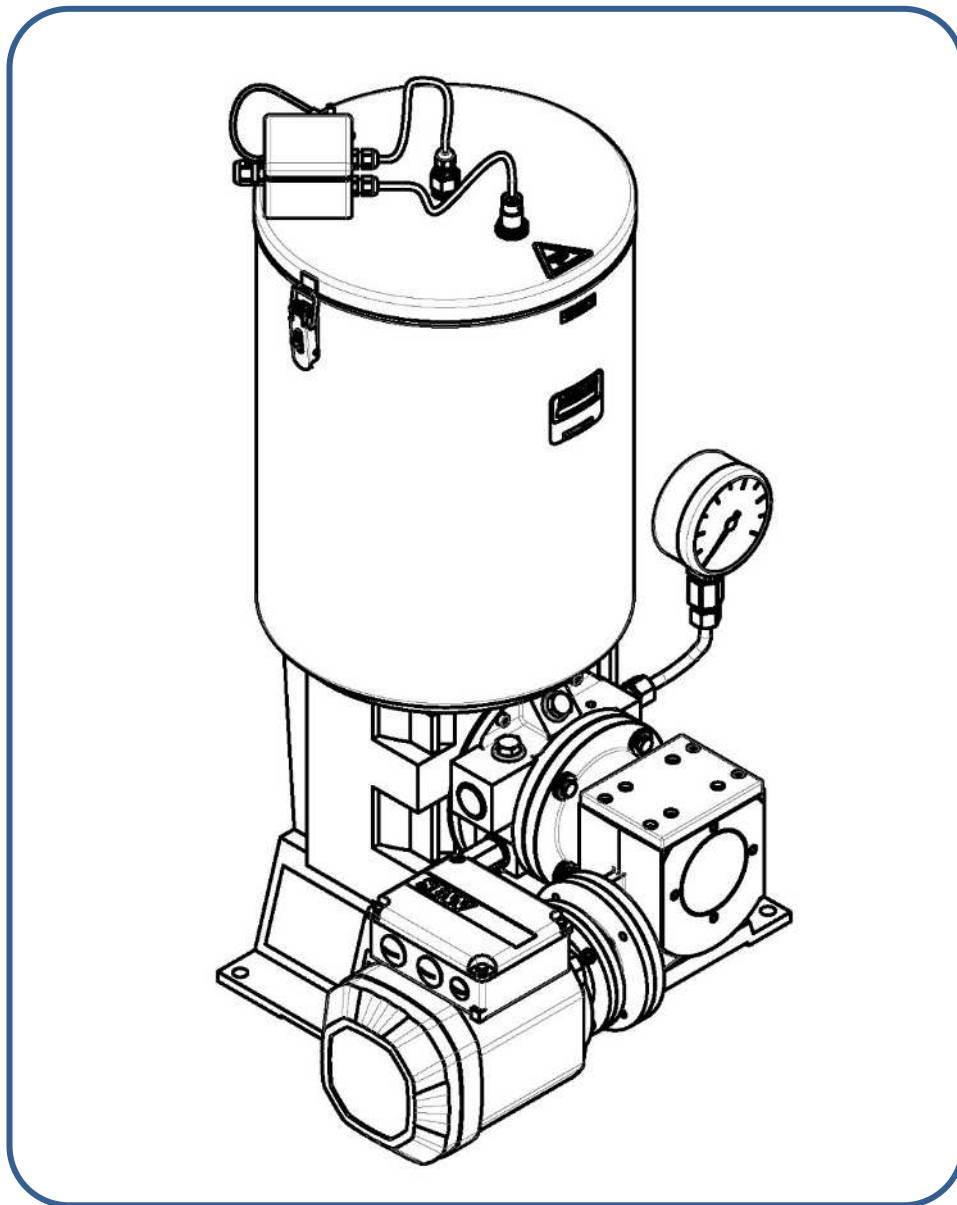


# ZPU 08



# Operating Instructions

## Pump ZPU 08 ATEX

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### EU Declaration of Conformity according to ATEX Directive 2014/34/EU, Annex X

The manufacturer, SKF Lubrication Systems Germany GmbH, Walldorf Plant, Heinrich-Hertz-Str. 2- 8, DE - 69190 Walldorf hereby declares, under its sole responsibility, conformity of the device

Designation: Electrically operated pump for the supply of lubricants within a centralized lubrication system

Type: ZPU 08

Part numbers: 605-40759-6 | 605-40759-7 | 605-41759-8 | 605-46211-3  
6050-000008 | 6050-000017 | 6050-000018

complies with all essential safety and health requirements of ATEX directive 2014/34/EU and the safety and health requirements of machinery directive 2006/42/EC (see appendix to the EU declaration of conformity) at the time of placing on the market).

The technical documentation according

- o ATEX Directive 2014/34/EU Annex VIII No. 2 has been compiled and filed with the conformity assessment body (CE0123).
- o Machinery Directive 2006/42/EC Annex VII Part B has been compiled.

We undertake to transmit these in electronic form in response to a reasoned request by the national authorities. The manufacturer is authorized for the technical documentation. Furthermore, the following Directives and (harmonized) standards were applied in the applicable areas:

#### Directives

2011/65/EU      RoHS II

2014/30/EU      Electromagnetic Compatibility t

EN ISO 12100:2010

EN 1127-1:2019

EN IEC 63000:2018

EN 809:1998+A1:2009/AC2010

EN ISO 80079-36:2016

EN 60204-1:2018

EN ISO 80079-37:2016

#### Standards

The device must not be put into service until it has been established that the machinery into which it is to be incorporated is in compliance with the provisions of ATEX Directive 2014/34/EU, Machinery Directive 2006/42/EC, and all other applicable Directives.

Walldorf, 13.03.2026

Wilhelm Burger  
COO Managing Director  
SKF Lubrication Systems Germany GmbH



# Operating Instructions

## Pump ZPU 08 ATEX

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### UK Declaration of Conformity pursuant to the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (2016 No. 1107)

The manufacturer, SKF Lubrication Systems Germany GmbH, Walldorf Plant, Heinrich-Hertz-Str. 2- 8, DE - 69190 Walldorf hereby declares, under its sole responsibility, conformity of the device

Designation: Electrically operated pump for the supply of lubricants within a centralized lubrication system

Type: ZPU 08

Part numbers: 605-40759-6 | 605-40759-7 | 605-41759-8 | 605-46211-3  
6050-0000008 | 6050-0000017 | 6050-0000018

complies with all essential safety and health requirements of the regulation The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 No. 1107, and the applicable health and safety requirements of the Supply of Machinery (Safety) Regulations 2008 No. 1597 (see appendix to the EU declaration of conformity) at the time of placing on the market.

The technical documentation according to:

- The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 No. 1107 has been compiled and filed with the conformity assessment body (CE0123).
- Supply of Machinery (Safety) Regulations 2008 No. 1597 has been compiled.

We undertake to transmit these in electronic form in response to a reasoned request by the national authorities. The authorized representative for the compilation of the technical documentation is SKF (U.K.) Limited, 2 Canada Close, Banbury, Oxfordshire, OX16 2RT, GBR. The following regulations and standards were applied in the applicable areas:

#### Regulations

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 No. 3032

Electromagnetic Compatibility Regulations 2016 No. 1091

EN ISO 12100:2010

EN 1127-1:2019

EN IEC 63000:2018

EN 809:1998+A1:2009/AC2010

EN ISO 80079-36:2016

EN 60204-1:2018

EN ISO 80079-37:2016

The device must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 (2016 No. 1107), the Supply of Machinery (Safety) Regulations 2008 (2008 No. 1597) and all other applicable regulations.

Walldorf, den 13.03.2026

Wilhelm Burger  
COO Managing Director  
SKF Lubrication Systems Germany GmbH



# Operating Instructions

## Pump ZPU 08 ATEX

### Essential health and safety requirements according to 2006/42/EC, Annex II, No. 1 B

Description of the essential health and safety requirements according to 2006/42/EC, Annex I, which have been applied and fulfilled. Any essential health and safety requirements not listed here are not relevant to this product.

| No.:   | Essential health and safety requirement            | Applicable: | Fulfilled: |
|--|--|-------------|------------|
| 1.1.1  | Definitions  | YES         | YES        |
| 1.1.2  | Principles of safety integration                   | YES         | YES        |
| 1.1.3  | Materials and products                             | YES         | Partially  |
| Regarding 1.1.3: Hazards due to the lubricant used must be assessed by the operator on the basis of the Safety Data Sheet (SDS) and, if necessary, protective measures must be taken.  |  |             |            |
| 1.1.5  | Design of machinery to facilitate its handling     | YES         | YES        |
| 1.1.6  | Ergonomics   | YES         | Partially  |
| Regarding 1.1.6 Not completely fulfilled: The operator must ensure that the pump is integrated into the higher-level machine in such a way that the pump can be operated and filled ergonomically.   |  |             |            |
| 1.2  | Control systems                                    | YES         | YES        |
| 1.2.1  | Safety and reliability of control systems          | YES         | YES        |
| 1.2.3  | Starting   | YES         | YES        |
| 1.2.6  | Failure of the power supply                        | YES         | YES        |
| 1.3  | Protection against mechanical hazards              | YES         | YES        |
| 1.3.1  | Risk of loss of stability                          | YES         | YES        |
| 1.3.2  | Risk of break-up during operation                  | YES         | Partially  |
| Regarding 1.3.2 Not completely fulfilled: The operator must protect the lubrication system against excessive pressure. For this purpose, a pressure relief valve with max. 350 bar opening pressure must be provided on each pump element. |  |             |            |
| 1.3.4  | Risks due to surfaces, edges or angles             | YES         | YES        |
| 1.3.7  | Risks related to moving parts                      | YES         | YES        |
| 1.3.9  | Risks of uncontrolled movements                    | YES         | YES        |
| 1.5  | Risks due to other hazards                         | YES         | YES        |
| 1.5.1  | Electricity supply                                 | YES         | YES        |
| 1.5.6  | Fire   | YES         | YES        |
| 1.5.8  | Noise  | YES         | YES        |
| 1.5.11   | External radiation                                 | YES         | YES        |
| 1.5.13   | Emissions of hazardous materials and substances    | YES         | YES        |
| 1.5.15   | Risk of slipping, tripping, or falling             | YES         | YES        |
| 1.6  | Servicing  | YES         | YES        |
| 1.6.1  | Machinery maintenance                              | YES         | YES        |
| 1.6.2  | Access to operating positions and servicing points | YES         | YES        |
| Regarding 1.6.2 Not completely fulfilled: The operator must ensure that the pump is integrated into the higher-level machine in such a way that the pump can be operated without danger.   |  |             |            |
| 1.6.4  | Operator interventions                             | YES         | YES        |
| 1.7  | Information  | YES         | YES        |
| 1.7.1  | Information and warnings on the machinery          | YES         | YES        |
| 1.7.1.   | Information and information devices                | YES         | YES        |

## Operating Instructions Pump ZPU 08 ATEX

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|        |   |     |     |
|--------|---|-----|-----|
| 1.7.2  | Warning of residual risks   | YES | YES |
| 1.7.3  | Marking of machinery  | YES | YES |
| 1.7.4  | Operating instructions/assembly instructions  | YES | YES |
| 1.7.4. | General principles for the drafting of operating instructions/assembly instructions | YES | YES |
| 1.7.4. | Contents of the operating instructions/assembly instructions                        | YES | YES |
| 1.7.4. | Sales literature  | YES | YES |
|        |   |     |     |

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### 1. Guidelines

As you read these instructions, you will notice a number of depictions and symbols which are to facilitate the navigation and understanding of these instructions. For reasons of better legibility, in these instructions we mainly use the male form for general references. Of course, the female form is also always intended.

| Text representations | Meaning  |
|----------------------|--|
| <b>Bold print</b>    | Highlighting of particularly important words or passages               |
| • List 1             | Marks lists  |
| ○ List 2             | Marks lists  |
| (parenthesis)        | Item numbers   |
| ➤ Instructions       | Instructions to personnel. These always appear in chronological order. |

#### 1.1 Warnings

Activities which generate actual hazards (to life and limb or possible damage to the material) are marked by warnings. Definitely observe the instructions given in the warnings. The following warnings are possible.

| Warning level  | Consequence           | Probability |
|--|-----------------------|-------------|
|  <b>DANGER</b>  | Death/ serious injury | imminent    |
|  <b>WARNING</b> | Death/ serious injury | possible    |
|  <b>CAUTION</b> | Minor injury          | possible    |
| <b>NOTICE</b>  | Property damage       | possible    |

# Operating Instructions

## Pump ZPU 08 ATEX

### 1.2 Illustrations

The illustrations used refer to a specific product. In the case of other products or product versions they may have a schematic character only. The basic functions, however, do not change.

