Fluid metering

STFQ

MICRO VOLUME ADJUSTABLE DISPLACEMENT DISPENSER PUMP

The STFQ is an advanced miniaturized fluidic system designed to control small volumes of fluid at the microscale level for a broad range of applications. It is currently available in standard drive configurations ranging from 250 µL through 1.25 mL in 1 µL increments. Standard pump head options are available with various sealing options and diameters.

Achieving optimal performance in accuracy and repeatability with innovative design modifications, this product enables the ability to do precision microliter dispensing.

This technology is ideal for OEM life science applications including Diagnostics/IVD, Medical, Biotechnology, and Analytical Instrumentation.

FEATURES & BENEFITS

- CeramPump® technology simplifies fluidic architecture with one moving part in fluid path
- Internal sapphire-hard ceramics are chemically inert, dimensionally stable, and abrasion resistant
- Patented fixed link adjustment mechanism
- Optical sensor for positioning feedback
- Configurable options available
- Minimal pulse for precise control and consistent, repeatable dispense volume
- Reduced shear stress protects delicate samples
- Quiet operation for controlled environments
- Less gas ingress prevents bubble formation
- Flush port options available for continuous flushing
- Maintains 0.5% precision for millions of cycles without maintenance or recalibration

REV-I

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.

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5 Aerial Way, Suite 500, Syosset, NY, 11791
800.223.3388 P: 516.922.6050 E: pumps@fluidmetering.com
www.fluidmetering.com

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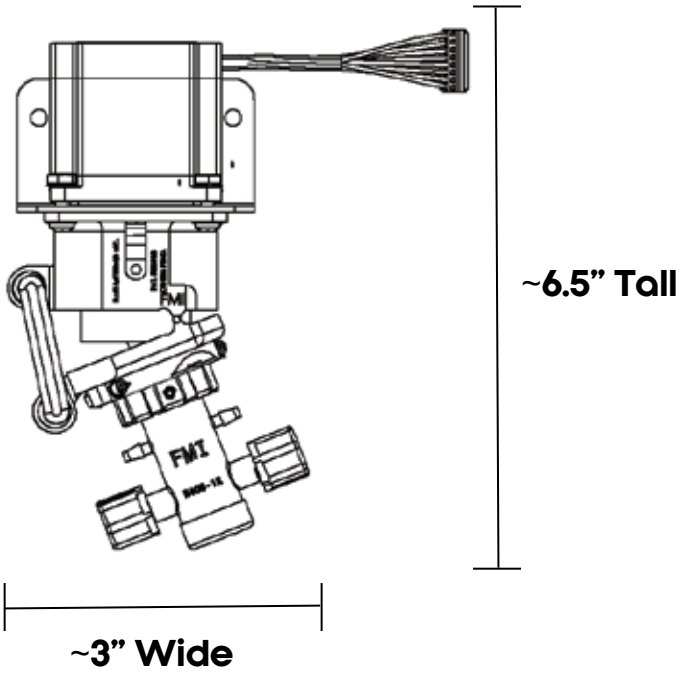
PUMP SPECIFICATIONS



WETTED MATERIAL OPTIONS:
Ceramics: Alumina
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 VOLUME:
For 250 - 1250µL
Accuracy of ± 1%
Precision (CV) ≤ 0.5%

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.*

DRIVE MOTOR SPECIFICATIONS

RATED CURRENT:
Rotational: 2.3A

MOTOR FRAME:
Rotational: NEMA 23 (57mm)

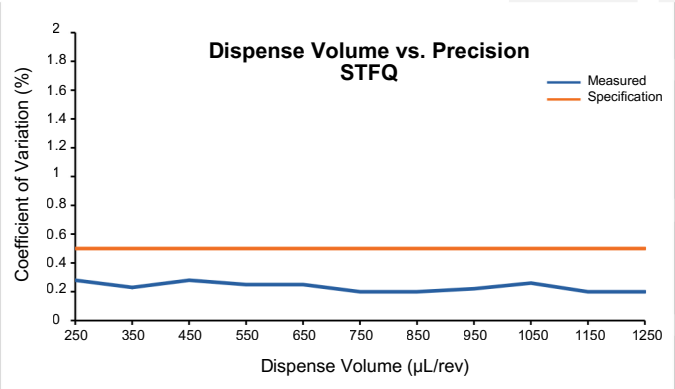
STEP ANGLE:
Rotational: 1.8˚ Full Step

MOTOR SPEED:
Rotational: 1-1000 rpm

MOTOR DIRECTION:
Rotational: Bidirectional, Calibrated Clockwise

OPERATING TEMPERATURE:
0˚C to 50˚C

	Dispense Volume (µL/rev)		Flow Rate (mL/min)		Accuracy, Precision
	min	max	1 rpm	1000 rpm	(%, %)
STFQ-1000	250	1000	0.25	1000	1%, ≤ 0.5%
STFQ-1080	270	1080	0.27	1080	
STFQ-1250	313	1250	0.313	1250	



- Maximum standard operating pressure: 60 psig

[1] The performance of Fluid Metering pumps may vary based on specific application conditions and individual user setups. We recommend consulting with a qualified professional or our technical support team for assistance tailored to your specific needs.

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