

FLUX AIR-OPERATED DIAPHRAGM PUMPS TYPE RFM AND RFML OF SOLID CONSTRUCTION



FLUX air-operated diaphragm pumps are most versatile and can be used for almost every liquid in all different fields of industry.

Be it viscous products, even with solids in suspension, abrasive fluids, high flammability or aerated liquids: FLUX air-operated diaphragm pumps meet every application featuring high operation safety and reliability.

Due to their solid construction together with matched diaphragms, these self-priming pumps are especially designed for continuous operation. FLUX air-operated diaphragm pumps ensure a very smooth liquid transfer (no shearing), are insensitive to solids in suspension, safe in dry running as well as totally overload-proof.

Other main features of FLUX air-operated diaphragm pumps are their high cost efficiency and a very low noise level. Each pump can be easily dismantled for an optimum cleaning. A comprehensive range of accessories such a pulsation dampers, pressure controllers with filter unit, stroke counters and fittings guarantee a safe use of the pumps.

Which material goes best with which liquid

Material: Pump housing

Polypropylene (PP) up to 60 °C

suitable for corrosive liquids, acids and alkalis as well as neutral liquids

Polypropylene conductive (PP) up to 60 °C

suitable for high flammability liquids

Polytetrafluorethylene (PTFE) up to 100 °C

suitable for very corrosive liquids, concentrated acids and alkalis as well as neutral liquids

Polytetrafluorethylene conductive (PTFE) up to 100 °C

suitable for high flammability liquids

Material: Diaphragm, Balls and Seals

NBR (NN) up to 90 °C

Acrylonitrile-Butadiene-Rubber

EPDM (EE) up to 80 °C

Ethylene-Propylene-Diene-Rubber

FKM (VV) up to 90 °C

Fluor-Rubber

PTFE/FFKM (TK) up to 100 °C

Polytetrafluorethylene/Per-Fluor-Rubber

PTFE/EPDM (TE) up to 80 °C

Polytetrafluorethylene/Ethylene-Propylene-Diene-Rubber

PTFE/FKM (TV) up to 90 °C

Polytetrafluorethylene/Fluor-Rubber

Example of type code

RFM 25 PP/TV

RFM 25 PP/TV = model size

RFM 25 PP/TV = material pump housing

RFM 25 PP/TV = material diaphragm and balls

RFM 25 PP/TV = material seals

FLUX AIR-OPERATED DIAPHRAGM PUMP TYPE RFML 15 IN POLYPROPYLENE (PP) OR POLYTETRAFLUORETHYLENE (PTFE), 1/2"

Electrically conductive for use in hazardous areas according to ATEX-Directive 94/9/EG



Technical Data

| | |
|-----------------------------|--------------------|
| Delivery rate max. | 45 l/min |
| Operating pressure max. | 7 bar |
| Suction head, dry | up to 3 m |
| Suction head, liquid-filled | up to 8 m |
| Max. size of solids | 2 mm |
| Explosion-proof to | Ex II 2 G cp IIB X |
| PTB Registration No. | 04 ATEX D102-1 |

Connection pump

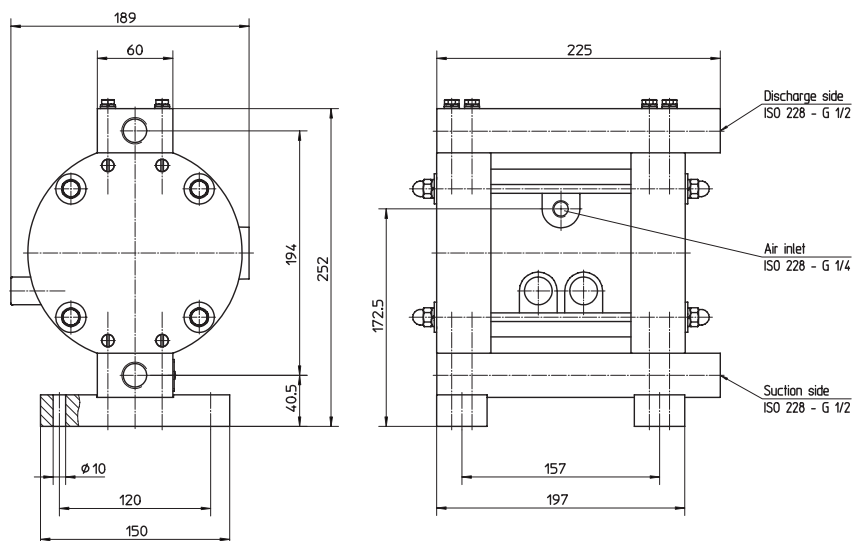
| | |
|----------------|-------------------------|
| suction side | G 1/2 (BSP 1/2" female) |
| discharge side | G 1/2 (BSP 1/2" female) |

