

# MPB

## Pneumatic barrel pump

(Original operating instructions compliant with Directive 2006/42/EC)



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# 1 Declaration of conformity

## following machinery directive 2006/42/EC, annex II Part 1 A

The manufacturer  
Oy SKF Ab Finland, Lubrication Product Division  
Teollisuustie 6, Fi-40951 Muurame, Finland

hereby declares under sole responsibility that the product described in these instructions.

Designation: Pneumatically-operated barrel pump for lubricants  
Type: SKF-MPB-PUMP-1/X  
Type designations: SKF-MPB-PUMP-1/1; SKF-MPB-PUMP-1/4; SKF-MPB-PUMP-1/8

Date of manufacture: [The model indicated in the type identification plate] complies with the following basic safety and health requirements of the EC machinery directive 2006/42/EC at the time when first being launched in the market.

1.1.2, 1.1.3, 1.1.5, 1.3.1, 1.3.2, 1.3.4, 1.3.7, 1.5.3, 1.5.4, 1.6.1, 1.7.1, 1.7.2, 1.7.3, 1.7.4

The relevant technical documentation has been compiled in accordance with Annex VII part A of the directive. Upon justifiable request, these special technical documents can be forwarded to the respective national authorities. The person empowered to assemble the technical documentation on behalf of the representative of the manufacturer is RD Manager, Product Development Nordic. See the manufacturer's address.

Furthermore, the following directives and harmonised standards were applied in the respective applicable areas:

Machinery Directive 2006/42/EC: EN ISO 12100-1/A1, EN ISO 12100-2/A1  
Pneumatic power transmission: EN ISO 4414:2011-4

In the case of modifications or alterations of the above mentioned machine not authorized by the manufacturer validity of this EC declaration of conformity will cease.

Muurame  
Place

21 February 2017  
Time



Juha Kärkkäinen  
R&D Manager, Product Development Nordic  
SKF Lubrication Product Division

## 2 Legal disclosure

### Manufacturer

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[www.skf.com/lubrication](http://www.skf.com/lubrication)

### Training courses

In order to provide a maximum of safety and economic viability, SKF provides detailed training courses. Attending the training courses is recommended. For further information, please contact the provided SKF Service address.

### Copyright

© SKF. All rights reserved.

### Warranty and liability

Oy SKF Ab assumes no liability, nor will the warranty provided cover any loss in the following cases:

- The system or component has been used for something other than its intended purpose.
- The system or component has not been installed, commissioned, decommissioned, maintained or used according to the instructions provided.
- Impure lubricants or materials not approved by Oy SKF Ab have been used in the system or component.
- The system or component has been incorrectly maintained or repaired.
- Parts other than Oy SKF Ab's original spare parts have been used in the system or component.
- The system or component has been altered in ways that Oy SKF AB Muurame has not approved.
- The system or component has been used outside the specified operating limits.
- The system or component has not been stored according to the storage instructions herein.

### Notes related to the operating instructions

The present operating instructions are original operating instructions of the manufacturer pursuant to Machinery Directive 2006/42/EC. The instructions are part of the described products and must be kept in an accessible location for further use.

### Disclaimer

The manufacturer shall not accept any liability for damages caused by the following actions by the customer:












- accidents, negligent or inappropriate use, assembly, operation, configuration, maintenance or repairs,
- improper or late response to malfunctions,
- unauthorised modifications to the product,
- intent or negligence, and
- the use of non-original (non-SKF) spare parts.




Liability for loss or damage resulting from the use of our products is limited to the maximum purchase price. Liability for consequential damages of any kind is excluded.

### 3 Explanations for symbols, signs and abbreviations

The following symbols are used in the safety instructions included in this manual to highlight conditions which are potentially harmful to people, materials or the environment.

Please follow the instructions provided especially in the highlighted conditions. Also, relate the safety instructions to other operators.

	General warning		Risk of electric shock
	Risk of falling		Hot surface
	Fire hazard		Use protective goggles
	Use hearing protectors		Read the operating instructions before use
	General notes		Environmentally friendly disposal
	Dispose of cartridges in an environmentally friendly way		

