

Drift Rail and Clip

Curtain Wall/Bypass with Drift and Vertical Deflection

Vertical and lateral building movement

ClarkDietrich Drift Rail (DR) or Drift Headed Rail (DHR) with Drift Rail Clip (DRC), is a uniquely designed two-piece system that is used to attach curtain-wall studs to the building structure and allows for vertical and lateral movement or to be rigidly attached. The system utilizes a C-Shaped Drift Rail and distinctively designed Drift Rail Clips that rotate into position for easy installation. The multifaceted Drift Rail Clips use Proprietary Deflection Screws for attachment to the wall studs and allows for 3" vertical deflection (1-1/2" up and down) and is also designed with 1/8" holes to rigidly attach wall studs.

MATERIAL SPECIFICATIONS

Yield Strength: 50ksi

Coating: G90

ASTM: A653 / A1003

DRIFT RAIL (S)

Gauge: 12ga (97mils)

Design Thickness: 0.1017"

Min. Thickness: 0.0966"

HEADED STUD MATERIAL SPECIFICATIONS

Yield Strength: Grade 1010 through 1020, 51ksi

ASTM: A29/A108

AWS: D1.1

Dimensions: 3/8" dia. x 3" long with 3/4" head dia.

DRIFT RAIL CLIP

Gauge: 12ga (97mils)

Design Thickness: 0.1017"

Min. Thickness: 0.0966"

Gauge: 14ga (68mils)

Design Thickness: 0.0713"

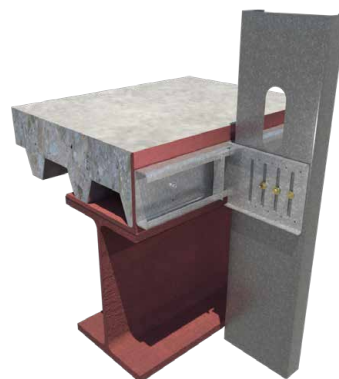
Min. Thickness: 0.0677"

CODE APPROVALS

IAPMO ER-729 (DHR not included)

ALTERNATIVE PRODUCTS

Drift FastClip™ Slide Clip



Drift Rail
(DR) Installation



Drift Headed Rail
(DHR) Installation

DRC - 12ga Clip / 12ga Rail

Product code	Thickness	Size (in)	No. of slots per Clip	No. of holes per clip	Drift Clips per box	Prop. Screws per box
	Mils (Gauge)					
DRC3-97	97mils (12ga)	3.3875"	2	4	25	55 or 80
DRC6-97		5.875"	4	8	25	55 or 80
DRC8-97		7.325"	4	8	25	55 or 80

DRC - 14ga Clip / 12ga Rail

Product code	Thickness	Size (in)	No. of slots per Clip	No. of holes per clip	Drift Clips per box	Prop. Screws per box
	Mils (Gauge)					
DRC3-68	68mils (14ga)	3.3875"	2	4	25	55 or 80
DRC6-68		5.875"	4	8	25	55 or 80
DRC8-68		7.325"	4	8	25	55 or 80

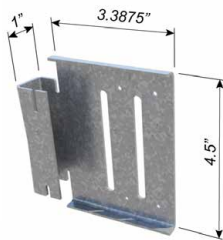
Note: 12' Drift Rail(s) are individually packaged.



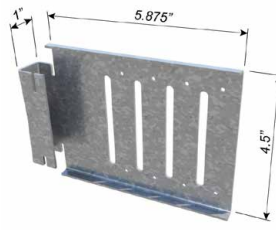
Proprietary Deflection Screw



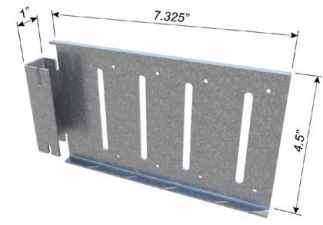
Proprietary HD Deflection Screw
(10ga and 12ga Clips Only)



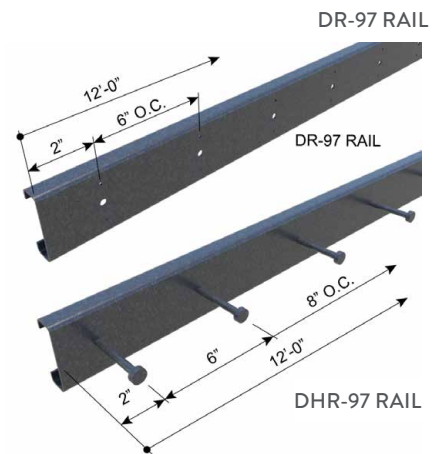
DRC3



DRC6



DRC8



Drift Rail and Clip

INSTALLATION

Install the Drift Rail to minimum 3/16-in thick **steel** support structure using:

- Welds
- PAF fasteners
- Self-drilling screws

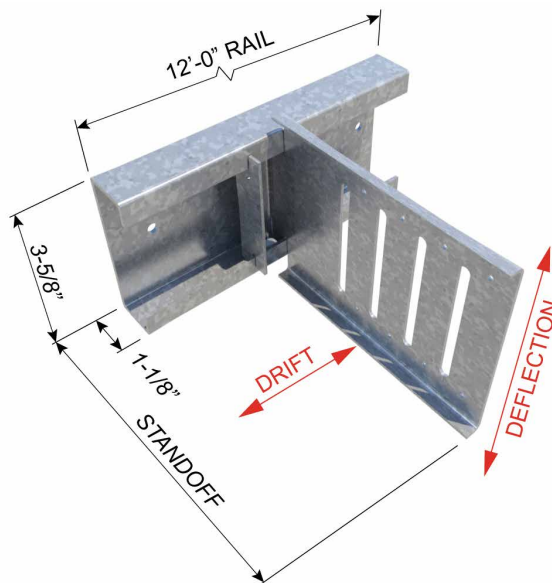
Install the Drift Rail to **concrete** support structure using:

- Expansion anchors
- Screw anchors
- Cast In Place / Embedded (Drift Headed Rail only)

Pilot holes are provided along the length of the Drift Rail web at a spacing of 6-in on-center. (DR rail only)

Design load capacities for commonly used fasteners are tabulated in the product Design Guide and include:

- Hilti X-U Universal Knurled Shank Fasteners
- #12-24 HWH Fasteners
- Hilti 1/4" KWIK HUS-EZ anchor



With the Drift Rail or Drift Headed Rail installed on the structure, the Drift Clips can be positioned as required:

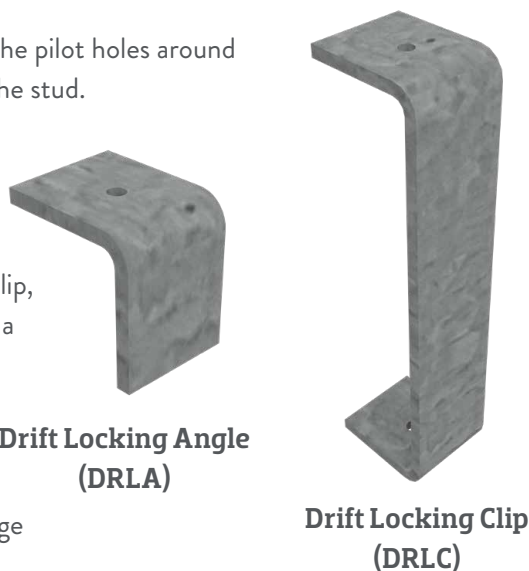
- The framing stud web must contact the flat face of the long leg of the Drift Clip.
- Note that one of the four slots in the channel portion of the Drift Clip is longer than the others.
- Tilt the Drift Clip and position it so that the longer slot initially engages one leg of the Drift Rail.
- Rotate the Drift Clip to the vertical position, engaging all four slots with the Drift Rail legs.

