Vernay-QM Series
Disposable Pumps
Introducing a new generation of disposable pump technology for precision medical applications.

Convenient, compact and comfortable, combining cost efficiency with better accuracy and control

Vernay-QM Series Disposable Pumps

The QM series platform delivers a new era in dispensing accuracy, and low maintenance operation in high performance single use - disposable pumps. This revolutionary pump technology can replace most typical pump styles, eliminating the clean up and likely contamination problems associated with these “old-fashioned” technologies. Vernay, in partnership with Quantex brings easy to use pump technology to you as another flow control solution as you develop your “smart design solution” for your targeted medical applications. As your engineering partner we can collaborate with your product design team on a co-designed, custom solution that meets your specific technical and brand needs.

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<th>Selected Applications</th>
<th>Benefits</th>
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<tr>
<td>Blood Management</td>
<td>High precision output without compromising drug delivery or reliability</td>
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<td>Diagnostic Reagents</td>
<td>Disposable pump eliminates contamination or cleaning mishaps allowing for at home care as well as in hospital care needs</td>
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<td>Drug Delivery</td>
<td>Pump can deliver constant smooth flow at any given flow rate with a cusstom designed offset multi-bolus rotor</td>
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<td>Enteral Feeding</td>
<td>Simplifies motor-driven designs; all wearing parts are disposable, eliminating expensive maintenance and calibration</td>
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<td>IV Therapy</td>
<td>Fluid delivery or extraction with disposable pump integrated into medically disposable packaging</td>
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<td>On-Demand Compounding</td>
<td>High precision disposable pump ensures the right dose is dispensed accurately every time no matter what the position or location of the device</td>
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<td>Perfusion</td>
<td>For single use packaging with an airless and aseptic dispense plus unmatched accuracy</td>
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<td>Wound Care Management</td>
<td>Flexibility to manage a wide variety of viscosities and chemical compositions at any given dispense rate</td>
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Introducing the LR-mini. There is no telling how small we can go because size does matter when it comes to patient comfort and product innovation.

The disposable pump can be directly integrated into the IV bedside unit and is replaced with each use.

*All finished device designs represented are possible integration examples of the QM-Series Disposable Pumps.*
Vernay-QM Series Disposable Pumps

The QM pump series is for single use disposable applications, combining accuracy and control with easy-to-use, convenient, compact and comfortable benefits. Designed for medical use, this series is highly flexible in its configuration for a range of potential applications. Each pump provides an airless and aseptic dispense plus is self-priming and once primed, can draw up to a 5M H2O vacuum. Fluid contact is only with PP and PE which is inert to chemical reagents, acidic and alkaline solutions as well as solvent based liquids and more. Additionally, this single use, disposable pump technology is globally patented.

**LR-13 and LHP-13**

These pumps are typically positioned in line using standard push-fit connectors.

- The LR-13 has a maximum pressure capacity of 1 Bar and is suitable for precise dosing of liquids.
- The LHP-13 is physically identical to the LR-13 pump, but employs a pressure feedback loop which increases the pressure capacity of the LHP-13 up to 6 Bar. The high pressure allows for use in spraying or atomizing liquids such as those in pharmaceutical drug delivery.

**Basic Specifications**

- Inlet/outlet: 8mm OD
- Flow Rate: 0-10ml/s
- Flow Rate Accuracy: 0.31ml/s
- Pressure:  
  - Up to 1 bar for LR-13
  - Up to 6 bars for LHP-13

**Applications**

- Blood Management
- Diagnostic Reagents
- Drug Delivery
- Enteral Feeding
- Laboratory Pumping
- Perfusion
- Wound Care
- On-Demand Compounding

* 13mm, 2 or 3 bolus rotor available for testing

**LR-mini**

How small do you need to go because size does matter when it comes to patient comfort. This inline pump can be designed for metered mini-dosing with extreme accuracy. The mini can be 6 mm or less with either 2 or 3 bolus rotors or designed with a continuous offset rotor. Custom connector fittings can be added to improve the fit into your device system.

**Applications:** IV Therapy, Drug Delivery, On-demand Compounding, Wound Care Management and More.
How the Quantex Pump works

The Quantex pump comprises two plastic moldings - a rotor and housing. The rotor has indents that pick up fluid from the input port and transport it around the housing to the output port. A flexible membrane on the housing pushes the fluid into the output, emptying the indents. High accuracy is achieved because the indents running against the housing form a fixed volume and scavenging is very efficient. This simple mechanism can run at a wide range of rotation speeds to match particular flow rate requirements.

The flow rate is directly proportional to the rotation rate. A practical range of speeds is 1:1,000. For a larger dynamic range, and where precision is important, there is a continuous flow option giving a range >1:10,000.

Your pump seems to be treating cells undoubtedly better than normal peristaltic pumps, hence one of the major issues we could foresee is now off the radar.

-Fortune 500 global medical device manufacturer

Series 13 Pump Evaluation Kit

Complete programmable drive system for use with QM series disposable pumps.

- Compatible with all series 13 pumps including mixer and dilution pumps
- Consists of motor, pump drive, chassis, motor controller, solenoid and 110/240V power supply
- No cleaning required during change over
- Stand-alone running or with PC control
- USB to PC connection for easy programming
- Supplied with easy to use software programs to create custom dosing and mixing regimes

Vernay
Corporate Headquarters
Atlanta, Georgia, USA
+1-404-994-2000
Sales@vernay.com

www.vernay.com
Quantex designs custom pumping, dosing, dilution and mixing solutions for a broad range of applications in a disposable format. Quantex pumping technology provides a groundbreaking way of delivering fluids from consumable packs and is particularly suitable where there is a desire to eliminate cleaning regimes. Airless and aseptic dispense capabilities provide enhanced levels of hygiene in a maintenance-free package. Typically built into the packaging, Quantex pumps are an environmentally friendly, cost effective means to accurately dispense beverages, foods, soaps, detergents, pharmaceuticals and chemicals.