

# PROSERIES®

PREFERRED WATERING SYSTEMS AND ACCESSORY CATALOG



Philadelphia Scientific industrial battery innovation

EnerSys.

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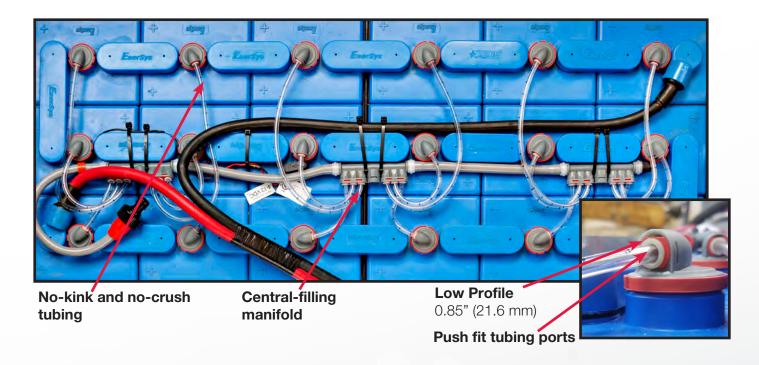
# Battery Watering: It's Application Specific!

# There's PRO Series® product for every application!

Product	Battery Irrigation System <sup>™</sup>	Stealth Watering System™	Battery Watering Gun
Highlights	The Fastest Single-Point Watering Systems	The Lowest Profile Single-Point Watering System	The Fastest Watering Gun
Facility Size	25 or more Batteries	5 - 25 Batteries	1 - 5 Batteries
Application	<ul><li>Large and Medium Fleets</li><li>Heavy-Duty</li><li>Abusive Conditions</li><li>Rapid Charge</li><li>Battery Changers</li></ul>	<ul><li>Small Fleets</li><li>General Service</li><li>Battery Changers</li><li>Golf Course</li><li>Scrubbers</li></ul>	<ul><li>Small Facility</li><li>Infrequent Use</li><li>Golf Course</li></ul>
Time to Fill an 18-cell battery	15 Seconds	2 -10 Minutes	20 Minutes
Time to Install	3 Minutes	12 Minutes	Not Applicable
Saving Potential	\$\$\$	\$\$	\$

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# The Fastest Single Point Watering System



The BIS Spider™ is the world's fastest and most reliable way to add water to industrial batteries. It is simple to use: an operator makes a hose connection, opens a valve and in 15 seconds or less the entire battery is watered perfectly. This is eight times faster than filling a battery with a float-based system. For most warehouses and distribution centers, that adds up to hours of maintenance time saved each week.

Each Water Injector™ has it's own precision level-sensing valve enclosed in a protective housing. When the electrolyte level rises to reach the tip of the Injector, the valve shuts off instantly. There are no floats or delicate exposed parts to stick or break. The Injectors are unaffected by oil and tar in the cells and can function in extreme cold or hot, dry and abusive conditions.

The system saves money in two ways:

- It cuts labor costs, often paying for itself within its first year of operation.
- It extends battery life by filling batteries to the proper level every time.

The system also improves safety and environmental cleanliness. There is no need to peer into cells to inspect levels as with manual filling. And Water Injectors automatically fill each cell to the correct level, so there is no overfilling and no electrolyte spillage during charging. The BIS is exceptionally durable. Designed for harsh industrial environments, it is unaffected by abuse that would destroy most other systems, and continues to work dependably for the life of the battery.

#### • Easy installation:

Features such as flexible tubing, push-fit tubing ports and the snap-fit base make installation fast and easy.

#### Fast operation:

An average forklift truck battery can be filled in 15 seconds or less.

#### • Precise filling:

A precision level-sensing valve shuts off instantly when electrolyte levels rise to the Injector tip.

#### • Safe:

Prevents direct contact with electrolyte during battery filling and prevents overfilling.

### • Compact:

Low profile allows Injectors to fit on any industrial battery and minimizes damage due to battery cables and handling equipment.

## Proven reliability:

Patented pressure-activated technology makes the Water Injector System the world's most dependable single-point watering system.

#### Heat resistant:

System will survive high battery temperatures without failing.

#### • No-freeze tubing:

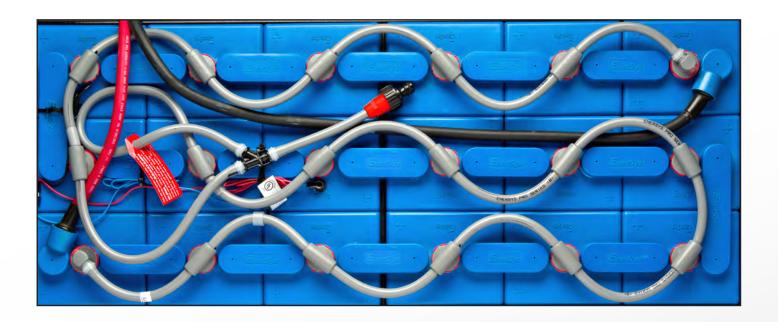
Tubing drains surplus water into cells after filling is complete, so the system can be used in cold storage environments.