Connection between the Drift Clip and Framing Studs:

- For bypass connections, Proprietary Deflection Screws are placed through each slotted hole of the long leg, of the Drift Clip to the web of the stud. The required number and location of the slotted holes used to secure the stud is determined by the required design load capacity.
- For rigid connections, self-drilling screws are placed through the pilot holes around the perimeter of the long leg of the Drift Clip to the web of the stud.

To restrict clip lateral movement (Drift) along the Drift Rail, install one of two types of stops:

- Drift Locking Angle (DRLA) is an L-shaped clip
 - The long leg is inserted into the channel of the Drift Rail Clip,
 - The short leg is secured to the flange of the Drift Rail with a #10 self-drilling screw
- Drift Locking Clip (DRLC) is a C-shaped clip
 - The DRLC sits within the channel of the Drift Clip, and straddles the flanges of the Drift Rail.
 - The two outside legs of the DRLC are secured to each flange of the Drift Rail with a #10 self-drilling screw.



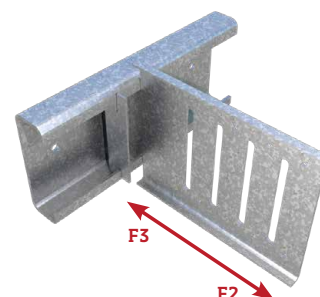
Drift Rail and Clip - Structural Attachment Designed by Others

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

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

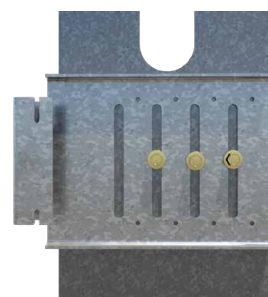
Product code	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)	
		Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-97	33mils (20ga)	See Figure	(2) x #14	560	600
	43mils (18ga)		(2) x #14	655	670
	54mils (16ga)		(2) x #14	1000	970
	68mils (14ga)		(2) x #14	1085	1325
	97mils (12ga)		(2) x #14	1085	2040
DRC6-97	33mils (20ga)	See Figure	(3) x #14	560	600
	43mils (18ga)		(3) x #14	655	670
	54mils (16ga)		(3) x #14	1000	970
	68mils (14ga)		(3) x #14	1085	1325
	97mils (12ga)		(3) x #14	1085	2040
DRC8-97	33mils (20ga)	See Figure	(3) x #14	560	620
	43mils (18ga)		(3) x #14	655	730
	54mils (16ga)		(3) x #14	1000	1060
	68mils (14ga)		(3) x #14	1085	1340
	97mils (12ga)		(3) x #14	1085	1965



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

Product code	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)	
		Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-68	33mils (20ga)	See Figure	(2) x #14	490	440
	43mils (18ga)		(2) x #14	540	520
	54mils (16ga)		(2) x #14	850	870
	68mils (14ga)		(2) x #14	850	1170
	97mils (12ga)		(2) x #14	850	1600
DRC6-68	33mils (20ga)	See Figure	(3) x #14	490	440
	43mils (18ga)		(3) x #14	540	520
	54mils (16ga)		(3) x #14	850	870
	68mils (14ga)		(3) x #14	850	1170
	97mils (12ga)		(3) x #14	850	1600
DRC8-68	33mils (20ga)	See Figure	(3) x #14	490	485
	43mils (18ga)		(3) x #14	540	620
	54mils (16ga)		(3) x #14	850	900
	68mils (14ga)		(3) x #14	850	1105
	97mils (12ga)		(3) x #14	850	1710



(3) #14 Deflection Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Drift Rail attachment to structure designed by others. Drift Rail attachment to the structure should occur at every 6" o.c., and each connection capacity should satisfy the design load requirement of the project. Listed Drift Rail clip load capacities must be evaluated along with clip-to-structure connection capacity to establish the governing load capacity of the assembly.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (2) x #14 shouldered screws (for DRC3) and (3) x #14 shouldered screws (for DRC6 and DRC8) must be used to secure the Drift Rail Clip for attachment to stud (#14 shouldered screws provided with each Drift Rail Clip).
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.

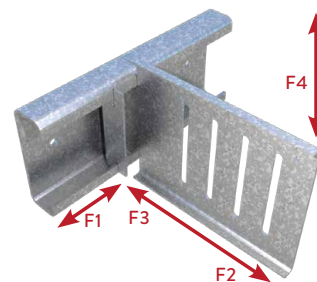
Drift Rail and Clip - Structural Attachment Designed by Others

ATTACHMENT TO STRUCTURAL: **DESIGNED BY OTHERS**
 ATTACHMENT TO STUD: **FIXED CONNECTION W/(4)#10-16**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

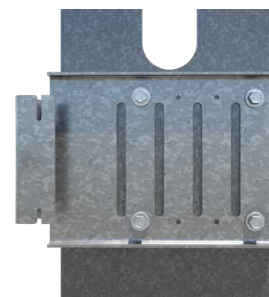
Product code	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-97	33mils (20ga)	See Figure	(4) x #10	155	560	600	280
	43mils (18ga)		(4) x #10	155	655	670	415
	54mils (16ga)		(4) x #10	155	1000	970	840
	68mils (14ga)		(4) x #10	155	1085	1325	865
	97mils (12ga)		(4) x #10	155	1085	2040	865
DRC6-97	33mils (20ga)	See Figure	(4) x #10	155	560	600	235
	43mils (18ga)		(4) x #10	155	655	670	345
	54mils (16ga)		(4) x #10	155	1000	970	705
	68mils (14ga)		(4) x #10	155	1085	1325	725
	97mils (12ga)		(4) x #10	155	1085	2040	725
DRC8-97	33mils (20ga)	See Figure	(4) x #10	140	560	620	240
	43mils (18ga)		(4) x #10	140	655	730	360
	54mils (16ga)		(4) x #10	140	1000	1060	725
	68mils (14ga)		(4) x #10	140	1085	1340	745
	97mils (12ga)		(4) x #10	140	1085	1965	745



