	0.0428	1-1/2"	200	20-16 Ga. Structural studs
CLIP-FB68	14	68	50ksi	0.0713	0.0677	1-1/2"	200	16-12 Ga. Structural studs

Coating: G90

* Fastbridge™ (FB33, FB43 & FB68) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich FastBridge™ is a trademark of ClarkDietrich.



INSTALLATION

Clip is used to secure 1-1/2" bridging channel to structural or nonstructural wall studs when used in load-bearing, curtain wall or drywall framing applications. Fast and efficient installation, using less screws per clip than standard angle bridging clips. One size clip can cover studs widths from 3-5/8" up to 8".

COATING G90:

- Use 1 or 2 #10 self-drilling screws to secure to the bridging channel
- Number of screws to be used must be determined by Engineer of Record (EOR)
- This clip does not require any fastening to the stud
- Compatible with Bailey studs and knockout from 3-5/8" up to 8".

FASTBRIDGE™

FB33 / FB43 / FB68

RIGID

SUGGESTED INSTALLATION OPTIONS FOR FASTBRIDGE CLIPS WITH BAILEY STUDS

OPTION 1

CLIPS FIRST THEN 1-1/2" BRIDGING CHANNEL, FACING DOWN.



Insert and place clips in the stud knockouts facing down



Run 1-1/2" bridging channel facing down and lift and drop clips into place as the channel passes through the knockouts



Rotate 1-1/2" bridging channel and clips into position and fasten the clip to the channel

OPTION 2

CLIPS FIRST THEN 1-1/2" BRIDGING CHANNEL, FACING UP.



Insert and place clips in knockouts facing up



Run 1-1/2" bridging channel facing up and rotate into position. Fasten the clip to the channel

OPTION 3

CHANNEL FIRST THEN CLIPS AND ROTATE INTO PLACE, FACING DOWN.



Run U channel and sit vertically in the knockout



Insert clips and adjust position to align in knockout



For each stud, rotate channel and clip into place. Fasten the clips to the channel

FB43 & FB68 SCREW REQUIREMENTS FOR LATERAL PRESSURE OF STUDS at **16"** o.c. with Bracing Distance from 4' to 8'

Stud Section	Stud Thickness (mil)	FastBridge Type	SPECIFIED WIND PRESSURE (PSF) AND BRACING DISTANCE (FT)																																															
			5psf				10psf				20psf				25psf				30psf				35psf				40psf				50psf																			
			4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'	4'	5'	6'	7' 8'																
362S162	33	FB43	1*				1*				1* 2*				1* 2*				2*				-				2*				-				2*				-											
	43		1*				1*				1* 2*				1* 2*				2*				-				2*				-																			
	54		1*				1*				1* 2*				1* 2*				2*				-				2*				-																			
	54		1*				1*				1* 2*				1* 2*				2*				-				2*				-																			
	68		1*				1*				1*				1*				1*				1*				1*				2*																			
362S200	33	FB43	1*				1*				2*				2*				-				-				2*				-				2*				-											
	43		1*				1*				1*				2*				2*				-				2*				-																			
	54		1*				1*				1*				2*				2*				-				2*				-																			
	54		1*				1*				1*				2*				2*				-				2*				-																			
	68		1*				1*				1*				1*				1*				1*				1*				2*																			
362S250	33	FB43	1*				1*				2*				2*				-				-				2*				-				2*				-											
	43		1*				1*				1*				2*				2*				-				2*				-																			
	54		1*				1*				1*				2*				2*				-				2*				-																			
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	68		1*				1*				1*				1*				1*				1*				1*				2*																			
400S162	33	FB43	1*				1*				1*				2*				2*				-				2*				-				2*				-											
	43		1*				1*				1*				2*				2*				-				2*				-																			
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400S200	33	FB43	1*				1*				2*				2*				-				2*				-				2*				-															
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400S250	33	FB43	1*				1*				2*				2*				-				2*				-				2*				-															
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600S162	33	FB43	1*				1*				1*				2*				2*				-				2*				-				2*				-											
	43		1*				1*				1*				2*				2*				-				2*				-																			
	54		1*				1*				1*				2*				2*				-				2*				-																			
	54		1*				1*				1*				2*				2*				-				2*				-																			
	68		1*				1*				1*				1*				1*				1*				1*				2*																			
600S200	33	FB43	1*				1*				1*				2*				2*				-				2*				-				2*				-											
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	54		1*				1*				1*				2*				2*				-				2*				-																			
	68		1*				1*				1*				1*				1*				1*				1*				2*																			
600S250	33	FB43	1*				1*				2*				2*				-				2*				-				2*				-															
	43		1*				1*				2*				2*				-				2*				-																							
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800S162	33	FB43	1*				1*				1*				2*				2*				-				2*				-				2*				-											
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	68		1*				1*				1*				1*				1*				1*				1*				2*																			
800S200	33	FB43	1*				1*				2*				2*				-				2*				-				2*				-															
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800S250	33	FB43	1*				1*				2*				2*				-				2*				-				2*				-															
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	54		1*				1*				2*				2*				-				2*				-																							
	68		1*				1*				1*				2*				2*				1*				2*				-																			

- "1*" indicates that one #10 screw used with either the FB43 or FB68 FastBridge Clip provides adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- "2*" indicates that two #10 screws used with either the FB43 or FB68 FastBridge Clip provides adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- Blank portions of the table indicates that FB43 or FB68 FastBridge Clip do not provide adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- Specified wind pressure to be obtained from NBC 2015.

FASTBRIDGE™ CLIP FB43 & FB68

FB43 & FB68 SCREW REQUIREMENTS FOR LATERAL PRESSURE OF STUDS
at 24" o.c. with Bracing Distance from 4' to 8'

NOTES:

- "1*" indicates that one #10 screw used with either the FB43 or FB68 FastBridge Clip provides adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- "2*" indicates that two #10 screws used with either the FB43 or FB68 FastBridge Clip provides adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- Blank portions of the table indicates that FB43 or FB68 FastBridge Clip do not provide adequate torsional restraint to the stud for the designated lateral design pressure and brace spacing.
- Specified wind pressure to be obtained from NBC 2015.

Stud Section	Stud Thickness (mil)	FastBridge Type	SPECIFIED WIND PRESSURE (PSF) AND BRACING DISTANCE (FT)																																			
			5psf				10psf				20psf				25psf				30psf				35psf				40psf				50psf							
			4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	4'	5'	6'	7'	8'	
362S162	33	FB43	1*				1*				2*				2*				2*				2*				2*				2*				2*			
	43		1*				1*				1*				2*				2*				2*				2*				2*							
	54		1*				1*				1*				2*				2*				2*				2*				2*							
	54		1*				1*				1*				2*				2*				2*				2*				2*							
	68		1*				1*				1*				1*				2*				2*				2*				2*							
362S200	33	FB43	1*				1*				2*				2*				2*				2*				2*				2*							
	43		1*				1*				2*				2*				2*				2*				2*											
	54		1*				1*				2*				2*				2*				2*				2*											
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362S250	33	FB43	1*				2*				2*				2*				2*				2*				2*											
	43		1*				2*				2*				2*				2*				2*															
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400S162	33	FB43	1*				1*				2*				2*				2*				2*				2*											
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600S162	33	FB43	1*				1*				1*				2*				2*				2*				2*											
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800S162	33	FB43	1*				1*				1*				2*				2*				2*				2*											
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800S200	33	FB43	1*				2*				2*				2*				2*				2*				2*											
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800S250	33	FB43	1*				2*				2*				2*				2*				2*				2*											
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FASTBRIDGE™

CLIP FB43 & FB68

FASTBRIDGE™



FB43: FASTBRIDGE CONNECTORS

MAXIMUM SPECIFIED DESIGN VALUES

FastBridge Model	Stud Depth (in)	Maximum Specified Design Values	No. of Screws	Stud Thickness (mil)		
				33	43	54
FB43	3.625	Axial Brace Stiffness (lbs/in)	1	1140	1330	2270
			2	1220	1480	2270
		Axial Brace Force (lbs)	1	168	198	258
			2	259	300	400
		Torsional Moment (in-lbs)	1	140	172	196
			2	312	406	524
FB43	4.00	Axial Brace Stiffness (lbs/in)	1	1030	1460	2170
			2	1190	1520	3030
		Axial Brace Force (lbs)	1	180	201	248
			2	267	303	402
		Torsional Moment (in-lbs)	1	129	172	221
			2	380	380	470
FB43	6.00	Axial Brace Stiffness (lbs/in)	1	790	990	1730
			2	990	1160	1930
		Axial Brace Force (lbs)	1	101	201	273
			2	248	306	424
		Torsional Moment (in-lbs)	1	157	160	162
			2	279	383	535
FB43	8.00	Axial Brace Stiffness (lbs/in)	1	-	750	1910
			2	-	750	1960
		Axial Brace Force (lbs)	1	-	200	256
			2	-	284	413
		Torsional Moment (in-lbs)	1	-	143	323
			2	-	435	496

NOTES:

- Maximum specified loads are based on studs with a minimum yield stress, $F_y = 33$ ksi and tensile strength,
- $F_u = 45$ ksi for 43 mil or thinner and a minimum yield stress, $F_y = 50$ ksi and tensile strength, $F_u = 65$ ksi for 54 mil or thicker.
- Maximum specified loads are based on 54 mil bridging U-channel with a minimum yield stress, $F_y = 33$ ksi and tensile strength, $F_u = 45$ ksi.
- Maximum specified loads are based only on the bridging connection. It is the responsibility of the designer to verify the strength and serviceability of the framing members.
- Maximum specified loads are based on #10 self-drilling screws with a nominal diameter of 0.190 in. and a washer diameter of 0.375 in. Fasteners must have a minimum nominal shear resistance, $P_{nvs} = 1718$ lbs and a minimum nominal tensile resistance, $P_{ts} = 2654$ lbs.
- Maximum specified loads may not be increased for wind or seismic load.
- Serviceability limit state is not considered since brace stiffness requirements are given in Section C2.3 of CSA S136-16.
- Tabulated values are based on physical tests carried out by Clark Dietrich.

