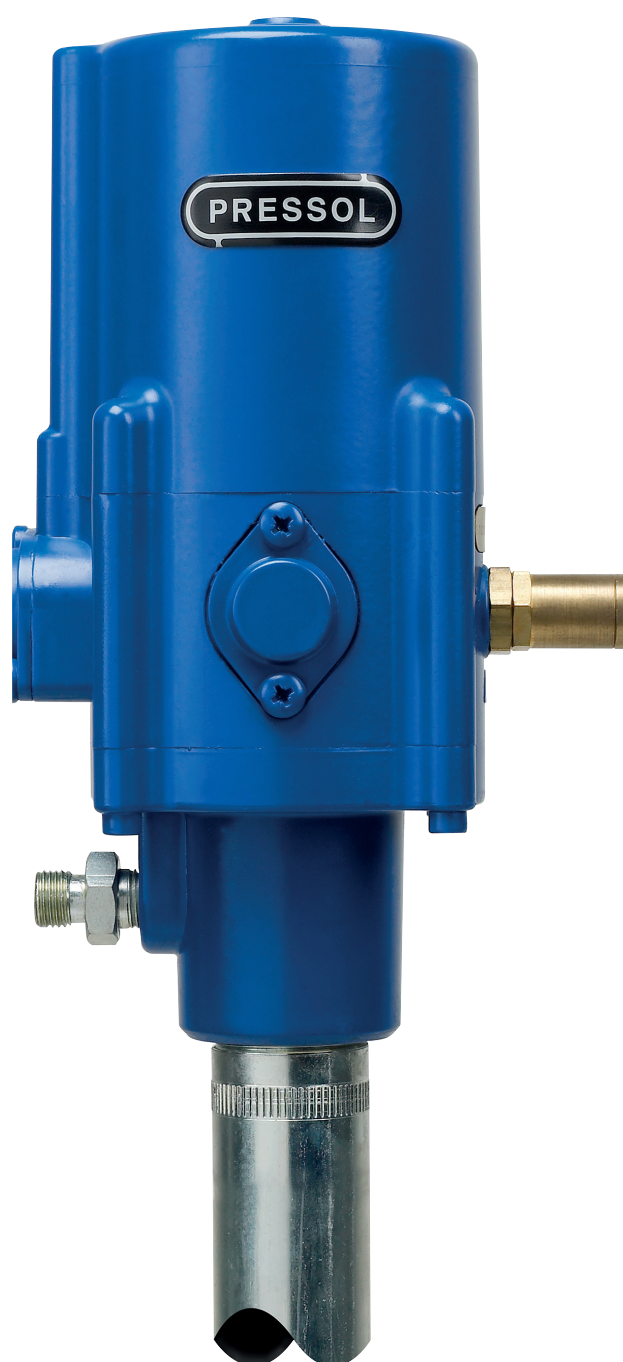


# OPERATING INSTRUCTIONS AND SAFETY NOTES

## Pneumatic grease pump 50:1

and grease supply system



**Pressol Schmiergeräte GmbH**

This documentation is exclusively intended for the operating company and their staff.

Without our written consent, the content of this documentation (textes, figures, drawings, charts, diagrams etc. ), must not be duplicated or distributed, neither in full or in part, utilized for the purpose of competition or passed on/made available to third parties.

**Pressol Schmiergeräte GmbH**

Parkstraße 7

93167 Falkenstein | Germany

Tel. +49 9462 17-0

Fax +49 9462 17-208

info@pressol.com

www.pressol.com

**Operating instructions translation**

Date of issue: 11 / 2020

We reserve the right to make design and product modifications, which serve to improve the product.

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## 1. Introduction

### 1.1. Preface

Please carefully read these operating instructions and observe in particular all safety notes!

Our staff will be pleased to provide support if you have any questions about the product.

Yours sincerely, FMT Swiss AG

### 1.2. Obligations of the personnel

Before they start to work, all persons who are entrusted with work with the pneumatic grease pump 50:1, are obliged:

- to follow all applicable regulations on occupational safety and accident prevention.
- to read and to comply with all safety instructions and warning notes contained in these operating instructions.

