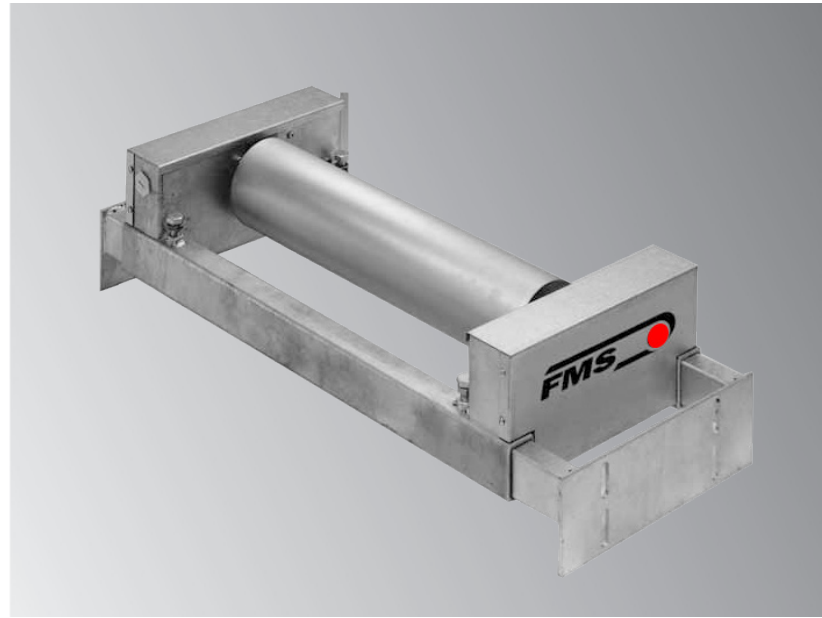


FMS Belt Scales / Measuring Rollers

## **BMGZ021-Series** Robust measuring roller for flat conveyor belts

- **Longest lifetime**  
Robust design, all components enclosed, integrated, contact-less speed detection
- **Precise measuring results**  
10'000-times proven technology, direct force detection on the shaft, w/o deflection or any braces
- **Compact, maintenance-free**  
Integrated speed detection without friction wheel, dual shaft sealings
- **Simple and universal retrofit**  
Sophisticated and proven concept with multiple installation options



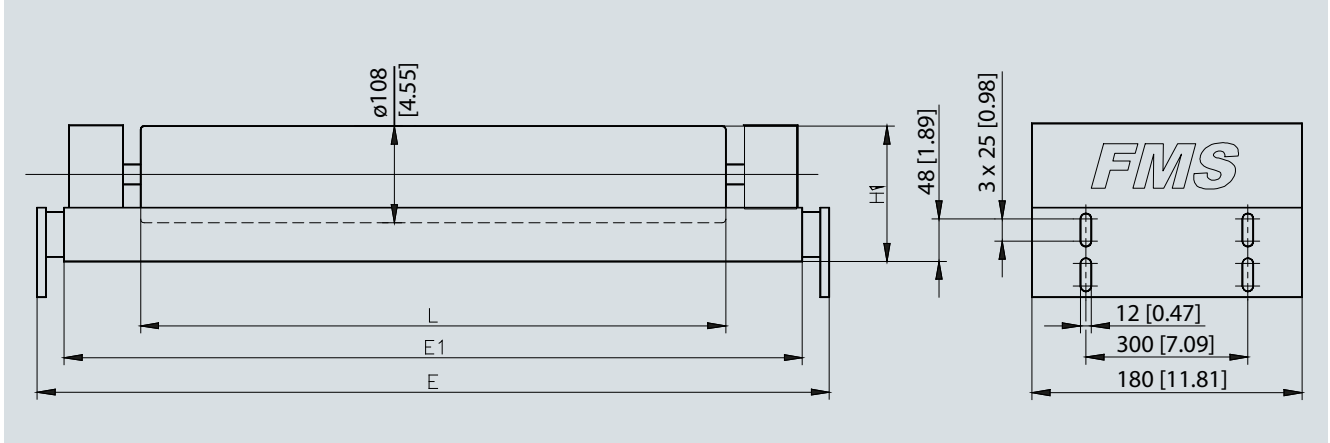
### **BMGZ021-Series**

The flat measuring rollers of the BMGZ021-series are designed for operation in most severe conditions and under steady load in mobile and stationary plants that process heavy, bulky goods, such as sand, gravel, stones, coal, building rubble etc. A wide portfolio of sizes for standard belts offers solutions for most applications.

