

Calvatis GmbH

Dosing technology





Your partner for... ...innovative hygiene management

Calvatis is one of the leading independent manufacturers of cleaning and disinfection products. We offer our customers individual hygiene concepts based on this experience. Calvatis has been successfully represented in the global market for over 75 years with its calgonit product range.

The main applications are in

- Hygiene consulting and hygiene management
- Beverage industry
- Food industry
- Institutions
- Milk-processing industry
- Agriculture
- Equipment and systems technology
- Water treatment
- Laundry
- Production to order



calvatis
calgonit
industrial

Calvatis has a mature product range of over 1,000 branded products in the calgonit product lines and can therefore provide integrated hygiene concepts for all areas.

Calvatis develops and produces at its Ladenburg site in Germany, from where it also coordinates global sales of products and services.

Calvatis products and the company's comprehensive services provide all customers with top quality at an optimal price/performance ratio.

Calvatis is certified according to ▶ DIN EN ISO 9001 and ▶ DIN EN ISO 14001

Calvatis specialises in the production of cleaning and disinfection products, particularly when it comes to services, to ensure clear differentiation from competitors.

High quality and environmental awareness are second nature for Calvatis, are lived, maintained and continuously adapted to the increasing demands in the market.

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How do I order the right spare parts?

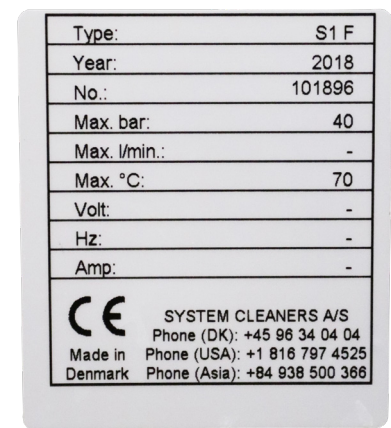
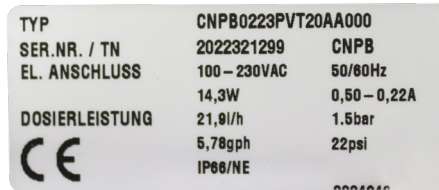
Do you need a spare part or accessories for your dosing pump? Then you're in the right place. Here you will find the right spare parts and accessories for all dosing pumps in our range.

How do you find the right spare parts?

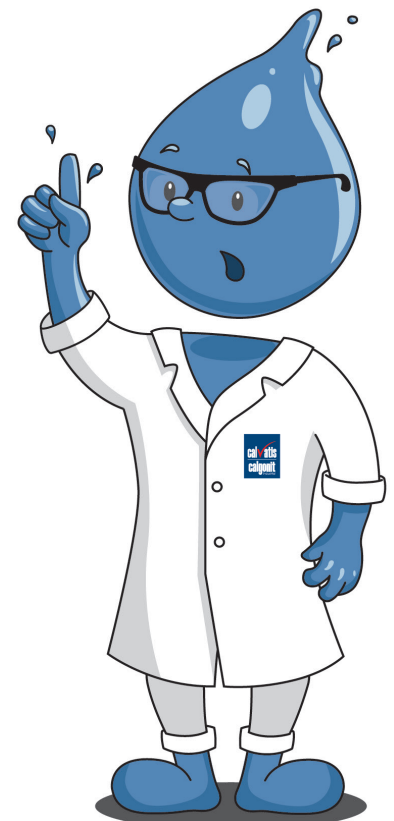
Tell us the serial number of your dosing pump or dosing system and send us a picture of the type plate. We will then determine the right spare parts for you.

Where can you find the type plate?

The type plate is permanently attached to each pump. You can see what the nameplate looks like here:



Please always send the serial number and the picture of the type plate to info-gtech@calvatis.com



Images may differ from the actual product.

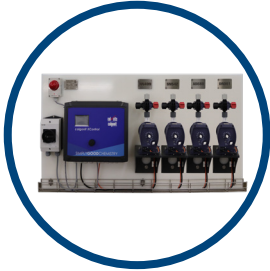
Dosing Systems



Dosing Systems

For industrial cleaning systems

calgonit XControl EC Basic



The calgonit XControl EC Basic dosing system is a modular dosing system for industrial cleaning systems and offers a wide range of options for carrying out and monitoring the cleaning and washing process.

Up to two cleaner pumps and two additive pumps can be mounted on the PE base plate.

Adjustable time windows determine which dosing pump is used to dose the cleaner. The detergent can be dosed in Cycle/Pause and Conductivity Control modes.

In addition, the calgonit XControl EC Basic dosing system is equipped with three further temperature measurement inputs and two inputs for measuring the water flow.

All readings, pump control performance and faults are recorded in a CSV file via data logging and can be downloaded via the built-in web server or USB stick. The parameters can also be changed quickly and conveniently via the web server with the corresponding user level.

Technical data:

- ✓ Power supply: 230 V 10 A
- ✓ Inputs Release signals: 230V
- ✓ Inputs Temperature sensors: 3x PT100, 0 - 20 mA or 4 - 20 mA
- ✓ Flow measurement inputs: 2x contact, 0 - 20 mA or 4 - 20 mA
- ✓ Dimensions (WxHxD): 1100 x 600 x 359 mm

Scope of delivery:

- ✓ Pre-assembled PE plate with calgonit XControl EC Basic, flashing lamp and main switch
- ✓ Conductivity probe with 5 m connection cable

Accessories to be ordered separately:

- ✓ Extracting lances
- ✓ Hose lines
- ✓ Splash guard
- ✓ Temperature and flow sensors
- ✓ Sensor connection cable (10 / 25 / 50 m)
- ✓ Connection cable to the cleaning system

Cleaner pumps alternatively also available as peristaltic pumps!

The pump is designed individually according to your data on the completed checklist.



Dosing Systems

calgonit XControl EC Basic

Dosing technology calgonit XControl EC Basic with a dosing pump (e.g. alkaline cleaner)



Dosing technology calgonit XControl EC Basic with two dosing pumps (e.g. alkaline and acidic cleaner)



Dosing technology calgonit XControl EC Basic with three dosing pumps (e.g. alkaline cleaner, acid cleaner and additive 1)



Dosing technology calgonit XControl EC Basic with four dosing pumps (e.g. Alkaline Cleaner, Acidic Cleaner, Additive 1 and Additive 2)



Cleaner pumps alternatively also available as peristaltic pumps!

Name	Article No.
calgonit XControl EC Basic with one detergent pump	83000700
calgonit XControl EC Basic with one detergent pump and one additive pump	83000701
calgonit XControl EC Basic with one detergent pump and two additive pumps	83000702
calgonit XControl EC Basic with two detergent pumps	83000703
calgonit XControl EC Basic with two detergent pumps and one additive pump	83000704
calgonit XControl EC Basic with two detergent pumps and two additive pumps	83000705

Images may differ from the actual product.

Accessories for calgonit XControl EC

Accessories

Name	Article No.
Maintenance set Detergent CNPb0223	86120169
Maintenance set Additive CNPb0704	86120172
calgonit XControl EC Basic splash guard	83000697
Temperature contact sensor (max. 3 pieces)	86001405
Frame	83000649

Hose in protective hose

Name	Material	Connection	Article No.
Hose in protective hose max. 50 m, 7 bar at 20°C	PE	I/O Ø 9/12 mm	86340121
Hose in protective hose max. 100 m, 13 bar at 20°C		I/O Ø 4/6 mm	86340016
Other sizes on request!			

Electrical connection cables

Name	Length	Article No.
Sensor connection cable with moulded connector for temperature sensors and conductivity probe	10 m	86041616
	25 m	86041617
	50 m	86041618
Connection cable between machine and calgonit XControl EC	100 m	86040008

Extraction lances

Name	Hose	Article No.
Canister extraction lance SLNS 9608 - 600 mm	I/O Ø 6/12 mm	87091991
Canister extraction lance SLNS 9608 - 600 mm	I/O Ø 9/15 mm	86311106
Drum/IBC Extraction lance SLNS 9608 - 1200 mm	I/O Ø 9/15 mm	87091992
Drum/IBC Extraction lance SLNS 9608 - 1200 mm	I/O Ø 6/12 mm	86311107
Extraction lance foot	Float switch with cable for drum, IBC and canister	86311004

Images may differ from the actual product.

Dosing Systems

For Laundry

Hydro EvoClean

EvoClean is a water-driven unit with Venturi technology and low maintenance requirements. It has an integrated control system that can be used for applications requiring four, six or eight products. It has a built-in flush valve block, „product missing“ alarm and optional remote control for formula selection.



Device types

Name	Article No.
EvoClean2 4 products LF 1227GB, 8 mm Aflas without RFS SP0180	86560053
EvoClean2 6 products LF 1221GB, 8 mm Aflas without RFS SP0182	86560054

Accessories

Name	Article No.
Low Level Alarm without power supply HYD LLA 2000L8D	86560055
EvoClean Form Select Control Unit	86560056
RFS cable kit 3.5 m with flap	86560057
Extraction lance 9608 - 600 mm 6/12 hose	87091991
Screw-on hose nozzle G 3/4" - 19 mm ES	86200824
Hose clamp VA size 20 - 32 mm	86240804
Hose grommet 3/4" - 19 mm VA	86200808
PVC commercial hose 19/27 mm I/O	86340005

Images may differ from the actual product.

Accessories for Hydro EvoClean

Maintenance kits

Name	Article No. Manufacturer
KIT, EVCL, HF EDUCTOR	90096103
KIT, EVCL, HF EDUCTOR (5 PK)	90098382
KIT, EVCL, LF EDUCTOR	90096102
KIT, EVCL, LF EDUCTOR (5 PK)	90098383
KIT, EVCL EPDM CHK VLV W ELBOW (1 PK)	10098125
KIT, EVCL AFLAS CHK VLV W ELBOW (1 PK)	10098124
KIT, CHECKVALVE 5/16 B, AFL	90097842
KIT, EVCL O-RING, UPPER MANIFOLD (10 PK)	10098127
KIT, EVCL O-RING, LOWER MANIFOLD (10 PK)	10098128
KIT, EVCL 8 PMP, PIPE NIPPLE (1 PK)	90098373
KIT, EVCL WASHER, EPDM (10 PK)	10098126
KIT, EVCL ACCUPRO BODY (5 PK)	90098375
KIT, EVCL, 3/8IN BARB OUT (5 PK)	90098381
KIT, EVCL LOCK KEY (5 PK)	90098377

Installation kits

Name	Article No. Manufacturer
KIT, INSTALL, LAUNDRY 4 PUMP - 8 mm	90093134
KIT, INSTALL, LAUNDRY 6 PUMP - 8 mm	90093136
EVCL, 1/2IN CHK VLV, KIT, 4 PROD - 13 mm	90098851
EVCL 1/2IN CHK VLV, KIT, 6 PROD - 13 mm	90098852

Images may differ from the actual product.

Accessories for Hydro EvoClean

Repair spare parts kits

Name	Article No. Manufacturer
KIT, EVCL CLIP (10 PK)	10098123
KIT, EVCL, TOP& BOTTOM CLIPS (6 PK)	90098365
KIT, EVCL, LOCK ASSY (1 PK)	10098138
KIT, EVCL WALL BRACKET (1 PK)	90098378
KIT, EVCL 4/8 PMP LOWER MF	90098366
KIT, EVCL FRONT LBL PK W USB CVR (1 PK)	90098376
KIT, EVCL 15 MM PUSHFIT	90098374
KIT, EVCL WATER 3/4 SWIV.	90098379
KIT, EVCL WTR VALVE/NIPPLE (5 PK)	90098380
EVCL, PCB, FRONT, KIT	90098920
EVCL, PCB, REAR, MKII, KIT	90098923
EVCL, PCB, REAR, KIT	90098922
EVCL, PCB, FRONT, MKII, KIT	90098921

EvoClean Remote Formula Select

	Name	Article No. Manufacturer
EvoClean Remote Formula Select	EvoClean Remote Select Unite	10097825
	EvoClean RFS 20 m Cable	90097605
	EvoClean, Cable Coupler	90098103
	KIT, EVCL, 3.5 m REM-FORM	90098502

Images may differ from the actual product.

Dosing Systems

Saier MPX Laundry



All necessary components of the MPX textile dosing system are integrated in a compact housing (approx. 60 x 60 cm). This makes on-site installations very quick and easy. The MPX textile dosing system is connected to the operating voltage and to the domestic water supply. A small water reservoir provides Category 5 DIN EN 1717 decoupling (by means of a „free outlet“) and reliable system separation. The water reservoir ensures that each chemical dose is followed by a water rinse at all times. Filling and emptying of the water reservoir are for monitoring purposes and to check the pump hose wear.