FASTBRIDGE™

CLIP FB43 & FB68

RIGID

FB68: FASTBRIDGE CONNECTORS

MAXIMUM SPECIFIED DESIGN VALUES

NOTES:

- Maximum specified loads are based on studs with a minimum yield stress, $F_y = 33$ ksi and tensile strength,
- $F_u = 45$ ksi for 43 mil or thinner and a minimum yield stress, $F_y = 50$ ksi and tensile strength, $F_u = 65$ ksi for 54 mil or thicker.
- Maximum specified loads are based on 54 mil bridging U-channel with a minimum yield stress, $F_y = 33$ ksi and tensile strength, $F_u = 45$ ksi.
- Maximum specified loads are based only on the bridging connection. It is the responsibility of the designer to verify the strength and serviceability of the framing members.
- Maximum specified loads are based on #10 self-drilling screws with a nominal diameter of 0.190 in. and a washer diameter of 0.375 in. Fasteners must have a minimum nominal shear resistance, $P_{nvs} = 1718$ lbs and a minimum nominal tensile resistance, $P_{ts} = 2654$ lbs.
- Maximum specified loads may not be increased for wind or seismic load.
- Serviceability limit state is not considered since brace stiffness requirements are given in Section C2.3 of CSA S136-16.
- Tabulated values are based on physical tests carried out by Clark Dietrich.

FastBridge Model	Stud Depth	Maximum Specified Design Values	No. of Screws	Stud Thickness (mil)		
				54	68	97
FB68	3.625	Axial Brace Stiffness (lbs/in)	1	3410	4410	6270
			2	4010	6880	7585
		Axial Brace Force (lbs)	1	438	490	540
			2	627	690	776
		Torsional Moment (in-lbs)	1	313	415	410
			2	693	843	1084
FB68	4.00	Axial Brace Stiffness (lbs/in)	1	3060	3440	6740
			2	3710	4670	8960
		Axial Brace Force (lbs)	1	448	477	477
			2	637	709	828
		Torsional Moment (in-lbs)	1	360	436	532
			2	682	756	885
FB68	6.00	Axial Brace Stiffness (lbs/in)	1	2270	3240	3200
			2	2710	3870	3530
		Axial Brace Force (lbs)	1	442	477	486
			2	643	743	835
		Torsional Moment (in-lbs)	1	277	389	632
			2	647	715	947
FB68	8.00	Axial Brace Stiffness (lbs/in)	1	1940	2500	2530
			2	1960	2810	3015
		Axial Brace Force (lbs)	1	436	481	487
			2	601	705	847
		Torsional Moment (in-lbs)	1	292	483	636
			2	643	743	908

FASTBRIDGE™

CLIP FB43 & FB68



FASTBRIDGE™

Example Field Pictures

- Project: Demising wall for industrial/warehouse facility

Location: Vaughan, Ontario



FASTBRIDGE™

CLIP FB43 & FB68

RIGID

FB43 DESIGN EXAMPLES

EXAMPLE-2: EXTERIOR LOAD BEARING-WALL STUD

Input

- CSA S136-16 w/ S1-18 Supplement
- 600S162-43 ($F_y = 33$ ksi) studs at 16 in. o.c., 10 ft tall
- Bracing at 4 ft o.c.
- Factored axial stud resistance, $P_r = 5070$ lbs (CSSBI 58-2018)
- Distance from shear center to mid-plane of web, $m = 0.670$ in. (CSSBI 58-2018)
- Specified wind pressure = 20 psf

Laterally-Loaded Stud Design

Specified tributary load to brace:

$$W = (20)(16/12)(4) = 107 \text{ lbs}$$

Specified flange force (Eq. C2.2.1-3)

$$PL_1 = 1.5(m/d)W = 1.5(0.670/6)107 = 17.9 \text{ lbs}$$

Specified torsional brace moment ($d = 6$ in.)

$$M = PL_1(d) = 17.9(6) = 108 \text{ lbs-in}$$

From **FB33** Connector Table for 600S162-43 stud,

select clip with **One** #10 fasteners

Maximum specified torsional brace moment

$$= \underline{160 \text{ lbs-in} > 108 \text{ in-lbs}} \text{ OK}$$

Bracing of Axially Loaded Studs (Section C2.3)

Axial brace force due to factored loads (assume $P_{ra} = P_r = 5070$ lbs)

$$P_{rb} = 0.01(P_{ra}) = 0.01(5070) = \underline{50.7 \text{ lbs}} \text{ (Eq. C2.3-1)}$$

where P_{ra} is the compressive axial force due to factored loads

Brace stiffness shall be \geq Eq. C2.3-2b ($\phi = 0.70$)

$$\beta_{rb} = 2[4-(2/n)]/L_b(P_{ra}/\phi) = 2[4-(2/1)]/48(5070/0.70) \\ = \underline{604 \text{ lbs/in}}$$

From **FB33** Connector Table for 600S162-43 stud,

select clip with Two #10 fasteners

Maximum specified axial brace force = **271 lbs > 50.7 lbs** OK

Maximum specified axial brace stiffness = **860 lbs/in > 604 lbs/in** OK



EXAMPLE-2: INSTALLATION REQUIREMENT

Input

- CSA S136-16 w/ S1-18 Supplement
- 362S162-43 (33 ksi) studs at 16" o.c., 10 ft tall
- Bracing at 5 ft o.c.
- Specified wind pressure = 20 psf

From FB33 Installation Table for 362S162-43 stud with 20 psf specified wind pressure w/ 5 ft bracing distance,

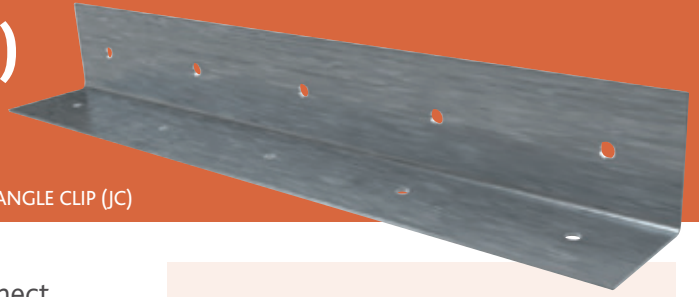
select clip with One #10 fasteners **OK**

GENERAL NOTES:

- Bridging connectors may also be designed using Maximum Specified Design Values.
- Only lateral load has been included.
- Design of curtain wall studs should consider load combinations in accordance with the applicable building code.

JOIST END-ANGLE CLIP (JC) FOR BAILEY FLOOR JOIST

JOIST END-ANGLE CLIP (JC)



The **Bailey Joist End-Angle Clips** are designed to connect floor joists to the rim joist at the perimeter of the floor, to headers at floor openings, and flush to beams.

