

GRUNDFOS ENVIRONMENTAL VARIABLE PERFORMANCE PUMPING SYSTEMS



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The Environmental Variable Frequency Drive (VFD) has been uniquely designed to operate and protect the **MP1** Variable Performance Groundwater Sampling Pump and the **SPE 4”** Variable Performance Sampling / Remediation Pumps. Due to the sophisticated electronics within the VFD, the operator can easily change between the **MP1** and **SPE 4”** Variable Performance Pumps by pressing a button. With the pressing of another button, the operator can precisely control the discharge flow rate from the pump from a maximum of 50 gallons per minute to a minimum of 100 milliliters per minute, to depths to 524 feet of head.

Unlike most variable frequency drives, this VFD is compatible with either 120V or 230V single-phase, AC input power. The operator can simply change the power cord to accommodate the different voltages.

The VFD can also be purchased without the carrying case for use in dedicated applications.

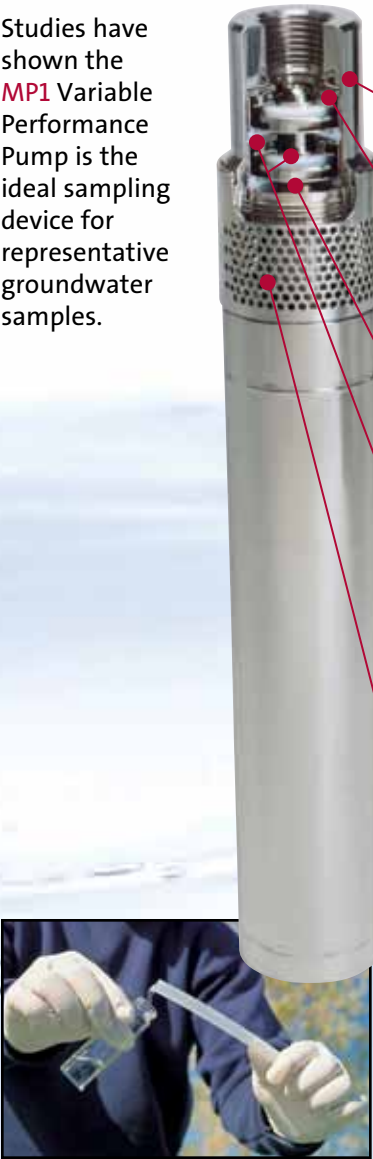


THE UNIQUE FEATURES OF THE ENVIRONMENTAL VFD:

- **Precise Flow Control** — The push button control pad provides greater control over the pump’s discharge flow rate for better accuracy and precision during sampling.
- **Wide Performance Range** — Instead of operating according to one performance curve, the VFD allows for coverage of a range of performances and can function at any point of operation within that range.
- **Motor Protection** — The VFD will protect the Environmental Performance Pumps from adverse motor conditions such as, over-and-under-voltage, over-current, and groundfault.
- **Dual Input Power Capability** — Either 120V or 230V, single-phase AC input power is accommodated simply by changing the power cord.
- **Dual Functionality** — The VFD can be easily switched to operate either the **MP1** pump or the **SPE 4”** Variable Performance Pumps.
- **Enclosure** — The VFD NEMA 4 enclosure is designed for outdoor duty and is resistant to damage as a result of incidental exposure to rain or splashing water.

The **MP1** Variable Performance Pump combines state-of-the-art technology into a light, compact and yet powerful submersible pump for precise, accurate and reproducible groundwater sampling. Designed for long-term reliability in dedicated monitoring wells, the **MP1** provides optimal sample quality with either traditional purging prior to sampling, or low draw-down passive sampling when operated with the VFD.

Studies have shown the **MP1** Variable Performance Pump is the ideal sampling device for representative groundwater samples.

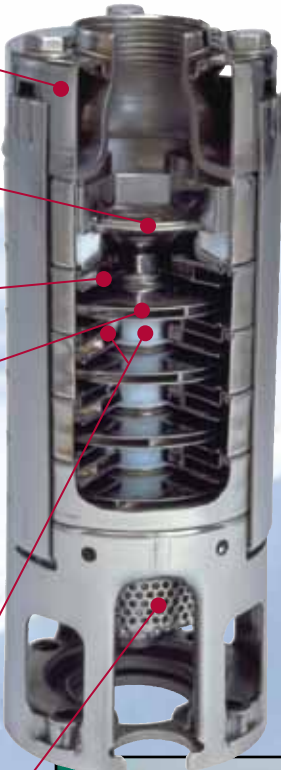


Smooth, continuous, uninterrupted discharge flow rate is possible with the **MP1**.

