

IMGZ

The intergrated Force Measuring Roller

powered by **FMS**

- 10 times overload protection
No recalibration required
- 20 : 1 force measuring range
Wide measuring capability
- Nominal forces from 200 to 3000 N
Sizes available for every application
- Stainless steel sensor
Corrosion resistant, ultra-durable
- Sensor integrated in roller
with only one electrical connection
Easy mounting and connection



Functional description

FMS Force Measuring Roller IMGZ series is used to measure the tension in continuous material processing applications, e.g. papers or foils. The force measuring roller is either directly mounted to the side of the machine frame or mounted using mounting brackets. The measuring sensors are integrated in the roller and measure the forces which are acting on the roller.

Both analogue and digital measurement amplifiers evaluate the signals of the web tension measurement and regulation. Fieldbus solutions are also possible (Profibus, Profinet or Ethernet-IP). Further information see www.fms-technology.com

Measuring principle

Foil type strain gauges mounted in a full Wheatstone Bridge configuration perform the actual tension measurement. The dual flexion beam design ensures accurate measurement at any material position on the roller. A built in mechanical hard-stop provides high overload protection ensuring that frequent calibration is not required. The red point on the side indicate the direction of the force for a positive measuring signal.

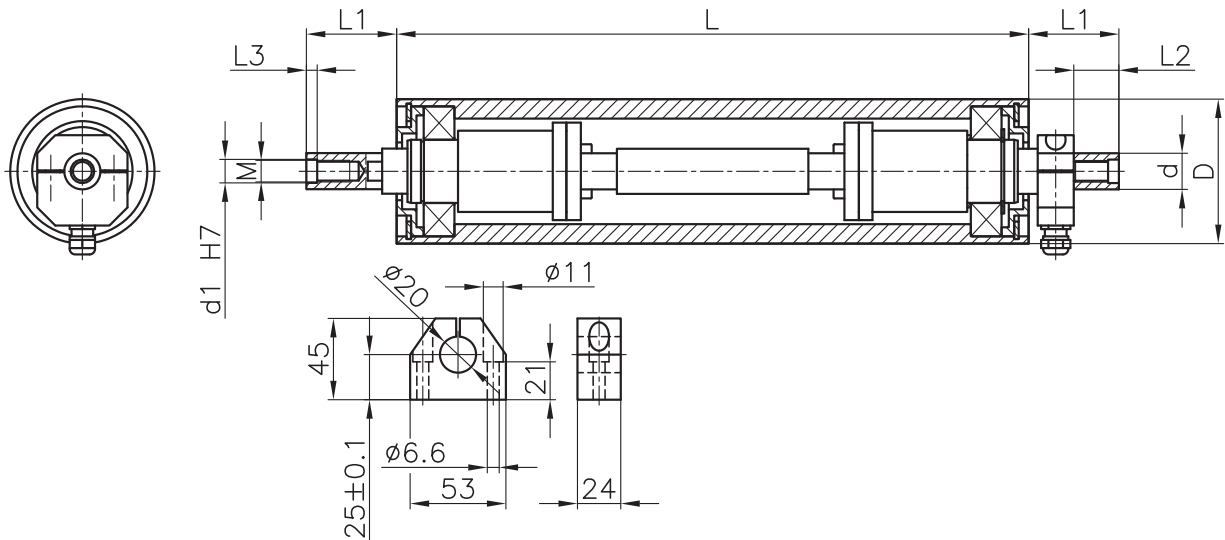


Surfaces available

Aluminium

- belt-ground (D)
- anodised (E)
- non-stick coated (A)
- chromium plated (V)
- ceramic coated (K)
- polyurethane coated (P)
- rubber coated (G)

IMGZ Series I Dimensions in mm



Support IMGZ035

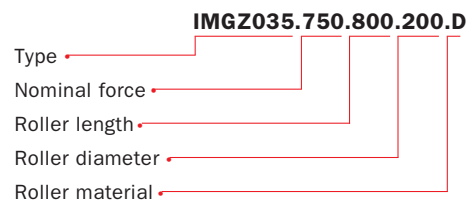
IMGZ Series I Nominal force / dimensions

Series	Nominal force N	Dimensions in mm						d	d1	D ²⁾	Bearing Type
		L ¹⁾	L1	L2	L3	M					
IMGZ035	200	400 – 3000	50	25	6	M 12 x 18 / 23	20	13	80, 100, 120, 140, 160, 200	1207	
	400										
	750										
	1500										
	3000										

¹⁾ Lengths in 100 mm steps, other lengths on request ²⁾ Other diameters on request

IMGZ Series I Technical data

Sensitivity	1.8 mV / V
Tolerance of sensitivity	< ± 0.2 %
Accuracy class	± 0.5 % (F _{nominal})
Temperature coefficient	± 0.1 % / 10 K
Temperature range	- 10...+ 60 °C
Input resistance	175 Ω
Supply voltage	1...12 VDC
Overload protection	10 times the rated nominal force
Sensor Material	Stainless steel
Roller material and surface	See page 1 „Surfaces available“



Scope of delivery:

Force measuring roller with 5 m connection cable.
Mounting supports can be ordered separately.