WAGNER

Translation of the Original Operating Manual

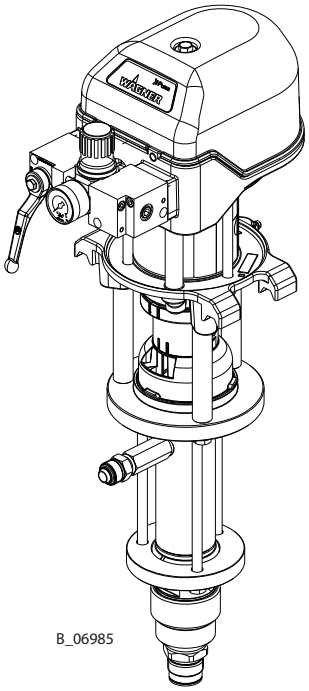
For professional use.
Always follow the information in this manual, particularly the safety instructions and the warning instructions. Store the manual in a safe place.

Version 03/2020

Wildcat 10-70 / 18-40
Puma 28-40 / 15-70
Puma 21-110 / 15-150
Leopard 35-70
Leopard 35-150 / 48-110
Jaguar 75-150

IceBreaker Piston Pumps

Flow rate 40 cm^3 – 150 cm^3



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CE Ex II 2 G Ex h IIB T3/T4 Gb X

Contents

1 ABOUT THESE INSTRUCTIONS

1.1 PREFACE

The operating manual contains information about safely operating, maintaining, cleaning and repairing the device. The operating manual is part of the device and must be available to the operating and service personnel. The device may only be operated by trained personnel and in compliance with this operating manual.
Operating and service personnel should be instructed according to the safety instructions.
This equipment can be dangerous if it is not operated according to the instructions in this operating manual.

1.2 WARNINGS, NOTICES AND SYMBOLS IN THESE INSTRUCTIONS

Warning instructions in this manual highlight particular dangers to users and to the device and state measures for avoiding the hazard. These warning instructions fall into the following categories:

⚠ **DANGER**	Immediate risk of danger. Non-observance will result in death or serious injury.
⚠ **WARNING**	Potential risk. Non-observance can result in death or serious injury.
⚠ **CAUTION**	Potentially hazardous situation. Non-observance may result in minor injury.
ⓘ **NOTICE**	Potentially hazardous situation. Non-observance may result in damage to property.
Notice	Provides information about particular characteristics and how to proceed.

Explanation of warning notice:

⚠ **LEVEL OF DANGER**

This notice warns you of a hazard!
Possible consequences of not observing the warning notice.
→ The measures for preventing the hazard and its consequences.

1.3 LANGUAGES

The operating manual is available in the following languages:
Original operating manual

Language	Order No.
German	2333537

Translation of the original operating manual

Language	Order No.
French	2333539
Spanish	2333541
Japanese	2338088
Dutch	2367552

Language	Order No.
English	2333538
Italian	2333540
Russian	2351629
Hungarian	2352104

Additional languages on request or at: www.wagner-group.com

1.4 SERVICE MANUAL

The service manual is available in the following languages:

Language	Order No.
German	2335993

Language	Order No.
English	2335994

Additional languages on request or at: www.wagner-group.com

1.5 ABBREVIATIONS

Stk	Number of pieces
Pos	Position
K	Marking in the spare parts lists
Order No.	Order number
DH	Double stroke
DN	Nominal diameter
PN	Nominal pressure
2K	Two components

SSt	Stainless steel
PE	Polyethylene
UHMWPE	Ultra-high molecular weight polyethylene
PTFE	Polytetrafluorethylene
TG	PTFE with graphite
T	PTFE
L	Leather
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1.6 TERMINOLOGY FOR THE PURPOSE OF THIS MANUAL

Cleaning	
Cleaning	Manual cleaning of devices and device parts with cleaning agent.
Flushing	Internal flushing of paint-wetted parts with flushing agent.
Product pressure generator	Pump or pressure tank.
Personnel qualifications	
Trained person	Is instructed in the tasks assigned to him/her, the potential risks associated with improper behavior as well as the necessary protective devices and measures.
Electrically trained person	Is instructed by an electrician about the tasks assigned to him/her, the potential risks associated with improper behavior as well as the necessary protective devices and measures.
Electrician	Can assess the work assigned to him/her and detect possible hazards based on his/her technical training, knowledge, experience and knowledge of the relevant provisions.
Skilled person in accordance with TRBS 1203 (2010/Revision 2012)	A person, who, based on his/her technical training, experience and recent vocational experience, has sufficient technical knowledge in the areas of explosion protection, protection from pressure hazards and electric hazards (if applicable) and is familiar with the relevant and generally accepted rules of technology so that he/she can inspect and assess the status of devices and coating systems based on workplace safety.

2 CORRECT USE

2.1 DEVICE TYPES

2.1.1 PNEUMATIC PUMPS AND THEIR SPRAYPACKS

Wildcat	Puma	Leopard	Jaguar
10-70	28-40	35-70	75-150
18-40	15-70	35-150	--
--	21-110	48-110	--
--	15-150	--	--

2.1.2 SPECIAL VERSIONS FOR ACIDIC HARDENERS AND THEIR SPRAYPACKS

Wildcat	Leopard
10-70 (TC 1.4404)	35-70 (TC 1.4404)

2.2 TYPE OF USE

The device is suitable for processing liquid products like paints and lacquers:
- Non-ignitable products.
- Products in accordance with their classification in explosion class IIB.

WAGNER explicitly prohibits any other use!
The device may only be operated under the following conditions:
→ Use the device only to work with the products recommended by WAGNER.
→ Do not deactivate safety fixtures.
→ Use only WAGNER original spare parts and accessories.
→ The operating personnel must be trained on the basis of this operating manual.

2.3 FOR USE IN POTENTIALLY EXPLOSIVE AREAS

The device can be employed in explosion hazard zones (Zone 1) (see Chapter 3).

2.4 PROCESSIBLE WORKING MATERIALS

→ Fluid materials like paints and lacquers.

Application	WILDCAT 18-40 10-70	PUMA 28-40	PUMA 15-70 21-110 15-150	LEOPARD 35-70	LEOPARD 35-150 48-110	JAGUAR 75-150
Water-dilutable products	↗	↗	↗	↗	↗	↗
Solvent-based lacquers and paints	↗	↗	↗	↗	↗	↗
Primers	⇾	⇾	⇾	↗	↗	↗
Epoxy and polyurethane lacquers, phenolic lacquers	⇾	↗	⇾	↗	↗	↗
Liquid plastics	↘	⇾	↘	↗	↗	↗
Wax-based underside protection	↘	↘	↘	↗	↗	↗
Chemically aggressive products that attack carbide seats	↘	↘	↘	↘	↘	↘
Special versions for 2K products: Wildcat 10-70 TC and Leopard 35-70 TC	↗	--	--	↗	--	--

↗ recommended ⇾ limited suitability ↘ not suitable -- not compatible with 2K products

NOTICE

Abrasive working materials and pigments!

Greater wear of product-wetted parts.

→ Use the application-oriented model (flow rate/cycle, product, valves, etc.) as indicated in Chapter 5.5.

→ Check if the fluids and solvents used are compatible with the pump construction materials as indicated in Chapter 5.5.1.

→ Use suitable combinations of devices (packings, valves etc.)

Wear caused by abrasive working materials is not covered by the warranty.

Typical applications

Fields of application	WILDCAT 18-40 10-70	PUMA 28-40	PUMA 15-70 21-110 15-150	LEOPARD 35-70	LEOPARD 35-150 48-110	JAGUAR 75-150
Furniture industry	↗	↗	↗	↗	↗	↘
Kitchen manufacturers	↗	↗	↗	↗	↗	↘
Joinery	↗	↗	↗	⇻	↘	↘
Window factories	⇻	⇻	↗	↗	↗	↘
Steel-processing industry	↘	⇻	↘	↗	↗	↗
Construction of vehicles	↗	↗	↗	↗	⇻	⇻
Shipbuilding	↘	↘	↘	⇻	⇻	↗

↗ recommended ⇻ limited suitability ↘ not suitable

2.4.1 SPECIAL VERSIONS FOR ACIDIC HARDENERS

WARNING

Acidic hardeners!

Risk of burns and injury for skin, tissue and organs.

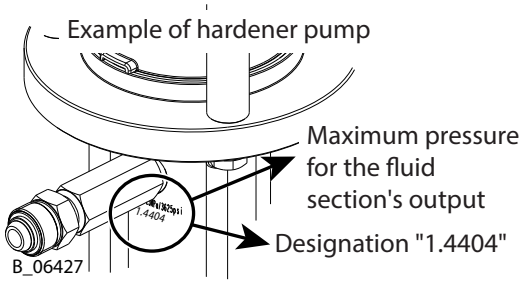
→ Observe the lacquer manufacturer's safety data sheets and take prescribed safety measures.

Special versions:
Wildcat 10-70 TC and Leopard 35-70 TC

Check products for compatibility: see Chapter 5.5.1.

Parts made of stainless steel 1.4404 are labeled with "1.4404" (see example).

Further information about operation with acidic hardeners can be found in the operating manual for the entire system.



2.5 MISUSE

Misuse can lead to physical injury and/or property damage!
Special attention must be paid that:

→ No dry coating products, e.g., powder are processed.

→ no food, medicine or cosmetics are processed.
It is important to note that the device's materials are not food-safe.

3 IDENTIFICATION

3.1 EXPLOSION PROTECTION IDENTIFICATION

As defined in the Directive 2014/34/EU (ATEX), the device is suitable for use in potentially explosive areas.

Device types: **IceBreaker Piston Pump**
Wildcat 10-70, Wildcat 18-40
Puma 28-40, Puma 15-70, Puma 21-110, Puma 15-150
Leopard 35-70, Leopard 35-150, Leopard 48-110
Jaguar 75-150

Manufacturer: Wagner International AG
CH-9450 Altstätten, Switzerland

CE Ex II 2 G Ex h IIB T3/T4 Gb X

CE:	European Communities
Ex:	Symbol for explosion protection
II:	Device class II
2:	Category 2 (zone 1)
G:	Ex-atmosphere gas
Ex	Explosion protection
h	Ignition protection for non-electrical devices
IIB:	Explosion group
T3:	Maximum surface temperature < 200 °C; 392 °F (without drying protection active)
T4	Maximum surface temperature < 135 °C; 275 °F (with drying protection active)
Gb	High safety level
X	There are special instructions to ensure safe operation. → See the following Chapter "Identification X".

3.2 IDENTIFICATION "X"

The maximum surface temperature corresponds to the permissible product temperature. This and the permissible ambient temperature can be found in Chapter 5.5.3 and 5.5.5 (technical data regarding the Wildcat, Puma, Leopard and Jaguar pumps).

Safe Handling of WAGNER Spray Devices

Mechanical sparks can form if the device comes into contact with metal.

In an explosive atmosphere:

→ knocking or pushing metal against metal is to be avoided;

→ Do not drop the device or components.

Maximum surface temperature

The maximum surface temperature of the piston pump can be reached if it runs dry.

→ Ensure that the piston pump is filled with sufficient working or flushing agent.

→ Ensure that the separating agent tank is filled with sufficient separating agent.

Ignition temperature of the coating product

→ Ensure that the ignition temperature of the surrounding gases (pumping product, cleaning agents) is higher than the maximum permitted surface temperature of the device.

Ambient temperature

→ The permissible ambient temperature range is: 5 °C to 50 °C; 41 °F to 122 °F.

Medium supporting atomizing

→ To atomize the product, use only weakly oxidizing gases, e.g., air.

Surface spraying, electrostatics

→ Do not spray device parts using electrostatic equipment.

Cleaning

If there are deposits on the surfaces, the device may form electrostatic charges. Flames or sparks can form during discharge.

→ Remove deposits from the surfaces to maintain conductivity.

→ Use only a damp cloth to clean the device.

Air in the pump fluid

Ignitable gas mixtures can form if air enters the pump fluid.

→ Prevent the pump from taking in air and running dry.

→ If air has been taken in, fix the leak. Then, fill slowly and in a controlled manner until the air has escaped.

Air in the pumped fluid can be caused by damaged packings.

→ Avoid operating the pump with damaged packing.

→ Ensure that the separating agent tank is filled with sufficient separating agent.

→ Periodically check that the pump is working smoothly, paying special attention to the presence of air in the pumped fluid.

Filling and emptying

Ignitable gas mixtures can form in the fluid section or product hoses if the pump must be emptied for maintenance and/or repair purposes.

→ Empty and fill the device slowly and in a controlled manner.

→ Avoid potentially explosive atmosphere in the surroundings.

3.3 TYPE PLATES

Pos	Designation
1	Manufacturer and CE Identification
2	Pump type
3	Maximum product pressure
4	Pump ratio
5	Flow rate per double stroke
6	Maximum air inlet pressure
7	Maximum product temperature
8	Model year - serial number
9	Read the operating manual before use

4 BASIC SAFETY INSTRUCTIONS

4.1 SAFETY INSTRUCTIONS FOR THE OPERATOR

→ Keep this operating manual at hand near the device at all times.
→ Always follow local regulations concerning occupational safety and accident prevention.

4.1.1 ELECTRICAL DEVICES AND EQUIPMENT

Electric shock hazard!
Danger to life from electric shock
→ Prepare device in accordance with the local safety requirements with regard to the operating mode and ambient influences.
→ May only be maintained by skilled electricians or under their supervision. With open housings, the mains voltage poses a danger.
→ Operate device in accordance with the safety regulations and electrotechnical regulations.
→ Must be repaired immediately in the event of problems.
→ Decommission if it poses a hazard or is damaged.
→ Must be de-energized before work is commenced. Inform personnel about planned work. Observe electrical safety regulations.
→ Ground all devices to a common grounding point.
→ Only operate the device with a properly installed socket with a protective ground wire connection.
→ Keep liquids away from electrical devices.

4.1.2 A SAFE WORK ENVIRONMENT

Hazard due to dangerous fluids or vapors!
Severe or fatal injuries due to explosion hazard or inhalation, swallowing or contact with the skin or eyes.
→ Ensure that the floor in the working area is static dissipative in accordance with EN 61340-4-1 (resistance must not exceed 100 MΩ).
→ Paint mist extraction systems/ventilation systems must be fitted on site according to local regulations.
→ Make sure that the ground connection and potential equalization of all system parts are reliable and continuous and can withstand the expected stress (e.g. mechanical stress, corrosion).
→ Ensure that product hoses / air hoses adapted to the working pressure are used.

→ Ensure that personal protective equipment (see Chapter 4.2.1) is available and is used.
→ Ensure that all persons within the working area wear static dissipative shoes. Footwear must comply with EN 20344. The measured insulation resistance must not exceed 100 MΩ.
→ Ensure that during spraying, persons wear electrically conductive gloves. The grounding takes place via the spray gun handle or the trigger.
→ Protective clothing, including gloves, must comply with EN 1149-5. The measured insulation resistance must not exceed 100 MΩ.
→ Ensure that there are no ignition sources such as naked flames, sparks, glowing wires, or hot surfaces in the vicinity. No smoking.

→ Ensure that the pipe joints, hoses, equipment parts and connections are permanently, technically leak-proof:
- Periodic preventative maintenance and service (replacing hoses, checking tightness strength of the connections etc.).
- Regular monitoring of leaks and defects via visual inspection and odor testing, e.g., daily before commissioning, at the end of work or weekly.

→ Ensure that maintenance and safety checks are performed regularly.

→ In the event of defects, immediately bring the device or system to a stop and arrange to have repairs carried out immediately.

4.1.3 PERSONNEL QUALIFICATIONS

Hazard due to incorrect use of device!

Risk of death due to untrained personnel.

→ Ensure that the operating personnel has been instructed by the operator in accordance with the operating manual and the operating instructions. The device must only be operated, maintained and repaired by trained personnel. Refer to the operating instructions for information about the required personnel qualifications.

4.2 SAFETY INSTRUCTIONS FOR THE PERSONNEL

→ Always follow the information in this manual, particularly the safety instructions and the warning instructions.

→ Always follow local regulations concerning occupational safety and accident prevention.

→ In electrostatics applications: anyone who belongs to a risk group according to EMF Directive 2013/35/EU (e.g. those with active implants), must not enter the high-voltage area.

4.2.1 PERSONAL SAFETY EQUIPMENT

Hazard due to dangerous fluids or vapors!

Serious or fatal injuries due to inhalation, swallowing or contact with the skin or eyes.

→ When preparing or working with lacquer and when cleaning the device, follow the working instructions of the manufacturer of the lacquers, solvents, and cleaning agents being used.

→ Take the specified protective measures. In particular wear safety goggles, protective clothing and gloves, as well as hand protection cream if necessary.

→ Use a mask or breathing apparatus if necessary.

→ For sufficient health and environmental safety: Operate the device in a spray booth or on a spraying wall with the ventilation (extraction) switched on.

→ Wear suitable protective clothing when working with hot products.

4.2.2 SAFE HANDLING OF WAGNER SPRAY DEVICES

Hazard due to injection of lacquer or flushing agent into the skin!

The spray jet is under pressure and can cause dangerous injuries. Avoid injection of lacquer or flushing agents:

- → Never point the spray gun at people.
- → Never reach into the spray jet.
- → Before any work on the device, in the event of work interruptions and malfunctions:
  - – Switch off the energy/compressed air supply.
  - – Relieve the pressure from the spray gun and device.
  - – Secure the spray gun against actuation.
  - – Disconnect the control unit from the mains.
  - – In the event of functional faults, remedy the fault as described in the "Troubleshooting" chapter.
- → If necessary or at least every 12 months, the liquid ejection devices must be checked for safe working conditions by an expert (e.g. WAGNER Service Technician) in accordance with the guidelines for liquid ejection devices (ZH 1/406 and DGUV 100-500 Chapters 2.29 and 2.36).
  - – For shut-down devices, the check can be postponed until the next start-up.

In the event of skin injuries caused by lacquer or flushing agents:

- → Note the lacquer or flushing agent that you have been using.
- → Consult a doctor immediately.

Danger due to recoil forces!

Actuating the trigger can causes strong recoil forces. Thereby, the user can lose his balance and injure himself when falling.

Avoid risk of injury from recoil forces:

- → Ensure that you have firm footing when operating the spray gun.

4.2.3 GROUNDING THE UNIT

Hazard due to electrostatic charge!

Explosion hazard and damage to the device.

Friction, flowing liquids and air or electrostatic coating processes create charges. Flames or sparks can form during discharge.

Correct grounding of the entire spraying system prevents electrostatic charges.

- → Ensure that all devices and tanks are grounded before each spraying process.
- → Ground the work pieces to be coated.
- → Ensure that all persons inside the working area are grounded, e.g., that they are wearing static dissipative shoes.
- → Wear static dissipative gloves when spraying. The grounding takes place via the spray gun handle or the trigger.

4.2.4 PRODUCT HOSE

Hazard due to bursting of product hose!

The product hose is under pressure and may cause dangerous injuries.

- → Ensure that the hose material is chemically resistant to the sprayed products and the flushing agents used.
- → Ensure that the product hose and the fittings are suitable for the pressure generated.
- → Ensure that the following information can be seen on the high-pressure hose:
  - – manufacturer
  - – permissible operating pressure
  - – date of manufacture
- → Make sure that the hoses are laid only in suitable places. Hoses should not be laid in the following places under any circumstances:
  - – in high-traffic areas
  - – on sharp edges
  - – on moving parts
  - – on hot surfaces
- → Ensure that the hoses are never run over by vehicles (e.g., fork lift trucks), or that the hoses are never put under pressure from the outside in any other way.
- → Ensure that the hoses are never kinked. Observe maximum bending radii.
- → Ensure that no work is ever performed with a damaged hose.
- → Make sure that the hoses are never used to pull or move the equipment.
- → The electrical resistance of the product hose, measured at both valves, must be less than 1 MΩ.
- → Suction hoses may not be subjected to pressure.

Several liquids have a high expansion coefficient. In some cases, their volume can rise with consequent damage to pipes, fittings, etc. and cause fluid leakage.
When the pump sucks liquid from a closed tank, ensure that air or a suitable gas can enter the tank. Thus a negative pressure is avoided. The vacuum could implode the tank (squeeze) and can cause it to break. The tank would leak and the liquid would flow out.
The pressure created by the pump is a multiplication of the inlet air pressure.

4.2.5 CLEANING AND FLUSHING

Hazard due to cleaning and flushing!

Explosion hazard and damage to the device.

- → Preference should be given to non-ignitable cleaning and flushing agents.
- → When carrying out cleaning work with flammable cleaning agents, make sure that all equipment and resources (e.g., collection tank, funnel, transport cart) are conductive or static dissipative and grounded.
- → Observe the specifications of the lacquer manufacturer.
- → Ensure that the flash point of the cleaning agent is at least 15 K above the ambient temperature or that cleaning is undertaken at a cleaning station with technical ventilation.

