



HydroTerra

Environmental Monitoring Specialists

Stygo 5 **Geotechnical Monitoring** **Vibrating Wire Telemetry Hub**

Stygo 5 VWT (Vibrating Wire Telemetry) is an Australian made compact, low power, multi-comms data transmitter and VWP convertor in one. It reads vibrating wire and temperature sensors and transmits frequency and temperature measurements wirelessly to DataStream web portal over either the Iridium Satellite Network or LTE. The optional patented well-cap device is designed to simplify installation.



Overview

The versatile device offers the ability to use across a wide variety of applications such as Tailings Storage Facilities, Slope Stability Monitoring, Dam Safety Monitoring, Infrastructure and Construction Monitoring.



VWT comes as either single, 4-channel or 8-channel option for versatility around nested bores or clustered vibrating wire instruments.



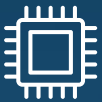
Internal rechargeable battery pack or long-life non rechargeable options. Input for external battery pack or direct to solar (Internal Solar regulator). Ultra-Low power draw with internal battery backup.



Easily change settings, log time, transmission rate, alarms with OTA firmware updates onsite over the cellular or Iridium Satellite Networks.



Simply activate Bluetooth by pressing the button and connect via our free mobile Android and Apple mobile app for all your device configuration requirements



Internal storage of up to 260,000 events



Compact form factor 45mm x55mm x 120mm



DataStream™

by **HydroTerra**



Environment • Water • Geotechnical • Data

*Powered by EWS, through our
official partnership*

HydroTerra Platform

FEATURES



Monitor environmental sensors and device locations and parameters



Configure sample rates, device outputs and variable alerts



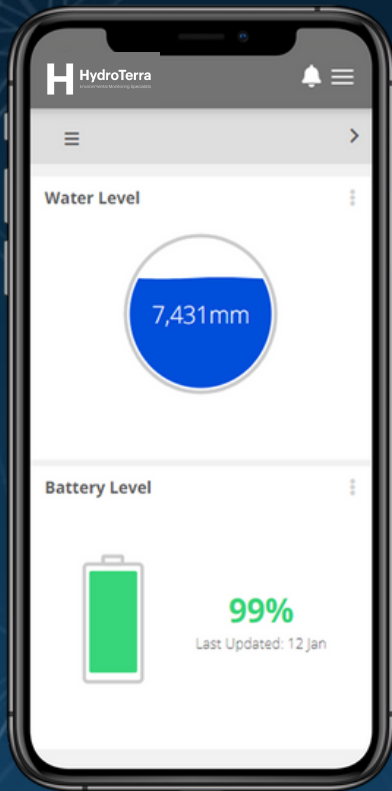
Control device outputs such as pumps, valves and gates



Receive SMS or email alerts based on variable thresholds



Download device data as csv files and images



OVERVIEW

Sensors are remotely monitored with our custom cloud based platform. Interrogate volume and level trends, change sampling intervals and set SMS and email alerts. Our platform is flexible and modular meaning we can set it up the way you like from our library of maps, charts, gauges and controls.

OTHER SERVICES

- Integrate other sensors to our platform
- White label the platform with your company branding
- Send your sensor data to third party platforms



DataStream™

by HydroTerra



Vibrating Wire Piezometers

Applications

VW piezometers are used to monitor pore-water pressure. They can also be used to monitor water levels.

Typical applications include:

- Monitoring pore water pressures to determine safe rates of fill or excavation.
- Monitoring pore water pressures to determine slope stability.
- Monitoring the effects of dewatering systems used for excavations.
- Monitoring the effects of ground improvement systems such as vertical drains and sand drains.
- Monitoring pore pressures to check the performance of earth fill dams and embankments.
- Monitoring pore pressures to check containment systems at land fills and tailings dams.
- Monitoring water levels in stilling basins and weirs.

Operation

The VW piezometer converts water pressure to a frequency signal via a diaphragm, a tensioned steel wire, and an electromagnetic coil.

