

MP20 Flow Cell with PurgeScan Technology

Automated Purge Stabilization Alert for Ease in Low-Flow Sampling

The MP20 Flow Cell has been designed to continuously monitor groundwater quality parameters in-line, such as pH, temperature, redox potential, conductivity and turbidity (optional sensor) during purge.

The MicroPurge® MP20 Flow Cell purge water quality monitor leads the field in performance, convenience, completeness and warranty. On top of all that, QED's exclusive PurgeScan™ technology automatically signals when stabilization has been achieved for selected water quality parameters and stores key data points



PurgeScan Technology

QED PurgeScan technology provides an easier and more accurate assurance of purge stabilization

Successful, consistent low-flow ground water sampling is based on knowing when purge water indicator parameters stabilize. This ensures that sampling begins only when the samples are truly representative of water in the surrounding aquifer.



Until now, deciding when stabilization had been achieved was complex; it required you to monitor multiple ground water quality parameters simultaneously and make repeated calculations to determine whether the fluctuations in each parameter had fallen within acceptable limits. The MP20 Flow Cell changed this process forever. Microprocessor-based PurgeScan™ technology performs the monitoring and calculations automatically, clearly signaling when stabilization has occurred with audio and visual alerts.

This makes low-flow sampling easier, more accurate, and more efficient, too, as it frees

your time to perform other sampling tasks while purging is underway. You can do it the right way, collecting the most accurate samples, and saving time and money.

Beyond its exclusive PurgeScan feature, the MicroPurge MP20 Flow Cell has ease of use and ruggedness built in, in the tradition of QED sampling equipment designed for practical field conditions. The lightweight, waterproof MP20 meter is highly regarded for its simplicity to calibrate. It displays all readings automatically. The sonde is a compact, low-profile design with rugged, easy-to-service probes. The flow cell is designed to collect and vent gas bubbles effectively, and to distribute purge flow evenly for quick measurement response and more accurate readings. And the entire system is housed in a rugged, waterproof case that doubles as a measurement and calibration workbench in the field.

The whole package is protected by an exclusive 3-year warranty, and backed

MP20 Advantages

- ¥ Exclusive PurgeScan™ technology (U.S. Patent No. 6,415,659) automatically gives the OK to sample when selected purge water quality parameters remain steady over successive readings, at user-defined intervals.
- ¥ Waterproof MP20 meter displays all readings automatically: pH, ORP, temperature, conductivity, DO, and turbidity (optional).
- ¥ Exclusive long-life pH electrode lowers maintenance costs significantly
- ¥ Known for its exceptional ease of calibration
- ¥ Fast PC download capability and automatic date/time stamping (MP20D and MP20DT models only)
- ¥ Rugged, waterproof case doubles as a measurement and calibration workbench.
- ¥ Transparent, molded flow cell effectively vents bubbles, even in the horizontal position; low internal volume (175 ml), designed flow distribution and built-in stirrer give fast response to changes in purge water quality, even at low-flow purge rates.
- ¥ Exclusive Three Year Warranty.

by service and support from QED, the leader in low-flow sampling.

Exclusive Optimized Liquid Contact Flow Path

The MP20 flow cell is engineered to allow the sensing probes to make rapid, accurate responses to changes in purge water parameters. The flow cell is 100% transparent for ease of observation. The low-volume, fast-response cell couples to the sonde with a quick, bayonet attachment, and can be used in either a horizontal or vertical position.

The incoming flow is directed in a tangential path around the flow cell to provide fast, thorough mixing with no "dead spots" that could affect the accuracy of purge parameter measurements. Bubbles in the flow stream are vented out of the cell and away from the probe so they don't interfere with purge water analysis.

The multiparameter probe has a special sensor with built-in stirring for highly stable dissolved oxygen readings. All sensors are easy to calibrate and the unique pH reference electrode is fully field-serviceable, a huge advantage in keeping field work on track as well as reducing pH probe replacement costs.