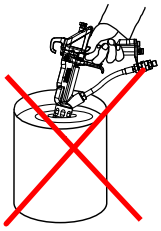
- → Never use chloride or halogenated solvents (such as trichloroethane and methylene chloride) with units containing aluminium or galvanized and zinc-plated parts. They may react chemically thus producing an explosion danger.
- → Take measures for workplace safety (see Chapter 4.1.2).
- → When commissioning or emptying the device, please note that:
  –depending upon the coating product used,
  –depending on the flushing agent (solvent) used.
  an explosive mixture may temporarily exist inside the lines and components of equipment.
- → Only electrically conductive tanks may be used for cleaning and flushing agents.
- → The tanks must be grounded.

An explosive gas/air mixture forms in closed tanks.

- → Never spray into a closed tank when using solvents for flushing.

External Cleaning

When cleaning the exterior of the device or its parts, also observe the following:



- → Relieve the pressure from the device.
- → De-energize the device electrically.
- → Disconnect the pneumatic supply line.
- → Use only moistened cloths and brushes. Never use abrasive agents or hard objects, and never spray cleaning agents with a spray gun. Cleaning the device must not damage it in any way.
- → Ensure that no electric component is cleaned with or immersed into solvent.

4.2.6 TOUCHING HOT SURFACES

Hazard due to hot surfaces because of hot coating products!

Risk of burn injuries

- → Only touch hot surfaces if you are wearing protective gloves.
- → When operating the device with a coating product with a temperature of > 43 °C; 109 °F:
  – Identify the device with a warning label "Warning – hot surface".
  Part no.
  9998910 instruction label
  9998911 protection label
  Note: Order the two stickers together.

4.2.7 MAINTENANCE AND REPAIR

Hazard due to improper maintenance and repair!

Danger to life and equipment damage.

- → Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- → Use only WAGNER original spare parts and accessories.
- → Do not change or modify the device; if change is necessary, contact WAGNER.
- → Only repair and replace parts that are listed in Chapter 13 and Chapter 14 that are assigned to the unit.
- → Do not use any defective components.
- → Exclusively use accessories listed in Chapter 13 and that are assigned to the unit.
- → Before all work on the device and in the event of work interruptions:
  - Relieve the pressure from the spray gun, high-pressure hoses and all devices.
  - Secure the spray gun against actuation.
  - Switch off the energy and compressed air supply.
  - Disconnect the control unit from the mains.
- → Observe the operating and service manual for all work.

4.2.8 PROTECTIVE AND MONITORING EQUIPMENT

Hazard due to removal of protective and monitoring equipment!

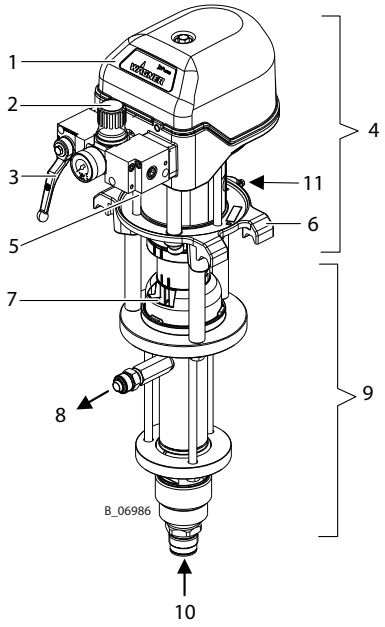
Danger to life and equipment damage.

- → Protective and monitoring equipment must not be removed, modified or rendered unusable.
- → Regularly check for perfect functioning.
- → If defects are detected on protective and monitoring equipment, the system must not be operated until these defects are remedied.

5 DESCRIPTION

5.1 COMPONENTS

Pos	Designation
1	Control housing with integrated silencer
2	Air pressure regulator
3	Ball valve
4	Air motor
5	Compressed air inlet
6	Mounting flange
7	Separating agent cup
8	Product outlet
9	Fluid section
10	Product inlet
11	Grounding connection



5.2 MODE OF OPERATION

The piston pump is driven with compressed air (2). This compressed air moves the air piston up and down in the air motor (4) and it also moves the associated pump piston up and down in the fluid section (9).
In the control housing (1), the air pressure is redirected at the end of each stroke with the help of the reversing valve. The working material is sucked up during the upwards stroke and is continuously conveyed towards the product outlet (8) in both stroke directions.

5.2.1 AIR MOTOR

The air motor (4) with its pneumatic reverse (1) does not require pneumatic oil.
The compressed air is fed to the motor via the air regulator (2) and the ball valve (3).
The air motor (4) is fitted with a safety valve in accordance with Chapter 5.3.

5.2.2 FLUID SECTION

The fluid section (9) has been designed as a piston pump with exchangeable ball valves. The hard chrome-plated pump piston runs in two fixed packings which are self-adjusting by means of a pressure spring, thus resulting in a long service life.
Between the air motor (4) and the fluid section (9) there is a separating agent cup (7) for holding the separating agent.

5.3 PROTECTIVE AND MONITORING EQUIPMENT

⚠ WARNING

Overpressure!

Danger to life from bursting device components.

→ Never change the safety valve setting.

The air motor is fitted with a safety valve. The safety valve has been set and sealed at the factory. In case of pressures over and above the permissible operating pressure, the spring-loaded valve, automatically opens and releases the excess pressure.

The control housing is equipped with noise insulation. Never operate the device without noise insulation.

The connection set is equipped with a coupling cover. Never operate the device without a coupling cover.

5.4 INCLUDED ITEMS

Pneumatic piston pump	
–	Fluid section
–	Air motor
–	Connection set for air motor - fluid section
–	Air pressure regulator for air motor

The standard equipment includes:

Stk	Order No.	Designation
1	9992504	Separating agent 250 ml; 250 cc
1	2333537	Operating manual, in German
1	see Chapter 15	Declaration of Conformity
1	see Chapter 1.3	Operating manual in the local language

The delivery note shows the exact scope of delivery. Accessories: see Chapter 13.

5.5 DATA

5.5.1 MATERIALS OF PAINT-WETTED PARTS

Paint-wetted part	Product
Housing	Stainless steel
Piston	Stainless steel and hard chrome
Valve balls	Stainless steel
Valve seats	Carbide
O-rings	PTFE
Packings	Standard PE/ TG

TG = PTFE with graphite PE = Ultra high molecular weight polyethylene

5.5.1.1 MATERIALS OF THE PAINT-WETTED PARTS FOR ACIDIC HARDENERS

Special versions for working with acidic hardeners

Pumps	Product
Wildcat 10-70 TC 1.4404 Leopard 35-70 TC 1.4404	1.4301, 1.4404, 1.4408, 1.4571 Fluoroelastomer, carbide, Polyethylene, Polytetrafluorethylene

5.5.2 RECOMMENDED PACKINGS

WAGNER packings for this device:

Code	Product	Color
L	Leather	dark brown
TG	PTFE with graphite	black
PE	Ultra high molecular weight polyethylene	transparent
T	PTFE	white

Each product has the following properties, which influence the packings:

Designation	L	TG	PE	T
Mechanical stability	poor	good	good	poor
Friction coefficient	poor	very good	good	very good
Sealing force	good*	good	good	good
Chemical resistance	poor	good	very good	very good
Temperature resistance	good	poor - good	very good	poor

* for abrasive products

Standard combinations	
Standard pumps	PE / TG
Heavy duty (high-pressure) pumps	PE/L
Hardener pumps in 2K systems:	PE/T

5.5.3 TECHNICAL DATA FOR WILDCAT AND PUMA

Description		Units	WILDCAT 10-70	WILDCAT 18-40	PUMA 28-40	PUMA 15-70	PUMA 21-110	PUMA 15-150
Pump ratio			10:1	18:1	28:1	15:1	21:1	15:1
Volume flow per double stroke (DH)		cm^3; cc	70	40	40	70	110	150
Maximum operating overpressure		MPa bar psi	8 80 1160	14.4 144 2089	22.4 224 3249	12 120 1740	16.8 168 2436	12 120 1740
Maximum possible strokes in operation		DH/min.	60					
Maximum recommended strokes per minute in continuous operation		DH/min.	40					
Minimum/maximum air inlet pressure		MPa bar psi	0.25–0.8 2.5–8 36–116					
Compressed air quality: free from oil and water		Quality standard 7.5.4 according to ISO 8573.1, 2010 7: Particle concentration 5 – 10 mg/m^3 5: Humidity: pressure dew point ≤ 7 °C 4: Oil content ≤ 5 mg/m3						
ø air inlet (inside thread)		inch	G 1/2"					
Minimum ø of the compressed air supply line		mm; Inch	9; 0.35					
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke		nl scf	5.3 0.19		8.3 0.29		16.5 0.58	
Air motor piston diameter		mm; Inch	80; 3.2		100; 4			
Air motor piston stroke		mm; Inch	75; 3		75; 3		150; 6	
Sound pressure level at maximum permissible air pressure*		dB(A)	77	77	78	77	78	78
Sound pressure level at 0.6 MPa; 6 bar; 87 psi air pressure*		dB(A)	74	74	74	74	74	74
Sound pressure level at 0.4 MPa; 4 bar; 58 psi air pressure*		dB(A)	69	69	69	69	69	69
Product inlet (outside thread)		mm	M 36×2					
Product outlet (outside thread)		mm	M 24×1.5					
Weight		kg; lb	17; 38	15; 33	16; 35	18; 40	28; 62	
Product pH value		pH	3.5–9					
Product pH value with acidic hardeners		pH	**	--				
Maximum product pressure at pump inlet		MPa bar psi	2 20 290					
Product temperature		°C; °F	5–80; 41–176					
Ambient temperature	Construction and assembly	°C; °F	5–50; 41–122					
	Storage	°C; °F	-20–60; -4–140					
Relative humidity		%	10–95 (without condensation)					
Allowable inclination for operation		<) °	± 10					

** Check products for compatibility (Chapter 5.5.1.1).
* A-rated sound pressure level measured at 1 m distance, LpA1m, according to DIN EN 14462: 2005. Reference measurements have been made by SUVA (Swiss Accident Insurance Institute).

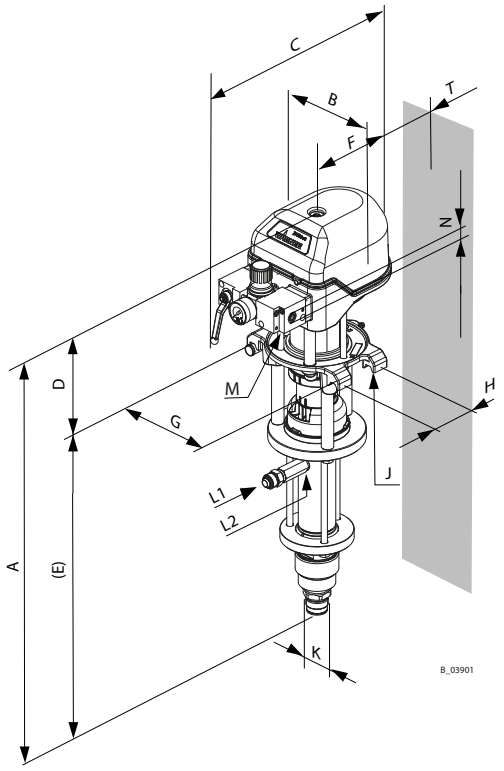
⚠ WARNING

Exhaust air containing oil!
Risk of poisoning if inhaled.

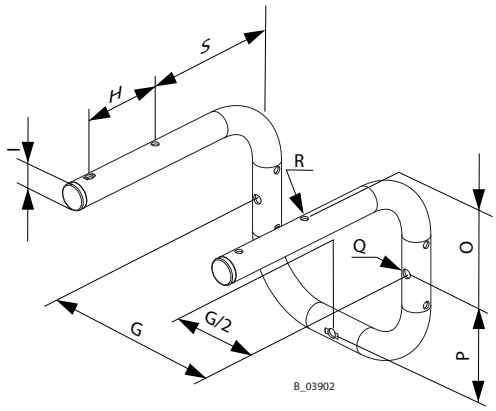
→ Provide compressed air free from oil and water.

5.5.4 MEASUREMENTS AND CONNECTIONS FOR WILDCAT AND PUMA

Pos	WILDCAT 10-70 mm; Inch	WILDCAT 18-40 mm; Inch	PUMA 28-40 mm; Inch	PUMA 15-70 mm; Inch	PUMA 21-110 mm; Inch	PUMA 15-150 mm; Inch
A	736; 29	722; 28.4		736; 29	1034; 40.7	
B	169; 6.7					
C	~ 321; 12.6					
D	261.5; 10.3				336; 13.2	
E	474.5; 18.7	460.5; 18.1		474.5; 18.7	698; 27.5	
F	134; 5.3					
G	182; 7.2					
H	80; 3.2					
I	ø 25; ø 1					
J	M6					
K	M36×2					
L1	M24×1.5					
L2	G3/8"					
M	G1/2"					
N	G1/4"					
O	106; 4.2					
P	96.5; 3.8					
Q	ø 9; ø 0.35					
R	ø 7; ø 0.28					
S	149; 5.9					
T	55; 2.2					



Wall mount



5.5.5 TECHNICAL DATA FOR LEOPARD AND JAGUAR

Description		Units	LEOPARD 35-70	LEOPARD 48-110	LEOPARD 35-150	JAGUAR 75-150
Pump ratio			35:1	48:1	35:1	75:1
Volume flow per double stroke (DH)		cm^3; cc	70	110	150	150
Maximum operating overpressure		MPa bar psi	25 250 3626	38 380 5511	27 270 3916	53 530 7687
Maximum possible strokes in operation		DH/min	60			
Maximum recommended strokes per minute in continuous operation		DH/min	40			
Minimum/maximum air inlet pressure		MPa bar psi	0.25–0.71 2.5–7.1 36–103	0.25–0.8 2.5–8 36–116	0.25–0.77 2.5–7.7 36–112	0.25–0.71 2.5–7.1 36–103
Compressed air quality: free from oil and water		Quality standard 7.5.4 according to ISO 8573.1, 2010 7: Particle concentration 5 – 10 mg/m^3 5: Humidity: pressure dew point ≤ 7 °C 4: Oil content ≤ 5 mg/m3				
ø air inlet (inside thread)		inch	G1/2"			G1"
Minimum ø of the compressed air supply line		mm; Inch	13; 0.51			25; 0.98
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke		nl scf	18.6 0.66	37.3 1.32		79.9 2.82
Air motor piston diameter		mm; Inch	150; 6			220; 8.7
Air motor piston stroke		mm; Inch	75; 3	150; 6		
Sound pressure level at maximum permissible air pressure*		dB(A)	77	78	80	83
Sound pressure level at 0.6 MPa; 6 bar; 87 psi air pressure*		dB(A)	74		78	81
Sound pressure level at 0.4 MPa; 4 bar; 58 psi air pressure*		dB(A)	71	69	74	
Product inlet (outside thread)		mm	M36×2			
Product outlet (outside thread)		mm	M24×1.5			
Weight		kg; lb	26; 57	36; 79		53; 117
Product pH value		pH	3.5–9			
Product pH value with acidic hardeners		pH	**	--		
Maximum product pressure at pump inlet		MPa bar psi	2 20 290			
Product temperature		°C; °F	5–80; 41–176			
Ambient temperature	Construction and assembly	°C; °F	5–50; 41–122			
	Storage	°C; °F	-20–60; -4–140			
Relative humidity		%	10–95 (without condensation)			
Allowable inclination for operation		<) °	± 10			

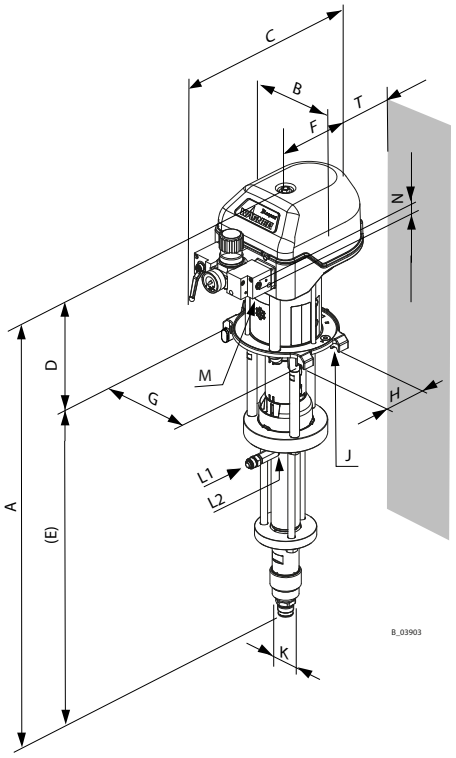
** Check products for compatibility (Chapter 5.5.1.1).
* A-rated sound pressure level measured at 1 m distance, LpA1m, according to DIN EN 14462: 2005. Reference measurements have been made by SUVA (Swiss Accident Insurance Institute).

⚠ WARNING

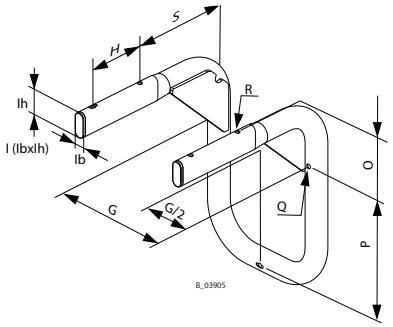
Exhaust air containing oil!
Risk of poisoning if inhaled.
→ Provide compressed air free from oil and water.

5.5.6 MEASUREMENTS AND CONNECTIONS FOR LEOPARD AND JAGUAR

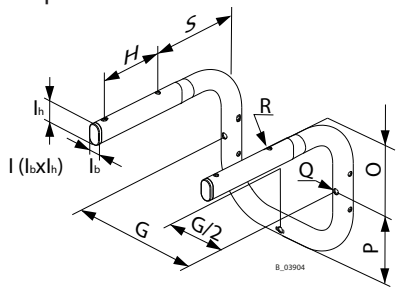
Pos	LEOPARD 35-70 mm; inch	LEOPARD 48-110 mm; inch	LEOPARD 35-150 mm; inch	JAGUAR 75-150 mm; inch
A	799; 31.5	1080; 42.5		1200; 47.2
B	240; 9.4			304; 12
C	~ 434; 17.1			~ 595; 23.4
D	305; 12	380; 15		516; 20.3
E	490; 19.3	705; 27.6		684; 26.9
F	192; 7.6			244; 9.6
G	230; 9.1			
H	110; 4.3			
I	20×35; 0.8×1.4			20×48; 0.8×1.9
J	M6			M8
K	M36×2			
L1	M24×1.5			
L2	G3/8"			
M	G1/2"			G1"
N	G1/4"			--
O	129; 5.1			135.5; 5.3
P	111.5; 4.4			238; 9.4
Q	ø 9; ø 0.35			
R	ø 7; ø 0.28			ø 9; ø 0.35
S	167; 6.6			206; 8.1
T	30; 1.2			17; 0.67



Jaguar wall mount



Leopard wall mount



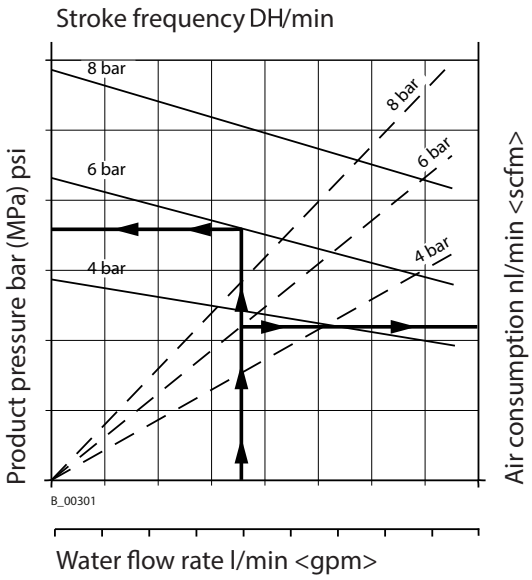
5.5.7 VOLUME FLOW

WAGNER AL nozzles			Volume flow* in l/min				
ø inch	ø mm	Spray angle	7 MPa 70 bar 1015 psi	10 MPa 100 bar 1450 psi	15 MPa 150 bar 2175 psi	20 MPa 200 bar 2900 psi	Maximum ranges for continuous operation at 40 DS/min
0.007	0.18	40°	0.17	0.20	0.21	0.22	
0.009	0.23	20-30-40-50-60°	0.21	0.25	0.31	0.36	
0.011	0.28	10-20-30-40-50-60°	0.30	0.35	0.43	0.50	
0.013	0.33	10-20-30-40-50-60-80°	0.45	0.53	0.62	0.68	
0.015	0.38	10-20-30-40-50-60-80°	0.58	0.67	0.81	0.91	
0.017	0.43	20-30-40-50-60-70°	0.73	0.79	1.06	1.23	Wildcat 18-40
0.019	0.48	20-30-40-50-60-70-80°	0.93	1.09	1.37	1.47	Puma 28-40
0.021	0.53	20-40-50-60-80°	1.14	1.36	1.69	1.78	Wildcat 10-70
0.023	0.58	20-40-50-60-70-80°	1.37	1.59	2.01	2.24	Puma 15-70
0.025	0.64	20-40-50-60-80°	1.62	1.91	2.40	2.60	Leopard 35-70
0.027	0.69	20-40-50-60-80°	1.83	2.13	2.68	3.12	
0.029	0.75	60°	2.19	2.51	3.17	3.63	
0.031	0.79	20-40-50-60°	2.40	2.77	3.49	4.00	Puma 21-110
							Leopard 48-110
0.035	0.90	20-40-50-60°	3.22	3.74	4.69	5.14	Puma 15-150
							Leopard 35-150
							Jaguar 75-150
0.043	1.10	20-50°	5.07	6.04	7.46	7.84	
0.052	1.30	50°	5.12	6.10	7.52	8.06	

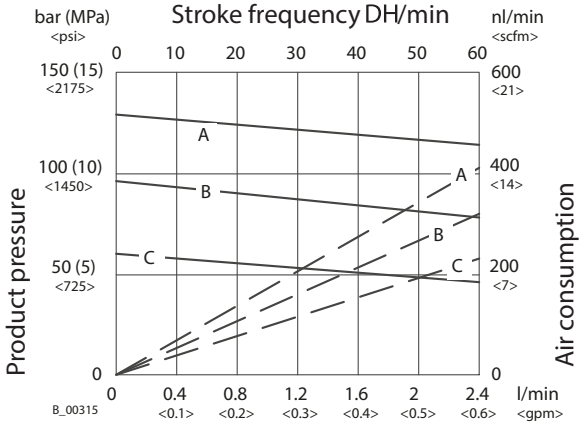
* Volume flow refers to water.

