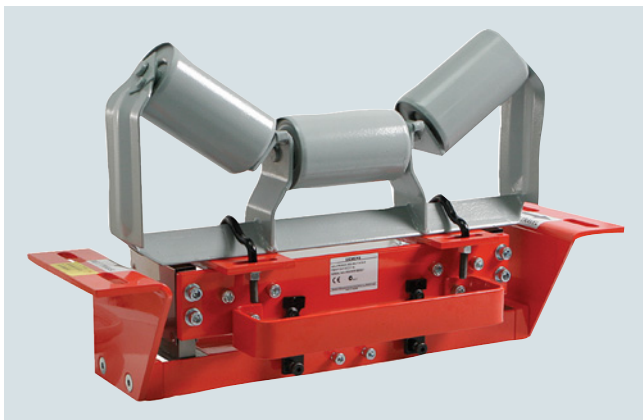


### Overview



Milltronics MSI is a heavy-duty, high accuracy full-frame single idler belt scale used for process and load-out control. Idler not included with belt scale.



Milltronics MMI is a heavy-duty, high accuracy multiple idler belt scale used for critical process and load-out control. Idler not included with belt scale.

### Benefits

#### Milltronics MSI belt scale

- Outstanding accuracy and repeatability
- Unique parallelogram style load cell design
- Fast reaction to product loading; capable of monitoring fast moving belts
- Rugged construction
- SABS approval (South Africa), OIML, MID, and Measurement Canada

#### Milltronics MMI belt scale

- Exceptional accuracy and repeatability
- Unique parallelogram style load cell design
- Suitable for uneven or light product loading
- Capable of monitoring fast moving belts
- Low cost of ownership
- NTEP, OIML, MID, and Measurement Canada approved

### Application

#### Milltronics MSI belt scale

Milltronics MSI belt scale provides continuous in-line weighing on a variety of products in primary and secondary industries. It is proven in a wide range of tough applications from extraction (in mines, quarries and pits), to power generation, iron and steel, food processing and chemicals. The MSI is suitable for monitoring such diverse products as sand, flour, coal, or sugar.

The MSI's proven use of parallelogram-style load cells results in fast reaction to vertical forces, ensuring instant response to product loading. This enables it to provide outstanding accuracy and repeatability even with uneven loading and fast belt speeds.

Operating with Milltronics BW500, SIWAREX WT241, WP241, or FTC microprocessor-based integrators, the MSI provides indication of flow rate, totalized weight, belt load, and belt speed of bulk solid materials. A speed sensor monitors conveyor belt speed for input to the integrator.

The MSI is installed in a simple drop-in operation and may be secured with just four bolts. An existing idler is then attached to the MSI dynamic beam. With no moving parts, maintenance is kept to a minimum, with just periodic calibration checks required.

#### Milltronics MMI belt scale

Milltronics MMI belt scale consists of two or more MSI single idler belt scales installed in series. It provides high accuracy continuous in-line weighing on a variety of products in primary and secondary industries. The MMI system is proven in a wide range of tough applications from extraction to power generation, iron and steel, food processing and chemicals. The MMI is suitable for monitoring such diverse products as fertilizer, sand, grain, flour, coal, or sugar.

The MMI's proven use of parallelogram-style load cells results in fast reaction to vertical forces, ensuring instant response to product loading. This enables it to provide outstanding accuracy and repeatability even with uneven or light loading, short idler spacing and fast belt speeds. Operating with Milltronics BW500 integrator (for custody transfer applications), the MMI provides indication of flow rate, total weight, belt load and belt speed of bulk solids materials on a belt conveyor. A speed sensor monitors conveyor belt speed for input to the integrator.

The MMI is installed in a simple drop-in operation and may be secured with just eight bolts and existing idler sets, secured to the dynamic beam. With no moving parts, maintenance is kept to a minimum, with just periodic calibration checks required.

