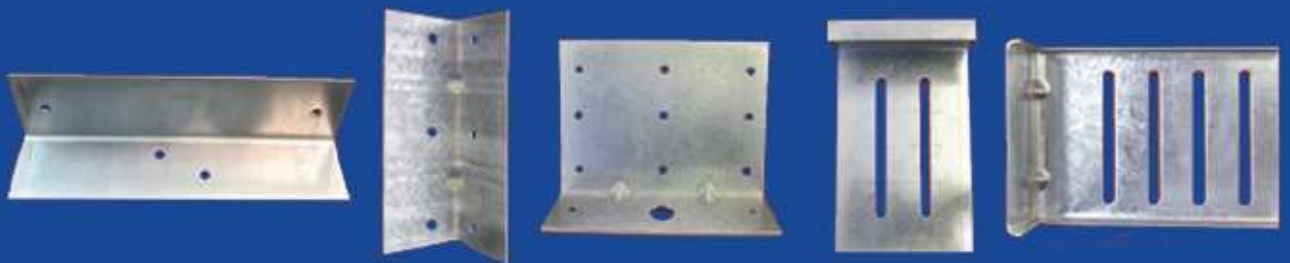
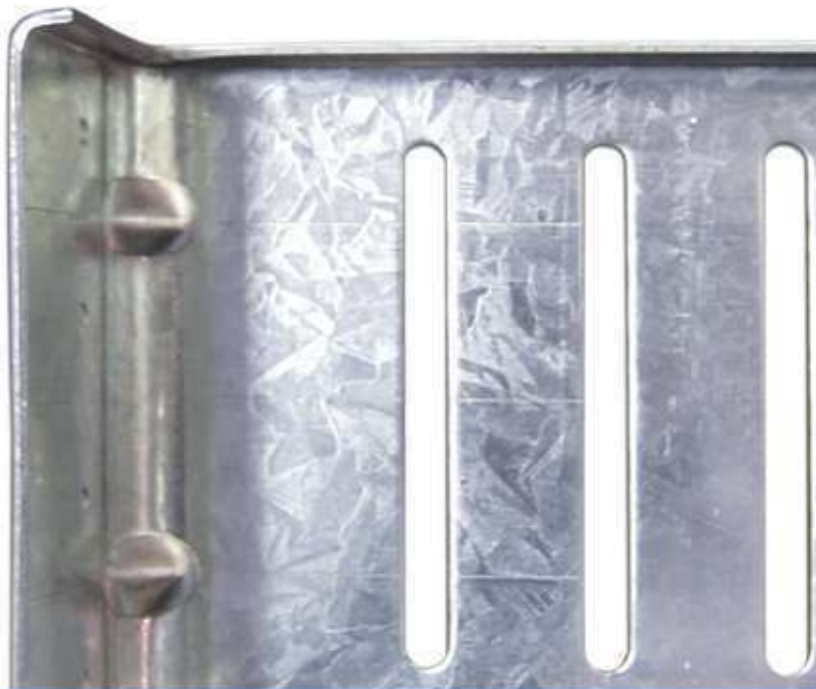


FrameRite™ **Connectors**

Distributed by **CEMCO**



PRODUCT CATALOG



Steel Framing and Metal Lath

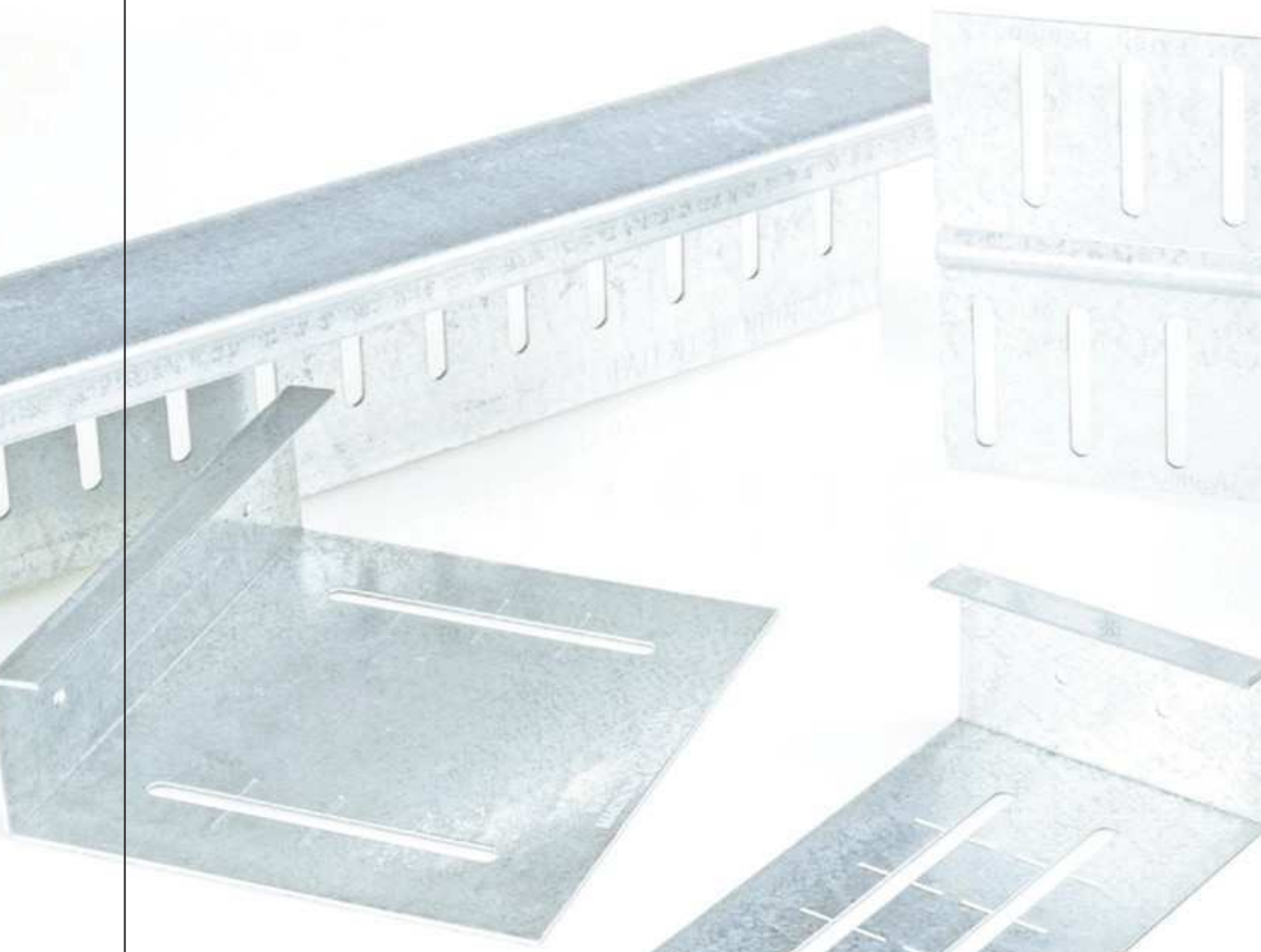


Steel Framing and Metal Lath

THE BEST PRODUCTS, QUALITY, AND CUSTOMER SERVICE.

Our FrameRite™ Connectors Catalog details our line of high quality steel framing connectors. We know our customers depend on our quality products so we work hard to ensure each FrameRite product is manufactured and supplied using industry standards, backed by testing to assure reliability. Our connector line is another addition to our extensive family of steel framing products, with over 300 varieties of connectors to cover every requirement on the job.

