

LC 6000

Specification sheet

SCION 6100 PUMP

Dimensions and weights

Height:	140 mm (5.5 in.)
Width:	340 mm (13.4 in.)
Depth:	440 mm (17.3 in.)
Weight*:	16 kg (35.3 lb)
Power Supply:	24VDC, 4.0A (max)
Power Consumption:	96W

Solvent Delivery System

Dual plunger reciprocating pump system

Wetted Part Material:	Stainless steel 316, ruby, sapphire, zirconia, PTFE, Carbon PTFE, PEEK, Vespel®
Solvent Compression Calibration:	Real time feedback
Pressure:	60 MPa (0.001 - 2.500 mL/min) 30 MPa (2.500 - 5.000 mL/min)
Settable Pressure Limiter Range:	0.0 - 60.0 MPa
Settable Flow Range:	0.001 - 5.000 mL/min
Recommended Flow Range:	0.010 - 2.500 mL/min

Data

Flow Rate Accuracy:	Measured under constant ambient temperature of 20 °C, distilled water, solvent delivery pressure 30MPa ±2 µL (0.010 - 0.100 mL/min) ±1 % (0.101 - 2.500 mL/min)
Flow Rate Precision:	RSD <0.05%
Pressure Indication Accuracy:	±5 %

Instrument Status

LED Status:	See Table 1
Chemical compatibility (limited solvent):	See Table 2

Table 1: LED State for Degassing Unit

No.	LED Status	Vacuum Pump State
1.	Orange – Blinking	Power On – Running
2.	Green – Blinking	Vacuum degree reached the upper limit of the control range
3.	Green – Solid	Vacuum degree reached a setting control point
4.	Orange – Solid	Error – vacuum pump has stopped



Note: Solvents described in Table 2 may pass through the degassing unit, it has some restrictions. In particular, HFIP, hydrofluoric solvents, perfluorinated solvents and freons cannot be used. (Hexane can be used with the 6-channel degassing unit).

Table 2: Mobile phase compatibility

No.	Solvent	Remarks
1.	Acid	High concentration > 1 mol/L – corrodes chamber
2.	Alkali	High concentration > 1 mol/L – corrodes chamber
3.	Salts	Salts and a high buffer solution require a wash with distilled water to reduce salt deposition as it may cause damage to the instrument
4.	Buffer Solution	Salts and a high buffer solution require a wash with distilled water to reduce salt deposition as it may cause damage to the instrument

Communication

Communication: Serial RS-422

External I/O:

- i) RS-422
 - (a) BUSY OUT
 - (b) ERROR IN/OUT
 - (c) GRADIENT START IN
- ii) Terminals on rear side:
 - (a) EVENT1 - 4 (Limit out)
 - (b) PUMP ON IN
 - (c) PUMP OFF IN
 - (d) PRESS OUT

Options

Low Pressure Gradient Unit

Mixture:	Quaternary Pump; four solvents
System:	Solenoid valve control
Gradient:	Linear, stepwise
Gradient Precision:	<0.15%
Settable Mixing Ratio:	0-100% (1% step)
Composition Accuracy:	±5%
Recommended Flow Range:	0.04-1.8mL/min <0.4mL/min with semi micro mixer
Number of Stored Programmes:	9
Maximum Program Time:	600mins
Programmable Items:	a) Time b) Flow Rate c) Composition Rate d) Event Timer Output e) Stopping of Solvent Delivery f) Buzzer

Six-Channel Degassing Unit

Flow Path:	6 (Pump: 4 flow paths; Autosampler: 2 flow paths)
Max Flow Rate:	5.0 mL/min
Recommended Flow Rate:	<3.0 mL/min
Chamber Volume (480 µL, inlet tube not included)	
Max Pressure:	0.2 MPa* Flow path in a degassing unit should always maintain constant negative pressure.
Wetted Part Material:	Teflon® AF, PEEK, FEP, PPS (glass included).

Instrument Status

Degasser pressure sensor error

Auto Purge Valve Unit

Optional valve for purging automatically

Max pressure:	60MPa
Settable Flow Range:	0.500-5.0mL/min
Settable Time:	1-30 min
Wetted Materials:	Stainless Steel Stator and Steel Rotor Seal*

*Vespel® is used in the auto purge valve. Avoid using strong acids or bases, as these may cause corrosion.

Plunger Wash Pump

Flow Rate:	1mL/min
Delivering Solvent:	Distilled water only
Max Pressure:	65kPa

Dynamic Mixer

Max Pressure:	40kPa
Mixer Volume:	2000µL
Mixing Method:	Stirring Bar
Recommended Flow Rate:	<2.0mL/min

Conventional Mixer

Max Pressure:	60 MPa
Mixer Volume:	700 µL
Recommended Flow Rate:	0.4 - 1.8 mL/min

Semi Micro Mixer

Max Pressure:	60 MPa
Mixer Volume:	200 µL
Recommended Flow Rate:	< 0.4 mL/min

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