LIQUID INJECTION SYSTEM (LIS)

Automated Liquid Feeding In Shake Flasks

Technical Specifications

Input Voltage 5 VDC ± 5%

Height (Without Mounting System) approx. 74 mm

Additional Height on Shake Flask approx. 70 mm

Operating Temperature

Operating temperature 15 – 45 °C Charging temperature 15 – 40 °C

Battery (built-in)

Type Li-Ion Capacity 600 mAh

Runtime when fully charged¹ approx. 1 week Charging time approx. 3 h

Charging source Standard USB port that can source 500mA @ 5V

Radio

Frequency 2.4 GHz
Range² up to 30 m

Pump Flow Rate max. 1 mL/min

Cartridge

Sterilization Ethylene Oxide (EtO)
Required flask type Straight neck (no brim)
Required flask outside diameter 38 mm (± 0.3 mm)

Minimum flask inside diameter 33 mm

² Dependent on environment



Dependent on feeding profile

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Recommended Operating Conditions

Temperature 10 – 45 °C

Humidity (Relative) 0 – 80% (non-condensing)

Filling Volume Recommended 3 - 20 mL

Maximum¹ 25 mL

Maximum Shaking Speeds², ³

Shaking diameter ≤ 2.5 cm

100 – 125 mL shake flasks	250 rpm
250 – 300 mL shake flasks	300 rpm
500 – 2000 mL shake flasks	250 rpm

Shaking diameter ≥ 5.0 cm

100 – 300 mL shake flasks	250 rpm
00 – 1000 mL shake flasks	225 rpm
2000 mL shake flasks	200 rpm

¹Dependent on shaking speed and diameter

²Values may differ when sticky mats or other adhesive mats are used or other addons are used (e.g., the Cell Growth Quantifier CGQ by SBI). Please carefully determine acceptable shaking speeds with your setup.



²Tested with factory new Infors/Lauber spring clamps (full spring strength, not warped)