	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

Symbol	Meaning
●	Instruction step
○	List item

✓	Conditions which must be met before the activities described in the title clause can be completed
☞	Related factors, causes or consequences

approx.	approximately	°C	degrees Celsius	°F	degrees Fahrenheit
i.e.	that is	K	Kelvin	Oz.	Ounce
etc.	et cetera	N	Newton	fl. oz.	fluid ounce
poss.	possibly	h	hour	in.	inch
incl.	including	s	second	PSI	pounds per square inch
min.	minimum	d	day	sq.in.	square inch
max.	maximum	Nm	Newtonmeter	cu. in.	cubic inch
min	minute	ml	millilitre	mph	miles per hour
etc.	et cetera	ml/d	millilitre per day	rpm	revolutions per minute
e.g.	for example	cc	cubic centimetre	gal.	gallon
kW	kilowatt	mm	millimetre	lb.	pound
U	Voltage	l	litre	hp	horse power
R	resistance	dB (A)	sound pressure level	kp	kilopond
I	current	>	greater than	fpsec	feet per second
V	volt	<	less than		
W	watt	±	plus/minus		
AC	alternating current	∅	diameter		
DC	direct current	kg	kilogram		
A	ampere	rh	relative humidity		
Ah	Ampere hour	≈	approximately		
Hz	Frequency [Hertz]	=	equal to		
NC	normally closed	%	per cent		
NO	normally open	‰	per mille		
		≥	Equal to or greater than		
		≤	Equal to or less than		
		mm <sup>2</sup>	square millimetre		

Conversion factors	
length	1 mm = 0.03937 in.
Area	1 cm <sup>2</sup> = 0.155 sq.in
volume	1 ml = 0.0352 fl.oz.
	1 l = 2.11416 pints (US)
mass	1 kg = 2.205 lbs
	1 g = 0.03527 oz.
Density	1 kg/cc = 8.3454 lb./gal (US)
	1 kg/cc = 0.03613 lb./cu.in.
Force	1 N = 0.10197 kp
Pressure	1 bar = 14.5 PSI
temperature	°C = (°F-32) x 5/9
output	1 kW = 1.34109 hp
acceleration	1 m/s <sup>2</sup> = 3.28084 ft./s <sup>2</sup>
speed	1 m/s = 3.28084 fpsec.
	1 m/s = 2,23694 mph

## 4 Safety instructions

### 4.1 General safety instructions

- These safety instructions should be read and followed by any persons entrusted with working on the product and those who supervise or instruct the group of persons mentioned above. In addition, the owner must ensure that the relevant personnel are fully familiar with the contents of the instructions and have understood them. It is prohibited to commission or operate the product prior to reading the instructions.
- These instructions must be kept for further use.
- The described products have been manufactured according to the state of the art. However, if the products are used for other than their intended purpose, there may be risks which may result in personal injury or property damage.
- Any malfunctions which may affect safety must be remedied immediately. In addition to these instructions, general statutory regulations for accident prevention and environmental protection must be observed.

### 4.2 General behaviour when handling the product

- Please follow these instructions whenever you use the product. If the product is not in proper technical condition or you are unaware of the potential hazards, do not use the product.
- Familiarize yourself with the functions and operation of the product. All specified assembly and operating steps must be completed in the indicated order.
- Any unclear points regarding proper condition or correct assembly/operation must be clarified. Operation is prohibited until issues have been clarified.
- Prevent unauthorised access.
- Always wear personal protective equipment.
- Take the proper precautions and follow the instructions concerning the relevant task. Responsibilities for different activities must be clearly defined and observed. Uncertainty is a major risk factor for safety.
- Safeguards and other protective and emergency equipment must not be removed, modified, disconnected or otherwise disabled. Their completeness and function must also be checked at regular intervals.
- If a safeguard or other protective equipment has to be detached, it must be reattached and tested immediately after the work is complete.
- Remedy any faults included in your area of responsibility. If the fault is beyond your competence, notify your supervisor immediately of the fault.
- Never use parts of the centralised lubrication system or of the machine as standing or climbing aids.

### 4.3 Intended use

Supply of lubricants within a centralised lubrication system in accordance with the specifications, technical data and limits stated in these instructions:

Usage is allowed exclusively for professional users in the frame of commercial and economic activities.

### 4.4 Foreseeable misuse

Any use differing from that stated in these instructions is strictly prohibited, particularly the following:

- use outside the indicated temperature range,
- use of non-specified lubricants,
- exceeding the maximum allowable operating pressure,
- use in continuous operation,
- use in areas with aggressive or corrosive materials (e.g. high ozone pollution),
- use 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.
- feeding, forwarding or storing 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, and
- use in an explosion protection zone.

## 4.5 Modifications to the product

Unauthorised conversions or modifications may have unforeseeable effects on product safety and functionality. Therefore, any unauthorised conversions or modifications are expressly prohibited.

## 4.6 Other applicable documents

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

- Operational instructions and approval rules
- Safety data sheet (MSDS) of the lubricant used

Where appropriate:

- project planning documents
- instructions provided by the suppliers of purchased parts
- any documents of other components required to set up the centralised lubrication system
- other documents relevant for the integration of the product into the machine or system.
- 

## 4.7 Notes concerning the type identification plate

The type identification plate indicates the type designation, order code and other key details of the machine.

