

ProMinent® Sigma/2 Control

Motor Driven Type Metering Pump

Programmable - Reliable - Flexible

Flow rates up to 92.5 gph (350 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 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 15.9 to 92.5 gph (60 to 350 L/h) at maximum backpressures of 174 to 58 psig (12 to 4 bar).

The Sigma/2 Control Version (S2Ca) is supplied with an integral TEFC motor. Pump settings are programmable and viewed on an illuminated LCD. Functions include stroke frequency, batch delivery and external control by pulse or analog signal.

The Sigma/2 control version features information displays for flow rate (in gph or l/h) and totalized flow (gallons or litres); accumulative stroke count with clear/reset capabilities; and stroke length adjustment displayed in increments of 1%. Three LED lights indicate operating status. Options include a programmable access code, flow monitoring, fault and pacing relays, calibration, timer and 4-20 mA output.

Sigma/2 HK pumps offer three gear ratios and four liquid end sizes for maximum capacities ranging from 0.6 to 17.2 gph (2.3 to 65.2 L/h) 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

- Double diaphragm design with optional failure detection for **safety**
- Ideal for **rapid and reliable adjustments to changing metering conditions**
- Also available in basic versions for **simplicity and cost savings**
- Problem free connection to complex process control systems with **PROFIBUS®-DP**

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 Control

Sigma/2 HM Control Version

Technical data:	60 Hz 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 S2Ca HM	psig	(bar)	U.S. (L/h) GPH	Stroke/min.	mL/stroke	ft. (m)	psig (bar)	DN (in.)	lbs. (kg.)		
12050 PVT	145	(10)	15.9 (60)	90	11.4	23 (7)	44 (3)	15 (1/2" MNPT)	33 (15)		
12050 SST	174	(12)	15.9 (60)	90	11.4	23 (7)	44 (3)	15 (1/2" FNPT)	44 (20)		
12090 PVT	145	(10)	28.5 (108)	160	11.4	23 (7)	44 (3)	15 (3/4" MNPT)	33 (15)		
12090 SST	174	(12)	28.5 (108)	160	11.4	23 (7)	44 (3)	15 (1/2" FNPT)	44 (20)		
12130 PVT	145	(10)	34.3 (130)	200	10.9	23 (7)	44 (3)	15 (3/4" MNPT)	33 (15)		
12130 SST	174	(12)	34.3 (130)	200	10.9	23 (7)	44 (3)	15 (1/2" FNPT)	44 (20)		
07120 PVT	100	(7)	38 (144)	90	27.4	16 (5)	15 (1)	25 (3/4" MNPT)	35 (16)		
07120 SST	100	(7)	38 (144)	90	27.4	16 (5)	15 (1)	25 (3/4" MNPT)	53 (24)		
07220 PVT	100	(7)	69.7 (264)	160	27.7	16 (5)	15 (1)	25 (3/4" MNPT)	35 (16)		
07220 SST	100	(7)	69.7 (264)	160	27.7	16 (5)	15 (1)	25 (3/4" MNPT)	53 (24)		
04350 PVT	58	(4)	92.5 (350)	200	29.4	16 (5)	15 (1)	25 (1" MNPT)	35 (16)		
04350 SST	58	(4)	92.5 (350)	200	29.4	16 (5)	15 (1)	25 (1" MNPT)	53 (24)		

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

Sigma/2 HK Control 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/2C 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)	1.7 (6.5)	200		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)	4.5 (17.2)	200		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)	9.2 (35.0)	200		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)	17.3 (65.4)	200		5.45	13 (4)	218 (15)		3/8	55 (25)

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