Connection air

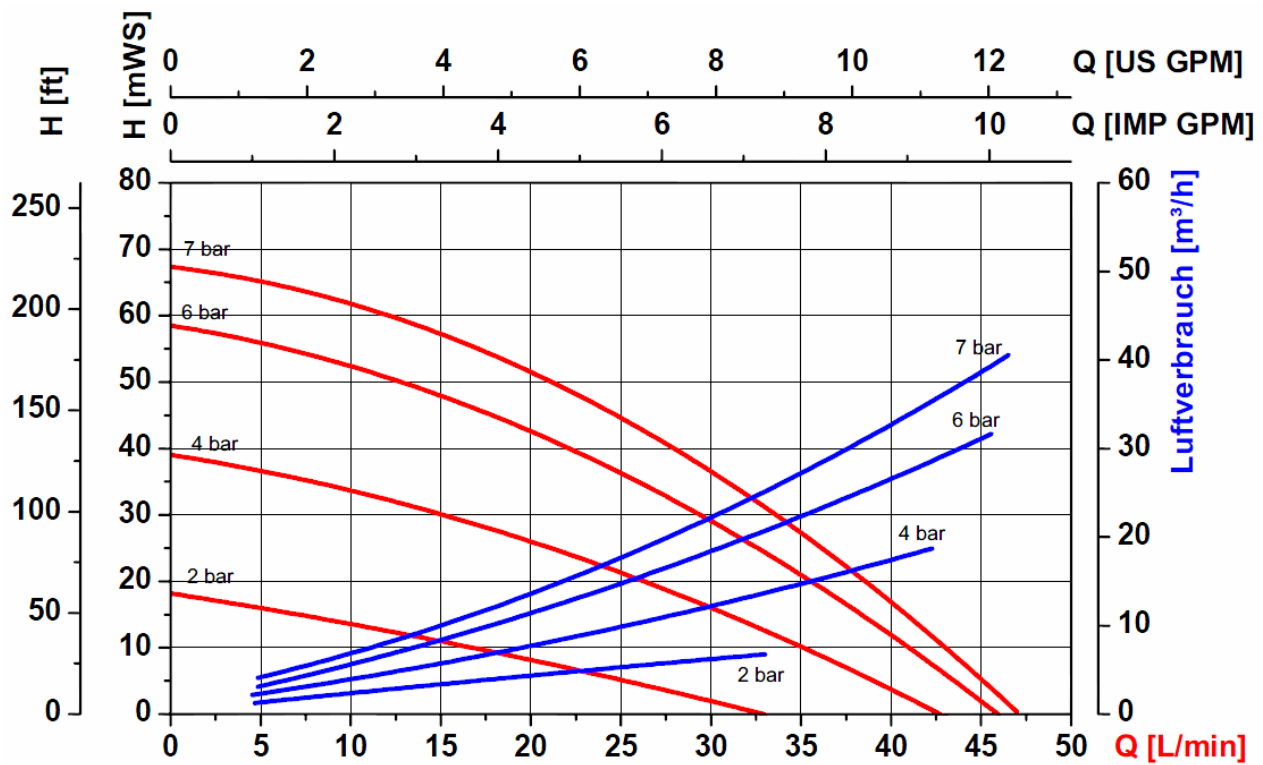
| | |
|---------|-------------------------|
| inlet | G 1/4 (BSP 1/4" female) |
| outlet* | G 1/4 (BSP 1/4" female) |

