

Product Name

Multi-Adjustable Curtain Wall Clips

Associated Specification Section

Section 08905 - Curtain Wall Anchors

Section 08900 - Glazed Curtain Wall

Manufacturer's Name

Halfen Anchoring Systems, A Division of Meadow Burke Products

Product Description

2003-07-29

**PRODUCT FEATURES**

- **BASIC USES / RELATED USES**
 - Curtain wall clips for edge-of-slab applications with up/down and in/out adjustability.
 - Dead load anchoring of curtain wall.
 - Wind load anchoring of curtain wall.
- **PRODUCT ATTRIBUTES AND CHARACTERISTICS**
 - Clips and washers are made of 6005-T5 aluminum alloy.
 - Extruded serrations on projected side.
 - Dead load clips have offset slot to maximize capacity.
 - Wind load clips allow for vertical movement of mullion, relative to clips.
 - Three dimensional adjustments, when used with Halfen anchor channel.
 - No shop assembly required.
- **SELECTION CRITERIA**
 - Three (3) sizes are available to fit most stick curtain wall applications.
 - The most efficient embed for edge-of-slab conditions can be calculated using Halfen's AnkerCalc calculation utility.
 - Clips may be used with embedded anchor channel or attached to structure with drilled, post-installed anchors.
- **APPLICABLE STANDARDS AND RELATED REFERENCES**
 - ASTM B221/B221M-02 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- **QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS**
 - Engineering Data:

Part Number	Description	Minimum Proj.	Maximum Proj.	Force Multipliers	
				Dead Load	Wind Load
HCWL1	Dead load, left	32 mm (1.25")	83 mm (3.25")	3.12	3.36
HCWR1	Dead Load, right	32 mm (1.25")	83 mm (3.25")	3.12	3.36
HCWL2	Dead load, left	57 mm (2.25")	108 mm (4.25")	3.31	2.95
HCWR2	Dead load, right	57 mm (2.25")	108 mm (4.25")	3.31	2.95
HCWL3	Dead load, left	83 mm (3.25")	133 mm (5.25")	3.53	2.71
HCWR3	Dead load, right	83 mm (3.25")	133 mm (5.25")	3.53	2.71
HWLC1	Wind load	57 mm (2.25")	57 mm (2.25")	---	2.65
HWLC2	Wind load	83 mm (3.25")	83 mm (3.25")	---	2.41

Part Number	Description	Minimum Proj.	Maximum Proj.	Force Multipliers	
				Dead Load	Wind Load
HWLC3	Wind load	108 mm (4.25")	108 mm (4.25")	---	2.24
HCWW	Serrated Washer, 30 mm x 30 mm (1-3/16" x 1-3/16"), with 14 mm (9/16") hole.				
HCWS	Nylatron Shim, 76 mm x 76 mm (3" x 3"), with 14 mm (9/16") hole				

- Test Results performed by Wiss, Janney, Elstner Associates, Inc. Report WJE No. 2002.2579.

	Small Clips (HCWL1/HCWR 1)	Medium Clips (HCWL2/HCWR 2)	Large Clips (HCWL3/HCWR 3)
Dead Load Configuration Average Ultimate Load	6400 lbs	6550 lbs	6650 lbs
Wind Load Configuration Average Ultimate Load	9900 lbs	8750 lbs	8800 lbs

- Loads shown are for pair of clips, with maximum eccentricity.
- LIMITATIONS
 - Calculations required for anchor application, to suit specific uses.
 - Mullion bolt and nut are not part of the assembly.
 - Anchor channel and fasteners must be engineered, considering eccentricity of clips.
- SAFETY PRECAUTIONS
 - Nylatron shims may be used between wind load clip and mullion to reduce friction.
 - Insulating shims may be used between backside of clip and structure to avoid galvanic action.
- AVAILABILITY
 - Product is available across North America.
- COST
 - Varies with substrate condition and configuration, and relative size of building.
 - Consult manufacturer national or regional offices for specific product costs or relative costs.

PRODUCT PROPERTIES

- MATERIALS AND PROPERTIES
 - Clips:
 - ASTM B221/B221M, Alloy 6005, Temper T5, extruded aluminum,
 - With impressed serrations gripping for serrated anchor washers,
 - Pilot hole for temporary fixing is standard.
 - Dead load clips:
 - Carry dead load, and wind/suction loads.
 - Marked "L" (left) or "R" (right) and "UP".
 - Two serrated washers required per dead load clip.
 - Wind load clips:
 - Resist wind/suction loads only.
 - One serrated washer required per wind load clip.
 - Shims: Nylatron, low-friction shims for wind load clips.

- ACCESSORIES
 - Bolts, nuts, and round washers of galvanized steel.
- DIMENSIONS
 - Sizes as indicated on Engineering Data table. Thickness is 9.5 mm (0.375").
 - Clips and washers accommodate 12.7 mm (1/2 inch) bolt to anchor mullion.
- SHOP FABRICATION AND ASSEMBLY
 - Shop fabricated and delivered to site ready to install.
- FINISH
 - Mill finish typical, other finishes available upon request.

PRODUCT PLACEMENT

- PREPARATION
 - Ensure substrate surfaces are in position and within tolerance of required position.
- APPLICATION
 - Pilot hole may be used to secure clip to mullion temporarily.
 - Bolt clips to anchor channel with Halfen Tee-bolts and nuts.
 - Bolt clips to mullion with 13 mm (1/2 inch) mullion nut and bolt (by others)
 - Typical dead load, edge of slab connection - one embed, two tee-bolts and nuts, two curtain wall clips, and four serrated washers. Mullion bolt and nut by others.
 - For thin concrete coverage, Halfen can provide embed devices with rebar anchors or can custom design an anchor suitable to the application.

Corporate Identification

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Classification and Filing

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