# Belt Weighing

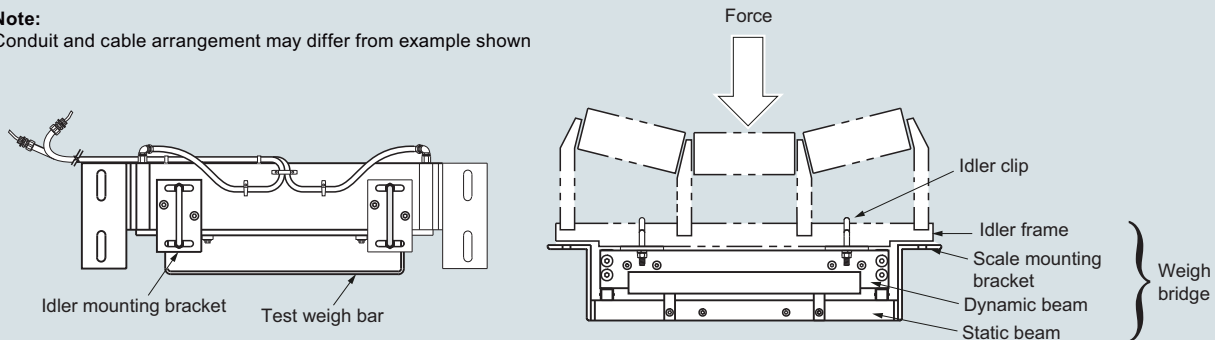
Belt scales

## Milltronics MSI and MMI

### Design

#### Mounting

**Note:**  
Conduit and cable arrangement may differ from example shown

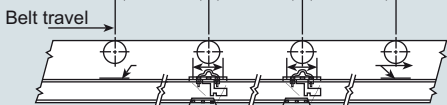


MSI/MMI mounting

4

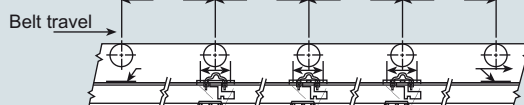
Applications with 2 MSIs (MMI-2)

450 ... 1 525 mm (18 ... 60 inch) idler spacing



Applications with 3 MSIs (MMI-3)

450 ... 1 525 mm (18 ... 60 inch) idler spacing



Mounting (two or more MSI units)

### Technical specifications

| Milltronics MSI/MMI  |  | Milltronics MSI/MMI   |  |
|--|--|---|--|
| <b>Mode of operation</b>   |  | <b>Load cell</b>  |  |
| Measuring principle  | Strain gauge load cells measuring load on belt conveyor idler(s)   | Construction  | Stainless steel construction with 304 (1.4301) stainless steel cover<br>Strain gauge protection: polybutadiene   |
| Typical application  |  | Degree of protection  | IP67, IP65 on hazardous approved models  |
| • MSI  | Control in fractionated stone blending tunnels   | Cable length  | 3 m (10 ft)  |
| • MMI  | Custody transfer   | Excitation  | Note: to calculate installation cable length subtract 3 048 mm (120 inch) from the "A" dimension<br>10 V DC nominal, 15 V DC maximum   |
| <b>Measurement accuracy</b>  |  | Output  | 2 ± 0.002 mV/V excitation (nominal) at rated load cell capacity  |
| Accuracy <sup>1)</sup>   |  | Non-linearity and hysteresis  | 0.02 % of rated output   |
| • MSI  | ± 0.5 % or better of totalization over 20 ... 100 % operating range  | Non-repeatability   | 0.01 % of rated output   |
| • MMI-2 (2 idler)  | ± 0.25 % or better of totalization over 20 ... 100 % operating range   | Capacity  |  |
| • MMI-3 (3 idler)  | ± 0.125 % or better of totalization over 25 ... 100 % operating range  | • Maximum ranges  | 25, 50, 100, 250, 500, 750, 1 000, 1 250, 1 500, 2 000 lb  |
| <b>Note: available with system specification option D only</b>   |  | Overload  | 150 % of rated capacity, ultimate 300 % of rated capacity  |
| Repeatability  | ± 0.1 %  | Temperature   | • -50 ... +75 °C (-58 ... +167 °F) operating range, optional -50 ... +175 °C (-58 ... 347 °F)<br>• -40 ... +65 °C (-40 ... +150 °F) compensated<br>• -10 ... +40 °C (14 ... 104 °F) compensated on trade approved versions |
| <b>Medium conditions</b>   |  | <b>Weight</b>   |  |
| Material temperature   | -50 ... +200 °C (-58 ... +392 °F)  | See dimensions section  |  |
| <b>Belt design</b>   |  | <b>Interconnection wiring (to integrator, per MSI)</b>  |  |
| Belt width   | • 18 ... 96 inch in CEMA sizes <sup>2)</sup><br>• Equivalent to 500 ... 2 400 mm in metric size <sup>2)</sup><br>• Refer to dimensions section | < 150 m (500 ft) 18 AWG (0.75 mm <sup>2</sup> ) 6 conductor shielded cable  |  |
| Belt speed   | Up to 5 m/s (1 000 fpm) <sup>2)</sup>  | > 150 m ... 300 m (500 ft ... 1 000 ft) 18 ... 22 AWG (0.75 ... 0.34 mm <sup>2</sup> ), 8 conductor shielded cable  |  |
| <b>Capacity</b>  |  | <b>Approvals</b>  |  |
| Up to 12 000 t/h (13 200 STPH) at maximum belt speed. Please contact a Siemens representative for higher rates. <sup>2)</sup>                      |  | <ul style="list-style-type: none"> <li>• CSA/FM Class 1, Div. 1, Groups A, B, C, Class II, Div. 1, Groups E, F, G, and Class III</li> <li>• ATEX II 1GD, Ex ia IIC T4 Ga, Ex ia IIIC T135 °C Da, ATEX I M1, Ex ia I Ma</li> <li>• ATEX II 2D Ex tD A21 IP65 T90 °C</li> <li>• EAC Ex</li> <li>• IEC Ex 1G Ex ia IIC T4 Ga, Ex ia IIIC T135 °C Da M1, Ex ia I Ma</li> <li>• MSHA</li> <li>• CE, RCM, EAC, KCC, CMC, RTN</li> </ul> |  |
| <b>Conveyor incline</b>  |  | <b>Metrology approvals</b>  |  |
| <ul style="list-style-type: none"> <li>• ± 20° from horizontal, fixed incline</li> <li>• Up to ± 30° with reduced accuracy<sup>3)</sup></li> </ul> |  | Measurement Canada, MID, OIML, SABS <sup>4)</sup> , NTEP <sup>5)</sup> , STAMEQ, GOST   |  |
| <b>Idlers</b>  |  |   |  |
| Idler profile  | <ul style="list-style-type: none"> <li>• Flat to 35°</li> <li>• Up to 45° with reduced accuracy<sup>3)</sup></li> </ul>                        |   |  |
| Idler diameter   | 50 ... 180 mm (2 ... 7 inch)   |   |  |
| Idler spacing  | 0.5 ... 1.5 m (1.5 ... 5.0 ft)   |   |  |