*with silencer

Dimensions RFM 15 / RFML 15



| Type / Material | Pump housing | Diaphragm/ Ball | Seal | Weight | Part No. |
|-----------------|-----------------|-----------------|------|---------|-------------------|
| RFML 15 PP/NN | PP conductive | NBR | NBR | 5,0 kg | D15 41 010 |
| RFML 15 PP/TK | PP conductive | PTFE | FFKM | 5,0 kg | D15 41 120 |
| RFML 15 PP/TE | PP conductive | PTFE | EPDM | 5,0 kg | D15 41 130 |
| RFML 15 PP/TV | PP conductive | PTFE | FKM | 5,0 kg | D15 41 140 |
| RFML 15 PP/EE | PP conductive | EPDM | EPDM | 5,0 kg | D15 41 210 |
| RFML 15 PP/VV | PP conductive | FKM | FPM | 5,0 kg | D15 41 310 |
| RFML 15 PTFE/TK | PTFE conductive | PTFE | FFKM | 10,0 kg | D15 01 120 |
| RFML 15 PTFE/TE | PTFE conductive | PTFE | EPDM | 10,0 kg | D15 01 120 |
| RFML 15 PTFE/TV | PTFE conductive | PTFE | FKM | 10,0 kg | D15 01 120 |
| RFML 15 PTFE/EE | PTFE conductive | EPDM | EPDM | 10,0 kg | D15 01 210 |
| RFML 15 PTFE/VV | PTFE conductive | FKM | FKM | 10,0 kg | D15 01 310 |



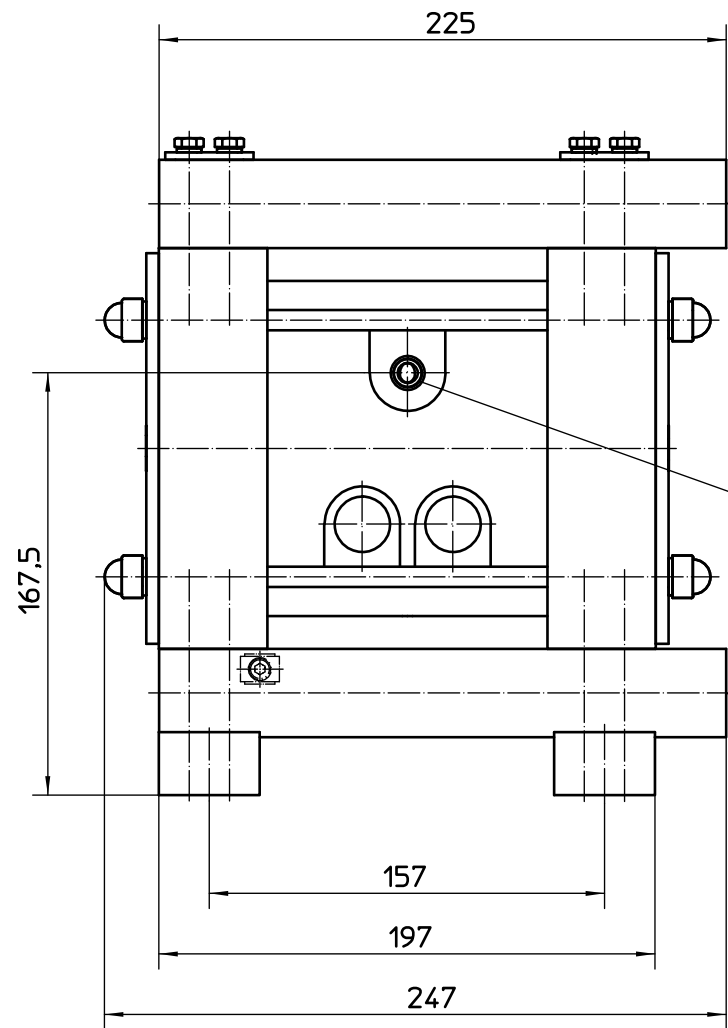
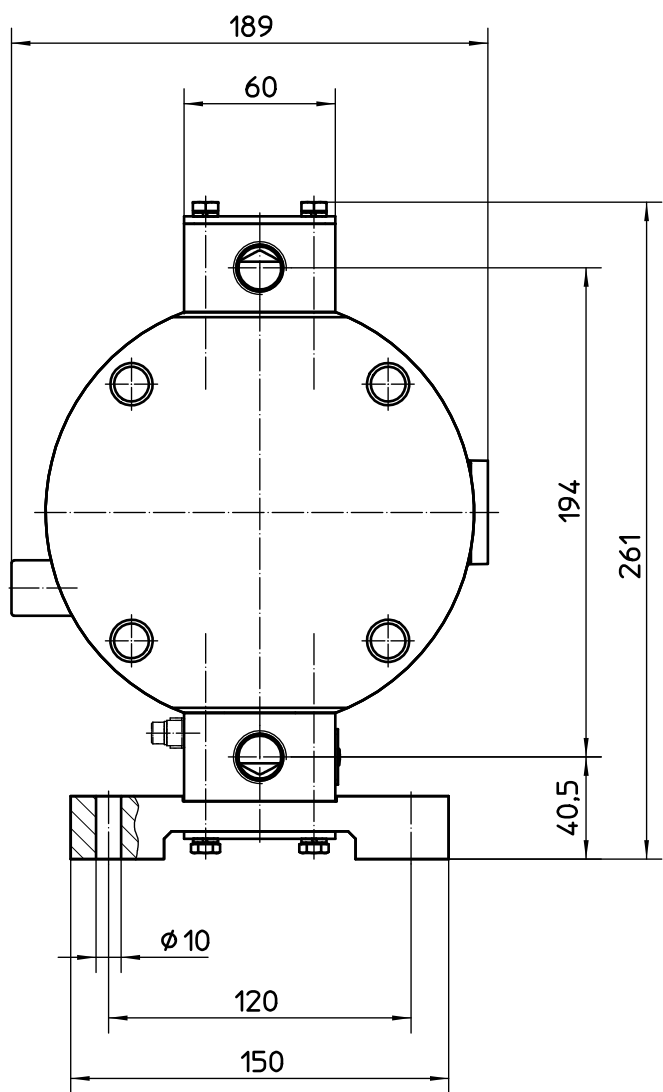
Typ / Type

