

Sigma/ 1 Series

New Technology, Durable Design

The ProMinent® Sigma/ 1 is a mechanically-actuated diaphragm metering pump capable of flow rates from **5.2 to 38 gph (20 to 144 L/h)** and pressures up to **174 PSI (12 bar)**. ProMinent® Sigma/ 1 microprocessor controlled metering pumps are programmable and display comprehensive data for monitoring, recording, and tracking. Functions include digital setting of stroke frequency, manual stroke length adjustment, integral variable speed and access codes. **Also available in basic, non-microprocessor based version and explosion proof models.**

Applications

- Time-controlled chemical addition in cooling water circuits
- Proportional chemical addition in water treatment (e.g. Sodium Hypochlorite for drinking water disinfection)
- Measurement-dependent chemical addition (e.g. acid & caustic metering for pH neutralization in wastewater treatment)
- Pulse-controlled metering from variable flow meters
- Chemical process, Mining, Petrochemical, Heavy industrial, Pharmaceutical, Water and Wastewater Treatment
- Integrated multi-layer safety diaphragm (standard) with visual rupture indicators

Features & Benefits

- Certified to **NSF/ANSI 61** (PVDF liquid ends)
- Universally compatible PVDF liquid ends
- Drive unit is adjustable at 90° angles to the base
- Optimum combination of variable AC frequency combined with digital stroking frequency
- Simple adjustment of pump functions via panel programming keys
- A large backlit LCD indicates the current operating status
- 3-LED-function as operation indicators, alarm indicator and fault indicator
- Problem-free connection to complex process control systems with PROFIBUS®-DP interface.
- Control via contact or analog signals (e.g. 0/4-20 mA)
- On demand, integration of 2-week-process timer
- Remote monitoring, diagnostics, control (via fieldbus, analog, pulse and/or timer), access codes, fault/pacing relays, mA analog output, and flow monitoring



Sigma/ 1 Series

Capacity data: Sigma/ 1 Control Version

Pump version:			Capacity at Max. Backpressure		Max. Stroke Rate	Output per Stroke	Max. Suction Lift		Max. Suction Pressure		Suction/ Discharge Connector		Shipping Weight w/Motor	
	psig	(bar)	U.S.	(L/h)	Stroke/ min.	mL/ stroke	(water) ft.	(m)	psig	(bar)	DN	in.	(approx.) lbs.	(kg)
S1Ca HM				GPH										
12017 PVT	145	(10)	5.2	(20)	90	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
12017 SST	174	(12)	5.2	(20)	90	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
12035 PVT	145	(10)	11.1	(42)	170	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
12035 SST	174	(12)	11.1	(42)	170	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10050 PVT	145	(10)	13.2	(50)	200	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10050 SST	145	(10)	13.2	(50)	200	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10022 PVT	145	(10)	6.8	(26)	90	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10022 SST	145	(10)	6.8	(26)	90	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10044 PVT	145	(10)	14	(53)	170	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10044 SST	145	(10)	14	(53)	170	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
07065 PVT	102	(7)	17.2	(65)	200	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
07065 SST	102	(7)	17.2	(65)	200	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
07042 PVT	102	(7)	13.2	(50)	90	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
07042 SST	102	(7)	13.2	(50)	90	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)
04084 PVT	58	(4)	26.7	(101)	170	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
04084 SST	58	(4)	26.7	(101)	170	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)
04120 PVT	58	(4)	31.7	(120)	200	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
04120 SST	58	(4)	31.7	(120)	200	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)

Capacity data: Sigma/ 1 Basic Version

Pump version:			Capacity at Max. Backpressure		Max. Stroke Rate	Output per Stroke	Max. Suction Lift		Max. Suction Pressure		Suction/ Discharge Connector		Shipping Weight w/Motor	
	psig	(bar)	U.S.	(L/h)	Stroke/ min.	mL/ stroke	(water) ft.	(m)	psig	(bar)	DN	in.	(approx.) lbs.	(kg)
S1Ba HM				GPH										
12017 PVT	145	(10)	5.2	(20)	88	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
12017 SST	174	(12)	5.2	(20)	88	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
12035 PVT	145	(10)	11.1	(42)	172	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
12035 SST	174	(12)	11.1	(42)	172	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10050 PVT	145	(10)	15.8	(60)	240	4	23	(7)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10050 SST	145	(10)	15.8	(60)	240	4	23	(7)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10022 PVT	145	(10)	6.8	(26)	88	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10022 SST	145	(10)	6.8	(26)	88	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
10044 PVT	145	(10)	14	(53)	172	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
10044 SST	145	(10)	14	(53)	172	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
07065 PVT	102	(7)	20.6	(78)	240	5.1	19.6	(6)	14.5	(1)	10	1/2 MNPT	19.8	(9)
07065 SST	102	(7)	20.6	(78)	240	5.1	19.6	(6)	14.5	(1)	10	3/8 FNPT	26.5	(12)
07042 PVT	102	(7)	13.2	(50)	88	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
07042 SST	102	(7)	13.2	(50)	88	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)
04084 PVT	58	(4)	26.7	(101)	172	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
04084 SST	58	(4)	26.7	(101)	172	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)
04120 PVT	58	(4)	38	(144)	240	9.7	9.8	(3)	14.5	(1)	15	3/4 MNPT	21	(9.5)
04120 SST	58	(4)	38	(144)	240	9.7	9.8	(3)	14.5	(1)	15	1/2 FNPT	29.8	(13.5)

Sigma/ 1 Type:

The Sigma/1 microprocessor controlled metering pump (S1Ca) is supplied with an integral TEFC motor. The Sigma basic version (S1Ba) is suitable for simple metering pump applications. The pump may be operated manually by adjusting the stroke length knob (displacement per stroke). Automatic control of displacement per stroke via a 4-20 mA analog signal is possible with an optional servomotor. See identity code for motor options.

Optional servomotor available for automatic control of displacement per stroke (via a 4-20 mA analog signal).

ProMinent®

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