

Drive-in piezometers



Applications

Drive-in piezometers are used in soft soils and saturated soil for monitoring, pressures and pore pressures in the long term. They are equipped with electrical resistive transducers or vibrating wire transducer with porous filters for every kind of use.

- Measurement of pore pressures in soft soil and saturated soil
- Monitoring over-pressures induced overload, road and rail embankments and tanks.

Technical features

Drive-in piezometer is constituted by a metal body of cylindrical shape and a conical tip 40 mm diameter, larger than the body of the piezometer to facilitate its insertion into the ground. A connection to the push rods completes the tool of the instrument.

The pressure transducer is housed inside of the metal body complete with a porous filter made of sintered steel or ceramic. The electronics of the transducer is completely embedded in resin to ensure long-term reliability. The water pressure deforms the membrane integral with the sensor which converts the pressure into a signal, electrical, proportional to it.

Drive-in piezometers are easily connected to a portable readout unit or to Datalogger.

Installation

Drive-in piezometer is installed directly in the ground (soft) through a thrust device (static penetrometer and / or drilling machine), by applying a vertical force with a battery of rods, to bring the instrument to the installation point. On the upper end of the pusher, you need an adapter with groove, to avoid damaging the cable.

OTR srl
Organizzazione Tecnici Riuniti

Via Btg. Susa, 36 – 29122 Piacenza
Tel: +39 0523 594290 – Fax: +39 0523 607512
info@otr-geo.it – www.otr-geo.it – P.IVA/CF 00894610153



Technical specifications



Code	OPIEDR420XX	OPIEDRVWXX
Measure	Pore pressure	Pore pressure
Type of sensor	Absolute or SG Piezoresistive	Absolute Vibrating wire
Range	100-200-500-700-1000-2000-3000 kPa	350-500-700-1000-1500 kPa
Sensitivity	0.01% F.S.	0.01% F.S.
Accuracy	0.3% F.S.	0.3% F.S.
Overload	150%	120%
Output signal	4-20 mA	Hz
Temperature oper. range	from -10°C to +70°C	from -10°C to +70°C
Long term stability	0.02% F.S. (1 year)	0.02% F.S. (1 year)
Diameter	22 mm	19 mm
Length	190 mm	150 mm
Material	Stainless steel	Stainless steel
Weight	0,25 Kg	0,2 Kg
Filter pore size (*)	40 micron	40 micron

PUSHROD

Code OPIEDRVROD

Length	500 mm
Diameter	1"
Material	Stainless steel
Diameter conical tip	40 mm
Material	Stainless steel

(*) Filter cells with different porosity size can be provided on request

Accessories



Pushrod
(Code OPIEDRVROD)
and conical tip in Inox.



Portable readout unit
(Code O001800001)



Wateight connector
(Code OCONST00000)

Cables

Code OCABLE00001 2x2x0.35 if Absolute or Vibrating Wire