### 1.3 Addresses of manufacturer

| Address of manufacturer plants  | Authorized party placing the product on the market locally  |
|---|---|
| <p>Manufacturer<br/>SKF Lubrication Systems Germany GmbH<br/>E-mail: <a href="mailto:Lubrication-germany@skf.com">Lubrication-germany@skf.com</a><br/><a href="http://www.skf.com/lubrication">www.skf.com/lubrication</a></p> <p>Werk Walldorf<br/>Heinrich-Hertz-Straße 2-8<br/>69190 Walldorf<br/>Deutschland<br/>Tel: +49 (0) 6227 33-0<br/>Fax: +49 (0) 6227 33-259</p> <p>Werk Berlin<br/>Motzener Straße 35/37<br/>12277 Berlin<br/>Deutschland<br/>Tel. +49 (0)30 72002-0<br/>Fax +49 (0)30 72002-111</p> | <p>Great Britain<br/>SKF (U.K.) Limited,<br/>2 Canada Close, Banbury, Oxfordshire,<br/>OX16 2RT, GBR.</p> <p>North-America<br/>SKF Lubrication Business Unit<br/>Lincoln Industrial<br/>5148 North Hanley Road, St. Louis,<br/>MO. 63134 USA</p> <p>South-America<br/>SKF Argentina Pte. Roca 4145,<br/>CP 2001 Rosario, Santa Fe</p> |

**1.4**      ***Warranty***

The instructions do not contain any information on the warranty. This can be found in our general terms and conditions.

**1.5**      ***Disclaimer***

Observation of these instructions is the prerequisite for safe operation and the achievement of product characteristics and performance levels. The manufacturer shall bear no liability for damages - of any kind - resulting from the non-observance of these instructions.

**1.6**      ***Copyright***

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## 2. Safety information

Safety information is to be read and observed by any persons entrusted with works on the machine or by those persons who supervise or instruct the before-mentioned group of persons. It is prohibited to commission or operate the machine prior to reading the Instructions. These Instructions must be kept at an accessible location for further use.

### 2.1. **Emergency stopping of the pump**

In case of an emergency stop the pump by:

- Switching off the machine or system in which the pump has been integrated.

### 2.2. **Intended use**

Supply of lubricants within a centralized lubrication system following the specifications made in these Instructions and the stated explosion protection class: The pump may be used within commercial machines or systems exclusively.

### 2.3. **Explosion protection class / Explosion protection marking**

See declaration of conformity or type identification plate of the pump.

### 2.4. **Expiry of the ATEX certification**

The ATEX certificate for this product expires through:

- Use not in accordance with the intended purpose
- Unauthorized modifications.
- Use of non-original spare parts.
- non-observance of these instructions and other applicable documents.
- Use of non-specified lubricants.
- Non-observance of the specified maintenance and repair intervals.
- Operation with damaged or lacking ATEX painting or ATEX painting done wrongly later on and not complying with the standards applicable for ATEX

### 2.5. **Pump operation**

Operation is permitted only, if in compliance with:

- All information given in these instructions or stated in the referenced documents.
- All laws and regulations to be complied with by the user.
- Information on explosion protection according to directive 1999/92/EC (ATEX 137).
- ATEX approval.

### 2.6. *Foreseeable misuse*

Any other use and purpose of the pump than the ones described before are strictly prohibited. It is expressly forbidden to be used:

- outside the indicated temperature range
- with non-specified means of operation
- with contaminated lubricants or lubricants with air inclusions
- with lubricants the temperature of which exceeds the maximum admissible ambient temperature
- without adequate pressure control valve
- in areas with aggressive or corrosive materials (e.g. high ozone pollution). These may affect seals and painting.
- in areas with harmful radiation (e. g. ionising radiation)
- to supply, transport, or store hazardous substances and mixtures in accordance with annex I part 2-5 of the CLP regulation (EG 1272/2008) and marked with GHS01 - GHS06 and GHS08 hazard pictograms.
- to feed, forward, or store gases, liquefied gases, dissolved gases, vapours, or fluids whose vapour pressure exceeds normal atmospheric pressure (1013 mbar) by more than 0.5 bar at the maximum permissible operating temperature.
- to feed, forward, or store lubricants containing volatile solvents
- in explosive gas and vapour atmospheres, the ignition temperature of which is smaller than 125 % of the maximum surface temperature
- in explosive dust atmospheres, the minimum ignition and glow temperature of which is smaller than 150 % of the maximum surface temperature
- In a different, more critical potentially explosive atmosphere than stated on the type identification plate of the pump used.
- with damaged or lacking ATEX painting or ATEX painting done wrongly later on. The painting must comply with the standards valid for ATEX.
- With a frequency converter.

### **2.7. Prohibition of certain activities**

The following activities may be carried out by manufacturer specialists or authorized persons only due to potential sources of faults that may not be visible for the user, or due to legal regulations:

- Repairs/ changes to the motor/ gear

### **2.8. Conversions or modifications**

Unauthorized conversions or modifications may result in unforeseeable impacts on safety. Therefore, any unauthorized reconstructions or changes are expressly prohibited.

### **2.9. Inspections**





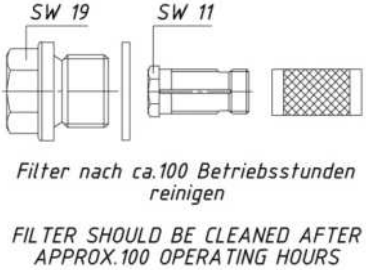
**The following inspections were carried out prior to delivery:**

- Inspections following ATEX.
- Electrical inspections following DIN EN 60204-1 / VDE 0113-1.
- Safety and functional tests


# Operating Instructions

## Pump ZPU 08 ATEX

### 2.10. Labels on the pump

|  |   |
|--|---|
|   | <p><b>Hand injury warning</b></p> <p>During operation of the pump, never remove the lid and reach into the reservoir. Risk of trapping or shearing off hands and fingers!</p> |
|   | Behind the protective fitting marked with this symbol there is the lubricant filter.  |
|   | Behind the protective fitting marked with this symbol there is the check valve.   |
|   | Marks the equipotential bonding connection of the pump.   |
|  | Provides instructions on how to clean the lubricant filter.   |

### 2.11. Note on UKCA marking

|   |  |
|---|--|
|  | The UKCA marking confirms the conformity of the product with the applicable directives of Great Britain. |
|---|--|

### 2.12. **Other applicable documents**

In addition to these instructions, the following documents must be observed by the respective target group:

- Operator's explosion protection document.
- Operational instructions and release provisions by the operator.
- Safety data sheet (MSDS) of the lubricant used.

Gear

Rehfuss

- Instructions for the SM type series

Motor

SEW

- Explosion-protected three-phase motors EDR.71-225 documentation no.: 19402007

Where appropriate:

- Any documents of other components required to set up the centralized lubrication system.
- Project planning documents.
- Other relevant documents for the integration of the pump into the machine or system.

The owner must supplement these documents by the respective valid national or regional regulations laid down by the country in which the product is to be used. If the product is sold or transferred, any associated documents must be passed on to the subsequent operator as well.

**2.13. Sources of hazard**

The pump has been designed, built and tested using state-of-the-art technology. It will have left our company only after having passed stringent safety and reliability tests. Like for all complex machines, also for this pump there may still be involved potential sources of hazard, For example:

**2.14. Moving, rotating parts**

- Drive, stirring paddles

**2.15. Energies**

- Electricity
- Temperature (hot/ cold surfaces)
- Position energy (raised components)
- Parts subject to (operating) pressure
- Parts subject to spring tension

**2.16. Lubricants**

- Greases

**2.17. Explosive substances at the location of use**

- Gases, dusts

# Operating Instructions

## Pump ZPU 08 ATEX

### 2.18. Existing residual risks

| Residual risks  | Remedy  |
|---|---|
| <b>Operation in potentially explosive area</b>  |   |
| Deviating installation position.<br>Loss of correct low-level signal function.  | Maintain installation position ( $\pm 5^\circ$ ). Correct installation position, if necessary.  |
| Heat-up of non-lubricated lubrication points in the area of ignition temperature through undetected faults within the centralized lubrication system. | The operator must check thoroughly whether an operation without low-level signal leads to a new hazard potential (e.g. through heat-up of bearing points on the machine in the area of ignition temperature). If uncertain, provide low-level signal. |
| Heat-up of components in the area of ignition temperature or formation of a potentially explosive atmosphere through whirling up of dust.             | Avoid dust accumulation and remove dust regularly. Select a location of installation with as little dust as possible.   |
| Strong heating up of the motor in case of high load or failure of the motor circuit breaker.  | Switch the pump off. Let parts cool down, eliminate cause. Replace the motor circuit breaker or adjust it correctly.  |
| Loosening of plug-in connections under voltage.   | Secure plug-in connections against inadvertent loosening by means of safety clips. Prior to loosening the plug-in connections: de-energise the pump.  |
| Generation of electrostatic charges or sparks through unsuitable clothing or tools.   | Within potentially explosive areas use ESD clothing and tools only.   |
| Generation of sparks through dropping parts.  | Secure parts against falling. Where appropriate, cover parts in order to avoid the formation of sparks.   |
| Missing or insufficient grounding.  | Check the grounding on the pump.  |
| Bringing catalytic, unstable or pyrophoric substances into a potentially explosive area.  | Ensure that none of these substances gets into the potentially explosive area. Have all substances approved by the operator.  |
| Use of isolating amplifiers to operate the capacitive sensor in potentially explosive areas.  | Mount isolating amplifiers outside potentially explosive areas only.  |
| Operation with damaged or lacking ATEX painting or ATEX painting done wrongly later on and not complying with the standards applicable for ATEX       | Before the first start-up and later at regular intervals check the painting and let it be renewed by authorized personnel, where appropriate.   |

# Operating Instructions

## Pump ZPU 08 ATEX

| Residual risks  | Remedy   |
|---|--|
| <b>Transport lifecycle</b>  |  |
| Tilting or falling of parts during transport, e.g. over inclines. | Secure parts against tilting or falling during transport (e.g. using tapes, belts, ropes, etc.). |

| <b>Installation life cycle</b>   |  |
|--|--|
| Dropping of lifted parts or tools.   | No people may remain under suspended loads. Keep unauthorized persons away. Secure suspended loads using suitable hoisting equipment (e.g. tapes, belts, ropes, etc.).   |
| Falling of parts due to insufficient fixing to the machine.  | Fix parts only to machine parts with sufficient load capacity. Observe the weight. Observe the stated tightening torques. If no tightening torques are stated, the tightening torques are to be applied according to the screw size for 8.8 screws.                        |
| Electric shock when connecting the pump.   | Prior to connection of the pump, de-energize all affected electrical components. If necessary, please observe discharge times. The electrical connection may be carried out by commissioned and qualified electricians only and in accordance with the connection diagram. |
| People falling due to contamination of floors with spilled lubricant.  | Take care when filling. Bind and remove leaked or spilled lubricant immediately with a suitable agent. Observe the legal or company regulations on dealing with oils and greases and contaminated parts.   |
| Ripping out or damage to lines when assembling movable machine parts (e.g. pivot arm).   | If possible, do not mount onto movable parts. Should this not be possible, use flexible hose lines of sufficient length.   |
| Deviating installation position.<br>Foreign objects falling into the motor air intake.<br><br>Borehole for drainage of condensation water is no longer at the lowest point of the motor. | Installation of a suitable protective roof over the air intake.<br><br>Deviating installation position only, if the formation of condensation water has been completed.  |

## Operating Instructions

### Pump ZPU 08 ATEX

| Residual risks   | Remedy   |
|--|--|
| <b>Lifecycle Commissioning/ operation/ maintenance</b>                                   |  |
| Lubricant spraying out due to incorrect screw connection of components or lines.         | Tighten all parts with appropriate tightening torques. Use suitable hydraulic screw connections and lines for the stated pressures. Check these prior to commissioning for correct connection and damage.  |
| Contact with the stirring paddle when filling from the top during operation of the pump. | Fill preferably via the filling connection. Fill only from the top when the pump is not moving. When filling, do not reach into the reservoir.   |
| Electric shock through reduced insulation resistance.                                    | Check the formation of condensation water in the motor regularly. If applicable, drain off condensation water at the drain plug.<br>Check the insulation resistance regularly.   |
| Electric shock when connecting the pump.   | Prior to connection of the pump, de-energize all affected electrical components. If necessary, please observe discharge times. The electrical connection may be carried out by commissioned and qualified electricians only and in accordance with the connection diagram. |

| Residual risks                                      | Remedy   |
|---|--|
| <b>Fault lifecycle</b>                              |  |
| Severe heat-up or defect of motor through blockage. | Switch the pump off. Let parts cool down, eliminate cause. |

| Residual risks  | Remedy  |
|---|---|
| <b>Disposal lifecycle</b>   |   |
| Contamination of the environment with lubricant and wetted parts. | Dispose of the parts following the valid legal and company regulations. |

**2.19. Persons authorized to operate the pump**

**2.20. Operator**

A person who is qualified by training and experience to carry out the functions and activities related to normal operation. This includes avoiding possible hazards that may arise during machine operation.

