DATASHEET

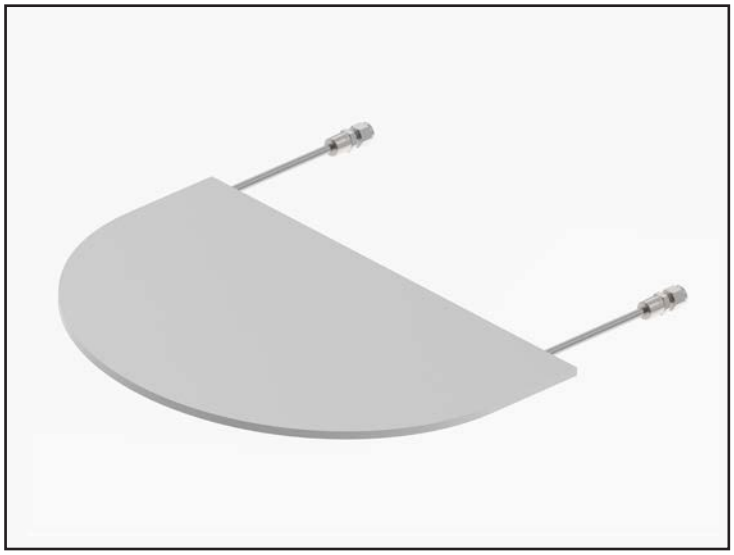
Flat Jack

Flat Jacks provide in-situ testing of stresses within masonry structures or rock

GEOSENSE

Flat Jack

Overview



APPLICATIONS

- Measurement of in situ stress
- Evaluation of the mechanical properties of concrete and rock masses
- Monitoring of variations in the stress state
- Restoration of monuments and historical buildings
- Sheet piles
- Tunnel lining
- Fills & embankments
- Mine backfilling
- Rail track

FEATURES

- Robust and reliable
- Available in various sizes
- Possibility of automatic monitoring

Flat jacks are designed to carry out in-situ testing of masonry structures and rock.

The flat jack is constructed from two stainless steel plates welded around their periphery, with the narrow gap between the plates filled with hydraulic fluid. It is inserted into a slot cut into the structure to be monitored and gradually brought up to pressure with a special hydraulic pump.

As stress increases within the structure or rock,the fluid pressure within the cell rises as the plates are squeezed together and it is possible to derive the stresses acting in the structure test area.

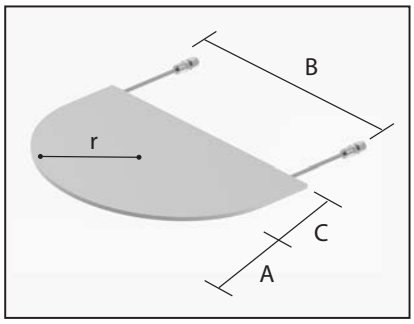
A length of stainless steel tube connects the plates to a pressure transducer (VWDT 5000 or SGT 3000) that converts the pressure to an electrical signal which can be read directly with a MP12 readout or data logged.

Flat Jack

Specifications

FLAT JACK

Material	Steel				
Thickness	4mm				
Max operating pressure	60 bar				
Exterior finish	Painted				
Standard dimensions	Semi-circular	B: 350mm	A: 175mm	C: 0mm	r: 175mm
	Semi-circular	B: 325mm	A: 120mm	C: 0mm	r: 120mm
	Semi-oval	B: 350mm	A: 260mm	C: 85mm	r: 175mm
	Rectangular	400mm x 200mm			

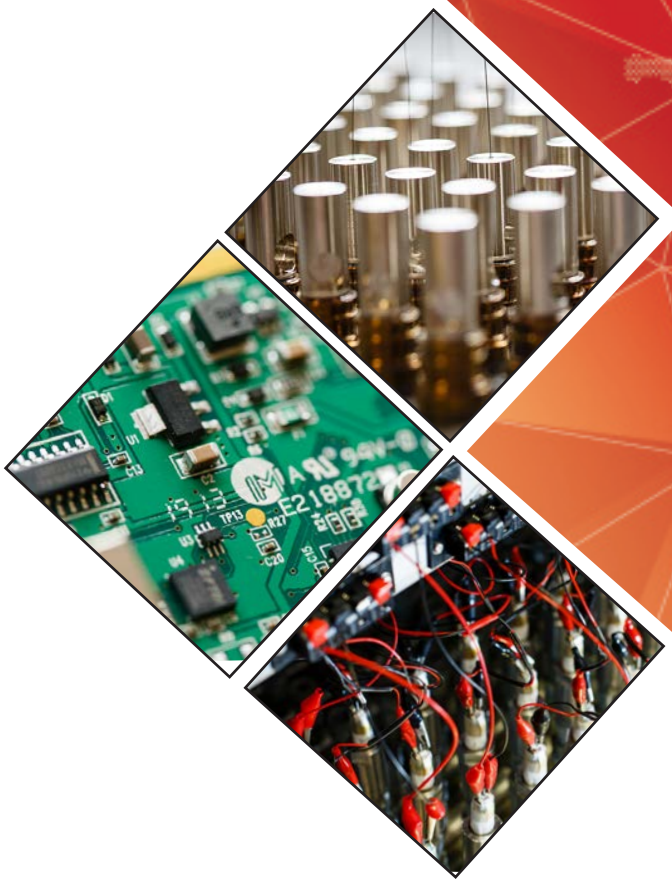


PRESSURE TRANSDUCER

Type	Vibrating wire, piezoresistive
Material	Stainless steel
Pressure fitting	Swage lock type
Output	Frequency, 4-20 mA
Measuring range	1-2-5-10 bar (others on request)
Total accuracy	<0.5% FS (others on request)
Operating temperature	-20 to +75 ° C

HYDRAULIC PRESSURE PUMP

Hand pump	Includes 100 bar pressure gauge & T-fitting
Connection kit	Includes ball valve & nylon tube



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