



# Diaphragm metering pump EcoPro / EcoAdd



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# Diaphragm metering pump EcoPro / EcoAdd

## 1 Diaphragm metering pump EcoPro / EcoAdd

- ▲ Simple and fast operation thanks to plain text operator guidance and multicolor 3.5" graphic display with touch function
- ▲ Adjustable metering range up to 1:12000
- ▲ Different metering modes adjustable (e.g. for high-viscosity products)
- ▲ USB interface (EcoAdd, transmission of operating data, software updates)
- ▲ Bluetooth interface (EcoAdd, operating data retrievable via smartphone APP)
- ▲ Evaluation and visualization tool for PC/laptop (EcoAdd)
- ▲ Variable arrangement of control unit and mounting console



EcoPro

EcoAdd

The EcoPro/EcoAdd is a metering pump series with step motor technology. This drive technology provides a variety of advantages:

- Precise adjustable metering capacity from 1:100 (for EcoPro) and 1:12000 (for EcoAdd)
- Almost pulsation-free injection
- Adjustment of the suction lift period for viscous products or difficult suction conditions
- Low-noise operation

The modular structure makes a simple modification of EcoPro to the EcoAdd version possible. The

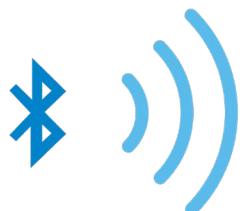
control unit can be turned by 90° with simple methods. This allows the adjustment to local conditions. Also the mounting console is for variable use. This makes it suitable for both installations, on a table or on the wall.

EcoAdd also enables a comfortable data exchange through communication interfaces such as USB or optionally Bluetooth.

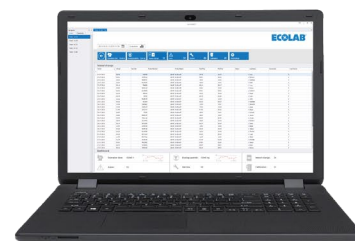
The scope of delivery is rounded off by practical accessories, so forming a complete range of equipment for all metering uses.



EcoAdd



EcoAPP



EcoCONNECT

*Bluetooth communication by pinboard with smartphone, App and PC software.*

# Diaphragm metering pump EcoPro / EcoAdd

## Variable structure

Upgrade from EcoPro to EcoAdd



**EcoPro**

**EcoAdd**

Control unit can be rotated by 90°:









Standard version:  
Operation from the front and  
pump head at the side

Option:  
Operation from the front and  
pump head on the back side

# Diaphragm metering pump EcoPro / EcoAdd

## Technical data

### 2 Technical data

Pump type		5	11	30	50	120
EcoPro						
EcoAdd						
Pump capacity range <b>EcoPro</b>	l/h	0.05 - 5	0.11 - 11	0.3 - 30	0.5 - 50	1.2 - 120
Pump capacity range <b>EcoAdd</b>	l/h	0.01 - 5	0.01 - 11	0.01 - 30	0.01 - 50	0.01 - 120
Max. metering back pressure	bar	10	10	3	10	3
Connection thread	Zoll	3/8	3/8	5/8	5/8	1¼
Reproductivity		< ±3 %				
Max. suction height with wet valves	m	2				
Max. metering frequency	1/min	171	190	171	158	171
Max. viscosity (spring-loaded valves)	mPas	1000	1000	500	1000	500
Permissible ambient temperature	°C	2 - 45				
Power supply		100-240 V ±10 % 50/60 Hz				
Safety type		IP 65				
Weight	kg	3.1	3.1	3.8	5.2	5.7
Certificates		CE, UL, CSA				

#### Materials:

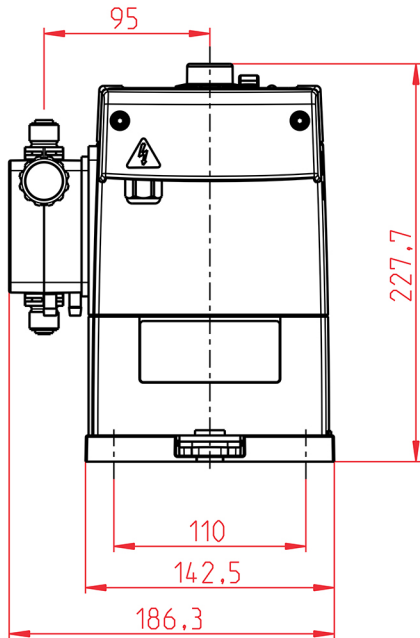
Housing:	PPO (Noryl)
Pump head:	PP or PVDF
Diaphragm:	PTFE – EPDM compound diaphragm
Seals:	FKM or EPDM <b>optional</b> PTFE or FFPM (Kalrez)
Valve balls:	ceramics <b>optional</b> PTFE or stainless steel 1.4401
Valve spring:	Hastelloy C4
Colour:	blue RAL 5007

# Diaphragm metering pump EcoPro / EcoAdd

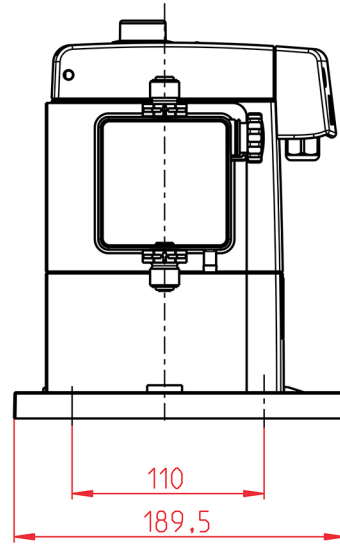
## Technical data

### Dimensions

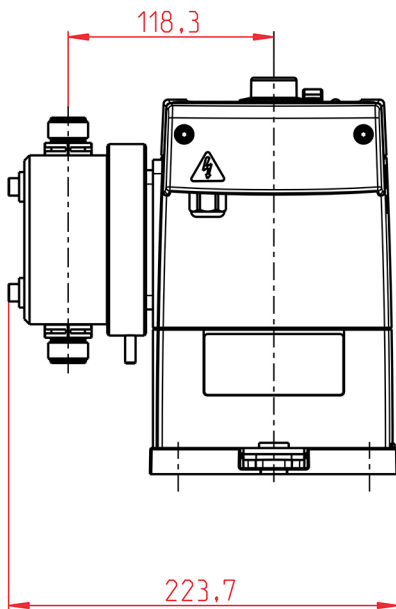
EcoPro 5 / 10 / 30 / 50 l/h:



EcoPro 5/11 l/h



EcoPro side view

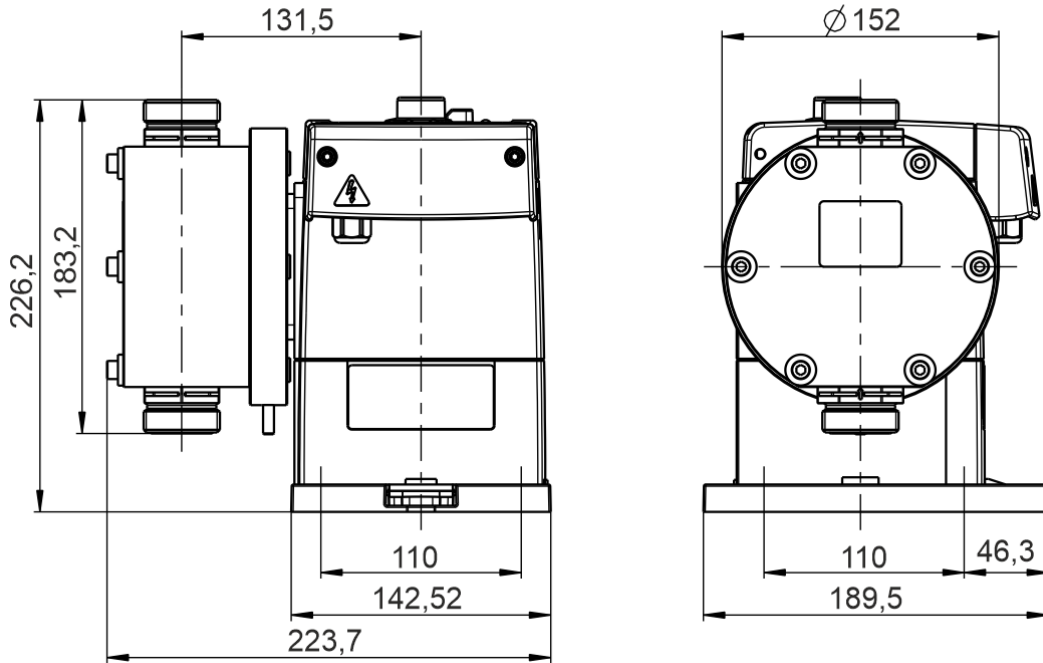


EcoPro 30/50 l/h

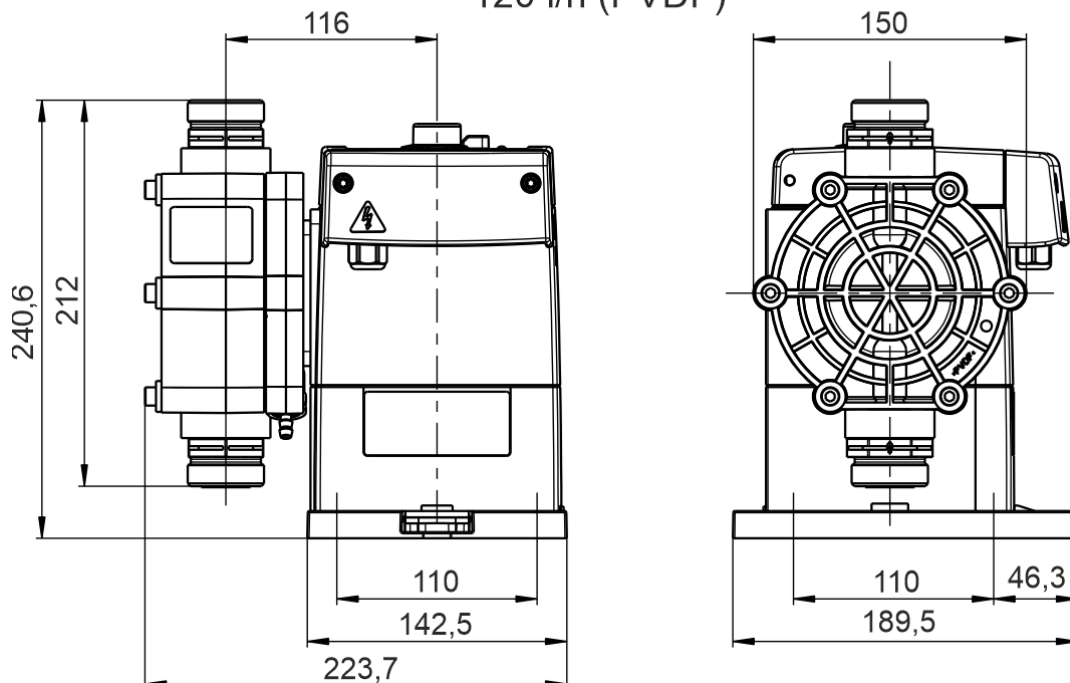
**Diaphragm metering pump EcoPro / EcoAdd**  
**Technical data**

EcoPro 120 l/h:

120 l/h (PP)



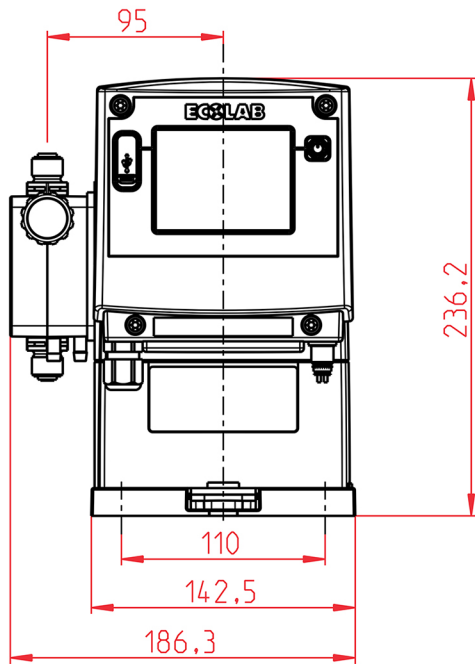
120 l/h (PVDF)



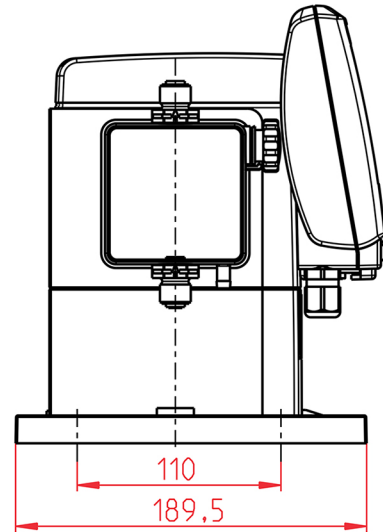
# Diaphragm metering pump EcoPro / EcoAdd

## Technical data

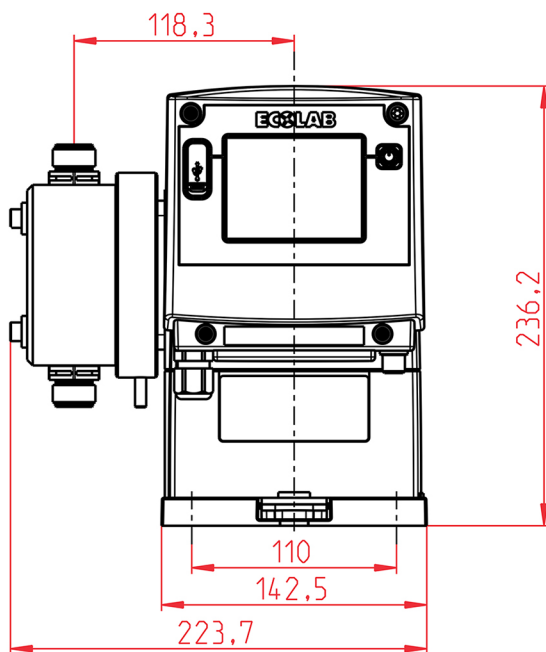
EcoAdd 5 / 10 / 30 / 50 l/h:



EcoAdd 5/11 l/h



EcoAdd side view



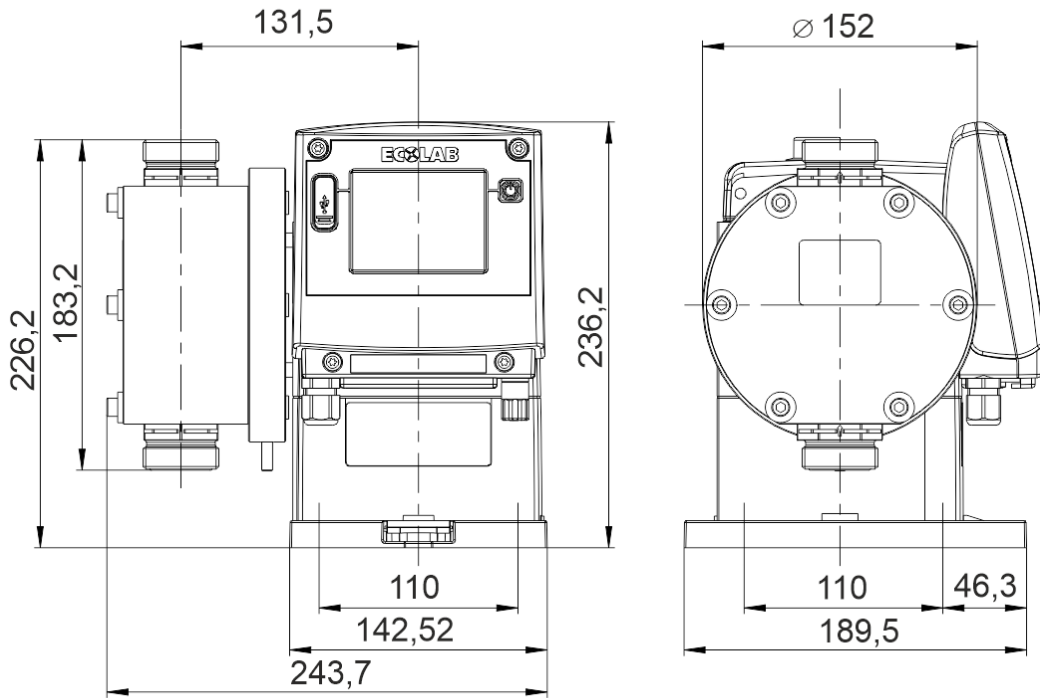
EcoAdd 30/50 l/h



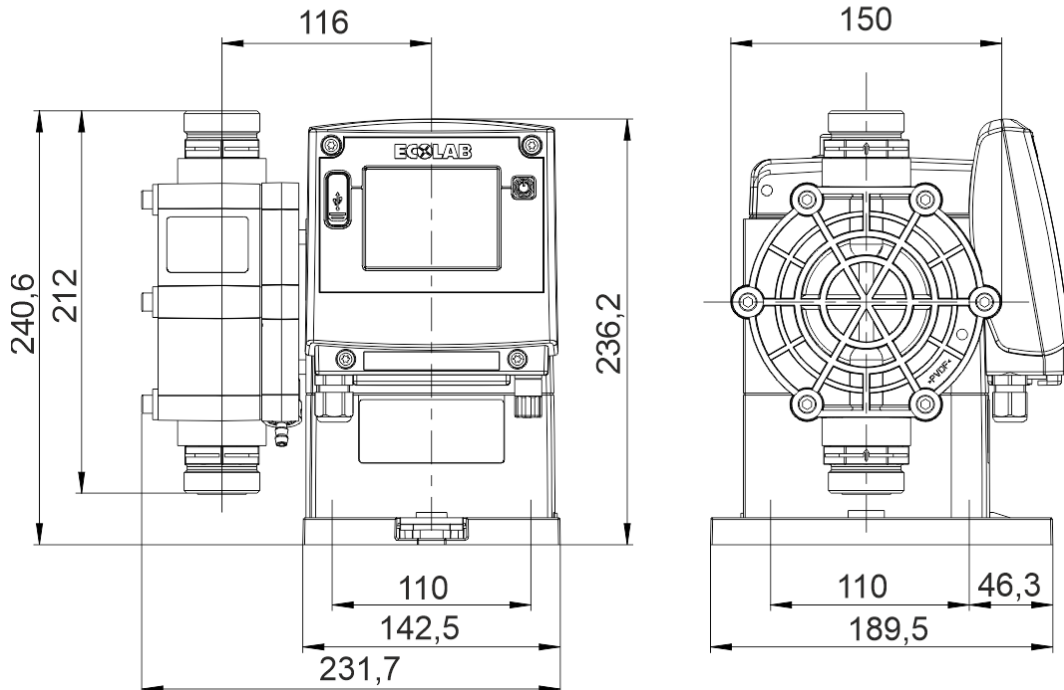
**Diaphragm metering pump EcoPro / EcoAdd**  
**Technical data**

EcoAdd 120 l/h:

120 l/h (PP)



120 l/h (PVDF)



# Diaphragm metering pump EcoPro / EcoAdd

## Ordering data

### 3 Ordering data

#### Ordering data – standard pumps:

Article	Pump code	Article no.
<b>EcoPro</b> PP/FKM	EcoPro-ES-00510X-PFC-00S-1S-S0	15201000
	EcoPro-ES-01110S-PFC-00S-1S-S0	15202000
	EcoPro-ES-03003S-PFC-00S-1S-S0	15203000
	EcoPro-ES-05010M-PFC-00S-1S-S0	15205000
	EcoPro-ES-12003M-PFC-00S-1S-S0	15206000
PP/EPDM	EcoPro-ES-00510X-PEC-00S-1S-S0	15201100
	EcoPro-ES-01110S-PEC-00S-1S-S0	15202100
	EcoPro-ES-03003S-PEC-00S-1S-S0	15203100
	EcoPro-ES-05010M-PEC-00S-1S-S0	15205100
	EcoPro-ES-12003M-PEC-00S-1S-S0	15206100
PVDF/FKM	EcoPro-ES-00510X-DFC-00S-1S-S0	15201300
	EcoPro-ES-01110S-DFC-00S-1S-S0	15202300
	EcoPro-ES-03003S-DFC-00S-1S-S0	15203300
	EcoPro-ES-05010M-DFC-00S-1S-S0	15205300
	EcoPro-ES-12003M-DFC-00S-1S-S0	15206300
PVDF/EPDM	EcoPro-ES-00510X-DEC-00S-1S-S0	15201400
	EcoPro-ES-01110S-DEC-00S-1S-S0	15202400
	EcoPro-ES-03003S-DEC-00S-1S-S0	15203400
	EcoPro-ES-05010M-DEC-00S-1S-S0	15205400
	EcoPro-ES-12003M-DEC-00S-1S-S0	15206400
<b>EcoAdd</b> PP/FKM	EcoAdd-ES-00510X-PFC-00S-1S-S0	15221000
	EcoAdd-ES-01110S-PFC-00S-1S-S0	15222000
	EcoAdd-ES-03003S-PFC-00S-1S-S0	15223000
	EcoAdd-ES-05010M-PFC-00S-1S-S0	15225000
	EcoAdd-ES-12003M-PFC-00S-1S-S0	15226000
PP/EPDM	EcoAdd-ES-00510X-PEC-00S-1S-S0	15221100
	EcoAdd-ES-01110S-PEC-00S-1S-S0	15222100
	EcoAdd-ES-03003S-PEC-00S-1S-S0	15223100
	EcoAdd-ES-05010M-PEC-00S-1S-S0	15225100
	EcoAdd-ES-12003M-PEC-00S-1S-S0	15226100
PVDF/FKM	EcoAdd-ES-00510X-DFC-00S-1S-S0	15221300
	EcoAdd-ES-01110S-DFC-00S-1S-S0	15222300
	EcoAdd-ES-03003S-DFC-00S-1S-S0	15223300
	EcoAdd-ES-05010M-DFC-00S-1S-S0	15225300
	EcoAdd-ES-12003M-DFC-00S-1S-S0	15226300
PVDF/EPDM	EcoAdd-ES-00510X-DEC-00S-1S-S0	15221400
	EcoAdd-ES-01110S-DEC-00S-1S-S0	15222400
	EcoAdd-ES-03003S-DEC-00S-1S-S0	15223400
	EcoAdd-ES-05010M-DEC-00S-1S-S0	15225400
	EcoAdd-ES-12003M-DEC-00S-1S-S0	15226400

Scope of supply: Diaphragm metering pump (EcoPro/EcoAdd), mounting console, operating instructions  
**without** hose connection material

**Hose connection material, see accessories.**

## Diaphragm metering pump EcoPro / EcoAdd

### Ordering data

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#### Ordering data – standard pumps:

Article	Pump code	Article no.
<b>EcoAdd</b> (with Bluetooth module)		
PP/FKM	EcoAdd-EB-00510X-PFC-00S-1S-S0	15221001
	EcoAdd-EB-01110S-PFC-00S-1S-S0	15222001
	EcoAdd-EB-03003S-PFC-00S-1S-S0	15223001
	EcoAdd-EB-05010M-PFC-00S-1S-S0	15225001
	EcoAdd-EB-12003M-PFC-00S-1S-S0	15226001
PP/EPDM	EcoAdd-EB-00510X-PEC-00S-1S-S0	15221101
	EcoAdd-EB-01110S-PEC-00S-1S-S0	15222101
	EcoAdd-EB-03003S-PEC-00S-1S-S0	15223101
	EcoAdd-EB-05010M-PEC-00S-1S-S0	15225101
	EcoAdd-EB-12003M-PEC-00S-1S-S0	15226101
PVDF/FKM	EcoAdd-EB-00510X-DFC-00S-1S-S0	15221301
	EcoAdd-EB-01110S-DFC-00S-1S-S0	15222301
	EcoAdd-EB-03003S-DFC-00S-1S-S0	15223301
	EcoAdd-EB-05010M-DFC-00S-1S-S0	15225301
	EcoAdd-EB-12003M-DFC-00S-1S-S0	15226301
PVDF/EPDM	EcoAdd-EB-00510X-DEC-00S-1S-S0	15221401
	EcoAdd-EB-01110S-DEC-00S-1S-S0	15222401
	EcoAdd-EB-03003S-DEC-00S-1S-S0	15223401
	EcoAdd-EB-05010M-DEC-00S-1S-S0	15225401
	EcoAdd-EB-12003M-DEC-00S-1S-S0	15226401
Scope of supply:	Diaphragm metering pump (EcoPro/EcoAdd), mounting console, operating instructions <b>without</b> hose connection material	

**Hose connection material, see accessories.**

# Diaphragm metering pump EcoPro / EcoAdd

## Pump code

### 4 Pump code

#### Control unit

#### 1. Pump name / electrical version

EcoPro	=	Keys / settings:	on/off, test, viscosity high/low, adjustment range 1:100
		LEDs:	operation, viscosity high/low, alarm
		Inputs:	release
EcoAdd	=	Keys / settings:	on/off, 4 viscosity modes, 5 operating modes adjustment range 1:12000
		Display:	touch display
		Operation mode:	manual, pulse, current, timer, charge
		Inputs:	release, pulse, current, charge, level, flow, diaphragm break
		Outputs:	stroke signal, alarm
		Communication:	USB, CAN Bus
		Option:	Bluetooth extension module

#### 2. Mains supply

E	=	mains cable 2.5 m with EU plug
U	=	mains cable 2.5 m with US plug
N	=	mains cable 2.5 m without plug (end splices)

#### 3. Control unit versions

S	=	standard
B	=	Bluetooth extension (EcoAdd)
T	=	rotated control unit
1	=	Bluetooth extension and rotated control unit (EcoAdd)

EcoPro-ES-00510X-PFC-00S-1S-S0

#### Pump head

#### 4. Pump capacity (max.) / back pressure / drive

00510X	=	5 l/h / 10 bar / drive size XS
01110S	=	11 l/h / 10 bar / drive size S
03003S	=	30 l/h / 3 bar / drive size S
05010M	=	50 l/h / 10 bar / drive size M
12003M	=	120 l/h / 3 bar / drive size M

#### 5. Material pump head / valves

P	=	PP
D	=	PVDF

#### 6. Sealing material

F	=	FKM
E	=	EPDM
T	=	PTFE-coated
K	=	FFPM (Kalrez)

#### 7. Valve ball material

C	=	ceramics
T	=	PTFE
S	=	stainless steel V4A

#### 8- Valve spring

0	=	without spring (--)
1	=	suction valve (SV): --, pressure valve (PV): 0.1 bar
2	=	SV: --, PV: 0.2 bar (5, 11 l/h)
3	=	SV: --, PV: 0.4 bar (5, 11 l/h)
5	=	SV: 0.1 bar, PV: 0.1 bar

#### 9. Hydraulic connection

0	=	without hose connection
---	---	-------------------------

#### 10. Pump head version

S	=	standard
---	---	----------

EcoPro-ES-00510X-PFC-00S-1S-S0

# Diaphragm metering pump EcoPro / EcoAdd

## Pump code

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### Miscellaneous

**11. Power supply**

**1** = 100 – 240 V 50/60 Hz

**12. Housing / drive version**

**S** = standard

**13. Packaging**

**0** = without packaging

**S** = standard packaging

**14. Accessories**

**0** = without accessories

EcoPro- E S - 00510X- P F C - 00 S - **1 S - S 0**

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## 5 Pump kits

The pump kit is a complete system. The components of this set have been selected to match the respective pump size and to be compatible with the pump head materials. With this operational metering system, the user no longer has to go through the tedious search for suitable individual parts for the metering task.



*EcoAdd pump kit*

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## 5.1 Pump kits EcoPro

### Pump kit EcoPro 5 l/h DFC with bottom admission valve

Consisting of:

	Article	Article no.
	<b>Diaphragm metering pump EcoPro</b> EcoPro-ES-00510X-DFC-00S-1S-S0	15201300
	<b>Bottom admission valve</b> BSV VC PV FP KE 000 G 3/8 - 22	243129
	<b>Hose PE 4/6 mm</b> Length: 5 m	417400301
	<b>Metering valve</b> DVP DFC-H03-G1/2-G3/8-045-99	252157
	<b>Connection sets (3 pcs.)</b> Connection set Di4/Da6-G3/8-PVDF-NA	252101

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## Pump kit EcoPro 11 l/h DFC with bottom admission valve

Consisting of:

	Article	Article no.
	<b>Diaphragm metering pump EcoPro</b> EcoPro-ES-01110X-DFC-00S-1S-S0	15202300
	<b>Bottom admission valve</b> BSV VC PV FP KE 000 G 3/8 - 23	243130
	<b>Hose PE 6/8 mm</b> Length: 5 m	417400310
	<b>Metering valve</b> DVP DFC-H03-G1/2-G3/8-045-99	252157
	<b>Connection sets (3 pcs.)</b> Connection set Di6/Da8-G3/8-PVDF-NA	252105



# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## Pump kit EcoPro 50 l/h PFC with bottom admission valve

Consisting of:

**Article**

**Article no.**



**Diaphragm metering pump EcoPro**

EcoPro-ES-05010M-PFC-00S-1S-S0

15202500



**Bottom admission valve**

BSV PV PV FP GL 000 G 5/8 – 06

249018



**PVC-fabric PE 6/12 mm**

Length: 5 m

417400123



**Metering valve**

DVP PFC-007-G1/2-G5/8-045-99

252177



**Connection sets (3 pcs.)**

Connection set Di6/Da12-G5/8-PP-GY

252118

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## 5.2 Pump kits EcoAdd

### Pump kit EcoAdd 5 l/h DFC with suction lance 540 mm

Consisting of:

Article	Article no.
	<p><b>Diaphragm metering pump EcoAdd</b> EcoAdd-ES-00510X-DFC-00S-1S-S0 15221300</p>
	<p><b>Suction lance, 540 mm</b> A-SGL-VVF0C-G3/8-06-2SS-0540-99-99-p 10240524</p>
	<p><b>Hose PE 4/6 mm</b> Length: 5 m 417400301</p>
	<p><b>Metering valve</b> DVP DFC-H03-G1/2-G3/8-045-99 252157</p>
	<p><b>Connection sets (4 pcs.)</b> Connection set Di/Da 4/6-6/8-6/12-G3/8-PV-NA 252138</p>

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## Pump kit EcoAdd 11 l/h DFC with suction lance 540 mm

Consisting of:



**Article**

**Article no.**

**Diaphragm metering pump EcoAdd**

EcoAdd-ES-01110S-DFC-00S-1S-S0

15222300



**Suction lance, 540 mm**

A-SGL-VVF0C-G3/8-06-2SS-0540-99-99-p

10240524



**Hose PE 5/8 mm**

Length: 5 m

417400300



**Metering valve**

DVP DFC-H03-G1/2-G3/8-045-99

252157



**Connection sets (4 pcs.)**

Connection set Di5/Da8-G3/8-PVDF-NA

252103

# Diaphragm metering pump EcoPro / EcoAdd Pump kits

## Pump kit EcoAdd 50 l/h DFC with suction lance 475 mm

Consisting of:



