

IMGZ Series Force Measuring Roller

10 times overload protection

No recalibration required

20 : 1 force measuring range

Wide measuring capability

Nominal forces from 200 to 12000 N

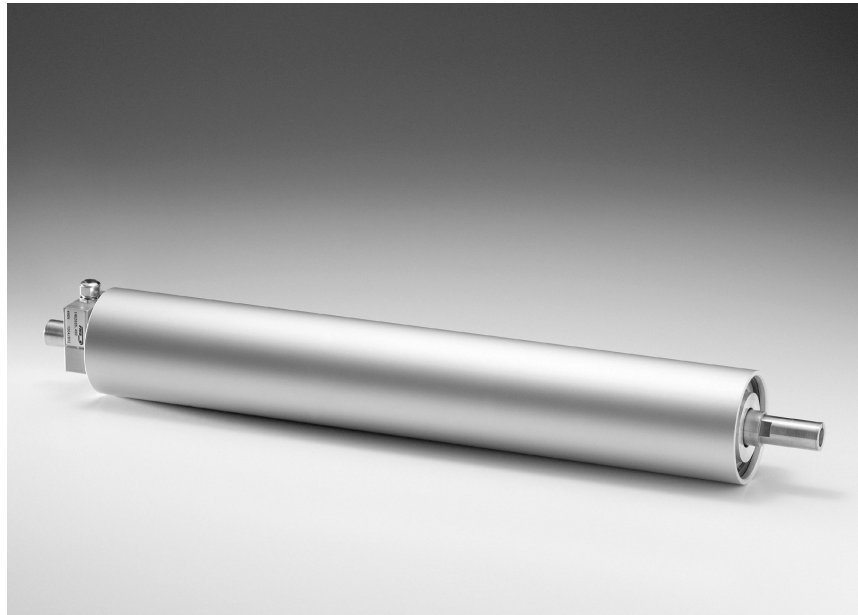
Sizes available for every application

Stainless steel sensor

Corrosion resistant, ultra-durable

Sensor integrated in roller with only one electrical connection

Easy mounting and connection



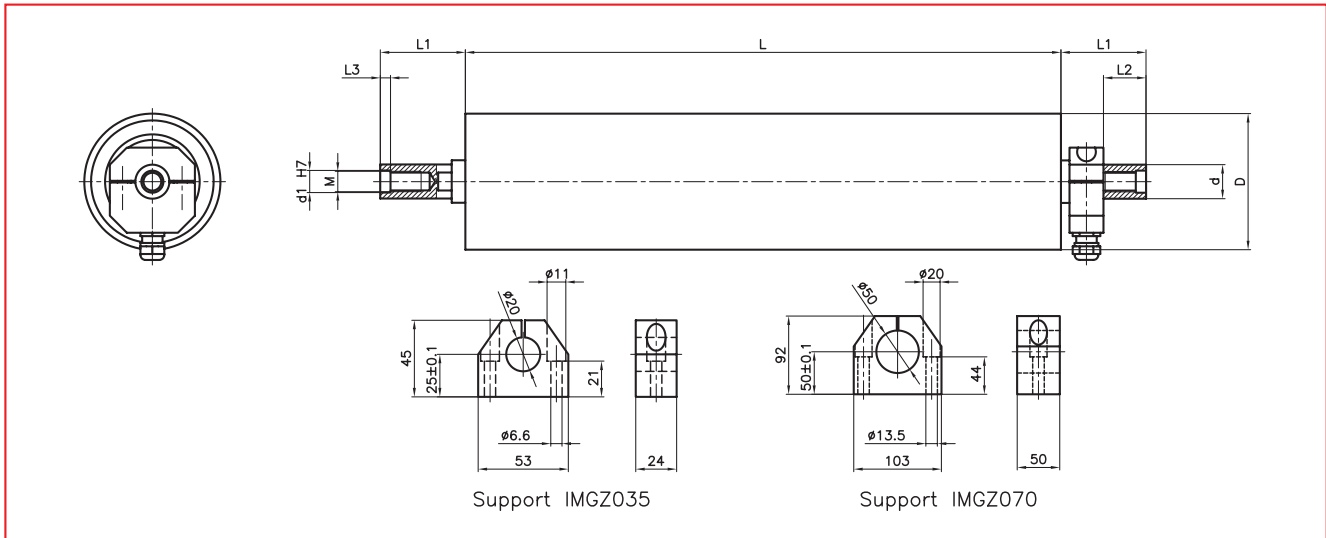
● Functional description

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.

● 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.

IMGZ Series • Dimensions in mm



IMGZ Series • Nominal force / dimensions

Bearing Type	Measuring roller Type	Nominal force N	Dimensions in mm							
			L ¹⁾	L ₁	L ₂	L ₃	M	d	d ₁	D ²⁾
035 1207	IMGZ035.200	200	400 – 3000	50	25	6	M 12 x 18 / 23	20	13	80, 100, 120, 140, 160, 200
	IMGZ035.400	400								
	IMGZ035.750	750								
	IMGZ035.1500	1500								
	IMGZ035.3000	3000								
070 1214	IMGZ070.750	750	400 – 3000	80	50	10	M 20 x 28 / 40	50	22	140, 160, 200, 250, 300
	IMGZ070.1500	1500								
	IMGZ070.3000	3000								
	IMGZ070.6000	6000								
	IMGZ070.12000	12000								

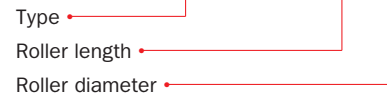
¹⁾ Lengths in 100 mm steps, other lengths on request ²⁾ Other diameters on request

IMGZ Series • 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	Standard anodised aluminium (other roller coatings on request)

Order code (example):

IMGZ035.750.800.200



Scope of delivery:

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

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