Part No	Description
PSI-505101	BIS Spider for 24V (12-cell) batteries
PSI-505102	BIS Spider System for 36V (18-cell) batteries
PSI-505103	BIS Spider System for 48V (24-cell) batteries

BIS Spider Specifications		
Input/Operating	25 to 35 psi	
Pressure:		
Flow Rate:	8 to 10 gpm	
	per string	
Acceptable Filling	35° to 160°F	
Temperature:	(2° to 71°C)	
System Exposure	-20° to 160°F	
Temperature:	(-29° to 71°C)	
Valve Body	Polypropylene	
Material:		
Tubing	Proprietary	
Material:	Flexible PVC	
Fitting:	DIN standard	
	push fit and	
	BCI standard	
	quarter turn	
Max Valve Height	0.83 inches	
above Vent	(2.1 cm)	
Opening:		



# The Fastest Single Point Watering System



The precise, reliable BIS™ fills your battery in 15 seconds.

The Battery Irrigation System is the world's fastest and most reliable way to add water to industrial batteries. It is simple to use: an operator makes a hose connection, opens a valve, and in 15 seconds or less the entire battery is watered perfectly. It has an 8 to 1 speed advantage; fill 8 batteries with the BIS in the time it takes to fill 1 battery with a float-based system.

Each Water Injector™ has its own precision level-sensing valve enclosed in a protective housing. When the electrolyte level rises to reach the tip of the injector, the valve shuts off instantly. There are no floats or delicate exposed parts to stick or break, so the injectors are unaffected by oil and tar in the cells and can function in extreme cold or hot, dry and abusive conditions. The BIS is the preferred system for rapid and opportunity charge applications.

The system also improves safety and environmental cleanliness. There is no need to peer into cells to inspect levels as with manual filling. And Water Injectors automatically fill each cell to the correct level, so there is no overfilling and no electrolyte spillage during charging. The BIS is exceptionally durable. Designed for harsh industrial environments, it is unaffected by abuse that would destroy most other systems, and continues to work dependably for the life of the battery.

### A safer way to fill:

No more filling one cell at a time by hand and risking possible splashing of electrolyte. The use of Water Injectors<sup>™</sup> prevents direct contact with electrolyte during battery filling.

### • Compact:

Water Injectors have a very low profile, so they fit on almost any battery.

### Quick and easy removal:

Injectors easily snap out of the cells for inspecting levels and taking specific gravities. You can check an entire battery in seconds.

### • Rugged construction:

Each injector is made from tough, heavy-duty plastics designed to stand up to impact. There are no exposed parts to break off when the unit is snapped out of the cell. Engineered plastics provide the ultimate in chemical resistance.

#### • Heat resistant:

System will survive high battery temperatures without failing.

### No freeze tubing:

Tubing drains surplus water into cells after filling is complete, so the system can be used in cold storage environments.

# • 2-stage filtration:

In addition to the filter screen in the water supply, each injector has its own individual filter.

BIS Classic Specifications		
Input/Operating	25 to 35 psi	
Pressure:		
Flow Rate:	8 to 10 gpm	
/ //	per string	
Acceptable Filling	35° to 160°F	
Temperature:	(2° to 71°C)	
System Exposure	-20° to 160°F	
Temperature:	(-29° to 71°C)	
Valve Body	Polypropylene	
Material:		
Tubing	Proprietary	
Material:	Flexible PVC	
Fitting:	DIN standard	
	push fit and	
	BCI standard	
	quarter turn	
Max Valve Height	0.83 inches	
above Vent	(2.1 cm)	
Opening:		



# **BIS Installation Options**

#### BIS™: Semi-Assembled Systems

Manufactured according to the number of cells, the Semi-Assembled BIS™ comes as a single string with as much assembly as possible without knowing the battery dimensions. This makes the Semi-Assembled BIS perfect for those who would like to keep an inventory of BIS Systems. It is also appropriate when you are installing BIS Systems at a site and are not sure of the size and mix of batteries.

When ordering Semi-Assembled BIS use the following part numbers:

6-cell systems	501147
9-cell systems	501450
12-cell systems	501143
18-cell systems	501144
20-cell systems	501149
24-cell systems	501146

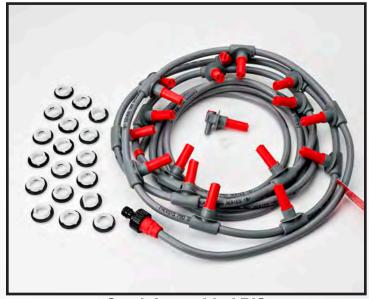
Note: 36-cell batteries require (2) 18-cell systems. 40-cell batteries require (2) 20-cell systems

BIS: Instant-Install™

The BIS Instant-Install™ System comes pre-assembled for the battery that it will be used on. Based on detailed layout drawings of the most common battery sizes, the systems are pre-assembled and prepunched to the proper dimensions.

By following the simple installation layout, which provides clear, concise directions for routing the system around cables and terminals, you will reduce installation time and error. This option also takes the guesswork out of installing systems and minimizes problems later on that could result from incorrect installation.

Order Instant Install BIS by using the catalog number of the battery and adding BIS to the end of the part number.



