



MCS

Weighing on conveyor belt

Belt scales

ELECTRONIC
EQUIPMENT

ACOUSTIC

WEIGHING

ANTI-TILTING

VALVES

TEMPERATURE

DETECT
A FIRE®

FLOW/
RATE

DENSITY

INTERFACE

PRESSURE

LEVEL



MCS is a compact, robust and modular heavy-duty belt scale, suitable for use with mobile crushers and aggregate screening equipment. The roller bridge is not included in the scope of delivery.

Benefits

- Sturdy structure
- Compact design
- Easy reconfiguration
- Economic solution
- Stainless Steel Load Cells

Application

The MCS scale offers continuous weighing with minimal costs. Stainless steel load cells guarantee reliable, repeatable and accurate measurements. Thanks to its modular design and simple assembly, the MCS scale can be available in a short time. The MCS belt scale is used with a BW500, SIWAREX WT241, WP241 or FTC microprocessor electronics (integrator) and provides measurements of instantaneous flow rate, total weight, load and speed of solids on the belt.

To complete the weighing system, a sensor is required to control the belt speed (signal transmitted to the integrator). Compact and extremely robust, the TASS speed sensor can be used with the MCS scale to control mobile crusher systems.

TECHNICAL SPECIFICATIONS

Operating mode	Measuring principle	Strain gauge load cells measure the load on the roller decks of a belt conveyor
	Typical applications	Mobile crushers
Accuracy of measurement	Accuracy	• $\pm 0.5 \dots 1\%$ of the total weight over 25 ... 100 % of the working range, depending on the application - $\pm 2\%$ of the total weight over 25 ... 100 % of the working range in mobile crusher applications
	Repeatability	$\pm 0.1\%$
Belt execution	Belt width	• Up to 1 600 mm (60 inch CEMA) • See Dimensions
	Belt speed	Up to 4 m/s (800 fpm)
Capacity		Up to 2 400 t/h (2 640 STPH) at maximum belt speed ²
Conveyor slope		• $\pm 20^\circ$ from horizontal line, constant slope • Up to $\pm 30^\circ$ with reduced accuracy ³)
Roller bridge	Roller bridge profile	• From flat to 35° slope • Up to 45° with reduced accuracy ³)
	Roller diameter	100 ... 150 mm (4 ... 6 inch)
	Free space between roller bridges	0.6 ... 1.2 m (2.0 ... 4.0 ft)
Load cell	Structure	Stainless steel 1.4568 (17-4 PH), stainless steel cover 1.4301 (304) Load cell-based protection: Polybutadiene
	Protection rating	IP67, IP65 on models for hazardous areas
	Cable length	3 m (10 ft)
	Energization	DC 10 V nominal, max. DC 15 V
	Outlet	2 mV/V supply at nominal load cell capacity
	Linearity and hysteresis error	0.02 % of nominal output value
	Reproducibility error	0.01 % of nominal output value
Capacity		25, 50, 100, 250, 500 lb stainless steel
Overload		150 % of nominal capacity, max. 300 % of nominal capacity
Temperature		• $+50 \dots +75^\circ\text{C}$ ($-58 \dots +167^\circ\text{F}$) operating range • $+40 \dots +65^\circ\text{C}$ ($-40 \dots +150^\circ\text{F}$) compensated
Weight		Up to 20 kg (44 lb), 10 kg (22 lb) for side
Interconnection wiring (to the integrator)		• < 150 m (500 ft) 0.75 mm ² (18 AWG) 6-core shielded cable • > 150 m (500 ft) to 300 m (1 000 ft) 0.75 ... 0.34 mm ² (18 ... 22 AWG), 8-core screened cable • CSA/FM Class II, Div. 1, Groups E, F, G and Class III • ATEX II 2D, Ex tD A21 IP65 T90 °C
Approvals		• EAC Ex • IEC Ex, Ex tD A21 IP65 T90 °C • CE, RCM, EAC, KCC, RTN

MCS - Dimensional drawings

