

Installation and operation manual

# Electromagnetic pump PEP

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Read manual prior to installation or use of this product. Keep manual nearby for future reference.

# Imprint

This manual – containing installation, operation and maintenance instructions complies with EC-Machinery Directive 2006/42/EC and is an integral part of the described lubrication system. It must be kept for future use.

This manual – containing installation, operation and maintenance instructions was created in accordance with the valid standards and regulations on documentation.

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# Information concerning the EC Declaration of Incorporation

## EC Declaration of Incorporation in accordance with EC-Machinery Directive 2006/42/EC, Appendix II Part B

The manufacturer SKF France SAS, 204, Bld Charles de Gaulle, B.P. 239 – 37540 St-Cyr-sur-Loire – FRANCE, declares herewith the conformity of the partly completed machine

Designation:	Electromagnetic pump
Type:	PE
Order No.:	see ID plate
Year of construction:	see ID plate

with the following essential health and safety requirements of the EC Machinery Directive 2006/42/EC when released on the market.  
1.1.2 · 1.13 · 1.3.2 · 1.3.4 · 1.5.1 · 1.5.6 · 1.5.8 · 1.5.9 · 1.6.1 · 1.7.1 · 1.7.3 · 1.7.4

The relevant technical documentation is compiled in accordance with part B of Annex VII of this Directive. We undertake to transmit in electronic format the relevant technical documentation in response to a reasoned request by the competent national authorities. The person empowered to draw up the declaration is the technical standards manager. See the manufacturer's address.

Furthermore the followings directives and (harmonized) standards have been applied.

2011/65/CE

RoHS II

2014/35/EU

Low voltage directive

The partly completed machine must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the EC Machinery Directive 2006/42/EC and other relevant Directives.

St Cyr-sur-Loire, January 15<sup>th</sup>, 2015



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# General

## Meaning of symbols and corresponding information

In this manual, the symbols and safety warnings shown on this page are intended to communicate a particular risk to persons, material assets, or the environment.

All safety instructions must be respected by person exposed to these risks. The safety instructions must be communicated to all other persons.

Instructions attached directly to the equipment, such as

- rotational direction arrows
- fluid connection labels, etc.

must be respected and remain perfectly legible.

It is essential to read these instructions thoroughly and to respect the safety instructions given.

# 1. Safety instructions

The described product was manufactured in accordance with all generally acknowledged regulations pertaining to technology, occupational safety, and accident prevention. However, dangers that can cause physical injury to persons or damage to other material assets might still occur during the use of the product.

## NOTE

These instructions must be read and understood by all persons who are involved with the installation, operation, maintenance, and repair of the product. These instructions must be kept close to the equipment for future reference.

Note that these installation instructions is an integral part of the product. It must be handed over to the new operator of the product if the product is sold.

In addition to the information provided in the installation instructions, all generally applicable regulations on accident prevention and the environment must be observed.

## 1.1 Intended use

Electromagnetic pumps PE serve to supply lubricant to centralized lubrication systems. Other use or use beyond this purpose is considered unintended.

Products of SKF must not be used in conjunction with substances and mixtures classified as hazardous by the Annex I part 2-5 of the CLP regulation (EC 1272/2008), and identified with hazard pictograms GHS01-GHS06 and GHS08.

None of the products manufactured by SKF can be used in conjunction with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1013 mbar) by more than 0.5 bar at their maximum permissible temperature.

Unless otherwise noted, products of SKF must not be used in conjunction with explosive atmospheres according to the ATEX-Directive 2014/34/EU.

#### NOTE

All SKF products may be used strictly respecting the instructions described in this brochure or the operating instructions.

## 1.2 Authorized personnel

The products described in the installation instructions may only be installed, operated, maintained, and repaired by qualified experts. Qualified experts are persons who have been trained, instructed, and familiarized with the end product into which the described product is installed.

These persons are considered capable of such tasks due to their education, training, and experience with valid standards, conditions, accident prevention regulations in effect, and installation conditions. They should be able to carry out the required tasks and to recognize – and thus avoid – any dangers that might otherwise occur.

A definition of what constitutes a qualified person and who are unqualified persons are stipulated in DIN VDE 0105 and IEC 364.