**Article**

**Article no.**

**Diaphragm metering pump EcoAdd**

EcoAdd-ES-05010M-PFC-00S-1S-S0

15225000



**Suction lance, 475 mm**

A-SGL-VVF0C-G3/8-06-2SS-0540-99-99-p

10240410



**PVC-fabric PE 10/16 mm**

Length: 5 m

417400126



**Metering valve**

DVP PFC-007-G1/2-G5/8-045-99

252177



**Connection sets (4 pcs.)**

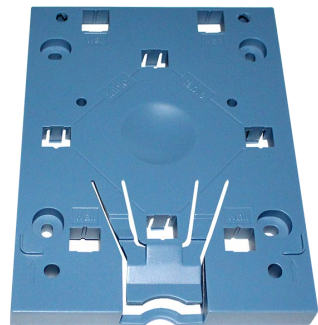
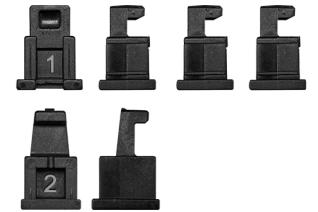

Connection set Di/Da 6/12-10/16-G5/8-PP-GY

249237

# Diaphragm metering pump EcoPro / EcoAdd Spare parts

## 6 Spare parts

### 6.1 General spare parts

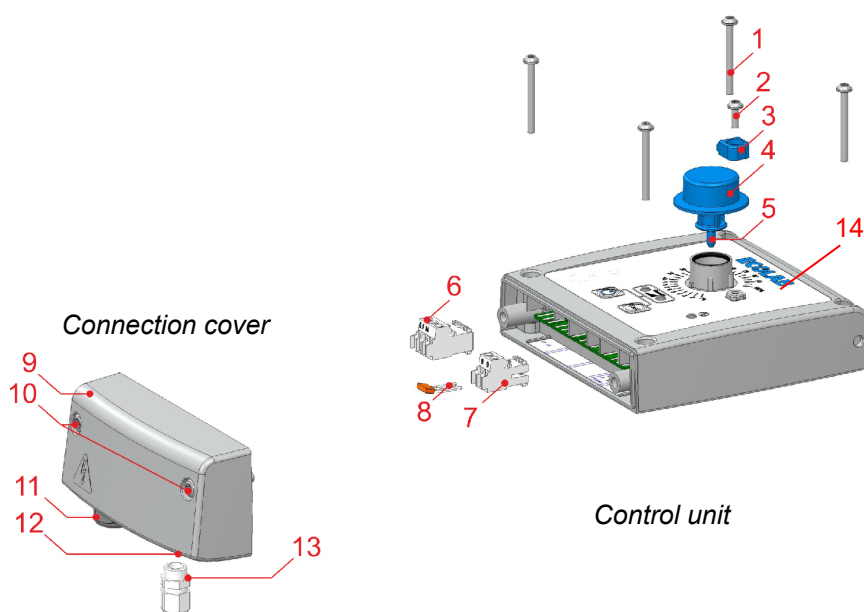
	Designation	Article no.
	<p><b>Mounting plate</b> Material: thermoplastic polyester (without fastening elements)</p>	35200103
	<p><b>Accessories fastening elements</b> consisting of: 4 fastening elements with code 1 (for stand mounting) 2 fastening elements with code 2 (for wall mounting*)</p> <p>* For wall mounting, 2 fastening elements each with codes 1 and 2 are used.</p>	252019
	<p><b>Replay- ribbon cable</b> Ribbon cable 6-pole, from the motor electronics board to the control unit</p>	35208202

# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, EcoPro control unit

### 6.2 EcoPro control unit

Designation	Article no.
EcoPro control unit, complete, 5 l/h	252045
EcoPro control unit, complete, 11 l/h	252046
EcoPro control unit, complete, 30 l/h	252047
EcoPro control unit, complete, 50 l/h	252048
EcoPro control unit, complete, 120 l/h	252049
EcoPro connection cover, complete	252033



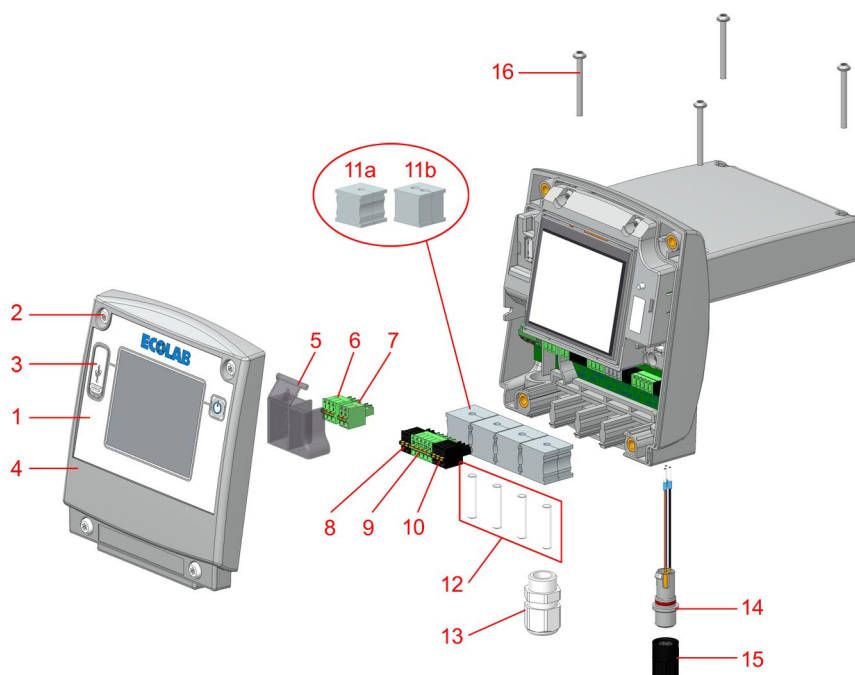
Pos.	Designation	Article no.
	<b>Control unit spare parts:</b>	
1	EJOT DELTA PT screw 35x35 WN5451 V2A (4 x)	413070100
2	EJOT DELTA PT screw 35x10 WN5451 V2A	413070094
3	Clamp for rotary knob	35200155
4	Rotary knob potentiometer	35200152
5	Axis rotary knob	35200153
6	Plug connector 3-pole (mains connection, terminal 1-3)	418461707
7	Plug connector 2-pole (release input, terminal 8-9)	418461701
8	Bridge for coupling relay 2-pole	418461483
14	Front sticker	35200156
	<b>Connection cover spare parts:</b>	
9	Connection cover	35200150
10	EJOT DELTA PT screw 50x30/15 WN5452 V2A (2 x)	413070209
11	Cable union M 16x1,5 PA/GR	418441002
12	Dummy plug M12x1.5	418441033
13	Cable union, threaded, M 12x1.5 PA/GR (in accessories pack)	418441001

# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, EcoAdd control unit

### 6.3 EcoAdd control unit

Designation	Article no.
EcoAdd control unit, complete	252030



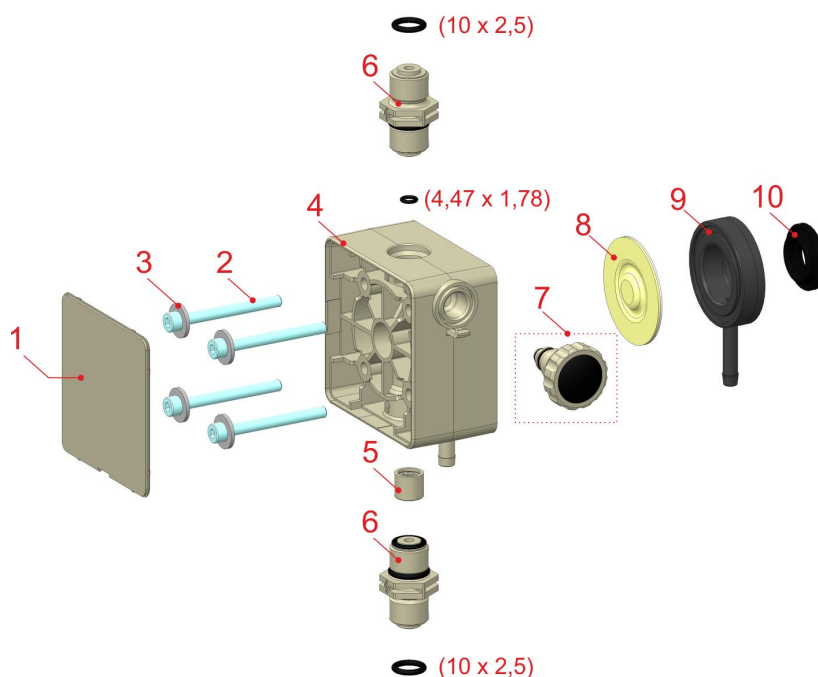
Pos.	Designation	Article no.
1	Front sticker	35200141
2	Shaft screw, M 5x20 (4 x)	413123501
3	USB plug	35200125
4	Display cover with seal	35200127
5	Voltage cover (cover power)	35200130
6	Plug in terminal 3-pole, green (alarm output, terminal 1-3)	418461692
7	Plug in terminal 2-pole, green (stroke signal output, terminal 4-5)	418461690
8	Plug in terminal 2-pole, black (standard signal input, terminal 18-19)	418461691
9	Plug in terminal 5-pole, green (control input, terminal 20-24)	418461697
10	Plug in terminal 3-pole, black (level input, terminal 25-27)	418461693
11a	Cable sleeve KT5 Ø5 grey, for one cable (standard) (4 x)	417028631
11b	Cable sleeve KT2/5 2xØ5 grey, for two cables (4 x)	417028632
12	Plug for cable sleeves ST5 Ø 5 mm, white (4 x)	417028641
13	Cable union M 16x1,5 PA/GR	418441002
14	Empty signal plug, 3-pole	35200123
15	Dummy connector, empty signal input	248186
16	EJOT DELTA PT screw 35x35 WN5451 V2A (4 x)	413070100

# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, pump heads

### 6.4 Pump heads

#### 6.4.1 Pump head 5 l/h



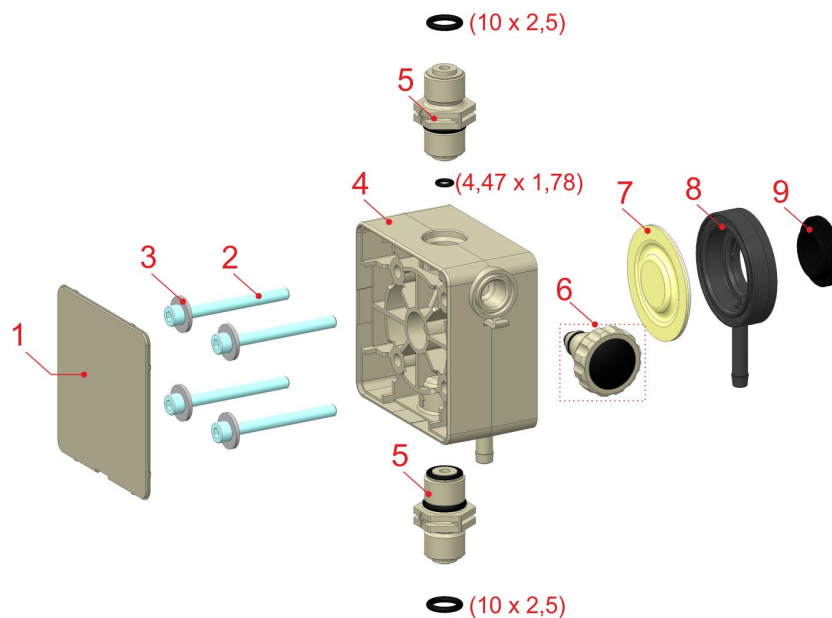
Pos.	Designation	Article no.
1	Cover plate, PP, pebble grey	35200180
	Cover plate, PVDF, nature	35200181
2	Hexagon socket screw, M 5x50, DIN 912, V2A (4 x)	413031127
3	Washer, 5.3 x 15 1.6, DIN 9021, V2A (4 x)	413501720
4	Pump head, 5 l/h, PP	35200107
	Pump head, 5 l/h, PVDF	35200108
5	Suction valve cartridge, V3 PFC	252014
	Suction valve cartridge, V3 PEC	252015
	Suction valve cartridge, V3 DFC	252016
	Suction valve cartridge, V3 DEC	252017
6	Suction/pressure valve, PFC-000 G3/8-G3/8-99 (2 x)	252010
	Suction/pressure valve, PEC-000 G3/8-G3/8-99 (2 x)	252011
	Suction/pressure valve, DFC-000 G3/8-G3/8-99 (2 x)	252012
	Suction/pressure valve, DEC-000 G3/8-G3/8-99 (2 x)	252013
7	Vent screw, PP/FKM	252035
	Vent screw, PP/EPDM	252034
	Vent screw, PVDF/FKM	252037
	Vent screw, PVDF/EPDM	252036
8	Diaphragm	35200109
9	Intermediate plate	35200110
10	Protective diaphragm	35200137



# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, pump heads

### 6.4.2 Pump head 11 l/h

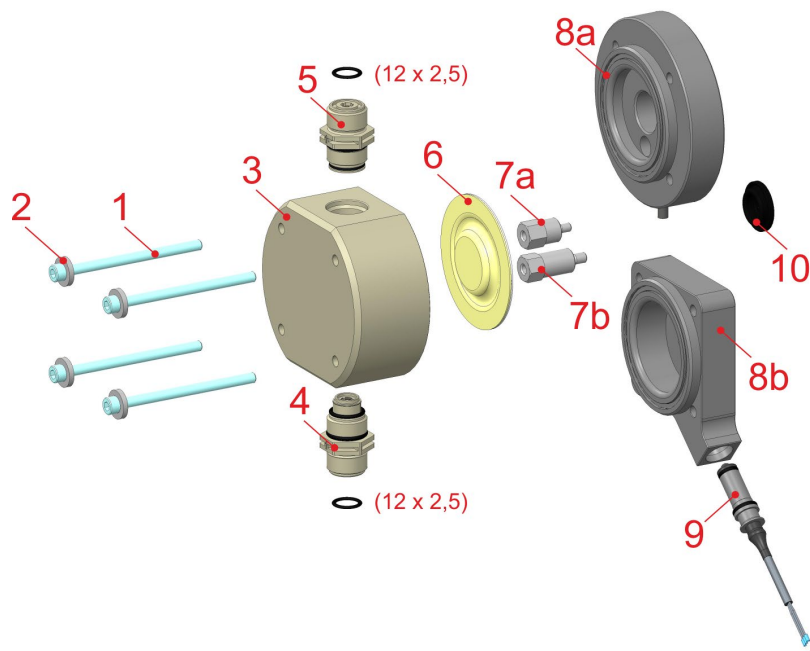


Pos.	Designation	Article no.
1	Cover plate, PP, pebble grey	35200180
	Cover plate, PVDF, nature	35200181
2	Hexagon socket screw, M 5x50, DIN 912, V2A (4 x)	413031127
3	Washer, 5.3 x 15 1.6, DIN 9021, V2A (4 x)	413501720
4	Pump head, 11 l/h, PP	35200112
	Pump head, 11 l/h, PVDF	35200113
5	Suction/pressure valve, PFC-000 G3/8-G3/8-99 (2 x)	252010
	Suction/pressure valve, PEC-000 G3/8-G3/8-99 (2 x)	252011
	Suction/pressure valve, DFC-000 G3/8-G3/8-99 (2 x)	252012
	Suction/pressure valve, DEC-000 G3/8-G3/8-99 (2 x)	252013
6	Vent screw, PP/FKM	252035
	Vent screw, PP/EPDM	252034
	Vent screw, PVDF/FKM	252037
	Vent screw, PVDF/EPDM	252036
7	Diaphragm	35200114
8	Intermediate plate	35200115
9	Protective diaphragm	35200137

# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, pump heads

### 6.4.3 Pump head 30/50 l/h

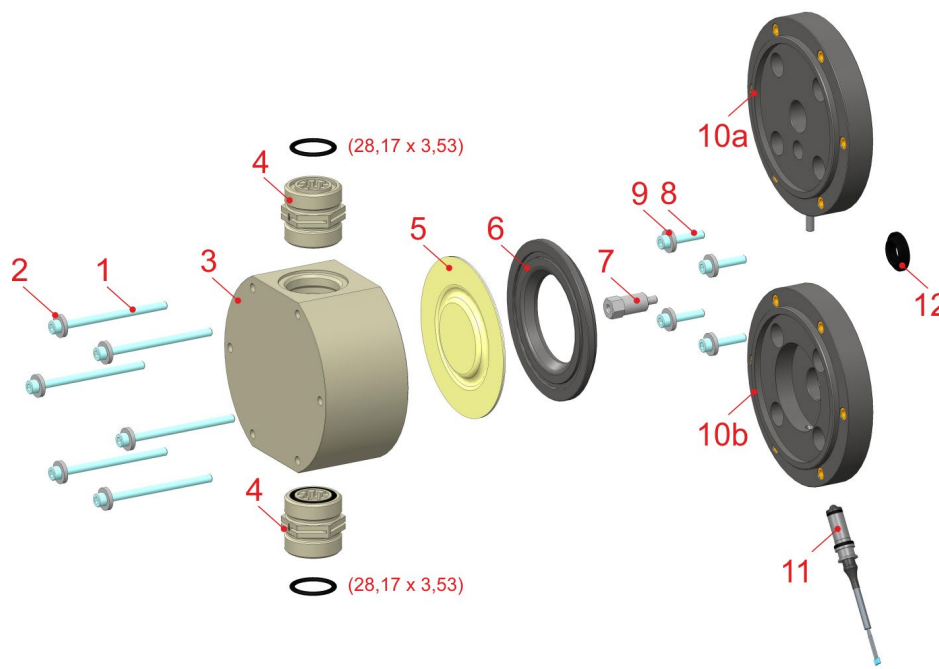


Pos.	Designation		Article no.
1	Hexagon socket screw, M 6 x 90, DIN 912, V2A	(4 x)	413031148
2	Washer, 17 x 6.4 x 3 DIN 7349 V2A	(4 x)	413501304
3	Pump head, 30/50 l/h, PP		35200116
	Pump head, 30/50 l/h, PVDF		35200117
4	Suction valve, PFC-000 G5/8-G5/8-99		252024
	Suction valve, PEC-000 G5/8-G5/8-99		252025
	Suction valve, DFC-000 G5/8-G5/8-99		252026
	Suction valve, DEC-000 G5/8-G5/8-99		252027
5	Pressure valve, PFC-000 G5/8-G5/8-99		252020
	Pressure valve, PEC-000 G5/8-G5/8-99		252021
	Pressure valve, DFC-000 G5/8-G5/8-99		252022
	Pressure valve, DEC-000 G5/8-G5/8-99		252023
6	Diaphragm		35200120
7a	Diaphragm extension, 30 l/h		35200121
7b	Diaphragm extension, 50 l/h		35200148
8a	Intermediate plate		35200118
8b	Intermediate plate with sensor support		35200119
9	Diaphragm rupture sensor, complete		252081
10	Protective diaphragm		35200137

# Diaphragm metering pump EcoPro / EcoAdd

## Spare parts, pump heads

### 6.4.4 Pump head 120 l/h



Pos.	Designation		Article no.
1	Hexagon socket screw, M 6 x 90, DIN 912, V2A	(4 x)	413031148
2	Washer, 17 x 6.4 x 3 DIN 7349 V2A	(4 x)	413501304
3	Pump head, 120 l/h, PP		35200142
	Pump head, 120 l/h, PVDF		35200143
4	Suction/pressure valve, PFC-000 G11/4-G11/4-99	(2 x)	249075
	Suction/pressure valve, PEC-000 G11/4-G11/4-99	(2 x)	249055
	Suction/pressure valve, DFC-000 G11/4-G11/4-99	(2 x)	252028
	Suction/pressure valve, DEC-000 G11/4-G11/4-99	(2 x)	252029
5	Diaphragm		35200144
6	Intermediate plate		35200147
7	Diaphragm extension, 120 l/h		35200148
8	Hexagon socket screw, M 6 x 30, DIN 912, V2A	(4 x)	413031140
9	Washer, 17 x 6.4 x 3 DIN 7349 V2A	(4 x)	413501304
10a	Adapter plate		35200145
10b	Adapter plate with sensor support		35200146
11	Diaphragm rupture sensor, complete		252081
12	Protective diaphragm		35200137

# Diaphragm metering pump EcoPro / EcoAdd

## Wearing parts

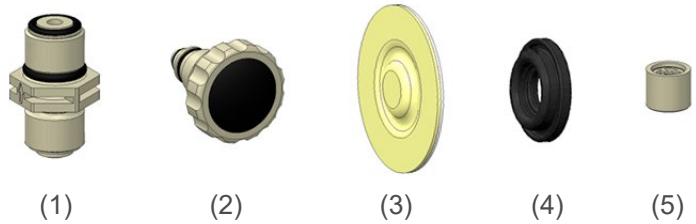
### 6.5 Wearing parts

#### 6.5.1 Wearing part kit 5 l/h and 11 l/h

#### Wearing part kit

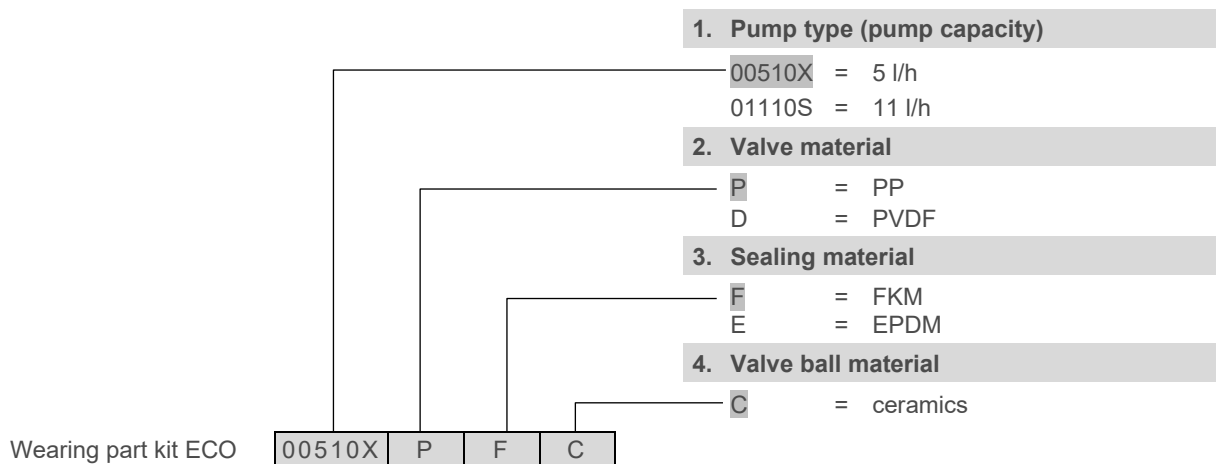
consisting of:

- 2 suction/pressure valves (1)
- 1 vent screw (2)
- 1 diaphragm (3)
- 1 protective diaphragm (4)
- 1 valve cartridge (5), only for 5 l/h



Article	Code	Article no.
Wearing part kit	ECO 00510X PFC	252121
	ECO 00510X PEC	252122
	ECO 00510X DFC	252123
	ECO 00510X DEC	252124
	ECO 01110S PFC	252125
	ECO 01110S PEC	252126
	ECO 01110S DFC	252127
	ECO 01110S DEC	252128

#### Article code



# Diaphragm metering pump EcoPro / EcoAdd

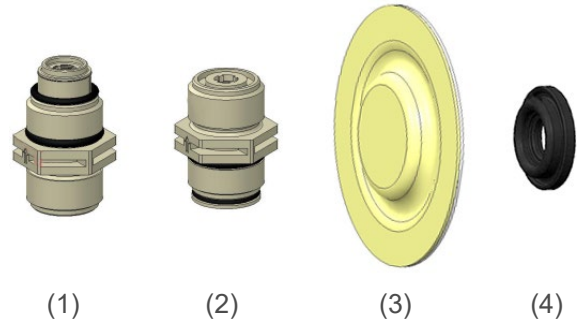
## Wearing parts

### 6.5.2 Wearing part kit 30/50 l/h and 120 l/h

#### Wearing part kit

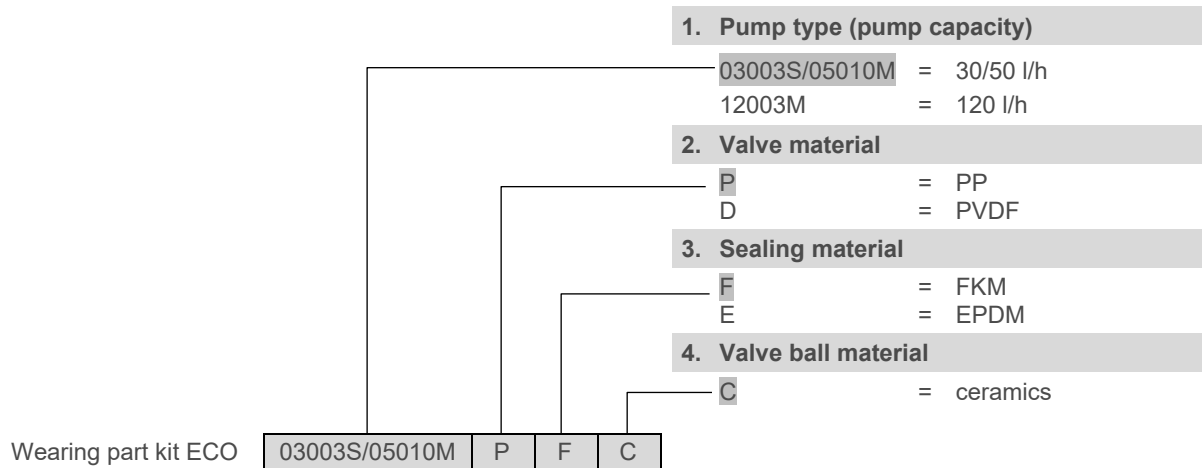
consisting of:

- 1 suction valve (1)
- 1 pressure valve (2)
- 1 diaphragm (3)
- 1 protective diaphragm (4)



Article	Code	Article no.
Wearing part kit	ECO 03003S/05010M PFC	252129
	ECO 03003S/05010M PEC	252130
	ECO 03003S/05010M DFC	252131
	ECO 03003S/05010M DEC	252132
	ECO 12003M PFC	252133
	ECO 12003M PEC	252134
	ECO 12003M DFC	252135
	ECO 12003M DEC	252136

#### Article code



# Diaphragm metering pump EcoPro / EcoAdd

## General accessories

### 7 Accessories

#### 7.1 General accessories

**Article**

**Article no.**



**Bluetooth board**

252080

for upgrading EcoAdd pumps  
for data exchange via Bluetooth



**Adapter cable**

for connecting existing EMP pump connections, when  
replacing EMP pumps with Eco pumps.

Adapter cable, control input, EMP – EcoAdd

252082

Adapter cable, output, EMP – EcoAdd

252083

**Diaphragm metering pump EcoPro / EcoAdd  
General accessories**

**Article**

**Article no.**



**Oval gear meter**

for volumetric measurement of the rate of flow

**Ordering data are to be found in chapter  
„Measuring and Controlling, Oval Gear Meter“**



**Contact Water Meter**

For volume-proportional applications, we recommend the use of contact water meters from our product range.

**Ordering data are to be found in chapter  
„Measuring and Controlling, Contact Water Meter“**



**Signal horn with integrated red flashlight**

230 V / 50 Hz / IP 33 RO

418271053

## Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

### 7.2 Accessories 5 l/h and 11 l/h

#### 7.2.1 Connection material



Article	Article no.
<b>Connection set for PE/PTFE hose 4/6 mm (only for 5 l/h)</b>	
Connection set Di4/Da6-G3/8-PP-GY	252102
Connection set Di4/Da6-G3/8-PVDF-NA	252101
<b>Connection set for PE/PTFE hose 5/8 mm</b>	
Connection set Di5/Da8-G3/8-PP-GY	252104
Connection set Di5/Da8-G3/8-PVDF-NA	252103
<b>Connection set for PE/PTFE hose 6/8 mm</b>	
Connection set Di6/Da8-G3/8-PP-GY	252106
Connection set Di6/Da8-G3/8-PVDF-NA	252105
<b>Connection set for PE/PTFE hose 1/4" / 3/8"</b>	
Screw-on connection PP, G3/8 <sub>i</sub> – DN 1/4" / 3/8"	415102350
Screw-on connection PVDF, G3/8 <sub>i</sub> – DN 1/4" / 3/8"	415102304
<b>Connection set for PE/PTFE hose 6/10 mm</b>	
Screw-on connection PVDF, G3/8 <sub>i</sub> - 6/10 mm	415102352
<b>Connection set for PVC hose 6/12 mm</b>	
Connection set Di6/Da12-G3/8-PP-GY	252108
Connection set Di6/Da12-G3/8-PVDF-NA	252107
<b>Connection set for PE/PTFE hose 4/6 and 6/8 mm and PVC hose 6/12 mm</b>	
Connection set Di/Da 4/6-6/8-6/12-G3/8-PP-GY	252137
Connection set Di/Da 4/6-6/8-6/12-G3/8-PV-NA	252138



## Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

### 7.2.2 Suction lances

Ecolab suction lances include a protective function as well as a monitoring function. A sieve protects the metering pump from coarse particles, and a ball check valve prevents the suction line from running empty. At the same time, level messages for the states "pre-warning" and "empty" are provided via two float switches.

#### Note:

All components with moving parts are subject to wear, including suction lances.

We therefore recommend inspecting the suction lances for leaks and proper functioning at all service appointments and replacing them if necessary.



#### Article

#### Article no.

#### Suction lances D16 with reserve and empty signal report

incl. ball non-return valve, suction strainer, potential-free contacts for level pre-warning and empty signal (when dropping below the level = contact interrupted).

Tube diameter: 16 mm  
 Material: see suction lance code  
 Connection cable: 3-pin plug incl. 5 m cable  
 Turn-on voltage: max. 48 V AC/DC  
 Switching current: 0.5 A  
 Rupturing capacity: 8 W / 8 VA

A-SGL-VVF0C-G3/8-06-2SS-0540-99-99-p

10240524

A-SGL-VVF0C-G3/8-06-2SS-0750-99-99-p

10240525

A-SGL-VVF0C-G3/8-06-2SS-1125-99-99-p

10240526

*Suction lance code, see next page!*

#### Connection sets G3/8" for suction lances D16

Connection set Di/Da 4/6-6/8-6/12-G3/8-PP-GY

252137

Connection set Di/Da 4/6-6/8-6/12-G3/8-PV-NA

252138

Connection set Di5/Da8-G3/8-PP-GY

252104

Connection set Di5/Da8-G3/8-PVDF-NA

252103

Screw-on connection PVDF, G3/8"i - 6/10 mm

415102352

## Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h



### Article

### Article no.

#### Suction lances D32 with reserve and empty signal report

incl. of ball non-return valve, suction strainer and potential-free contacts for level pre-warning and empty signal (when dropping below the level = contact interrupted).

