

Drift Head-of-Wall

Head-of-Wall drift and deflection connection

Head-of-Wall drift and deflection for exterior curtain wall and interior nonload-bearing walls

ClarkDietrich's Drift Head-of-Wall Clips are used in deflection conditions for in-fill curtain wall assemblies and/or interior nonload-bearing partitions to provide for both vertical (deflection) and lateral (drift) movement.

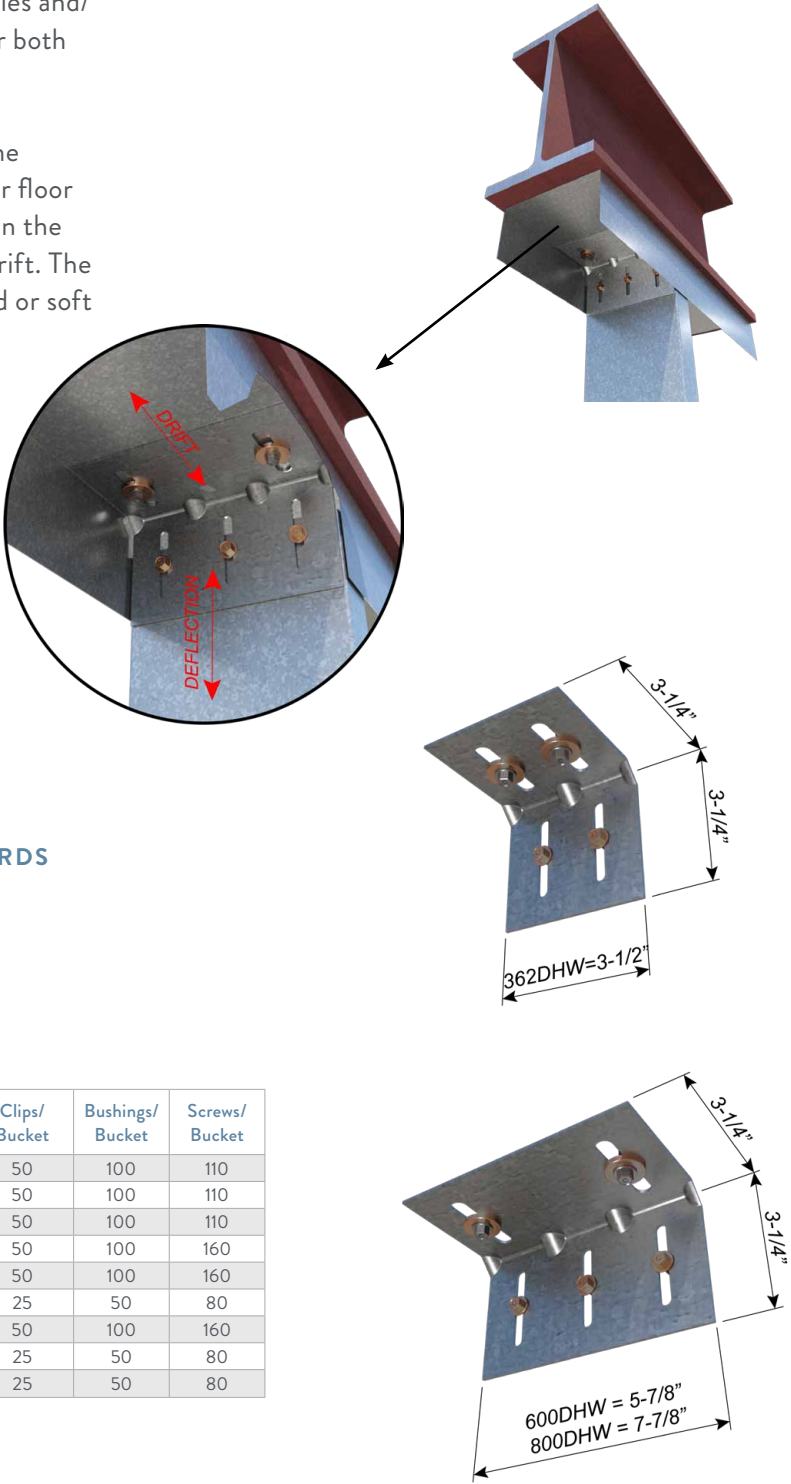
The Drift Head-of-Wall Clips can be attached to the underside of structural members, concrete decks or floor assemblies. Structural attachments are positioned in the center of the slot with a bushing to allow building drift. The Drift Head-of-Wall clip can be installed on the hard or soft side of the stud.