To make sure no information is lost if the type identification plate becomes illegible, enter the details in this manual:

Type \_\_\_\_\_

Code \_\_\_\_\_

Date of manufacture \_\_\_\_\_

SKF Pneumatic Barrel pump		SKF
TYYPPI TYPE		
MIN ILMANPAIN MIN AIR PRESSURE	bar	SARJANUMERO SERIAL NO.
MAX ILMANPAIN MAX AIR PRESSURE	bar	KODI CODE
PAINESUHDE PRESSURE RATIO		VALM. PVM. MANUF. DATE
VALHISTAJA MANUFACTURER		Oy SKF Ab
CE		P.O. Box 80
IP65		FIN - 40951 MUURAME FINLAND

## 4.8 Persons authorised to operate the device

### 4.8.1 Operator

An operator is a person who is qualified to carry out the functions and activities related to normal operation based on his or her training, knowledge and experience. This includes avoiding possible hazards that may arise during operation.

### 4.8.2 Mechanical specialist

A mechanical specialist is a person with appropriate professional education, knowledge and experience to

detect and avoid the hazards that may arise during transport, installation, commissioning, operation, maintenance, repair and disassembly.

### **4.8.3 Electrician**

An electrician is a person with appropriate professional education, knowledge and experience to detect and avoid electrical hazards.

### **4.8.4 Providing briefing for external technicians**

Prior to commencing any activities, external technicians must be informed by the operator of its safety provisions, applicable accident prevention procedures and the functions of the superordinate machine and its protective devices.

### **4.8.5 Provision of personal protective equipment**

The operator must provide suitable personal protective equipment for the respective location of operation and the purpose of operation.

## **4.9 Operation**

The following must be observed during commissioning and operation:

- any information within this manual and the information within the referenced documents, and
- all laws and regulations that the operator must observe.

### **4.9.1 Stopping the pump in an emergency**

Conduct an emergency stop as follows:

- Cut off the pump's pressurised air supply from the air filter regulator.

### **4.9.2 Transport, installation, maintenance, malfunctions and repairs**

- All relevant persons must be informed of the activity prior to starting any work. Observe the precautionary operational measures and work instructions.
- Transport the products with suitable transportation and hoisting equipment using suitable work methods.
- 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.
- Before conducting any work, depressurise the product or machine into which the product will be integrated and secure it against unauthorised activation.
- Ensure through suitable measures that movable or detached parts are immobilized during the work and that no limbs can be caught in between if there are inadvertent movements.
- Assemble the product only outside of the operating range of moving parts, at an adequate distance from sources of heat or cold. Be careful not to damage other units in the machine or vehicle or impair their function during installation.
- Dry or cover wet, slippery surfaces accordingly.
- Cover hot or cold surfaces accordingly.
- Work on electrical components must be carried out by electrical specialists only. Observe any waiting periods for discharging, if necessary. Carry out work on electrical components using voltage insulated tools only.
- Make 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.

- Do not bypass any fuses. Replace fuses with same type and rating only.
- Do not drill holes to critical, load-bearing parts. Use existing boreholes whenever possible. Be careful not to damage lines and cables when drilling.
- Observe possible abrasion points. Protect the parts accordingly.
- All components used must be suitable for use in:
  - the system's maximum operating pressure, and
  - the system's minimum and maximum ambient temperature range.
  
- No parts of the centralised lubrication system may be subjected to torsion, shear or bending.
- Before using any parts, check them for contamination, clean if necessary.
- Before installation, prime the hoses between the doser group and the lubrication point with lubricant. This makes it easier to bleed the system of air afterwards.
- Observe the specified tightening torques. Use a calibrated torque wrench.
- When working with heavy parts, use suitable lifting tools.
- Avoid mixing up dismantled parts or assembling parts in the wrong order by marking the parts accordingly.

## 4.10 Commissioning and daily start-up

Ensure that:

- All safety devices are complete and work properly.
- All connections are correctly connected.
- All parts have been correctly installed.
- All warning labels on the machine are complete, highly visible and undamaged.
- Replace illegible or missing warning labels without delay.

## 4.11 Cleaning

- There is a risk of fire and explosion when using flammable cleaning agents. Use only non-flammable cleaning agents suitable for the purpose.
- Do not use aggressive cleaning agents.
- Do not clean using a steam jet or pressure washer, as these may damage electrical components. Observe the IP protection class.
- Cleaning work on energised components may be carried out by electrical specialists only.
- Mark damp areas accordingly.

