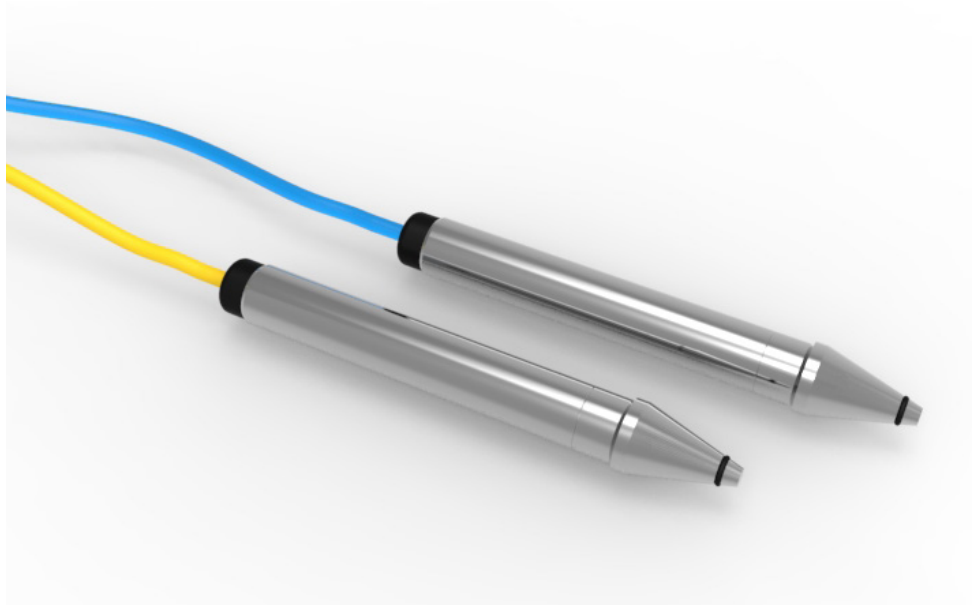


PK45C

REMOVABLE PRESSURE
TRANSDUCERS

PIEZOMETERS





REMOVABLE PRESSURE TRANSDUCERS

The PK45C removable pressure transducer is designed to measure pore water pressure when installed in a Casagrande piezometer filter unit with a dedicated conical port.

The sensor can be retrieved for functional checks, recalibration or replacement, making it suitable for long-term monitoring programmes. Available versions include vibrating wire (VW) and piezoresistive technologies.

Each measurement is referenced to the intake zone of the installed filter unit (measuring point at the filter elevation).


The influence of atmospheric pressure should be considered during data processing, depending on the measurement setup.

APPLICATIONS

- Long-term monitoring
- Suitable in lightning-prone areas (since it can be replaced)
- Dams and fill embankments
- Pore water pressure monitoring
- Landslide monitoring
- Natural or cut slope sites

FEATURES

- Retrievable for recalibration, functional checks and replacement
- Suitable for long cable runs
- Built-in surge protection and temperature sensor (vibrating wire only)
- When the transducer is removed, the Casagrande piezometer can still be read manually using a water level meter

 Meet the essential requirements of the EMC Directive 2014/30/EU

TECHNICAL SPECIFICATIONS

	VIBRATING WIRE		PIEZO-RESISTIVE	
	REMOVABLE PRESSURE TRANSDUCER		REMOVABLE PRESSURE TRANSDUCER	
APPLICATION	Pore water pressure monitoring via Casagrande piezometer filter unit		Pore water pressure monitoring via Casagrande piezometer filter unit	
MODEL	0PK45C20000	0PK45C50000	0P252C00200	0P252C00500
Range	0 - 200 kPa 0 - 29 psi	0 - 500 kPa 0 - 73 psi	0 - 200 kPa 0 - 29 psi	0 - 500 kPa 0 - 73 psi
Overpressure	2 x range		1.3 x range	
Resolution	0.025% FS		0.01% FS	
Sensitivity	See individual Calibration Report		See individual Calibration Report	
Accuracy (MPE) ⁽¹⁾	≤ ±0.25% FS		≤ ±0.20% FS	≤ ±0.15% FS
Signal output	frequency (VW), resistance (T)		4 - 20 mA (current loop)	
Electric supply	depends on readout/logger		12 -24 V DC	
Thermal zero shift	0.01 to 0.03 % FS /°C		0.00025 % FS /°C typ.	
Operating temperature range	-20 to +80 °C		-10 to +55 °C	
Temperature sensor	thermistor		thermistor (on request)	
Material	stainless steel		stainless steel	
IP rating	IP68 (tested up to full-scale pressure)		IP68 (tested up to full-scale pressure)	
Body diameter	Ø 27 mm (1.1")		Ø 27 mm (1.1")	
FILTER UNIT				
Filter tip	Porous stone tip, Ø 4 mm (0.16")		Porous stone tip, Ø 4 mm (0.16")	
Material	stainless steel		stainless steel	
Pore size	40/50 µm		40/50 µm	
CABLE				
Signal cable	0WE104K00PV (standard PVC jacket) 0WE104K00ZH (LSZH jacket)		0WE102KEOZH (LSZH jacket)	
Max cable length to logger ⁽²⁾	1000 m (for more information see FAQ#77)		1000 m (for more information see FAQ#77)	

