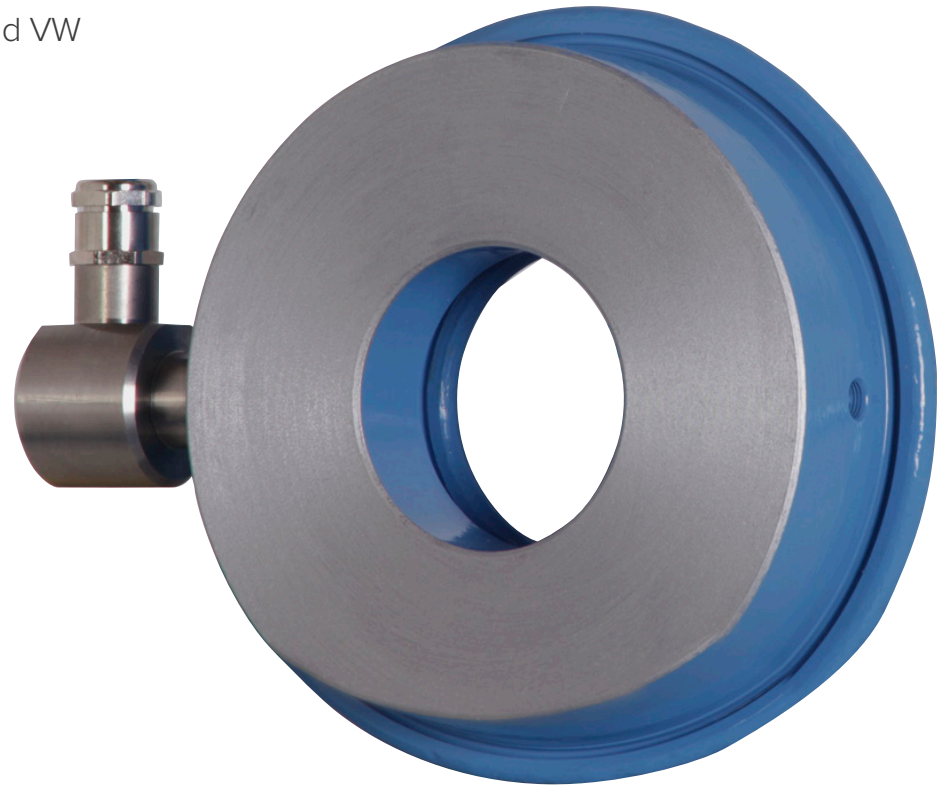
Anchor load cell KK

Model AU, AI and VW

Art.-Nr. 42.00



The GLÖTZL anchor load cell, which has an integrated distribution plate and electronic transducer, is designed to provide reliable, continuous monitoring of the preload force of anchors. The load cell consists of a sensor pad with a defined surface comprising two rigid discs. These discs can move along ring-shaped grooves at the edges of the pad. The pressure chamber is filled with hydraulic fluid and connected to a pressure sensor. This combination makes it possible to convert voltage into a pressure reading. This can then be converted into a unit of force using the effective area. The small volume of hydraulic fluid in a closed chamber and the defined geometry of the sensor provide highly accurate measurements with minimal temperature drift.
The dimensions shown in this brochure are based on the most common strand and rod anchor systems. Individual adjustments can be made at any time and with short notice. On request, the dimensions of the load cells can be recalculated to meet the requirements of the installation position, necessary measuring range and anchor diameter.

Benefits

- Hydraulic Principle
- Defined surface for force application
- Simple assembly
- Very robust design
- Low temperature sensitivity
- Low overall height

Handheld measuring devices

- Handheld measuring device type HMG-AU
- Vibrating wire measuring device type VWM

Data acquisition

Extended digitisation is possible with the DC2 digital controllers.
These allow low-cost daisy chaining of digital transducers and can be fitted with an additional temperature sensor.
This significantly minimises cabling and installation costs. Compensation is possible during data acquisition and additional linearisations can be stored to improve accuracy.

Distribution plates

To ensure that the force is applied to the entire surface of the load cell, we offer additional distribution plates in various designs. Special solutions are available on request.

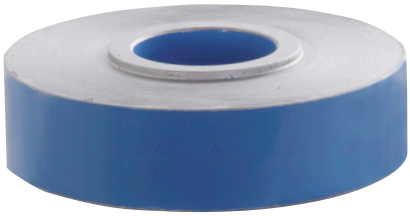


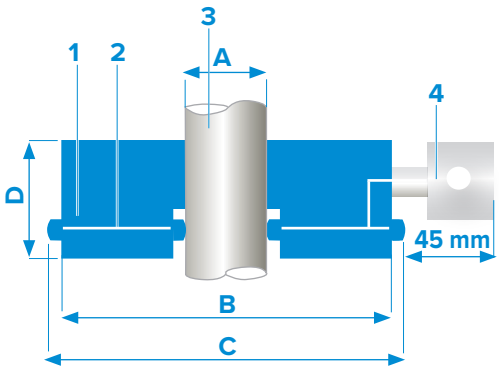
Fig.: Distribution plates

Fig.: DC2 Controller

GLÖTZL

TYPE AU, AI UND VW

with electrical transducer



SYSTEM AND DESIGN

1. Piston pad
2. Hydraulic fluid
3. Anchor
4. Electr. pressure transducer
5. Optional additional distribution plate

Type KK AU, AI o. VW	Load (kN) nom	max	Dimensionen (mm) A	B	C	D	E	Weight (kg) Cell with integradet distribution plate
KK 250 A 35	250	300	35	123	144	57	30	5,1
KK 500 A 50	500	600	50	144	165	65	37	7,5
KK 750 A 50	750	900	50	144	165	65	37	7,5
KK 750 A 75	750	900	75	157	179	65	37	7,7
KK 1000 A105	1000	1200	105	219	241	65	42	14,6
KK 1000 A135	1000	1200	135	235	257	65	42	14,4
KK 1400 A105	1400	1600	105	219	241	65	42	14,6
KK 1400 A135	1400	1600	135	235	257	65	42	14,4
KK 2000 A135	2000	2200	135	265	287	80	61	24,8
KK 3000 A135	3000	3300	135	306	330	80	76	36,7
KK 5000 A160	5000	6000	160	380	406	90	81	64,5

*Further load anges upon request, *Extra distribution plate upon request

TECHNICAL DATA

mV **AU**

AU pressure sensor piezoresistive 4-wire system	
Power supply:	1 mA opt. 10 V DC
Output signal:	0 to max. 250 mV
Measurement range:	120 to 10000 kN
Resolution::	<1 kN
Linearity:	<0,5 % f.s.
Temperature range:	-30 °C to 70 °C
Temperature error:	<0,1 % °C f.s.
Protection class:	IP68
Temperature sensor:	AD592 (optional)

mA **AI**

AI pressure sensor piezoresistive as before, with built-in amplifier	
Power supply:	10 bis 30 V DC
Output signal:	4 to max. 20 mA
Measurement range:	120 to 10000 kN
Resolution:	<1 kN
Linearity:	<0,5 % v.E. (0,1 %)
Temperature range:	-30 °C bis 70 °C
Temperature error:	<0,1 % °C f.s.
Protection class:	IP68
Temperature sensor:	AD592 (optional)

VW **VW**

Pressure transducer with vibrating wire technology VW	
Output signal:	Frequency
Measurement range:	120 to 10000 kN
Resolution::	<1 kN
Linearity:	<0,5 % f.s.
Temperature range:	-30 °C to 70 °C
Temperature error:	<0,1 % °C f.s.
Protection class:	IP68
Temperature sensor:	Thermistor (optional)