- ✓ Central dosing for washing machines
- ✓ Safe application
- ✓ Quick installation
- ✓ Maximum hygiene
- ✓ Innovative detergent combinations possible
- ✓ Web dashboard
- ✓ Online fine dosing possible
- ✓ Monitoring, hygiene reports and protocols
- ✓ Optimal water consumption

MPX® multiplexers provide flexible connections between treatment agents and washing machines. This means: maximum freedom of dosing options in the smallest possible space. Low investment costs thanks to compact design, integrated system separator and quick installation. Reliable and precise dosing with the lowest possible water consumption guarantees high economic efficiency and environmental protection. Powerful and user-friendly software tools enable smart management from anywhere.

Article numbers on request!

Accessories for Saier MPX Laundry

Accessories

Name	Description
Programme selector switch for mounting on a washing machine (only for MPD mode)	<ul style="list-style-type: none"> ✓ Required for Manual Programme Detection (MPD) mode to enter the wash programme number and transfer it to the MPX control. ✓ Attachment by means of a wattle (without damaging the washing machine)
I/O module to acquire the washing machine's relay pattern and transmit it to the MPX.	<ul style="list-style-type: none"> ✓ For transferring the respective number of the selected washing programme and for synchronising the programme steps via 8 wide-range voltage inputs. ✓ Required for each connected washing machine from the second machine onwards ✓ Cabling with 4-wire cables as RS485 bus system to the MPX ✓ Selection of machine number and bus termination with jumpers
Signalling device for faults and empty container empty alarms	<ul style="list-style-type: none"> ✓ Additional optical / acoustic warning device for signalling a required container change or a malfunction ✓ Can be connected to the MPX via 4-wire cable (bus cable) ✓ Acoustic signal can be temporarily suppressed
MPX data transmission adapter	<ul style="list-style-type: none"> ✓ Optical data transmission system (without contacts) with cable and USB connector that adheres magnetically to the MPX display. ✓ MPX housing does not need to be opened ✓ MPX data transmission adapter can also be used to read out other dosing systems for the kitchen and swimming pool sector.
SSC software package („Saier System Centre“)	<ul style="list-style-type: none"> ✓ Ergonomically designed configuration and data analysis software for Windows PCs or laptops or Windows emulations. ✓ The SSC software can also be used to configure and analyse data from a range of other dosing systems for the food, kitchen and swimming pool sectors.
Extraction lance SLNS 9608	Hose size 9/15
WLAN module and LTE Router	



Accessories for Saier MPX Laundry

	MPX 7x1 (Basic)	MPX 7x1 (Smart)	MPX 7x7 (Smart)	MPX 13x7 (Smart)
Description	Compact system for 1 machine with Control and innovative MPX-Valve-Technology	Compact system for 1 washing line or machine with control and innovative MPX-Valve-Technology	Multi-machine capable system for up to 7 machines with control and MPX-Valve-Technology	Multi-machine capable system for up to 7 machines with control and MPX-Valve-Technology
Max. number of products	7	7	7	13
Number of machines	1	1	7	7
Max. dosing capacity	200 ml/min	800 ml/min (1000 ml/min - water)	800 ml/min (1000 ml/min - water)	800 ml/min (1000 ml/min - water)
Duty cycle	Multi-shift operation		Multi-shift operation	Multi-shift operation
Washing programs	80	80	80	80
Washing steps	426	426	426	426
Product dosage	2304	2304	2304	2304
Number of actuation / control variable	Abruf eines Programms über externen Programmwahlschalter (MPD-Modus) oder über Relaiskontakte (APD-Modus oder Direktbetrieb)			
Compatibility with washing machines and washing machine controls	Miele (Profitronic, XCI-Box), Eletrolux (Compass Pro), and many others like Schulthess, Stahl, IPSO, Primus			
Control data	Direct mode (1:1); Sum signal; Binary pattern signals; Automatic programme detection mode (APD); Manual programme detection (MPD)			
Programming / Configuration MPX	Configuration software SSC from 1.11 via USB data transfer adapter			
Pump hose	PS 136-6.4x2.4 PH	PS 230-6.4x2.4 PH	PS 230-6.4x2.4 PH	230-6.4x2.4 PH
Rotor	Rotor 45-11	Rotor 9310, orange	Rotor 9310, orange	Rotor 9310, orange
Hose holder	SH 9911/6.4-8	SH 9310	SH 9310	SH 9310
Empty indicator	+ Flashing lamp with buzzer (SDB-HLED) + Display on the unit (product name) + Remote access (optional)			
Special feature	Compact housing LCD display			
Hose connections	8 mm	8 mm	8 mm	8 mm
Operatin temperature	10 to 50°C	10 to 50°C	10 to 50°C	10 to 50°C
Protection class	IP 65	IP 65	IP 65	IP 65
Electrical data	230 V; 50 - 60 Hz			

Images may differ from the actual product.

Measurement and Control technology



Measurement and Control technology

calgonit XControl EC



The calgonit XControl EC is a versatile control unit for use in industrial cleaning systems.

The calgonit XControl EC offers a wide range of possibilities to ideally supply and monitor the cleaning or washing process with chemicals.

Up to four dosing pumps can be connected to the calgonit XControl EC. Adjustable time windows determine which dosing pump is used to dose the cleaner. The detergent can be dosed in Cycle/Pause and Conductivity Control modes. In addition to a maximum of two dosing pumps for cleaning agents, two dosing pumps for additives can be controlled.

In addition, the calgonit XControl EC is equipped with three further temperature measurement inputs and two inputs for measuring the water flow.

All readings, pump control performance and faults are recorded in a CSV file via data logging and can be downloaded via the built-in web server or USB stick. The parameters can also be changed quickly and conveniently via the web server with the corresponding user level.

Technical data:

- ✓ Power supply: 230 V 10 A
- ✓ Inputs Release signals: 230 V
- ✓ Inputs Temperature sensors: 3x PT100, 0-20 mA or 4-20 mA
- ✓ Flow measurement inputs: 2x contact, 0-20 mA or 4-20 mA
- ✓ Category of the switching outputs: AC3
- ✓ Control of the pumps: PWM or contact
- ✓ Dimensions (WxHxD): 324 x 289 x 112 mm
- ✓ Integrated power supply for dosing pumps: 230 V max. 3 A

Name	Article No.
calgonit XControl EC	83000691

Spare parts

Name	Article No.
Buffer battery CR 2032	86040607
Load relay	86000118
Fine-wire fuse, slow-blow 0.5 ampere	86040338
Fine-wire fuse, slow-blow 6.3 ampere	86040337

Images may differ from the actual product.

Measurement and Control technology

Dosing computer DC 2418

The Dosing computer DC 2418 is an intelligent, communication-enabled dosing system. It is used as a control, regulation and documentation system in the food industry and many other sectors. With this dosing system and connected pumps, up to two different products can be dosed: detergent and rinse aid or two different detergents (e.g. in the often required „acid-alkaline switchover“). Depending on the day of the week or time of day, different dosing programmes can be run, which can also be switched by signal or password.



Many rinsing and cleaning processes are based on conductivity control: The prescribed or effective concentration of an alkaline or acidic detergent is controlled to the setpoint based on the conductivity measured in the wash liquor. Depending on the type of soiling, a detergent is dosed that leaves positively charged sodium or potassium ions and negatively charged hydroxide ions in the rinse water. As these are ‚consumed‘ by washing, the drop in measurable conductivity calls for more detergent.

This conductivity control method works particularly well when osmosis water or water with a low base conductivity is used, or when the water exchange due to evaporation, carry-over, discharge or discharge control is so high that contamination of the wash liquor and the resulting „saline“ is low.

The system can also be configured as a stand-alone desalination controller as a special feature. If the cooling water becomes saline, the controller repeatedly activates a solenoid valve above an adjustable conductivity limit to add fresh water. The daily fresh water quantity in litres can be recorded in addition to the valve activation time using an additional ctLog 2013 sensor connection module and a water meter with pulse output.

An inductive conductivity sensor ILFS 02 with integrated temperature measurement (see picture) or a conductive conductivity sensor EE 65-25-10 can be connected to the dosing computer DC 2418. With the inductive conductivity sensor ILFS 02, sensor failure can also be detected and the medium temperature measured, recorded and monitored, just as with an ILFD 02 (for sample water in the cooling water circuit).

Name	Article No.
Dosing computer DC 2418	86020115

Spare parts

Name	Article No.
ILFS monitor with USB connection	86020333
Data transmission adapter	86020338

Images may differ from the actual product.

Measurement and Control technology

Aegis II



The AEGIS II monitor and controller continuously measures and controls conductivity and biocide levels to keep pipes and heat exchangers clean. The AEGIS II records all the parameters required for cooling water treatment and controls the functions necessary for proper operation:

- ✓ Measurement of electrolytic conductivity - controls desalination
- ✓ Biocide dosing - time-dependent or as measurement and control, VDI 2047 and 42. BImSchV compliant (e.g. chlorine)
- ✓ Corrosion measurement - determines if enough corrosion inhibitor is being dosed
- ✓ pH measurement - measures and regulates the pH value

Benefits:

- ✓ Control of biocide dosing via 1, 7 or 28 days real-time clock
- ✓ If desired, the biocide concentration can be measured and controlled online
- ✓ Measurement of conductivity, temperature and flow monitoring with the digital sensor type CTFS
- ✓ Standard web interface for unit configuration and remote maintenance with e-mail alerting (the controller must be connected to the Internet for e-mail alerting). WLAN / WiFi as an option
- ✓ Forced desalination: performs a desalination prior to a biocide dosing, depending on time or measurement.
- ✓ Desalination lock: locks desalination after biocide dosing

Article number on request!

Dosing pumps



Dosing pumps ProMInent

Membrane pump CONCEPT^{PLUS}



The pumps of the CONCEPT^{PLUS} series can be infinitely adjusted via stroke length in the range of 10 - 100 % as well as in 4 steps via stroke frequency. This results in a control range of 1:40. In addition to manual adjustment of the stroke frequency, the pump can also be controlled via potential-free contacts coming from a water meter or a measuring and control device. In addition, the pump can be switched ON/OFF via a potential-free contact. For this purpose, the retrofit kit „External control“ is required.

Materials touched by media:

- ✓ Conveyor unit: PVT
- ✓ Dosing head: PVDF
- ✓ Diaphragm: PTFE pad
- ✓ Extraction/pressure connection: PVDF
- ✓ Valve ball: Ceramics
- ✓ Gaskets: PTFE

Name	Supply pressure at max. counterpressure			Supply pressure at medium counterpressure			Stroke rate Strokes/min	Connection size aØxιØ mm	Extraction height mWs
	bar	L/h	ml/Stroke	bar	L/h	ml/Stroke			
CNPb1601	16	1,1	0,1	8,0	1,4	0,13	180	6x4	2
CNPb1002	10	2,1	0,19	5	2,6	0,24	180	6x4	5
CNPb0704	7	3,9	0,36	3,5	4,4	0,41	180	6x4	4
CNPb0312	3	12,0	0,83	1,5	17,3	1,20	240	8x5	2
CNPb0223	1,5	21,9	1,52	1	25,2	1,75	240	8x5	1,5

Name	Article No.	Article No. Spare parts kit
Membrane metering pump CNPb1601	86101407	86120173
Membrane metering pump CNPb1002	86100497	86120172
Membrane metering pump CNPb0704	86100499	86120171
Membrane metering pump CNPb0312	86100498	86120170
Membrane metering pump CNPb0223	86101401	86120169
Retrofit kit external control	86120078	

Images may differ from the actual product.

Dosing pumps ProMinent

Membrane pump Beta

The universally applicable Beta membrane pump is equipped with all the necessary features to ensure high-quality process control.

Capacity range 0.74 - 32 L/h, 2 - 25 bar

Benefits:

- ✓ Simple adjustment of the dosing capacity via stroke frequency and stroke length
- ✓ Adaptation to existing signal transmitters through external control via potential-free contacts with pulse step-up and pulse step-down
- ✓ Can be used for almost all liquid chemicals due to the available material combinations PP, PVDF, acrylic glass, PTFE and stainless steel
- ✓ Acrylic/PVDF and PVDF self-vent liquid end design without bypass,
- ✓ e.g. for H₂O₂ and chlorine bleaching lye
- ✓ Virtually wear-free magnetic drive: economical and overload-proof
- ✓ Optional external control via 0/4 - 20 mA and potential-free contacts with pulse over- and undercutting from 32:1 to 1:32

Technical data:

- ✓ External control via potential-free contacts with pulse over- and undercutting for adaptation to existing signal transmitters from 64:1 - 1:64
- ✓ Stroke frequency adjustment in 10% steps from 10% - 100% corresponds to 18 - 80 strokes/ min
- ✓ Stroke length adjustment infinitely variable from 0% - 100% (recommended 30% - 100%)
- ✓ Connection for 2-stage level switch
- ✓ Wide-range supply voltage 100 - 230 V, 50/60 Hz
- ✓ An optional relay module can also be easily and safely retrofitted

The pump is designed individually according to your data on the completed checklist.