### **Functional description**

The FMS measuring roller normally substitutes a regular idler roller station of the conveyor belt. The FMS measuring roller is selected according to the width of the conveyor belt. Both measuring roller axis are supported by force measuring sensors. This direct measurement at the point of load transmission makes the measuring system insensitive to forces that act in direction of the moving belt. Additional components (guiding beams and connections to the frame, etc.) to isolate the force are not required and lead to an extremely slim design. With an installation height of only 150 mm (5.9 in.) the FMS measuring roller can be easily installed where space is limited, e.g. in mobile crushers or screening plants. The adjustable support of the measuring roller can be adapted to various frame dimensions and widths. The mounting brackets simplify the installation and are also supplied. The integrated, sealed and contact-less speed detection is wear- and maintenance-free. It is also installed directly on the axis of the measuring roller.

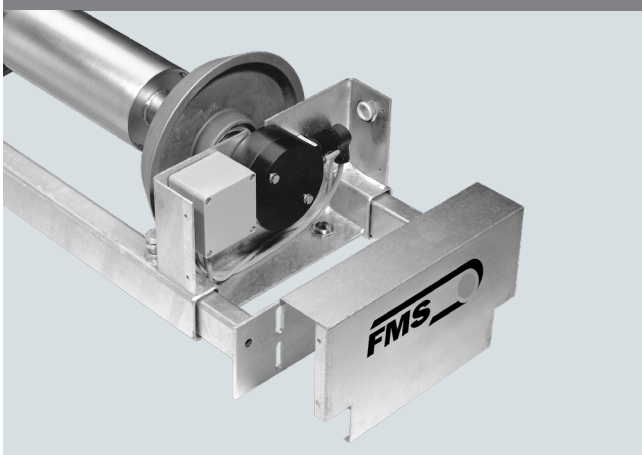
**BMGZ021-Series** : Dimensions in mm (in.)



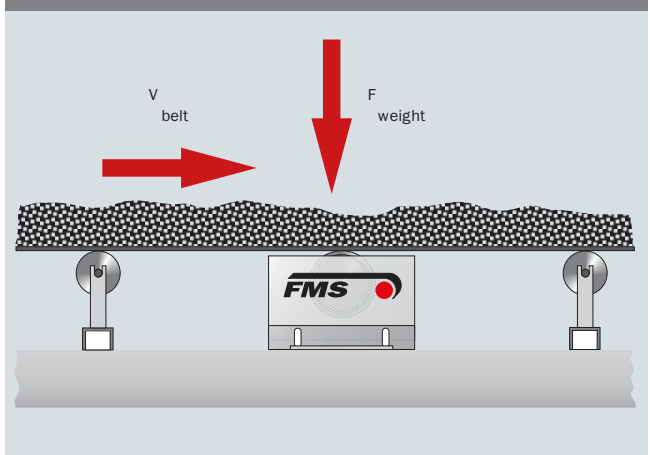
**BMGZ021-Series** : Dimensions

Type	Belt width mm (in.)	L mm (in.)	E mm (in.)	E1 mm (in.)	H1 mm (in.)
BMGZ021.020	400 (15.7)	400 (15.7)	600 – 970 (23.6 – 38.2)	580 (22.8)	150 (5.9)
BMGZ021.030	500 (19.7)	500 (19.7)	700 – 1070 (27.6 – 42.1)	680 (26.8)	150 (5.9)
BMGZ021.040	650 (25.6)	650 (25.6)	850 – 1220 (33.5 – 48.0)	830 (32.7)	150 (5.9)
BMGZ021.050	800 (31.5)	800 (31.5)	1000 – 1370 (39.4 – 53.9)	980 (38.6)	150 (5.9)
BMGZ021.060	1000 (39.4)	1000 (39.4)	1200 – 1570 (47.2 – 61.8)	1180 (46.5)	150 (5.9)

