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Traction measuring
Tension measuring bearing

Measuring range 100-45000 N

To measure, regulate and control tractive forces in flexible material webs like e.g. plastic foils, metal, paper, textiles etc.

Tension measuring bearings consist of a tension measuring ball bearing housing and an integrated roller bearing, allowing them to fulfill two purposes. These are:

- bear shafts and rollers
- measure the tension of a running web

The tension measuring bearings are bolted directly to the machine column or mounted to the machine frame using brackets. Measurement is effected by four strain gauges (SG) bonded to the sides of the measuring bar.

The pick-up housing are overload protected. If abnormal operating conditions cause the admissible measuring load to be exceeded, strait pins limit the relative motion between the inner and the outer rings. This prevents plastic deformation of the measuring bar.

Technical data
Type MGZ...

sensitivity	1,8mV/V
repeating accuracy	± 0,5%
rated voltage	12V
max. voltage	18V
measuring signal at 5V and nominal load	approx. 6,5 mV
impedance of the SG-bridge	350 Ω
temperature coefficient	± 0,5%/10K
operating temperature	-10...+60°C
Overload reaction	1,5x f_N
breaking load	10x f_N
axial load	20% f_N
round connector type 4-poles	MS3057-6A

Tension measuring bearing	Nominal measuring force [N]	Bearing hole [mm]
MGZ 200	100	9
MGZ 200	50	10
MGZ 201	500/250/125	12
MGZ 203	1000/500/250	17
MGZ 205	1500	20
MGZ 205	750/375	25
MGZ 307	3000	35
MGZ 307	1500/750	10
MGZ 310	6000	50
MGZ 310	3000/1500	60
MGZ 313	10000	65
MGZ 313	5000/2500	80
MGZ 316	30000	80
MGZ 320	45000	100