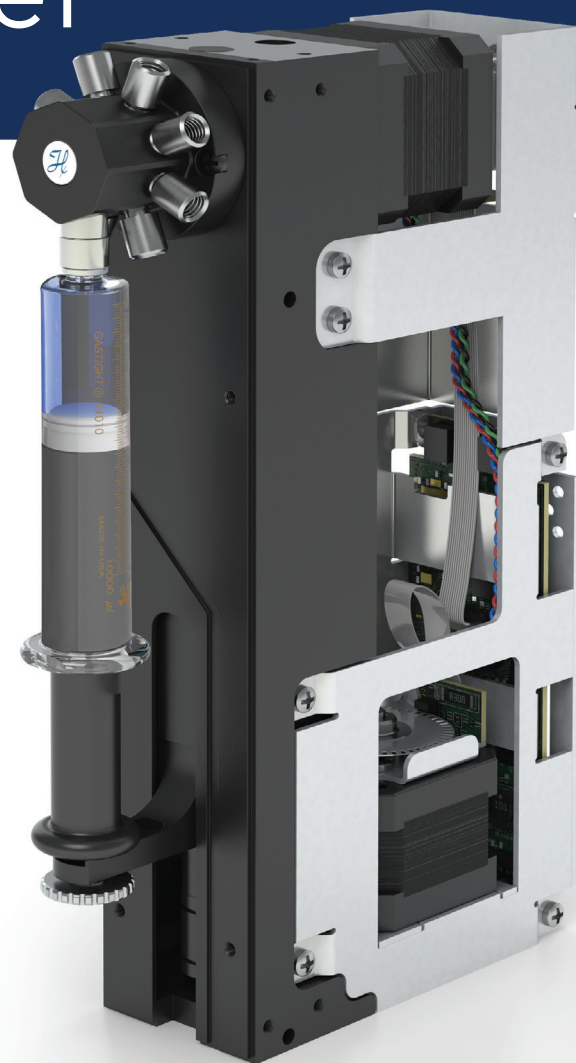


PSD/6 Full-Height Syringe Pump Specification Sheet

A Compact, Full-Height Pump, for Precision Dispensing of Small to Large Volumes

The PSD/6 is Hamilton's 60 mm full-height syringe pump capable of dispensing up to 50 mL in a single stroke, with a maximum dispense time of 16 hours. Compatible with a wide variety of valve and syringe combinations, the PSD/6 can perform all standard liquid handling functions, including dispensing, serial dispensing, and diluting. The pumps are easy to integrate, self-contained syringe drive modules which can be used as a single pump or in a daisy chain of up to 16 pumps.

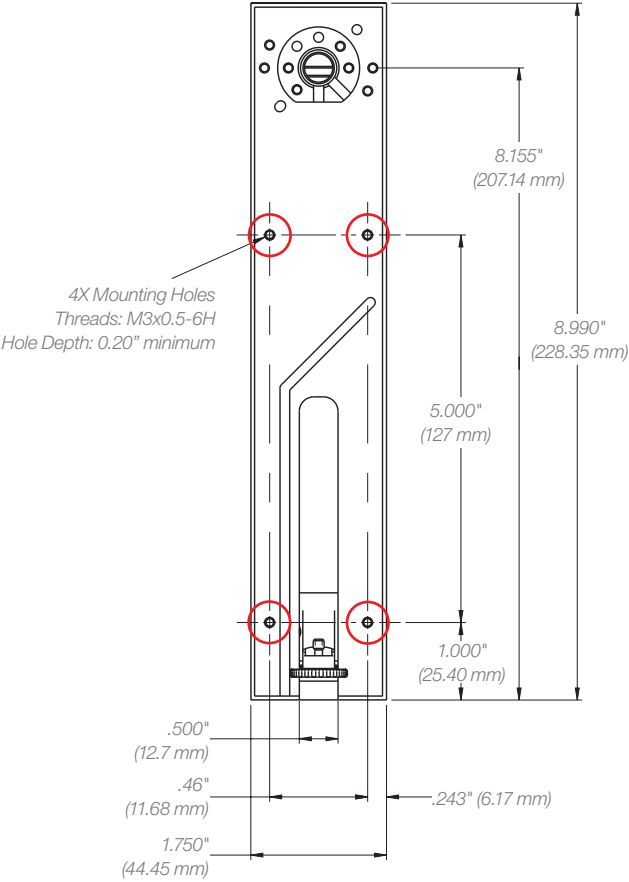
The PSD/6 is a reliable turnkey system to meet the requirements of the most demanding applications. Ensure that your development projects stay on time and on budget with proven technology, engineered to exceed expectations.