- **Discharge/Pump Housing***
corrosion-resistant with Female NPT discharge pipe connection
- **Integral Check Valve (SPE 4” only)**
offers reliable, jam-free back flow prevention
- **Guide Vane***
increases pump efficiency by providing optimal fluid movement
- **Impeller***
long-wearing, corrosion-resistant with a high strength-to-mass ratio; a fabricated design allows for optimum hydraulic performance
- **Spacer Ring and Wear Ring (MP1 only)**
placed at each impeller, eliminating vibration and maintains pump efficiency
- **Seal Ring and Intermediate Bearing (SPE 4” only)**
placed at each stage to support the shaft and maintain pump efficiency; constructed of 100% virgin Teflon®
- **Inlet Screen***
non-corrosive inlet screen prevents the impellers from clogging

*On these features, the material of construction for the **MP1** is 316 stainless steel, and the **SPE 4”** is 304 stainless steel.

The **SPE 4”** Variable Performance Pumps are submersibles constructed of virgin Teflon® and stainless steel to handle the rigors of contaminated groundwater monitoring and continuous operation in remediation applications. The **SPE 4”** Variable Performance Pumps are designed to operate in 4 inch and larger wells to depths of 524 feet. The **SPE 4”** pumps have a built-in check valve to prevent back-flow in the well after the pump is shut down. A user-friendly cable guard aids in the ease of variable length motor lead installation.

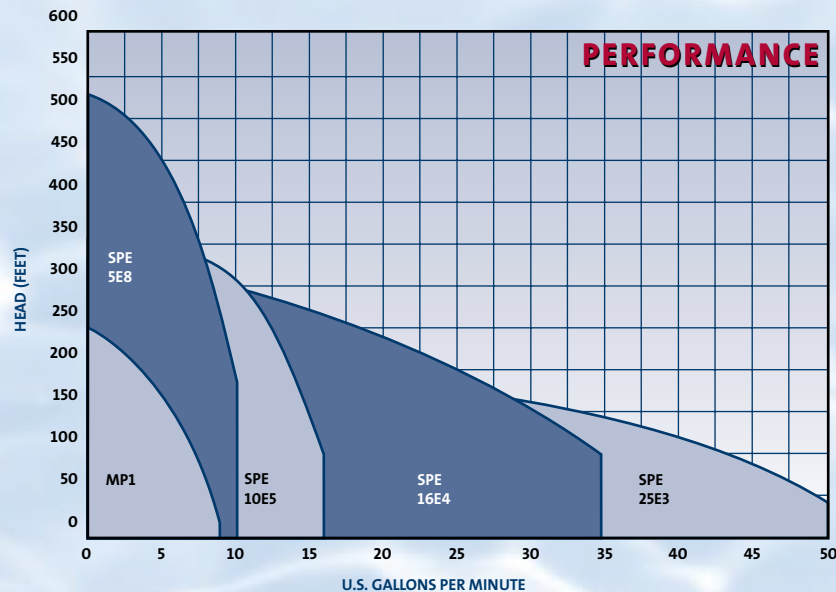


The **SPE 4”** provides up to 45 gallons per minute for purging and remediation.

GRUNDFOS ENVIRONMENTAL PRODUCTS

| MODELS | WELL SIZE | DISCHARGE SIZE* | FLOW RANGE GPM | HEADS TO: (FT.) |
|--|-----------|-----------------|-------------------|--------------------|
| MP1 VARIABLE PERFORMANCE PUMP | | | | |
| MP1 | 2" | 1/2" | 100 ml/min - 9 | 250 |
| SPE 4" VARIABLE PERFORMANCE PUMPS | | | | |
| 5E8 | 4" | 1" | 100 ml/min - 10 | 524 |
| 10E5 | 4" | 1-1/4" | 100 ml/min - 15 | 356 |
| 16E4 | 4" | 1-1/4" | 100 ml/min - 35 | 302 |
| 25E3 | 4" | 1-1/2" | 100 ml/min - 50 | 234 |

*Female NPT



Contact:

VFD unit:



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