**2.21. Specialist for maintenance and repairs in potentially explosive atmospheres**

A person who is qualified by training and experience to identify and assess possible risks and hazards during work on the machine or partial components in potentially explosive areas and to initiate suitable measures to prevent such risks. The specialist has knowledge of the different ignition protection types, installation procedures and zone divisions. He is familiar with the rules and regulations relevant for his activities and explosion protection, in particular with ATEX directive 2016/34/EU.

**2.22. Protection of special groups of persons**

The respective legal employment restrictions do apply.

**Persons with cardiac pacemakers and/or metal implants**

Magnetic fields existing in the environment of live conductors and motors may present a hazard to above-mentioned persons. Should it be necessary for them to access such areas, a doctor should be consulted beforehand, as health impairments cannot be excluded generally.

**2.23.      *Safety recommendations to be complied with***

**2.24.      *General behaviour when handling the pump***

- The pump may be used only in awareness of the potential dangers, in proper technical condition, and according to the information in these instructions.
- Familiarize yourself with the functions and operation of the product. The specified assembly and operating steps and their sequences must be observed.
- Any unclear points regarding proper condition or correct assembly/operation must be clarified. Operation is prohibited until issues have been clarified.
- Keep unauthorized persons away from the machine.
- Precautionary operational measures and instructions for the respective work must be observed.
- Responsibilities for different activities must be clearly defined and observed. Uncertainty seriously endangers safety.
- Safety-related protective and emergency devices must not be removed, modified or affected otherwise in their function and are to be checked at regular intervals for completeness and function.
- Remedy occurring faults in the frame of responsibilities. Immediately inform your superior in the case of faults beyond your competence.
- Do not open the reservoir lid during operation. Do not reach into the reservoir.
- Wear personal protective equipment always.
- When handling lubricants, adhere to the respective safety data sheets.
- Never use parts of the centralized lubrication system or of the machine as standing or climbing aids.

### 2.25. **Explosion protection**

- Always behave so that fire and explosion hazards are avoided.
- A written work approval from the operator is required prior to working in potentially explosive areas.
- There must be no indications that parts of the explosion protection are missing or are not working. Should such indications become apparent, switch off the machine and inform a superior without delay. Keep unauthorized persons away.
- Measures for explosion protection must never be deactivated, modified or bypassed.
- It is forbidden to bring in ignition sources such as sparks, open flames and hot surfaces in potentially explosive areas.
- Check the machine at regular intervals for damage which may represent an ignition risk.
- The ignition temperature of the lubricant must lie at least 50 K over the maximum admissible surface temperature of the components.
- The ignition temperature of the ambient explosive gas and vapour atmospheres must be greater than 125 % of the maximum surface temperature.
- The minimum ignition and glow temperature of the ambient explosive dust atmospheres must be greater than 150 % of the maximum surface temperature.
- Only use tools and clothing which are permitted for use in potentially explosive areas (ESD).
- Transport, installation, repairs and work on electrical components may only be carried out, if it has been ensured that the atmosphere is not potentially explosive.
- Repairs or modifications to machines which are protected against explosions may be carried out only by the manufacturer or by a workshop recognized by a named institution and confirmed in writing. If the work is not carried out by the manufacturer, the repairs must be approved by a named expert and confirmed in writing. The repairs are to be marked by a repair sign on the machine, stating the following:
  - Date
  - Company responsible for the work
  - Type of repair
  - If applicable, expert's code
- Transport damages can result in the loss of the explosion protection. If transport damages can be seen, do not assemble the machine or put it into operation

# Operating Instructions

## Pump ZPU 08 ATEX

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- All parts of the grounding concept must be correctly available and connected with the superordinate machine.
- If transport lugs are dismantled after set-up, the threaded bores must be permanently sealed in accordance with the protection class.
- Handle the materials so that no sparks generated by tilting, falling, sliding, rubbing, impacting, etc. If needed, cover materials with suitable means.
- Never disconnect plug-in connections when energized. Secure plug-in connections against inadvertent manual disconnection with the safety clips included in the delivery.
- The operator must check thoroughly whether an operation without low-level signal leads to a new hazard potential (e.g. through heat-up of bearing points on the machine in the area of ignition temperature). If this cannot be ascertained, provide a low-level signal or suitable organisational measures for monitoring of the bearing point temperature.
- Avoid dust accumulation and remove dust immediately. Dust accumulations have a thermally insulating effect and, if whirled up, generate the formation of a potentially explosive atmosphere.
- The pump should be integrated into the operator's lightning protection concept.
- All parts are to be checked regularly for corrosion. Replace the affected parts.
- Terminal boxes must be firmly closed and the cable breakthroughs correctly sealed.
- Additional electrical monitoring devices must be firmly connected and correctly adjusted.
- Protect the motor with a motor circuit breaker against inadmissible heating up.
- When reaching their nominal life, the motor bearings have to be replaced or inspected to ensure their suitability for further utilisation.

### **2.26. Transport / installation / maintenance / repairs / servicing**

- All relevant persons (e.g., operating personnel, supervisors) must be informed of the respective activity prior to starting any work. Observe the precautionary operational measures and work instructions.
- If protective and safety equipment has to be dismantled, it must be reassembled immediately after finishing the work, and then checked for correct function.
- Ensure through suitable measures that movable or detached parts are immobilized during the work and that no limbs can be caught in between by inadvertent movements.
- Carry out transport using only suitable hoisting equipment.
- All the parts to be mounted onto the shaft end of the motor have to be dynamically balanced according to the balancing system of the motor. With a direct coupling, ensure that the parts align precisely (observe the manufacturer's guidelines).
- Assemble the product only outside of the operating range of moving parts, at an adequate distance from sources of heat or cold.
- Dry wet, slippery surfaces.
- Cover hot or cold surfaces accordingly.
- Prior to performing work, de-energize and depressurize the pump and secure it against unauthorized switch-on. Work on electrical components must be carried out by electrical specialists only. Observe any waiting periods for discharging, if necessary.
- Carry out electrical connections only according to the information in the valid wiring diagram and taking the relevant regulations and the local connection conditions into account.
- Do not touch cables or electrical components with wet or damp hands.
- Maintenance and repair work can be subject to restrictions in low or high temperatures (e.g. changed flow properties of the lubricant). Therefore, where possible, try to carry out maintenance and repair work at room temperature.

## Operating Instructions

### Pump ZPU 08 ATEX

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- Carry out all works on electrical components using voltage insulated tools only.
- Fuses must not be bypassed Always replace fuses by such of the same type.
- Ensure correct grounding of the electrical system.
- Undertake drilling at non-critical, non-load bearing parts only. Use any available boreholes. Do not damage lines and cables when drilling.
- Observe possible abrasion points. Protect the parts accordingly.
- Other units of the machine or vehicle must not be damaged or impaired in their function by the installation of the centralized lubrication system.
- All components used must be designed for:
  - maximum operating pressure
  - maximum/ minimum ambient temperature
  - lubricant to be supplied
  - required ATEX zone
  - operating/ ambient conditions at the location of use.
- Parts of the centralized lubrication system must never be subjected to torsion, shearing or bending.
- Check all parts prior to use for contamination and clean, if necessary. Lubricant lines should be primed with lubricant prior to installation. This makes the subsequent ventilation of the system easier.
- Observe the specified tightening torques. When tightening, use a calibrated torque wrench.
- When working with heavy parts use suitable lifting tools.
- Avoid mixing up or wrong assembly of dismantled parts. Mark these parts accordingly.

**2.27. Initial commissioning / daily start-up**

Ensure that:

- All safety devices are completely available and functional.
- All connections are correctly connected.
- All parts are correctly installed.
- All warning labels on the machine are completely available, highly visible and undamaged.
- Illegible or missing warning labels are to be replaced without delay.
- The machine is correctly earthed.

**2.28. Cleaning**

- Risk of fire and explosion when using inflammable cleaning agents. Only use non-flammable cleaning agents suitable for the purpose.
- Do not use any aggressive cleaning agents.
- Do not use sharp-edged or spark-generating tools for cleaning (e.g. cooling fins of the motor).
- Do not use steam jet or high pressure cleaners. Electrical components may be damaged. Observe the IP protection class.
- Cleaning work on energized components may be carried out by electrical specialists only.
- Do not touch cables or electrical components with wet or damp hands.
- Mark damp areas accordingly.
- Remove dust accumulations regularly. Do not whirl up dust whilst doing so.

### 2.29. **Training courses**


In order to provide a maximum of safety and economic viability, SKF carries out detailed training courses. It is recommended that the training courses are attended. Please contact SKF Customer Service for information.

### 2.30. **Inspection of the delivery**

The delivery must be inspected for completeness based on the delivery papers. Transport damages must be reported to the forwarder immediately. Keep the packaging material until any discrepancies are resolved.

### 2.31. **Returns**

Clean all parts and pack them properly before returning them. Mark returns on the packaging as follows.

|   |                               |
|---|-------------------------------|
|  | Do not burden / this side up! |
|   | Protect against moisture      |
|   | Handle with care!             |
|   | Fragile, do not throw!        |

### 2.32. **Disposal**

At the end of its service life, the pump must be dismantled correctly and disposed of according to the respective valid provisions. It is forbidden to use parts of a pump that is to be disposed of or to assemble these parts to make a new pump.

Electrical components:

Dispose of or recycle electrical components following WEEE directive 2012/19/EU.

Plastic or metal parts

can be disposed of with commercial waste.



### 3. Lubricant

Lubricants are used specifically for certain application purposes. In order to fulfil their tasks, lubricants must fulfil various requirements to varying extents. The most important requirements for lubricants are:

- Reduction of abrasion and wear
- Corrosion protection
- Noise minimisation
- Protection against contamination or penetration of foreign objects
- Cooling (primarily with oils)
- Longevity (physical/ chemical stability)
- Compatibility with as large a number of materials as possible
- economic and ecological aspects.

#### 3.1. *Selection of lubricants*

A suitable lubricant is selected already when designing the machine and forms the basis for the planning of a centralized lubrication system.

The selection is made by the manufacturer/ operator of the machine, preferably together with the lubricant supplier based on the requirement profile defined by the specific application.

Should you have little or no experience with the selection of lubricants for centralized lubrication systems, please contact SKF. You will avoid possible costly downtimes through damage to your machine/ system or damage to the centralized lubrication system.

#### 3.2. *Ageing of lubricants*

After a prolonged downtime, the lubricant must be inspected prior to recommissioning as to whether it is still suitable for use due to chemical or physical ageing. We recommend that you undertake this inspection already after a machine downtime of 1 week. If doubts arise as to the suitability of the lubricant, please replace it prior to re-commissioning and, if necessary, undertake initial lubrication manually.