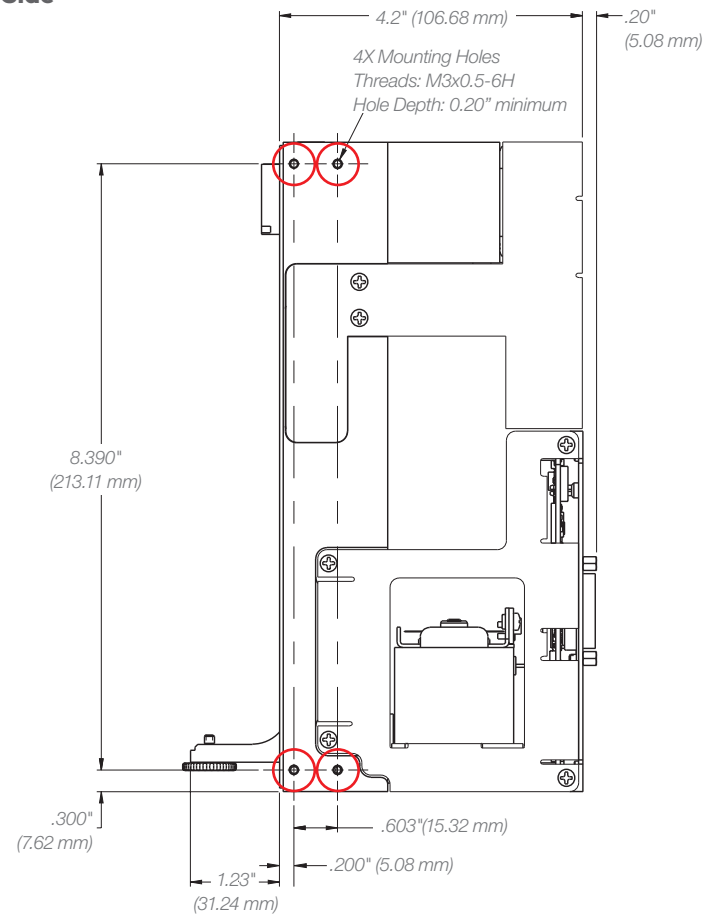
PSD/6 Type	P/N	Max Resolution (μsteps/stroke)	Fastest/Slowest (time/stroke)	Linear Force Capability (lbf)	Valve Torque Capability (in oz)	Size = D x H x W (in)	Weight (lbs)
Standard	63133-01	48,000	2.0 sec / 100 min	20	25	4.19 x 8.99 x 1.75	3.7
Smooth Flow	99199-01	384,000	28.2 sec / 16 hours	20	25	4.19 x 8.99 x 1.75	3.7
High Lift Force	99196-01	109,714	8.1 sec / 228 min	40	25	4.19 x 8.99 x 1.75	3.7
High Valve Torque	99197-01	48,000	2.0 sec / 100 min	20	75	4.99 x 8.99 x 1.75	4.2
High Torque and Lift Force	99198-01	109,714	8.1 sec / 228 min	40	75	4.99 x 8.99 x 1.75	4.2