Dosing pumps ProMinent

Solenoid Membrane pump Gamma/X



The Gamma/X solenoid membrane dosing pump is easy to use and has a long service life. A sophisticated solenoid control system measures the counterpressure, protects the system from overload and ensures uniform dosing independent of pressure. In addition, the Gamma/X detects and compensates for air in the dosing head.

Capacity range 1 ml/h - 45 L/h, 2 - 25 bar

Benefits:

- ✓ Simple and fine adjustment of the litre output in automatic mode. Can be reduced to a few ml/h. Alternatively, the pump can also be operated in automatic „OFF“ mode via stroke length and stroke frequency.
- ✓ Suitable for continuous small-volume dosing from approx. 1 ml/h due to the controlled magnetic drive
- ✓ Integrated pressure measurement and display for more safety during commissioning and in the process
- ✓ Batch operation with max. 99.99 L or 99,999 strokes/start pulse
- ✓ Connection for 2-stage level switch
- ✓ Available material combinations PP, PVDF, acrylic glass, PTFE and stainless steel
- ✓ Special dosing head designs for degassing and higher viscosity media
- ✓ Integrated 1-week / 1-month timer
- ✓ Optionally available with Profibus®, Profinet, Modbus RTU and CANopen
- ✓ Optional 0/4 - 20 mA output for remote transmission of actual dosing capacity and error messages
- ✓ Optional relay module 230 V, easy and safe to retrofit
- ✓ Optional 24 V combination relay, easy and safe to retrofit

The pump is designed individually according to your data on the completed checklist.

Dosing pumps ProMinent

Solenoid Membrane pump Gamma/XL

The Gamma/XL solenoid diaphragm metering pump is operated via a click wheel and 4 additional operating keys. The dosing pump detects air and pressure in the dosing head, which greatly increases operational safety and accuracy. In addition, it has bus interfaces and can be networked with all common systems, devices and platforms. The Gamma/XL stands out from the Gamma/X with a logbook that records the last 300 events and 3 configurable inputs and outputs.



Capacity range 4ml/h - 80L/h, 2 - 25 barr

Benefits:

- ✓ Simple and fine adjustment of the litre output in automatic mode. Can be reduced to a few ml/h. Alternatively, the pump can also be operated in automatic „OFF“ mode via stroke length and stroke frequency.
- ✓ Batch operation with max. 99.99 L or 99,999 strokes/start pulse
- ✓ Connection for 2-stage level switch
- ✓ 3 additional ports, switchable as digital inputs or outputs
- ✓ Available material combinations PP, PVDF, acrylic glass, PTFE and stainless steel
- ✓ Special dosing head designs for degassing and higher viscosity media
- ✓ Integrated 1-week / 1-month timer
- ✓ Optionally available with Profibus®, Profinet, Modbus RTU and CANopen
- ✓ Optional 0/4 - 20 mA output for remote transmission of actual dosing capacity and error messages
- ✓ Optional relay module with 1 x changeover contact, 230 V - 8 A
- ✓ Optional relay module with 2 x On, 24 V - 100 mA

The pump is designed individually according to your data on the completed checklist.

Dosing pumps ProMinent

Motor Membrane pump Sigma Basic type



The Sigma basic type is a very robust motor-driven diaphragm metering pump with patented multi-layer safety diaphragm for high process reliability. It offers a wide range of drive variants such as three-phase or 1-phase AC motors, also for hazardous areas.

Benefits:

- ✓ Stroke length adjustment: manually by means of self-locking rotary knob in 1% steps (optionally with actuator or variable speed drive)
- ✓ Reproducibility of the dosing under defined conditions and correct installation better than $\pm 2\%$ in the stroke length adjustment range 30 - 100%.
- ✓ Materials in contact with the medium: PVDF, stainless steel 1.4571/1.4404 and PTFE
- ✓ Patented multilayer safety diaphragm with optical diaphragm rupture indicator (optionally with diaphragm rupture signalling via contact)
- ✓ Integrated hydraulic overflow and vent valve
- ✓ Optional for hazardous area II 2G Ex h IIC T3 Gb X or II 2G Ex h IIC T4 Gb X
- ✓ Protection class IP 55
- ✓ Glass fibre reinforced plastic housing

For all mechanically deflected diaphragm metering pumps, suitable overflow devices must be provided during installation for safety reasons.

The pump is designed individually according to your data on the completed checklist.

Dosing pumps ProMinent

Motor Membrane pump Sigma/X Control type

The Sigma/X control type is an intelligent, flexible motor-driven diaphragm metering pump that sets new standards in terms of ease of use, reliability and safety.

Benefits:

- ✓ Stroke length adjustment: manually by means of self-locking knob in 1% steps
- ✓ Reproducibility of the dosing under defined conditions and correct installation better than $\pm 2\%$ in the stroke length adjustment range 30 - 100%.
- ✓ Power supply: 1 pH, 100 - 230 V $\pm 10\%$, 240 V $\pm 6\%$, 50/60 Hz (420 W)
- ✓ Protection class IP 65
- ✓ Glass fibre reinforced plastic housing
- ✓ Manual or external contact operation adjustable, factor for external contact control 99:1 - 1:99, batch operation with max. 99,999 strokes/start pulse
- ✓ Connection for 2-stage level switch
- ✓ Time-dependent control of the dosing quantity via integrated timer
- ✓ Relay module with 1 x changeover contact, 230 V - 8 A
- ✓ Relay module with 2 x On, 24 V - 100 mA
- ✓ The Sigma series is available in the version „Physiologically harmless to the material in contact with the medium“.
- ✓ Materials in contact with the medium: PVDF, stainless steel 1.4571/1.4404 and PTFE
- ✓ Optional output/relay module: 0/4 - 20 mA analogue output for remote transmission of stroke frequency plus relay module with 1 x On, 24 V - 100 mA
- ✓ Optional connection to PROFINET via ProMinent DULConvert PROFIBUS®- PRO- FI-NET Converter



For all mechanically deflected diaphragm metering pumps, suitable overflow devices must be provided during installation for safety reasons.

The pump is designed individually according to your data on the completed checklist.

Accessories for ProMinent dosing pumps

Accessories

Name	Description	Length (m)	CONCEPT	Beta Gamma	Sigma	Article No.
Level cable round plug 3-pole	Activation of the empty signal	2				86120011
		5		✓	✓	
Pulse control cable round plug 5-pole	Control of the pumps via contacts	5		✓	✓	86120006
		10				86120007
Universal control cable round plug 5-pole	Control of the dosing pump via potential-free contacts, analogue standard signals and for on/off switching	2		✓	✓	86120012
		10				86120026
Level monitoring for containers	Switching off a dosing pump via potential-free contacts			✓	✓	86010900
Multi-function valve for mounting directly on the pump head	Pressure valve, opening pressure approx. 1.5 bar Overflow valve, opening pressure approx. 10 bar		✓	✓		86120010

Accessories

Description	Name	Article No.
Wall bracket PPE für: ✓ Alpha ✓ Beta ✓ Gamma/X ✓ CONCEPT ^{PLUS}	To accommodate a dosing pump made of glass-fibre reinforced plastic	86120008
Wall bracket ✓ Gamma/XL ✓ DFXa ✓ Vario ✓ Sigma	To accommodate a dosing pump made of polypropylene	86120022
Elbow fitting	To accommodate a multi-function valve on self-ventilating dosing heads	86120020
Adapter plate	For mounting the dosing head perpendicular to the wall	86120019

Images may differ from the actual product.

Accessories for ProMinent dosing pumps

Hose connection kits

Name	Material	Connection	Article No.
Connection set 2 each M20x1.5 screw connection	PP/EPDM	I/O Ø 4/6 mm	86120001
	PVDF	I/O Ø 4/6 mm	86120031
	PP/FKM	I/O Ø 5/8 mm	86120002
	PVDF	I/O Ø 5/8 mm	86120030
	PP/EPDM	I/O Ø 6/12 mm	86120000
	PP/FKM	I/O Ø 6/12 mm	86120045
	PVDF	I/O Ø 6/12 mm	86120062
	PP/FKM	I/O Ø 9/12 mm	86120003
Universal connection kit	PVDF	I/O Ø 4/6 - 6/12 mm	86120049

Hose

Name	Material	Connection	Article No.
Fabric hose clear	PVC	I/O Ø 6/12 mm	86340000
		I/O Ø 9/15 mm	86340001
		I/O Ø 10/16 mm	86340002
		I/O Ø 13/20 mm	86340003
		I/O Ø 16/24 mm	86340004
		I/O Ø 19/27 mm	86340005
		I/O Ø 25/34 mm	86340006
		I/O Ø 38/48 mm	86340007
Hose especially for chlorine/H ₂ O ₂ 10 bar at 20°C	PTFE	I/O Ø 4/6 mm	86340101
		I/O Ø 5/8 mm	86340103
Hose	PVC	I/O Ø 4/6 mm	86341500
		I/O Ø 6/9 mm	86341501
		I/O Ø 5/8 mm	86340106
		I/O Ø 5/8 mm blau	86340105
		I/O Ø 6/10 mm	86340110
Other hose colours on request!			

Hose in protective hose

Name	Material	Connection	Article No.
Hose in protective hose max. 50 m, 7 bar at 20°C	PE	I/O Ø 9/12 mm	86340121
Hose in protective hose max. 100 m, 13 bar at 20°C		I/O Ø 4/6 mm	86340016
Other sizes on request!			

Images may differ from the actual product.

Accessories for ProMinent dosing pumps

Extraction lances drum and IBC incl. empty message

Name		Hose	Article No.
SLNS 9608 - 1200 mm		9/15	87091992
SLNS 9608 - 1200 mm		6/12	86311107
Extraction lance foot	Float switch with cable for drum, IBC and canister		86311004



Extraction lances drum and IBC / connection variable / incl. empty message

Name	Connection	Article No.
Extraction lance 1,300 mm / 50 mm Protective pipe extraction line DN10 - extraction connection M20x1.5 return M20x1.5 with blind plug	M20x1,5	86311100
Extraction lance 1,200 / 50 mm Protective pipe extraction line DN10 - extraction connection D16 return D16	D16	86311115
Extraction lance 1,200 mm / 50 mm Protective tube extraction line DN20 - extraction connection D16 Return D16	D16	86311116
Connecting parts are not included in the scope of delivery!		



Extraction lances canister incl. empty message

Name	Hose	Article No.
SLNS 9908 - 500 mm	5/8	86311203
SLNS 9608 - 600 mm	6/12	87091991
SLNS 9608 - 600 mm	9/15	86311106



Extraction lances canister incl. empty message

Name	Connection	Article No.
Canister - extraction lance 450 mm / 50 mm Protective extraction pipe DN10 - Extraction connection D16 Return D16 ATTENTION: Hose connection M20x1.5 must be ordered for the connection kit!	D16	86311200



Images may differ from the actual product.

Accessories for ProMinent dosing pumps

Accessories

Name	Hose	Article No.
Connection kit PP/EPDM	4/6 mm	86120001
Connection kit PVDF	4/6 mm	86120031
Connection kit PP/EPDM	5/8 mm	86120002
Connection kit PVDF	5/8 mm	86120030
Connection kit PP/EPDM	6/12 mm	86120000
Connection kit PVDF	6/12 mm	86120062
Connection kit M20x1.5 Connection for screw fitting D16	6/12 mm	86311012
PVC hose nozzle for screw connection D16	10 mm	86311020
PVC hose nozzle for screw connection D16	12 mm	86311021
PVC hose nozzle for screw connection D16	16 mm	86311023
PVC hose nozzle for screw connection D16	19 mm	86311024
Dummy cap PVC for screw connection D16		86311025

Dosierventile

Name	Material composition	Article No.
Dosing valve PPE 1/2"	PPE housing, EPDM seals Connection 6/12 mm	86130000
Dosing valve PVT 1/2"	Housing made of PVDF, seals PTFE Connection 6/12 mm	86130001
Dosing valve PPE 3/4"	PPE housing, EPDM seals Connection 16/24 mm	86130010
Dosing valve PVT 3/4"	PVDF housing, PTFE seals Connection 16/24 mm	86130012
Dosing valve PPE 1"	PPE housing, EPDM seals Connection 19/27 mm	86130007
Dosing valve PVT 1"	Housing made of PVDF, seals PTFE Connection 19/27 mm	86130013

Images may differ from the actual product.

Dosing pumps Grundfos

Diaphragm dosing pumps SMART Digital up to 200 L/h

Designed for flow rates up to 200 litres per hour and nominal pressures up to 16 bar, the SMART Digital range offers reliable, safe and cost-effective dispensing with industry-leading ease of use and flexibility in any application across all sectors and industries, including water treatment. The advanced monitoring and self-analysis capabilities provided by the wide range of control options offer intelligent process control, monitoring the entire system beyond the pumps.