For more information on our products and services, call 800.775.2362 or visit www.cemcosteel.com





Trusted by Architects and Builders throughout the country, CEMCO has always been an industry leader in quality, service and new product development.

We are now providing a line of connectors that are designed specifically to reduce labor while assuring proper attachment of cold formed steel products.

CEMCO is proud to offer FrameRite™ connectors to our customers who desire a one-stop source for their steel framing and connector requirements. As always, CEMCO is dedicated to providing the industry's highest quality products to the steel framing industry.

- FrameRite™ Connectors are the industry's most comprehensive line of connectors for cold formed steel framing.
- Designed to significantly reduce time, labor, materials and costs, our connectors facilitate quicker, more cost-effective installation.
- Save time, labor and cost. FrameRite™ Connectors give you more control, more options, and more ways to build better.

TECHNICAL SERVICES

CEMCO offers its customers free expert technical assistance with the selection and use of our FrameRite™ Connectors. If you have questions or need more information on any of the products listed in this catalog, contact our Technical Services department at 800.416.2278, or at info@cemcosteel.com. In most cases Technical Services representatives can provide an immediate response.

CEMCO offers professional Engineered Shop Drawings. These drawings are created using AutoCAD software and are prepared for the submittal process. In addition, these drawings assist the installer in the construction process indicating product gauge, spacing and connections. Most shop drawings can be completed within 2-3 weeks.

Our Structural Engineering and Design Group is located at 1001-A Pittsburg Antioch Hwy., Pittsburg, CA 94565. Please contact them at 925.473.9340 or www.cemcosteel.com/engineering.

For more information visit our website at www.cemcosteel.com

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DEFLECTION CONNECTORS

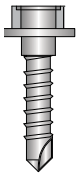
WSC SLIDE CLIP

WSC Slide clips connect exterior curtainwall studs to the building structure and allow for vertical movement of the building independent of the studs. The new WSC series allows for 3" total deflection, 1-1/2" up and 1-1/2" down. WSC series 14 ga. clips come with extended leg lengths and shouldered screws are provided in each box of clips. 25 pieces per box.

MATERIAL: See Table

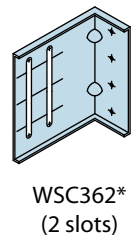
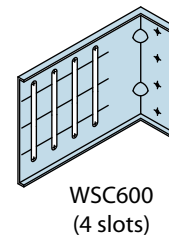
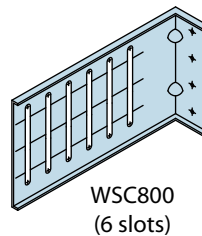
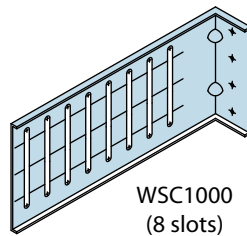
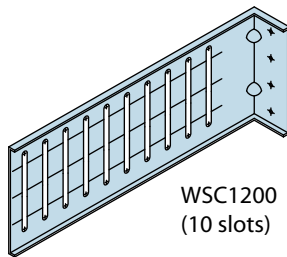
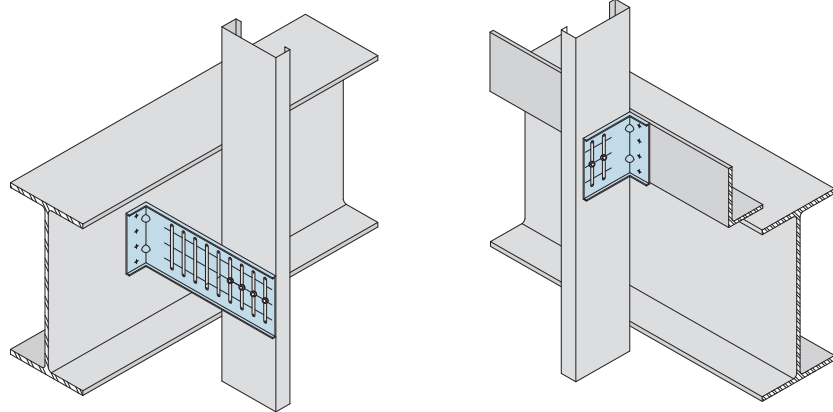
FINISH: Galvanized – G90

Part No.	Ga/Mil	Material	Finish	Size
WSC600	14ga (68)	50 KSI	G-90	4" x 1.5" x 5.5"
WSC800	14ga (68)	50 KSI	G-90	4" x 1.5" x 7.5"
WSC1000	14ga (68)	50 KSI	G-90	4" x 1.5" x 9.5"
WSC1200	14ga (68)	50 KSI	G-90	4" x 1.5" x 11.5"



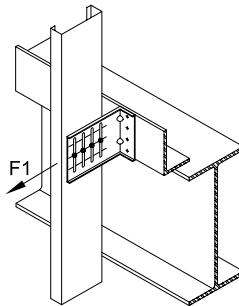
110 #14 Shouldered screws included per box.

*(Note: WSC362 includes 55 #14 shouldered screws per box)



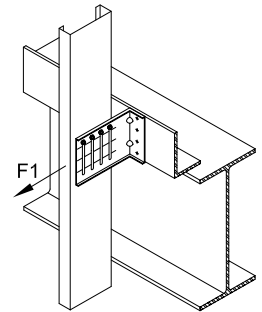
CONCENTRIC TENSION (lbs.)

# Screws	CFS Member			
	33 mil	43 mil	54 mil	68 mil
2	376	560	652	652
3	564	840	978	978
4	752	1120	1304	1304
5	940	1400	1559	1559



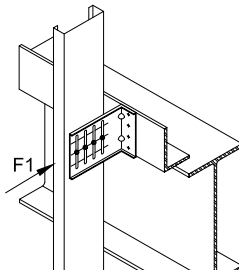
ECCENTRIC TENSION (lbs.)

# Screws	CFS Member			
	33 mil	43 mil	54 mil	68 mil
2	376	560	652	652
3	564	840	978	978
4	752	1120	1304	1304
5	940	1315	1315	1315



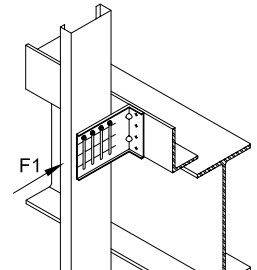
CONCENTRIC COMPRESSION (lbs.)

# Screws	CFS Member			
	33 mil	43 mil	54 mil	68 mil
2	376	560	652	652
3	564	840	966	966
4	752	966	966	966
5	940	966	966	966



ECCENTRIC COMPRESSION (lbs.)

# Screws	CFS Member			
	33 mil	43 mil	54 mil	68 mil
2	376	560	652	652
3	564	788	788	788
4	752	788	788	788
5	788	788	788	788



Notes:

1. Allowable loads have not been increased for wind or seismic.
2. Attachment of WSC clip to main structure should be engineered by a design professional for steel or concrete base materials.
3. Allowable loads are based on attachment to main structure through pilot holes with #10-24 cap screws with a head diameter of 0.29".
4. Safety factor, Ω, determined in accordance with the provision of section F1.2 of the NASPEC with statistical data specified in AC261 and from test data.
5. The serviceability limit of 1/8" deflection between the stud and supporting structure did not govern in testing.
6. Eccentric tension and compression values represent clip capacity after structure deflects +1-1/2" up or down from center of the clip.