PSD/6 Product Drawings and Dimensions

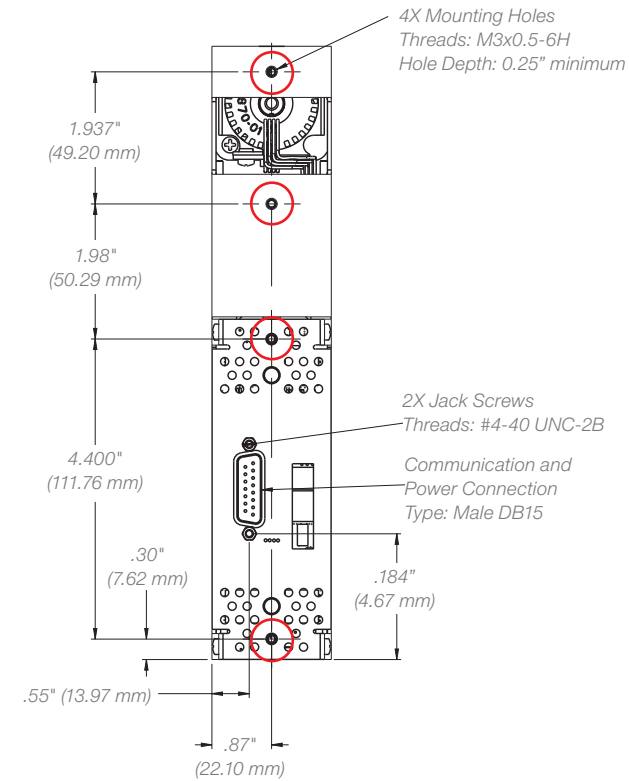
Front



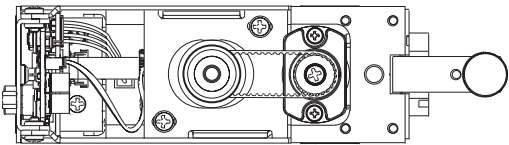
Side



Back



Bottom



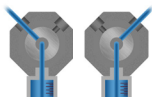
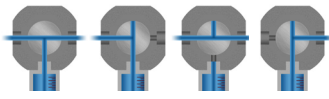
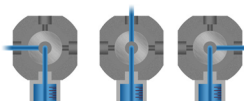
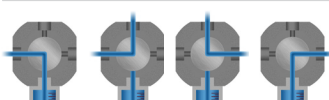
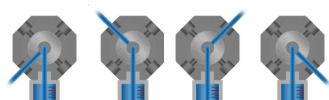
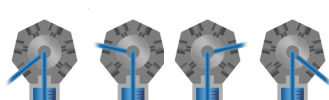
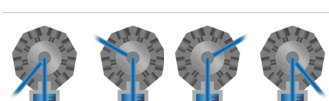
* Contact us for High Valve Torque PSD/6 dimensions.

60 mm Syringes for PSD/6



Volume	Bubble Free Prime (BFP) Termination	Luer Lock (TLL) Termination	
	Standard Life PTFE Plunger Tip	Standard Life PTFE Plunger Tip	Long Life UHMWPE Plunger Tip
10 µL	59000-05	-	-
25 µL	59000-10	80222	-
50 µL	59000-15	80922	8300-15
100 µL	59000-20	81022	8300-20
250 µL	59000-25	81122	8300-25
500 µL	59000-30	81222	8300-30
1.0 mL	59000-35	81320	8300-35
2.5 mL	59000-40	81420	8300-40
5.0 mL	59000-45	81520	8300-45
10 mL	59000-50	81620	8300-50
25 mL	59000-55	82521	-
50 mL	59000-60	85021	-