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Product code	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-68	33mils (20ga)	See Figure	(4) x #10	115	490	440	280
	43mils (18ga)		(4) x #10	115	540	520	415
	54mils (16ga)		(4) x #10	115	850	870	740
	68mils (14ga)		(4) x #10	115	850	1170	740
	97mils (12ga)		(4) x #10	115	850	1600	805
DRC6-68	33mils (20ga)	See Figure	(4) x #10	115	490	440	235
	43mils (18ga)		(4) x #10	115	540	520	345
	54mils (16ga)		(4) x #10	115	850	870	705
	68mils (14ga)		(4) x #10	115	850	1170	725
	97mils (12ga)		(4) x #10	115	850	1600	725
DRC8-68	33mils (20ga)	See Figure	(4) x #10	120	490	485	240
	43mils (18ga)		(4) x #10	120	540	620	360
	54mils (16ga)		(4) x #10	120	850	900	725
	68mils (14ga)		(4) x #10	120	850	1105	745
	97mils (12ga)		(4) x #10	120	850	1710	745



(4) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Drift Rail attachment to structure designed by others. Drift Rail attachment to the structure should occur at every 6" o.c., and each connection capacity should satisfy the design load requirement of the project. Listed Drift Rail clip load capacities must be evaluated along with clip-to-structure connection capacity to establish the governing load capacity of the assembly.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 6 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

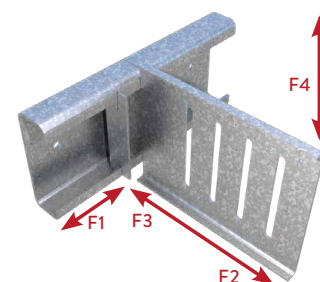
Drift Rail and Clip - Structural Attachment Designed by Others

ATTACHMENT TO STRUCTURAL: **DESIGNED BY OTHERS**
 ATTACHMENT TO STUD: **FIXED CONNECTION W/(8)#10-16**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

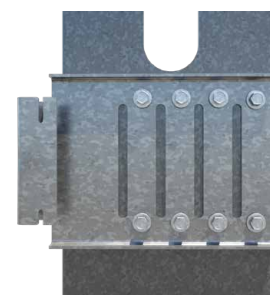
Clip designation	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-97	20ga (33mils)	See Figure	(8) x #10	155	560	600	395
	18ga (43mils)		(8) x #10	155	655	670	585
	16ga (54mils)		(8) x #10	155	1000	970	875
	14ga (68mils)		(8) x #10	155	1085	1325	920
	12ga (97mils)		(8) x #10	155	1085	2040	920
DRC8-97	20ga (33mils)	See Figure	(8) x #10	140	560	620	375
	18ga (43mils)		(8) x #10	140	655	730	555
	16ga (54mils)		(8) x #10	140	1000	1060	910
	14ga (68mils)		(8) x #10	140	1085	1340	910
	12ga (97mils)		(8) x #10	140	1085	1965	910



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-68	20ga (33mils)	See Figure	(8) x #10	115	490	440	395
	18ga (43mils)		(8) x #10	115	540	520	585
	16ga (54mils)		(8) x #10	115	850	870	740
	14ga (68mils)		(8) x #10	115	850	1170	740
	12ga (97mils)		(8) x #10	115	850	1600	805
DRC8-68	20ga (33mils)	See Figure	(8) x #10	120	490	485	375
	18ga (43mils)		(8) x #10	120	540	620	555
	16ga (54mils)		(8) x #10	120	850	900	800
	14ga (68mils)		(8) x #10	120	850	1105	800
	12ga (97mils)		(8) x #10	120	850	1710	865



(8) #10 Screw Pattern
 Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Drift Rail attachment to structure designed by others. Drift Rail attachment to the structure should occur at every 6" o.c., and each connection capacity should satisfy the design load requirement of the project. Listed Drift Rail clip load capacities must be evaluated along with clip-to-structure connection capacity to establish the governing load capacity of the assembly.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 6 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

Drift Rail and Clip - Attachment Using (2) #12-24 Fasteners

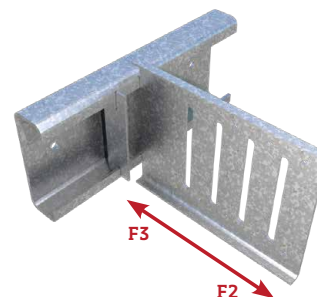
ATTACHMENT TO STRUCTURAL STEEL: #12-24 FASTENERS

ATTACHMENT TO STUD: AS A DEFLECTION CONNECTION

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

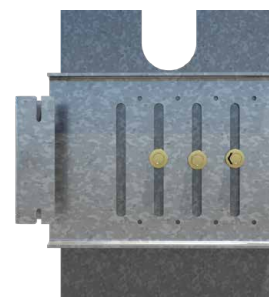
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(2) x #14	560	600
	43mils (18ga)			(2) x #14	655	670
	54mils (16ga)			(2) x #14	1000	970
	68mils (14ga)			(2) x #14	1030	1325
	97mils (12ga)			(2) x #14	1030	2040
DRC6-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	560	600
	43mils (18ga)			(3) x #14	655	670
	54mils (16ga)			(3) x #14	1000	970
	68mils (14ga)			(3) x #14	1030	1325
	97mils (12ga)			(3) x #14	1030	2040
DRC8-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	560	620
	43mils (18ga)			(3) x #14	655	730
	54mils (16ga)			(3) x #14	1000	1060
	68mils (14ga)			(3) x #14	1030	1340
	97mils (12ga)			(3) x #14	1030	1965



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(2) x #14	490	440
	43mils (18ga)			(2) x #14	540	520
	54mils (16ga)			(2) x #14	850	870
	68mils (14ga)			(2) x #14	850	1170
	97mils (12ga)			(2) x #14	850	1600
DRC6-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	490	440
	43mils (18ga)			(3) x #14	540	520
	54mils (16ga)			(3) x #14	850	870
	68mils (14ga)			(3) x #14	850	1170
	97mils (12ga)			(3) x #14	850	1600
DRC8-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	490	485
	43mils (18ga)			(3) x #14	540	620
	54mils (16ga)			(3) x #14	850	900
	68mils (14ga)			(3) x #14	850	1105
	97mils (12ga)			(3) x #14	850	1710



(3) #14 Deflection Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x #12-24 HWH fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x #12-24 HWH fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (2) x #14 shouldered screws (for DRC3) and (3) x #14 shouldered screws (for DRC6 and DRC8) must be used to secure the Drift Rail Clip for attachment to stud (#14 shouldered screws provided with each Drift Rail Clip).
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.