Tube diameter: 32 mm  
 Material: see suction lance code  
 Connection cable: 3-pin plug incl. 5 m cable  
 Turn-on voltage: max. 50 V AC/DC  
 Switching current: 0.5 A  
 Rupturing capacity: 10 W / 10 VA

A-SGL-VDFEC-G5/8-10-2SS-0475-99-99-p	10240410
A-SGL-VDFEC-G5/8-10-2SS-0725-99-99-p	10240411
A-SGL-VDFEC-G5/8-10-2SS-1125-99-99-p	10240412
A-SGL-VDFEC-G5/8-10-2SS-1300-99-99-p	10240413

*Suction lance code, see next page!*

**Connection sets G5/8" for suction lances D32**  
see page 37.



**7.2.3 Suction lance adaptors**

	<b>Article</b>	<b>Article no.</b>
	<p><b>Adaptor – screw cap</b> for suction lance Ø 16 mm</p> <p>Thread pitch: 5 mm            Threaded int. diameter: 50 mm            Threaded ext. diameter: 55 mm            Hole diameter: 25 mm            can be screwed on: canister 10 l and 20 l</p>	38619003
	<p>as 38619003 but with</p> <p>Threaded int. diameter: 56 mm            Threaded ext. diameter: 61 mm            can be screwed on: canister 30 l <b>or</b>            container 60 – 200 l</p>	38619004
	<p>as 38619004 but <b>with return hole</b></p>	247627
	<p><b>Adaptor – insert cap</b></p> <p>for suction lance Ø 32 mm            PVC soft            to attach on: canister 10 l and 20 l</p>	286198
	<p><b>Adaptor – insert cap</b></p> <p>for suction lance Ø 32 mm            PVC – hard / Viton B            appropriate for <b>degassing products</b></p> <p>Return connection: 4/6, 6/8 or 6/12 mm (int.Ø / ext.Ø)            Vent connection: 6/12 mm (int.Ø / ext.Ø)            to attach on: canister 30 l <b>or</b>            container 60 – 200 l</p>	288534
	<p><b>Adaptor – screw joint</b></p> <p>for suction lance Ø 32 mm            PVC hard</p> <p>Thread pitch: 5 mm            Threaded int. diameter: 56 mm            Threaded ext. diameter: 61 mm            can be screwed on: canister 30 l <b>or</b>            container 60 – 200 l</p>	286197

# Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

	Article	Article no.
	<p><b>Adaptor – screw joint</b>            for suction lance Ø 32 mm            PVC – hard / Viton B / silicone            appropriate for <b>degassing products</b>            Return connection: 4/6, 6/8 or 6/12 mm (int.Ø /ext.Ø)            Vent connection: 6/12 mm (int.Ø /ext.Ø)            Thread pitch: 5 mm            Threaded int. diameter: 63 mm            Threaded ext. diameter: 69 mm            for barrel with internal thread (L–ring plus barrel 220 l)</p>	288535
	<p><b>Adapter screw connection</b>            for suction lance Ø 32 mm            PVC – hard / Viton B / Silicon            suitable for degassing products            Return connection: 4/6, 6/8 or 6/12 mm (int./ext.Ø)            Vent connection: 6/12 mm (int./ext.Ø)            Thread pitch: 2.31 mm            Threaded int. diameter: 56.66 mm            Threaded ext. diameter: 59.61 mm            for container screw cap with 2" internal thread</p>	288570
	<p><b>Adapter</b>            2" internal thread for adapter screw connection <b>288570</b>            Tri-Sure external thread for container screw cap</p>	419800026
	<p><b>Suction lance adapter, rigid PVC/Viton B</b>            for canister or barrel</p>	288549
	<p><b>Suction lance adapter, rigid PVC/Viton B</b>            for barrels (l-ring plus – barrel 220)</p>	288547
	<p><b>Suction lance adapter, rigid PVC/Viton B</b>            for container (ECOBULK-container with skid pallet)            for screw in in screw cap with 2"            Tri-Sure-Stuffing</p>	288548

**Diaphragm metering pump EcoPro / EcoAdd  
Accessories 5 l/h and 11 l/h**

---

**Article**

**Article no.**



**Terminal box for connection cable of the suction pipe**

288419

for connection cable with round plug  
incl. cable union PG 7 (max. 2 x 1 m<sup>2</sup>)

# Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

## 7.2.4 Bottom admission valve

Bottom suction valves protect against dirt and coarse particles by means of a suction strainer. The integrated ball check valve prevents the suction line from running empty.

**Note:**

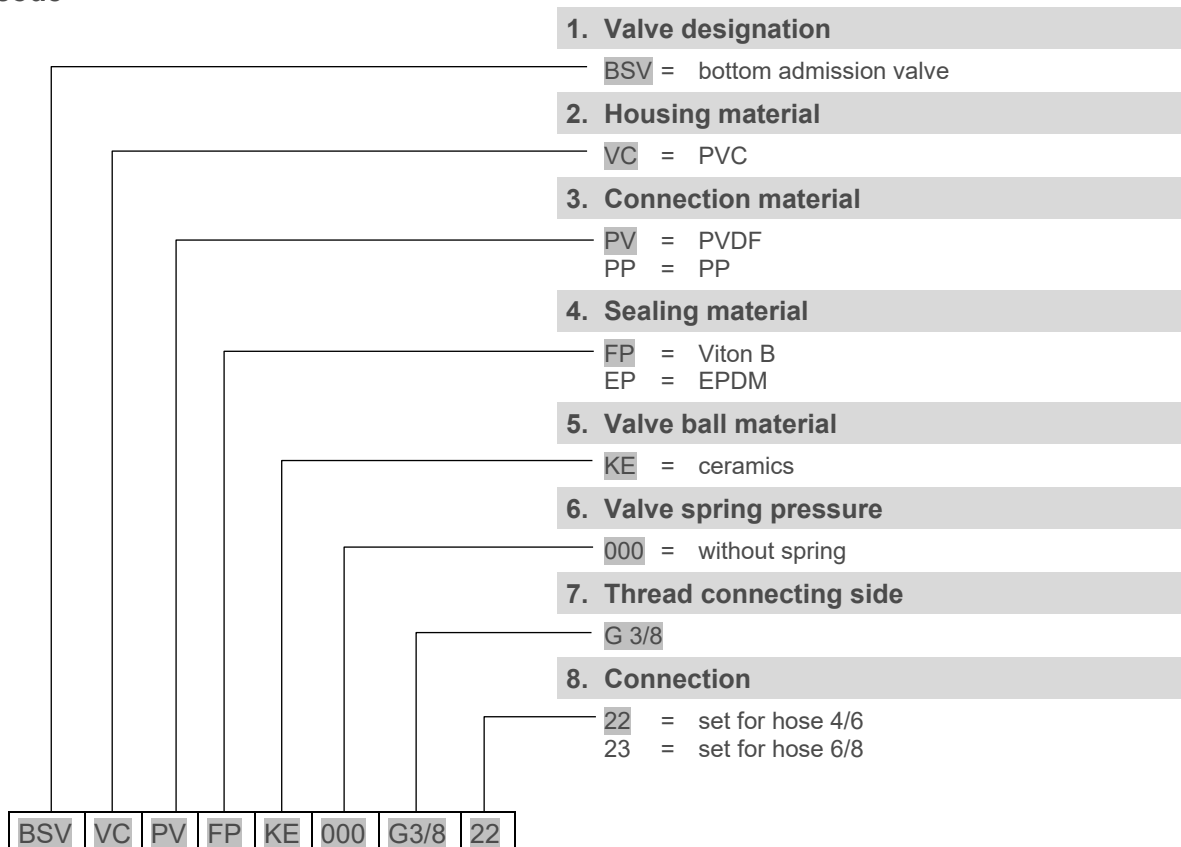
All components with moving parts are subject to wear, including bottom suction valves.

We therefore recommend inspecting the bottom suction valves for leaks and proper functioning at all service appointments and replacing them if necessary.



Article	Article no.
BSV VC PP FP KE 000 G 3/8 - 22	243125
BSV VC PP FP KE 000 G 3/8 - 23	243126
BSV VC PP EP KE 000 G 3/8 - 22	243127
BSV VC PP EP KE 000 G 3/8 - 23	243128
BSV VC PV FP KE 000 G 3/8 - 22	243129
BSV VC PV FP KE 000 G 3/8 - 23	243130
BSV VC PV EP KE 000 G 3/8 - 22	243131
BSV VC PV EP KE 000 G 3/8 - 23	243132

**Article code**



# Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

## 7.2.5 Degas valve

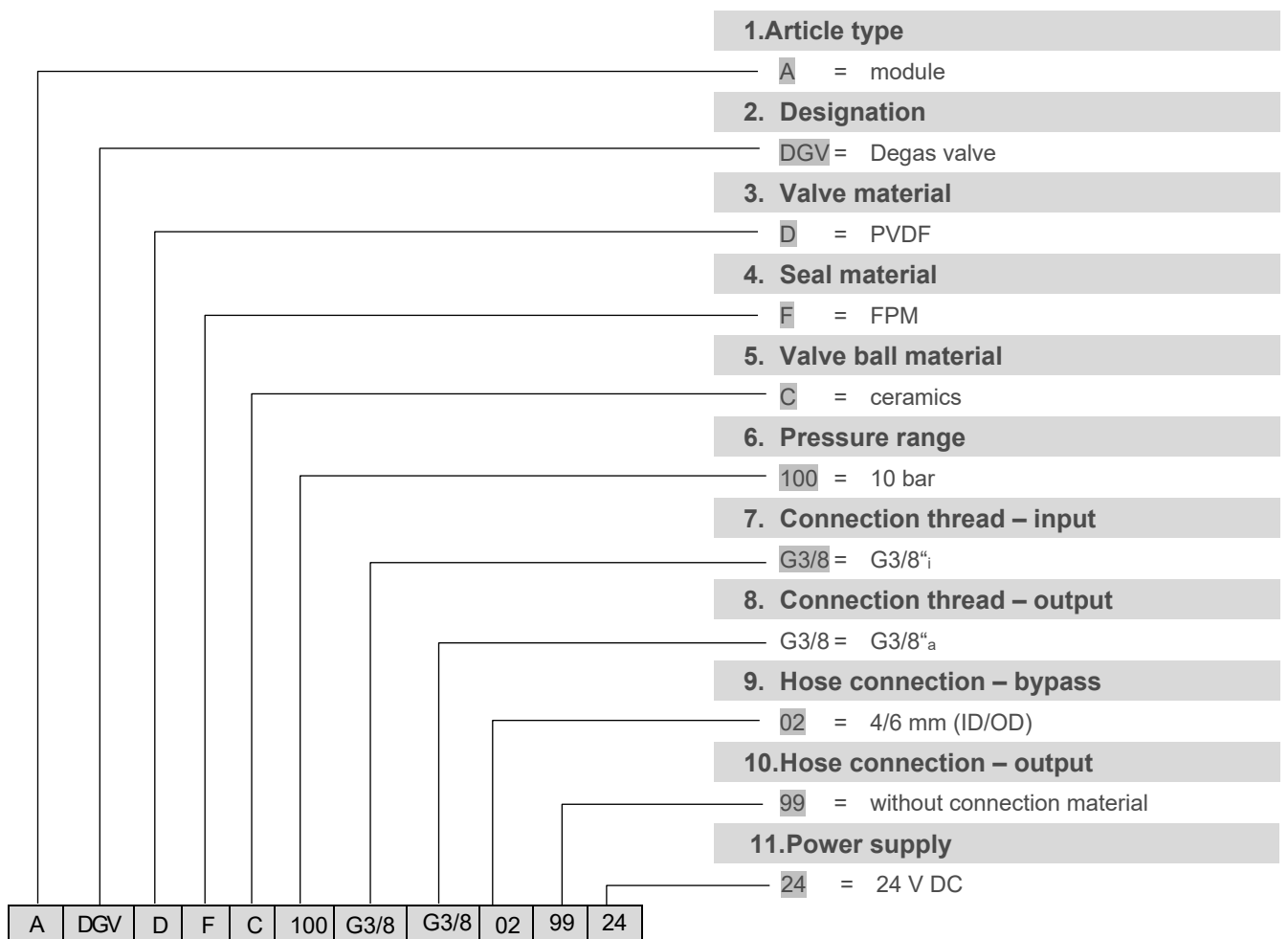
The Degas valve is used for automatic venting of the pump head in applications with highly outgassing dosing media. The valve can be mounted directly on the pump head, the electrical connection is made at the control terminal block of the pump. The required settings can be conveniently made in the pump menu.



Article	Article no.
<b>Degas valve</b> with Degas control cable (0.5 m) and plug A-DGV-DFC100-G3/8-G3/8 -02-99-24	10240163

**Note:**  
Hose connection set has to be ordered separately,  
see 6.2.1 Connection material, page 23.

### Article code





# Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

## 7.2.6 Multifunction valve

Multi-function valves are safety components and are used to protect the piping system and the metering pump against impermissible high pressures. They also increase the metering accuracy of the system and enable reliable start-up and maintenance of the system.

A multi-function valve combines the following functions: **Overflow, pressure maintenance, venting and draining.**

**Note:**

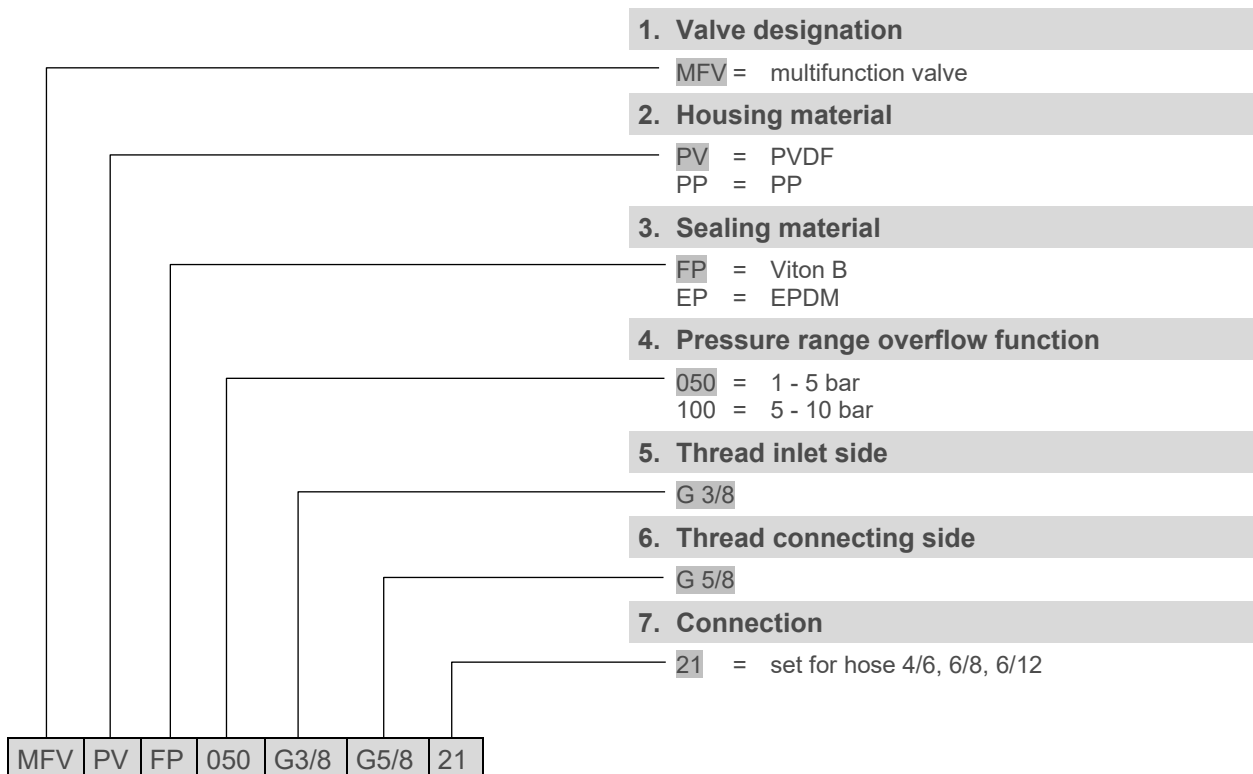
All components with moveable parts are subject to wear, including multi-function valves.

