

SURFACE WATER SAMPLING & MONITORING

Water Level Loggers

Open Water Sampler

Nets

Automatic Sampler

Drum & Tank Sampler

Peristaltic Pump

Open Water Monitoring Accessories

Water Flow Probe

In-Situ Level TROLL

Level & Temp Dataloggers

The Level TROLL® contains everything needed for monitoring level/pressure and temperature all in one design. There are three data logging instruments to choose from (Level TROLL 700, 500 or 300) and all are manufactured for accuracy, ruggedness and easy usability. You can have total confidence whatever your application when using Level TROLL® products.

BaroTROLL

Barometric Pressure logger

The BaroTROLL® is used to measure and log barometric pressure and temperature changes. It can be used by itself or together with a non-vented (absolute) Level TROLL® to compensate the level readings for fluctuations in barometric pressure where vented cable cannot be used.

Superior Accuracy and Performance

In-Situ® uses the newest sensor technologies. All instruments undergo an extensive full-scale calibration procedure for both pressure and temperature.

Rugged and Reliable

All Level TROLL sensors are designed for use in many applications. Deploy 316 stainless steel (300) and titanium (500, 700) sensors into most types of environmental waters.

Flexible Communications

The Level TROLL 300, 500 and 700 instruments feature Modbus (RS485), SDI-12 and 4-20mA outputs. Connect each of these units to a SCADA or PLC system.

Ordering Information

- Level TROLL 300, 500 or 700
- +
- Required range
- +
- Cable or Suspension Wire
- +
- Download/Communications

Level TROLL 300

Simple, reliable and economical. Ideally suited for non-vented long-term level and/or pressure monitoring.

Level TROLL 500

Highly accurate, reliable, and affordable. Ideally suited for long-term level and/or pressure monitoring. Fresh or marine.

Level TROLL 700

Our top-of-the-line unit. Powerful and flexible level monitoring. Optimized for multi-step aquifer testing, precision level monitoring, and research.



In-Situ Level TROLL - Applications

Application	Level TROLL 300 (316 SS)	Level TROLL 500 (Titanium)	Level TROLL 700 (Titanium)	Recommended cable type
Aquifer characterization		O	X	Vented
Economical, long-term monitoring in fresh water	X			Suspension wire
High-accuracy, long-term monitoring in brackish, saltwater or fresh water		X	O	Vented
Lake and reservoir monitoring	O	X	O	Vented or non-vented
Storm water monitoring		X	O	Vented
Tide/harbor fluctuations monitoring		O	X	Vented
Wetlands/estuaries monitoring		X	O	Vented or non-vented
River and stream gauging	O	X	O	Vented or non-vented
Crest stage gauging	X	O	O	Non-vented or suspension wire
Flood and storm surge monitoring	X	O	O	Non-vented or suspension wire
Dewatering	O	X	O	Vented or non-vented
Landfill monitoring groundwater	X	O	O	Non-vented
Municipal and process monitoring	O	X	O	Vented or non-vented
Real-time monitoring via telemetry	O	X	O	Vented or non-vented

X = Recommended, O = Can also be used

Win-Situ® Software

Win-Situ® 5.0 takes a fresh new approach to monitoring instrument control software with a large, easy to read display, icon based buttons and friendly wizards. The basic functions are Home (real-time data view), Logging, Calibration, Setup, and MyData--are organised by five large tabs at the top of the screen. When connected, the unit type and serial are displayed on every screen. A dashboard includes the time of the instrument along with battery and memory gauges.

Data logging setup has never been easier with our new setup Wizard. The Logging Setup Wizard guides every step, including setting reference points and display modes, to ensure error free logging configuration.

With such easy software, you'll spend more time getting data and less time reading manuals!



Level TROLL Accessories

Twist-Lock Cable

Surprisingly simple and incredibly reliable. Just press together and twist until they lock! Twist-Lock cables are available vented or non-vented with rugged titanium connectors (2 year warranty). Select between polyurethane, FEP or halogen-free cable jackets that are custom length up to 1212m. All Twist-Lock Cables include a Kellems® grip for easy suspension. (Level TROLL 300, 500, 700)

Twist-Lock Hanger

The Twist-Lock Hanger is a combination backshell cap and hanger to anchor a pre-programmed BaroTROLL® or non-vented (absolute) Level TROLL® in a well or other site while taking data. No communication capabilities. No venting. Allows use of inexpensive hanging cable.

TROLL Cable Extender

The TROLL cable extender is a titanium adapter for joining two lengths of Level TROLL® Rugged deployment cable. Twist-Lock connectors mate with mating connectors on cable so you can take two cables and Twist-Lock them together. The TROLL® Cable Extender seals the cables and provides a weight bearing connection.



Rugged Reader

Introducing the New RuggedReader®. Collect, store, analyze and transfer data using this ultra-rugged, multi-purpose, hand-held PC. When coupled with any of In-Situ's TROLL® Water Quality or Level instruments, the RuggedReader® delivers a reliable, easy-to-use data management system that will stand up to the harshest conditions. Improved smart battery, faster processing speed, a more flexible interface and the latest Microsoft® operating system make the new RuggedReader® a must have.

Features

- Rugged Construction
- IP-67 rating
- Lightweight and easy to hold
- Easy-to-use keypad
- User-Accessible Expansion
- Large, High-Contrast Display
- Powerful Win-Situ® Software



TROLL LINK Telemetry

Flexible and economical TROLL® Link Telemetry Systems offer reliable data retrieval from remote locations.

TROLL Link Telemetry Systems provide:

- Satellite or cellular options that guarantee communication from nearly any location.
- Faster data access at a lower total cost than other data retrieval methods.
- Full compatibility with Level TROLL® 300, 500, 700, Aqua TROLL® 200 or TROLL® 9500 instruments.
- User-defined configuration options for monitoring and alarming.
- A solar-powered option to eliminate on-site power supply.
- Remote access to instruments using Win-Situ® Plus software

