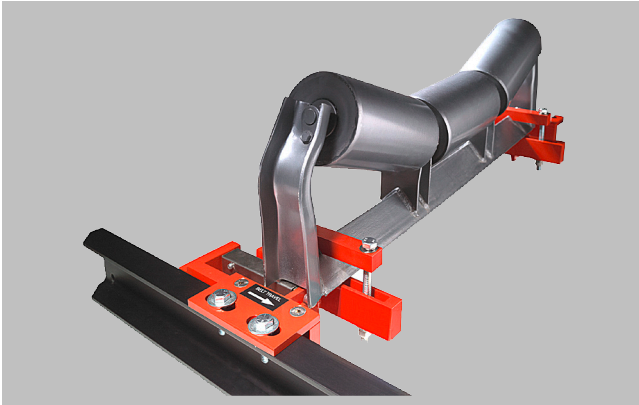


## Overview



Milltronics MCS is a compact, rugged, modular, heavy-duty belt scale for use in mobile crushers and aggregate screening plants. Idler not included with belt scale.

## Benefits

- Rugged design
- Low profile
- Easy retrofit
- Low cost
- Stainless steel load cells

## Application

Milltronics MCS provides continuous, in-line weighing at minimal cost. The stainless steel load cells ensure long-term, consistent, reliable measurement. The modular construction and easy assembly of the MCS ensures quick delivery to meet even the tightest of schedules.

Operating with Milltronics BW500, SIWAREX WT241, WP241, or FTC microprocessor-based integrators, the MCS provides indication of flow rate, total weight, belt load, and belt speed of bulk solids materials on a belt conveyor.

To complete the weighing system, include a speed sensor to monitor conveyor belt speed for input to the integrator. On mobile crushing equipment, the TASS speed sensor is a compact, rugged speed sensor designed for use with the MCS.

# Belt Weighing

## Belt scales

### Milltronics MCS

#### Selection and ordering data

Milltronics MCS Belt scale		Article No.				
Accuracy is $\pm 0.5 \dots 1$ % of totalization over 25 ... 100 % operating range with capacity up to 2 400 t/h (2 640 STPH).		7MH725- ● ● ● ● ●				
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.						
<b>Scale construction</b>						
Ordinary Locations/General Purpose (Non-Ex), CE, UKCA, RCM, EAC, KC		1				
CSA/FM Class II, Div. 1, Groups E, F, G, Class III; ATEX II 2D Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; UKEX II 2D Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; IECEX Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; EAC Ex Ex tD A21 IP65 T90°C X; CE, UKCA, RCM, EAC, KC		2				
<b>Load cell capacity</b>						
50 lb (22.7 kg) (use not recommended for mobile crushers)		A				
100 lb (45.5 kg) (use not recommended for mobile crushers)		A				
250 lb (113.6 kg)		A				
500 lb (226.8 kg)		A				
25 lb (11.3 kg) (use not recommended for mobile crushers)		A				
Not specified <sup>1)</sup>		B				
<b>Fabrication</b>						
C5-M rated polyester painted mild steel		1				
C5-M rated polyester painted mild steel, for use with flat bar or MWL calibration		2				
<b>System specification</b>						
Standard		0				
PAC Russia		1				

Selection and ordering data	Order code
<b>Further designs</b>	
Please add "-Z" to article no. and specify order code(s).	
Stainless steel tag [69 x 38 mm (2.7 x 1.5 inch)], Measuring-point number / identification (max 27 characters), specify in plain text.	Y15
Application Eng. reference number (max. 15 characters), specify in plain text.	Y31
Manufacturer's test certificate: According to EN 10204-2.2	C11
PAC Russia approval additional nameplate (submit application data with order) <sup>2)</sup>	Y79
<b>Operating instructions</b>	
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>	
<b>Spare parts</b>	
<b>Stainless steel load cell</b>	
[17-4 PH (1.4568) stainless steel construction with 304 (1.4301) stainless steel cover]	
25 lb (11.3 kg)	A5E01673047
50 lb (22.7 kg)	A5E01135823
100 lb (45.4 kg)	A5E01135824
250 lb (113.4 kg)	A5E01135825
500 lb (226.8 kg)	A5E01135826
<b>Stainless steel load cell</b>	
[17-4 PH (1.4568) stainless steel construction with 304 (1.4301) stainless steel cover], mounting hardware included	
25 lb (11.3 kg)	7MH725-1DR
50 lb (22.7 kg)	7MH725-1DH
100 lb (45.4 kg)	7MH725-1DJ
250 lb (113.4 kg)	7MH725-1DK
500 lb (226.8 kg)	7MH725-1DS
25 lb (11.3 kg), CSA/FM/ATEX/IECEX	7MH725-1DQ

