

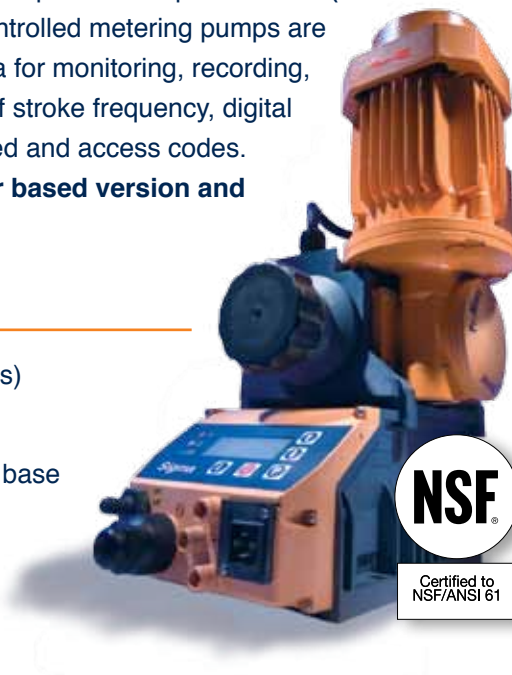
# Sigma/ 1 Series

## 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, digital stroke length adjustment, integral variable speed and access codes. **Also available in basic, non-microprocessor based version and explosion proof models.**

## 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



## 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, Fine dust environments, Generally hazardous areas

**ProMinent®**

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# Sigma/ 1 Series

## Capacity data: Sigma/ 1 Control Version

| Pump version:  | Capacity at Max. Pressure |       | 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) GPH   | Stroke/ min.      | mL/ stroke        | (water) ft. (m) | psig                  | (bar) | DN                           | in.      | (approx.) lbs.          | (kg)   |
| <b>S1Ca HM</b> |                           |       |                  |                   |                   |                 |                       |       |                              |          |                         |        |
| 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. Pressure |       | 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) GPH   | Stroke/ min.      | mL/ stroke        | (water) ft. (m) | psig                  | (bar) | DN                           | in.      | (approx.) lbs.          | (kg)   |
| <b>S1Ba HM</b> |                           |       |                  |                   |                   |                 |                       |       |                              |          |                         |        |
| 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 Motors:

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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