We therefore recommend inspecting the multi-function valves for leaks and proper functioning at all service appointments and replacing them if necessary.

	Article	Article no.
	MFV PP FP 100 G 3/8 – G 5/8 – 21	249247
	MFV PP EP 100 G 3/8 – G 5/8 – 21	249267
	MFV PV FP 100 G 3/8 – G 5/8 – 21	249241
	MFV PV EP 100 G 3/8 – G 5/8 – 21	249261

**Further material combinations on request!**

**Article code**



## Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

### 7.2.7 Metering valve

Ecolab metering valves are designed as spring-loaded ball valves or as hose valves (bicycle valve principle). They prevent the dosing line from running empty and thus increase the metering accuracy of the system.

**Note:**

All components with moveable parts are subject to wear, including metering valves.

We therefore recommend inspecting the metering valves for leaks and proper functioning at all service appointments and replacing them if necessary.



**Article**

DVP PFC-H03-G1/4-G3/8-045-99  
 DVP PEC-H03-G1/4-G3/8-045-99  
 DVP DFC-H03-G1/4-G3/8-045-99  
 DVP DEC-H03-G1/4-G3/8-045-99  
 DVP PFC-H03-G1/2-G3/8-045-99  
 DVP PEC-H03-G1/2-G3/8-045-99  
 DVP DFC-H03-G1/2-G3/8-045-99  
 DVP DEC-H03-G1/2-G3/8-045-99

**Article no.**

252150  
 252151  
 252153  
 252154  
 252155  
 252156  
 252157  
 252158



**Metering valves with hose valve for chloric products**

DVT PFC-H18-G1/4-G3/8-025-99  
 DVT PEC-H18-G1/4-G3/8-025-99  
 DVT DFC-H18-G1/4-G3/8-025-99  
 DVT DEC-H18-G1/4-G3/8-025-99  
 DVT PFC-H18-G1/2-G3/8-040-99  
 DVT PEC-H18-G1/2-G3/8-040-99  
 DVT DFC-H18-G1/2-G3/8-040-99  
 DVT DEC-H18-G1/2-G3/8-040-99

252159  
 252160  
 252161  
 252162  
 252163  
 252164  
 252165  
 252166

**Note:**

Hose connection set has to be ordered separately, see 6.2.1 Connection material, page 23.

**Diaphragm metering pump EcoPro / EcoAdd  
Accessories 5 l/h and 11 l/h**



**Article**

**Article no.**

**Hot-water metering area**

consisting of:

**Metering valve with metering pipe**

DVM VA VA FP GL 004 G1/2 – G1/4 – 41

240153

and

**Cooling stretch**

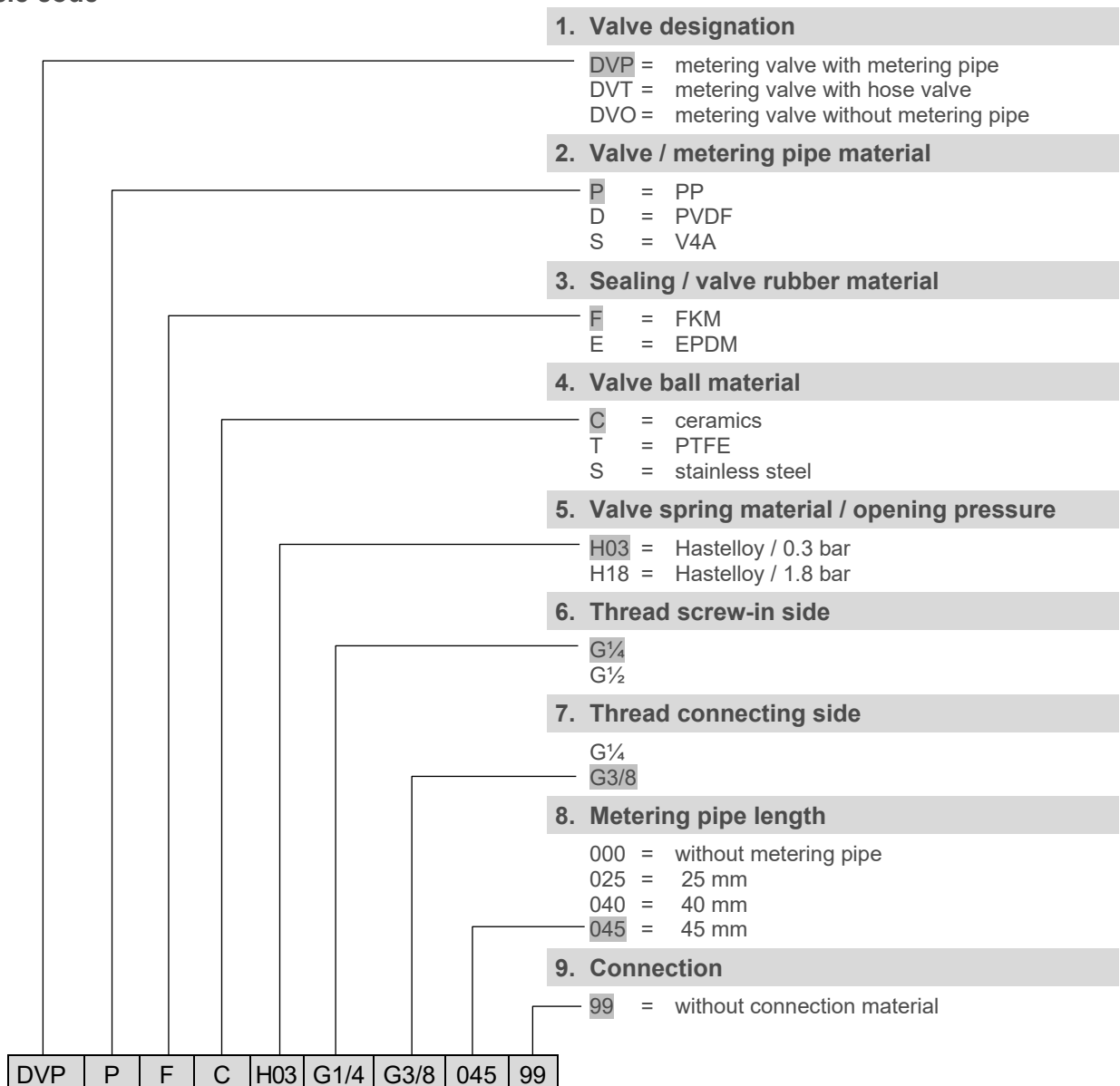
248411

stainless steel spiral-pipe da 8 mm

with adapter and connection material for hose 4/6, 6/8 and 6/12 mm (ID/AD)




Temperature resistance: **max. 130 °C**

**Article code**



## Diaphragm metering pump EcoPro / EcoAdd Accessories 5 l/h and 11 l/h

### 7.2.8 Suction and pressure lines

Article	Article no.
<b>Suction and pressure lines</b>	
available by the metre (int.Ø / ext.Ø)	max. operating pressure [bar] at 20 °C
 PVC-fabric 6/12 mm	16 417400123
	PE hose 4/6 mm 12 417400301
	PE hose 5/8 mm 13 417400300
	PE hose 6/8 mm 8 417400310
	PE hose 6/10 mm 15 417400302
	PTFE hose 4/6 mm 12 417400215
	PTFE hose 5/8 mm 14 417400213
	PTFE hose 6/8 mm 9 417400224
	PTFE hose 6/10 mm 15 417400216

**Note:** PVC hoses  
**PVC hoses only have a limited service life!**  
**Especially when metering alkaline media or under heavy mechanical load, the service life can drop to less than 6 months.**

Other hose materials  
**The service life of other hose materials is also limited!**  
**Depending on the metering medium and the mechanical load, the service life can vary greatly.**

**We therefore recommend checking the dosing hoses at all service appointments and replacing them if necessary.**

## Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

### 7.3 Accessories 30 l/h and 50 l/h

#### 7.3.1 Connection material



Article	Article no.
<b>Connection set for PE/PTFE hose 6/10 mm</b>	
Screw-on connection PVDF, G5/8 <sub>i</sub> - 6/10 mm	415102353
<b>Connection set for PVC hose 6/12 and 10/16 mm</b>	
Connection set Di/Da 6/12-10/16-G5/8-PP-GY	249237
Connection set Di/Da 6/12-10/16-G5/8-PV-NA	249216
<b>Connection set for PE/PTFE hose 9/12 mm</b>	
Connection set Di9/Da12-G5/8-PP-GY	252116
Connection set Di9/Da12-G5/8-PVDF-NA	252115
<b>Connecting parts for pipe connection DN8/d12</b>	
Union nut PP G5/8 <sub>a</sub>	34500228
Insertion part (welded sleeve) PP DN8/d12 - 5/8 <sub>a</sub>	34900246
Union nut PVDF G5/8 <sub>a</sub>	34500134
Insertion part (welded sleeve) PVDF DN8/d12 - 5/8 <sub>a</sub>	34900196
<b>Connecting parts for transition to standard thread</b>	
Screw-on connection PP G5/8 <sub>i</sub> - 1/2 <sub>a</sub> NPT	34900273
Screw-on connection PVDF G5/8 <sub>i</sub> - 1/2 <sub>a</sub> NPT	34900274

## Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

### 7.3.2 Suction lances

Ecolab suction lances include a protective function as well as a monitoring function. A sieve protects the metering pump from coarse particles, and a ball check valve prevents the suction line from running empty. At the same time, level messages for the states "pre-warning" and "empty" are provided via two float switches.

#### Note:

All components with moving parts are subject to wear, including suction lances.

We therefore recommend inspecting the suction lances for leaks and proper functioning at all service appointments and replacing them if necessary.



#### Article

#### Article no.

#### Suction lances D32 with reserve and empty signal report

incl. of ball non-return valve, suction strainer and potential-free contacts for level pre-warning and empty signal (when dropping below the level = contact interrupted).

Tube diameter:	32 mm
Material:	see suction lance code
Connection cable:	3-pin plug incl. 5 m cable
Turn-on voltage:	max. 50 V AC/DC
Switching current:	0.5 A
Rupturing capacity:	10 W / 10 VA

A-SGL-VDFEC-G5/8-10-2SS-0475-99-99-p	10240410
A-SGL-VDFEC-G5/8-10-2SS-0725-99-99-p	10240411
A-SGL-VDFEC-G5/8-10-2SS-1125-99-99-p	10240412
A-SGL-VDFEC-G5/8-10-2SS-1300-99-99-p	10240413

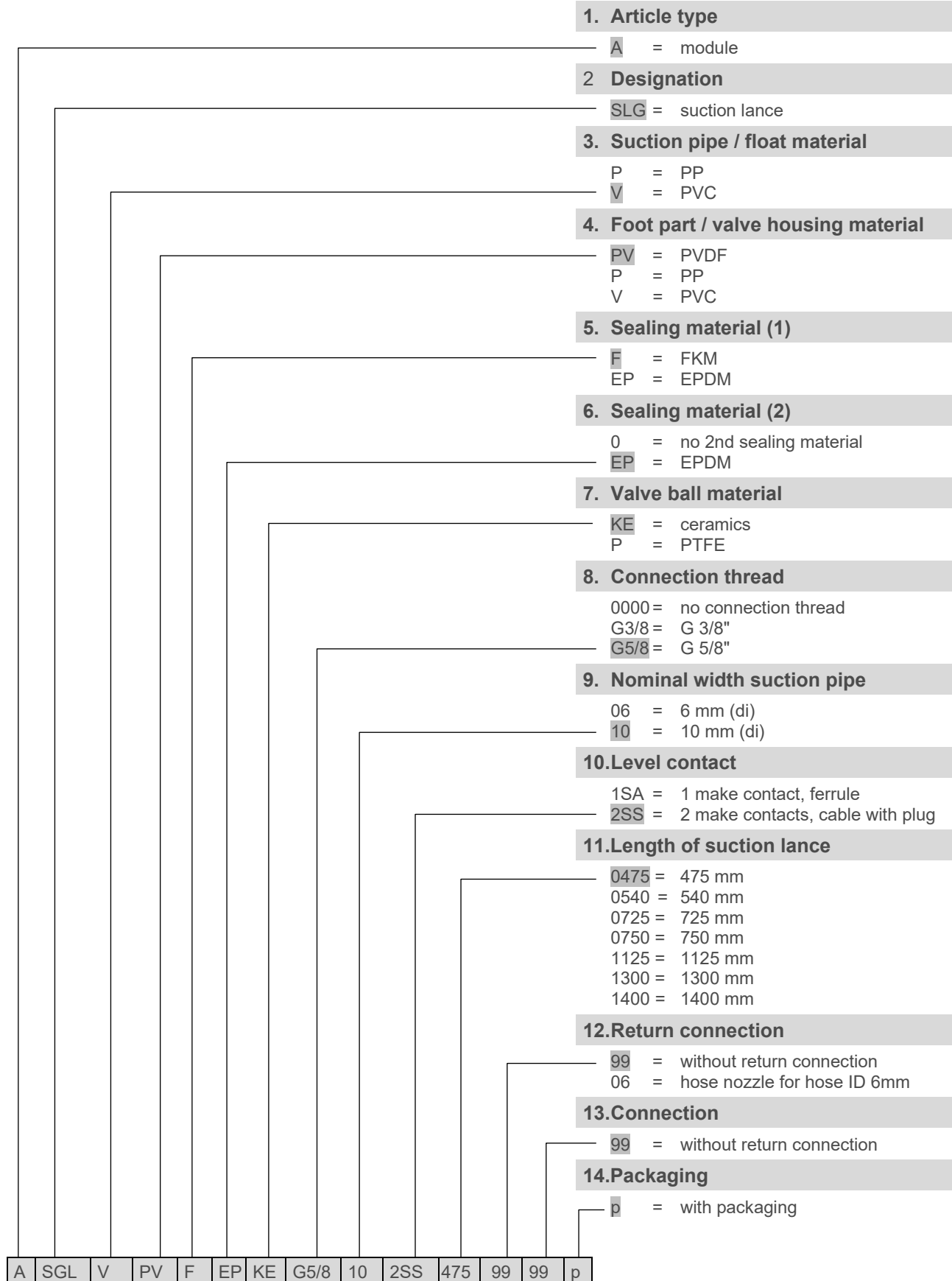
*Suction lance code, see next page!*

#### Connection sets G5/8" for suction lances D32

Connection set Di/Da 4/6-6/8-6/12-G5/8-PP-GY	252139
Connection set Di/Da 4/6-6/8-6/12-G5/8-PV-NA	252140
Connection set Di5/Da8-G5/8-PP-GY	252112
Connection set Di5/Da8-G5/8-PVDF-NA	252111
Connection set Di/Da 6/12-10/16-G5/8-PP-GY	249237
Connection set Di/Da 6/12-10/16-G5/8-PV-NA	249216
Connection set PP G5/8"i - hose 12/21	249234
Connection set PVDF G5/8"i - hose 12/21	249233
Connection set angled PVC G5/8"i- NW12	246023

# Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

## Suction lance code



## Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

### 7.3.3 Suction lance adaptors

	Article	Article no.
	<p><b>Adaptor – insert cap</b> for suction lance Ø 32 mm PVC soft to attach on: canister 10 l and 20 l</p>	286198
	<p><b>Adaptor – screw joint</b> for suction lance Ø 32 mm PVC hard Thread pitch: 5 mm Threaded int. diameter: 56 mm Threaded ext. diameter: 61 mm can be screwed on: canister 30 l or container 60 – 200 l</p>	286197
	<p><b>Suction lance adaptor, D 32, rigid PVC/Viton B</b> for canister or barrel</p>	288549
	<p><b>Suction lance adaptor, D 32, rigid PVC/Viton B</b> for barrels (l-ring plus – barrel 220)</p>	288547
	<p><b>Suction lance adaptor, rigid PVC/Viton B</b> for container (ECOBULK-container with skid pallet) for screw in in screw cap with 2” Tri-Sure-Stuffing</p>	288548



## Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h



### Article

### Article no.

#### Adaptor – insert cap

288534

for suction lance  $\varnothing$  32 mm

PVC – hard / Viton B

appropriate for **degassing products**

Return connection: 4/6, 6/8 or 6/12 mm (int. $\varnothing$  /ext. $\varnothing$ )

Vent connection: 6/12 mm (int. $\varnothing$  /ext. $\varnothing$ )

to attach on: canister 30 l or  
container 60 – 200 l



#### Adaptor – screw joint

288535

for suction lance  $\varnothing$  32 mm

PVC – hard / Viton B / silicone

appropriate for **degassing products**

Return connection: 4/6, 6/8 or 6/12 mm (int. $\varnothing$  /ext. $\varnothing$ )

Vent connection: 6/12 mm (int. $\varnothing$  /ext. $\varnothing$ )

Thread pitch: 5 mm

Threaded int. diameter: 63 mm

Threaded ext. diameter: 69 mm

for barrel with internal thread (L–ring plus barrel 220 l)



#### Terminal box for connection cable of the suction pipe

288419

for connection cable with round plug  
incl. cable union PG 7 (max. 2 x 1 m<sup>2</sup>)

# Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

## 7.3.4 Bottom admission valve

Bottom suction valves protect against dirt and coarse particles by means of a suction strainer. The integrated ball check valve prevents the suction line from running empty.