Semi-Assembled BIS



Instant-Install™ BIS

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8-in. (20.3 cm)

ball bearing

# Water Supplies for BIS

Both the BIS Classic<sup>™</sup> and BIS Spider Systems<sup>™</sup> must be used with our factory authorized BIS Water Supplies to ensure proper performance and our famous 15-second fill.



All BIS Water Supplies feature The Instant Valve Pro™. The Instant-Valve PRO utilizes rapid response technology to control the flow of water to the BIS. The water flow is either ON or OFF with no in between. The operator simply squeezes the ergonomic handle to start the flow of water and releases the handle to stop it. The Instant Valve Pro eliminates the possibility of choking/throttling the output from a water supply to the BIS, which can lead to overfilling of a battery.

# HydroCart Max™



#### Features:

- Handles like a hand truck.
- Sturdy 20 gallon polypropylene tank.
- On/off switch and power indicator located on front of unit.
- 30 feet of total reach.
- Robust submersible pump provides the volume and pressure required by BIS.

**Specifications:** 

Wheel size

#### Easy to Use:

- Fill the tank with deionized water.
- Plug into any 110 VAC outlet.
- Switch activates pump.
- Connect to the BIS and open the Instant Valve.
- Flow indicator tells you when the Injectors have shut off and it is time to disconnect.

Part No. 502054	
Capacity	20 gal. (75.7 l)
Range	30 ft. (9.1 m)
Height	40.6 in. (103.1 cm)
Width	19.7 in. (50.0 cm)
Empty weight	59 lb. (26.8 kg)
Output hose	15 ft. (4.6 m)
Power	110 VAC 8.5 Amps
Power cord length	15 ft. (4.6 m)



- Designed for small to mid-range operations.
- Easy to transport to remote locations.

#### Features

- Handles like a hand truck.
- On/off switch on rear of unit.
- Sturdy ten gallon polypropylene tank.
- Robust submersible pump provides the volume and pressure required.

### Easy to Use

- Fill tank with battery water.
- Plug into any 110 VAC outlet.
- Switch activates pump.
- Connect the BIS and open the Instant Valve.
- Flow indicator tells you when filling is complete.

# Specifications:

### Part No. 502055

Capacity 10 gal. (37.8 l) Range 23 ft. (7.1 m) Height 35 in. (88.9 cm) Depth 15 in. (38.1 cm) Empty weight 31 lb. (14.1 kg) Output hose 10 ft. (3.0 m) Power 110 VAC 8.5 Amps Power cord length 13 ft. (3.9 m) Wheel size 8-in. (20.3 cm)

# Extractor Mounted Water Supply



#### **Features**

- Handles like a hand truck.
- Sturdy 20 gallon polypropylene tank.
- On/off switch and power indicator located on front of unit.
- 15-foot 5/8" high output industrial hose.
- Robust submersible pump provides the volume and pressure required by BIS Water Injectors.

#### Easy to Use

- Fill tank with battery water.
- Plug into any 110 VAC outlet.
- Switch activates pump.
- Connect the BIS and open the Instant Valve.
- Flow indicator tells you when filling is complete.

#### **Specifications:**

#### Part No. PSI-502700

 Capacity
 20 gal. (75.7 l)

 Height
 48 in. (121.92 cm)

 Width
 29 in. (73.7 cm)

 Depth
 27 in. (68.6 cm)

 Empty weight
 68 lb. (30.8 kg)

 Output hose
 15 ft. (4.6 m)

 Power
 110 VAC 8.5 Amps

The Water Buffalo Mobile Water Supply is a pallet-mounted 300-gallon water tank designed to be easily transported by rider pallet truck.

#### Features:

- DC-powered by the 24-volt battery on a rider pallet truck. An onboard inverter converts DC to AC power for the pump.
- Hardware mounts to the metal frame of the 300-gallon tank. The unit includes a submersible pump and control unit.
- The control unit shuts off the pump after 10 seconds of non-use to save energy and conserve pump life or if the tank is empty (run dry protection).
- The pump shuts off automatically if there is not enough capacity in the battery to successfully operate the pump.
- 16 feet of industrial output hose with Instant Valve Pro<sup>™</sup>.
- An automatic shutoff valve to precisely fill the 300-gallon tank.

### **Specifications:**

Length

#### Part No. PSI-INJ-719Y

300 gallons (1135.6 l) Capacity Range Unlimited Weight (Empty) 250 lb. (113.4 kg) Weight (Full) 3,000 lb. (1360.8 kg) Output hose 15 ft. (4.6 m) Power Source: Pallet-Rider 24v DC battery 62 in. (157.5 cm) Height 40 in. (101.6 cm) Width 48 in. (121.9 cm)

The Water Buffalo Mobile Water Supply is delivered fully assembled. Not included is the wye-splitter (SB connector and DC cable) to power the unit from a rider pallet truck 24-volt battery.









#### Features:

- Unlimited range.
- Requires no power.
- Sturdy 10 gallon heavy duty steel tank.
- Handles like a hand truck
- Fill tank with approved water by attaching the input hose to your building's water supply with the Quick-Connect provided.
- When the gauge indicates the tank is full, disconnect the input hose.