### 3.3. **Specification**

Lubricants of the following consistencies can in principle be conveyed using SKF centralized lubrication systems.

- Lubricating greases up to NLGI 2
- solids content up to 5 % maximum
- mineral oils with a viscosity of minimum 40 mm<sup>2</sup>/s at +40 °C

Lubricants must be compatible with the following materials:

- steel / grey iron / brass / copper / aluminium
- NBR / FPM / ABS / PA / PU

### **NOTICE**

#### **Risk of damage to the machine or system**

Do not mix lubricants. This may have unforeseeable effects on the usability and therefore on the function of the centralized lubrication system.

Due to the multitude of possible additives, it is possible that individual lubricants, which - according to the manufacturer's data sheets - fulfil the necessary specification, are not in fact suitable for use in centralized lubrication systems (e.g. incompatibility between synthetic lubricants and materials). In order to avoid this, always use lubricants tested by SKF.

Please contact the SKF Service Department for an overview of lubricants tested by SKF.



### **DANGER**

#### **Risk of explosion**

The ignition temperature of the lubricant must lie at least 50 K over the maximum admissible surface temperature of the components.

---

## 4. Technical data

### 4.1. Ambient temperatures

|                         | min.   | max.   |
|-------------------------|--------|--------|
| Part no.: 605-40759-6   | -20 °C | +50 °C |
| Part no.: 605-40759-7   | -20 °C | +40 °C |
| Part no.: 605-41759-8   | -20 °C | +40 °C |
| Part no.: 605-46211-3   | -20 °C | +40 °C |
| Part no.: 6050-00000008 | -20 °C | +40 °C |
| Part no.: 6050-00000017 | -20 °C | +50 °C |
| Part no.: 6050-00000018 | -20 °C | +50 °C |

### 4.2. Explosion protection marking

|                         |                      |                            |
|-------------------------|----------------------|----------------------------|
| Part no.: 605-40759-6   | II 2G Ex h IIB T3 Gb |                            |
| Part no.: 605-40759-7   | II 2G Ex h IIC T4 Gb | II 2D Ex h IIIC T120 °C Db |
| Part no.: 605-41759-8   | II 2G Ex h IIC T4 Gb | II 2D Ex h IIIC T120 °C Db |
| Part no.: 605-46211-3   | II 2G Ex h IIC T6 Gb | II 2D Ex h IIIC T85°C Db   |
| Part no.: 6050-00000008 | II 2G Ex h IIC T3 Gb | II 2D Ex h IIIC T135°C Db  |
| Part no.: 6050-00000017 | II 2G Ex h IIC T3 Gb | II 2D Ex h IIIC T135°C Db  |
| Part no.: 6050-00000018 | II 2G Ex h IIC T3 Gb | II 2D Ex h IIIC T135°C Db  |

### 4.3. Operating pressure

Operating pressure is limited to max. 410 bar  $\pm$  10 % by a pressure control valve.

All system parts must be designed for the maximum operating pressure.

### 4.4. Installation position

Vertical, i.e. reservoir at top. Maximum deviation  $\pm$  5°

### 4.5. sound pressure level

< 70 dB (A)

### 4.6. Maximum set-up height

1000 m above sea level.

### 4.7. Maximum dust thickness

< 5 mm

### 4.8. Weight

The weight of the empty pump is approx. 62 kg.

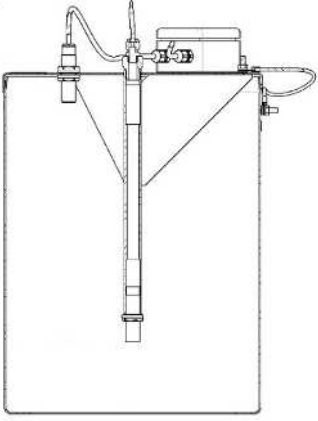
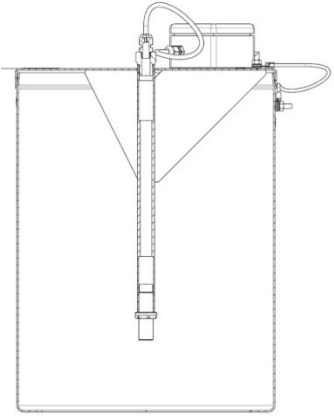
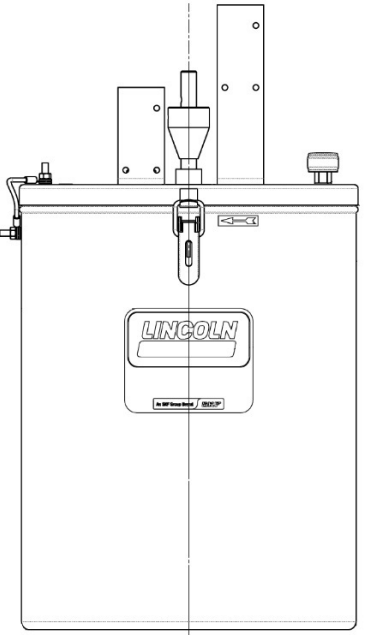
### 4.9. Gear ratio

i = 20:1

# Operating Instructions

## Pump ZPU 08 ATEX

### 4.10. reservoir

|  |   |
|--|---|
| <p>40 XB<br/>(Part no.: 605-46554-6)</p>   | <p>40 XL<br/>(Part no.: 605-46554-7)</p>  |
| <p>Used with pump<br/>6050-00000008, 6050-0000017,<br/>6050-0000018, 605-41759-8<br/>605-40759-6</p> | <p>Used with pump<br/>Part no.: 605-40759-7</p>                                     |
|                    |  |
| <p>40 XBF<br/>(Part no.: 605-77177-1)</p>  |   |
| <p>Used with pump<br/>605-46211-3</p>  |   |
|                   |   |

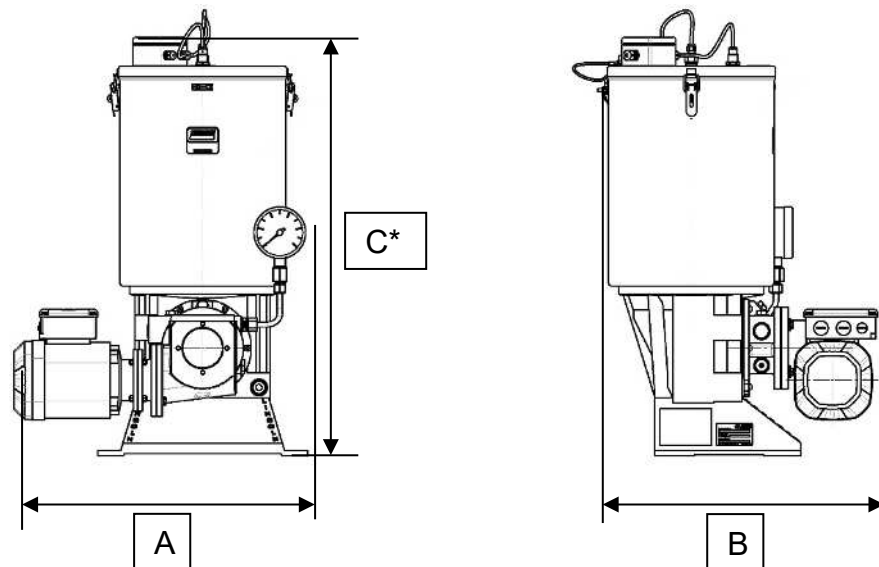
# Operating Instructions

## Pump ZPU 08 ATEX

### 4.11. Space requirements

|  | Width<br>A     | Depth<br>B     | Height<br>C*   |
|--|----------------|----------------|----------------|
|  | approx. 530 mm | approx. 580 mm | approx. 820 mm |

It is recommended that an additional free space of 100 mm is provided in each direction for maintenance and inspections works.  
 The distance between the motor air intake and any obstacle must total to at least 40 mm. Ensure that the air can flow into the motor without hindrance. Outflowing air must not be sucked in again directly.



\* When planning consider an additional free space of 350 mm above the reservoir to remove the reservoir lid (XB and XL) respectively to extend the guide rod (XBF).

**4.12. Electrical connection**

Connection must be done in such way that a permanent, safe electrical connection can be maintained (use safe protective conductor connection and dedicated cable ends; avoid protruding wire ends). Make sure that there are no foreign particles, dirt or humidity in the terminal box. Close the terminal box dust- and watertight. In addition to the general valid installation prescriptions for electrical systems, the electrical connection is carried out in accordance with the applicable national ATEX regulations, for example:

- ElexV
- DIN EN 60079-14, VDE 0165-1  
Electrical systems in explosive areas
- DIN EN 60079-17  
Electrical equipment for use in areas with combustible dust
- DIN VDE 0100

Tolerance voltage  $\pm 5\%$

Tolerance frequency  $\pm 2\%$

The waveform and mains symmetry must be maintained so that the motor heat-up remains within the permitted limits.

The distance to any voltage-carrying or conductive parts has to correspond to the minimum values following DIN EN 60079-7 / VDE 0170-6.

| Nominal voltage        | Distance to motors<br>Ex category 2 |
|------------------------|-------------------------------------|
| For motors up to 500 V | 5 mm                                |

**4.13. IP Types of protection**

Gear  
IP 65

Motor  
IP 55

Capacitive sensor  
IP 67

Terminal box  
IP 65

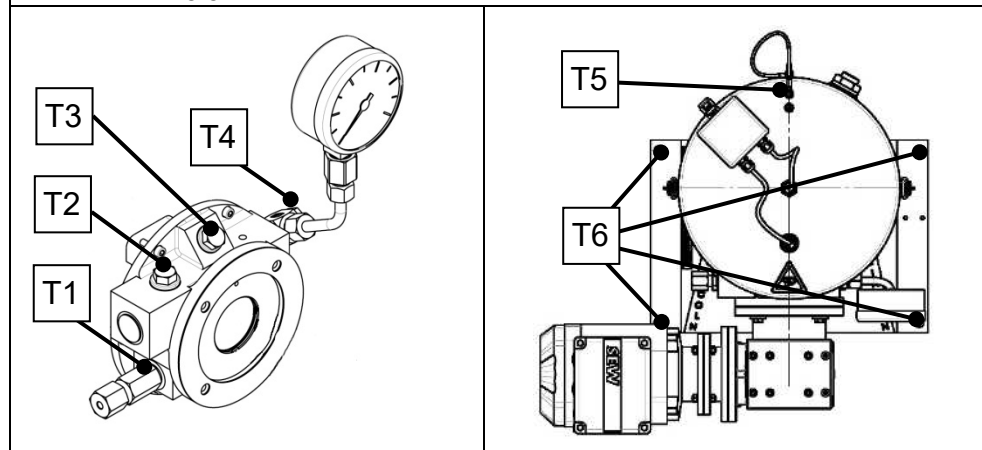
# Operating Instructions

## Pump ZPU 08 ATEX

### 4.14. Tightening torques

| Component |   | Tightening torques |
|-----------|---|--------------------|
| T1        | Pressure control valve AF 24              | 80 ± 8 Nm          |
| T2        | Lubricant filter:                         |                    |
|           | Protective fitting AF 19                  | 80 ± 8 Nm          |
|           | Filter element AF 11                      | 20 ± 2 Nm          |
| T3        | Check valve                               |                    |
|           | Protective fitting AF 19                  | 80 ± 8 Nm          |
|           | Check valve (flat-bladed screwdriver)     | 20 ± 2 Nm          |
| T4        | Pressure gauge AF 22                      | 60 ± 5 Nm          |
| T5        | Grounding connection lid / reservoir AF 6 | 8 ± 1 Nm           |
| T6        | Pump to foundation                        | 18 ± 2 Nm          |

If no tightening torques are stated, the tightening torques are to be applied to the screw size for 8.8 screws.



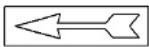
**4.15. Connections / outlets**

- Pressure line G  $\frac{3}{4}$ "
- Relief line G  $\frac{3}{4}$ "
- Filling adapter G  $\frac{3}{4}$ "

**4.16. Filling possibilities**

- via filling adapter
- via reservoir lid

**4.17. Rotational direction of the pump**

|   |  |
|---|--|
|  | The rotational direction is always clockwise (CW). Observe the arrow on the reservoir. The rotational direction of the motor is as needed. |
|---|--|

**4.18. Admissible speed of the eccentric shaft**

|               |               |  |
|---------------|---------------|--|
| Minimum speed | Maximum speed |  |
| 10 rpm        | 85 rpm        |  |

When supplying the pump without motor and gear, speeds must be maintained by selecting a suitable motor and gear.

