



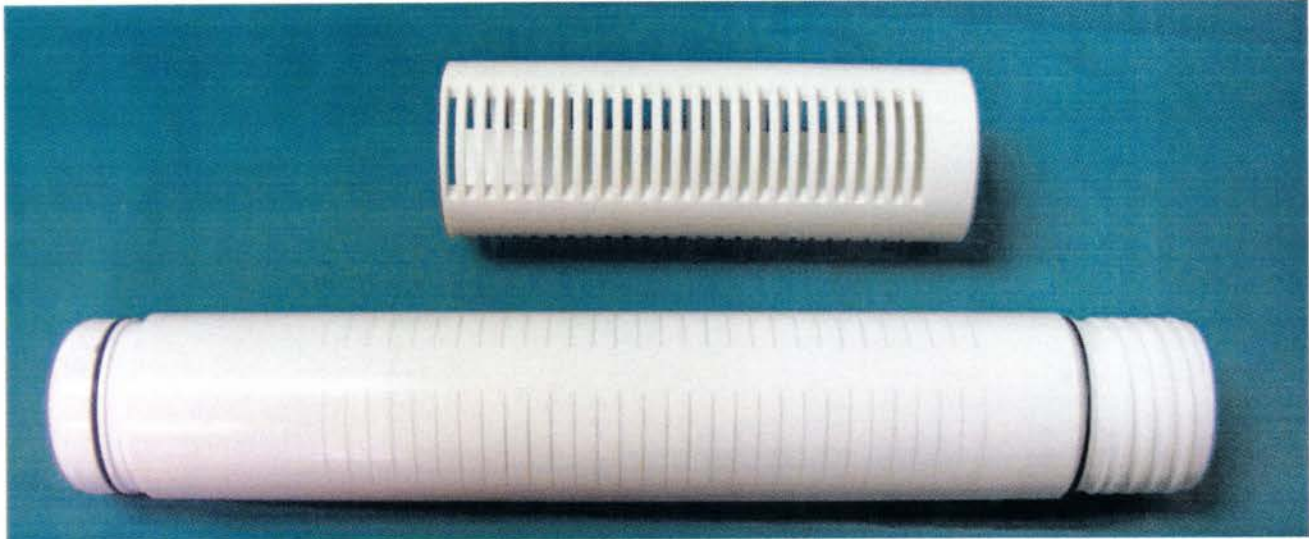
[www.terraquip.ca](http://www.terraquip.ca)

1-877-663-9660



# ÉQUIPEMENT ENVIRONNEMENTAL TERRA INC

## CRÉPINES ET ALLONGES PVC



**MANUFACTURÉS SELON LES PLUS HAUTS STANDARDS DE L' INDUSTRIE**

**NOUS UTILISONS DES TUYAUX AU NORMES CSA FABRIQUÉS  
À PARTIR DE RÉSINES VIERGES**

**NOS FILETS ET OUVERTURES SONT USINÉS AVEC DES MACHINES CONTROLÉES  
NUMÉRIQUEMENT POUR UNE PLUS GRANDE PRÉCISION ET UNIFORMITÉE**

**TOUT NOS FILETS SONT USINÉS SELON LA NORME ASTM F-480 COURANTE**

**NOS CRÉPINE ET ALLONGES SONT INSPECTÉES NETTOYÉES ET EMBALLÉES  
AVANT LEUR EXPÉDITION**

**SELON VOS BESOINS, DES OUVERTURES DE 0.006" A 0.128" SONT DISPONIBLES  
ET NOUS POUVONS VOUS LES OFFRIR DANS LES DIAMETRES DE 1/2" A 10"**

### APPLICATIONS

**PUITS D OBSERVATION**

**PUITS GÉOTECHNIQUES**

**DRAINS**

**PUITS DOMESTIQUES**

**CAPTAGE DE BIOGAZ**

**PIEZOMETRES**

**RÉFECTION DE PUIITS**

**RABATTEMENT DE NAPPE**

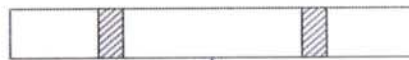
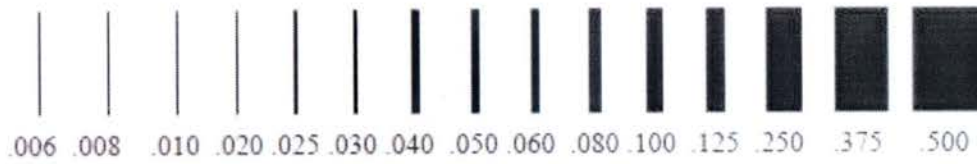
**LES CRÉPINES TERRA STANDARDS SONT EN PVC SCH 40 AVEC FILETS ASTM 4TPI  
NOUS POUVONS ÉGALEMENT,  
A VOTRE DEMANDE, LES FABRIQUER SELON VOS BESOINS**



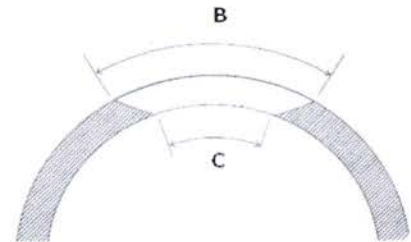
# ÉQUIPEMENT ENVIRONNEMENTAL TERRA INC

## CREPINE ET ALLONGE PVC

DIMENSIONS DES OUVERTURES ( APPROX.PAS A L'ÉCHELLE)