Residual risk	Possible in lifecycle stage	Prevention / remedy
Personal injury / material damage due to falling of raised parts	A, B, C, G, H, K	Keep unauthorised people away. make sure no one remains under suspended parts or loads. Lift parts with suitable and tested lifting devices.
Personal injury / material damage due to tilting or falling of the product because of non-observance of the stated tightening torques	B, C, D, G	Observe the specified tightening torques. Fasten the product to components with adequate load-bearing capacities only. If no tightening torques are stated, tightening torques for grade 8.8 screws apply.
Personal injury / material damage due to electric shock from a damaged connection cable	B, C, D, E, F, G, H	Check that the low level switch connection cable is intact before using the switch for the first time and, after that, at regular intervals. Do not mount the cable to moving parts or at an abrasion point. If this cannot be avoided, use either spring coils or protective conduits depending on the circumstances.
Personal injury / damage to material due to spilled or leaked lubricant	B, C, D, F, G, H, K	When replacing the barrel, detach and reattach lubricant feed lines with care. Always use appropriate hydraulic screw connections and lubrication lines suitable for use in the stated pressures. Do not mount lubrication lines to moving parts or abrasion points. If this cannot be avoided, use either flexible hose lines, spring coils or protective conduits depending on the circumstances.
Lifecycle stages: A = transport, B = installation, C = commissioning, D = operation, E = cleaning, F = maintenance, G = fault, repair, H = decommissioning, K= disposal		

# 5 Lubricants

## 5.1 General information

Different lubricants are used in different applications. 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 and entry of foreign objects
- cooling (primarily for oils)
- longevity (physical/chemical stability)
- compatibility with as wide range of materials as possible
- economic and ecological aspects

## 5.2 Lubricant selection


SKF considers lubricants to be an element of system design. A suitable lubricant is selected already when designing the machine and it forms the basis for centralised lubrication system planning.


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


Should you have little or no experience with the selection of lubricants for centralised lubrication systems, please contact SKF.

If required, we will be glad to support customers in selecting suitable components for feeding the selected lubricant and planning and designing their centralised lubrication system.

You will avoid possible costly downtimes caused by damage to your machine/system or the centralised lubrication system.

	Only lubricants specified for the product may be used. Unsuitable lubricants may lead to product failure.
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	Do not mix lubricants. This may have unforeseeable effects on the usability and therefore on the function of the centralised lubrication system.
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	Due to the multitude of possible additives, it is possible that individual lubricants, which according to the manufacturer's data sheets match the system's specification, might not in fact suitable for use in centralised lubrication systems (e.g. incompatibility between synthetic lubricants and materials). To avoid this problem, always use lubricants tested by SKF.
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## 5.3 Material compatibility

Lubricants must generally be compatible with the following materials:

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

## 5.4 Ageing of lubricants

After a prolonged downtime of the machine, the lubricant may no longer be suitable for use due to chemical or physical ageing and must therefore be inspected before the system is recommissioned. We recommend inspecting the lubricant already after a week's downtime.

If you suspect that the lubricant is no longer suitable, replace it prior to recommissioning and, if necessary, perform initial lubrication manually.

It is possible for lubricants to be tested in the company's laboratory for their suitability for being pumped in centralised lubrication systems (e.g. no "bleeding").

Please contact SKF if you have further questions regarding lubricants.

An overview of the lubricants tested by SKF is also available upon request.

## 6 MPB pump – general description

The purpose of the pump is to supply lubricant to a centralised lubrication system. The pump is suitable for greases up to grade 000-2 (NLGI), and it has both an outlet connection (pressure connection, “P”) and a return connection (tank connection, “T”). Its pressure ratio is 65:1, which means that the pump's maximum allowable lubricant pressure ( $\approx 300$  bar, 30 MPa) is achieved at 4.5 bar air pressure. The minimum air pressure required for operation is 2 bar (0.2 MPa).

The SKF-MPB-PUMP pump is a pneumatic piston pump consisting of an air motor and pump unit. The air motor is controlled by a pneumatic valve, which in turn is controlled by a mechanical valve controller. The mechanical valve controller follows the motion of the air motor's air piston. A connecting rod transmits the motion of the air piston to the pump unit's piston assembly, which pressurises the lubricant. The air motor has been designed to be lubrication-free, which means that no lubricator is needed in the air filter regulator assembly.

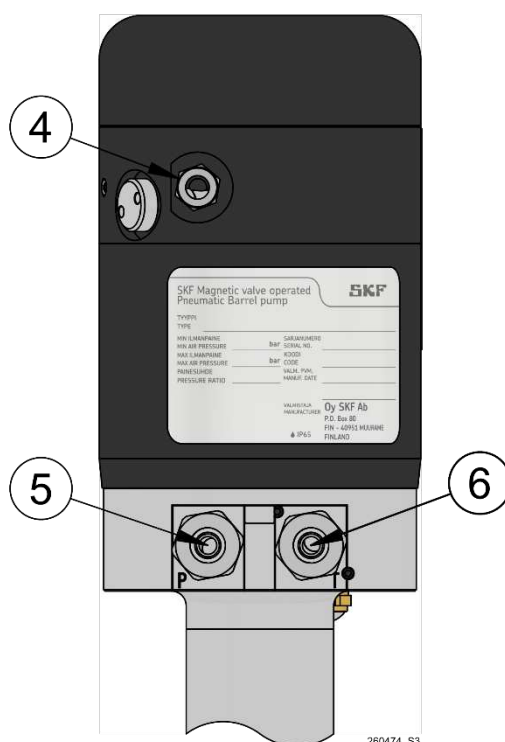
The pump is intended for central lubrication systems consisting of a pump and lid set, air filter regulator and lubrication system control unit (each sold separately). Installing the MPB pump in an existing system driven by an SKF-EPB pump requires an additional installation kit, which includes the components required for connecting the pump in the lubrication system.