RFM / RFML 15

Messwerte / Values / Valeurs $\pm 10\%$
 gemessen mit Wasser bei 20°C am Druckstutzen der Pumpe
 obtained with water at 20°C at the outlet nozzle of the pump
 mesurées avec de l'eau à 20°C au refoulement de la pompe

D15 88 000

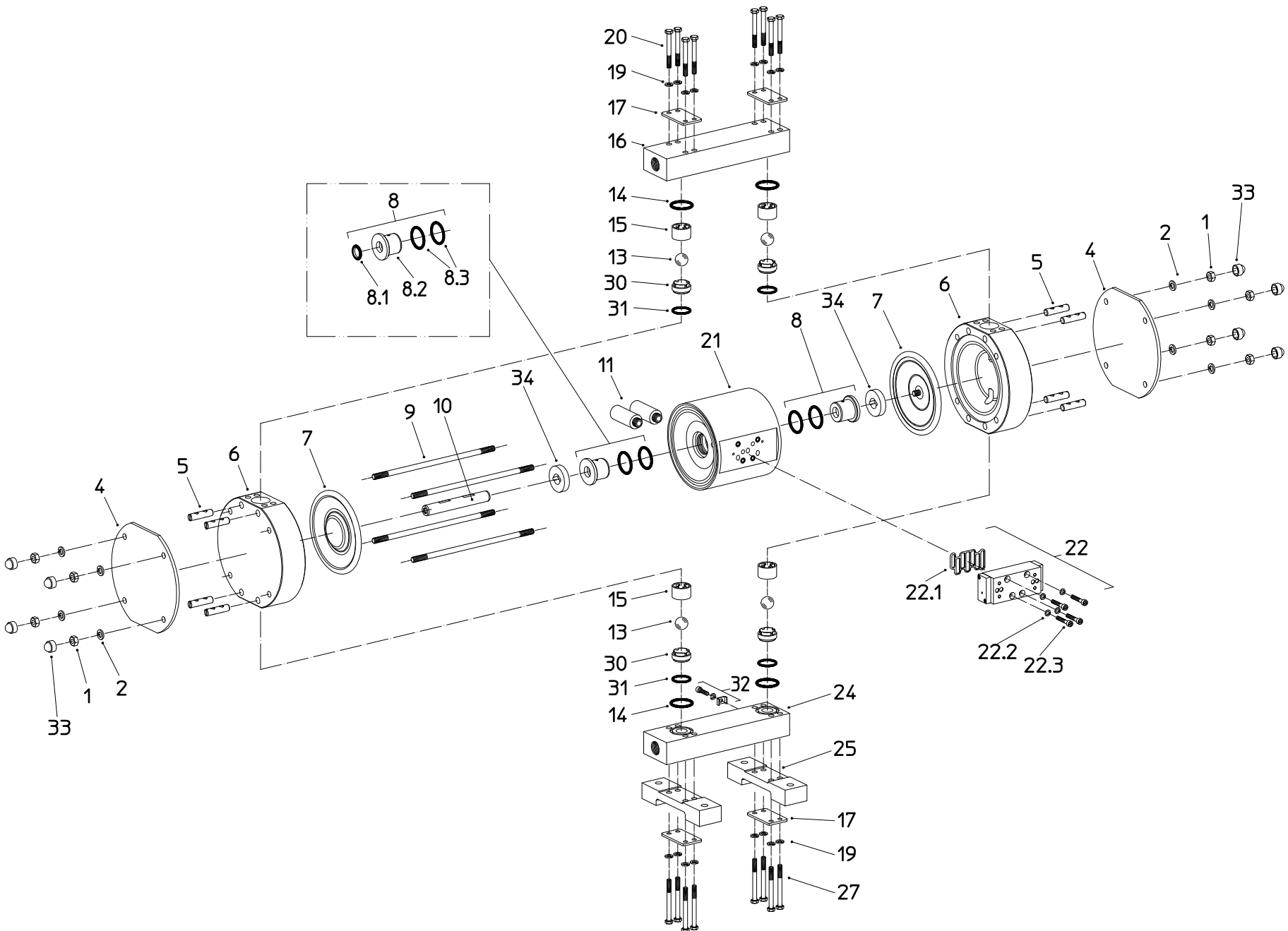
ab Fertigungs-Nr. RFM00900
 as from serial no.
 a partir de no. de série