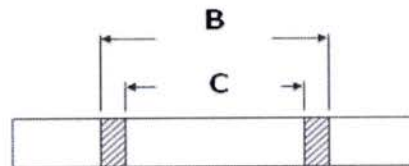


A



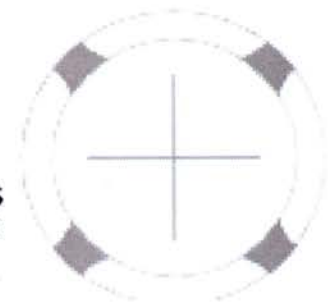
B

C



B

C



**RANGÉES**

**A ESPACEMENT ENTRE FENTES**  
0.125" 0.250" 0.375 XXX

**B OUVERTURE EXTÉRIEURE**

**C OUVERTURE INTÉRIEURE**

**MATÉRIAUX**  
PVC SCH40 80  
CPVC SCH40 80  
PVC SDR  
POLYÉTHYLENE

**EMBOUTS**  
BOUT UNIS A COLLÉ  
ASTM 2TPI  
ASTM 4 TPI  
AUTRES



# ÉQUIPEMENT ENVIRONNEMENTAL TERRA INC CREPINE ET ALLONGE PVC ACCESOIRES



**BOUCHON DE FOND MALE**



**BOUCHON FEMELLE**



**POINTE**



**SNAP CAP**



**BOUCHON CADENASSABLE**



**BOUCHON COLLÉ**



**ADAPTEUR ET BOUCHON FILLETÉ**



**BOUCHON POUR CAPTAGE DE BIOGAZ**



**CENTRALISATEUR EN ACIER INOXIDABLE**



**TRAPPE DE RETENUE**

**POUR TOUT VOS TRAVAUX**

**LA PERFORMANCE ET LA QUALITÉ DES**

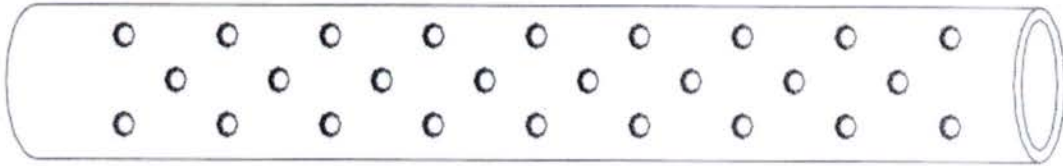
**DES PRODUITS SONT IMPORTANTS**

**NOTRE ÉQUIPE L' A COMPRIS!!!**

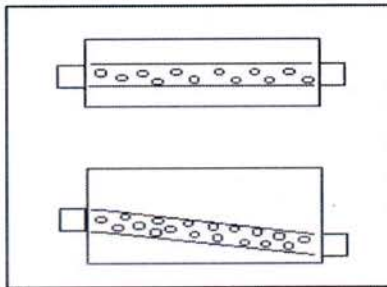


**ÉQUIPEMENT  
ENVIRONNEMENTAL  
TERRA INC**

**CRÉPINE POUR CAPTAGE DE BIOGAZ ET LIXIVIAT**



**IDÉAL POUR SITE D ENFOUISSEMENT  
OU SITE AVEC MOUVEMENTS DE TERRAINS**



**FABRICATION POLYETHYLENE  
GRANDE ROBUSTESSE ET FLEXIBILITÉ**

**FABRICATION PVC**

**TOUT DIAMETRES**

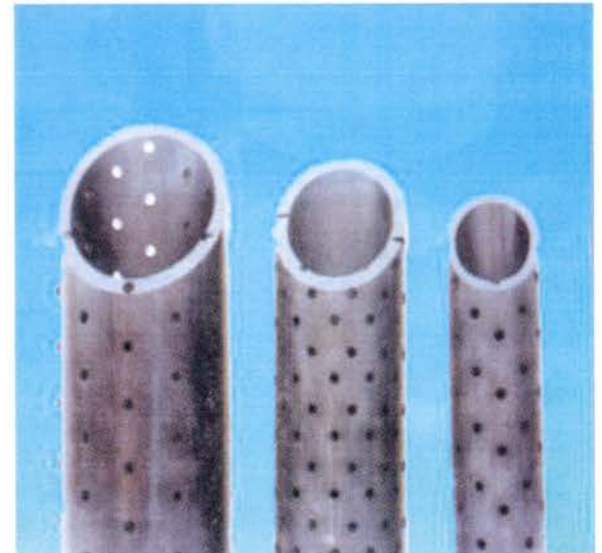
**FENTES LONGITUDINALES AUSSI DISPONIBLES**