NOTICE	
	The pump is intended for intermittent use only. If the pump is used continuously at high pressure, or moist pressurised air is used, the pneumatic valve may freeze, causing a malfunction.

# 7 Commissioning

The pump is activated when air (minimum pressure: 2 bar) is supplied to its pressurised air inlet (4). The pump pressurises the lubricant, transferring it through the lubricant outlet (5) into the lubrication system. The pump also includes a tank connection (6). During depressurisation, lubricant returns through the tank connection into the pump pipe and, from there, back to the lubricant barrel. Lubricant pressure can be adjusted from the air filter regulator (sold separately). When used in a central lubrication system, the pump's air supply is controlled by a control centre (sold separately) following user-defined lubrication values.

The pump can be equipped with a low lubricant level alarm (sold separately), which is connected to the lubrication system's control centre.



**Figure 1: Connections**

Pressurised air inlet (4)

- Quick connector, 8 mm, G1/4"

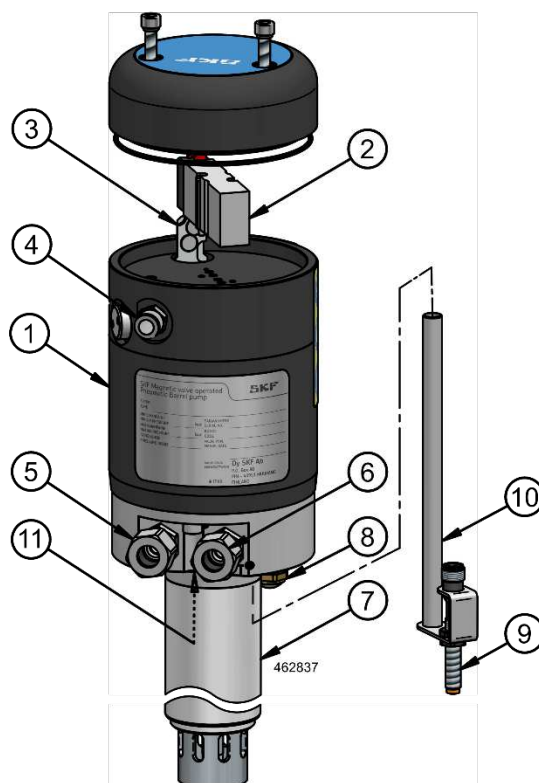
Hydraulic connections (5, 6):

- (5), P = Pressure, lubricant outlet, G1/4", basic connector, 12 L
- (6), T = Tank, lubricant inlet, G1/4", basic connector, 12 L



## 8 Main components

MPG pump consists of the following components (Figure 2):



**Figure 2, Main components**

Item	Description
1	Air motor
2	Pneumatic valve
3	Valve controller
4	Pressurised air inlet, G1/4", Ø8 quick connector
5	Pressure connection (hydraulic outlet), G1/4", basic connector, 12L
6	Tank connection (return inlet), G1/4", basic connector, 12L
7	Pump unit
8	Air exhaust muffler
9	Inductive sensor (included in the ECO lid set)
10	Low level switch bracket (included in the ECO lid set)
11	Leakage detection hole

## 9 Periodic inspections


Monthly inspections

- Inspect the pressure air filter regulator and drain it of water.
- Check the pump's operation.
- Check the pump and lubrication system for leaks.

When replacing the barrel (in addition to the above):

- Clean the grease filter and the filter cartridge and replace them if necessary.

## 10 Troubleshooting

	<b>WARNING</b>
	<p>Before addressing the following malfunctions, turn off the power from the control and pumping centre, isolate the pressurised air supply and depressurise the lubrication line connected to the pump outlet. Any residual pressure in the system when opening or disconnecting components may cause components to be thrown or lubricant to spray, causing injury to people or damage to the environment.</p>

### 10.1 Malfunctions

In case of a malfunction:

- Check the air pressure and the condition of the air lines.
- Check that the grease filter and the hydraulic lines connected to the pump outlet are not clogged.
- If the problem persists, contact your Oy SKF Ab representative.