**Note:**

All components with moving parts are subject to wear, including bottom suction valves.

We therefore recommend inspecting the bottom suction valves for leaks and proper functioning at all service appointments and replacing them if necessary.



**Article**

**Article no.**

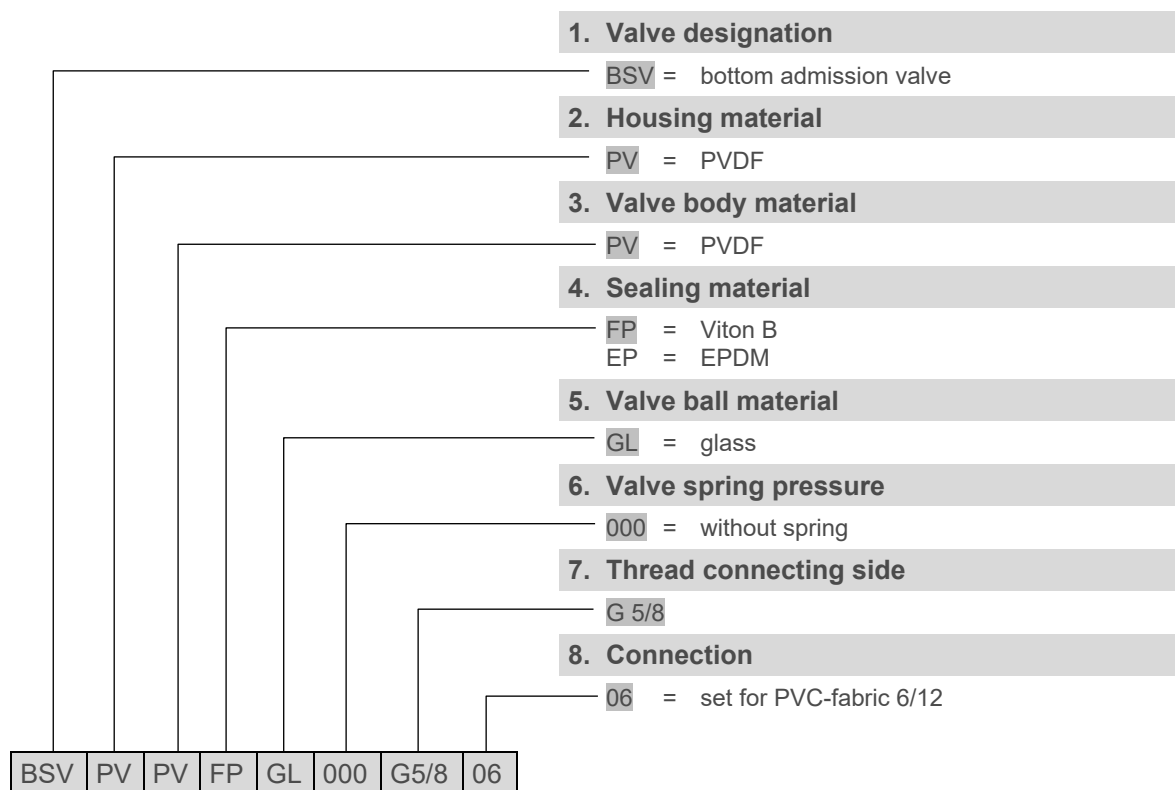
BSV PV PV FP GL 000 G 5/8 – 06

249018

BSV PV PV EP GL 000 G 5/8 – 06

249024

**Article code**



# Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

## 7.3.5 Multifunction valve

Multi-function valves are safety components and are used to protect the piping system and the metering pump against impermissible high pressures. They also increase the metering accuracy of the system and enable reliable start-up and maintenance of the system.

A multi-function valve combines the following functions: **Overflow, pressure maintenance, venting and draining.**

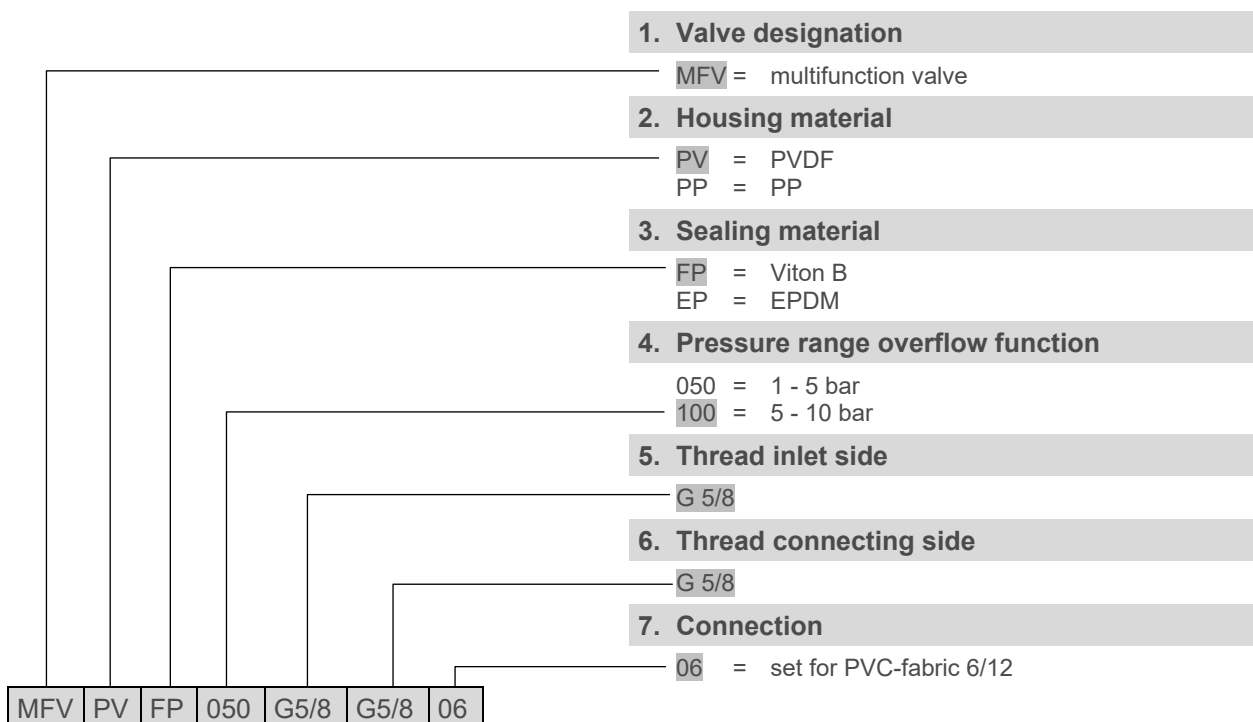
**Note:**

All components with moveable parts are subject to wear, including multi-function valves.

We therefore recommend inspecting the multi-function valves for leaks and proper functioning at all service appointments and replacing them if necessary.

	Article	Article no.
	<b>Pump type 30</b>	
	MFV PP FP 50 G 5/8 – G 5/8 – 06	249248
	MFV PP EP 50 G 5/8 – G 5/8 – 06	249268
	MFV PV FP 50 G 5/8 – G 5/8 – 06	249242
	MFV PV EP 50 G 5/8 – G 5/8 – 06	249262
	<b>Pump type 50</b>	
	MFV PP FP 100 G 5/8 – G 5/8 – 06	249249
	MFV PP EP 100 G 5/8 – G 5/8 – 06	249269
MFV PV FP 100 G 5/8 – G 5/8 – 06	249243	
MFV PV EP 100 G 5/8 – G 5/8 – 06	249263	

**Article code**



## Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

### 7.3.6 Metering valve

Ecolab metering valves are designed as spring-loaded ball valves. They prevent the dosing line from running empty and thus increase the metering accuracy of the system.

**Note:**

All components with moveable parts are subject to wear, including metering valves.

We therefore recommend inspecting the metering valves for leaks and proper functioning at all service appointments and replacing them if necessary.



**Article**

**Article no.**

**Metering valve with metering pipe**

DVP PFC-H07-G1/2-G5/8-045-99	252177
DVP PEC-H07-G1/2-G5/8-045-99	252178
DVP DFC-H07-G1/2-G5/8-045-99	252179
DVP DEC-H07-G1/2-G5/8-045-99	252180

**Metering valve without metering pipe**

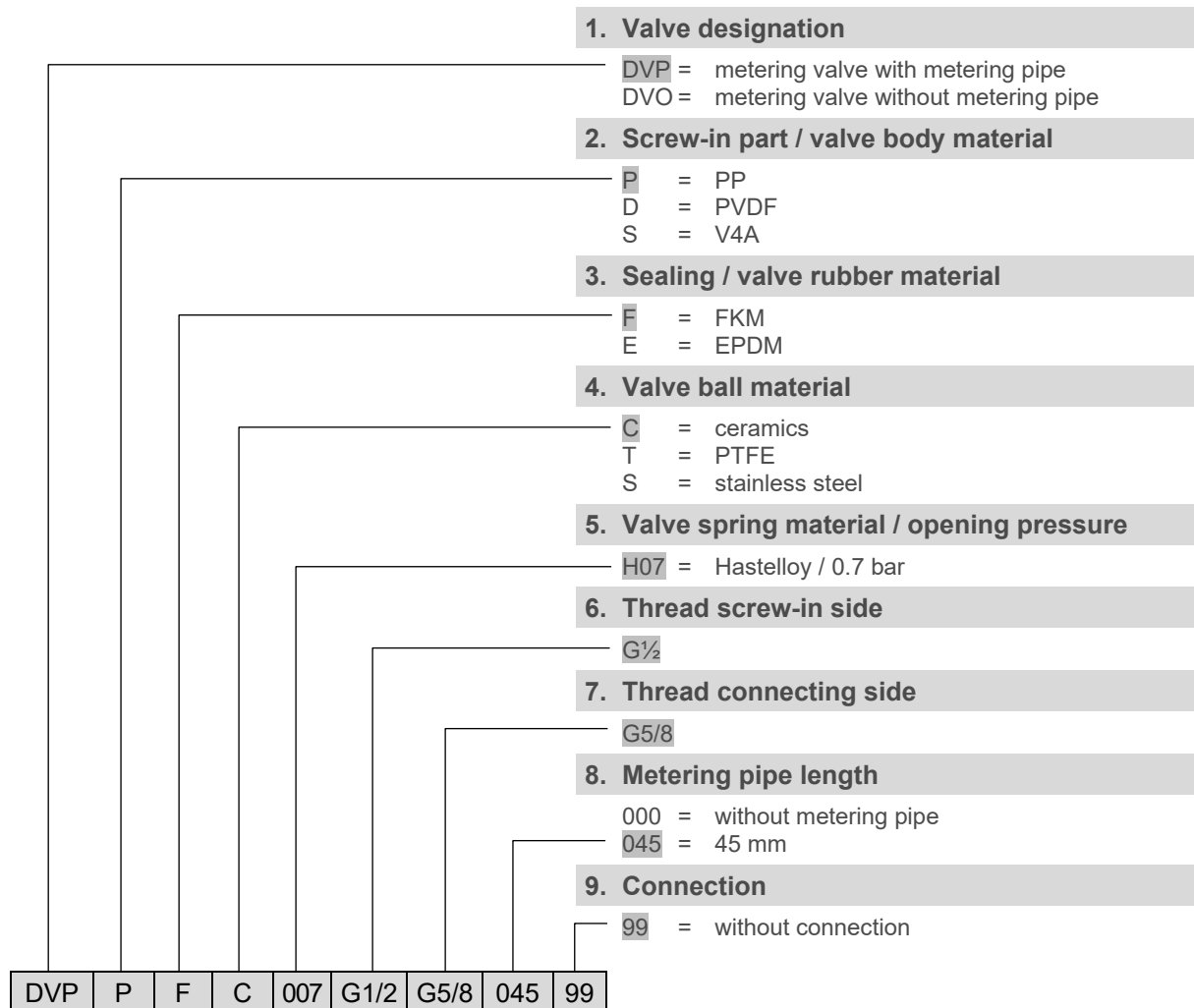
DVO PFC-H07-G1/2-G5/8-000-99	252173
DVO PEC-H07-G1/2-G5/8-000-99	252174
DVO DFC-H07-G1/2-G5/8-000-99	252175
DVO DEC-H07-G1/2-G5/8-000-99	252176

**Note:**




Hose connection set has to be ordered separately, see 6.3.1 Connection material, page 36.

# Diaphragm metering pump EcoPro / EcoAdd Accessories 30 l/h and 50 l/h

## Article code



### 7.3.7 Suction and pressure lines

	Article		Article no.
<b>Suction and pressure lines</b>			
	available by the metre (int.Ø / ext.Ø)	max. operating pressure [bar] at 20 °C	
	PVC-fabric 6/12 mm	16 bar	417400123
	PVC-fabric 10/16 mm	16 bar	417400126
	PE hose 6/8 mm	8 bar	417400310
	PE hose 9/12 mm	9 bar	417400304
	PTFE hose 6/8 mm	9 bar	417400224
	PTFE hose 9/12 mm	9 bar	417400281

**Note:** PVC hoses  
PVC hoses only have a limited service life!  
Especially when metering alkaline media or under heavy mechanical load, the service life can drop to less than 6 months.

Other hose materials  
The service life of other hose materials is also limited!  
Depending on the metering medium and the mechanical load, the service life can vary greatly.

We therefore recommend checking the dosing hoses at all service appointments and replacing them if necessary.

## Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

### 7.4 Accessories 120 l/h

#### 7.4.1 Connection material

Article	Article no.
<b>Connection set for PVC hose 12/21 mm</b>	
Connection set Di12/Da21-G11/4-PP-GY	249238
Connection set Di12/Da21-G11/4-PVDF-NA	249258
<b>Connecting parts for pipe connection DN20/d25</b>	
Union nut PP G1¼"	415099835
Insertion part (welded sleeve) PP DN20/d25 - 1¼"	415099709
Union nut PVDF G1¼"	415099072
Insertion part (welded sleeve) PVDF DN20/d25 - 1¼"	415099033
<b>Connecting parts for transition to standard thread</b>	
Union nut PP G1¼"	415099835
Insertion part PP G1/2 <sub>i</sub> " - 1¼"	34950259
Insertion part PP G1 <sub>a</sub> " (NPT) - 1¼"	34900276
Union nut PVDF G1¼"	415099072
Insertion part PVDF G1/2 <sub>i</sub> " - 1¼"	34950235
Insertion part PVDF G1 <sub>a</sub> " (NPT) - 1¼"	34900277

## Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

### 7.4.2 Suction lances

Ecolab suction lances include a protective function as well as a monitoring function. A sieve protects the metering pump from coarse particles, and a ball check valve prevents the suction line from running empty. At the same time, level messages for the states "pre-warning" and "empty" are provided via two float switches.