#### **Specifications:**

#### Part No 502052

10 gal. (37.8 l) Capacity Unlimited Range 41 in. (104.1 cm) Height Width 17 in. (43.2 cm) Empty weight 59.9 lb. (27.2 kg) Output hose 18 ft. (5.5 m) Input hose 9 ft. (2.7 m) Power cord length n/a Wheel size 8-in. (20.3-cm) ball bearing

Very low water pressure will require a booster pump (INJ-BP).



# Direct*Fill*™ Hose Assembly



#### Features:

- 18 foot rugged industrial hose.
- Sediment filter.
- Pressure regulator.
- Flow indicator.
- Instant Valve PRO shutoff mechanism.

#### **Specifications:**

#### Part No. 502053

Output hose 18 ft. (5.5 m)
Empty weight 6.5 lb. (2.9 kg)
Isolation valve recommended at

source

Use a Flow Checker (INJ-FC) to be sure the output pressure is adequate to use the Direct Fill. A minimum of 25 psi flowing pressure is required.



# Replacement Parts for BIS Spider and Classic



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PSI-INJ-630 Quick-Connect Male x Female Thread with Check Valve, 25 pack

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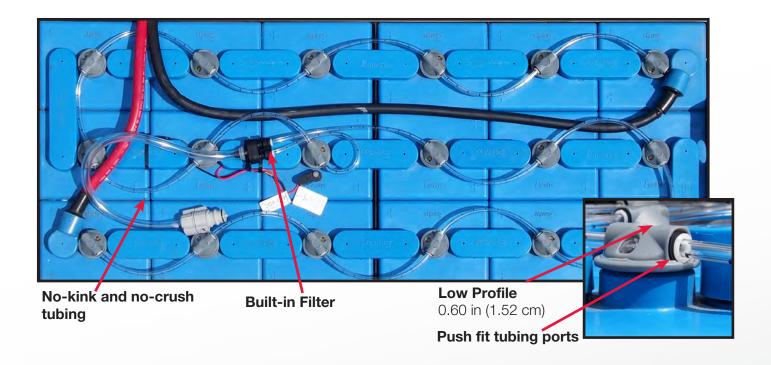
# Replacement Parts for BIS Water Supplies





# Stealth Push-Fit Watering System

# The Lowest Profile Single Point Watering System



The Stealth Watering System™ is a float-based, single-point watering system that precisely fills all battery cells to the same level simultaneously. It makes battery watering safe, easy and affordable. The PRO Stealth Watering System, as with all float-based watering systems, is perfect for small to medium size facilities using conventional charging technology. It is also ideal for back-of-store applications and for golf cart and utility vehicles.

The Stealth Watering System incorporates many unique features that make it the best in its class and the most convenient to install:

**Fastest tubing installation:** Push-fit tubing ports, a unique design feature, make tubing installation fast, easy and secure. Secure tubing by simply pushing tubing into ports. Tubing is released by pushing on white collar.

Widest operating pressure range: Operating pressure range of 3 to 45 psi.

**Abuse-resistant tubing:** The system tubing is kink and crush-resistant. With a small bend radius, it fits the smallest cells easily, including 5 and 7-plate batteries.

One Size-Fits All Design: Fills all cells to appropriate level so multiple float sizes are not needed.

# Features and Benefits

Unlike other systems, the The PRO Stealth Watering System™ makes multiple float sizes unnecessary.

The system's unique design incorporates a onesize-fits-all philosophy to ensure that all battery cells are filled to the same level simultaneously.

This means less inventory to buy or stock. The Stealth Watering System is designed to sit lower than the inter-cell connectors when installed on a battery. This means reduced damage from the battery's cables as they move across the top of the battery.

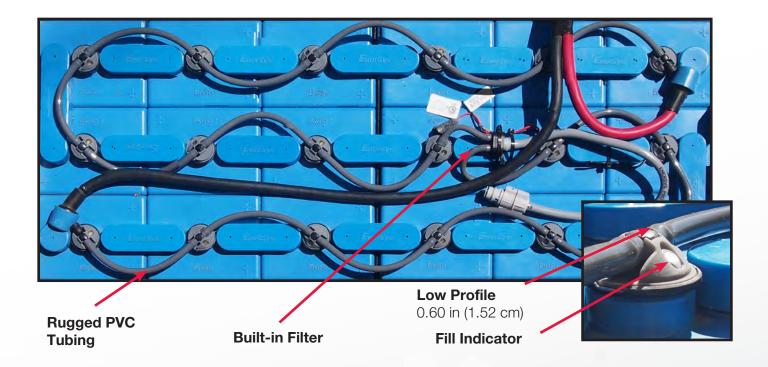
Input/Operating Pressure:	3 to 45 psi (0.21 to 3.10 bar)
Flow Rate:	1/2 gpm per string
Acceptable Filling Temperature:	35° to 160°F (2° to 71°C)
System Exposure Temperature:	-20° to 160°F (-29° to 71°C)
Valve Body Material:	Polypropylene
Tubing Material:	Proprietary Flexible PVC
Max Valve Height above Vent Opening:	0.60 inches (15.2 mm)
Fitting:	DIN standard push fit and BCI standard quarter turn