<sup>1)</sup> Accuracy subject to: on factory approved installations the belt scale system's totalized weight will be within the specified accuracy when compared to a known weighed material test sample. The test rate must be within the specified range of the design capacity and held constant for the duration of the test. The minimum material test sample must be equivalent to a sample obtained at the test flow rate for three revolutions of the belt or at least ten minutes running time, whichever is greater.

<sup>2)</sup> Contact Siemens ([http://www.automation.siemens.com/aspa\\_app](http://www.automation.siemens.com/aspa_app)) for consideration of higher values.

<sup>3)</sup> Review by Siemens required ([http://www.automation.siemens.com/aspa\\_app](http://www.automation.siemens.com/aspa_app)).

<sup>4)</sup> MSI only.

<sup>5)</sup> MMI only.



| Selection and ordering data   | Article No.  | Article No.   |  |
|---|--|---|--|
| <p><b>Milltronics MSI Belt scale</b></p> <p>Accuracy is ± 0.5 % or better of totalization over 20 ... 100 % operating range with capacity up to 12 000 t/h (13 200 STPH).</p> <p><b>Load cell capacity</b></p> <p>Not specified<sup>1)</sup></p> <p>25 lb (11.3 kg)</p> <p>50 lb (22.7 kg)</p> <p>100 lb (45.4 kg)</p> <p>250 lb (113.4 kg)</p> <p>500 lb (226.8 kg)</p> <p>750 lb (340.2 kg)</p> <p>1 000 lb (453.6 kg)</p> <p>1 250 lb (567 kg)<sup>2)</sup></p> <p>1 500 lb (680.4 kg)<sup>2)</sup></p> <p>2 000 lb (907.2 kg)</p> <p><b>Fabrication</b></p> <p>C5-M rated polyester painted mild steel</p> <p><u>Electro-galvanized mild steel:</u></p> <p>18 ... 29 inch (457.2 ... 736.6 mm)</p> <p>30 ... 41 inch (762 ... 1 041.4 mm)</p> <p>42 ... 53 inch (1 066.8 ... 1 346.2 mm)</p> <p>54 ... 65 inch (1 371.6 ... 1 651 mm)</p> <p>66 ... 77 inch (1 676.4 ... 1 955.8 mm)</p> <p>78 ... 89 inch (1 981.2 ... 2 260.6 mm)</p> <p>90 ... 96 inch (2 286 ... 2 438.4 mm)</p> <p><u>Stainless steel 304 (1.4301), bead blast finish (1 ... 6 µm, 40 ... 240 µin) for belt width scales:</u></p> <p>18 ... 29 inch (457.2 ... 736.6 mm)</p> <p>30 ... 41 inch (762 ... 1 041.4 mm)</p> <p>42 ... 53 inch (1 066.8 ... 1 346.2 mm)</p> <p>54 ... 65 inch (1 371.6 ... 1 651 mm)</p> <p>66 ... 77 inch (1 676.4 ... 1 955.8 mm)</p> <p>78 ... 89 inch (1 981.2 ... 2 260.6 mm)</p> <p>90 ... 96 inch (2 286 ... 2 438.4 mm)</p> <p><u>Stainless steel 316 (1.4401), bead blast finish (1 ... 6 µm, 40 ... 240 µin) for belt width scales:</u></p> <p>18 ... 29 inch (457.2 ... 736.6 mm)</p> <p>30 ... 41 inch (762 ... 1 041.4 mm)</p> <p>42 ... 53 inch (1 066.8 ... 1 346.2 mm)</p> <p>54 ... 65 inch (1 371.6 ... 1 651 mm)</p> <p>66 ... 77 inch (1 676.4 ... 1 955.8 mm)</p> <p>78 ... 89 inch (1 981.2 ... 2 260.6 mm)</p> <p>90 ... 96 inch (2 286 ... 2 438.4 mm)</p> <p>C5-M rated polyester painted mild steel (compatible with MWL or flat bar weight calibration system)</p> | <p><b>7MH7122-</b></p> <p>0</p> <p>9 L 1 A</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9 L 1 B</p> <p>1 1</p> <p>1 2</p> <p>1 3</p> <p>1 4</p> <p>1 5</p> <p>1 6</p> <p>1 7</p> <p>1 8</p> <p>2 1</p> <p>2 2</p> <p>2 3</p> <p>2 4</p> <p>2 5</p> <p>2 6</p> <p>2 7</p> <p>3 1</p> <p>3 2</p> <p>3 3</p> <p>3 4</p> <p>3 5</p> <p>3 6</p> <p>3 7</p> <p>4 1</p> | <p><b>Milltronics MSI Belt scale</b></p> <p>Accuracy is ± 0.5 % or better of totalization over 20 ... 