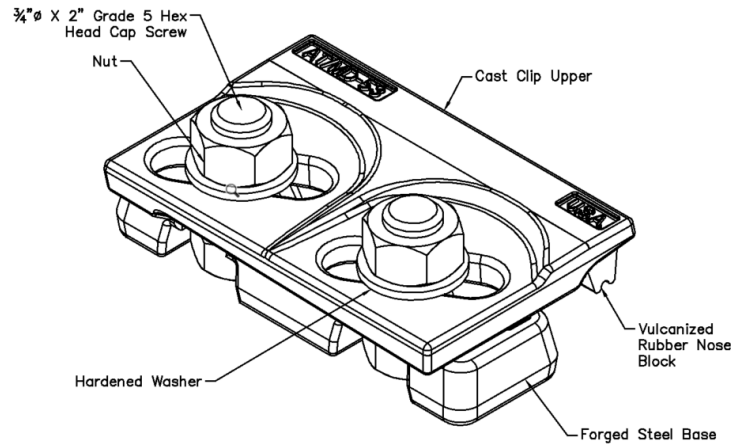




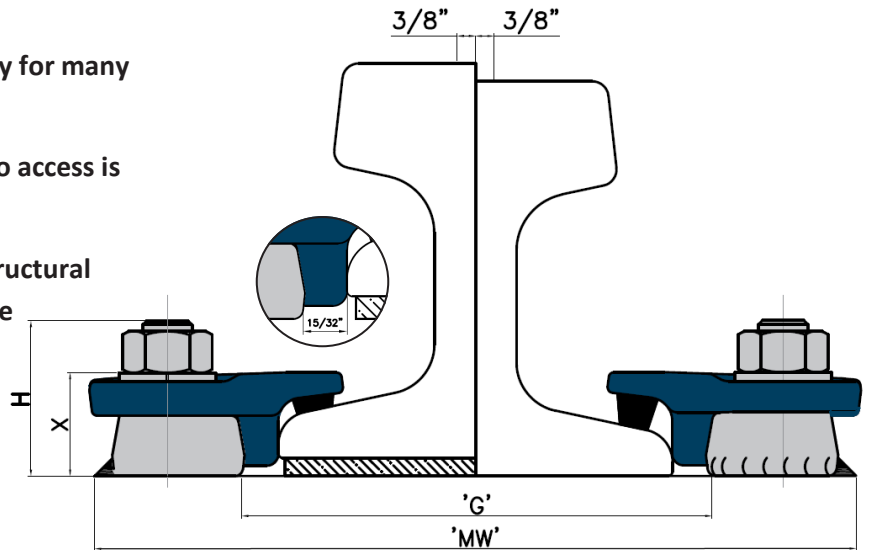
Clip Specifications	
Max Side Load Capacity:	53 Kips (235kN)
Horizontal Rail Adjustment	20mm (3/4") Total
Approximate Clip Weight	6.2lbs (w/ Hardware)
Bolt Torque	259 ft/lbs



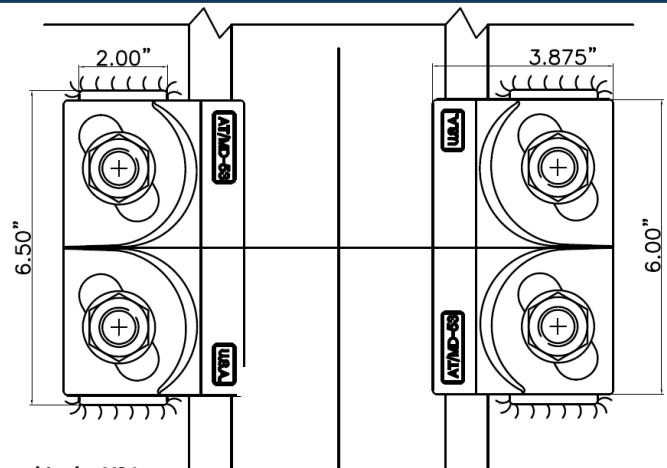
The Atlantic Track Mill Duty [MD]-53 Adjustable Crane Rail Clip is designed specifically to fix Crane Rail mounted on a narrow support beam or plate.

The low profile design allows this clip to be fitted on rail systems supporting cranes equipped with guide rollers.

- This proven design has been used successfully for many years throughout the world.
- The clip base is welded to the rail support. No access is required from below.
- The two components are locked together (structural friction connection) by properly torquing the grade 5 Hex Head Cap Screws.
- The clip has a self-tightening mechanism.
- A special vulcanized rubber nose block applies a controlled downforce to the rail.



Assembly Dimensions	
Clip Gauge (G)	Rail Base + .945"
Minimum Mounting Width (MW)	Rail Base + 5.51"
Clip Dimensions	H = 2.375" X = 1.575"

