

OEM PISTON PUMPS

PBC[®]

Improved Performance, Long Life and reduced cost.

The PBC[®] is a new Piston Pump generation with improved Performance, Long Life and reduced cost of ownership over competing products.

The PBC[®] automates pipetting, diluting and dispensing using a variety of piston sizes. These pumps boast a guaranteed life of more than 15 million cycles without any decreasing of precision and accuracy. They support aggressive and abrasive liquids (NaOH...).

The PBC[®] pumps do not require syringes.

Communications

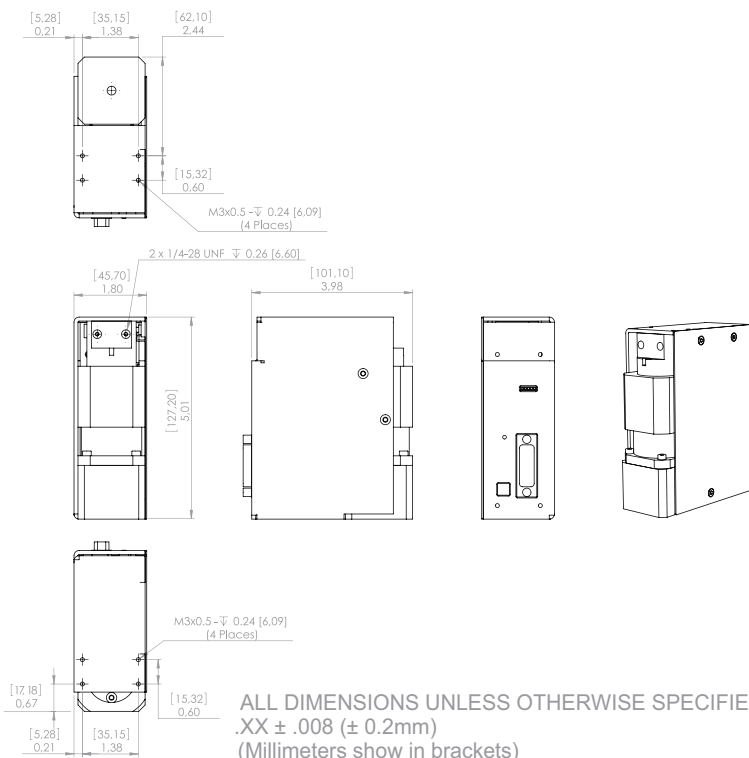
The PBC[®] communicates through RS-232, RS-485 and Controlled Area Network (CAN) interface (RS-232, RS 485 and CAN are Cavro™ compatible).

Multi-pump communication is through RS-485 or CAN interface. 15 pumps can be addressed through a single communication BUS.

Maintenance

The PBC[®] is a Maintenance Free Device.

The PBC[®] has a 2 year warranty.



Maintenance Free Device

No syringe

Fully Cavro™ Compatible

More functions (Rinsing)

Long Life Piston and Seal

Reduced cost

2 year warranty

PBC®: Specifications

Piston Drive

Principle	Linear actuator with home sensor flag.
Travel	12,8 mm
Drive	Stepper motor (optional encoder for positioning feedback)
Piston	Diameter from 3 mm (50 µL) to 14mm (2 mL)
Material	Piston: Stainless Steel 316L, PEEK, Ceramic or Sapphire

Manifold

Material	PMMA, KELF, PEEK, PCTFE Polypropylene, PETP or PSU
Standard Fittings	1/4-28 or M6 tubing

Rod Seal

Material	UHMWPE
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Valve

Material	Body : PPS or PEEK Seal : EPDM or Simriz
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Firmware

Programmable ramps, cut-off velocity, backlash compensation, piston speeds, delays and loops, change speeds on the fly, terminate moves, diagnostics, absolute or relative positions, EEPROM

Dimensions

Height	127,2 mm (5.0 in.)
Width	45,7 mm (1.8 in.)
Depth	101,1 mm (3.98 in.)

Power Requirements

Supply Voltage	24 VDC ± 10%
Current	Peak: 1.5 Amps

Resolution

3.000 increments to 6.000 increments when using half-step-mode

Speed

0.3 second - 20 minutes / full stroke depending upon piston size and tubing.
Speed can reach 20000 1/2 Steps per second

Precision

<0.05% CV within run at full stroke using deionized water (for 250 µL Piston Pump and above)
<0.1% CV within run at full stroke using deionized water (for 50 and 100 µL Piston Pumps)

Accuracy

<1.0% deviation from expected at full stroke

Interface

Type	RS-232, RS-485, and CAN BUS
Baud Rate	RS-232, RS-485: 9.600 or 38.400 bauds CAN BUS: 100kbauds or 125kbauds
Format	Data Bits : 8 Parity : None Stop Bits : 1 Half Duplex
Addressing	Up to 15 pumps can be addressed individually

Communications

Data terminal and OEM protocol

Environmental

Operating range	Temperature : 15° - 40°C (59° - 104°F) Humidity : 20 - 95% RH at 40°C (59° - 104°F) non-condensing
Storage range	Temperature : 5° - 45°C (41° - 113°F) Humidity : 10 - 95% RH at 40°C (104°F) non-condensing

Ordering Information

PBC® RS-232/RS-485/CAN

	50 µL	100 µL	250 µL	500 µL	1.0 mL	2.0 mL
3-Port, 1/4-28	PBC-050-1-H-L	PBC-100-1-H-L	PBC-250-1-H-L	PBC-500-1-H-L	PBC-1000-1-H-L	PBC-2000-1-H-L
3-Port, M6	PBC-050-2-H-L	PBC-100-2-H-L	PBC-250-2-H-L	PBC-500-2-H-L	PBC-1000-2-H-L	PBC-2000-2-H-L

H=1 : Manifold material : PSU
H=2 : Manifold material : PMMA
H=3 : Manifold material : PETP
H=4 : Manifold material : PEEK
H=5 : Manifold material : KELF
H=6 : Manifold material : PCTFE
H=7 : Manifold material : Polypropylene

L=1 : Piston material : Stainless steel 316L
L=2 : Piston material : Zirconia Ceramic
L=3 : Piston material : Sapphire
L=4 : Piston material : PEEK

Cavro™ is a trademark of Tecan Systems.



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