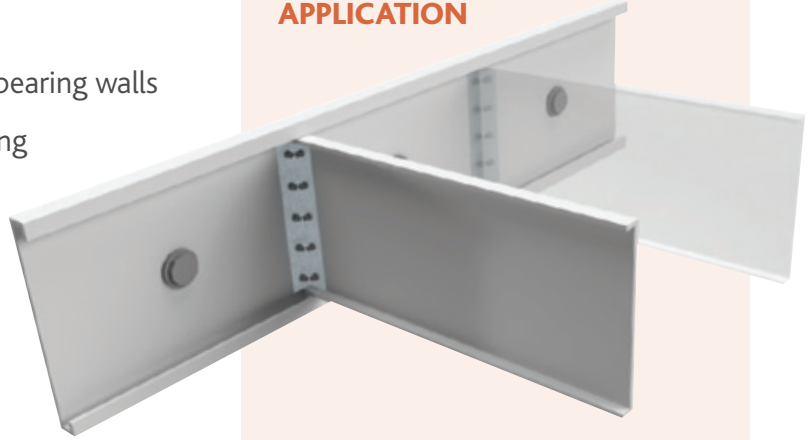
These clips can also be used to:

- Connect lintels to king studs at openings in loadbearing walls
- Attach solid blocking to adjacent joists for bridging
- Connect miscellaneous framing components
- Act as a bridging clip for 10" studs

PRODUCT FEATURES:

- These clips are designed to fit inside of the joist and allow 1/4" clearance at both ends
- The leg length will not interfere with the flange of the joist
- An edge distance of more than 1/2" to the screw hole is maintained
- The holes are located to provide easy access for the installation of the screws
- Adequate number of holes are provided
- Pre-punched holes provided for #10 screws

JOIST END-ANGLE CLIP APPLICATION



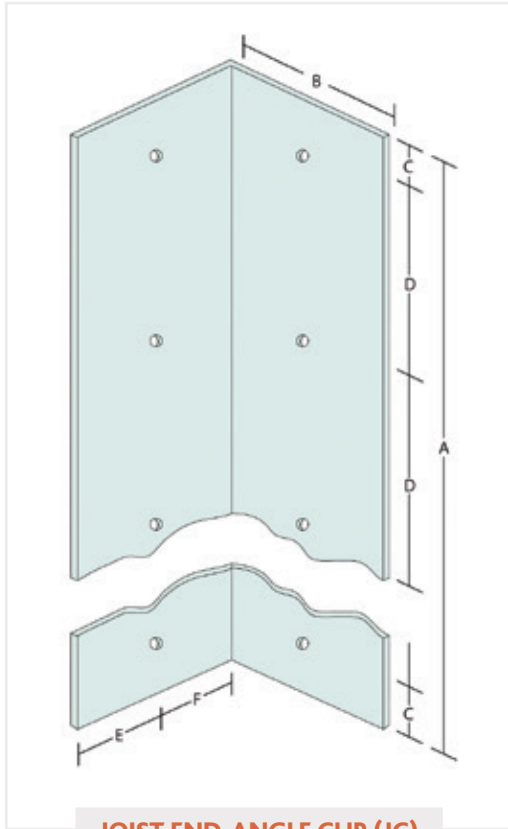
ORDERING INFORMATION

Joist Depth	Clip Length	Part #
8"	7 1/2"	JC 800-54
10"	9 1/2"	JC 1000-54
12"	11 1/2"	JC 1200-54
14"	13 1/2"	JC 1400-54



JOIST END-ANGLE CLIP (JC) FOR BAILEY FLOOR JOIST

RIGID



JOIST END-ANGLE CLIP (JC)

DIMENSIONS AND INFORMATION On the Joist End-Angle Clip for 8", 10", 12" and 14" joists

A	7.5"	9.5"	11.5"	13.5"
B	1.5"	1.5"	1.5"	1.5"
C	0.75"	0.75"	0.75"	0.75"
D	2.0"	2.0"	2.0"	2.0"
E	0.688"	0.688"	0.688"	0.688"
F	0.688"	0.688"	0.688"	0.688"

STEEL	<ul style="list-style-type: none"> • G60 Galvanized • Thickness 0.054" • Grade 33 K.S.I. (Minimum yield)
HOLE SIZE	0.160"
PACKAGING	25 Pcs / Ctn
DESIGNED	For use with #10 screws

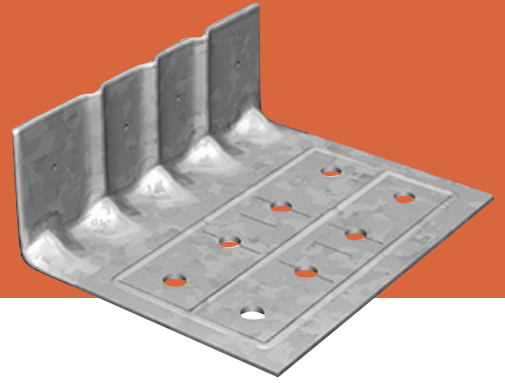
NOTE: Other profiles and materials available on request.

These clips are not recommended for use as a bearing stiffener.
For bearing stiffeners use Bailey web stiffeners.



UNI-CLIP™ END CLIP UCEC

UNI-CLIP™ END CLIP (UCEC)



14 Gauge Rigid Connection Clip

Uni-Clip™ framing clip is a universal framing clip used to attach and support numerous rigid framing conditions.

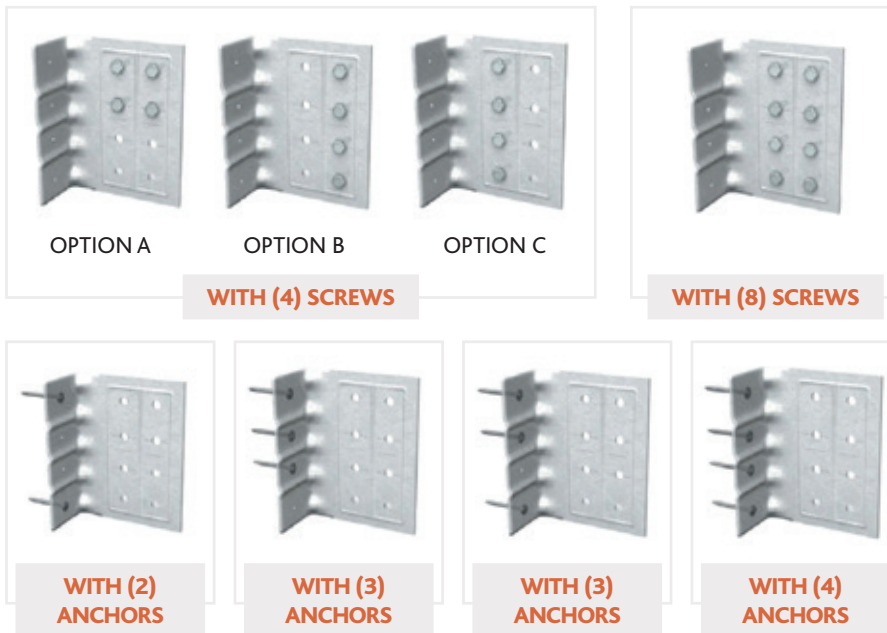
The **Uni-Clip™** framing clip has stiffened corners that provide superior design values and are installed easily with screws or powder-actuated fasteners. This clip is ideal for most rigid connections, including shear, tension and two-axis loading.

- Designed to transfer large horizontal and vertical loads.
- Universal multi-application connector.
- Stiffened corners result in superior design values.
- Embossed fastening patterns to ensure accurate placement of fasteners.



UNI-CLIP™ END CLIP

LOCATION OPTIONS



INSTALLATION

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 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. Follow the required anchor placement pattern to achieve the allowable load.

PRODUCT DATA & ORDERING INFORMATION

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

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating
See submittals for product weights

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UNI-CLIP™ END CLIP UCEC

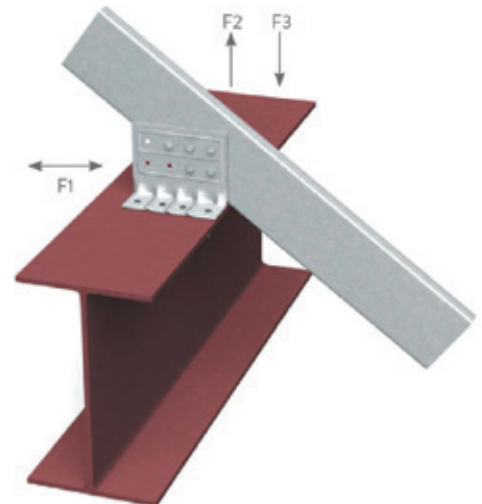
RIGID

UNI-CLIP™ ALLOWABLE LOADS (LBS)

Anchor Type	Stud Thickness and Yield Strength	No. Anchors to Structure	Number/Configuration of Screws to Stud Framing											
			8 Screws			4 Screws (Option A)			4 Screws (Option B)			4 Screws (Option C)		
			F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3
BUILDEX #12-24 TEK 5 SELF-DRILLING SCREWS TO 3/16" STEEL	20ga (33mil) 33ksi	2	529	1121	1121	192	561	561	177	561	561	272	561	561
		3	529	1121	1121	192	561	561	177	561	561	272	561	561
		4	529	1121	1121	192	561	561	177	561	561	272	561	561
	18ga (43mil) 33ksi	2	784	1227	1664	285	832	832	263	832	832	404	832	832
		3	784	1664	1664	285	832	832	263	832	832	404	832	832
		4	784	1664	1664	285	832	832	263	832	832	404	832	832
	16ga (54mil) 33ksi	2	1105	1227	1889	402	920	1172	371	1172	1172	569	1172	1172
		3	1105	1841	1889	402	1172	1172	371	1172	1172	569	1172	1172
		4	1105	2345	1889	402	1172	1172	371	1172	1172	569	1172	1172
	16ga (54mil) 50ksi	2	1370	1227	1889	568	920	1417	523	1227	1209	804	1227	1655
		3	1560	1841	1889	568	1380	1417	523	1655	1209	804	1655	1655
		4	1560	2454	1889	568	1655	1417	523	1655	1209	804	1655	1655
PAF TO 3/16" STEEL*	20ga (33mil) 33ksi	2	529	511	1121	192	383	561	177	511	561	272	511	561
		3	529	767	1121	192	561	561	177	561	561	272	561	561
		4	529	1022	1121	192	561	561	177	561	561	272	561	561
	18ga (43mil) 33ksi	2	784	511	1664	285	383	832	263	511	832	404	511	832
		3	784	767	1664	285	575	832	263	767	832	404	767	832
		4	784	1022	1664	285	767	832	263	832	832	404	832	832
	16ga (54mil) 33ksi	2	1105	511	1889	402	383	1172	371	511	1172	569	511	1172
		3	1105	767	1889	402	575	1172	371	767	1172	569	767	1172
		4	1105	1022	1889	402	767	1172	371	1022	1172	569	1022	1172
	16ga (54mil) 50ksi	2	1117	511	1889	568	383	1417	523	511	1209	804	511	1655
		3	1560	767	1889	568	575	1417	523	767	1209	804	767	1655
		4	1560	1022	1889	568	767	1417	523	1022	1209	804	1022	1655