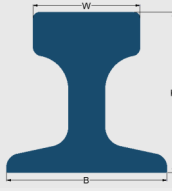


Engineered and Manufactured in the USA

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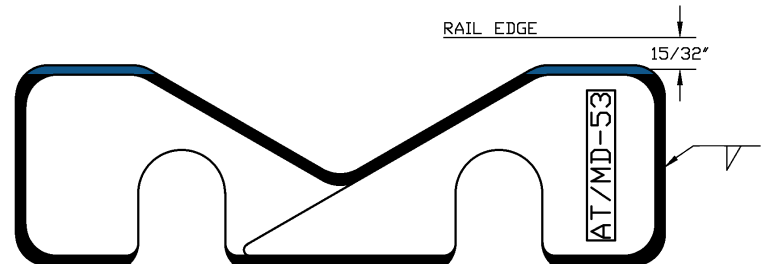
	Base (B) Inches	Height (H) Inches	Head Width (W) Inches	Suggested Minimum Mounting Width (MW) (Inches)	AT/MD-53 Pad Mounted	AT/MD-53 No Pad
ASCE 60	4¼	4¼	2¾	9¾	MD-53/60P	N/A
ASCE 80	5	5	2½	10½	MD-53/80P	N/A
ASCE 85	5 ³ / ₁₆	5 ³ / ₁₆	2 ⁹ / ₁₆	10 ⁵ / ₈	MD-53/85P	N/A
104 CR (MRS51)	5	5	2½	10½	MD-53/104P	MD-53/104NP
105 CR (MRS52)	5 ³ / ₁₆	5 ³ / ₁₆	2 ⁹ / ₁₆	10 ⁵ / ₈	MD-53/105P	MD-53/105NP
135 CR (MRS67)	5 ³ / ₁₆	5 ³ / ₁₆	3 ⁷ / ₁₆	10 ⁵ / ₈	MD-53/135P	MD-53/135NP
171 CR (MRS85)	6	6	4.3	11½	MD-53/171P	MD-53/171NP
175 (MRS87B)	6	6	4¼	11½	MD-53/175P	MD-53/175NP
MRS87A	6	6	4	11½	MD-53/MRS87A-P	MD-53/MRS87A-NP
DIN A65	6.89	2.95	2.56	11 ³ / ₈	MD-53/a65P	N/A
DIN A75	7.87	3.35	2.95	13 ³ / ₈	MD-53/a75P	MD-53/a75NP
DIN A100	7.87	3.74	3.94	13 ³ / ₈	MD-53/a100P	MD-53/a100NP
DIN A120	8.66	4.13	4.72	14 ³ / ₈	MD-53/a120P	MD-53/a120NP
DIN A150	8.66	5.91	5.91	14 ³ / ₈	MD-53/a150P	MD-53/a150NP

The Atlantic Track MD-Series Clips are available to suit most available rail sections. Please contact Atlantic Track if your rail does not appear in the above table.

Welding and Installation Guidelines

- Mark out and position clip base across rail centerline according to 'G' dimension on this Data Sheet.
- Weld all around the clip base with a 5/16" fillet weld, using low hydrogen electrodes. Recommended electrodes include AWS E7018 or E7028. Clip base is manufactured from weldable forged steel.

***For Clip Installation on systems without a Rail Pad, the weld closest to and parallel with the rail must be adapted or omitted. Please contact Atlantic Track for additional weld detail when pad is not to be used.**



- Do not apply coatings to the contact surface between upper and lower components. Consult with Atlantic Track prior to painting or coating any component.
- For complete installation guidelines, please contact Atlantic Track for the applicable Technical Bulletin.

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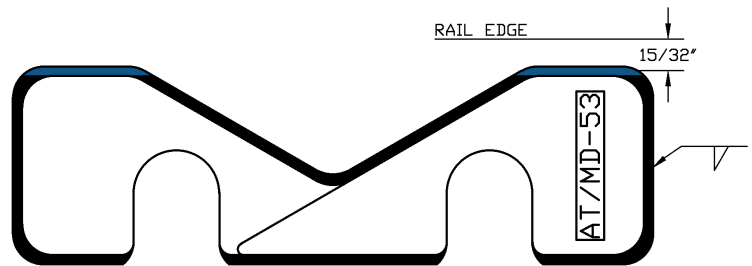
Technical Weld Details

The Atlantic Track MD-53 Crane Rail Clip has been designed to take lateral forces from crane rails. It consists of an upper part which has a feature to contact the side of the rail, a vulcanized rubber nose block which bears down on the rail and two Grade 5 Hex Head Cap Screws which fasten the two metal parts together. The designed lateral load for the clip is dependent on the amount of weld that is used to attach the lower part to the rail support. It is also dependent on other features of the design of the clip.

Atlantic Track has carried out calculations, using AISC Manual (Allowable Stress Design Method), to determine the allowable load. The calculations below show that with the recommended amount of weld the clip can carry a lateral load (allowable load) of 53 kips. Atlantic Track has undertaken a range of tests done independently. Based on the results of these tests and consideration of the rails that can be fixed with this clip, the Atlantic Track Technical Data Sheet shows a lateral load capacity of 53 kips.

Welding Instructions:

Weld all around the clip base with a 5/16" fillet weld, using low hydrogen electrodes. Recommended electrodes include AWS E7018 or E7028. The Clip base is manufactured from weldable forged steel. Throat thickness cannot exceed 5mm. [For Clip Installation on systems without a Rail Pad, the weld closest to and parallel with the rail must be adapted or omitted.](#)



Atlantic Track MD-53 Rail Clip Calculations:

Total length of 5/16" fillet weld = 14.0 inches.

Available strength of weld is determined in accordance with AISC (American Institute of Steel Construction Manual) specification using section J2.4 and table J2.5.

Nominal load capacity of weld, $R_n = 0.6 \times F_{EXX} \times 0.707 \times D/16 \times l$

Where, $F_{EXX} = 70$ ksi

D - weld size in sixteenth of an inch

l - weld length, inches.

Nominal load capacity of weld, $R_n = 0.6 \times 70 \times 0.707 \times 5/16 \times 14.0 = 129.91$ kips.

Available strength / Allowable strength using ASD method, $R_n/\Omega = 129.91 / 2 = 64.95$ kips.

Where $\Omega = 2.00$, safety factor.

Atlantic Track suggested maximum load considering both the calculated value and the results of tests = 235kN or 53 kips

Atlantic Track normally test clips to twice the specified allowable load. Some clips have been tested to loads higher than twice the design load to determine their suitability for use in nuclear installations.

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