BELT SCALE SERIES 1020



DATA SHEET

Process Belt Scale Series 1020.

The industry standard for weighing bulk materials on belt conveyors. Legal for trade in classes 2, 1 and 0.5.

Accuracy: ±0.5%.



Very accurate, robust belt scale

The 1020 series process belt scale registers, monitors and controls the continuous flow of bulk materials and can achieve an accuracy of $\pm 0.5\%$ even under the harshest conditions.

Register, monitor, and control production performance with the 1020 series belt scale. At the same time, you receive important information for your process management and about the productivity in your company.



The industry standard among belt scales

The process belt scale series 1020 consists of the self-supporting weighing frame 1020 for 1 or 2 weighing rollers, and the speed sensor WI520 or ZA-11. A modern electronic integrator is also used.

The 1020 series process belt scale represents the industry standard for accuracy and performance.



Belt Speed Sensor

The WI520 digital belt speed sensor is one of the most reliable and accurate belt speed sensors ever developed for belt scales. The direct coupling of the sensor to the tail pulley or to a non-driven pulley with a large diameter ensures the precise measurement of the belt speed. This avoids the otherwise well-known problems, such as slipping, jumping or soiling of the measuring wheels in the inner belt.

WI520 Belt Speed Sensor Advantages:

- Rugged housing, suitable for outdoor installations.
- Digital rotary encoder; not affected by belt slippage or dirt.



Performance Guarantee

On installations approved by EmWeA, we warrant that the 1020 beltscale will weigh and totalize to a value within $\pm 0.5\%$ of the test load when calibrated to our specifications.

System Components

The 1020 series belt scale consists of three major components: control unit (integrator), weighing frame, and belt speed sensor.

Control Unit (Integrator)

As control units, state-of-the-art integrators are used. These devices are characterized by their high accuracy, their ruggedness and their easy handling. Interfaces make it easy connecting the belt scale with process control systems.

Weighing Frame

The stable and robust weighing frame1020 is mounted and aligned in the construction of the conveyor belt. This one-piece weighing mechanism is fully assembled at the factory and is quick and easy to install on the conveyor. The design provides additional stabilization and support, minimizing conveyor torsion. Both the one and two idler station models feature a three-point linkage with maintenance-free and friction-free pivot points. The system is insensitive to vibration, moisture and product build-up, and the problems often associated with knife edges or ball bearings are effectively avoided.

1020 Weighing Frame Advantages:

- No moving or wearing components.
- Precision load cell; suspended to guarantee high and consistent accuracy.
- Total deflection of the weighing roller(s) below 0.1 mm.
- Narrow profile so that problems with material buildup and thus zero point problems are minimized.
- A weight application mechanism for a quick check of the mechanics and the accuracy of the belt scale is available as an option.



1020-1 Single Idler Weighing Frame:



1020-2 Dual Idler Weighing Frame:



BELT SCALE SERIES 1020



Technical Specifications:

1020 Weighing Frame:



No. of weighing idlers: Clearance requirements: Belt width: Construction: Mounting:

1 or 2 fits any standard conveyor; no space required above belt line from ca. 400 mm (no upper limit) Tubular steel profiles, powder-coated (options: galvanized; stainless steel) 4 or 6 bolts to conveyor stringers

environmentally-protected load cell, stainless steel, IP 68

Load Cell(s):



Quantity: Enclosure: Mounting: Accuracy: Non-Linearity: Non-Repeatability: Hysteresis: Operating temperature: Temperature sensitivity:

1 or 2

tension type

±0.02 % / 3000 d

<0.03 % full span

<0.01 % full span <0.02 % full span

span: 0.0014 % full span / °K zero: 0.0027 % full span / °K

-40°C ... +80°C

150 % full span

300 % full span

50 % full span

ATEX, FM, OIML, MID

CE

Safe load: Ultimate load: Sideload: Certificates (standard): Certificates (optional):

WI520 Belt Speed Sensor:



Type: Mounting: Housing: Mounting hardware: Certificates (standard): Certificates (optional): digital, brushless direct to shaft of tail pulley or bend pulley weatherproof, IP 67 supplied with flexible coupling CE ATEX, cCSAus

Control and Display Unit (Integrator):

Different variants are available for different requirements. Choose from field mount, or panel mount. Various interfaces such as binary and analogue inputs and outputs, serial inferfaces, PROFIBUS, PROFINET®, EtherNet TCP/IP, or EtherNet/IP enable connection to process control systems and controllers. We would be happy to make you an individual offer!





EmWeA Prozessmesstechnik e.K. Günzerode Am Hagen 3 99735 Werther Germany



Phone: +49 36335 3800-0 Telefax: +49 36335 3800-10 info@emwea.de www.emwea.de

© EmWeA Prozessmesstechnik e.K. • Subject to change without prior notice!