THE INTELLIGENT SOLUTION
SMART DOSING PUMP
The new Smart Dosing Pump combines the classic dosing benefits of a progressive cavity pump with up-to-date control concepts.

Progressive cavity pumps are the first choice for gentle pumping of media with minimal pulsation and high linear accuracy. They are used successfully in a wide range of applications and easily cover the spectrum of thin to highly viscous media, as well as solids and corrosive liquids.

The SDP offers an integrated PLC to enable stand-alone operation in, for example, distributed control systems (DCS). Set points are entered and sensors on the pump feed back operating conditions to the integrated PLC. Complex implementation into higher-level controllers is no longer required. This simplifies automation system integration and reduces the cost of installation and maintenance.

SEEPEX answers these challenges by offering the Smart Dosing Pump (SDP), an intelligent dosing pump for a wide range of applications. As a longstanding supplier of dosing technology, the SEEPEX solution provides a perfect, custom-made system, which covers the multiple requirements of complex dosing tasks, from industrial settings to laboratory applications.

**OPERATION MODES**

In continuous operation, the Smart Dosing Pump provides a constant flow. Batch operation is used for repeated filling of defined quantities.

**PARAMETERIZATION**

Target value input takes place according to the requirements for system integration via:
- A hand-held control panel (HMI)
- Analog and digital inputs
- Various Modbus interfaces (e.g., PROFIBUS DP, CANopen, EtherCAT, DeviceNet, PROFINET, Ethernet POWERLINK, EtherNet/IP)

**INTelligent CONTROL**

The pump can be configured with various measurement technology options.

<table>
<thead>
<tr>
<th>MEASUREMENT OF PROCESS VARIABLES (ACTUAL VALUE)</th>
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<tbody>
<tr>
<td>Flow meter for example: Electromagnetic flow meter for measuring the flow volume. Alternative to speed measurement on the motor shaft. Optionally available.</td>
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<tr>
<td>Pressure sensor for measurement of low and overpressure in the feed and discharge pipelines. Optionally available.</td>
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<tr>
<td>Dry-running protection device (TSE)</td>
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<td>Prevents against damage to the stator through dry-running. Optionally available.</td>
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<td>Intensive frequency inverter</td>
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<td>Frequency inverter with integrated PLC functionality. The SEEPEX-specific control parameters are optimized for use with SEEPEX dosing pumps, and can be parameterized by the customer and adapted to the specific application.</td>
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<tr>
<td>Drive with pulse generator on motor shaft</td>
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<tr>
<td>Alternative to flow measurement, the flow rate can be determined via revolutions of the motor shaft.</td>
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**SAFETY FEATURES**

Input signals of safety feature sensors (i.e., pressure and temperature sensor).

**PROCESS VARIABLES**

Input signals to determine actual flow rate and control the speed of the pump.

**CUSTOMER INTERFACE**

Connection to higher-level automation system and interface for specifying the operation mode (dosing/portioning) and target value input. Actual values of the dosing and pertaining quantities as well as status messages are reported back.
The Smart Dosing Pump with its integrated control merges seamlessly into our ranges of pump and control solutions. The modular design of our control system makes them individually adaptable to the customer’s process.

With a control solution by SEEPEX, our customers can be sure that their pump is protected even in critical situations and that their process will be optimally supported. Our dosing pumps can be applied in practically every industry sector for constant dosing and portioning of exact quantities. They are particularly well suited for minimal pulsation conveying of thin to highly viscous media with or without solids, as well as for corrosive media.

SEEPEX dosing pumps are used in the following areas: agriculture, vehicle construction, bakeries, construction industry, ceramics industry, chemical and biochemical industry, coating kitchens, material preparation, deinking in paper mills, confectionary industry, dairy industry, spirits industry, paint and varnish industry, fruit and vegetable processing, pharmaceutical and cosmetics industry, poultry, fish and meat processing, oil, gas and petrochemicals, ship building, sludge dewatering, waste water treatment, water conditioning, wine industry, as well as wood processing.

**FEATURES**
- Easy implementation of complex dosing in continuous and batch mode
- Realization of short filling times and resource-efficient media pumping
- Cost reduction due to minimal pulsation and high repeatability
- Easy integration into higher-level controls and automation systems
- Operation via handheld panel or various fieldbus systems
- Broad pumping performance range through our modular system

**KEY FACTS**
- Conveying capacity: 3–2,000 l/h (0.01–8.81 USGPM)
- Pressure: up to 48 bar (700 psi)