100 % operating range with capacity up to 12 000 t/h (13 200 STPH).</p> <p><u>Galvanized, for belt width scales:</u><br/>(compatible with MWL or flat bar weight system)</p> <p>18 ... 29 inch (457.2 ... 736.6 mm)</p> <p>30 ... 41 inch (762 ... 1 041.4 mm)</p> <p>42 ... 53 inch (1 066.8 ... 1 346.2 mm)</p> <p>54 ... 65 inch (1 371.6 ... 1 651 mm)</p> <p>66 ... 77 inch (1 676.4 ... 1 955.8 mm)</p> <p>78 ... 89 inch (1 981.2 ... 2 260.6 mm)</p> <p>90 ... 96 inch (2 286 ... 2 438.4 mm)</p> <p><b>System specification</b></p> <p>Standard MSI and MMI</p> <p>NTEP Certified MMI<sup>(3)(4)(5)</sup></p> <p>OIML/MID Certified<sup>(4)(5)</sup></p> <p>MSI for MMI-3 ± 0.125 % accuracy<sup>(6)</sup></p> <p><b>Further designs</b></p> <p>Please add <b>"-Z"</b> to article no. and specify order code(s).</p> <p>Stainless steel tag [69 x 38 mm (2.7 x 1.5 inch)], Measuring-point number / identification (max 27 characters), specify in plain text.</p> <p>Application Eng. reference number (max. 15 characters), specify in plain text.</p> <p>Manufacturer's test certificate: According to EN 10204-2.2</p> <p>Factory calibration certificate</p> <p>OIML/MID approval additional nameplate (submit application data with order)<sup>(5)</sup></p> <p>NTEP approval additional nameplate (submit application data with order)<sup>(5)</sup></p> <p>Extended cable length (For spare part pricing and part number consult factory)<br/>Load cell with 15 m (49.2 ft) cable length [standard is 3 m (9.8 ft)]</p> <p>High temp load cell (For spare part pricing and part number consult factory)<br/>Load cell suitable for high temp up to 175 °C (347 °F) [standard is 75 °C (167 °F)]<sup>(7)</sup></p> <p>Load cell with 316 (1.4401) cover (For spare part pricing and part number consult factory)<br/>Load cell cover is constructed from 316 (1.4401) -stainless steel [standard is 304 (1.4301)]</p> <p>FDA compliant version<br/>Conduit and fittings designed for food applications -conforming to FDA/USDA standards</p> <p><b>Operating instructions</b></p> <p><u>MSI Manuals</u></p> <ul style="list-style-type: none"> <li>English</li> </ul> <p>Note: the operating instructions should be ordered as a separate item on the order.</p> <p>All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/weighing/documentation">http://www.siemens.com/weighing/documentation</a></p> | <p><b>7MH7122-</b></p> <p>4 2</p> <p>4 3</p> <p>4 4</p> <p>4 5</p> <p>4 6</p> <p>4 7</p> <p>4 8</p> <p>A</p> <p>B</p> <p>C</p> <p>D</p> <p>Order Code</p> <p><b>Y15</b></p> <p><b>Y31</b></p> <p><b>C11</b></p> <p><b>Y33</b></p> <p><b>Y77</b></p> <p><b>Y78</b></p> <p><b>A08</b></p> <p><b>T50</b></p> <p><b>H53</b></p> <p><b>K01</b></p> <p>Article No.</p> <p><b>7ML1998-5CY04</b></p> |

## Belt Weighing

### Belt scales

#### Milltronics MSI and MMI

#### Selection and ordering data

##### Spare parts

Flat bar/MWL retrofit kit

Conduit replacement kit

FDA conduit replacement kit

MWL calibration weight support brackets -galvanized

Ground cable

##### Stainless steel load cells

Standard load cell with 304 (1.4301) stainless steel cover

25 lb (11.3 kg)

50 lb (22.7 kg)

100 lb (45.4 kg)

250 lb (113.4 kg)

500 lb (226.8 kg)

750 lb (340.2 kg)

1 000 lb (453.6 kg)

1 250 lb (567 kg)

1 500 lb (680.4 kg)

2 000 lb (907.2 kg)

