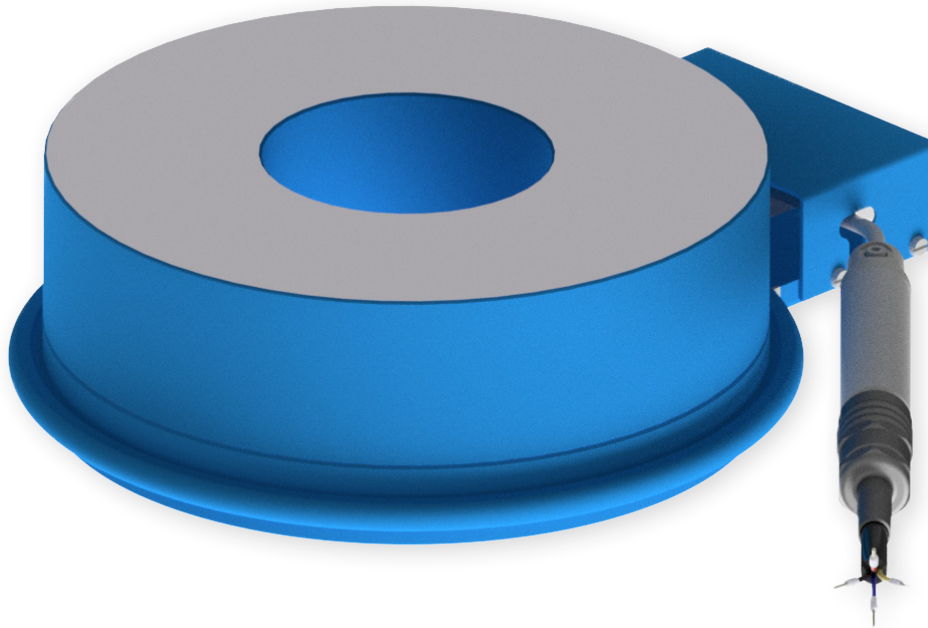


Anchor load cell KN

Model AU, AI and VW



The GLÖTZL anchor load cell with electronic transducer and distribution plate, 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.

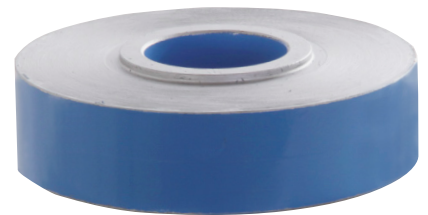


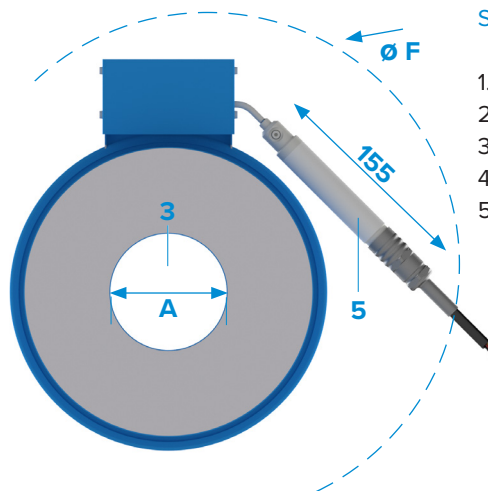
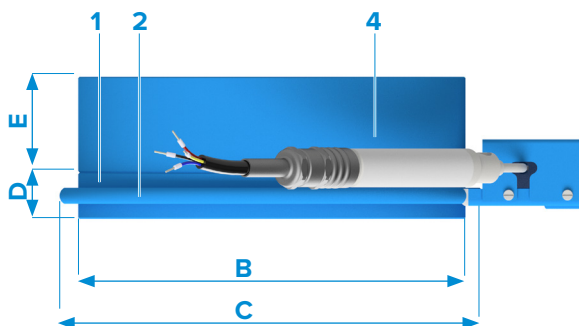
Fig.: Distribution plates



