

## SYKAM S 1122 HPLC PUMP

The HPLC pump S 1122 is a dual plunger solvent delivery system. The mechanical design includes short plunger stroke technology with only two check valves. This results in low pulsation, typically observed with dual plunger pumps and high reliability otherwise achieved only by single plunger pumps.

The delivery plunger performs a two mm stroke, the compensation plunger makes one mm. The nearly pulseless solvent delivery of the pump results from the high stroke frequency and the use of the compensation plunger. The two plungers are counter rotating installed. While the delivery plunger pushes out the solvent volume, the compensation plunger, located on the pressure side, collects half of the volume. During the return movement of the delivery piston, the collected volume is pumped from the compensation plunger.

The microprocessor controlled speed regulation leads to a very stable speed of the D.C. motor, driving the plungers. Additionally, an integrated calculation software continuously corrects the pressure dependent differential between the preset and actual flow rates. This results in a very constant volume delivery throughout the entire range, independently of the resulting back pressure.

Through the alphanumeric display, the pump's parameters are shown in clear text and the user can



delay time from 1 - 999 minutes, time ramp for soft-start, time ramp for soft-stop.

### Constant Pressure Mode

Constant pressure, maximum flow in ml/min, run time from 1 - 999 minutes, delay time from 1 - 999 minutes, time ramp for soft-start, time ramp for soft-stop.

### High-Pressure Gradient

Two S 1122 could be combined with a S 8200 High Pressure Mixer to form a High Pressure Gradient system.

## TECHNICAL SPECIFICATIONS

■ <b>Delivery Method:</b>	Dual-Piston Pump	■ <b>Flow Precision:</b>	< 0.1 %
■ <b>Operation Mode:</b>	Constant Flow / Constant Pressure	■ <b>Flow Accuracy:</b>	< 1.0 %
■ <b>Flow Rate</b>		■ <b>External Control:</b>	analoge signal control & digital control (RS-232)
<b>Micro:</b>	0.02 to 4.00 ml/min	■ <b>Display:</b>	2x20 character LCD
<b>Analytical:</b>	0.05 to 9.95 ml/min	■ <b>Dimensions:</b>	297 x 198 x 495 mm
<b>Preparative:</b>	0.2 to 40 ml/min	■ <b>Power:</b>	110/220 V, 50/60 Hz
■ <b>Max. Pressure:</b>	40 MPa (400 bar, 6000 PSI)		

easily control or change the data.

The programming is easily done by a stepwise dialogue. There is basically a choice between two operation modes. The delivery with „constant flow“, and the delivery with „constant pressure“. Normally, the constant flow delivery is used for analytical purposes and the constant pressure mode for specific operations, e.g. column packing, etc. The following parameters can be programmed for the respective modes:

### Constant Flow Mode

Constant flow in ml/min, minimum pressure level (time delayed), maximum pressure level, compressibility factor from 0.7 (for methanol) up to 1.0 for aqueous solutions, run time from 1 - 999 minutes,

## ORDER INFORMATION

Cat.-No.	Description
10 10 046	S1122, analytical, Steel
10 10 047	S1122, analytical, PEEK
10 10 048	S1122, micro, Steel
10 10 049	S1122, micro, PEEK
10 10 050	S1122, preparative, Steel
10 10 051	S1122, preparative, PEEK
10 80 004	S 8200 High Pressure Mixer