

**Operating instructions**  
**RP Series**  
**Peristaltic pump**

**realax**

**ALL THE HOSE PUMP YOU'LL EVER NEED**



## **Congratulations! And welcome to the world of relax hose pumps.**

Drawing on extensive interaction with real users of peristaltic pumping technology and examining applications as diverse as food, water and wastewater, chemicals and pharmaceuticals, construction and mining, we have tried to tailor our range of pumps more precisely to your needs.

Our range of hoses and accessories reflect what hose pump customers really need and use – after all, best is what you want, second best should never be an option.

We hope you'll find using your relax pump simple, trouble-free and that it makes a positive contribution to the success of your process. If you have any questions you can't find answers to in these pages, check our website or call your local representative on the number on the contact page of this guide.

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## 1 INTRODUCTION

This manual forms an integral part of the pump and must accompany it until its demolition. The series RP peristaltic pump is a machine destined to work in industrial areas and as such the instruction manual must form part of the legislative dispositions and the applicable technical standards and does not substitute any installation standard or eventual additional standard.

## 1.1 Explanation of the safety information



The instructions of this manual, whose inobservance is determined as a failure to meet safety standards, are identified by this symbol .



The instructions of this manual, whose inobservance compromises electrical safety.



The instructions of this manual, whose inobservance compromises the correct working of the pump, are identified with this symbol.

## 1.2 Users' qualifications

Pumps are machines that due to their functioning under pressure and moving parts can present dangers. The following can cause serious damage or injury:

- Improper use
- Removing the protections and/or disconnecting the protection device
- The lack of inspections and maintenance

They can cause serious damage or injury.

The person in charge of safety should therefore guarantee that the pump is transported, installed, put in service, used, maintained and repaired by qualified personnel who should therefore possess:

- Specific training and sufficient experience.
- Knowledge of the technical standards and applicable laws.
- Knowledge of the general national and local safety standards and also of the installation.

Any work carried out on the electrical part of the pump should be authorized by the person responsible for safety. Given that the pump is destined to form part of an installation, it is the responsibility of whoever supervises the installation to guarantee absolute safety, adopting the necessary measures of additional protection.

## 2 SAFETY AND RESPONSIBILITY

### 2.1 General safety information



#### **Live parts**

Possible consequence: Fatal or very serious injuries.

- Measure: The device must be disconnected from the power supply before it is opened.
- Isolate damaged faulty or manipulated devices from the mains in order to de-energise.



#### **Emergency stop switch**

Possible consequence: Fatal or very serious injuries.

An emergency stop switch is to be connected for the entire plant. This should enable the entire plant to be shut down in the event of an emergency in such a way that the overall plant can be brought into a safe condition.



#### **Unauthorized access**

Possible consequence: Fatal or very serious injuries.

- Measure: Ensure that there can be no unauthorized access to the unit.



#### **Hazardous media/contamination of persons and equipment**

Possible consequence: Fatal or very serious injuries  
material damage.

- Ensure that the pump hoses are resistant against the media being conveyed
- Always observe the safety data sheets for the media to be conveyed. The system operator must ensure that these safety data sheets are available and that they are kept up-to-date.
- The safety data sheets for the media being conveyed are always decisive for initiating countermeasures in the event of leakage to the media being conveyed.
- Observe the general restrictions in relation to viscosity limits, chemical resistance and density.
- Always switch the pump off before exchanging the pump hose

**CAUTION****Correct and proper use**

Possible consequence: Fatal or very serious injuries.

- The unit is not intended to convey or regulate gases or solid media.
- Do not exceed the rated pressure, speed or temperature for the pump.
- The unit may only be used in accordance with the technical data and specifications provided in these operating instructions and in the operating instructions for the individual components.
- The system is not designed for use in areas of risk from explosion.
- Only switch the pump on if it has been properly fastened to the floor.
- Only switch the pump on if the front cover has been attached.
- Do not carry out any maintenance operations or dismantle the pump without first making sure that the pipes are not under pressure and are empty or isolated.
- In the case of the hose becoming stuck during extraction or fitting it is necessary to reverse the direction of the pump, re-lubricate, and then repeat the operation.
- As the peristaltic pump is volumetric and its functioning is positive displacement, it is necessary to prevent a possible overload of pressure, due to for example, the accidental closure of a valve. For this reason it is advisable to fit a safety device such as: a safety valve, pressure limiter, etc.

**CAUTION****Operational lifetime of the pump hose**

Possible consequence: Fatal or very serious injuries.

The operational lifetime of the pump hose cannot be precisely specified. For this reason, the possibility of fracture and consequential leakage of liquids must be accounted for. If the hose rupture alarm (optional) is fitted, then the pump can be stopped and / or an electrical valve can be actuated.

In addition, as the hose has an indeterminate life and due to the possibility of its breakage or deterioration, the user is responsible for the prevention of a possible (although most unlikely) incorporation of particles from the hose into the product being pumped. This can be achieved e.g. by means of filtration, a hose rupture alarm or other means suitable for the respective process.



### **CIP cleaning**

In the event of CIP cleaning, it is necessary to obtain information from the manufacturer about correct installation of the pump (a special installation is required) as well as regarding the compatibility of the cleaning agents with the pump hoses and the hydraulic connections.

Cleaning should be undertaken at the recommended maximum temperature.



### **Direction of rotation/flow direction**

Possible consequence: Material damage right through to destruction of the unit.

- The pump's direction of rotation in relation to the desired flow direction must be checked prior to every start.



### **Disconnect the pump from the mains**

Possible consequence: Personal injury.

You may only carry out work on the pump after it has previously been switched off and disconnected from the mains.



### **Environmental influences**

Possible consequence: Material damage right through to destruction of the unit.

- The device is not suitable for outdoor operation
- Take suitable measures to protect the device from environmental influences such as:
  - UV rays
  - Moisture
  - Frost, etc.

### 3 FUNCTIONAL DESCRIPTION

The RP Series is a positive displacement pump. The feed process fluid is conveyed by the rotor squeezing the hose in the direction of flow. No valves are needed for this. This ensures gentle handling of the metered media.

The RP Series has been designed for safe and uncomplicated operation, as well as straightforward maintenance.

The RP Series can be used for many different media. However, this pump type is often the optimal solution for abrasive, shear-sensitive and viscose media.

Typical areas of use include processes where only a low discharge pressure is required (max. 15 Bar).

#### 3.1 Construction

Main modules: – Drive Unit, – Tubing, – Base frame

The pump housing is closed off with a screwed front cover in order to avoid the risk of injury.

The motor serves to drive the rotor. Two shoes at the ends of the rotor serve to press the pump hose against the pump housing.

The rotary movement of the rotors alternately press and relax the shoes in relation to the pump hose. This serves to suck the media and convey it into the process line.

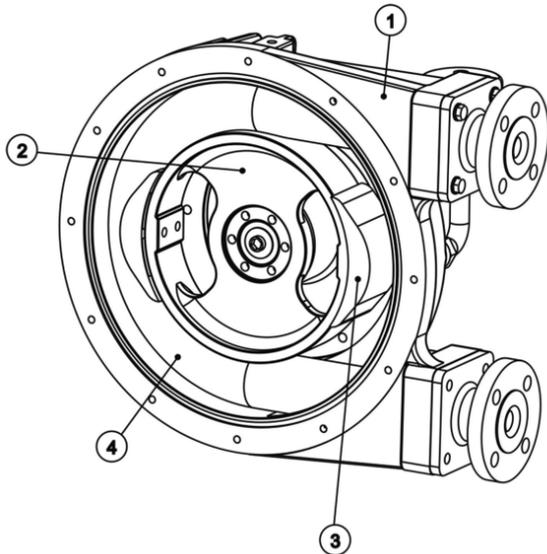


Fig 1: Diagram of functional principle

1 Casing

2 Rotor

3 Shoes

4 Hose

## 4 TRANSPORT AND STORAGE

### 4.1 Transport

- The pump is protected by a cardboard packaging.
- The packaging materials are recyclable.

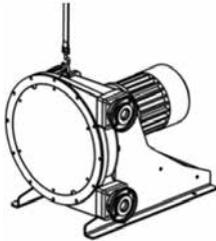
### 4.2 Storage

- The pump should be in a resting position. (The hose should not be compressed).
- Avoid areas open to harsh weather or excessive humidity.
- For storage periods of longer than 60 days, protect the coupling surfaces (clamps, reducers, motors) with adequate anti-oxidant products.
- Spare hoses should be stored in a dry place away from direct light.

### 4.3 Lifting

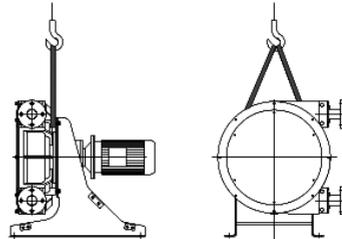
Models RP-25, RP-32, and RP-40

- To lift the pump use the eye bolt.



Models RP-60, RP-70, RP-80 and RP-100

- To lift the pump, it's necessary to use lifting slings.



## 5 ASSEMBLY AND INSTALLATION

### 5.1 Ambient conditions

Assembly is to be carried out in the following order. If the pump has to be installed outdoors, then it is to be equipped with protection against sunlight and weather influences. When positioning the pump, ensure that sufficient room for access is provided for all types of maintenance work.

