

# Sample Pro®

## Portable MicroPurge® Sampling Equipment Catalog



SEVERN  
TRENT  
SERVICES

▼ QED ENVIRONMENTAL SYSTEMS

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# Sample Pro® *The first portable MicroPurge® pumps for low-flow sampling.*



## 2 SIZES:

- 1-3/4" for 2" & Larger Wells
- 3/4" for Direct Push Wells

The all-new Sample Pro Portable MicroPurge Pumps are the first pumps developed specifically to bring the advantages of low-flow sampling to sites requiring portable pumps.

### Reliable low flow rates and fast, simple cleaning

Sample Pro Pumps are not only able to deliver consistent low-flow rates, they are easy to disassemble without tools, simple to clean, and truly field rugged.



Innovative design and precision machining make the pumps reliable and easy to disassemble.

The pumps are available in two sizes: 1-3/4" diameter for conventional monitoring wells, and 3/4" diameter for direct push and small diameter wells, piezometers, and specialty installations.

### The easiest-to-use portable field pump ever

Sample Pro reliability, ease of use, and low maintenance make sampling more economical. The bayonet-type, 1/4 turn twist-open design makes it easy to remove the pull-off, disposable bladder in seconds. The compact units fit in a 5 gallon bucket for pumping and cleaning.

Under typical field conditions, a Sample Pro pump can be completely disassembled, decontaminated, and fitted with a new bladder in 5 to 10 minutes. Tubing replacement is just as easy, if your sampling protocol requires it. Before you know it, you'll be ready to move on to the next well.

Unlike other portable pumps, they are cool-running and can be operated by a lightweight backpack controller. There are no high speed rotating parts, no sample and motor heating, no bulky, noisy generators. There is nothing in a Sample Pro pump that will burn up or seize — you will never have a destructive failure. If a pump gets silted up, just take it apart and rinse it out.

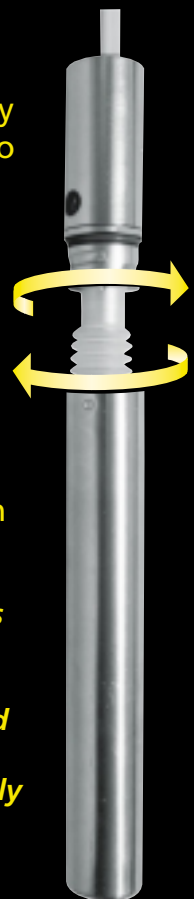


*The only pumps available with these 3 major innovations for portable low-flow sampling.*

**1** Easy, rapid disassembly — 1/4 turn, no tools

**2** Pull-off bladder for fast replacement

**3** No-fitting, push-in tubing option



*From QED, the originators of MicroPurge low-flow equipment and Well Wizard®, the most widely used sampling pumps.*

Visit [www.micropurge.com](http://www.micropurge.com)  
your source for the latest in low-flow technology.

# With Easy to Use MicroPurge<sup>®</sup> basics<sup>™</sup> Control and Power Supplies



Only Sample Pro Pumps are engineered specifically to be compatible with the new generation of MicroPurge basics control and power equipment. This is the most advanced low flow sampling pump control system in the industry. You will enjoy the advantage of many exclusive capabilities, including the Purge Scan<sup>™</sup> stabilization indicator, Automatic Drawdown Control, and unparalleled portability for easy well access.

## Simple pump control for flawless low flow operation

Sample Pro Pump users are raving about how easily and reliably these pumps and controllers sample at low flow rates, when other pump systems falter.

The pumps deliver a steady flow at any rate, even the lowest, with simple up/down arrow key adjustments on the compact, easy-to-use controllers. Once flow rate settings for a well have been optimized, take note of the I.D. setting for one-touch recall during later sampling events.

## Versatile power options for every well on your site

MicroPurge basics pneumatic power supplies make it a breeze to operate your Sample Pro pumps, even at remote wells.

Compact, full-powered compressors are available with optional 200 foot hose reels and cart kits to extend your reach beyond where a pickup truck can drive. Lightweight 12 VDC electronic compressors, ultralight CO<sub>2</sub> bottles, and regulators that let you use your own gas cylinders complete the system.

## Exclusive advantages of MicroPurge basics control equipment

- Easy up/down arrow key flow rate adjustment
- One-touch recall of previously optimized flow rate settings
- Purge Scan<sup>™</sup> stabilization indicator
- Automatic Drawdown Control
- The only controller with a self-contained gas supply

## PORTABLE SAMPLING PACKAGES

### Simplest portable package



This combination sticks to the essentials for portable sampling of conventional drilled wells (2" dia. and larger).

