



## **CASAGRANDE AND STANDPIPE PIEZOMETERS**

Casagrande filter unit is used to measure the water pressure in permeable soil. Filter unit is made in high density polyethylene. It is available in different models to suite all the customer applications. Filter units have threaded cap joint with two 1/2" twin tubes or with a 1 1/2" 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**

## FILTER UNITS TECHNICAL SPECIFICATIONS

**P112**



Filter *high density polyethylene tube*  
 Pair of 1/2" diameter connection for two plastic tube columns.  
 Two columns facilitate filter cleaning by flushing.

Filter diameter	61.5 mm
Filter length	200 mm
Porosity	40 micron
Material	polyethylene
External diameter	61.5 mm
Tube connection	2x1/2"G

**Casagrande or standpipe boreholes**

**P112A**



Filter *high density polyethylene tube*  
 Two connections for a 1/2" and 1"1/2 plastic tube column.  
 Permits simultaneous manual and automatic readout.  
 Two columns facilitate filter cleaning by flushing

Filter diameter	61.5 mm
Filter length	200 mm
Porosity	40 micron
Material	polyethylene
External diameter	80.0 mm
Tube connection	1x1/2"G, 1x1"1/2 G

**Casagrande or standpipe boreholes**

**P101**



Filter *high density polyethylene tube*  
 1"1/2 connection for single plastic tube column

Filter diameter	61.5 mm
Filter length	200 mm
Porosity	40 micron
Material	polyethylene
External diameter	61.5 mm
Tube connection	1x1"1/2 G

**Casagrande or standpipe boreholes**

**TFH**



Filter is a length of PVC tube with closed end and horizontal slots.  
 Available in different diameters.  
 Filter is 3 m long covered in geotechnical fabric.

Length	3 m
Diameter	1", 1"1/2, 2" o 3"G
Material	PVC
Slot	0.5 mm
Pitch	6 mm

**Standpipe only**

## PVC TUBES TECHNICAL SPECIFICATIONS

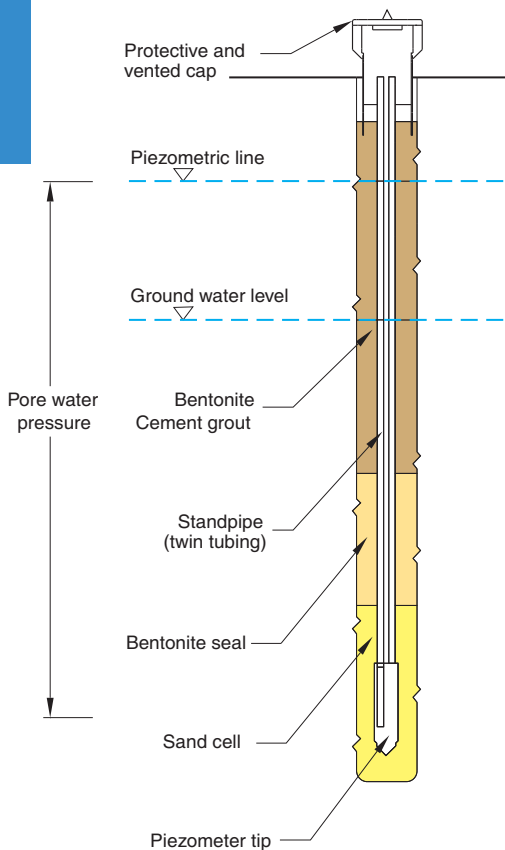
### BLIND TUBES

	OD	ID	Material	Length	Appropriate filter
OTCH0005000	1/2"G, 21.1 mm	15.9 mm	PVC	3 m	P112, P112A
OTCH0010000	1"G, 33.3 mm	26.7 mm	PVC	3 m	TFH
OTCH0015000	1"1/2 G, 48.0 mm	40.0 mm	PVC	3 m	P101, P112A
OTCH0020000	2"G, 60.0 mm	51.6 mm	PVC	3 m	TFH
OTCH0030000	3"G, 89.0 mm	79.0 mm	PVC	3 m	TFH

### SLOTTED TUBES

	OD	ID	Material	Length	Coupling OD	Slot and Pitch
OTFH0010000	1"G, 33.3 mm	26.7 mm	PVC	3 m	40.0 mm	0.5mm/6mm
OTFH0015000	1"1/2 G, 48.0 mm	40.0 mm	PVC	3 m	55.0 mm	0.5mm/6mm
OTFH0020000	2"G, 60.0 mm	51.6 mm	PVC	3 m	81.0 mm	0.5mm/6mm
OTFH0030000	3"G, 89.0 mm	79.0 mm	PVC	3 m	95.0 mm	0.5mm/6mm

## 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.