Level TROLL Specifications

	Level TROLL 300	Level TROLL 500	Level TROLL 700
<i>Operational Temp. Range</i>	-20°C to 80°C	-20°C to 80°C	-20°C to 80°C
<i>Storage Temperature</i>	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C
<i>Diameter, OD</i>	20.82mm	18.3mm	18.3mm
<i>Length</i>	22.9cm	21.6cm	21.6cm
<i>Weight</i>	0.24kg	0.197kg	0.197kg
<i>Output Options</i>	Modbus (RS485) SDI-12, 4-20mA	Modbus (RS485) SDI-12, 4-20mA	Modbus (RS485) SDI-12, 4-20mA
<i>Housing Material</i>	Stainless Steel	Titanium	Titanium
<i>Nose Cone Material</i>	Black Delrin®	Black Delrin®	Black Delrin®
<i>Internal Battery</i>	3.6V lithium	3.6V lithium	3.6V lithium
<i>Battery Life</i>	5 yrs or 2M readings*	5 yrs or 2M readings*	5 yrs or 2M readings*
<i>Cable Connect</i>	Direct Read or Wire	Direct Read or Wire	Direct Read or Wire
<i>External Power</i>	8-36VDC	8-36VDC	8-36VDC
<i>Memory</i>	1MB	2MB	4MB
<i>Data Records**</i>	50,000	100,000	350,000
<i>Fastest Logging Rate</i>	1 per sec	2 per sec	4 per sec
<i>Fastest Output Rate</i>			
<i>Modbus</i>	2 per sec	2 per sec	2 per sec
<i>SDI-12</i>	2 per sec	2 per sec	2 per sec
<i>4-20 mA Update Rate</i>	2 per sec	2 per sec	2 per sec
<i>Measurement Types</i>	Linear, Fast Linear, Event	Linear, Fast Linear, Event	Linear, Fast Linear, Linear Average, Step Linear, Event, and True Logarithmic Silicon strain gauge Titanium
<i>Pressure Sensor</i>	Silicon strain gauge	Silicon strain gauge	Silicon strain gauge
<i>Sensor Material</i>	Stainless steel	Titanium	Titanium
<i>Sensor Accuracy</i>			+/- 0.05% @ 15°C
<i>Full Scale</i>	+/-0.1% @ 15°C +/- 0.1% over calibrated temperature range	+/-0.05% @ 15°C +/- 0.1% over calibrated temperature range	+/- 0.1% over calibrated temperature range +/- 0.005% or better
<i>Sensor Resolution</i>	+/- 0.01% or better	+/- 0.005% or better	Non-Vented***
<i>Sensor Ranges Available</i>	Non-Vented*** (30 psia) 0-35ft (10.5m) (100 psia) 0-200ft (60m) (300 psia) 0-650ft (200m)	Non-Vented*** (30 psia) 0-35ft (10.5m) (100 psia) 0-200ft (60m) (300 psia) 0-650ft (200m) (500 psia) 0-1100ft (340m) Vented (5 psig) 0-11.5ft (3.5m) (15 psig) 0-35ft (11m) (30 psig) 0-70ft (21m) (100 psig) 0-230ft (70m) (300 psig) 0-700ft (210m) (500 psig) 0-1150ft (350m)	Non-Vented*** (30 psia) 0-35ft (10.5m) (100 psia) 0-200ft (60m) (300 psia) 0-650ft (200m) (500 psia) 0-1100ft (340m) Vented (5 psig) 0-11.5ft (3.5m) (15 psig) 0-35ft (11m) (30 psig) 0-70ft (21m) (100 psig) 0-230ft (70m) (300 psig) 0-700ft (210m) (500 psig) 0-1150ft (350m)
<i>Burst Pressure</i>	Maximum 2X range Burst 3X range	Maximum 2X range Burst 3X range	Maximum 2X range Burst 3X range
<i>Units of Measure – Pressure</i>	Psi, kPa, bar, mbar, mmHg, inHg, cmH2O, and inH2O	Psi, kPa, bar, mbar, mmHg, inHg, cmH2O, and inH2O	Psi, kPa, bar, mbar, mmHg, inHg, cmH2O, and inH2O
<i>Units of Measure – Level</i>	m, mm, cm, in, ft	m, mm, cm, in, ft	m, mm, cm, in, ft
<i>Calibrated Temperature</i>	0°C to 50°C	-5°C to 50°C	-5°C to 50°C
<i>Temperature Accuracy</i>	+/- 0.3°C	+/- 0.1°C	+/- 0.1°C
<i>Temperature Resolution</i>	0.1°C	0.01°	0.01°
<i>Units of Measure</i>	Fahrenheit, Celsius	Fahrenheit, Celsius	Fahrenheit, Celsius

* 1 reading = time and date plus all available parameters polled or logged from device

** Data records = one reading with time stamp

*** Recommended for Baro TROLL® and Baro TROLL® 100 for post correcting non-vented instruments



Rugged TROLL® 100 and 200 Instruments

The Rugged TROLL 100 and 200 instruments are designed for long- and short-term groundwater and surface-water monitoring. The non-vented (absolute) instruments monitor and record changes in water level, pressure, and temperature. Use with a Rugged BaroTROLL® for optimum accuracy. All instruments are compatible with the user-friendly Win-Situ® 5 or Win-Situ® Mobile software platform for programming and data retrieval.

Affordable Titanium Data Loggers

- Use instruments in harsh environments – Titanium construction offers chemical- and corrosion-resistance.
- Customize data logs for your application – Linear, fast linear, and event logging modes are available.



Simplified Setup and Data Retrieval

- Program and download data from a Rugged TROLL 100/200 or Rugged BaroTROLL with the Rugged TROLL® docking station.
- Communicate with a deployed Rugged TROLL 200 by using the low-cost Rugged TROLL® Com device, which connects to either a RuggedReader® handheld PC or a desktop/laptop computer.

Flexible Deployment Options

- Use suspension wire with hanger for long-term deployments requiring minimal instrument access (for all instruments).
- Use direct-read cable with the Rugged TROLL 200 or Rugged BaroTROLL for applications requiring real-time data access.
- Access data when you need it – The Rugged TROLL 200 or Rugged BaroTROLL can be connected to a TROLL® Link telemetry system or SCADA system via Modbus/RS485 or SDI-12.

Applications

- Coastal wetland and estuary research
- Crest stage gaging
- Drilling and well development
- Flood and storm surge monitoring
- Landfill monitoring