## 1.3 Danger relating to electric current

The electrical connection for the described product may only be established by qualified, instructed persons who have been authorized by the operator or owner to carry out this task. If the product is improperly connected, substantial material or personal damage may be the consequence.

#### ⚠ CAUTION!

Working on products that have not been disconnected from the power supply can cause serious injury or death to persons. Installation, maintenance, and repair work may only be carried out by qualified experts on products that have been disconnected from the power supply. The supply voltage must be turned off before any product components are opened.

## 1.4 Danger relating to system pressure

#### ⚠ CAUTION!

Centralized lubrication systems are under pressure when they are being operated. Such systems must therefore be depressurized before starting installation, maintenance, or repair work and before making any changes to the system.



## 1.5 Warranty

The instructions do not contain any information on the warranty. This can be found in the General Conditions of Sales, which are available at: [www.skf.com/lubrication](http://www.skf.com/lubrication).

# 2. Lubricants

## 2.1 General

### NOTE

All SKF products must only be used for their intended purpose and in accordance with the specifications of the installation instructions for the product in question.

The intended use of this product is for the centralized lubrication/lubrication of bearings and wear points with lubricants. All physical limitations of use stipulated in the documentation of the product such as the owner's manual, technical drawings and catalogs must be observed.

More specifically, we call your attention to the fact that substances and mixtures classified as hazardous by the Annex I part 2-5 of the CLP regulation (EC 1272/2008), and identified with hazard pictograms GHS01-GHS06 and GHS08, can only be used to feed the SKF centralized lubrication systems,

transported or distributed by these systems after consultation with SKF and obtaining written permission.

All products manufactured by SKF are not approved for use in conjunction with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1013 mbars) by more than 0,5 bar at their maximum permissible temperature.

Should there be a need to use the product to convey media other than lubricants or hazardous substances, this must be discussed with SKF first and the company must give express written permission.

In the opinion of SKF, lubricants constitute a design element that must be considered when selecting components and designing centralized lubrication systems. The lubrication properties of the lubricants in question must be considered.

## 2.2 Selection of lubricants

### NOTE

You must observe the machinery manufacturer's information on the lubricants to be used in the machinery.

### NOTE

The manufacturer of the bearing or machinery to be lubricated will specify the lubricant requirements for each point to be lubricated. You must make sure that the required quantity of lubricant is provided to the relevant lubricating point. If a lubricating point is insufficiently lubricated, the bearing may become damaged or jammed.

While the machinery/bearing manufacturer usually specifies lubricants, it is the owner/operator (or maintenance person) who must finally select the appropriate lubricant, with the help of the lubricant supplier. When selecting a lubricant, the type of bearing/wear point, the stresses and strains to be expected during operation, and anticipated ambient conditions must be taken into

account. All financial/economic aspects must also be considered.

### Note

If required, SKF can help customers to select suitable components for the conveyance of the selected lubricant and to plan and design their centralized lubrication system.

### NOTE

If an electromagnetic pump unit is not listed in table 2, please refer to the delivered technical sheet to know the specific technical data of the electromagnetic pump.

If you have further questions, you can contact SKF.

We can test lubricants in our own laboratory to establish their suitability for

conveyance (e.g. 'oil separation' behavior) in centralized lubrication systems.

You can request an overview of lubricant tests offered by SKF from our Service Center.

## 2.3 Approved lubricants

### CAUTION!

Only lubricants that have been approved by SKF for use with the product may be used. Unsuitable lubricants can cause product malfunctions and damage to property.

**⚠ CAUTION!**

Different lubricants must not be mixed together. Doing so can cause damage and require extensive cleaning of the products/centralized lubrication system. To prevent confusion, we recommend that you attach information indicating the lubricant to be used on the lubricant reservoir.

## 2.4 Lubricants and the environment

**⚠ WARNING!**

Lubricants can pollute the soil and water. Lubricants must be used and disposed of in compliance with the rules. Instructions and local regulations must be observed when handling lubricants.

The described product can be operated with lubricants that comply with the specifications in the technical data.

Note that some lubricants may have properties that lie within the permitted limit values and yet not be suitable for use in centralized lubrication systems for other reasons. For example, some synthetic lubricants are not compatible with elastomers.

Note that lubricants are harmful to the environment and flammable; their transportation, storage, and processing are subject to special precautionary measures. For specifications on transportation, storage, processing, and dangers to the use and the environment for the lubricant, refer to the material safety data sheet provided by or available from the lubricant manufacturer. You can ask the manufacturer of the lubricant for the material safety data sheet.

