

# Sigma

## Motor-driven diaphragm metering pump

The right capacity for every requirement. Each Sigma pump is available as a basic version or as a micro-processor/control version with internal electronics.

The three variants differ in their capacity ranges:

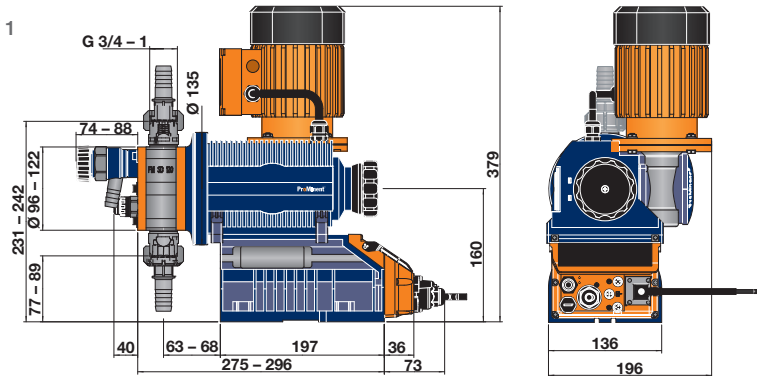
**Sigma/ 1** 17–144 l/h, 12–4 bar

**Sigma/ 2** 50–420 l/h, 16–4 bar

**Sigma/ 3** 145–1,030 l/h, 12–4 bar

- Process safety through double diaphragm with diaphragm rupture indication
- Ventilation option provides functional reliability
- Integral relief valve protects against overload
- Simple operation through large plain text display (microprocessor version)
- Ideal for simplified spares management when a number of pumps in the Sigma series are used together. Their key features are:
- Straightforward linking to bus-networked systems via PROFIBUS DP® or CAN-open interface (microprocessor version)
- For volume-proportional, measured value-dependent, time and pulse-controlled dosing

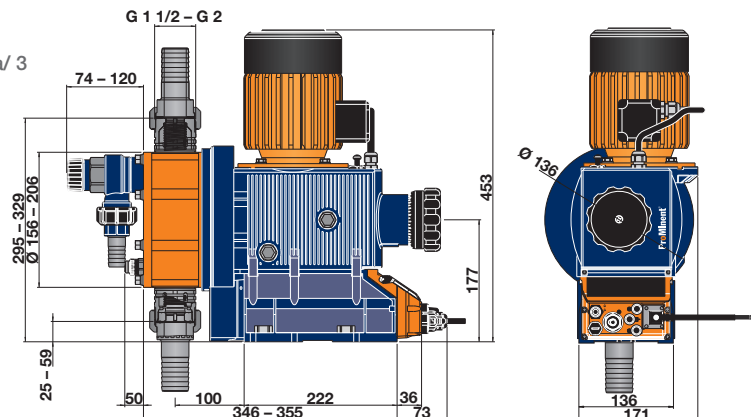
Sigma/ 1



Sigma/ 2



Sigma/ 3



شرکت مهارفن ابزار  
Mahar Fan Abzar Co.