5.5.8 PERFORMANCE DIAGRAMS

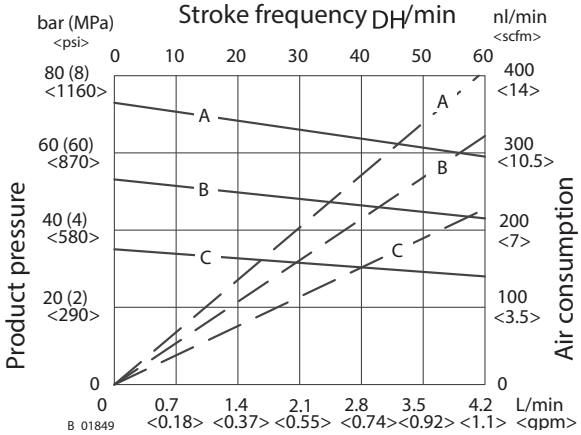
Example



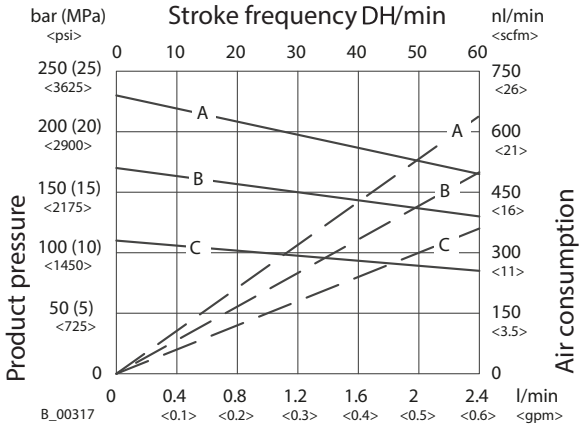
WILDCAT 18-40



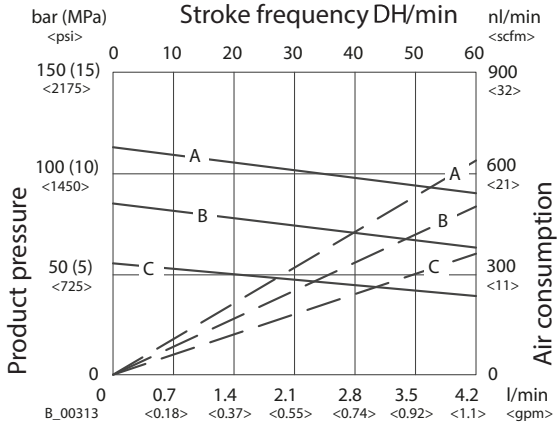
WILDCAT 10-70



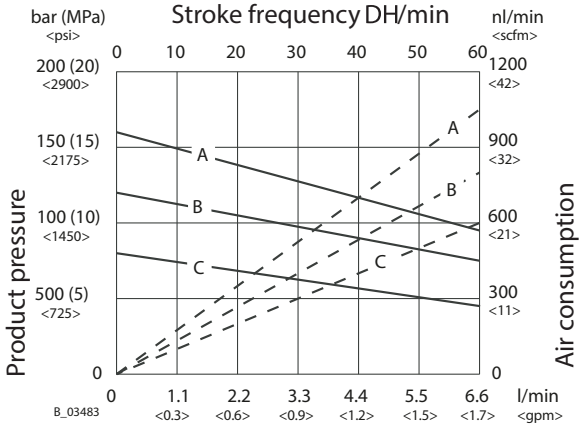
PUMA 28-40



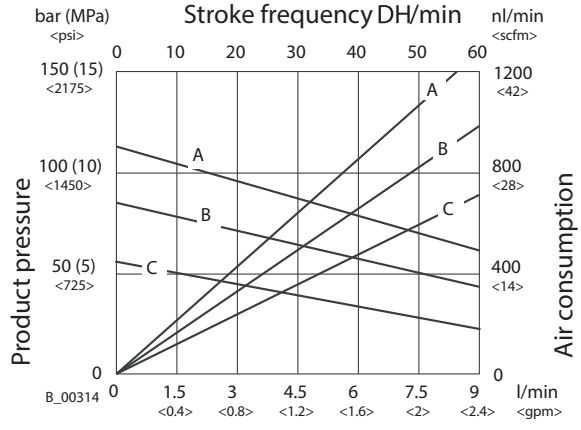
PUMA 15-70



PUMA 21-110



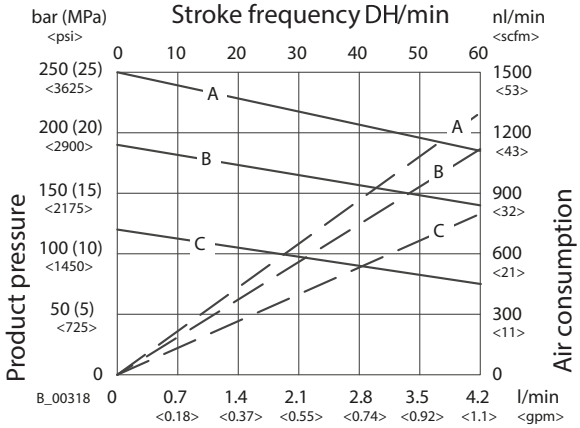
PUMA 15-150



Flow rate (water)
A = 8 bar; 0.8 MPa; 116 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

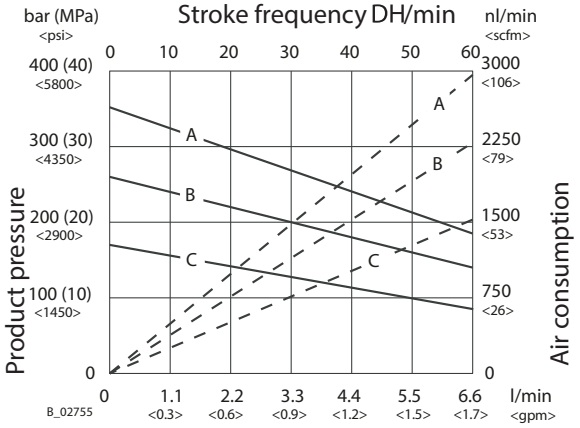
Flow rate (water)
A = 8 bar; 0.8 MPa; 116 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

LEOPARD 35-70



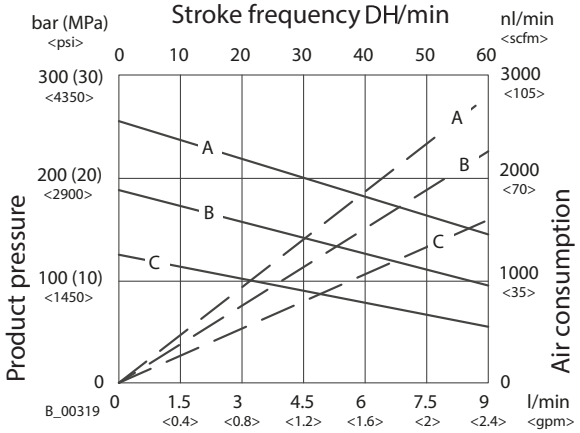
Flow rate (water)
A = 7.1 bar; 0.71 MPa; 103 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

LEOPARD 48-110



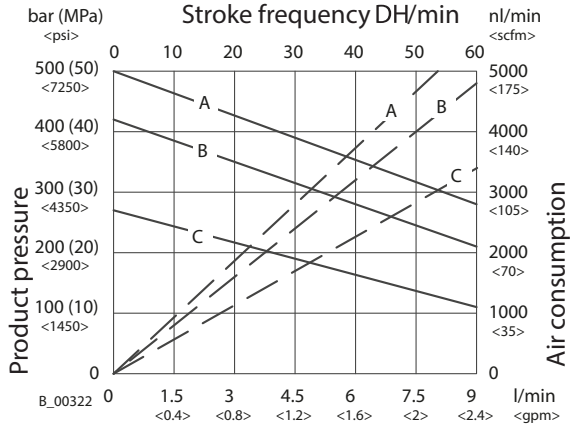
Flow rate (water)
A = 8 bar; 0.8 MPa; 116 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

LEOPARD 35-150



Flow rate (water)
A = 7.7 bar; 0.77 MPa; 112 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

JAGUAR 75-150

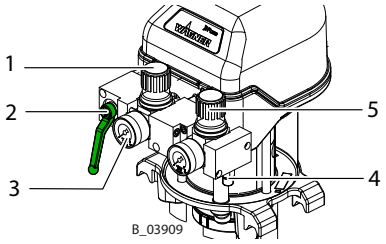


Flow rate (water)
A = 7.1 bar; 0.71 MPa; 103 psi air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

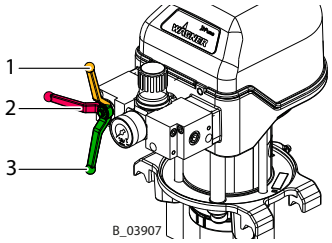
5.6 OPERATING ELEMENTS

5.6.1 PRESSURE REGULATOR UNIT

Puma 28-40 AirCoat pneumatic pump	
Pos	**Designation**
1	Pressure regulator
2	Ball valve
3	Pressure gauge
4	Compressed air inlet
5	AirCoat regulator (option)



Puma 28-40 Airless pneumatic pump	
Pos	**Positions of the ball valve**
1	Closed: working pressure in the air motor will be relieved (control pressure is still present).
2	Closed: The air motor may still be under pressure.
3	Open: working position



5.7 PRODUCT FILTER AND RETURN LINE

So that complete pressure relief of the pump can be performed (see Chapter 7.4), a high-pressure filter with a return line or a relief combination, is mandatory.

5.7.1 HIGH-PRESSURE FILTER (OPTION)

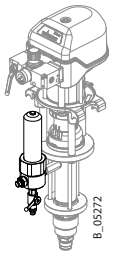
To ensure problem-free operation it is recommended that a WAGNER high-pressure filter be used.

These have been developed especially for WAGNER pneumatic pumps.

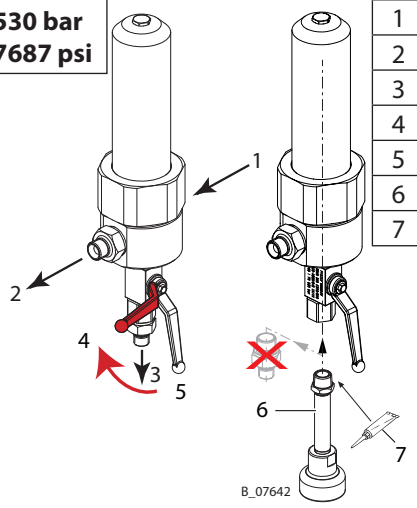
The filter inserts can be exchanged depending on the product to be used.

The high-pressure filter, which corresponds to the device, can be found in Chapter 13. The compatible filter inserts can be found in Chapter 14.

Preferred filter installation pos.



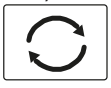
53 MPa
530 bar
7687 psi



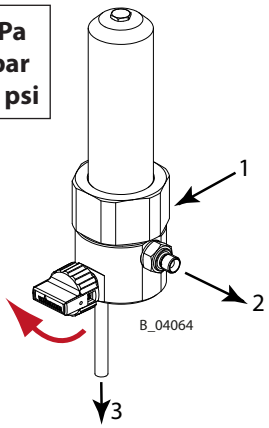
Pos	Designation
1	Fluid section connection
2	Product outlet
3	Return line
4	Closed
5	Open
6	Pressure relief (Relex)
7	Loctite 542

27 MPa
270 bar
3916 psi

Open (Return line)



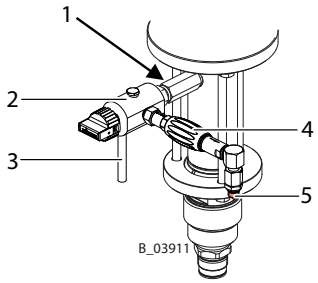
Closed (Spraying)



5.7.2 RELIEF COMBINATION AND INLINE FILTER UP TO 270 BAR (OPTION)

Instead of the standard high-pressure filter the lower-cost filter-relief combination and an inline filter can be used if only a small volume of product will be processed.
Application: in pumps with a maximum product pressure of 270 bar; 3916 psi.
Relief combination and inline filter (see Chapter 13).

27 MPa, 270 bar, 3916 psi



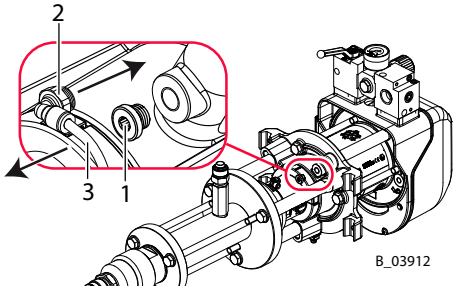
Pos	Designation
1	Fluid section connection
2	Relief combination
3	Return line
4	Inline filter
5	Product outlet

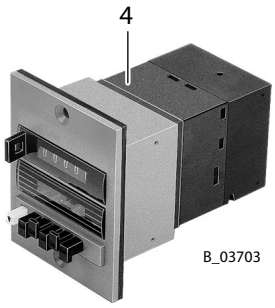
5.8 STROKE COUNT (OPTION)

Each air motor has a 1/8" air connection with which the air pressure in the lower air motor chamber can be measured. This signal can be used for counting the strokes in an external controller, for example.
The pressure signal corresponds to the set working air pressure and is available during the complete upwards stroke of the pump. If both of the signal edges are evaluated, the upper and lower reversal point can be determined. An air hose (4/2-mm; 0.16/0.08-inch) is used as an air signal line.

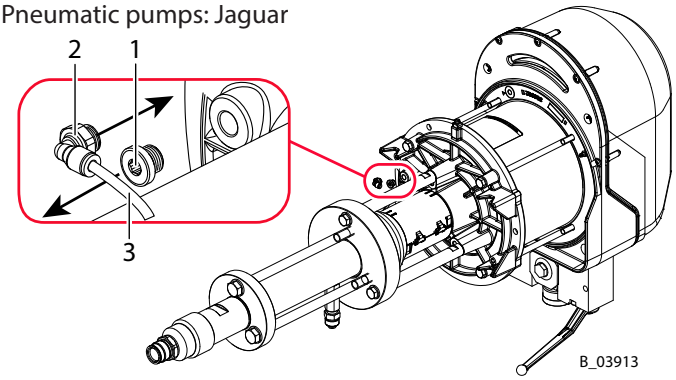
Pos	Order No.	Designation
1	9998675	Threaded plug
2	9999066	Male stud elbow
3	9982072	Air hose (per meter)
4	9943049	Pneumatic pre-selection counter

Pneumatic pumps: Wildcat, Puma and Leopard





Pneumatic pumps: Jaguar



5.9 FEED PUMP (OPTION)

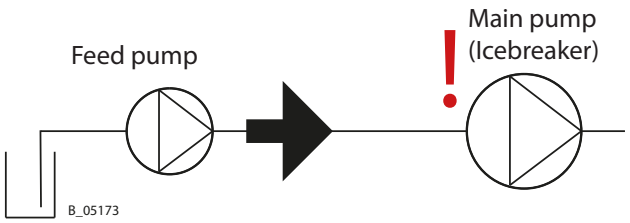
A feed pump can be used with high-viscosity products or longer feed lines.

Dimensioning of the feed pump

→ The IceBreaker piston pumps pump the working product to the product output with up and down strokes but only draw in new product on the up stroke. The feed pump therefore has to pump twice the volumetric flow.

Main pump protection

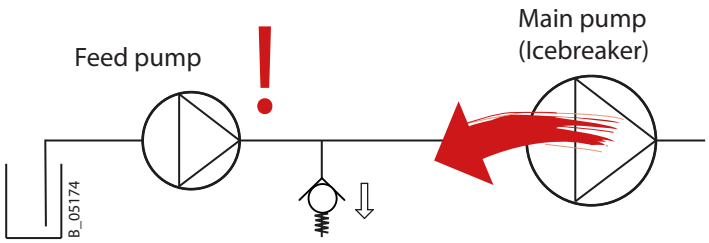
→ The maximum product pressure at the pump inlet of the IceBreaker pump may not be exceeded.



Protection of feed pump

→ If the maximum pressure of the feed pump is lower than the maximum pressure of the main pump, this could be exceeded if the main pump malfunctions. The feed pump and connection line must therefore be protected from excessive overpressure. An overpressure valve must then be installed between the feed pump and main pump.

→ Observe the flow direction during installation.



Pressure relief valve

→ The pressure-relief valve must be cleaned regularly and after each activation: Flush with solvent.

Installation sets and compatible feed pumps

→ See assembly manual "Feed pump installation sets", order no. 2357584.

6 ASSEMBLY AND COMMISSIONING

6.1 TRAINING OF ASSEMBLY/COMMISSIONING PERSONNEL

→ The assembly and commissioning personnel must have the technical skills to safely commission the device.
→ When assembling, commissioning and carrying out all work, read and follow the operating manuals and safety regulations for the additionally required system components.

A skilled person must check to ensure that the device is in a reliable state after it is installed and commissioned.

6.2 STORAGE CONDITIONS

Until the point of assembly, the device must be stored in a dry location, free from vibrations and with a minimum of dust. The device must be stored in closed rooms.

The air temperature at the storage location must be between -20 °C and 60 °C (-4 °F and 140 °F).

The relative air humidity at the storage location must be between 10 and 95% (without condensation).

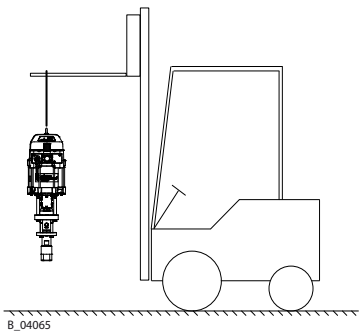
6.3 INSTALLATION CONDITIONS

The air temperature at the installation site must be in a range between 5 °C and 50 °C; 41 °F and 122 °F.

The relative air humidity at the installation site must be between 10 and 95% (without condensation).

6.4 TRANSPORTATION

Only the pump, without trolleys, may be lifted by the lifting eye nut or lifting eye bolt (see accessories) and transported short distances.
Wildcat, Puma and Leopard: The pump can be moved on a trolley (4"/6" trolley) or manually without lifting equipment or a crane.
Jaguar: The pump must be moved on a trolley (heavy-duty PC trolley) or with lifting equipment or a crane.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6.5 **ASSEMBLY** AND INSTALLATION

⚠ WARNING

Inclined ground!

Risk of accidents if the device rolls away/falls.

→ Place the device on horizontal floor.

→ If the floor is inclined, position the feet of the trolley towards the gradient.