## 2.5 Danger relating to lubricants

**⚠ CAUTION!**

Centralized lubrication systems must be absolutely leak-free. Leaking centralized lubrication systems can cause a slip hazard. When performing installation, maintenance, and repairs test the centralized lubrication system for leaks. Leaky parts of the centralized lubrication system or components of the lubrication equipment have to be sealed immediately.

Leaking centralized lubrication systems or components of the lubrication equipment are a source of danger in relation to slip hazard and the risk of injury. These dangers can cause physical injury to persons or damage to other material assets.

Refer to safety precautions in the lubricant manufacturer's material safety data sheet.

Lubricants are hazardous substance. It is essential to respect any safety instructions given in the lubricant safety data sheet. You can ask the manufacturer of the lubricant for the material safety data sheet.

## 3. Design and function

### 3.1 Versions

Electromagnetic pumps PEP are available in different designs. They differ in the number of outlets as well as in the flow rate per stroke.

The electromagnetic pumps PEP are delivered with three plungers corresponding to the flow rates. One of the plunger is mounted into the pump (flow rate indicated in the order No.). The two other plungers are separately delivered.

How your electromagnetic pump is equipped is indicated on the nameplate and delivery papers. The adjacent table explains the type key.

#### NOTE

If an electromagnetic pump unit is not listed in table 2, please refer to the delivered technical sheet to know the specific technical data of the electromagnetic pump.

**Table 2**

**PEP electromagnetic pump codification system**

**Order No.**                      PEP    -    2                      -                      20                      +                      924

**Number of outlets** —————┐

- 1 = 1 lubricant outlet
- 2 = 2 lubricant outlets
- 3 = 3 lubricant outlets

**Flow rate stroke/outlet** —————┐

- 20 = 20 mm<sup>3</sup>
- 40 = 40 mm<sup>3</sup>
- 60 = 60 mm<sup>3</sup>

**Voltage key** —————┐

- 924 = 24 V DC

## 3.2 Description

The electromagnetic pump PEP consists of a housing-mounting flange, an electric connector (to be ordered separately) and an electromagnet (swiveling by  $-90^\circ$ ,  $0^\circ$ ,  $+90^\circ$ ) that acts on the plunger. In the case of the pump PEP-1, the plunger pushes the pumping piston, which is centered in the pump housing. With the pumps PEP-2 and PEP-3, the plunger pushes the pumping pistons by means of a barrel centered in the pump housing. A return spring pulls each piston back into its initial position.

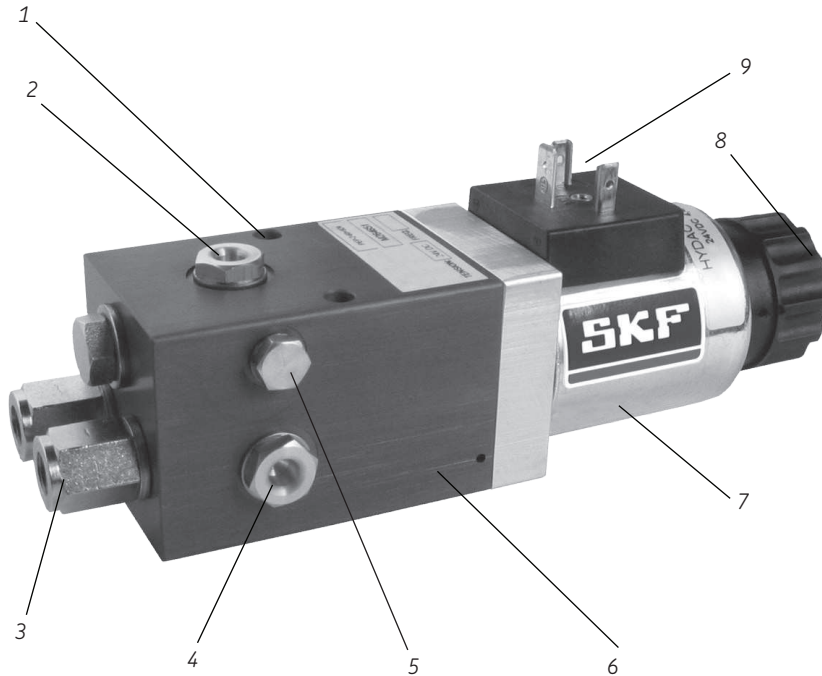
The PEP pump can supply 1, 2 or 3 outlet ports. Each outlet port is equipped with a check valve.