## Sigma

| Pump type       | With motor 1,500 rpm at 50 Hz<br>Delivery rate at max. backpressure |       |           | Suction head<br>mWC | Perm. admss.<br>pressure suction side<br>bar | Connection<br>suction/pressure side<br>G-DN |         |
|-----------------|---|-------|-----------|---------------------|--|---|---------|
|                 | bar   | l/h   | ml/stroke |                     |  |   |         |
| <b>Sigma/ 1</b> |   |       |           |                     |  |   |         |
| 12017           | 12  | 17    | 4.0       | 73                  | 7  | 1   | ¾ – 10  |
| 12035           | 12  | 35    | 4.0       | 143                 | 7  | 1   | ¾ – 10  |
| 10050           | 10  | 50    | 4.0       | 200                 | 7  | 1   | ¾ – 10  |
| 10022           | 10  | 22    | 5.1       | 73                  | 6  | 1   | ¾ – 10  |
| 10044           | 10  | 44    | 5.1       | 143                 | 6  | 1   | ¾ – 10  |
| 07065           | 7   | 65    | 5.1       | 200                 | 6  | 1   | ¾ – 10  |
| 07042           | 7   | 42    | 9.7       | 73                  | 3  | 1   | 1 – 15  |
| 04084           | 4   | 84    | 9.7       | 143                 | 3  | 1   | 1 – 15  |
| 04120           | 4   | 120   | 9.7       | 200                 | 3  | 1   | 1 – 15  |
| <b>Sigma/ 2</b> |   |       |           |                     |  |   |         |
| 16050           | 16  | 48    | 11.4      | 73                  | 7  | 3   | 1 – 15  |
| 16090           | 16  | 86    | 11.4      | 132                 | 7  | 3   | 1 – 15  |
| 16130           | 16  | 125   | 10.9      | 198                 | 7  | 3   | 1 – 15  |
| 07120           | 7   | 120   | 27.4      | 73                  | 5  | 1   | 1½ – 25 |
| 07220           | 7   | 220   | 27.7      | 132                 | 5  | 1   | 1½ – 25 |
| 04350           | 4   | 350   | 29.4      | 198                 | 5  | 1   | 1½ – 25 |
| <b>Sigma/ 3</b> |   |       |           |                     |  |   |         |
| 120145          | 12  | 145   | 31.5      | 72                  | 2  | 5   | 1½ – 25 |
| 120190          | 12  | 190   | 31.5      | 103                 | 2  | 5   | 1½ – 25 |
| 120270          | 12  | 270   | 31.5      | 144                 | 2  | 5   | 1½ – 25 |
| 120330          | 12  | 330   | 31.5      | 180                 | 2  | 5   | 1½ – 25 |
| 070410          | 7   | 410   | 95.1      | 72                  | 1  | 4   | 2 – 32  |
| 070580          | 7   | 580   | 95.1      | 103                 | 1  | 4   | 2 – 32  |
| 040830          | 4   | 830   | 95.1      | 144                 | 1  | 3   | 2 – 32  |
| 041030          | 4   | 1,030 | 95.1      | 180                 | 1  | 3   | 2 – 32  |

Sigma Control version and basic version operating with 60 Hz increases delivery rate approx. 20 %.

Sigma/ 2 and Sigma/ 3 with PVDF design max. 10 bar.

## Materials in contact with medium

| Material                   | Liquid end                          | Suction/pressure port  |                           | Seals/Ball seat | Valve balls            | Integrated overflow valve         |                                |
|----------------------------|-------------------------------------|------------------------|---------------------------|-----------------|------------------------|-----------------------------------|--------------------------------|
| <b>Sigma/ 1 + Sigma/ 2</b> |                                     |                        |                           |                 |                        |                                   |                                |
| PVT                        | PVDF                                | PVDF                   |                           | PTFE/PTFE       | Ceramic                | PVDF/FPM or EPDM                  |                                |
| SST                        | Stainless steel 1.4404              | Stainless steel 1.4581 |                           | PTFE/PTFE       | Stainless steel 1.4404 | Stainless steel/FPM or EPDM       |                                |
| <b>Sigma/ 3</b>            |                                     |                        |                           |                 |                        |                                   |                                |
| Material                   | Suction/pressure<br>port liquid end | DN 25 ball valve       |                           |                 | DN 32 ball valve       |                                   | Integrated<br>overflow valve   |
|                            |                                     | Seals                  | Valve balls               | Valve seat      | Seals                  | Valve plate/<br>valve spring      |                                |
| PVT                        | PVDF                                | PTFE                   | Glas                      | PTFE            | PTFE                   | Ceramic/Hast C.<br>+ CTFE         | PVDF/FPM<br>or EPDM            |
| SST                        | Stainless steel<br>1.4581           | PTFE                   | Stainless steel<br>1.4404 | PTFE            | PTFE                   | Stainless steel<br>1.4404/Hast C. | Stainless steel/FPM<br>or EPDM |

DEVELOPAN® metering diaphragm with PTFE coating for all types.