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# lubriLine

## TECHNICAL DATA, OPTIONS AND ACCESSORIES

# Products for every process step

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**This symbol is clickable. Online you will find operating manuals, technical data, STEP files and much more for each product.**

**productportal.dopag.com**

# Transfer pumps for direct supply from original containers www.

## Technical data

| Basic version | | TP20 505.05.30 | TP60 505.05.31 | TP200 505.05.32 | TP200 505.05.82 | FP300 |
|---|---|---|---|---|---|---|
| Pressure ratio (drive) | | 21:1 | | | 7.6:1 | 11:1 / 23:1 / 37:1 |
| Flow rate (at 20 double strokes) | l/min | 0.80 | | | 2.24 | 6.00 |
| Material viscosity | mPas | 50.000 | | | | |
| Working pressure (max.) | bar | 100 (160) | | | 50 (80) | 250 |
| Air consumption (at 20 double strokes) (drive 10:1 / 30:1) | l/min | 142 | | | | 450 / 900 / 1400 |
| Height retracted | mm | 917 | 1150 | 1438 | 1438 | 1040 |
| Pump length | mm | 339 | 577 | 860 | 860 | 600 |
| Weight without container | kg | 13.2 | 14.9 | | | 38 / 42 / 46 |
| Maximum container height | mm | 339 | 577 | 860 | 860 | – |
| Maximum container size | l | 20 | 60 | 200 | 200 | – |

**Comment:**
The container change can be facilitated with an optional pneumatic cylinder.

lubriLine

# Pumps for lubricants

## Technical specifications

| Basic version | | P30-LL | P80-LL | P200-LL |
|---|---|---|---|---|
| Tandem | | X | | |
| 1-hand control | | X | | – |
| 2-hand control | | X | | |
| Pressure ratio | | 11:1 / 33:1 | 33.5:1 / 56:1 | 11:1 / 33:1 / 48:1 |
| Flow rate | l/min | 1.2 | 0.9 | 1,2–3 |
| Viscosity range | NLGI | 0–4 | | |
| Operating pressure | bar | 10–70 / 30–160 | 30–200 / 50–250 | 30–160 / 100–250 |
| Maximum pressure | bar | 250 | 355 | 400 |
| Max. air consumption | l/min | 350–950 | 1,000–1,500 | 250 / 350 / 950 |
| Base plate dimensions | mm | 600 x 550 | 600 x 550 | 900 x 600 |
| Retracted height | mm | 1100 | 1470 | 1560 |
| Extended height | mm | 1570 | 2230 | 2560 |
| Max. container size | l | 30 | 80 | 200 |
| Max. container height | mm | 450 | 750 | 880 |
| Max. container outer Ø | mm | 455 | 440 | 600 |
| Weight (basic version) | kg | 66 | 74 | 125 |

## Modules and options

| | | | |
|---|---|---|---|
| Basic module | **Single pump**<br>P30, P80, P200 | **Tandem pump**<br>P30, P80, P200 | |
| Control unit | **1-hand control** | **2-hand control** | |
| Drive pressure limit | Reduction of drive pressure for pressure-sensitive materials (3/3.5/4/4.5/5/6 bar) | | |
| Pump | **Chop check grease pump:**<br>For lubricants from NLGI0 to NLGI4 | | |
| Follower plate | **PUR lip seal**<br>For smooth containers | **PUR double-lip seal**<br>For containers with beading | **Hose seal**<br>For 200-litre drums |
| Chassis | **U-profile**<br>Pump can be moved with a pallet truck | **Rollers**<br>Increases the mobility of the pump | |
| Drum change support | **Drum roll-in mechanism**<br>Helps roll up the 200-litre drum | **Drum roller conveyor**<br>Allows easy replacement of the 200-litre drum | |
| Conformity of the product | **Complete machine**<br>With CE conformity, Integrated emergency-off function, Adjustable air inlet pressure | **Incomplete machine**<br>With EC declaration of incorporation, Without emergency-off, Inlet air pressure not adjustable | |
| Level alarm | **Empty alarm** | **Empty alarm +pre-alarm** | Available in combination with drum bottom detection to reduce material loss at the bottom of the drum |
| External communication | **Monitoring I**<br>Level min/Level empty | **Monitoring II**<br>Pump running/Level min./Level empty | **Control unit**<br>Pump ready/Pump running/ Level min/Level empty/Start-Stop/ Supply air on-off |
| Material relaxation | **Pump pressure release**<br>Material pressure release directly at the pump outlet + air pressure release at the ram | **System pressure release**<br>Material pressure release at additional release valve + air pressure release at the ram | **Circulation**<br>Homogenisation through adjustable material circulation and mixer \| For reducing material separation in containers and pipes \| System pressure release included |
| Connection block | **Connection block with deairing valve**<br>For deairing the feed pump | | |
| Extensions | **Connection block with material filter 60 mesh**<br>(filter size 250 µm) | **Connection block with mixer** | **Connection block with material filter 60 mesh + mixer**<br>(filter size 250 µm) |
| Follower plate deairing | **Manual**<br>Via ball valve | **Automatic**<br>Fully automatic deairing process \| Start via drum edge detection | |