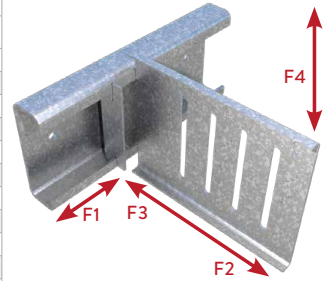
Drift Rail and Clip - Attachment Using (2) #12-24 Fasteners

ATTACHMENT TO STRUCTURAL STEEL: #12-24 FASTENERS
ATTACHMENT TO STUD: FIXED CONNECTION W/(4)#10-16

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

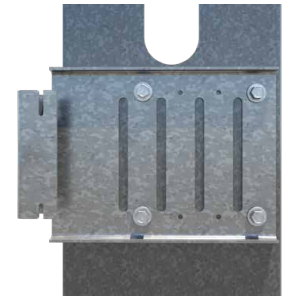
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	155	560	600	280
	43mils (18ga)			(4) x #10	155	655	670	415
	54mils (16ga)			(4) x #10	155	1000	970	840
	68mils (14ga)			(4) x #10	155	1030	1325	865
	97mils (12ga)			(4) x #10	155	1030	2040	865
DRC6-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	155	560	600	235
	43mils (18ga)			(4) x #10	155	655	670	345
	54mils (16ga)			(4) x #10	155	1000	970	705
	68mils (14ga)			(4) x #10	155	1030	1325	725
	97mils (12ga)			(4) x #10	155	1030	2040	725
DRC8-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	140	560	620	240
	43mils (18ga)			(4) x #10	140	655	730	360
	54mils (16ga)			(4) x #10	140	1000	1060	725
	68mils (14ga)			(4) x #10	140	1030	1340	745
	97mils (12ga)			(4) x #10	140	1030	1965	745



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	115	490	440	280
	43mils (18ga)			(4) x #10	115	540	520	415
	54mils (16ga)			(4) x #10	115	850	870	740
	68mils (14ga)			(4) x #10	115	850	1170	740
	97mils (12ga)			(4) x #10	115	850	1600	805
DRC6-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	115	490	440	235
	43mils (18ga)			(4) x #10	115	540	520	345
	54mils (16ga)			(4) x #10	115	850	870	705
	68mils (14ga)			(4) x #10	115	850	1170	725
	97mils (12ga)			(4) x #10	115	850	1600	725
DRC8-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(4) x #10	120	490	485	240
	43mils (18ga)			(4) x #10	120	540	620	360
	54mils (16ga)			(4) x #10	120	850	900	725
	68mils (14ga)			(4) x #10	120	850	1105	745
	97mils (12ga)			(4) x #10	120	850	1710	745



Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x #12-24 HWH fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x #12-24 HWH fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where fasteners are loaded simultaneously, load interaction must be considered following fastener manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

Drift Rail and Clip - Attachment Using (2) #12-24 Fasteners

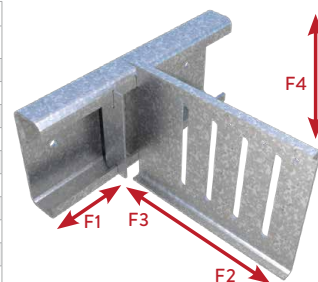
ATTACHMENT TO STRUCTURAL STEEL: **#12-24 FASTENERS**

ATTACHMENT TO STUD: **FIXED CONNECTION W/(8)#10-16**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

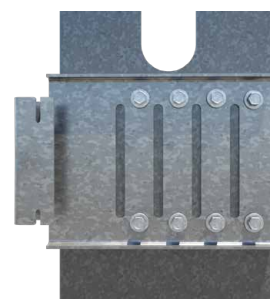
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(8) x #10	155	560	600	395
	43mils (18ga)			(8) x #10	155	655	670	585
	54mils (16ga)			(8) x #10	155	1000	970	875
	68mils (14ga)			(8) x #10	155	1030	1325	920
	97mils (12ga)			(8) x #10	155	1030	2040	920
DRC8-97	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(8) x #10	140	560	620	375
	43mils (18ga)			(8) x #10	140	655	730	555
	54mils (16ga)			(8) x #10	140	1000	1060	910
	68mils (14ga)			(8) x #10	140	1030	1340	910
	97mils (12ga)			(8) x #10	140	1030	1965	910



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(8) x #10	115	490	440	395
	43mils (18ga)			(8) x #10	115	540	520	585
	54mils (16ga)			(8) x #10	115	850	870	740
	68mils (14ga)			(8) x #10	115	850	1170	740
	97mils (12ga)			(8) x #10	115	850	1600	805
DRC8-68	33mils (20ga)	(2) x #12-24 HWH Fasteners to 3/16" ASTM A36 Steel	See Figure	(8) x #10	120	490	485	375
	43mils (18ga)			(8) x #10	120	540	620	555
	54mils (16ga)			(8) x #10	120	850	900	800
	68mils (14ga)			(8) x #10	120	850	1105	800
	97mils (12ga)			(8) x #10	120	850	1710	865



(8) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x #12-24 HWH fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x #12-24 HWH fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where fasteners are loaded simultaneously, load interaction must be considered following fastener manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (8) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

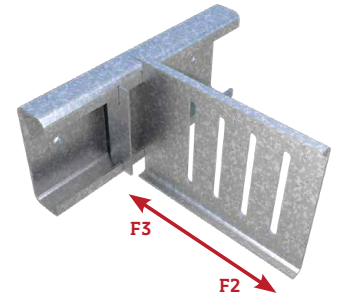
Drift Rail and Clip - Attachment Using (2) Hilti X-U Fasteners

ATTACHMENT TO STRUCT. STEEL: **HILTI X-U FASTENERS**
ATTACHMENT TO STUD: **AS A DEFLECTION CONNECTION**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

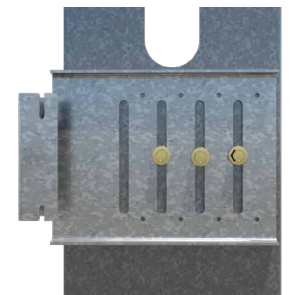
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-97	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(2) x #14	560	600
	43mils (18ga)			(2) x #14	655	670
	54mils (16ga)			(2) x #14	1000	970
	68mils (14ga)			(2) x #14	1070	1325
	97mils (12ga)			(2) x #14	1070	2040
DRC6-97	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	560	600
	43mils (18ga)			(3) x #14	655	670
	54mils (16ga)			(3) x #14	1000	970
	68mils (14ga)			(3) x #14	1070	1325
	97mils (12ga)			(3) x #14	1070	2040
DRC8-97	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	560	620
	43mils (18ga)			(3) x #14	655	730
	54mils (16ga)			(3) x #14	1000	1060
	68mils (14ga)			(3) x #14	1070	1340
	97mils (12ga)			(3) x #14	1070	1965



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-68	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(2) x #14	490	440
	43mils (18ga)			(2) x #14	540	520
	54mils (16ga)			(2) x #14	850	870
	68mils (14ga)			(2) x #14	850	1170
	97mils (12ga)			(2) x #14	850	1600
DRC6-68	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	490	440
	43mils (18ga)			(3) x #14	540	520
	54mils (16ga)			(3) x #14	850	870
	68mils (14ga)			(3) x #14	850	1170
	97mils (12ga)			(3) x #14	850	1600
DRC8-68	33mils (20ga)	(2) x Hilti X-U Universal Knurled Shank Fasteners to 3/16" ASTM A36 Steel	See Figure	(3) x #14	490	485
	43mils (18ga)			(3) x #14	540	620
	54mils (16ga)			(3) x #14	850	900
	68mils (14ga)			(3) x #14	850	1105
	97mils (12ga)			(3) x #14	850	1710



(3) #14 Deflection Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x Hilti X-U Universal Knurled Shank fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x Hilti X-U Universal Knurled Shank fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (2) x #14 shouldered screws (for DRC3) and (3) x #14 shouldered screws (for DRC6 and DRC8) must be used to secure the Drift Rail Clip for attachment to stud (#14 shouldered screws provided with each Drift Rail Clip).
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.

