

TRICONTINENT

CX-Series

SYRINGE PUMPS

6 cm stroke
pump with
exceptional
performance
in a compact
design



www.tricontinent.com

YOUR BENEFITS

SUPERIOR ACCURACY & PRECISION

CX-Series syringe pumps provide extremely high accuracy and precision for low volume dispensing and pipetting.

FLOW STABILITY

The pump is capable of running at a high resolution of 384,000 micro steps/full stroke allowing for enhanced flow rate accuracy. Ideal solution for applications requiring low flow with low pulsation.

LONG-LIFE

The robust drive mechanism has been life-tested and lasts several million cycles with no maintenance required throughout its life. In addition our rotary shear valves showed in lifetime tests up to 24 times the life of competing valves.

FLEXIBLE CONFIGURATION & CUSTOM DESIGN

TriContinent offers a wide range of different syringe sizes and valve options with flexible configurations.

We are also able to offer custom solutions to accommodate customer specific designs and configurations.

COMPACT SIZE

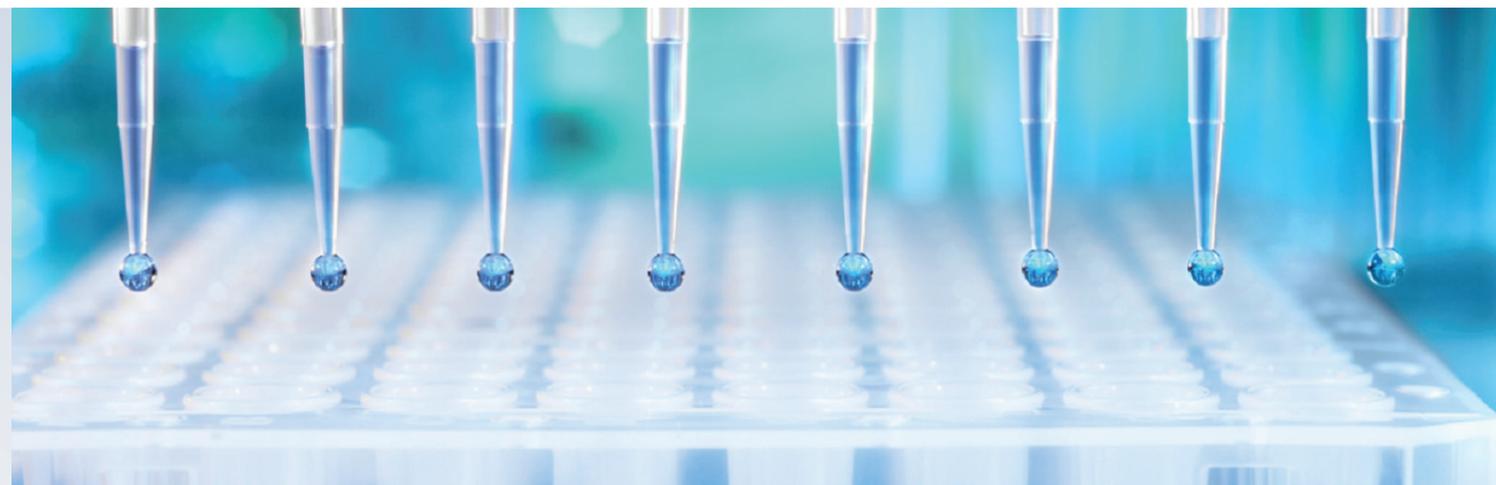
Due to its compact size, the CX-Series pump fits easily into your instrument while providing exceptional liquid handling performance.

ENCODER

Utilizes a high resolution linear encoder for fine positional feedback and lost step detection.

SEAMLESS REPLACEMENT & COMPATIBILITY

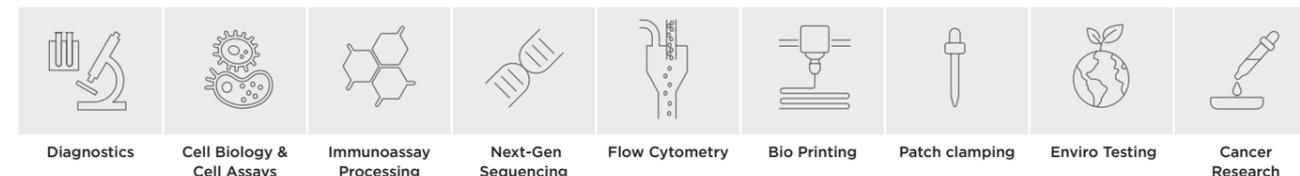
The CX-Series syringe pump is a seamless replacement for industry standard pumps using the Cavo[®] protocol as well as mounting configurations used by other syringe pump designs, thereby eliminating expensive and time consuming re-development.