#### Limit values for hose temperature and pressure

| Material Hose | Min. Temp. (°C)<br>Feed chemical | Max. Temp (°C)<br>Feed chemical | Min. Temp (°C)<br>Environment | Max. Pressure (Bar) |
|---------------|----------------------------------|---------------------------------|-------------------------------|---------------------|
| NR            | -20                              | 80*                             | -40                           | 15                  |
| NBR           | -10                              | 80*                             | -40                           | 15                  |
| EPDM          | -10                              | 80*                             | -40                           | 15                  |
| NR-A          | -10                              | 80*                             | -40                           | 15                  |
| NBR-A         | -10                              | 80*                             | -40                           | 15                  |

*\* At max. temperature., the life of hose is drastically reduced. Please contact authorized distributor for high temperature application.*

### 5.2 Correct installation of the pump

#### 5.2.1 Suction side

The pump is to be positioned as near as possible to the liquid container, so that the suction side is kept as short and straight as possible. The suction line must be absolutely airtight and made of a suitable material, so that it is not squeezed together under vacuum. The diameter must correspond to the rated diameter of the pump hose. A larger diameter is recommended in the event of viscose liquids. The pump is self-priming and does not require an admission valve. The pump is reversible and the suction connection can therefore comprise of one of two options. Normally the option is selected which is best suited to the physical conditions of the installation. It is recommended to use a flexible transition between two fixed pipes and the hydraulic connection of the pump, in order to avoid the transmission of vibrations.

### 5.2.2 Discharge side

The discharge line is to be kept as straight and short as possible, in order to avoid performance reduction. The diameter must correspond to the rated diameter of the pump hose. A larger diameter is recommended in the event of viscose liquids. It is recommended to use a flexible transition between two fixed pipes and the hydraulic connection of the pump, in order to avoid the transmission of vibrations.

### 5.3 Adjusting the shoe pressure

The peristaltic pump is equipped with shims, in order to adjust the precise pressure distance to the shoe (dependent on speed and operating pressure).

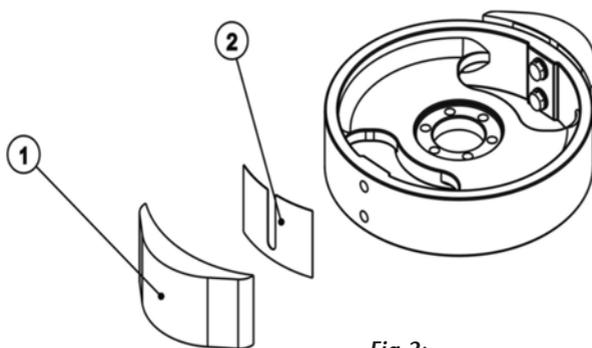
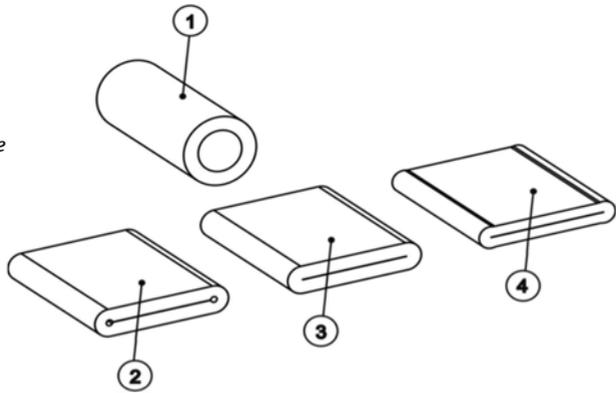


Fig 2:

1- Shoe / 2- Shims

Fig 3:

Squeezing the hose



1. Hose in normal shape
2. Insufficient squeezing (back flowing media in the cavity will destroy the hose within a short period of time)
3. Perfect squeezing
4. Excessive squeezing (increased wear and tear to pump and hose)

The shims are fitted in the factory. You can adapt the number of shims to the actual operating conditions according to the following table.

### 5.3.1 Model RP 25 (Number of shims of 0.5 mm thickness):

a) NR, NBR, EPDM, HYPALON, NR-A and NBR-A:

| Bar  | 1/min |       |       |       |       |
|------|-------|-------|-------|-------|-------|
|      | 0-19  | 20-39 | 40-59 | 60-79 | 80-99 |
| 0.5  | 1     | 1     | 1     | 0     | 0     |
| 2.5  | 1     | 1     | 1     | 1     | 1     |
| 5.0* | 2     | 2     | 2     | 2     | 2     |
| 7.5  | 4     | 3     | 3     | 3     | 3     |
| 10   | 5     | 4     | 4     | 4     | 4     |
| 12.5 | 6     | 5     | 5     | 5     | 4     |
| 15   | 7     | 6     | 6     | 6     | —     |

\*Factory default setting if working pressure is not informed.

### 5.3.2 Model RP 32 (Number of shims of 0.5 mm thickness):

a) NR, NBR, EPDM, HYPALON, NR-A and NBR-A:

| Bar  | 1/min |       |       |       |       |
|------|-------|-------|-------|-------|-------|
|      | 0-19  | 20-39 | 40-59 | 60-79 | 80-99 |
| 0.5  | 0     | 0     | 0     | 0     | 0     |
| 2.5  | 0     | 0     | 0     | 0     | 0     |
| 5.0* | 1     | 1     | 1     | 0     | 0     |
| 7.5  | 2     | 1     | 1     | 1     | 0     |
| 10   | 2     | 2     | 2     | 1     | 1     |
| 12.5 | 3     | 3     | 3     | 2     | 2     |
| 15   | 4     | 4     | 4     | 3     | –     |

\*Factory default setting if working pressure is not informed.

### 5.3.3 Model RP 40 (Number of shims of 0.5 mm thickness):

a) NR, NBR, EPDM, HYPALON, NR-A and NBR-A:

| Bar  | 1/min |       |       |       |       |
|------|-------|-------|-------|-------|-------|
|      | 0-19  | 20-39 | 40-59 | 60-79 | 80-99 |
| 0.5  | 3     | 3     | 2     | 2     | 2     |
| 2.5  | 4     | 3     | 3     | 3     | –     |
| 5.0* | 5     | 4     | 4     | 4     | –     |
| 7.5  | 5     | 5     | 5     | –     | –     |
| 10   | 6     | 6     | 5     | –     | –     |
| 12.5 | 7     | 7     | 6     | –     | –     |
| 15   | 8     | 8     | –     | –     | –     |

\*Factory default setting if working pressure is not informed.

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### 5.3.4 Model RP 60 (Number of shims of 1 mm thickness):

a) NR, NBR, EPDM, NR-A and NBR-A:

| Bar  | 1/min |       |       |       |       |
|------|-------|-------|-------|-------|-------|
|      | 0-19  | 20-39 | 40-59 | 60-79 | 80-99 |
| 0.5  | 0     | 0     | 0     | 0     | 0     |
| 2.5  | 0     | 0     | 0     | 0     | 0     |
| 5.0* | 1     | 1     | 0     | 0     | 0     |
| 7.5  | 1     | 1     | 1     | 1     | 1     |
| 10   | 2     | 2     | 1     | 1     | –     |
| 12.5 | 2     | 2     | 2     | 2     | –     |
| 15   | 2     | 2     | 2     | –     | –     |

\*Factory default setting if working pressure is not informed.

### 5.3.5 Model RP 70 (Number of shims of 0.5 mm thickness):

a) NR, NBR, EPDM, HYPALON, NR-A and NBR-A:

| Bar  | 1/min |       |       |       |       |
|------|-------|-------|-------|-------|-------|
|      | 0-19  | 20-39 | 40-59 | 60-79 | 80-99 |
| 0.5  | 3     | 2     | 1     | 0     | 0     |
| 2.5  | 4     | 3     | 2     | 1     | –     |
| 5.0* | 6     | 5     | 4     | 3     | –     |
| 7.5  | 7     | 6     | 5     | –     | –     |
| 10   | 9     | 8     | 7     | –     | –     |
| 12.5 | 10    | 9     | 8     | –     | –     |
| 15   | 12    | 11    | –     | –     | –     |

\*Factory default setting if working pressure is not informed.

### 5.3.6 Model RP 80 (Number of shims of 1 mm thickness):

a) NR, NBR and EPDM:

| Bar  | 1/min |       |         |
|------|-------|-------|---------|
|      | 0-19  | 20-39 | 40-59** |
| 0.5  | 1     | 1     | –       |
| 2.5  | 1     | 2     | –       |
| 5.0* | 2     | 2     | –       |
| 7.5  | 2     | 2     | –       |
| 10   | 3     | 3     | –       |
| 12.5 | 4     | –     | –       |
| 15   | 4     | –     | –       |

\*Factory default setting if working pressure is not informed.

\*\*In case of a need for higher speed, please consult your relax distributor.