Rugged TROLL® 100 and 200 Instruments

General	Rugged TROLL 100 & 200	Rugged BaroTROLL®
Temperature ranges	Operational: 32-122° F (0-50° C) Storage: -40-176° F (-40-80° C) Calibrated: 32-122° F (0-50° C)	Operational: 32-122° F (0-50° C) Storage: -40-176° F (-40-80° C) Calibrated: 32-122° F (0-50° C)
Diameter	1.03 in (2.62 cm)	1.03 in (2.62 cm)
Length	5.68 in (14.43 cm)	5.68 in (14.43 cm)
Weight	0.37 lb (170 g)	0.37 lb (170 g)
Materials	Titanium body; Delrin® nose cone, hanger, backend	Titanium body; Delrin nose cone, hanger, backend
Output options	Rugged TROLL 100: USB or RS232 via docking station Rugged TROLL 200: USB or RS232 via docking station; Modbus/RS485 or SDI-12 via Rugged TROLL 200 cable	USB or RS232 via docking station; Modbus/RS485 or SDI-12 via Rugged TROLL 200 cable
Battery type & life	3.6V lithium; 5 years or 2M readings ¹	3.6V lithium; 5 years or 2M readings ¹
External power	Rugged TROLL 100: NA Rugged TROLL 200: 8-36 VDC	8-36 VDC
Measurement current	14 mA typical	14 mA typical
Sleep current	20 µA typical	20 µA typical
Memory	1.0 MB	1.0 MB
Data records²	65,000	65,000
Data logs	Rugged TROLL 100: 1 log Rugged TROLL 200: 2 logs	2 logs
Fastest logging rate	1 per second	1 per minute
Fastest output rate	Rugged TROLL 200 only Modbus & SDI-12: 1 per second	Modbus & SDI-12: 1 per second
Log types	Linear, Fast Linear, and Event	Linear
Sensor Type/Material	Piezoresistive; Ceramic	Piezoresistive; Ceramic
Range	30 ft (9.0 m) (Burst: 60 ft) 100 ft (30 m) (Burst: 134 ft) 250 ft (76 m) (Burst: 368 ft)	7.0 to 30.0 psi; 0.5 to 2 bar
Accuracy @ 15° C	Typical ±0.1% full scale (FS)	Typical ±0.1% FS
Accuracy (FS)	±0.3% FS max. ³	±0.3% FS max. ³
Resolution	±0.01% FS or better	±0.01% FS or better
Units of measure	Pressure: psi, kPa, bar, mbar, mmHg Level: in, ft, mm, cm, m	Pressure: psi, kPa, bar, mbar, mmHg, inHg
Temperature Sensor	Silicon	Silicon
Range	Calibrated: 32-122° F (0-50° C)	Calibrated: 32-122° F (0-50° C)
Accuracy	±0.3° C	±0.3° C
Resolution	0.01° C or better	0.01° C or better
Units of measure	Fahrenheit, Celsius	Fahrenheit, Celsius
Warranty	1 year	1 year

¹ Battery life guaranteed when used within the factory-calibrated temperature range.

² 1 record = date/time plus 2 parameters logged (no wrapping) from device within the factory-calibrated temperature range.

³ Across factory-calibrated temperature range.

Specifications are subject to change without notice. Delrin is a registered trademark of E.I. du Pont de Nemours & Co.

Accessories

Rugged BaroTROLL Instrument

Use the economical, titanium Rugged BaroTROLL instrument with either a Rugged TROLL 100 or 200 instrument. Win-Situ Baro Merge™ software simplifies post-correction of non-vented water level data.

Rugged TROLL® 200 Cable

Use the non-vented Rugged TROLL 200 cable to access a Rugged TROLL 200 or Rugged BaroTROLL. Use the Rugged TROLL 200 cable suspension kit to anchor the cable in place. The following configurations are available:

- Modbus/RS485 stripped and tinned cable or SDI-12 stripped and tinned cable — Use with PLC, telemetry system, or logger
- Modbus/RS485 top-of-well cable — Use with Rugged TROLL Com and laptop PC or RuggedReader® handheld PC

Jacket options	TPU (thermoplastic polyurethane)
Conductors	4 conductors, 24 AWG, polypropylene insulation
Diameter	Cable: 0.200 in (5.1 mm) Connector: 1.03 in (26.1 mm)
Minimum bend radius	5X cable diameter
Break strength	150 lb (68 kg)

Rugged TROLL® Com Communication Device

Use the Rugged TROLL Com device for communication between a cabled Rugged TROLL 200 or Rugged BaroTROLL instrument and a RuggedReader handheld PC or a desktop/laptop computer. The Rugged TROLL Com communicates via Modbus/RS485.

Operating temp. range	-4-122° F (0-50° C)
Storage temp. range	-40-176° F (-40-80° C)
Materials	Delrin, rubber, copper pins
Environmental rating	IP67 with battery cover closed
Dimensions (LxWxH)	3.5 x 1.14 x 1.88 in (8.9 x 2.9 x 4.8 cm)
Input connection	Modbus/RS485
Output connection	Available with either USB or RS232
Power source	9V alkaline battery, user-replaceable
Cable	Black polyurethane, 3 ft (91 cm) long

Rugged TROLL® Docking Station

Use the docking station to program and download data from the Rugged TROLL 100 or 200 or from the Rugged BaroTROLL. The docking station is available with either a USB or RS232 communication interface. USB communication allows fast data transfer to a PC. The RS232 version is used with a PC or a RuggedReader handheld PC.

Swing Sampler Long Handled

Take a liquid sample in a replaceable bottle

Sample from different angles up to 90°. Use the Swing Sampler as a standard dipper with the bottle upright, or swing the bottle 90° to sample in hard to reach areas such as sewers and other horizontal flows.

The pivoting head is attached to a sturdy 1.3m fibreglass pole that extends to 2.4m, providing greater flexibility for all situations.

Choose from two versions

- 1) Free swinging head (1000ml) - head swings free due to gravity and always remains vertical.
- 2) Rotatable head (500ml) - head rotates by hand but remains in position by a friction grip.



1) Free Swinging Head Swing Sampler
EEQB226390



2) Rotatable Head Swing Sampler
EEQESS500

Long Handled Dipper

Features a polyethylene fixed cup with pouring spout. Samples are taken using a ladling action, and poured from the dippers' sampling cup into your own sample bottles.

Features

- 500ml poly cup with pouring spout
- Extendable pole, fiberglass and aluminium
- Extends from 1.3 to 2.4 m



Fixed Head Dipper
EEQEDP500

Ordering Information

- EEKESS100** Swing Sampler with 1000ml bottle, free rotating head
- EEQESS500** Swing sampler with 500ml bottle, rotatable head
- EEQEDP500** Dipper with 500ml screw on poly cup fixed head,
- BMEF36786** Replacement 500ml dipper cup for EDP500 sampler
- NAL2104-0016** 500ml HDPE Bottle
- NAL2104-0032** 1000ml HDPE Bottle

Bomb Samplers

Nickel-Plated Brass Bomb Sampler

Manufactured from brass and bronze, then nickel plated, these samplers are designed to extract samples from drums, tanks, tank cars, wells and ponds.

The plunger assembly will be activated automatically when the sampler contacts a hard surface such as the bottom of a tank, or it may be activated by the operator at various depths with the use of a pull line. This feature allows samples to be taken at random depths. When raised, the plunger automatically reseals closing off the inlet port, locking the sample in place.

Stainless Steel Bomb Sampler

The stainless bomb samplers are manufactured from a high quality corrosion resistant type 302 stainless steel. The bomb samplers are designed to collect liquid samples from storage tanks, lakes, ponds, manholes, wells and other hard to reach places.

