Liquid Control™ DL
Plural-Component Rotary Pump Meter, Mix and Dispense Unit

Reduces Rework Costs Through Accurate, High-Volume Dispensing

- Variable ratios from 1:1 to 30:1 allow you to handle more materials
- Easy programming with intuitive touch pad
- Reliable brushless AC gear motors provide thousands of hours of service
- Optional EnGarde® ratio monitoring system provides independent ratio accuracy
Accurate, Continuous Flow and Shot Dispensing

**Designed for high-volume output to increase your production capacity**

The Liquid Control DL is a stand-alone rotary pump metering system. With fully-programmable flow rate and mix ratio, the DL reduces operator training time and waste from improper machine calibration. The DL’s rotary or progressive cavity pumps are designed to provide a smooth dispense for your continuous flow applications.

**Display Screen**
Easy to configure, set up and operate with customized PLC software

**Reservoirs**
A variety of sizes and features accommodates most processes and chemistries

**Mixing Heads**
The metered components are delivered to either motionless or dynamic disposable mixers, depending on the material

**Metering Pumps**
Each component is precisely metered using gear pumps or progressive cavity pumps

**Internal Components**
Easily accessible inside the custom enclosure. The wiring is color-coded, and labeled using the highest quality assembly techniques
Engineered for Performance

Improve production flexibility

- A wide selection of pump types and sizes are independently driven to dial in your ratio
- Flow rates from 2 cc/sec to 100 cc/sec (1.5 gal/min) depending on pump selection
- Touch pad interface displays ratios, flow rates and other process functions
- Continuous or shot dispensing for silicones, polyurethanes or epoxies; filled and unfilled
- Additional options include progressive cavity and magnetic drive pumps, Paradyne® dynamic mixing head and automation

Simple interface software is easy to learn and operate

- Configure the desired options
- Calibrate mix ratios in a few easy steps

Handles all your process control needs

- EnGarde ratio monitoring system uses independent meters to ensure ratio accuracy
- Two levels of access protect critical process settings

For a variety of applications

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- Flexible Packaging & Coating
- Composite Processes
- Gasketing
- Molding & Encapsulation
- Bonding
- Open Pour
Customize the DL to Your Manufacturing Process

Direct Dispense
Use the process flow configuration when:

- Motionless mixers are used
- Processing materials that do not separate
- Feeding a mixed material stream to a continuous process (such as laminator, coating line or filament winder)
- Shot duration is from two seconds to infinite
- Material ratios are from 1:1 to 5:1
- Process requires only limited temperature control

Re-circulation System
Use the Re-circulation System configuration when:

- Motionless mixers are used
- A light-weight mixing head is required
- Closed loop ratio control is desired
- Discontinuous shot or bonding applications are used
- Chemistries may separate or stratify
- Optional EnGarde closed loop ratio control available

Feed/Reservoir Systems
After selecting the correct metering pump and mixing head, choose your feed system. All systems are available with:

- Stainless steel or mild steel construction
- Bottom outlets
- Stands

Chemistry dictates the construction materials and the process aids such as heat and agitation. The application and dispense volumes will lead to reservoir size and refilling options.

A range of reservoir sizes is available:

- 5 gal (20 l)
- 10 gal (40 l)
- 55-gal (200 l) drum feed systems

Sealed Reservoirs
- Pressure feed
- Sight tubes
- Low/high level fluid control
- Agitation

55-Gallon
Drum Feed
- 2-drum
- 4-drum
- Optional low-level sensors

Heat/Vacuum
Degas Reservoirs
- Vacuum to <5 torr
- Heat to 180°F/80°C
- 2 to 60 gallon
- Slinger plates for fast degassing
- Auto-refill
Digital Interface Provides Precise Control

Simple interface software is easy to learn and operate:
- Configure the options purchased
- Calibrate flow rates in a few steps
- Password protect your settings

The right mixing head for the right materials
The DL can be configured with motionless, dynamic, handheld or spray mixing heads. Select the one that is right for your process.

**Twin Dispense**
- Spring-loaded valves
- Motionless mixers
- Lightweight

**MD2**
- Pneumatically actuated
- Non-drip design
- Lightweight
- Motionless mixers

**Paradyne®**
- Patented non-drip
- Recirculation design
- Dynamic mixing with disposable mixers
Easy-to-Configure Systems

Wide Ratio Performance, from 1:1 to 33:1

Use this chart to determine proper pump sizes for your desired flow rate at the volume ratio.

<table>
<thead>
<tr>
<th>Pump Output</th>
<th>Ratio Range</th>
<th>Flow Rate at Min Ratio</th>
<th>Flow Rate at Mid Ratio</th>
<th>Flow Rate at Max Ratio</th>
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</thead>
<tbody>
<tr>
<td>A cc/rev</td>
<td>B cc/rev</td>
<td>Ratio Max</td>
<td>Ratio Mid</td>
<td>Ratio Min</td>
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<td>3.00</td>
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</table>

Examples of flow rate envelopes for selected pumps
Technical Specifications

Refer to the DL Configurator for all specifications listed below.

- **Voltage**: 230/1/60Hz
- **Max Flow**: 100cc/sec @ 1:1
- **Min Flow**: 2 cc/sec @ 5:1
- **Ratio Range**: 1:1 to 33:1
- **Max viscosity**: 10,000 cps
- **Max fluid pressure**: 500 psi
- **Heating Voltage**: 230/1/60Hz for heated hoses and 5 gallon tanks. 10 gallon tanks require 230/3/50-60. Separate power service is required for all tanks.
- **Wetted parts**: Pump: Mild Steel standard. Optional Stainless Steel. Seals: EP or Viton

Options to create your own meter mix dispense system.

- Agitators
- Auto-Refill
- Printer
- Sight Gauge
- Desiccant Air Dryer
- Pressure Tanks
- Audible Alarm
- EnGarde™ Gear Flowmeter for Ratio Monitoring
- EnGarde Mass Flowmeter for Ratio Monitoring
- Vacuum Pump
- Elevated Temperature Control
- Third Component Injection

Modular designs are available to adapt the DL to specific plant requirements.
PROVEN QUALITY. LEADING TECHNOLOGY. OUTSTANDING SERVICE.

Since 1998, EnDiSys has provided customer-driven solutions to fluid delivery challenges in an ever-changing market. As products become increasingly high tech, and adhesives replace fasteners, EnDiSys consistently invests in research and development to maintain their position as an industry leader for spray and pumping equipment, and other fluid delivery systems. Whether their products are used for coating chewing gum tablets in Bangkok, Thailand, evacuating 250-gallon bins of caramel at a Pennsylvania food processing plant, or striping roads on Minnesota highways, EnDiSys is meeting the demand for quality fluid delivery systems.

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Call today for product information or to request a demonstration.

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