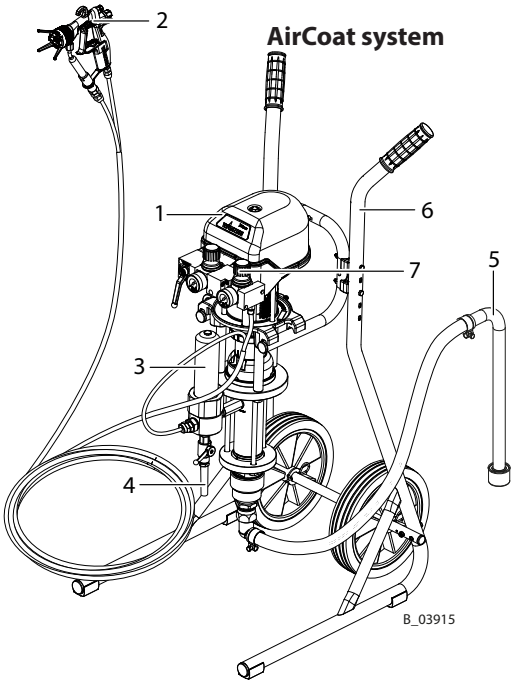
→ Secure the trolley.

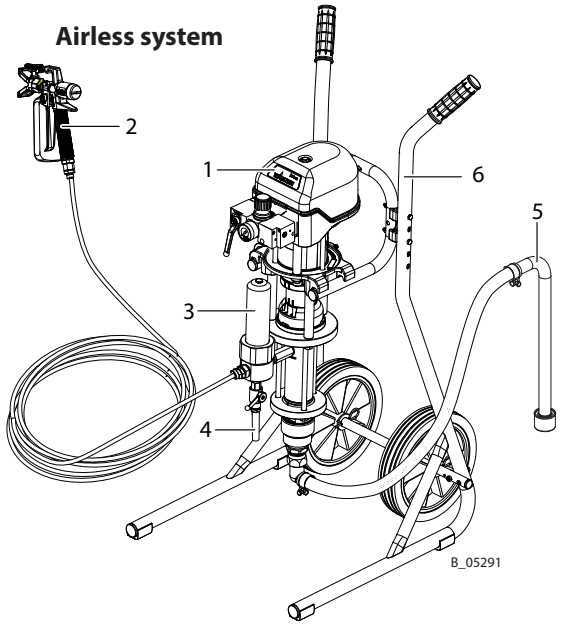
National regulations

→ Ensure that the national explosion prevention rules and regulations are observed when setting up the device.

This pump can be used as part of a spraying system for Airless or AirCoat applications. The individual components are shown in the accessories, or can be arranged with a spraypack configurator. The nozzles must be selected according to the spray gun operating manual. In the case of spraypack orders, the pumps (1) are already pre-mounted on a trolley (6) or on a frame at the factory.

1. Mount pump (1) on frame, trolley (6) or wall mount.
2. Mount the AirCoat regulator (7) with an AirCoat system.
3. Mount high-pressure filter (3) or filter relief combination and inline filter.
4. Mount suction system (5).
5. Mount return tube (4) or return hose.
6. Connect high-pressure hose and spray gun (2) according to the operating manual for the spray gun.





6.5.1 **VENTILATION** OF THE SPRAY BOOTH

→ Operate the device in a spray booth approved for the working materials.
- or -
→ Operate the device on an appropriate spraying wall with the ventilation (extraction) switched on.
→ Observe national and local regulations for the exhaust air speed.

6.5.2 AIR SUPPLY LINES

Ensure that only dry, clean atomizing air is used in the spray gun! Dirt and moisture in the atomizing air worsens the spraying quality and spray pattern.

⚠ WARNING

Hose connections!
Risk of injury and damage to the device.
→ Do not mix up hose connections of product hose and air hose.

6.5.3 PRODUCT SUPPLY LINES

⚠ DANGER

Bursting hose, bursting threaded joints!
Danger to life from injection of product.
→ Ensure that the hose material is chemically resistant to the sprayed products.
→ Ensure that the spray gun, fittings and product hose between the device and the spray gun are suitable for the pressure generated in the device.
→ Ensure that the following information can be seen on the high-pressure hose:
- manufacturer
- permissible operating pressure
- date of manufacture

6.6 GROUNDING

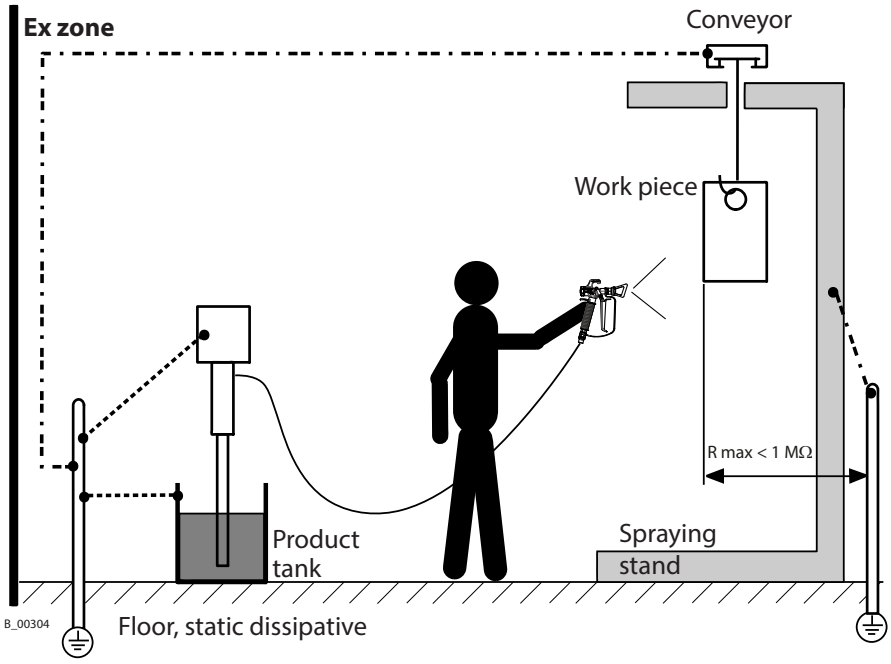
⚠ WARNING

Discharge of electrostatically charged components in atmospheres containing solvents!
Explosion hazard from electrostatic sparks.
→ Clean the pump only with a damp cloth.

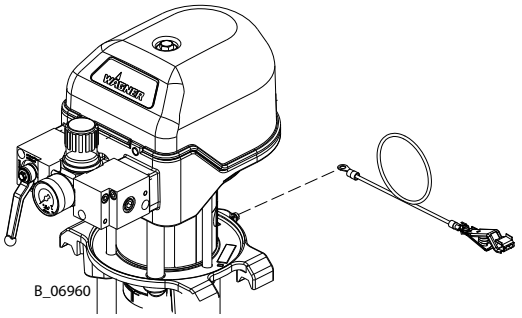
⚠ WARNING

Heavy paint mist if grounding is insufficient!
Danger of poisoning.
Insufficient paint application quality.
→ Ground all device components.
→ Ground the work pieces to be coated.

Grounding scheme (example)



Part / workstation	Cable cross section
Pump	4 mm²; AWG 12
Product tank	6 mm²; AWG 10
Conveyor	16 mm²; AWG 6
Booth	16 mm²; AWG 6
Spraying stand	16 mm²; AWG 6



Safe operation of the pump is only guaranteed with a grounding connection.
Connect all grounding cables using a short and direct route.

Procedure:

1. Screw on grounding cable with eyelet.
2. Clamp the grounding cable clip to a grounding connection on site.
3. Ground the product tank to an on-site grounding connection.
4. Ground the other parts of the system to an on-site grounding connection (16 mm²; AWG 6).

Ex zone

All devices and equipment must be suitable for use in potentially explosive areas.

→ All paints, flushing agents and waste tanks have to be electrically conductive.

→ All tanks must be grounded.

6.7 COMMISSIONING

⚠ WARNING

Gas mixtures can explode if there is an incompletely filled pump!

Danger to life from flying parts.

→ Ensure that the pump and suction system are always completely filled with flushing agent or working medium.

→ Do not spray the device empty after cleaning.

Ⓘ NOTICE

Impurities in the spraying system!

Spray gun blockage.

→ Flush the spray gun and paint supply with a suitable flushing agent before commissioning.

→ Emergency stop, see Chapter 7.2.

Preparation

Before every start-up, the following points should be observed as laid down in the operating manual:

– Secure spray gun with safety lever.
– Check the permissible pressures.
– Check all connections for leaks.
– Check hoses for damage in accordance with Chapter 8.2.3.3.
– Fill the separating agent in accordance with Chapter 8.2.3.1.

Fill the pump with flushing agent

The devices are tested during manufacturing with emulsifying oil, pure oil or solvent. Possible residues must be flushed out of the circuits with a solvent (flushing agent) before commissioning.

– Fill the empty device with flushing agent in accordance with Chapter 8.2.5.

Pressure tightness test

⚠ WARNING

Overpressure!

Risk of injury from bursting components.

→ The operating pressure must not exceed the value shown on the type plate.

– Gradually increase the pressure in pump with the pressure regulator until maximum pressure is reached. Maintain the pressure for 3 minutes and check all connection points for leaks.
– Depressurization in accordance with Chapter 7.4.

Verifying a Safe Operational Condition

A skilled person must check to ensure that the device is in a reliable state after it is installed and commissioned.

This includes:

– Carry out safety checks in accordance with Chapter 8.2.3.

Filling with Working Material

– According to Chapter 8.2.5.

7 OPERATION

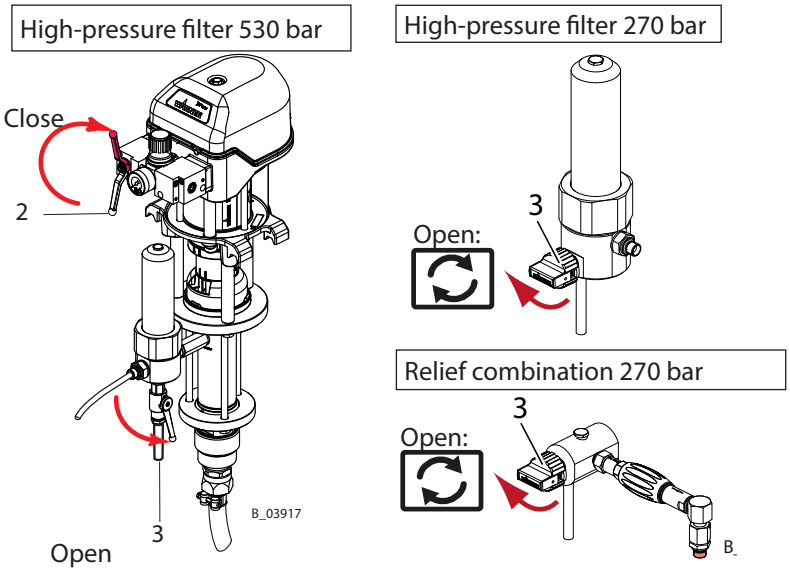
7.1 TRAINING THE OPERATING PERSONNEL

→ The operating personnel must be qualified to operate the entire system.

→ The operating personnel must be familiar with the potential risks associated with improper behavior as well as the necessary protective devices and measures.
→ Before work commences, the operating personnel must receive appropriate system training.

7.2 EMERGENCY STOP

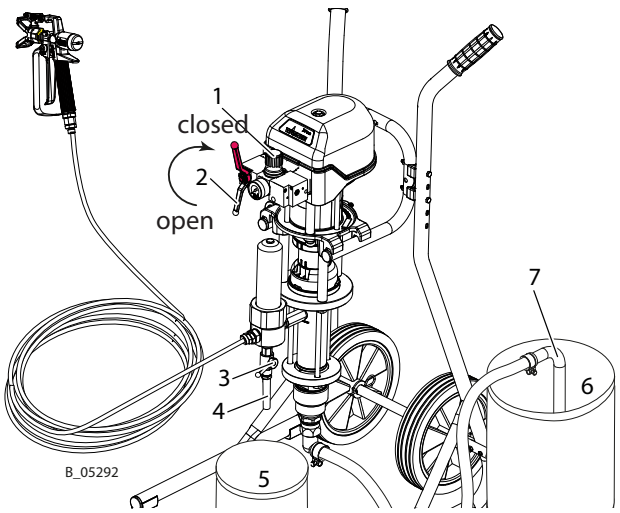
In the case of unforeseen occurrences:
– Close ball valve (2);
– Open return valve (3).



7.3 TASKS

Ensure that:
→ commissioning is carried out in accordance with Chapter 6.7.

1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Secure spray gun and insert nozzle into the spray gun.
3. Close return valve (3).
4. Slowly open the ball valve (2).
5. Set required working pressure on the pressure regulator (1).
6. Optimize spray pattern in accordance with the spray gun's operating manual.
7. Start work process.



7.4 **PRESSURE RELIEF**/WORK INTERRUPTION

The pressure must always be relieved when:
- after the spraying tasks are finished,
- before servicing or repairing the spraying system,
- before carrying out cleaning tasks on the spraying system,
- Before moving the spraying system to another location.
- before something must be checked on the spraying system,
- before the nozzle or the filter is removed from the spray gun.

The components for pressure relief on a CE-compliant spraying system include:
- Air cock with pressure relief hole mounted between compressed air source and pneumatic pump.
- Outlet equipment (return valve) mounted between pump and spray gun.

Process for relieving pressure

1. Close the spray gun.
2. Close ball valve (2).
3. Release the system of pressure by opening the spray gun.

→ Attention: If a blocked nozzle is preventing relief, first carry out the additional steps 4 and 5, then clean the nozzle.

4. Close and secure the spray gun.
5. Open and close the return valve (3) slowly to completely depressurize the system.

If the system will process 2K products:

NOTICE

Hardened working material in the spraying system when 2K product is processed!

Destruction of pump and injection system.

→ Observe the manufacturer's processing rules, particularly in regards to the pot life.

→ Flush thoroughly before the end of the pot life.

→ The pot life is decreased by warmth.

7.5 BASIC FLUSHING

Regular flushing

→ Regular flushing, cleaning and maintenance ensures the pump's high pumping and extraction capacity.

→ The cleaning and flushing agents used must be compatible with the working material.

→ Do not flush hardener pumps with water. Only flush them using suitable flushing agents (solvents).

⚠ WARNING

Incompatibility of flushing / cleaning agent with the working medium!

Risk of explosion and danger of poisoning by toxic gases.

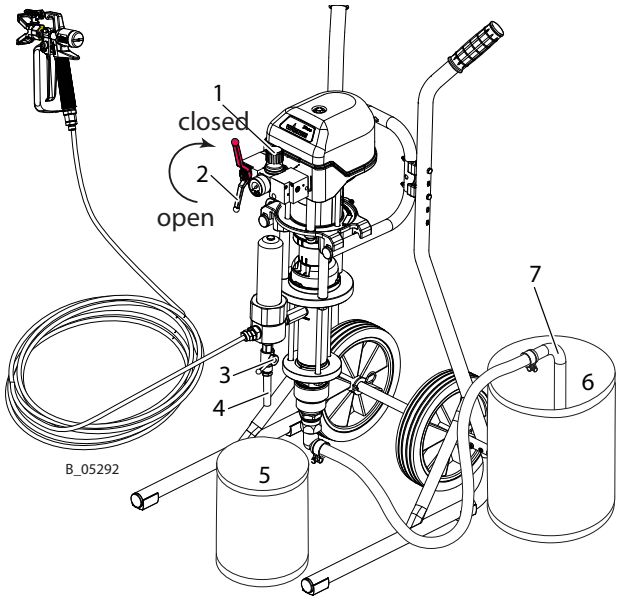
→ Examine the compatibility of the flushing and cleaning agents and working media on the basis of the safety data sheets.

Flushing procedures

1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Place an empty, grounded collection tank (5) under the return tube (4).
3. Place the suction hose (7) in the grounded tank with flushing agent (6).
4. Adjust the pressure regulator (1) to approx. 0.05 MPa; 0.5 bar; 7.25 psi.

Flushing via the return valve

5. Open return valve (3).
6. Slowly open the ball valve (2).
7. Adjust the air pressure on the pressure regulator (1) so that the pump runs smoothly.
8. Flush the system until clean flushing agent flows into the tank (5).
9. Close ball valve (2).
10. As soon as there is no pressure remaining in the system, close the return valve (3).



Flushing via spray gun

11. In case of AirCoat systems, carry out the basic flushing without atomizing air.
12. Point the spray gun, without nozzle, into the tank (5) and open it.
13. Slowly open the ball valve (2).
14. Rinse until clean flushing agent flows from the spray gun.
15. Close ball valve (2).
16. As soon as there is no pressure remaining in the system, close the spray gun.
17. Secure the spray gun.
18. Dispose of the contents of the tank (5) according to the local regulations.

External Cleaning

19. Clean the outside of the system.
20. Fully assemble the system.
21. Relieve the pump's pressure according to Chapter 7.4.
22. Dispose of the contents of the tank (5) according to the local regulations.

7.6 FILLING WITH WORKING MATERIAL

After basic flushing, the system can be filled with working product.
Proceed according to Chapter 8.2.5, but use working material instead of flushing agent.

8 CLEANING AND MAINTENANCE

8.1 CLEANING

8.1.1 CLEANING PERSONNEL

Cleaning work should be undertaken regularly and carefully by qualified and trained personnel. They should be informed of specific hazards during their training. The following hazards may arise during cleaning work:

- Health hazard from inhaling solvent vapors.
- Use of unsuitable cleaning tools and aids.

8.1.2 DECOMMISSIONING AND CLEANING

The device should be cleaned for maintenance purposes, etc. Ensure that no remaining product dries on and sticks to the device.

Procedure

1. Carry out work interruption → Chapter 7.4.
2. Carry out the basic flushing → Chapter 7.5.
3. Empty system in a controlled manner → Chapter 8.2.4.
4. Service spray gun in accordance to its operating instructions.
5. Clean and check the suction system and the suction filter.
6. When using a product filter, check filter insert and filter housing and clean or replace them. → Chapter 8.2.6
7. Clean the outside of the system.
8. Fully assemble the system.
9. Check fill level of the separating agent → Chapter 8.2.3.1.
10. Fill the system with flushing agent in accordance with Chapter 8.2.5.

8.1.3 LONG-TERM STORAGE

When storing the device for longer periods of time, it is necessary to thoroughly clean it and protect it from corrosion. Replace the water or solvent in the product pump with a suitable preservative, fill separating agent cup with separating agent.

Procedure

1. Perform points 1 to 8 in Chapter 8.1.2.
2. Fill the system with preservative in accordance with Chapter 8.2.5.
3. Empty the system in a controlled manner in accordance with Chapter 8.2.4 and seal the openings.

8.2 MAINTENANCE

8.2.1 MAINTENANCE PERSONNEL

Maintenance work should be undertaken regularly and carefully by qualified and trained personnel. They should be informed of specific hazards during their training. The following hazards may arise during maintenance work:

- Health hazard from inhaling solvent vapors.
- Use of unsuitable tools and aids.

An authorized person must ensure that the device is checked for being in a reliable state after maintenance work is completed.

8.2.2 MAINTENANCE INSTRUCTIONS

⚠ DANGER

Incorrect maintenance/repair!

Danger to life and equipment damage.

- → Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- → Use only WAGNER original spare parts and accessories.
- → Only repair and replace parts that are listed in the "Spare parts" chapter and that are assigned to the unit.
- → Before all work on the device and in the event of work interruptions:
  - Relieve the pressure from the spray gun, high-pressure hoses and all devices.
  - Secure the spray gun against actuation.
  - Switch off the energy and compressed air supply.
  - Disconnect the control unit from the mains.
- → Observe the operating and service manual for all work.

Prior to Maintenance

It should be ensured that the device is in the following state before carrying out any work on it:

- Flush and clean the system. → Chapter 8.1.2
- Interrupt the air supply.

After maintenance

- Carry out safety checks in accordance with Chapter 8.2.3.
- Put the system into operation and check for leaks as described in Chapter 6.7.
- Have the system checked for safe condition by an authorized person.
- Function test in accordance with Chapter 11.

8.2.3 SAFETY CHECKS AND MAINTENANCE INTERVALS

Every day

→ Check grounding: see Chapter 6.6.
→ Check hoses, tubes and couplings: see Chapter 8.2.3.3
→ Check the level of separating agent in the separating agent tank and top up, if necessary, in accordance with Chapter 8.2.3.1. Check coupling cover.
→ For each decommissioning, the process according to Chapter 8.1.2 must be followed.
→ If the pump has to be emptied for maintenance work, proceed according to Chapter 7.5 and Chapter 8.2.4.

Weekly

→ Check system for damage.
→ Check that the safety fixtures function properly (see Chapter 5.3).