# Material pressure regulator with piston

## Technical data

| Version | | ID4 / 25 bar | ID4 / 50 bar | ID4 / 50 bar HM* | ID 4 / 100 bar | ID4 / 100 bar HM* | ID 4 / 150 bar |
|---|---|---|---|---|---|---|---|
| Internal diameter Ø | mm | 4 | | | | | |
| Flow rate at 50.000 mPas | l/min | < 0.07 | < 0.13 | | < 0.26 | | < 0.39 |
| Input pressure max. | bar | 20–100 | 20–250 | | | | 30–400 |
| Output pressure max. | bar | 6–25 | | 6–50 | 6–100 | | 15–150 |
| Connection input | G | 1/4" | | | | | 3/8" |
| Connection output | G | 1/4" | | | | | 3/8" |
| Dimensions (A x B) | mm | 40 x 40 | | | | | 60 x 60 |
| Height max. (C) | mm | ca. 200 | | | | | |

* Valve seat and valve ball out of tungsten carbide

## Variants*

| | | | | | | |
|---|---|---|---|---|---|---|
| Without pressure gauge | 1003471 | 450.00.00 | 450.00.04 | 450.00.02 | 1013168 | 450.00.13 |
| Pressure gauge - / 25 bar | 1006235 | – | | | | |
| Pressure gauge 160 / 25 bar | 1005686 | – | | | | |
| Pressure gauge - / 60 bar | – | 450.00.05 | 450.00.07 | 1006237 | – | |
| Pressure gauge - / 160 bar | – | 450.00.06 | 450.00.28 | – | 1013172 | 450.00.23 |
| Pressure gauge 400 / 60 bar | – | 450.00.01 | – | | | |
| Pressure gauge 400 / 160 bar | – | | | 450.00.03 | 1013189 | 450.00.22 |
| Replacement filter with 100 mesh (Standard 30 mesh) | 400.25.69 | | | | | |
| Heating 100W / 230V / PT100 | 1006693 | | | | | |

* The material pressure regulators can optionally be equipped with one or two pressure gauges.

## Options

| | | | | |
|---|---|---|---|---|
| Straight | Pressure gauge 0–25 bar 1005440 | Pressure gauge 0–60 bar 135902 | Pressure gauge 0–160 bar 135904 | Pressure gauge 0–400 bar 135906 |
| 90° | Pressure gauge 0–25 bar 1005441 | Pressure gauge 0–60 bar 135903 | Pressure gauge 0–160 bar 135905 | Pressure gauge 0–400 bar 135907 |
| | Mounting brackets (max. one pressure gauge) 1006834 | | | |

## Technical data

| Version | | ID8 / 50 bar | ID12 / 50 bar | ID12 / 150 bar |
|---|---|---|---|---|
| Internal diameter Ø | mm | 8 | 12 | |
| Flow rate at 50.000 mPas | l/min | < 1.40 | < 5.00 | < 15.00 |
| Input pressure max. | bar | 20–250 | | 30–250 |
| Output pressure max. | bar | 6–50 | | 15–150 |
| Connection input | G | 3/8" | 1/2" | |
| Connection output | G | 3/8" | 1/2" | |
| Dimensions (A x B) | mm | 60 x 60 | | |
| Height max. (C) | mm | 200 | | |

## Variants

| | | | |
|---|---|---|---|
| Without pressure gauge | 450.00.10 | 450.00.11 | 450.00.12 |
| Pressure gauge - / 25 bar | – | | |
| Pressure gauge 160 / 25 bar | – | | |
| Pressure gauge - / 60 bar | 450.00.15 | 450.00.18 | – |
| Pressure gauge - / 160 bar | 450.00.16 | 450.00.19 | – |
| Pressure gauge 400 / 60 bar | 450.00.14 | 450.00.17 | – |
| Pressure gauge 400 / 160 bar | – | | 450.00.20 |
| Replacement filter with 100 mesh (Standard 30 mesh) | 400.26.28 | | |
| Heating 100W / 230V / PT100 | – | | |

## Accessories

### Heating

Heating 100 W 230 V PT100
1006693
(for ID4)

### Safety cap

| | |
|---|---|
| Safety cap ID4 (25,50,100 bar) 1028738 | Safety cap ID4 (150 bar) / ID8 /ID12 1028727 |

# Material pressure regulator with diaphragm

www.

