



# LS CLASS

High Performance Isocratic Pumps

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.*



**Flow Rate**

- 5 mL/MIN
- 10 mL/MIN
- 40 mL/MIN
- 100 mL/MIN

**Pressure**

Up To  
**6,000 psi**  
(5 mL/MIN OR 10 mL/MIN)

**Fluid Path**

STAINLESS STEEL,  
PEEK, OR  
TITANIUM

**Control**

RS-232, MICRO USB,  
RUN/STOP,  
ANALOG (0-10V, 4-20mA)

# LS CLASS - MODEL SELECTION MATRIX

Single Piston Pumps with Accurate Flow Rates for Demanding HPLC Applications

USE THE FOLLOWING LISTS OF OPTIONS AND OPTION CODES TO CONSTRUCT YOUR PUMP MODEL NUMBER.

PUMP CLASS	FLOW RATE	MATERIAL	SELF-FLUSH	PULSE DAMPENER	PISTON SEAL	INLET/OUTLET TUBING	SPECIAL OPTIONS
<b>LS</b> = LS Class	<b>005</b> = 5 mL/min (6,000 psi max.) <b>010</b> = 10 mL/min (6,000 psi max.) <b>040</b> = 40 mL/min (1,600 psi max.) <b>100</b> = 100 mL/min (600 psi max.)	<b>S</b> = Stainless Steel Fluid Path <b>P</b> = PEEK Fluid Path <b>T</b> = Titanium Fluid Path <b>J</b> = Jacketed SS Pump Head	<b>F</b> = w/ Self-Flush Piston Wash <b>N</b> = No Self-Flush	<b>P</b> = Pulse Dampener Only No Pressure or Leak Sensors <b>T</b> = Pulse Dampener w/ Pressure & Leak Sensors <b>N</b> = No Pulse Dampener No Pressure or Leak Sensors <b>X</b> = No Pulse Dampener w/ Pressure & Leak Sensors	<b>1</b> = Standard Seal (SS Energizer) <b>2</b> = Organic Seal (SS Energizer) <b>3</b> = Standard Seal (FP Energizer) <b>4</b> = Organic Seal (FP Energizer) (SS : Stainless Steel) (FP : Fluoropolymer)	<b>Inlet</b> <b>A</b> = 1/8" OD (flexible) <b>B</b> = 1/8" OD (rigid) <b>C</b> = 1/8" OD (rigid) <b>D</b> = 1/8" OD (flexible) <b>G</b> = 1/8" OD (flexible) <b>Outlet</b> <b>1/16"</b> OD <b>1/16"</b> OD <b>1/8"</b> OD (rigid) <b>1/8"</b> OD (flexible) <b>1/8"</b> OD (rigid)	= Standard Product (leave blank for standard options & cabinet) <b>XX</b> = Customer Special (Consult Factory)

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

Note: Inlet and Outlet Fittings are included with the pump for the specified tubing. For options A and D, the inlet tubing and filter are included.

EXAMPLE MODEL NUMBER: **LS040SFP1A**

Please Note: Some features and options are not available with certain configurations. Please refer to the Part Number Configurator (Excel) to verify model number before ordering. Download at: [www.ssihplc.com/configurator/](http://www.ssihplc.com/configurator/)

## LS CLASS - SPECIFICATIONS

<b>Flow Rate Range and Max. Pressure Ratings*</b> .....	0.000 - 5.000 mL/min (6,000 psi) (5,000 psi PEEK)	<b>Flow Precision</b> .....	0.2% RSD
	0.00 - 10.00 mL/min (6,000 psi) (5,000 psi PEEK)	<b>Wetted Materials</b> .....	(See Above Options), Synthetic Ruby, Sapphire, UHMWPE, PTFE
	0.0 - 40.0 mL/min (1,600 psi)	<b>Dimensions</b> .....	6.5" H x 7" W x 16" D
	0.0 - 100.0 mL/min (600 psi)	<b>Weight</b> .....	(16.5 x 17.8 x 40.6 cm)
<b>Pulsation**</b> .....	≤2% @ 1 mL/min and 1,000 psi (5 mL, 10 mL, 40 mL)	<b>Power</b> .....	15.3 lbs. (6.9 kg)
	≤4% @ 50 mL/min and 500 psi (100 mL)	<b>Control</b> .....	RS-232, Micro USB, Run/Stop, Analog (0-10V, 4-20mA)
<b>Pressure Accuracy</b> .....	±2% of full scale pressure		
<b>Flow Accuracy</b> .....	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 is dependent on solvent selection and operating pressure.

\*\* Pulsation value with pulse dampener.