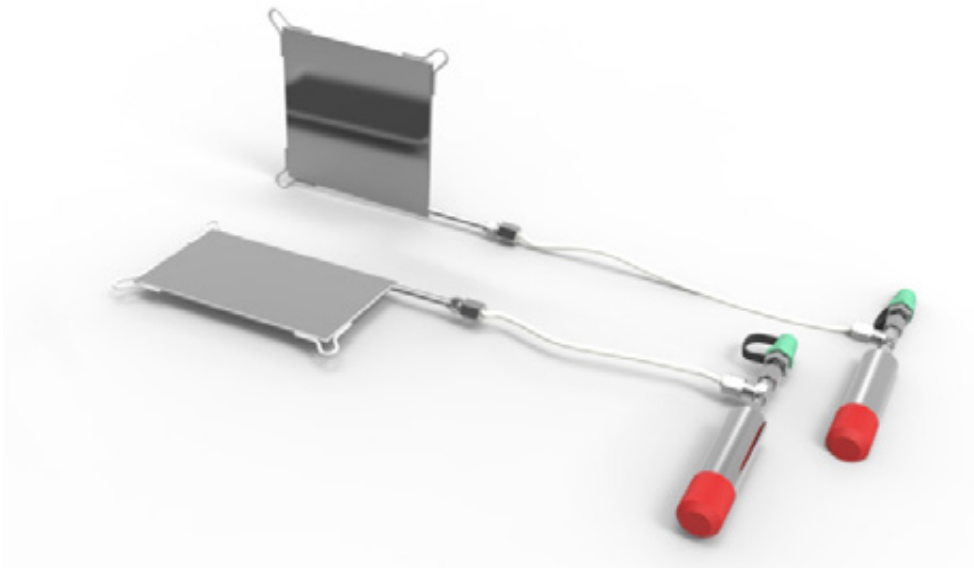


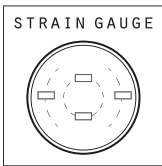
NATM

PRESSURE CELLS

PRESSURE
& LOAD CELLS



NATM PRESSURE CELLS



Sisgeo flexible diaphragm NATM stress cells have been designed to optimize measurements of radial and tangential stresses in shotcrete and concrete tunnel linings.

The stress cell consists of a pressure pad connected to the transducer by a hydraulic tube. Readings are taken by the C6002MV portable readout directly connected to the stress cell terminal.

The internal cavity between the two steel plates of the pressure pad and the hydraulic line are factory filled with special deaired oil under high vacuum to obtain the minimum oil compressibility.

APPLICATIONS

- Pressure on tunnel linings
- Radial and tangential stresses in shotcrete tunnel lining, suitable for NATM method

FEATURES

- High rigidity
- Negligible diaphragm sensor displacement
- Quick and easy to read
- Rugged and waterproof construction for high reliability
- Direct reading in MPa by digital indicator

TECHNICAL SPECIFICATIONS

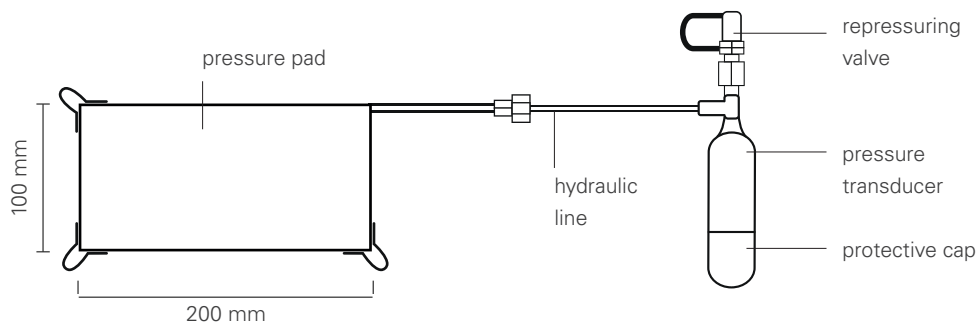
	L112R MODEL	☼	L112T MODEL	☼
Application	radial stress cell		tangent stress cell	
Pressure transducer	ceramic diaphragm with resistive printed strain-gauges		ceramic diaphragm with resistive printed strain-gauges	
Measuring range	0-5 MPa (50 Bar)		0-20 MPa (200 Bar)	
Accuracy (*)	0.3 % F.S. including linearity and hysteresis		0.3 % F.S. including linearity and hysteresis	
Resolution	0.01 MPa (with C6002MV0 indicator)		0.01 MPa (with C6002MV0 indicator)	
Measuring connector	7 pin with sealing cap for direct connection to C6002MV0 indicator		7 pin with sealing cap for direct connection to C6002MV0 indicator	
Pressure pad thickness	5 mm		5 mm	
TUNY0306 Hydraulic line (**)	high resistance rilsan 11H tube filled by de-aired oil. 2 meter standard length, extending to max 25 meter.		high resistance rilsan 11H tube filled by de-aired oil. 2 meter standard length, extending to max 25 meter.	
Transducer dimension	OD 25mm, 130mm long		OD 25mm, 130mm long	
Material	stainless steel and PVC (transducer) galvanised steel (pressure pad)		stainless steel and PVC (transducer) galvanised steel (pressure pad)	
Total weight	2.0 Kg		2.0 Kg	

