WATER LEVEL DATALOGGERS

vanEssen Instruments

ÉQUIPEMENT ENVIRONNEMENTAL TERRA INC

TD-Diver

Superior Long-term Performance

The TD-Diver is based on an ingenious and proven concept and is acknowledged as the most reliable instrument for the autonomous measuring and recording of groundwater level and temperature.

Its internal working memory of 72,000 measurements per parameter provides sufficient capacity to perform one measurement every 15 minutes for over 2 years.

For each measurement, the Diver registers the date and time, groundwater level, and temperature.

Technical Specification

Length	4.33 inch
Diameter	0.87 inch
Weight	3.7 ounce
Memory	72,000 measurements with backup; continuous and fixed length memory
Wetted parts	
housing	stainless steel 316L
o-rings	Viton ®
pressure sensor	piezoresistive ceramic
cap / nose cone	Nylon PA6 30% glass fiber / ABS
Battery life	up to 10 years (dependent on usage)
Sample interval	½ second to 99 hours
Sample methods	fixed

Temperature

Range	-4 to 176	°F
Calibrated	32 to 122	°F
Accuracy*	±0.18	°F
Resolution	0.018	°F

Pressure

Part number	DI 801	DI 802	DI 805	DI 810	
Range	33	66	164	328	ftH_2O
Accuracy*	± 0.2	± 0.4	± 1.0	± 2.0	inH_2O
Resolution	0.02	0.04	0.07	0.14	inH_2O

*typical accuracy

- Long-term groundwater monitoring
- Watershed and recharge area monitoring
- Storm water discharge

Baro-Diver

Reference of Choice

The Baro-Diver ensures that you accurately capture changes in atmospheric pressure. Conveniently priced and easy to deploy, one Baro-Diver covers a radius of up to 15 km, depending on the topography.

The Baro-Diver can also be used for measuring shallow water levels up to approximately 3 feet.

The Baro-Diver has an internal working memory capable of storing 72,000 measurements per parameter. For each measurement, the Baro-Diver simultaneously registers barometric pressure, air temperature, date and time.

Technical Specification

Length	4.33 inch
Diameter	0.87 inch
Weight	3.7 ounce
Memory	72,000 measurements with backup; continuous and fixed length memory
Wetted parts	
housing	stainless steel 316L
o-rings	Viton ®
pressure sensor	piezoresistive ceramic
cap / nose cone	Nylon PA6 30% glass fiber / ABS
Battery life	up to 10 years (dependent on usage)
Sample interval	½ second to 99 hours
Sample methods	fixed

Temperature

Range	-4 to 176	°F
Calibrated	14 to 122	°F
Accuracy+	± 0.18	°F
Resolution	0.018	°F

Pressure

Part number	**DI 800**	
Range	4.9	ftH_2O
Accuracy+	± 0.2	inH_2O
Resolution	0.01	inH_2O

+typical accuracy

- **Atmospheric pressure**
- **Wetlands monitoring**
- **Flood management**

Micro-Diver

Compact Size

Measuring only 3.46" in length and 0.71" in diameter, the Micro-Diver is the smallest Diver capable of accurately recording groundwater levels and temperature.

The Micro-Diver is specifically designed for monitoring wells or drive-points too small to accommodate larger dataloggers.

In addition to its compact size, the Micro-Diver's memory capacity can store up to 48,000 measurements per parameter - almost one measurement every ten minutes for an entire year.

Technical Specification

Length	3.46 inch
Diameter	0.71 inch
Weight	1.6 ounce
Memory	48,000 measurements; fixed length memory
Wetted parts	
housing	stainless steel 316L
o-rings	Viton ®
pressure sensor	piezoresistive ceramic
cap / nose cone	Nylon PA6 30% glass fiber / ABS
Battery life	up to 10 years (dependent on usage)
Sample interval	½ second to 99 hours
Sample methods	fixed, event dependent, averaging, and pumping test

Temperature

Range	-4 to 176	°F
Calibrated	32 to 122	°F
Accuracy[+]	±0.18	°F
Resolution	0.018	°F

Pressure

Part number	DI 601	DI 602	DI 605	DI 610	
Range	33	66	164	328	ftH_2O
Accuracy[+]	± 0.4	± 0.8	± 2.0	± 4.0	inH_2O
Resolution	0.02	0.04	0.07	0.14	inH_2O

[+] typical accuracy

- **Engineering and construction**
- **Shallow water monitoring**
- **Aquifer characterization**

Cera-Diver

Corrosion Proof

Monitoring groundwater under potentially corrosive conditions, such as brackish water and seawater, requires a robust and durable datalogger.