TABLE NOTES:

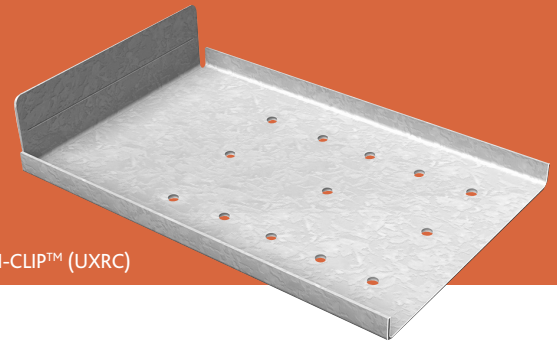
1. The 1/3 stress increase for wind shall not be used.
2. Attach the Uni-Clip to the stud framing using Buildex #10-16 (min.) self-drilling screws.
3. When using 2 anchors, use the outer-most marks on the short leg of the clips for anchor placement.
4. Attach building anchors to the structure according 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. It is the responsibility of the design professional to detail the project drawings for proper clip installation.



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EXTENDED UNI-CLIP™

UXRC



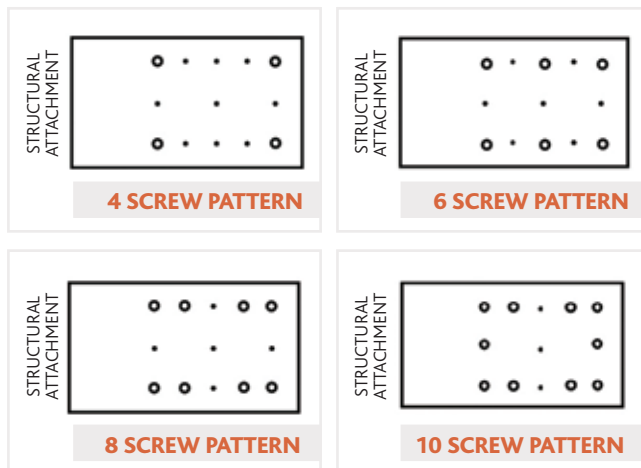
EXTENDED UNI-CLIP™ (UXRC)

14 Gauge Rigid Connection Clip.

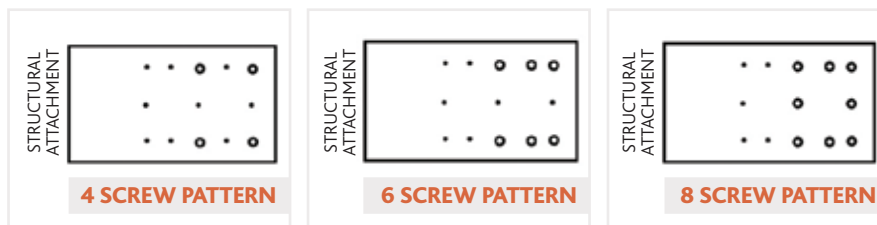
Extended Uni-Clip™ rigid framing clip is used to attach exterior wall studs to the structure of the building.

Designed to transfer horizontal and vertical loads, the extended rigid clips installs easily with screws, powder-actuated fasteners, or welds. This clip is ideal for all medium and large standoff conditions.

8" UXRC SCREW PATTERN – 2" OFFSET



8" UXRC SCREW PATTERN – 4" OFFSET



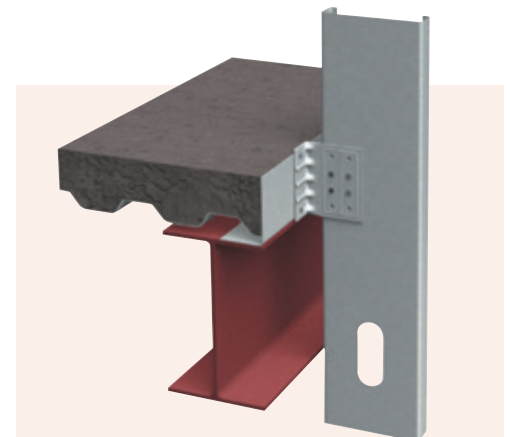
PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Packaging Pcs./Ctn
CLIP-UXRC8	14	68	0.0713	1-7/8 x 4-7/8 x 8	25

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating
See submittals for product weights



EXTENDED UNI-CLIP™



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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EXTENDED UNI-CLIP™

UXRC

RIGID

EXTENDED UNI-CLIP™ ALLOWABLE LOADS (KIPS)

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

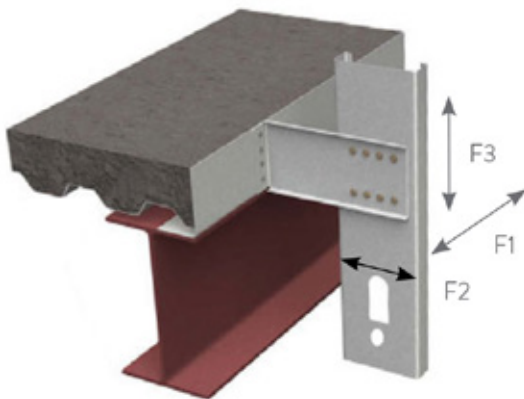


TABLE NOTES:

- 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.
- Weld capacities are calculated for 2" long weld assuming 1" from the edges on the outer radius of the bend.
- Allowable loads have not been increased for wind, seismic, or other factors.
- The F1 values are calculated based on the moment capacity of the clip cross section.
- Capacities are based on the use of #12 screws to clip-stud interface.
- 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."
- The Hilti X-U pins and #12-24 screws are embedded in 3/16" structural steel.
- Torsional effects are considered on screw group for F3 allowable loads.
- Use a linear interaction equation for connections involving any combination of F1, F2, and F3.
- Hilti is a registered trademark of the Hilti Aktiengesellschaft Corporation.
- Hilti X-U PAFs shown in table may not be substituted without prior approval from ClarkDietrich Engineering Services.

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EASYCLIP™

D & T-SERIES™

EASYCLIP™



D-SERIES™



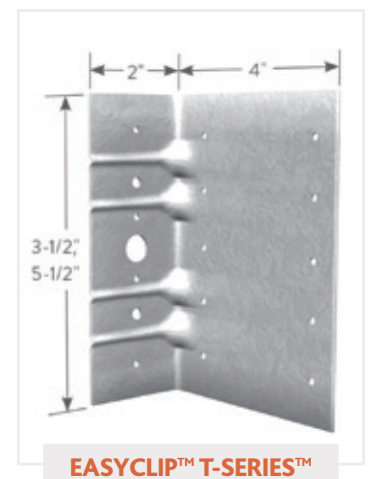
T-SERIES™

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

The **EasyClip™ D-Series™ & T-Series™** 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™ & T-Series™** Anchor Clips are designed to resist horizontal, torsional, and vertical (uplift) loads. These clips are prepunched with a series of attachment holes (including heavy-duty anchor and screw holes) for efficient and accurate fastener placement.

- Resist uplift, horizontal and rotational loads
- Pre-punched holes for fast attachment
- Stiffening ribs for superior design values
- Multipurpose applications



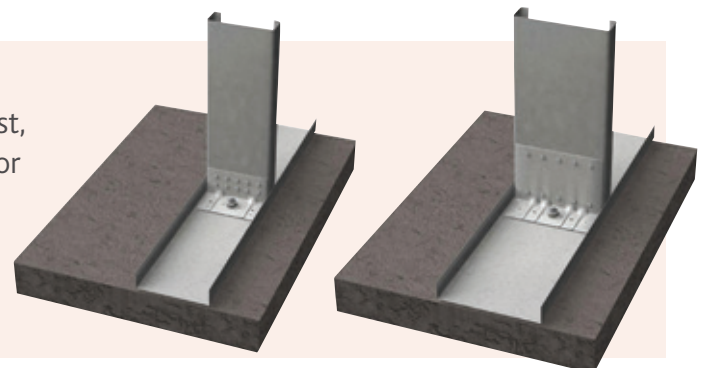
PRODUCT DATA & ORDERING INFORMATION

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

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating

INSTALLATION

Attach the screw hole only leg to the web of the stud, joist, rafter or track with the applicable # 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.