YOUR PARTNER FOR LIQUID HANDLING APPLICATIONS

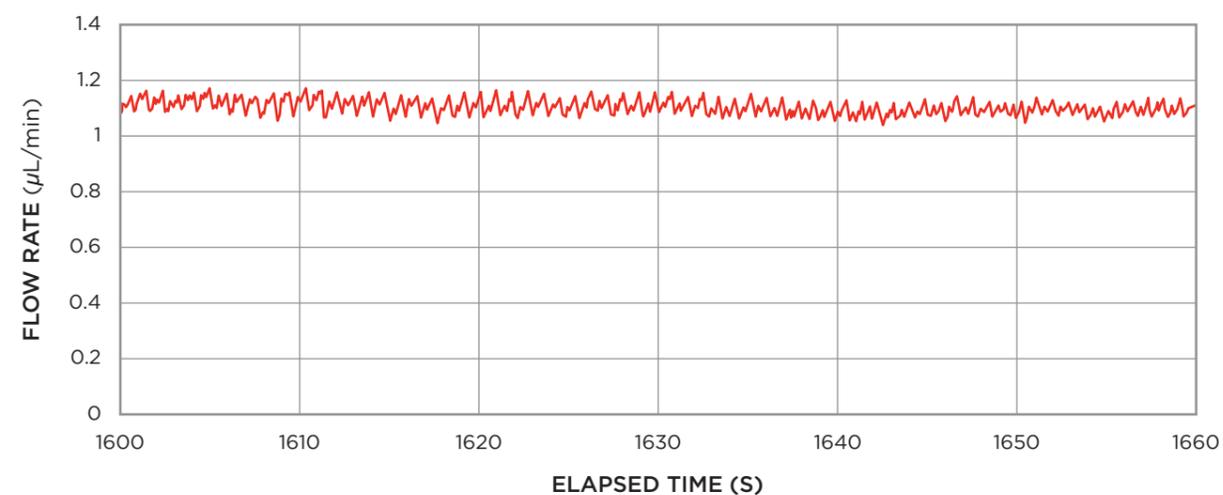
TriContinent is trusted by leading manufacturers of IVD Devices, Life Science Instrument manufacturers and Biotechnology companies. We have earned a reputation for the highest quality in the industry and quality is woven through every part of the manufacturing process. TriContinent meets the stringent and encompassing requirements for ISO 13485 Certification for the design and manufacture of Medical Devices. Requirements govern systems, planning, management, resources, product realization, and quality control procedures.

The CX-Series offers a wide flow range and low pulsation capability to address liquid handling needs for diagnostic, analytical and bioprocessing applications:



Flow Stability over time at 1 $\mu\text{L}/\text{min}$ flow rate

CX48000, 100 μL syringe



Flow stability at CV=2.29% over a 60 second time period.



PRODUCT SPECIFICATION

	CX6000 Syringe Pump	CX48000 Syringe Pump
Stroke Speed	1.2 seconds to 200 minutes per stroke (800 minutes in microstep mode)	4.2 seconds to 800 minutes per stroke (6,400 minutes in microstep mode)
Step Resolution	Standard mode 6,000 steps Hi-Res mode 48,000 steps	Standard mode 48,000 steps Hi-Res mode 384,000 steps
Drive Design	Direct drive stepper motor/leadscrew with 60 mm of travel	Direct drive stepper motor/leadscrew with 60 mm of travel
Valve Options	120° 3-port, 90° 4-port, T-valve, 90° 3-Way Distribution, 6-Way Distribution Valve Body materials PEEK or PCTFE, Rotary Plug PTFE or UHMWPE	
Interface Type	RS232, RS485 or CAN	
Communication Rates	RS232/RS485 9600 or 38400 baud CAN - 100K, 125K, 250K, 500K, 1M bps	
Format (RS232/RS485)	Data Bits - 8, Parity - None, Stop Bit - 1 Half Duplex, Data Terminal and OEM protocols	
Operating Temperature and Humidity	10°C to 40°C (50°F to 104°F) and 20% to 80% RH at 40°C (104°F), non-condensing	
Non-Operating Temperature and Humidity	25°C to 60°C (-13°F to 140°F) and 20% to 80% RH at 40°C (104°F), non-condensing	
Media Temperature	15°C to 40°C (59°F to 104°F)	