Oil is fed directly from the gravity reservoir into the intake chamber. The pump is vented by an opening.

Power (direct current) is supplied to the pump via a swiveling connector.

The pump can be operated by hand at any time or when there is a power failure.

**Fig. 1**

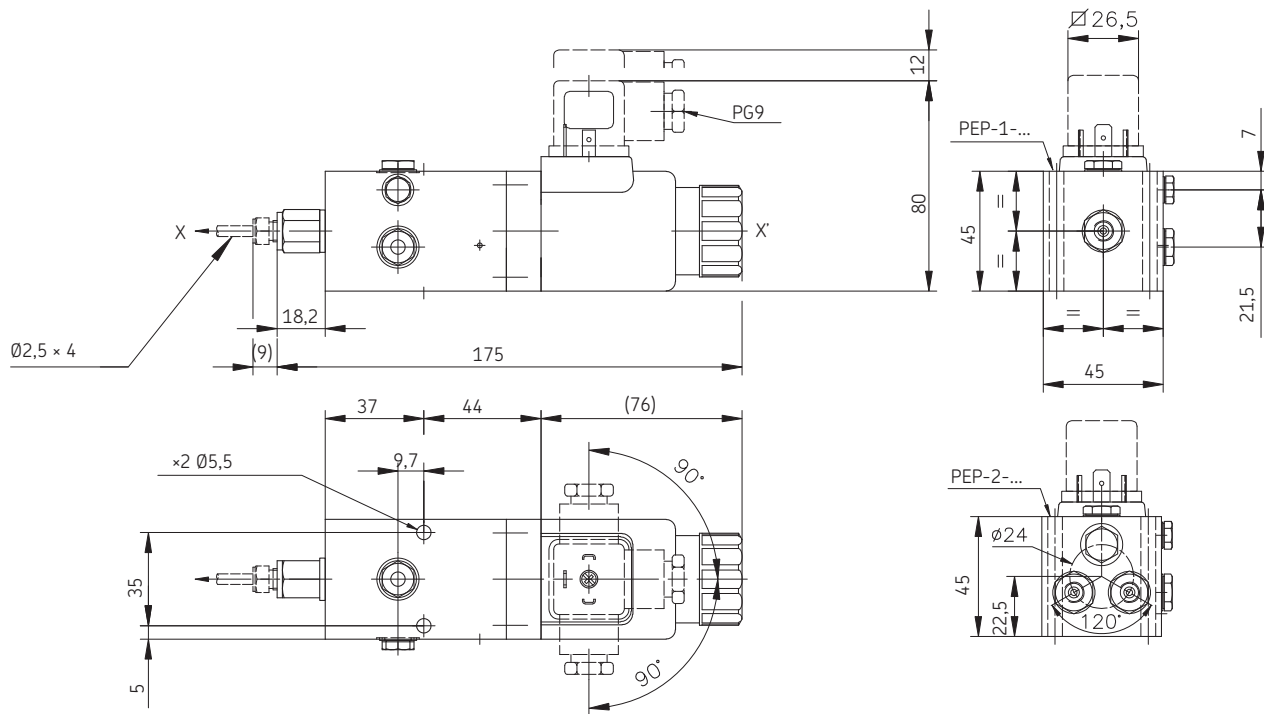


**Electromagnetic pump PEP**

- 1 Fixing holes (x 2)
- 2 Lubricant inlet
- 3 Outlet ports
- 4 Lubricant inlet
- 5 Bleed opening
- 6 Pump housing
- 7 Electromagnet
- 8 Manual control
- 9 Electrical connection