## Selection and ordering data (Continued)

Selection and ordering data	Order code
50 lb (22.7 kg), CSA/FM/ATEX/IECEX	7MH7725-1DL
100 lb (45.4 kg), CSA/FM/ATEX/IECEX	7MH7725-1DM
250 lb (113.4 kg), CSA/FM/ATEX/IECEX	7MH7725-1DN
500 lb (226.8 kg), CSA/FM/ATEX/IECEX	7MH7725-1DP
Conduit replacement kit	7MH7723-1NA
<b>Calibration weights</b>	
Flat bar/MWL retrofit kit	7MH7723-1HA
Calibration test arm assembly, c/w one 8.2 kg (18 lb) calibration weight	7MH7723-1FR
Calibration test arm assembly, c/w two 8.2 kg (18 lb) calibration weights	7MH7723-1FS
MCS calibration arm c/w idler clip [holds up to two 8.2 kg (18 lb) weights]	7MH7726-1AD
Calibration weight, 18 lb (8.2 kg)	7MH7724-1AA
Calibration weight, 6 lb (2.7 kg)	7MH7724-1AB
See Milltronics flat bar calibration weights catalog page: <a href="https://support.industry.siemens.com/cs/document/109813400">https://support.industry.siemens.com/cs/document/109813400</a>	
Note: calibration accessories should be ordered as a separate item on the order.	

<sup>1)</sup> Only for quotation purposes, not a valid ordering option.

<sup>2)</sup> Complete specification data sheet and submit with order "legal for trade" version (see Application Questionnaire at <https://assets.new.siemens.com/siemens/assets/api/uuid:35272d97-6289-4291-ac8a-03398eb9315c/questionnaire-beltscale-en.pdf>)

## Technical specifications

Milltronics MCS	
<b>Mode of operation</b>	
Measuring principle	Strain gauge load cells measuring load on belt conveyor idlers
Typical application	Mobile crusher systems
<b>Measurement accuracy</b>	
Accuracy <sup>1)</sup>	<ul style="list-style-type: none"> <li>± 0.5 ... 1 % of totalization over 25 ... 100 % operating range, application dependent</li> <li>± 2 % of totalization over 25 ... 100 % operating range on mobile crusher applications</li> </ul>
Repeatability	± 0.1 %
<b>Belt design</b>	
Belt width	<ul style="list-style-type: none"> <li>Up to 1 600 mm (60 inch CEMA) width</li> <li>Refer to the outline dimension section</li> </ul>
Belt speed	Up to 4 m/s (800 fpm) <sup>2)</sup>
<b>Capacity</b>	Up to 2 400 t/h (2 640 STPH) at maximum belt speed <sup>2)</sup>
<b>Conveyor incline</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>
<b>Idlers</b>	
Idler profile	<ul style="list-style-type: none"> <li>Flat to 35°</li> <li>To 45° with reduced accuracy<sup>3)</sup></li> </ul>
Idler diameter	100 ... 150 mm (4 ... 6 inch)
Idler spacing	0.6 ... 1.2 m (2.0 ... 4.0 ft)
<b>Load cell</b>	
Construction	17-4 PH (1.4568) stainless steel construction with 304 (1.4301) stainless steel cover Strain gauge protection: polybutadiene
Degree of protection	IP67, IP65 on hazardous approved models
Cable length	3 m (10 ft)
Excitation	10 V DC nominal, 15 V maximum
Output	2 mV/V excitation at rated load cell capacity