#### Note:

All components with moving parts are subject to wear, including suction lances.

We therefore recommend inspecting the suction lances for leaks and proper functioning at all service appointments and replacing them if necessary.



#### Article

#### Article no.

#### Suction lances D32 with reserve and empty signal report

incl. of ball non-return valve, suction strainer and potential-free contacts for level pre-warning and empty signal (when dropping below the level = contact interrupted).

Tube diameter: 32 mm  
 Material: see suction lance code  
 Connection cable: 3-pin plug incl. 5 m cable  
 Turn-on voltage: max. 50 V AC/DC  
 Switching current: 0.5 A  
 Rupturing capacity: 10 W / 10 VA

A-SGL-VDFEC-G5/8-10-2SS-0475-99-99-p	10240410
A-SGL-VDFEC-G5/8-10-2SS-0725-99-99-p	10240411
A-SGL-VDFEC-G5/8-10-2SS-1125-99-99-p	10240412
A-SGL-VDFEC-G5/8-10-2SS-1300-99-99-p	10240413

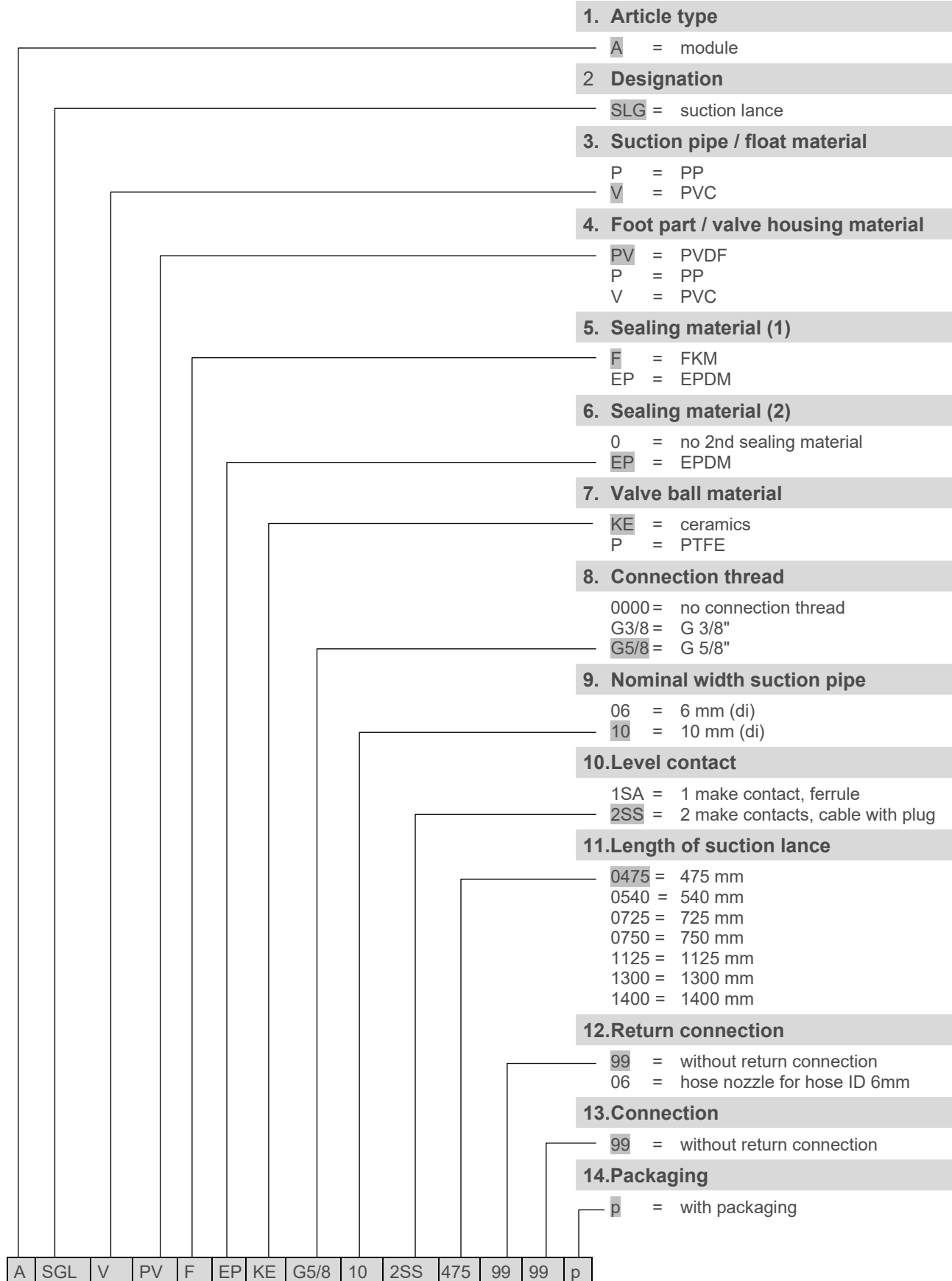
*Suction lance code, see next page!*

**Connection sets G5/8" for suction lances D32**  
 see page 37.



# Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

## Suction lance code



# Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

## 7.4.3 Bottom admission valve

Bottom suction valves protect against dirt and coarse particles by means of a suction strainer. The integrated ball check valve prevents the suction line from running empty.

**Note:**

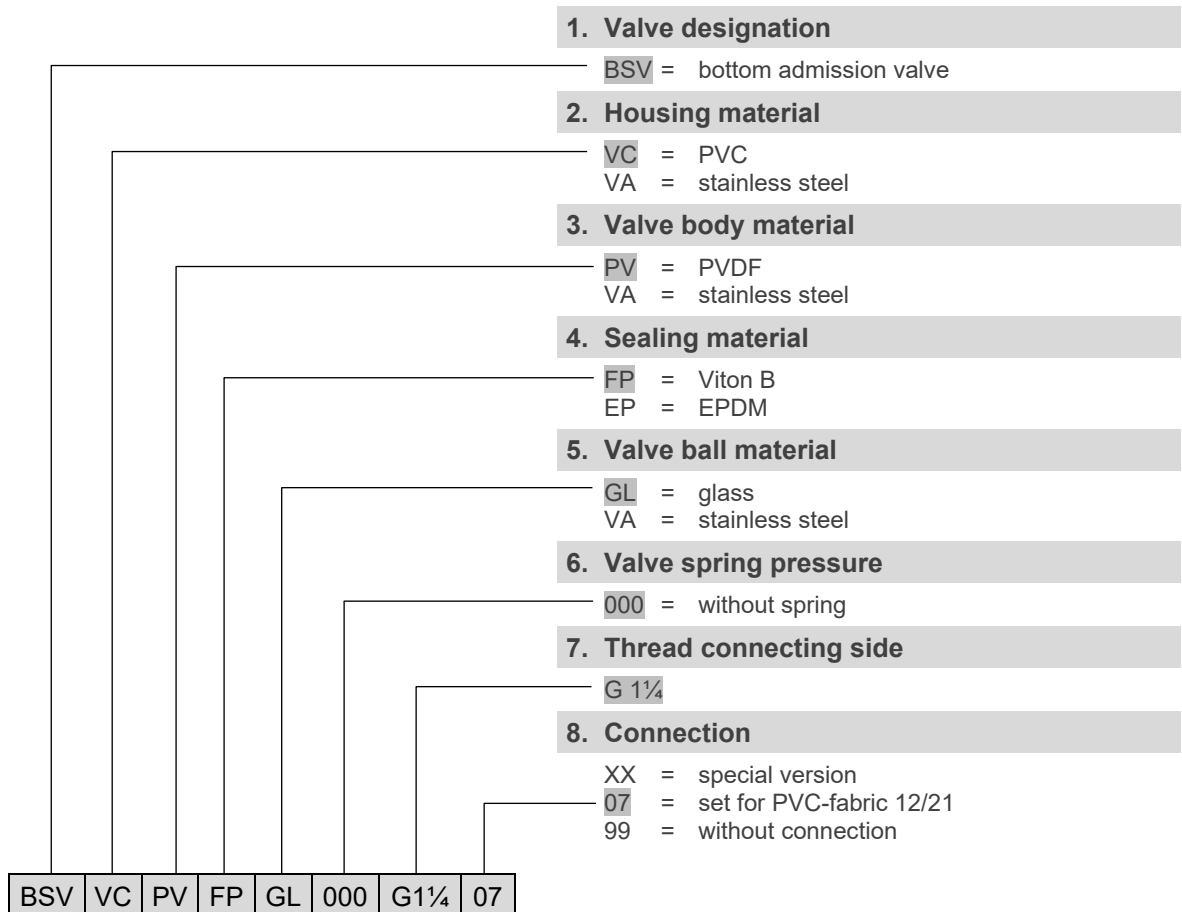
All components with moving parts are subject to wear, including bottom suction valves.

We therefore recommend inspecting the bottom suction valves for leaks and proper functioning at all service appointments and replacing them if necessary.



Article	Article no.
BSV VC PV FP GL 000 G 1¼ – 07	249019
BSV VC PV EP GL 000 G 1¼ – 07	249025
<b>Hose connection: bush for hose NW 16 mm and NW 19 mm</b>	
BSV VC PV FP GL 000 G 1¼ – XX	249017

**Article code**



## Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

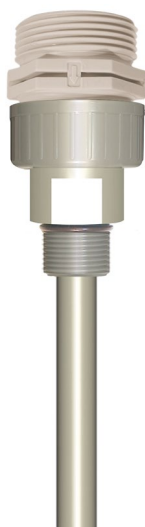
### 7.4.4 Metering valves

Ecolab metering valves are designed as spring-loaded ball valves. They prevent the dosing line from running empty and thus increase the metering accuracy of the system.

**Note:**

All components with moveable parts are subject to wear, including metering valves.

We therefore recommend inspecting the metering valves for leaks and proper functioning at all service appointments and replacing them if necessary.



**Article**

**Article no.**

**Metering valve with metering pipe**

DVP PFC-H08-G3/4-G11/4-150-99	252184
DVP PEC-H08-G3/4-G11/4-150-99	252185
DVP DFC-H08-G3/4-G11/4-150-99	252186
DVP DEC-H08-G3/4-G11/4-150-99	252187



**Metering valve without metering pipe (suction / pressure valve)**

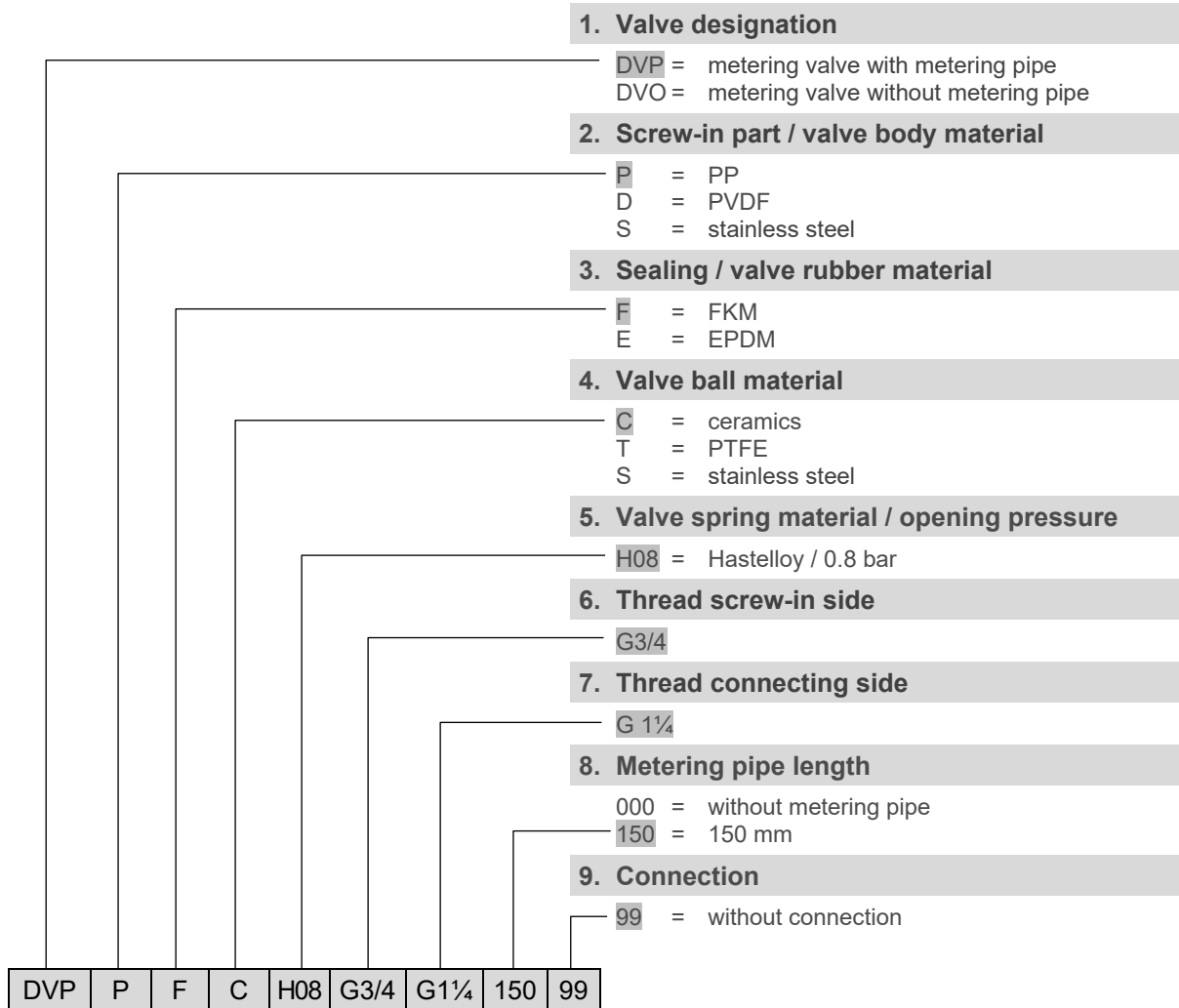
SDV PFC-H08-G11/4-G11/4-99	249518
SDV PEC-H08-G11/4-G11/4-99	249519
SDV DFC-H08-G11/4-G11/4-99	252038
SDV DEC-H08-G11/4-G11/4-99	252039

**Note:**

Hose connection set has to be ordered separately, see 6.4.1 Connection material, page 46.

# Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

## Article code



## Diaphragm metering pump EcoPro / EcoAdd Accessories 120 l/h

### 7.4.5 Suction and pressure lines

#### Suction and pressure lines

available by the metre  
max. operating pressure: 15 bar (at 20 °C)



PVC-fabric, 12/21 mm (int.Ø/ext.Ø)	417400127
PVC-fabric, 19/27 mm (int.Ø/ext.Ø)	417400131

**Note:** PVC hoses

**PVC hoses only have a limited service life!**  
Especially when metering alkaline media or under heavy mechanical load, the service life can drop to less than 6 months.

Other hose materials

The service life of other hose materials is also limited!  
Depending on the metering medium and the mechanical load, the service life can vary greatly.

**We therefore recommend checking the dosing hoses at all service appointments and replacing them if necessary.**