(1) MPE is the Maximum Permissible Error over the full-scale range (FS). In the Calibration Report, the error is evaluated using both linear regression (≤ Lin. MPE) and polynomial correction (≤ Pol. MPE).

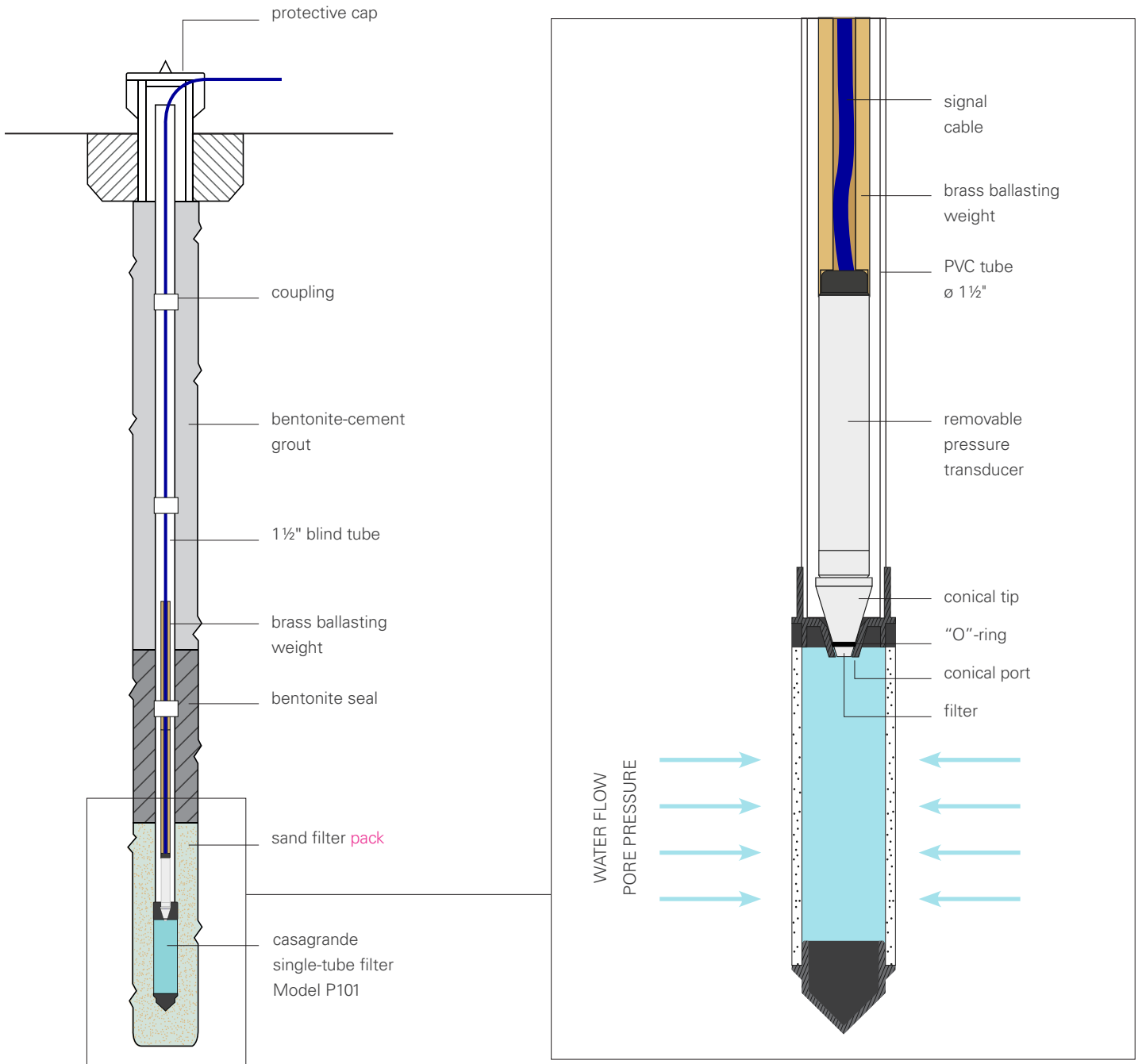
(2) refer to FAQ section of Sisgeo website: www.sisgeo.com/faq



