



## CASAGRANDE AND STANDPIPE PIEZOMETERS

Casagrande filter unit is used to measure the water pressure in permeable soil. Filter unit is made in synthesised high density polyethylene. It is available in different models to suite all the customer applications. Filter units have threaded cap joint with two 0.5" twin tubes or with a 1.5" single tube.

Standpipe piezometers are used to monitor the ground water table. The standpipe filter unit consists of a slotted tube covered by geotechnical fabric for filtered water entry.

Stainless steel push-in filter unit is also available for drive-in piezometer installation in soft soils.

Control of ground water level in soil

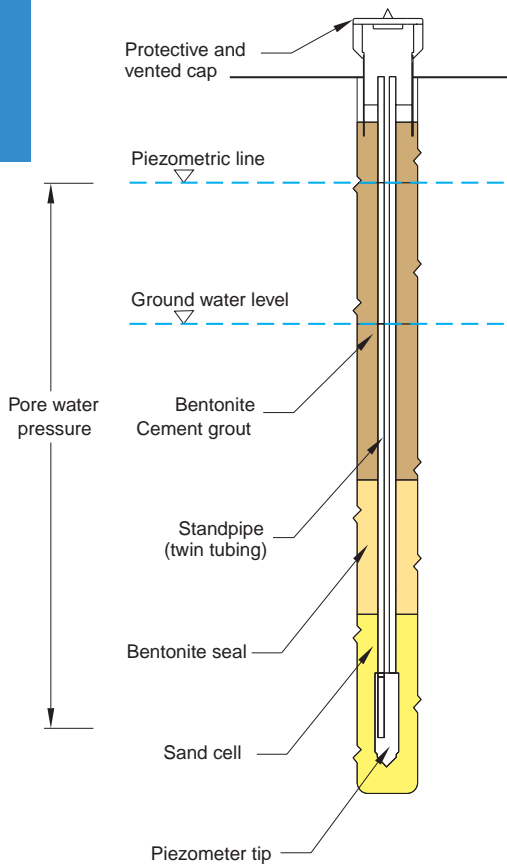
Construction and stability control of rail and road embankments, earth dams and foundations

Investigation of stability in natural and cut slopes

Hydrological and water supply investigations

Permeability tests for drainage and de-watering activities

## CASAGRANDE PIEZOMETERS (for boreholes)



Casagrande piezometers are used to detect, measure and monitor water pressure in permeable soil or rock specifically at the installed depth of the measuring tip. Typically a bentonite seal is installed immediately above and sometimes below the filter. The filter is normally connected to the surface by a pair of tube columns.

A pair of tubes is installed where water pressure measurement with a vented filter is required. Also two tubes provide a water inlet and outlet for internal flushing to clean the filter. The water level can be read by portable acoustic water level meter or automatically with a pressure transducer inserted in the standpipe or connected to the filter to form a closed circuit piezometer.

### APPLICATIONS

- Control of ground water level in soil
- Construction and stability control of rail and road embankments, earth dams and foundations
- Investigation of stability in natural and cut slopes
- Permeability testing of drainage and de-watering activities

## STANDPIPE PIEZOMETERS (for boreholes)

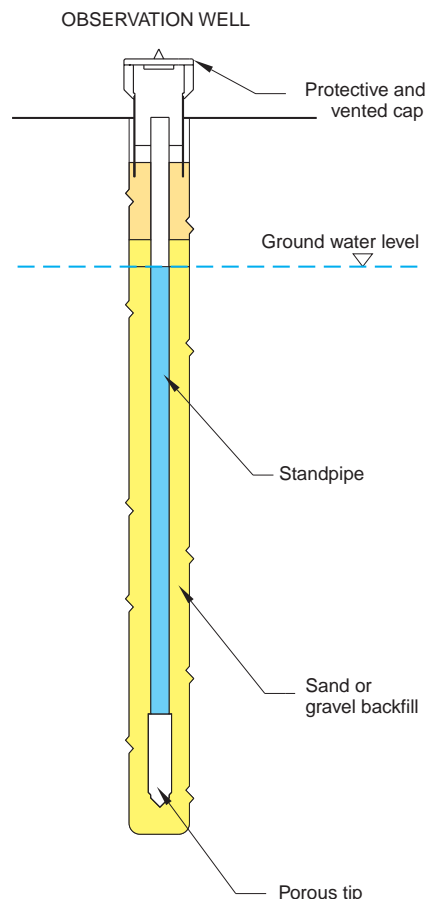
The standpipe piezometer is used to detect, measure and monitor ground water level. The filter is connected to the surface either by a single or a pair of tube columns.

