

## Optos Series Pumps DATA SHEET

Eldex designs and manufactures high precision metering pumps that deliver reliable performance. Our instruments enable critical industrial processes to run 24/7 with minimal downtime and maintenance. Optos Series metering pumps can be used wherever precise flow rate control is required, particularly at high pressures.

Optos Series pumps are highly configurable and are grouped into three pump models. For best pump efficiency, we recommend choosing a pump which would typically run in the upper half of its flow range.

Model 1	Low Flow Liquid End	Standard Flow Liquid End	High Flow Liquid End	
Optimal at lower flow rates Stroke length 0.125"	<b>1L</b> .002-2.5 ml/min @ 6000 psi (max)	<b>1S</b> .003-5 ml/min @ 6000 psi (max)	<b>1H</b> .01-20 ml/min @ 3000 psi (max)	
Model 2	Optimal at medium flow rates Stroke length 0.250"	<b>2L</b> .003-5 ml/min @ 6000 psi (max)	<b>2S</b> .01-10 ml/min @ 6000 psi (max)	<b>2H</b> .02-40 ml/min @ 1500 psi (max)
Model 3	Optimal at higher flow rates Stroke length 0.500"	<b>3L</b> .01-10 ml/min @ 3000 psi (max)	<b>3S</b> .01-20 ml/min @ 1500 psi (max)	<b>3H</b> .04-80 ml/min @ 750 psi (max)



### Specifications

<b>Ambient Conditions:</b>	5°-35°C / 41°-95°F
<b>Liquid Temperature Range:</b>	5°-260°C / 41°-500°F
<b>Maximum Humidity:</b>	85% non-condensing
<b>Reproducibility:</b>	typically, +/-0.3%
<b>Viscosity Limit:</b>	500 centipoise
<b>Electrical:</b>	100-230VAC (+/- 10%) 50/60Hz
<b>Motor:</b>	24 Volt
<b>Control Options:</b>	Voltage: 0-5 VDC Current Loop: 4-20 mA RS232
<b>Contact Closure &amp; Outputs:</b>	Remote run and stop, Pressure output (0-5V) Pump error output
<b>Dimensions:</b>	10 cm W x 23 cm H x 24 cm D (4" W x 9" H x 9.5" D)
<b>Weight:</b>	with Damper: 6.4 kg (14 lbs.) w/o Damper: 5.9 kg (13 lbs.)

### Chemical Compatibility - Wetted Parts

<b>Stainless</b>	Type 316 stainless steel, GFP, PCTFE, sapphire, ruby.
<b>PEEK</b>	PEEK®, UHMWPE, PCTFE, sapphire, ruby.
<b>Hastelloy</b>	Hastelloy-C, GFP, PCTFE, sapphire, ruby.

### Standard Fittings and Tubing Connections

#### Low and Standard Flow Liquid End pumps:

Inlet valves 1/4-28: for use with 1/8" tubing. Outlet valves 10-32: for use with 1/16" tubing.

#### High Flow Liquid End Pumps:

Inlet and outlet valves 1/8" compression style connection: for use with 1/8" tubing.

Other connections available on request.

### Connectivity

Our Optos pump can be controlled with an analog signal (0-5V, 4-20mA) or via an RS232 interface through any terminal emulation software. High- and low-pressure limits can only be monitored when the Optos Series pump is fitted with the optional pulse damper/ transducer.