The piezometer is designed so that a change in pressure on the diaphragm causes a change in tension of the wire. An electro-magnetic coil is used to excite the wire, which then vibrates at its natural frequency. The vibration of the wire in the proximity of the coil generates a frequency signal that is transmitted to the readout device.

The readout or data logger stores the reading in Hz. Calibration factors are then applied to the reading to arrive at a pressure in engineering units.



VW Piezometers: Standard, Heavy Duty, and Push-In (bottom)

Types of VW Piezometers

Standard: The standard piezometer is suitable for most applications. It operates equally well in fully-grouted boreholes or sand-filter zones.

Heavy-Duty: The heavy-duty model has a strong, double-wall housing and is supplied with armored cable.

Push-In: The push-in piezometer can be pushed a short distance into soft soils using a EW drill rod.

Multi-Level: The multi-level piezometer system provides an easy way to install multiple sensors in a borehole. See separate datasheet.

Low-Pressure: The low-pressure piezometer can monitor very small changes in pore-water pressure.

Vented: The vented piezometer is used to monitor water levels in open standpipes and wells.

Corrosion Resistant: A titanium body protects from corrosive environments.

Advantages

Groutable: VW piezometers can be installed in fully-grouted boreholes and do not require sand filter zones. This greatly simplifies the installation of multiple sensors in the same borehole. It also makes it possible to install piezometers with inclinometer casing within the same borehole.

High Resolution: VW piezometers provide a resolution of 0.025% FS.

High Accuracy: Slope Indicator's automated, precision calibration system ensures that these sensors meet or exceed specifications.

Rapid Response: VW piezometers respond very quickly to changes in pore-water pressure.

Reliable Signal Transmission: With properly shielded cable, signals from the VW piezometer can be transmitted long distances.





STANDARD VW PIEZOMETERS

3.5 bar (50 psi) Piezometer	52611020
7 bar (100 psi) Piezometer.....	52611030
17 bar (250 psi) Piezometer	52611040
35 bar (500 psi) Piezometer	52611050
Signal Cable	50613824

The standard VW piezometer is suitable for most applications. The piezometer can be installed without a sand filter when the borehole is backfilled with bentonite-cement grout.

VW PIEZOMETERS WITH CABLE

Standard VW Piezometers, 3.5 bar (50 psi) with 15 m (50') cable	52611028
with 30 m (100') cable.....	52611024
with 45 m (150') cable.....	52611027
with 60 m (200') cable.....	52611026

Standard VW Piezometers, 7 bar (100 psi) with 30 m (100') cable.....	52611033
with 45 m (150') cable.....	52611034
with 60 m (200') cable.....	52611035
with 90 m (300') cable.....	52611036



PUSH-IN VW PIEZOMETERS

3.5 bar (50 psi) Piezometer	52621020
7 bar (100 psi) Piezometer.....	52621030
17 bar (250 psi) Piezometer	52621040
35 bar (500 psi) Piezometer	52621050
Signal Cable	50613824
Adapter for EW Drill Rod	50718042
EW Coupling	50718010

The push-in piezometer has a special housing that allows it to be pushed a short distance into soft, cohesive soils.

Adaptor for EW drill rod extends the length of the piezometer by 0.6m and provides a left-hand thread for easy disconnect of the drill rod. Order one adaptor per piezometer.

Coupling (pin) threads into the drill rod and has a left-hand thread for easy disconnect from the adaptor. Coupling can be reused, so only one is needed.



HEAVY-DUTY VW PIEZOMETERS

3.5 bar (50 psi) Piezometer.....	52610520
7 bar (100 psi) Piezometer	52610530
17 bar (250 psi) Piezometer	52610540
35 bar (500 psi) Piezometer	52610550
Signal Cable, Armored.....	50613886

This piezometer features a strong double wall housing and is normally supplied with armored signal cable.



LOW-PRESSURE VW PIEZOMETERS

0.7 bar (10 psi) Piezometer.....	52611610
1.8 bar (25 psi) Piezometer.....	52611625
Signal Cable	50613824

The low-pressure piezometer is designed to monitor very small changes in pore-water pressure. It can also be used to monitor water levels.

