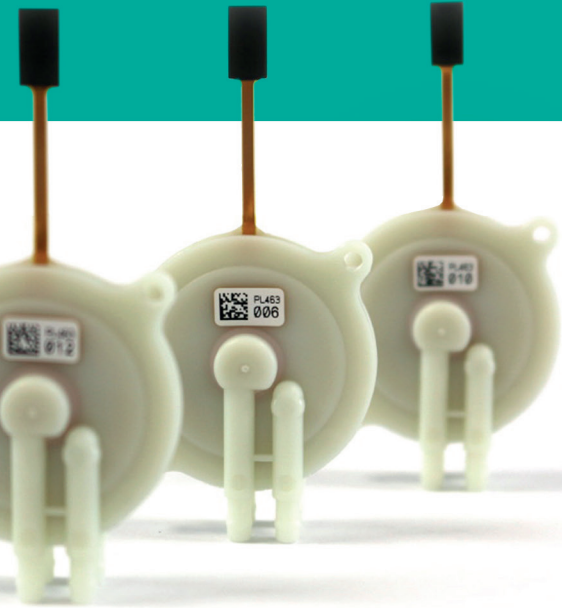


BL SERIES

BL-S2-012 / BL-S2-030 / BL-P2-013 / BL-P2-031



Our entry-level BL Series strikes a balance between performance and cost. In common with all Disc Pumps, BL Series devices combine silent operation, pulsation-free flow, millisecond response and high precision in a compact form factor.

Key Features

- Exceptional pressure and flow
- Silent, vibration-free operation
- Ultrafast millisecond response
- Lightweight, compact form
- High-precision controllability
- True pulsation-free flow
- Infinite turn-down ratio
- Maintenance free
- RoHS compliant

Typical Applications

- Blood pressure monitoring
- Capnography
- Compression therapy
- Wound care
- Point-of-Care diagnostics
- Microfluidics
- Liquid handling
- Gas detection and analysis
- Leak detection

Model ^{1,2}	Configuration	Pressure	Flow	Vacuum
BL-S2-012	Series	> 300 mbar	> 0.50 L/min	> 200 mbar
BL-S2-030	Series	> 270 mbar	> 0.85 L/min	> 180 mbar
BL-P2-013	Parallel	> 170 mbar	> 0.95 L/min	> 170 mbar
BL-P2-031	Parallel	> 160 mbar	> 1.65 L/min	> 160 mbar

