



Model 4500S/SV › 4500SH › 4500AL/ALV Standard Piezometers*

The Model 4500 Standard Piezometer is designed to measure fluid pressures such as ground water elevations and pore pressures when buried directly in embankments, fills, etc. Can also be installed inside boreholes, observation wells and standard (> 19 mm diameter) piezometer riser pipe. The Model 4500AL is designed for low-pressure ranges. The vented version (ALV) provides automatic compensation for barometric pressure changes. Thermistors are included to measure temperatures.

Specifications	4500S/SV	4500SH	4500AL/ALV
Ranges	-100 to 350, 700 kPa; 1, 2, 3 MPa	-100 kPa to 3, 7.5, 10, 20 MPa	70, 170 kPa
Over Range	1.5 × rated pressure	1.5 × rated pressure	1.5 × rated pressure
Resolution (Minimum)	0.025% F.S.	0.025% F.S.	0.025% F.S.
Accuracy ¹	±0.1% F.S.	±0.1% F.S.	±0.1% F.S.
Linearity ²	< 0.5% F.S.	< 0.5% F.S.	< 0.5% F.S.
Temperature Range ³	-20 °C to +80 °C	-20 °C to +80 °C	-20 °C to +80 °C
Dimensions (L × Ø)	133 × 19.1 mm	194 × 25.4 mm	133 × 25.4 mm

¹Transducer accuracy established under laboratory conditions. | ²±0.1% F.S. option available in some ranges. ³Other ranges available on request.



Model 4500B/BV › 4500C Small Diameter Piezometers*

These piezometers are uniquely designed to enable the automation of small diameter, non-standard piezometer standpipes. The 4500B will fit inside 19 mm pipe and the 4500C will fit inside 12 mm pipe.

Specifications	4500B/BV	4500C
Ranges	-100 to 350, 700 kPa; 1, 2, 3 MPa	-100 to 350, 700 kPa
Over Range	1.5 × rated pressure	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)	0.05% F.S. (minimum)
Accuracy ¹	±0.1% F.S.	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)	< 0.5% F.S.
Temperature Range ²	-20 °C to +80 °C	-20 °C to +80 °C
Dimensions (L × Ø)	133 × 17.5 mm	165 × 11 mm

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4500DP Drive Point Piezometers*

The Model 4500DP Drive Point Piezometer has the transducer located inside a housing with an EW drill rod thread and removable pointed nose cone. This model is ideally suited for use in peat and soft clays. The piezometer may be recovered at the end of the job. Models are also available which use metric threads allowing for installation using conventional cone penetrometer or other drill rods with adapters.

Specifications	
Ranges	-100 to 70, 170, 350, 700 kPa; 1, 2, 3, 5, 7.5 MPa
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)
Accuracy ¹	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ²	-20 °C to +80 °C
Dimensions (L × Ø)	187 × 33.3 mm

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4500HD Heavy Duty Piezometer*

The Model 4500HD Heavy Duty Piezometer is designed for direct burial in fills and dam embankments. The 4500HD is used in conjunction with heavily armored cable to withstand earth movements during construction. Recommended for use in earth dams.

Specifications	
Ranges	-100 to 70, 170, 350, 700 kPa; 1, 2, 3, 5, 7.5 MPa
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)
Accuracy ¹	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ²	-20 °C to +80 °C
Dimensions (L × Ø)	203 × 38.1 mm

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4500HT/HHT High Temp Piezometers/Pressure Transducers*

The 4500HT Series High Temperature Piezometers and 4500HHT Series High Temperature Pressure Transducers are designed for monitoring downhole pressures and temperatures in oil recovery systems and geothermal applications, where the temperature may be as high as 250 °C. These sensors are supplied with either mineral insulated cables or Teflon® cables inside stainless steel tubing.

Specifications	4500HT	4500HHT
Ranges ¹	-100 to 700 kPa; 1, 2, 3, 5, 7.5, 10, 20, 50, 75, 100, 150 MPa	-100 to 700 kPa; 1, 2, 3, 5, 7.5, 10, 20, 50, 75, 100, 150 MPa
Over Range	1.5 × rated pressure	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)	0.025% F.S. (minimum)
Accuracy ²	±0.1% F.S.	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)	< 0.5% F.S. (±0.1% optional)
Temperature Range ¹	0 °C to +250 °C	0 °C to +250 °C
Dimensions (L × Ø) ³	191 × 19 mm (-100 to 700 kPa; 1, 2, 3, 5, 7.5, 10 MPa)	191 × 19 mm (-100 to 700 kPa; 1, 2, 3, 5, 7.5, 10 MPa)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions. ³Please contact GEOKON for dimensions of ranges above 10 MPa and pressure connection details for 4500HHT.



