MODULAR TRACK WELDING CARRIAGE FROM STEELMAX®

RAIL RUNNER II

MODULAR WELDING/CUTTING CARRIAGE WITH INTEGRATED SEAM TRACKING

The Steelmax® Rail Runner II is a compact, modular, mechanized carriage which can be custom configured for a variety of welding, thermal cutting and gouging applications on flat or curved plate, tube and pipe. By utilizing a magnetic guide rail and positive rack and pinion drive, the system can be utilized in all welding positions. Ergonomic remote control pendant with simple, easy to find control knobs makes process adjustment possible without the operator lifting their welding hood. A digital display with numeric representation for each motion parameter makes presetting the optimum welding or cutting procedure simple and highly repeatable. The Rail Runner II increases arc-on time and produces consistent, high-quality welds and cuts in a fraction of the time required by manual operations. Optional accessories include tactile probe seam tracking and motorized vertical torch slide for automatic torch height control.

The Rail Runner II can be used with semi-flexible rail for plate and tank work with a minimum radius of 16’ (5m) or adapted to bent ring rail for pipe and tube applications. Standard ring rails are available for tube diameters from 8” (200mm) up to 9.85” (3000mm).

APPLICATIONS

- Trailer manufacturing
- Truck tanks
- Oil & Water storage tanks
- Pressure vessels
- Overlay/Hard facing
- Bridge girders
- Structural steel
- Structural towers
- Panel welding
- Boiler panel fabrication
- Shipbuilding and repairs
MODULAR TRACK WELDING CARRIAGE FROM STEELMAX®

RAIL RUNNER II Technical Specification

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>1~ 42V, 115V, 230 V, 50–60 Hz</td>
</tr>
<tr>
<td>Power</td>
<td>120 W</td>
</tr>
<tr>
<td>Welding positions</td>
<td>Horizontal PA (flat), PB (horizontal vertical), PC (horizontal)</td>
</tr>
<tr>
<td></td>
<td>Vertical PF (vertical up), PG (vertical down)</td>
</tr>
<tr>
<td>Minimum track curvature radius</td>
<td>5 m (16 ft)</td>
</tr>
<tr>
<td>Torch type</td>
<td>MIG/MAG</td>
</tr>
<tr>
<td>Torch diameter</td>
<td>16–22 mm (0.63–0.87&quot;) up to 35 mm (1.38&quot;) option</td>
</tr>
<tr>
<td>Minimum workpiece thickness</td>
<td>5 mm (0.20&quot;)</td>
</tr>
<tr>
<td>Horizontal pulling force</td>
<td>400 N</td>
</tr>
<tr>
<td>Vertical pulling force</td>
<td>400 N</td>
</tr>
<tr>
<td>Horizontal speed</td>
<td>0–300 cm/min (0–120 in/min)</td>
</tr>
<tr>
<td>Vertical speed</td>
<td>0–300 cm/min (0–120 in/min)</td>
</tr>
<tr>
<td>Oscillation type</td>
<td>linear</td>
</tr>
<tr>
<td>Oscillation path</td>
<td>triangle, straight line</td>
</tr>
<tr>
<td>Oscillator arm stroke</td>
<td>0–100 mm (0–3.9&quot;)</td>
</tr>
<tr>
<td>Oscillation width</td>
<td>0–50 mm (0–1.9&quot;)</td>
</tr>
<tr>
<td>Oscillation speed</td>
<td>0–3000 mm/min (0–118.0 in/min)</td>
</tr>
<tr>
<td>Oscillation delay at center and on ends</td>
<td>0–5 s</td>
</tr>
<tr>
<td>Maximum oscillator pulling force</td>
<td>100 N</td>
</tr>
<tr>
<td>Weight</td>
<td>10 kg (22 lbs)</td>
</tr>
</tbody>
</table>

FEATURES AND BENEFITS:
- Compact, lightweight design
- Simple, ergonomic remote control pendant with magnetic base and multifunction LED display
- Quick clamping torch holder mechanism:
  - Standard for torch diameters of 16–22 mm (0.63 – 0.87”)
  - Optional for larger torch diameters up to 35 mm (1.38”)
- Simple, precise torch adjustment
- Automatic ARC ON/OFF initiates welding and travel, simultaneously
- Closed loop control system insures accurate speed and position control
- Improves working environment - removes operator from heat and fumes
- Integrated linear oscillator
- Rack and pinion drive with integrated limit switches
- Improved weld performance
  - Constant travel speed maintains consistent heat input, minimizes distortion and eliminates over welding
  - Minimizes starts & stops in long welds, eliminating the associated weld defects
  - Digital display with numeric representation for each motion parameter makes presetting the optimum welding or cutting procedure simple and highly repeatable

Required accessories:
- SM-PBW-0482-15-02-00-0 Track segment of 6.5 ft (2 m)
- SM-ZSP-0475-56-00-00-0 Magnetic base unit
- SM-DYS-0482-15-01-01-0 Mounting Bracket for Magnet

Optional accessories:
- Motorized Vertical Slide SM-WC-RR-VS
- Seam Tracking Sensor SM-WC-RR-ST
RAIL OPTIONS FOR RAIL RUNNER FAMILY OF CARRIAGES

Hi Flex Rail

Hi Flex Rail can be equipped with magnetic and vacuum units as shown below.

- Hi Flex Rail
  - min OD 60 in (1.5 m)
  - length 60 in (1.52 m)
  - Product code: SM-TR0-0673-00-00-00-0

- Bracket for magnetic unit for semi-flexible rail and Hi Flex rail
  - Product code: SM-DYS-0483-19-00-00-0

- Bracket for narrow magnet flexible rail and Hi Flex rail
  - Product code: SM-DYS-0282-10-00-00-0

- Bracket for vacuum pad for semi-flexible rail and Hi Flex rail
  - Product code: SM-DYS-0541-11-01-00-0

- Vacuum pad for Non-ferrous material
  - Product code: SM-MST-0547-02-02-00-0

- Set of Hi Flex Rail Guiding Rollers (4 pcs)
  - Product code: SM-ZSP-0673-07-00-00-0

The regular Rail Runner/ Rail Runner 2 rollers should be replaced with the optional Hi Flex Rail guiding rollers.

Ring Rails

Available on request, diameter can be custom configured within the range from 8" OD up to 10 ft OD (200 mm to 3000 mm).

- Ring Rail Support with Magnetic feet
  - Product code: SM-WSP-0233-14-12-00-0

- Ring Rail Support with plastic feet
  - Product code: SM-WSP-0233-14-11-00-0
**Semi Flex Rail**

Semi-flexible rail 6.5 ft (2 m) long will flex at a minimum radius of 16 ft (5 m) without permanent deformation.

SM-PRW-0482-15-05-00-0

Semi-flexible rails can be custom rolled to a specific radius between 5 ft & 16 ft.

**Rigid Rail**

Rigid rail length 6.5 ft (2 m)

SM-PRW-0482-47-00-00-0

**Bracket for Magnetic Bridge**

SM-DYS-0482-21-00-00-0

**Vacuum Pad for Non-Ferrous Material**

SM-MST-0541-10-02-00-0

**Bracket for Narrow Magnet**

SM-PDS-0582-10-00-02-0

**Adjustable Spacing Magnetic Bridge**

SM-ZSP-0523-19-00-00-0

**Lightweight Magnetic Bridge**

SM-MST-0677-00-00-00-0

**Pivoting Magnetic Bridge**

SM-ZSP-0523-19-00-00-0