### 5.3.7 Model RP 100 (Number of shims of 1 mm thickness):

a) NR, NBR and EPDM:

| Bar  | 1/min |       |         |
|------|-------|-------|---------|
|      | 0-19  | 20-39 | 40-59** |
| 0.5  | 0     | 1     | –       |
| 2.5  | 1     | 1     | –       |
| 5.0* | 1     | 1     | –       |
| 7.5  | 1     | 1     | –       |
| 10   | 2     | 2     | –       |
| 12.5 | 3     | –     | –       |
| 15   | 4     | –     | –       |

\*Factory default setting if working pressure is not informed.

\*\*In case of a need for higher speed, please consult your relax distributor.

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## 6 COMMISSIONING

### 6.1 Testing prior to commissioning the pump

The following tests are to be carried out:

- Ensure that the pump has not been damaged during transportation or storage. Immediately report any damage to the supplier.
- Check that the mains voltage is suitable for the motor.
- Ensure that the hose is suitable for the fluid to be conveyed and that it is not damaged.
- Make sure that the temperature of the liquid does not exceed the recommended temperature range.
- Only switch the pump on if the front cover has been properly attached.
- Check that the drive and the casing of the pump are properly lubricated.
- Check that the thermal overload protection (not included in the delivery scope) corresponds to the value specified on the motor type plate.
- Check whether the direction of rotation is correct.
- Check that the optional electrical components are connected and are working properly.
- Install a manometer (pressure gauge) in the pressure line if the back-pressure value is unknown.
- Check the operating instructions in order to ensure that the flow values, pressures and power consumption of the motor do not exceed the rated values.
- Install a pressure relief valve in the pressure line in order to protect the pump and pipework in the event that a valve is unintentionally closed off or the line is blocked in another way.

## 7 MAINTENANCE, REPAIR, MALFUNCTIONS, DISPOSAL AND SPARE PARTS

### 7.1 Lubrication:

Check that the level of lubricant in the casing of the pump is correct.

- The quantity of lubricant per pump:

|                  | RP-25 | RP-32 | RP-40 | RP-60 | RP-70 | RP-80 | RP-100 |
|------------------|-------|-------|-------|-------|-------|-------|--------|
| Liters lubricant | 2     | 3     | 5     | 10    | 25    | 45    | 70     |

- The correct level is shown on the lower inspection window cover installed on the front cover. Add lubricant if it's necessary.
- The specially formulated lubricant can be obtained from your authorised realax pump distributor. The use of the original realax lubricant ensures a longer life of the hose.

Gear reducers

- RP-25, RP-32 and RP-40: The lubrication is permanent. Servicing is not required.
- RP-60, RP-70, RP-80 and RP-100: Exchange the oil at regular intervals in accordance with the gear reducer maintenance manual.

### 7.2 Exchanging the pump hoses:

#### 7.2.1 Exchanging the pump hoses – dismantling

##### 7.2.1.1 Models RP-40, RP-70, RP-80 and RP-100

- 1 Close off all valves, in order to prevent leakage of the process fluid.
- 2 Dismantle the pipes from both discharge and suction sides.
- 3 The pump body must be drained of all lubricating liquid, removing both the interior drain plug and the upper suction plug. The plugs are found on the back part of the casing.
- 4 Remove the front cover, using suitable lifting equipment if required.

- 
- 5 Remove the shoe incl. the shims (the shoe that is not touching the pump hose).
  - 6 Remove the press flange and connections from the pump housing.
  - 7 Mount the front cover.
  - 8 Remove the hose by turning on the pump.
  - 9 Dismount the front cover.

### **7.2.1.2 Models RP-25 and RP-32**

- 1 Close off all valves, in order to prevent leakage of the process fluid.
- 2 Dismantle the pipes from both discharge and suction sides.
- 3 The pump body must be drained of all lubricating liquid, removing both the interior drain plug and the upper suction plug. The plugs are found on the back part of the casing.
- 4 Remove the front cover.
- 5 Remove the shoe incl. the shims (the shoe that is not touching the pump hose).
- 6 Remove the connections and inserts from the pump housing.
- 7 Mount the front cover.
- 8 Remove the hose by turning on the pump.
- 9 Dismount the front cover.

### **7.2.1.3 Models RP-60**

- 1 Close off all valves, in order to prevent leakage of the feed chemical.
- 2 Dismantle the pump hoses from both discharge and suction sides.
- 3 Remove the front cover.
- 4 Remove shoe incl. the shims (the shoe that is not touching the pump hose).
- 5 Remove the press flange and inserts.
- 6 Mount the front cover.
- 7 Remove the hose by turning on the pump.
- 8 Dismount the front cover.

## 7.2.2 Exchanging the pump hoses- installation

### 7.2.2.1 Models RP-40, RP-70, RP-80 and RP-100

- 1 Clean the interior surfaces of the pump housing.
- 2 Lubricate the internal surfaces of the pump housing at the contact surfaces to the pump hose and the external part of the new hose with relax lubricant.
- 3 Check the shoe. Ensure that the shoe surfaces are not damaged.
- 4 Mount front cover.
- 5 Lay the pump hose into the pump housing through the connection holes turning the drive by hand.
- 6 Lay the press rings. Between the end of the hose and the press ring, it has to be a distance of 3-7 mm.

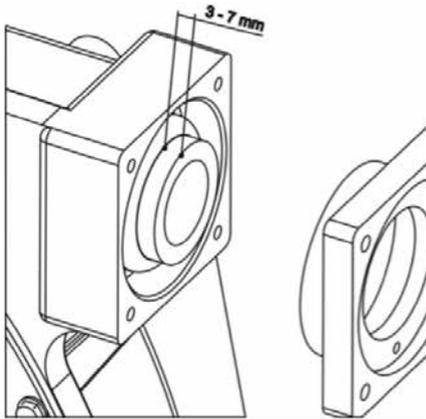
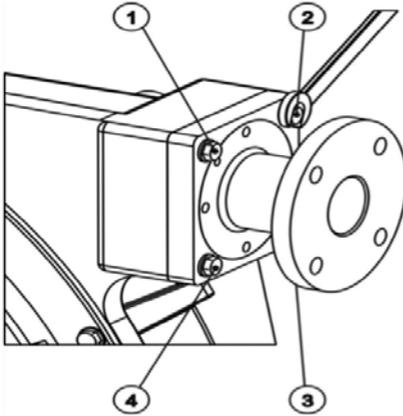


Fig 4:

*Required distance between the end of the hose and the press ring.*

- 7 Fasten the press flange and the connections to the pump casing, tightening each bolt in the following order (1,3,2,4,1,3,2,4, etc.), until the flange becomes totally tight.



*Fig 5:*

*Way to proceed with the screws tightening.*

- 8 Turn the rotor with the help of the motor so that the remaining shoe presses against the pump hose.
- 9 Dismount the front cover.
- 10 Re-attach the second shoe with shims back onto the rotor.
- 11 Fix the lower drain plug.
- 12 Attach the front cover to the pump housing.
- 13 Fill the body of the pump with lubricant via the upper filling or inspection cover.
- 14 Mount the pipes from both discharge and suction sides.
- 15 Open all of the valves.

### **7.2.2.2 Models RP-25 and RP32**

- 1 Clean the interior surfaces of the pump housing.
- 2 Lubricate the internal surfaces of the pump housing at the contact surfaces to the pump hose and the external part of the new hose with relax lubricant.
- 3 Check the shoe. Ensure that the shoe surfaces are not damaged.
- 4 Mount front cover.
- 5 Lay the pump hose into the pump housing through the connection holes turning the drive by hand.

- 6 Lay the press rings. Between the end of the hose and the press ring, it has to be a distance of 3-7 mm. (same as 7.2.2.1, item 6).
- 7 Fasten the connections and insert to the pump housing, tightening each bolt in the following order (1,3,2,4,1,3,2,4, etc.), until the connection becomes totally tighten (same as 7.2.2.1, item 7).
- 8 Turn the rotor with the help of the motor so that the remaining shoe presses against the pump hose.
- 9 Dismount the front cover.
- 10 Re-attach the second shoe with shims back onto the rotor.
- 11 Fix the lower drain plug.
- 12 Attach the front cover to the pump housing.
- 13 Fill the body of the pump with relax lubricant via the upper filling or inspection cover.
- 14 Mount the pipes from both discharge and suction sides.
- 15 Open all of the valves.

### 7.2.2.3 Models RP-60

- 1 Clean the interior surfaces of the pump housing.
- 2 Lubricate the internal surfaces of the pump housing with relax lubricant at the contact surfaces to the pump hose and the external part of the new hose.
- 3 Check the shoe. Ensure that the shoe surfaces are not damaged.
- 4 Mount front cover.
- 5 Lay the pump hose into the pump housing through the connection holes turning the drive by hand.
- 6 Fasten the two parts of press flanges us the base.
- 7 Fasten the press flange to the pump casing.
- 8 Fasten the connections to the press flange.
- 9 Mount the front cover.
- 10 Turn the rotor with the help of the motor so that the remaining shoe presses against the pump hose.
- 11 Dismount the front cover.
- 12 Re-attach the second shoe with shims back onto the rotor.
- 13 Fix the lower drain plug.
- 14 Attach the front cover to the pump housing.
- 15 Fill the body of the pump with relax lubricant via the upper filling or inspection cover.
- 16 Mount the pipes from both discharge and suction sides.
- 17 Open all of the valves.