Yearly or as required

→ In accordance with DGUV regulation 100-500 Chapter 2.29 and 2.36:
– The liquid ejection devices should be checked by an expert (e.g., WAGNER service technician) for their safe working conditions as required and at least every 12 months.
– For shut down devices, the examination can be suspended until the next start-up.

8.2.3.1 FILLING WITH SEPARATING AGENT

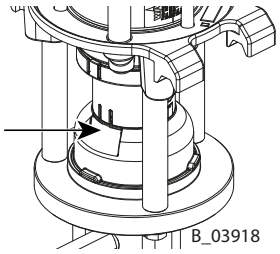
NOTICE

Piston pump dry run!
High wear/damage to the packings.
Paint or solvent can escape if the seals are dry.
→ Ensure that the separating agent tank is filled with sufficient separating agent.

Pour the supplied separating agent into the intended opening.

Separating agent: order no. 9992504

Filling level: 1 cm; 0.4 inch under the cup edge.



Inclination angle of the pump
Maximum permissible tilt of the pump for moving, transporting, etc. after filling separating agent is ± 30°.
The pump must be vertical during operation.

8.2.3.2 CONDENSATE DRAIN FROM THE AIRCOAT FILTER REGULATOR

→ Frequently drain the condensate that may accumulate in the pneumatic filter.
– Make sure the water level in the filter cup never reaches the max. level marked on the cup.

8.2.3.3 PRODUCT HOSES, PIPES AND COUPLINGS

The service life of the complete hoses between product pressure generator and application device is reduced due to environmental influences even when handled correctly.

- → Check hoses, pipes, and couplings every day and replace if necessary.
- → Before every commissioning, check all connections for leaks.
- → Additionally, the operator must regularly check the complete hoses for wear and tear as well as for damage at intervals that he/she has set. Records of these checks must be kept.
- → The complete hose is to be replaced as soon as one of the two following intervals has been exceeded:
  – 6 years from the date of the hose crimping (see fitting embossing).
  – 10 years from the date of the hose imprinting.

Fitting embossing	**Meaning**
xxx bar	Pressure
yymm	Crimping date (year/month)
XX	Internal code

Hose imprinting	**Meaning**
Wagner	Name / Manufacturer
yymm	Date of manufacture (year/month)
xxx bar (xx MPa) e.g., 270 bar (27 MPa)	Pressure
XX	Internal code
DNxx (e.g., DN10)	Nominal diameter

8.2.4 EMPTYING PUMP

⚠ WARNING

Gas mixtures can explode if there is an incompletely filled pump!

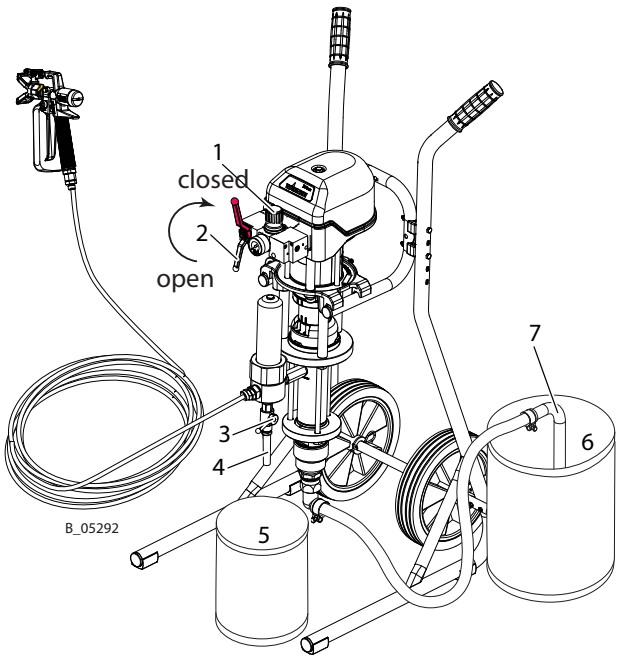
Danger to life from flying parts.
Ignition of potentially explosive surrounding atmosphere.
→ Empty the device slowly and in a controlled manner.
→ Avoid potentially explosive atmosphere in the surroundings.

→ If the pumping product becomes heated, switch off all heaters and let the product cool off.

1. Place an empty, grounded collection tank (5) under the return tube (4).
2. Place the suction hose (7) in an empty, grounded tank (6).
3. Close pressure regulator (1) (0 MPa; 0 bar; 0 psi).

Emptying via return line

4. Open return valve (3).
5. Slowly open the ball valve (2).
6. Slowly turn air pressure up on the pressure regulator (1) and only until the pump is running normally (approx. 0.05 MPa; 0.5 bar; 7.25 psi).
7. Be ready for the switch from working material to air. Turn down pressure regulator (1) far enough that the pump is still running normally (approx. 0–0.05 MPa; 0–0.5 bar; 0–7.25 psi).
8. As soon as working material is no longer flowing from the return tube (4), close the ball valve (2).
9. Close return valve (3).



Emptying up to the spray gun

10. Point the spray gun, without nozzle, into the tank (5) and open it.
11. Slowly open the ball valve (2). Be ready for the switch from working material to air.
12. As soon as working material is no longer flowing from the return tube, close the ball valve (2).
13. Close and secure the spray gun.
14. Depressurization in accordance with Chapter 7.4.
15. Dispose of the contents of the tank (5) according to the local regulations.

8.2.5 FILLING THE EMPTY PUMP

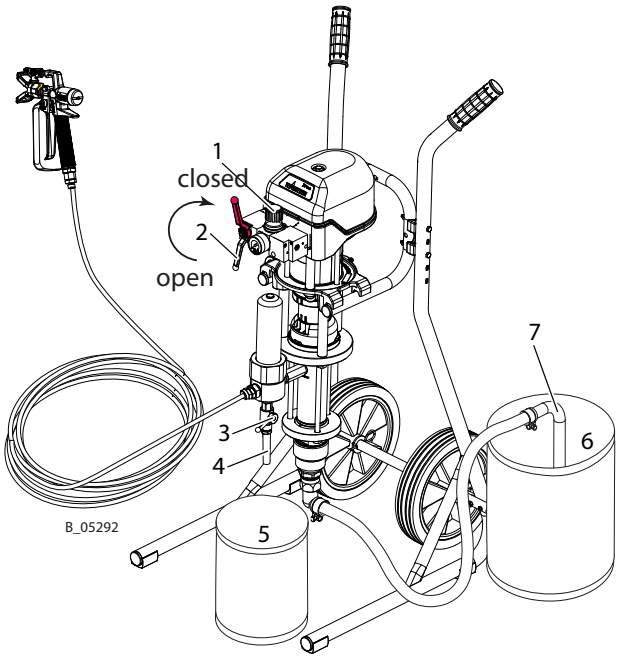
⚠ WARNING

Gas mixtures can explode if there is an incompletely filled pump!

Danger to life from flying parts.
Ignition of potentially explosive surrounding atmosphere.
→ Fill the device slowly and in a controlled manner.
→ Avoid potentially explosive atmosphere in the surroundings.

Before each filling, the nozzle must be removed from the spray gun. Here, the specifications in the spray gun operating manual must be followed.
In case of AirCoat systems, carry out the filling of the system without atomizing air (8).

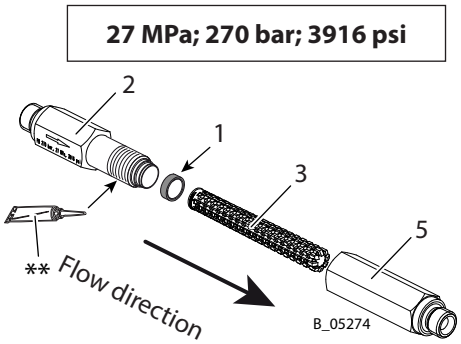
1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Place an empty, grounded collection tank (5) under the return tube (4).
3. Place the suction hose (7) in a grounded tank with working material (6).
   Note:
   If the pump is equipped with a rigid suction system, it should only be dipped in into the working product up to the middle of the inlet housing at the maximum!
4. Close pressure regulator (1) (0 MPa; 0 bar; 0 psi).
5. Open return valve (3).
6. Slowly open the ball valve (2).
7. Slowly turn the air pressure up on the pressure regulator (1) and only until the pump is running normally (approx. 0–0.05 MPa; 0–0.5 bar; 0–7.25 psi). Be ready to switch from air to working material and prevent back spray.
8. Close ball valve (2) as soon as pure working product starts coming from the return tube (4).
9. Close return valve (3).
10. Point the spray gun, without nozzle, into the tank (5) and open it.
11. Slowly open the ball valve (2). Be ready to switch from air to working material and prevent back spray.



12. As soon as pure working material without air bubbles is flowing, close the ball valve (2).
13. Close and secure the spray gun.
14. Depressurization in accordance with Chapter 7.4.
15. Dispose of the contents of the tank (5) according to the local regulations.

8.2.6 CLEANING AND REPLACING THE FILTER

8.2.6.1 STRAIGHT INLINE FILTER

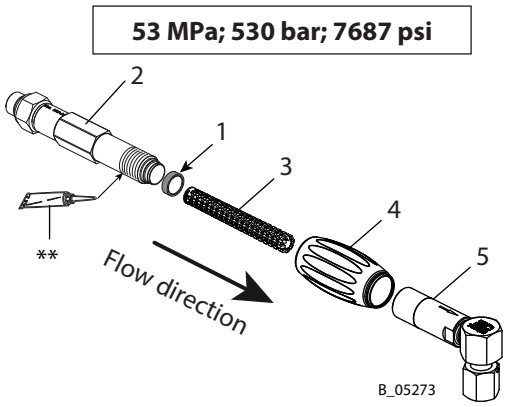


1. Flush the pump and inline filter in accordance with Chapter 7.5. Flush using the spray gun so that the flushing agent flows through the inline filter. Maximize the flow (remove the nozzle, open the dosing valve if necessary).
2. Empty the pump in a controlled manner in accordance with Chapter 8.2.4.
3. Place the grounded collection tank under the inline filter.
4. If no swivel joint is mounted, remove the hose.
5. Unscrew the inlet housing (2) and outlet housing (5) with two size 19 wrenches.
6. Remove the filter insert (3).
7. If the inline filter has any leaks, replace the seal* (1).
8. Insert the new filter insert* (3). Note the installation position: closed end in direction of flow.
9. If necessary, coat the thread with anti-seize paste**.
10. Screw together the inlet housing (2) and outlet housing (5) with two size 19 wrenches.
11. If necessary, screw the hose back on.
12. Fill the pump in accordance with Chapter 8.2.5.

* Order no., see Chapter 13.

** Order no., see Chapter 10.5.

8.2.6.2 ANGLED INLINE FILTER



1. Flush the pump and inline filter in accordance with Chapter 7.5. Flush using the spray gun so that the flushing agent flows through the inline filter. Maximize the flow (remove the nozzle, open the dosing valve if necessary).
2. Empty the pump in a controlled manner in accordance with Chapter 8.2.4.
3. Place the grounded collection tank under the inline filter.
4. Unscrew the filter by turning the handle (4).
5. Remove the filter insert (3).
6. If the inline filter has any leaks, replace the seal* (1).
7. Insert the new filter insert* (3). Note the installation position: closed end in direction of flow.
8. If necessary, coat the thread with anti-seize paste**.
9. Assemble the turning handle (4), inlet housing (2) and outlet housing (5) and tighten by turning the handle.
10. Fill the pump in accordance with Chapter 8.2.5.

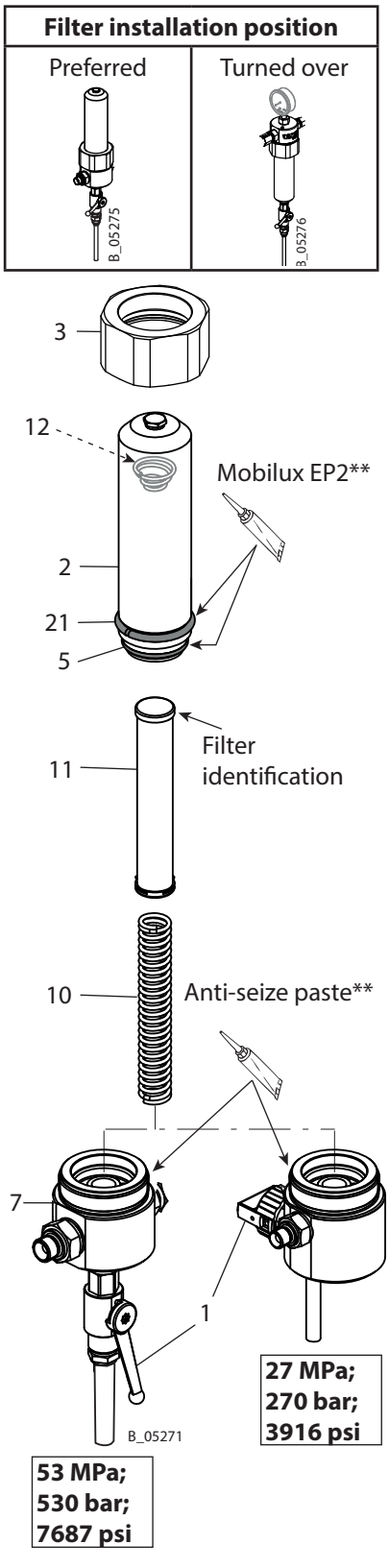
* Order no., see Chapter 13.

** Order no., see Chapter 10.5.

8.2.6.3 HIGH-PRESSURE FILTER

1. Flush the pump and HP filter in accordance with Chapter 7.5, and while doing so:
   – At the preferred filter installation position: Flush via the return valve (1). This produces a large flow. As a result, the flushing agent also flows through the upper part of the filter cartridge (11). Pressure regulator approx. 0.15 MPa; 1.5 bar; 22 psi.
   – With a reversed filter installation position: Flush using the spray gun. This is required in the case of a reversed installation position so that the flushing agent flows through the filter cartridge (11). Maximize the flow (remove the nozzle, open the dosing valve if necessary).
2. Empty the pump in a controlled manner in accordance with Chapter 8.2.4.
3. Place the grounded collection tank under the high-pressure filter.
4. Open ball valve (1).
5. Loosen union nut (3) with a size 70 wrench.
6. Unscrew the union nut (3) and lift slightly so that it does not get dirty in the next step.
7. Remove the filter housing (2) with the union nut (3). The cone spring (12) remains in the filter housing (2). If the O-ring (5) is not damaged, it remains on the filter housing (2).
8. Remove the filter cartridge (11) and filter socket (10) from the filter housing (2).
9. Clean all parts:
   – Place the filter cartridge (11) and filter support (10) in solvent. Clean using brush.
   – Fill the filter housing (2) approx. 1/3 full with solvent. Close, wearing a glove, and shake well.
   – Clean the distribution housing (7) using a brush.
10. If necessary, replace the O-ring (5) and/or filter cartridge (11). Order No., see Chapter 14.11.
11. Assemble all parts in reverse order. While doing so:
   – Coat the thread of the distribution housing (7) with anti-seize paste**.
   – Coat the O-ring (5) and pressure ring (21) with Mobilux® EP2**.
   – Observe the installation position of the filter cartridge (11): Push the closed end with the filter identification ahead into the filter housing (2).
   – Make sure that the cone spring (12) is in the filter housing (note the installation position). Press on the cone spring after inserting the filter cartridge (11) and filter support (10); the spring action must be noticeable.
   – Tighten the union nut (3) by hand.
12. Close ball valve (1).
13. Fill the pump in accordance with Chapter 8.2.5.

** Order no., see Chapter 10.5.



9 TROUBLESHOOTING AND RECTIFICATION

Problem	Cause	Remedy
The pump does not work	Air motor does not work or stops.	Open and close ball valve on the pressure regulator unit or briefly disconnect compressed air supply.
	No pressure indication on the pressure gauge (air pressure regulator defective).	Disconnect compressed air supply briefly or repair or change pressure regulator.
	Spray nozzle is clogged.	Clean the nozzle according to the instructions.
	Insufficient compressed air supply.	Check compressed air supply.
	Filter insert in spray gun or high-pressure filter is clogged.	Clean the parts and use a suitable working product.
	Fluid section or high-pressure hose are blocked (e.g., 2K product hardened).	Dismount and clean fluid section, replace high-pressure hose.
	Grease in spool and sleeve assembly.	Degrease spool and sleeve assembly.
	Occasionally, the pump stops at the reversal point.	Check detent element (see service manual).
Poor spray pattern	See operating manual of spray gun.	
Irregular operation of product pump: spray jet collapses (pulsation)	Viscosity is too high.	Dilute the working material.
	Spraying pressure is too low.	Increase incoming air pressure. Use a smaller nozzle.
	Valves are clogged.	Clean pump. If necessary, leave it to soak in cleaning agent.
	Foreign body in suction valve.	Dismantle suction valve housing, clean and check valve seat.
	Diameter of compressed air line too small.	Assemble a larger supply line. → Technical data, Chapter 5.5.
	Valves, packings, or pistons are worn out.	Replace the parts.
	Control air filter or work air filter is clogged.	Check and clean it if necessary.
Pump is running uniformly, but does not take in any working product	The suction system's union nut is loose; the pump is taking in air.	Tighten union nut.
	Suction filter is clogged.	Clean filter.
	Ball, in suction or piston valve, is sticking.	Clean ball and valve seats.
The pump is working with a closed spray gun.	Packings, valves, or pistons are worn out.	Replace the parts.
The air motor is iced up	There is a lot of condensation water in the air supply.	Install a water separator.

If none of the causes of malfunction mentioned are present, the defect can be remedied by a WAGNER Service Center.

10 REPAIR WORK

10.1 REPAIR PERSONNEL

Repair work must be carried out carefully and by qualified and trained personnel. They should be informed of specific hazards during their training.
The following hazards may arise during repair work:

- Health hazard from inhaling solvent vapors.
- Use of unsuitable tools and aids.

A skilled person must check to ensure that the device is in a reliable state after it is repaired.
Carry out function test in accordance with Chapter 11.

10.2 REPAIR NOTES

⚠ DANGER

Incorrect maintenance/repair!

Danger to life and equipment damage.

→ Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
→ Use only WAGNER original spare parts and accessories.
→ Only repair and replace parts that are listed in the "Spare parts" chapter and that are assigned to the unit.
→ Before all work on the device and in the event of work interruptions:
- Relieve the pressure from the spray gun, high-pressure hoses and all devices.
- Secure the spray gun against actuation.
- Switch off the energy and compressed air supply.
- Disconnect the control unit from the mains.

→ Observe the operating and service manual for all work.

Before Repair Work

- Flush and clean the system. → Chapter 8.1.2
- Interrupt the air supply.

After Repair Work

- Carry out safety checks in accordance with Chapter 8.2.3.
- Put the system into operation and check for leaks as described in Chapter 6.7.
- Have the system checked for safe condition by an authorized person.
- Function test in accordance with Chapter 11.

10.3 TOOLS

For disassembling and assembling the devices, the following tools are required:
(if possible, always bring entire tool sets with you):

- Torque wrench 2-3 Nm; 2 lbft.
- Torque wrench 8-10 Nm; 6-7 lbft.
- Torque wrench 10-15 Nm; 7-11 lbft.
- Torque wrench 20-25 Nm; 15-19 lbft.
- Torque wrench 40 Nm; 30 lbft.
- Torque wrench 70 Nm; 52 lbft.
- Torque wrench 140 Nm; 103 lbft.
- Allen wrench, wrench size (SW) 4, 5, 6, 8, 10, 14, 17.
- Allen wrench, wrench size (SW) 6, 12, 13, 17, 19, 22, 32.
- Torx® wrench size (SW) 4.5, 5.5.

10.4 **CLEANING** THE PARTS AFTER DISASSEMBLY

⚠ WARNING

Incompatibility of cleaning agent and working medium!

Risk of explosion and danger of poisoning by toxic gases.

→ Examine the compatibility of the cleaning agents and working media on the basis of the safety data sheets.

Please note:

→ Thoroughly clean all reusable parts with a suitable cleaning agent.

→ All dismantled parts have to be clean and dry after cleaning. Care should be taken that these parts remain free of solvents, grease or sweat from the hands (salt water). Perform cleaning and mounting tasks wearing gloves.

10.5 ASSEMBLY OF THE DEVICE

In Chapter 14 the order numbers for device spare parts can be found, as well as for wearing parts such as seals.

→ Defective parts, O-rings and seal sets must always be replaced.

→ Use greases and glues in accordance with Chapter 14.

→ Observe torque specifications in Chapter 14.