### 10.2 Troubleshooting table

**Table 1: Troubleshooting**

Description of malfunction	Cause of malfunction	Solution
The pump does not start.	Pressurised air has been cut off.  Insufficient air pressure.	Turn on the air supply and set the pressure to 2-4.5 bar.  Check that the pressure at the air filter regulator is 2–4.5 bar. Check the air supply hoses for leaks.
The pump is activated, but stops shortly.	Insufficient air pressure.	Check that the pressure at the air filter regulator is 2–4.5 bar. Check the air supply hoses for leaks.
A lot of grease leaks from the hole (11) at the bottom of the cylinder block (1, Fig 2). Minor leakage is normal.	Damaged seal.	Contact your Oy SKF Ab representative.

Description of malfunction	Cause of malfunction	Solution
The pump starts but pressure does not increase.	The grease filter is clogged.	Clean or replace the grease filter cartridge.
	There is air in the suction piping.	Bleed the pump of air by opening the pump's pressure connection (P, item 5). Check that only grease and no air comes out of the bleed screw or the pressure connection.
	There are impurities in the pump's suction inlet.	Contact Oy SKF Ab if necessary.

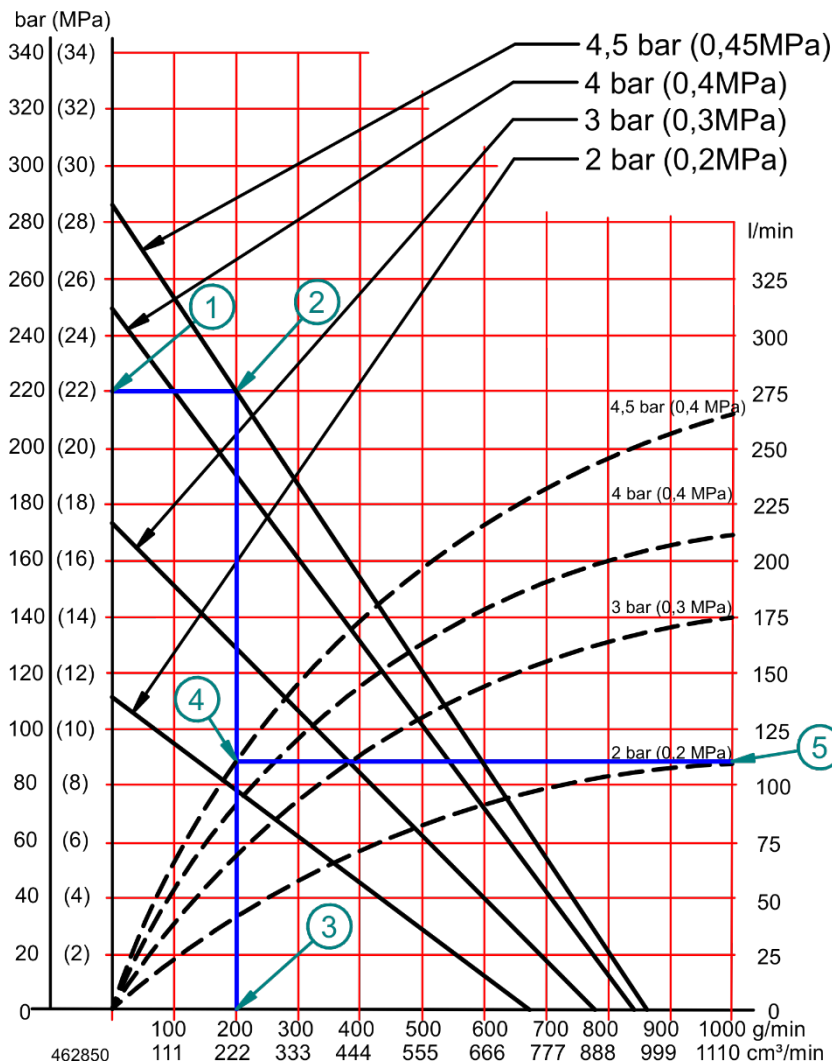
# 11 Technical information

## 11.1 Specifications table

Table 2

Value	Unit	Description
-10...+55 14...131	°C °F	Operating temperature range
300 4,350 30	bar PSI MPa	Maximum pressure
65:1	bar	Pressure ratio
850	g/min cc/min	Max. pump output ( <b>Figure 3</b> )
5.5	grams/stroke	Pump output per stroke
2...4.5	bar	Pressure air supply
300	l/min	Max. air consumption ( <b>Figure 3</b> )
10,000	cSt	Maximum oil viscosity
000-2	NLGI	Lubricant grade
6.3 7.6 8.8	kg	Weight, 1/8 pump Weight, 1/4 pump Weight, 1/1 pump
650 x 130 x 130 920 x 130 x 130 1120 x 130 x 130	mm (h x l x w)	Dimensions, 1/8 pump Dimensions, 1/4 pump Dimensions, 1/1 pump
IP65		Protection class
<80	dB	Max. noise level
Ø 50	mm	Pump pipe diameter
Aluminium		Body material