DEFLECTION CONNECTORS

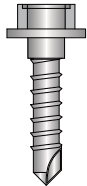
OUTRIGGER

Outrigger Slide Clip is used for horizontal surface applications and offers the highest capacity of any horizontal surface connection clip. The outrigger comes in lengths of 18", can be field cut to shorter lengths if needed. Simple and fast to install which saves time and money. One clip fits all stud sizes, no right or left hand clips.

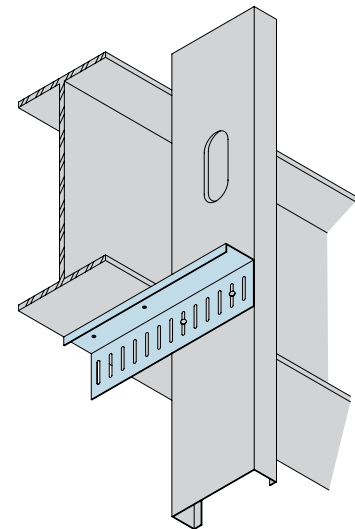
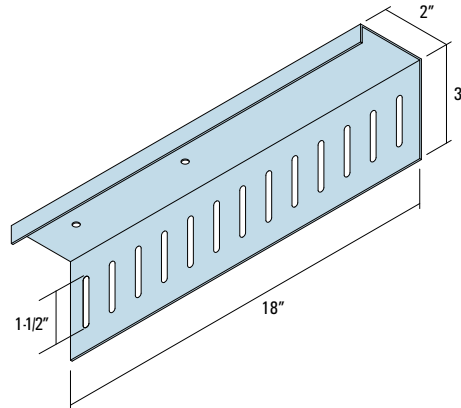
MATERIAL: 16 ga (54 mil) 50ksi.

FINISH: Galvanized – G90

DEFLECTION: 1-1/2" Total



55 - #10 Shouldered screws provided per box



Model No.	Gauge (Mil) Yield	Box Quantity
Outrigger	16 (54) 50ksi	25

Connection to Structure Hilti 0.145" X-EDNI Powder Actuated Fastener in 3/16" Steel				Connection to Structure #12-14 Hilti kwik Pro Self Drilling Screws to 3/16" Steel			
Thickness (mil/ga)	No. of Screws	No. of Anchors	Allowable Load (lbs.)	Thickness (mils/ga)	No. of Screws	No. of Anchors	Allowable Load (lbs.)
20ga. (33 mil) 33ksi	2	2	278	20ga. (33 mil) 33ksi	2	2	278
		3	278			3	278
		4	278			4	278
20ga. (33 mil) 33ksi	4	2	484	20ga. (33 mil) 33ksi	4	2	557
		3	557			3	557
		4	557			4	557
18ga. (43 mil) 33ksi	2	2	413	18ga. (43 mil) 33ksi	2	2	413
		3	413			3	413
		4	413			4	413
18ga (43 mil) 33ksi	4	2	483	18ga (43 mil) 33ksi	4	2	590
		3	775			3	827
		4	827			4	827
16ga. (54 mil) 33ksi	2	2	483	16ga. (54 mil) 33ksi	2	2	580
		3	580			3	580
		4	580			4	580
16ga. (54 mil) 33ksi	4	2	483	16ga. (54 mil) 33ksi	4	2	590
		3	775			3	595
		4	910			4	1075
16ga. (54 mil) 50ksi	2	2	483	16ga. (54 mil) 50ksi	2	2	590
		3	740			3	742
		4	740			4	742
16ga. (54 mil) 50ksi	4	2	483	16ga. (54 mil) 50ksi	4	2	590
		3	775			3	985
		4	910			4	1075
14ga. (68 mil) 50ksi	2	2	483	14ga. (68 mil) 50ksi	2	2	590
		3	740			3	742
		4	740			4	742
14ga. (68 mil) 50ksi	4	2	783	14ga. (68 mil) 50ksi	4	2	590
		3	783			3	985
		4	910			4	1075

Notes:

1. All anchors must be attached in a single file line down the center of the clip.
2. All anchor data is from the Hilti 2006 Product Technical Guide.
3. All anchors must be attached to structure per manufacturer's instructions.
4. Anchor Spacing for 2 and 3 anchors to be min. 2".
5. Anchor Spacing for 4 anchors to be 1" min.
6. Anchor edge distance to be 1/2" min.

DEFLECTION CONNECTORS

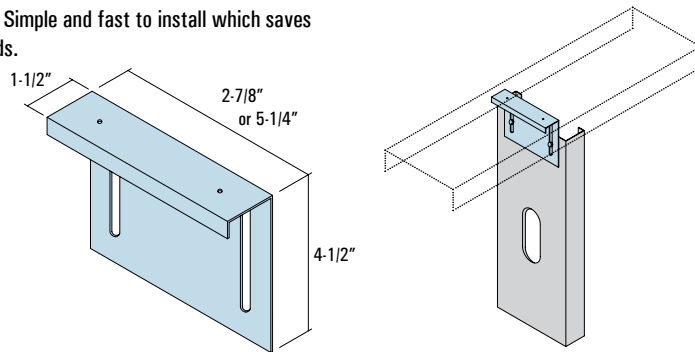
DEFLEX CLIP

The Deflex Slide Clips allow for up to 1-1/2" vertical floor or roof deflection without the use of laborious slip tracks it can be installed with or without standard leg tracks. Simple and fast to install which saves time and money. Two sizes available for 3-5/8", 4", 6" and 8" studs.

MATERIAL: 16 ga (54 mil) 50ksi.

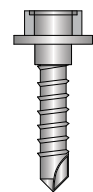
FINISH: Galvanized – G90

- 3T1000 accommodates 3-5/8" and 4" stud widths
- 6T1000 accommodates 6" and 8" stud widths



Model No.	Gauge (Mil) Yield	Box Quantity
3T1000	16 (54) 50 ksi	25
6T1000	16 (54) 50 ksi	25

Connection to Structure Hilti 0.145" X-EDNI Powder Actuated Fastener in 3/16" Steel					Connect to Structure #12-14 Hilti Kwik Pro Self Drilling Screws to 3/16" Steel				
Stud Thickness	# of Screws to Stud	# of Anchors to Structure	Deflex 3T1000	Deflex 6T1000	Stud Thickness	Number of Screws	Number of Anchors	Deflex 3T1000	Deflex 6T1000
			Allowable Load (lbs.)	Allowable Load (lbs.)				Allowable Load (lbs.)	Allowable Load (lbs.)
20ga. (33 mil) 33ksi	2	2	224	276	20ga. (33 mil) 33ksi	2	2	278	278
		3	228	276				278	278
18ga. (43 mil) 33ksi	2	2	224	413	18ga. (43 mil) 33ksi	2	2	410	413
		3	228	413				410	413
16ga. (54 mil) 33ksi	2	2	224	413	16ga. (54 mil) 33ksi	2	2	455	580
		3	228	440				495	580
16ga. (54 mil) 50ksi	2	2	224	413	16ga. (54 mil) 50ksi	2	2	455	685
		3	228	440				495	742
14ga. (68 mil) 50ksi	2	2	224	413	14ga. (68 mil) 50ksi	2	2	455	685
		3	228	440				495	742



55 - #10 Shouldered screws included

Notes:

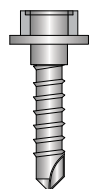
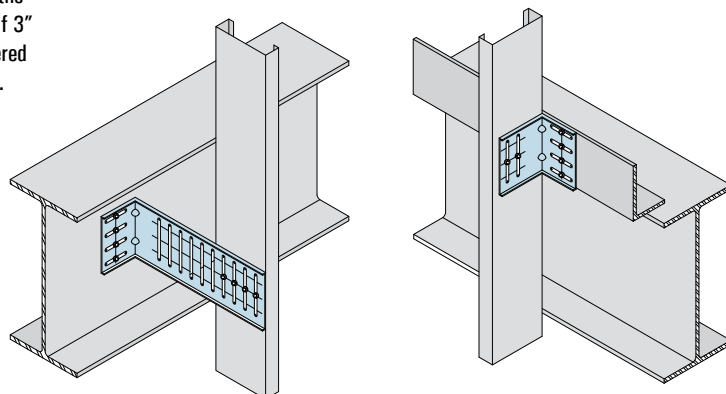
1. All anchors must be attached in a single file line down the center of the clip.
2. All anchor data is from the Hilti 2006 Product Technical Guide.
3. All anchors must be attached to structure per manufacturer's instructions.
4. Anchor edge distance to be 1/2" min.

DWSC SEISMIC CLIP

NEW

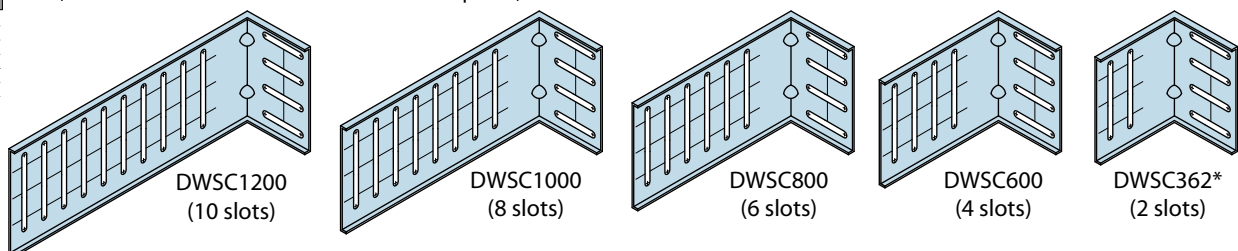
The DWSC series of clips allow for vertical and lateral movement of the building structure independent of the studs. The DWSC has a total of 3" vertical deflection and total of 2" lateral movement and uses shouldered screws which are included for ease of installation. 25 pieces per box.

Part No.	Ga/Mil	Material	Finish	Size
DWSC362	14ga (68)	50 KSI	G-90	4" x 2.5" x 3.5"
DWSC600	14ga (68)	50 KSI	G-90	4" x 2.5" x 5.5"
DWSC800	14ga (68)	50 KSI	G-90	4" x 2.5" x 7.5"
DWSC1000	14ga (68)	50 KSI	G-90	4" x 2.5" x 9.5"
DWSC1200	14ga (68)	50 KSI	G-90	4" x 2.5" x 11.5"



110 -#14 Shouldered screws included per box.

*(Note: DWSC362 includes 55 - #14 shouldered screws per box)



UTILITY CLIP (UA) - 16 GAUGE

Utility Clips are used in a variety of framing applications including floors, walls and roofs. UA clips are pre-cut with pre-drilled holes for easy installation.

- Leg lengths available from 3-1/4" through 15-3/4". (See table for exact sizes)
- Leg widths available in 1-1/2", 2", 3" and 4".
- Available in 16, 14 and 12 gauge.
- Pre-punched for faster and more accurate fastener attachment.
- 3"x 3" Clips available (do not have embossments) See page 12

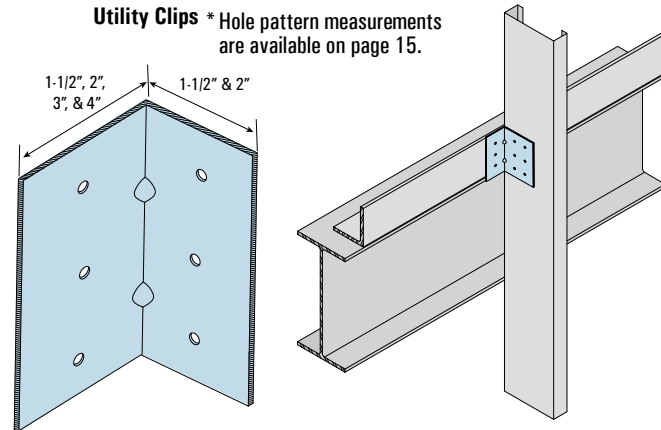
MATERIAL: See Table for sizes – 50ksi

FINISH: Galvanized – G90

INSTALLATION:

- Utility Clips are attached to the cold formed steel (CFS) framing members using #10 - 16 self-drilling screws; using pre-punched holes.

Utility Clips * Hole pattern measurements are available on page 15.



