

Anchor Load Cell TK

Model MF

The Glötzl-Anchor Load Cell with Manometer (pressure gauge) for direct readings in kilonewton (kN) is used among others to monitor loads in tunnel supports.

The anchor load cell is characterized by a pad with predefined surface made of two discs with high bending strength. Ring grooves at the edges enable the discs to move slightly. The pressure chamber in between is filled with hydraulic liquid and connected directly to the Manometer.

This combination allows a conversion of hydraulic pressure into load/forth. The small amount of hydraulic liquid in the closed chamber of the load cell as well as the predefined geometry, provide very accurate measurements with a low influence of temperature.

The anchor load cell type TK is an advancement of the standard load cell type K. It was specially developed for the use in tunnel construction, whereby the aspects of easy handling and a robust design was of importance.

The supporting surface at the bottom of the load cell is designed in a way that the use of an additional load distribution plate is not necessary. There are also no requirements regarding a certain quality of the bearing surface.

The distribution plate for the top is available in two versions, with a planar surface (standard, included in the scope of delivery) or upon request with conical recess for a clamping nut.



Art.-No. 40.00

SPECIFICATIONS

Anchor Load Cell with Manometer

Temperature Error:	1,2% temperature difference per 20 Kelvin
Temperature Range:	-30 °C up to 60 °C
Measuring Range:	160, 250, 400, 600 kN
Accuracy of Manometer:	Kl. 2,0

Load Distribution Plates

In order to ensure that the applied force on the anchor load cell is evenly spread we are offering additional load distribution plates in various designs. Customized solutions are available on request.

Advantages

- hydraulic measuring principle
- defined contact area/surface
- easy installation
- very robust design
- low sensitivity to temperature
- direct readings in kilonewton
- linear measuring method

Alternatives

As an alternative to anchor load cell type MF with manometer it is also possible to equip the cell with a Glötzl-Compensation-Valve (VHD) for hydraulic measurements and remote readings.

For automated readings likewise to use a type with piezoresistive pressure transducer (Model AU/AI) or vibrating wire sensor (VW) can be used – see associated datasheet.

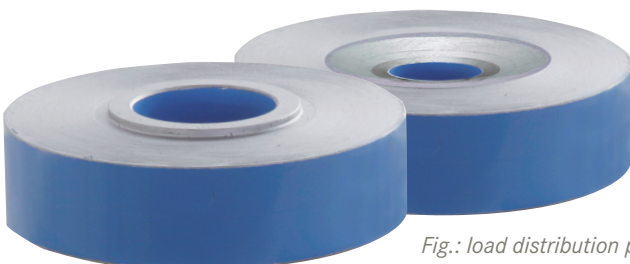
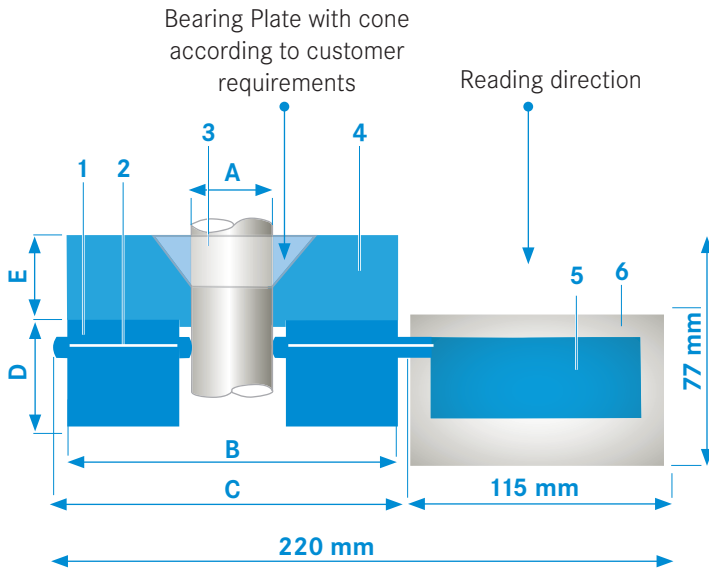


Fig.: load distribution plate standard flat and with cone

MODEL MF

Manometer horizontal

SYSTEM AND DESIGN



1. Piston Pad
2. Hydraulic Liquid
3. Anchor
4. Distribution Plate
5. Manometer
6. Protective Cover

Type TK	Load (kN)*	Dimensions (mm)					Weight (kg)	
		A	B	C	D	E	Cell	Cell + Distribution plate (P)**
TK 160 A35	160	Ø 42	121	140	52	25	4.5	6.5
TK 160 A55	160	Ø 57	128	147	52	25	4.5	6.5
TK 250 A35	250	Ø 42	121	141	52	25	4.5	6.5
TK 250 A55	250	Ø 57	128	148	52	25	4.5	6.5
TK 400 A35	400	Ø 42	121	141	52	25	4.5	6.5
TK 400 A55	400	Ø 57	128	148	52	25	4.5	6.5
TK 600 A35	600	Ø 42	121	141	52	25	4.5	6.5
TK 600 A55	600	Ø 57	128	148	52	25	4.5	6.5

*Other measuring ranges available on request ** Additional distribution plate available on request