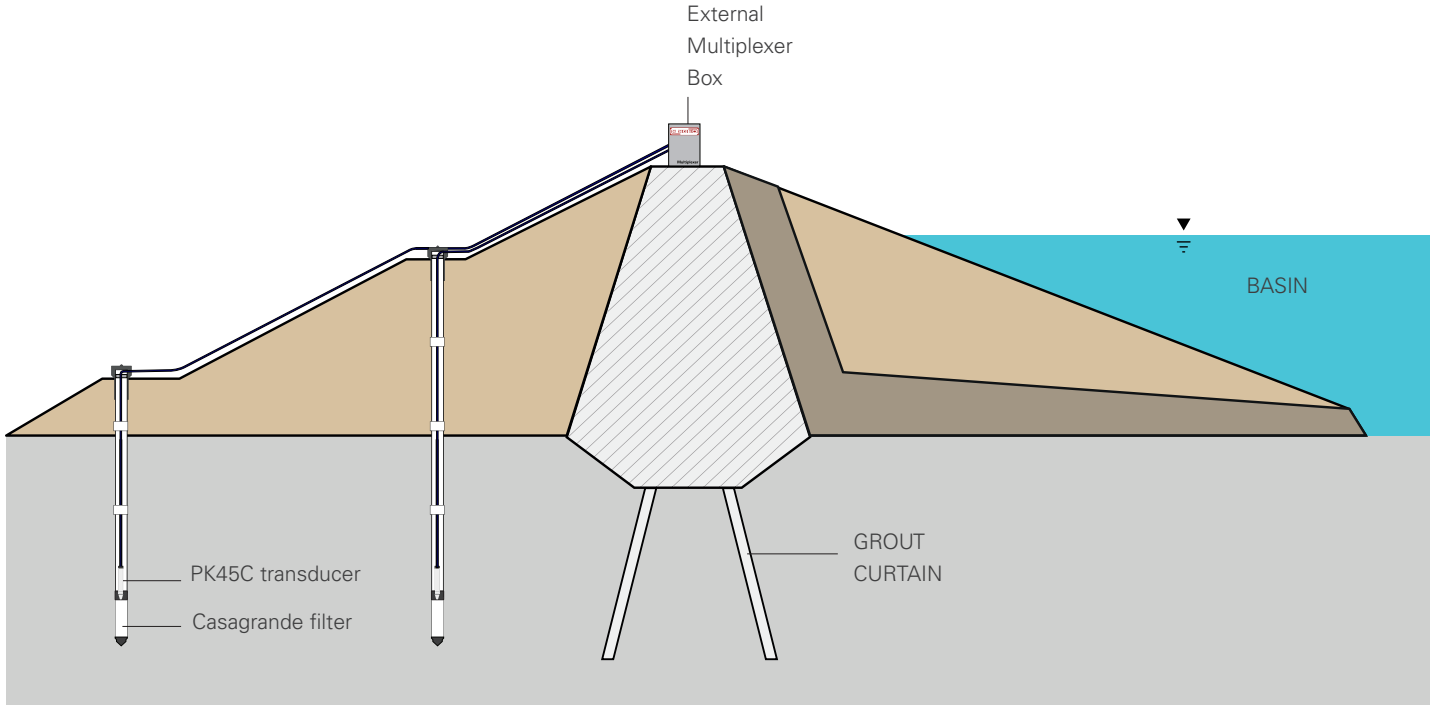
WORKING PRINCIPLE

The tip of the removable pressure transducer is designed to mate with the conical port of the P101 Casagrande filter. Sealing is ensured by an O-ring at the probe tip; the transducer is positioned by brass ballast weights fitted on the signal cable. A small port in the probe tip allows pore water pressure to act on the diaphragm inside the pressure transducer.