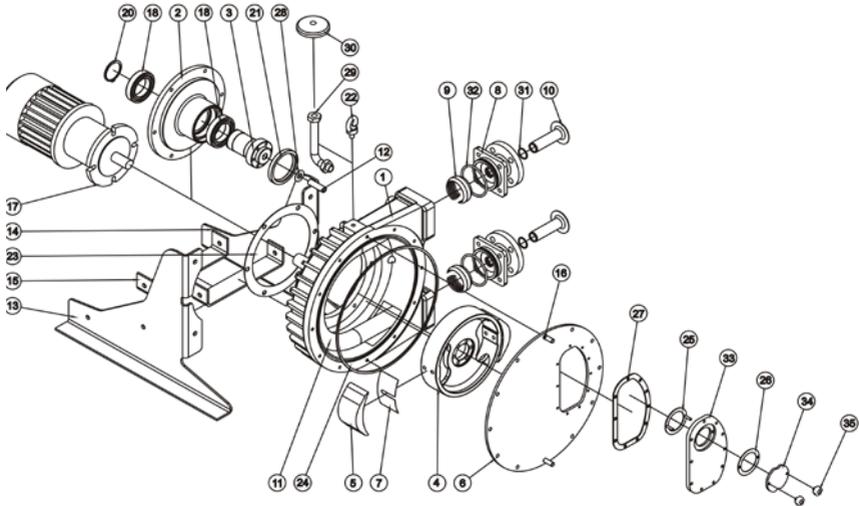
## 7.3 Troubleshooting

| <b>Problem</b>                    | <b>Possible cause</b>  | <b>Solution</b>   |
|-----------------------------------|--|---|
| Increased pump temperature        | Pump hose has no lubricant   | Lubricate pump hose   |
|                                   | Increased product temperature  | Reduce product temperature or consult realax distributor  |
|                                   | Insufficient or poor suction conditions                                | Check suction line for blockages  |
|                                   | Pump speed too high  | Reduce pump speed and consult realax distributor  |
| Reduced flow or pressure          | Valves on discharge and or suction side completely or partially closed | Open valves   |
|                                   | Pump hose insufficiently compressed                                    | Check number of shims according to the actual discharge pressure  |
|                                   | Pump hose rupture (the product leaks out into the housing)             | Exchange pump hose  |
|                                   | Partial blockage of the suction line                                   | Clean pipe  |
|                                   | Insufficient product quantity in storage container                     | Fill storage container or exchange pump   |
|                                   | Insufficient diameter on the suction side                              | Increase the diameter on the suction side, as far as possible   |
|                                   | Suction line too long  | Shorten the suction line, as far as possible or consult realax distributor  |
|                                   | High viscosity of medium   | Reduce viscosity, as far as possible  |
|                                   | Air introduction in the suction connections                            | Check connections and accessories for air tightness   |
|                                   | High pulsation on suction  | Tighten connections and accessories. Mount antipulsation equipment. Reconsider application (speed, etc.) and consult realax distributor |
| Vibrations on pumps and pipelines | The pipes are not correctly fastened                                   | Fasten pipes correctly (e.g. wall brackets)   |

|   |  |  |
|---|--|--|
| Vibrations on pumps and pipelines       | Pump speed too high                            | Reduce pump speed  |
|   | Insufficient nominal width of the pipes        | Increase nominal width and consult relax distributor   |
|   | Pump base plate loose                          | Fasten base plate  |
|   | Pulsation dampers insufficient or missing      | Install pulsation dampers on suction and / or discharge side.  |
| Short operational lifetime of the hoses | Chemical exposure                              | Check the compatibility of the hose with the liquid being conveyed, the cleaning fluid and the lubricant with relax pump distributor |
|   | High pump speed                                | Reduce pump speed  |
|   | High conveying temperature                     | Reduce product temperature   |
|   | High operating pressure                        | Reduce operating pressure  |
|   | Pump cavitation                                | Check the suction conditions   |
|   | Abnormal elevation of temperature              | Check number of shims  |
|   | Unsuitable lubricant                           | Use relax lubricant  |
| Pump hose pulled into the pump housing  | High inlet pressure (> 3 bar)                  | Reduce inlet pressure  |
|   | Pump hose filled with deposits                 | Clean or replace the pump hose   |
|   | Holder (press flange) insufficiently tightened | Re-tighten holder (press flange)   |
|   | Insufficient lubricant                         | Top up lubricant   |
| The pump does not start up              | Insufficient motor performance                 | Check motor and replace if necessary   |
|   | Insufficient output from frequency converter   | The frequency converter must match the motor   |
|   | Blockage in the pump                           | Check voltage. Start occurs at minimum 10 Hz   |
|   | Blockage in the pump                           | Check if the suction or discharge side is blocked. Rectify blockage  |

## 8 SPARE PARTS

### 8.1 Spare parts exploded RP-25 Model

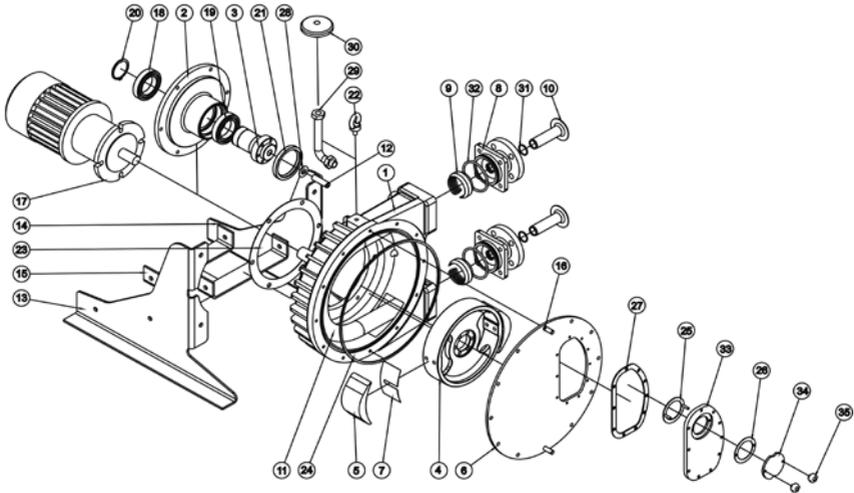


| Pos. | Description          | Quantity | Reference |
|------|----------------------|----------|-----------|
| 1    | Pump body            | 1        | 100.01.01 |
| 2    | Ball bearing box     | 1        | 100.01.03 |
| 3    | Rotor shaft          | 1        | 100.01.14 |
| 4    | Rotor                | 1        | 100.01.16 |
| 5    | Shoe                 | 2        | 100.01.17 |
| 6    | Front cover          | 1        | 100.00.07 |
| 7    | Shim                 | *)       | 100.01.13 |
| 8    | Press flange         | 2        | 100.00.06 |
|      | Press flange ANSI    | 2        | 100.00.40 |
| 9    | Press ring           | 2        | 100.00.05 |
| 10   | Insert SS            | 2        | 100.00.04 |
|      | Insert Polypropylene | 2        | 100.00.15 |
|      | Insert PVDF          | 2        | 100.00.34 |

\*) according to pressure rating see section 5.3.1

| <b>Pos.</b> | <b>Description</b>                    | <b>Quantity</b> | <b>Reference</b> |
|-------------|---------------------------------------|-----------------|------------------|
| 11          | Peristaltic hose NR                   | 1               | 100.01.08        |
|             | Peristaltic hose NBR                  | 1               | 100.01.09        |
|             | Peristaltic hose EPDM                 | 1               | 100.01.10        |
|             | Peristaltic hose NR-A                 | 1               | 100.01.11        |
|             | Peristaltic hose NBR-A                | 1               | 100.01.12        |
| 12          | Shaft cap                             | 1               | 104.01.23        |
| 13          | Base left                             | 1               | 100.01.24        |
|             | Base left S.S                         | 1               | 100.01.34        |
| 14          | Base right                            | 1               | 100.01.25        |
|             | Base right S.S                        | 1               | 100.01.35        |
| 15          | Base middle                           | 2               | 100.01.26        |
|             | Base middle S.S                       | 2               | 100.01.36        |
| 16          | Stud                                  | 2               | 102.00.14        |
| 17          | Driver                                | 1               |                  |
| 18          | Ball bearings                         | 2               | 100.01.28        |
| 20          | Ring for shaft                        | 1               | 100.01.31        |
| 21          | Lip seal box                          | 1               | 100.01.32        |
| 22          | Eye bolt                              | 1               | 106.00.40        |
| 23          | Gasket box                            | 1               | 100.01.33        |
| 24          | O-Ring front cover                    | 1               | 100.00.17        |
| 25          | Inspection window with level          | 1               | 104.00.36        |
| 26          | Inspection window                     | 1               | 104.00.35        |
| 27          | Gasket inspection window              | 2               | 104.00.37        |
| 28          | Gasket shaft cap                      | 1               | 104.00.38        |
| 29          | Air breather tube                     | 1               | 104.00.41        |
|             | Air breather tube for leakage detect. | 1               | 100.00.43        |
| 30          | Air breather cap                      | 1               | 104.00.42        |
| 31          | O-Ring insert                         | 2               | 100.00.19        |
| 32          | O-Ring flange                         | 2               | 100.00.18        |
| 33          | Drain plug RP                         | 2               | 100.00.44        |