25 lb (11.3 kg), NTEP, OIML/MID

50 lb (22.7 kg), NTEP, OIML/MID

100 lb (45.4 kg), NTEP, OIML/MID

250 lb (113.4 kg), NTEP, OIML/MID

500 lb (226.8 kg), NTEP, OIML/MID

750 lb (340.2 kg), NTEP, OIML/MID

1 000 lb (453.6 kg), NTEP, OIML/MID

1 250 lb (567 kg), NTEP, OIML/MID

1 500 lb (680.4 kg), NTEP, OIML/MID

2 000 lb (907.2 kg), NTEP, OIML/MID

Load cell with 316 (1.4401) stainless steel cover

25 lb (11.3 kg)

50 lb (22.7 kg)

100 lb (45.4 kg)

250 lb (113.4 kg)

500 lb (226.8 kg)

750 lb (340.2 kg)

1 000 lb (453.6 kg)

1 250 lb (567 kg)

1 500 lb (680.4 kg)

2 000 lb (907.2 kg)

100 lb (45.4 kg), NTEP, OIML/MID

250 lb (113.4 kg), NTEP, OIML/MID

500 lb (226.8 kg), NTEP, OIML/MID

750 lb (340.2 kg), NTEP, OIML/MID

1 000 lb (453.6 kg), NTEP, OIML/MID

#### Article No.

**7MH7723-1FW****7MH7723-1NA****7MH7723-1QL****7MH7723-1JT****7MH3701-1AA1****A5E35801457****PBD-23900246****PBD-23900247****PBD-23900248****PBD-23900249****PBD-23900250****PBD-23900251****A5E02235671****A5E02239623****A5E35801460****A5E35801462****A5E03324790****PBD-23900261****PBD-23900262****PBD-23900263****PBD-23900264****PBD-23900265****A5E02235672****A5E02239620****A5E35801463****PBD-25851-A8H53****PBD-25851-A0H53****PBD-25851-A1H53****PBD-25851-A2H53****PBD-25851-A3H53****PBD-25851-A4H53****PBD-25851-A5H53****PBD-25851-A6H53****PBD-25851-A7H53****PBD-25851-A9H53****PBD-25851-B1H53****PBD-25851-B2H53****PBD-25851-B3H53****PBD-25851-B4H53****PBD-25851-B5H53**

#### Article No.

Load cell, high temperature up to 175 °C (347 °F)

25 lb (11.3 kg)

50 lb (22.7 kg)

100 lb (45.4 kg)

250 lb (113.4 kg)

500 lb (226.8 kg)

750 lb (340.2 kg)

1 000 lb (453.6 kg)

1 250 lb (567 kg)

1 500 lb (680.4 kg)

2 000 lb (907.2 kg)

Load cell, high temperature up to 175 °C (347 °F) with 316 (1.4401) stainless steel cover

25 lb (11.3 kg)

50 lb (22.7 kg)

100 lb (45.4 kg)

250 lb (113.4 kg)

500 lb (226.8 kg)

750 lb (340.2 kg)

1 000 lb (453.6 kg)

1 250 lb (567 kg)

1 500 lb (680.4 kg)

2 000 lb (907.2 kg)

Load cell with 15 m (49.2 ft) cable length

25 lb (11.3 kg)

50 lb (22.7 kg)

100 lb (45.4 kg)

250 lb (113.4 kg)

500 lb (226.8 kg)

750 lb (340.2 kg)

1 000 lb (453.6 kg)

1 250 lb (567 kg)

1 500 lb (680.4 kg)

2 000 lb (907.2 kg)

100 lb (45.4 kg), NTEP, OIML/MID

250 lb (113.4 kg), NTEP, OIML/MID

500 lb (226.8 kg), NTEP, OIML/MID

750 lb (340.2 kg), NTEP, OIML/MID

1 000 lb (45.4 kg), NTEP, OIML/MID

**PBD-25851-A8T50****PBD-25851-A0T50****PBD-25851-A1T50****PBD-25851-A2T50****PBD-25851-A3T50****PBD-25851-A4T50****PBD-25851-A5T50****PBD-25851-A6T50****PBD-25851-A7T50****PBD-25851-A9T50****PBD-25851-A8TH****PBD-25851-A0TH****PBD-25851-A1TH****PBD-25851-A2TH****PBD-25851-A3TH****PBD-25851-A4TH****PBD-25851-A5TH****PBD-25851-A6TH****PBD-25851-A7TH****PBD-25851-A9TH****PBD-25851-A8A08****PBD-25851-A0A08****PBD-25851-A1A08****PBD-25851-A2A08****PBD-25851-A3A08****PBD-25851-A4A08****PBD-25851-A5A08****PBD-25851-A6A08****PBD-25851-A7A08****PBD-25851-A9A08****PBD-25851-B1A08****PBD-25851-B2A08****PBD-25851-B3A08****PBD-25851-B4A08****PBD-25851-B5A08**

