PNEUMATIC PIEZOMETERS

Models FPC-2 and FPC-2D

APPLICATIONS

The FPC-2 pneumatic piezometer is designed to measure fluid pressure in soil and at the interfaces or in the vicinity of structures buried in the ground. It is used to monitor pore-water or joint-water pressure in:

- Embankments and backfill
- Dams
- Foundations (seepage and uplift)
- Natural and cut slopes
- Excavations
- Retaining walls, piles, culverts and tunnel linings
- Waste disposal sites

DESCRIPTION

The FPC-2 pneumatic piezometer consists of a thin flexible diaphragm on which is applied the fluid pressure. During readout this pressure is balanced by an externally applied nitrogen gas pressure. The readings are obtained when the external gas pressure is equal to the pore-water pressure acting on the reverse side of the diaphragm. The volume change associated with pressurization of the diaphragm is extremely small and consequently the response time is very low, even in low permeability soils as clays.

The design and the materials (brass or stainless steel) used in the construction of the FPC-2 make it particularly suitable for use in both short- and long-term monitoring programs where ruggedness, stability and reliability are required. An integrated filter on the input gas line prevents the entry of foreign particles into the piezometer.

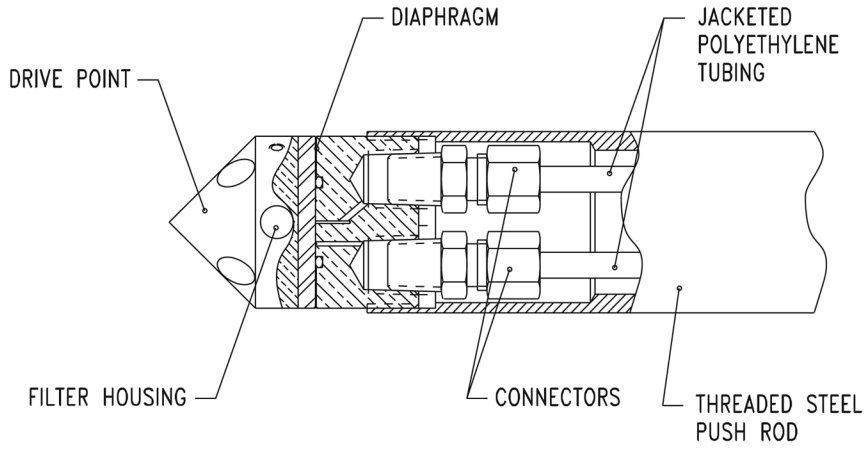
FPC-2 pneumatic piezometers are available with low-air or high-air entry filters. Two models are available: model FPC-2 for borehole installation and model FPC-2D to be pushed into soft soil.

FEATURES

- High resolution and accuracy
- Short response time
- Highly reliable
- Excellent stability
- Available in brass or stainless steel
- Quick-release connectors available

SPECIFICATIONS

Range	0–1000 kPa (standard) 0–3500 kPa (high pressure)
Accuracy	
PR-20 readout	±0.25% F.S. of pressure gauge
PR-20D readout	±0.25% F.S. of pressure transducer
Diaphragm volumetric displacement	<0.01 cm^3
Standard construction	Brass, stainless steel (optional)
Filter	Plastic, ~50 µm, ~10 kPa low air entry (standard) Stainless steel, ~50 µm, ~10 kPa low air entry Ceramic, ~1 µm, ~450 kPa high air entry
Twin tubing	2 polyethylene tubes (ID: 2.5 mm, OD: 4.7 mm) under a PVC jacket
Optional	2 nylon 11 tubes (ID: 3.2 mm, OD: 6.3 mm) under a polyethylene jacket
Dimensions	
Outside diameter	32 mm
Length	28 mm (FPC-2), 52 mm (FPC-2D)



Model FPC-2D

ACCESSORIES

- Quick-connect and plug set for twin tubing
- Junction and switching box
- Push-rod adapter for the FPC-2D; please specify thread type
- Readout instruments: PR-20, PR-20D

ORDERING INFORMATION

Please specify:

- Model
- Measuring range
- Filter type
- Accessories

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