## 8.2 Spare parts exploded RP-32 Model

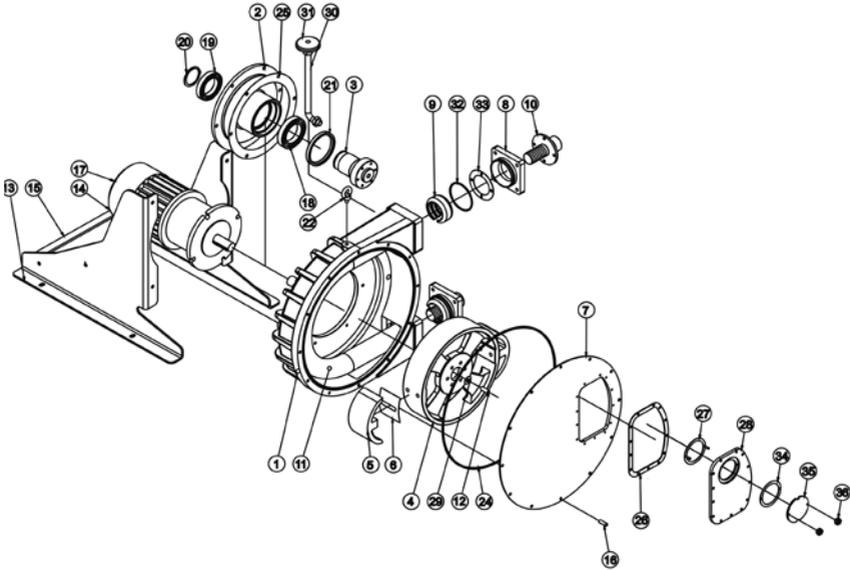


| Pos. | Description          | Quantity | Reference |
|------|----------------------|----------|-----------|
| 1    | Pump body            | 1        | 104.01.01 |
| 2    | Ball bearing box     | 1        | 104.01.03 |
| 3    | Rotor shaft          | 1        | 104.01.14 |
| 4    | Rotor                | 1        | 104.01.16 |
| 5    | Shoe                 | 2        | 104.01.17 |
| 6    | Front cover          | 1        | 104.00.07 |
| 7    | Shim                 | *)       | 104.01.13 |
| 8    | Press flange         | 2        | 104.00.06 |
|      | Press flange ANSI    | 2        | 104.00.40 |
| 9    | Press ring           | 2        | 104.00.05 |
| 10   | Insert SS            | 2        | 104.00.04 |
|      | Insert Polypropylene | 2        | 104.00.15 |
|      | Insert PVDF          | 2        | 104.00.34 |

\*) according to pressure rating see section 5.3.2

| <b>Pos.</b> | <b>Description</b>           | <b>Quantity</b> | <b>Reference</b> |
|-------------|------------------------------|-----------------|------------------|
| 11          | Peristaltic hose NR          | 1               | 104.01.08        |
|             | Peristaltic hose NBR         | 1               | 104.01.09        |
|             | Peristaltic hose EPDM        | 1               | 104.01.10        |
|             | Peristaltic hose NR-A        | 1               | 104.01.11        |
|             | Peristaltic hose NBR-A       | 1               | 104.01.12        |
| 12          | Shaft cap                    | 1               | 104.01.23        |
| 13          | Base left                    | 1               | 106.00.24        |
| 14          | Base right                   | 1               | 106.00.25        |
| 15          | Base middle                  | 2               | 106.00.26        |
| 16          | Stud                         | 2               | 106.00.27        |
| 17          | Driver                       | 1               |                  |
| 18          | Ball bearings anterior       | 1               | 106.00.28        |
| 19          | Ball bearings posterior      | 1               | 106.00.29        |
| 20          | Ring for shaft               | 1               | 106.00.31        |
| 21          | Lip seal box                 | 1               | 106.00.32        |
| 22          | Eye bolt                     | 1               | 106.00.40        |
| 23          | Gasket box                   | 1               | 104.00.33        |
| 24          | O-Ring front cover           | 1               | 104.00.17        |
| 25          | Inspection window with level | 1               | 104.00.36        |
| 26          | Inspection window            | 1               | 104.00.35        |
| 27          | Gasket inspection window     | 2               | 104.00.37        |
| 28          | Gasket shaft cap             | 1               | 104.00.38        |
| 29          | Air breather tube            | 1               | 104.00.41        |
| 30          | Air breather cap             | 1               | 104.00.42        |
| 31          | O-Ring insert                | 2               | 104.00.19        |
| 32          | O-Ring flange                | 2               | 104.00.18        |
| 33          | Drain plug RP                | 2               | 100.00.44        |

### 8.3 Spare parts exploded RP-40 Model

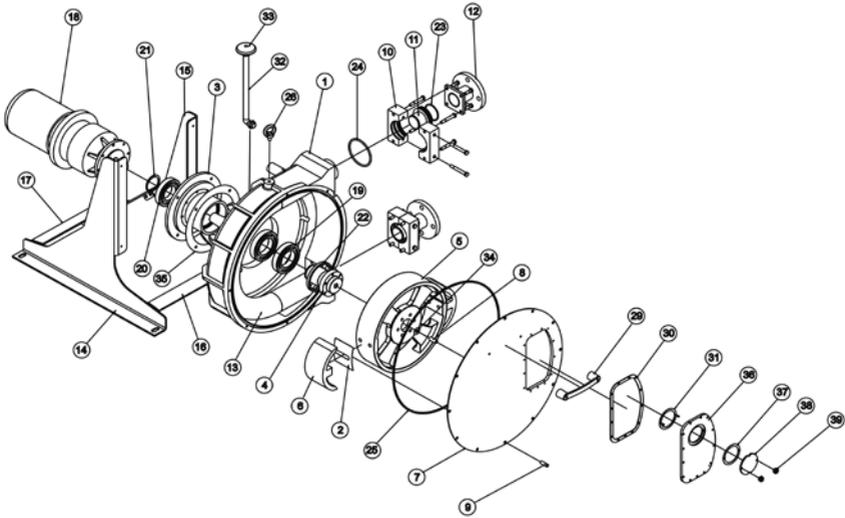


| Pos. | Description                      | Quantity | Reference |
|------|----------------------------------|----------|-----------|
| 1    | Pump body                        | 1        | 109.00.01 |
| 2    | Ball bearing box                 | 1        | 108.00.02 |
| 3    | Rotor shaft                      | 1        | 108.00.03 |
| 4    | Rotor                            | 1        | 109.00.02 |
| 5    | Shoe                             | 2        | 109.00.03 |
| 6    | Shim                             | *)       | 109.00.04 |
| 7    | Front cover                      | 1        | 109.00.05 |
| 8    | Press flange                     | 2        | 109.00.06 |
| 9    | Press ring                       | 2        | 108.00.12 |
| 10   | Connection flange DN40 S.S       | 2        | 108.00.13 |
|      | Connection ANSI flange DN-40 S.S | 2        | 108.00.14 |
|      | Connection flange DN40 PP        | 2        | 108.00.16 |
|      | Connection ANSI flange DN-40 PP  | 2        | 108.00.17 |
|      | Connection flange DN40 PVDF      | 2        | 108.00.18 |
|      | Connection ANSI flange DN40 PVDF | 2        | 108.00.19 |

\*) according to pressure rating see section 5.3.3

| Pos. | Description                  | Quantity | Reference |
|------|------------------------------|----------|-----------|
| 10   | Connection DIN 11851 NW-40   | 2        | 108.00.15 |
|      | Connection TRI-CLAMP         | 2        |           |
| 11   | Peristaltic hose NR          | 1        | 109.00.07 |
|      | Peristaltic hose NR-A        | 1        | 109.00.08 |
|      | Peristaltic hose NBR         | 1        | 109.00.09 |
|      | Peristaltic hose NBR-A       | 1        | 109.00.10 |
|      | Peristaltic hose EPDM        | 1        | 109.00.11 |
|      | Peristaltic hose HYPALON     | 1        | 109.00.12 |
| 12   | Shaft cap                    | 1        |           |
| 13   | Base left                    | 1        | 108.00.26 |
|      | Base left S.S                | 1        | 108.00.36 |
| 14   | Base right                   | 1        | 108.00.27 |
|      | Base right S.S               | 1        | 108.00.37 |
| 15   | Base middle                  | 2        | 108.00.28 |
|      | Base middle S.S              | 2        | 108.00.38 |
| 16   | Stud                         | 2        | 106.00.27 |
| 17   | Driver                       | 1        |           |
| 18   | Ball bearing anterior        | 1        | 108.00.29 |
| 19   | Ball bearing posterior       | 1        | 108.00.30 |
| 20   | Ring for shaft               | 1        | 108.00.32 |
| 21   | Lip seal box                 | 1        | 108.00.33 |
| 22   | Eye bolt                     | 1        |           |
| 23   | Drain plug                   | 2        |           |
| 24   | O-Ring front cover           | 1        | 108.00.35 |
| 25   | Gasket box                   | 1        | 109.00.14 |
| 26   | Inspection window with level | 1        | 104.00.36 |
| 27   | Inspection window            | 1        | 104.00.35 |
| 28   | Gasket inspection window     | 2        | 104.00.37 |
| 29   | Gasket shaft cap             | 1        | 109.00.15 |
| 30   | Air breather tube            | 1        | 109.00.16 |
| 31   | Air breather cap             | 1        | 109.00.17 |
| 32   | O-Ring flange                | 2        | 109.00.18 |
| 33   | Gasket connection            | 2        | 109.00.19 |