- 1-3/4" Sample Pro Pump
- Sampling Consultant's Kit: Rugged toolbox w/ bladders, o-rings, check balls, tubing cutter, and more
- 250' reel of 1/4x1/4" bonded twin polyethylene tubing
- MP10 Controller

### Backpack power package



On-board compressed gas supply for ultimate portability and easy access to any well, no matter how remote.

- 1-3/4" Sample Pro Pump
- Sampling Consultant's Kit: Rugged toolbox w/ bladders, o-rings, check balls, tubing cutter, and more
- 250' reel of 1/4x1/4" bonded twin polyethylene tubing
- MP15 Controller

### Direct push package



When you're sampling direct push wells (3/4" up), piezometers, and specialty wells, this is what you need.

- 3/4" Sample Pro Pump
- Sampling Consultant's Kit: Rugged toolbox w/ bladders, o-rings, check balls, tubing cutter, and more
- 250' reels of 1/4 & 1/8" single polyethylene tubing
- MP10 Controller

# The most reliable pump ever engineered for portable sampling

Sample Pro innovations don't stop there. Both pumps are available with "no fitting" push-in heads that are perfect for applications where the tubing is discarded frequently. The 1-3/4" pump also has optional compression fittings



for conventional tubing attachment. Both options provide high pull-out strength; a cable eye is also included for applications where a support cable is desired.

Sample Pro value and rugged, all-stainless construction will stand up

to tough portable use. The simple yet effective design avoids the high maintenance expenses and destructive failure modes of other pumps.

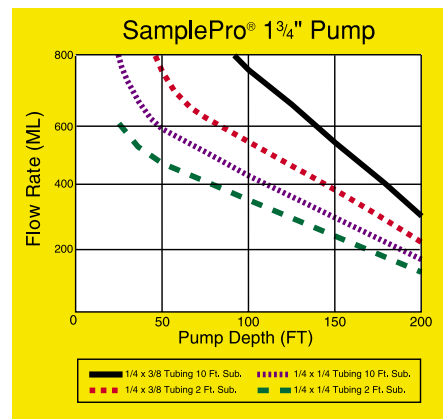
## How they work

Squeeze type bladder pumps are supported by years of independent research that shows they provide unaltered samples for even the most sensitive parameters.

Water enters the pump through the inlet in the upper, head section, then flows down into the bladder. The high inlet helps prevent clogging if the pump is accidentally lowered into a sediment-filled sump.

Compressed gas squeezes the outside of the quick-change, one-piece bladder to force liquid out of the pump; there is no gas contact with the pumped water inside the bladder.

Check valves with stainless steel seats and Teflon check balls are located at the inlet and outlet. A replaceable inlet screen is provided for wells with high solids levels



to help ensure proper sealing of the check valves. Each Sample Pro Pump is shipped in a heavy-duty tube with rubber end caps to help keep the pump clean and protected between uses.

The pump is disassembled by a 1/4 turn of the cap and body; no special tools are needed. The bladder pulls off for replacement. Both check valves are press-in, pull-out design, and use the same size Teflon check ball.

## SAMPLE PRO 1-3/4" PUMP SPECIFICATIONS

### MODEL NUMBERS

Pump Only	Kit
MP-SP-4P (1/4" discharge, push-in fittings)	MP-SPK-4P
MP-SP-4C (1/4" discharge, compression fittings)	MP-SPK-4C
MP-SP-6P (3/8" discharge, push-in fittings)	MP-SPK-6P
MP-SP-4C (3/8" discharge, compression fittings)	MP-SPK-6C

### MATERIALS

Body:	303 Stainless Steel
Inlet & Discharge Housing:	303 Stainless Steel
Bladder:	Polyethylene or Teflon®
O-rings:	Viton®

Teflon is a registered trademark of E. I. DuPont Co. Viton is a registered trademark of DuPont Dow Elastomers

### DIMENSIONS

Diameter:	1.75" (44.5 mm)			
Length:	14.75" (37.5 cm) w/ push-in fittings; 16.5" (41.9 cm) w/ compression fittings; 12.12" (30.8 cm) bottom of pump to centerline of inlet			
Weight:	4.25 lbs. (1.93 kg)			
Pump Volume:	Milliliters	Liters	Gallons	Ounces
	100	.100	.026	3.34

### FITTINGS

Stainless Steel Compression or Push-in Type	
Air:	1/4" (6.4 mm) O.D., 3/16" (4.7 mm) I.D.
Discharge:	3/8" (9.5 mm) O.D., 1/4" (6.4 mm) I.D. or 1/4" (9.5 mm) O.D., 3/16" (6.4 mm) I.D.