### Selection and ordering data

Load cell with 15 m (49.2 ft) cable length and 316 (1.4401) stainless steel cover

25 lb (11.3 kg)  
 50 lb (22.7 kg)  
 100 lb (45.4 kg)  
 250 lb (113.4 kg)  
 500 lb (226.8 kg)  
 750 lb (340.2 kg)  
 1 000 lb (453.6 kg)  
 1 250 lb (567 kg)  
 1 500 lb (680.4 kg)  
 2 000 lb (907.2 kg)  
 100 lb (45.4 kg), NTEP, OIML/MID  
 250 lb (113.4 kg), NTEP, OIML/MID  
 500 lb (226.8 kg), NTEP, OIML/MID  
 750 lb (340.2 kg), NTEP, OIML/MID  
 1 000 lb (453.6 kg), NTEP, OIML/MID

Load cell, high temperature up to 175 °C (347 °F) with 15 m (49.2 ft) cable length

25 lb (11.3 kg)  
 50 lb (22.7 kg)  
 100 lb (45.4 kg)  
 250 lb (113.4 kg)  
 500 lb (226.8 kg)  
 750 lb (340.2 kg)  
 1 000 lb (453.6 kg)  
 1 250 lb (567 kg)  
 1 500 lb (680.4 kg)  
 2 000 lb (907.2 kg)

Load cell, high temperature up to 175 °C (347 °F) with 15 m (49.2 ft) cable length and 316 (1.4401) stainless steel cover

25 lb (11.3 kg)  
 50 lb (22.7 kg)  
 100 lb (45.4 kg)  
 250 lb (113.4 kg)  
 500 lb (226.8 kg)  
 750 lb (340.2 kg)  
 1 000 lb (453.6 kg)  
 1 250 lb (567 kg)  
 1 500 lb (680.4 kg)  
 2 000 lb (907.2 kg)

Spare load cell hardware kit

### Article No.

**PBD-25851-A8AH**  
**PBD-25851-A0AH**  
**PBD-25851-A1AH**  
**PBD-25851-A2AH**  
**PBD-25851-A3AH**  
**PBD-25851-A4AH**  
**PBD-25851-A5AH**  
**PBD-25851-A6AH**  
**PBD-25851-A7AH**  
**PBD-25851-A9AH**  
**PBD-25851-B1AH**  
**PBD-25851-B2AH**  
**PBD-25851-B3AH**  
**PBD-25851-B4AH**  
**PBD-25851-B5AH**

**PBD-25851-A8TA**  
**PBD-25851-A0TA**  
**PBD-25851-A1TA**  
**PBD-25851-A2TA**  
**PBD-25851-A3TA**  
**PBD-25851-A4TA**  
**PBD-25851-A5TA**  
**PBD-25851-A6TA**  
**PBD-25851-A7TA**  
**PBD-25851-A9TA**

**PBD-25851-A8AHT**  
**PBD-25851-A0AHT**  
**PBD-25851-A1AHT**  
**PBD-25851-A2AHT**  
**PBD-25851-A3AHT**  
**PBD-25851-A4AHT**  
**PBD-25851-A5AHT**  
**PBD-25851-A6AHT**  
**PBD-25851-A7AHT**  
**PBD-25851-A9AHT**  
**A5E44809390**