**4.19. Output**

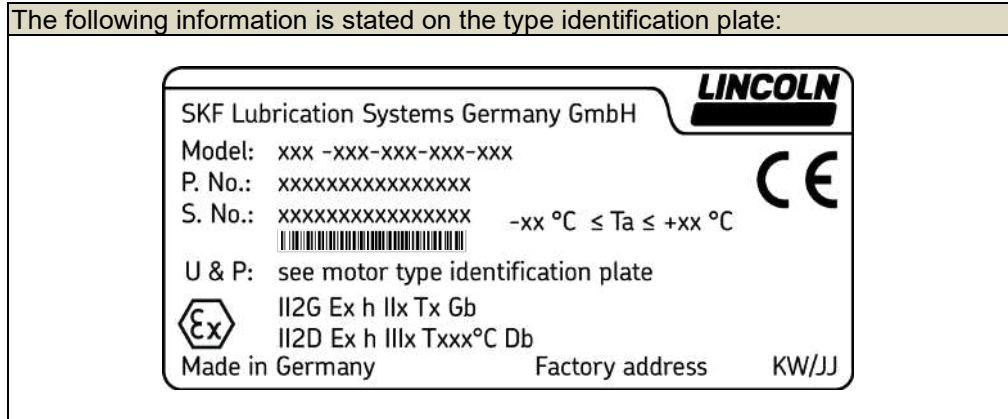
approx. 11.2 dm<sup>3</sup>/h

This information applies for grease of NLGI class 2 at +20 °C and 100 bar counterpressure. Deviating conditions such as different NLGI class, temperature or counterpressure may lead to a deviation in the flow rate. This should be taken into account when designing the lubrication points.

**4.20. Lubricant filter**

Filter area: 5.1 cm<sup>2</sup>  
Grade of filtration: 280 μm

**4.21. Type identification plate**



**4.22. Storage until the first use**

- in the original packaging
- in dry rooms with little dust
- without direct sun or UV radiation
- without aggressive, corrosive substances at the place of storage
- without vibrations
- protected against pests (insects, rodents, etc.)

Temperature range: - 20 °C minimum  
+ 40 °C maximum

For part number 605-40759-6 + 50 °C maximum

Air humidity (relative): 90 % maximum

Storage time: 24 months max.

**NOTICE**

**Risk of damage to the machine or system**

Prior to initial use or after the storage time ends, prefilled components must be inspected and replaced, if necessary, in case the lubricant quality has changed, or filled with lubricant suitable for the application purpose.

**Special storage conditions of the motor**

- Do not store the motor on the fan cover.
- After a longer period of storage, make sure to check the insulation resistance.



In case of storage > 1 year:

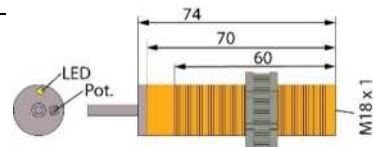
Make sure to observe the grease service life of the ball bearings which is reduced by 10 % per year.

# Operating Instructions

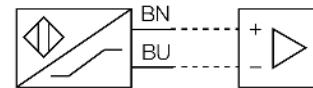
## Pump ZPU 08 ATEX

### 5. Technical data of the capacitive sensor

|  |   |
|--|---|
| Type designation                           | Capacitive sensor (Namur)   |
| Part number                                | 664-34621-2   |
| Rated operating distance                   | 5 mm for flush installation   |
| Sn   | 7.5 mm for non-flush installation   |
| Secured switching distance                 | $\leq (0.72 \times S_n)$ mm   |
| Hysteresis                                 | 1..... 20 %   |
| Temperature drift                          | $\leq \pm 20$ %   |
| Repeatability                              | $\leq 2$ %  |
| Ambient temperature                        | -25 °C - +70 °C   |
| Voltage                                    | nominal 8.2 VDC   |
| Current consumption, not activated         | $\leq 1.2$ mA   |
| Current consumption, activated             | $\geq 2.1$ mA   |
| Switching frequency                        | 0.1 kHz   |
| Output function                            | 2-wire NAMUR  |
| Internal capacity (C <sub>i</sub> )        | 150 nF  |
| Inductivity (L <sub>i</sub> )              | 150 µH  |
| Design                                     | Threaded tube M 18 x 1  |
| Dimensions                                 | 74 mm   |
| Housing material                           | Plastic PA12-GF30   |
| Material of active surface                 | Plastic PA12-GF30, yellow   |
| Admissible pressure onto front closing cap | $\leq 6$ bar  |
| Max. tightening torque                     | 2 Nm  |
| Housing nut                                |   |
| Connection                                 | Cable   |
| Cable quality                              | Ø 5.2 LiYY, PVC, 10 m   |
| Cable cross section                        | 2 x 0.34 mm <sup>2</sup>  |
| Vibration resistance                       | 55 Hz (1mm)   |
| Shock resistance                           | 30 g (11ms)   |
| Degree of protection                       | IP 67   |
| MTTF                                       | 448 years following SN 29500<br>40 °C   |
| Switching status display                   | LED, yellow   |
| Fine adjustment                            | Potentiometer   |
| Approvals                                  | KEMA 02 ATEX 1090X  |
| Marking                                    |  II 2G EX ia IIC T6 Gb<br> II 1D EX ia IIIC T 135 °C Da<br>max. U <sub>i</sub> = 20 V, I <sub>i</sub> = 20mA, P <sub>i</sub> = 200 mW |



Connection diagram



# Operating Instructions

## Pump ZPU 08 ATEX

### 6. Technical data of the motor

| Part no.                               | Type of motor       | ATEX no.            |       | Manufacturer |       |
|--|---------------------|---------------------|-------|--------------|-------|
| 245-13984-6                            | EDRS80S4            | PTB 10 ATEX 3026/01 |       | SEW          |       |
| for pumps with part number 605-40759-6 |                     |                     |       |              |       |
| Rated power                            | 0.55                |                     | kW    | Code         | ----- |
| Operating mode                         | S 1                 |                     |       | Flange       | Ø 120 |
| Rated frequency                        | 60                  |                     | Hz    | IP           | 55    |
| Rated speed                            | 1715                |                     | rpm   | Design       | B14   |
| Rated voltage                          | 254 /               | 440                 | VDC   | Size         | 80    |
| Circuit                                | D /                 | Y                   |       | Shaft        | 19x40 |
| Nominal current                        | 2.15                | 1.24                | A     |              |       |
| Performance factor                     | 0.81                |                     | cos φ |              |       |
| Insulation class                       | F                   |                     |       |              |       |
| Starting current                       | 5,6 x Rated current |                     |       |              |       |

| Part no.  | Type of motor       | ATEX no.            |       | Manufacturer |       |
|---|---------------------|---------------------|-------|--------------|-------|
| 245-13984-7   | EDRS80S4            | PTB 10 ATEX 3026/01 |       | SEW          |       |
| for pumps with part numbers 605-40759-7 / 605-41759-8 |                     |                     |       |              |       |
| Rated power   | 0.55                |                     | kW    | Code         | ----- |
| Operating mode  | S 1                 |                     |       | Flange       | Ø 120 |
| Rated frequency                                       | 50                  |                     | Hz    | IP           | 55    |
| Rated speed   | 1415                |                     | rpm   | Design       | B14   |
| Rated voltage   | 219 – 241 /         | 380- 440            | VDC   | Size         | 80    |
| Circuit   | D                   | Y                   |       | Shaft        | 19x40 |
| Nominal current                                       | 2.35                | 1.36                | A     |              |       |
| Performance factor                                    | 0.81                |                     | cos φ |              |       |
| Insulation class                                      | F                   |                     |       |              |       |
| Starting current                                      | 5,1 x Rated current |                     |       |              |       |

| Part no.  | Type of motor       | ATEX no.            |       | Manufacturer |       |
|---|---------------------|---------------------|-------|--------------|-------|
| 2450-00000038   | EDRN80MK4           | PTB 10 ATEX 3026/01 |       | SEW          |       |
| for pumps with part numbers 605-40759-7 / 605-41759-8 |                     |                     |       |              |       |
| Rated power   | 0,55                |                     | kW    | Code         | ----- |
| Operating mode  | S 1                 |                     |       | Flange       | Ø 120 |
| Rated frequency                                       | 50                  |                     | Hz    | IP           | 55    |
| Rated speed   | 1430                |                     | rpm   | Design       | B14   |
| Rated voltage   | 220 – 240 /         | 380 - 415           | V     | Size         | 80    |
| Circuit   | D /                 | Y                   | Shaft | Shaft        | 19x40 |
| Nominal current                                       | 2,40                | 1,38                | A     |              |       |
| Performance factor                                    | 0,76                |                     | cos φ |              |       |
| Insulation class                                      | F                   |                     |       |              |       |
| Starting current                                      | 5,9 x Rated current |                     |       |              |       |




## Operating Instructions

### Pump ZPU 08 ATEX

| Part no.                                  | Type of motor         | ATEX no.            | Manufacturer |       |
|---|-----------------------|---------------------|--------------|-------|
| 2450-00000120                             | EDRN80MK4             | PTB 10 ATEX 3026/61 | SEW          |       |
| for pumps with part numbers 6050-00000017 |                       |                     |              |       |
| Rated power                               | 0,55                  | kW                  | Code         | ----- |
| Operating mode                            | S 1                   |                     | Flange       | Ø 120 |
| Rated frequency                           | 50                    | Hz                  | IP           | 65    |
| Rated speed                               | 1430                  | rpm                 | Design       | B14   |
| Rated voltage                             | 220 – 240 / 380 - 415 | V                   | Size         | 80    |
| Circuit                                   | D / Y                 | Shaft               | Shaft        | 19x40 |
| Nominal current                           | 2,40                  | 1,38                | A            |       |
| Performance factor                        | 0,76                  | cos φ               |              |       |
| Insulation class                          | F                     |                     |              |       |
| Starting current                          | 5,9 x Rated current   |                     |              |       |

| Part no.                                  | Type of motor         | ATEX no.            | Manufacturer |       |
|---|-----------------------|---------------------|--------------|-------|
| 2450-00000123                             | EDRN80MK4             | PTB 10 ATEX 3026/61 | SEW          |       |
| for pumps with part numbers 6050-00000018 |                       |                     |              |       |
| Rated power                               | 0,55                  | kW                  | Code         | ----- |
| Operating mode                            | S 1                   |                     | Flange       | Ø 120 |
| Rated frequency                           | 50                    | Hz                  | IP           | 65    |
| Rated speed                               | 1430                  | rpm                 | Design       | B14   |
| Rated voltage                             | 220 – 240 / 380 - 415 | V                   | Size         | 80    |
| Circuit                                   | D / Y                 | Shaft               | Shaft        | 19x40 |
| Nominal current                           | 2,40                  | 1,38                | A            |       |
| Performance factor                        | 0,76                  | cos φ               |              |       |
| Insulation class                          | F                     |                     |              |       |
| Starting current                          | 5,9 x Rated current   |                     |              |       |