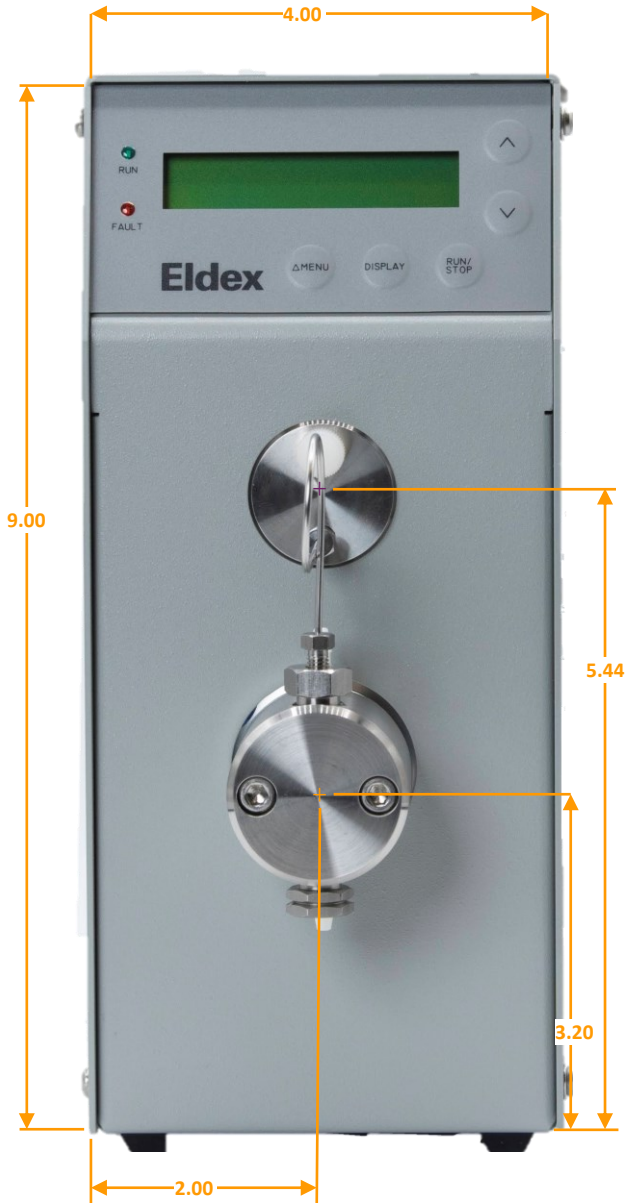
### High Temperature Dosing

It is possible to pump fluids which are at elevated temperatures above 150°C. Although the reaction of specific fluids at elevated temperatures to the wetted parts may vary, it is usually the plastic materials in the liquid end which will be of concern. Generally, the CTFE (Kel-F) seal maintains integrity at temperatures up to 200°C. The PTFE piston seal material is generally good to 260°C. For high temperature applications we offer Ceramic/PEEK check valves.

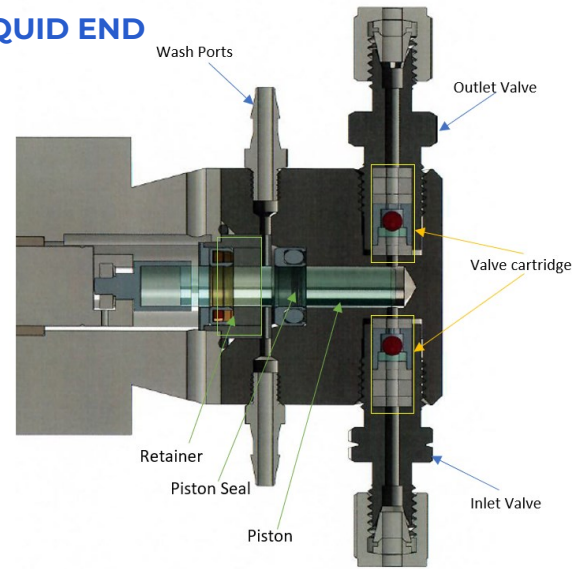
If you don't see what you are looking for, please reach out. Eldex engineers are always happy to answer systems questions to make sure you have the best information possible when building your next fluidics system.

## Optos Series Pumps

Optos pumps can be controlled remotely via an analog signal (either 4-20 mA or 0-5 VDC). If you wish to operate the Optos pump remotely using one of the available analog signals, you need to adjust pump menu settings (operating via RS232 does not require any setup).

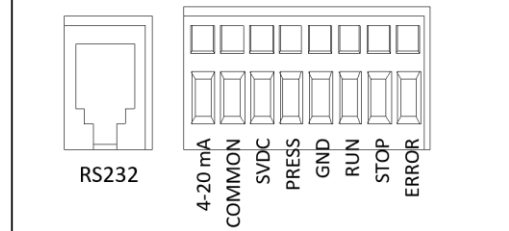


### LIQUID END



### REMOTE CONTROL OPTIONS

Remote control via analog or RS232



### Electrical Specifications

<b>Voltage:</b>	100-230VAC (+/- 10%)
<b>Cycle:</b>	50/60Hz
<b>VA:</b>	80
<b>Phase:</b>	1
<b>Motor:</b>	24 Volt
<b>Certifications:</b>	UKCA, CE



For the valves to operate effectively, a pressure differential of at least 25 psi is required on the outlet side of the pump.

Spare part list is available on our website <https://www.eldex.com/products/>. Select an Optos Model to see list of required spare parts.