Drift Rail and Clip - Attachment Using (2) Hilti X-U Fasteners

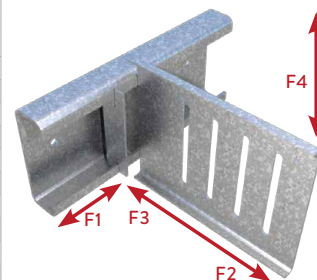
ATTACHMENT TO STRUCT. STEEL: **HILTI X-U FASTENERS**

ATTACHMENT TO STUD: **FIXED CONNECTION W/(4)#10-16**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

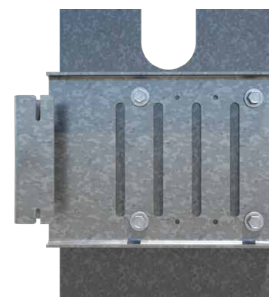
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-97	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	155	560	600	280
	43mils (18ga)	Universal Knurled		(4) x #10	155	655	670	415
	54mils (16ga)	Shank Fasteners		(4) x #10	155	1000	970	840
	68mils (14ga)	to 3/16" ASTM		(4) x #10	155	1070	1325	865
	97mils (12ga)	A36 Steel		(4) x #10	155	1070	2040	865
DRC6-97	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	155	560	600	235
	43mils (18ga)	Universal Knurled		(4) x #10	155	655	670	345
	54mils (16ga)	Shank Fasteners		(4) x #10	155	1000	970	705
	68mils (14ga)	to 3/16" ASTM		(4) x #10	155	1070	1325	725
	97mils (12ga)	A36 Steel		(4) x #10	155	1070	2040	725
DRC8-97	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	140	560	620	240
	43mils (18ga)	Universal Knurled		(4) x #10	140	655	730	360
	54mils (16ga)	Shank Fasteners		(4) x #10	140	1000	1060	725
	68mils (14ga)	to 3/16" ASTM		(4) x #10	140	1070	1340	745
	97mils (12ga)	A36 Steel		(4) x #10	140	1070	1965	745



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-68	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	115	490	440	280
	43mils (18ga)	Universal Knurled		(4) x #10	115	540	520	415
	54mils (16ga)	Shank Fasteners		(4) x #10	115	850	870	740
	68mils (14ga)	to 3/16" ASTM		(4) x #10	115	850	1170	740
	97mils (12ga)	A36 Steel		(4) x #10	115	850	1600	805
DRC6-68	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	115	490	440	235
	43mils (18ga)	Universal Knurled		(4) x #10	115	540	520	345
	54mils (16ga)	Shank Fasteners		(4) x #10	115	850	870	705
	68mils (14ga)	to 3/16" ASTM		(4) x #10	115	850	1170	725
	97mils (12ga)	A36 Steel		(4) x #10	115	850	1600	725
DRC8-68	33mils (20ga)	(2) x Hilti X-U	See Figure	(4) x #10	120	490	485	240
	43mils (18ga)	Universal Knurled		(4) x #10	120	540	620	360
	54mils (16ga)	Shank Fasteners		(4) x #10	120	850	900	725
	68mils (14ga)	to 3/16" ASTM		(4) x #10	120	850	1105	745
	97mils (12ga)	A36 Steel		(4) x #10	120	850	1710	745



(4) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x Hilti X-U Universal Knurled Shank fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x Hilti X-U Universal Knurled Shank fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where fasteners are loaded simultaneously, load interaction must be considered following fastener manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

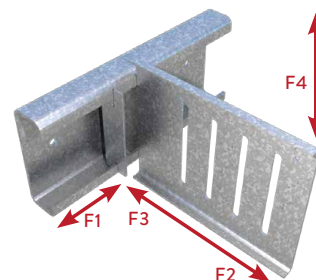
Drift Rail and Clip - Attachment Using (2) Hilti X-U Fasteners

ATTACHMENT TO STRUCT. STEEL: **HILTI X-U FASTENERS**
 ATTACHMENT TO STUD: **FIXED CONNECTION W/(8)#10-16**

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

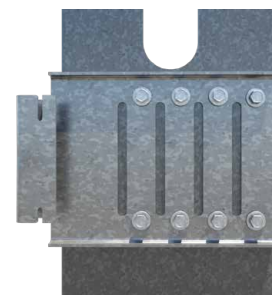
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-97	33mils (20ga)	(2) x Hilti X-U	See Figure	(8) x #10	155	560	600	395
	43mils (18ga)	Universal Knurled		(8) x #10	155	655	670	585
	54mils (16ga)	Shank Fasteners		(8) x #10	155	1000	970	875
	68mils (14ga)	to 3/16" ASTM		(8) x #10	155	1070	1325	920
	97mils (12ga)	A36 Steel		(8) x #10	155	1070	2040	920
DRC8-97	33mils (20ga)	(2) x Hilti X-U	See Figure	(8) x #10	140	560	620	375
	43mils (18ga)	Universal Knurled		(8) x #10	140	655	730	555
	54mils (16ga)	Shank Fasteners		(8) x #10	140	1000	1060	910
	68mils (14ga)	to 3/16" ASTM		(8) x #10	140	1070	1340	910
	97mils (12ga)	A36 Steel		(8) x #10	140	1070	1965	910



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-68	33mils (20ga)	(2) x Hilti X-U	See Figure	(8) x #10	115	490	440	395
	43mils (18ga)	Universal Knurled		(8) x #10	115	540	520	585
	54mils (16ga)	Shank Fasteners		(8) x #10	115	850	870	740
	68mils (14ga)	to 3/16" ASTM		(8) x #10	115	850	1170	740
	97mils (12ga)	A36 Steel		(8) x #10	115	850	1600	805
DRC8-68	33mils (20ga)	(2) x Hilti X-U	See Figure	(8) x #10	120	490	485	375
	43mils (18ga)	Universal Knurled		(8) x #10	120	540	620	555
	54mils (16ga)	Shank Fasteners		(8) x #10	120	850	900	800
	68mils (14ga)	to 3/16" ASTM		(8) x #10	120	850	1105	800
	97mils (12ga)	A36 Steel		(8) x #10	120	850	1710	865



