Flexible, efficient and safe metering

Motor-driven diaphragm metering pumps Sigma (S1Cb/S2Cb/S3Cb)

NEW

The entire Sigma motor-driven metering pump product range, control type S1Cb/S2Cb/S3Cb, has been equipped with intelligent features to provide a high level of operating convenience, safety and efficiency. The pump range comes with a removable operating unit and an automatic overpressure cut-off as standard. Metering profiles ensure optimum metering results. The mobile operating unit offers additional operating convenience ensuring that the pump can be quickly and easily adapted to any specific application.

An optimum metering result can be obtained with the adjustable metering profiles. Speed control with an integrated frequency converter can adapt the metering behaviour to the chemical or application.
Motion and speed profiles are also recorded as is energy demand. The supply of energy depends on the amount of power needed and is controlled to suit the requirements of the application in hand.

Benefits

- Process safety thanks to multi-layer diaphragm with diaphragm rupture warning system
- Ventilation option provides reliable function
- Metering profiles for optimum metering results
- Removable operating unit with large illuminated LCD for maximum operating convenience
- Simplified management of spare parts when using the Sigma product family
- Simple integration in systems with bus networking using PROFIBUS® or CANopen interface

Metering options

- Volume-proportional
- Measured variable-dependent
- Time-controlled
- Pulse-controlled

Capacity range

- Pump capacity 20 – 1000 l/h
- Pressure 12 – 4 bar

Comfortable: flexible operating unit
Application-oriented: metering profiles
Efficient: energy consumption based on power required
# Safe: diaphragm rupture warning system/overload protection

Removable operating unit (HMI) for maximum operating convenience
The Sigma control type is equipped with a removable operating unit with integrated microprocessor control.

## Metering profiles for optimum metering results
Metering profiles guarantee optimum metering results by adapting the metering behaviour of the metering pump to the application or chemical used.
The stroke motion of the displacement body is continually recorded and regulated such that the stroke is undertaken in line with the desired metering profile.
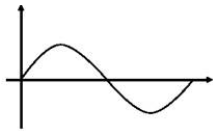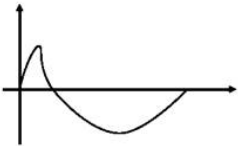
Normal mode
The suction stroke and pressure stroke are of equal lengths
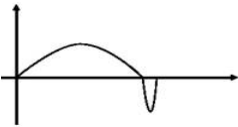
Optimised pressure stroke
The pressure stroke is extended and the suction stroke undertaken as quickly as possible. This set up is suited to applications which require optimum mixing and as continuous a mixing of chemicals as possible, for example.

Optimised suction stroke
The suction stroke is carried out as slowly as possible, which allows for accurate and uncomplicated metering of viscous and gaseous media. This set up should also be selected to minimise the NPSH value.

Energy consumption based on power required
Motion and speed profiles are also recorded as is energy demand via integrated software which electronically controls the motor. It detects the amount of power needed and controls the supply of energy to suit the requirements of the specific application.
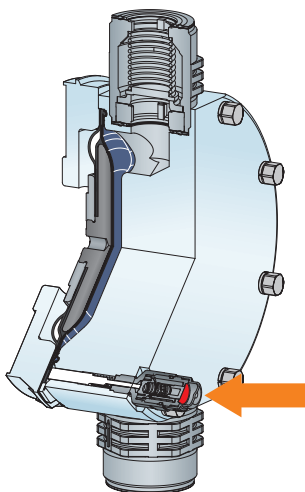
Overload switch for reliable pump protection
Since the energy demand is monitored, the pump is switched off electronically when it exceeds a defined tolerance range. The overload switch protects the pump, guaranteeing maximum safety for your investment.

Diaphragm rupture warning system
The liquid end has a patented multi-layer safety diaphragm and optical diaphragm rupture display as standard. The diaphragm is coated with PTFE film on both sides. This coating ensures that nothing leaks out should the diaphragm rupture. In the event of a rupture, the metering medium enters the layer between the diaphragm coatings and thereby triggers a mechanical display and/or alarm via the sensors. This concept also ensures reliable metering in critical operating statuses.