### Article No.

#### Idler clips

5 inch (127 mm) for 27 ... 62 inch (686 ... 1 575 mm) "A" dimensions

**7MH7723-1BT**

7 inch (178 mm) for 63 ... 74 inch (1 600 ... 1 880 mm) "A" dimensions

**7MH7723-1DF**

#### Calibration weights

6.0 lb/ 2.7 kg

**7MH7724-1AB**

18 lb/ 8.2 kg

**7MH7724-1AA**

18 lb/ 8.2 kg certified weight

**A5E32423812**

Milltronics flat bar calibration weights, see page 4/53

Note: calibration accessories should be ordered as a separate line order

#### Intrinsically safe barriers for use with IS mining approvals<sup>8)</sup>

Mild steel enclosure 115 V AC P+F barrier

**A5E39271483**

Mild steel enclosure 230 V AC P+F barrier

**A5E39271487**

Stainless steel enclosure 115 V AC P+F barrier

**A5E39271485**

Stainless steel enclosure 230 V AC P+F barrier

**A5E39271489**

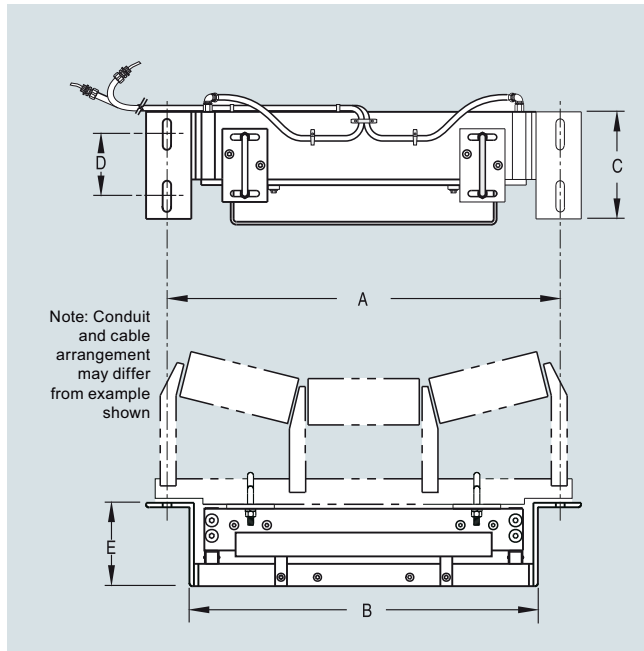
- 1) Only for quotation purposes, not a valid ordering option.
- 2) Available with Fabrication options 11 ... 18 and 41 ... 48 only, and with -System specification option A only.
- 3) Two MSI are required to make the NTEP approved MMI.
- 4) Approval available with load cell options 2 ... 6 only and applicable BW500.
- 5) Complete specification data sheet and submit with order "legal for trade" version (see Application Questionnaire at <http://www.siemens.com/weighing/application-questionnaires>)
- 6) Includes metrological approved load cells.
- 7) Not available with construction option 2, or system specification options B, C, D.
- 8) Barrier contains connections for MMI-2 and speed sensor.

## Belt Weighing

### Belt scales

#### Milltronics MSI and MMI

#### Dimensional drawings



MSI dimensions

| Conveyor belt width   | Mounting scale width<br>A | Minimum drop-in width<br>B | C                    | D                    | E                  | Weight (approx.)   |
|-----------------------|---------------------------|----------------------------|----------------------|----------------------|--------------------|--------------------|
| 18 inch<br>(457 mm)   | 27 inch<br>(686 mm)       | 23.25 inch<br>(591 mm)     | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 82 lb<br>(37 kg)   |
| 20 inch<br>(508 mm)   | 29 inch<br>(737 mm)       | 25.25 inch<br>(641 mm)     | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 85 lb<br>(39 kg)   |
| 24 inch<br>(610 mm)   | 33 inch<br>(838 mm)       | 29.25 inch<br>(743 mm)     | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 90 lb<br>(41 kg)   |
| 30 inch<br>(762 mm)   | 39 inch<br>(991 mm)       | 35.25 inch<br>(895 mm)     | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 99 lb<br>(45 kg)   |
| 36 inch<br>(914 mm)   | 45 inch<br>(1 143 mm)     | 41.25 inch<br>(1 048 mm)   | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 107 lb<br>(49 kg)  |
| 42 inch<br>(1 067 mm) | 51 inch<br>(1 295 mm)     | 47.25 inch<br>(1 200 mm)   | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 116 lb<br>(53 kg)  |
| 48 inch<br>(1 219 mm) | 57 inch<br>(1 448 mm)     | 53.25 inch<br>(1 353 mm)   | 9.5 inch<br>(241 mm) | 5.5 inch<br>(140 mm) | 7 inch<br>(178 mm) | 125 lb<br>(57 kg)  |
| 54 inch<br>(1 372 mm) | 63 inch<br>(1 600 mm)     | 59.25 inch<br>(1 505 mm)   | 12 inch<br>(305 mm)  | 8 inch<br>(203 mm)   | 7 inch<br>(178 mm) | 175 lb<br>(79 kg)  |
| 60 inch<br>(1 524 mm) | 69 inch<br>(1 753 mm)     | 65.25 inch<br>(1 657 mm)   | 12 inch<br>(305 mm)  | 8 inch<br>(203 mm)   | 7 inch<br>(178 mm) | 193 lb<br>(88 kg)  |
| 66 inch<br>(1 676 mm) | 75 inch<br>(1 905 mm)     | 71.25 inch<br>(1 810 mm)   | 12 inch<br>(305 mm)  | 8 inch<br>(203 mm)   | 8 inch<br>(203 mm) | 229 lb<br>(104 kg) |
| 72 inch<br>(1 829 mm) | 81 inch<br>(2 057 mm)     | 77.25 inch<br>(1 962 mm)   | 12 inch<br>(305 mm)  | 8 inch<br>(203 mm)   | 8 inch<br>(203 mm) | 247 lb<br>(112 kg) |

Other widths available - check configuration information.