Please observe the following instructions in the interest of all concerned:

- Refrain from any unsafe working methods!
- Adhere to all hazard and warning notes contained in this manual!
- In addition to this documentation, keep to all generally accepted safety rules, legal provisions as well as all other binding rules regarding occupational safety, accident prevention and environmental protection!
- Wear appropriate protective clothing in accordance with the work to be done!
- Perform only work for which you have been sufficiently trained and instructed!
- Only genuine spare parts as well as original tools and auxiliaries of the manufacturer are allowed to be used in order to ensure the functional safety and maintain the warranty coverage.

### 1.3. Symbols in this manual

#### 1.3.1. Structure of the safety notes

The warning notes have the following structure:



#### SIGNAL WORD

##### Type and source of the hazard

- Consequences of non-compliance with the notes
- Measures to avoid that risk

Depending on the danger level, different signal words are used:

Signal word	Danger level	Consequences of non-compliance
<b>DANGER</b>	Imminent threat of danger	Death or serious bodily injury
<b>WARNING</b>	Possible threat of danger	Death or serious bodily injury
<b>CAUTION</b>	Possibly dangerous situation	Minor bodily injury
<b>ATTENTION</b>	Possibly dangerous situation	Damage to material property



**NOTE**

Indicates further information or tips which facilitate work

**1.3.2. Hazard warning symbols**

Symbol	Meaning
	General hazard symbol. The warning note marked in this way contains supplementary information on the type of hazard.
	This symbol warns against the risk of slipping and falling

**1.3.3. General symbols**

Symbol	Meaning
■	A small black square indicates the work you have to perform
–	The dash denotes lists
⇒	The arrow identifies cross-references.  If cross-references to other chapters are required within the text, the expression is shortened for reasons of clarity.  Example: ⇒ chapter 2 Safety notes This means: please refer to chapter 2 for the safety notes

**2. Safety notes**

Various dangers may occur if the pneumatic grease pump 50:1 is improperly handled during installation, commissioning and daily operation.



**WARNING**

**Risk of injury and damage to material property because of improper handling**

- Hold the instructions at the disposal of the operating staff at the usage site of the unit.
- Country-specific safety measures and accident prevention regulations must be observed.

**2.1. Authorized personnel**

Only qualified and authorized persons are allowed to operate and to work on the pneumatic grease pump.

Persons are qualified if they are, due to their training, experience, instruction and knowledge of the relevant standards, able to assess assigned tasks and to identify potentially hazardous situations.

These persons must have been authorized by the person responsible for the safety of the unit and must be able to identify and to avoid potential dangers.

All persons charged with installation, operation, maintenance and repair work, must have read and understood this operation manual.

A copy of this operating manual must be stored permanently and ready at hand at the place of usage of the pump.

**2.2. Intended conditions of use**

This pump is to be used for feeding lubrication greases and multi function greases from NLGI 0 to NLGI 2 from original barrels. It is both designed for use in conjunction with distribution lines or directly on the container.

To ensure that usage stipulations are met, read through the operating instructions completely before using the pump and observe all stipulations.

Only original replacement parts are to be used for any repairs, otherwise the warranty will be invalidated.

**2.3. Reasonably foreseeable misuse**

Any departure from the usage stipulations (other media, use of force) or unauthorized modifications (changes, use of non-original parts) can be dangerous and are considered to be non-intended usage.

Foreseeable misuse could be:

- Operation with modified or defective safety devices.
- Non-intended installation or misuse of the grease pump, which may lead to personal injury or damage to property.
- Repair by unauthorised personnel.

## 2.4. Risks when handling the pneumatic grease pump 50:1



### DANGER

#### Damaged attachments and accessories can lead to personal injury and material damage

- Suction and pressure pipes must not be kinked, twisted or stretched.
- Attachments and accessories must be checked for wear, splits or other damage throughout their period of use.
- Damaged accessories and attachments must be replaced immediately.
- With reference to the period of use, please note the details in ZH 1/A45.4.2 or DIN 20066 Part 5.3.2.

#### Overpressure may cause damages of grease gun head and its accessories

- Do not exceed the working pressure stated in chapter 4.
- We recommend the use of original accessories according to DIN 1283 only.