## 11.2 Pump output curve



Unit	Description
bar (MPa)	Lubricant counter pressure
g/min cc/min	Pump capacity
l/min	Pump air consumption

**Figure 3: MPB pump, output curve (462850)**

**Example:**

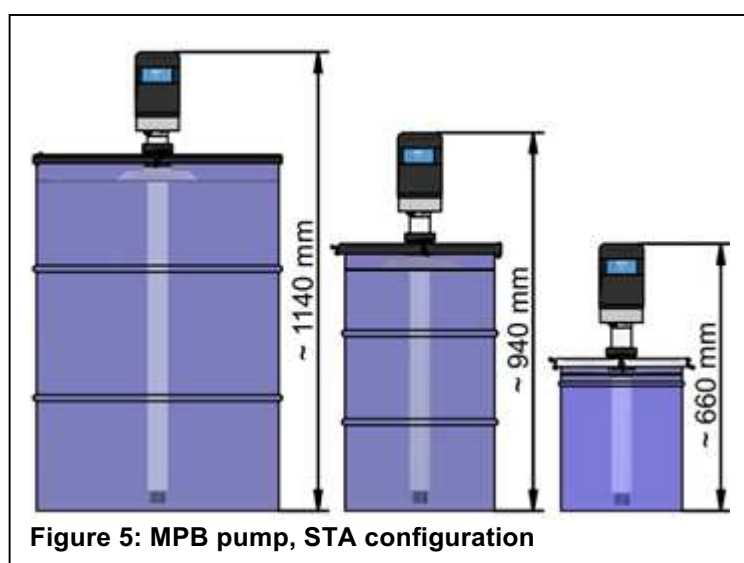
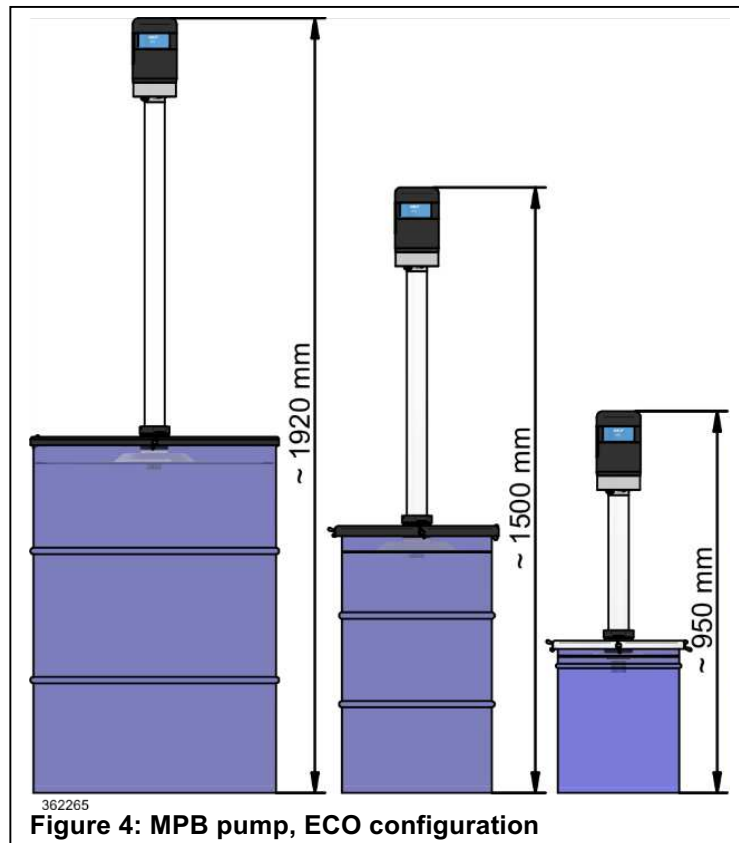
Air supply pressure is 4.5 bar (item 1) and counter pressure (item 2) is 220 bar, which gives a lubricant output of 200 g/min (item 3). To determine the air consumption, follow the 4.5 bar dashed line to item 4 and draw a horizontal line to the air consumption scale (item 5; 110 l/min).

## 11.3 MPB pump configurations

Different lid sets (see table 4) allow the MPB pump to be installed in a stationary (STA lid sets) or descending (ECO lid sets) configuration.



Use STA lid sets (Figure 5) for pumping NLGI 00 and 0 greases.  
Use ECO lid sets (Figure 4) for pumping NLGI 1 and 2 greases.