Druckseite /
 Discharge side / Coté refoulement
 ISO 228 - G 1/2

Lufteinlass /
 Air inlet / Entrée d'air
 ISO 228 - G 1/4

Saugseite /
 Suction side / Coté aspiration
 ISO 228 - G 1/2





| Item No. | Qty. per unit | Description | Part No. RFML 15 PP | Part No. RFML 15 PTFE |
|--|---------------|---|------------------------|--------------------------|
| Version according to exploded view No. D15 80 004 – 05/2011 valid as from Serial No. RFM00900 | | | | |
| 1 | 8 | Hexagonal nut | 906 91 004 | 906 91 004 |
| 2 | 8 | Spring washer | 909 95 002 | 909 95 002 |
| 4 | 2 | Support plate for pump housing | D15 70 063 | D15 70 063 |
| 5 | 8 | Insert for pump housing | D15 70 016 | D15 70 016 |
| 6 | 2 | Pump housing | D15 74 057 | D15 74 058 |
| 7 | 2 | Diaphragm (NBR) <i>optional</i> | D15 70 035 | D15 70 035 |
| | | Diaphragm (PTFE/EPDM) <i>optional</i> | D15 74 036 | D15 74 036 |
| | | Diaphragm (EPDM) <i>optional</i> | D15 70 037 | D15 70 037 |
| | | Diaphragm (FKM) | D15 70 038 | D15 70 038 |
| 8 | 1 | Bearing kit with o-rings (item 8.1 – 8.3) | D10 70 200 | D10 70 200 |
| 8.1 | 2 | Rod seal (PTFE/NBR) | 925 39 018 | 925 39 018 |
| 8.2 | 2 | Bearing | D10 70 021 | D10 70 021 |
| 8.3 | 4 | O-ring Ø30 x 3 (NBR) | 925 65 048 | 925 65 048 |
| 9 | 4 | Tension rod | D15 70 112 | D15 70 112 |
| 10 | 1 | Selector shaft | D15 70 019 | D15 70 019 |
| 11 | 2 | Silencer | 947 15 006 | 947 15 006 |
| 13 | 4 | Ball (NBR) <i>optional</i> | D15 74 001 | D15 74 001 |
| | | Ball (PTFE) <i>optional</i> | D15 74 003 | D15 74 003 |
| | | Ball (EPDM) <i>optional</i> | D15 74 004 | D15 74 004 |
| | | Ball (FKM) | D15 74 002 | D15 74 002 |
| 14 | 4 | O-ring Ø30 x 3 (NBR) <i>optional</i> | 925 65 048 | 925 65 048 |
| | | O-ring Ø30 x 3 (FFKM) <i>optional</i> | 925 65 057 | 925 65 057 |
| | | O-ring Ø30 x 3 (EPDM) <i>optional</i> | 925 65 029 | 925 65 029 |
| | | O-ring Ø30 x 3 (FKM) | 925 65 014 | 925 65 014 |
| 15 | 4 | Ball cage | D15 74 052 | D15 74 052 |
| 16 | 1 | Manifold, discharge side | D15 74 141 | D15 74 142 |
| 17 | 4 | Support plate for manifold | D15 74 064 | D15 74 064 |