The plunger assembly will be activated automatically when the sampler contacts a hard surface such as the bottom of a tank or it may be activated by the operator at various depths with the use of a pull line. A Viton® "O" ring insures the integrity of the sampling chamber until the plunger is activated.

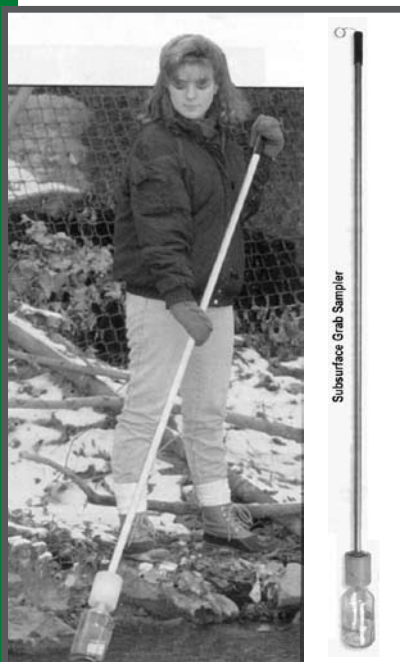


Ordering Information

- CNB5400** Bomb sampler, stainless steel, 29x380 mm, 100 ml
- CNB5405** Bomb sampler, stainless steel, 63x280 mm, 500 ml
- CNB5406** Bomb sampler, stainless steel, 64x560 mm, 1000 ml
- CNB5310** Bomb sampler, Brass 48x230 mm, 125 ml
- CNB5330** Bomb sampler, Brass 56x250 mm, 250 ml
- CNB5340** Bomb sampler, Brass 56x430 mm, 500 ml
- CNB5360** Bomb sampler, Brass 86x410 mm, 1000 ml

Subsurface Grab Sampler

Collect liquid samples without physically entering potentially dangerous sites. The Subsurface Grab Sampler is excellent for access to fluid flow in manholes and hard-to-reach sampling areas. This unit features a telescoping modular design for the handle, allowing the user to break the longer units down to smaller sections for easy transport. The cable in the handle features a ring that can open the sample jar. The Grab Sampler is made of high strength aluminium tubing with polypropylene sampling head and attaches to a wide mouth, 1,000ml glass jar.



Ordering Information

- CNB7308** Subsurface Grab Sampler, 1.2m to 2.4m
- CNB7312** Subsurface Grab Sampler, 1.5m to 3.6m
- CNB7324** Subsurface Grab Sampler, 2.1m to 7.3m
- CNB9025** Case of 12 Glass Jars for Subsurface Grab Sampler

Kemmerer Bottle

General Purpose Stainless Steel/Polyethylene

Useful for general purpose sampling at specified depths! The all-angle head locks the sampler in the open position and unlocks when struck by the messenger, closing both end seals of the sampler. Constructed of a stainless steel sampling tube and polyurethane end seals, the Kemmerer has few moving parts and needs little maintenance. 1.2L Volume.



Ordering Information

- BME223488** Kemmerer Bottle Stainless Steel/Polyethylene, 1.2L, w/Case 6kg
- BME223489** Kemmerer Bottle Stainless Steel/Polyethylene Kit, 1.2L, Including: 30m of braided line, messenger and carrying case, 6 kg
- BME223490** Kemmerer Bottle Stainless Steel/Polyethylene, 1.2L, w/o Case 3 kg

Kemmerer Bottle

Stainless/Teflon

For extra heavy duty use! Constructed of all stainless steel with Teflon end seals for sampling industrial solvents, strong acids and bases at temperatures up to 232°C. Also for sampling when stainless steel and Teflon is required. 1.2L Volume capacity.



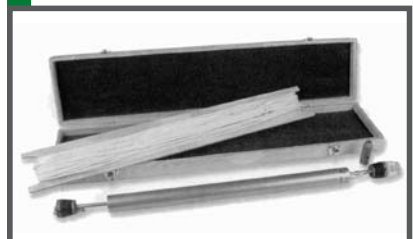
Ordering Information

- BME223482** Kemmerer Bottle Stainless/Teflon w/Case 6 kg
- BME223483** Kemmerer Bottle Stainless/Teflon Kit, Including: 30m (100 feet) of steel cable, messenger and case, 7 kg
- BME223484** Kemmerer Bottle Stainless/Teflon w/o Case 3 kg

Kemmerer Bottle

Stainless Steel/Polyurethane

With this small diameter Kemmerer bottle, take discrete samples at any depth not just the surface like conventional bailers. Constructed of durable stainless steel with polyurethane end seals and trip head that closes both ends of the sampler when struck by the messenger. Sampling volume of 0.6L. Outer diameter 45mm.



Ordering Information

- BME223492** Kemmerer Bottle Kit, Includes: 66m of polyester line, messenger and carrying case, 8 kg

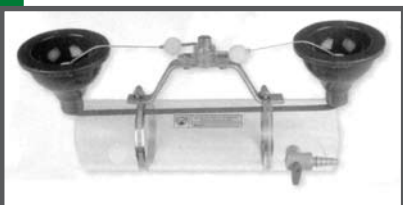
Alpha Horizontal and Vertical Water Bottle

In clear acrylic or PVC

Alpha water bottles are well suited for general purpose sampling at any depth. Plunger like polyurethane end seals are water resistant and very flexible for a secure seal. Black latex tubing is resistant to sunlight and water for extra durability. Available in your choice of horizontal samplers for stratification sampling or vertical samplers for placing multiple or single bottles on each line. 2.21L volume.

Note about contamination

The Alpha Samplers with blue end seals may leach phosphorus and mercury and are not recommended for chemical sampling.



Ordering Information

Kits include 30m of braided line, stainless steel messenger and carrying case.

Acrylic Alpha Water Bottles

- BME223450** Horizontal, w/Case, 6 kg
- BME223451** Horizontal Kit, 7 kg
- BME223452** Horizontal, w/o Case, 5 kg
- BME223454** Vertical, w/Case, 7 kg
- BME223455** Vertical Kit, 7 kg

PVC Alpha Water Bottles

- BME223458** Horizontal, w/Case, 6 kg
- BME223459** Horizontal Kit, 7 kg
- BME223460** Horizontal, w/o Case, 5 kg
- BME223462** Vertical, w/Case, 6 kg
- BME223463** Vertical Kit, 7 kg

Beta Plus Horizontal and Vertical Water Bottle

For trace sampling in clear acrylic or PVC

Beta Plus bottles are similar to Alpha water bottles except for the end seals and closing tubing. The materials used in the Beta Plus make it more suitable for sampling trace metals and organics.