Fig.: DC2 Controller

TYPE AU, AI UND VW

with electrical transducer



SYSTEM AND DESIGN

1. Piston pad
2. Hydraulic fluid
3. Anchor
4. Distribution plate
5. Electr. pressure transducer

Type KN AU, AI o. VW	Load (kN)		Dimensions (mm)			AU+AI		VW		Weight (kg)	
	nom	max	A	B	C	D	E	F	F	Cell	+ Distribution plate
KN 250 A35	250	300	35	123	144	30	27	540	580	3,5	5,8
KN 250 A50	250	300	50	133	155	30	37	540	580	3,5	6,6
KN 500 A50	500	600	50	144	165	30	37	540	580	4,5	8,2
KN 500 A60	500	600	60	152	172	30	37	540	580	4,5	8,5
KN 500 A75	500	600	75	157	179	30	37	540	580	4,5	8,4
KN 500 A90	500	600	90	165	187	30	37	540	580	4,5	8,4
KN 500 A105	500	600	105	176	198	30	37	540	580	4,5	8,6
KN 750 A50	750	900	50	144	165	30	37	540	580	4,5	8,2
KN 750 A60	750	900	60	159	172	30	37	540	580	4,5	8,5
KN 750 A75	750	900	75	157	179	30	37	540	580	5,5	11,5
KN 750 A90	750	900	90	165	187	30	37	540	580	4,5	8,4
KN 750 A105	750	900	105	176	198	30	37	540	580	4,5	8,6
KN 1000 A105	1000	1200	105	219	241	30	42	540	580	7,5	16,7
KN 1000 A115	1000	1200	115	228	250	30	42	540	580	7,5	17,4
KN 1000 A135	1000	1200	135	235	257	30	47	540	580	7,5	17,8
KN 1400 A105	1400	1600	105	219	241	30	42	540	580	7,5	16,7
KN 1400 A115	1400	1600	115	228	250	30	42	540	580	7,5	17,4
KN 1400 A135	1400	1600	135	235	257	30	47	540	580	7,5	17,8
KN 1400 A160	1400	1600	160	282	306	30	61	540	580	10,0	29,7
KN 2000 A135	2000	2400	135	265	287	30	61	540	580	10,0	29,4
KN 2000 A160	2000	2400	160	282	306	30	61	540	580	10,0	29,7
KN 3000 A160	3000	3600	160	336	360	41	76	540	580	21,5	61,5
KN 3000 A180	3000	3600	180	340	364	41	76	540	580	20,0	58,5
KN 5000 A160	5000	6000	160	380	406	50	81	580	580	35,5	94
KN 5000 A200	5000	6000	200	400	426	50	81	580	580	35,5	94,5

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

TECHNICAL DATA



AU



AI



VW

AU pressure sensor piezoresistive 4-wire system		AI pressure sensor piezoresistive as before, with built-in amplifier		Pressure transducer with vibrating wire technology VW	
Power supply:	1 mA opt. 10 V DC	Power supply:	10 bis 30 V DC	Output signal:	Frequency
Output signal:	0 to max. 250 mV	Output signal:	4 to max. 20 mA	Measurement range:	120 to 10000 kN
Measurement range:	120 to 10000 kN	Measurement range:	120 to 10000 kN	Resolution::	<1 kN
Resolution::	<1 kN	Resolution:	<1 kN	Linearity:	<0,5 % f.s.
Linearity:	<0,5 % f.s.	Linearity:	<0,5 % v.E. (0,1 %)	Temperature range:	-30 °C to 70 °C
Temperature range:	-30 °C to 70 °C	Temperature range:	-30 °C bis 70 °C	Temperature error:	<0,1 % °C f.s.
Temperature error:	<0,1 % °C f.s.	Temperature error:	<0,1 % °C f.s.	Protection class:	IP68
Protection class:	IP68	Protection class:	IP68	Temperature sensor:	Thermistor (optional)
Temperature sensor:	AD592 (optional)	Temperature sensor:	AD592 (optional)		