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EASYCLIP™ D & T-SERIES™

RIGID

EASYCLIP™ D-SERIES™ ANCHOR CLIPS AND T-SERIES™ TALL ANCHOR CLIPS ALLOWABLE LOADS (LBS)

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

TABLE NOTES:

- 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.
- An " * " in the shear column indicates that the shear capacity is limited to 642 lbs for D683 and T683 clips, 917 lbs for D973 and T973 clips, and 994 lbs for D685, D975, T685, and T975 clips when using 1/4" x 1-3/4" Hilti® Kwik-Cons to 3000 psi concrete as shown in Figure 1.
- A " # " in the shear column indicates that the shear capacity is limited to 963 lbs for D683 and T683 clips, 1374 lbs for D973 and T973 clips, and 1816 lbs for D685, D975, T685, and T975 clips when using #12-24 self tapping screws to 3/16" A36 steel as shown in Figure 2.
- A " % " in the shear column indicates that the shear capacity is limited to 1970 lbs when using 1/2" x 2-1/4" Hilti Kwik-Bolts to 3000 psi concrete as shown in Figure 3.
- A " * " in the moment column indicates that moment capacity is limited to 1706 in.-lb. for 3" clips, and 2231 in.-lb. for 5" clips when using 1/4" x 1-3/4" Hilti-Cons to 3000 psi concrete as shown in Figure 1.
- Tabulated moment capacity is limited to a serviceability of 0.02 radians, or 1.1 degrees of rotation at the connection.
- 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.
- Tabulated moment capacity is based on a stud to clip connection using (6) #10-16 screws.
- For single bolt connections, rotational restraint must be provided by the base track.
- For 14 gauge (68mil) and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi studs.
- It is the responsibility of the designer to properly detail connections on the contract drawings.
- Use a linear interaction equation for connections involving any combination of F1, F2, and M.
- Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

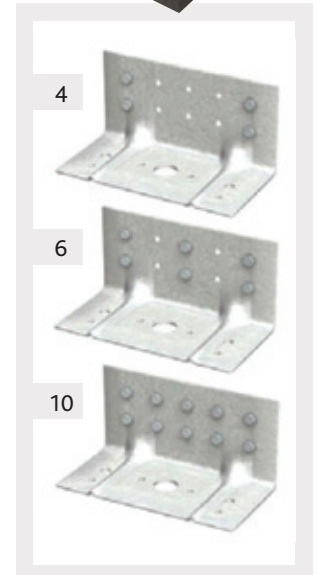
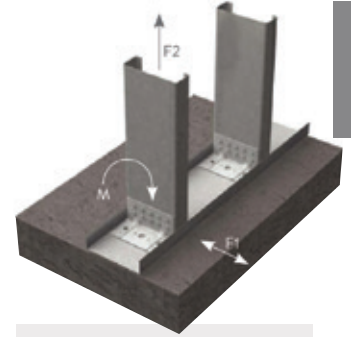


Figure 1 KWIK-CONS



Figure 2 #12-24 SCREWS

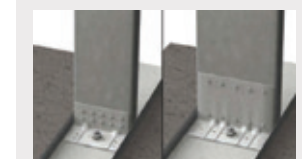


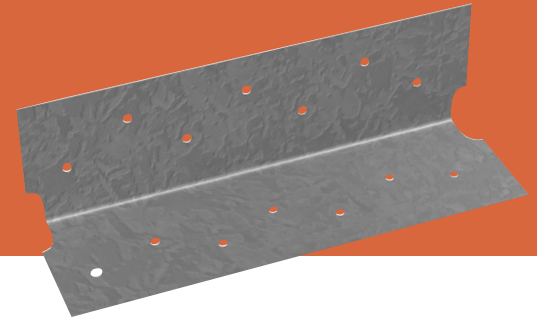
Figure 3 KWIK-BOLTS

*EasyClip™ D-Series™ or T-Series™ Anchor Clips are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich EasyClip™ D-Series™ or T-Series™ Anchor Clips is a trademark of ClarkDietrich.

EASYCLIP™

S-SERIES™

EASYCLIP™ S-SERIES™



Commonly used to secure U-channel to framing members for lateral bridging and for miscellaneous rigid connections.

This high-performance, multi-use utility clip is ideal for corner reinforcements, stair openings, and numerous support applications.

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.

Available in a variety of lengths and gauges, **EasyClip™ S-Series™** clips are prepunched for faster and more accurate fastener placement.

- 1-1/2" x 1-1/2" legs
- Lengths available in 3", 5", 7", 9" and 11"
- Available in 16, 14, and 12 gauge



EASYCLIP™ S-SERIES™

PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Pcs./ Bucket
CLIP-S543	16	54	0.0566	1-1/2 x 1-1/2 x 3	400
CLIP-S545	16	54	0.0566	1-1/2 x 1-1/2 x 5	200
CLIP-S547	16	54	0.0566	1-1/2 x 1-1/2 x 7	100
CLIP-S549	16	54	0.0566	1-1/2 x 1-1/2 x 9	100
CLIP-S685	14	68	0.0713	1-1/2 x 1-1/2 x 5	200
CLIP-S687	14	68	0.0713	1-1/2 x 1-1/2 x 7	100
CLIP-S689	14	68	0.0713	1-1/2 x 1-1/2 x 9	100
CLIP-S681	14	68	0.0713	1-1/2 x 1-1/2 x 11	100
CLIP-S973	12	97	0.1017	1-1/2 x 1-1/2 x 3	200

Material Structural Grade 50 Type H (ST50H), 50ksi

INSTALLATION

EasyClip S-Series support clips are attached to the cold-formed steel (CFS) framing members using #10 minimum selfdrilling 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. 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 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.

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EASYCLIP™

S-SERIES™

RIGID

EASYCLIP™ S-SERIES™ SUPPORT CLIPS ALLOWABLE CLIP CAPACITIES (LBS)

Using #10-16 Self-Drilling Screws

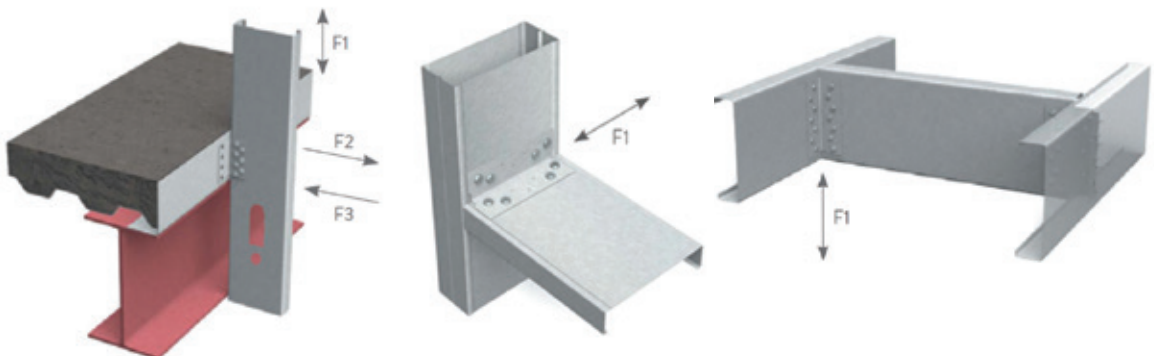
SCREW CAPACITY NOTES:

- The tabulated value indicates the number of screws in a single clip leg attached to the cold-formed steel (CFS) framing.
- Screws shall be attached in a symmetric manner, starting at the outside holes and moving to the center. Reference Figure 1 below.
- 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.
- The allowable values for F2 assume mechanical fasteners are attached to the structure, and are along the vertical centerline of the clip leg. Mechanical fasteners to other materials and structures must be checked separately.
- The screw diameter must be 0.19" (min.) for #10 screws.
- The ultimate screw shear strength must be a minimum of 1400 lbs for #10 screws.
- 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.
- Screws must be long enough so that at least three exposed threads are visible after installation.
- Allowable loads have not been increased 33% for wind or seismic.
- For connections made to 14 gauge (68mil) and 12 gauge (97mil), use the tabulated values for 16 gauge (54mil), 50ksi.
- It is the responsibility of the design professional to detail the drawings for proper clip attachment.

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

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 3/16" — 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.



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EASYCLIP™

E-SERIES™

EASYCLIP™ E-SERIES™

Features a long leg to accommodate greater standoff for rigid connections.

EasyClip™ E-Series™ Support Clips are used for rigid stand-off connections.

The 4" wide leg provides extra length to achieve stand-off connections up to 3". They are commonly used in by-pass wall conditions, solid blocking attachments in joist framing and to secure rafter framing to the primary structure. These clips are pre-punched for faster and more accurate fastener placement.