UA Clips - 16 Gauge					Allowable Load (lbs)											
Model No.	Thickness (mil/ga)	Size (in.)	Box Qty	Screws	20ga (33 mil) 33 ksi		18ga (43 mil) 33 ksi		16ga (54 mil) 33 ksi		16ga (54 mil) 50 ksi		14ga (68 mil) 50 ksi		12ga (97 mil) 50 ksi	
					F1	F2	F1	F2	F1	F2	F1	F2	F1	F2	F1	F2
					UA-113-16	54 (16 ga)	1-1/2 x 1-1/2 x 3-1/4	100	3-#10	686	380	907	462	907	546	1313
UA-223-16	54 (16 ga)	2 x 2 x 3-1/4	100	3-#10	686	380	907	462	907	546	1313	546	1589	644	1589	644
UA-133-16	54 (16 ga)	1-1/2 x 3 x 3-1/4	100	3-#10	562	380	562	462	562	546	722	546	722	644	722	644
UA-143-16	54 (16 ga)	1-1/2 x 4 x 3-1/4	100	3-#10	495	380	489	462	489	546	489	546	489	644	489	644
UA-115-16	54 (16 ga)	1-1/2 x 1-1/2 x 5-1/4	100	3-#10	686	435	907	645	907	882	1313	882	1589	1040	1589	1040
UA-225-16	54 (16 ga)	2 x 2 x 5-1/4	50	3-#10	686	435	907	645	907	882	1313	882	1589	1040	1589	1040
UA-135-16	54 (16 ga)	1-1/2 x 3 x 5-1/4	50	3-#10	562	435	562	645	562	882	722	882	722	1040	722	1040
UA-145-16	54 (16 ga)	1-1/2 x 4 x 5-1/4	50	3-#10	495	435	489	645	489	882	489	882	489	1040	489	1040
UA-118-16	54 (16 ga)	1-1/2 x 1-1/2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1302	2188	1302	2649	1535	2649	1535
UA-228-16	54 (16 ga)	2 x 2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1302	2188	1302	2649	1535	2649	1535
UA-138-16	54 (16 ga)	1-1/2 x 3 x 7-3/4	25	5-#10	1143	725	1512	1075	1512	1302	2188	1302	2562	1535	2562	1535
UA-148-16	54 (16 ga)	1-1/2 x 4 x 7-3/4	25	5-#10	1143	725	1468	1075	1468	1302	1468	1302	1468	1535	1468	1535
UA-119-16	54 (16 ga)	1-1/2 x 1-1/2 x 9	50	5-#10	1143	725	1512	1075	1512	1512	2188	1512	2649	1782	2649	1782
UA-229-16	54 (16 ga)	2 x 2 x 9	50	5-#10	1143	725	1512	1075	1512	1512	2188	1512	2649	1782	2649	1782
UA-139-16	54 (16 ga)	1-1/2 x 3 x 9	25	5-#10	1143	725	1512	1075	1512	1512	2188	1512	2562	1782	2562	1782
UA-149-16	54 (16 ga)	1-1/2 x 4 x 9	25	5-#10	1143	725	1512	1075	1512	1512	2188	1512	2377	1782	2377	1782
UA-1110-16	54 (16 ga)	1-1/2 x 1-1/2 x 9-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	1638	2649	1795	2649	1795
UA-2210-16	54 (16 ga)	2 x 2 x 9-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	1638	2649	1795	2649	1795
UA-1310-16	54 (16 ga)	1-1/2 x 3 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	1638	2562	1795	2562	1795
UA-1410-16	54 (16 ga)	1-1/2 x 4 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	1638	2377	1795	2377	1795
UA-1112-16	54 (16 ga)	1-1/2 x 1-1/2 x 11-3/4	50	7-#10	1600	1015	2116	1505	2116	1974	3063	1974	3709	2327	3709	2327
UA-2212-16	54 (16 ga)	2 x 2 x 11-3/4	50	7-#10	1600	1015	2116	1505	2116	1974	3063	1974	3709	2327	3709	2327
UA-1312-16	54 (16 ga)	1-1/2 x 3 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	1974	3063	1974	3586	2327	3586	2327
UA-1412-16	54 (16 ga)	1-1/2 x 4 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	1974	3063	1974	3328	2327	3328	2327
UA-1114-16	54 (16 ga)	1-1/2 x 1-1/2 x 13-3/4	50	9-#10	2057	1305	2721	1935	2721	2310	3938	2310	4768	2723	4768	2723
UA-2214-16	54 (16 ga)	2 x 2 x 13-3/4	50	9-#10	2057	1305	2721	1935	2721	2310	3938	2310	4768	2723	4768	2723
UA-1314-16	54 (16 ga)	1-1/2 x 3 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2310	3938	2310	4611	2723	4611	3231
UA-1414-16	54 (16 ga)	1-1/2 x 4 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2310	3938	2310	4279	2723	4279	3231
UA-1116-16	54 (16 ga)	1-1/2 x 1-1/2 x 15-3/4	50	9-#10	2057	1305	2721	1935	2721	2646	3938	2646	4768	3119	4768	3119
UA-2216-16	54 (16 ga)	2 x 2 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2646	3938	2646	4768	3119	4768	3119
UA-1316-16	54 (16 ga)	1-1/2 x 3 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2646	3938	2646	4611	3119	4611	3119
UA-1416-16	54 (16 ga)	1-1/2 x 4 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2646	3938	2646	4279	3119	4279	3119

Notes:

1. Allowable loads have not been increased for wind or seismic.
2. Allowable strength shown is the lowest value from the four failure modes: screw tilting/bearing, screw shear, screw pull-over and the serviceability limit state of 1/8" deflection of CFS members.
3. It is the responsibility of design professional to design the connection of UA connectors to the supporting structure. In the test program, this connection was made with cap screws with a head diameter of 0.29". The allowable loads should be conservative for any fastener with a header diameter equal to or greater than 0.29".
4. F1 = Shear, F2 = Tension

RIGID CONNECTORS

UTILITY CLIP (UA) - 14 GAUGE

Utility Clips are used in a variety of framing applications including floors, walls and roofs. UA clips are pre-cut with pre-drilled holes for easy installation.

- Leg lengths available from 3-1/4" through 15-3/4". (See table for exact sizes)
- Leg widths available in 1-1/2", 2", 3" and 4".
- Available in 16, 14 and 12 gauge.
- Pre-punched for faster and more accurate fastener attachment.
- 3"x 3" Clips available (do not have embossments) See page 12

MATERIAL: See Table for sizes – 50ksi

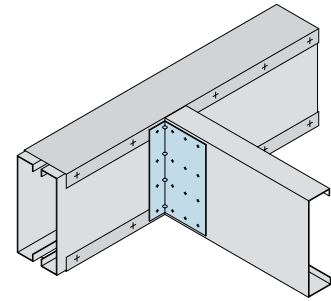
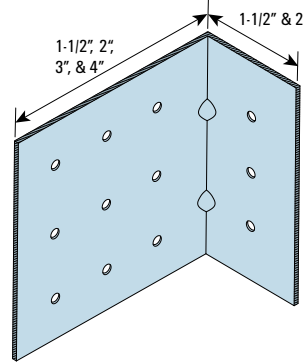
FINISH: Galvanized – G90

INSTALLATION:

- Utility Clips are attached to the cold formed steel (CFS) framing members using #10 - 16 self-drilling screws; using pre-punched holes.

Utility Clips

* Hole pattern measurements are available on page 15.



UA Clips - 14 Gauge					Allowable Load (lbs)											
Model No.	Thickness (mil/ga)	Size (in.)	Box Qty	Screws	20ga (33 mil) 33 ksi		18ga (43 mil) 33 ksi		16ga (54 mil) 33 ksi		16ga (54 mil) 50 ksi		14ga (68 mil) 50 ksi		12ga (97 mil) 50 ksi	
					F1	F2	F1	F2	F1	F2	F1	F2	F1	F2	F1	F2
UA-113-14	68 (14 ga)	1-1/2 x 1-1/2 x 3-1/4	100	3-#10	686	435	907	645	907	861	1313	861	1589	920	1589	920
UA-223-14	68 (14 ga)	2 x 2 x 3-1/4	100	3-#10	686	435	907	645	907	861	1313	861	1589	920	1589	920
UA-133-14	68 (14 ga)	1-1/2 x 3 x 3-1/4	100	3-#10	562	435	562	645	562	861	722	861	722	920	722	920
UA-143-14	68 (14 ga)	1-1/2 x 4 x 3-1/4	100	3-#10	495	435	489	645	489	861	489	861	489	920	489	920
UA-115-14	68 (14 ga)	1-1/2 x 1-1/2 x 5-1/4	100	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-225-14	68 (14 ga)	2 x 2 x 5-1/4	50	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-135-14	68 (14 ga)	1-1/2 x 3 x 5-1/4	50	3-#10	562	435	562	645	562	909	722	1290	722	1290	722	1290
UA-145-14	68 (14 ga)	1-1/2 x 4 x 5-1/4	50	3-#10	495	435	489	645	489	909	489	1290	489	1290	489	1290
UA-118-14	68 (14 ga)	1-1/2 x 1-1/2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2054	2649	2150	2649	2150
UA-228-14	68 (14 ga)	2 x 2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2054	2649	2150	2649	2150
UA-138-14	68 (14 ga)	1-1/2 x 3 x 7-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2054	2562	2150	2562	2150
UA-148-14	68 (14 ga)	1-1/2 x 4 x 7-3/4	25	5-#10	1143	725	1468	1075	1468	1515	1468	2054	1468	2150	1468	2150
UA-119-14	68 (14 ga)	1-1/2 x 1-1/2 x 9	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-229-14	68 (14 ga)	2 x 2 x 9	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-139-14	68 (14 ga)	1-1/2 x 3 x 9	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2562	2150	2562	2150
UA-149-14	68 (14 ga)	1-1/2 x 4 x 9	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2377	2150	2377	2150
UA-1110-14	68 (14 ga)	1-1/2 x 1-1/2 x 9-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-2210-14	68 (14 ga)	2 x 2 x 9-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-1310-14	68 (14 ga)	1-1/2 x 3 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2562	2150	2562	2150
UA-1410-14	68 (14 ga)	1-1/2 x 4 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2377	2150	2377	2150
UA-1112-14	68 (14 ga)	1-1/2 x 1-1/2 x 11-3/4	50	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3709	3010	3709	3010
UA-2212-14	68 (14 ga)	2 x 2 x 11-3/4	50	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3709	3010	3709	3010
UA-1312-14	68 (14 ga)	1-1/2 x 3 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3586	3010	3586	3010
UA-1412-14	68 (14 ga)	1-1/2 x 4 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3328	3010	3328	3010
UA-1114-14	68 (14 ga)	1-1/2 x 1 1/2 x 13-3/4	50	9-#10	2057	1305	2721	1935	2721	2727	3938	3644	4768	3870	4768	3870
UA-2214-14	68 (14 ga)	2 x 2 x 13-3/4	50	9-#10	2057	1305	2721	1935	2721	2727	3938	3644	4768	3870	4768	3870
UA-1314-14	68 (14 ga)	1-1/2 x 3 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3644	4611	3870	4611	3870
UA-1414-14	68 (14 ga)	1-1/2 x 4 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3644	4279	3870	4279	3870
UA-1116-14	68 (14 ga)	1-1/2 x 1-1/2 x 15-3/4	50	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-2216-14	68 (14 ga)	2 x 2 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-1316-14	68 (14 ga)	1-1/2 x 3 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4611	3870	4611	3870
UA-1416-14	68 (14 ga)	1-1/2 x 4 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4279	3870	4279	3870