**PERFORÉE SELONS VOS DEVIS ET BESOINS**

**INSTALLATION VERTICALE  
OU  
HORIZONTALE**

**FAITES NOUS PART DE VOS PROJETS**

**NOUS AVONS LA SOLUTION!**





**ÉQUIPEMENT  
ENVIRONNEMENTAL  
TERRA INC**

**PROTECTION DE PUITTS**

**BOITES DE SERVICES**



**DISPONIBLES DE 3" ET 4"  
POUR INTÉRIEUR  
FABRICATION PLASTIQUE**



**DISPONIBLES DE 4" A 24"**



**DISPONIBLES DE 8" A 24 "**

**ROBUSTE ET CONÇUES POUR RESISTER A LA CIRCULATION**

**FABRICATION ALUMINIUM ACIER FONTE ET PLASTIQUE**

**GARDES DE PROTECTION HORS SOL**



**HDPE COUVERCLE ALUMINIUM**



**TOUT ALUMINIUM**



**CADENAS DE TYPE SÉRIE**



**TOUT ACIER DE TYPE CARRÉ**



**ÉQUIPEMENT  
ENVIRONNEMENTAL  
TERRA INC**

## **PROTECTION DE PUIT COUVERCLES DE PUIT**



**COUVERCLES ALUMINIUM CADENASSABLE**



**COUVERCLES A BOSSE POURT CONDUITS**



**COUVERCLES ÉTANCHES POUR PUIS ARTÉSIENS**

**OBTURATEURS DE PUIT ÉTANCHES POUR POMPES**



**BOUCHONS CADENASSABLE ÉTANCHES**



**SCELLÉES  
POUR PUIT**

**IDENTIFICATIONS  
PERSONNALISÉES**

**SELON VOTRE  
DEMANDE**





**ÉQUIPEMENT  
ENVIRONNEMENTAL  
TERRA INC**

**BENTONITE, FLUIDES ET POLYMERES DE FORAGE**



**SPÉCIALISÉ DANS LES DOMAINES:**



**FORAGES GÉOTECHNIQUES  
FORAGES ENVIRONNEMENTAUX  
FORAGES D EXPLORATION**



**ABANDON DE PUIITS  
SCELLEMENT DE PUIITS**



**FORAGES GÉOTHERMIQUES  
COULIS GÉOTHERMIQUE**



**FORAGES MINIERS**



**RÉHABILITATION DE PUIITS**



**FORAGES DE FONDATIONS  
CONSTRUCTIONS**



**FORAGES DE PUIITS ARTÉSIENS**



**TRANCHÉE DE BOUES ÉTANCHES**





# PEL-PLUG TR30/60

COATED BENTONITE PELLETS  
(U.S. Patent No. 5,476,543)



## DESCRIPTION

**Pel-Plug TR30/60** is a clean, virtually odorless and easy to handle bentonite pellet which combines the high quality yield of western bentonite with a biodegradable non-sticking coating. This coating, developed by PDSCo, allows the pellets to be poured through standing water without sticking together, eliminating voids and bridging. **Pel-Plug TR30/60** has the same ability to absorb water and maintain the 8-12 times expansion pattern that has been typical of our very successful regular Pel-Plug bentonite pellets. Pellets should be allowed to hydrate for at least 2 to 3 hours (depending on water quality).

## ADVANTAGES

1. Clean, dust-free, and easy to handle.
2. Non-toxic and non-polluting.
3. Can be poured directly into place for the highest density per cubic foot (accumulation) of any existing grouting method, dry or wet.
4. No mixing required; thus, eliminates the needs for large and expensive grouting units, problem of over mix, and reduces labor costs.
5. Do not disintegrate upon swelling; seals are tough but flexible, and do not crack when subjected to movement.

## RECOMMENDED USAGE

USAGE CHART	Hole Diameter	2"	3"	4"	5"	6"	7"	8"
	Lbs of pellets/ft of seal	1.75	4	7	11	16	22	28

**NOTE:** These are dry weights and volumes. In use, the swelling of the pellets will increase the length of the seal (depending on hole condition).

## PACKAGING

**Pel-Plug TR30/60** is packaged in 50 lb reusable, reseal able, and waterproof containers.

Pellets available in 1/4", 3/8", and 1/2" sizes.

Special order pellets are available to further retard pellet swell time during very deep water applications.

Please call for more details.



Votre Distributeur Au

Québec

1-877-663-9660





## TUBE A PAROI MINCE ( SHELBY )

970 MICHELIN  
LAVAL QUEBEC H7L 5C1  
TEL:450-663-9666  
FAX:450-663-9695  
WATT:877-663-9660

**CONTACT:**

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[terra.mario@bellnet.ca](mailto:terra.mario@bellnet.ca)

**MARTIN BÉDARD**  
[terramartin@bellnet.ca](mailto:terramartin@bellnet.ca)

**VINCENT CADIEUX**  
[vincentc@terraquip.ca](mailto:vincentc@terraquip.ca)



**TUBE MÉTALIQUE A PAROIS MINCE POUR ÉCHANTILLONAGE DE SOL EN NATUREL**

**EMBOUT SUPÉRIEUR PERFORÉ POUR L'INSTALLATION AU TRAIN DE TIGES**

**EMBOUT INFÉRIEUR AIGUISÉ POUR UNE MEILLEURE PÉNÉTRATION DU SOL**

**FOURNIT UN ÉCHANTILLON DE SOL INTACT NON REMANIÉ POUR ANALYSE  
EN LABORATOIRE**

**POUR TEST DE DENSITÉ, PERMÉABILITÉ, COMPRESSIBILITÉ ETC**

**POUR UTILISATION EN FORMATION DE SOLS COHÉRENTS (ARGILE ET SILT)**

**PEUT AUSSI ÊTRE UTILISÉ POUR LE TRANSPORT DE L'ÉCHANTILLON**

**FABRIQUÉ AU STANDARDS DE LA NORME ASTM D1587 COURANTE A NOTRE USINE**

**SPÉCIFICATIONS:**

**DIAMETRE EXTERIEUR: 2-7/8 POUCES**

**LONGUEUR HORS TOUT: 30 POUCES**

**MATERIEL : ACIER**



Plant: 4 Osborne Road  
 Poodiac, NB, E4E 5K5  
 Tel. 506-433-5890  
 Fax 506-433-4619

