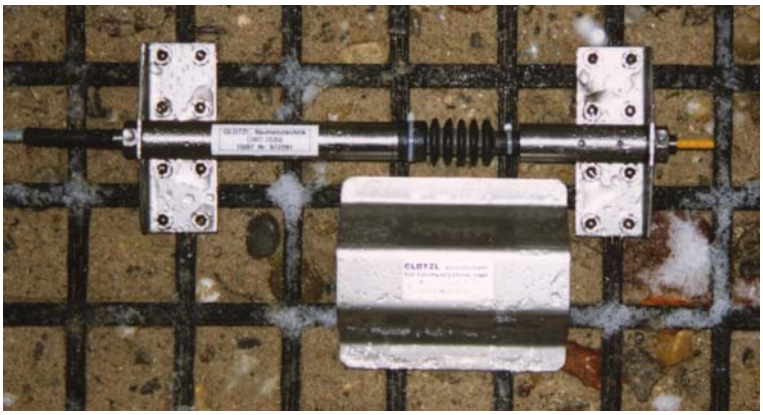
GLÖTZL Baumeßtechnik

Textile strain measurement with Electrical Displacement Transducers

with passive resistive element

Type GWD 20 / . .
Art.-No.: 65.15

The displacement transducer GWD 20 consists of a flexible insulated foil with a resistive track inside. The foil itself is assembled to a carrier of special steel. A slider connected to a tracer pin is charging the foil and working as voltage divider. Load value is proportional to the measuring displacement with regards to the position of the slider. Connection of the displacement transducer is made in 3-wire-technique.



GWD 20/60 is a special model with fixation angle for strain measurement at the geotextile grid with a measuring basis of 200 mm, with tracer pin elongation of a flexible fibre glass rod (yellow protection tube of dia. 4.5mm).

GWD 20/250 is a special model assembled on a holding device of special steel for measurement of fibre glass extensometers.

The displacement transducers of the series **GWD 20** are foreseen for installation in boreholes or also other application ranges where access is difficult. For this reason we did installation without electronic measuring amplifiers. When using the standard version, connection is made via Teflon wires which are grouted in the displacement transducer. Optionally, plug connectors are available. Evaluation electronics for processing of measured data 0 - 10 V, 0 - 20 mA, 4 - 20 mA etc. are available in various housing types according customers' request.
All housing connections are sealed by 0-rings against environmental influences. At the tracer pin the housing is protected against penetration of dust and fluid by a radial shaft-sealing ring

Technical data of standard types

Type	**GWD 20/6**	displacement 60mm	housing length 170mm
	GWD 20/60	displacement 100mm	housing length 210mm
	GWD 20/250	displacement 250mm	housing length 280mm

Housing	dia. 20mm	Max. operating load	10 V
Tracer pin	dia. 6mm	Factory-made calibration	
Max. power-handling capacity	0.5 W at 40°	with supply 1 V	meas.output: mV/V
Potentiometer resistance	4.7 kOhm	Temperature range	-30 °C, +70 °C
Resistance tolerance	+/- 10%	Max. operating pressure	1.5 bar
Linearity	> +/- 2%	Protection class IP 66	protected against dust and water jet
Resolution/Reproducibility	0.1mm		
Sliding current	max. 1 mA		

In order to achieve slightest possible measuring values corruption, measuring values should be measured on high impedance. Current supply of the potentiometer should not exceed 10 Volts.

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