Fig. 2

PEP dimensions



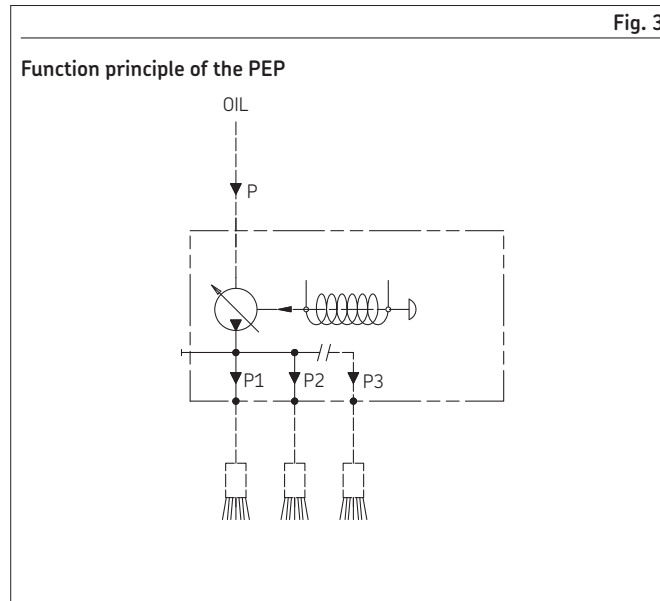


## 3.3 Function

When the electromagnet of the pump is switched on the barrel moves all the pistons towards and a minimal quantity of lubricant is delivered passing the check valves to the lubrication lines connected to the outlet ports. The lubricant flows to lubricating brushes connected at the end of the lubrication line.

When the electromagnet is switched off, return springs bring the pistons back to their initial position and suck lubricant from the intake chamber.

The electromagnetic pump PEP has a maximal working frequency of 2 strokes / second and a duty ratio of 40%.



## 4. Installation instructions

The product described in the mounting instructions may only be installed, operated, maintained, and repaired by qualified experts. Qualified personnel are persons who have been trained, instructed, and familiarized by the user of the end product into which the system is installed. These persons are considered capable of such tasks due to their education, training, and experience with valid standards, conditions, accident prevention regulations in effect, and installation conditions. They should be able to carry out the required tasks and to recognize – and thus avoid – any dangers that might otherwise occur.

A definition of what constitutes a qualified person and who are unqualified persons are stipulated in DIN VDE 0105 and IEC 364.

Before installing/positioning the product, remove the packaging material and any transportation safety devices such as sealing plugs. Keep the packaging material

until any and all problems have been clarified.

### CAUTION!

The electromagnetic pump must not be tilted or dropped.

Country-specific accident prevention regulations and the operating and maintenance instructions for the operator must be observed when carrying out all installation work on machines.

### 4.1 Positioning and installation

The pump must be mounted in a way that protects it from humidity and vibrations. It should also be easily accessible so that all other installation work can be carried out without hindrance. Ensure that there is sufficient circulating air to prevent the system from overheating. For information on the

maximum admissible ambient temperature, see the technical data section.

- The XX' main axis of the electromagnetic pump has to be always horizontal.
- The reservoir is located above the pump (gravity) to get a lubricant inlet pressure between 0.01 and 0.5 bar.
- Distance between the reservoir and the lubricant inlet port 5 m max.
- Lubricant supply with steel or polyamide tube, inner diameter 6.
- The vent opening has to be at the highest point.

The electromagnetic pump PEP is fixed with two M 5x55 screws, distance between the holes 35 mm.

**⚠ CAUTION!**

The electromagnetic pump must be firmly attached to the support plate to prevent any accidental fall. If the pump falls it could be damaged or cause damage and can also injure an operator or another person.

**⚠ CAUTION!**

When drilling installation holes always pay attention to any supply lines or other units as well as further sources of dangers such as moving parts.

**⚠ WARNING!**

The supply voltage on site must agree with the information on the nameplate. Check the fusing of the circuit. Use only the original fuse with the required ampere value. If other fuses are used, damage to property of personal injury may be the consequence.

## 4.2 Hydraulic connection

### 4.2.1 Lubricant inlet

The lubricant reservoir must be above (gravity) the electromagnetic pump. The inlet pressure is between 0,01 and 0,5 bar.

The tube (steel or polyamide)  $\varnothing 6 \times 1$ , is connected to the inlet port G 1/8 according to NF E 03-005 with a maximal depth of 6 mm.

**⚠ CAUTION!**

The maximum inlet pressure specified for operating the electromagnetic pump must not be exceeded.

### 4.2.2 Lubricant outlet

Coming out the electromagnetic pump the lubricant is directed either to projection nozzles or to lubricating brushes.