## Technical data

| Version | | ID4 / 50 bar | ID4 / 150 bar | ID8 / 50 bar | ID8 / 150 bar | ID12 / 50 bar | ID12 / 150 bar |
|---|---|---|---|---|---|---|---|
| Internal diameter Ø | mm | 4 | | 8 | | 12 | |
| Flow rate at 50.000 mPas | l/min | < 0.28 | | < 3.0 | | < 10.0 | |
| Input pressure max. | bar | 250 – 400 | | | | | |
| Output pressure max. | bar | 4 – 50 | 10 – 150 | 4 – 50 | 10 – 150 | 4 – 50 | 10 – 150 |
| Connection input | G | 3/8" | | | | 1/2" | |
| Connection output | G | 3/8" | | | | 1/2" | |
| Dimensions (A x B) | mm | 55 x 55 | | | | 65 x 65 | |
| Height max. (C) | mm | 210 | | | | 200 | |

## Variants

| | | | | | | |
|---|---|---|---|---|---|---|
| Without pressure gauge | 402.25.20 | 402.25.40 | 402.25.00 | 402.25.50 | 402.25.60 | 402.25.30 |
| Pressure gauge - / 60 bar | – | | 402.26.74 | | – | |
| Pressure gauge - / 160 bar | – | | | | | |
| Pressure gauge 400 / 60 bar | 402.26.05 | – | 402.26.59 | – | 402.26.07 | – |
| Pressure gauge 400 / 160 bar | – | 402.26.60 | – | 402.26.64 | – | 402.26.08 |

## Options

| | | | | |
|---|---|---|---|---|
| Straight | Pressure gauge 0–25 bar 1005440 | Pressure gauge 0–60 bar 135902 | Pressure gauge 0–160 bar 135904 | Pressure gauge 0–400 bar 135906 |
| 90° | Pressure gauge 0–25 bar 1005441 | Pressure gauge 0–60 bar 135903 | Pressure gauge 0–160 bar 135905 | Pressure gauge 0–400 bar 135907 |



# Needle metering valves

www.

## Technical data (Micro-metering valve)

| Article no. | | 401.06.18 |
|---|---|---|
| Metering volume per shot | ml | 0.001 – 0.01 |
| Material inlet pressure min. | bar | 3 |
| Material inlet pressure max. | bar | 20 |
| Viscosity range | mPas | 10 – 200'000 |
| Material connection | G | 1/8 60° |
| Dimensions (A x B) | mm | 25 x 20 |
| Height max. (C) | mm | 160 |
| Weight | kg | 0.2 |

## Accessories

### Packing key

| | | |
|---|---|---|
| | 401.04.66 | Packing key |

### Tank

| | | |
|---|---|---|
| | 401.04.90 | Tank 18 ml |

### Handle

| | | |
|---|---|---|
| | 1007395 | Handle pneumatic |
| | 1007396 | Handle electric with switch |
| | 1007397 | Handle electric with initiator |

### Solenoid valve plate

| | | |
|---|---|---|
| | 100.15.02 | Solenoid valve plate with industrial plug form C |

### Signal generator

| | | |
|---|---|---|
| | 1025106 | Electronic signal generator with 5 m cable |
| | 130078 | Electronic signal generator with 5 m cable and M8x1 plug |
| | 29.01.238 | Cable 10m with plug 3-pole M8x1 |

### Micro-flow sensor

| | | |
|---|---|---|
| | 403.04.21 | Micro-flow sensor |

# Needle metering valves

## Technical data (for 450 series)

| Article no. | | 450.20.00 | 450.20.03 |
|---|---|---|---|
| Metering volume per shot | ml | 0.003 – 0.200 | |
| Material inlet pressure min. | bar | 3 | |
| Material inlet pressure max. | bar | 20 | 50 |
| Viscosity range | mPas | 10 – 200,000 | |
| Material connection | G | 1/4 60° | |
| Dimensions (A x B) | mm | 35 x 35 | |
| Height max. (C) | mm | 260 | |
| Weight | kg | 0.75 | |

## Accessories

### Handle

| | | |
|---|---|---|
| | 401.03.50 | Handle pneumatic |
| | 401.03.60 | Handle electric with switch |
| | 401.03.66 | Handle electric with initiator |

### Stroke detection

| | | |
|---|---|---|
| | 1025106 | Electronic signal transmitter with plug M8x1 and cable 5 m |
| | 130078 | Electronic signal transmitter with plug M8x1 |
| | 29.01.238 | Cable 10m with plug 3-pole M8x1 |

### Solenoid valve plate

| | | |
|---|---|---|
| | 1010807 | Solenoid valve plate with plug 3 pin M8x1 |
| | 1010907 | Solenoid valve plate with throttle check valve with plug 3 pin M8x1 |
| | 1032903 | Solenoid valve plate with plug 3 pin M8x1 |
| | 1032456 | Solenoid valve plate with throttle check valve with plug 3 pin M8x1 |

### Luer-Lock

| | | |
|---|---|---|
| | 400.09.05 | Luer-Lock-adapter |

## Accessories

### Spray adaptor

| | | |
|---|---|---|
| | 1029791 | Spray adaptor Ø 1.0 |
| | 1013259 | Solenoid valve for spray air |
| | 1006954 | Air maintenance unit |