Executive Office: PO Box 10  
 Enfield, NS, B2T 1C6  
 Tel. 902-883-3020  
 Fax. 902-883-8881

**SABLE DE SILICE**

**DISTRIBUTION PAR**



Équipement Environnemental Terra Inc.  
 970 Michelin  
 Laval Québec Canada H7L-5C1  
 Tel. 450-663-9666  
 Fax. 450-663-9695  
 Watt. 1-877-663-9660

[www.terraquip.ca](http://www.terraquip.ca)

Typical Chemical Analysis		
Element Compound	Not Magnetically Separated	Magnetically Separated
SiO <sub>2</sub>	99.6	99.75
Al <sub>2</sub> O <sub>3</sub>	0.2	0.1
Fe <sub>2</sub> O <sub>3</sub>	0.06	0.02
TiO <sub>2</sub>	0.02	ND-Trace
CaO	<0.01	<0.01
MgO	<0.01	<0.01
K <sub>2</sub> O	<0.01	<0.01
Na <sub>2</sub> O	<0.01	<0.01
LOI	0.1 Max	0.1 Max
Acid Demand	<1	<1
Specific Gravity	2.64	2.64

TYPICAL SIZE ANALYSIS									
US SIEVE SIZE		% RETAINED							
#	mm	3/4 x 1/2	1/2 x 1/4	1/4 x 1/8	#3	#2	#1	#0	#00
1.0"	25								
3/4"	19								
5/8"	16	22,4							
1/2"	12,5	52,2	17,6						
7/16"	11,2	18,9	29,1						
3/8"	9,5	5,7	30,1						
5/16"	8		11,9						
1/4"	6,3		8,8	5,8					
4	4,75		1,9	57,6					
5	4,000			30,9					
6	3,350			4,4	0,8				
8	2,360			1,1	64,9	4,9			
10	2,000				13,9	46,5			
12	1,700				8,1	42,3	0,9		
14	1,400				7,1	4,7	28,2		
16	1,180				3,4	0,7	36,9		
18	1,000				1,2	0,2	19,6	6,7	
20	0,850						6,5	19	
30	0,600						5,3	43,5	
35	0,500						1,1	17,3	
40	0,425						0,4	7,6	4,5
50	0,300						0,7	4,5	34,7
60	0,250							0,7	15,3
70	0,212								10,1
80	0,180								9,9
100	0,150								11
140	0,106								11,2
200	0,075								2,8
270	0,053								
PAN		0,8	0,6	0,2	0,6	0,7	0,4	0,7	0,5



970 MICHELIN  
LAVAL QUEBEC H7L 5C1  
TEL:450-663-9666  
FAX:450-663-9695  
WATT:877-663-9660

CONTACT:

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VINCENT CADIEUX  
[vincentc@terraquip.ca](mailto:vincentc@terraquip.ca)

## PLAQUES DE TASSEMENT



FABRICATION DE PLAQUES DE TASSEMENT

DIMENSIONS SELON VOS BESOINS ET DEVIS

BOIS OU ACIER

TRAIN DE TIGES FILETÉ DE DIAMETRE ET LONGUEUR VARIÉ



APPELEZ NOUS POUR UNE SOUMISSION !!



**JAUGES  
DIVERSES**



## ÉQUIPEMENTS GÉNÉRAUX



**FILTRE SUCCION**



**FILTRE AU SABLE**



**RACCORDS MÉTALIQUES**

**ACIER  
INOX  
BRONZE  
ALUMINIUM  
GALVANISÉE**



**COLLIERS ET ATTACHES**



**BARRIL POUR RÉCUPÉRATION  
DE SOLS OU LIQUIDES**



**BOYAU GOUTTE A GOUTTE ET GICLEURS**



**RESERVOIR DE CHANTIER**

**BOYAUX ET CONDUITES FLEXIBLES ADAPTÉES A VOS APPLICATIONS**



**TEL: 450-663-9666 FAX: 450-663-9695 SANS FRAIS: 1-877-663-9660**



## ÉQUIPEMENTS GÉNÉRAUX

VANNES DE TOUT TYPES  
PVC - INOX - LAITON - CPVC- POLYPROPYLENE



ECONOMIQUE



TROIS VOIES



AVEC UNION



POUR RESERVOIR  
( TOTE )



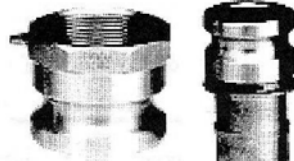
POUR GAZ



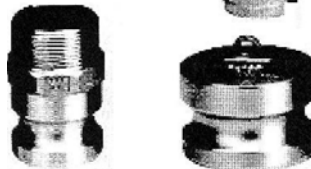
TYPE PAPILLON



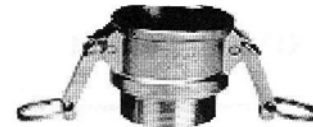
BOUCHON À BIOGAZ



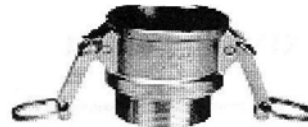
LAITON



POLYPROPYLENE



ALUMINIUM



INOX

RACCORDS A CAMES

TEL: 450-663-9666 FAX: 450-663-9695 SANS FRAIS 1-877-663-9660



**HERON**  
INSTRUMENTS INC.

## WATER LEVEL METERS and more...

### dipper-T

#### Four Function Water Level Meter

The **dipper-T**, a **multi-functional** instrument able to measure **static** and **falling** head levels, can be conveniently converted to determine the full **well depth** and **length of steel casing**. The water level sensing probe is easily removed at the link connection and substituted with either the **Well Depth Indicator Probe** or **Well Casing Indicator Probe**.