Connection of tubing to outlet ports M 8x1 according to NFR 954-03.

- Oiling brushes: metallic or polyamide tube  $\varnothing 4 \times 0,7$

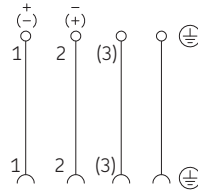


For the oiling brushes the tubing length between the pump and the brushes must not exceed 20 m. Avoid using any connectors, banjo fittings or others on the line.

## 4.3 Electric connection

### ⚠ WARNING!

Only qualified, instructed specialists who are authorized by the operator may install the electrical connections for the electromagnetic pump. The connection conditions and the local regulations (e.g. DIN, VDE, NF) must be scrupulously respected. If the electromagnetic pump is improperly connected, substantial material or personal damage may be the consequence.



Wiring diagram for 24 V DC pump without integrated bridge rectifier and with LED

The electromagnetic pump connector has four wires ( 3 poles and 1 ground).

# 5. Transport, delivery and storage

## 5.1 Transport

SKF products are packaged in accordance with the regulations of the recipient country and in accordance with DIN ISO 9001. Our products must be transported with care. Products must be protected against mechanical influences such as impacts. Transport packaging must be labeled with the information 'Do not drop!'.

**⚠ CAUTION!**

The product must not be tipped up or dropped.

There are no restrictions relating to land, air, or sea transportation.

## 5.2 Delivery

Following receipt of the shipment, the product or products must be checked for damage and the shipping documents should be used to make sure that the delivery is complete. Keep the packaging material until any and all problems have been clarified.

## 5.3 Storage

The following conditions apply to the storage of SKF products.

### 5.3.1 Storage of lubrication units

- Ambient conditions: dry, dust-free environment; storage in well-ventilated, dry area
- Storage time: 24 months max.
- Permitted air humidity: < 65%
- Warehouse temperature: 10 – 40 °C
- Light: direct sunlight/UV radiation must be avoided; nearby sources of heat must be screened

### 5.3.2 Storage of electronic and electrical devices

- Ambient conditions: dry, dust-free environment; storage in well-ventilated, dry area
- Storage time: 24 months max.
- Permitted air humidity: < 65%
- Warehouse temperature: 10 – 40 °C
- Light: direct sunlight/UV radiation must be avoided; nearby sources of heat must be screened

### 5.3.3 Storage – general information

- Ensure that no dust gets into stored products by wrapping them in plastic film
- Store products on racks or pallets to protect them from damp floors
- Before placing products into storage, protect uncoated metal surfaces – and drive parts and mount surfaces in particular – from corrosion using long-term corrosion protection.

# 6. Activation

## 6.1 General

The electromagnetic pump operates automatically. However it is recommended that you regularly verify that the lubricant is correctly projected from the nozzle.

The level of lubricant in the reservoir must be checked visually at regular intervals. When the lubricant level is at a minimum, refill the reservoir.

### **⚠ CAUTION!**

Always respect the equipment manufacturer's recommendations concerning which lubricant to use.

### **⚠ WARNING!**

Lubricant should not be sprayed at a person nor on a hot/incandescent body.

### **⚠ CAUTION!**

Only use a clean lubricant. Soiled lubricants can cause major defects in the system.

Do not mix different lubricants together, as this may cause damage and require the full cleaning of the pump/lubrication system. To prevent any risk of error, it is recommended to clearly identify the lubricant used on the reservoir.

Depending on the nature of the lubricant used, the user should wear protective equipment such as glasses, a mask and gloves. For further information please consult the technical file and the safety data sheet for the lubricant used.

## 6.2 Bleeding

- Open the bleeding plug M 6x1 (wrench H 9)
- Check that lubricant comes out of the bleeding plug without air bubbles (lubricant supply open)
- Put back and tighten the bleeding plug
- Let the pump run (electrically)
- Check that bubble-free lubricant is coming out from every outlet and then connect the tubes to the lubrication points.
- Check at the end the good function of the lubricating brushes.