		Part Number	
Stealth System Kit	Standard Input (also Flow- Rite <sup>™</sup> Compatible -CPC <sup>™</sup> Fitting)	BFS <sup>™</sup> Compatible	BWT™ Compatible (CPC fitting)
6 cell (12 Volt) battery	PSI-601154	PSI-601164	PSI-601174
9 cell (18 Volt) battery	PSI-601155	PSI-601165	PSI-601175
12 cell (24 Volt) battery	PSI-601150	PSI-601160	PSI-601170
18 cell (36 Volt) battery	PSI-601151	PSI-601161	PSI-601171
24 cell (48 Volt) battery	PSI-601152	PSI-601162	PSI-601172
36 cell (72 Volt) battery	PSI-601158	PSI-601168	PSI-601178
40 cell (80 Volt) battery	PSI-601153	PSI-601163	PSI-601173

# Stealth Barbed Watering System

# The Lowest Profile Single Point Watering System



The Stealth Barbed Watering System integrates a barbed-fit design with the lowest profile watering system available in the industry. Stealth is a float-based, single-point watering system that precisely fills all battery cells to the same level simultaneously. Designed with the same body type as our push-fit valve, the barbed fitting makes it quick and easy to install as well as giving the system universal compatibility. This flexibility allows you the performance and reliability that comes with Stealth, working alongside your current system.

The Barbed Stealth Watering System is equipped with industry leading, robust grey PVC tubing... Along with the other features this makes the Stealth Watering System:

- Easy to fit and swap out valves.
- Ideal for low profile batteries.
- Durable design.
- The snap fit designed fitting is 100% interchangeable with all float based single point watering systems on the market.

Each of the Stealth components can be used with any other float system available on the market, giving you endless flexibility.

# Features and Benefits

Unlike other float-based systems, the PRO Stealth Watering System™ makes multiple float sizes unnecessary.

The system's unique design incorporates a onesize-fits-all philosophy to ensure that all battery cells are filled to the same level simultaneously.

This means less inventory to buy or stock. The Stealth Watering System is designed to sit lower than the inter-cell connectors when installed on a battery. This means reduced damage from the battery's cables as they move across the top of the battery.

On a sifications	
Specifications:	
Input/Operating Pressure:	3 to 45 psi (0.21 to 3.10 bar)
Flow Rate:	0.2 gpm per valve (0.76 lpm)
Acceptable Filling Temperature:	35° to 160°F (2° to 71°C)
System Exposure Temperature:	-20° to 160°F (-29° to 71°C)
Valve Body Material:	Polypropylene
Tubing Material:	Proprietary Flexible PVC
Max Valve Height above Vent Opening:	0.60 inches (15.2 mm)
Fitting:	DIN standard push fit and BCI standard quarter turn



Stealth Barbed System Kit	Part Number Standard Input (also Flow-Rite™ Compatible -CPC™ Fitting)	
6 cell (12 Volt)	FLT-KBP6Y	
battery	FLI-NDFUI	
9 cell (18 Volt)	FLT-KBP9Y	
battery	LLI-MDE91	
12 cell (24 Volt)	FLT-KBP12Y	
battery	I LI-NDE IZI	
18 cell (36 Volt)	FLT-KBP18Y	
battery	TETADI TOT	
24 cell (48 Volt)	FLT-KBP24Y	
battery	TETADIZ41	
36 cell (72 Volt)	FLT-KBP36Y	
battery	I LITION OUT	
40 cell (80 Volt)	FLT-KBP40Y	
battery		

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# Water Supplies for the Stealth System

# Get water to where you need it



These versatile and rugged water supplies are designed to deliver water to your PRO Series® Stealth Watering Systems™. Use the Gravity Feed Tank with optional shelf, the Direct Link™ or PRO Series Deionizer system with adapter to create a watering station.

Or fill the PRO Series Mobile Watering Cart with approved water and take it to your batteries.

# Mobile Watering Cart for Stealth Watering Systems™



This sturdy high density polyethylene tank is designed to work with the Stealth Watering System and easily transports water to your batteries. Fill the tank from any available water source. This sturdy DC powered watering cart handles like a hand truck. The battery

can be charged from any AC outlet. Simply connect to the Stealth Watering System and turn on the switch. A flow indicator will tell you when all of the Stealth valves have shut off and it is time to disconnect.

Includes:
Charger and Battery

Specifications:	
Part No 502060	
Capacity	10 gal. (37.8 l)
Range	Unlimited
Height	35 in. (88.9 cm)
Width	15 in. (38.1 cm)
Empty weight	27 lb. (12.2 kg)
Output hose	9 ft. (2.7 m)
Battery	12 VDC 7 Ah
Charger	120 VAC
Wheel size	8-in. (20.3-cm)

# Stealth Watering System<sup>™</sup> Direct Link<sup>™</sup>



The DirectLink is designed to be used with the Stealth Watering System<sup>™</sup> and the existing plumbing in your facility. Simply connect the DirectLink to the wall tap, connect to the Stealth Watering System, wait for the spinner to stop, and disconnect. Simple and affordable!

#### Includes:

- 20 ft. Heavy-Duty Hose.
- Sediment Filter.
- Pressure Regulator.
- Flow Indicator.
- CPC<sup>™</sup> Connector.