A complete system with two pump sizes

The SMART Digital range includes the original SMART Digital DDA, DDC and DDE pumps for flows up to 30 l/h and the SMART Digital XL DDA and DDE pumps for flows up to 200 l/h. A wide range of accessories is available for all pumps, such as mounting kits, control and signalling cables and dosing containers, which make it even easier to adapt the pumps to the respective application.

Service and maintenance friendly

SMART Digital pumps feature very long service and maintenance intervals and greatly reduced life cycle costs, ensuring trouble-free operation and reliable metering performance. When maintenance is required, our customised service kits ensure optimal maintenance that keeps the pumps in top condition for years.



Dosing pumps Grundfos

Dosing pump DDA

Dosing pump DDA

High-end solution for complex and demanding applications

- ✓ AutoFlowAdapt: Setpoint for dosing quantity is achieved by automatically adjusting the measured flow value
- ✓ Automatic venting when the pump is in standby mode
- ✓ Flexible fieldbus control
- ✓ Adjustment range 1:3000 with constant full stroke length



Dosing pump DDC

Dosing pump DDC

Best value for money

- ✓ Two SlowMode levels (25% and 50%), calibration mode, warning display
- ✓ External stop device, switching of two container levels, two relay outputs



Dosing pump DDE

Dosing pump DDE

A cost-effective Digital Dosing™ solution

- ✓ Control options: manual control between 0.1 and 100%, pulse control (% of stroke volume) and analogue control (DDE XL)
- ✓ External stop device, empty message control



The pump is designed individually according to your data on the completed checklist.

Name	max. delivery rate	Media temperature	max. operating pressure
DDA	200 L/h	-10 to +50°C	16 bar
DDC	15 L/h	-10 to +45°C	10 bar
DDE	200 L/h	-10 to +50°C	10 bar

Images may differ from the actual product.

Peristaltic pumps and proportional feeders



Universal peristaltic pumps

Concept 2105-3

Universal dosing hose pump with built-in GCL speed control. Wide range of adjustment and control functions. The pump can be used in stand-alone mode. It can also be controlled by intelligent dosing systems..

Properties:

- ✓ Safety shutdown in case of hose rupture in the pump with conductive media
- ✓ Rotor speed control with high drive torque reserves
- ✓ Pump hoses with 2.4 mm wall thickness can be used for significantly longer pump hose service life
- ✓ There is a wide range of applicable hose materials due to the high torque reserves
- ✓ On request, the delivery capacity ranges can be changed by converting pump hoses, hose holders and rotors
- ✓ Due to the special pump hose, rotor and hose holder, it is possible to realise very small doses of up to 0.08 ml/min.
- ✓ Through the use of a non-return valve, also suitable as a pressure dosing hose pump.
- ✓ Hose filling button for quick filling of the intake and outlet hose („venting“)
- ✓ Versatile use through the selection of 6 standard operating modes (adjustable flow rate, time-controlled, conductivity controller with ILFS02)
- ✓ When the inductive conductivity probe ILFS 02 is connected, the unit becomes a conductivity-controlled pump.
- ✓ On request for products containing chlorine, hydrogen peroxide and peracetic acid, also available with resistance to connecting parts such as hoses and fittings.



Technical data:

- ✓ Power consumption: max. 20 VA
- ✓ Protection class: IP65
- ✓ Ambient temperature: 10 to 50°C
- ✓ Delivery rate: 0.08 - 250 ml/min
- ✓ Hose connection: 6 mm grommet
- ✓ Recommended max. duty cycle: 50%

Name	Voltage	Article No.
Concept 2105-3	230 V AC	86100363
Concept 2105-3	24 V DC	86100364

Images may differ from the actual product.

Accessories for Concept 2105-3

Conductivity probe

Name	Description	Article No.
ILFS02 with 5 m cable and M12 plug	When ordering, specify the type of instrument to which the conductivity probe is to be connected (data mode).	86020335
Extension cable ILFS02	Sold by the metre	86040110
M12 connector female for ILFS02		86041704

Empty indicator / indicator lights

Name	Description	Article No.
Hazard warning light	optical	86010902
Warning light with buzzer	visually and acoustically	87092141
Connection cable	3G 0.75 mm ² sold by the metre	86040000

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	incl. 4 m hose	600	✓		87091991
SLNS 9608 - 1200 mm	incl. 4 m hose	1,200		✓	86311107
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC pressure fabric hose clear	I/O Ø 6/12 mm	86340000

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet nozzle	Ø 10.5 mm	6 mm grommet	87091604

Images may differ from the actual product.

Accessories for Concept 2105-3

Spare hoses

Name	Material	Flow rate (ml/min)	Back pressure (bar)	Required Rotor	Required Hose holder	Article No.
Pump hose DPSN 136 - 6.4 x 2.4 PH	PharMed	3 - 250	max. 0.5	Rotor saffron	9911/6.4 - 6 PP	86110311
Pump hose DPSN 136 - 4.8 x 2.4 PH (Standard)	PharMed	2 - 150	max. 2	Rotor yellow	9911/4.8 - 6	86110308
Pump hose 138 - 3.2 x 1.6 PH	PharMed	0.83 - 4,5	2	Rotor blue	9911/3.2 - 4x1	86110340
Pump hose 138 - 1.6 x 1.6 PH	PharMed	0.25 - 1.25	3	Rotor blue	9911/1.6 - 4x1	86110361
Pump hose 138 - 0.8 x 1.6 PH	PharMed	0.08 - 0.4	3,7	Rotor blue	9911/0.8 - 4x1	86110359

Hose holder

Name	Hose connection	Article No.
Hose holder 9911/6,4 - 6 PP (Standard Concept 2106 mcs)	6 mm grommet	86110337
Hose holder 9911/4,8 - 6 (Standard Concept 2105 mcs)	6 mm grommet	86110314

Rotors

Name	Article No.
Rotor saffron (Standard Concept 2106 mcs)	86110336
Rotor yellow (Standard Concept 2105 mcs)	86110324
Rotor blue 47 - 13	86110362
Rotor grey 47 - 13	86110324

Images may differ from the actual product.

Universal peristaltic pumps

Compact Series



The peristaltic pumps Compact R and Compact K are suitable for continuous dosing of a pre-set quantity (e.g. cleaner). The delivery rate is adjusted via a potentiometer inside the pump. The pumps of the Compact series have a good price-performance ratio. The scope of delivery includes the necessary accessories such as tank inlet connection, container suction and supply hoses.

Name	Delivery rate	Recommended max. continuous dosing capacity	Article No.
Compact R	2 - 75 ml/min	4.5 L/h	86100319
Compact K	0.9 - 10 ml/min	0.6 L/h	86100332

Images may differ from the actual product.

Accessories for Compact Series

Vacancy display / indicator lights

Name	Description	Article No.
Level monitoring device	With red flashing lamp, for automatic switch-off when containers are empty in conjunction with the empty signal from the suction lance.	86010900
Connection cable	3G 0.75 mm ² sold by the metre	86040000

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9908 - 350 mm	incl. 4 m hose	350	✓		86311108
SLNS 9908 - 500 mm	incl. 4 m hose	500	✓		86311203
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC hose	I/O Ø 4/6 mm	86341500
Other hose materials on request!		

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet	Ø 10.5 mm	6 mm grommet	87091604
Check valve	G 1/8"	5 x 1.5 mm clamping ring	86110338
Other tank inlets on request!			

Images may differ from the actual product.

Accessories for Compact Series

Spare hoses

Name	Material	Flow rate (ml/min)	Back pressure(bar)	Required Rotor	Required Hose holder	Article No.
Pump hose PS140 PH (Standard Compact R)	PharMed	2 - 75	max. 0.5	Rotor yellow	9911/4.8 - 5x1.5	86110302
Pump hose PS138 - 3,2x1,6 RI 4 (Standard Compact K)	Silicone	1.3 - 10	max. 2.0	Rotor blue	9911/3.2 - 5x1.5	86110340

Hose holder

Name	Hose connection	Article No.
Hose holder 9911/4,8 - 5x1,5 (Standard Compact R)	5 x 1.5 mm clamping ring	86110326
Hose holder 9911/3,2 - 5x1,5 (Standard Compact K)	5 x 1.5 mm clamping ring	86110353

Rotors

Name	Article No.
Rotor yellow (Standard Compact R)	86110324
Rotor grey (Standard Compact K)	86110344

Images may differ from the actual product.

Universal peristaltic pumps and Accessories

Peristaltic pump DSP 9612

The DSP 9612 dosing unit is very well suited for a wide range of applications for pressureless dosing (< 0.5 bar) of liquids. The very robust DC motor provides a delivery rate of 833 ml/min.



Technical data:

- ✓ Dimensions (WxHxD): 180 x 148 x 88 mm
- ✓ Hose connection: 9 mm
- ✓ Voltage: 230 V
- ✓ Recommended flow rate: 25 L/h
- ✓ Recommended max. continuous dosing rate: 50%
- ✓

Name	Article No.
Peristaltic pump DSP 9612	86100325

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	incl. 4 m hose	600	✓		86311106
SLNS 9608 - 1200 mm	incl. 4 m hose	1,200		✓	87091992
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC pressure fabric hose	I/O Ø 9/15 mm	86340001
Other hose materials on request!		

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet M 12	Ø 12.5 mm	9 mm grommet	87093080
Other tank inlets on request!			

Images may differ from the actual product.

Accessories for DSP 9612

Spare hoses

Name	Material	Flow rate (ml/min)	Back pressure (bar)	Required Rotor	Required Hose holder	Article No.
Pump hose PS230 - 6.4x2.4 PH (Standard)	PharMed	833	max. 0,5	Rotor orange	9310	86110306
Pump hose PS230 - 6.4x2.4 SI	Silicone	833	max. 0,5	Rotor orange	9310	86110347
Pump hose PS230 - 6.4x2.4 NO	Neoprene	833	max. 0,5	Rotor orange	9310	86110348

Hose holder

Name	Hose connection	Article No.
Hose holder 9310	9 mm grommet	86110315

Rotors

Name	Article No.
Rotor orange	86110318
Locking ring for rotor orange	86110319

Pumps housing cover

Name	Article No.
Transparent cover for rotor case	86110317

Images may differ from the actual product.

Time-controlled peristaltic pump

DSP 9905 mcs

The DSP 9905 mcs peristaltic pump is a detergent metering device for one- and two-valve machines. The pump's wear-free AC motor (230 V, 50 Hz) ensures an above-average service life and a delivery rate of 166 ml/min.

Operating modes:

- ✓ „Running time“ and „Pause“
- ✓ 2 time relays („pre-dosing“ and „post-dosing“)
- ✓ Time relay (start of dosing, started with the push-button on the side)

Technical data:

- ✓ Hose connection: 6 mm grommet
- ✓ Voltage: 230 V, 50 Hz
- ✓ Adjustment range flow rate: 4 - 166 ml/min
- ✓ Time relay 1: 5 - 50 s or 40 - 400 s
- ✓ Time relay 2: 2 - 20 s

Attention:

The pump does not have an empty indicator evaluation for suction lances with float switch. An additional level monitoring device, which is not included in the scope of delivery, is required for a shutdown.



Name	Article No.
DSP 9905 mcs	86100335

Images may differ from the actual product.

Accessories for DSP 9905 mcs

Empty indicator / indicator lights

Name	Description	Article No.
Level monitoring device	With red flashing lamp, for automatic switch-off when containers are empty in conjunction with the empty signal from the extraction lances	86010900
Connection cable	3G 0.75 mm ²	86510138

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	incl. 4 m hose	600	✓		87091991
SLNS 9608 - 1200 mm	incl. 4 m hose	1,200		✓	86311107
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC-pressure fabric hose clear	I/O Ø 6/12 mm	86340000

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet nozzle	Ø 10.5 mm	6 mm grommet	87091604

Images may differ from the actual product.

Accessories for DSP 9905 mcs

Spare hoses

Name	Material	Flow rate (ml/min)	Back pressure (bar)	Required Rotor	Required Hose holder	Article No.
Pump hose PS140 PH (Standard)	PharMed	166	max. 0.5	Rotor yellow	9911/4,8 - 6	86110302
Pump hose PS140 SI	Silicone	166	max. 0.5	Rotor yellow	9911/4,8 - 6	86110347
Pump hose PS1440 NO	Neoprene	166	max. 0.5	Rotor yellow	9911/4,8 - 6	86110348

Hose holder

Name	Hose connection	Article No.
Hose holder 9911/4,8 - 6	6 mm grommet	86110314

Rotors

Name	Article No.
Rotor yellow	86110324

Images may differ from the actual product.