Specifications

Model No.	MP20 (Standard) MP20D (w/ Real Time Clock / Data Download) MP20DT (w/ Real Time Clock / Data Download / Turbidity)
Dimensions	18.5"x15"x6.5" (47 x 38 x 17 cm)
Weight	14 lbs (6.4 kg)
Storage	100 Data Points (200 opt.)
Stabilization	Purge Scan™ Technology (U.S. Patent #6,415,659)
Case Material	Structural Resin
Keypad	5 Keys

Meter Specifications:

Display	3.5" (9 cm)
Weight	2.1 lbs (1 kg)
Memory	100 Data Frames (200 opt.)
Rating	Waterproof NEMA 6 [IP67]
Power	3 "C" batteries
Battery Life	12 Hours
Temperature	23 - 122°F (-5 - 50°C)
Cable	6 foot (1.83 m)

Flow Cell Specifications:

Volume	175 ml
Material	Rigid urethane
Fitting Type	Soft-tube "clamp-free"
Fitting Size(s)	Inlet: 1/4" I.D. x 3/8" O.D. Outlet: 3/8" I.D. x 1/2" O.D.
Venting Modes	Horizontal and Vertical
Sonde Connection	Bayonet-style Twist Mount

Sonde Specifications:

Size	3" x 9" (8 x 23 cm)
Weight	1.3 lbs (0.6 kg)

Typical Sensor Performance Specifications:

	Range	Accuracy	Resolution
Temperature	-5 - 50°C (23 - 122°F)	± 0.2°C (0.36°F)	0.01°C (0.018°F)
DO	0 to 20 mg/l	± 0.2 mg/l	0.01 mg/l
Specific Cond.	0 to 100 mS/cm	±1% of reading ± 1 count	4 Digits
pH	2 to 12 units	± 0.2 units	0.01 units
ORP	-999 to 999 mV	± 20 mV	1 mV
Turbidity (MP20DT Only)	0 to 1,000 NTU	± 5% of reading ± 1 NTU	1 NTU
Salinity*	0 to 70 PSS	± 1% of reading ± 1 count	0.01 PSS

*Calculated

PurgeScan™ Specifications:

Parameter Stabilization range criteria*	pH	± .2 units
	DO	± 0.2 mg/l
	Conductivity	± 0.020 mS/cm
	ORP	± 20 millivolts
	Turbidity	± 1 NTU

*NOTE: These are default ranges; settings are adjustable to meet site specifications.

Stabilization basis

3 consecutive readings of selected parameters (one or more of above 5) within above limits, at time interval selected, from 1 to 9 minutes. For example, if 2 minutes is selected, then stabilization would be signaled when 3 consecutive 2-minute intervals showed in-range readings at the end of each interval, requiring 6 minutes.

Elapsed time since Purge Scan initiated shows at the bottom of the screen.

Full data sets are stored at time 0, every 5 minutes, and the 3 consecutive readings which satisfy the stabilization criteria.

Stabilization of purge water quality is signaled visually and audibly when 3 consecutive readings of selected quality parameters (one or more of above 5) fall within the selected ranges. The time interval between readings is selected from 1 to 9 minutes. For example, if 2 minutes is selected as the interval between stabilization readings, then stabilization would be signaled when 3 consecutive 2-minute intervals showed in-range readings at the end of each interval, requiring 6 total minutes of stabilized purge water quality. The elapsed time since Purge Scan was initiated is displayed at the bottom of the screen.

Full data sets are stored at time 0, every 5 minutes, and the 3 consecutive readings which satisfy the stabilization criteria.

Calibration Solutions



Calibration Solutions

Ensure the accuracy of your water indicator parameter readings with QED's NIST traceable calibration solutions

- Provide the most accurate calibration of the MP20 Flow Cell
- QED calibration solutions are traceable to the U.S. National Institute of Standards & Technology (NIST) standards.