MATERIAL SPECIFICATIONS

- Gauge: 18 gauge (43mils)
Design Thickness: 0.0451 inches
- Gauge: 14 gauge (68mils)
Design Thickness: 0.0713 inches
- Gauge: 12 gauge (97mils)
Design Thickness: 0.1017 inches
- Yield Strength: 50ksi
- Coating: G90

CODE APPROVALS & PERFORMANCE STANDARDS

- IAPMO ER-729
- AISI S100



Drift Head-of-Wall (DHW)

Clip Designation	mils (ga)	Design Thickness (in)	Clip Length (in)	Clips/ Bucket	Bushings/ Bucket	Screws/ Bucket
362DHW-43	43 (18)	0.0451	3-1/2	50	100	110
362DHW-68	68 (14)	0.0713	3-1/2	50	100	110
362DHW-97	97 (12)	0.1017	3-1/2	50	100	110
600DHW-43	43 (18)	0.0451	5-7/8	50	100	160
600DHW-68	68 (14)	0.0713	5-7/8	50	100	160
600DHW-97	97 (12)	0.1017	5-7/8	25	50	80
800DHW-43	43 (18)	0.0451	7-7/8	50	100	160
800DHW-68	68 (14)	0.0713	7-7/8	25	50	80
800DHW-97	97 (12)	0.1017	7-7/8	25	50	80

INSTALLATION

Attach to primary structure using 1/4" fasteners with drift bushings for steel applications or 1/4" anchors with drift bushings for concrete. Proprietary Deflection Screws are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.

Drift Bushing and Deflection Screws

Step bushings are provided for the connection to the structure and allow for 2" lateral deflection (1" left and right). Proprietary Deflection Screws are provided for the connection of the clip to the stud, and allow for 2" vertical deflection (1" up and down). These fasteners eliminate drag, binding or resistance that can often occur with common fasteners.



Drift Head-of-Wall

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Drift Head-of-Wall (DHW-43)

DEFLECTION CONNECTIONS

Clip Designation	Framing Details			Loads Capacities (lbs)							
	Stud Depth (in)	Thickness mils (ga)	Yield Strength (ksi)	Shear (F4) - Center*				Shear (F4) - Offset*			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-43	3-5/8	33 (20)	33	40	505	260	415	15	575	295	475
		43 (18)	33	45	545	280	445	15	795	410	655
		54 (16)	50	80	545	280	445	20	1040	535	855
600DHW-43	6	33 (20)	33	135	765	395	630	55	990	510	815
		43 (18)	33	235	805	415	665	75	1255	605	905
		54 (16)	50	265	860	440	705	90	1700	605	905
800DHW-43	8	33 (20)	33	480	1095	560	900	155	1160	400	640
		43 (18)	33	490	1355	605	905	185	1575	540	870
		54 (16)	50	530	1810	605	905	225	1810	605	905

Drift Head-of-Wall (DHW-68)

