



TOUGH TRAC™

MID ANGLE BALLAST PORTRAIT SYSTEM 2012

TOP PERFORMER

BEST IN CLASS
PRICING

ULTRA STRENGTH

70 LBS SNOW
LOADS



TOUGH TRAC™

The TOUGH TRAC solution for a low angle design for Flat Roof Mounting features a ballast design for a penetration free installation.

For applications requiring a ballasted mid angle degree tilt for flat roofs, the TOUGH TRAC Mid Angle Ballast Portrait System features a fixed 30 – 45 degree tilt with a penetration free ballast system.

Available with the TOUGH TRAC Standard Rail, our Mid Angle Ballast Portrait System can be designed to all types of configured layouts, degree tilts, and vertical heights.

In addition, with rear Joining Braces to another row, all systems are interlocked together to create a uniform array which prevents any row from sliding on the roof during high winds. Each ballast tray is designed to hold 12 concrete blocks from 4 - 8 inches for the required weight needed.

Consult your installer, architect, or engineer to determine your roof structure max weight loads and adequate spacing for shadowing between rows.



FACTORY PRODUCTION FACILITIES: Made in the USA & China

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Mid Angle Ballast Portrait Section

REAR
CROSS
BRACE

REAR
VERTICAL
SUPPORT

ONE PIECE
BALLAST
TRAY

C-RAIL ANGLE ARM

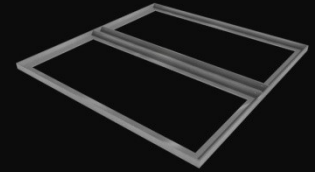
FRONT
VERTICAL
SUPPORT

SIDE CROSS BRACE

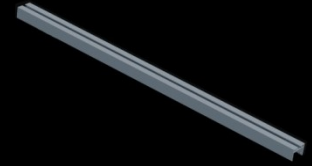
TOUGH TRAC

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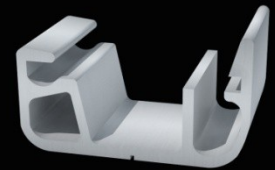
MABPS Parts



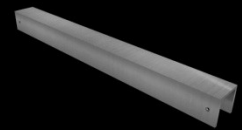
BALLAST TRAY



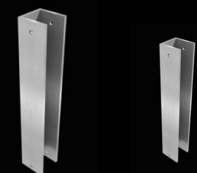
C-RAIL ANGLE ARM



STD RAIL CLICK MOUNT



JOINING BRACE



VERTICAL SUPPORTS

Mid Angle Ballast Portrait System comprises the following parts:

- One Piece Ballast Trays
- C Rail Angle Arms
- Click Mounts
- Front & Rear Vertical Supports
- Joining Braces
- Side Braces
- Standard Rail
- Connector Tubes
- Universal Top Mount End Clamps
- Universal Top Mount Mid Clamps
- 1/4" x 3" Stainless Steel Bolts/Washers/Nuts
- 1/4" x 2" Stainless Steel Bolts/Washers/Nuts
- 1/4" x 1" Stainless Steel Bolts/Washers/Nuts
- T Bolts and Square Stainless Steel Bolts/Washers/Nuts
- Set Screws #14 x 1.5" Stainless



RAIL BOLTS



STANDARD RAIL



CONNECTOR TUBE



TOP MOUNT CLAMPS



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Mid Angle Ballast Portrait System



Photo: Courtesy of www.contielectric.com

Component Specifications

Aluminum Rail & Parts: 6005 Aluminum USA (Mill Finish)

Hardware Parts: 300 & 400 Series Stainless Steel

Ballast Tray: One Piece Welded

Code Compliant

PE Certified
TUV Tested
ISO Certified

Warranty

20 Years Limited Warranty

Technical Support

Installation Manual & Videos
Layout Design & Bill of Materials Calculated

Key Benefits:

- Lowest Priced MSRP in the market.
- Simple Installation.
- Designed with One Piece Ballast Tray for easy install & can hold up to 12 blocks.
- Designed and Able to mount oversize panels. (250W – 300W)
- Available with 8"- 12" clearance in front end to avoid snow.
- Designed to accommodate all types of layout configurations.
- Best in class spans for Standard Rail.
- Standard rail can handle 70 lbs PSF snow loads at 90 mph wind zones. Tray spacing at 80".
- 100% all Aluminum Components and Stainless Steel Hardware.
- 20 Year Limited Warranty.
- Standard Set weighs 1.1 psf.



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