A pair of tubes is installed where water pressure measurement with a vented filter is required. The filter unit and tube column(s) are installed to permit water from the full length of the borehole to enter the filter. Typically this is achieved by back filling the standpipe borehole with coarse grained sand or gravel.







The water level can be read by portable acoustic water level meter or automatically with a pressure transducer inserted in the standpipe or connected to the filter to form a closed circuit piezometer.

### APPLICATIONS

- Hydrological and water supply investigations
- Stability of embankments and foundations
- Investigations of the stability of natural and cut slopes
- Permeability tests for drainage and de-watering activities



## FILTER UNITS-APPLICATIONS AND SUITABLE MEASURING EQUIPMENT

FILTER CODE	FEATURES	SUITABLE MEASURING INSTRUMENTS
<p>P112</p> 	<p>Filter <i>high density polyethylene tube</i>            Pair of 0.5" diameter connection for two plastic tube columns            Two columns facilitate filter cleaning by flushing</p> <p><b>Casagrande or standpipe boreholes</b></p>	<p>C111 and C112 acoustic water level meters-manual readout</p>
<p>P112A</p> 	<p>Filter <i>high density polyethylene tube</i>            Two connections for a 0.5" and 1.5" plastic tube column            Permits simultaneous manual and automatic readout            Two columns facilitate filter cleaning by flushing</p> <p><b>Casagrande or standpipe boreholes</b></p>	<p>P252R vented pressure transducer using largerport-suitable for automated readout.            C111 and C112 acoustic water level meters-manual readout</p>
<p>P113</p> 	<p>Stainless steel drive-in filter housing containing a <i>high density polyethylene filter</i>            Connects to a driven-in column of steel stand pipe with a concentric plastic pipe to facilitate filter cleaning by flushing</p> <p><b>Casagrande only</b></p>	<p>C111 and C112 acoustic water level meters-manual readout</p>
<p>P101</p> 	<p>Filter <i>high density polyethylene tube</i>            1.5" connection for single plastic tube column</p> <p><b>Casagrande or standpipe boreholes</b></p>	<p>C111 and C112 acoustic water level meters-manual readout.            P252C Pore pressure transducer-manual or automated readout</p>
<p>P102</p> 	<p>Stainless steel drive-in filter housing containing a <i>high density polyethylene filter</i>            Connects to a driven column of steel stand pipe</p> <p><b>Casagrande only</b></p>	<p>C111 and C112 acoustic water level meters-manual readout</p>
<p>THF</p> 	<p>Filter is a length of PVC tube with closed end and horizontal slots over 1 m length            Available in different diameters            Filter is 3 m long covered in geotechnical fabric</p> <p><b>Standpipe only</b></p>	<p>P252R vented pressure transducer (suitable automation).            C111 and C112 acoustic water level meters-manual readout</p>

# CASAGRANDE AND STANDPIPE PIEZOMETERS

## ACCESSORIES AND SPARE PARTS

OP100ITPS00	Drive-in top cap	Tube top cap for steel tube- pointed for topographical survey
OP100CH0000	Protection Cap	Lockable cap to protect piezometer casing top.
OBE10050K00	Bentonite Pellets	To seal piezometer tip into borehole. Supplied in 50Kg bags

## TECHNICAL SPECIFICATIONS

Filter elements for P101, P112 and P112A are high density polyethylene tube

### TECHNICAL FEATURES

Outer Diameter	61,5 mm
Filter wall thickness	5,0 mm
Weight per unit filter length	1,5 kg/m
Maximum pore size	40 micron

### Filter element lengths

OP101002000	OP101004000	P101008000
OP112002000	OP112004000	P112008000
OP112A02000	OP112A04000	P112A08000
20 cm	40 cm	80 cm

Connecting tubes	OD mm	ID mm	Material	Length m	Appropriate filter
OTCH0005000	21	15	PVC	3.0	P112
OTCH0015000	50	40	PVC	3.0	P101, P112A and TFH
OTCH0020000	70	60	PVC	3.0	TFH
OTCH0030000	90	80	PVC	3.0	TFH
OTUF3800000	38	32	Steel	0.5, 1.0, 3.0	P102 and P113
OP1131T1700	22	17	PVC	Continuous	P113

## DRIVE-IN PIEZOMETERS

A stainless steel pointed filter unit suitable for drive-in applications. Lengths of steel are connected to the unit as the tip is driven into the ground. Suitable for installation in soft soils.

### APPLICATIONS

Casagrande piezometer for soft soils

### DRIVE-IN UNITS

OP102IF4000	Driving tip and filter
OP113IF4000	Driving tip and filter
OTUF3800000	Steel driving tube
OP1131T1700	Plastic central tube

