The reliable **LS Class** consists of single-headed, positive displacement piston pumps incorporating advanced cam designs for very low pulsation. With micro-stepping motor technology and a proven single-piston pump mechanism, the **LS Class** exceeds the performance of more expensive units at a fraction of the cost.

The pumps are ideal for a wide variety of HPLC applications (including Bio-compatible separations), Semi-Prep LC, metering & dispensing, and general laboratory use. Standard fluid path materials are Stainless Steel and PEEK, in addition to optional Titanium. Other available features include jacketed heads for temperature controlled processes. With 5 mL/min, 10 mL/min, 40 mL/min and 100 mL/min versions available, and pressure capability up to 6,000 psi, these versatile pumps will meet the most demanding applications.

Features include automatic pressure compensation, Pulse Dampener, integrated Prime-Purge Valve, interactive keypad control, and complete PC control and status through RS-232 and Micro USB 2.0 ports. The unique **LS Class** provides the highest performance/cost ratio in a compact package.

Components are also available in Kit Form for OEM Applications.

### Specifications

<table>
<thead>
<tr>
<th><strong>Flow Rate</strong></th>
<th><strong>Pressure</strong></th>
<th><strong>Fluid Path</strong></th>
<th><strong>Control</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>5 mL/min</td>
<td>Up to 6,000 PSI</td>
<td>Stainless Steel, PEEK, or Titanium</td>
<td>RS-232, Micro USB, Run/Stop, Analog (0-10V, 4-20mA)</td>
</tr>
<tr>
<td>10 mL/min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 mL/min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 mL/min</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All SSI Pumps carry a 3-Year Warranty.
**LS CLASS - Model Selection Matrix**

Single Piston Pumps with Accurate Flow Rates for Demanding HPLC Applications

<table>
<thead>
<tr>
<th>LS = LS Class</th>
<th>FLOW RATE</th>
<th>MATERIAL</th>
<th>SELF-FLUSH</th>
<th>PULSE DAMPENDER</th>
<th>PISTON SEAL</th>
<th>INLET/OUTLET TUBING</th>
<th>SPECIAL OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>055</td>
<td>5 mL/min</td>
<td>Stainless Steel Fluid Path</td>
<td>w/ Self-Flush</td>
<td>Pulse Dampener Only</td>
<td>Standard Seal (SS Energizer)</td>
<td>Inlet: 1/8&quot; OD (flexible)</td>
<td>Standard Product (leave blank for standard options &amp; cabinet)</td>
</tr>
<tr>
<td>010</td>
<td>10 mL/min</td>
<td>PEEK Fluid Path</td>
<td>No Self-Flush</td>
<td>No Pressure or Leak Sensors</td>
<td>Organic Seal (SS Energizer)</td>
<td>Outlet: 1/16&quot; OD</td>
<td>Customer Special (Consult Factory)</td>
</tr>
<tr>
<td>040</td>
<td>40 mL/min</td>
<td>Titanium Fluid Path</td>
<td>w/ Pressure &amp; Leak Sensors</td>
<td>Pulse Dampener</td>
<td>Standard Seal (FP Energizer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>100 mL/min</td>
<td>Jacketed SS Pump Head</td>
<td>No Pressure or Leak Sensors</td>
<td>No Pulse Dampener</td>
<td>Organic Seal (FP Energizer)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 5,000 psi max. for PEEK Fluid Path.

**Flow Rate Range and Max. Pressure Ratings**

- 0.000 - 5.000 mL/min (6,000 psi max.)
- 0.00 - 10.00 mL/min (6,000 psi max.)
- 0.0 - 40.0 mL/min (1,600 psi max.)
- 0.0 - 100.0 mL/min (600 psi max.)

**Pulsation**

- ≤2% @ 1 mL/min and 1,000 psi (5 mL, 10 mL, 40 mL)
- ≤4% @ 50 mL/min and 500 psi (100 mL)

**Pressure Accuracy**

- ±2% of full scale pressure

**Flow Accuracy**

- Within 2% of set flow rate, 0.20 mL/min and above; 80:20 Water/IPA @ 1,000 psi (5 mL and 10 mL)
- Within 2% of set flow rate, 0.80 mL/min and above; 80:20 Water/IPA @ 1,000 psi (40 mL)
- Within 4% of set flow rate, 5 mL/min and above; 80:20 Water/IPA @ 500 psi (100 mL)

**Flow Rate**

- 0.000 - 5.000 mL/min (6,000 psi max.)
- 0.00 - 10.00 mL/min (6,000 psi max.)
- 0.0 - 40.0 mL/min (1,600 psi max.)
- 0.0 - 100.0 mL/min (600 psi max.)

**Pressure Accuracy**

- ±2% of full scale pressure

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- Within 2% of set flow rate, 0.20 mL/min and above; 80:20 Water/IPA @ 1,000 psi (5 mL and 10 mL)
- Within 2% of set flow rate, 0.80 mL/min and above; 80:20 Water/IPA @ 1,000 psi (40 mL)
- Within 4% of set flow rate, 5 mL/min and above; 80:20 Water/IPA @ 500 psi (100 mL)

**Flow Precision**

- 0.2% RSD

**Wetted Materials**

(See Above Options), Synthetic Ruby, Sapphire, UHMWPE, PTFE

**Dimensions**

- 6.5” H x 7” W x 16” D

**Weight**

- 15.3 lbs. (6.9 kg)

**Power**

- 100-240 Vac (± 10%), 50-60 Hz

**Control**

- RS-232, Micro USB, Run/Stop, Analog (0-10V, 4-20mA)

**Note:** Flow Rate is dependent on solvent selection and operating pressure.

**Pulsation value with pulse dampener.