(8) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3/16" thick ASTM A36 steel using (2) x Hilti X-U Universal Knurled Shank fasteners spaced 2" apart at 6" on center spacing.
- 2 (2) x Hilti X-U Universal Knurled Shank fasteners must be fastened at every 6" o.c. for Drift Rail attachment to 3/16" ASTM A36 steel structure. Other fasteners may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where fasteners are loaded simultaneously, load interaction must be considered following fastener manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (8) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

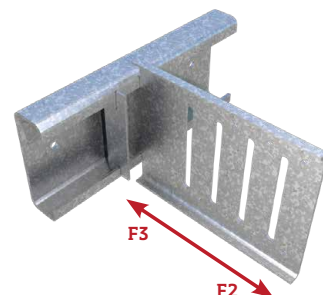
Drift Rail and Clip - Attachment Using (1) 1/4" Hilti KWIK HUS-EZ

ATTACHMENT TO CONCRETE: 1/4" HILTI KWIK HUS-EZ
ATTACHMENT TO STUD: AS A DEFLECTION CONNECTION

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

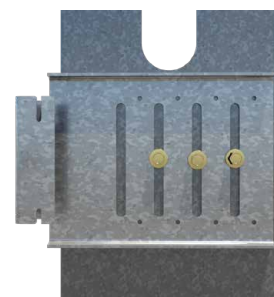
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(2) x #14	560	600
	43mils (18ga)			(2) x #14	655	670
	54mils (16ga)			(2) x #14	1000	970
	68mils (14ga)			(2) x #14	1045	1325
	97mils (12ga)			(2) x #14	1045	2040
DRC6-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(3) x #14	560	600
	43mils (18ga)			(3) x #14	655	670
	54mils (16ga)			(3) x #14	1000	970
	68mils (14ga)			(3) x #14	1045	1325
	97mils (12ga)			(3) x #14	1045	2040
DRC8-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(3) x #14	560	620
	43mils (18ga)			(3) x #14	655	730
	54mils (16ga)			(3) x #14	1000	1060
	68mils (14ga)			(3) x #14	1045	1340
	97mils (12ga)			(3) x #14	1045	1965



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)	
			Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(2) x #14	490	440
	43mils (18ga)			(2) x #14	540	520
	54mils (16ga)			(2) x #14	850	870
	68mils (14ga)			(2) x #14	850	1170
	97mils (12ga)			(2) x #14	850	1600
DRC6-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(3) x #14	490	440
	43mils (18ga)			(3) x #14	540	520
	54mils (16ga)			(3) x #14	850	870
	68mils (14ga)			(3) x #14	850	1170
	97mils (12ga)			(3) x #14	850	1600
DRC8-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(3) x #14	490	485
	43mils (18ga)			(3) x #14	540	620
	54mils (16ga)			(3) x #14	850	900
	68mils (14ga)			(3) x #14	850	1105
	97mils (12ga)			(3) x #14	850	1710



(3) #14 Deflection Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3000psi uncracked concrete using (1) x 1/4" Hilti X KWIK HUS-EZ anchor only.
- 2 (1) x 1/4" Hilti KWIK HUS-EZ anchors (nom. embedment depth of 2-1/2", 3000psi uncracked concrete) should be fastened at every 6" o.c. for Drift Rail attachment to structure. Other anchors may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (2) x #14 shouldered screws (for DRC3) and (3) x #14 shouldered screws (for DRC6 and DRC8) must be used to secure the Drift Rail Clip for attachment to stud (#14 shouldered screws provided with each Drift Rail Clip).
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.

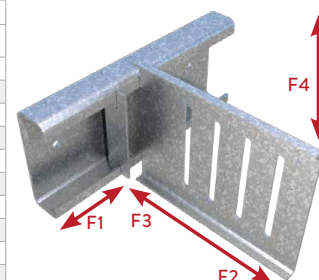
Drift Rail and Clip - Attachment Using (1) 1/4" Hilti KWIK HUS-EZ

ATTACHMENT TO CONCRETE: 1/4" HILTI KWIK HUS-EZ
ATTACHMENT TO STUD: FIXED CONNECTION W/(4)#10-16

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

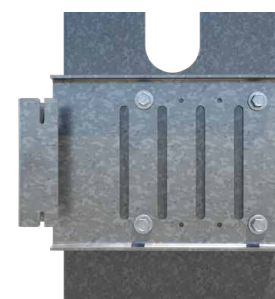
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	155	560	600	280
	43mils (18ga)			(4) x #10	155	655	670	415
	54mils (16ga)			(4) x #10	155	1000	970	840
	68mils (14ga)			(4) x #10	155	1045	1325	865
	97mils (12ga)			(4) x #10	155	1045	2040	865
DRC6-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	155	560	600	235
	43mils (18ga)			(4) x #10	155	655	670	345
	54mils (16ga)			(4) x #10	155	1000	970	705
	68mils (14ga)			(4) x #10	155	1045	1325	725
	97mils (12ga)			(4) x #10	155	1045	2040	725
DRC8-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	140	560	620	240
	43mils (18ga)			(4) x #10	140	655	730	360
	54mils (16ga)			(4) x #10	140	1000	1060	725
	68mils (14ga)			(4) x #10	140	1045	1340	745
	97mils (12ga)			(4) x #10	140	1045	1965	745



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	115	490	440	280
	43mils (18ga)			(4) x #10	115	540	520	415
	54mils (16ga)			(4) x #10	115	850	870	740
	68mils (14ga)			(4) x #10	115	850	1170	740
	97mils (12ga)			(4) x #10	115	850	1600	805
DRC6-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	115	490	440	235
	43mils (18ga)			(4) x #10	115	540	520	345
	54mils (16ga)			(4) x #10	115	850	870	705
	68mils (14ga)			(4) x #10	115	850	1170	725
	97mils (12ga)			(4) x #10	115	850	1600	725
DRC8-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(4) x #10	120	490	485	240
	43mils (18ga)			(4) x #10	120	540	620	360
	54mils (16ga)			(4) x #10	120	850	900	725
	68mils (14ga)			(4) x #10	120	850	1105	745
	97mils (12ga)			(4) x #10	120	850	1710	745



(4) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3000psi uncracked concrete using (1) x 1/4" Hilti KWIK HUS-EZ anchor only.
- 2 (1) x 1/4" Hilti KWIK HUS-EZ anchors (nom. embedment depth of 2-1/2", 3000psi uncracked concrete) should be fastened at every 6" o.c. for Drift Rail attachment to structure. Other anchors may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where anchors are loaded simultaneously, load interaction must be considered following anchor manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