CORROSION-RESISTANT VW



PIEZO

7 bar (100 psi) Piezometer	52621230
17 bar (250 psi) Piezometer	52621240
PVC Signal Cable	50613824

The body of the corrosion-resistant VW piezometer is manufactured of titanium while the filter and diaphragm are protected by a heat-bonded PTFE coating and a PVC housing. PVC signal cable has four 22-gauge conductors. Consult factory if other configurations are required.

VW PIEZOMETER SPECIFICATIONS

Sensor Type: Pluck-type vibrating wire sensor with built-in thermistor or RTD.

Range: Standard ranges are listed at left. Custom calibration ranges are available.

Resolution: 0.025%FS.

Accuracy: $\pm 0.1\%$ FS for 0.7 - 7 bar sensors, $\pm 0.3\%$ FS for 17 and 35 bar sensors.

Maximum Pressure: 1.5 x rated range.

Filter: 50-micron, sintered stainless steel. Add y part 92611065 for 1-bar high-air-entry filter.

Temperature Coefficient: $< 0.04\%$ FS per $^{\circ}\text{C}$.

Materials: Stainless steel.

Size: Standard: 19 x 155 mm (0.75 x 6.10")
 Low-Pressure: 29 x 191 mm (1.125 x 7.5"). Heavy-Duty: 29 x 191 mm (1.125 x 7.5").
 Push-In: 35 x 270 mm (1.385 x 10.5").
 Corrosion-Resistant: 29x191mm (1.125 x 7.5").

Weight: Standard: 0.16 kg (0.3 lb).
 Low-pressure: 0.45 kg (1 lb).
 Heavy-Duty: 0.8 kg (1.75 lb).
 Push-in: 1.2 kg (2.75 lb).

SIGNAL CABLE SPECIFICATIONS

Standard Signal Cable	50613824
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Shielded cable with four 22-gauge tinned-copper conductors and polyvinyl chloride jacket.

Armored Signal Cable.....	50613886
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Shield cable with four 22-gauge tinned-copper conductors, inner polyurethane jacket, steel braid armor, and outer high-density, polyethylene jacket. For heavy duty piezometer only.

READOUT & TERMINAL BOXES

VW Data Recorder	52613500
Jumper Cable for Terminal Box.	52613557
Terminal Box for 6 sensors.....	57711606
Terminal Box for 12 Sensors	57711600
Terminal Box for 24 Sensors	97711624

See separate datasheet for VW Data Recorder. Terminal boxes provide terminals for 6, 12, or 24 sensors. Sensors are selected by rotary switch. 6-sensor box is 240 x 190 x 120 mm (9.5 x 7.5 x 4.75"). 12 and 24-sensor boxes are 290 x 345 x 135 mm (11.5 x 13.5 x 5.25").

DATA LOGGERS

VW piezometers connect directly to the Stygo4 VWP Telemetry Hub and report to HydroTerra's DataStream platform



DataStream™
 by HydroTerra

MODEL 4500 SERIES



Front to back Model 4500C, 4500S, 4500H, 4500DP and 4500HD Vibrating Wire Piezometers (front to back).

APPLICATIONS

For the measurement of...

- Ground water elevations
- Pore water pressures
- Pump tests
- Uplift pressures in dam foundations
- Hydraulic pressures in tanks and pipelines
- Wick drain efficiency
- Water pressures behind tunnel linings

OPERATING PRINCIPLE

The transducer uses a pressure sensitive diaphragm with a vibrating wire element attached to it. The diaphragm is welded to a capsule which is evacuated and hermetically sealed. Fluid pressures acting upon the outer face of the diaphragm cause

deflections of the diaphragm and changes in tension and frequency of the vibrating wire. The changing frequency is sensed and transmitted to the readout device by an electrical coil acting through the walls of the capsule.

Piezometers incorporate a porous filter stone ahead of the diaphragm, which allows the fluid to pass through but prevents soil particles from impinging directly on the diaphragm.