Rigid, white polyurethane end seals with silicone gaskets and amber latex tubing are used for cleaner samples without fear of contamination by leached materials. No metal parts touch the sample. Available in your choice of horizontal samplers for sampling at any depth or vertical samplers for stratification studies. 2.21L Volume.



Ordering Information

Kits include 30m of braided line, stainless steel messenger and carrying case.

Acrylic Beta Plus Water Bottles

- BME223465** Horizontal, w/Case, 7 kg
- BME223466** Horizontal Kit, 7 kg
- BME223467** Horizontal, w/o Case, 5 kg
- BME223469** Vertical, w/Case, 7 kg
- BME223470** Vertical Kit, 8 kg

PVC Beta Plus Water Bottles

- BME223472** Horizontal, w/Case, 7 kg
- BME223473** Horizontal Kit, 8 kg

Van Dorn Style Bottle

Lightweight and compact, this water sampler is ideal for field workers.

A one litre sampler of transparent acrylic comes with 20m of calibrated nylon line and a lead collar which assures rapid descent and minimal drift. The trigger release mechanism seals the sampler chamber at the desired depth. For removal of water samples, outlet is mounted on side.

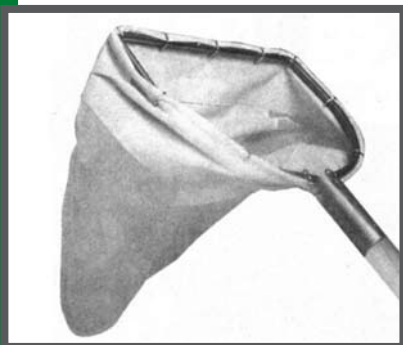


Ordering Information

BME224250 Van Dorn Style Bottle, 5kg

Aquatic Dip Net D Frame

This Wildco Dip Net is ideal for sweeping over vegetation or use in shallow ponds or streams. Net ring is made of stainless steel and is securely attached to the hardwood handle with Wildco's superior handle attachment system. Constructed of a 800 x 900µm mesh nylon bag reinforced with heavy muslin and an internal rope at the edge. Diameter 300 mm, Depth 560 mm, handle 1300 L x 30 mm Dia.



Ordering Information

BME224916 D-Frame Aquatic dip net, 4kg

Plankton Net

The Wildco Fieldmaster Plankton net is a small but complete sampling net suitable for use in shallow waters. Each net features a threaded adaptor for attaching a 125 ml plastic sample bottle.

Net is constructed of strong Nitex nylon in a choice of mesh sizes with swivel and stainless steel bridle. Net dimensions, 125 mm x 365 mm long.



Ordering Information

BME223522 Fieldmaster Plankton net, 153 micrometer 2 kg

BME223523 Fieldmaster Plankton net, 80 micrometer 2 kg

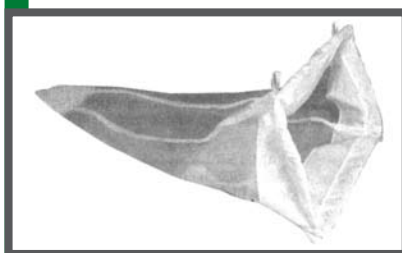
BME223524 Fieldmaster Plankton net, 363 micrometer 2 kg

Drift Net

For use in streams, rivers, tidal creeks and estuaries

Drift nets are stationary nets designed to sample organisms from flowing waters at and below the water surface. Nets can be used individually or in groups with the nets placed side by side, anchored to the bottom with stakes.

Frame and stakes are made of stainless steel. Net is a durable Nitex nylon with a 363 micrometer mesh size and measures 1000 mm long with a mouth of 300 x 450 mm. Comes with two 450 mm stakes.



Ordering Information

BME223520 Drift net with stakes, 3 kg

Hess Stream Bottom Sampler

Ideal for gravel and rocky stream beds

The modified Hess Sampler features a stainless steel cylinder with two upstream and downstream windows of Nitex® nylon and two strong handles for forcibly pushing the cylinder into gravel or rocky stream bottoms.

Water flows through the upstream and downstream windows and into the collecting net and bucket. A net adaptor and straining bucket are attached to the downstream end of the net for easy sample removal.

Sample cylinder measures 400H x 325 mm diameter with a bottom open area of 850 cm². Downstream net is constructed of Nitex® nylon with a choice of mesh sizes.



Ordering Information

BME223540 Hess Sampler with 1000micronmesh, 9kg

BME223541 Hess Sampler with 600micronmesh, 9 kg

BME223542 Hess Sampler with 500micronmesh, 9 kg

Composite/Storm Water Samplers

WS705 Portable Composite Sampler



FEATURES:

- Ideal for wastewater, industrial and environmental sampling
- Collects composite sample in a 9.4L vessel
- Quick disconnect pickup hose conveniently stored inside the enclosure for easy transport
- Simple to operate – no programming required
- Heavy duty wheels and retractable handle built in
- Rugged construction for harsh environments
- Can take timed or flow proportional samples
- Peristaltic pump prevents sample contamination
- Automatic backflush clears pickup strainer and hose
- Enclosed battery compartment and smart battery charger to improve battery life
- The easiest and most reliable method for collecting water quality samples

WS755 Portable Wastewater/ Stormwater Sampler



FEATURES:

- Ideal for wastewater, industrial and environmental sampling
- Does composite, discrete or both types of sampling into 2 x 3.75L poly bottles
- Simple to operate – no programming required
- Quick disconnect pickup hoses conveniently stored inside the enclosure for easy transport
- Heavy duty wheels and retractable handle built in
- Rugged construction for harsh environments
- Meets federal, state and local wastewater regulations
- Timed and external flow proportional sampling
- Adjustable and repeatable sample volume
- Peristaltic pump prevents sample contamination
- Automatic backflush clears pickup strainer and hose
- Enclosed battery compartment and smart battery charger to improve battery life
- The easiest and most reliable method for collecting water quality samples

Specifications

WS705 & WS755

Operating Temp 0° to +70°C

Dimensions

560H X 457W X 254D mm

Weight 11.7 kg

MATERIALS

Enclosure

Expanded UV protected PVC

Bottle(s) Polyethylene (WS755: 2x 3.7L, WS705: 1x 9.4L)

Pickup Hose 5m x 6 mm ID, nylon-reinforced PVC tubing with SS strainer(s)

Pump Tubing

Norprene 6mm ID, 11 mm OD

SAMPLE PUMP

Flow Rate

1000 ml per minute at a 1.2 m head

Type Peristaltic

Maximum Lift ~6 m

BATTERY

Life 60 mins WS705

30 min WS755

(continuous pumping under load)

Battery Type

Rechargeable 4.5 Ah

Ordering Information

GLWWS705 Composite sampler with bottle, battery and charger

GLWWS755 Storm/Waste Water sampler, with two bottles, battery and charger

GLWWSWK Stormwater Kit

Includes: CA0400 Rain Sensor, CA0500 Flow Sensor and RG333 Auto-drain Rain Gauge

**12 MONTH
WARRANTY**

Aquacell P2 Portable Automatic Samplers

Portable water samplers designed for reliability, advanced programming & flexibility.