Drift Rail and Clip - Attachment Using (1) 1/4" Hilti KWIK HUS-EZ

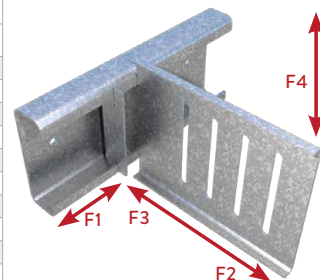
ATTACHMENT TO CONCRETE: 1/4" HILTI KWIK HUS-EZ

ATTACHMENT TO STUD: FIXED CONNECTION W/(8)#10-16

Drift Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

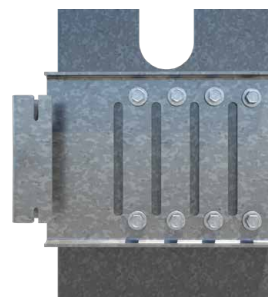
Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(8) x #10	155	560	600	395
	43mils (18ga)			(8) x #10	155	655	670	585
	54mils (16ga)			(8) x #10	155	1000	970	875
	68mils (14ga)			(8) x #10	155	1045	1325	920
	97mils (12ga)			(8) x #10	155	1045	2040	920
DRC8-97	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(8) x #10	140	560	620	375
	43mils (18ga)			(8) x #10	140	655	730	555
	54mils (16ga)			(8) x #10	140	1000	1060	910
	68mils (14ga)			(8) x #10	140	1045	1340	910
	97mils (12ga)			(8) x #10	140	1045	1965	910



Drift Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud Mils (Gauge)	Anchor to structure	Framing Connection		ASD Allowable Loads (lbs)			
			Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(8) x #10	115	490	440	395
	43mils (18ga)			(8) x #10	115	540	520	585
	54mils (16ga)			(8) x #10	115	850	870	740
	68mils (14ga)			(8) x #10	115	850	1170	740
	97mils (12ga)			(8) x #10	115	850	1600	805
DRC8-68	33mils (20ga)	(1) x 1/4" Hilti KWIK HUS-EZ @ 6" o.c. (3000psi uncracked concrete)	See Figure	(8) x #10	120	490	485	375
	43mils (18ga)			(8) x #10	120	540	620	555
	54mils (16ga)			(8) x #10	120	850	900	800
	68mils (14ga)			(8) x #10	120	850	1105	800
	97mils (12ga)			(8) x #10	120	850	1710	865



(8) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip where Drift Rail is attached to 3000psi uncracked concrete using (1) x 1/4" Hilti KWIK HUS-EZ anchor only.
- 2 (1) x 1/4" Hilti KWIK HUS-EZ anchors (nom. embedment depth of 2-1/2", 3000psi uncracked concrete) should be fastened at every 6" o.c. for Drift Rail attachment to structure. Other anchors may be used to achieve full clip capacity but must be designed separately.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Where anchors are loaded simultaneously, load interaction must be considered following anchor manufacturer guidelines.
- 5 Use linear load interaction for combined loading conditions.
- 6 Minimum (8) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 7 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 8 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

Drift Headed Rail and Clip - Cast In Place

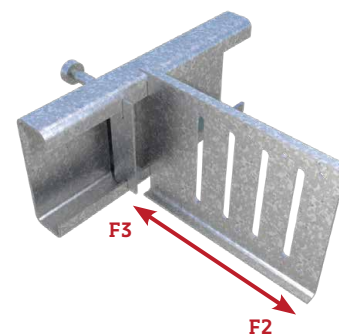
ATTACHMENT TO STRUCTURE: **CAST IN PLACE**

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

Drift Headed Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

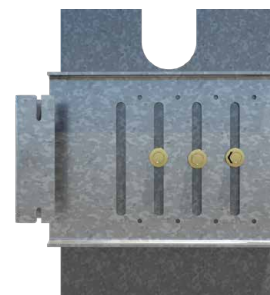
Clip designation	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)	
		Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-97	33mils (20ga)	See Figure	(2) x #14	560	600
	43mils (18ga)		(2) x #14	655	670
	54mils (16ga)		(2) x #14	1000	970
	68mils (14ga)		(2) x #14	1085	1325
	97mils (12ga)		(2) x #14	1085	2040
DRC6-97	33mils (20ga)	See Figure	(3) x #14	560	600
	43mils (18ga)		(3) x #14	655	670
	54mils (16ga)		(3) x #14	1000	970
	68mils (14ga)		(3) x #14	1085	1325
	97mils (12ga)		(3) x #14	1085	2040
DRC8-97	33mils (20ga)	See Figure	(3) x #14	560	620
	43mils (18ga)		(3) x #14	655	730
	54mils (16ga)		(3) x #14	1000	1060
	68mils (14ga)		(3) x #14	1085	1340
	97mils (12ga)		(3) x #14	1085	1965



Drift Headed Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A DEFLECTION CONNECTION

Clip designation	Stud Mils (Gauge)	Framing Connection		ASD Allowable Loads (lbs)	
		Screw Pattern	No. of Screws	F2 (Tension)	F3 (Compression)
DRC3-68	33mils (20ga)	See Figure	(2) x #14	490	440
	43mils (18ga)		(2) x #14	540	520
	54mils (16ga)		(2) x #14	850	870
	68mils (14ga)		(2) x #14	850	1170
	97mils (12ga)		(2) x #14	850	1600
DRC6-68	33mils (20ga)	See Figure	(3) x #14	490	440
	43mils (18ga)		(3) x #14	540	520
	54mils (16ga)		(3) x #14	850	870
	68mils (14ga)		(3) x #14	850	1170
	97mils (12ga)		(3) x #14	850	1600
DRC8-68	33mils (20ga)	See Figure	(3) x #14	490	485
	43mils (18ga)		(3) x #14	540	620
	54mils (16ga)		(3) x #14	850	900
	68mils (14ga)		(3) x #14	850	1105
	97mils (12ga)		(3) x #14	850	1710



(3) #14 Deflection Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Maximum tension on DHR-97 anchor should not exceed 1,600 lbs ASD. In tension and shear, the strength of the DHR-97 anchor itself should be considered. The weld does not need to be considered in tension or shear as the load table and 1,600 lbs ASD tension maximum are inclusive of the strength of the welds. Designers must check Drift Headed Rail (DHR-97) tension and shear anchorage capacity in concrete per ACI 318 based on actual edge distance and concrete compressive strength.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (2) x #14 shouldered screws (for DRC3) and (3) x #14 shouldered screws (for DRC6 and DRC8) must be used to secure the Drift Rail Clip for attachment to stud (#14 shouldered screws provided with each Drift Rail Clip).
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.

