

# HERON INSTRUMENTS INC.

## dipperLog

### Groundwater Data Logging Made Affordable

Heron Instruments' **dipperLogs** are a durable, versatile and cost effective tool which will deliver accurate water level and temperature readings for many years. Groundwater professionals have been successfully employing the **Heron** family of instrumentation to monitor both open waters and wells, to perform pump and slug tests, and to complete wetland and tidal studies with excellent results for over 20 years.

With the dedicated, intuitive software, the **dipperLog** is quick and easy to program and launch and allows for simple data recovery. Easily save your data in a tabular display and graph and view both parameters side by side in a split screen.

**Heron** also offers various accessories to further enhance your logging experience. The wide range of transducer values (available in both absolute and vented models) will ensure the collection of the most accurate of levels.



#### dipperLog<sup>TOUGH</sup>

**dipperLog TOUGH** is a **premium logger**, with titanium body and transducer coupled with **Teflon O-rings**, is suitable for use in the most caustic and hazardous of environments. The **dipperLog TOUGH** offers a memory capacity of **64,000 data points** and a choice of pressure ranges.



#### dipperLog<sup>64</sup>

The **dipperLog 64**, our flagship logger, offers a maximum storage capacity of **64,000 data points** and an extended battery life up to 10 years $\diamond$ . The **dipperLog 64** comes in a wide variety of pressure ranges and deployment options.



#### dipperLog<sup>VENTED</sup>

The **dipperLog VENTED**, incorporates a **gauged transducer** that measures pressure exempt from barometric influences. The **dipperLog VENTED** is **removable from the vent cable** allowing for easy field replacement. *Attach the NEW Vent Cap Adapter for deployments (without vented cable) used in shallow wetland studies.*



#### 4-20mA Pressure Transmitter

The **4-20 mA Pressure Transmitter** is easily integrated into an existing **SCADA system** or with a third party data logger. It will provide a continuous water level reading for your application. It can also be equipped with a digital display.



#### dipperLog<sup>32</sup>

**dipperLog 32**, the most economical data logger in our lineup, has a maximum storage capacity of **32,000 data points** and an expected battery life up to 5 years $\diamond$ . The **dipperLog 32** is only available in a 30m/100' pressure range.



#### barLog

The **barLog** is configured to **measure barometric pressure fluctuations** necessary to compensate your absolute **dipperLog** data files. The **barLog** takes readings every 1 hour and has a capacity for **32,000 data points**.

$\diamond$  Dependent upon use

# Specifications

	dipperLog <sup>TOUGH</sup>	dipperLog <sup>64</sup>	dipperLog <sup>VENTED</sup>
<b>Performance</b>			
# of Data Points	64,000	64,000	64,000
Download Speed	21,333.33/min	21,333.33/min	21,333.33/min
Accuracy %FS	0.05	0.05	0.05
Stability %FS/Year	0.20	0.20	0.20
<b>Operating Features</b>			
Pressure Ranges	10m/30ft, 30m/100ft, 60m/200ft, 120m/400ft	10m/30ft, 30m/100ft, 60m/200ft, 120m/400ft	10m/30ft, 30m/100ft, 60m/200ft, 120m/400ft
Overpressure Rating	2X	2X	2X
Operating Temperature	-20°C to 80°C	-20°C to 80°C	-20°C to 80°C
Pressure Resolution	0.001	0.001	0.001
Expected Battery Life◇	Up to 10 Years	Up to 10 Years	Up to 10 Years
Warranty	3 Years	3 Years	3 Years
<b>Physical Characteristics</b>			
Wetted Material	Titanium & Delrin®	316 SS & Delrin®	316 SS & Delrin®
O-Rings	Teflon™	Viton™	Viton™
Transducer	Titanium Piezoresistive Silicon	316 SS Piezoresistive Silicon	316 SS Piezoresistive Silicon
Length	130mm	130mm	130mm
Diameter	22mm	22mm	22mm
Weight	105g	160g	160g
<b>Deployment Options</b>			
All Absolute Deployments Require Compensation	Suspended*, Direct Read*, Reel*, Wireless Communication* <sup>Δ</sup>	Suspended*, Direct Read*, Reel*, Wireless Communication* <sup>Δ</sup>	Suspended*, Direct Read*, Reel*
*Features Available for Additional Costs			
<sup>Δ</sup> dipperLog-SMART Wireless Monitoring System Compatible			

◇ Dependent upon use

### Suspended Version

This is the simplest and most inexpensive method of deploying a **dipperLog**. Suspend the dipperLog in the well using a non-corrosive, no-stretch wire or cord. No communication is possible with the **dipperLog** in-situ, the **dipperLog** must be programmed and started before deployment then recovered for data retrieval and reprogramming.

Add the Vent Cap Adapter to the **dipperLog VENTED** for deployments in shallow wetland studies.



### Direct Read Well Head Version

This is the least labour intensive option. The **dipperLog** is suspended on a direct read cable, which establishes a connection to the **dipperLog** at the wellhead. Programming of the **dipperLog**, downloading of data and stopping and starting data collection can be done while the logger is deployed.

Available in both absolute and vented models. Real time display is available with this configuration.