### PERFORMANCE

Maximum Lift:	250 Feet (76 m)
Flow Rates:	[1/4" (6.4 mm) x 1/4" (6.4 mm) O.D. tubing] 1.2 liters/min @ 25 ft. (7.6 m) [10 ft. (3 m) submergence] 400 ml/min. @ 150 ft. (45.6 m) [10 ft. (3 m) submergence]



## Sampling Consultant's Kit

The Sample Pro 1-3/4" Pump is also offered in this exclusive kit, which holds accessories and supplies in a rugged case that also carries and protects the pump.

The kit includes all supplies, accessories, and replacement parts necessary to sample 10 wells, packed in a 9x9x20" heavy-duty structural foam tool box for easy portability on-site.

## DIRECT PUSH AND SMALL DIAMETER WELL SAMPLING

### The first fully take-apart pump for direct push & small diameter wells



The all-new 3/4" Sample Pro Portable Pump is the first practical solution for collecting precise, accurate ground water samples from small diameter wells.

Now users of direct push technology — the fastest-growing sector of the environmental industry —

can sample with the same EPA-accepted low flow methods previously reserved for 2" and larger conventionally drilled wells.

At just 0.75" O.D. by 10.5" long, the 3/4" Sample Pro Pump fits in wells as small as 3/4" schedule 40.

### Save \$\$\$ on sampling

Direct push technology and low-flow sampling reduce the time and costs of well installation, sampling and purge water handling. With a direct push rig, a 3/4" Sample Pro pump, and a MicroPurge basics control system, you can install and collect quality samples from multiple wells in a single day.

This is the only pump for 3/4" and larger small diameter wells that minimizes turbidity and silting. These factors, which degrade sample quality and consistency and can threaten the long-term integrity of the well and filter pack, are caused by well surging that can occur using devices such as bailers and jerk samplers.

## SAMPLE TUBING



QED recommends disposable polyethylene tubing for most portable sampling applications. The 1-3/4" pump uses standard 1/4x1/4" twin-line bonded tubing (optional 1/4x3/8" for faster discharge). Tubing sets are supplied on 250' reels. Teflon® lined twin tubing is available for use with Teflon bladders.

The 3/4" pump model uses 1/8" air supply & 1/4" discharge single polyethylene tubing. These are available on separate reels.

## SAMPLE PRO 3/4" PUMP SPECIFICATIONS

### MODEL NUMBERS

Pump Only	Kit
SP-3/4-P	SP-3/4-PK

### MATERIALS

Body & Cover:	316 Stainless Steel			
Inlet, Discharge & Head:	303 Stainless Steel			
Bladder:	Polyethylene			
O-rings:	Viton®			

Viton is a registered trademark of DuPont Dow Elastomers

### DIMENSIONS

Diameter:	.75" (19 mm)			
Length:	10.75" (27 cm) w/ push-in fittings; 9.18" (30.8 cm) bottom of pump to centerline of inlet			
Weight:	.5 lbs. (.22 kg)			
Pump Volume:	Milliliters	Liters	Gallons	Ounces
	10-15	.01-.015	.0026-.0039	.33-.50

(Note: Volume of pump stroke increases with greater submergence.)

### FITTINGS

Type:	Push-in fitting w/ 316 Stainless Steel grab plate
Air:	1/8" (3.2 mm) O.D.
Discharge:	1/4" (6.4 mm) O.D.

### PERFORMANCE

Maximum Lift:	200 Feet (61 m)
Flow Rate:	The 3/4" Sample Pro Pump provides a full range of controlled flow rates from zero to at least 100 ml/min for depths to 50 feet; consult QED for performance at greater depths.



### Sampling Consultant's Kit

The Sample Pro 3/4" Pump is also offered in this exclusive kit, which holds accessories and supplies in a rugged case that also carries and protects the pump.

The kit includes all supplies, accessories, and replacement parts necessary to sample 10 wells, packed in a handy, 7.5x8.25x16" tool box in high-visibility red.

# Control System Specifications



## MP10 basics Controller PATENT PENDING

Microprocessor-based advanced logic puts easy 1-2-3 system control at your fingertips.