(*) laboratory tests in fluid have shown difference between the pressure transducer calibration and the stress cell within 0,02% of the linearity.

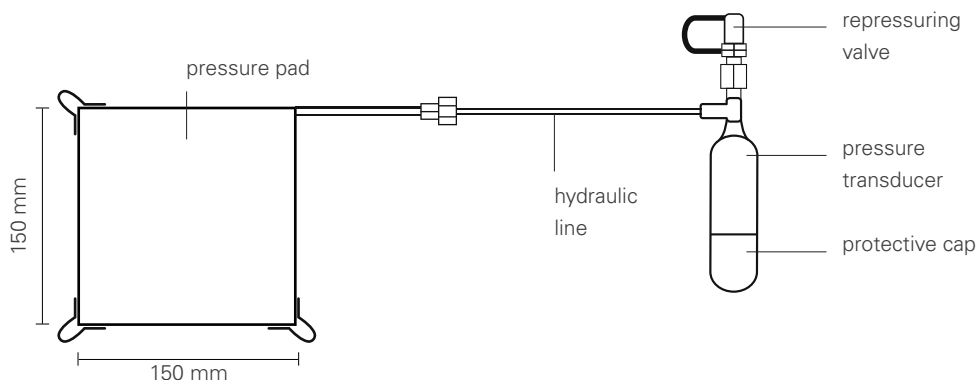
(**) rilsan 11H tube presents negligible volume variation at the working pressure for the maximum requested length.

PHYSICAL FEATURES

L112T MODEL



L112R MODEL



DIGITAL INDICATOR

The reading procedure of Sisgeo NATM pressure cells is much easier if compared to the other similar pressure cells.

Connect the transducer to the purposely developed C6002MV digital indicator by the mating connector and the indicator displays measurements directly in MPa.

PRODUCT CODE 0C6002MV000

Display	3.5 LCD
Resolution	0,01 MPa
Accuracy	± 1 digit
Battery	alkaline 9V disposable
Operating time	2 hours continuously
Mating connector	7 pin female
Environmental	-5°C +50°C, dust-proof case
Dimension	130 x 75 x 40 mm
Material	aluminium alloy
Weight	0.6 Kg



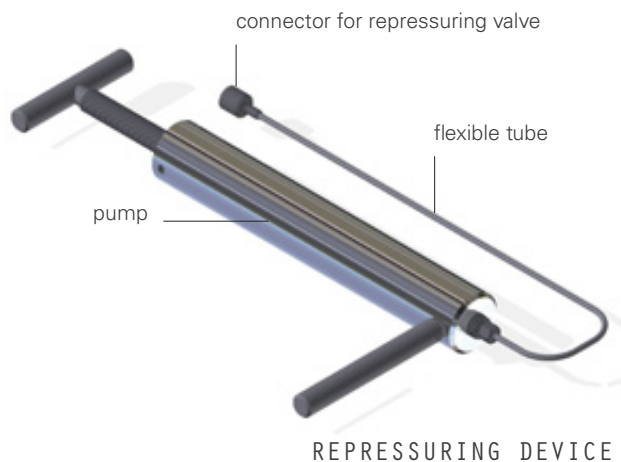
ACCESSORIES AND SPARE PARTS

REPRESSURING DEVICE 0L111PUMPO0

This device permits to increase the volume of the hydraulic oil inside the cavity of the pressure pad, expanding it, in order to maintain close contact between the pad and the surrounding material after the concrete has cured.

DEAIRED OIL 10000IL1KGMG

Special deaired oil for repressuring device. Supplied in 1 kg box.



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ADDITIONAL SUPPORT

SISGEO offers on-line assistance service to the Customers in order to maximize the performance of the system and training on the correct use of the instrument/readout.

For more information contact mail: assistance@sisgeo.com