## Accessories:

<p style="text-align: center;"><b>Software &amp; PC Communication Cable</b></p>  <p style="text-align: center;">PN# 5008    PN# 5009</p>	<p style="text-align: center;"><b>barLog for Barometric Compensation</b></p>  <p style="text-align: center;">PN# 5116</p>	<p style="text-align: center;"><b>tapNtell Surface Mount Display</b></p>  <p style="text-align: center;">PN# 5020</p>	<p style="text-align: center;"><b>showNtell Hand Held Display</b></p>  <p style="text-align: center;">PN# 5018</p>	<p style="text-align: center;"><b>Digital Display 4-20mA</b></p>  <p style="text-align: center;">PN# 5031</p>
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# Specifications

dipperLog <sup>32</sup>	4-20mA <sup>Pressure Transmitter</sup>	barLog	
			<b>Performance</b>
32,000	N/A	32,000	# of Data Points
21,333.33/min	N/A	21,333.33/min	Download Speed
0.10	0.05	0.05	Accuracy %FS
0.40	0.20	0.20	Stability %FS/Year
			<b>Operating Features</b>
30m/100ft	10m/30ft, 30m/100ft, 60m/200ft, 120m/400ft	N/A	Pressure Ranges
2X	2X	2X	Overpressure Rating
-10°C to 50°C	-20°C to 80°C	-20°C to 80°C	Operating Temperature
0.01	0.001	0.001	Pressure Resolution
Up to 5 Years	N/A	Up to 10 Years	Expected Battery Life◇
1 Year	3 Years	3 Years	Warranty
			<b>Physical Characteristics</b>
316 SS & Delrin®	316 SS & Delrin®	316 SS & Delrin®	Wetted Material
Viton™	Viton™	Viton™	O-Rings
316 SS Piezoresistive Silicon	316 SS Piezoresistive Silicon	316 SS Piezoresistive Silicon	Transducer
105mm	130mm	105mm	Length
22mm	22mm	22mm	Diameter
130g	160g	130g	Weight
Suspended*, Direct Read*, Reel*	N/A	N/A	<b>Deployment Options</b> All Absolute Deployments Require Compensation  *Features Available for Additional Costs **dipperLog-SMART Wireless Monitoring System Compatible  ◇ Dependent upon use



## Reel Version

The reel version is an ideal option when transporting your dipperLog from site to site for pump and slug tests or any other short term deployment. Programming and downloading of the data is capable via the connection on the face plate on the reel.  
Available in both absolute and vented models.  
Real time display is available with this configuration.



## 4-20mA

The 4-20mA Pressure Transmitter is easy to install by simply attaching the vented cable to an existing SCADA system. A two wire 4-20mA current loop is used for signal transmission. This is a pressure sensor only and has no data logging capability.

SCADA systems are not available through Heron Instruments.

<p><b>SDI-12 Interface Cable</b></p> <p>PN# 5021</p>	<p><b>Vent Cap Adapter for dipperLog<sup>VENTED</sup></b> For Shallow Wetland Studies</p> <p>PN# 5035</p>	<p><b>Well Mounting Kit</b></p> <p>PN# 5023</p>	<p><b>Lockable Well Caps</b></p> <p>PN# 5007    PN# 5006</p>	<p><b>dipperLog Carry Case</b></p> <p>PN# 7500</p>
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## Selection Guide

Pressure Range	dipperLog <sup>TOUGH</sup>	dipperLog <sup>64</sup>	dipperLog <sup>VENTED</sup>	dipperLog <sup>32</sup>
B (10m/30ft)	5401-Ti	5401-64	5401-V	N/A
C (30m/100ft)	5402-Ti	5402-64	5402-V	5402-32
D (60m/200ft)	5403-Ti	5403-64	5403-V	N/A
E (120m/400ft)	5404-Ti	5404-64	5404-V	N/A

### Suspended Version *(Remove from Well to Communicate)*

Absolute Logger	Vented Logger
dipperLog (64, TOUGH, 32)	dipperLog Vented
barLog for Barometric Compensation	Vent Cap Adapter
Stainless Steel Suspension Wire	Stainless Steel Suspension Wire
Kevlar Suspension Cord	Kevlar Suspension Cord
Suspension Crimps	Suspension Crimps
PC Communication Cable	PC Communication Cable
dipperLog Software	dipperLog Software

Locking Well Plug

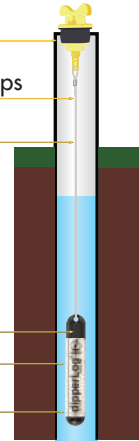
Stainless 316 Crimps

Wire/Cord

Standard Cap

dipperLog

Datum Point



### Direct Read Version *(Communicate While in Well)*

Absolute Logger	Vented Logger
dipperLog (64, TOUGH, 32)	dipperLog Vented
Direct Read Cable	Vented Direct Read Cable
Direct Read Well Head	Vented Direct Read Well Head
Mounting Bracket	Mounting Bracket
PC Communication Cable	PC Communication Cable
barLog for Barometric Compensation	N/A
dipperLog Software	dipperLog Software

Standard Cap & Direct Read Well Head

Lockable Well Cap

barLog (suspended above water in well, or near site)

Direct Read Cable (vented option available to eliminate barLog)

dipperLog

Datum Point



### Reel Version *(Portable, Communicate While in Well)*

Absolute Logger	Vented Logger
dipperLog (64, TOUGH, 32)	dipperLog Vented
Reel	Vented Reel
Direct Read Cable	Vented Direct Read Cable
PC Communication Cable	PC Communication Cable
barLog for Barometric Compensation	N/A
dipperLog Software	dipperLog Software

dipperLog Reel (suspended on side of well)

Direct Read Cable, (vented option available)

dipperLog (all Heron dipperLogs are available on a reel)

Datum Point