AVAILABLE IN 3 DIFFERENT OPTIONS:

1. **dipper-T** with **Well Depth & Well Casing Indicator Probes**
2. **dipper-T** with **Well Depth Indicator Probe**
3. **dipper-T** with **Well Casing Indicator Probe**



### dipper-T2

#### Static & drawDown Levels

Don't require interchangeable probes? We have added the **NEW dipper-T2** with a **NON-removable** probe to our product line. The unit is capable of measuring both **static** and **falling** head levels.

The dual function, **static** and **drawDown**, allows the user to easily switch from measuring depth of water in wells, boreholes and standpipes to measuring **falling** head levels during purging and well development.

Renowned for its **premium, polyethylene** coated yellow steel tape accuracy and fully pressure rated probe\*, the **dipper-T2** is an excellent tool for any project!



### water tape2

#### Static & drawDown Levels

The **NEW water tape2** is a cost effective choice that can **NOW** accurately measure both **static** and **falling** head levels in wells, boreholes or standpipes. The **water tape2** indicates **static** and **drawDown** levels with both a visual and auditory signal ensuring accuracy in your measurements. This **dual function** meter is ideal for every project and budget.

The **water tape2** is manufactured with white **polyethylene** tape, reinforced with **Kevlar**. Unlike some other white tape units on the market, the **water tape2** comes with a fully pressure rated probe\* and carry bag.



### little dipper2

#### Static & drawDown Levels

Designed with portability in mind, the compact **little dipper2** water level meter is used to measure both **static** and **falling** head levels in wells and boreholes. A padded carry case comes included, but it's small enough to be stowed in a backpack.

In order to meet our client's needs, **Heron** is **NOW** manufacturing the **little dipper2** with a shorter probe, making it easier to guide the probe down angled wells.

Available in 3 metric lengths (15m, 22m, 30m) and 3 engineering scale lengths (50ft, 75ft, 100ft); the **little dipper2** is able to reach varying depths, while still maintaining the compact size!



### dipper-Tough

#### Static & drawDown Levels

The rugged **dipper-Tough** is a top quality instrument used for measuring **static** and **falling** head levels in waste disposal, remediation sites and other harsh environments. The **drawDown** feature on the **dipper-Tough** makes this unit ideal to use during pump and treat testing when contaminants are found in the groundwater.

The hydrocarbon resistant, **Kynar** coated, high tensile steel core tape is embedded directly into the probe body, allowing for longer life of the tape and probe.



### SKINNY DIPPER












#### Static Levels

Made with a **1/4" tape** and **1/4" probe**, the **SKINNY DIPPER** water level meter is designed for **narrow** wells, boreholes, tubes and piezometers. The probe, with beaded weights, enables the **SKINNY DIPPER** to quickly and accurately measure **static** level, with a visual and audible signal when water is detected.

The **1/4" polyethylene tape** is available in metric (mm) or engineering scale (1/100ft) with easy to read black and red graduations. The **SKINNY DIPPER** comes complete with a padded carry case.



# SELECTION GUIDE

	STATIC LEVELS	FALLING HEAD LEVELS	WELL DEPTH INDICATOR	WELL CASING INDICATOR	INTERFACE LEVELS (LNAPL & DNAPL)	CONDUCTIVITY LEVELS UP TO 80,000µS	TEMPERATURE LEVELS	ELECTRONIC SENSOR DISPLAY FUNCTION
 <b>dipper-T</b>	●	●	●	●				Audio Visual Sensitivity Control
 <b>dipper-T2</b>	●	●						Audio Visual Sensitivity Control
 <b>water tape2</b>	●	●						Audio Visual Sensitivity Control
 <b>little dipper2</b>	●	●						Audio Visual Sensitivity Control
 <b>dipper-Tough</b>	●	●						Audio Visual Sensitivity Control
 <b>SKINNY DIPPER</b>	●							Audio Visual Sensitivity Control
 <b>H.OIL</b>	●				●			Audio Visual
 <b>Sm.OIL</b>	●				●			Audio Visual
 <b>dipper-Temp - 110</b> <b>dipper-Temp - 80</b>	●						110°C	Audio Visual LCD Display
							80°C	
 <b>conductivity plus</b>	●					●	50°C	Audio Visual LCD Display
 <b>dipper-Tag</b>								Acoustically



**Hanger**

**Tape Guide**

**Inverted Triangle**

- to support the meter on the side of the casing.
  - to protect your tape from sharp edges on the casing (N/A **little dipper2** & **Sm.OIL**).
  - on back of probe holder, serves as datum point indicating "top of casing".
- \*\*Option must be ordered at time of manufacturing.