Model 4500MLP Multilevel Piezometer*

The Model 4500MLP system overcomes the difficulties associated with the installation of multiple piezometers in a single drill hole. The 4500MLP is lowered into position, then a spring loaded apparatus is actuated, forcing specially configured piezometer filter elements into firm contact with the borehole walls. The borehole is then grouted from the bottom up in one quick and simple operation.

Specifications	
Ranges	-100 to 70, 170, 350, 700 kPa; 1, 2, 3, 5, 7.5 MPa
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)
Accuracy ¹	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ²	-20 °C to +80 °C
Borehole Diameter	100 to 150 mm

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4500Ti Titanium Piezometer*

The Model 4500Ti is designed specifically for use in highly corrosive environments, such as landfills and leach fields. It is also used in critical areas where long-term survivability is essential, for example, nuclear waste repositories and aggressive mine tailings. All exposed surfaces are made from titanium.

Specifications

Ranges ¹	-100 to 350, 700 kPa; 1, 2, 3, 5, 7.5 MPa
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)
Accuracy ²	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ¹	-20 °C to +80 °C
Dimensions (L × ø)	125 × 25.4 mm

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 4500H › 4500HH Pressure Transducers*

The Model 4500H and 4500HH Pressure Transducers are supplied with a female pipe thread fitting to permit the transducer to be coupled directly into hydraulic or pneumatic pressure lines.†

Specifications

	4500H	4500HH
Ranges ¹	-100 to 70, 170, 350, 700 kPa; 1, 2, 3 MPa;	-100 to 5, 7.5, 10, 20, 35, 75, 100 MPa
Over Range	1.5 × rated pressure	1.5 × rated pressure
Resolution	0.025% F.S. (minimum)	0.025% F.S. (minimum)
Accuracy ²	±0.1% F.S.	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)	< 0.5% F.S. (±0.1% optional)
Temperature Range ¹	-20 °C to +80 °C	-20 °C to +80 °C
Dimensions (L × ø)	140 × 25.4 mm 140 × 32 mm (70, 170 kPa)	143 × 25.4 mm

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 4580 Pressure Transducers*

The Model 4580 Pressure Transducers are designed for very low fluid pressure measurements, such as groundwater elevations in wells, water levels in streams, weirs, flumes, etc. Changes in water levels of as little as 0.2 mm can be measured. Sealed types can be used as a barometer to measure atmospheric pressure changes.

Specifications

Ranges ¹	7, 17, 35 kPa; 200 Mbar (Barometer) ¹
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (depends on readout)
Accuracy ²	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ¹	-20 °C to +80 °C
Dimensions (L × ø)	165 × 38 mm, 165 × 63.5 mm; 110 × 63.5 mm (Barometer)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.



Model 4500AR Autoresonant Piezometer

The Model 4500AR Autoresonant Piezometer is designed for use with existing data acquisition systems incapable of reading standard (pluck and read) vibrating wire sensors. It can also be used where low frequency (<20 Hz) dynamic measurements are required. Its high-output offers excellent noise immunity and enhanced signal transmission over long cables (300 m+). (Also see the Model 4500CPR and 8020-42CPR Autoresonant Vibrating Wire Sensors, page 17.)

Specifications

Ranges	7, 17, 35, 70, 170, 350, 700 kPa; 1, 2, 3, 5, 7.5, 10, 20, 25, 35, 50, 75, 100, 150 MPa
Over Range	1.5 × rated pressure
Resolution	0.025% F.S. (minimum; depends on readout system)
Accuracy ¹	±0.1% F.S.
Linearity	< 0.5% F.S. (±0.1% optional)
Temperature Range ²	-20 °C to +80 °C
Dimensions	varies according to pressure range

¹Transducer accuracy established under laboratory conditions. | ²Other ranges available on request.



Model 4675LV Weir Monitor

The Model 4675LV is a water level monitoring system that uses a vibrating wire force transducer to provide a highly stable and sensitive means of monitoring water levels. The main component is a cylindrical weight suspended from the force transducer. The cylinder hangs partially submerged in the water being monitored. As the water level changes the changing buoyancy force on the cylinder acts directly on the transducer, altering the tension of the wire, and thereby its resonant frequency.

Specifications

Ranges ¹	150, 300, 600, 1500 mm
Resolution	0.025% F.S. (minimum)
Accuracy ²	±0.1% F.S.
Linearity	0.25% to 0.75% F.S.
Stability	±0.05% F.S. per year
Temperature Range	-20 °C to +80 °C (using antifreeze solutions)
Dimensions (L × ø)	165 × 25 mm (transducer)

¹Other ranges available on request. | ²Transducer accuracy established under laboratory conditions.

*All GEOKON vibrating wire piezometers and pressure transducers include tripolar plasma surge arrestors to protect the sensor coils from possible lightning damage. Semiconductor piezometers and pressure transducers are also available (3400 Series). Please see page 22 for further details.

†All high pressure sensors are potentially dangerous and care must be taken not to over-range them beyond their calibrated range. Sensors are tested to 150% of the range to provide a factor of safety.