Conductivity controlled peristaltic pump

DSP 9805-II



The DSP 9805-II dosing unit has been specially developed for use with crate washers, pack washers and bottle washers. With a delivery rate of 833 ml/min, even large tank contents can be effortlessly brought up to the target concentration when refilling with fresh water. During washing operation, the concentration of the cleaning agent in the washing tank can be continuously and consistently maintained at the desired target concentration in the washing solution, depending on the conductivity.

The conductivity controlled dosing unit can be operated with either a stable, two-pole conductive conductivity probe or an ILFS 02 inductive conductivity probe, which is virtually immune to surface contamination.

Technical data:

- ✓ Hose connection: 9 mm
- ✓ Voltage: 230 V
- ✓ Delivery rate: 833 ml/min
- ✓ Recommended flow rate: 25 L/h

Attention:

Conductivity probes are not included in the scope of delivery and must be ordered separately.

Name	Article No.
DSP 9805-II	86100306

Accessories for DSP 9805-II

Empty indicator / indicator lights

Name	Description	Article No.
Hazard warning light	optical	86010902
Warning light with buzzer	visually and acoustically	87092141
Connection cable	3G 0.75 mm ²	86040000

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	inkl. 4 m hose	600	✓		86311106
SLNS 9608 - 1200 mm	inkl. 4 m hose	1,200		✓	87091992
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC pressure fabric hose	I/O Ø 9/15 mm	86340001
Other hose materials on request!		

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet	Ø 12.5 mm	9 mm grommet	87093080
Other tank inlets on request!			

Images may differ from the actual product.

Accessories for DSP 9805-II

Hose holder

Name	Hose connection	Article No.
Hose holder 9310	9 mm grommet	86110315

Rotors

Name	Article No.
Rotor orange	86110318
Locking ring for rotor orange	86110319

Pump housing cover

Name	Article No.
Transparent cover for rotor case	86110317

Conductivity probes

Name	Description		Article No.
Inductive conductivity probe ILFS02 with 5 m cable and M12 connector	When ordering, the type of unit to which the conductivity probe is connected must be specified (data mode).	0.5 - 250 mS	86020335
Extension cable ILFS02			86040110
M12 connector female for ILFS02			86041704
Conductive conductivity probe EE 65 - 25 - 10		0.5 - 25 mS	86020312
Conductive conductivity probe EE 65 - 25 - 10		2 - 150 mS	86020307
Extension cable for conductive conductivity probe	Connectors M12 female and male are required for the extension.		86040000
M12 plug female			86041704
M12 plug male			86041703

Images may differ from the actual product.

Conductivity controlled peristaltic pump

Concept 2115 mcs

Dosing hose pump with integrated conductivity controller for conductive conductivity sensors for dosing liquid detergents or other liquid media depending on the conductivity of the wash solution.

By reducing the dosing rate close to the setpoint (from approx. 75%), the setpoint is quickly reached with little overshoot and is precisely maintained (I control behaviour).

The set point is adjustable in the range of 0.5 - 25 mS/cm.

Pump data:

- ✓ Delivery rate 500 ml/min
- ✓ Dosing rates up to max. 12 L/h with a maximum duty cycle of 40%.
- ✓ Hose connection with 6 mm grommet
- ✓ Adjustable pre-dosing time 6 - 60 s or 1 - 20 min
- ✓ Post-dosing time monitoring 1 - 10 min
- ✓ All settings via 2 potentiometers and a slide switch
- ✓ Hose rupture - monitoring in the pump housing
- ✓ Connection for suction lances with container - Empty signal
- ✓ Control output for vacancy indicators/indicator lights (230 V max. 100 VA)

Scope of delivery:

- ✓ Conductivity probe with 4 m connection cable
- ✓ Wall mounting material

Technical data:

- ✓ Operating voltage: 180 - 264 V, 50 - 60 Hz
- ✓ Operating conditions: Ambient temperature 10°C - 50°C
- ✓ Back pressure: max. 0,5 bar
- ✓ Dimensions (WxHxD): 95 x 180 x 130 mm
- ✓ Delivery rate: 500 ml/min
- ✓ Recommended max. continuous dosing rate: 40%



Name	Article No.
Concept 2115 mcs	86100329

Images may differ from the actual product.

Accessories for Concept 2115 mcs

Empty indicator / indicator lights

Name	Description	Article No.
Hazard warning light	optical	86010902
Warning light with buzzer	visually and acoustically	87092141
Connection cable	3G 0.75 mm ²	86040000

Extraction lances with empty signal

Name	Description	Length (mm)	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	incl. 4 m hose	600	✓		87091991
SLNS 9608 - 1200 mm	incl. 4 m hose	1.200		✓	86311107
Other extraction lances on request!					

Hose

Name	Description	Article No.
PVC fabric hose clear	I/O Ø 6/12 mm	86340000
Other hose materials on request!		

Tank inlet

Name	Hole in the tank	Connection hose	Article No.
Tank inlet nozzle	Ø 10.5 mm	6 mm grommet	87091604

Images may differ from the actual product.

Accessories for Concept 2115 mcs

Spare hoses

Name	Material	Flow rate (ml/min)	Back pressure (bar)	Required Rotor	Required Hose holder	Article No.
Pump hose DPSN136 - 6.4x2.4 PH (Standard)	PharMed	40 - 500	max. 0.5	Rotor saffron	9911/6.4 - 6 PP	86110311
Pump hose DPSN136 - 4.8x2.4 PH	PharMed	3 - 200	max. 2	Rotor yellow	9911/4.8 - 6	86110308
Pump hose DPSN132 - 4.8x2.4 TG - G	Silikon	3 - 200	max. 2	Rotor yellow	9911/4.8 - 6	87093032

Hose holder

Name	Hose connection	Article No.
Hose holder 9911/6.4 - 6 PP	6 mm grommet	86110337
Hose holder 9911/4.8 - 6	6 mm grommet	86110314

Rotors

Name	Article No.
Rotor saffron (standard)	86110336
Rotor yellow	86110324

Conductivity probes

Name	Description	Article No.
Conductive conductivity probe EE 65 - 25 - 10		0.5 - 25 mS 86020312
Extension cable for conductive conductivity probe	Connectors M12 female and male are required for the extension.	86040000
M12 plug female		86041704
M12 plug male		86041703

Images may differ from the actual product.

Compact dosing hose pump Set

DSP Set 2602, DSP Set 2602-3



The DSP Set 2602 is a control and regulation unit with up to three controllable dosing pumps for use in commercial and industrial cleaning systems, especially dishwashers. The microprocessor-controlled unit offers a wide range of options for carrying out and monitoring the cleaning and rinsing process in an ideal way.

Properties:

- ✓ Compact dosing system with detergent and rinse aid dosing pump, configurable with 4 - key keypad and display
- ✓ Display of operating and status messages on LC display
- ✓ On request with event storage and readout option via PC software
- ✓ Operating modes of the cleaner dosing: Time-controlled, run/pause, conductivity two-point control, conductivity proportional control (PI control)
- ✓ Conductivity control with setting range 0.2 - 150 mS/cm
- ✓ 3 adjustable setpoints for 3 washing programmes (timer-controlled)
- ✓ Delivery rate additive/clear rinse 150 ml/min (duty cycle of 50%/h) at max. 2.0 bar back pressure
- ✓ Cleaner delivery rate 250 ml/min (duty cycle 50%/h) at max. 0.5 bar gas pressure
- ✓ Rinse pump continuous with adjustable delivery rate or dependent on water flow rate
- ✓ Safety shutdown in case of hose rupture in any pump with conductive media
- ✓ Operating hours counter
- ✓ Adjustable pre-dosing time 1 s - 59 min
- ✓ Password protection of the parameter settings
- ✓ Extraction lances with container - empty signal can be connected
- ✓ Output for external warning signal (230 V)

Technical data:

- ✓ Operating voltage: 180 - 264 V, 50 - 60 Hz
- ✓ Operating conditions: Protection class IP 65
- ✓ Ambient temperature: 10 - 50°C
- ✓ Delivery rate Cleaner: 250 ml/min
- ✓ Delivery rate Additive / Rinse aid: 20 - 150 ml/min
- ✓ Hose connection Cleaner: 6 x 3 mm
- ✓ Hose connection Additive / Rinse aid: 4 x 1 mm

Scope of delivery:

- ✓ Inductive sensor ILFS 02 with M12 plug and 5 m cable
- ✓ Wall mounting material

Name	Dimensions (WxHxD)	Detergent 1	Detergent 2	Additiv / Rinse aid	Article No.
DSP Set 2602	188 x 202 x 136 mm	✓		✓	86100357
DSP Set 2602-3	285 x 202 x 136 mm	✓	✓	✓	86100358

Images may differ from the actual product.

Accessories for DSP Set 2602, DSP Set 2602-3

empty indicator / indicator lights

Name	Description	Article No.
Hazard warning light	optical	86010902
Warning light with buzzer	visually and acoustically	87092141
Connection cable	3G 0.75 mm ²	86040000

Extraction lances with empty signal

Name	Description	Length (mm)	Detergent	Additiv / rinse aid	canister	IBC / drum	Article No.
SLNS 9608 - 600 mm	incl. 4 m hose	600	✓		✓		87091991
SLNS 9608 - 1200 mm	incl. 4 m hose	1,200	✓			✓	86311107
Canister extrac- tion lance Ø 50 mm, extraction line D10, return line D16	Hose, cable for empty signal and connection set M20x1.5 for screw connection D16 must be ordered separately.			✓	✓		86311200
Container extrac- tion lance Ø 50 mm, extraction line and return with M20x1.5 connection	Hose, line for empty signal and the connection set 4/6 PP must be ordered separately.			✓		✓	86311115
Connection kit M20x1.5 for screw connection D16							86311012
Connection kit 4/6 PP							86120001
Connection cable	3G 0.75 mm ²						86040000
Other extraction lances on request!							

Images may differ from the actual product.

Accessories for DSP Set 2602, DSP Set 2602-3

Hose

Name	Description	Article No.
PVC pressure fabric hose clear (Detergent)	I/O Ø 6/12 mm	86340000
PE hose (additiv/rinse aid)	I/O Ø 4/6 mm	86340100
Other hose materials on request!		

Tank inlet

Name	Hole in the tank	Hose connection	Article No.
Tank inlet nozzle (detergent)	Ø 10.5 mm	6 mm grommet	87091604
Tank inlet PVDF (additive / rinse aid)	Ø 10.5 mm	4x1 mm clamping ring	86130600
Check valve (additive / rinse aid)	G 1/8"	4x1 mm clamping ring	86110360
Other tank inlets on request!			

Spare hoses

Name	Material	Flow rate (ml/min)	Back pres- sure (bar)	Required Rotor	Required Hose holder	Article No.
Pump hose additive / rinse aid PS138 - 1.6x1.6 PH	PharMed	20 - 150	max. 2.0	Rotor grau	9911/1.6 - 4x1	86110361
Pump hose Detergent DPSN136 - 4.8x2.4 PH	PharMed	250	max. 0.5	Rotor gelb	8811	86110308

Images may differ from the actual product.

Accessories for DSP Set 2602, DSP Set 2602-3

Rotors

Name	Article No.
Rotor grey Additiv / rinse aid	86110344
Rotor yellow Detergent	86110324

Conductivity probes

Name	Description	Article No.
ILFS02 with 5 m cable and M12 plug	When ordering, the type of device to which the conductivity probe is connected must be specified (data mode).	1 - 250 mS 86020335
Extention cable ILFS02		86040110
M12 plug female for ILFS02		86041704

Hose holder

Name	Hose connection	Article No.
Hose holder additive / rinse aid 9911/1.6 - 4x1	4x1 mm clamping ring	86110363
Hose holder Detergent 8811	6 mm grommet	86110346

Images may differ from the actual product.