DEFLECTION CONNECTIONS

Clip Designation	Framing Details			Loads Capacities (lbs)							
	Stud Depth (in)	Thickness mils (ga)	Yield Strength (ksi)	Shear (F4) - Center*				Shear (F4) - Offset*			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-68	3-5/8	33 (20)	33	160	835	405	610	100	710	365	585
		43 (18)	33	200	1295	605	905	120	1065	545	875
		54 (16)	50	200	1295	445	715	120	1530	525	840
		68 (14)	50	215	1295	445	715	130	1860	640	1025
		97 (12)	50	220	1485	510	820	130	2085	720	1150
600DHW-68	6	33 (20)	33	535	1225	610	910	195	1155	595	910
		43 (18)	33	535	1825	830	1325	195	1955	905	1360
		54 (16)	50	610	2695	925	1485	280	2620	900	1445
		68 (14)	50	610	2795	965	1540	280	3010	1035	1655
		97 (12)	50	620	2795	965	1540	315	3960	1365	2180
800DHW-68	8	33 (20)	33	1210	1680	610	910	445	1490	610	910
		43 (18)	33	1285	2540	905	1360	455	2660	905	1360
		54 (16)	50	1410	3745	1290	2065	455	3700	1275	2040
		68 (14)	50	1455	3980	1370	2190	455	4305	1460	2195
		97 (12)	50	1540	4280	1460	2195	460	4385	1460	2195

Drift Head-of-Wall (DHW-97)

DEFLECTION CONNECTIONS

Clip Designation	Framing Details			Loads Capacities (lbs)							
	Stud Depth (in)	Thickness mils (ga)	Yield Strength (ksi)	Shear (F4) - Center*				Shear (F4) - Offset*			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-97	3-5/8	33 (20)	33	150	850	405	610	85	885	405	610
		43 (18)	33	220	1275	605	905	85	1430	605	905
		54 (16)	50	240	1655	570	910	125	1790	615	985
		68 (14)	50	240	1675	575	925	130	1945	670	1070
		97 (12)	50	330	1675	575	925	145	1960	675	1080
600DHW-97	6	33 (20)	33	665	1155	595	910	270	1490	610	910
		43 (18)	33	690	1615	830	1325	325	2360	905	1360
		54 (16)	50	875	2750	945	1515	325	3210	1105	1770
		68 (14)	50	1000	2750	945	1515	325	3425	1180	1885
		97 (12)	50	1200	2970	1020	1635	415	3425	1180	1885
800DHW-97	8	33 (20)	33	1355	1350	610	910	340	1725	610	910
		43 (18)	33	1580	2145	905	1360	410	2715	905	1360
		54 (16)	50	1640	4525	1560	2495	520	4420	1520	2435
		68 (14)	50	1640	5195	1790	2860	740	4420	1520	2435
		97 (12)	50	2320	5390	1855	2970	740	4470	1540	2460

Notes:

- 1 Listed capacities were derived from calculations and structural tests in accordance with provisions of AISI S100-16(R2020)/S2-20 and ICC-ES AC261.
- 2 ASD and LRFD loads are based on calculated nominal capacities only without considering 1/8" service loads. Designer shall use governing loads based on 1/8" service and strength capacities.
- 3 The safety factor for ASD loads and resistance factor for LRFD loads are calculated in accordance with Chapter K of AISI-S100.
- 4 *The shear deflection tests were carried out with:
 - Center condition (fasteners (w/drift bushings) and framing screws centered in slots)
 - Off-set condition (fasteners (w/drift bushings) and framing screws at far end of slots).
- 5 For Center Condition a stand-off distance of 1" was provided between end of the framing and clip structural leg.
- 6 For Offset Condition a stand-off distance of 2" was provided between end of the framing and clip structural leg.
- 7 ClarkDietrich Proprietary Deflection Screws (0.25" dia) were used to attach clips to framing members through the provided slotted holes.
- 8 It is the responsibility of the design professional to detail the project drawings for proper Drift Head-of-Wall installation.
- 9 Other framing members may be used with these clips; however, it is the responsibility of the design professional to verify the framing members' capacities and potential failure modes.