#### Specifications:

#### Part No 502062

Capacity Unlimited
Range 20 ft (6.1 m)
Empty weight 6.5 lb. (2.9 kg)
Output hose 20 ft. (6 m)
Isolation valve recommended at source.

# 5 Gallon Gravity Tank for Stealth Watering Systems™



This sturdy 5 US gallon (18.9 liter) tank uses gravity to create enough water pressure to operate the Stealth Watering System™.

Note: The Gravity Tank cannot be used with the BIS™.

#### Includes:

- •25 ft. Hose.
- Flow Indicator.
- CPC Connector.



#### Specifications:

#### Part No 502061

 Capacity
 5 gal (18.92 l)

 Height
 22 in (55.9 cm)

 Width
 18 in (45.7 cm)

 Depth
 15 in (38.1 cm)

 Empty weight
 7 lb (3.18 kg)

 Output hose
 25 ft (3.66 m)

The Gravity tank must be at least 5 feet above the top of the battery

Shelf sold separately: Part # PSI-502063

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# Replacement Parts for Barbed and Push-Fit Stealth





PSI-FLT-105 End Caps, Stealth Barbed System, 50 pack



PSI-FLT-109 Stealth Barbed Tubing 100 ft, Gray, EnerSys



PSI-FLT-L1Y Stealth Float, Loose, EnerSys



PSI-INJ-601 Installation Tool



PS-INJ-608 BIS/Stealth Float Collar, 25 pack

# **NOTES:**

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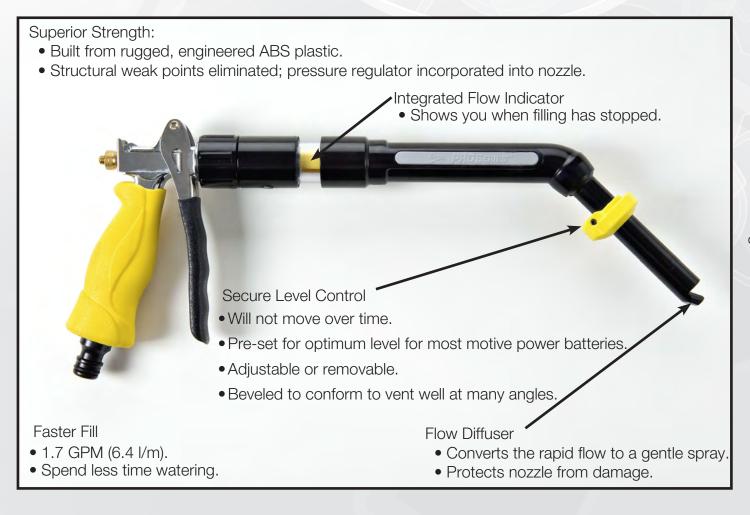
# Replacement Parts for Stealth Water Supplies



# **Battery Watering Guns**

# The world's best selling watering gun.

No battery room should be without this essential maintenance tool. Simply connect the Battery Watering Gun to a standard water hose or a Deionizer, put the tip of the gun into the cell and squeeze the ergonomic handle. The mechanism will automatically shut off at exactly the right electrolyte level. The reliable PRO Series Battery Watering Gun speeds up battery watering, improves filling accuracy, and improves operator safety. It also saves money; compared to hand watering, our battery watering gun reduces labor costs up to \$150 a year for each 18-cell battery. It's no wonder that our watering guns have been the world's most popular battery maintenance tool since 1983.







With a diameter of 0.67 in. (17 mm), the nozzle easily fits the PRO Series Flip Top vent caps, as well as all standard quarter-turn, bayonet openings (Part No: 811112-E).

The PRO Series® Battery Watering Gun (Part No: PSI-92755) is ergonomically designed, with a rugged, easy-squeeze handle and a 45° bend nozzle. The new design requires less bending over to fill the battery. In addition, this watering gun incorporates a host of features that deliver the following benefits:

- Greatly improved strength and durability.
- Faster fill speed.
- Elimination of post shut-off drip.
- Visual indication of shut-off.
- Improved ease of use.
- Reliable performance.
- Easy to operate.

- Compact.
- Lightweight.

#### Also Available

# PRO Series® Stationary Watering Gun



Gun operates outside the cell and does not have automatic shutoff.

- Cone-shaped nozzle injects water through funnels of the flame arrestor vents, battery can be serviced without removing vent caps.
- Manually adjustable flow throttle.

# PRO Series® Railroad Battery Watering Gun



Works just like the motive power battery watering gun except that it is ergonomically designed to water diesel starter batteries.

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# **HydroFill Battery Watering Cart**

# Battery water when you want it, where you want it

The HydroFill™ cart is a 10 US gallon (37.9 liter), battery powered unit that is designed to work with our Watering Guns. It is a sturdy, easy to transport cart that handles like a hand truck. The HydroFill™ Watering Cart makes our Battery Watering Guns even more flexible and effective.

This cart is the perfect solution for:

- When the charging area doesn't have a suitable water supply.
- When available pure water is in unpressurized containers like bottles or storage tanks.
- In cold storage operations where a static water supply would freeze.
- Delivering deionized water to scattered battery locations.

#### Easy to use:

Instructions right on the unit.

#### **Easy to Fill:**

Large Opening.