**7. Brief description of the pump**

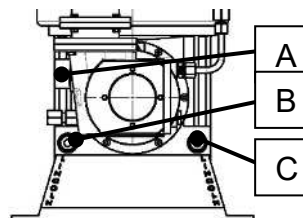
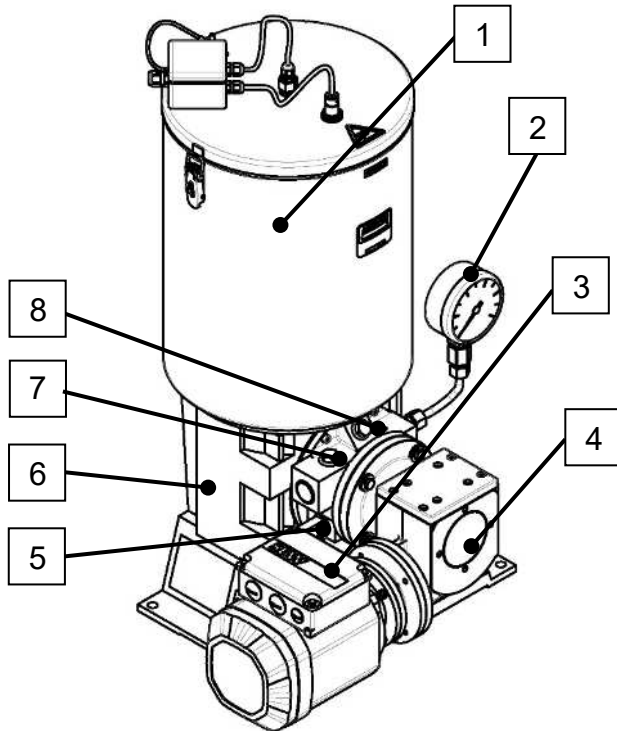
|  |  |
|--|--|
| <br> |  <b>DANGER</b>  |
|  | <p><b>Risk of explosion</b><br/>                 Carry out work on electrical parts only if the atmosphere is not potentially explosive.</p> <p><b>Electric shock</b><br/>                 Disconnect the pump from the mains prior to all work on electrical parts.</p> |

The ZPU 08 pump consists of the following main components:

- (1) Reservoir with stirring paddle, capacitive sensors for filling-level monitoring and grounding
- (2) Pressure gauge
- (3) Motor
- (4) Gear
- (5) Pressure control valve
- (6) Pump housing
- (7) Lubricant filter
- (8) Check valve

**Connections:**

- (A) Pressure line
- (B) Relief line
- (C) Filling line



# Operating Instructions

## Pump ZPU 08 ATEX

### Operating principle:

The gear reduces the motor speed to the necessary speed of the pump. The eccentric shaft drives the high-pressure pump elements and the stirring paddle. The stirring paddle homogenizes and vents the lubricant.

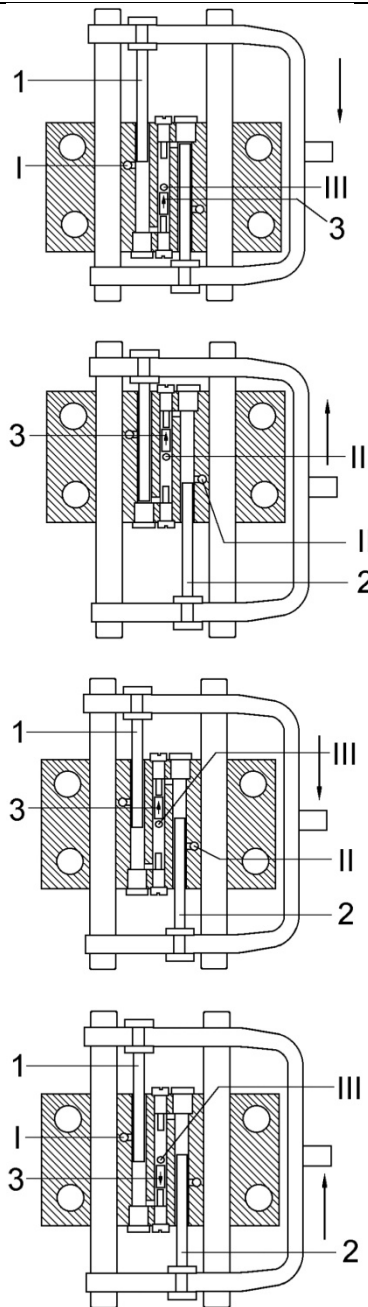
The high-pressure pump element works as a piston pump with two counter-actively acting pistons that alternately take in lubricant and dispense it via the outlet bore to the pressure line. The outlet channels of the high-pressure pistons are controlled by a floating valve piston.

The pump element is driven via a hollow shaft with eccentric pin and switch roll, whereby the rotational movement is transformed into an oscillating linear movement of the pump pistons.

This type of drive allows to select or change the rotational direction of the pump shaft as needed.

The lubricant supplied by the pump element is dispensed to the pressure-line connection via a check valve and a lubricant filter.

One respectively two sensors determine the reservoir filling level (low-level respectively high- and low-level indication).



### Upper end position

Start of the piston movement downwards

### Downward working stroke

Supply piston 1 displaces the floating piston upwards together with the lubricant in front of it. Lubricant is supplied into the pressure line via the open outlet bore. Supply piston 2 generates a negative pressure that sucks in lubricant after opening bore II.

### Lower end position

Start of the piston movement upwards

### Upward working stroke

By means of the lubricant of the previous suction stroke, supply piston 2 displaces the floating piston downwards. Lubricant is supplied into the pressure line. Supply piston 1 sucks in lubricant.

## 8. Installation and commissioning

### 8.1. Filling of the reservoir

#### NOTICE

##### Risk of centralized lubrication system faults

When filling ensure that no dirt enters the reservoir.

#### Filling via filling adapter

##### *Automatic Filling:*

The filler pump is started by the low-level indication and stopped by the high-level indication.

##### *Manual filling:*

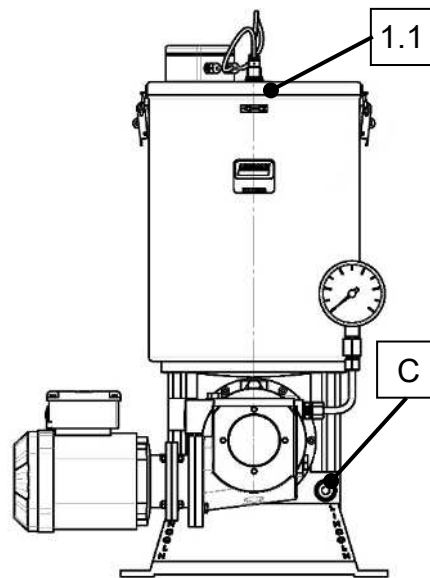
Let a second person observe the filling procedure.

- Switch the filling pump on.
- Fill the reservoir
- Switch off the filler pump.

Filling port (C)

#### Filling via the reservoir lid

- Switch the pump off.
- Open the reservoir lid (1.1).
- Ensure that no dirt enters the reservoir or the inner side of the reservoir lid. In case of reservoirs equipped with a sensor, the sensor must not be damaged or contaminated.
- Fill in lubricant up to a maximum of 1 cm below the reservoir rim.
- Reposition and close the reservoir lid (1.1). Make sure not to crush the grounding cable.
- Switch the pump on.



**8.2. *Inadvertent filling with incorrect lubricant***

Should incorrect lubricant have been filled, please proceed as follows:

- Switch off the pump and secure it against being switched on.
- Remove lubricant.
- Clean the reservoir, pump housing and, if applicable, the tubing system.
- Fill in lubricant of correct specification.
- Switch the pump on.
- Inform your superior to ensure that the error won't occur again.

**8.3. *Inspections prior to initial start-up***

**NOTICE**

**Risk of damage to the machine**

Fill the feed lines with lubricant and fill the lubrication points manually. Otherwise the bearing points may become damaged due to a lack of lubricant.

Check the entire system for accordance with the intended purpose and the planning documentation.

Ensure that all parameters, characteristic values and means of operation have been correctly adjusted or are present.

If deviations are detected, they must be remedied without delay.

In order to warrant safety and function, a person assigned by the operator must inspect certain areas of the central lubrication system prior to initial commissioning. Report any detected deficiencies immediately to your superior and remedy them. Deficiencies may be remedied by an authorized and qualified specialist only. Check the following points prior to initial commissioning.

### Electrics

- Electrical connections carried out correctly.
- Cable entries sealed correctly.
- The voltage and frequency of the power network correspond to the information on the type identification plate of the motor.
- Monitoring devices and additional equipment (e.g. motor circuit breaker) are correctly connected and adjusted.
- Grounding is complete.
- All parts such as lines, cables, metering devices, etc. have been correctly installed and are undamaged.

### Mechanics:

- No dust accumulations present, in particular on the air intake of the motor.
- Loose or missing parts remaining (e.g. pressure relief valves, feed lines).
- Damages, deformations, or cracks.
- Smoke or smouldering spots.
- Discolorations, contaminations and/or corrosion.
- Unusual humidity.
- Unusual odours, vibrations, or sounds.
- Leakages of lubricant at connections and from lines.

## **8.4. *Activation of the pump***

The pump is activated on:

- Installation into a machine
  - By switching on the machine contact.
  - By a control provided by the customer.

**9. Standard operation**

**9.1. Daily start-up**

Below find the activities to be carried out in case of standard operation.




**9.2. Inspections**

With regard to the actions listed below "Inspections prior to commissioning" the operator has to determine adequate control intervals depending on the respective operating situation of the pump.

**9.3. Filling of the reservoir during operation**

Fill the reservoir as described in the chapter "Installation and commissioning".

**9.4. Cleaning**

|   |  |   |   |   |
|---|--|---|---|---|
|    |  <b>DANGER</b>  |   |   |   |
|  | <p><b>Danger to life</b><br/>Risk of fire and explosion when using inflammable cleaning agents. Do not use steam jet or high pressure cleaners. Electrical components may be damaged.<br/>Do not touch cables or electrical components with wet or damp hands. Cleaning work on energized components may be carried out by electrical specialists only.<br/>Wear personal protective equipment always.</p> |   |   |   |
|  |   |  |  |  |

**Exterior cleaning**




- Thorough cleaning of all surfaces with a damp cloth.
- Mark and secure wet areas.

**Interior cleaning**

- Normally, interior cleaning is not required.

## 10. Maintenance

Regular and appropriate maintenance is a prerequisite to detect and clear faults in time. As individual operating conditions cannot be defined for all applications, the listed terms represent a general advice for undisturbed operation. The terms have to be adapted to the local conditions always.

|   |   |
|---|---|
|  |  <b>DANGER</b>   |
|  | <p><b>Risk of explosion</b><br/>When carrying out maintenance, repair or modification works on explosion-protected machines, observe the legal and operational prescriptions. If the works are not carried out by the manufacturer, authorized and qualified personnel only is allowed to carry out such works. Works then have to be reviewed by a qualified and officially recognised person.<br/>Carry out work on electrical parts only, if the atmosphere is not potentially explosive.</p> <p><b>Electric shock</b><br/>Make sure to disconnect the pump from the power supply before carrying out works on electrical parts.</p> |

### 10.1. **Maintenance of pump**

Any maintenance works may be carried out only while the pump is idle and when there is no potentially explosive atmosphere.

The pump is mainly maintenance-free.

However, the following parts should be inspected and, if necessary, replaced by new parts at regular intervals:

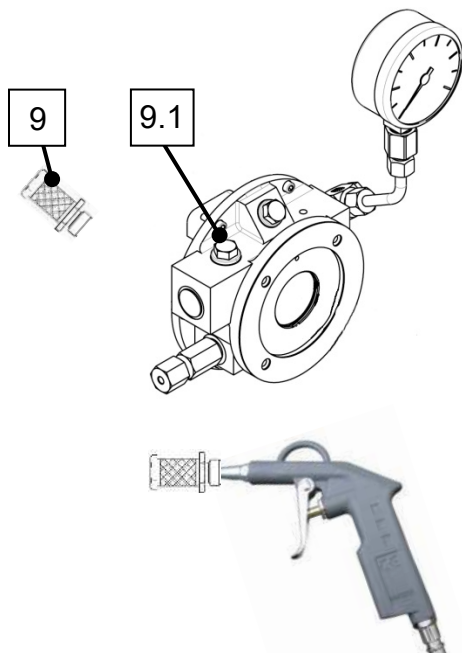
- Pressure relief valves
- Check valves
- Lubricant filter

Tolerance frequency of the pressure control valve  $\pm 10 \%$

If this tolerance is exceeded, the pressure control valve must be replaced.