## 6.3 Adjusting the flow rate

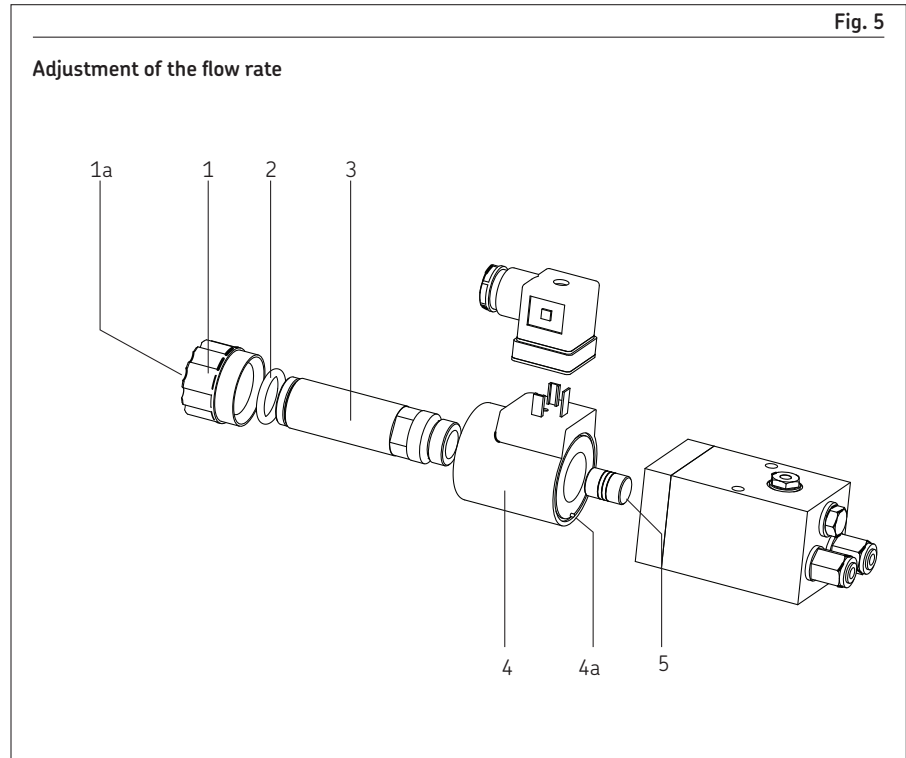
To modify the flow rate of the electromagnetic pump PEP you need to change the plunger.

Procedure:

- Unscrew the nut (1) and remove the seal (2).
- Let the electromagnet (4) slide backwards
- Unscrew the coil (3) - wrench 19.
- Replace the plunger (5) with the one corresponding to the selected flow rate.

Plungers are identified according to the corresponding flow rate (one ring for 20 mm<sup>3</sup>/stroke, two rings for 40 mm<sup>3</sup>/stroke and three rings for 60 mm<sup>3</sup>/stroke).

- Remount in reverse order and respect the position of the snug (4a).
- Run the pump manually - manual command (1a) - to check the good function of the pump.



## 7. Shutdown

### 7.1 Temporary shutdown

You can temporarily shut down the described product by disconnecting the electrical, pneumatic, and/or hydraulic supply connections. For more information, see the section General information in this manual.

If you wish to shut down the product temporarily, refer also to the instructions in the section Transport, delivery, and storage of this manual.

When placing the product back into operation, refer to the information in the sections Installation and Commissioning of this manual.

### 7.2 Permanent shutdown

All country specific legal guidelines and legislation on the disposal of contaminated

equipment must be observed when shutting down the product for the final time.

#### **⚠ CAUTION!**

Lubricants can contaminate the ground and watercourses. Lubricants must be used and disposed of in compliance with the rules. Instructions and local regulations must be observed when handling lubricants.

The system can also be taken back by SKF for disposal if the costs are covered.

## 8. Maintenance

#### **⚠ WARNING!**

Working on products that have not been disconnected from the power supply can cause serious injury or death to persons. Installation, maintenance, and repair work may only be carried out by qualified experts on a product that is not connected to a power supply. The supply voltage must be turned off before any product components are opened.

#### **⚠ WARNING!**

The lubrication system may be under pressure. Centralized lubrication systems must therefore be depressurized before starting installation, maintenance, or repair work and before making any changes to the system.



**⚠ WARNING!**

The described product may be under pressure when it is being operated. The product must therefore be depressurized before starting installation, maintenance, or repair work and before making any changes to the system.