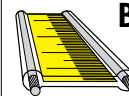
FULLY PRESSURE RATED PROBE (temporary submersion*)	FIELD REPLACEABLE PROBE	3/8" NARROW PROBE OPTION AVAILABLE**	LEVEL WIND OPTION AVAILABLE**	TAPE	TAPE LENGTHS (longer lengths are available)	<ul style="list-style-type: none"> <li>● PADDED CARRY CASE</li> <li>◆ CLOTH CARRY BAG</li> </ul>	WARRANTY FOR MANUFACTURER DEFECT (see manual for details)
●	●		●	A	15m - 300m 50ft - 1000ft	●	5 Years Probes 1 Year
●		●	●	A	15m - 600m 50ft - 2000ft	●	5 Years Probe 1 Year
●		●		C	30m - 450m 100ft - 1500ft	◆	5 Years Probe 1 Year
●		●		A	15m - 30m 50ft - 100ft	●	5 Years Probe 1 Year
●		●	●	B	15m - 150m 50ft - 500ft	●	5 Years Probe 1 Year
Pressure Rated to 100m/300ft for 20 Minutes				D	30m - 150m 100ft - 500ft	●	5 Years Probe 1 Year
●	●			B	15m - 150m 50ft - 500ft	●	5 Years Probe 1 Year
●	●			B	20m 60ft	●	5 Years Probe 1 Year
●	●		●	B A	30m - 150m 100ft - 500ft	●	3 Years Probe 1 Year
●	●		●	A	30m - 300m 100ft - 1000ft	●	3 Years Probe 1 Year
Weighted Plopper				E	150m 500ft	◆	3 Years Probe N/A

**Tapes** - Markings in metric or engineering scale (1/100ft).

- **Dog Bone Section** to help eliminate sticking to the side of the casing (N/A **SKINNY DIPPER** [D]).
- 7 strand s/s conductors (N/A **dipper-Tag** [E]).



**A ASME-Certified** – High tensile steel tape, jacketed with **polyethylene**, high break strength, stretch resistant and lifelong legibility



**B ASME-Certified** – High tensile steel tape, jacketed with heat and hydrocarbon resistant **Kynar**, high break strength, stretch resistant and lifelong legibility



**C** White **polyethylene** tape, reinforced with stretch resistant **Kevlar**



**D** 1/4" white **polyethylene** tape with s/s conductors, oval shape, comparative to coaxial cable



**E** White **polyethylene** tape reinforced with **Kevlar** in three areas for added strength



# OIL/WATER INTERFACE METERS TEMPERATURE METERS | CONDUCTIVITY METERS | TAG LINES



## H.OIL Interface & Static Levels

The **H.OIL** oil/water interface meter is used to measure the **interface levels** between two liquids in the same tank, vessel, well or aquifer. The sensing probe can easily detect floating product (**LNAPL**), sinking product (**DNAPL**) and water with a different audio and visual signal.

The hydrocarbon resistant, **Kynar** jacketed, high tensile steel core tape is able to withstand solvents and other harsh contaminants.

The **CSA Intrinsically Safe Certification with Class I, Groups A, B, C and D in Zones 0 & 1**, makes the **H.OIL** ideal for use in hazardous environments by Oil & Gas, Chemical and Petrochemical Industries.



## Sm.OIL Interface & Static Levels

The compact **Sm.OIL** interface meter, used to measure both **static** and **interface levels**, is available in one metric (20m) and one engineering scale (60ft) length. The dissimilar density of two liquids means the lower density, non conductive product (**LNAPL**) will float on top of the higher density, conductive liquid (water).

Denser products will tend to sink (**DNAPL**), creating a layer under the water.

The **CSA Intrinsically Safe Certification with Class I, Groups A, B, C and D** makes the **Sm.OIL** ideal for use in hazardous environments.



## dipper-Temp - 110 or dipper-Temp - 80 Temperature & Static Levels

The **dipper-Temp**, temperature meter is ideal for profiling **temperature** and **static** water levels in wells, boreholes, standpipes, lakes and rivers.

The **dipper-Temp** is available with 2 different tape coatings:

The high accuracy sensor probe on the **dipper-Temp - 110** allows for **temperature** profiling up to **110°C**. The heat resistant **Kynar** jacketed measuring tape is able to withstand hydrocarbons, solvents and other harsh contaminants.

The more economical **polyethylene** jacketed tape on the **dipper-Temp - 80** is used for lower **temperature** profiling, up to **80°C**. The markings are under the coating for long term readability.



## conductivity plus Conductivity, Temperature & Static Levels

The **conductivity plus** is ideal for measuring **conductivity**, **temperature** and **static** water levels in wells, boreholes, standpipes and estuaries where salt water intrusion and contamination levels become a concern. The LCD screen, accurately displays **conductivity** up to **80,000µS** (using 1413 µS solution) and **temperatures** to **50°C** with a one minute response time.

**Conductivity** can be an indication of changes in a water system due to fluctuations of salinity in the water. When well profiling is not required, the **conductivity plus** is an excellent tool for **early** detection of threats to a water system before intrusion becomes a factor.



## dipper-Tag Tag Line Plus

The economical **dipper-Tag** is a **multi-purpose** unit designed for use when installing or monitoring wells.

The 316 grade s/s weighted **plopper** that comes with the **dipper-Tag** can be used for measuring to the bottom of a well, or the depth to the top of a bentonite layer or backfill sand. The **plopper** can also be used to measure to the top of the water level acoustically.

The spring release clip allows the user to exchange the **plopper** to other available accessories such as a **Heron dipperLog** or a third party bailer.

**DON'T SEE IT HERE? ASK US!**

### HERON ALSO MANUFACTURES:

- Data Loggers
- Vented Loggers
- 4-20mA
- Borehole Inspection Cameras
- Custom Units/Projects

### HERON INSTRUMENTS INC.

447 Moxley Road, Dundas, ON L9H 5E2 CANADA | 1-800-331-2032 or 905-628-4999 | info@heroninstruments.com  
Please visit our website [www.heroninstruments.com](http://www.heroninstruments.com) for more information on the complete **Heron** product line.