- 4" leg accommodates large standoff.
- Lengths available in 3", 5", 7", 9" and 11".
- Available in 16, 14 and 12 gauge.

PRODUCT DATA & ORDERING INFORMATION

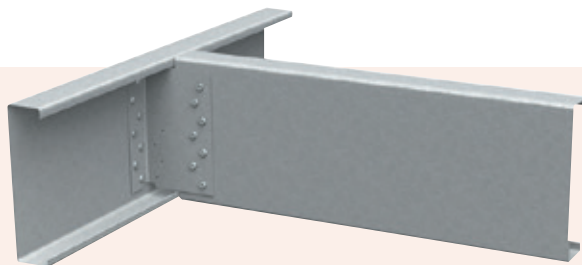
Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Pcs./Bucket
CLIP-E543	16	54	0.0566	4 x 1-1/2 x 3	100
CLIP-E545	16	54	0.0566	4 x 1-1/2 x 5	100
CLIP-E547	16	54	0.0566	4 x 1-1/2 x 7	100
CLIP-E549	16	54	0.0566	4 x 1-1/2 x 9	50
CLIP-E683	14	68	0.0713	4 x 1-1/2 x 3	100
CLIP-E685	14	68	0.0713	4 x 1-1/2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

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating



INSTALLATION

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.



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EASYCLIP™

E-SERIES™

RIGID

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

Using #10-16 Self-Drilling Screws

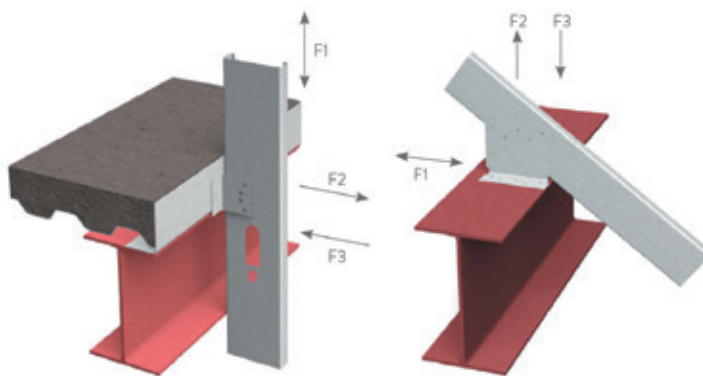
SCREW CAPACITY NOTES:

- The tabulated value indicates the number of screws in a single clip leg attached to the coldformed steel (CFS) framing.
- Screws shall be attached in a symmetric manner, starting at the outside holes. See screw options for examples.
- 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.
- 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.
- 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.
- 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.
- The screw diameter must be 0.19" (min) for #10 screws.
- The ultimate screw shear strength must be a minimum of 1400 lbs for #10 screws.
- Screws must be long enough so at least 3 exposed threads are visible after installation.
- Allowable loads have not been increased 33% for wind or seismic.
- For connections made to 14ga (68mil) and 12ga (97mil), use the tabulated values for 16ga (54mil), 50ksi.

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

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 3/16" – 36ksi)
- 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 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.



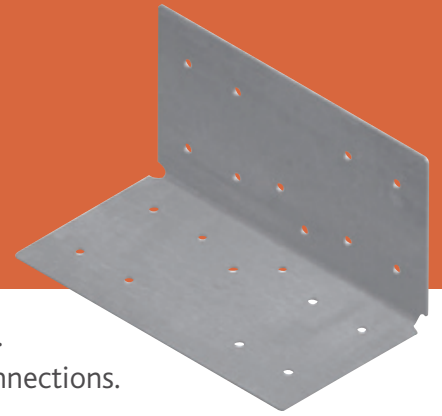
THE TABLE VALUES ARE VALID ONLY WHEN SCREWS ARE USED ALONG THE OUTSIDE LINE OF THE PREPUNCHED HOLES AS SHOWN.

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SWIFTCLIP™

3" X 3" LA-SERIES™

SWIFTCLIP™ 3" X 3" (LA-SERIES)



Pre-punched **SwiftClips™** are used for multiple construction applications. 3" leg x 3" leg clips are commonly used for floor joist hangers and truss connections. **Fixed clips should not be used in place of a deflection clip.**

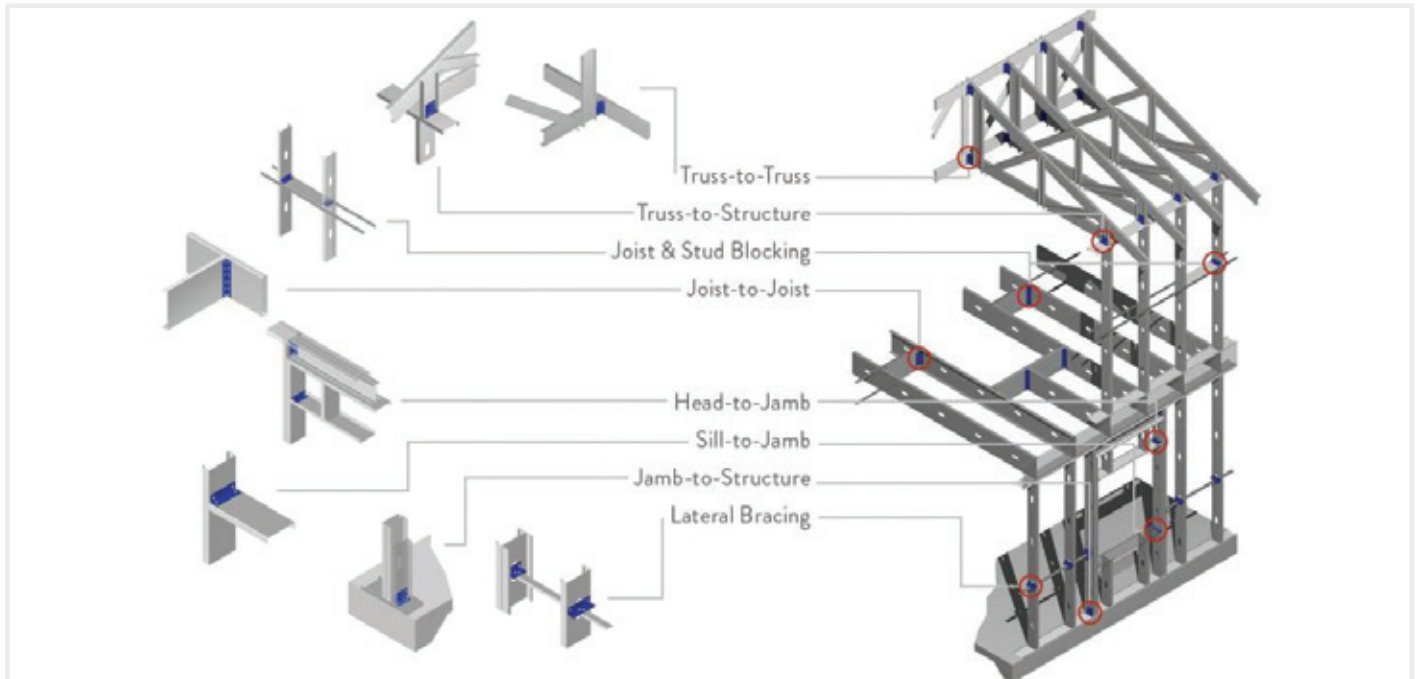
INSTALLATION

SwiftClip™ Support Clips are attached to the cold-formed steel (CFS) framing members using #10 minimum self-drilling screws driven. Connections to the building frame can be made with powder-actuated fasteners, drill-in concrete anchors or welding.

- It is the responsibility of the design engineer to detail the attachment of clips and verify their capacity meets the application.



SWIFTCLIP™ 3" X 3" (LA-SERIES)



PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Common Application	Pcs./Bucket
CLIP-LA543	16	54	0.0566	3 x 3 x 3-1/4	Joists/Trusses	100
CLIP-LA545	16	54	0.0566	3 x 3 x 5-1/2	Joists/Trusses	100
CLIP-LA685	14	68	0.0713		Joists/Trusses	50
CLIP-LA975	12	97	0.1017		Joists/Trusses	50
CLIP-LA687	14	68	0.0713	3 x 3 x 7-1/4	Joists/Trusses	50
CLIP-LA977	12	97	0.1017		Joists/Trusses	50

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating

*SwiftClip™ 3" X 3" (LA-Series) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich SwiftClip™ 3" X 3" (LA-Series) is a trademark of ClarkDietrich.