#### Overpressure at the point of lubrication may destroy the grease nipple and perhaps even the bearings or the machine itself

- Do not exceed the working pressure stated in chapter 4.
- Note the maintenance and service instructions of the manufacturer of your machine.

#### Escaping liquids can cause environmental harm

- Local and country rules and regulations relating to domestic water supplies and fuel storage must be obeyed.

## 3. Construction & functional description

The grease pump can be fitted with a variety of PRESSOL accessories.

The Pump casing is manufactured from die-cast zinc with a hardened stainless steel piston rod and high quality durable synthetic control components.

The polyurethane or Buna N o-rings and washers are designed to meet the operating requirements of the pump.

### 3.1. Application range

This pump is to be used for feeding lubrication greases and multi function greases from NLGI 0 to NLGI 2 from original barrels.

## 4. Technical data

Typ	50:1	
Transmission ratio		50:1
Maximum air pressure	bar	8
Minimum air pressure	bar	2
Recommended air Pressure	bar	6
Motor Displacement	cm <sup>3</sup>	220
Pump Displacement	cm <sup>3</sup>	8
Number of strokes at 8 bar *	strokes/min	220
Pump performance at 8 bar *	g/min	1100
Pump pressure at 8 bar compressed air	bar	400
Air consumption at 8 bar compressed air	l/min	400
Airline connection	G	¼" female
Grease supply connection from the suction side	Ø/mm	35
Grease supply connection from the pressure side	G	¼" male
Noise level on no load, according to ISO 9614-2 (2 m distance)	db (A)	78
Noise level on load, according to ISO 9614-2 (2 m distance)	db (A)	77
Weight	kg	8,4

\* under free discharge

Tab. 4-1: Technical data

### 4.1. Operational area requirements

The grease pump is intended for use within a building. The installation area must be selected such that correct operation is ensured.

The pneumatic pump must be used with a maintenance unit otherwise the warranty will be invalid! It is also important to ensure that a pressure control valve is used when the pump is operated. Set the pressure to 6 bar to achieve the recommended operating pressure of the pump. This will prevent possible damage to equipment, pipe leakage and protect the pump.

New installation lines should be cleaned to avoid any residual metal filings damaging individual components within the pump. When changing containers protect the suction tube properly to make sure that the suction tube will not be contaminated by dirt particles, such as metal parts, splinters etc. which will additionally contaminate the lubricant in a new container.

The operator of such an installation is, according to § 19i WHG (Germany) responsible for continuous monitoring to ensure compliance with the above stated requirements at the installation.



## 5. Assembly

The grease pump will be delivered completely assembled.

Accessories might need to be fitted depending on the version used.



### NOTE

Ensure cleanliness during assembly and that all accessories are correctly connected to the pump.

Please use suitable sealing material (e.g. Teflon film), only.

- Remove the dust cover from the container and insert the follower plate (pos. 1) slightly tilted. Then push the follower plate against the grease until grease emerges from the central opening.
- Fix the stabilising fixing brackets (pos. 3) on the grease container (pos. 1) and adjust the stabilising fixing brackets above the central opening of the follower plate (pos. 2).
- Push the dust cover (pos. 4) onto the pipe of the grease pump (pos. 5) and insert the pipe through the stabilising fixing brackets (pos. 3) and through the follower plate (pos. 2) to the grease container (pos. 1).
- Fix the grease hose with all its corresponding accessories (swivel joint, high pressure grease control gun, etc.) onto the pump exit (pos. 5.1).

The grease pump is now ready for operation.