Notes:

1. Allowable loads have not been increased for wind or seismic.
2. Allowable strength shown is the lowest value from the four failure modes: screw tilting/bearing, screw shear, screw pull-over and the serviceability limit state of 1/8" deflection of CFS members.
3. It is the responsibility of design professional to design the connection of UA connectors to the supporting structure. In the test program, this connection was made with cap screws with a head diameter of 0.29". The allowable loads should be conservative for any fastener with a header diameter equal to or greater than 0.29".
4. F1=Shear, F2= Tension

RIGID CONNECTORS

UTILITY CLIP (UA) - 12 GAUGE

Utility Clips are used in a variety of framing applications including floors, walls and roofs. UA clips are pre-cut with pre-drilled holes for easy installation.

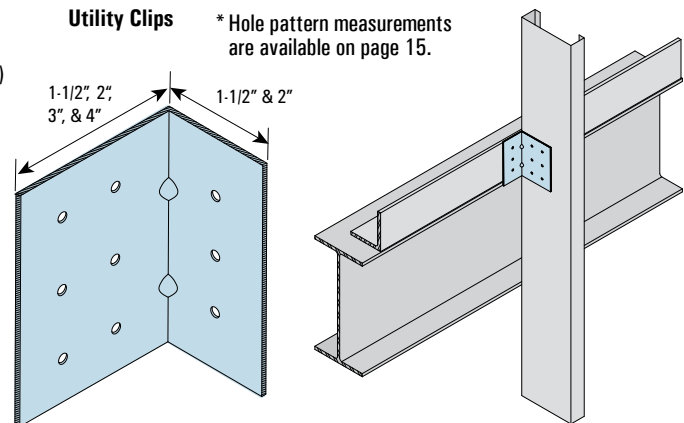
- Leg lengths available from 3-1/4" through 15-3/4". (See table for exact sizes)
- Leg widths available in 1-1/2", 2", 3" and 4".
- Available in 16, 14 and 12 gauge.
- Pre-punched for faster and more accurate fastener attachment.
- 3" x 3" Clips available (do not have embossments) See page 12

MATERIAL: See Table for sizes – 50ksi

FINISH: Galvanized – G90

INSTALLATION:

- Utility Clips are attached to the cold formed steel (CFS) framing members using #10 - 16 self-drilling screws; using pre-punched holes.



UA Clips - 12 Gauge					Allowable Load (lbs)											
Model No.	Thickness (mil/ga)	Size (in.)	Box Qty	Screws	20ga (33 mil) 33 ksi		18ga (43 mil) 33 ksi		16ga (54 mil) 33 ksi		16ga (54 mil) 50 ksi		14ga (68 mil) 50 ksi		12ga (97 mil) 50 ksi	
					F1	F2	F1	F2	F1	F2	F1	F2	F1	F2	F1	F2
UA-113-12	97 (12 ga)	1-1/2 x 1-1/2 x 3-1/4	100	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-223-12	97 (12 ga)	2 x 2 x 3-1/4	100	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-133-12	97 (12 ga)	1-1/2 x 3 x 3-1/4	100	3-#10	686	435	907	645	907	909	1313	1290	1537	1290	1537	1290
UA-143-12	97 (12 ga)	1-1/2 x 4 x 3-1/4	50	3-#10	686	435	907	645	907	909	1313	1290	1426	1290	1426	1290
UA-115-12	97 (12 ga)	1-1/2 x 1-1/2 x 5-1/4	100	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-225-12	97 (12 ga)	2 x 2 x 5-1/4	50	3-#10	686	435	907	645	907	909	1313	1290	1589	1290	1589	1290
UA-135-12	97 (12 ga)	1-1/2 x 3 x 5-1/4	50	3-#10	686	435	907	645	907	909	1313	1290	1537	1290	1537	1290
UA-145-12	97 (12 ga)	1-1/2 x 4 x 5-1/4	50	3-#10	686	435	907	645	907	909	1313	1290	1426	1290	1426	1290
UA-118-12	97 (12 ga)	1-1/2 x 1-1/2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-228-12	97 (12 ga)	2 x 2 x 7-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-138-12	97 (12 ga)	1-1/2 x 3 x 7-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2562	2150	2562	2150
UA-148-12	97 (12 ga)	1-1/2 x 4 x 7-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2377	2150	2377	2150
UA-119-12	97 (12 ga)	1-1/2 x 1-1/2 x 9	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-229-12	97 (12 ga)	2 x 2 x 9	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-139-12	97 (12 ga)	1-1/2 x 3 x 9	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2562	2150	2562	2150
UA-149-12	97 (12 ga)	1-1/2 x 4 x 9	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2377	2150	2377	2150
UA-1110-12	97 (12 ga)	1-1/2 x 1-1/2 x 9-3/4	50	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-2210-12	97 (12 ga)	2 x 2 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2649	2150	2649	2150
UA-1310-12	97 (12 ga)	1-1/2 x 3 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2562	2150	2562	2150
UA-1410-12	97 (12 ga)	1-1/2 x 4 x 9-3/4	25	5-#10	1143	725	1512	1075	1512	1515	2188	2150	2377	2150	2377	2150
UA-1112-12	97 (12 ga)	1-1/2 x 1-1/2 x 1-13/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3709	3010	3709	3010
UA-2212-12	97 (12 ga)	2 x 2 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3709	3010	3709	3010
UA-1312-12	97 (12 ga)	1-1/2 x 3 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3586	3010	3586	3010
UA-1412-12	97 (12 ga)	1-1/2 x 4 x 11-3/4	25	7-#10	1600	1015	2116	1505	2116	2121	3063	3010	3328	3010	3328	3010
UA-1114-12	97 (12 ga)	1-1/2 x 1-1/2 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-2214-12	97 (12 ga)	2 x 2 x 13-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-1314-12	97 (12 ga)	1-1/2 x 3 x 13-3/4	15	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4611	3870	4611	3870
UA-1414-12	97 (12 ga)	1-1/2 x 4 x 13-3/4	15	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4279	3870	4279	3870
UA-1116-12	97 (12 ga)	1-1/2 x 1-1/2 x 15-3/4	25	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-2216-12	97 (12 ga)	2 x 2 x 15-3/4	15	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4768	3870	4768	3870
UA-1316-12	97 (12 ga)	1-1/2 x 3 x 15-3/4	15	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4611	3870	4611	3870
UA-1416-12	97 (12 ga)	1-1/2 x 4 x 15-3/4	15	9-#10	2057	1305	2721	1935	2721	2727	3938	3870	4279	3870	4279	3870