Assembly Aids

Order No.	Quantity	Designation	Smaller tanks
9992590	1 pc ≙ 50 ml	Loctite® 222	
9992511	1 pc ≙ 50 ml	Loctite® 243	
9992831	1 pc ≙ 50 ml	Loctite® 542	
9998808	1 pc ≙ 18 Kg !	Mobilux® EP 2 grease	400 g tube ≙ Order No. 2355418
9992616	1 pc ≙ 1 kg can	Molykote® DX grease	50 g tube ≙ Order No. 2355419
9992609	1 pc ≙ 100 g	Anti-seize paste	
9992816	1 pc ≙ 70 g	Miranit contact adhesive	

Brand notice

The brands specified in this document are property of the respective owners. Loctite®, for example, is a registered brand of Henkel.

11 FUNCTION TEST AFTER REPAIR WORK

After all repairs, the device must be checked for safe condition before recommissioning. The necessary scope of inspection and testing depends on the repair carried out and must be documented by the repair personnel.

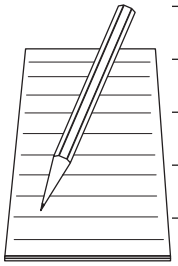
Activity	Means
1.1 Filling with separating agent → See Chapter 8.2.3.1.	
1.2 EX-relevant inspections – Check grounding connection between ground connection of the pump and the frame/trolley and between the individual components of the frame/trolley: < 1MΩ – Check conductivity between piston and grounding connection: < 1MΩ **These inspections are**  **- relevant!**	Ωm (measurement voltage 500...1000 VDC)
1.3 Testing for leaks – Connect the air motor to the air supply 7 bar. To perform a leak test on the device, the product pressure with the flushing agent is slowly increased in increments until the maximum pressure indicated on the type plate is reached. Close pump outlet. In each position (with upstroke and downstroke), let sit for 0.5-1 minutes and listen for audible blowing off. When the air supply is turned off, a drop in pressure must be watched for. Check seal of following modules: – fluid section – mounted fittings and regulators	Air motor: Test medium compressed air Leak spray Fluid section: Test medium: suitable Flushing agent
1.4 General inspections – Check tightening torque of various screws. See Chapter 14. – Check all fittings. – Empty device in a controlled manner (Chapter 8.2.4) and depressurize (Chapter 7.4). – Check function of frame or transport trolley.	Torque wrench Visual check

12 DISPOSAL

When the equipment must be scrapped, please differentiate the disposal of the waste materials.
The following materials have been used:

→ Stainless steel
→ Aluminum
→ Elastomers
→ Plastics
→ Carbide

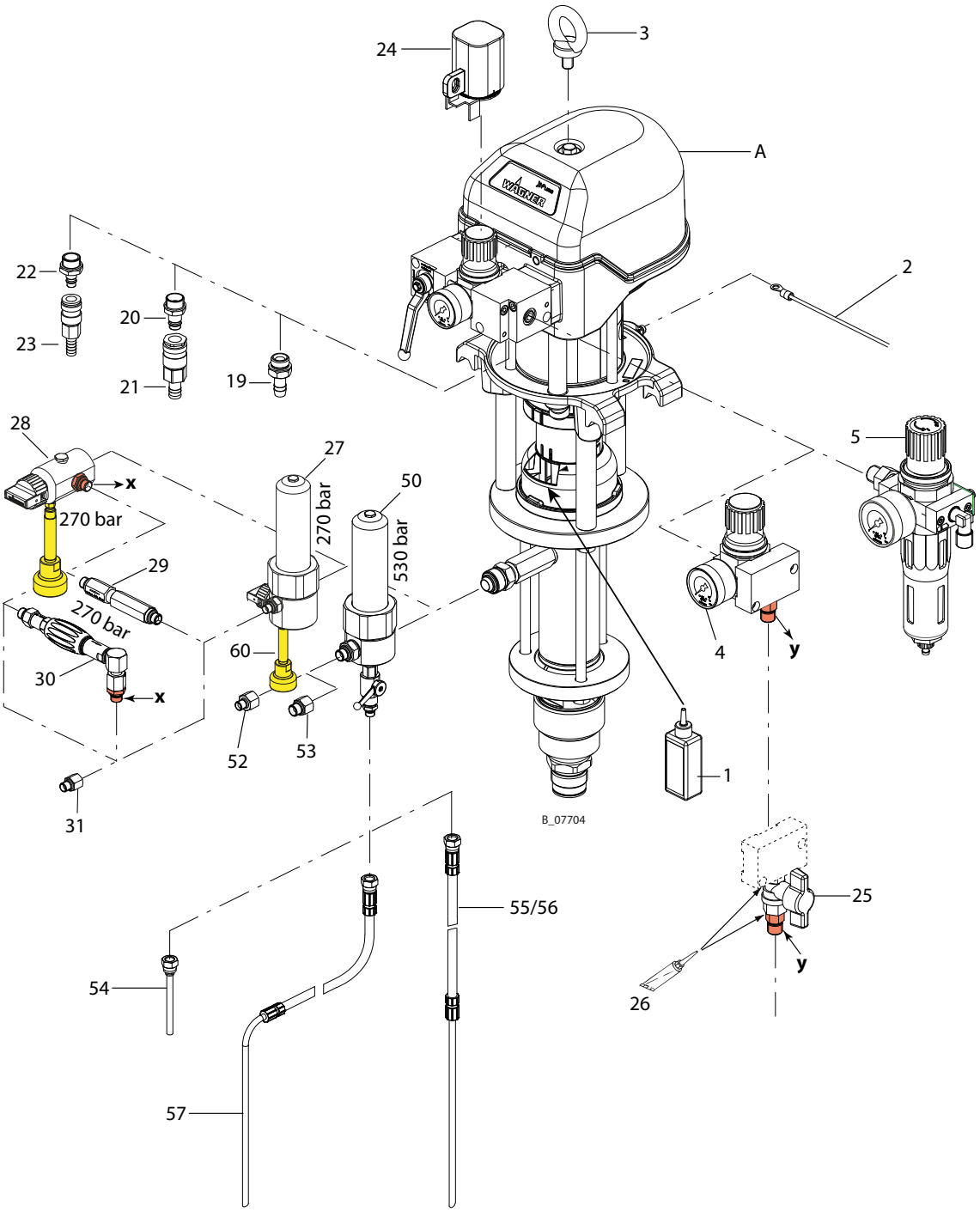
Consumable products
Consumable products (lacquers, adhesives, flushing and cleaning agents and solvents) must be disposed of in accordance with all legal requirements and provisions.



13 ACCESSORIES

13.1 WILDCAT AND PUMA PUMPS

13.1.1 PRODUCT OUTLET AND MISCELLANEOUS

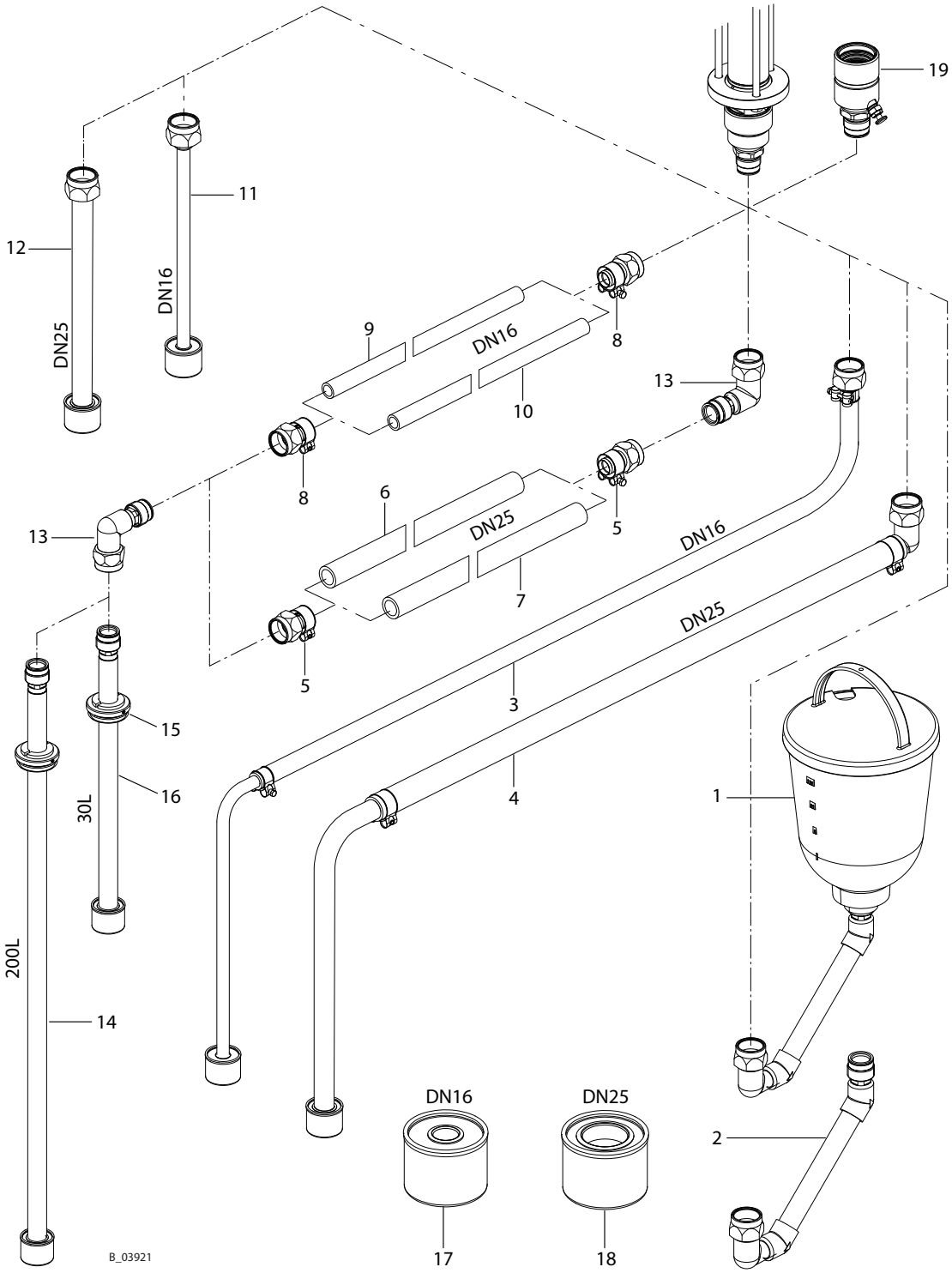


Mount fittings **x** and **y** at the correct position, depending on the system's characteristics.

Pos	K	WILDCAT 10-70	WILDCAT 18-40	PUMA 28-40	PUMA 15-70	PUMA 21-110	PUMA 15-150	Designation
		Order No.		Order No.		Order No.		
A		2329460	2329456	2329467	2329471	2329517	2329475	Piston pump PE/TG
A		2329462	2329458	2329469	2329473	2330614	2329477	Piston pump PE/T
A		2366704	/	/	/	/	/	Piston pump PE/T TC 1.4404
1		9992504						Separating agent 250 ml; 250 cc
2		236219						Grounding cable 3 m; 9.8 ft
3		9907133						Lifting eye bolt
4		2328611						AirCoat regulator set (Chapter 14.12)
5		2382997						AirCoat filter regulator set (Chapter 14.12)
19		9985619						Plug-in fitting with hose fitting DN13
20		9998813						Plug-in fitting with quick-release coupling DN13
21		9998812						Quick release coupling with hose fitting DN 13
22		9998810						Plug-in fitting with quick-release coupling DN10
23		9998811						Quick release coupling with hose fitting DN 10
24		2334956						Regulator lock
25		2335815						Ball valve DN7-PN10-G1/4-R1/4-CB
26		9992831						Loctite® 542, 50 ml; 50cc
Product outlet up to 270 bar								
27		2329024						HP filter DN10-PN270-SSt, complete Details and filter cartridges: Chapter 14.10
28		2329023						Relief combination, complete For details, see Chapter 14.7
29		2324558						Inline filter DN6-PN270-G1/4"-SSt Details and filter insert: Chapter 14.7
30		2329026						Inline filter HL DN6-PN270-G1/4"-SSt Details and filter insert: Chapter 14.8
31		2332619						Adapter G1/4"-NPS1/4"
Product outlet up to 530 bar								
50		2329025						HP filter DN12-PN530-SSt, complete Details and filter cartridges: Chapter 14.9
52		2332621						Adapter G3/8"-NPS1/4"
53		2332620						Adapter G3/8“-NPS 3/8“
54	◆	2331752						Return tube, DN6-G1/4"-100mm-PA
55	◆	2331017						Circulation hose DN6-G1/4"-1.8m-PA
56	◆	2331014						Circulation hose DN6-G1/4"-2.8m-PA
57	◆	2329046						Return hose DN6-PN310-G1/4"-PA
Pressure relief Relex								
60		--						Pressure relief Relex (see supplement, order no. 2409685)

◆ = Wearing parts
/ = Item does not exist.

13.1.2 PRODUCT INLET

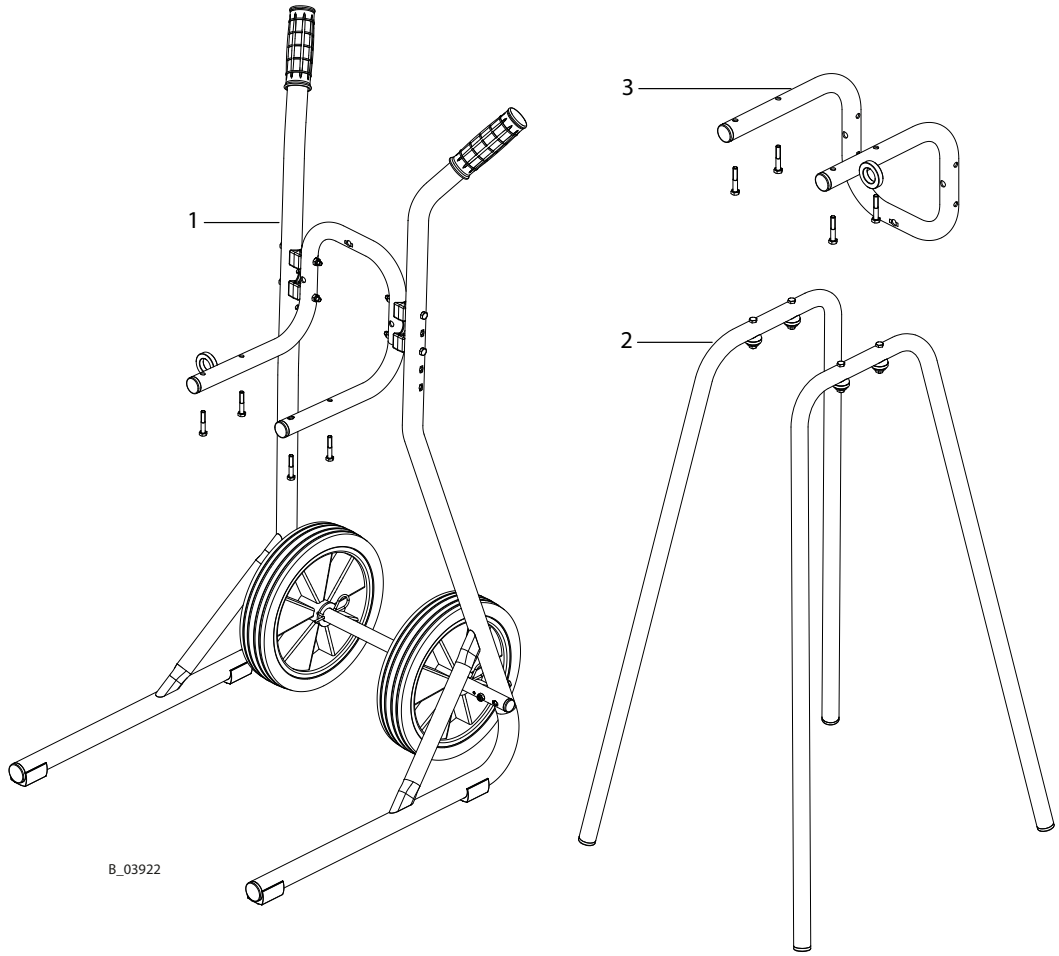


For trouble-free suction, use hoses which are as short as possible. The maximum hose length is dependent upon the viscosity of the product, the suction height, and the nominal diameter of the hose.

Pos	K	WILDCAT 10-70	WILDCAT 18-40	PUMA 28-40	PUMA 15-70	PUMA 21-110	PUMA 15-150	Designation
		Order No.		Order No.		Order No.		
A		2329460	2329456	2329467	2329471	2329517	2329475	Piston pump PE/TG
A		2329462	2329458	2329469	2329473	2330614	2329477	Piston pump PE/T
A		2366704	/	/	/	/	/	Piston pump PE/T TC 1.4404
1		2332169				--	--	Hopper set, 5 l for piston pump
2		2323225				--	--	Suction elbow for hopper SSt
3	◆	2324110					--	Suction hose DN16-SSt, complete
4	◆	2324116						Suction hose DN25-SSt, complete
5		2325408						LP hose-fitting DN25-M36-SSt
6*	◆	2323474						LP hose DN25-PN10-EPDM (per meter)
7*	◆	2323595						LP hose DN25-PN10-PE (per meter)
8		2325390					--	LP hose-fitting DN16-M36-SSt
9*	◆	2323329					--	LP hose DN16-PN10-EPDM (per meter)
10*	◆	2323597					--	LP hose DN16-PN10-PE (per meter)
11		2324158				--	--	Suction tube DN16-SSt, complete
12		2323239						Suction tube DN25-SSt, complete
13		2324247						Suction elbow DN25-SSt
14		2324238						Suction tube DN25-200L-SSt, complete
15		2315163						Bung adapter DN25-G2"
16		2324241						Suction tube DN25-30L-SSt, complete
17	◆	2323396					--	Suction filter DN16-18mesh-SSt
18	◆	2323325						Suction filter DN25-18mesh-SSt
19		2329688	2329689		2329688	--	--	Inlet valve with valve depressor For details, see Chapter 14.6

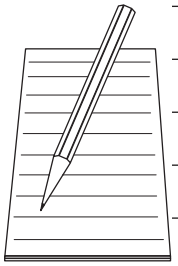
◆ = Wearing parts
-- = Item not available as spare part.
/ = Item does not exist.
* Pos 6, 7, 9, 10: max. 10 bar:
If a feed pump (>10 bar) is used, do not use downstream of the feed pump.

13.1.3 TROLLEY, FRAME AND WALL MOUNT ACCESSORIES



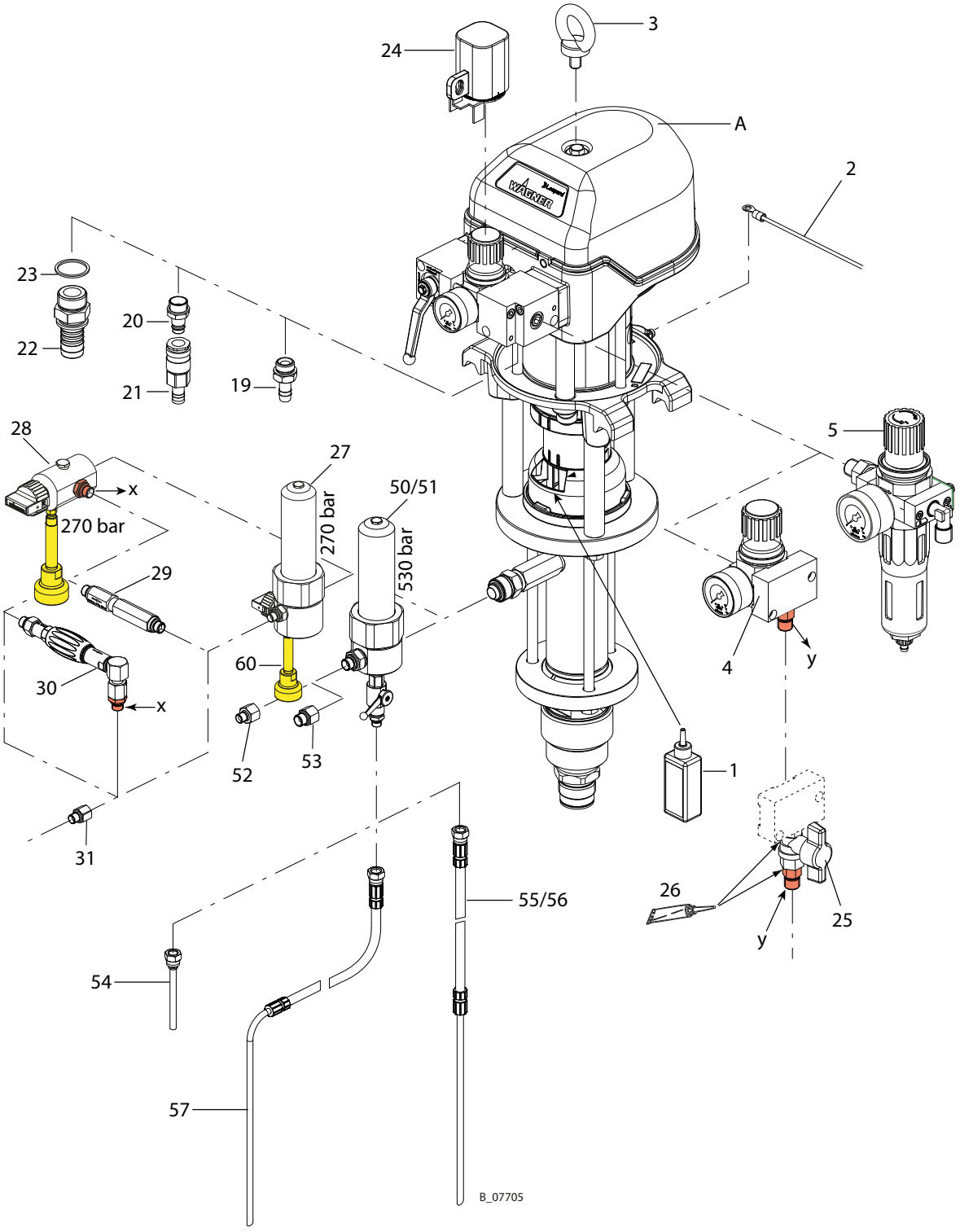
Pos	K	WILDCAT 10-70	WILDCAT 18-40	PUMA 28-40	PUMA 15-70	PUMA 21-110	PUMA 15-150	Designation
		Order No.		Order No.		Order No.		
A		2329460	2329456	2329467	2329471	2329517	2329475	Piston pump PE/TG
A		2329462	2329458	2329469	2329473	2330614	2329477	Piston pump PE/T
A		2366704	/	/	/	/	/	Piston pump PE/T TC 1.4404
1		2325901						Trolley 4", complete For details, see Chapter 14.13
2		2332374						Frame 4", complete
3	◆	2332143						Wall mount 4“, complete

◆ = Wearing parts
/ = Item does not exist.