Different nozzle extensions and air caps available for spray adaptor

### Nozzle extensions

### Outlet adapter

| | | |
|---|---|---|
| | 1002566 | Outlet adapter IM12x1 iG 1/8 cpl. |

### Micro-flow sensor

| | | |
|---|---|---|
| | 403.04.21 | Micro-flow sensor |

### Valve heating

| | | |
|---|---|---|
| | 1028786 | Valve heating 100W 230V PT100 |

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

# Chamber metering valves

## Technical data

| Article no. | | 1029662 | 1029669 | 1023208 | 1026646 | 415.12.21 | 415.101.0 |
|---|---|---|---|---|---|---|---|
| Metering volume per shot | ml | 0.05 – 0.5 | 0.05 – 0.5 | 0.1 – 3.0 | 0.1 – 3.0 | 0.5 – 12.0 | 5 – 100 |
| Material inlet pressure min. | bar | 40 | 40 | 40 | 40 | 40 | 40 |
| Material inlet pressure max. | bar | 80 | 80 | 80 | 80 | 80 | 80 |
| Viscosity range | mPas | 1,000 - 1,000,000 | | | | | |
| Material connection | G | 1/8" | 1/8" | 1/8" | 1/8" | 1/4" | 1/4" |
| Reversing valve | | LW3 | LW3 | LW3 | LW3 | LW8 | LW8 |
| Dimensions (A x B) | mm | 68 x 30 | 68 x 30 | 68 x 30 | 68 x 30 | 107 x 40 | 39 x 60 |
| Height max. (C) | mm | 151 | 151 | 194 | 194 | 171 | 278 |
| Weight | kg | 0.6 | 0.6 | 0.73 | 0.73 | 1.96 | 4.6 |
| Sensor type stroke detection | | Inductive | Magnetic | Inductive | Magnetic | Inductive | Inductive |

## Accessories

### Solenoid valve plate

| | | |
|---|---|---|
| | 450.10.03 | Solenoid valve plate with industrial plug form CI (for ID3) |
| | 1012081 | Solenoid valve plug with M8x1 plug-in connection (for ID3) |
| | 1032902 | Solenoid valve plug with M8x1 plug-in connection (for ID8) |

### Stroke detection

| | | |
|---|---|---|
| | 144455 | Inductive sensor (for ID3) |
| | 1025106 | Magnetic sensor (for ID3) |
| | 29.01.043 | Inductive sensor (for ID8) |

## Accessories

### Handle

| | | |
|---|---|---|
| | 401.01.11 | Handle pneumatic (for ID3) |
| | 401.01.12 | Handle electric with switch (for ID3) |
| | 401.01.13 | Handle electric with initiator (for ID3) |
| | 401.01.14 | Handle pneumatic (for ID8) |
| | 401.01.15 | Handle electric with switch (for ID8) |
| | 401.01.16 | Handle electric with initiator (for ID8) |

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

### Outlet adapter

| | | |
|---|---|---|
| | 410.18.11 | Hollow needle connection G1/8 |
| | 410.14.11 | Hollow needle connection G1/4 |

### Spray adaptor

| | | |
|---|---|---|
| | 1027640 | Spray adaptor Ø 1.0 |
| | 1013259 | Solenoid valve for spray air |
| | 1006954 | Air maintenance unit |

Different nozzle extensions and air caps available for spray adaptor

### Nozzle extensions

# Dispensing valves

## Technical data

| Article no. | | 401.00.24 | 401.09.01 | 401.23.00 | 401.23.70 | 401.23.03 |
|---|---|---|---|---|---|---|
| Description | | ID 1 | ID 2.5 | ID 6 | | ID 12 |
| Version | | with packing | with packing | with packing | with lip seal | with packing |
| Working pressure | bar | 250 | | | | 100 |
| Maximum pressure | bar | 315 | | | | |
| Viscosity range | mPas | 50 - 2.500.000 | | | | |
| Pneumatic connection | | 2x iM5 | 2x iG1/8 | | | |
| Material connection | G | 1/8" | 1/4" short | 1/4" | | 1/2" |
| Dimensions (A x B) | mm | 20 x 23 | 35 x 35 | 50 x 50 | | |
| Height max. (C) | mm | 130 | 260 | | | 345 |
| Weight | kg | 0.2 | 0.52 | 1.45 | | 1.66 |

## Accessories

### Handle

| | | |
|---|---|---|
| | 1007423 | Handle pneumatic (for ID1) |
| | 1007424 | Handle electric with switch (for ID1) |
| | 1007425 | Handle electric with initiator (for ID1) |
| | 401.03.50 | Handle pneumatic (for ID2.5 / 6 / 12) |
| | 401.03.60 | Handle electric with switch (for ID2.5 / 6 / 12) |
| | 401.03.66 | Handle electric with initiator (for ID2.5 / 6 / 12) |