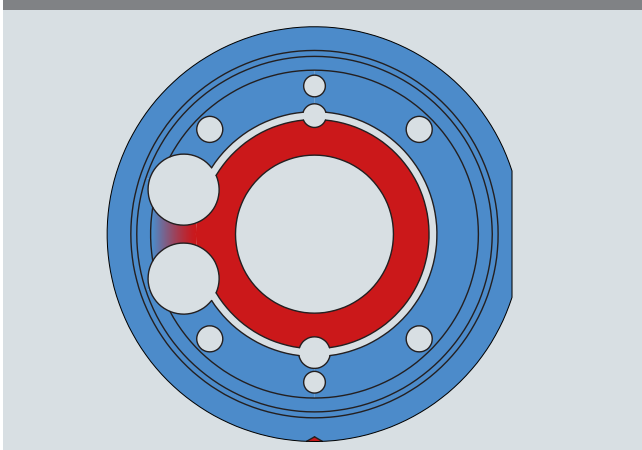
No loose cables, integrated speed detection



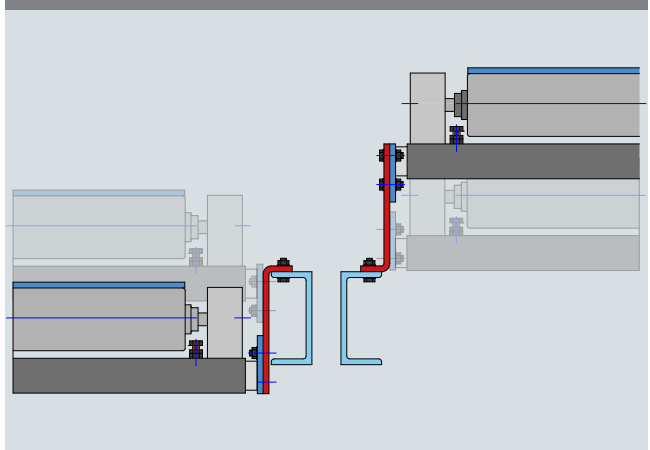
Measurement where the force is introduced, w/o levers



Proven force measurement with integrated overload protection



Versatile installation for most conveyer systems



**BMGZ021 : Technical data**

<b>Accuracy class</b>	± 0.3 % (F <sub>Nenn</sub> )
<b>Temperature range</b>	-10 to +60 °C (14 to 140 F)
<b>Overload protection force sensor</b>	10 times nominal force (F <sub>Nom</sub> )
<b>Material frame</b>	galvanized steel
<b>Protection class</b>	IP67

**BMGZ021 : Order code**

<b>BMGZ021. 05 0 3 4</b>	
	Increment of speed detection
	Nominal force of the force sensor (encoded)
	Troughing angle (0°)
	Belt width (encoded)
	Series

**BMGZ021 : Scope of supply**

● measuring roller ● electronics (separate order) ● installation bracket ● no additional installation material

**BMGZ021 : Accessories**

● connection cable from measuring roller to electronics, 15 m (49 ft.) (other lengths on request)

**BMGZ021** : Typical application



**Other products** : Construction and Recycling

**BMGZ710 electronics**



**BMGZ041 measuring roller for troughed belts**



**About us**

FMS Force Measuring Systems AG is the market leader in the field of web tension measurement, control and specialist for web guiding solutions. For the wire industry we are the only manufacturer offering a complete range of technologies for force measurement, data processing and radio transmission of signals.

Our in house developed products are used in the manufacturing industry, converting, metals, paper, textiles, as well as in cable and wire rope production. Utilising the latest technology, high quality components and a firm understanding of customer applications, FMS supports customers worldwide in the effort to maximize the productivity of their machines. Since 1993, our highly qualified employees have been creating high-end solutions for machine builders and plant operators. As an owner-managed company, we pride ourselves on being personal and approachable with the ability to make decisive moves fast.

**World Headquarters: FMS Force Measuring Systems AG**

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