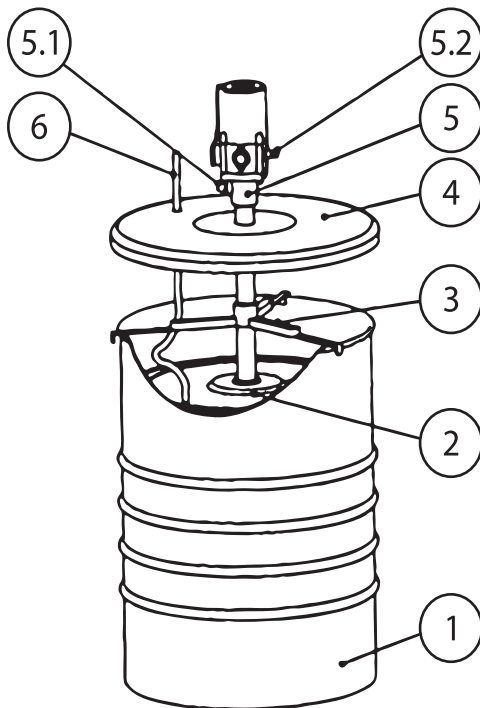


Fig. 5-1: Assembly

Pos.	Designation	Pos.	Designation
1	Grease container	5	Pump pipe
2	Follower plate	5.1	Pump outlet
3	Stabilising-fixing bracket	5.2	Compressed air supply
4	Dust cover	6	Hose

Tab. 5-1: Overview of components for fig. 5-1

**5.1. Adjustment of the maintenance unit (old version)****Item number: 20 218 950 (old version):**

- With this maintenance unit the adjusting dial must be set to Position 1 as shown in the diagram.

Fig. 5-1-1: Adjustment of the maintenance unit (old version)

**5.2. Adjustment of the maintenance unit (new version)****Item number: 20 218 950 (new version):**

- Use a screwdriver to screw in the brass screw by turning it clockwise up to its limit.
- Then, loosen the brass screw again by one turn.

Fig. 5-2-1: Adjustment of the maintenance unit (new version)

## 6. Preparing for operation



### CAUTION

- **Never work on a pump that is running!**
- Mount and operate the pump only in vertical position on a storage container.
- Mount or remove attachments and accessories only when the pump is switched off.

- Connect the compressed air connection ⇨ chapter (fig. 5-1, pos. 5.2) of the grease pump with the air supply line. The pump now starts to run.
- Operate the high pressure grease control gun until the grease flows out without air bubbles.
- Stop operating the high pressure grease control gun. The pump stops automatically when the set working pressure is reached.

The grease pump is now ready for operation.

## 7. Operation



### CAUTION

#### The pump supplies a working pressure of 400 bar

- While working with the pump please wear suitable safety equipments (leather gloves, protective glasses).
- Never point the high pressure grease control gun at parts of your own body or on other persons standing nearby.

#### Do not pump contaminated materials

- Please ensure that the grease to be pumped contains no contaminants.

- Press the hydraulic coupler onto the grease nipple in axial direction. (Fig. 7-1)
- Operate the high pressure grease control gun until the required amount of grease has been delivered.
- Disconnect the hydraulic coupler from the grease nipple by moving the hydraulic coupler in circles. (Fig. 7-2)

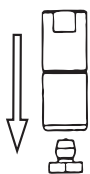


Fig. 7-1



Fig. 7-2



### WARNING

#### Risk of injury due to slipping and falling

- Disconnect the quick coupler of the grease gun from the compressed air supply if the greasing procedure has been achieved or if the pneumatic grease gun is not to be used for a while, to avoid an unintentional discharge of the grease cartridge or to prevent leakage.

### 7.1. Replacement of container



### CAUTION

- **Never work on a pump that is running**
- Replace the container only when the pump is switched off and only when there is no more air pressure in the system.

- Disconnect the quick coupler of the grease gun from the compressed air supply.
- Operate the high pressure grease control gun until grease flow stops.
- When using 200 l container the follower plate (fig. 5-1, pos. 2) can be removed from the bottom of the container by using compressed air supply. In order to achieve this blow compressed air through the hose (fig. 5-1, pos. 6) under the follower plate by means of an air gun.
- Uninstall the grease pump, the dust cover, the stabilizing fixing brackets and the follower plate in reverse sequence as described under chapter 5 (assembly).



## NOTE

Do not place the pump with its pipe directly onto the floor. Protecting the pump from dust will avoid possible damage on the system as well as maintenance time and after sales service cost.

## 7.2. Accessories

See catalogue Garage equipment or [www.pressol.com](http://www.pressol.com)



## NOTE

Only with original-PRESSOL spare parts is perfect operation of your grease pump guaranteed! To avoid faulty operation and danger, please use only original spare parts.

## 8. Preventive maintenance

Maintenance must be done by qualified technical personnel.

The muffler and air inlet filter should be cleaned regularly to maintain the trouble free performance of the pump. If the pump is not used with a maintenance unit, frequently lubricate the pump by inserting 2 to 3 drops of quality oil through the air inlet connector at regular intervals.