### Solenoid valve plate

| | | |
|---|---|---|
| | 401.02.81 | Solenoid valve plate with CI plug (for ID1) |
| | 1032456 | Solenoid valve plate with plug M8x1 (for ID2.5) |
| | 1032455 | Solenoid valve plate with plug M8x1 (for ID6/12) |
| | 1000631 | Valve plug CI with 10 m cable |
| | 29.01.238 | Valve plug M8x1 with 10m cable |



## Accessories

### Stroke detection

| | | |
|---|---|---|
| | 1025106 | Electronic signal transmitter with plug M8x1 and cable 5m |
| | 130078 | Electronic signal transmitter with plug M8x1 |
| | 29.01.238 | Valve plug M8x1 with 10m cable |

### Outlet adapter

| | | |
|---|---|---|
| | 500.00.31 | Outlet adapter iM12x1 aG1/8 60° (for LW2.5) |
| | 500.01.04 | Outlet adapter iM12x1 iG1/4 60° (for LW2.5) |
| | 500.00.56 | Sleeve nut iM12x1 iG1/8 (for LW2.5) |
| | 500.00.15 | Sleeve nut with O-ring iG1/2 aG1/2 60° (for LW6) |

### Valve heating

| | | |
|---|---|---|
| | 1007871 | Valve heating 100W 230V PT100 |
| | 1006490 | Valve heating 100W 230V PT100 |

### Inlet adapter

| | | |
|---|---|---|
| | 500.00.32 | Double nipple aG1/8 aG1/8 60° (for LW1) |
| | 500.00.33 | Reducing nipple aG1/8 aG1/4 60° (for LW1) |
| | 410.18.03 | Nipple aG1/8 iG1/8 60° (for LW1) |
| | 500.00.34 | Nipple aG1/4 aG1/4 60° (for LW2.5) |
| | 500.00.36 | Nipple aG1/4 aG3/8 60° (for LW2.5) |
| | 500.00.37 | Nipple aG1/4 aG1/2 60° (for LW2.5) |

# Progressive cavity pumps

## Technical data

| Article no. | | 1020344 | 1025907 | 1020346 | 1021232 | 1020347 | 1025908 | 1025911 | 1025912 |
|---|---|---|---|---|---|---|---|---|---|
| Description | | PCP1/0.01-AH11L-ML | PCP1/0.01-AH21L-ML | PCP1/0.05-AH11L-ML | PCP1/0.05-AH21L-ML | PCP1/0.15-AH11L-ML | PCP1/0.15-AH21L-ML | PCP1/0.3-AH11L-ML | PCP1/0.3-AH21L-ML |
| Metering volume per revolution | ml | 0,013 | | 0,059 | | 0,163 | | 0,3 | |
| Min. metering volume* | ml | 0,002 | | 0,008 | | 0,01 | | 0,03 | |
| Flow rate | ml/min | 0.13 – 1.95 | | 0.59 – 8.85 | | 1.63 – 24.5 | | 16497,00 | |
| Material inlet pressure | bar | 0 – 6 | | | | | | | |
| Material inlet pressure | bar | 10 | | | | | | | |
| Viscosity range | mPas | 0 – 150'000 | | | | | | | |
| Stator material | | FKM | FFKM | FKM | FFKM | FKM | FFKM | FKM | FFKM |
| Material connection | G | iG1/8 | | | | | | | |
| Weight | kg | 0.45 | | 0.48 | | 0.63 | | 0.63 | |

* Depending on material properties, nozzle size, alignment of PCP etc.

## Accessories

### Cartridge supply

| | | |
|---|---|---|
| | 1023641 | Cartridge supply 10cc eG1/8 |
| | 1023482 | Cartridge supply right 30cc eG1/8 |
| | 1023640 | Cartridge supply right 55cc eG1/8 |
| | 1026026 | Level control cartridge 10cc |
| | 1026027 | Level control cartridge 30cc / 55cc |
| | 1026385 | Ball valve iG1/4 with pressure regulator 0.1-7bar iØ4 |
| | 1026386 | 3/2-solenoid valve iG1/8 with pressure regulator 0.1-7bar iØ4 |

### Luer Lock nozzles

| | |
|---|---|
| | Wide range of Luer Lock nozzles available |

### Spray adaptor

| | | |
|---|---|---|
| | 1027237 | Spray adaptor PCP1 Ø1.0 |
| | 1013259 | Solenoid valve for spray air |
| | 1029833 | Air maintenance unit |

Different nozzle extensions and air caps available for spray adaptor

### Nozzle extensions

### Drive kit

| | | |
|---|---|---|
| | 1023415 | Drive kit with 5m cable |

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

# Shot valves SHV-01

www.