**10.2. Maintenance of lubricant filter**

The lubricant filter should be checked and, if necessary, be cleaned every 100 operating hours. To do so proceed as follows:

|   |                  |           |                    |           |   |
|---|------------------|-----------|--------------------|-----------|---|
| <ul style="list-style-type: none"> <li>➤ Switch the pump off.</li> <li>➤ Unscrew protective fitting (9.1) from lubricant filter (AF 19).</li> <li>➤ Unscrew lubricant fitting (9) (SW 11).</li> <li>➤ Clean lubricant filter with non-flammable cleaning agents.</li> <li>➤ Blow lubricant filter with compressed air from inside two outside - as shown in the accompanying figure - to avoid contaminations in the strainer.</li> <li>➤ Reinstall lubricant filter and protective fitting.</li> </ul> <p><u>Tightening torques</u></p> <table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">Lubricant filter</td> <td>20 ± 2 Nm</td> </tr> <tr> <td>Protective fitting</td> <td>80 ± 8 Nm</td> </tr> </table> | Lubricant filter | 20 ± 2 Nm | Protective fitting | 80 ± 8 Nm |  |
| Lubricant filter  | 20 ± 2 Nm        |           |                    |           |   |
| Protective fitting  | 80 ± 8 Nm        |           |                    |           |   |



**10.3. Maintenance of gear unit**

| For further relevant information on maintenance, see original Instructions by the gear manufacturer.  |  |
|---|--|
| Activity  | Interval   |
| Visual check for: <ul style="list-style-type: none"> <li>• Leakages</li> <li>• Damages to the surface protection/ corrosion protection</li> </ul> | Every 3,000 hours, but at least once a year<br><br>Depending on the type of application and ambient conditions |

**10.4. SEW motor maintenance**

| For further relevant information on maintenance, see original Instructions by the motor manufacturer. |   |
|---|---|
| Activity  | Interval  |
| Check the airways and surfaces  | Depending on the local degree of contamination, at the latest, however, every 4 weeks   |
| Initial inspection  | After about 500 operating hours, at the latest, however, after 1/2 a year.  |
| Ball bearing/ radial sealing ring   | Check and, if necessary, replace every 10,000 operating hours   |
| Re-lubrication / oil change   | Re-lubrication interval, grease volume and grease quality → see type identification respectively lubrication plate of the motor |
| Main inspection   | After about 10,000 operating hours, at the latest, however, after 1 year.   |

**10.5. Measurement of the insulation resistance**

|   |  |
|---|--|
|  |  <b>DANGER</b>   |
|   | <p><b>Electric shock</b><br/>Do not touch the terminals when measuring the insulation resistance. If necessary, wear insulating gloves. Observe the manual of the insulation measurement device.</p> |

|  |
|--|
| <b>NOTICE</b>  |
| <p><b>Risk of damage to the motor</b><br/>The voltage applied for the insulation test must not exceed 500 V.</p> |

Before the first start-up and after longer downtimes measure the insulation resistance following the standards (e. g. VDE 0100 / DIN EN 61557-1) valid in the country of use.

If the insulation resistance falls below the required minimum value, determine and eliminate the cause (e.g. appropriate drying of the coil, etc.).

**10.6. Maintenance of gear unit**

**Capacitive sensor:**

The capacitive sensor is maintenance-free. Repairs are not possible.

**11. Troubleshooting**

## Operating Instructions

### Pump ZPU 08 ATEX

| <b>Motor of pump does not run</b>   |   |  |
|---|---|--|
| Possible cause  | Visible   | Remedy   |
| Fault in the superior machine/<br>external control unit.<br>Motor circuit breaker has tripped.    | no pump noise   | Check power supply lines/<br>external control/ motor circuit<br>breaker. |
| <b>Motor runs, but pump does not supply lubricant</b>   |   |  |
| Possible cause  | Visible   | Remedy   |
| Reservoir empty   | by visual check   | Refill   |
| Air pockets in the lubricant  | Air bubbles in the lubricant                            | Vent   |
| Contaminated filter   | Short deflections on the<br>pressure gauge (fluttering) | Check and clean filter and<br>replace, if necessary.                     |
| Suction bore of pump element is<br>clogged.   | After disassembling the<br>pump element                 | Disassemble and clean the pump<br>element.                               |
| Defective or dirty check valve  | After disassembling the<br>pump element                 | Replace check valve.   |
| Eccentric shaft or driving parts of<br>the swivelling lever and the<br>stirring device defective. | Visual check  | Replace the affected parts.  |
| Faults on the change-over device  | See instructions of<br>change-over device.              | See instructions of change-over<br>device.                               |
| Blockade in the downstream<br>lubrication system  | Lubricant leaking from the<br>pressure relief valve     | Determine cause and eliminate it.  |
| If the fault cannot be determined/ remedied, contact our Customer Service.                        |   |  |

## Operating Instructions

### Pump ZPU 08 ATEX

| <b>Rehfuss gear</b>  |  |  |
|--|--|--|
| Fault  | Possible cause   | Remedy   |
| Constant unusual running noise   | Bearing damage (grinding noise)  | Check oil and oil level, if required, change bearing.<br>→ Consult the manufacturer.                         |
|  | Irregular toothing (knocking noise)  | → Consult the manufacturer.  |
| Inconstant unusual running noise   | Foreign particle in the gear oil   | Check oil and oil level (see original instructions of the gear manufacturer).<br>→ Consult the manufacturer) |
| Oil / grease leaking from shaft seal <sup>#</sup>  | Defective seal   | → Consult the manufacturer.  |
| Oil leaking from vent valve  | Too much oil in the gear; vent valve dirty; frequent cold starts (foaming oil) | → Consult the manufacturer.  |
| Output shaft does not rotate although motor is on  | Defective shaft-hub joint  | Sent gear to manufacturer for repair.  |
| <p>For further relevant information on maintenance, see original Instructions by the gear manufacturer. Make sure to observe these at all times.</p> <p><sup>#</sup> Oil/ grease leaking from the radial sealing ring (small quantities) during the run-in phase (24 hours runtime) is deemed normal (DIN 3761).</p> |  |  |

## Operating Instructions

### Pump ZPU 08 ATEX

| <b>SEW motor</b>   |  |  |
|--|--|--|
| Fault  | Possible cause   | Remedy   |
| Motor does not start   | Feed line interrupted  | Check and correct connections, if necessary.   |
|  | Blown fuse   | Replace fuse   |
|  | Motor circuit breaker has responded  | Check correct adjustment of motor circuit breaker. If necessary, remedy the fault  |
|  | Motor circuit breaker does not switch; fault in the control program.                       | Check control program of motor circuit breaker and, if necessary, remedy the fault   |
| Motor is hard to start   | Motor has been designed for delta connection, but has been wired to star connection        | Correct the wiring   |
|  | Voltage or frequency largely differ from the target value at least when starting the motor | Provide better grid conditions; check cross section of the feed line   |
| Motor does not start when wired as a star connection, only when wired as a delta connection  | In case of star connection torque is not sufficient  | Provided the delta starting current is not too high, immediately switch the motor on. Otherwise use larger motor or special version (after consultation) |
|  | Contact fault on star respectively delta connection  | Remedy the fault   |
| Wrong direction of motor rotation  | Motor connected wrongly  | Reverse two phases   |
| Motor hums and has a high power consumption  | Defective winding  | → Consult the manufacturer. Motor must be sent to the workshop for repair  |
|  | Rotor touches  |  |
| Fuse is tripped or motor circuit breaker trips immediately   | Short circuit in the line  | Remedy the short circuit   |
|  | Short circuit in the motor   | → Consult the manufacturer. Motor must be sent to the workshop for repair  |
|  | Lines connected wrongly  | Correct the wiring   |
|  | Short circuit on the motor   | → Consult the manufacturer. Motor must be sent to the workshop for repair  |
| Speed decreasing significantly in case of load   | Overload   | Measure performance, if necessary, use larger motor or reduce load   |
|  | Voltage drops out  | Increase cross section of feed line  |
| For further relevant information on maintenance, see original Instructions by the motor manufacturer. Make sure to observe these at all times. |  |  |

## Operating Instructions

### Pump ZPU 08 ATEX

| <b>SEW motor</b>   |  |  |
|--|--|--|
| Fault  | Possible cause   | Remedy   |
| Motor heats up too much<br>(measure the temperature)   | Overload   | Measure performance, if necessary, use larger motor or reduce load   |
|  | Insufficient cooling   | Correct cooling air supply or open cooling air ways, if necessary, retrofit external fan   |
|  | Ambient temperature is too high  | Observe admissible temperature range   |
|  | Motor is wired to delta connection instead of planned star connection  | Correct the wiring   |
|  | Feed line has a loose contact (one phase is missing)   | Remedy the loose contact   |
|  | Blown fuse   | Search the cause and remedy (see above); replace fuse  |
|  | Mains voltage deviates by more than 5 % from the rated motor voltage. Higher voltage is very unfavourable in case of high-pole motors, as in case of a normal voltage their no-load current is already close to the rated current. | Adapt the motor to the mains voltage   |
|  | Nominal operating mode (S1 to S10) exceeded, e.g. because of too high switching frequency  | Adapt the nominal operating mode of the motor to the required operating conditions; if necessary, consult an expert to determine the appropriate type of drive |
| Extreme noise emission   | Ball bearing strained, contaminated or damaged   | Realign the motor, inspect the ball bearing and replace it, if necessary (see original instructions of the motor manufacturer)                                 |
|  | Vibration of the rotating parts  | Determine cause, e.g. imbalance, and eliminate it.   |
|  | Foreign particle in the cooling airways  | Clean cooling airways  |
| For further relevant information on maintenance, see original Instructions by the motor manufacturer. Make sure to observe these at all times. |  |  |

## 12. Declarations of conformity of the purchase parts

Carl Rehfuß GmbH + Co. KG Antriebstechnik

- Getriebe und Getriebemotoren mit konstanten Drehzahlen / Fixed speed gearboxes and geared motors
- Elektronisch und mechanisch regelbare Antriebe / Electronic and mechanical variable speed drives
- Sonderantriebe und kundenspezifische Lösungen / Special drives and customized solutions

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Fax: + 49 (0) 7432 / 70 15-0  
Email: info@rehfuss.com  
Url.: www.rehfuss.com



### EU-Konformitätserklärung EU Declaration of conformity

CARL REHFUSS GmbH + Co.KG

erklärt in alleiniger Verantwortung, das die SR, FG, S, SM, SS, SSM-Getriebe für Gerätegruppe II der Kategorien 2G,2D und 3G,3D, auf die sich diese Erklärung bezieht, mit der

declares in sole responsibility that the SR,FG, S, SM,SS,SSM-gearboxes for equipment group II in category 2G,2D and 3G,3D that are subject to this declaration are meeting the requirements set forth in

ATEX – Richtlinie 2014/34/EU

ATEX – Directive 2014/34/EU

übereinstimmen.  
to conform.