The grease pump is very easy to maintain and service.

Due to the operator responsibilities according to § 19i WHG (German rules), the following components must be regularly checked and replaced as necessary, to minimise the possibility of environmental or equipment damage, or personal injury:

- Pump housing
- Delivery hose
- Nozzle valve
- Connection lines

## 9. Maintenance

Maintenance must be done by qualified technical personnel. External impact may cause a loss of performance, constitute a risk of damage to persons and/or property and void the guarantee.



## WARNING

### Risk of injury and damage to material property because of improper maintenance and repair

- Before opening the pump, always interrupt the air supply and activate the discharge gun so that air can escape.
- For safety reasons, disconnect the compressed air supply outside the operating hours, so that the pump is not under pressure.
- Please also observe all statutory regulations and requirements of the local supervisory authorities and environmental protection bodies regarding the handling of lubricants.

Observe the following recommendations for operating the pump:

- Before performing any maintenance work, disconnect the pump from all electric and hydraulic supply sources.
- Always wear personal protective equipment when carrying out maintenance work.

- Check to ensure that the labels and decals have not become illegible and have not come loose in the course of time.
- Check at regular intervals that the line connections have not worked loose in order to avoid that liquid escapes.
- From time to time, check the pump housing and remove any dirt.
- Check to ensure that the power cables are in perfect working order.

During the warranty period, the pump is only allowed to be opened by PRESSOL service personnel.

## 10. Troubleshooting

All position numbers indicated in the following table relate to figure 13-1, ⇨ chapter 13.

Problem	Cause	Solution
The pneumatic unit runs slowly or not at all	<ul style="list-style-type: none"> <li>▶ The air pressure is too low</li> <li>▶ The muffler (pos. 20) or the filter (pos. 11) is obstructed or dirty</li> </ul>	<ul style="list-style-type: none"> <li>▶ Set the air supply to a minimum pressure of 3 bar</li> <li>▶ Clean the muffler and filter</li> </ul>
The pneumatic unit is running but the pump is operating too slow or not at all	<ul style="list-style-type: none"> <li>▶ Sieve (pos.41) foul</li> <li>▶ Grease container dented</li> <li>▶ Air bubbles in the grease</li> <li>▶ Grease too stiff</li> <li>▶ Friction loss in the delivery hose</li> </ul>	<ul style="list-style-type: none"> <li>▶ Sieve must be cleaned up</li> <li>▶ Press the follower plate underneath the dent</li> <li>▶ Remove the pump from the container. Push the container several times on the floor. Press down the follower plate and replace the pump into the container. Operate the high pressure grease control gun and connect the compressed air</li> <li>▶ Use only grease up to consistency grade NLGI 2. Do not use grease below temperature of 15 °C</li> <li>▶ Select if possible only short hoses and insert the pump centrally</li> </ul>
The pump runs but no pressure is generated	<ul style="list-style-type: none"> <li>▶ The o-rings, washers or valves of the pump are damaged or dirty</li> </ul>	<ul style="list-style-type: none"> <li>▶ Clean or replace the relevant components</li> </ul>
Air escapes from the muffler when the pump is not operating.	<ul style="list-style-type: none"> <li>▶ The plunger (pos. 5) is damaged</li> <li>▶ The o-rings or the distributor seal (pos. 19.6) are damaged</li> </ul>	<ul style="list-style-type: none"> <li>▶ Replace the plunger (art.-no. 03 324)</li> <li>▶ Replace the components utilising the complete repair kit (art.-no. 87 351)</li> </ul>

Tab. 10-1: Fault Finding

## 11. Repairs/Service

The grease pump was developed and produced according to the highest quality standards.

Should a problem develop, despite all quality controls, please contact our customer service:

**PRESSOL Schmiergeräte GmbH**

Tel +49 9462 17-246

Fax +49 9462 1063

service@pressol.com

## 12. Disposal

The operating company is responsible for the proper disposal of the pump.

Dispose of the different materials in accordance with all industry-specific, local, regional and federal regulations. Only qualified personnel is authorized to disassemble and dispose of the pump.

