L/S® VARIABLE-SPEED ECONOMY DRIVES

**FEATURES/BENEFITS**
- Perfect upgrade from a fixed-speed drive to a variable-speed system.
- Deliver flow rates from 0.42 to 2900 mL/min with Masterflex® L/S pump heads.
- Deliver flow rates from 0.0025 to 1700 mL/min with cartridge pump heads.
- Wide flow control range (30:1 turn-down).
- Long-lasting, stackable steel housing.
- Ideal for low-flow metering or general fluid transfer.
- Safe, reliable continuous-duty motor.
- Unidirectional operation.
- Multichannel pumping.

**DRIVE CONTROLS**
- All manual controls are on the front panel.
- Single-turn potentiometer for speed control.
- On/off switch, green power-on indicator.

**SETUP**
1. Mount pump head and lead tubing.
2. Turn pump on.
3. Adjust flow rate with potentiometer.

**SELECTION CRITERIA**
1. Motor rpm/flow rate.
2. Voltage required.
3. Pump heads accepted.
Order pump heads and tubing separately.

**SPEED CONTROL/CIRCUITRY**
- Single-turn potentiometer.
- Solid-state circuit.
- Soft-start for no power surges.
- Speed not affected by minimum variations in line voltage or frequency.
- Switch: ON/OFF.
- Meets or exceeds UL, CSA, EN, and selected IEC limits.

**MOTOR SPECIFICATIONS**
- Permanently lubricated.
- Designed around a 90 or 180 VDC motor.

**PUMP HEADS ACCEPTED**
- Drive accepts nine different pump heads:
  - Standard
  - High-Performance
  - Easy-Load® S
  - PTFE-Tubing
  - Easy-Load II
  - Multichannel
  - Easy-Load Cartridge
  - Multichannel PTFE-Diaphragm

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Catalog number</th>
<th>rpm</th>
<th>Power (50/60 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RX-07554-90</td>
<td>20</td>
<td>20 to 60 VAC</td>
</tr>
<tr>
<td>RX-07554-95</td>
<td>30</td>
<td>180 to 260 VAC</td>
</tr>
<tr>
<td>RX-07554-97</td>
<td>7</td>
<td>180 to 260 VAC</td>
</tr>
</tbody>
</table>

**NOTES**
- Use drives 07554-90 and 07554-95 with High-Performance, Multichannel, and Cartridge pump heads only when loaded with C-FLEX® or silicone tubing. Do not use these 600-rpm drives with the PTFE-tubing or PTFE-diaphragm pump heads.

**L/S PUMP TUBING FLOW RATE INFORMATION (ML/MIN)**
Order Masterflex L/S pump tubing separately on pages 64–65.

<table>
<thead>
<tr>
<th>Tubing cross sections</th>
<th>L/S Precision pump tubing</th>
<th>L/S High-performance Precision pump tubing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow range @ 20 to 800 rpm</td>
<td>1.2 to 36</td>
<td>L/S 13</td>
</tr>
<tr>
<td></td>
<td>4.2 to 130</td>
<td>L/S 14</td>
</tr>
<tr>
<td></td>
<td>16 to 480</td>
<td>L/S 16</td>
</tr>
<tr>
<td></td>
<td>34 to 1600</td>
<td>L/S 25</td>
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<tr>
<td></td>
<td>25 to 1700</td>
<td>L/S 17</td>
</tr>
<tr>
<td></td>
<td>75 to 2300</td>
<td>L/S 18</td>
</tr>
<tr>
<td>Flow range @ 7 to 200 rpm</td>
<td>0.42 to 12</td>
<td>L/S 15</td>
</tr>
<tr>
<td></td>
<td>1.4 to 43</td>
<td>L/S 24</td>
</tr>
<tr>
<td></td>
<td>5.6 to 160</td>
<td>L/S 35</td>
</tr>
<tr>
<td></td>
<td>12 to 330 (12 to 370)</td>
<td>L/S 36</td>
</tr>
</tbody>
</table>

Note: Flow rates in parentheses can be obtained only with L/S High-Performance pump heads.
# Specifications for L/S Variable-Speed Economy Drives

## Performance Specifications
- **Flow capacity**: 1.0 to 2800 mL/min (0 to 16 GPH) for RX-07554-30, 0.42 to 870 mL/min (0 to 15 GPH) for RX-07554-95, 0.42 to 870 mL/min (0 to 15 GPH) for RX-07554-90, 0.42 to 870 mL/min (0 to 15 GPH) for RX-07554-86
- **RPM**: 20 to 900 for RX-07554-30, 7 to 200 for RX-07554-95
- **Number of heads accepted**: 1
- **Maximum torque**: 19.5 kg-cm (270 oz-in) for RX-07554-30, 39 kg-cm (540 oz-in) for RX-07554-90, 13 kg-cm (169 oz-in) for RX-07554-85
- **Reversible**: No
- **External control - Input**: Not applicable
- **External control - Output**: Not applicable

## Electrical Specifications
- **Voltage/frequency**: VAC (50/60 Hz)
  - **Current**: 1.5 A for RX-07554-30, 0.6 A for RX-07554-90, 1.5 A for RX-07554-95, 0.9 A for RX-07554-86
  - **Fuse rating**: 2.0 A/250 V for RX-07554-30, 1.0 A/250 V for RX-07554-90, 2.0 A/250 V for RX-07554-95, 1.0 A/250 V for RX-07554-86
- **Motor type**: Continuous-duty, permanent magnet DC
- **Motor size**: 37 W (1/16 hp)
- **Motor/Servo control type**: Single-turn potentiometer, solid-state
- **Speed regulation (Repeatability)**: ±5% (±3%)
- **Soft-start/Electronic brake**: Yes/No

## Physical Specifications
- **Housing materials**: Painted steel
- **IP rating**: IP 22
- **Agency listings**: UL, cUL, CE
- **Operating temperature**: 0 to 40°C (32 to 104°F)
- **Storage temperature**: -25 to 65°C (-13 to 149°F)
- **Dimensions (L x W x H)**: 22.9 x 18.1 x 12.3 cm (9 x 7 x 5"
- **Shipping weight**: 3.7 kg (8 lb)

*See page 104 for an explanation of IP ratings.*

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## 24-HOUR PROTECTION

The Liqui-Sense® emergency cut-off system protects you from pumping problems 24 hours a day. Detection of a leak, air in a line, or a high/low liquid level in a tank signals the Liqui-Sense controller to turn off your pump and turn on a back-up. Please see pages 160-161 for a complete description.