The PE electromagnetic pumps are for the most part maintenance free. To ensure they work properly, however, please regularly check the following:

- If there is no monitoring device on the lines and after longer operation (max. 6 months), check the good function of the pump.
- Regularly check the level of lubricant in the reservoir and, if necessary refill the reservoir.
- Check the system regularly for external damages and leaks.
- All electrical connections and lines must be checked regularly for damage and to ensure that they are firmly in place.
- Any faults found must be properly rectified before the system is activated again.

**! Note**

You must not dismantle the product or parts of the product during the warranty period. Doing so invalidates all warranty claims.

Only original SKF spare parts may be used. It is prohibited for the operator to make alterations to the product or to use non original spare parts and resources. Doing so invalidates all warranty claims.

SKF is not liable for damage caused by improper installation, maintenance, or repair work.

## 9. Failures

Table 3 gives an overview of possible malfunctions and their causes. If you are unable to rectify the malfunction, please contact SKF Service Center.

### Note

You must not dismantle the product or parts of the product during the warranty period. Doing so invalidates all warranty claims.

All other work relating to installation, maintenance, and repair must only be carried out by SKF Service.

Only original SKF spare parts may be used. It is prohibited for the operator to make alterations to the product or to use non original spare parts and resources.

### WARNING!

Working on products that have not been disconnected from the power supply can cause serious injury or death to persons. Installation, maintenance, and repair work may only be carried out by qualified experts on products that are not connected to a power supply. The supply voltage must be turned off before any product components are opened.

### WARNING!

Centralized lubrication systems are under pressure when they are being operated. Centralized lubrication systems must therefore be depressurized before starting installation, maintenance, or repair work and before making any changes to the system.

Table 3

## Failure analysis and remedy

Problem	Cause	Remedy
<b>The pump does not run.</b>	Power supply	Check if the power supply meets the requirement of the pump. Check the connection of the connector. If necessary change the connector. Check the control unit
	Electromagnet out of order	Replace the electromagnet
<b>No outflow</b>	Lubricant inlet	Check the lubricant level in the reservoir and if necessary refill the reservoir. Check the connection of the lubricant inlet.
	Presence of air	Bleed the pump
	Unsuitable lubricant	Empty the entire lubrication system of unsuitable lubricant and fill it with new lubricant. The old lubricant must be properly disposed of.
	The working frequency is too high	Adjust the working frequency of the pump
	No plunger	Check if there is a plunger and if necessary put a new plunger.
<b>Flow rate too low or too high</b>	Wrong working frequency	Adjust the working frequency of the pump
	Wrong flow rate adjustment	Adjust the flow rate. Therefore change the plunger.
	Wrong plunger	Change the plunger
<b>The pump runs with difficulty.</b>	Mounting position	Reinstall the pump PEP according to the horizontal main axis XX'.

# 10. Technical data

Table 4

## Technical data

PE electromagnetic pump

### Pump

Operating temperature	-20 to +60 °C
Working frequency	≤ 2 strokes/s
Life	20 × 10 <sup>6</sup> cycles maximum
Flow rate	20, 40 or 60 mm <sup>3</sup> /cycle
Discharge pressure	< 80 bar
Inlet pressure	0,01 < P < 0,5 bar
Lubricant	mineral or synthetic oils, without additive, effective viscosity < 1 000 mm <sup>2</sup> /s
Seals	fluorocarbon (FPM)

### Electric

Direct current	24 V DC (-10% +5%)
Intensity max.	4.8 A
Power-on time	0,1 ≤ T ≤ 0,2 s
Duty ratio	40%
Electromagnet, power according to the low voltage directive 2014/35/EU.	125 W
Type of enclosure (screwed connector)	IP 65
Connector	according to DIN 43 650

# 11. Spare parts

**Note**

Only original SKF spare parts may be used. It is prohibited for the operator to make alterations to the product or to use non original spare parts and resources.

**Table 5****List of spare parts**

Order No.

Designation

**PE-2014-2+924**

Electromagnet (coil 24 V DC) for pump 24 V DC

**AC.2218**

Electric connector, 3 poles + G, PG9 for 24 V DC power supply EN 175301-803

**PE-2015-1**

Maintenance kit with connectors for 4 outlets, a plunger set, seals and springs.

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**!** **Important information on product usage**  
SKF and Lincoln lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1 013 mbar) by more than 0,5 bar at their maximum permissible temperature.

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