#### Easy to maneuver:

Handles like a hand truck.

**Dependable Water Source:** This pump has been sold for nearly 3 decades.

Specifications:	
Part No 502056	
Capacity	10 gal. (37.8 l)
Range	Unlimited
Height	35 in. (88.9 cm)
Width	15 in. (38.1 cm)
Empty weight	27 lb. (12.2 kg)
Output hose	9 ft. (2.7 m)
Battery	12 VDC 7 Ah
Charger	120 VAC
Wheel size	8-in. (20.3-cm)



# Replacement Parts for Battery Watering Guns and Carts



# HydroPure Deionizer

# Battery quality water in your facility



Make your own pure water directly from your tap water. PRO Series® HydroPure™ deionizers reduce the high price of buying bottled water and they're more convenient as well. Each disposable cartridge purifies about 600 gallons of water and the purity light will tell you exactly when the cartridge needs to be replaced. Why let impurities in your water reduce the life of your battery, when this system is so easy to use and so cost effective? PRO Series deionizers are pressurized to use directly with PRO Series battery watering guns.

#### **Professional Quality Deionizers**

Not just a filter, which only removes particles, but a real ion-exchange medium which electrostatically removes dissolved impurities. Purity is comparable with distilled water and ideal for batteries. Output water quality is 50 ppm or less of total dissolved solids. Pressurized System: Unlike some lab type systems, PRO Series deionizers operate at full line pressure. This makes it possible to dispense pressurized, pure water directly from these deionizers.

#### **Ready To Use**

The system comes with a mounting plate, one cartridge, purity light, hose hanger, quick connects, input and output hoses. With the optional watering gun, you can fill a battery directly from the deionizer.

#### **Easy Installation**

Setting up the wall mounted system is simple:

- Attach the mounting plate to the wall with two bolts.
- Connect input hose to any tap with standard hose fittings.
- Attach the D/C purity light and pull the battery tab.

PRO Series HydroPure Deionizer Part No PSI-94866

		coming Tap ater		f a Single Cartridge
	TDS (PPM)	Conductivity (µS/cm)	Gallons	Liters
Good	20	30.0	3,600	13,627
	50	75.0	1,440	5,451
	75	112.5	960	3,634
Average	100	150.0	720	2,725
	125	187.5	576	2,180
	150	225.0	480	1,817
Poor	200	300.0	360	1,363
	250	375.0	288	1,090
	300	450.0	240	908

<sup>\*</sup>The amount of purified water produced by a cartridge will average about 600 gallons, but this will vary with the quality of the incoming tap water. Actual conditions will vary based on input water quality.

# **Purity Light**

Testing tap water chemically is too complicated. A more practical measure for water purity is resistivity. The electrical resistance of water is very sensitive to the amount of dissolved solids it contains. Resistivity can be tested instantaneously with this easy to read meter.



Flashing Green
Light- Deionizer is
ready to dispense
battery water.

Flashing Red Light-Replace Cartridge.

No Light- Power Problem. Replace Batteries.

#### The Facts:

- -Flooded industrial batteries need water.
- -Battery life depends on water purity.
- -Impurities reduce the life of a battery.

With the PRO Series® Water Deionizer, tap water is passed through a cartridge containing beads of cationic and anionic resins which electrostatically remove the impurities. The result is very pure water. When the cartridge becomes exhausted it is simply replaced with a fresh one.

Recommended Maximum Allowable Impurities in Deionized Water from ASTM Spec D-1888-67 Method A‡						
Type of Impurity		Max Allowed (in parts per million)				
Ammonia	NH <sub>4</sub>	5.0				
Magnesium and Calcium Oxides	MgO and CaO	40.0				
Chlorine	Cl	5.0				
Chromium	Cr	1.0				
Manganese	Mn	0.07				
Iron	Fe	4.0				
Nickel	Ni	0.2				
Nitrates	NO <sub>3</sub>	10.0				
Nitrites	NO <sub>2</sub>	5.0				
Organic and Volatile Matter		15.0				
Total Solids	5	50.0				
‡in parts per million (PPM)						

# Replacement Parts for HydroPure Deionizers



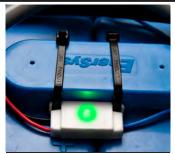
PS-PR Pressure
Regulator 40 PSI for Deionizer

# **Electrolyte Level Indicators**

# Let your battery tell you when it needs water!







Smart Blinky Remote<sup>™</sup>



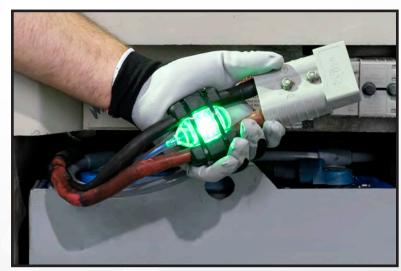
Smart Blinky™



Blinky Basic™

The biggest problem in battery maintenance is knowing when to fill batteries with water. Without indication, operators must devise watering schedules or carry out weekly inspections to maintain the batteries. Time is often wasted when inspecting and watering batteries that do not require filling, while batteries left under-watered can suffer costly permanent damage.