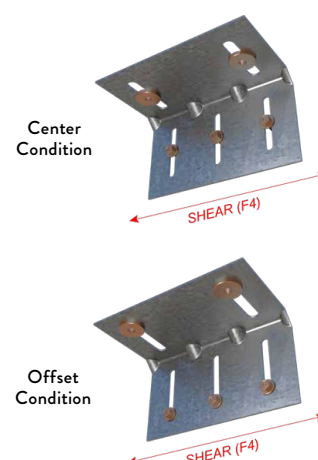
Drift Head-of-Wall (DHW-43)

Table 1	Clip Designation	Stud Thickness / Yield Strength / mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-43		33 (20) 33	1/4" - 20 Fasteners in 3/16" Steel	40	505	260	415	15	575	295	475
		43 (18) 33		45	545	280	445	15	795	410	655
		54 (16) 50		80	545	280	445	20	1040	535	855
600DHW-43		33 (20) 33		135	765	395	630	55	990	510	815
		43 (18) 33		235	805	415	665	75	1255	605	905
		54 (16) 50		265	860	440	705	90	1700	605	905
800DHW-43		33 (20) 33		480	1095	560	900	155	1160	400	640
		43 (18) 33		490	1355	605	905	185	1575	540	870
		54 (16) 50		530	1810	605	905	225	1810	605	905

Table 2	Clip Designation	Stud Thickness / Yield Strength / mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-43		33 (20) 33	1/4" Hilti Kwik HUS-EZ (2-1/2" Embedment in to 3000psi cracked concrete)	40	505	260	415	15	575	295	475
		43 (18) 33		45	545	280	445	15	795	410	655
		54 (16) 50		80	545	280	445	20	1040	535	855
600DHW-43		33 (20) 33		135	765	395	630	55	990	510	815
		43 (18) 33		235	805	415	665	75	1215	605	905
		54 (16) 50		265	860	440	705	90	1215	605	905
800DHW-43		33 (20) 33		480	1095	560	900	155	1160	400	640
		43 (18) 33		490	1215	605	905	185	1575	540	870
		54 (16) 50		530	1215	605	905	225	1810	605	905

Notes:

- Listed capacities were derived from calculations and structural tests in accordance with provisions of AISI S100-16(R2020)/S2-20, ICC-ES AC261, and ACI 318-19.
- Table-1 shall be applicable when 1/4" fasteners (w/drift bushings) are used for attachment to steel structure.
- Table-2 shall be applicable when 1/4" Hilti Kwik HUS-EZ Anchors (w/ drift bushings) are used for attachment to concrete structure.
- ASD and LRFD loads are based on calculated nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.
- Lateral bridging within 12" of the connection is recommended to minimize torsional effects on the stud.
- DHW clip allows up to 2" (±1") of vertical displacement, and 2" (±1") of drift in the plane of the wall.
 - "Center" condition is for the Center configuration of both Drift and Vertical Displacement
 - "Offset" condition is for the Offset configuration of both Drift and Vertical Displacement
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) shall be used to attach clips to framing members through the provided slotted holes.
- For anchors in concrete, the listed values are applicable only for following:
 - Anchor embedment depth of 2-1/2"
 - Minimum of 4.5" edge distance perpendicular to concrete edge
 - Anchor attachment spacing provided for 362DHW, 600DHW and 800DHW
 - Minimum concrete thickness of 4-1/8"
 - 3000psi normal weight cracked concrete
- Capacities have not been increased for wind, seismic, or other factors.
- It is the responsibility of the design professional to detail the project drawings for proper Drift Head-of-Wall installation.



Drift Head-of-Wall

Head-of-Wall drift and deflection connection

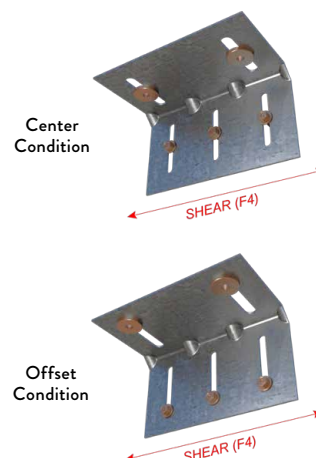
Drift Head-of-Wall (DHW-68)