Drift Headed Rail and Clip - Cast In Place

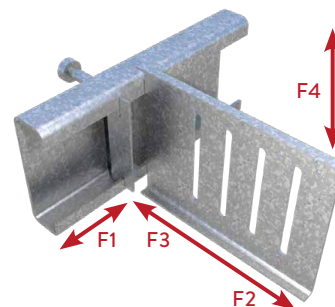
ATTACHMENT TO STRUCTURE: **CAST IN PLACE**

ATTACHMENT TO STUD: **FIXED CONNECTION W/(4)#10-16**

Drift Headed Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

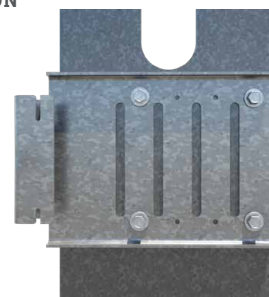
Clip designation	Stud gauge (mils)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-97	20ga (33mils)	See Figure	(4) x #10	155	560	600	280
	18ga (43mils)		(4) x #10	155	655	670	415
	16ga (54mils)		(4) x #10	155	1000	970	840
	14ga (68mils)		(4) x #10	155	1085	1325	865
	12ga (97mils)		(4) x #10	155	1085	2040	865
DRC6-97	20ga (33mils)	See Figure	(4) x #10	155	560	600	235
	18ga (43mils)		(4) x #10	155	655	670	345
	16ga (54mils)		(4) x #10	155	1000	970	705
	14ga (68mils)		(4) x #10	155	1085	1325	725
	12ga (97mils)		(4) x #10	155	1085	2040	725
DRC8-97	20ga (33mils)	See Figure	(4) x #10	140	560	620	240
	18ga (43mils)		(4) x #10	140	655	730	360
	16ga (54mils)		(4) x #10	140	1000	1060	725
	14ga (68mils)		(4) x #10	140	1085	1340	745
	12ga (97mils)		(4) x #10	140	1085	1965	745



Drift Headed Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud gauge (mils)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC3-68	20ga (33mils)	See Figure	(4) x #10	115	490	440	280
	18ga (43mils)		(4) x #10	115	540	520	415
	16ga (54mils)		(4) x #10	115	850	870	740
	14ga (68mils)		(4) x #10	115	850	1170	740
	12ga (97mils)		(4) x #10	115	850	1600	805
DRC6-68	20ga (33mils)	See Figure	(4) x #10	115	490	440	235
	18ga (43mils)		(4) x #10	115	540	520	345
	16ga (54mils)		(4) x #10	115	850	870	705
	14ga (68mils)		(4) x #10	115	850	1170	725
	12ga (97mils)		(4) x #10	115	850	1600	725
DRC8-68	20ga (33mils)	See Figure	(4) x #10	120	490	485	240
	18ga (43mils)		(4) x #10	120	540	620	360
	16ga (54mils)		(4) x #10	120	850	900	725
	14ga (68mils)		(4) x #10	120	850	1105	745
	12ga (97mils)		(4) x #10	120	850	1710	745



(4) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Maximum tension on DHR-97 anchor should not exceed 1,600 lbs ASD. In tension and shear, the strength of the DHR-97 anchor itself should be considered. The weld does not need to be considered in tension or shear as the load table and 1,600 lbs ASD tension maximum are inclusive of the strength of the welds. Designers must check Drift Headed Rail (DHR-97) tension and shear anchorage capacity in concrete per ACI 318 based on actual edge distance and concrete compressive strength.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 6 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.

Drift Headed Rail and Clip - Cast In Place

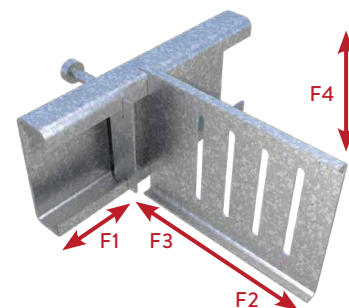
ATTACHMENT TO STRUCTURE: **CAST IN PLACE**

ATTACHMENT TO STUD: **FIXED CONNECTION W/(8)#10-16**

Drift Headed Rail and Clip - 12ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

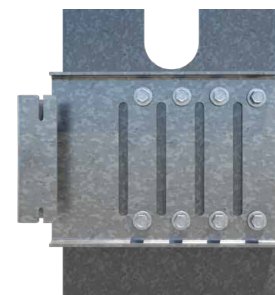
Clip designation	Stud gauge (mils)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-97	20ga (33mils)	See Figure	(8) x #10	155	560	600	395
	18ga (43mils)		(8) x #10	155	655	670	585
	16ga (54mils)		(8) x #10	155	1000	970	875
	14ga (68mils)		(8) x #10	155	1085	1325	920
	12ga (97mils)		(8) x #10	155	1085	2040	920
DRC8-97	20ga (33mils)	See Figure	(8) x #10	140	560	620	375
	18ga (43mils)		(8) x #10	140	655	730	555
	16ga (54mils)		(8) x #10	140	1000	1060	910
	14ga (68mils)		(8) x #10	140	1085	1340	910
	12ga (97mils)		(8) x #10	140	1085	1965	910



Drift Headed Rail and Clip - 14ga Clip / 12ga Rail

ALLOWABLE DRIFT RAIL CLIP LOADS USING CLIP AS A FIXED CONNECTION

Clip designation	Stud gauge (mils)	Framing Connection		ASD Allowable Loads (lbs)			
		Screw Pattern	No. of Screws	F1 (In-Plane)	F2 (Tension)	F3 (Compression)	F4 (Shear)
DRC6-68	20ga (33mils)	See Figure	(8) x #10	115	490	440	395
	18ga (43mils)		(8) x #10	115	540	520	585
	16ga (54mils)		(8) x #10	115	850	870	740
	14ga (68mils)		(8) x #10	115	850	1170	740
	12ga (97mils)		(8) x #10	115	850	1600	805
DRC8-68	20ga (33mils)	See Figure	(8) x #10	120	490	485	375
	18ga (43mils)		(8) x #10	120	540	620	555
	16ga (54mils)		(8) x #10	120	850	900	800
	14ga (68mils)		(8) x #10	120	850	1105	800
	12ga (97mils)		(8) x #10	120	850	1710	865



(8) #10 Screw Pattern
Shown in a DRC6 Clip

Notes:

- 1 Allowable loads (ASD) listed are for Drift Rail Clip to stud only (framing connection).
- 2 Maximum tension on DHR-97 anchor should not exceed 1,600 lbs ASD. In tension and shear, the strength of the DHR-97 anchor itself should be considered. The weld does not need to be considered in tension or shear as the load table and 1,600 lbs ASD tension maximum are inclusive of the strength of the welds. Designers must check Drift Headed Rail (DHR-97) tension and shear anchorage capacity in concrete per ACI 318 based on actual edge distance and concrete compressive strength.
- 3 Allowable loads have not been increased for wind, seismic, or other factors.
- 4 Minimum (4) x #10-16 screws must be used to secure the Drift Rail Clip for attachment to stud.
- 5 It is the responsibility of the designer to properly detail connections on the contract drawings.
- 6 F1 (In-Plane) loads are based on using a Drift Locking Clip (DRLC) or Drift Locking Angle (DRLA) restricting Drift Clip lateral movement.