SIGMA/3 motor-driven metering pump from ProMinent. Maximum power in the mid-performance range.

BEST SELLER
More performance – more precision.
A new microprocessor controller with an optimum combination of speed control and Stop/Go operation offers an extensive control range with selective fine tuning.

More flexibility – less cost!
One for all: standard PVDF liquid end with integrated bypass valve – the correct choice for specialised applications in 99% of cases. Alternative liquid ends available.

Improved feed rate up to 1,000 l/h.
Total control via illuminated LCD display with feed rate shown in l/h or US gal/h. Simple and clear operating menu for feed rate adjustment.

Optimum reliability – the doubled DEVELOPAN® diaphragm with integrated sensor guarantees effective protection – even in the event of diaphragm rupture.
The Sigma/3 series also includes an economical base model without the microprocessor controller.

The operating concept underlying the Sigma/3 range guarantees optimum reliability and precision. The power is transmitted from the motor to the metering diaphragm via a worm gear, cam and push rod assembly. The proven spring cam principle ensures play-free mechanism and good reproducibility. It also ensures that metering precision is maintained even after long periods in use. Safety is a key factor in the Sigma/3. The doubled metering diaphragm made of the DEVELOPAN® material incorporates a sensor situated between the means of venting the liquid end during priming. There are two different liquid end materials to choose from: PVDF and stainless steel. These material options permit the metering of an extremely wide range of chemicals – even difficult and corrosive chemicals. This means that the Sigma/3 series can be adapted to practically any application.

The Sigma/3 series also includes an economical base model without the microprocessor controller.

1 Motor
2 Stroke length adjusting knob
3 Gearbox
4 Plastic housing
5 Liquid end
6 Microprocessor controller
7 Metal inner housing
8 Integrated bypass/vent valve
9 Doubled diaphragm system

BEST SOLUTION

ROBUST MECHANICS MEET PRECISION ELECTRONICS.
THE RESULT: LONG TERM RELIABLE PERFORMANCE.
With in-built “intelligence” the Sigma/3 metering pump can be integrated into practically any control environment. The modular assembly concept with two different liquid end materials ensures that the pump can be used with a wide variety of different chemicals. Its main area of application is in the treatment of drinking water but its flexible construction is equally equipped to deal with varied requirements within the chemical industry and in production systems. Sigma/3's high safety standards guarantee the protection of processes, people and the environment. With a precision microprocessor controller, comprehensive process monitor and membrane rupture signal-function the Sigma/3 sets new standards.

![Diagram of Sigma/3 metering pump](image)

### BEST VALUES

With in-built “intelligence” ensures that the pump to deal with varied requirements within the chemical industry and in production systems. Sigma/3’s high safety standards guarantee the protection of processes, people and the environment. With a precision microprocessor controller, comprehensive process monitor and membrane rupture signal-function the Sigma/3 sets new standards.

**Connector A B C D D1** **E E1** **F ø G**

<table>
<thead>
<tr>
<th>Pump type Sigma/3</th>
<th>Connector</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>D1**</th>
<th>E</th>
<th>E1**</th>
<th>F</th>
<th>ø G</th>
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<tbody>
<tr>
<td>120145, 120190</td>
<td>DN 25</td>
<td>292</td>
<td>230</td>
<td>G1½ A</td>
<td>120</td>
<td>140</td>
<td>346</td>
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<tr>
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<td>230</td>
<td>G1½ A</td>
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<td>147</td>
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**Best Values**

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<thead>
<tr>
<th>Operating at 50 Hz</th>
<th>Operating at 60 Hz</th>
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<tbody>
<tr>
<td>Feed rate at max. back pressure</td>
<td>Stroke rate at max. back pressure</td>
</tr>
<tr>
<td>max. stroke rate</td>
<td>Suction lift</td>
</tr>
<tr>
<td>l/h</td>
<td>str./min.</td>
</tr>
<tr>
<td>-------</td>
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<tr>
<td>120145 PVT</td>
<td>10</td>
</tr>
<tr>
<td>120145 SST</td>
<td>12</td>
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<tr>
<td>120190 PVT</td>
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</tr>
<tr>
<td>120190 SST</td>
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</tr>
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<td>120270 PVT</td>
<td>10</td>
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<tr>
<td>120270 SST</td>
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<td>120330 SST</td>
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<tr>
<td>070410 PVT</td>
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</table>