ADVANTAGES & LIMITATIONS

The 4500 Series Vibrating Wire Piezometers and Pressure Transducers have outstanding long-term stability and reliability, and low thermal zero shift. Cable lengths of several kilometers are no problem and the frequency output signal is not affected by changing cable resistances (caused by splicing, changes of length, terminal contact resistances, etc.), nor by penetration of moisture into the electronic circuitry.

A thermistor, located in the housing, permits the measurement of temperature at the piezometer location.

All-stainless steel construction and evacuation of the capsule¹ guarantees a high level of corrosion resistance. Integral gas discharge tubes inside the main housing protect against lightning damage.

Standard porous filters are made from sintered stainless steel. High air-entry ceramic filters are also available.

Vented versions of all models are available to provide automatic compensation for barometric pressure fluctuations. Negative pressures up to 1 bar can be measured.

For use in seawater and other chemically aggressive environments,

corrosion resistant and high temperature 4500 models are also available. Refer to the 4500CR and 4500HT datasheets for more information.

Where measurements of rapidly changing pressures are required, the 4500 series piezometers and pressure transducers can be read using the CSI Dynamic VW Analyzer² (or similar). Alternatively, the 3400 series piezometers and pressure transducers (semiconductor type) could be considered.

¹Evacuation does not apply to vented models.

²<https://www.campbellsci.com/dynamic-vibrating-wire>

TECHNICAL SPECIFICATIONS

Model	Standard Ranges	Over Range	Resolution	Accuracy ¹	Linearity	Temperature Range ²	Thermal Zero Shift	Diaphragm Displacement	Length x Diameter	Mass
4500S	350, 700 kPa; 1, 2, 3 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	133 x 19.1 mm	0.12 kg
4500SH	350, 700 kPa; 1, 2, 3, 5, 7.5, 10, 20 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	194 x 25.4 mm	0.44 kg
4500SV	350, 700 kPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	146 x 19.1 mm	0.20 kg
4500AL/ALV	70, 170 kPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.1% F.S./°C	< 0.001 cm ³ at F.S.	133 x 25.4 mm	0.25 kg
4500B	350, 700 kPa; 1, 2, 3 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	133 x 17.5 mm	0.10 kg
4500BV	350, 700 kPa; 2 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	133 x 17.5 mm	0.10 kg
4500C	350, 700 kPa	1.5 x rated pressure	0.05% F.S.	±0.1% F.S.	< 0.5% F.S.	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	165 x 11 mm	0.09 kg
4500DP	70, 170, 350, 700 kPa; 1, 2, 3 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	187 x 33.3 mm	0.90 kg
4500HD	70, 170, 350, 700 kPa; 1, 2, 3, 5, 7.5 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	203 x 38.1 mm	1.50 kg
4500H ³	70, 170, 350, 700 kPa; 1, 2, 3 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	140 x 32 mm ⁴ 140 x 25.4 mm	0.30 kg
4500HH ³	5, 7.5, 10, 20, 35, 75, 100 MPa	1.5 x rated pressure	0.025% F.S.	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.05% F.S./°C	< 0.001 cm ³ at F.S.	143 x 25.4 mm	0.30 kg
4580-1 (Barometer)	200 mbar ²	1.5 x rated pressure	0.025% F.S. ⁵	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.01% F.S./°C	n/a	110 x 63.5 mm	1.18 kg
4580-2	35 kPa	1.5 x rated pressure	0.025% F.S. ⁵	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.01% F.S./°C	n/a	165 x 38 mm	0.86 kg
4580-2V	17, 35 kPa	1.5 x rated pressure	0.025% F.S. ⁵	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.01% F.S./°C	n/a	165 x 38 mm	0.86 kg
4580-3V	7 kPa	1.5 x rated pressure	0.025% F.S. ⁵	±0.1% F.S.	< 0.5% F.S. (±0.1% F.S. optional)	-20 °C to +80 °C	< 0.01% F.S./°C	n/a	165 x 63.5 mm	1.72 kg

Note: PSI = kPa x 0.14503, or MPa x 145.03. Piezometers with a range of 350 kPa and higher are capable of reading negative pressures to -100 kPa. Contact GEOKON for more information.