Hoses / Rotors / Hose holder Saier

		Concept 2105 mcs Concept 2114 mcs	Concept 420 sm	Concept 9911/15 Concept 9911/30
Pump hose (Ph)	Ph 140 PH	(yes)	yes	
	Ph 140 NO	(yes)	yes	
	Ph 140 SI	(yes)	yes	
	DPSN 136-4.8x2.4 PH	yes		
	DPSN 132-4.8x2.4 TG-G	yes		
	Ph 136-6.4x2.4 PH	yes		yes
	Ph 138-3.2x1.6 RI 4			
	Ph 138-3.2x1.6 PH	yes + R4 + Hh7	yes + R4 + Hh7	
	Ph 138-1.6x1.6 PH	yes + R4 + Hh8	yes + R4 + Hh8	
	Ph 138-0.8x1.6 PH	yes + R4 + Hh9	yes + R4 + Hh9	
	Ph 138-3.2x1.6 VT	yes + R4 + Hh7	yes + R4 + Hh7	
	Ph 230-6.4x2.4 PH			
Rotor (Ro)	Rotor 8811, yellow (R1)	yes		
	Rotor 9310, orange (R3)			
	Rotor 47-13, blue (R4)	(yes)	yes	
	Rotor 47-13, grey (R5)			
	Rotor 45-11, saffron			yes
Hose holder (Hh)	9911/4.8-6 Standard (Hh3)	yes	(yes)	
	9911/4.8-5x1.5 (Hh4)	(yes)	(yes)	
	9911/4.8-4x1 PVDF (Hh5)	(yes)	(yes)	
	9911/3.2-5x1.5 (Hh6)			
	9911/3.2-4x1 PVDF (Hh7)	(yes)	(yes)	
	9911/1.6-4x1 PVDF (Hh8)	(yes)	(yes)	
	9911/0.8-4x1 PVDF (Hh9)	(yes)	(yes)	
	9911/6.4-6 PVDF (Hh10)	(yes)		
	9911/6.4-6 PP (Hh11)	(yes)		yes
	9911/4.8-6 with RV	(yes)	(yes)	
	9310			

Hoses / Rotors / Hose holder Saier

Concept 9911/10	Compact R Compact L+	Compact K	DSP 9905	DSP 9612	DSPset 9602-II
yes	yes		yes		
yes	yes		yes		
yes			yes		
					yes Detergent
					yes Rinse aid
		yes			
			yes + R4 + Hh7		
			yes + R4 + Hh8		
			yes + R4 + Hh9		
			yes + R4 + Hh7		
				yes	
yes	yes		yes		
				yes	
(yes)					
		yes			
yes			yes		
yes	yes		yes		
(yes)					
		yes			
(yes)					
(yes)					
(yes)					
					yes Detergent
					yes Rinse aid
				yes	

Proportional dosing unit

DOSATRON



The DOSATRON brand of highly accurate, current-independent proportional dosing units can be used to dose liquids for a wide range of applications. Typical applications of the DOSATRON proportional dosing pumps are e.g. the dosage of cleaning agents and disinfectants or of conditioning agents in water treatment.

The devices are driven solely by the force of the fluids flowing through them. Even small quantities drive a metering piston, which delivers the medium to be metered. The dosing of the injected product is consistent even if pressure or flow rate fluctuations occur and remains proportional to the amount of water flowing through the dosing unit.

Benefits:

- ✓ Proportional and current-independent dosing (without risks associated with electricity)
- ✓ Servo-controlled dosing via the water flow rate
- ✓ Excellent repeatability in terms of dosing rate and homogeneity
- ✓ High and thus environmentally friendly dosing precision without any risk of overdosing
- ✓ Easy installation and maintenance
- ✓ Quick and easy deployment and use through simple dosage adjustment
- ✓ Precise and constant dosing independent of flow rate and pressure fluctuations
- ✓ Self-priming up to 4 m
- ✓ Compact design
- ✓ Also ideal for mobile use, as the units operate without power and are self-priming

Technical data*:

- ✓ Dosing ranges: 0.03% - 25%
- ✓ Water flow rate: 10 L/h - 20 m³/h
- ✓ Operating pressure: 0.3 - 6 bar
- ✓ Concentrate Dosage: 0.003 - 300 L/h
- ✓ Water temperature: 5 - 40°C

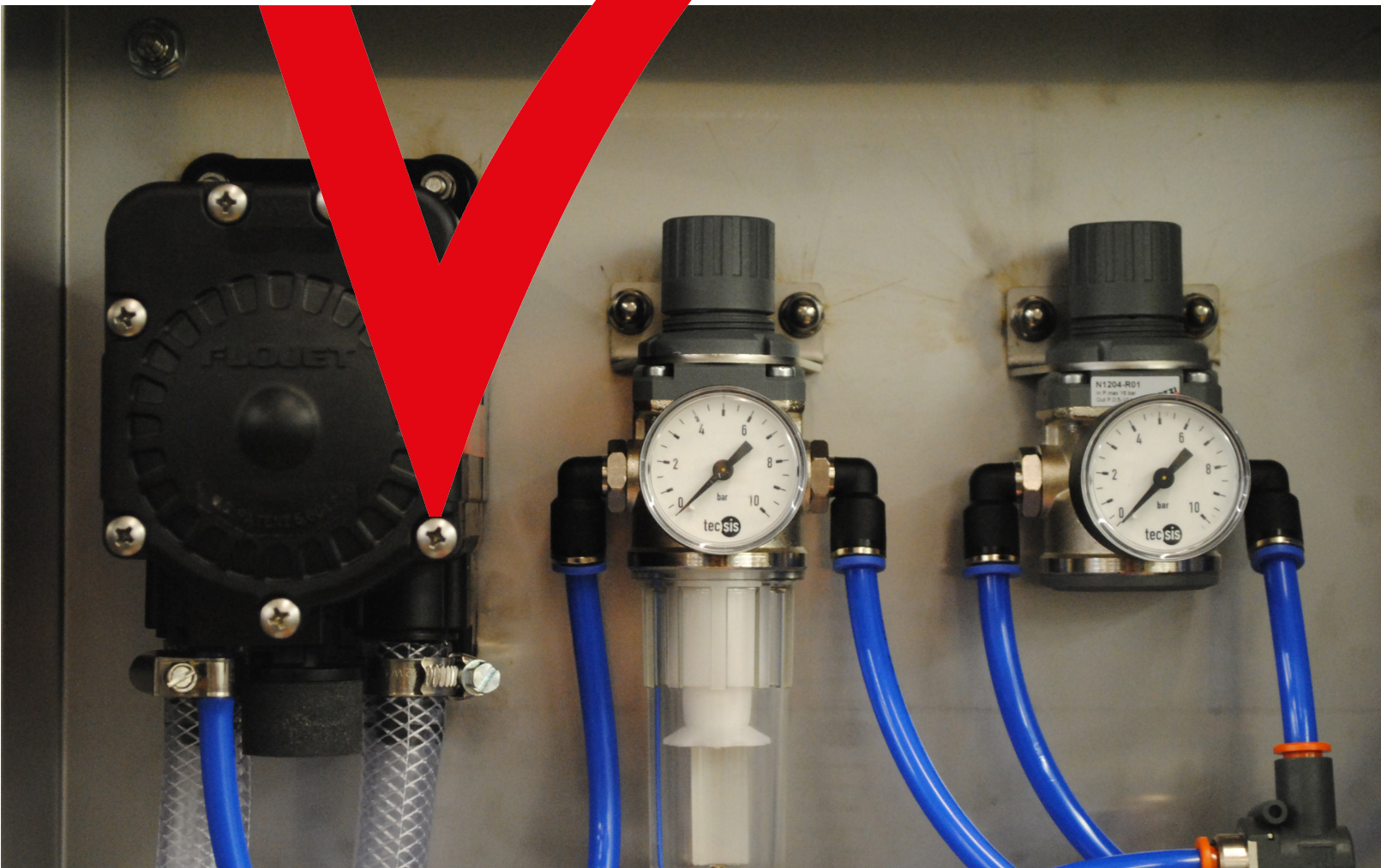
*varies depending on model

Attention:

When connecting a dosing or cleaning system to a drinking water pipe, a suitable backflow prevention device (DIN EN 1717) must be installed in accordance with the German Drinking Water Ordinance (TrinkwV) and the German Technical and Scientific Association for Gas and Water (DVGW). This backflow prevention device must be installed in the supply line to prevent chemicals from flowing back into the drinking water line. An on-site drain is necessary so that the water escaping from the backflow preventer can drain off.

Please contact us for the design of the suitable DOSATRON. The housing material and seals are specially adapted to the chemical used.

Air-operated diaphragm pumps



Air-operated diaphragm pumps

FloJet



The air operated double diaphragm industrial pump works absolutely reliably even at the highest performance. The robust construction made of chemical-resistant Viton combines innovative features and convinces with a long, trouble-free service life. The uniquely designed shuttle and check valves, together with the pump's high performance capabilities, provide the basis for an ultimate, compact, air-operated double diaphragm pump technology.

Technical data:

- ✓ Flow rate: up to 26.5 L/min
- ✓ Delivery pressure: up to 6.9 bar
- ✓ Dry self-priming up to 4.5 m
- ✓ Solids up to 3.2 mm
- ✓ Suitable for operation with air, nitrogen and CO₂, adjustable via air/gas supply
- ✓ Patented switching valve
- ✓ Robust design
- ✓ Low noise emission
- ✓ Easy installation via quick release buckles

Name	Article No.
FloJet G57C	87091994

Small dosing units and admixing dosing units



Small dosing units and admixing dosing units

Plastic dosing unit AccuDose II



With the push-button operation you automatically dilute chemical concentrates, e.g. for sprayers, buckets, wash basins, scrubber-suction machines and container foam devices. The concentration can be set by changing the individual nozzles/tips. At the touch of the green button, the chemical is drawn into the water stream and mixed with the water. Available in four versions that produce either one, two, three or four different cleaning or disinfecting solutions.



Benefits:

- ✓ Direct addition of the chemicals via water inflow
- ✓ Saves time by eliminating manual dosing
- ✓ Exact dosing of the chemicals required
- ✓ Simple button operation
- ✓ No electrical connection needed
- ✓ Tested by DVGW (Deutscher Verein des Gas- und Wasserfach e.V.)
- ✓ On request with bottle activation
- ✓ Different coloured buttons available on request



Scope of delivery/Connecting materials:

- ✓ Extraction hoses PVC 6 mm ID Length 2.1 m
- ✓ Outlet hose PVC 1/2" ID length 1.2 m (0.2 ml for bottle filling)
- ✓ Suction valve unit and weight
- ✓ Dosing nozzle set
- ✓ Mounting supplies
- ✓ Hook for the discharge hose (not for bottle filling)



Name	Dosing stations	Dilution ratio	Flow rate	Article No.
AccuDose II - 1	1-product	3:1 - 350:1	14 L/min	86560010
AccuDose II - 2	2-products	3:1 - 350:1	14 L/min	86560011
AccuDose II - 3	3-products	3:1 - 350:1	14 L/min	86560012
AccuDose II - 4	4-products with rotary knob	3:1 - 125:1 3:1 - 350:1	4 L/min and 14 L/min	87093809

Images may differ from the actual product.

Small dosing units and admixing dosing units

ProMax tank filling dosing units

Push-button operation automatically dilutes chemical concentrates, e.g. for scrubber-driers, container equipment or bottle filling. The concentration can be set by changing the individual nozzles/tips. By pressing the respective button, the chemical is sucked in via the water flow and mixed with the water.

The dosing units are available with two different flow rates of 30 L/min for container filling and 4 L/min for bottle filling.



Benefits:

- ✓ Direct addition of the chemicals via water inflow
- ✓ Saves time by eliminating manual dosing
- ✓ Exact dosing of the chemicals required
- ✓ Simple button operation
- ✓ No electrical connection needed
- ✓ Up to 9 bar water pressure
- ✓ Water inflow can be from the right or the left

Technical data:

- ✓ Operating pressure 1 - 9 bar
- ✓ Water connection 3/4" female - Adapter GHT
- ✓ Plastic enclosure

Scope of delivery/Connecting material:

- ✓ PVC suction hoses 6mm, L = 4 m
- ✓ Transport hose 2 m
- ✓ Suction valve unit and weight
- ✓ Dosing nozzle set
- ✓ Mounting supplies
- ✓ Hook for the discharge hose

ProMax Bottle filling dosing units



Name	Dosing stations	Applications	Enclosure	Article No.
ProMax 30 L/min	1-product	Container filling (e.g. bucket)	Plastic	86560070
ProMax 30 L/min	4-products	Container filling (e.g. bucket)	Plastic	86560071
ProMax 4 L/min	1-product	Bottle filling	Plastic	86560036
ProMax 4 L/min	4-products	Bottle filling	Plastic	86560037

Images may differ from the actual product.

Small dosing units and admixing dosing units

StreamLine Serie



Automatic dosing system for cleaning agents with up to four independent venturis in a sturdy stainless steel housing. The solutions flowing through the StreamLine series are automatically diluted with the specified dilution ratio. The dosing system is surrounded by a sturdy stainless steel housing, which ensures a long service life and durability. StreamLine dispensers are the industry's preferred solution for automatically dispensing diluted solutions into spray bottles, buckets, automatic scrubbers and other containers - all at the touch of a button.

