THE INTELLIGENT SOLUTION
SMART DOSING PUMP
Plant operators and builders are under pressure to design their operations cost effectively, optimize process times and minimize downtimes. Energy efficiency, the economical use of raw materials and the orderly scheduling of commissioning and maintenance work present additional challenges.

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**

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 features 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.

**INTELLIGENT FREQUENCY INVERTER**

Frequency inverter with integrated PLC functionality. The SEEPEX-specific control software is optimized for use with SEEPEX dosing pumps, and can be parameterized by the customer and adapted to the specific application.

**CUSTOMER INTERFACE**

Connection to higher-level automation systems and interface for specifying the operation mode (dosing/portioning) and target value input. Actual values of the dosing and portioning quantities as well as status messages are reported back.

**FLOW METER**

For example: Electromagnetic flow meter for measuring the flow volume. Alternative to speed measurement on the motor shaft. Optionally available.

**PRESSURE SENSOR**

For measurement of low and overpressure in the feed and discharge pipelines. Optionally available.

**DRY-RUNNING PROTECTION DEVICE (TSE)**

Protects against damage to the stator through dry-running. Optionally available.

**SAFE OPERATION**

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.

**SAFETY FEATURES**

Input signals of safety feature sensors.

**MEASUREMENT OF PROCESS VARIABLES (ACTUAL VALUE)**

- Flow meter
- Pressure sensor TSE
- Pulse generator on motor shaft
- Intelligent frequency inverter

**FLOW RATES**

Output signals to determine target values.

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**SAFETY FEATURES**

Safety features are realized by integrating safety devices. For example, dry-running protection devices, by configuring the safety PLC in a suitable protection scheme, to ensure the safety of the system.

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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: up to 2,000 l/h (8.81 USGPM)
- Pressure: up to 48 bar (720 psi)