Angewandte Norm:  
Applicable standard:

EN 1127-1:2011  
EN 13463-1:2009  
EN 13463-5:2011  
EN 13463-8:2003  
EN 60529:2000

Die technische Dokumentation für Getriebe der Kategorie 2 ist hinterlegt bei notifizierter Stelle:  
The technical documentation for category 2 gearboxes is stored at the notified location:

TÜV PRODUKT SERVICE GmbH, EU-Code 0123

Ort und Datum der Ausstellung  
place and Date of issuing

Albstadt 20.04.2016

Bevollmächtigter zur Ausstellung dieser Erklärung im Namen des Herstellers  
authorized representative for issuing this declaration on behalf of the manufacturer

Bevollmächtigter zur Zusammenstellung der technischen Unterlagen  
authorized representative for compiling the technical documents

Dipl. Ing. (FH) M. Fink

Funktion: Bereichsleiter Technik  
Function: Technical Director

Handelsregister Stuttgart HRA 400233  
Persönlich haftende Gesellschaften: Pfister Verwaltungs- und  
Beteiligungs-Gesellschaft mbH - Handelsregister Stuttgart HRB 490529  
Ust-ID-Nr.: DE144844187 Steuer-Nr.: 53089/95951

Geschäftsführer: Gerd Pfister, Dipl.-Wirt.-Ing. (FH) Michael Pfister, Dipl.-Wirt.-Ing. (FH) Tobias Pfister  
Volksbank Albstadt (BLZ 653 901 20) 30 602 009 - BIC-Code: GENODE33EIB1 IBAN: DE57 6539 0120 0030 5020 09  
Sparkasse Züllichau (BLZ 653 512 00) 31 704 492 - BIC-Code: SOLADE51BAA1 IBAN: DE22 6536 1200 0031 7044 92  
Commerzbank AG (BLZ 653 600 00) 367 234 800 - BIC-Code: DRESDEFF333 IBAN: DE89 6538 0003 0087 2348 00

## EU Declaration of Conformity



Translation of the original text

903260318/EN

### SEW-EURODRIVE GmbH & Co KG

Ernst-Blickle-Str. 42, 76646 Bruchsal

declares under sole responsibility that the following products

|   |  |     |
|---|--|-----|
| Motors of the series                              | EDRN63... – EDRN315...   |     |
| Possibly in connection with brake of the series   | BE..., BF..., BT..., as well as for FS02 and FS11  | 14) |
| Possibly in connection with encoder of the series | ES7., EG7., EH7., EK8., AK8., AH7., AH6., XK., XV., AS7., AG7., X57., XG7., EV2., EV7., AV7., EV8., AV8., 12) also in FS04 and FS11  | 14) |
| Variant   | /3GD<br>/3D<br>/3G   |     |
| Designation                                       | II 3G Ex ec III B T3 Gc<br>II 3G Ex ec III C T3 Gc<br>II 3D Ex tc III B T120°C Dc<br>II 3D Ex tc III B T140°C Dc<br>II 3D Ex tc III C T120°C Dc<br>II 3D Ex tc III C T140°C Dc |     |

are in conformity with

|                     |   |     |
|---------------------|---|-----|
| ATEX Directive      | 2014/34/EU<br>(L 96, 29.03.2014, 309-356) |     |
| Machinery Directive | 2006/42/EG<br>(L 157, 09.06.2006, 24-86)  | 14) |

This includes the fulfilment of the protection targets for "electrical power supply" in accordance with annex I No. 1.5.1 according to the Low Voltage Directive 73/23/EEC and 2006/95/EC.

|                |   |     |
|----------------|---|-----|
| EMC Directive  | 2014/30/EU<br>(L 96, 29.03.2014, 79-106)        | 12) |
| ErP Directive  | 2009/125/EC<br>(L 285, October 31, 2009, 10-35) | 17) |
| RoHS Directive | 2011/65/EU<br>(L 174, 01.07.2011, 88-110)       |     |

|          |           |   |             |
|----------|-----------|---|-------------|
| Bruchsal | 3/30/2021 |   | Page 1 of 2 |
| Place    | Date      | Dr. Hans Krattenmacher<br>Managing Director Innovation/Mechatronics | a) b)       |

- a) Authorized representative for issuing this declaration on behalf of the manufacturer
- b) Authorized representative for compiling the technical documents

# Operating Instructions

## Pump ZPU 08 ATEX

**EU-Konformitätserklärung Nr. 5021M**  
EU Declaration of Conformity No.:

**TURCK**

Wir/we HANS TURCK GMBH & CO KG  
WITZLEBENSTR. 7, D – 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte  
declare under our sole responsibility that the products

Zweidraht Näherungsschalter Typ ...-Y1-... (gemäß EN 60947-5-6 NAMUR)

Two Wire Proximity Sensors Type ...-Y1-... (according to EN 60947-5-6 NAMUR)

auf die sich die Erklärung bezieht, den Anforderungen der folgenden EU-Richtlinien durch Einhaltung der  
folgenden Normen genügen:

to which this declaration relates are in conformity with the requirements of the following EU-directives by compliance with the following standards:

|   |                 |                            |
|---|-----------------|----------------------------|
| EMV – Richtlinie / EMC Directive                                | 2004 / 108 / EG | 15. Dez.2004 <sup>1</sup>  |
| EMV – Richtlinie / EMC Directive<br>EN 60947-5-6:2000           | 2014 / 30 / EU  | 26. Feb. 2014 <sup>2</sup> |
| Richtlinie / Directive ATEX 100a                                | 94 / 9 / EG     | 23. März 1994 <sup>1</sup> |
| Richtlinie / Directive ATEX<br>EN 60079-0:2012 EN 60079-11:2012 | 2014 / 34 / EU  | 26. Feb. 2014 <sup>2</sup> |

<sup>1</sup>: bis zum / until 19. April 2016

<sup>2</sup>: ab / as from 20. April 2016

Weitere Normen, Bemerkungen  
additional standards, remarks

Zusätzliche Informationen:  
Supplementary information:

Angewandtes ATEX-Konformitätsbewertungsverfahren / ATEX - conformity assessment procedure applied:  
Modul B + Modul D / E / module B + module D / E

EU-Baumusterprüfbescheinigung (Modul B) KEMA 02 ATEX 1090 X / EC-type examination certificate (module B):  
ausgestellt von / issued by: DEKRA Certification B.V., Kenn-Nr. / number 0344,  
Utrechtseweg 310, NL-6812 AR Arnhem

Zertifizierung des QS-Systems gemäß Modul D durch:  
certification of the QS-system in accordance with module D by:

Physikalisch Technische Bundesanstalt, Kenn-Nr. / number 0102,  
Bundesallee 100, D-38116 Braunschweig

Mülheim, den 01.04.2016



i.V. Dr. M. Linde, Leiter Zulassungen / Manager Approvals

Ort und Datum der Ausstellung /  
Place and date of issue

Name, Funktion und Unterschrift des Befugten /  
Name, function and signature of authorized person

# Operating Instructions

## Pump ZPU 08 ATEX

EU Konformitätserklärung  
 EU Declaration of Conformity  
 Déclaration UE de conformité



BARTEC Varnost d.o.o.  
 Cesta 9. Avgusta 59  
 1410 Zagorje ob Savi  
 Slovenia

N° VS-02 02 099E

| Wir  | We  | Nous   |
|--|---|--|
| <b>BARTEC Varnost d.o.o.,</b>  |   |  |
| erklären in alleiniger Verantwortung, dass das Produkt   | declare under our sole responsibility that the product  | attestons sous notre seule responsabilité que le produit   |
| <b>Abzweig- und Verbindungskasten</b>  | <b>Junction Box</b>   | <b>Boîtes de dérivation et coffrets de jonction</b>  |
| <b>Typ: 07-5103-***/*, 07-5105-***/*, 07-5106-***/* and 07-5107-***/*</b>  |   |  |
| auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht                       | to which this declaration relates is in accordance with the provision of the following directives (D)   | se référant à cette attestation correspond aux dispositions des directives (D) suivantes   |
| ATEX-Richtlinie 2014/34/EU (gültig ab 20. April 2016)<br>RoHS-Richtlinie 2011/65/EU<br>Maschinen-Richtlinie 2006/42/EG | ATEX-Directive 2014/34/EU (valid from April 20 <sup>th</sup> , 2016)<br>RoHS-Directive 2011/65/EU<br>Machinery Directive 2006/42/EC                                   | ATEX-Directive 2014/34/UE (valide à partir du 20. Avril 2016)<br>RoHS-Directive 2011/65/UE<br>Directive Européenne de l'Equipment 2006/42/CE |
| und mit folgenden Normen oder normativen Dokumenten übereinstimmt  | and is in conformity with the following standards or other normative documents  | et est conforme aux normes ou documents normatifs ci-dessous   |
| EN 60079-0:2012<br>EN 60079-7:2007   | EN 60079-11:2012<br>EN 60079-31 :2014   | EN 60529:1991<br>+A1:2000+ A2:2013   |
| <b>Kennzeichnung</b>   | <b>Marking</b>  | <b>Marquage</b>  |
|  | II 2G Ex e ia/ib IIA, IIB, IIC T6,T5 Gb<br>II 2G Ex ia/ib IIA, IIB, IIC T6,T5 Gb<br>II 2D Ex tb IIIC T80°C, T95°C Db IP66<br>II 2D Ex ia/ib IIIC T80°C, T95°C Db IP66 |  |
| <b>Verfahren der EU-Baumusterprüfung / Benannte Stelle</b>   | <b>Procedure of EU-Type Examination / Notified Body</b>   | <b>Procédure d'examen UE de type / Organisme Notifié</b>   |
| PTB 08 ATEX 1064<br>0102 PTB, Bundesallee 100, 38116 Braunschweig, D   |   |  |
| <b>CE 1304</b>   |   |  |
| Zagorje, den 19.04.2016  |   |  |
|  |   | Janez Gajski<br>Technical Manager  |

# Operating Instructions


## Pump ZPU 08 ATEX

Konformitätsbescheinigung  
Attestation of Conformity  
Attestation de conformité

# BARTEC

BARTEC GmbH  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany

N<sup>o</sup> **01-9702-7C0001\_B**

| Wir  | We   | Nous   |
|--|--|--|
| <b>BARTEC GmbH,</b>  |  |  |
| erklären in alleiniger Verantwortung, dass das Produkt   | declare under our sole responsibility that the product   | attestons sous notre seule responsabilité que le produit   |
| <b>Miniklemme</b>  | <b>Mini-terminal</b>   | <b>Minibornes</b>  |
| <b>Typ 07-9702-0*2*/****</b>   |  |  |
| auf das sich diese Erklärung bezieht den Anforderungen der folgenden <b>Richtlinien (RL)</b> entspricht  | to which this declaration relates is in accordance with the provision of the following <b>directives (D)</b>   | se référant à cette attestation correspond aux dispositions des <b>directives (D)</b> suivantes  |
| <b>ATEX-Richtlinie 2014/34/EU</b><br><b>RoHS-Richtlinie 2011/65/EU</b>   | <b>ATEX-Directive 2014/34/EU</b><br><b>RoHS-Directive 2011/65/EU</b>   | <b>ATEX-Directive 2014/34/UE</b><br><b>RoHS-Directive 2011/65/UE</b>   |
| und mit folgenden Normen oder normativen Dokumenten übereinstimmt  | and is in conformity with the following standards or other normative documents   | et est conforme aux normes ou documents normatifs ci-dessous   |
| <b>EN 60079-0:2012</b>   | <b>IEC 60079-7:2015</b>  |  |
| <b>Kennzeichnung</b>   | <b>Marking</b>   | <b>Marquage</b>  |
|   | <b>II 2G Ex eb IIC Gb</b><br><b>I M2 Ex eb I Mb</b>  |  |
| <b>Verfahren der EU-Baumusterprüfung / Benannte Stelle</b>   | <b>Procedure of EU-Type Examination / Notified Body</b>  | <b>Procédure d'examen UE de type / Organisme Notifié</b>   |
| <b>PTB 99 ATEX 3117 U</b><br><b>0102 PTB, Bundesallee 100, 38116 Braunschweig, D_</b>  |  |  |
| (*) Die Ex-Komponente ist Teil eines elektrischen Betriebsmittels oder eines Moduls, das mit dem Symbol „U“ gekennzeichnet ist, das nicht für sich allein verwendet werden darf und über dessen Einbau in elektrische Betriebsmittel oder Systeme zur Verwendung in explosionsgefährdeten Bereichen gesondert entschieden werden muss. | (*) The Ex-component is a part of an electrical apparatus or a module, marked with the symbol „U“, which is not intended to be used alone and requires additional consideration when incorporated into electrical apparatus or systems for use in explosive atmospheres. | (*) Le composant Ex est partie de matériel électrique ou de module, marquée du symbole „U“, ne devant pas être utilisée seule et nécessitant une certification complémentaire lorsqu'elle est incorporée à un matériel électrique ou à un système pour atmosphères explosives. |

# Operating Instructions

## Pump ZPU 08 ATEX

Konformitätsbescheinigung  
Attestation of Conformity  
Attestation de conformité

N<sup>o</sup> **01-9702-7C0001\_B**

# BARTEC

BARTEC GmbH  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany

Merkmale dieser Komponenten sowie die Bedingungen für ihren Einbau in Geräte und Schutzsysteme siehe Betriebsanleitung der Komponente.

Characteristics and how the component must be incorporated into equipment or protective systems see operation manual of the component.

Les caractéristiques du composant ainsi que les conditions d'incorporation dans des appareils ou des systèmes de protection regarde voir l'instruction d'emploi du composant.

**0044**

Bad Mergentheim, den 25.04.2016



i.V. Paul Wielsch  
Director Business Line ESS



i.V. Michael Schulte  
Leiter GW PZ

**Operating Instructions**  
**Pump ZPU 08 ATEX**

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