## 8.4 Spare parts exploded RP-60 Model

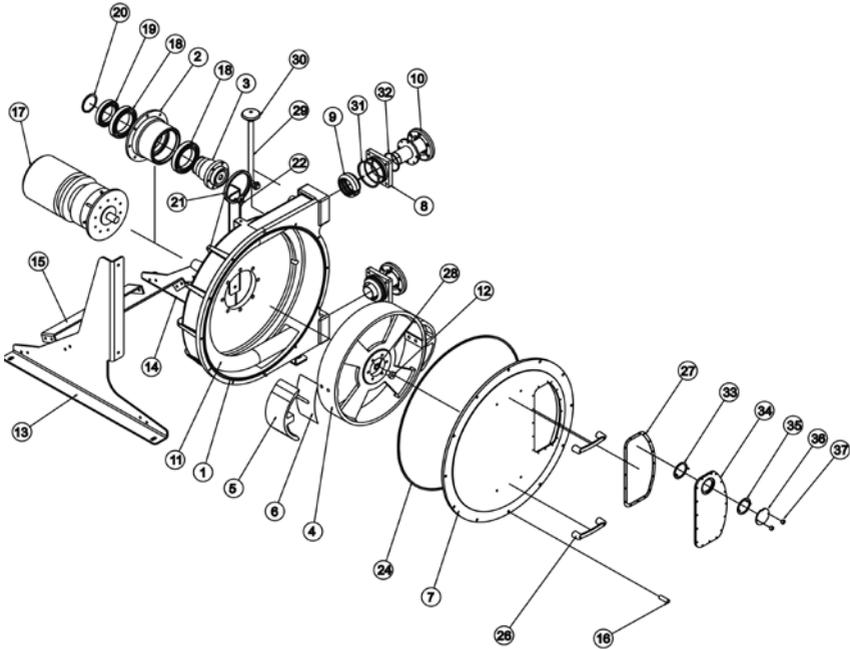


| Pos. | Description                    | Quantity | Reference |
|------|--------------------------------|----------|-----------|
| 1    | Pump casing                    | 1        | 111.00.01 |
| 2    | Shim                           | *)       | 111.00.02 |
| 3    | Ball bearing box               | 1        | 111.00.03 |
| 4    | Rotor shaft                    | 1        | 111.00.04 |
| 5    | Rotor                          | 1        | 111.00.05 |
| 6    | Pressing Shoe                  | 2        | 111.00.06 |
| 7    | Front cover                    | 1        | 111.00.07 |
| 8    | Cap M24                        | 1        | 111.00.08 |
| 9    | Stud                           | 4        | 106.00.27 |
| 10   | Press flange                   | 2        | 110.00.15 |
| 11   | Insert S.S                     | 2        | 111.00.11 |
|      | Insert Polypropylene           | 2        | 111.00.35 |
|      | Insert PVDF                    | 2        | 111.00.36 |
| 12   | Connection flange DIN          | 2        | 111.00.12 |
|      | Connection flange ANSI         | 2        | 111.00.32 |
|      | Connection flange DIN (Halar)  | 2        | 111.00.33 |
|      | Connection flange ANSI (Halar) | 2        | 111.00.34 |

\*) according to pressure rating see section 5.3.4

| <b>Pos.</b> | <b>Description</b>                  | <b>Quantity</b> | <b>Reference</b> |
|-------------|-------------------------------------|-----------------|------------------|
| 13          | Peristaltic hose NR                 | 1               | 111.00.18        |
|             | Peristaltic hose NR-A               | 1               | 111.00.19        |
|             | Peristaltic hose NBR                | 1               | 111.00.20        |
|             | Peristaltic hose NBR-A              | 1               | 111.00.21        |
|             | Peristaltic hose EPDM               | 1               | 111.00.22        |
| 14          | Base left                           | 1               | 111.00.14        |
| 15          | Base right                          | 1               | 111.00.15        |
| 16          | Base middle 100 mm                  | 1               | 111.00.16        |
| 17          | Base middle 60 mm                   | 2               | 111.00.17        |
| 18          | Driver                              | 1               |                  |
| 19          | Ball bearing                        | 2               | 111.00.28        |
| 20          | Ball bearing B                      | 1               | 111.00.29        |
| 21          | Elastic O-ring for shaft            | 1               | 111.00.30        |
| 22          | Lip seal                            | 1               | 111.00.31        |
| 23          | O-Ring connection                   | 2               | 111.00.23        |
| 24          | O-Ring hose                         | 2               | 111.00.24        |
| 25          | O-Ring front cover                  | 1               | 111.00.25        |
| 26          | Eye bolt                            | 1               | 111.00.26        |
| 27          | Hexagonal nut                       | 4               | 111.00.27        |
| 28          | Drain plug RP                       | 2               | 100.00.44        |
| 29          | Inspection window with level        | 1               | 111.00.38        |
| 30          | Inspection window                   | 1               | 111.00.39        |
| 31          | Gasket inspection window            | 2               | 111.00.40        |
| 32          | Air breather tube                   | 1               | 111.00.41        |
|             | Air breather tube for leak. Detect. | 1               | 111.00.42        |
| 33          | Air breather cap                    | 1               | 111.00.43        |
| 34          | Gasket shaft cap                    | 1               | 111.00.44        |
| 35          | Gasket ball bearing box             | 1               | 111.00.45        |

## 8.5 Spare parts exploded RP-70 Model

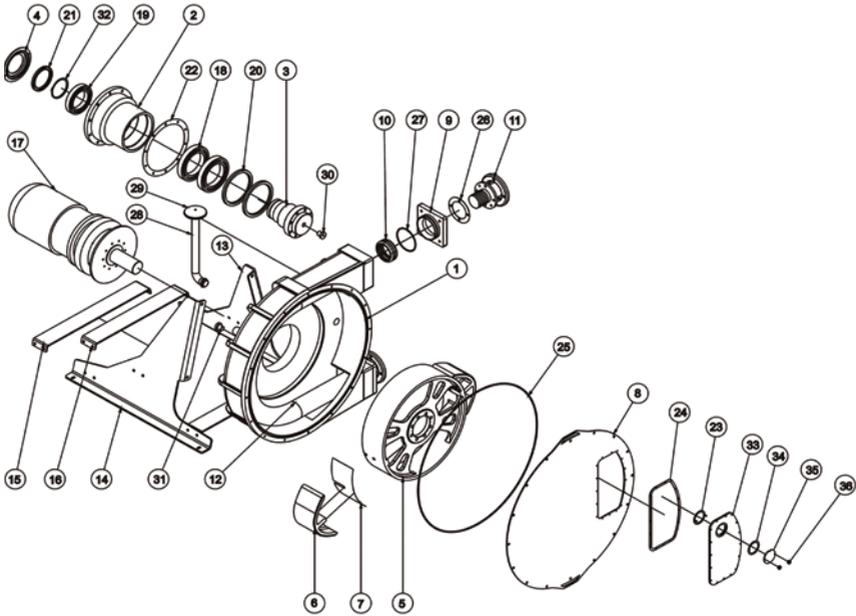


| Pos. | Description                     | Quantity | Reference |
|------|---------------------------------|----------|-----------|
| 1    | Pump body                       | 1        | 112.00.01 |
| 2    | Ball bearing box                | 1        | 111.00.03 |
| 3    | Rotor shaft                     | 1        | 111.00.04 |
| 4    | Rotor                           | 1        | 114.00.01 |
| 5    | Shoe                            | 2        | 114.00.02 |
| 6    | Shim                            | *)       | 114.00.03 |
| 7    | Front cover                     | 1        | 114.00.04 |
| 8    | Press flange                    | 2        | 114.00.05 |
| 9    | Press ring                      | 2        | 112.00.10 |
| 10   | Connection flange DIN DN65 S.S  | 2        | 112.00.11 |
|      | Connection ANSI flange DN65 S.S | 2        | 112.00.12 |
|      | Connection flange DIN DN65 PP   | 2        | 112.00.14 |
|      | Connection ANSI flange DN65 PP  | 2        | 112.00.15 |