Table 1	Clip Designation	Stud Thickness / Yield Strength mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-68		33 (20) 33	1/4" - 20 Fasteners in 3/16" Steel	150	835	405	610	85	710	365	585
		43 (18) 33		200	1275	445	715	85	1065	525	840
		54 (16) 50		200	1295	445	715	120	1530	525	840
		68 (14) 50		215	1295	445	715	130	1860	640	1025
		97 (12) 50		220	1485	510	820	130	1960	675	1080
600DHW-68		33 (20) 33		535	1155	595	910	195	1155	595	910
		43 (18) 33		535	1615	830	1325	195	1955	905	1360
		54 (16) 50		610	2695	925	1485	280	2620	900	1445
		68 (14) 50		610	2750	945	1515	280	3010	1035	1655
		97 (12) 50		620	2795	965	1540	315	3425	1180	1885
800DHW-68		33 (20) 33		1210	1350	610	910	340	1490	610	910
		43 (18) 33		1285	2145	905	1360	410	2660	905	1360
		54 (16) 50		1410	3745	1290	2065	455	3700	1275	2040
		68 (14) 50		1455	3980	1370	2190	455	4305	1460	2195
		97 (12) 50		1540	4280	1460	2195	460	4385	1460	2195

Table 2	Clip Designation	Stud Thickness / Yield Strength mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-68		33 (20) 33	1/4" Hilti Kwik HUS-EZ (2-1/2" Embedment in to 3000psi cracked concrete)	150	835	405	610	85	710	365	585
		43 (18) 33		200	1275	445	715	85	1065	525	840
		54 (16) 50		200	1295	445	715	120	1530	525	840
		68 (14) 50		215	1295	445	715	130	1860	640	1025
		97 (12) 50		220	1485	510	820	130	1930	665	1080
600DHW-68		33 (20) 33		535	1155	595	910	195	1155	595	910
		43 (18) 33		535	1295	665	1110	195	1295	665	1110
		54 (16) 50		610	1930	665	1110	280	1930	665	1110
		68 (14) 50		610	1930	665	1110	280	1930	665	1110
		97 (12) 50		620	1930	665	1110	315	1930	665	1110
800DHW-68		33 (20) 33		1210	1295	610	910	340	1295	610	910
		43 (18) 33		1285	1295	665	1110	410	1295	665	1110
		54 (16) 50		1410	1930	665	1110	455	1930	665	1110
		68 (14) 50		1455	1930	665	1110	455	1930	665	1110
		97 (12) 50		1540	1930	665	1110	460	1930	665	1110

Notes:

- Listed capacities were derived from calculations and structural tests in accordance with provisions of AISI S100-16(R2020)/S2-20, ICC-ES AC261, and ACI 318-19.
- Table-1 shall be applicable when 1/4" fasteners (w/drift bushings) are used for attachment to steel structure.
- Table-2 shall be applicable when 1/4" Hilti Kwik HUS-EZ Anchors (w/ drift bushings) are used for attachment to concrete structure.
- ASD and LRFD loads are based on calculated nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.
- Lateral bridging within 12" of the connection is recommended to minimize torsional effects on the stud.
- DHW clip allows up to 2" (±1") of vertical displacement, and 2" (±1") of drift in the place of the wall.
 - "Center" condition is for the Center configuration of both Drift and Vertical Displacement
 - "Offset" condition is for the Offset configuration of both Drift and Vertical Displacement
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) shall be used to attach clips to framing members through the provided slotted holes.
- For anchors in concrete, the listed values are applicable only for following:
 - Anchor embedment depth of 2-1/2"
 - Minimum of 4.5" edge distance perpendicular to concrete edge
 - Anchor attachment spacing provided for 362DHW, 600DHW and 800DHW
 - Minimum concrete thickness of 4-1/8"
 - 3000psi normal weight cracked concrete
- Capacities have not been increased for wind, seismic, or other factors.
- It is the responsibility of the design professional to detail the project drawings for proper Drift Head-of-Wall installation.



