

Hydraulic ring force transducer Geotechnical version up to 700 kN Model F6137



WIKA data sheet FO 52.20

Applications

- Civil engineering and special construction
- Tunnel construction
- Mining (surface and underground)
- Surveying and bridge building
- Slope stabilisation, retaining walls and excavations

Special features

- Measuring ranges 0 ... 80 kN to 0 ... 700 kN
- Relative linearity error ± 1.0 % with analogue pressure gauge, ± 0.5 % with digital pressure gauge or pressure sensor
- Piston stroke ≤ 0.5 mm
- Operates without supply voltage
- Case and piston made of galvanised steel

Description

The model F6137 hydraulic ring force transducer, geotechnical version, is available in nominal size NS 82 up to 700 kN.

This hydraulic force measuring unit can, in conjunction with a measuring or display instrument, display the measured values directly or output them as analogue signals. A cylinder-piston combination, filled with hydraulic medium, in a steel version with surface coating or in stainless steel version (option), forms the basis of the anchor force measuring system. It is an extremely robust design in line with the requirements of geotechnical engineering.



Hydraulic ring force transducer, model F6137

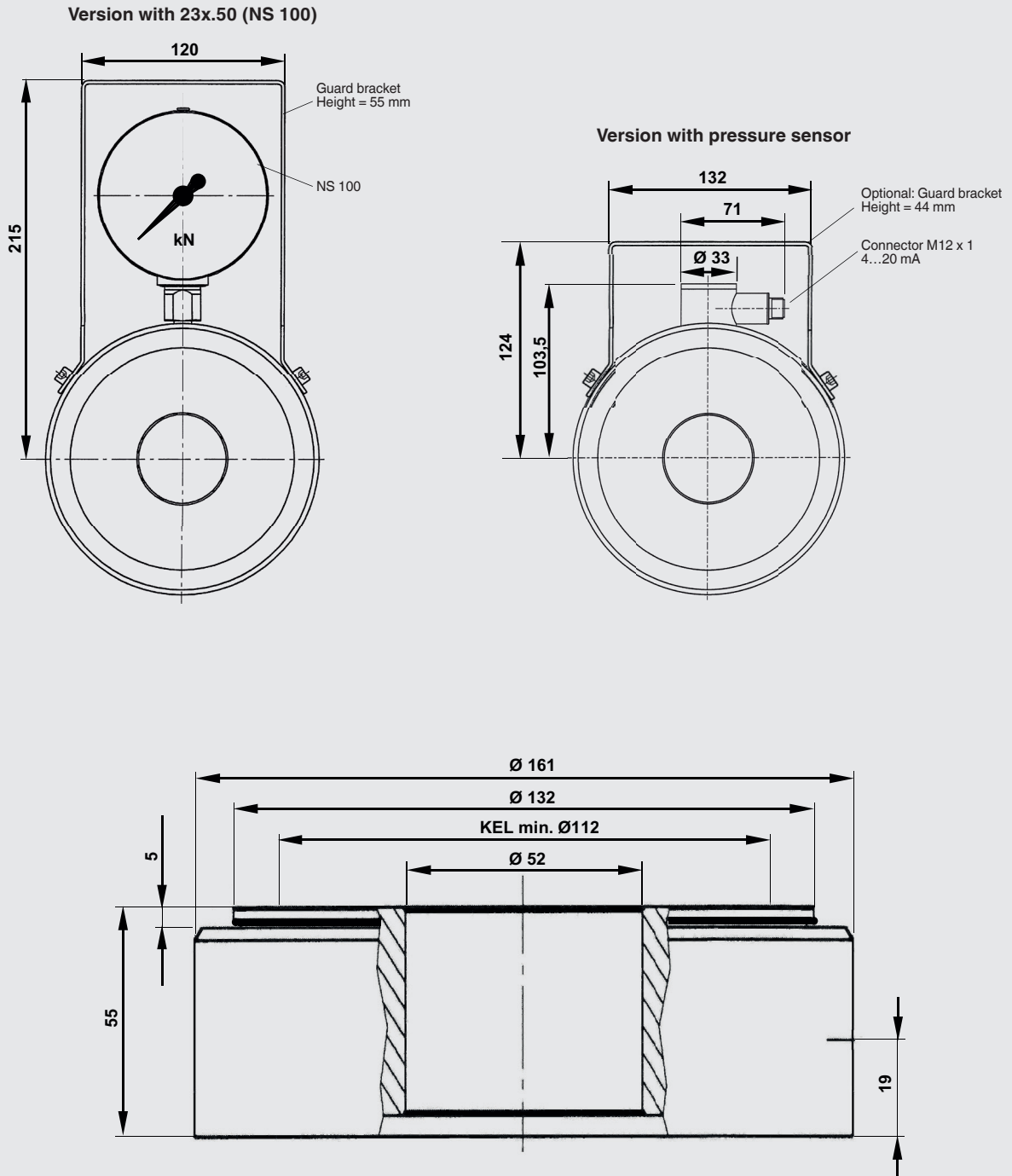
For maximum availability and ease of maintenance, we offer a connection solution that enables external measured value transducers/displays to be disconnected and replaced under operating conditions without loss of hydraulic fluid.