Valves for PSD/6

	Valve Type	Hamaflon Plug Valves		Ceramic Face-Sealing Valves	
	Fluid Path	TLL	BFP	TLL	BFP
	Y-Block	9537-01 ^A	-	-	-
	Port Diameter / Torque	0.060 in / -		-	
	Y-Valve	99891-01	99891-02	8778-01 ^D	8778-02
	Port Diameter / Torque	0.059 in / 25 in-oz		0.060 in / 25 in-oz	
	3-Port T (3-3)	99892-01	99892-02	8063-01 ^A	8063-02
	Port Diameter / Torque	0.059 in / 25 in-oz		0.060 in / 25 in-oz	
	3-Port Distribution (3-5)	99893-01	99893-02	7991-01 ^A	7991-02
	Port Diameter / Torque	0.059 in / 25 in-oz		0.060 in / 25 in-oz	
	4-Port 90° (4-2)	99894-01	99894-02	9234-01 ^A	9234-02
	Port Diameter / Torque	0.059 in / 25 in-oz		0.060 in / 25 in-oz	
	4-Port Distribution (4-5)	99895-01	99895-02 ^B	7992-01 ^E	63760-02
	Port Diameter / Torque	0.059 in / 25 in-oz		0.075 in / 25 in-oz	
	6-Port Distribution (6-5)	99896-01	99896-02 ^D	9998-01	9998-02
	Port Diameter / Torque	0.055 in / 45 in-oz		0.050 in / 25 in-oz	
	8-Port Distribution (8-5)	-	-	59943-01	59943-02 ^D
	Port Diameter / Torque	-		0.063 in / 25 in-oz	

^AFor use with a 50 mL syringe, adapter 209651 is required

^BMax compatible syringe volume is 10 mL

^CMax compatible syringe volume is 2.5 mL

^DIncompatible with 50mL syringe

^EMax compatible syringe volume is 5mL

PSD/6 Communication Starter Kit

P/N	Description
64316-04	Starter Kit Containing Software CD, Demo Communication Cable, Serial-to-USB Adapter, and Power Supply

PSD/6 Specifications

General Specifications

Accuracy	± 1% at 100% stroke
Precision	≤ 0.05% at 100% stroke
RoHS Compliant	Yes

Smooth Flow Pump Specifications

Flow Rate Accuracy	± 5%
Flow Rate Precision	≤ 5%
Flow Rate Range	26 nL/minute to 53 mL/minute

Power Requirements

Supply Voltage	24 VDC
RMS Current	850 mA
Max Current	1.5 A

Syringe and Syringe Drive

Syringe Fluid Path Materials	Borosilicate glass barrel, PTFE or PFA insert, PTFE or UHMWPE plunger tip
Syringe Drive Mechanism	Stepper motor driven lead screw and optical encoder
Stroke Length	60 mm

Valve and Valve Drive

Valve Drive Speed (Default)	250 ms per 120° rotation
Valve Drive Mechanism	Stepper motor with optical encoder feedback
Valve Fittings	¼" – 28
Valve Fluid Path Materials	Ceramic and ETFE, or PTFE and CTFE

Communication

Type	RS-232, RS-485, or CAN
Protocols	Terminal and Standard
Baud Rate	9,600 or 38,400 (RS-232 or RS-485); 100,000 or 125,000 (CAN)
Data Bits	8
Parity	None
Stop Bit	1, Half duplex
Daisy Chain Length	Up to 16 individual pumps
Programmable Capabilities	Ramps, cutoff velocity, backlash compensation, syringe speeds, loops, on-the-fly speed changes, terminate moves and delays, error detection, valve rotation selection, enhanced "h" Factor capabilities including valve rotation clockwise and counter-clockwise, 15 location method storage

Environmental Operating and Storage Range

Operating Temperature	59°F (15°C) to 104°F (40°C)
Operating Humidity	20% to 95% relative humidity, non-condensing
Storage Temperature	-4°F (-20°C) to 149°F (65°C)
Storage Humidity	20% to 95% relative humidity, non-condensing

For more information or to place your order, call Hamilton at **1.800.648.5950** or visit **www.hamiltoncompany.com**.

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