\*) according to pressure rating see section 5.3.5

| Pos. | Description                      | Quantity | Reference |
|------|----------------------------------|----------|-----------|
| 10   | Connection flange DIN DN65 PVDF  | 2        | 112.00.16 |
|      | Connection ANSI flange DN65 PVDF | 2        | 112.00.17 |
|      | Connection DIN 11851 NW65        | 2        | 112.00.13 |
|      | Connection TRI-CLAMP             | 2        | 112.00.43 |
| 11   | Peristaltic hose NR              | 1        | 114.00.18 |
|      | Peristaltic hose NBR             | 1        | 114.00.19 |
|      | Peristaltic hose NBR-A           | 1        | 114.00.20 |
|      | Peristaltic hose EPDM            | 1        | 114.00.21 |
|      | Peristaltic hose HYPALON         | 1        | 114.00.22 |
| 12   | Shaft cap                        | 1        | 111.00.08 |
| 13   | Base left                        | 1        | 112.00.24 |
|      | Base left S.S                    | 1        | 112.00.36 |
| 14   | Base right                       | 1        | 112.00.25 |
|      | Base right S.S                   | 1        | 112.00.37 |
| 15   | Base middle                      | 3        | 112.00.26 |
|      | Base middle S.S                  | 3        | 112.00.38 |
| 16   | Stud                             | 2        | 112.00.44 |
| 17   | Driver                           | 1        |           |
| 18   | Ball bearing anterior            | 2        | 111.00.28 |
| 19   | Ball bearing posterior           | 1        | 111.00.29 |
| 20   | Ring elastic for shaft           | 1        | 111.00.30 |
| 21   | Lip seal box                     | 1        | 111.00.31 |
| 22   | Eye bolt                         | 1        | 112.00.29 |
| 23   | Drain plug                       | 2        | 114.00.06 |
| 24   | O-Ring front cover               | 1        | 112.00.35 |
| 25   | Gasket ball bearing box          | 1        | 111.00.45 |
| 26   | Inspection window                | 1        | 114.00.11 |
| 27   | Gasket inspection window         | 1        | 114.00.12 |
| 28   | Gasket shaft                     | 1        | 111.00.44 |
| 29   | Air breather tube                | 1        | 114.00.07 |
| 30   | Air breather cap                 | 1        | 114.00.08 |
| 31   | O-Ring flange                    | 2        | 114.00.09 |
| 32   | O-Ring connection                | 2        | 114.00.10 |

## 8.6 Spare parts exploded RP-80 Model

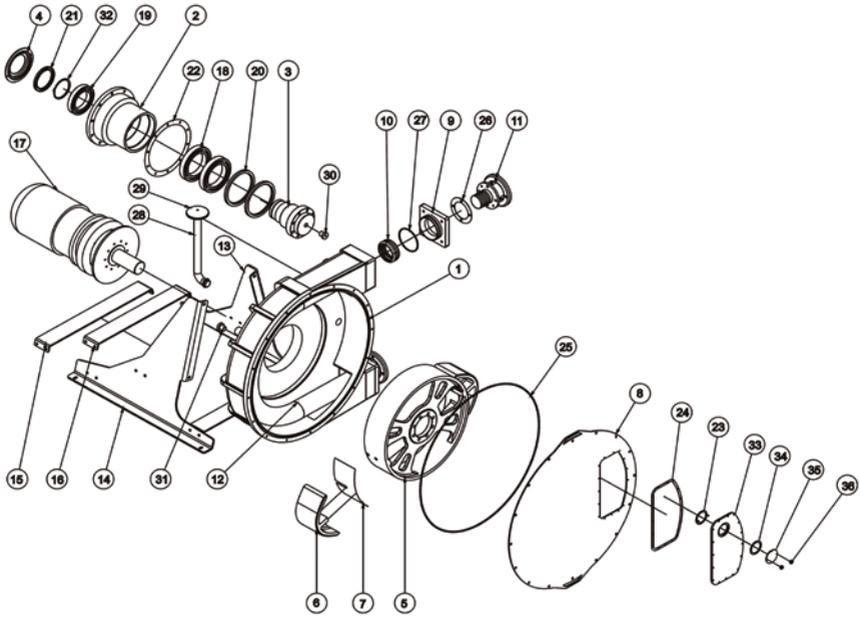


| Pos. | Description                    | Quantity | Reference |
|------|--------------------------------|----------|-----------|
| 1    | Pump body                      | 1        | 118.00.01 |
| 2    | Ball bearing box               | 1        | 119.00.02 |
| 3    | Shaft ball bearing box         | 1        | 119.00.03 |
| 4    | Support lip seal               | 1        | 119.00.04 |
| 5    | Rotor                          | 1        | 118.00.02 |
| 6    | Shoe                           | 2        | 118.00.17 |
| 7    | Shim                           | *)       | 118.00.10 |
| 8    | Front cover                    | 1        | 118.00.08 |
| 9    | Press flange                   | 2        | 118.00.04 |
| 10   | Press ring                     | 2        | 118.00.06 |
| 11   | Connection DIN flange S.S DN80 | 2        | 118.00.05 |
|      | Connection ANSI flange S.S 3"  | 2        | 118.00.27 |
|      | Connection DIN flange PP DN80  | 2        | 118.00.28 |

\*) according to pressure rating see section 5.3.6

| Pos. | Description                     | Quantity | Reference |
|------|---------------------------------|----------|-----------|
| 11   | Connection ANSI flange PP 3"    | 2        | 118.00.29 |
|      | Connection DIN flange PVDF DN80 | 2        | 118.00.30 |
|      | Connection ANSI flange PVDF 3"  | 2        | 118.00.31 |
|      | Connection DIN 11851 NW80       | 2        | 118.00.32 |
|      | Connection TRI-CLAMP            | 2        | 118.00.33 |
| 12   | Peristaltic hose NR             | 1        | 118.00.12 |
|      | Peristaltic hose NBR            | 1        | 118.00.13 |
|      | Peristaltic hose EPDM           | 1        | 118.00.14 |
|      | Peristaltic hose NR-A           | 1        | 118.00.15 |
|      | Peristaltic hose NBR-A          | 1        | 118.00.16 |
|      | Peristaltic hose HYPALON        | 1        | 118.00.17 |
| 13   | Base right                      | 1        | 118.00.21 |
|      | Base right S.S                  | 1        | 118.00.34 |
| 14   | Base left                       | 1        | 118.00.20 |
|      | Base left S.S                   | 1        | 118.00.35 |
| 15   | Base middle long                | 2        | 118.00.19 |
|      | Base middle long S.S            | 2        | 118.00.36 |
| 16   | Base middle short               | 1        | 118.00.18 |
|      | Base middle short S.S           | 1        | 118.00.37 |
| 17   | Driver                          | 1        |           |
| 18   | Ball bearing anterior           | 2        | 119.00.33 |
| 19   | Ball bearing posterior          | 1        | 119.00.34 |
| 20   | Lip seal anterior               | 2        | 119.00.35 |
| 21   | Lip seal posterior              | 1        | 119.00.36 |
| 22   | Gasket ball bearing box         | 1        | 119.00.37 |
| 23   | Inspection window               | 1        | 118.00.09 |
| 24   | Gasket inspection window        | 1        | 118.00.11 |
| 25   | O-Ring front cover              | 1        | 118.00.25 |
| 26   | Gasket connection               | 2        | 118.00.07 |
| 27   | O-Ring press flange             | 2        | 118.00.26 |
| 28   | Air breather tube               | 1        | 118.00.21 |
| 29   | Air breather cap                | 1        | 118.00.22 |
| 30   | Cap ball bearing box            | 1        | 119.00.45 |
| 31   | Drain plug                      | 2        | 118.00.23 |
| 32   | Seeger ball bearing box         | 1        | 118.00.24 |

## 8.7 Spare parts exploded RP-100 Model



| Pos. | Description                     | Quantity | Reference |
|------|---------------------------------|----------|-----------|
| 1    | Pump body                       | 1        | 119.00.01 |
| 2    | Ball bearing box                | 1        | 119.00.02 |
| 3    | Shaft ball bearing box          | 1        | 119.00.03 |
| 4    | Support lip seal                | 1        | 119.00.04 |
| 5    | Rotor                           | 1        | 119.00.05 |
| 6    | Shoe                            | 2        | 119.00.06 |
| 7    | Shim                            | *)       | 119.00.07 |
| 8    | Front cover                     | 1        | 119.00.08 |
| 9    | Press flange                    | 2        | 119.00.09 |
| 10   | Press ring                      | 2        | 119.00.10 |
| 11   | Connection DIN flange S.S DN100 | 2        | 119.00.11 |
|      | Connection ANSI flange S.S 4"   | 2        | 119.00.12 |
|      | Connection DIN flange PP DN100  | 2        | 119.00.13 |
|      | Connection ANSI flange PP 4"    | 2        | 119.00.14 |