¹Accuracy established under laboratory conditions.

²Other ranges available on request.

³All 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.

⁴For 70 and 170 kPa range only.

⁵Depends on readout system.

MODEL 4500S/SV/SH STANDARD PIEZOMETERS

The Model 4500S/SV Standard Piezometer is designed to measure fluid pressures such as ground water elevations and pore pressures when buried directly in embankments, fills, etc. It is also suitable for installation inside boreholes, observation wells and standard (>19 mm diameter) piezometer riser pipe.

The Model 4500SH is designed with a heavy duty housing. The vented version (Model 4500SV) provides automatic compensation for barometric pressure changes, via a cable with an integral vent tube.



MODEL 4500AL/ALV STANDARD PIEZOMETERS

The Model 4500AL is designed for low-pressure ranges. The vented version (Model 4500ALV) provides automatic compensation for

barometric pressure changes, via a cable with an integral vent tube.



MODEL 4500B/BV/C SMALL DIAMETER PIEZOMETERS

These piezometers are designed to enable the automation of small diameter piezometer standpipes.

The 4500B and 4500BV are designed to fit inside 19 mm pipe and the 4500C fits inside a 12 mm pipe.



MODEL 4500DP DRIVE POINT PIEZOMETERS

The standard Model 4500DP Drive Point Piezometer has the transducer located inside a housing with an EW drill rod thread and removable pointed nose cone. The unit can be pushed directly into soft ground with the signal cable located inside the drill rod. This model is ideally suited for

use in soft clays and landfills. The piezometer may be recovered at the end of the job. The Model 4500DP is available with a variety of thread configurations allowing for installation using cone penetrometer or other drill rods with adapters.



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.



MODEL 4500H/HH PRESSURE TRANSDUCERS

The Model 4500H and 4500HH Pressure Transducers are supplied with 1/4-18 female NPT (4500H) and 7/16-20 60 degree female medium pressure (4500HH) fittings to permit

the transducer to be coupled directly into hydraulic or pneumatic pressure lines. Other pipe thread sizes are also available.



MODEL 4580-1 BAROMETER

The Model 4580-1 is a barometer used to measure atmospheric pressure changes. The barometric sensors are calibrated at the factory and

referenced to an absolute barometric reading in millibars. Model 4580-1-ENCL is a protective fiberglass enclosure with integral vent.



MODEL 4580-2/2V/3V 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



ORDERING INFORMATION

CABLES

- 02-250V6-E/M:** Blue PVC Cable, 6 mm (0.250") Ø, 2 twisted pairs.
- 03-250V0-E/M:** Black Vinyl Cable, 6 mm (0.250") Ø, 3 twisted pairs.
- 02-250PILT-E/M:** Violet Polyurethane Cable, 6 mm (0.25") Ø, 2 twisted pairs, low temperature (-40 to +80 °C), 50 ohm
- 02-313PI-E/M:** Black Polyurethane Cable, with integral straining wire, 2 twisted pairs.
- 02-313V6-E/M:** Blue PVC Cable, 8 mm (0.313") Ø, 2 twisted pairs with Kevlar reinforcement.
- 02-335VT8-E/M:** Yellow Polyurethane Cable, with integral 3 mm (0.125") Ø polyethylene vent tube, 9 mm (0.335") Ø, 2 twisted pairs.
- 02-500PE1A-E/M:** Black Polyethylene Cable, with served armor, 13 mm (0.500") Ø, 2 twisted pairs, overall braided shield.

FILTER STONES

- 4500-1A:** Replacement stainless steel filter stone assembly for Model 4500AL Piezometer.
- 4500-1B:** Replacement stainless steel filter stone assembly for Model 4500B Piezometer.
- 4500-1C:** Replacement stainless steel filter stone assembly for Model 4500HD Piezometer.
- 4500-1S:** Replacement stainless steel filter stone assembly for Model 4500S Piezometer.
- 4500-1SH:** Replacement stainless steel filter stone assembly for Model 4500SH Piezometer.