## Technical data

| Article no. | | 1023899 | 1004397 | 1004398 | 1013258 |
|---|---|---|---|---|---|
| Nozzle size | mm | Ø 0.2 | Ø 0.3 | Ø 0.5 | Ø 1.0 |
| Shot frequency max. | Hz | 200 | | | |
| Material inlet pressure max. | bar | 100 | | | |
| Pneumatic pressure min. | bar | 5 – 6 | | | |
| Material connection | G | aG1/4 60° | | | |
| G1/8 for pressure sensor | | Yes | | | |
| Including needle | | Yes | | | |
| Weight | kg | 0.44 | | | |

## Accessories

### Heating

| | | |
|---|---|---|
| | 1023453 | Heating |
| | 29.01.289 | Connection cable shielded 10m M12 4-pole straight |

### Stroke detection

| | | |
|---|---|---|
| | 1009317 | Stroke detection Shot valve |

### Light barrier

| | | |
|---|---|---|
| | 1013792 | Light barrier |

### Silencer kit

| | | |
|---|---|---|
| | 1020219 | Silencer kit to SHV-01 |

### Nozzle extensions (for SHV-02 as well)

| | | | |
|---|---|---|---|
| | Gerade | 1012969 | D6 50 mm Ø 0.2 |
| | | 1000922 | D6 50 mm Ø 0.3 |
| | | 1010884 | D6 50 mm Ø 0.5 |
| | | 1010885 | D6 50 mm Ø 0.8 |
| | | 1010886 | D6 50 mm Ø 1.0 |
| | | 1010867 | D6 100 mm Ø 0.3 |
| | | 1010868 | D6 100 mm Ø 0.5 |
| | | 1010869 | D6 100 mm Ø 0.8 |
| | | 1010870 | D6 100 mm Ø 1.0 |
| | 45° | 1000923 | D6 50 mm Ø 0.3 |
| | | 1010888 | D6 50 mm Ø 0.5 |
| | | 1010889 | D6 50 mm Ø 0.8 |
| | | 1010890 | D6 50 mm Ø 1.0 |
| | | 1010863 | D6 100 mm Ø 0.3 |
| | | 1010864 | D6 100 mm Ø 0.5 |
| | | 1010865 | D6 100 mm Ø 0.8 |
| | | 1010866 | D6 100 mm Ø 1.0 |
| | 90° | 1000924 | D6 50 mm Ø 0.3 |
| | | 1010891 | D6 50 mm Ø 0.5 |
| | | 1010892 | D6 50 mm Ø 0.8 |
| | | 1010893 | D6 50 mm Ø 1.0 |
| | | 1010871 | D6 100 mm Ø 0.3 |
| | | 1010872 | D6 100 mm Ø 0.5 |
| | | 1010873 | D6 100 mm Ø 0.8 |
| | | 1010874 | D6 100 mm Ø 1.0 |
| | 135° | 1000925 | D6 50 mm Ø 0.3 |
| | | 1010894 | D6 50 mm Ø 0.5 |
| | | 1010895 | D6 50 mm Ø 0.8 |
| | | 1010896 | D6 50 mm Ø 1.0 |
| | | 1010880 | D6 100 mm Ø 0.3 |
| | | 1010881 | D6 100 mm Ø 0.5 |
| | | 1010882 | D6 100 mm Ø 0.8 |
| | | 1010883 | D6 100 mm Ø 1.0 |

Further extensions on request

# Spray valves SPV-01 incl. solenoid valve

## Technical data

| Article no. | | 1004412 | 100441 | 1004416 | 1022231 | 1002682 |
|---|---|---|---|---|---|---|
| Nozzle size | mm | Ø 0.5 | Ø 1.0 | ohne Düse | Ø 0.5 | Ø 1.0 |
| Functionality | | Spring closing / manually adjustable air blow | | | | |
| Material inlet pressure max. | bar | 35 | | | | |
| Pneumatic pressure min. | bar | 5 – 6 | | | | |
| Material connection | G | iG1/8 | | | | |
| G1/8 for pressure sensor | | Yes | | | | |
| Piston stroke scanning | | No | | | Yes | |
| Weight | kg | 0.53 | | | | |

# Spray valves SPV-03

## Technical data

| Article no. | | 1009996 | 1011651 | 1019209 |
|---|---|---|---|---|
| Nozzle size | mm | Ø 1.0 | | w ithout nozzle |
| Functionality | | spring closing / manually adjustable air blow | | |
| Material inlet pressure max. | bar | 35 | | |
| Pneumatic pressure min. | bar | 5 – 6 | | |
| Material connection | G | iG1/8 | | |
| G1/8 for pressure sensor | | Yes | | |
| Piston stroke scanning | | Yes | No | |
| Weight | kg | 0.53 | | |



# Spray valves SPV-04

## Technical data

| Article no. | | 1012009 |
|---|---|---|
| Nozzle size | mm | Ø 1.0 |
| Functionality | | pneumatic closing/ air blow externally controllable |
| Material inlet pressure max. | bar | 35 |
| Pneumatic pressure min. | bar | 5 – 6 |
| Material connection | G | iG1/8 |
| G1/8 for pressure sensor | | Yes |
| Weight | kg | 0.53 |