## Technical specifications (Continued)

Milltronics MCS	
Non-linearity and hysteresis	0.02 % of rated output
Non-repeatability	0.01 % of rated output
Capacity	25, 50, 100, 250, 500 lb stainless steel
Overload	150 % of rated capacity, ultimate 300 % of rated capacity
Temperature	<ul style="list-style-type: none"> <li>-50 ... +75 °C (-58 ... +167 °F) operating range</li> <li>-40 ... +65 °C (-40 ... +150 °F) compensated</li> </ul>
<b>Weight</b>	Up to 20 kg (44 lb), 10 kg (22 lb) per side
<b>Interconnection wiring (to integrator)</b>	<ul style="list-style-type: none"> <li>&lt; 150 m (500 ft) 18 AWG (0.75 mm<sup>2</sup>) 6 conductor shielded cable</li> <li>&gt; 150 m (500 ft) to 300 m (1 000 ft) 18 ... 22 AWG (0.75 ... 0.34 mm<sup>2</sup>), 8 conductor shielded cable</li> </ul>
<b>Approvals</b>	CSA/FM Class II, Div. 1, Groups E, F, G, Class III; ATEX II 2D Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; UKEX II 2D Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; IECEX Ex tb IIIC T90°C Db, Tamb = -40°C to +75°C; EAC Ex Ex tD A21 IP65 T90°C X; CE, UKCA, RCM, EAC, RTN
<b>Metrological approvals</b>	PAC Russia

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

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

# Belt Weighing

## Belt scales

### Milltronics MCS

#### Technical specifications (Continued)

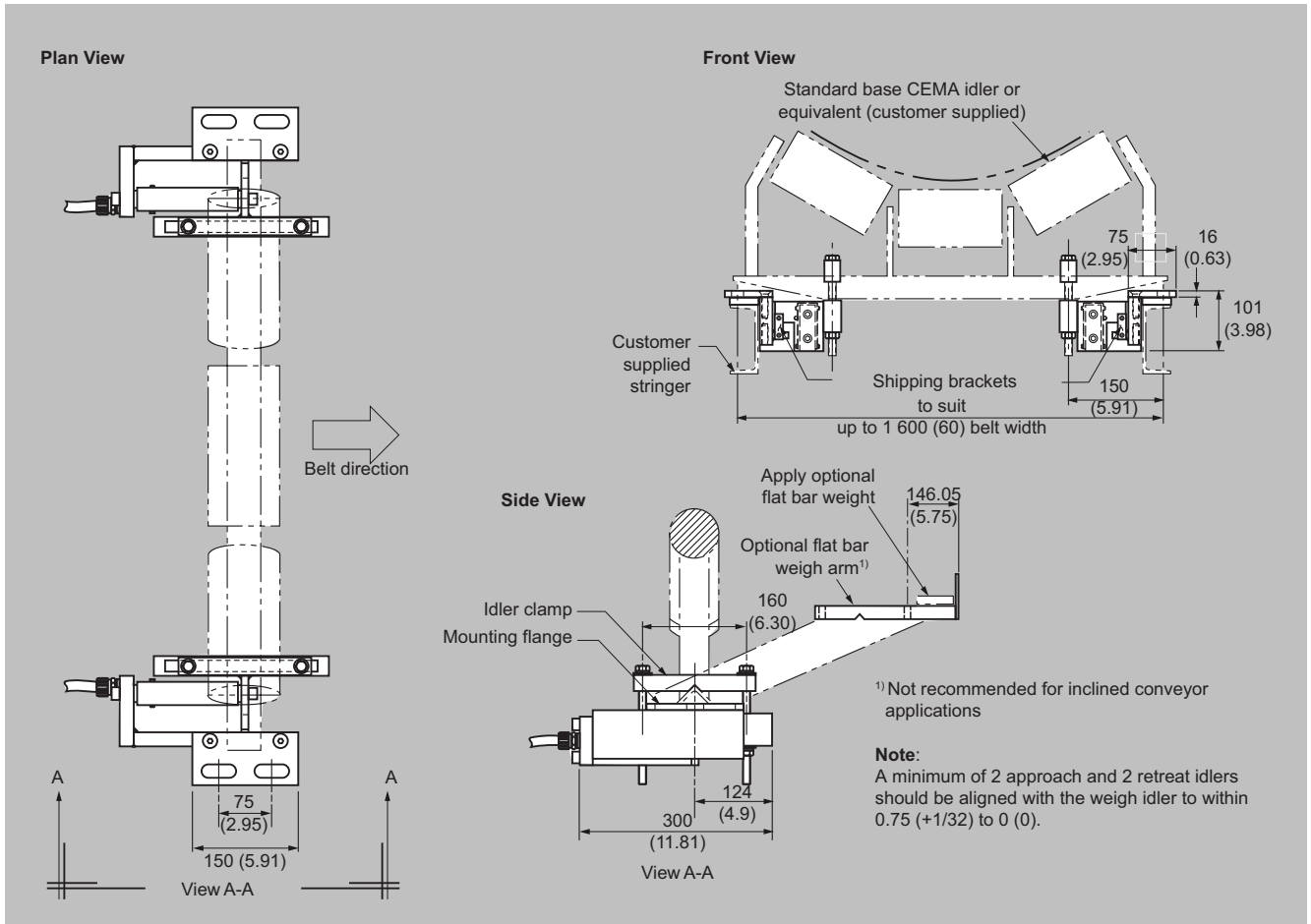
##### PAC Russia specification data

Accuracy limits (%)