**Detailed measurement data sheets on request.**

****Measurements performed by “Doubled diaphragm precision microprocessor controller, comprehensive process monitor and membrane rupture signal-function the Sigma/3 sets new standards.**
SERIAL SUCCESS: ProMinent®
Motor-driven diaphragm metering pumps

ProMinent® alpha
Capacity range:
up to 10 bar,
up to 21 l/h

ProMinent® Vario
Capacity range:
up to 12 bar,
up to 144 l/h

ProMinent® Sigma HM
Capacity range:
up to 12 bar,
up to 420 l/h

ProMinent® Sigma/3
Capacity range:
up to 12 bar,
up to 1030 l/h

ProMinent® Makro TZ HM/HMH
Capacity range:
up to 18 bar,
up to 2500 l/h

ProMinent® Hydro
Capacity range:
up to 64 bar,
up to 150 l/h

ProMinent® Motor-driven diaphragm piston pumps

ProMinent® Sigma HK
Capacity range:
up to 320 bar,
up to 76 l/h

ProMinent® Meta HK
Capacity range:
up to 240 bar,
up to 60 l/h

ProMinent® Makro TZ HK
Capacity range:
up to 320 bar,
up to 114 l/h

ProMinent® Makro/5
Capacity range:
up to 320 bar,
up to 6000 l/h
precision microprocessor controller, comprehensive process monitor and membrane rupture signalling function the Sigma/3 sets new standards.

<table>
<thead>
<tr>
<th>Liquid end version</th>
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<tbody>
<tr>
<td><strong>Materials in contact with chemicals</strong></td>
<td><strong>PVT</strong></td>
</tr>
<tr>
<td><strong>Liquid end</strong></td>
<td>PVDF*</td>
</tr>
<tr>
<td>Suction/dischARGE connector</td>
<td>PVDF*</td>
</tr>
<tr>
<td>Seals</td>
<td>PTFE</td>
</tr>
<tr>
<td>Valve balls</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Valve seat</td>
<td>PTFE</td>
</tr>
<tr>
<td>Connector</td>
<td>See identity code selection</td>
</tr>
</tbody>
</table>

*Polyvinylidene fluoride
The new operator prompts provide simple monitoring of all functions.

The new Sigma/3 inherits the robust, reliable mechanical concept of ProMinent® motor-driven metering pumps. It is equipped for the future, however, with an optimum combination of new microprocessor control, speed control and Stop/Go operation. Metering can now be finely adjusted.

With a feed rate of up to 1,000 l/h the Sigma/3 is certain to secure its position in many application areas.

The new microprocessor controller is the key feature of the Sigma/3.

With its easy-to-read display it provides clear, convenient operator prompts and simple monitoring of the pump function. Large text and constant illumination mean that all settings and measured variables are instantly accessible, even in unfavourable lighting conditions. The feed rate can be displayed either in l/h or US gal/h. The internal electronics significantly enhance the Sigma/3’s control options, providing the optimum conditions for external control. The operator can select between a 0/4-20 mA analogue standard signal or switch control. With a standard signal the user can specify configuration of the pump frequency to the control signal, while switch control incorporates increase/reduction of pulse rate.

This flexibility ensures that the Sigma/3 series always achieves its best performance in any control environment.
**ProMinent expertise – advanced Sigma/3.**

The Sigma/3 is at home in practically any process environment. Where commercial success is concerned, access to assistance – anywhere in the world. ProMinent is active worldwide. You will find our consultants and technicians in all industrial centres and you can tap into our experience in who have your success in mind at all times and who believe implicitly in working in partnership with the customer.

We hereby invite you to use our experience.

**BEST SERVICE**

reliable technical products you can trust, like Sigma/3, represent only one side of the coin. The other side is expert support before and during installation, advice on new applications and the field of fluid controls wherever you are based. We are happy to provide advice and assistance from the initial concept to the completed installation. We can be present at the first production run, make regular maintenance visits or assist you in retro or refits. You can rely on specialists backing up all Sigma products is the ProMinent name, which stands for sound advice, prompt service and reliable products – all over the world.

**Manufacturer’s addresses and delivery information:**

ProMinent Dosiertechnik GmbH
Im Schuhmachergewann 5–11
D-69123 Heidelberg
Postfach 10 17 60
D-69007 Heidelberg
Telephone +49 (6221) 842-0
Fax +49 (6221) 842-419
info@prominent.de · www.prominent.de

Subject to technical alterations.
Printed in Germany/PT SI 010 02/01 GB