Features and benefits:

- ✓ Automatic dilution with an exact dilution ratio
- ✓ User-friendly application of concentrates
- ✓ Up to four independent Venturis in one housing
- ✓ Hydro's E-Gap, with its rubber membrane, provides sufficient protection against chemicals being returned to the drinking water network and complies with the European drinking water standard DIN EN1717.
- ✓ Available options
- ✓ Different colours of buttons and hose hooks available (red, yellow, blue, green and grey)
- ✓ Dilution up to 1000:1

Technical data:

- ✓ Cold or hot water (up to 65°C)
- ✓ Water pressure from 1.8 to 6 bar
- ✓ Flow rates: low 4 L/min; high 14 L/min
- ✓ Dilution ratio 1 product bottle - 4 L/min (3:1 to 100:1)
- ✓ Low flow 3:1 to 125:1
- ✓ High flow 3:1 to 350:1
- ✓ Stainless steel housing

Scope of delivery:

- ✓ StreamLine dispenser
- ✓ Extraction kit (foot valve, weight, extraction hose)
- ✓ Dosing nozzle kit
- ✓ Output hoses

Device description PB:

- ✓ Admixing unit with injector controlled dosing
- ✓ Enables ready-to-use application solution at the touch of a button
- ✓ Four versions that can dose either one, two, three or four different detergents or disinfectants into the water.
- ✓ Functional parts are DVGW tested
- ✓ No electrical connection needed
- ✓ Bucket machines or bottle filling
- ✓ Optionally with bottle activation
- ✓ Optionally with lockable knob

Name	Dosing stations	Article No.
Streamliner	1-product	86560020
	2-products	86560019
	3-products	86560030
	4-products	86560022

Images may differ from the actual product.

Small dosing units and admixing dosing units

Prowash

ProWash is a chemical spray system that automatically and continuously mixes the right amount of chemicals to clean or disinfect large areas in commercial kitchens, super-market prep areas or food industry facilities.

ProWash's simple and robust design complies with all HACCP regulations and, as a complete system, helps to reduce effluent and chemical waste, protecting the environment and reducing operating costs. ProWash is made from materials known for their resistance and chemical compatibility, and has a powerful suction that ensures optimum operation in all working conditions and at an operating temperature of up to 60°C.



Available for one or two products with optional BA disconnect switch and stainless steel or plastic hose reel:

ProWash „1 product“ (on request) for cleaning/rinsing ProWash „2 products“ (standard) for cleaning/rinsing/disinfecting

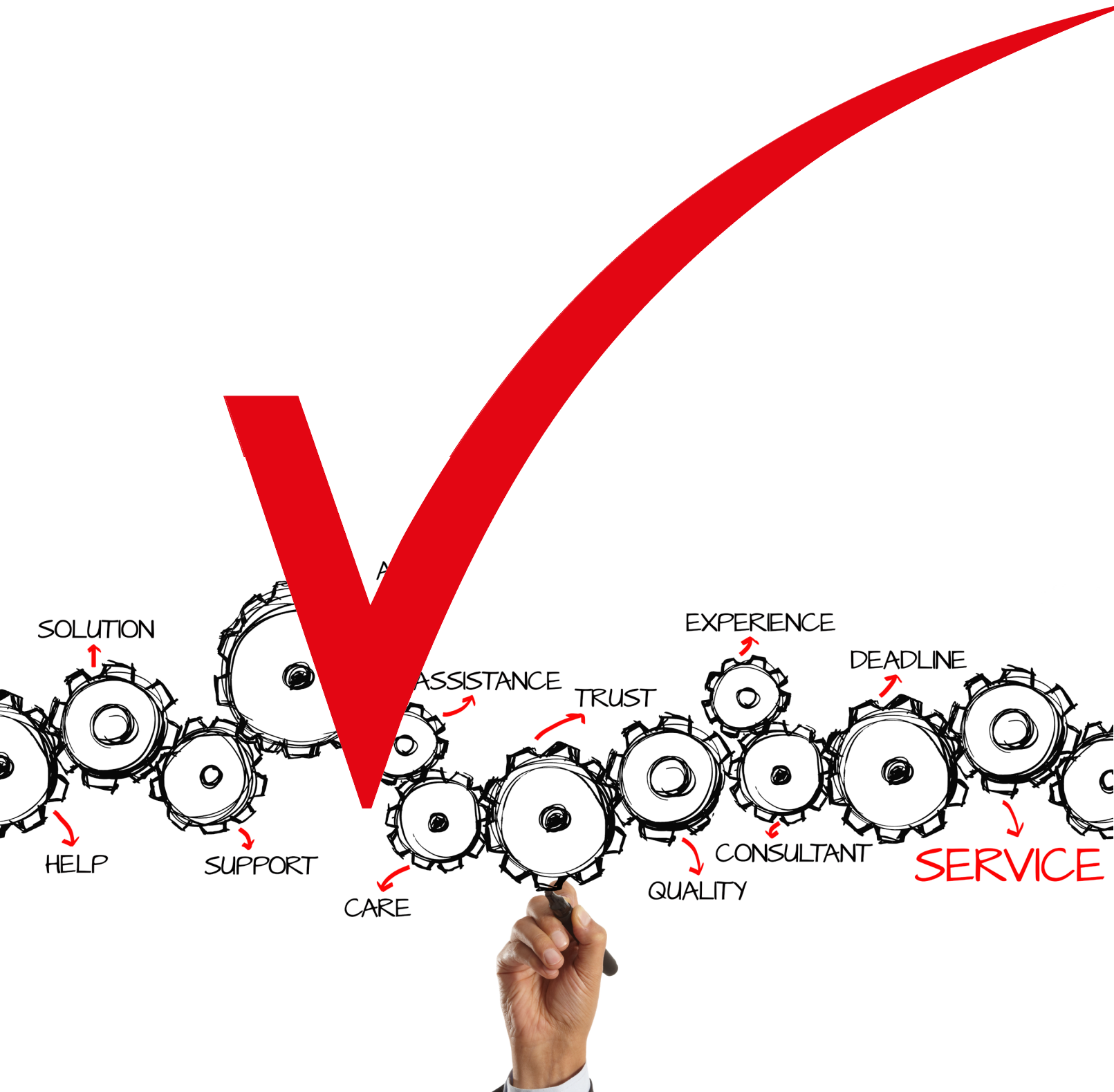
Properties:

- ✓ Maximum operating temperature: 60°C
- ✓ Operating pressure: 1.5 to 6 bar
- ✓ Delivery rate: 8 L/min
- ✓ Dosing tips for dilution ratios from 21 1:1 to 11:1 (from 0.5% to 10.9%)
- ✓ The spraying station weighs only 3.3 kg
- ✓ „INTELLIGENT“ Venturi system means easy maintenance
- ✓ Reduces the amount of waste water and chemicals
- ✓ With efficient vacuum power
- ✓ 2 available products - single or double options

Name	Length	Article No.
ProWash II	15 m	87093813
	20 m	87093814

Images may differ from the actual product.

Calvatis Solutions



Calvatis GmbH is one of the leading and independent suppliers of cleaning agents and disinfectants. In addition, plant and equipment construction is an important part of the company's business.

Focusing on the needs of our customers, Equipment Technology develops dosing systems for various processes in the food, beverage and institutional industries.

Depending on the needs of our customers, we can offer customised dosing systems. However, product standardisation is not forgotten. We rely on leading manufacturers and the highest level of quality.

The core of the dosing systems is the control technology. Here we can draw on many years of experience and have the development as well as the control construction in-house.

Data monitoring is a key issue for our customers and therefore a key issue for us. We have set new standards in the industry with a range of proprietary and Siemens MindSphere solutions.

With calgonit XControl and PDCA dosing technology, we can record, analyse and provide you with your data.

Weak points in plants or complex processes can be identified through targeted data monitoring. Water, temperature and chemical savings can be achieved by analysing measured values

All Calvatis developments are designed with sustainability in mind.



Calvatis Solutions - Food

calgonit PDCA

Automatic dosing systems play a key role in the dosing of detergents and additives. Each cleaning process generates a large amount of data that can be stored in Siemens MindSphere and made available to multiple users.

The calgonit PDCA dosing system from Calvatis GmbH offers everything you would expect from a professional system and also has an extremely user-friendly interface.

- ✓ Redundant conductance detection
- ✓ Redundant leakage monitoring in the pump cabinets
- ✓ Extremely high operational safety due to fail-safe PLC
- ✓ Large 7" touch display
- ✓ Protection level according to IP 65
- ✓ Spatial separation of control and pump modules
- ✓ Data transfer to the Siemens MindSphere

The benefits for you:

- ✓ PDA - recording specific operating data
- ✓ CIP - Data basis for continuous improvement processes
- ✓ OEE - Data basis for Overall Equipment Efficiency analyses Process verification
- ✓ Proof of verification in quality management
- ✓ Less on-site support through integrated remote maintenance module

Sustainability:

- ✓ Sustainability through continuous recording of operating data, such as temperature, chemical consumption, water consumption, conductivity, operating time
- ✓ Minimisation of waste water pollution
- ✓ Efficient use of resources through smart maintenance



Images may differ from the actual product.

Calvatis Solutions - Food

calgonit AD 830 dosing system

The calgonit AD 830 dosing system creates optimum conditions for the scalding and plucking process in poultry slaughtering. The critical parameters pH value and temperature are continuously monitored and recorded. Both of these critical parameters are further integrated into a broader data context for parallel, continuous and digital ingestion and analysis of a wide range of digital data sources and data standards into a unified and integrated data lake.

Such an approach not only provides in-depth insight into the poultry slaughtering process, enabling control measures and rapid intervention, but also provides the data basis for the definition of machine-specific performance indicators in real time and enables retrospective analysis of important quality parameters.

The pH during brewing is of particular interest. Temperature and pH are critical for pathogen neutralisation and affect the plucking process, quality control and traceability. Control of pH has shown positive effects on bristle removal (pig). Similar effects are expected in poultry, with smoother and faster plucking resulting in higher product quality and less waste due to defective products, while introducing clear traceability and the ability to integrate data into wider observations. Since the pH value fluctuates due to soluble components introduced into the brewing water, strict control and monitoring keeps conditions stable.

The benefits for you:

- ✓ Increased security, transparency and traceability
- ✓ Stable process conditions
- ✓ Increased product quality and less waste
- ✓ Continuous data recording

Sustainability:

- ✓ Efficient use of resources
- ✓ Minimisation of waste water pollution



Images may differ from the actual product.

Calvatis Solutions - Food

calgonit DesControl Pro

The calgonit DesControl Pro cold water dosing system consists of two redundant dosing lines with a common siphon vessel and a control measurement. The concentration measurement is used to monitor the dosage. The dosing pump doses disinfectant in proportion to the quantity.

If the control measurement in the primary line exceeds or falls below the limit, or if there is a fault in the dosing pump, the disinfectant dosing automatically switches to the secondary dosing line. If the secondary dosing line is active, measurement still takes place, but no monitoring. In this case, the measurements must be carried out manually, as the measurement may also be faulty if the measured value is too high or too low.

If a fault occurs in the secondary line, the system switches off automatically and issues a fault message. If there is a malfunction in the extraction, e.g. due to a lack of disinfectant, the system is also switched off. Any faults that occur are shown in the display and output externally. The data of the control measurement can be provided in 3 variants.

- a) USB stick (as CSV file)
- b) The data is made available online, not processed
- c) The data is made available online and processed

Notification in the event of a malfunction can take place in different ways

- a) In the display and acoustically
- b) On the display, acoustically and by email to predetermined recipients

The operating data of the dosing system is stored on a central server via a cloud connection. The measurement data is archived and can be accessed securely via a browser.

- ✓ Cloud connection via Siemens MindSphere
- ✓ Visualisation of the process data
- ✓ Archiving time 10 years
- ✓ Access for multiple users
- ✓ Calculation of several average values
- ✓ Central access to multiple locations possible



Images may differ from the actual product.

Calvatis Solutions - Food

The benefits for you:

- ✓ BDE - specific operating data are recorded
- ✓ CIP - Data basis for continuous improvement processes
- ✓ OEE - Data basis for Overall Equipment Efficiency analyses
- ✓ Process verification
- ✓ Proof of verification in quality management
- ✓ Less on-site support through integrated remote maintenance module

Sustainability:

- ✓ Sustainability through continuous recording of operating data, such as temperature, chemical consumption, concentration, water consumption, operating time
- ✓ Minimisation of waste water pollution
- ✓ Efficient use of resources through smart maintenance
- ✓ Energy-saving through cold water disinfection
- ✓ Water-saving



Images may differ from the actual product.

