

ProMinent® Sigma/2 Basic

Motor Driven Type Metering Pump

Simple - Cost effective - Reliable

Flow rates up to 111 gph (420 L/h) and Pressures up to 174 psi (12 bar)

Technical Description

The ProMinent Sigma/2 series is a motor driven metering pump with a mechanically actuated diaphragm-type liquid end (**Sigma HM**) or a packed plunger-type liquid end (**Sigma HK**). It is constructed of a rugged metal inner casing for components subjected to mechanical stress, and a corrosion resistant plastic outer housing. The standard materials for the liquid end are PVDF or 316 stainless steel, both with PTFE seals.

Sigma/2 HM pumps are designed with a convex DEVELOPAN diaphragm which seals to a concave curve in the liquid end. This allows for precise metering of media with various viscosities and reduces stress for long diaphragm life. Three gear ratios and two liquid end sizes provide maximum capacities ranging from 15.2 to 111 gph (57 to 420 L/h) at maximum backpressures of 174 to 58 psig (12 to 4 bar). The capacity can be infinitely varied in steps of 0.5% by adjustment of the self-locking stroke length adjusting knob or via an optional stroke positioning motor. Maximum stroke length is 0.19 (5mm). Under defined conditions and with correct installation, the repeatability is better than + 2% in the stroke length range of between 30 - 100%.

Sigma/2 HK pumps offer three gear ratios and four liquid end sizes for maximum capacities ranging from 0.6 to 20.1 gph (2.3 to 76 L/h) (basic) or 0.6 to 17.2 gph (2.3 to 65.2 L/h) (control) at maximum backpressures of 4640 to 174 psig (320 to 12 bar). The capacity can be infinitely varied in steps of 0.2% by adjustment of the self-locking stroke length adjusting knob or via an optional stroke positioning motor. Maximum stroke length is 0.6 (15mm). Under defined conditions and with correct installation, the repeatability is better than + 1% in the stroke length range of between 30 - 100%.



ProMinent® Sigma/2

Benefits

- Ideal for **simple metering pump applications**
- Optional servomotor available for **automatic control of displacement per stroke** (via a 4-20 mA analog or 3P signal)
- Microprocessor based control versions available for **rapid and reliable adjustments to changing metering conditions**

Liquid End Materials of Construction

Material Code	Dosing Head	Suction/Discharge Connectors	Seals	Valve Balls	Valve Seat
PVT	PVDF (Polyvinylidene Fluoride)	PVDF	PTFE	Ceramic	PTFE
SST	Stainless Steel	Stainless Steel	PTFE	Stainless Steel	PTFE

DEVELOPAN® diaphragm with PTFE coating in all models

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Motor Driven Type Metering Pump

Technical Data: Sigma/2 HM Basic

Sigma/2 HM Basic Version

Technical data:	60 Hz operation* Capacity at Maximum Pressure					Max. Stroke Rate	Output per Stroke	Max. Suction Lift	Max. Suction Pressure	Suction/Discharge Connector		Shipping Weight w/Motor
Pump Version Sigma/2B HM	psig	(bar)	U.S. (L/h) GPH		Stroke/ min.	mL/ stroke	(water) ft. (m)	psig (bar)		DN	in.	(approx.) lbs. (kg)
12050 PVT	145	(10)	15.9	(60)	87	11.4	23 (7)	44 (3)		15 1/2 MNPT		33 (15)
12050 SST	174	(12)	15.2	(57)	87	11.4	23 (7)	44 (3)		15 1/2 FNPT		44 (20)
12090 PVT	145	(10)	28.5	(108)	156	11.4	23 (7)	44 (3)		15 3/4 MNPT		33 (15)
12090 SST	174	(12)	27	(103)	156	11.4	23 (7)	44 (3)		15 1/2 FNPT		44 (20)
12130 PVT	145	(10)	41	(156)	232	10.9	23 (7)	44 (3)		15 3/4 MNPT		33 (15)
12130 SST	174	(12)	39.6	(150)	232	10.9	23 (7)	44 (3)		15 1/2 FNPT		44 (20)
07120 PVT	100	(7)	38	(144)	87	27.4	16 (5)	15 (1)		25 3/4 MNPT		35 (16)
07120 SST	100	(7)	38	(144)	87	27.4	16 (5)	15 (1)		25 3/4 MNPT		53 (24)
07220 PVT	100	(7)	69.7	(264)	156	27.7	16 (5)	15 (1)		25 3/4 MNPT		35 (16)
07220 SST	100	(7)	69.7	(264)	156	27.7	16 (5)	15 (1)		25 3/4 MNPT		53 (24)
04350 PVT	58	(4)	111	(420)	232	29.4	16 (5)	15 (1)		25 1 MNPT		35 (16)
04350 SST	58	(4)	111	(420)	232	29.4	16 (5)	15 (1)		25 1 MNPT		53 (24)

Technical Data: Sigma/2 HK Basic (Packed Plunger Type)

Sigma/2 HK Basic Version (packed plunger type diaphragm)

Technical data:	60 Hz (1750 RPM) operation Capacity at Maximum Pressure					Max. Stroke Rate	Output per Stroke	Max. Suction Lift (water)	Max. Suction Pressure	Suction/ Discharge Connector	Shipping Weight w/Motor
Pump Version Sigma/2B HK	psig	(bar)	U.S. (L/h) GPH	Stroke/ min.	mL/ stroke	ft. (m)	psig (bar)	in. FNPT (G)	lbs. (kg.)		
32002 SST	4640	(320)	0.6 (2.3)	84	0.46	16 (5)	2175 (150)	1/4	53 (24)		
23004 SST	3335	(230)	1.2 (4.8)	153	0.52	16 (5)	2175 (150)	1/4	53 (24)		
10006 SST	1450	(100)	2.0 (7.6)	233	0.55	16 (5)	2175 (150)	1/4	53 (24)		
14006 SST	2030	(140)	1.8 (7.1)	84	1.42	13 (4)	870 (60)	1/4	53 (24)		
10011 SST	1450	(100)	3.4 (13.1)	153	1.43	13 (4)	870 (60)	1/4	53 (24)		
05016 SST	725	(50)	5.2 (20)	233	1.43	13 (4)	870 (60)	1/4	53 (24)		
07012 SST	1015	(70)	3.9 (14.8)	84	2.90	13 (4)	435 (30)	1/4	53 (24)		
04522 SST	652	(45)	7.0 (27.6)	153	2.91	13 (4)	435 (30)	1/4	53 (24)		
02534 SST	363	(25)	10.7 (40.8)	233	2.92	13 (4)	435 (30)	1/4	53 (24)		
04022 SST	580	(40)	7.0 (26.5)	84	5.26	13 (4)	218 (15)	3/8	55 (25)		
02541 SST	363	(25)	13.0 (49.2)	153	5.37	13 (4)	218 (15)	3/8	55 (25)		
01264 SST	174	(12)	20.1 (76)	233	5.45	13 (4)	218 (15)	3/8	55 (25)		

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