Attention: Please always give full description, part no. and quantity of parts required.



| Item No. | Qty. per unit | Description | Part No. RFML 15 PP | Part No. RFML 15 PTFE |
|----------|---------------|--|------------------------|--------------------------|
| | | Version according to exploded view No. D15 80 004 – 05/2011 valid as from Serial No. RFM00900 | | |
| 19 | 16 | Spring washer | 909 85 004 | 909 85 004 |
| 20 | 8 | Hexagonal screw | 900 81 017 | 900 81 017 |
| 21 | 1 | Air valve part | D15 70 102 | D15 70 102 |
| 22 | 1 | 5/2-way control valve c/w item 22.1, 22.2 and 22.3 | D10 70 104 | D10 70 104 |
| 22.1 | 1 | Profile sealing (NBR) | 925 89 012 | 925 89 012 |
| 22.2 | 4 | Spring washer | 909 75 002 | 909 75 002 |
| 22.3 | 4 | Cylindric screw | 900 75 029 | 900 75 029 |
| 24 | 1 | Manifold, suction side c/w item 32 | D15 74 145 | D15 74 148 |
| 25 | 2 | Pedestal | D15 74 077 | D15 74 077 |
| 27 | 8 | Hexagonal screw | 900 81 007 | 900 81 007 |
| 30 | 4 | Ball seat | D15 74 076 | D15 74 076 |
| 31 | 4 | O-ring Ø24 x 2,5 (NBR) <i>optional</i> | 925 45 015 | 925 45 015 |
| | | O-ring Ø24 x 2,5 (FEP) <i>optional</i> | 925 45 023 | 925 45 023 |
| | | O-ring Ø24 x 2,5 (EPDM) <i>optional</i> | 925 45 017 | 925 45 017 |
| | | O-ring Ø24 x 2,5 (FKM) | 925 45 016 | 925 45 016 |
| 32 | 1 | Equipotential bonding (connecting parts) | 947 12 020 | 947 12 020 |
| 33 | 8 | Hexagonal cap | 947 05 056 | 947 05 056 |
| 34 | 2 | Stop ring | D15 74 092 | D15 74 092 |

Attention: Please always give full description, part no. and quantity of parts required.

This list
consists of
3 pages

FLUX-GERÄTE GMBH D-75433 Maulbronn

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make alterations
and/or modifications



Pressure controller with filter and speed regulator, mounted onto pump

| Pump Type | Connection | Part No./Weight |
|-----------|----------------------------------|----------------------------|
| RFM 10 | G 1/4 - G 3/8 (1/4"-3/8" female) | D01 00 410 /0,70 kg |
| RFM 15/25 | G 1/4 - G 1/4 (1/4"-1/4" female) | D01 00 412 /0,72 kg |
| RFM 40 | G 1/2 - G 1/2 (1/2"-1/2" female) | D01 00 403 /2,20 kg |

Pressure controller with filter and speed regulator, mounted onto pump, version for use in hazardous areas

| Pump Type | Connection | Part No./Weight |
|------------|----------------------------------|----------------------------|
| RFML 10 | G 1/4 - G 3/8 (1/4"-3/8" female) | D01 00 320 /0,96 kg |
| RFML 15/25 | G 1/4 - G 1/4 (1/4"-1/4" female) | D01 00 322 /0,96 kg |