Calvatis Solutions - Beverage

calgonit wet glide lubrication

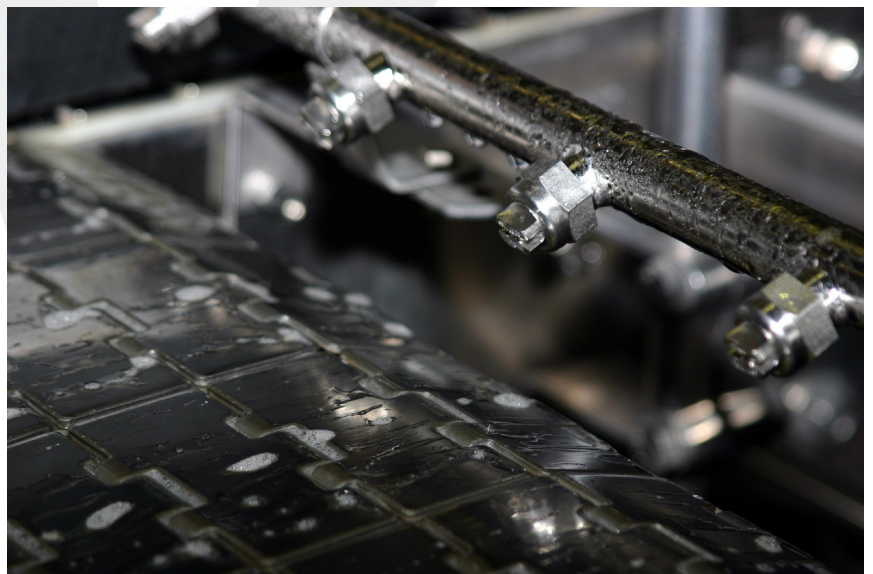
With calgonit wet glide lubrication, your containers are conveyed without any problems. At the same time, dirt can be removed from the conveyor. The wear of your conveyor belts can also be minimised thanks to belt lubrication. With our calgonit wet belt lubrication systems, the lubricant is applied contact-free via nozzles; the technology is suitable for all chain and container materials.

The benefits for you:

- ✓ Universally applicable for plastic and stainless steel chains
- ✓ Robust design of the nozzle sticks
- ✓ Removal of emerging bottle abrasion

Sustainability:

- ✓ Energy efficiency due to better gliding effect of the chains on the glide bars
- ✓ Dosage in proportion to quantity



Images may differ from the actual product.

Calvatis Solutions - Beverage

calgonit DryGlide

The calgonit DryGlide system consists of a control and pump unit for conveying the lubricant and distributing it to different lubrication circuits. The individual lubrication circuits are connected via solenoid valves. The dosing takes place via preset cycle / pause times. A pipe system with distributors and sub-distributors proportional to quantity connects all lubrication points. The lubricant is applied application-specific via slide pads.

The lubricant dosage in the individual zones can be individually selected to suit the specific task in order to achieve optimum lubrication.

The calgonit DryGlide lubrication system is designed exclusively for the application of small quantities of a lubricant to conveyor belts in the beverage industry.

Slidepads are mounted underneath the conveyors. The lubricant is metered onto the underside of the conveyor and spreads evenly over the length of the sliding section.

The benefits for you:

- ✓ Simple operation via touch display
- ✓ Control and hydraulic unit can be placed separately in production
- ✓ Up to 10 separately adjustable lubrication circuits
- ✓ Manual operation incl. time monitoring for rapid pre-dosing of the lubricant after cleaning (booster dosing)
- ✓ Release-controlled automatic operation
- ✓ No wet floor - occupational safety

Sustainability:

- ✓ Water saving
- ✓ Low lubricant consumption
- ✓ Low maintenance system



Images may differ from the actual product.

Calvatis Solutions - Institutional

calgonit PDCA Institutional Line

The calgonit PDCA Institutional Line is a central dosing system for four dishwashers in the commercial sector. With the central dosing system, detergent and rinse aid can be dosed individually for each of the four machines.

The detergent is dosed according to the wash release of the respective machine with conductivity control. The rinse aid is dosed according to the rinse aid release of the respective machine.

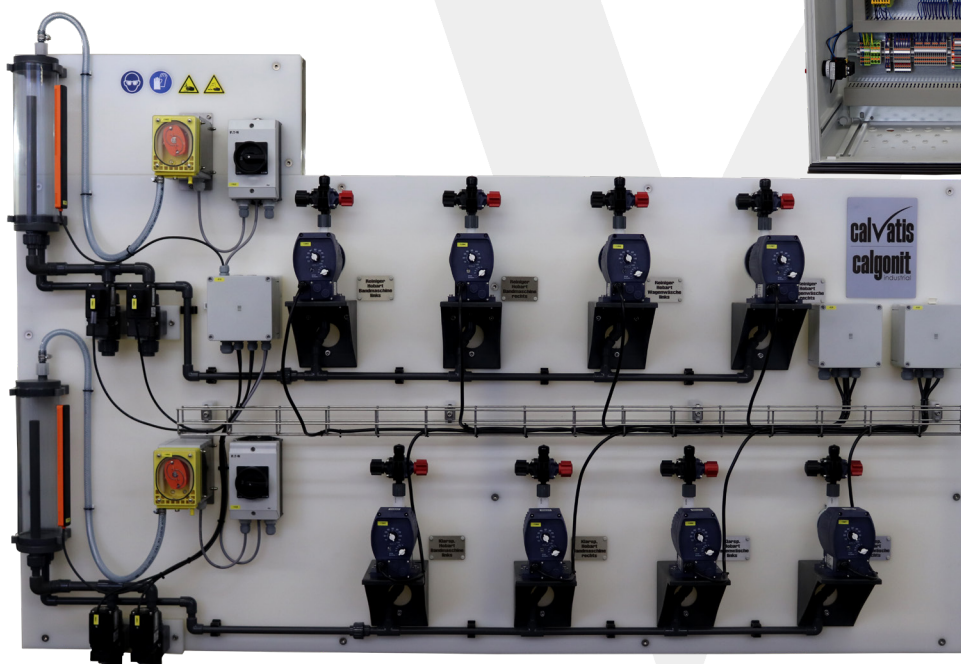
In addition, an automatic container switch is integrated into the intake of the detergent and rinse aid dosing pumps to ensure uninterrupted dosing.

The benefits for you:

- ✓ Simple operation via touch display
- ✓ Uninterrupted dosing due to automatic container changeover
- ✓ PDA - recording specific operating data
- ✓ CIP - Data basis for continuous improvement processes
- ✓ OEE - Data basis for Overall Equipment Efficiency analyses Process verification
- ✓ Proof of verification in quality management
- ✓ Less on-site support through integrated remote maintenance module

Sustainability:

- ✓ Sustainability through continuous recording of operating data, such as temperature, chemical consumption, water consumption, conductivity, operating time
- ✓ Minimisation of waste water pollution
- ✓ Efficient use of resources through smart maintenance



Images may differ from the actual product.

Calvatis Solutions - Watertreatment

Chlorine dioxide dosage

Chlorite-sulphuric acid process

The chlorite-sulphuric acid process is suitable for applications within sensitive (stainless steel) environments. This process achieves a lower corrosion effect.

Due to the increased chlorate levels, chlorine dioxide produced with sulphuric acid is not approved for drinking water treatment and is only intended for system disinfection (e.g. pasteurisers, recoolers, belt lubrication, CIP, cooling water treatment).

Chlorine dioxide generated from sulphuric acid reduces chloride input by up to 90%. This significantly reduces corrosion potential.

Chlorite-hydrochloric acid process

The chlorite-hydrochloric acid process is suitable for use in the drinking water sector. The hydrochloric acid used in excess in „conventional“ chlorine dioxide production results in a relevant input of chlorides. Bottle washers, rinsers and pasteurisers, as well as filler disinfection, are also suitable for conventional chlorine dioxide generation systems. It is also suitable for the disinfection of washing water for fruit and vegetables as well as seafood and poultry.

The benefits for you:

- ✓ Safe and reliable ClO₂ system
 - ✓ Three-stage hydraulic safety concept
 - ✓ PVDF reactor
 - ✓ Certified yield of 95%
 - ✓ Level control output chemicals
- ✓ Simple operation
 - ✓ Self-guiding menu
 - ✓ Infobox: HMI includes process description
 - ✓ Process visualisation, which includes all relevant operating parameters at a glance -
 - ✓ Including the amount of ClO₂ actually produced in g/h
 - ✓ Touch-sensitive colour HMI display with intuitive menu structure
 - ✓ Data and event logging on SD card
- ✓ Low life cycle costs
- ✓ Many options for customising your system
- ✓ Remote access
- ✓ Cost savings through optimised acid consumption

Sustainability:

- ✓ Low use of chemicals
- ✓ No excess chlorine dioxide production



Images may differ from the actual product.

Calvatis Solutions - Watertreatment

calgonit cooling water treatment

The dosing system for cooling water treatment essentially consists of a ProMinent chlorine dioxide system and the ProMinent Aegis II measuring and control system.

The measuring and control system is mounted on a PE plate incl. injection points, pre-filter, pH and redox probe. The measuring plate can be ordered with or without a desalination valve.

The PM AEGIS measuring and control panel series is a compact unit for reliable monitoring and conditioning of cooling water.

The measurement/control of specific parameters such as conductivity, pH, redox potential and oxidative biocides such as chlorine, chlorine dioxide or bromine concentration, as well as the proportionate addition of auxiliary chemicals such as inhibitors or dispersants, ensures optimum cooling water treatment.

The AEGIS II uses a data logger to record in real time the consumption of chemicals, the amount of fresh water supplied and the number of flushes including flush duration. Generated reports can be emailed daily to up to 5 recipients.

In addition, the operator can be informed by sending an email when faults occur - such as exceeding the maximum flushing time or the maximum dosing quantity. For this, the controller must be connected to the Internet.

The AEGIS LAN/WLAN feature allows you to configure the unit and view parameters and settings via smartphones and tablets.

The benefits for you:

- ✓ Record according to 42. BImSch V
- ✓ Safe and reliable ClO₂ system
 - ✓ Three-stage hydraulic safety concept
 - ✓ PVDF reactor
 - ✓ Certified yield of 95%
 - ✓ Level control output chemicals
- ✓ Simple operation
 - ✓ Self-guiding menu
 - ✓ Infobox: HMI includes process description
 - ✓ Process visualisation showing all relevant operating parameters at a glance - including the actual amount of ClO₂ produced in g/h
 - ✓ Touch-sensitive colour HMI with intuitive menu structure
 - ✓ Data and event logging on SD card
- ✓ Low life cycle costs
- ✓ Many options for customising your system
- ✓ Remote access

Sustainability:

- ✓ Low use of chemicals
- ✓ No excess chlorine dioxide production



Images may differ from the actual product.

Our service and maintenance package

The service technical review includes:

- ✓ Checking the set parameters on the pumps, systems and devices
- ✓ Checking individual connections for tight fit and leakage
- ✓ Checking the functionality of safety devices, e.g. overpressure or pressure-retaining valves
- ✓ Checking the pump heads for leaks
- ✓ Checking the container empty level indicator for proper functioning
- ✓ Checking the suction and pressure side outlets of the pumps for leakage
- ✓ Checking the conductivity probes or other control and regulating units that are important for the operation of the individual applications
- ✓ Documenting the work carried out
- ✓ Applications will be rated as „OK“ or „not OK“.
- ✓ The documentation will be provided to you by email within 3 working days

Maintenance work is preventive and includes, for example:

- ✓ Replacing pump hoses
- ✓ Replacing dosing diaphragms
- ✓ Replacing pump heads
- ✓ Replacing shaft seals
- ✓ Replace filters
- ✓ Replacing check valves
- ✓ Replacing other wearing parts

Basically:

- ✓ We always adhere to the manufacturer's specifications
- ✓ We assess the overall condition of the system and decide whether to shorten or extend the maintenance interval.
- ✓ We always take into account the intended use, the chemical components and the time

What do we want to accomplish?

- ✓ Increase of the plant availability
- ✓ Reduction of maintenance and repair costs
- ✓ Security of further processes
- ✓ Reduce dysfunctions



For optimal hygiene management

Our goal is to ensure a comprehensive service range to make the applications in your organisation technically safe, economically effective and ecologically friendly at all times.

We further support and advise our customers with a company-specific product selection according to their needs as well as optimal product application to ensure effective cleaning and disinfection processes.

Calvatis

- ✓ helps you optimise your cleaning and disinfection processes
- ✓ helps you find the causes of faults
- ✓ helps you implement effective measures to deal with events

Calvatis...

- ... analyses the initial situation on site (current state protocol; report) and plans the use of the products with you
 - ✓ order suggestions
 - ✓ work instructions
 - ✓ storage concepts
- ...documents the planned use (cleaning and disinfection plan)

Calvatis...

- ...helps you evaluate the results of monitoring
 - ✓ through statistical evaluation
 - ✓ and shows the need for action
- ...supports you in the annual verification of the cleaning and disinfection procedures
- ...checks and reports the plan and target specifications for cleaning and disinfection (amounts; costs; processes)

- ... trains your staff
 - ✓ to handle cleaning and disinfection agents
 - ✓ for personal hygiene
 - ✓ in dealing with illnesses
- ... regularly monitors adherence to specifications by determining the concentrations used and the success achieved
- ... documents these monitoring results
 - ✓ service report per visit

Notes



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