🇨🇦 Made in Canada



## dipper-See

### Borehole Camera

Length Options: 100m/300ft or 300m/1000ft

The **Heron dipper-See** is a high quality, full-featured, portable, **borehole inspection camera**, in a **self-contained unit**. This revolutionary new camera is ideal for viewing in wells, drains, vertical shafts, open bodies of water, boreholes, and narrow tubes from 1 inch in diameter to a maximum depth of 300m/1000ft.

The **versatile positioning arm**, conveniently attached to the frame, offers an ergonomic solution for adjusting the **HD display screen** for viewing at different angles and lighting conditions. The **built-in hanger** on the frame can support the unit at the top of the well, allowing for **hands-free** viewing while in the field.

#### Features included with the dipper-See:

- **Camera Probe** - 316 marine grade, fully pressure rated, field replaceable, upgradeable (coming soon)
- **Lens** - robust, scratch resistant clear sapphire
- **Level-Wind** - built in cable management
- **Cable Counter** - accurate, digital display on screen
- **Display** - depth, date, time, location
- **GPS Location** - built in, on/off feature
- **Monitor** - resolution 700tvl, 7", on/off feature
- **Recording Function** - SD card (included), USB (optional)
- **SD Card** - removable for transferring video to computer or USB
- **HDMI Output** - sends video feed to external device
- **Microphone** - 3.5mm jack, for video voice over
- **Battery** - removable, rechargeable lithium ion, more than 4 hours
- **Cable** - shielded, 4 conductor, reinforced with a stretch resistant core
- **Centralizer** - removable, centers and stabilizes camera probe
- **Weight** - detachable
- **Hanger** - built in, to support the unit at the well head
- **Rugged Carry Case** - to protect your precision borehole inspection camera from the elements and to transport additional accessories

#### Available options:

- **Virtual Reality Goggles** - high visibility of video feed in the field





# dipper-See Features

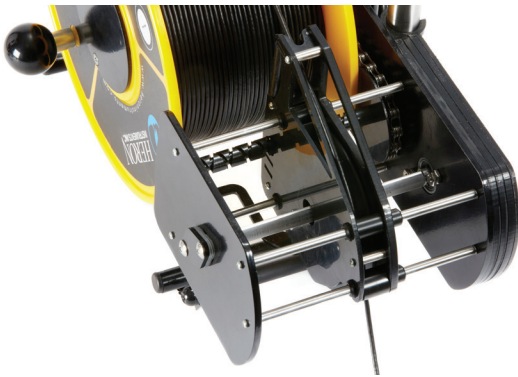
## See-Cam Pro



The HD, detachable **See-Cam Pro** camera probe is designed to work in the harshest environments and stand up to the most rigorous use. The camera probe can be easily removed at the link connection for field replacement and for future camera upgrades.

- 700tvl of resolution
- Pressure rated to 300m/1000ft (IP68)
- 7 ultra-bright LED lights
- 22mm (7/8") diameter
- 316 marine grade, non-ferrous stainless steel body
- Sapphire lens machined in the C-Axis for greater clarity
- Field replaceable/upgradable

## Level-Wind



The **Level-Wind**, built in cable management system accurately measures your cable draw and return while simultaneously laying your cable neatly on the hub. This allows you to focus on the screen and not on the cable placement.

- Built in cable management
- Accurately counts cable depth
- Patent Pending

## Display Monitor



The versatile positioning arm, attached to the frame, offers an ergonomic solution for adjusting the **dipper-See Display Monitor** for viewing at different angles and lighting conditions. The monitor conveniently houses all of the controls on the front of the panel for ease of use. Recording the location, date, time and depth, will enhance the legitimacy of your findings and chain of custody.

- 700tvl, 7" display screen
- Screen has on/off feature, to save battery life
- Records on SD card (included), USB (optional)
- Displays location, date, time and depth
- Unit measurements switchable
- Built in GPS hard codes location with on/off feature, to save battery life
- HDMI output sends video feed to external device
- 3.5mm microphone jack for video voice over

\*Features and specifications may change

### HERON INSTRUMENTS INC.

447 Moxley Road, Dundas, ON L9H 5E2 CANADA | 1-800-331-2032 or 905-628-4999 | [info@heroninstruments.com](mailto:info@heroninstruments.com)  
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# waterra

Groundwater Monitoring Equipment & Supplies

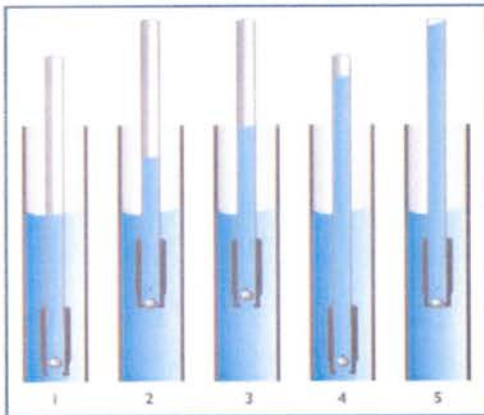
## ÉQUIPEMENTS DE PURGE ET ÉCHANTILLONNAGE DE Puits