Pulsation damper, passive type, max. operating pressure 8 bar

| Description | Diaphragm | Part No./Weight |
|-------------|-----------|----------------------------|
| PDP 15 PP/N | NBR | D01 15 400 /1,20 kg |
| PDP 15 PP/E | EPDM | D01 15 420 /1,20 kg |
| PDP 15 PP/V | FKM | D01 15 430 /1,20 kg |
| PDP 25 PP/N | NBR | D01 25 400 /2,00 kg |
| PDP 25 PP/E | EPDM | D01 25 420 /2,00 kg |
| PDP 25 PP/V | FKM | D01 25 430 /2,00 kg |
| PDP 40 PP/N | NBR | D01 40 400 /4,00 kg |
| PDP 40 PP/E | EPDM | D01 40 420 /4,00 kg |
| PDP 40 PP/V | FKM | D01 40 430 /4,00 kg |

Connection for filling of pulsation damper

| Version | Connection | Part No./Weight |
|-----------------|---------------------|----------------------------|
| Material: brass | G 1/4 - filling end | D01 00 000 /0,01 kg |

Stroke counter complete with 5/2-way valve

| Pump Type | Part No./Weight |
|-----------|----------------------------|
| RFM 10/15 | D01 00 101 /0,02 kg |
| RFM 25 | D01 00 102 /0,02 kg |
| RFM 40 | D01 00 103 /0,02 kg |

Connecting cable, 5 m long

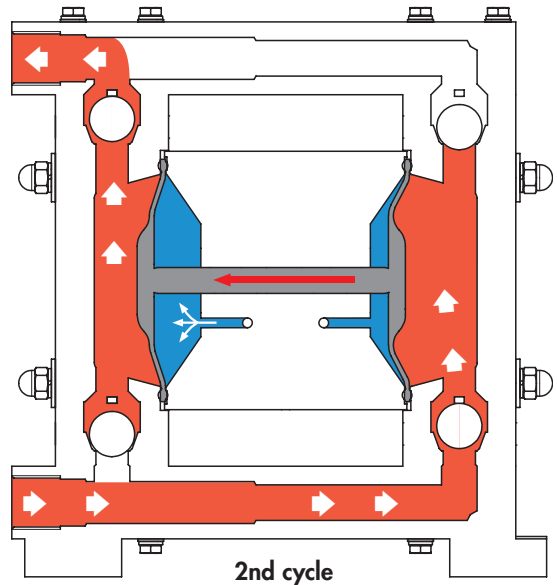
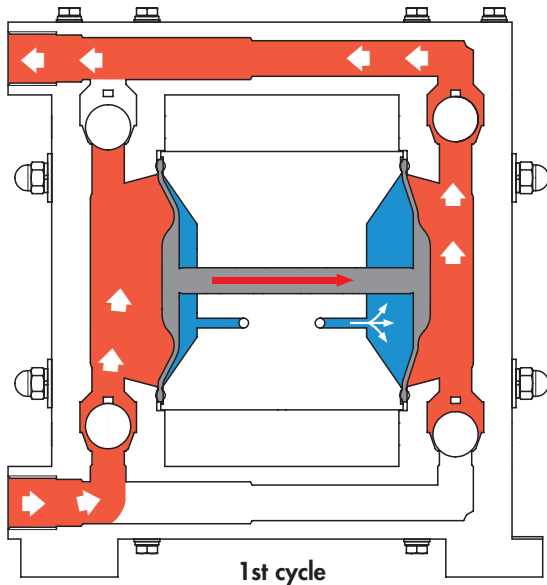
for use with digital display unit **934 08 038**/0,20 kg

External digital display unit

with mounting flange **001 42 008**/0,70 kg



Function features in detail



FLUX air-operated diaphragm pumps are positive displacement pumps consisting of two pump housings and one control valve part. Diaphragms within the pump housings securely separate the liquid section (red) from the air section (blue). Both diaphragms are connected by a selector shaft which is located in the control valve part.

Compressed air inflating alternately the air sections causes a movement of the diaphragms (1st and 2nd cycle). The subsequent transfer operation is controlled by a control valve which is easy to dismantle. Due to their solid construction, the pumps are designed for continuous operation and do not require any special maintenance.

Construction features in detail

