



# Pneumatic Piezometers



C108 Pneumatic Readout shown with RST Pneumatic Piezometers

RST Pneumatic Piezometers have an unsurpassed record for long term stability and reliability in over 50,000 world-wide installations. RST Pneumatic Piezometers utilize a direct reading pneumatically operated diaphragm, making operation simple while ensuring long term stability and high accuracy at a low cost.

Employing the lowest (0.002 cc) displacement available, measurements can be made under essentially zero volume change conditions. Time lag problems are minimized, and accuracy improved.

RST Pneumatic Piezometers are assembled to client specified length, tested, calibrated, and ready to install.

### RST Instruments Ltd.

11545 Kingston St.,  
Maple Ridge, BC  
Canada V2X 0Z5

Telephone: 604 540 1100  
Facsimile: 604 540 1005  
Toll Free: 1 800 665 5599

[info@rstinstruments.com](mailto:info@rstinstruments.com)

[www.rstinstruments.com](http://www.rstinstruments.com)

### applications

Assessing performance and investigating stability of earth fill dam embankments.

Slope stability investigations.

Monitoring water levels in wells and standpipes.

Monitoring pressures behind retaining walls and diaphragm walls.

Monitoring pressures during fill or excavation.

Monitoring pore pressure in land reclamation applications.

### features

Over 25 years of proven, long term reliability and accuracy.

Lowest displacement pneumatic piezometer available.

Low cost.

No internal metal parts. All piezometer components are non-metallic corrosion resistant nylon.

Flow or non-flow methods supported.

Compatible with most brands of readouts.

In-line filtered quick couplers.

Remote readings via flexible direct burial tubing avoids construction obstacles.



P-100 Mini Pneumatic Piezometer

P-100-1 Piezometer



P-102-SS Pneumatic Wellpoint Piezometer



specifications + ordering info

# Pneumatic Piezometers



## general specifications

ITEM	DESCRIPTION
Sensitivity	0.1% F.S.
Displacement	0.002 cc
Materials	Nylon 12 with EP diaphragm
Accuracy	±0.25% F.S.
Standard Resolution	1 kPa / 0.1 psi or 0.1 kPa / 0.01 psi with C-108 readout.
Repeatability	±0.35 kPa / ±0.05 psi
Range	0-2000 kPa / 0-200 psi with standard C-108 readout and T-102 tubing
Linear Range	21-2000 kPa / 3-200 psi with standard C-108 readout and T-102 tubing
Max Range	0-14,000 kPa / 0-2000 psi

## accessories

C108 Pneumatic Readout
Terminal stations
Filter fabric installation socks
Bentonite pellets
Optional armoured tubing
Splice kits
Riser pipe

## ordering info

ITEM	PART #
P-100 Miniature	PP0001
P-100-1 Standard	PP0011
P-102-SS Wellpoint	PP0025
P-104 High Air Entry	PP0041
P-104-D High Air Entry	PP0042

Additional info to be mentioned at time of ordering:

Tubing Length (per piezometer)
Range
Accessories
Number of channels (per terminal station)

## P-100 miniature: specifications

ITEM	DESCRIPTION
Description	The model P-100 is a general purpose piezometer incorporating a 50 micron stainless steel filter. It is capable of monitoring pore pressure from 0-2000 psi (0-14,000 kPa). The P-100 combines the features of high accuracy and reliability, small size, low cost, and extremely low displacement, with the ability to be constantly monitored.
Dimensions	1.59 cm X 6.30 cm long (.625 in. X 2.48 in. long) Filter area: .974 cm <sup>2</sup> / .151 in. <sup>2</sup>
Applications	General purpose miniature. Multiple installations are possible even in small boreholes.

## P-100-1 standard: specifications

ITEM	DESCRIPTION
Description	The model P-100-1 consists of a P-100 transducer encapsulated in a slotted PVC, sand filled, Casagrande type piezometer body. This body employs a protected 70 micron porous plastic filter, in addition to the 50 micron stainless steel filter in the P-100.
Dimensions	3.35 cm X 22.8 cm long (1.32 in. X 9.0 in. long) Filter area: 133 cm <sup>2</sup> / 21 in. <sup>2</sup>
Applications	Recommended general purpose type. Casagrande enclosure for added mechanical protection and increased filtration.

## P-102-ss wellpoint: specifications

ITEM	DESCRIPTION
Description	The P-102 wellpoint encloses a sealed P-100 transducer in an all stainless piezometer tip designed to withstand the rigors of push in installations. As an improvement over small disc filters, the large 40 micron poly filter is directly connected to the soil, and is removable for pre-saturation prior to installation. The first 1.5 m (5 ft.) length of drive pipe is semi-flushed coupled to aid in self-sealing. Standard thread connection is 1 1/4 in. NPT.  Alternate threads such as CPT are optional.
Dimensions	Drive point: 29.85 cm X 2.54 cm (11.75 in. X 1 in.) Adapter pipe (steel): 122.55 cm X 3.18 cm (48.25 in. X 1.25 in.) Overall length: 1.52 m (5 ft.) Filter area: 51 cm <sup>2</sup> (7.9 in. <sup>2</sup> )
Applications	Push-in piezometer for soft clays, organic and fine grained cohesion less soils.

## P-104 and P-104-D high air entry: specs

ITEM	DESCRIPTION
Description	The P-104 series of pneumatic piezometer consist of 1 Bar high air entry, 1 micron ceramic filters.  The P-104 filter is easily removed for saturation prior to installation. Alternate air entry values available.
Dimensions: P-104	4.06 cm X 9.34 cm long (1.60 in. X 3.68 in. long) Filter area: 97.29 cm <sup>2</sup> / 1508 in. <sup>2</sup>
Dimensions: P-104-D	2.54 cm X 6.68 cm long (1.0 in. X 2.63 in. long) Filter area: 1.99 cm <sup>2</sup> / .308 in. <sup>2</sup>
Applications	For use in negative pore pressure measurements or in unsaturated soils. * Requires specialized installation techniques. Contact RST for details.