- 4500-1-1:** Replacement high air entry filter stone assembly for 4500S piezometers, 1 bar.
- 4500-1-2:** Replacement high air entry filter stone assembly for 4500S piezometers, 2 bar.
- 4500-1-5:** Replacement high air entry filter stone assembly for 4500S piezometers, 5 bar.
- 4500-2-1:** Replacement high air entry filter stone assembly for 4500AL piezometers, 1 bar.
- 4500-2-2:** Replacement high air entry filter stone assembly for 4500AL piezometers, 2 bar.
- 4500-2-5:** Replacement high air entry filter stone assembly for 4500AL piezometers, 5 bar.
- 4500-2-6:** Replacement high air entry filter stone assembly for 4500HD piezometers, 1 bar.
- 4500-2-7:** Replacement high air entry filter stone assembly for 4500HD piezometers, 2 bar.
- 4500-2-8:** Replacement high air entry filter stone assembly for 4500HD piezometers, 5 bar.
- 4500-3:** Replacement stainless steel mesh type filter, mesh only, for 4500S/4500B piezometers.
- 4500-5:** Factory sealed piezometer cap for shipping saturated piezometers with HAE filters, S size.
- 4500-5A:** Factory sealed piezometer cap for shipping saturated piezometers with HAE filters, AL size.
- 4500-5B:** Factory sealed piezometer cap for shipping saturated piezometers with HAE filters, HD size.

SPLICE KITS

- 4500-9-HD:** Splice kit for armored cable, factory splice only.
- 4500-9-HDF1:** Splice kit for armored cable, field use.
- 4500-9-HDF2:** Splice kit for armored to unarmored cable, field use.
- 4500-9-EP:** Epoxy Resin and Hardener (138cc).
- 4500-9-SSI:** Splice kit for settlement systems, for vented electrical cable and fluid filled tubes.
- 4500-10:** Splice Kit for 6 mm (0.250") cable, complete with butt splices and epoxy.
- 4500-11:** Splice Kit for 9 mm (0.335") vented cable, complete with butt splices, tube union and epoxy.
- 4500-12:** Splice Kit for 10 mm (0.375") cable, complete with butt splices and epoxy.
- 4500-13:** Splice Kit for 13 mm (0.500") cable, complete with butt splices and epoxy.
- 4500-14:** Splice Kit for 16 mm (0.625") cable, complete with butt splices and epoxy.
- 4500-15:** Splice Kit for 5 mm (0.187") cable, complete with butt splices and epoxy.
- 4500-16:** Splice Kit for 8 mm (0.312") cable (not SR), complete with butt splices and epoxy.

CONNECTORS

- 4500-20:** 10-Pin Male Connector with Cap.
- 4500-20V:** 10-Pin Male Pigtail with tinned leads.
- 4500-21:** 10-Pin Female Connector with Cap
- 4500-21V:** 10-Pin Female Pigtail with tinned leads.

ACCESSORIES

- 4500-6:** Canvas bag.
- 4500-7:** Moisture trap with desiccant capsules (2) for 3 mm (1/8") polyethylene tube vent line.
- 4500-8:** Desiccant capsule for moisture traps.
- 4500-40-1:** Magnetic Shield for 19 mm (3/4") Ø sensor.
- 4500-40-2:** Magnetic Shield for 25 mm (1") Ø sensor.
- 4500-40-3:** Magnetic Shield for 38 mm (1.5") Ø sensor.
- 4580-1-ENCL:** Standard enclosure for Barometer. Includes mounting plate, clamp, and breather vent.
- CON-A350:** Kellems Grip for 6–8 mm (0.22–0.32") Ø Cable.
- CON-A351:** Kellems Grip for 7–9 mm (0.29–0.37") Ø Cable.