13.2 LEOPARD AND JAGUAR PUMPS

13.2.1 PRODUCT OUTLET AND MISCELLANEOUS

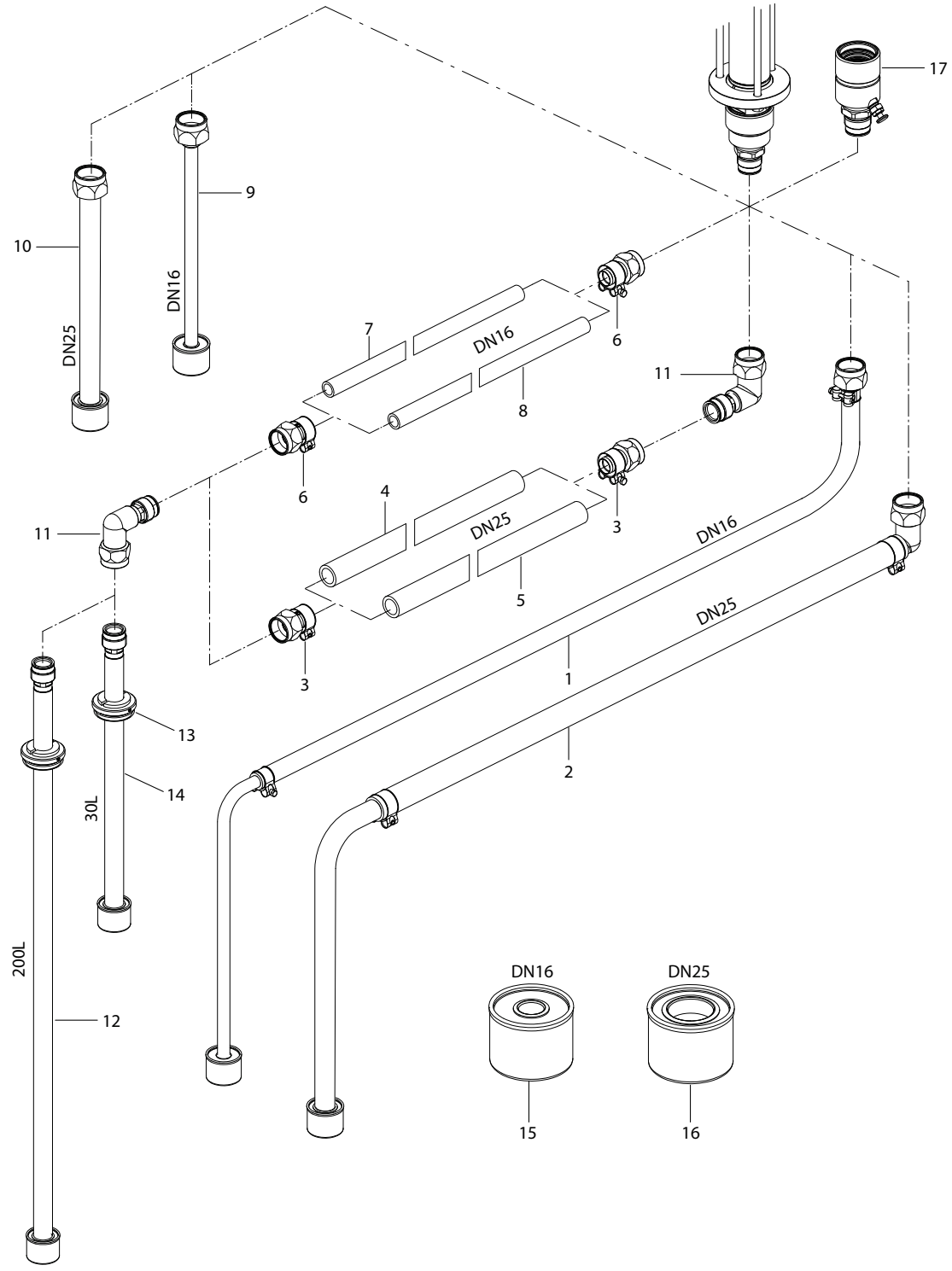


Mount fittings **x** and **y** at the correct position, depending on the system's characteristics.

Pos	K	LEOPARD 35-70 Order No.	LEOPARD 35-150 Order No.	LEOPARD 48-110 Order No.	JAGUAR 75-150 Order No.	Designation
A		2329479	2329484	2329490	--	Piston pump PE/TG
A		2329481	2329486	2329493	--	Piston pump PE/T
A		--	--	2329495	--	Piston pump PE/L
A		2366702	/	/	/	Piston pump PE/T TC 1.4404
1		9992504				Separating agent 250 ml; 250 cc
2		236219				Grounding cable 3 m; 9.8 ft
3		9907133			--	Lifting eye bolt
4		2328611				AirCoat regulator set (see Chapter 14.12)
5		2382997				AirCoat filter regulator set (see Chapter 14.12)
19		9985619			--	Plug-in fitting with hose fitting DN13
20		9998813			--	Plug-in fitting with quick-release coupling DN13
21		9998812			--	Quick release coupling with hose fitting DN 13
22		--			9985671	Outside thread grommet 1"-DN25
23		--			9974135	Sealing ring 1"
24		2334957			2334958	Regulator lock
25		2335815				Ball valve DN7-PN10-G1/4-R1/4-CB
26		9992831				Loctite® 542, 50 ml; 50cc
Product outlet up to 27 MPa; 270 bar; 3916 psi						
27		2329024		--		HP filter DN10-PN270-SSt, complete Details and filter cartridges: Chapter 14.10
28		2329023		--		Relief combination, complete For details, see Chapter 14.7
29		2324558		--		Inline filter DN6-PN270-G1/4"-SSt Details and filter insert: Chapter 14.8
30		2329026		--		Inline filter HL DN6-PN270-G1/4"-SSt Details and filter insert: Chapter 14.9
31		2332619		--		Adapter G1/4"-NPS1/4"
Product outlet up to 53 MPa; 530 bar; 7687 psi						
50		2329025				HP filter DN12 PN530-SSt with stainless steel ball valve Details and filter cartridges: Chapter 14.11
51		--		2335334		HP filter DN12 PN530-SSt with carbon steel ball valve. Details and filter cartridges: Chapter 14.11
52		2332621				Adapter G3/8"-NPS1/4"
53		2332620				Adapter G3/8“-NPS 3/8“
54	◆	2331752				Return tube DN6-G1/4"-100mm-PE
55	◆	2331017				Circulation hose DN6-G1/4"-1.8m-PA
56	◆	2331014				Circulation hose DN6-G1/4"-2.8m-PA
57	◆	2329046				Return hose DN6-PN310-G1/4"-PA
Pressure relief Relex						
60		--				Pressure relief Relex (see supplement, order no. 2409685)

◆ = Wearing parts
-- = Item not available as spare part.
/ = Item does not exist.

13.2.2 PRODUCT INLET

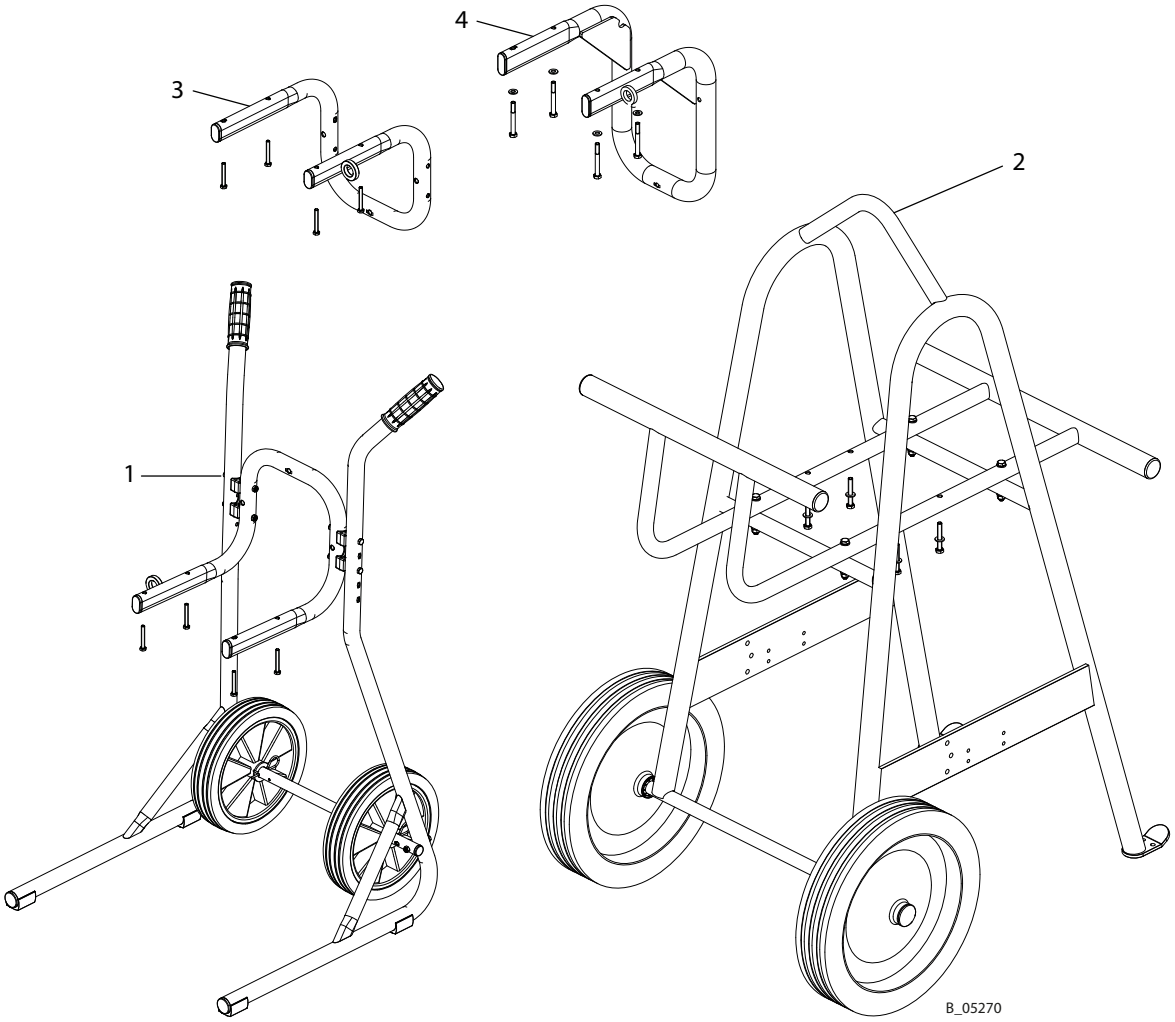


For trouble-free suction, use hoses which are as short as possible. The maximum hose length is dependent upon the viscosity of the product, the suction height, and the nominal diameter of the hose.

Pos	K	LEOPARD 35-70 Order No.	LEOPARD 35-150 Order No.	LEOPARD 48-110 Order No.	JAGUAR 75-150 Order No.	Designation
A		2329479	2329484	2329490	--	Piston pump PE/TG
A		2329481	2329486	2329493	--	Piston pump PE/T
A		--	--	2329495	--	Piston pump PE/L
A		2366702	/	/	/	Piston pump PE/T TC 1.4404
1	◆	2324110	--	--	--	Suction hose DN16-SSt, complete
2	◆	2324116				Suction hose DN25-SSt, complete
3		2325408				LP hose-fitting DN25-M36-SSt
4*	◆	2323474				LP hose DN25-PN10-EPDM (per meter)
5*	◆	2323595				LP hose DN25-PN10-PE (per meter)
6		2325390	--	--	--	LP hose-fitting DN16-M36-SSt
7*	◆	2323329	--	--	--	LP hose DN16-PN10-EPDM (per meter)
8*	◆	2323597	--	--	--	LP hose DN16-PN10-PE (per meter)
9		2324158	--	--	--	Suction tube DN16-SSt, complete
10		2323239				Suction tube DN25-SSt, complete
11		2324247				Suction elbow DN25-SSt
12		2324238				Suction tube DN25-200L-SSt, complete
13		2315163				Bung adapter DN25-G2"
14		2324241				Suction tube DN25-30L-SSt, complete
15	◆	2323396	--	--	--	Suction filter DN16-18mesh-SSt
16	◆	2323325				Suction filter DN25-18mesh-SSt
17		2329688	--	--	--	Inlet valve with valve depressor For details, see Chapter 14.6

◆ = Wearing parts
-- = Item not available as spare part.
/ = Item does not exist.
* Pos 4, 5, 7, 8: max. 10 bar.
If a feed pump (>10 bar) is used, do not use downstream of the feed pump.

13.2.3 TROLLEY AND WALL MOUNT



Pos	K	LEOPARD 35-70 Order No.	LEOPARD 35-150 Order No.	LEOPARD 48-110 Order No.	JAGUAR 75-150 Order No.	Designation
A		2329479	2329484	2329490	--	Piston pump PE/TG
A		2329481	2329486	2329493	--	Piston pump PE/T
A		--	--	2329495	--	Piston pump PE/L
A		2366702	/	/	/	Piston pump PE/T TC 1.4404
1		2325916			--	Trolley 6", complete For details, see Chapter 13.13
2		--		2339705		Heavy-duty PC trolley, complete For details, see Chapter 14.14
3		2332145			--	Wall mount 6“, complete
4		--			369020	Wall mount 9“, complete

-- = Item not available as spare part.
/ = Item does not exist.

14 SPARE PARTS

14.1 HOW CAN SPARE PARTS BE ORDERED?

Always supply the following information to ensure delivery of the right spare part:

Order number, designation and quantity
The quantity need not be the same as the number given in the quantity column "**Stk**" on the list. This number merely indicates how many of the respective parts are used in each component.

The following information is also required to ensure smooth processing of your order:
- billing address
- address for delivery
- name of the person to be contacted in the event of any queries
- type of delivery (normal mail, express delivery, air freight, courier etc.)

Identification in spare parts lists
Explanation of column "**K**" (labeling) in the following spare parts lists:
- ◆ Wearing parts/
- ★ Included in service set

Notice
These parts are not covered by warranty terms.
- ● Not part of standard equipment, available, however, as additional extra.

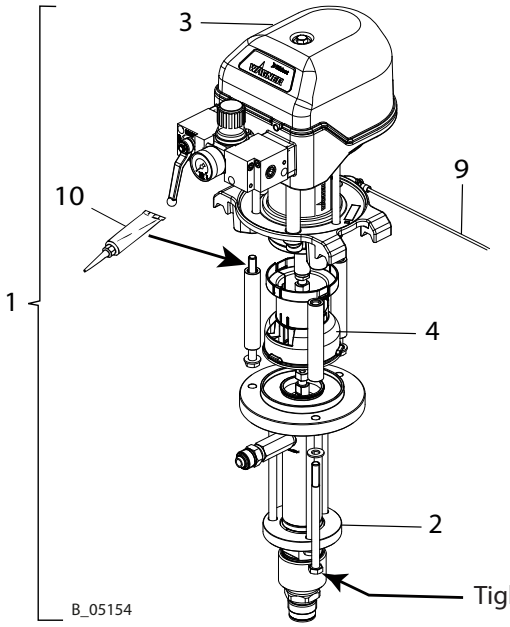
Identification in the order no. column.
- -- Item not available as spare part.
- / Position does not exist.

⚠ DANGER

Incorrect maintenance/repair!
Danger to life and equipment damage.
- → Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- → Use only WAGNER original spare parts and accessories.
- → Only repair and replace parts that are listed in the "Spare parts" chapter and that are assigned to the unit.
- → Before all work on the device and in the event of work interruptions:
  - Relieve the pressure from the spray gun, high-pressure hoses and all devices.
  - Secure the spray gun against actuation.
  - Switch off the energy and compressed air supply.
  - Disconnect the control unit from the mains.
- → Observe the operating and service manual for all work.