## Accessories

### Nozzle extensions

Wide range of different nozzle extensions on request

### Stroke detection

| | | |
|---|---|---|
| | 1009266 | Stroke detection scanning spray valve with plug M8x1 4-pole |
| | 22034560 | Connection cable 10 m M8 4-pole straight |

### Pressure sensor

| | | |
|---|---|---|
| | 1009325 | Pressure sensor with spacer |
| | 1021043 | Valve plug C with 10 m cable |

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

### Heating

| | | |
|---|---|---|
| | 1023452 | Heating |
| | 29.01.289 | Connection cable 10m M12 4-pole straight |

### Air maintenance unit

| | | |
|---|---|---|
| | 1006954 | Air maintenance unit |
| | 1009188 | Air maintenance unit with precision pressure regulator |

### Solenoid valve (only for SPV-03 & 04)

| | | |
|---|---|---|
| | 1013259 | 5/2-way fast switching solenoid valve |
| | 1013278 | 5/2-way solenoid valve |

# Spray valves SPV-02

www.

## Technical data

| Article no. | | 22036266 | 1004432 |
|---|---|---|---|
| Nozzle size | mm | Ø 0.5 | Ø 1.0 |
| Material inlet pressure max. | bar | 35 | |
| Pneumatic pressure min. | bar | 5 – 6 | |
| Air cap | | Flat spray 60° | |

## Accessories

### Nozzle extensions

Wide range of different nozzle extensions on request

### Pressure sensor

| | | |
|---|---|---|
| | 1009591 | Pressure sensor with spacer |
| | 1021043 | Valve plug C with 10 m cable |

### Heating

| | | |
|---|---|---|
| | 1023454 | Heating |
|  | 29.01.289 | Connection cable 10m M12 4-pole straight |

### Air maintenance unit

| | | |
|---|---|---|
| | 1006954 | Air maintenance unit |
| | 1009188 | Air maintenance unit with precision pressure regulator |

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

### Solenoid valve

| | | |
|---|---|---|
| | 1013259 | 5/2-way fast switching solenoid valve |



# Spray guns SPP-01

www.

## Technical data

| Article no. | | 1004447 | 1004448 |
|---|---|---|---|
| Nozzle size | mm | Ø 0.5 | Ø 1.0 |
| Material inlet pressure max. | bar | 50 | |
| Pneumatic pressure max. | bar | 6 | |
| Air cap | | Flat spray 60° | |

## Accessories

### Nozzle extensions

Wide range of different nozzle extensions on request

### Air caps

| | |
|---|---|
| | Div. air caps round spray (spray cone 15°) |
| | Div. air caps flat spray (spray cone 45°/60°/90°) |

# Hand spray valve VSP-01

## Technical data

| | | |
|---|---|---|
| Article no. | | 1015329 |
| Nozzle size | mm | Ø 1.0 |
| Material inlet pressure max. | bar | 35 |
| Pneumatic pressure max. | bar | 6 |

## Accessories

### Stroke detection

| | | | | | |
|---|---|---|---|---|---|
| | 1009266 | Stroke detection spray valve with plug M8x1 4-pole | | 29.01.289 | Connection cable 10 m M12 4-pole straight |



# Rotary applicator RAP-01

## Type code

| Type | | Nominal size of the centrifuge | | Maximal immersion depth | | Type of shot valve SHV0-01 | | Stroke detection | | Silencer kit | | Light barrier | | Heating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RAP-01 | - | 10 | - | 100 | - | 02 | - | S | - | S | - | L | - | H |

**O**: without heating
**H**: with heating 50 W 24 V

**O**: without light barrier for shot detection
**L**: with light barrier for shot detection

**O**: without silencer kit
**S**: with silencer kit

**O**: without stroke detection
**S**: with stroke detection

**02**: Shot valve SHV-01 with nozzle Ø 0.2 mm
**03**: Shot valve SHV-01 with nozzle Ø 0.3 mm
**05**: Shot valve SHV-01 with nozzle Ø 0.5 mm
**10**: Shot valve SHV-01 with nozzle Ø 1.0 mm

**100**: 100 mm immersion depth
**200**: 200 mm immersion depth

**10**: Outer diameter of the centrifuge Ø 10 mm
**15**: Outer diameter of the centrifuge Ø 15 mm
**25**: Outer diameter of the centrifuge Ø 25 mm
**50**: Outer diameter of the centrifuge Ø 50 mm
**75**: Outer diameter of the centrifuge Ø 75 mm

## Passendes Zubehör

### Anschlusskabel

| | | |
|---|---|---|
| | 22034560 | Valve plug with 10 m cable M8 4 pins straight |
| | 29.01.289 | Connecting cable shielded 10m M12 4-pole straight |