### CLAPETS DE PIEDS - POMPES WATERRA



OFFERTS EN DIFFÉRENTS DIAMÈTRES  
ACÉTAL OU ACIER INOXIDABLE

### PRINCIPE D'OPÉRATION



### ANNEAUX DE DÉVELOPPEMENT



POUR POMPE WATERRA

### ACTUATEURS

MANUEL  
POUR  
VOC



HYDROLIFT  
ÉLECTRIQUE



### TUBULURES POUR POMPES WATERRA



DISPONIBLES DANS LES MATÉRIEAUX SUIVANTS:  
LDPE HDPE TEFLON ETC  
ÉVENTAIL DE DIAMÈTRES SELON VOS BESOINS

### A ESSENCE



POWERPACK



POWERLIFT



**ÉQUIPEMENT  
ENVIRONNEMENTAL  
TERRA INC**

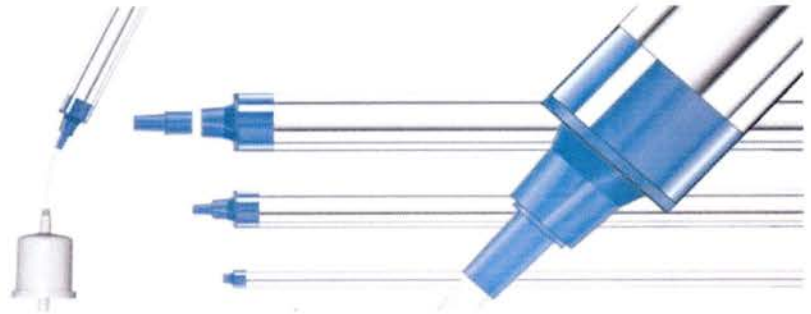
**waterra** Groundwater Monitoring Equipment & Supplies

**ÉQUIPEMENTS DE PURGE ET ÉCHANTILLONNAGE DE Puits**

**FILTRE A MÉTAUX**



**ÉCOPEES JETTABLES**



**ÉLECTRIQUE**



**PEGASUS ATHENA**

**POMPES PÉRISTALTIQUES**

**AUTONOME**



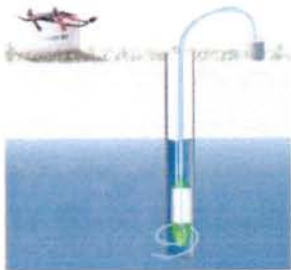
**PEGASUS ALEXIS**

**AUTONOME**



**SPECTRA FIELD PRO**

**POMPES SUBMERSIBLES 12 VOLTS**



**CONTROLEUR DE DÉBIT**



ÉQUIPEMENT  
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# waterra

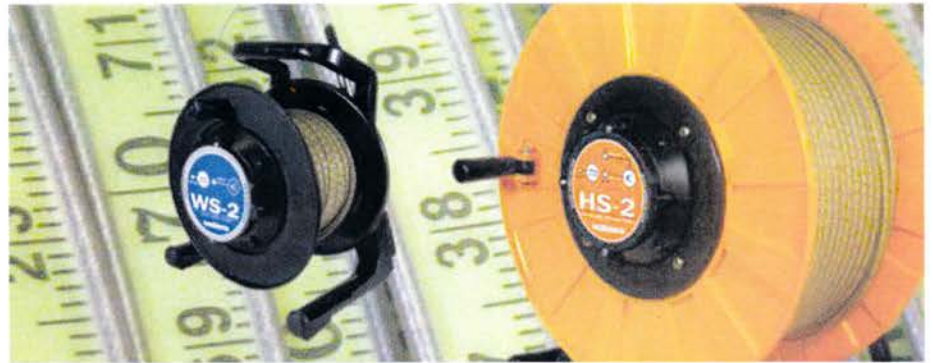
Groundwater Monitoring Equipment & Supplies

## ÉQUIPEMENTS DE MESURE

SONDES MANUELLES

NIVEAU D'EAU

D'INTERFACE



## SONDES D'ANALYSE MULTI-PARAMETRES



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# WATER LEVEL DATALOGGERS





# 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 <sub>2</sub> O
Accuracy*	± 0.2	± 0.4	± 1.0	± 2.0	inH <sub>2</sub> O
Resolution	0.02	0.04	0.07	0.14	inH <sub>2</sub> O

\*typical accuracy

**NEW**



- 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

<b>Part number</b>	<b>DI 800</b>	
Range	4.9	ftH <sub>2</sub> O
Accuracy*	± 0.2	inH <sub>2</sub> O
Resolution	0.01	inH <sub>2</sub> O

\*typical accuracy

**NEW**



- **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 <sub>2</sub> O
Accuracy*	± 0.4	± 0.8	± 2.0	± 4.0	inH <sub>2</sub> O
Resolution	0.02	0.04	0.07	0.14	inH <sub>2</sub> O

\*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  $\pm 0.05\%$  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*	$\pm 0.18$	°F
Resolution	0.018	°F

## Pressure

Part number	DI 701	DI 702	DI 705	DI 710	
Range	33	66	164	328	ftH <sub>2</sub> O
Accuracy*	$\pm 0.2$	$\pm 0.4$	$\pm 1.0$	$\pm 2.0$	inH <sub>2</sub> O
Resolution	0.02	0.04	0.07	0.14	inH <sub>2</sub> O

\*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 <sub>2</sub> )
o-rings	Viton ®
pressure sensor cap / nose cone	piezoresistive ceramic 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 <sub>2</sub> O
Accuracy*	± 0.2	± 1.0	± 2.0	inH <sub>2</sub> O
Resolution	0.02	0.07	0.14	inH <sub>2</sub> O

\*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](http://www.vanessen.com)

## **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  $\pm 0.05\%$  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  $\pm 1\%$  of reading.