Applications for hydraulic force measuring units can be found in the field of geotechnology in various fields such as tunnel construction, bridge building and slope stabilisation.

Specifications per VDI/VDE/DKD 2638

Model F6137	
Rated force F_{nom}	0 ... 80 kN to 0 ... 700 kN
Nominal size	NS 82
Display <ul style="list-style-type: none"> ■ Standard ■ Option 	Pressure gauge 23x.50 (NS 100) Digital pressure gauge DG-10 Pressure sensor (on request)
Relative linearity error d_{lin} <ul style="list-style-type: none"> ■ Standard ■ Option 	$\leq \pm 1.0 \% F_{nom}$ (analogue display) $\leq \pm 0.5 \% F_{nom}$ (pressure sensor/digital pressure gauge)
Temperature effect on <ul style="list-style-type: none"> ■ the characteristic value TK_C ■ the zero signal TK_0 	1 % $F_{nom}/10 K$ 1 % $F_{nom}/10 K$
Limit force F_L	100 % F_{nom}
Breaking force F_B	> 130 % F_{nom}
Rated displacement s_{nom}	< 0.5 mm
Rated temperature range $B_{T, nom}$	-30 ... +60 °C
Ingress protection (per EN/IEC 60529) <ul style="list-style-type: none"> ■ Analogue display ■ Pressure sensor/digital pressure gauge 	IP65 IP67
Case <ul style="list-style-type: none"> ■ Standard ■ Option 	Steel, galvanised Stainless steel
Piston <ul style="list-style-type: none"> ■ Standard ■ Option 	Steel, galvanised Stainless steel
Guard bracket <ul style="list-style-type: none"> ■ Analogue display ■ Pressure sensor/digital pressure gauge 	yes optional
Mounting type <ul style="list-style-type: none"> ■ Analogue display ■ Pressure sensor/digital pressure gauge ■ Option 	direct direct Capillary, measuring hose for "separation without any losses"
Analogue output <ul style="list-style-type: none"> ■ Supply voltage ■ Load ■ Electrical connection ■ Option 	4 ... 20 mA, 2-wire, DC 0 ... 30 V for current output $\leq (UB - 6 V)/0.024 A$ Circular connector M12 x 1, 4-pin Hand-held measuring instrument ViSens E3908
Fill fluid	Glycerine 70 %, water 30 %
Force introduction	as full-faced as possible, min. 75 % of the piston diameter
Weight in kg	8

Dimensions in mm



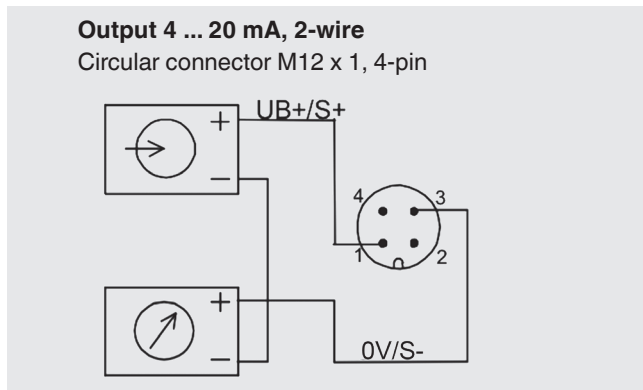
The sealed threaded connections of the hydraulic force transducer must not be loosened!
Non-compliant handling invalidates the warranty and a measuring function is no longer assured.

Version		Display
Rated force	System pressure	23x.50
kN	bar	
80	100	■
130	160	■
200	250	■
250	315	■
350	400	■
400	500	■
500	600	■
600	700	■
700	800	■

Other rated loads and versions on request

■ = possible selection

Pin assignment, analogue output



4...20 mA (2-wire)		
	Pin	Connection identification
Supply UB+	1	brown
Supply 0V/UB-	3	blue
Signal S+	1	brown
Signal S-	3	blue
Shield ⊕	case	case

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We reserve the right to make modifications to the specifications and materials.