Notes:

1. Allowable loads have not been increased for wind or seismic.
2. Allowable strength shown is the lowest value from the four failure modes: screw tilting/bearing, screw shear, screw pull-over and the serviceability limit state of 1/8" deflection of CFS members.
3. It is the responsibility of design professional to design the connection of UA connectors to the supporting structure. In the test program, this connection was made with cap screws with a head diameter of 0.29". The allowable loads should be conservative for any fastener with a head diameter equal to or greater than 0.29".
4. F1 = Shear, F2 = Tension

RIGID CONNECTORS

RIGID CLIP CONNECTOR (RCC)

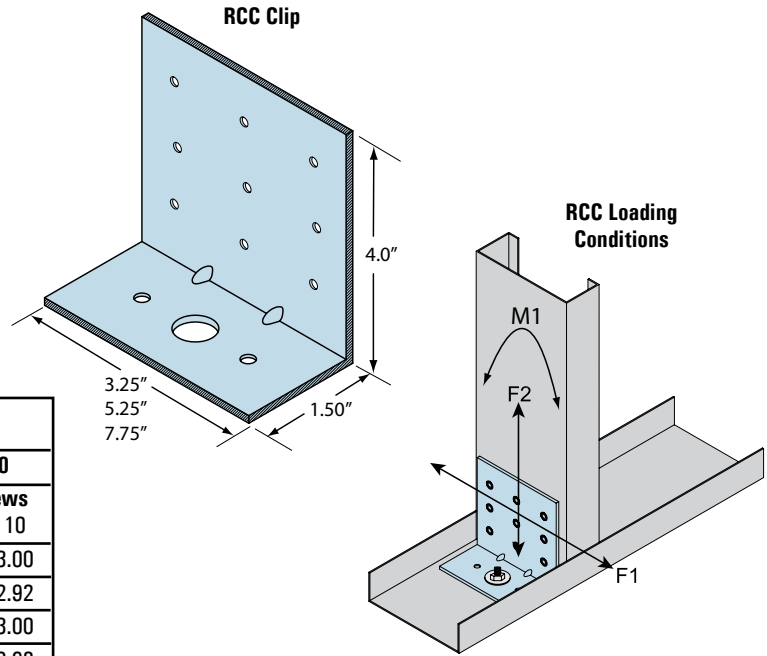
Rigid Clip Connectors (RCC) are used to rigidly attach the bottom of a parapet stud to the structure, or where high tension or rotational restraint is required.

MATERIAL: 12ga (97 mil), 50 ksi

FINISH: Galvanized G90

INSTALLATION:

- Attach long leg of Rigid Clip Connector to web of stud with #10–16 screws through pre-punched holes.
- Attach short leg of Rigid Clip Connector to structure with a 1/2" anchor bolt per Project Engineer's design.



Allowable Strength of RCC in Moment (M1)

CFS Member		Allowable Strength (in-kips) Flexibility (Rad/in-lb x 10 ⁶)					
Thickness (mils/ga)	Fy (ksi)	RCC358		RCC600		RCC800	
		No. of Screws		No. of Screws		No. of Screws	
33 (20)	33	3	6	3	6	5	10
		0.82	1.51	1.79	2.29	2.78	3.00
43 (18)	33	3	6	3	6	5	10
		29.3	17.4	7.28	5.9	8.21	2.92
54 (16)	50	3	6	3	6	5	10
		1.43	1.51	3.23	3.23	3.46	5.91
68 (14)	50	3	6	3	6	5	10
		29.3	17.4	7.28	5.9	8.21	2.92
97 (12)	50	3	6	3	6	5	10
		1.43	2.32	3.22	3.22	3.46	5.71
		3	6	3	6	5	10
		29.3	17.4	7.28	5.9	8.21	2.92

Rigid Clip Connector (RCC)

Model No.	Stud Size	Dimensions (in.)	Box Quantity
RCC358	3-5/8"	1-1/2 x 4 x 3-1/4	50
RCC600	6"	1-1/2 x 4 x 5-1/4	50
RCC800	8"	1-1/2 x 4 x 7-3/4	25

Allowable Strength of RCC in Tension/Compression (F2)

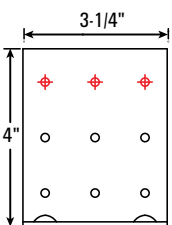
CFS Member		Allowable Strength (lbs)					
Thickness (mils/ga)	Fy (ksi)	RCC358		RCC600		RCC800	
		No. of Screws		No. of Screws		No. of Screws	
33 (20)	33	3	6	3	6	5	10
		530	1,060	530	1,060	884	1,767
43 (18)	33	3	6	3	6	5	10
		789	1,578	789	1,578	1,315	2,116
54 (16)	50	3	6	3	6	5	10
		1,602	2,116	1,602	2,116	2,116	2,116
68 (14)	50	3	6	3	6	5	10
		1,640	2,116	1,640	2,116	2,116	2,116
97 (12)	50	3	6	3	6	5	10
		1,640	2,116	1,640	2,116	2,116	2,116

Allowable Strength of RCC in Shear (F1)

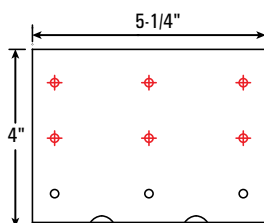
CFS Member		Allowable Strength (lbs)					
Thickness (mils/ga)	Fy (ksi)	RCC358		RCC600		RCC800	
		No. of Screws		No. of Screws		No. of Screws	
33 (20)	33	3	6	3	6	5	10
		450	450	600	710	850	850
43 (18)	33	3	6	3	6	5	10
		450	450	600	710	850	850
54 (16)	50	3	6	3	6	5	10
		840	1,000	1,250	1,500	1,860	1,990
68 (14)	50	3	6	3	6	5	10
		840	1,000	1,250	1,500	1,860	1,990
97 (12)	50	3	6	3	6	5	10
		840	1,000	1,250	1,500	1,860	1,990

Notes:

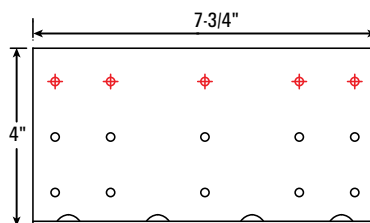
1. Tabulated values are based on #10-16 screws with ultimate shear capacity of 1,600 lbs per screw.
2. Allowable loads have not been increased for wind or seismic.
3. Tabulated loads are based on 1/2" diameter bolt with 1/2" Type A plain washer with a nominal outside diameter of 1.062" & nominal thickness of 0.095".
4. It is the responsibility of the design professional to design the connection of the RCC to the supporting structure.
5. Use linear interaction for combination of F1, F2, and M1.
6. The 1/4" thick Heavy Duty Washer (HDW) meets ASTM A36 Standard Specification for Carbon Structural Steel and is made from hot rolled flat bar and painted gray for corrosion resistance.