Drift Head-of-Wall (DHW-97)

Table 1	Clip Designation	Stud Thickness / Yield Strength / mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-97		33 (20) 33	1/4" - 20 Fasteners in 3/16" Steel	150	850	405	610	85	885	405	610
		43 (18) 33		220	1275	570	905	85	1430	605	905
		54 (16) 50		240	1655	570	910	125	1790	615	985
		68 (14) 50		240	1675	575	925	130	1945	670	1070
		97 (12) 50		330	1675	575	925	145	1960	675	1080
600DHW-97		33 (20) 33		665	1155	595	910	270	1490	610	910
		43 (18) 33		690	1615	830	1325	325	2360	905	1360
		54 (16) 50		875	2750	945	1515	325	3210	1105	1770
		68 (14) 50		1000	2750	945	1515	325	3425	1180	1885
		97 (12) 50		1200	2970	1020	1635	415	3425	1180	1885
800DHW-97		33 (20) 33		1355	1350	610	910	340	1725	610	910
		43 (18) 33		1580	2145	905	1360	410	2715	905	1360
		54 (16) 50		1640	4525	1560	2495	520	4420	1520	2435
		68 (14) 50		1640	5195	1790	2860	740	4420	1520	2435
		97 (12) 50		2320	5390	1855	2970	740	4470	1540	2460

Table 2	Clip Designation	Stud Thickness / Yield Strength / mils (ga) ksi	Mechanically Anchored to Structure	Load Capacities (Lbs) / Clip							
				Shear (F4) - Center				Shear (F4) - Offset			
				1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
362DHW-97		33 (20) 33	1/4" Hilti Kwik HUS-EZ (2-1/2" Embedment in to 3000psi cracked concrete)	150	850	405	610	85	885	405	610
		43 (18) 33		220	1275	570	905	85	1295	605	905
		54 (16) 50		240	1655	570	910	125	1790	615	985
		68 (14) 50		240	1675	575	925	130	1930	665	1070
		97 (12) 50		330	1675	575	925	145	1930	665	1080
600DHW-97		33 (20) 33		665	1155	595	910	270	1295	610	910
		43 (18) 33		690	1295	665	1110	325	1295	665	1110
		54 (16) 50		875	1930	665	1110	325	1930	665	1110
		68 (14) 50		1000	1930	665	1110	325	1930	665	1110
		97 (12) 50		1200	1930	665	1110	415	1930	665	1110
800DHW-97		33 (20) 33		1355	1295	610	910	340	1295	610	910
		43 (18) 33		1580	1295	665	1110	410	1295	665	1110
		54 (16) 50		1640	1930	665	1110	520	1930	665	1110
		68 (14) 50		1640	1930	665	1110	740	1930	665	1110
		97 (12) 50		2320	1930	665	1110	740	1930	665	1110

Notes:

- Listed capacities were derived from calculations and structural tests in accordance with provisions of AISI S100-16(R2020)/S2-20, ICC-ES AC261, and ACI 318-19.
- Table-1 shall be applicable when 1/4" fasteners (w/drift bushings) are used for attachment to steel structure.
- Table-2 shall be applicable when 1/4" Hilti Kwik HUS-EZ Anchors (w/ drift bushings) are used for attachment to concrete structure.
- ASD and LRFD loads are based on calculated nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.
- Lateral bridging within 12" of the connection is recommended to minimize torsional effects on the stud.
- DHW clip allows up to 2" (±1") of vertical displacement, and 2" (±1") of drift in the place of the wall.
 - "Center" condition is for the Center configuration of both Drift and Vertical Displacement
 - "Offset" condition is for the Offset configuration of both Drift and Vertical Displacement
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) shall be used to attach clips to framing members through the provided slotted holes.
- For anchors in concrete, the listed values are applicable only for following:
 - Anchor embedment depth of 2-1/2"
 - Minimum of 4.5" edge distance perpendicular to concrete edge
 - Anchor attachment spacing provided for 362DHW, 600DHW and 800DHW
 - Minimum concrete thickness of 4-1/8"
 - 3000psi normal weight cracked concrete
- Capacities have not been increased for wind, seismic, or other factors.
- It is the responsibility of the design professional to detail the project drawings for proper Drift Head-of-Wall installation.