FUNCTIONAL PARAMETERS

Imprecision (full stroke)	< 0.05% CV
Inaccuracy (full stroke)	< 0.50% syringe volume
Power Requirement	24 VDC ± 10%
Power Rating	≤ 1.5 Amp (peak)

CONFIGURED OPTIONS

Fluid Contact Syringe Material	Borosilicate Glass and UHMWPE or PTFE (seal) - Pressures to 80 PSI
Fluid Contact Valve Material	PCTFE or PEEK (housing) and PTFE or UHMWPE (plug) - Pressures to 100 PSI
Syringe Sizes	50 µL, 100 µL, 250 µL, 500 µL, 1 mL, 2.5 mL, 5 mL, 10 mL, 25 mL

CX6000 Pumps

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10240	CX6000 with 3PY PEEK/UHMWPE
10244	CX6000 with 4P90 PEEK/UHMWPE
10248	CX6000 with 3WD PCTFE/UHMWPE
10256	CX6000 no valve

CX48000 Pumps

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10260	CX48000 with 3PY PEEK/UHMWPE
10264	CX48000 with 4P90 PEEK/UHMWPE
10268	CX48000 with 3WD PCTFE/UHMWPE
10276	CX48000 no valve

Replacement Valves

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10020	120° 3-port, ¼ - 28 (PEEK/UHMWPE)
10021	120° 3-port, ¼ - 28 (PEEK/PTFE)
10022	120° 3-port, ¼ - 28 (PCTFE/UHMWPE)
10023	120° 3-port, ¼ - 28 (PCTFE/PTFE)
10040	90° 4-port, ¼ - 28 (PEEK/UHMWPE)
10041	90° 4-port, ¼ - 28 (PEEK/PTFE)
10042	90° 4-port, ¼ - 28 (PCTFE/UHMWPE)
10043	90° 4-port, ¼ - 28 (PCTFE/PTFE)
10062	Distribution 4-port, ¼ - 28 (PCTFE/UHMWPE)
10063	Distribution 4-port, ¼ - 28 (PCTFE/PTFE)
10115	T 3-Port, ¼ - 28 (PEEK/UHMWPE)
10125	T 4-Port, ¼ - 28 (PEEK/UHMWPE)
10106*	Distribution 6-way (PCTFE/UHMWPE)

* Requires valve adapter ring. Order number: 7809-37



Syringes - 6 cm Stroke (UHMWPE)

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10350	50µL (UHMWPE)
10351	100 µL (UHMWPE)
10352	250 µL (UHMWPE)
10353	500 µL (UHMWPE)
10354	1 mL (UHMWPE)
10355	2.5 mL (UHMWPE)
10356	5 mL (UHMWPE)
10357	10 mL (UHMWPE)

Syringes - 6 cm Stroke (PTFE)

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10360	50 µL (PTFE)
10361	100 µL (PTFE)
10362	250 µL (PTFE)
10363	500 µL (PTFE)
10364	1 mL (PTFE)
10365	2.5 mL (PTFE)
10366	5 mL (PTFE)
10367	10 mL (PTFE)
10368	25 mL (PTFE)

Accessories

ORDERING INFORMATION	
CATALOG #	DESCRIPTION
10151	Evaluation Kit for use with all C-Series and CX-Series Pumps. Includes: Power Supply, Tubing Kit, USB Converter/Cable Assembly and Quick Start Guide
10390	XLP Mounting Adapter Bracket Kit
7809-33	Valve adapter ring, Standard. 120° 3-port, 90° 4-port, T 3-Port, T 4-Port, 3-Way Distribution Valves
7809-37	Valve adapter ring MP (6-Way Distribution Valve)
10171	Cable, RS232 to pump
10176	Evaluation Cable, RS232 and Bench to One C/MC-Series Device
10177	Evaluation Cable, USB to One C/MC-Series Device
10178	Evaluation Cable, XYZ to One C/MC-Series Device
10179	Cable, Daisy Chain Jumper
8152-09	Universal Power Supply
8246-71	Cable, Interface Converter to Pump
8698-02	USB/RS485 Converter
8698-03	Cable, USB-A/USB-B, 2-meter

GENERAL CONTACT

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