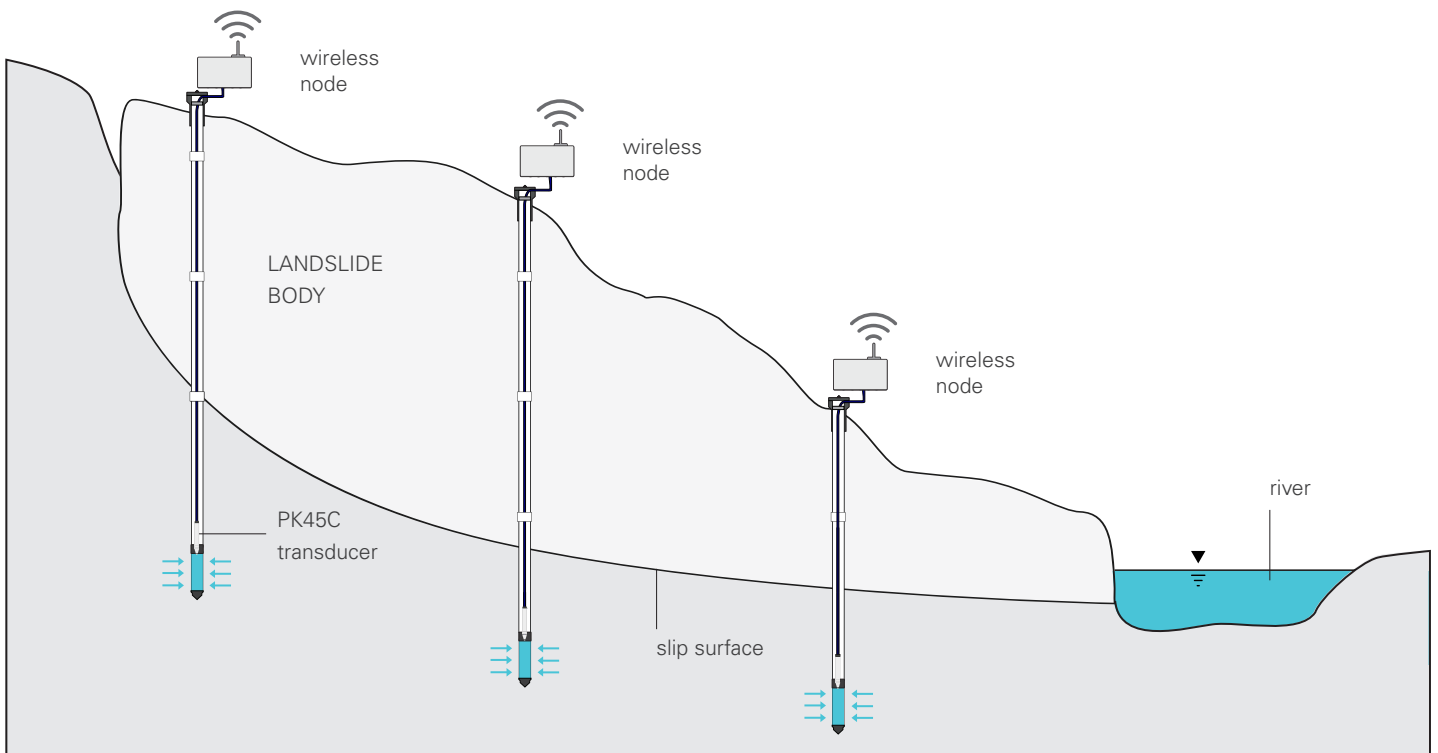
The P101 Casagrande filter tip and riser pipe are installed according to standard Casagrande piezometer practice. The transducer, with brass ballast weights, is lowered to engage with the port in the P101 filter. The transducer can be removed for functional checks, recalibration or replacement.



PORE WATER PRESSURE MONITORING IN EMBANKMENT DAM FOUNDATION



UPLIFT PRESSURE MONITORING IN LANDSLIDE APPLICATIONS



ACCESSORIES AND SPARE PARTS

LSZH 4 WIRE CABLE OWE104K00ZH

Electrical cable with 2 pairs of 22 AWG wire and LSZH jacket. External diameter 7.4 mm. Rated for -30° to + 80°C.

PVC 4 WIRE CABLE OWE104K00PV

Electrical cable with 2 pairs of 22 AWG wires and PVC jacket. External diameter 7.6 mm. Rated for -30° to +80°C.

LSZH 2 WIRE CABLE OWE102KE0ZH

Electrical cable with 2 wires (20 AWG), Kevlar stress member and LSZH jacket. External diameter 7.7 mm. Rated for -30° to +80°C.

PROTECTIVE PIEZOMETER CAP OP100CH1000

Lockable protective cap for standpipe or Casagrande piezometers, with data plate and survey pin.

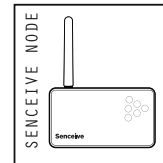
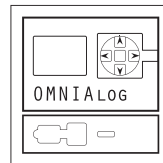
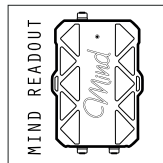
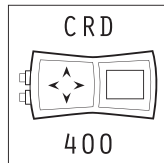


CABLE SPLICING KIT OEGSMOK0000

Splice kits are used when cables must be repaired or extended. Each splice kit includes circuit boards, butt connectors, plastic protection tubes, and the two-part epoxy resin kit for waterproofing.



READABLE BY



For further information, refer to the readout datasheets.

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