The ceramic-shelled Cera-Diver is designed specifically for such environments. This highly reliable and compact Diver measures groundwater levels with a typical accuracy of ±0.05% full scale.

The Cera-Diver is equipped with a memory for 48,000 measurements per parameter.

Technical Specification

Length	3.54 inch
Diameter	0.87 inch
Weight	1.8 ounce
Memory	48,000 measurements; fixed length memory
Wetted parts	
housing	ceramic (ZrO_2)
o-rings	Viton ®
pressure sensor	piezoresistive ceramic
cap / nose cone	Nylon PA6 30% glass fiber / ABS
Battery life	up to 10 years (dependent on usage)
Sample interval	½ second to 99 hours
Sample methods	fixed, event dependent, averaging, and pumping test

Temperature

Range	-4 to 176	°F
Calibrated	32 to 122	°F
Accuracy[+]	±0.18	°F
Resolution	0.018	°F

Pressure

Part number	DI 701	DI 702	DI 705	DI 710	
Range	33	66	164	328	ftH_2O
Accuracy[+]	± 0.2	± 0.4	± 1.0	± 2.0	inH_2O
Resolution	0.02	0.04	0.07	0.14	inH_2O

[+] typical accuracy

- Estuary monitoring
- Heap leach
- Underground plume monitoring

CTD-Diver

3 Parameters in 1 Housing

Where there is a need to monitor groundwater levels and saltwater intrusion, injected wastewater, or contamination from chemical discharges and landfill sites, the CTD-Diver with its rugged, corrosion proof ceramic housing, is the instrument of choice.

The CTD-Diver is equipped with a four-electrode conductivity sensor that measures electrical conductivity from 0 to 120 mS/cm. There are two options for measuring conductivity: true or specific conductivity at 77 °F. Additionally, pressure and temperature are measured and recorded.

Technical Specification

Length	5.3 inch
Diameter	0.87 inch
Weight	3.4 ounce
Memory	48,000 measurements; fixed length memory
Wetted parts	
housing	ceramic (ZrO_2)
o-rings	Viton ®
pressure sensor	piezoresistive ceramic
cap / nose cone	Nylon PA6 30% glass fiber / ABS
Battery life	up to 10 years (dependent on usage)
Sample interval	1 second to 99 hours
Sample methods	fixed, event dependent, averaging, and pumping test

Temperature

Range	-4 to 176	°F
Calibrated	32 to 122	°F
Accuracy⁺	± 0.18	°F
Resolution	0.018	°F

Conductivity

Range 1	0 to 120	mS/cm
Range 2	0 to 30	mS/cm
Accuracy⁺	± 1%	of reading
Resolution	0.1%	of reading

Pressure

Part number	DI 271	DI 272	DI 273	
Range	33	164	328	ftH_2O
Accuracy⁺	± 0.2	± 1.0	± 2.0	inH_2O
Resolution	0.02	0.07	0.14	inH_2O

⁺typical accuracy

- **Mine tailings**
- **Pollution monitoring**
- **Water quality monitoring**

SMART MONITORING TECHNOLOGY

- **Urban water management**
- **Water resources management**
- **Mining**
- **Surface water**
- **Remediation**

Van Essen Instruments
offers a complete portfolio with regards to technology as well as advice in the field of groundwater monitoring networks.
Reliable and accurate sensors are being combined with the latest developments in the field of wireless communication and data visualization. Van Essen Instruments not only offers high-quality groundwater data but also solutions to manage a groundwater monitoring network more effective and efficient.

www.vanessen.com
www.terraquip.ca

Diver-Suite
Diver-Suite from Van Essen Instruments provides a robust line of Diver dataloggers for groundwater and environmental professionals. The Diver dataloggers accurately measure and record fluctuations in groundwater levels, temperature and conductivity.

Suitable for Any Environment
From the technologically advanced Micro-Diver to the corrosion resistant CTD-Diver, Diver dataloggers are hermetically sealed to external influences. Electrical and/or environmental effects cannot affect the measurement results. With an extended battery life up to 10 years, this translates to long-term uninterrupted service.
Divers can be used from 1,000 feet below to 16,000 feet above sea level without the need to reprogram the datalogger.
All Divers operate from -4 to 176 °F.

Accurate Measurements
Divers monitor groundwater pressure with a typical accuracy of ±0.05% full scale range from 32 to 122 °F. The CTD-Diver is equipped with a four-electrode sensor for recording conductivity with an accuracy of ±1% of reading.

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