### 13. Exploded view

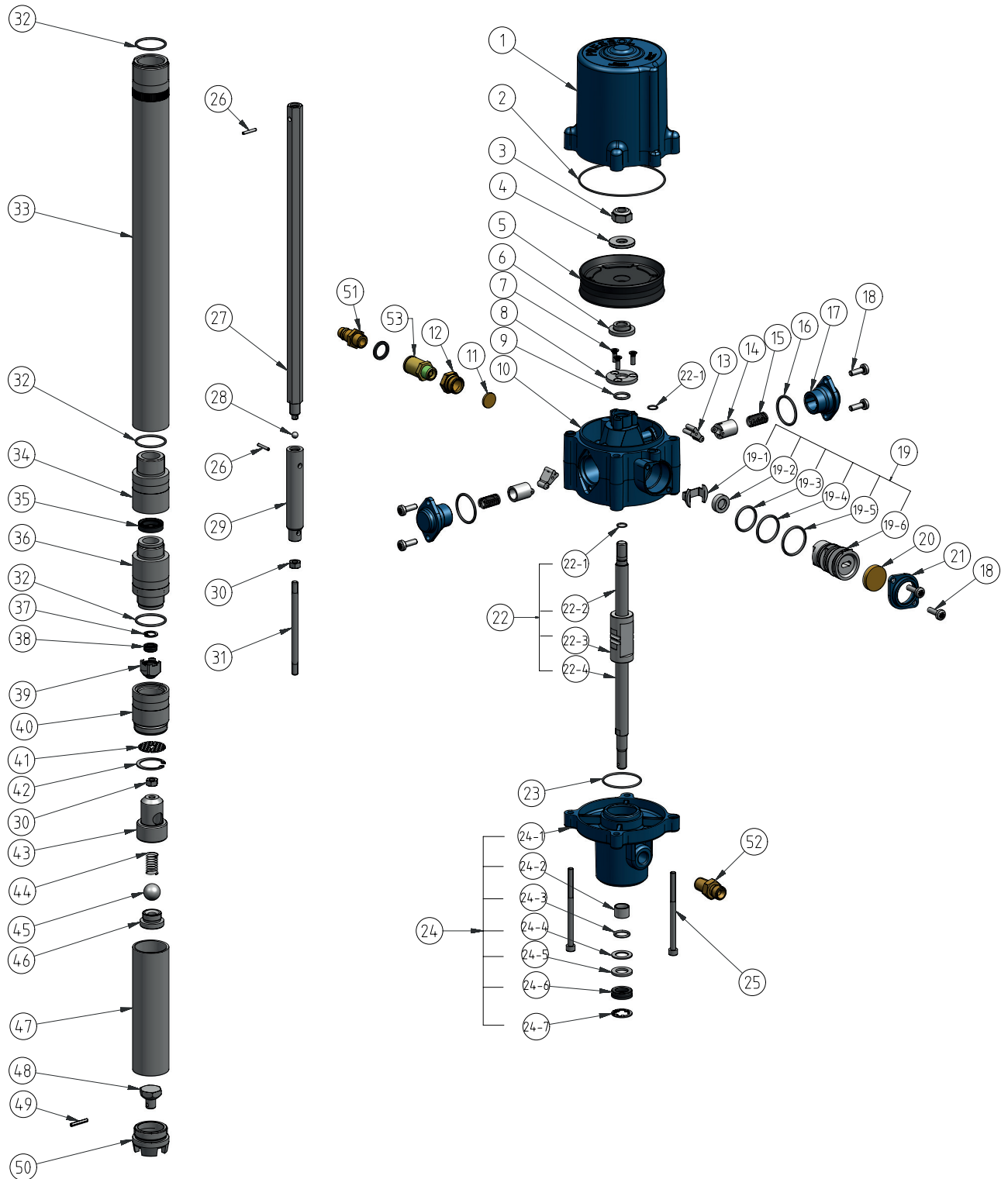


Fig. 13-1: Exploded view

Pos.	Quantity	Designation	Item number
1	1	Upper casing	03 268
2	1	O-ring	03 316
3	1	Locking nut	03 311
4	1	Washer	87 116
5	1	Plunger	03 324
6	1	Compensating washer	03 250
7	3	Screw	87 221
8	1	Washer	87 212
9	2	O-ring	02 380
10	1	Intermediate casing	87 211
11	1	Filter	87 228
12	1	Reducing connector	20 122
13	2	Control lever	87 210
14	2	Sleeve	87 209
15	2	Compression spring	87 215
16	3	O-ring	87 223
17	2	Insert	87 206
18	6	Screw	87 220
19		Distributor repair kit	87 351
19-1	1	Clamp	87 214
19-2	1	Sliding disc	87 213
19-3	1	O-ring	87 225
19-4	1	O-ring	87 224
19-5	1	O-ring	87 223
19-6	1	Distributor	87 204
20	1	Muffler	87 227
21	1	Retainer	87 207
22		Piston rod repair kit	87 352
22-1	2	O-ring	03 262
22-2	1	Piston rod	87 205
22-3	1	Slider	87 208
22-4	1	Piston rod	02 840
23	1	O-ring	87 226
24		Connecting flange repair kit	87 355
24-1	1	Connecting flange	87 216
24-2	1	Bearing	03 307
24-3	1	O-ring	02 380
24-4	1	Washer	87 262
24-5	1	Support washer	03 292
24-6	1	Lip washer	03 387
24-7	1	Circlip	03 264
25	4	Screw	87 222
26	2	Locking pin	03 260

Pos.	Quantity	Designation	Item number
27	1	Compression rod, length 126 mm	87 515
	1	Compression rod, length 188 mm	87 516
	1	Compression rod, length 326 mm	87 517
	1	Compression rod, length 426 mm	87 518
	1	Compression rod, length 726 mm	87 519
28	1	Ball bearing	03 304
29	1	Pressure piston	87 508
30	2	Locking nut	00 808
31	1	Threaded rod	80 739
32	3	O-ring	87 521
33	1	Suction tube, length 179 mm	87 510
	1	Suction tube, length 241 mm	87 511
	1	Suction tube, length 379 mm	87 512
	1	Suction tube, length 479 mm	87 513
	1	Suction tube, length 779 mm	87 514