Introducing the Aquacell P2 Portable Sampler range. The P2 sampler extracts individual sample shots (10-500ml adjustable) from a wastewater channel or vessel according to a predetermined program and deposits them into one or more sample collection vessels. The P2 Samplers can be powered by electrical mains power or rechargeable battery.

Easy to use and maintain –The Aquacell is designed to minimise operator burden. Even users with no

previous experience of wastewater sampling will quickly become fully proficient in operating the Aquacell.

Aquamatic Air Pump Sample Extraction System - Every Aquacell wastewater sampler embodies the tried and tested Aquamatic Air Pump Sample Extraction System. The sampler is operated / programmed using the 17 button membrane keypad in conjunction with a 16 x 2 character liquid crystal display.

Optional Ancillary Signal Connections

Remote control input - The sampler can be controlled using a signal from a pump (which pumps

the wastewater) or other device, which produces an event related signal.

Flow Input - Any flowmeter with either an integrated or instantaneous flow output can be connected to the sampler to produce flow proportional samples.

Sample Acquired Output - A contact closes each time a sample enters the sampler.

Optional computer interface - Aquacell's built in event logger & temperature logger (if sample temp monitoring is specified on the P2-COOLBOX) can be downloaded to your laptop if you specify the RS232 interface with the sampler.

Aquacell P2-COMPACT

This sampler is the super-compact version and includes a 5 litre polyethylene low profile, easy clean sample container. It is useful for regulators and others where samplers have to be distributed to a number of sites.

Front access means that sample retrieval can be done without disturbing either the sampler or it's intake hose. The Aquacell P2 COMPACT is less than half the size of most comparable samplers.



Specifications

P2-COMPACT (Max Lift 7m)

Container Options 5 Litre only (integrated)

Typical Location Indoor/Outdoor

Sample Temp Control No

Min. Ambient Temp -10C

Max Ambient Temp 50C

Dimensions 428 x 320 x 376mm

Weight 6kg

Aquacell P2-COOLBOX

The portable sampler with the practical cooling facility. The 5 litre polypropylene sample container stores samples for up to 7 days at between 0 and 5°C. Samples are kept cool in a highly insulated cool box containing pre-frozen cooling elements, no external power is required.



Specifications

P2-COOLBOX (Max Lift 7m)

Container Options 5 Litre Coolbox

Typical Location Indoor/Outdoor

Sample Temp Control Yes (passive)

Min. Ambient Temp -10C

Max Ambient Temp 50C

Dimensions 805 x 430 x 430mm

Weight 17.7kg

Aquacell P2-MULTIFORM

This is the most versatile sampler, as it can accept a variety of containers: 1x 25L; 12 x 0.7L; 12 x 1L; or 24 x 1L. Changing from one option to the other is a very simple operation.



Specifications

P2-MULTIFORM (Max Lift 7m)

Container Options

25L Poly Container

12 x 750ml glass bottler

12 x 1L PET Bottler

24 x 1L HDPE Bottler

Typical Location Indoor/Outdoor

Sample Temp Control No

Min. Ambient Temp -10C

Max Ambient Temp 50C

Dimensions 650 x 447 x 447mm

Weight 17.7kg

Aquacell S300 Series Stationary Automatic Samplers

The S310H and S320H Stationary Automatic Samplers are powered by mains power, with a backup battery. (Ask us about indoor samplers, also available). Collected samples are stored in the Lower Compartment. Being separate from the Sampling Module this configuration means the user can interrogate the program and carry out routine maintenance without the need to disturb the samples.

Temperature Control -

Both S320 models incorporate sample temperature control. This ensures that the collected samples are preserved at an optimum

temperature (0°C - 5°C) whilst awaiting collection / inspection. This is particularly useful when sampling biologically active wastewater.

External Equipment -

Via the ancillary signal connection all S300 models can be connected to and controlled by external equipment such as flow meters, pH meters, PLCs etc.

Collection Vessels -

The large volume lower compartment can accommodate a vast array of sample collection vessels, both composite and multi bottle. Access to these could not be easier with the optional pull out tray (included with Integral bottlers).

Security -

All electrical connections both power and signals are wired into the rear of the S300 cabinet. A screw down protective panel provides security against unauthorised access. Terminals are positioned at a height of 1000mm from the floor. Separate lockable compartments provide flexibility and security in exposed or vulnerable locations.

Cabinet Options -

1. Standard - Galvanised Steel, pre-treated and finished with white polyester powder coating
 2. Optional - Stainless Steel 304
 3. Optional - Stainless Steel 304, finished with white Polyester powder coating
- All finishes are extremely durable and suitable for indoor and outdoor applications.

Aquacell S310H & S320H Stationary Sampler

These floor standing samplers for outdoor incorporates frost protection for sample (S310H & S320H). The S320H has a refrigerated cabinet for sample temperature control.



Specifications

S310H or S320H Stationary Sampler

Container Options

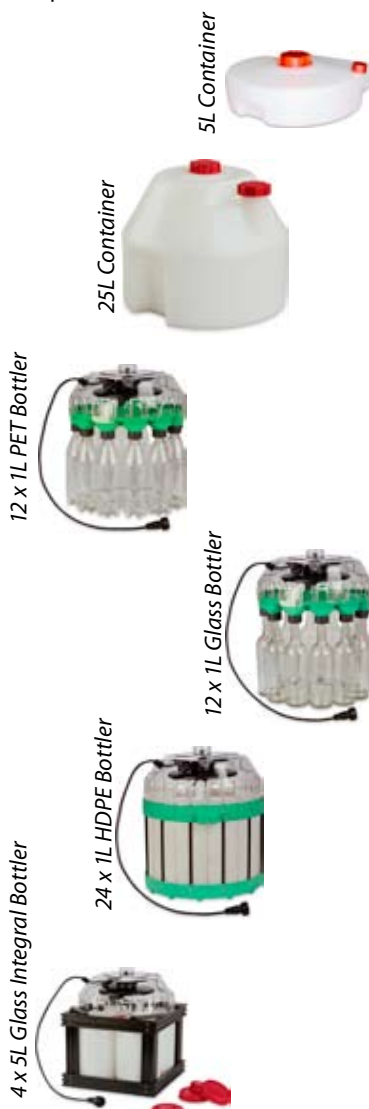
- 10L Poly Container
- 25L Poly Container
- 2 x 4.5L Self-Emptying Poly Integral Bottler
- 4 x 4.5L Glass Integral Bottler
- 4 x 5L HDPE Bottler
- 4 x 5L HDPE Integral Bottler
- 4 x 12L Poly Integral Bottler
- 12 x 0.75L Glass Bottler
- 12 x 1L PET Bottler
- 12 x 1L HDPE Bottler
- 24 x 1L HDPE Bottler