PRO Series® Family of Blinky battery watering monitors dramatically improve battery maintenance by intelligently alerting personnel



when a battery needs water — and when it does not. These monitors allow watering on a labor-saving "as-needed" basis instead of a hit-or-miss schedule. Watering too frequently can cause electrolyte boil overs, which reduce battery capacity by three percent for each occurrence. Lack of water in batteries creates a low electrolyte level, eventually causing permanent damage to the cells. PRO Series Smart Blinky PRO™, Smart Blinky Remote™, Smart Blinky™ and Blinky Basic™ will help ensure your electrolyte levels are never too low or too high.

As an essential tool for good maintenance, PRO Series watering monitors are a must for all industrial batteries. All four products are UL classified, with patented designs unique to PRO Series Blinky and Smart Blinky battery watering monitors.

### **Saves Money**

- Allows you to water only those batteries that need water.
- Prolongs battery life never lets a battery dry out.
- Monitors add minimal cost to batteries.

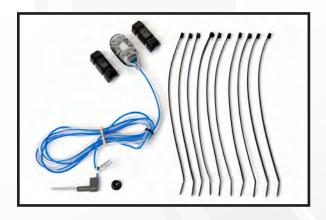
#### **Saves Time**

- Eliminates labor time wasted checking battery levels.
- Advanced technology eliminates false indication, maximizes watering intervals.

#### **Easy to Use**

- Bright LED is easy to see.
- Probe comes in a number of standard sizes and is easy to trim for a custom fit.

# Smart Blinky PRO™



- LED blinks green when electrolyte is OK.
- LED blinks red when water is needed after the next charge.

Because the LED is mounted on the battery cable near the connector, it is Ideal for applications in which the electrolyte level indicator cannot be seen (e.g., fast and opportunity charging where the battery never leaves the truck). The Smart Blinky PRO issues a beep sequence indicating if a battery needs watering and how long the battery has been without water. It is also the easiest installation of all of the Blinkies!

Cell Size	E55L, E75L, E90, E100/X, E110, and E140	E140, E155	55G, 75G, E75, 90G/P/PFC, 125G/P/PFC, E125	E90D	E125D	E100D
Probe Length	1.73"	2.00"	2.35"	3.00"	4.50"	5.00"
Part Number	PSI-829388	PSI-829389	PSI-829390	PSI-829391	PSI-829393	PSI-829394

# Smart BlinkyRemote™



- LED blinks green when electrolyte is OK.
- LED blinks red when water is needed after the next charge.

The Smart Blinky Remote™ is ideal for batteries that do not leave the truck or for batteries that are charged on multi-level racks because the indicator LED can be edgemounted for high visibility. The Smart Blinky Remote is an extremely flexible and visible maintenance tool — the most advanced level indicator on the market. When paired with the BIS System™ or the Stealth Watering System™ these battery watering monitors are part of the most effective battery maintenance program available.

Cell Size	E55L, E75L, E90, E100/X, E110, and E140	E140, E155	55G, 75G, E75, 90G/P/PFC, 125G/P/PFC, E125	E90D	E125D	E100D
Probe Length	1.73"	2.00"	2.35"	3.00"	4.50"	5.00"
Part Number	PSI-829166	PSI-829167	PSI-829168	PSI-829169	PSI-829171	PSI-829172



- LED blinks green when electrolyte is OK.
- LED blinks red when water is needed after the next charge.

The Smart Blinky™ is ideal for batteries where the top of the battery can be seen. Patented Smart Sensing Technology eliminates false indication and maximizes watering intervals to prevent unnecessary watering.

Cell Size	E55L, E75L, E90, E100/X, E110, and E140	E140, E155	55G, 75G, E75, 90G/P/PFC, 125G/P/PFC, E125	E90D	E125D	E100D
Probe Length	1.73"	2.00"	2.35"	3.00"	4.50"	5.00"
Part Number	PSI-829159	PSI-829160	PSI-829161	PSI-829162	PSI-829164	PSI-829165

# Blinky™Basic



- LED blinks green when electrolyte is OK.
- LED goes out when water is needed after the next charge.

With a legendary reputation for reliability, nothing simplifies battery watering like the Blinky<sup>™</sup>. Our original watering monitor revolutionized the checking of electrolyte levels in industrial batteries. Blinky saves time, reduces labor cost, and delivers a rapid ROI. It is a low-cost solution for electrolyte monitoring.

Cell Size	E55L, E75L, E90, E100/X, E110, and E140	E140, E155	55G, 75G, E75, 90G/P/PFC, 125G/P/PFC, E125	E90D	E125D	E100D
Probe Length	1.73"	2.00"	2.35"	3.00"	4.50"	5.00"
Part Number	PSI-829152	PSI-829153	PSI-829154	PSI-829155	PSI-829157	PSI-829158



AS TO FIRE AND ELECTRIC SHOCK HAZARD ONLY ELECTRICAL ACCESSORY FOR USE IN INDUSTRIAL TRUCKS PER UL GUIDELINES. <28VZ>

Products covered by the following U.S. patent numbers: Blinky – U.S. Patent No. 5,936,382 Smart Blinky – U.S. Patent No. 7,812,613 Patented by Philadelphia Scientific LLC

# Replacement Parts for Blinky Products



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