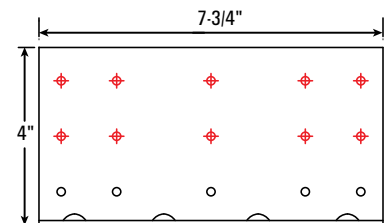
RCC358 & RCC600 with 3 screws pattern



RCC358 & RCC600 with 6 screws pattern



RCC800 with 5 screws pattern

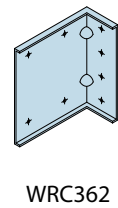
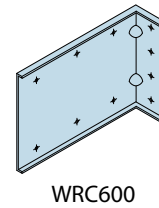
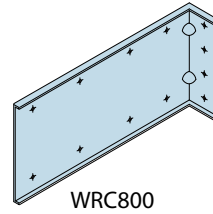
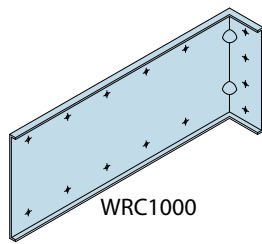
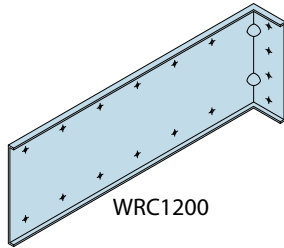
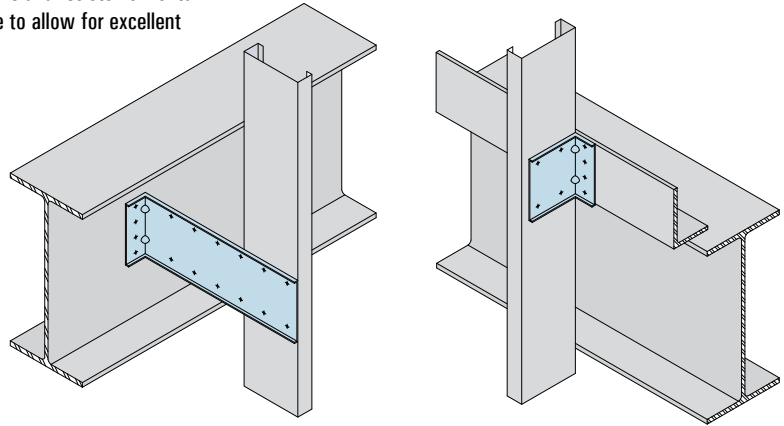


RCC800 with 10 screws pattern

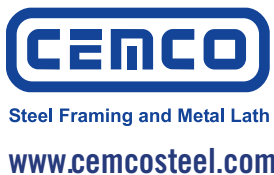
UTILITY CLIP (UA & LA)

The WRC series of clips connects exterior studs to the building structure and resists horizontal and lateral loads. The WRC has embossments and a continuous flange to allow for excellent load values. 25 pieces per box.

Part No.	Ga. (Mil)	Material	Finish	Size
WRC362	14ga (68)	50 KSI	G-90	4" x 1.5" x 3.5"
WRC600	14ga (68)	50 KSI	G-90	4" x 1.5" x 5.5"
WRC800	14ga (68)	50 KSI	G-90	4" x 1.5" x 7.5"
WRC1000	14ga (68)	50 KSI	G-90	4" x 1.5" x 9.5"
WRC1200	14ga (68)	50 KSI	G-90	4" x 1.5" x 11.5"

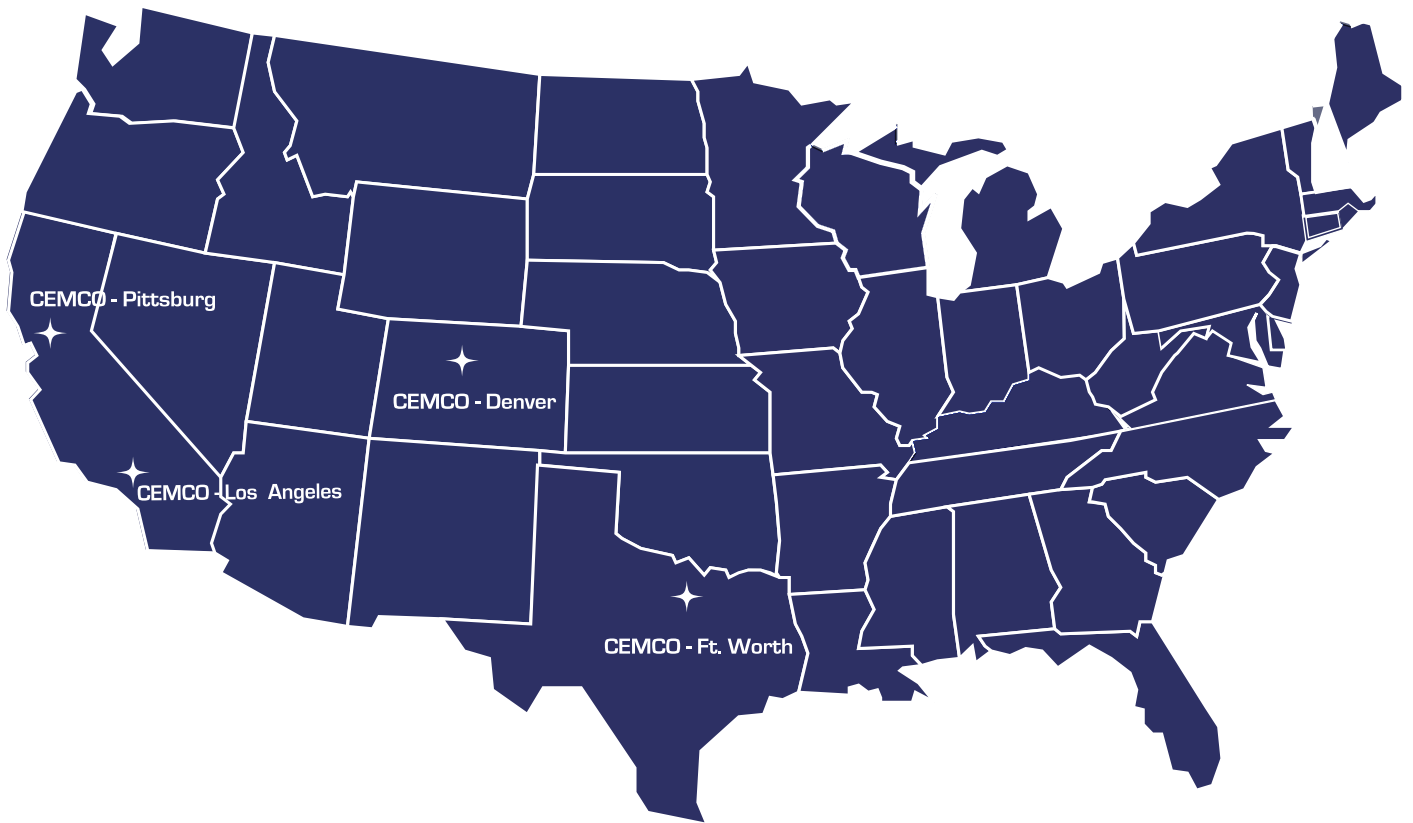


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