34	1	Adapter	87 507
35	1	Lip washer	87 522
36	1	Upper casing	87 506
37	1	Circlip	03 501
38	1	Lip washer	00 152
39	1	Valve cone	03 477
40	1	Valve body	87 505
41	1	Sieve	03 503
42	1	Circlip	03 328
43	1	Rod	80 738
44	1	Compression spring	01 010
45	1	Steel ball	01 006
46	1	Rod nut	80 737
47	1	Cylinder	80 733
48	1	Valve tappet	80 735
49	1	Locking pin	84 163
50	1	Foot valve	80 732
51	1	Quick release for KU Rectus	20 062
52	1	Double nipple	18 085
53	1	Pressure reducing valve	04 698

Tab. 13-1 Overview of components for fig. 13-1



## 14. EG Declaration of Conformity



Manufacturer:

**Pressol Schmiergeräte GmbH**

Parkstraße 7

93167 Falkenstein / Germany

Declares under his sole responsibility that the machine:

<b>Model</b>	<b>Pneumatic grease pump 50:1 18 710 950 18 710 051; 18 711 051 18 713 051; 18 716 051</b>
Function	Feeding lubrication greases and multi function greases from NLGI 0 to NLGI 2 from original barrels.
complies with all relevant provisions of the following directives:	
EC Directives	2006/42/EG Machinery Directive 2011/65/EC EU-Directive (RoHS)
Applicable standards	EN 809:2012-10 EN ISO 4414:2011-04 EN 12100:2010

Authorized representative for the compilation of the technical documentation:

Name: Manuel Bredenbruch  
 Adresse: Pressol Schmiergeräte GmbH  
 Parkstraße 7  
 93167 Falkenstein / Germany  
 Phone: +49 9462 17-218

Pressol Schmiergeräte GmbH  
 Falkenstein, 19.07.2019

Dipl.-Ing. Rudolf Schlenker  
 (Managing Director)

**Pressol Schmiergeräte GmbH**

Parkstraße 7

93167 Falkenstein | Germany

Tel. +49 9462 17-0

Fax +49 9462 17-208

[info@pressol.com](mailto:info@pressol.com)

[www.pressol.com](http://www.pressol.com)