Typical Location Outdoor

Power Mains (with backup battery)

Sample Temp Control S310H - No
S320H - Yes

Sample Collection Vessels for Aquacell Portable and Stationary (Please see Container Options in specifications for compatibility to sampler)



Sludge Judge®

Take accurate readings of settled solids to 5m

Ideal for sampling solids in noncaustic materials. Lower the 20mm sampler to the bottom of the tank, drum or pond. A float opens allowing material to flow in. When the sampler is filled, tug on the attached rope as the sampler is raised. This sets the valve, trapping the column of solids and liquid. Use the 0.3m graduations along the clear plastic tube to determine the amount of solids. Touch the pin extending from the bottom on a hard surface to release the valve and drain the sampler. Sampler comes in three 1.5m sections with screw type fittings. 1.5m extensions available for greater depths. A convenient carry case and 1.8m cleaning brush are also available.



Ordering Information

BME18582 Sludge Judge Sampler, 20mm diameter x 5m

BME18583 Carrying case

BME226495 1.8m Spiral Cleaning brush

Tank Sampler

For depths from 0.3 to 3m

Lower the sampler to the desired depth using the 1' (0.3 m) graduations as a guide. When in place, pull and hold the top rope, which opens the check valve, until the sampler is filled with liquid. Releasing the rope allows the check valve to close, trapping the sample inside. To empty, hold the sampler at a 15 degree angle and pull the rope, or simply press the release pin at the bottom of the sampler against a hard surface such as the bottom of a pail. The sampler is made of a tough 20mm diam plastic, holds approx 75 ml per 0.3m and is available as a 3m unit, made of two 1.5m sections.



Ordering Information

BME28977 Tank sampler, 20mm diam x 3m

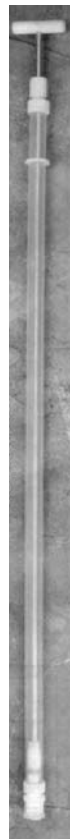
BME18583 Carrying case

BME226495 1.8m spiral cleaning brush

Mucksucker™

For sampling viscous liquids and sludge

Features a syringe action for sampling fluids and sludges that have a high viscosity. To use, loosen the safety nut, push the T-handle down, close the push/seal bottom and insert the sampler into drum or tank. When desired sampling depth is reached, open the push/seal bottom, pull the T-handle up until sample is obtained, and close the push/seal bottom snaps by pressing against the bottom or side of the drum or tank.



Ordering Information

BME224650 Mucksucker, 1m Teflon® 200 ml Capacity

BME224652 Mucksucker, 2m Teflon® 475ml Capacity

Athena®
Peristaltic Pump, 12V

The Athena® Peristaltic Pump is lightweight and compact. To use, simply attach an external power source such as a 12 volt battery to drive the pump. A high performance motor consumes only 3 amps at maximum draw making it an extremely efficient pump. The rugged Pelican™ 1300 case enclosure is made to withstand demanding work conditions. Incorporating the most accurate and precise variable speed controller for consistent flow rates will ensure the technician reliable sample integrity. Includes a built-in digital display and sealed push buttons are used to control the pump.

Features

- Constant Voltage Boosting Technology
- Masterflex Easyload™ 2 pump head design
- Precise Push Button Technology
- Super strong - Pelican™ 1300 case
- LCD Display
- Push Button Back Flushing
- Low Voltage Disconnect Warning
- Auto Reset Internal Fuse
- 4.5m of DC battery clamps to hook up for super long sampling events



Specifications

- Max. Lift* 8m
- Max. Flow* 2.5L per min
- Min. Flow* 40ml per min

Ordering Information

PEPATHENA Peristaltic Pump mounted in case



Masterflex Easyload™ 2 pump head is a registered trademark of Thermo Fisher Scientific

Alexis®
Peristaltic Pump, 12V

The compact Alexis® Peristaltic Pump can either run on its self-contained internal 17 amp AGM battery or 220 volt electric socket. This pump is light-weight and extremely durable. The rugged Pelican™ 1430 case enclosure is made to withstand demanding work conditions. Incorporating the most accurate and precise variable speed controller for consistent flow rates will ensure the technician reliable sample integrity. Includes a built-in digital display. Sealed push buttons are used to control the pump.

Features

- Constant Voltage Boosting Technology
- Masterflex Easyload™ 2 pump head design
- Long Lasting Internal Battery with Precise Push Button Technology
- Super strong - Pelican™ 1430 case
- LCD Display
- Push Button Back Flushing
- Low Voltage Disconnect Warning
- Auto Reset Internal Fuse
- 4.5m of DC battery clamps to hook up for super long sampling events



Specifications

- Max. Lift* 8m
- Max. Flow* 2.5L per min
- Min. Flow* 40ml per min

Ordering Information

PEPALEXIS Peristaltic Pump mounted in case with internal battery



Geopump Series II
Peristaltic Pump, 12V

The Geopump Peristaltic Pump is designed for pumping of liquids from groundwater wells or open water channels. It uses the proven Masteflex Easy Load II pump head.

Features

- Variable speed
- Forward, Stop and Reverse switch positions
- Ideal for pumping water through filters right at the sampling site

Power

The pump kit operates from a 12 volt DC internal battery giving 4 hours of pumping or from an external power source such as your vehicle battery. It draws 3-5 amps maximum. The variable speed motor is equipped with a 5 amp fuse and a blocking type reverse polarity protection.



Specifications

- Max. Lift* 8m
- Max. Flow* 1L per min
- Min. Flow* 60ml per min

Ordering Information

GAB91350103 GPSII Series II, 12 v DC pump, reversible, variable speed, 600 rpm max, with battery leads, with Materflex series II pump head for L/S15, 24 tubing. Supplied with 1 m tubing.
GAB91350113
As above with hard field case
GAB77250013 Charger for Modular Battery Pack 240V
GAB77250001 Modular Battery Pack

Secchi Disk - Turbidity Measurements

Designed for relative
turbidity studies

Fieldmaster Secchi Disk

A weighted, standard size 20cm diam limnology secchi disk with black and white quadrants used for water quality studies. Comes with 20m of uncalibrated line on a convenient spool and instructions.