## 11.4 Designation and order codes

**Table 1** SKF-MPB-PUMP, designation

SKF-MPB-PUMP-A	Abbreviation	Description
SKF-MPB-PUMP:	SKF-MPB-PUMP	SKF Pneumatic Barrel Pump
A:	1/8	Lubricant barrel capacity: 18 kg
	1/4	Lubricant barrel capacity: 50 kg
	1/1	Lubricant barrel capacity: 180 kg

Example:

SKF MPB-PUMP-1/1

	Voiteluaineastian koko 1/1 = 180 kg
	SKF Magnetic valve operated Pneumatic Barrel pump

**Table 4: Order codes**

Item	Order code	Prodmax code
<b>Pumps</b>		
SKF-MPB-PUMP-1/1	12381700	VGBN 12381700
SKF-MPB-PUMP-1/4	12381701	VGBN 12381701
SKF-MPB-PUMP-1/8	12381702	VGBN 12381702
<b>Installation kit (includes the components for connecting the EPB pump to existing pneumatic and electrical connections)</b>		
INSTALLATION KIT-EPB to MPB	12381357	VGBV 12381357
<b>Lid sets</b>		
MAX-LIDSET-1/1-ECO-MPBP	12381323	VGBV 12381323
MAX-LIDSET-1/4-ECO-MPBP	12381322	VGBV 12381322
MAX-LIDSET-1/8-ECO-MPBP	12381321	VGBV 12381321
MAX-LIDSET-1/1-STA-MPBP	12381328	VGBV 12381328
MAX-LIDSET-1/4-STA-MPBP	12381327	VGBV 12381327
MAX-LIDSET-1/8-STA-MPBP	12381326	VGBV 12381326
<b>Air filter regulator</b>		
MAXILUBE-SET-ECO-MPBP	12382675	VGBV 12382675
MAXILUBE-SET-STA-MPBP	12382676	VGBV 12382676

# 12 Shutdown, decommissioning and storage

## 12.1 Temporary shutdown

The system can be temporarily shut down by disconnecting it from electrical, pressurised air and hydraulic outlets. If you wish to shut down the product temporarily, see also Section 12.3: *Storage*. For further information, please refer to relevant components' operating and service manuals and Chapter 6: *MPB pump – general description* in this manual. When recommissioning the equipment, please refer to sections *Commissioning* and *Technical specification* in the relevant components' operating and service manuals.

## 12.2 Final decommissioning

Used equipment filled with lubricant must be decommissioned and disposed of in accordance with national legislation and the procedures indicated in this operating and service manual.



Lubricants can contain chemicals that can contaminate the soil and the water system. Lubricants must be disposed of appropriately. Observe any local laws and regulations concerning disposal and recycling.

You can also return the product to Oy SKF Ab for disposal. Oy SKF Ab reserves the right to recover any costs arising from the disposal.

## 12.3 Storage

The products must be stored as follows:

- Store in a dry, dust-free and well-ventilated space.
- Do not store the product for more than 24 months.
- Storage temperature range is +10...40 °C.
- Avoid direct sunlight and heat radiation.
- Store the products clear of the ground or floor.
- Protect the products against impacts, corrosion and dust.

# 13 Spare parts

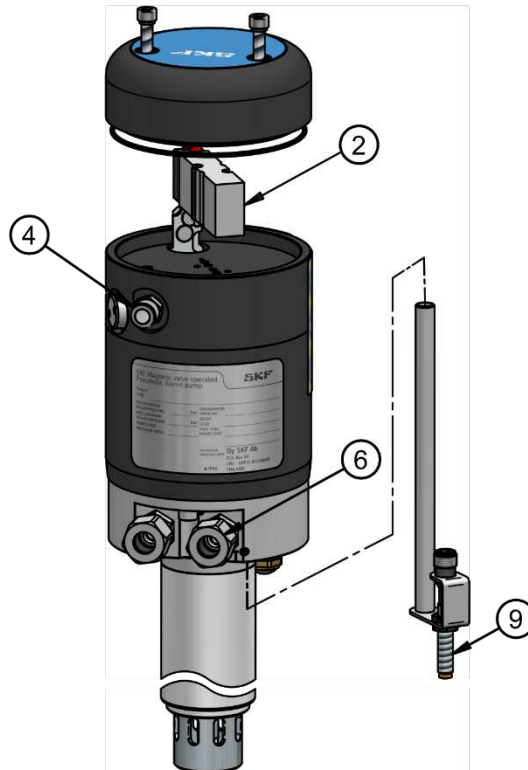


Figure 6, SKF-MPB-PUMP spare parts

Item	Description	Order code
2	Valve 6527	12602185
4	Quick connector 6510	12653165
6	Basic connector PEL 12L R1/4 H	12805080
9	Inductive sensor	10543528