- Simple up/down arrow keys adjust flow rates, with manual on/off control for sample collection.
- Automatic drawdown control when connected to MP30 Drawdown Meter.
- Compact, rugged, lightweight; allows easy recall of optimized settings for next sampling round.

**Dimensions:** 10-3/4" x 9-3/4" x 5" (27x25x13 cm); **Weight:** 5.5 lb. (2.5 kg); **Max. Pressure:** 120 PSI (8,275 kPa); **Max. Pump Depth:** 250 feet (76 m); **Power:** 3 "AA" batteries.



## MP15 basics Control & Power Pack PATENT PENDING

Backpack unit does it all, combining simple control and a quiet, portable compressed gas source.

- At just 27 pounds, it makes remote monitoring wells easier than ever to reach and sample.
- Automatic drawdown control when connected to MP30 Drawdown Meter.
- Pumps up to 7 hours continuously at 50 feet on a single cylinder of CO<sub>2</sub>.

**Dimensions:** 25-1/2" x 12-1/2" x 10" (65x32x25 cm); **Weight:** 27 lb. (12 kg); **Max. Pressure:** 120 PSI (8,275 kPa); **Max. Pump Depth:** 250 Feet (76 m); **Power:** 3 "AA" batteries; **Cylinder:** 5 lb. (2.3 kg) CO<sub>2</sub>.



## MP20 basics Flow Cell PATENT PENDING

Measures purge water indicator parameters in-line; compact, more portable size (50% smaller).

- PurgeScan technology provides automatic stabilization alert, with visible and audible signals.
- Displays 6 parameters — temperature, DO, specific conductivity, pH, ORP (redox), salinity.
- Engineered flow cell with automatic stirring for quicker, more accurate response.

**Overall Dimensions:** 18-1/2" x 15" x 6-1/2" (47x38x17 cm); **Weight:** 14 lb. (6.4 kg); **Power:** 3 "C" batteries; **Sonde:** 3" x 9" (8x23 cm), 1.3 lbs (0.6 kg); **Meter:** 3.5" (9 cm) Display, 2.1 lb. (1 kg); **Memory:** 100 Data Frames.



## MP30 basics Drawdown & Water Level Meter PATENT PENDING

Prevents excessive drawdown during low-flow sampling; also functions as a standard level meter.

- Allows setting of drawdown limit, with link to controller for automatic interruption of purging when limit is reached; pumping resumes when well recharges.
- Rugged polyethylene-coated steel tape provides durable performance, accuracy to 0.01 feet.

**Overall Dimensions:** 14" x 10-1/2" x 8" (37x27x20 cm); **Weight:** 7 lb. (3.2 kg) w/ 150' tape; **Power:** 9 volt battery; **Probe:** 5/8" O.D. x 7.5" L. (1.6 x 19 cm); **Tape Length:** 150 or 300 feet (46 or 91 m).

## ACCESSORIES



### QuickFilter® In-Line Filters

The original disposable filter, for fast field filtration with no danger of contamination.

- Faster, more efficient sampling, with no setup or decon required.
- High-performance, true membrane filtration, not outmoded, low-capacity materials.
- Clean Rinse™ - tested to ultra-pure 5 megaohm resistance - *at no extra cost.*

**Area:** Standard - 30 cm<sup>2</sup>, High Capacity - 609-770 cm<sup>2</sup>; **Filter Materials:** Polyethersulfone or Polypropylene; **Pore Sizes:** 0.45, 1.0 & 5.0 microns; **Max Pressure:** 60 psi.



### Portable Water Level Meters

6000 Series flat tape meters provide fast, precise well level measurements under any conditions.

- Fully immersible (w/ removable electronics) for easy, thorough decontamination and cleaning.
- Advanced probe design and sensitivity control eliminate false readings.
- Polyethylene clad, non-stretch tape with permanent markings for long-lasting accuracy.

**Dimensions:** Overall 13-1/2x10-3/4x7-1/2" (34x27x19 cm), Probe 5/8" (16 mm) diam. x 7-1/2" (19 cm) length; **Weight:** 6 lb. (2.7 kg) w/ 100' tape; **Tape Lengths:** 100', 150', 300', 500' (metric lengths available; inquire); **Power:** One 9V battery; **Reel:** Compact, free-standing w/ carrying handle, winding knob, brake, probe holder, battery test, sensitivity adjustment, light and buzzer indicators.