### Antriebskit

| | |
|---|---|
| | Drive kit with connection cable available on request |

# Gear flow meter

## Type code

| Type | Nominal size | | Multiplication | | Material | Connection | Gear wheel coating | Bearing | Tolerance | | Seal | Sensor type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GFM | 0,04 | / | 16 | - | S | S | O | B | N | - | F | A |

**A**: AMR

**F**: FPM
**T**: PTFE
**E**: EPDM

**N**: Normal tolerance
**I**: Increased tolerance
**D**: Decreased tolerance

**B**: Ball bearing
**P**: Plain bearing
**T**: Plain bearing tungsten carbide

**O**: No coating
**D**: DLC coating

**S**: Subplate
**P**: Pipe connection

**A**: Cast iron
**C**: Aluminium
**S**: Stainless steel

**1**-fold: VI= VT per / Imp.
**2**-fold: VI= VT/2 per / Imp.
**3**-fold: VI= VT/3 per / Imp.
**4**-fold: VI= VT/4 per / Imp.
**5**-fold: VI= VT/5 per / Imp.
**8**-fold: VI= VT/8 per / Imp.
**10**-fold: VI= VT/10 per / Imp.
**12**-fold: VI= VT/12 per / Imp.
**16**-fold: VI= VT/16 per / Imp.
**24**-fold: VI= VT/24 per / Imp.
**32**-fold: VI= VT/32 per / Imp.
**50**-fold: VI= VT/50 per / Imp.
**64**-fold: VI= VT/64per / Imp.
**100**-fold: VI= VT/100 per / Imp.
**128**-fold: VI= VT/128 per / Imp.

**0.04**: Tooth volume VT= 0.04 ccm/Imp
**0.1**: Tooth volume VT= 0.1 ccm/Imp
**0.2**: Tooth volume VT= 0.2 ccm/Imp
**0.4**: Tooth volume VT= 0.4 ccm/Imp
**1**: Tooth volume VT= 1 ccm/Imp
**2**: Tooth volume VT= 2 ccm/Imp

VI= Impulse volume
VT= Tooth volume

## Accessories

### Connection plates 0.04 / 0.1 / 0.2 ml

| | | |
|---|---|---|
| | 31.02.100 | Mounting plate G 1/4" M6 (40x70 mm) |
| | 31.02.055 | Mounting plate G 3/8" M6 (40x70 mm) |
| | 31.02.059 | Mounting plate G 1/2" M6 (40x70 mm) |
| | 1006706 | Mounting plate with heating 200W 230V PT100 |

### Connection plates 0.4 ml

| | | |
|---|---|---|
| | 22013674 | Mounting plate G 1/2" M8 (38x80 mm) |
| | 22003996 | Mounting plate G 3/4" M8 (38x80 mm) |
| | 1018550 | Mounting plate with heating 200W 230V PT100 |

### Connection plates 1.0 / 2.0 ml

| | | |
|---|---|---|
| | 31.02.057 | Mounting plate G 1/2" M8 (72x84 mm) |
| | 31.02.052 | Mounting plate G 3/4" M8 (72x84 mm) |
| | 22029253 | Mounting plate G 1" M8 (72x84 mm) |

### Connecting Cable

| | | |
|---|---|---|
| | 31.02.200 | Connecting Cable shielded 5 m |
| | 29.01.289 | Connecting cable shielded 10 m M12 4-pin straight |
| | 29.01.283 | Connecting cable shielded 10m M12 4-pole angle |
| | 1017835 | Connecting cable shielded 20m M12 4-pole straight |
| | 1007071 | Connecting cable shielded 20m M12 4-pole angle |

# Metering control unit

## Benchtop housing

- Plastic benchtop housing, 370 x 330 x 200 mm with positioning frame
- Built-in touch panel for the operation, data entry and error messages in plain text
- Indicator light with buzzer for error messages
- Device plug with main switch
- USB interface for programme updates, system data and dosing program backup/recovery and data archiving (optional)
- Sensors and actuators pass through the cable glands in the back of the housing into the control unit
- Upgradeable for further extensions and options

## Wall housing

- Sheet metal wall housing, 400 x 400 x 210 mm with fixing brackets
- Door closes with a special key
- 7" Touch screen control panel for the operation, data entry and error messages in plain text
- Indicator light with buzzer for error messages
- Main switch as emergency stop switch
- USB interface for programme updates, system data and dosing program backup/recovery and data archiving (optional)
- Sensors and actuators pass through the cable glands in the bottom of the housing into the control unit

# Adapter

## Individual solutions for your greasing or oiling application

### Examples & options

- Manual oiling
- Manual lubrication
- Release by push-button
- Time control for a perfect charge
- Pneumatic signal (impuls) to start the dosing cycle
- Electric signal (impuls) to start the dosing cycle (electrical time relay)
- Multiple nozzle

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Cham
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