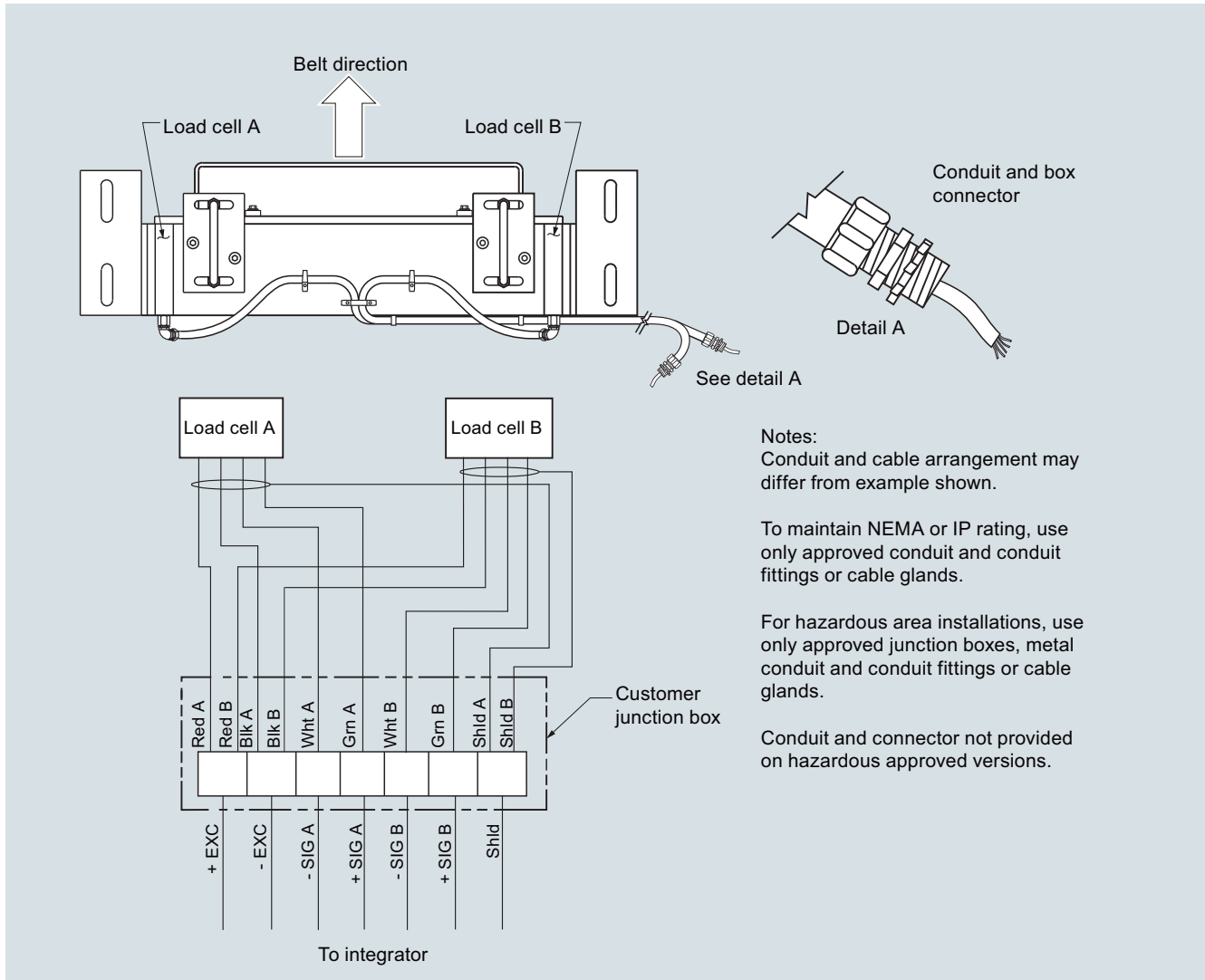
Sizes are from 18 inch (457 mm) to 96 inch (2 438 mm) in 1 inch (25.4 mm) increments.

All sizes are nominal.

Note: dimension B must be approx. 3/8 inch or 10 mm less than Y dimension of the conveyor (see Application Questionnaire at <http://www.siemens.com/weighing/application-questionnaires>).



**Circuit diagrams**



MSI/MMI connections

**More information**

**NTEP/Measurement Canada/OIML & MID Specification Data**

| Please complete and submit the relevant details listed below when ordering NTEP, Measurement Canada, or OIML & MID approval options | Value |
|---|-------|
| <b>NTEP</b>   |       |
| Maximum rated capacity (TPH)  |       |
| Minimum rated capacity (TPH)  |       |
| Belt speed (FPM)  |       |
| Scale division (tons)   |       |
| Maximum loading (lb/ft)   |       |
| <b>Measurement Canada</b>   |       |
| Rate  |       |
| Speed (min/max m/s, FPM)  |       |
| Test load (kg/m, lb/ft)   |       |

| Please complete and submit the relevant details listed below when ordering NTEP, Measurement Canada, or OIML & MID approval options | Value |
|---|-------|
| <b>OIML &amp; MID</b>   |       |
| Totalization scale interval (tonnes)  |       |
| Belt speed max/min (m/s)  |       |
| Maximum flow rate (MTPH)  |       |
| Minimum flow rate (MTPH)  |       |
| Minimum totalized load (tonnes)   |       |
| Product to be weighed   |       |
| Maximum capacity (tonnes)   |       |
| Weigh length (m)  |       |
| Ratio between minimum net load and maximum capacity   |       |
| Zero testing should have a duration of at least (____) revolutions  |       |