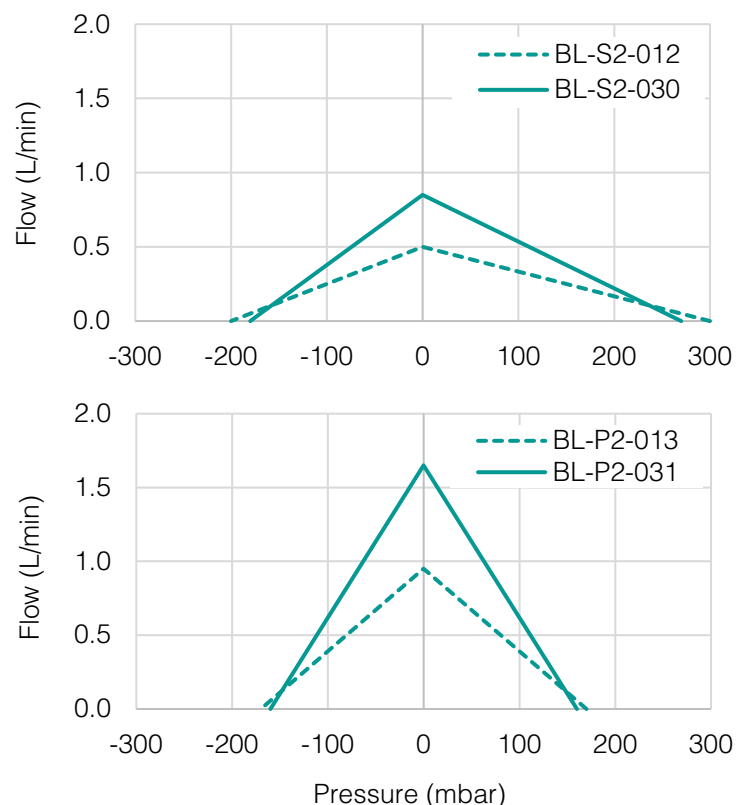
Operational

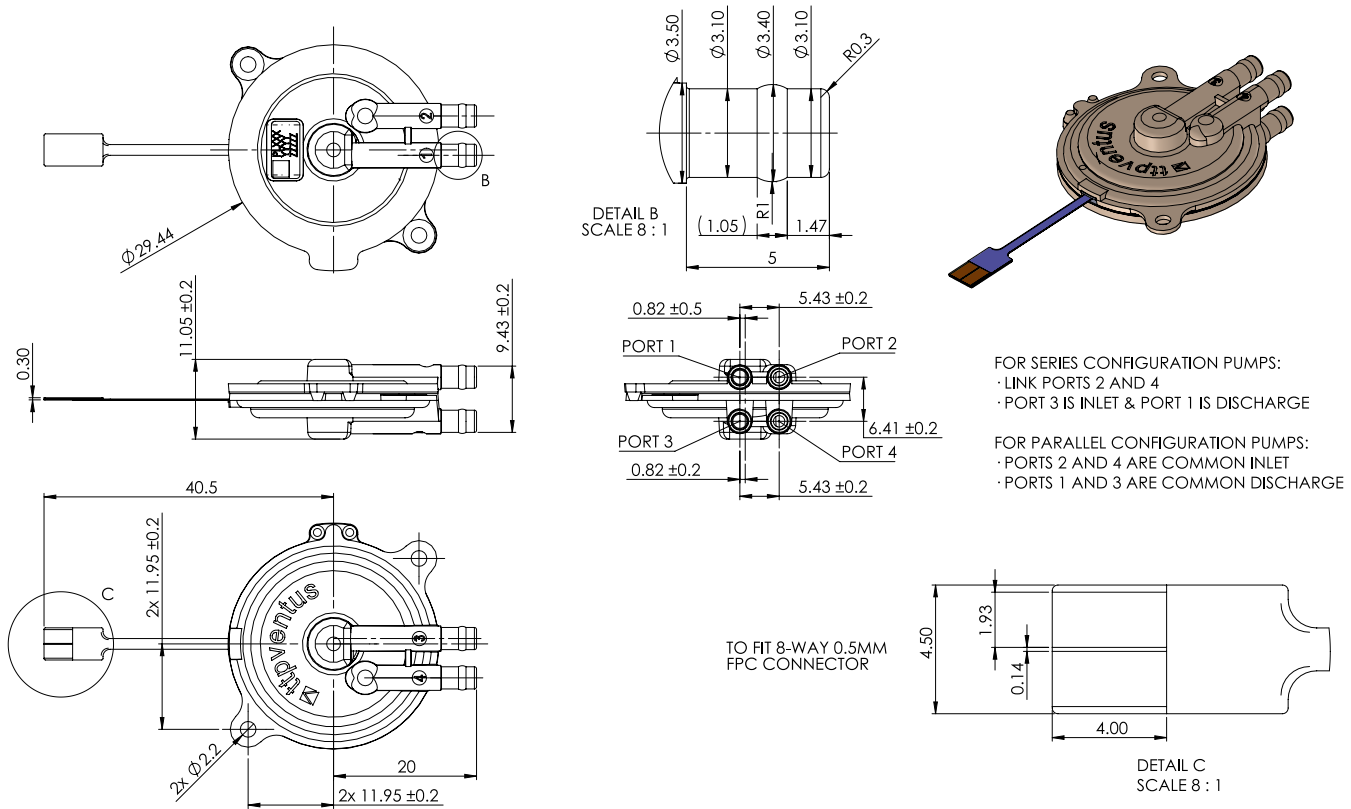
Temperature range	5 to 40 C
Humidity range ³	0 to 95% RH
Pumping medium ⁴	Air
Noise level ⁵	< 10 dB
Control precision ⁶	< 0.1%
Turn-down ratio ⁷	Infinite