\*) according to pressure rating see section 5.3.7

| Pos.           | Description                      | Quantity   | Reference |
|----------------|----------------------------------|------------|-----------|
| 11             | Connection DIN flange PTFE DN100 | 2          | 119.00.15 |
|                | Connection ANSI flange PTFE 4"   | 2          | 119.00.16 |
|                | Connection DIN 11851 NW100       | 2          | 119.00.17 |
|                | Connection TRI-CLAMP             | 2          | 119.00.18 |
| 12             | Peristaltic hose NR              | 1          | 119.00.19 |
|                | Peristaltic hose NBR             | 1          | 119.00.20 |
|                | Peristaltic hose EPDM            | 1          | 119.00.21 |
|                | Peristaltic hose NR-A            | 1          | 119.00.22 |
|                | Peristaltic hose NBR-A           | 1          | 119.00.23 |
|                | Peristaltic hose HYPALON         | 1          | 119.00.24 |
|                | 13                               | Base right | 1         |
| Base right S.S |                                  | 1          | 119.00.26 |
| 14             | Base left                        | 1          | 119.00.27 |
|                | Base left S.S                    | 1          | 119.00.28 |
| 15             | Base middle long                 | 2          | 119.00.29 |
|                | Base middle long S.S             | 2          | 119.00.30 |
| 16             | Base middle short                | 1          | 119.00.31 |
|                | Base middle short S.S            | 1          | 119.00.32 |
| 17             | Driver                           | 1          |           |
| 18             | Ball bearing anterior            | 2          | 119.00.33 |
| 19             | Ball bearing posterior           | 1          | 119.00.34 |
| 20             | Lip seal anterior                | 2          | 119.00.35 |
| 21             | Lip seal posterior               | 1          | 119.00.36 |
| 22             | Gasket ball bearing box          | 1          | 119.00.37 |
| 23             | Inspection window                | 1          | 119.00.38 |
| 24             | Gasket inspection window         | 1          | 119.00.39 |
| 25             | O-Ring front cover               | 1          | 119.00.40 |
| 26             | Gasket connection                | 2          | 119.00.41 |
| 27             | O-Ring press flange              | 2          | 119.00.42 |
| 28             | Air breather tube                | 1          | 119.00.43 |
| 29             | Air breather cap                 | 1          | 119.00.44 |
| 30             | Cap ball bearing box             | 1          | 119.00.45 |
| 31             | Drain plug                       | 2          | 119.00.46 |
| 32             | Seeger ball bearing box          | 1          | 119.00.47 |

## 9 DECLARATION OF CONFORMITY

- Original -

### EC Declaration of Conformity

We hereby declare, **AxFlow Holding AB**  
**Wenner-Gren Center**  
**Sveavaegen 166, floor 14**  
**SE-113 46 Stockholm**  
**Sweden**

That the following designated product complies with the pertinent fundamental safety and health requirements of the EC Directive in terms of its design and construction and in terms of the version marketed by us.

This declaration loses its validity in the event of a modification to the product not agreed with us.

**Description of the product:** Peristaltic pump RealAx RP  
**Product type:** RP-25/B, RP-32/B, RP-40, RP-60, RP-70, RP-80, RP-100  
**Serial no.:** Refer to nameplate on the device  
**Pertinent EC Directives:** CE Declaration of Conformity (Ann. II, A, 2006/42/CE): The pump is conform to the safety requirements according to the 2006/42/CE norms and amendments  
  
Manufacture Declaration (Ann. II, B, 2006/42/CE): The pump cannot be operated before the machine in which is assembled the pump, will be declared in conformity with the safety requirements according to the 2006/42/CE norms and amendments.

Signature:  
Details of the signatory:

  
Hakan Bjerner

## 10 WARRANTY

We guarantee against all manufacturing defects and guarantee the materials that compose the relax pump for two years from the date of delivery. This guarantee does not cover the hose or the lubricant as these are elements that have a normal function wear, irrespective of their duration.

This guarantee is valid as long as the equipment is operated in accordance with this document.

This guarantee includes materials and work but not the cost for transportation of the equipment to the authorized repair shop or its return to the customer.

**DK**

**For service og support til dine  
realax slangepumper kontakt  
venligst:**

AxFlow A/S

Omstillingen: +45 7010 3550

Telefax: +45 7010 3555

Bestillinger, forespørgsler og almene  
spørgsmål kan mailes til os på:

[axflow@axflow.dk](mailto:axflow@axflow.dk)

**Kontor og lager:**

AxFlow A/S

Kong Svends Vej 65A

DK-2765 Smørum

[www.axflow.dk](http://www.axflow.dk)

**FR**

**Pour le service et l'assistance  
technique contactez :**

AxFlow Services

Tél. 0 810 005 202

E-mail: [info@axflow.fr](mailto:info@axflow.fr)

**Pour plus d'informations sur les  
pompes péristaltiques realax,  
contactez :**

Site de Plaisir

AxFlow SAS

87, rue des Poiriers

Sainte Apolline

BP 72

78 372 PLAISIR CEDEX

Tél: +33 (0) 1 30 68 41 41

Fax: +33 (0) 1 30 68 41 00

Site de Notre Dame d'Oé

**AxFlow SAS**

3, rue René Cassin

37390 Notre Dame d'Oé

Tél: +33 (0) 2 47 45 84 58

Fax: +33 (0) 2 47 45 14 34

**Bureau de Mions**

ACK Forankra

8, rue Vaucanson

ZA de la Pesselière

69780 Mions

Tél: +33 (0) 4 72 47 71 71

Fax: +33 (0) 4 72 47 71 74

E-mail: [info@axflow.fr](mailto:info@axflow.fr)

[www.axflow.fr](http://www.axflow.fr)

**IE**

**For more information about realax  
hose pumps please contact:**

AxFlow Ltd.

Unit 33, Western Parkway Business Centre

Ballymount Road

Dublin 12

Tel : +353(0)1 4504522

Fax : +353(0)1 4504887

[www.axflow.ie](http://www.axflow.ie)

**IT**

**Per assistenza e supporto sulle  
pompe peristaltiche realax,  
contattare:**

Reparto di assistenza AxFlow

Axflow SpA

Telefono: 0039 02 484801

Fax: 0039 02 48401926

E-mail: [service@axflow.it](mailto:service@axflow.it)

**Per maggiori informazioni sulle  
pompe peristaltiche realax,  
contattare:**

Axflow SpA

Via del commercio 15/a

20090 Buccinasco (MI)

Telefono: 0039 02 484801

Fax: 0039 02 48401926

E-mail: [info@axflow.it](mailto:info@axflow.it)

[www.axflow.it](http://www.axflow.it)

## PL

**Aby uzyskać więcej informacji na temat pomp realax węża prosimy o kontakt:**

AxFlow Sp. z o. o.  
ul. Floriana 3/5  
04-664 Warszawa  
Telefon centrala: +48 (22) 613 00 12

**Wsparcie techniczne Pompy:**

wewn. 223 lub kom. +48 691 978 211,  
wewn. 254 lub kom. +48 667 856 565

**Wsparcie techniczne części zamienne:**

wewn. 218 lub kom. +48 667 808 878  
Pompy rejon Północ: +48 601 816 003  
Pompy rejon Centrum: +48 601 358 507  
Pompy rejon Południe: +48 605 737 091

**Serwis:**

wewn. 253, lub kom: +48 601 91 27 72

**Realizacje dostaw:**

wewn. 229, 240  
Fax: (22) 815 31 16  
E-mail: [biuro@axflow.pl](mailto:biuro@axflow.pl)  
[www.axflow.pl](http://www.axflow.pl)

## SE

**För mer information om realax slangpumpar vänligen kontakta:**

AxFlow AB  
Ostmästargränd 12  
120 40 Årsta  
(Box 90162, 120 22 Stockholm)  
Telefon: +46(0)8 602 22 00  
Fax: +46(0)8 91 66 66  
E-post: [kundservice@axflow.se](mailto:kundservice@axflow.se)  
[www.axflow.se](http://www.axflow.se)

## SRB

**Za servisiranje i podršku vaših realax peristaltičkih pumpi sa obratite se na adresu:**

AxFlow GesmbH Austria  
Seering 2/2  
8141 Unterpremstätten  
Tel.: +43 316/68 35 09-0  
Fax: +43 316/68 34 92-20  
E-mail: [office@axflow.at](mailto:office@axflow.at)

**Za više informacija o realax peristaltičkim pumpama obratite se na adresu:**

Regionalni menadžer prodaje  
Đorđe Bebić  
Mob: +381 64/93 03 308  
Tel: +381 21/63 64 728  
Fax: +381 21/63 69 366  
E-mail: [djordje.bebic@axflow.at](mailto:djordje.bebic@axflow.at)  
[www.axflow.rs](http://www.axflow.rs)

## UK

**For service and support to your realax hose pumps please contact:**

AxFlow Services  
Phone: +44(0)1484 543649  
Fax: +44(0)1484 512608  
E-mail: [service@axflow.co.uk](mailto:service@axflow.co.uk)

**For more information about realax hose pumps please contact:**

AxFlow London head office  
Orion Park, Northfield Ave, Ealing,  
London, W13 9SJ  
Phone: +44(0)20 85792111

**AxFlow Scotland**

Unit 3, Harlaw Centre, Howe Moss  
Crescent, Kirkhill Industrial Estate,  
Dyce, Aberdeen, AB21 OGN  
Phone: +44(0)1224 729367

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**AxFlow Huddersfield**

Unit 9a, Fieldhouse Business Park,  
Old Fieldhouse Lane,  
Huddersfield, HD2 1FA  
Phone: +44(0)1484 543649

**AxFlow Durham**

Unit 31, Evans Business Centre,  
Aycliffe Business Park, Newton  
Aycliffe, County Durham, DL5 6ZF  
Phone: +44(0)1325 327322

**AxFlow Windsor**

Unit 5, Millside Park, Crouch Lane,  
Winkfield, Windsor,  
Berkshire, SL4 4PX  
Phone: +44(0)1344 886633  
[www.axflow.co.uk](http://www.axflow.co.uk)

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**[www.realaxpumps.com](http://www.realaxpumps.com)**