

Fluid metering



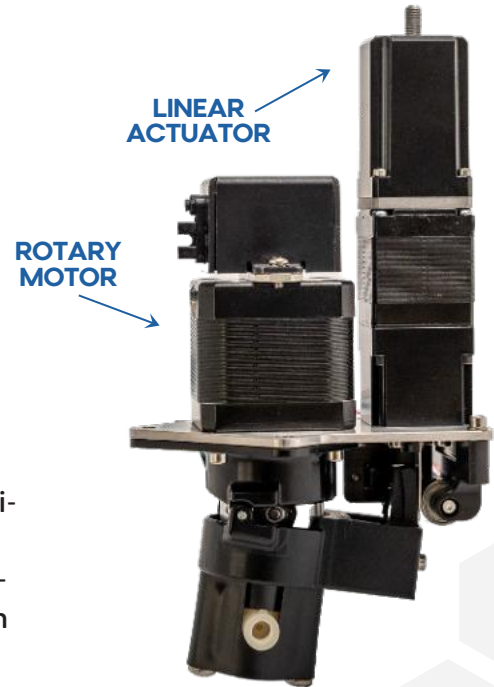
VARIABLE DISPENSE PUMP

Compact Variable Dispense for Precision Fluid Control

The FENYX® Variable Dispense Pump delivers compact, high-precision fluid control for life science and microfluidic applications. Built on CeramPump® technology with a single moving part, it enables accurate, repeatable microliter-scale dispensing, priming, and flushing in one integrated solution.

Designed for Compact System Integration

Engineered for feasibility studies and OEM integration, the FENYX Pump supports precise movement of liquids and air within space-constrained systems. Its compact design, chemically inert ceramic components, and simplified fluidic architecture enable a streamlined path from prototype to production. Designed for long service life, FENYX Pumps often match or exceed the lifetime of the instrument.



Patented

KEY BENEFITS

Dynamic Dispense Volume Control

- Enables dynamic adjustment of dispense volume through software, eliminating manual hardware changes and supporting flexible workflows.

Non-Contact Dispensing

- Enables non-contact dispensing, eliminating tip contact with the target vessel to reduce contamination risk and support sterile workflows.

Consistent Flow Under Changing Conditions

- Maintains stable, flow-driven performance even as resistance or back pressure varies within microfluidic channels.

Durable, Chemically Inert Construction

- Utilizes sapphire-hard ceramic components that resist wear, corrosion, and chemical degradation for long service life.

Simplified Fluidic Architecture

- Provides controlled flow without the need for external pressure controllers or complex valve systems, reducing system complexity and component count.

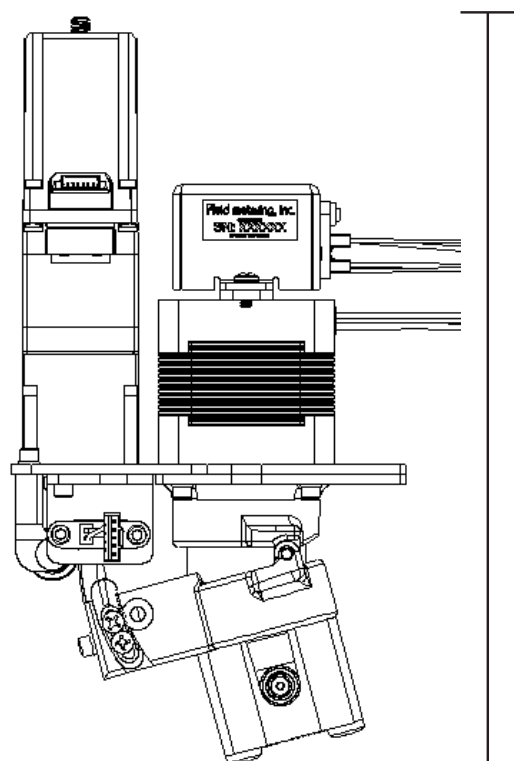
OEM Engineering Support

We offer support for dispense volume, flow rate, pressure, material compatibility, system integration, and configuration optimization. Contact us to discuss your project and explore a solution designed for your specific needs.



Fluid Metering's facility is certified to the ISO 9001:2015 international standard. Product components are manufactured to meet EU RoHS and REACH compliance requirements.

PUMP SPECIFICATIONS



3.8" Wide

7.1" Tall

WETTED MATERIAL OPTIONS:

Ceramics: Alumina, Zirconia

Pump Housing: PVDF, ETFE, Polypropylene

Seals: PTFE, FKM, FFKM, Rulon AR, UHMW-PE

PORT OPTIONS:

1/4-28 UNF Threaded Ports,

Barb Fittings (1/8" - 1/4" Tubing ID),

1/4" Compression Nuts

DISPENSE VOLUME¹:

FOR CALIBRATIONS:

Between 2 - 10 μ L

Accuracy of $\pm 5\%$

Precision (CV) $\leq 1\%$

>10 - 400 μ L

Accuracy of $\pm 1\%$

Precision (CV) $\leq 0.5\%$

¹ The performance of Fluid Metering pumps may vary based on specific application conditions and individual user setups. We recommend speaking with one of our engineering experts for guidance tailored to your specific needs.

DRIVE MOTOR SPECIFICATIONS

RATED CURRENT:

Rotational: 2.0 A

Linear: 1.0 A

MOTOR FRAME:

Rotational: NEMA 17 (43 mm)

Linear: NEMA 11 (28 mm)

STEP ANGLE:

Rotational & Linear:

1.8° Full Step

MOTOR SPEED:

Rotational: Up to 1000 rpm

Linear: Up to 1900 rpm

MOTOR DIRECTION:

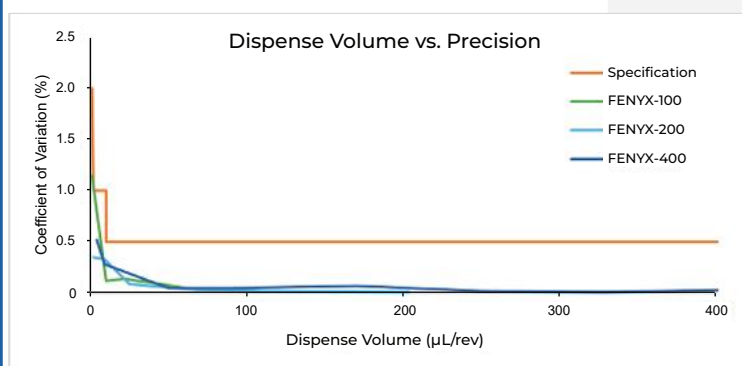
Rotational: Clockwise

Linear: Clockwise & Counterclockwise

OPERATING TEMPERATURE:

0°C to 50°C

	Dispense Volume (μ L/rev)		Flow Rate (mL/min)	
	min	max	1 rpm	1000 rpm
FENYX				
FENYX-100	0.75	110	0.00075	110
FENYX-200	2	200	0.002	200
FENYX-400	4	400	0.004	400



- Maximum standard operating pressure: 30 psig

CUSTOMIZED FLUIDIC SOLUTIONS

Be it a small tweak to existing technology or a full development project, our pumps and dispensers can be customized to accommodate dispense volume, flow rate, temperature, pressure, materials, and more.

Contact Us Today!

Rapid prototyping available within 10 business days*

*Prototype requests are subject to availability of parts and materials. Fluid Metering will confirm availability within 2 business days and provide an estimated shipping date.