Highest linear density (kg/m)

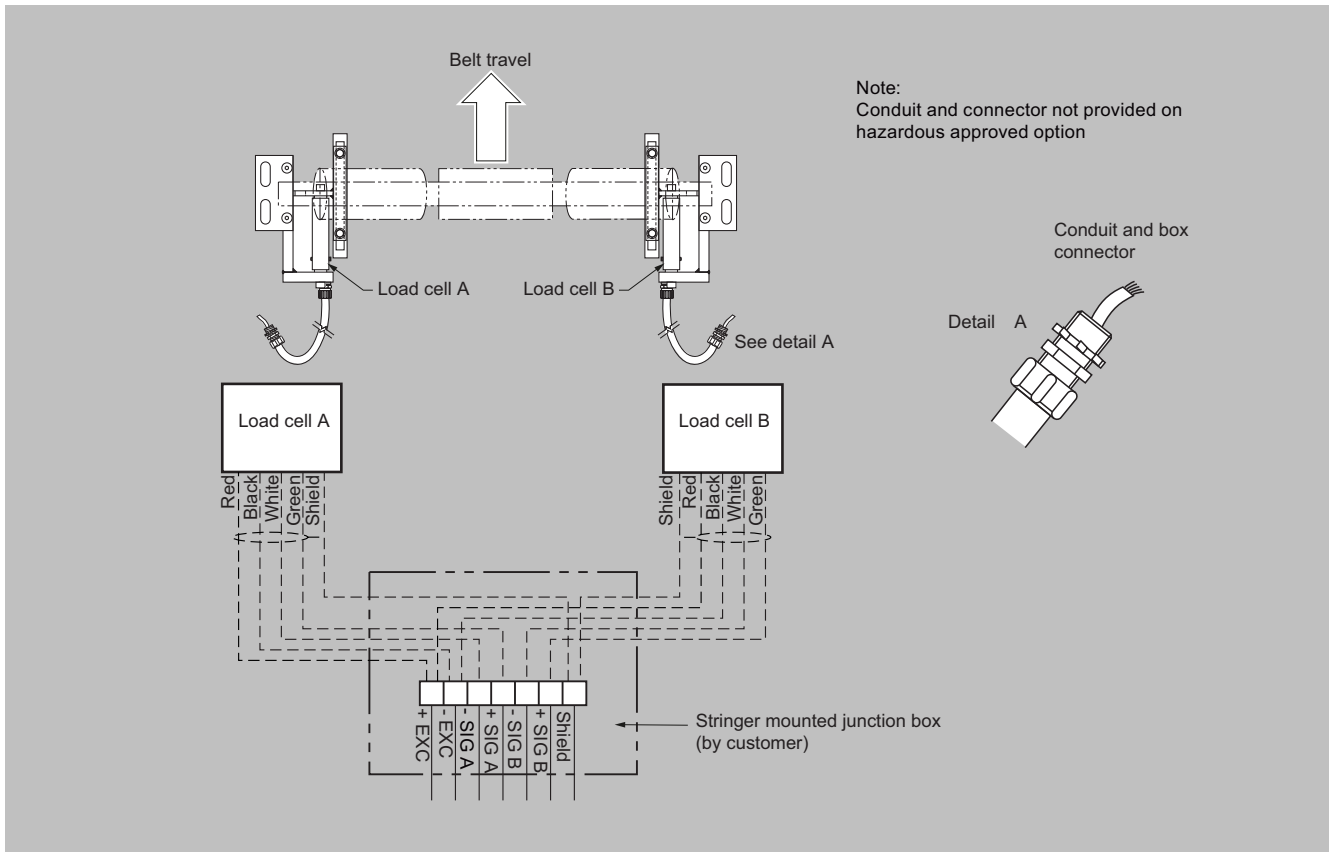
Lowest linear density (kg/m)

#### Dimensional drawings



MCS, dimensions in mm (inch)

Circuit diagrams



MCS connections