Combined Sampling Kit For water pollution and limnological studies

The sampling kit includes one each of the following; black & white secchi disk, 20m weighted line, 153 µm plankton net, thermometer, dissolved oxygen sampling bottle, stainless steel sampling dredge and Borger Color System book. All is contained in a sturdy plastic carrying case with foam interior.

Oceanographic Secchi Disk

A visibility disk that is white on one side and black on the reverse side, with a diameter of 20cm or 50cm. The disk is lowered on a sounding line into salt water, until the white can no longer be seen. The disk can be reversed and the depth measurement repeated on the black side. White side can be used to evaluate water colour. Made of acrylic plastic with stainless steel hardware. Weighted underneath for stability.



Ordering Information

BME223512 Fieldmaster Secchi Disk, 20cm diameter, with 20m rope, 1 kg

BME92010 Limnological Kit, 8 kg

BME223510 Oceanographic Secchi Disk, 20 cm, 1.5 kg

BME223511 Oceanographic Secchi Disk, 50 cm, 5 kg

Turbidity Tube

Estimate stream quality as it
relates to suspended materials
in water.

Just as a secchi disk is used as a measure of lake quality, the turbidity tube is an excellent reference for the study of water quality. The 45mm (1-3/4in.) diameter clear PVC tube is marked with Turbidity readings and has a line pattern at the bottom of the tube. To use, the tube is filled with water until the line pattern disappears.

The height of the water column is then recorded and a turbidity reading in NTU can be estimated.



Ordering Information

SBLENV8.20 Transparency Tube, 1 kg, 1.2 m high

Viewing Bucket

Lets you view a stream bed from
water surface

Get a clear glimpse of the water subsurface with this view bucket. The transparent base lets you see the river bed or other body of water clearly. Durable plastic pail is 240 mm diameter and 270mm deep.

Ordering Information

BME125043 View bucket with clear bottom, 2 kg



Fish-Ray Hand Held Sonar Bottom Depth Indicator

The revolutionary Fish-Ray is a self contained depth sounder capable of reading depths up to 30m

Used like a radar gun, hold the nose under water and pull the trigger. Water depth will instantly appear on the large LCD display at the rear of the unit. The location of the display allows the user to scan the bottom for contour changes. Excellent for lake studies, sediment sampling or locating underwater objects. Minimum depth is 600mm. Accuracy: +150mm



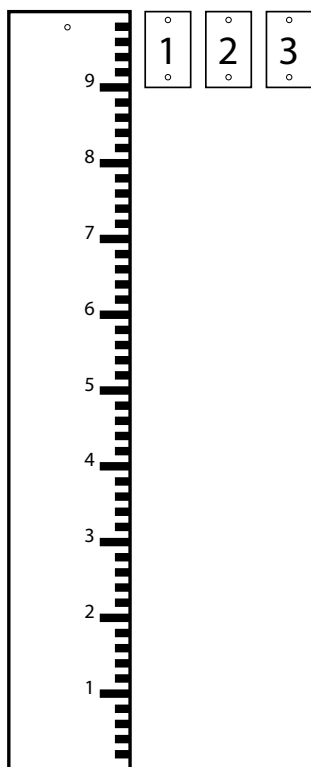
Ordering information

BME224925 Fish-Ray, 30m

Staff Gauge Level Measurements

Used on bridges, piers, docks, and waste water tanks, these simple gauges allow easy to read level measurements.

These gauges are made from white enamel over steel. The black markings show cm graduations which are easy to read. Supplied in 1m long sections marked from 0 to .9, the gauges can be stacked on top of each other to provide longer measuring intervals. Number Plates can be used to mark out each metre.



Ordering information

- GMIMSN** Staff Gauge Section, 1m long x 70mm wide, with mounting holes
- GMIMSW** Staff Gauge Section 1m long x 130mm wide, with mounting holes
- GMINP** Number Plates with mounting holes, Specify number: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

Water Tracing Dyes

Ecologically safe dyes for use in stream tracing, lake studies, flow mapping, storm and sewer analysis, pollution studies and leak detection. Two formulations: FWT Red, a specially formulated version of the dye Rhodamine WT and FLT Yellow/Green, which is a formulated version of the dye Fluorescein. Fluorescent colors can be detected visually in most water conditions or with the use of ultra-violet light or a fluorometer.

Fluorescent dyes are temporary and will degrade naturally in sunlight, 2-5 days for Red and 5-7 days for Yellow/Green, or with the addition of chlorine. FLT Yellow/Green is resistant to absorption in organic matter and should be used in water with heavy sediment loads.

Using a UV lamp for detection, allows detection down to approx 1/10th of what can be seen with visual detection and therefore reduces the amount of dye required.



Ordering information

- BME23680** FWT RED 200 Tablets, 1 tablet per 1,650 litres for visual detection
- BME23682** FWT RED 0.47 liter, 1 liter per 510,000 litres for visual detection
- BME23679** FLT Yellow/Green 200 Tablets, 1 tablet per 1,650 litres for visual detection
- BME23681** FLT Yellow/Green 0.47 liter, 1 liter per 780,000 litres for visual detection
- BME103031** Handheld UV lamp, 4 Watt, uses 4 AA batteries, inc Instruction manual

Global Flow Probe

Global Flow Probe Digital Water Velocity Meter
The Global Water Flow Probe is a highly accurate water velocity instrument for measuring flows in open channels and partially filled pipes. The water velocity probe consists of a protected water turbo prop positive displacement sensor coupled with an expandable probe handle ending in a digital readout display. The water flow meter incorporates true velocity averaging for the most accurate flow measurements. The Flow Probe is ideal for storm water runoff studies, sewer flow measurements, measuring flows in rivers and streams, and monitoring water velocity in ditches and canals.

- Digital display in ft/sec or m/sec
- Records 30 data sets for later analysis
- Rain-proof digital computer
- Highly accurate easy flow monitoring
- Debris shedding turbo-prop
- Lightweight, rugged, and reliable
- Telescoping handle with staff gauge
- Padded carrying case for easy storage



Specifications

- Carrying Case Dimensions** 230 x 100 x 100mm
- Range** 0.1 to 6.1 m/s
- Ordering Information**
- GLWFP111** Flow Probe 0.9 to 1.8m reach and carry case
- GLWFP211** Flow Probe 1.5 to 4.5m reach and carry case

ThermoFisher
SCIENTIFIC

Australia: For customer service, call 1300-735-295

Visit us online at: www.thermofisher.com.au

New Zealand: For customer service, call 0800-933-966

Visit us online at: www.thermofisher.co.nz

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