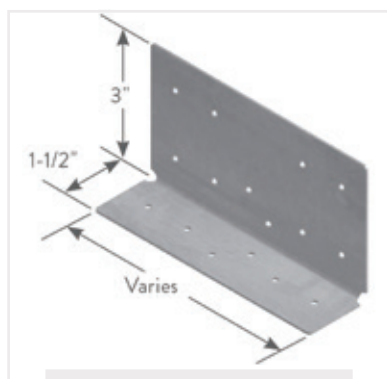
SWIFTCLIP™

1-1/2" X 3" LE-SERIES™

RIGID



SWIFTCLIP™ 1-1/2" X 3" (LE-SERIES)

SWIFTCLIP™ 1-1/2" X 3"
(LE-SERIES)

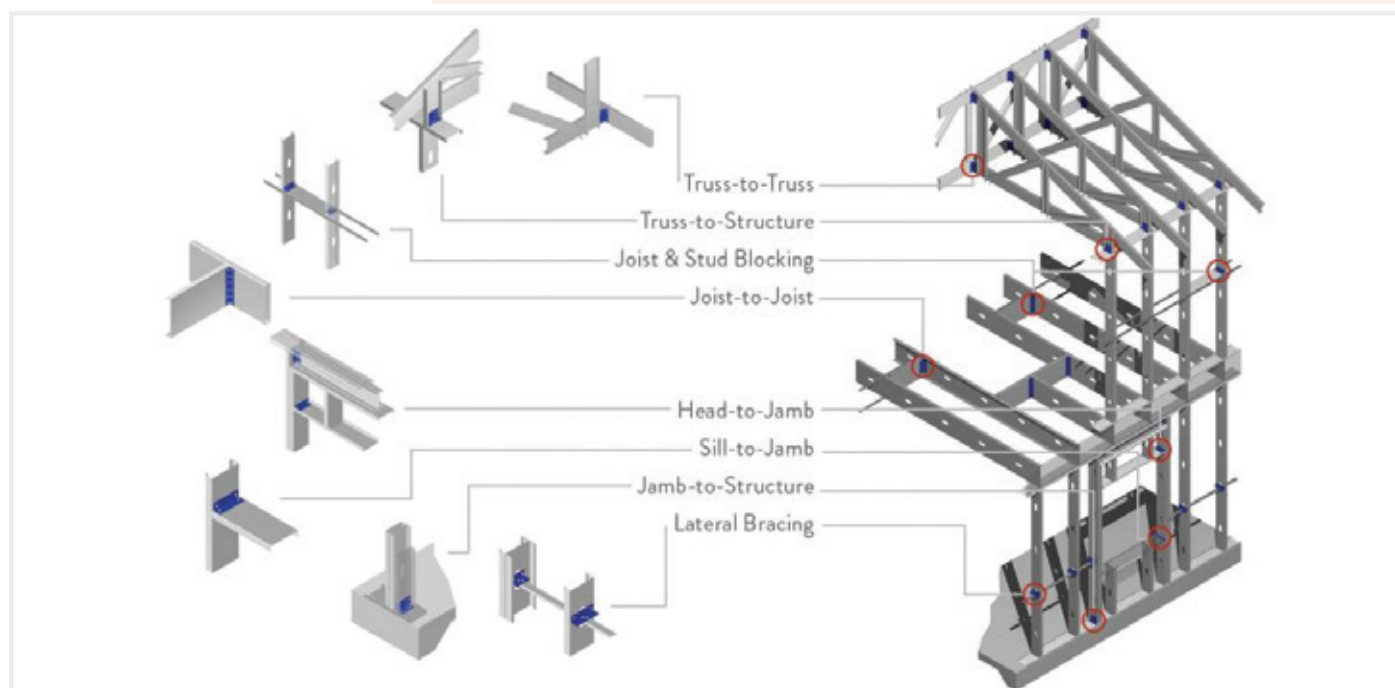
SwiftClips™ support clips are used in multiple construction projects, specifically in conjunction with structural studs and track. These labour time-savers include prepunched holes for quicker screw attachments, and are punched to accommodate for CRC lateral bracing connections.

Pre-punched **SwiftClips™** are used for multiple construction applications. 1-1/2" leg x 3" leg clips are commonly used for floor joist hangers and truss connections. **Fixed clips should not be used in place of a deflection clip.**

INSTALLATION

SwiftClip Support Clips are attached to the cold-formed steel (CFS) framing members using #10 minimum self-drilling screws driven. Connections to the building frame can be made with powder-actuated fasteners, drill-in concrete anchors or welding.

- It is the responsibility of the design engineer to detail the attachment of clips and verify their capacity meets the application.



PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Common Application	Pcs./Bucket
CLIP-LE683	14	68	0.0713	1-1/2 x 3 x 3-1/4	Fixed/Joists/Truss	100
CLIP-LA545	16	54	0.0566	1-1/2 x 3 x 5-1/2	Fixed/Joists/Truss	100
CLIP-LA685	14	68	0.0713		Fixed/Joists/Truss	50
CLIP-LA975	14	68	0.0713	1-1/2 x 3 x 7-1/4	Fixed/Joists/Truss	50

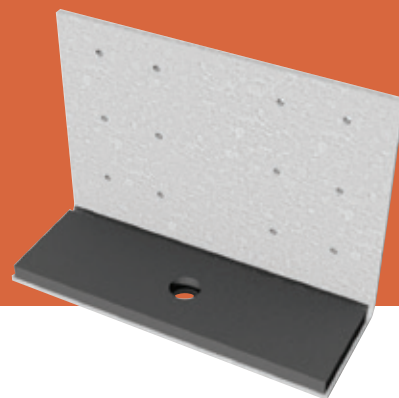
Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating

*SwiftClip™ 1-1/2" X 3" (LE-Series) are distributed by Bailey Metal Products in Canada under permission granted by ClarkDietrich Building Systems. ClarkDietrich SwiftClip™ 1-1/2" X 3" (LE-Series) is a trademark of ClarkDietrich.

MOMENT CLIP™

MC SERIES™

Moment Clip™



Moment connection for knee walls and shear walls to the structure foundation.

Moment clips™ are high-performance, cost effective solutions for knee wall-to-foundation connections and shear wall-to-foundation connections. These multi-application clips feature a 1/4" thick A36 steel stiffening plate that provides superior design values for maximum performance. The moment clips are designed to resist horizontal, torsional and vertical (uplift) loads. These clips are prepunched with a series of attachment holes for steel framing connections and a 1/2" anchor bolt hole for foundation connections.

PRODUCT DIMENSIONS:

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

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

1/4" A36 STEEL STIFFENING PLATE:

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

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

MATERIAL SPECIFICATIONS:

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

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

ALTERNATIVE PRODUCTS:

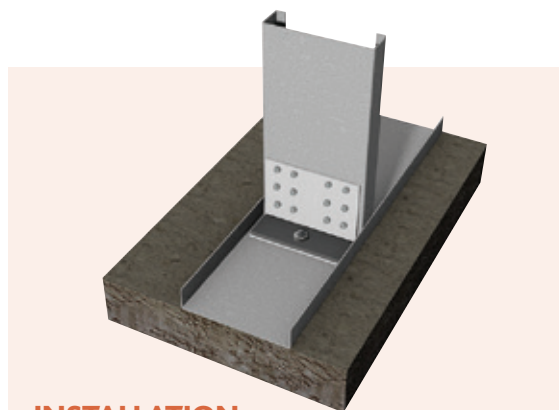
- EasyClip™ D&T-Series™ Anchor Clips
- Pony Wall

PRODUCT DATA & ORDERING INFORMATION

Product Code	Gauge	Mils	Design Thickness (in)	Size (in)	Packaging Pcs./Bucket
CLIP-MC683	14	68	0.0713	2 x 4 x 3-1/2	25
CLIP-MC973	12	97	0.1017	2 x 4 x 3-1/2	25
CLIP-MC685	14	68	0.0713	2 x 4 x 5-1/2	25
CLIP-MC975	12	97	0.1017	2 x 4 x 5-1/2	25

Material Structural Grade 50 Type H (ST50H), 50ksi
Coating G90 (Z275) hot-dipped galvanized coating
See submittals for product weights

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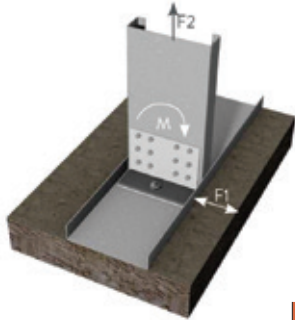
INSTALLATION

- Secure the Moment Clip to the steel framing member by using #12 screws in the prepunched holes. Number of screws and screw pattern is based on load required to achieve listed capacities.
- Place 1/4" steel stiffening plate on top of short leg of Moment Clip so anchor holes are aligned.
- Secure 1/4" steel stiffening plate and Moment Clip to foundation using 1/2" x 2" long Hilti Kwik-Bolts 3 or alternate anchorage calculated to resist the tension load for your specific application.