Mechanical

Size	29 dia. x 11 mm
Weight	5 g

TTP Ventus is actively developing higher performance pump designs; if the performance listed above is not sufficient for your application, please contact us to discuss whether we have an alternative design that meets your requirements.





FOR SERIES CONFIGURATION PUMPS:
 · LINK PORTS 2 AND 4
 · PORT 3 IS INLET & PORT 1 IS DISCHARGE

FOR PARALLEL CONFIGURATION PUMPS:
 · PORTS 2 AND 4 ARE COMMON INLET
 · PORTS 1 AND 3 ARE COMMON DISCHARGE

MOUNTING GUIDANCE

MOUNT IN ANY ORIENTATION USING COMPLIANT MATERIALS. IF USING MOUNTING EYES ON PUMP BODY, IT IS RECOMMENDED TO USE A COMPLIANT O-RING (E.G. 1.42 ID X 1.78 CS NITRILE 70 SHORE A), NYLON M2 BOLT AND THREADED MOUNTING STUD (E.G. WURTH ELEKTRONIK 9774050243R).

ALL DIMS MM

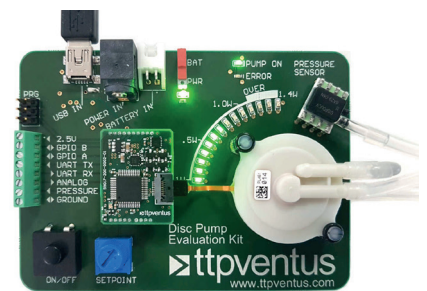
Electrical

- Electronic driver is required to identify and track optimum drive frequency.
- Driver provides:
 - AC drive waveform of 20-22 kHz at 0 to 40 V peak.
 - 0 to 1 W into pump (continuous).
- Typical driver implementation requires 3.7 to 5 V supply.
- Efficiency depends on specific implementation.
- Evaluation PCB / systems available.
- Reference circuits and firmware available to support product integration.
- See support materials on website or contact support@ttpventus.com to discuss.

Disc Pump Evaluation Kit: EK-M-015

Our evaluation kits come with everything necessary to start testing, including pump, electronics and PC application for configuration and control. The evaluation kits are suitable for laboratory testing, proof of concept and product prototyping. [Contact us to request a quotation.](#)

See our [support pages](#) for a "Getting Started" guide for more information and a video of the evaluation kit.



Notes

1. Continuous operation at 1 W drive power (into pump).
2. Performance data presented collected under Normal Temperature and Pressure and ambient humidity conditions. Performance under other conditions may vary. In particular, note that performance decreases with altitude and may decrease at elevated temperature.
3. Non-condensing; ingress of liquid-phase water will halt pump operation.
4. Liquid may be pumped indirectly in a "pressure-driven flow" / "air displacement" regime.
5. Per ISO 226:2003 and related studies; 30 cm equivalent measurement distance.
6. Pressure and flow. Requires pump under closed-loop control with suitable sensor and drive electronics.
7. Disc Pump's piezoelectric drive actuator has no stall speed. The pump can be controlled continuously between 0 and 100% maximum output.

The information presented herein is based on engineering data and test results of nominal preliminary units. It is believed to be accurate and reliable and is offered as an aid to guide in the selection of TTP Ventus products. It is the responsibility of the customer to determine the suitability of the product for the intended use and the customer assumes all risk and liability whatsoever in connection therewith. TTP Ventus does not warrant, guarantee or assume any obligation or liability in connection with this information. Product specifications may change without notice.