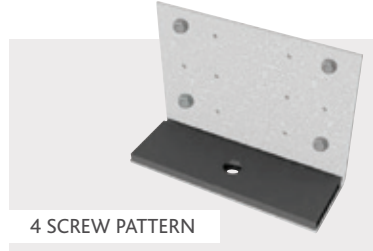
MOMENT CLIP™

MC SERIES™

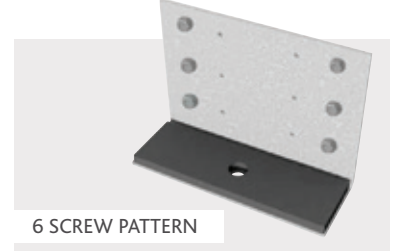
RIGID



MOMENT CLIP™
W/ 12 SCREW PATTERN
& ANCHOR BOLT



4 SCREW PATTERN



6 SCREW PATTERN

MOMENT CLIP™ ALLOWABLE LOADS

TABLE NOTES:

- Cells marked with an "1" in F1 (Shear) column indicates that the shear capacity is limited to 1628 lbs when using 1/2" x 2" Hilti Kwik-Bolts into 3000 psi concrete.
- Cells marked with a "2" in F2 (Tension) column indicates that the tension capacity is limited to 1509 lbs when using 1/2" x 2" Hilti Kwik-Bolts into 3000 psi concrete.
- Cells marked with a "3" in the M (Moment) column indicates that the moment capacity is limited to 1761 in-lbs for 3-1/2" long clips, 2767 in-lbs for 5-1/2" long clips, and 3773 in-lbs for 7-1/2" long clips when using 1/2" x 2" Hilti Kwik-Bolts into 3000 psi concrete.
- Capacities listed in the table/note assume that no load reductions are required for spacing or edge distance of Kwik-Bolts.
- Capacities listed in the table represent the capacity of the clip and the screws to the stud. Capacities listed in notes 1-3 are limits if the specified connector to the structure is used. Other 1/2" dia. anchors may be used to achieve the full clip capacity but must be designed separately.
- Moment capacities listed as Max. load/Factor of Safety. Loads must be limited by serviceability load taken as stiffness times the serviceability limit in radians.
- Stiffness is the max allowable clip rotation measured by the clip rotation divided at the max allowable clip moment.
- No stud-to-track connection is required. Higher loads can be achieved when stud-to-track is connected.
- Use a linear interaction equation for connections involving any combination of F1, F2, and M.
- Allowable loads have not been increased for wind, seismic, or other factors.
- Torsional effects are considered on screw group for F1 & F2 (Shear & Tension) allowable loads.
- Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.
- It is the responsibility of the designer to properly detail connections on the contract drawings.

Product Code	Stud Member Thickness	Stud F _y (ksi)	F1 (Shear), (lbs)			F2 (Tension), (lbs)			M (Moment), (in-lbs)			Rotational Stiffness for Wind Deflection (in-lbs/radian)
			Number of #12 screws to stud						1/2" Dia. Anchor to Structure			
			4	6	12	4	6	12	4	6	12	
MC683 2" x 4" x 3-1/2" 68mil (14ga)	33mil (20ga)	33	372	508	840	754	1131	2261 ²	1401	1784 ³	2462 ³	133,000
	43mil (18ga)	33	554	756	1250	1122	1683 ²	2736 ²	2084 ³	2581 ³	2581 ³	
	54mil (16ga)	50	1126	1536	2086 ¹	2278 ²	2736 ²	2736 ²	2743 ³	2743 ³	2743 ³	
	68mil (14ga)	50	1535	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	2756 ³	2756 ³	2756 ³	
	97mil (12ga)	50	1535	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	2756 ³	2756 ³	2756 ³	
MC973 2" x 4" x 3-1/2" 97mil (12ga)	33mil (20ga)	33	372	508	840	754	1131	2261 ²	1401	1784 ³	2560 ³	140,100
	43mil (18ga)	33	554	756	1250	1122	1683 ²	3365 ²	2084 ³	2655 ³	2862 ³	
	54mil (16ga)	50	1126	1536	2538 ¹	2278 ²	3417 ²	4065 ²	2862 ³	2862 ³	2862 ³	
	68mil (14ga)	50	1535	2094 ¹	2975 ¹	3107 ²	4181 ²	4181 ²	2862 ³	2862 ³	2862 ³	
	97mil (12ga)	50	1535	2094 ¹	2975 ¹	3107 ²	4181 ²	4181 ²	2862 ³	2862 ³	2862 ³	
MC103P 2" x 4" x 3-1/2" 118mil (10ga)	33mil (20ga)	33	372	508	840	754	1131	2261 ²	1401	1784 ³	2609 ³	143,900
	43mil (18ga)	33	554	756	1250	1122	1683 ²	3365 ²	2084 ³	2655 ³	2945 ³	
	54mil (16ga)	50	1126	1536	2538 ¹	2278 ²	3417 ²	3828 ²	2945 ³	2945 ³	2945 ³	
	68mil (14ga)	50	1535	2094 ¹	3462 ¹	3107 ²	3828 ²	3828 ²	2945 ³	2945 ³	2945 ³	
	97mil (12ga)	50	1535	2094 ¹	3462 ¹	3107 ²	3828 ²	3828 ²	2945 ³	2945 ³	2945 ³	
MC685 2" x 4" x 5-1/2" 68mil (14ga)	33mil (20ga)	33	441	630	1029	754	1131	2261 ²	1778	2417	3396 ³	252,000
	43mil (18ga)	33	656	937	1531	1122	1683 ²	2736 ²	2646	3597 ³	4993 ³	
	54mil (16ga)	50	1333	1903 ¹	2086 ¹	2278 ²	2736 ²	2736 ²	5307 ³	5307 ³	5307 ³	
	68mil (14ga)	50	1818 ¹	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	5363 ³	5363 ³	5363 ³	
	97mil (12ga)	50	1818 ¹	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	5363 ³	5363 ³	5363 ³	
MC975 2" x 4" x 5-1/2" 97mil (12ga)	33mil (20ga)	33	441	630	1029	754	1131	2261 ²	1778	2417	3396 ³	274,400
	43mil (18ga)	33	656	937	1531	1122	1683 ²	3365 ²	2646	3597 ³	5025 ³	
	54mil (16ga)	50	1333	1903 ¹	2975 ¹	2278 ²	3417 ²	4181 ²	5373 ³	5980 ³	5980 ³	
	68mil (14ga)	50	1818 ¹	2595 ¹	2975 ¹	3107 ²	4181 ²	4181 ²	5980 ³	5980 ³	5980 ³	
	97mil (12ga)	50	1818 ¹	2595 ¹	2975 ¹	3107 ²	4181 ²	4181 ²	5980 ³	5980 ³	5980 ³	
MC105P 2" x 4" x 5-1/2" 118mil (10ga)	33mil (20ga)	33	441	630	1029	754	1131	2261 ²	1778	2417	3396 ³	288,700
	43mil (18ga)	33	656	937	1531	1122	1683 ²	3365 ²	2646	3597 ³	5053 ³	
	54mil (16ga)	50	1333	1903 ¹	3109 ¹	2278 ²	3417 ²	4236 ²	5373 ³	6133 ³	6133 ³	
	68mil (14ga)	50	1818 ¹	2595 ¹	3633 ¹	3107 ²	4236 ²	4236 ²	6133 ³	6133 ³	6133 ³	
	97mil (12ga)	50	1818 ¹	2595 ¹	3633 ¹	3107 ²	4236 ²	4236 ²	6133 ³	6133 ³	6133 ³	
MC687 2" x 4" x 7-1/2" 68mil (14ga)	43mil (18ga)	33	791	1164	1928 ¹	1122	1683 ²	2736 ²	3646	5199 ³	6903 ³	387,600
	54mil (16ga)	50	1606	2086 ¹	2086 ¹	2278 ²	2736 ²	2736 ²	7403 ³	7656 ³	7656 ³	
	68mil (14ga)	50	2086 ¹	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	8186 ³	8186 ³	8186 ³	
	97mil (12ga)	50	2086 ¹	2086 ¹	2086 ¹	2736 ²	2736 ²	2736 ²	8186 ³	8186 ³	8186 ³	
	43mil (18ga)	33	791	1164	1928 ¹	1122	1683 ²	3365 ²	3646	5199 ³	6903 ³	
MC977 2" x 4" x 7-1/2" 97mil (12ga)	54mil (16ga)	50	1606	2363 ¹	2975 ¹	2278 ²	3417 ²	3875 ²	7403 ³	8979 ³	8979 ³	449,000
	68mil (14ga)	50	2190 ¹	2975 ¹	2975 ¹	3107 ²	3875 ²	3875 ²	8979 ³	8979 ³	8979 ³	
	97mil (12ga)	50	2190 ¹	2975 ¹	2975 ¹	3107 ²	3875 ²	3875 ²	8979 ³	8979 ³	8979 ³	
	43mil (18ga)	33	791	1164	1928 ¹	1122	1683 ²	3365 ²	3646	5199 ³	6903 ³	
	54mil (16ga)	50	1606	2363 ¹	3633 ¹	2278 ²	3417 ²	3835 ²	7403 ³	9180 ³	9180 ³	
MC107P 2" x 4" x 7-1/2" 118mil (10ga)	68mil (14ga)	50	2190 ¹	3223 ¹	3633 ¹	3107 ²	4236 ²	4236 ²	9282 ³	9282 ³	9282 ³	451,000
	97mil (12ga)	50	2190 ¹	3223 ¹	3633 ¹	3107 ²	4236 ²	4236 ²	9282 ³	9282 ³	9282 ³	

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