14.2 OVERVIEW OF THE COMPONENTS

Wildcat 10-70
Wildcat 18-40
Puma 28-40
Puma 15-70

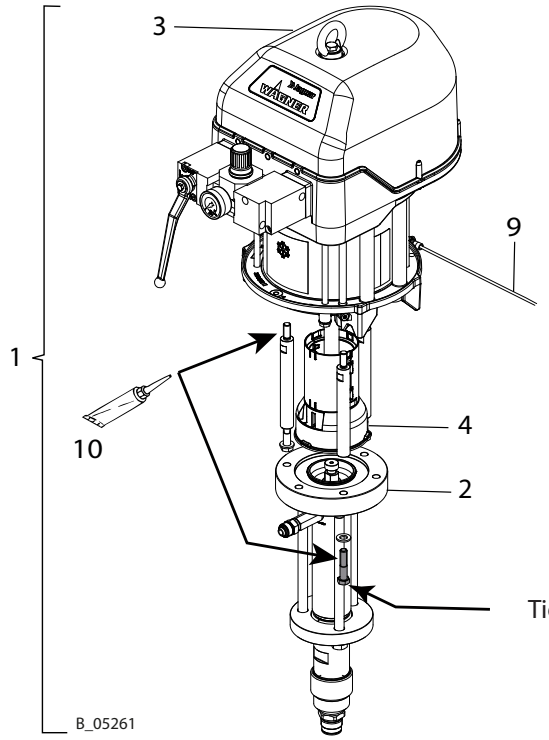


Pos	Designation	WILDCAT 10-70 PE/TG Order No.	WILDCAT 10-70 PE/T Order No.	WILDCAT 18-40 PE/TG Order No.	WILDCAT 18-40 PE/T Order No.
1	Piston pump	2329460	2329462	2329456	2329458
2	Fluid section	2329645	2329647	2329641	2329643
3	Air motor 3/75	2329613			
4	Connection set for air motor - fluid section	2350030		2350028	
9	Grounding cable, complete	236219			
10	Molykote® DX grease	9992616			
Tightening torque for air motor/fluid section		25 Nm; 18 lbft			

Pos	Designation	WILDCAT 10-70 PE/T TC 1.4404 Order No.
1	Piston pump	2366704
2	Fluid section	2366710
3	Air motor 3/75	2334375
4	Connection set for air motor - fluid section	2350030
9	Grounding cable, complete	236219
10	Molykote® DX grease	9992616
Tightening torque for air motor/fluid section		25 Nm; 18 lbft

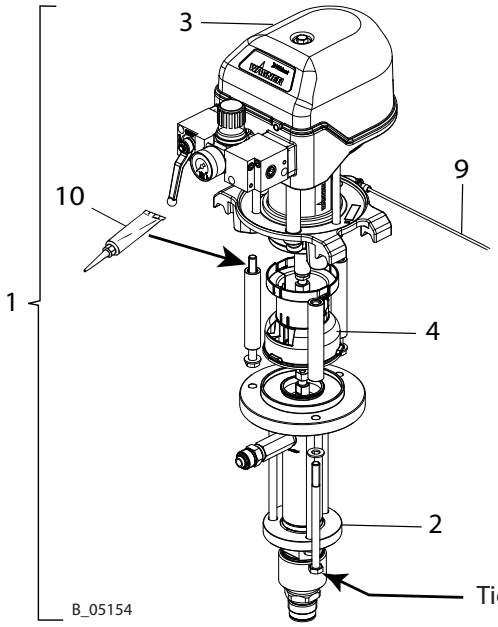
Pos	Designation	PUMA 28-40 PE/TG Order No.	PUMA 28-40 PE/T Order No.	PUMA 15-70 PE/TG Order No.	PUMA 15-70 PE/T Order No.
1	Piston pump	2329467	2329469	2329471	2329473
2	Fluid section	2329641	2329643	2329645	2329647
3	Air motor 3/75	2329617			
4	Connection set for air motor - fluid section	2350028		2350030	
9	Grounding cable, complete	236219			
10	Molykote® DX grease	9992616			
Tightening torque for air motor/fluid section		25 Nm; 18 lbft			

Puma 15-150
Puma 21-110



Pos	Designation	PUMA 15-150		PUMA 21-110	
		PE/TG	PE/T	PE/TG	PE/T
		Order No.	Order No.	Order No.	Order No.
1	Piston pump	2329475	2329477	2329517	2330614
2	Fluid section	2329650	2329652	2329654	2329656
3	Air motor 3/75	2329619			
4	Connection set for air motor - fluid section	2350031			
9	Grounding cable, complete	236219			
10	Molykote® DX grease	9992616			
Tightening torque for air motor/fluid section		50 Nm; 37 lbft			

Leopard 35-70

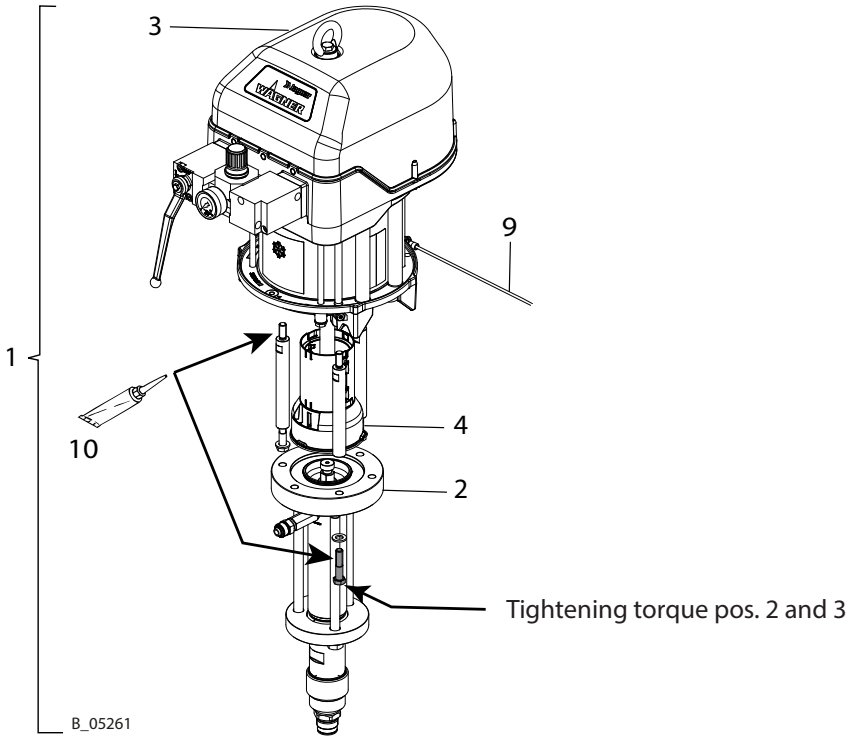


Pos	Designation	LEOPARD 35-70 PE/TG Order No.	LEOPARD 35-70 PE/T Order No.	LEOPARD 35-150 PE/TG Order No.	LEOPARD 35-150 PE/T Order No.
1	Piston pump	2329479	2329481	2329484	2329486
2	Fluid section	2329645	2329647	2329650	2329652
3	Air motor 3/75	2329621		2329623	
4	Connection set for air motor - fluid section	2350032		2350033	
9	Grounding cable, complete	236219			
10	Molykote® DX grease	9992616			
Tightening torque for air motor/fluid section		25 Nm; 18 lbft		50 Nm; 37 lbft	

Pos	Designation	LEOPARD 35-70 PE/T TC 1.4404 Order No.
1	Piston pump	2366702
2	Fluid section	2366710
3	Air motor 3/75	2334375
4	Connection set for air motor - fluid section	2350030
9	Grounding cable, complete	236219
10	Molykote® DX grease	9992616
Tightening torque for air motor/fluid section		25 Nm; 18 lbft

Pos	Designation	LEOPARD 48-110 PE/TG Order No.	LEOPARD 48-110 PE/T Order No.	LEOPARD 48-110 PE/L Order No.
1	Piston pump	2329490	2329493	2329495
2	Fluid section	2329654	2329656	2329658
3	Air motor	2329623		
4	Connection set for air motor - fluid section	2350033		
9	Grounding cable, complete	236219		
10	Molykote® DX grease	9992616		
Tightening torque for air motor/fluid section		50 Nm; 37 lbft		

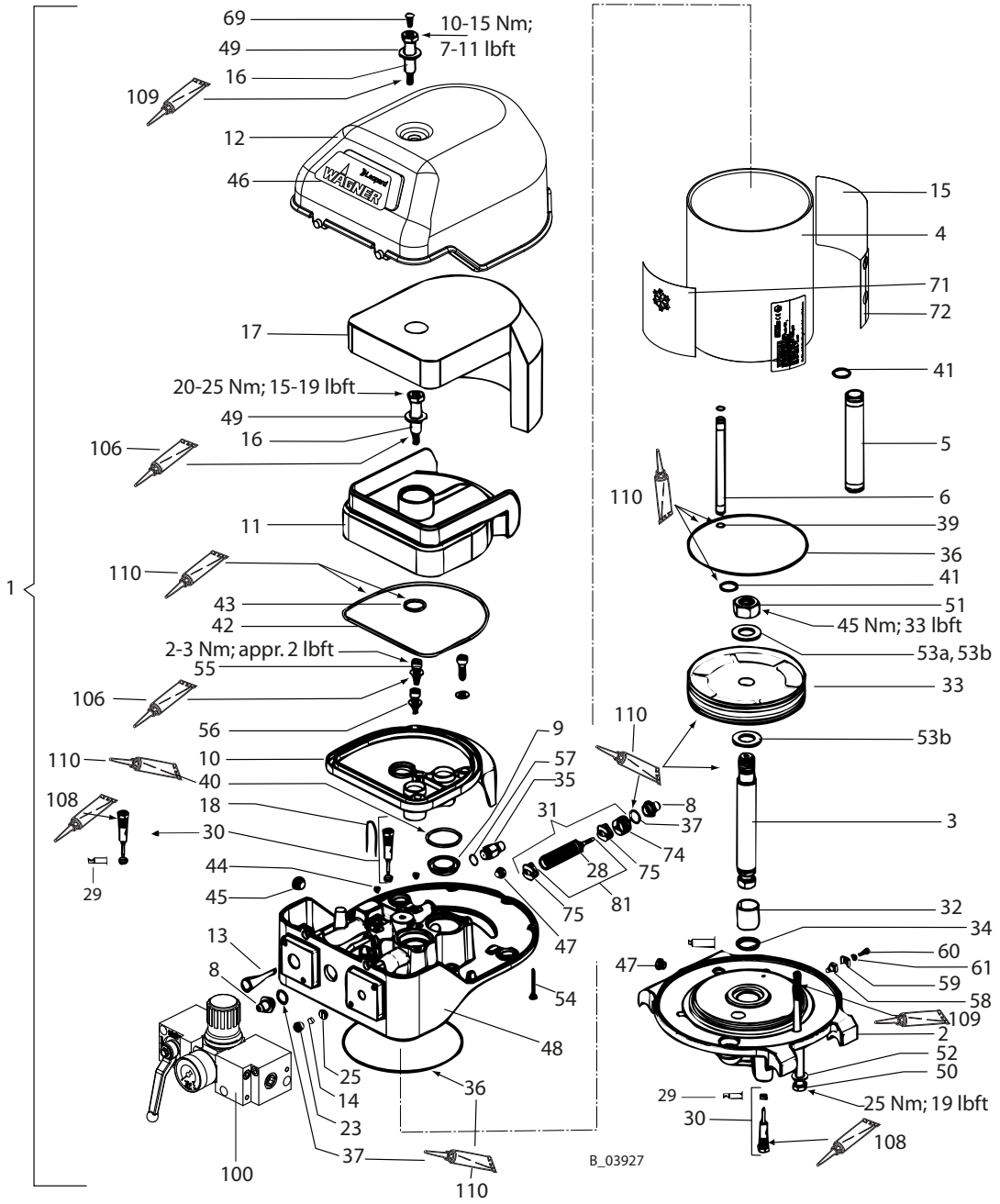
Leopard 35-150
Leopard 48-110
Jaguar 75-150



Pos	Designation	JAGUAR 75-150		
		PE/TG	PE/T	PE/L
		Order No.	Order No.	Order No.
1	Piston pump	--	--	--
2	Fluid section	2329650	2329652	2329664
3	Air motor	--		
4	Connection set for air motor - fluid section	2350033		
9	Grounding cable, complete	236219		
10	Molykote® DX grease	9992616		
Tightening torque for air motor/fluid section		50 Nm; 37 lbft		

14.3 AIR MOTORS

14.3.1 WILDCAT, PUMA AND LEOPARD AIR MOTORS



Pressure regulator (pos. 100):
For details, see Chapter 14.3.2 and/or Chapter 14.3.3

Do not dismount the piston (pos. 81).

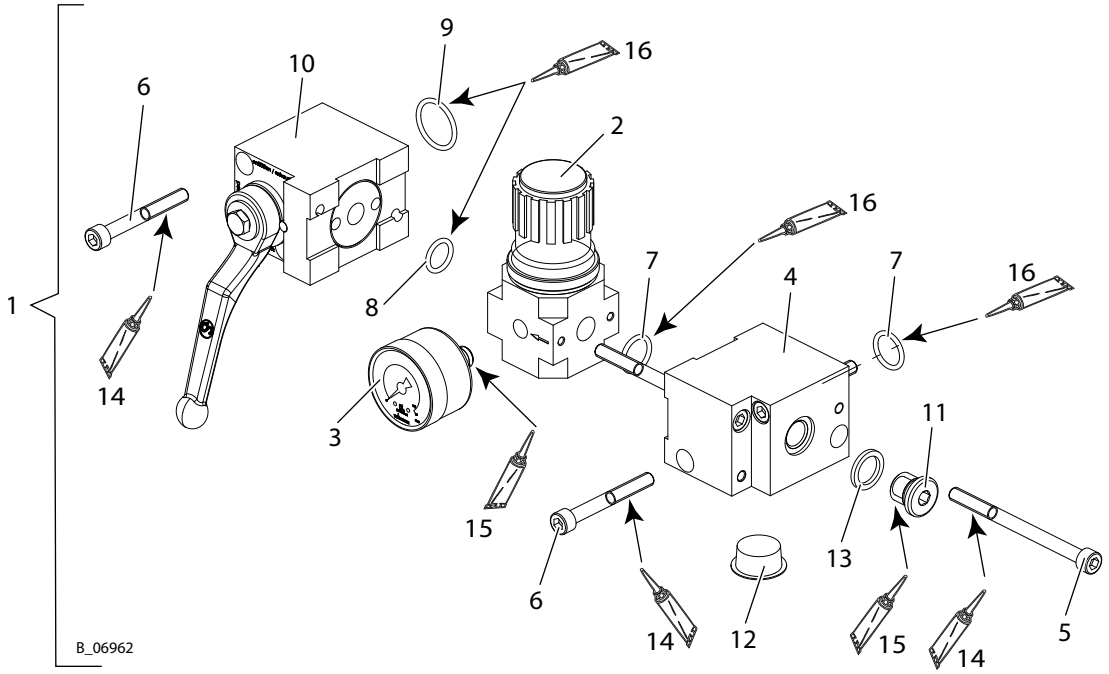
Pos	K	Stk	WILDCAT 10-70 18-40	PUMA 28-40 15-70	PUMA 21-110 15-150	LEOPARD 35-70	LEOPARD 48-110 35-150	Designation
			Order No.	Order No.		Order No.		
1		1	2329613	2329617	2329619	2329621	2329623	Air motor
		1	2334375	/			/	Air motor TC 1.4404
2		1	2344071			2344075		Flange
		1	2349900	/				Flange TC 1.4404
3		1	367302		367402	368302	368402	Piston rod
4		1	366303	367303	367403	368303	368403	Cylinder pipe
5		1	367304		367404	368304	368404	Compressed air pipe
6		1	367305		367405	367305	367405	Control air pipe
8		2	367307					Plug
9	◆ ★	2	L414.06C			L423.06		Outlet seal
10		1	367309			368309		Connecting part
11		1	367310			368310		Silencer
12		1	367311			368311		Hood
13	◆ ★	1	367313					Compressed air filter
14	◆ ★	1	367314					Control air filter
15		1	2332082					Fluid warning label
16		2	367318			368324		Shoulder screw
17	◆	1	367319			368319		Sound deadening pad
18		2	367320			368320		Cotter pin
23		1	367324					Filter holder
25		1	/	/	/	367325		Throttle
28	◆	6	9971123			9974142		O-ring
29	◆	2	9974217					Rod seal
30	◆	2	369290					Pilot valve
31	◆	1	9943080			9943081		Spool and sleeve assembly, complete
32	◆	1	9962018			9962019		Permaglide bushing
33	◆	1	9998663	9998661		9998662		Complete piston
34	◆ ★	1	9974090			9974091		Seal wiper ring
35		1	368288			/		Safety valve, 8.4 bar
		1	/			368286		Safety valve, 7.5 bar
		1	/			/		Safety valve, 8.1 bar
		1	2336178	/		/		Safety valve, 4.4 bar TC 1.4404
36	◆ ★	2	9974115	9974084		9974087		O-ring
37	◆ ★	2	9974085					O-ring
39	◆ ★	2	9974089					O-ring
40	◆ ★	2	9974095			9974096		O-ring
41	◆ ★	2	9971448			9971137		O-ring
42	◆ ★	1	9974097			9974100		O-ring
43	◆ ★	1	9974098			9974101		O-ring
44		2	9998674					Threaded plug
45		1	9998274					Threaded plug
46		1	2330369	2330370		2330371		Label, WAGNER

Pos	K	Stk	WILDCAT 10-70 18-40	PUMA 28-40 15-70	PUMA 21-110 15-150	LEOPARD 35-70	LEOPARD 48-110 35-150	Designation
			Order No.	Order No.		Order No.		
47		2	9998675					Threaded plug
48		1	2359165			2359171		Control housing
		1	2359170	/				Control housing TC 1.4404
49		2	9925033		9920106	9925026		Washer
50		3	9900225		9907121	9900225		Hexagon screw
51		1	2386160 (new)			2386161 (new)		Self-locking hexagon nut
		1	9910101 (old)			9910605 (old)		Hexagon nut secured with Loctite 243
52		3	9920106					Washer
53a		1	9920107			/		Washer
53b		2	/	/	/	9920110		Washer
54		2	9907126			/		SFS screw
		3	/	/	/	9907125		SFS screw
55		3	9900325			9900313		Socket cap screw, M6x16
56		3	9920103			9920102		Washer
57	◆ ★	1	9970149					Sealing ring
58		1	9952668					Base
59		1	9952667					Clamping bracket
60		1	9900701					Socket cap screw
61		1	9921505					Spring washer
69		1	9998718					Drive fastener
71		1	2330382					IceBreaker label
72		1	2332077					Warning label
74	◆	1	368038					Detent element, complete ISO 1/2
75	◆	2	368313					Damper ISO 1/2
81	◆	1	9943097			9943098		Spool and sleeve assembly ISO1 or ISO2
100		1	2384849			/		Pressure regulator unit, 4", complete For details, see Chapter 14.3.2
		1	/			2328607		Pressure regulator unit 6", complete For details, see Chapter 14.3.3
106		1	9992590					Loctite® 222 50 ml; 50cc
108		1	9992831					Loctite® 542, 50 ml; 50cc
109		1	9992616					Molykote® DX grease
110		1	9998808					Mobilux® EP 2 grease
		1	366995	367995		368995		Service set
		1	9992511					Loctite® 243, 50 ml; 50cc

◆ = Wearing parts

★ = Included in service set

14.3.2 WILDCAT AND PUMA AIR MOTOR REGULATORS

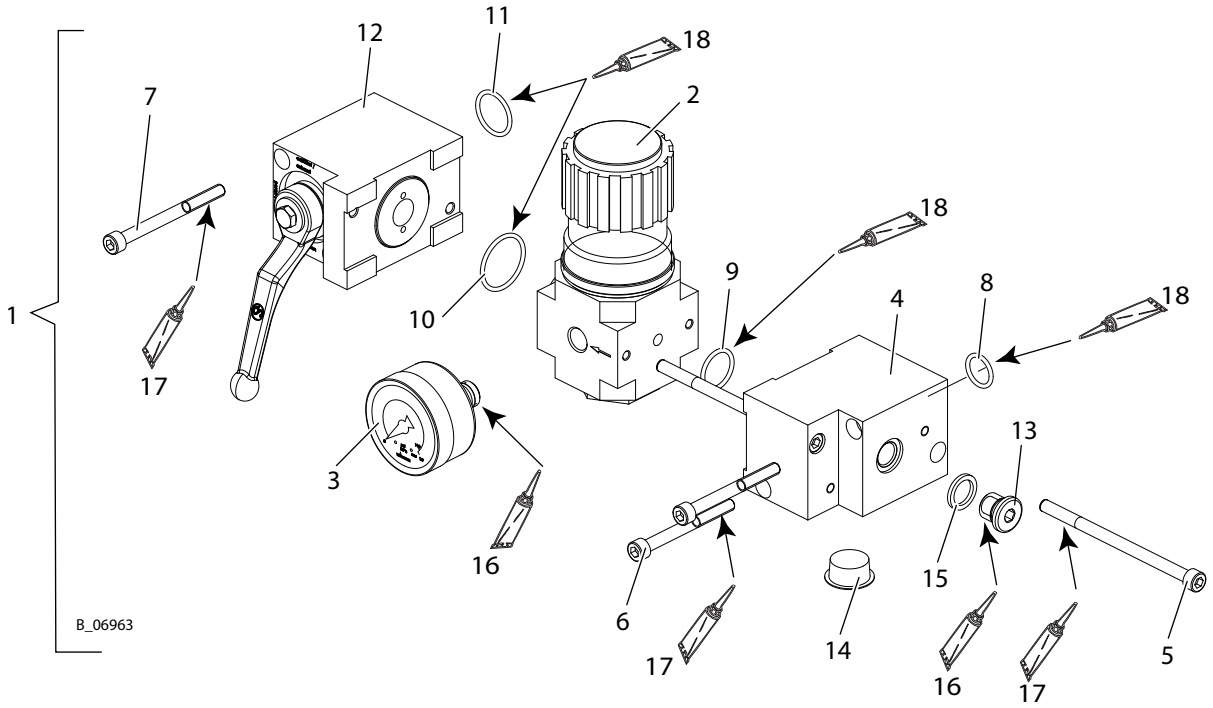


Pos 3: Screw in the pressure gauge only until the white sealing ring is completely inside the filter control valve. Thereafter continue turning the pressure gauge only to align the display scale.

Pos	K	Stk	WILDCAT 10-70 / 18-40	PUMA 28-40 / 15-70	PUMA 21-110 / 15-150	Designation
			Order No.			
1		1	2384849			Pressure regulator unit, 4" complete
2	◆	1	2309972			Pressure regulator valve, 4“
3	◆	1	9998677			Pressure gauge 0-10 bar (d40)
4		1	2309744			Distribution piece, 4"
5		2	9907039			Hexagon socket cylinder head screw
6		4	9900316			Hexagon socket cylinder head screw
7	◆	2	9974166			O-ring
8	◆	1	9971313			O-ring
9	◆	1	9971137			O-ring
10	◆	1	2360756			Edge ball valve, 4“
11		1	9904307			Screw plug
12		1	9990506			Cone plug, GPN 600
13		1	9970154			Sealing ring
14		1	9992616			Molykote® DX grease
15		1	9992831			Loctite® 542, 50 ml; 50cc
16		1	9998808			Mobilux® EP 2 grease

◆ = Wearing parts

14.3.3 LEOPARD AIR MOTOR REGULATOR

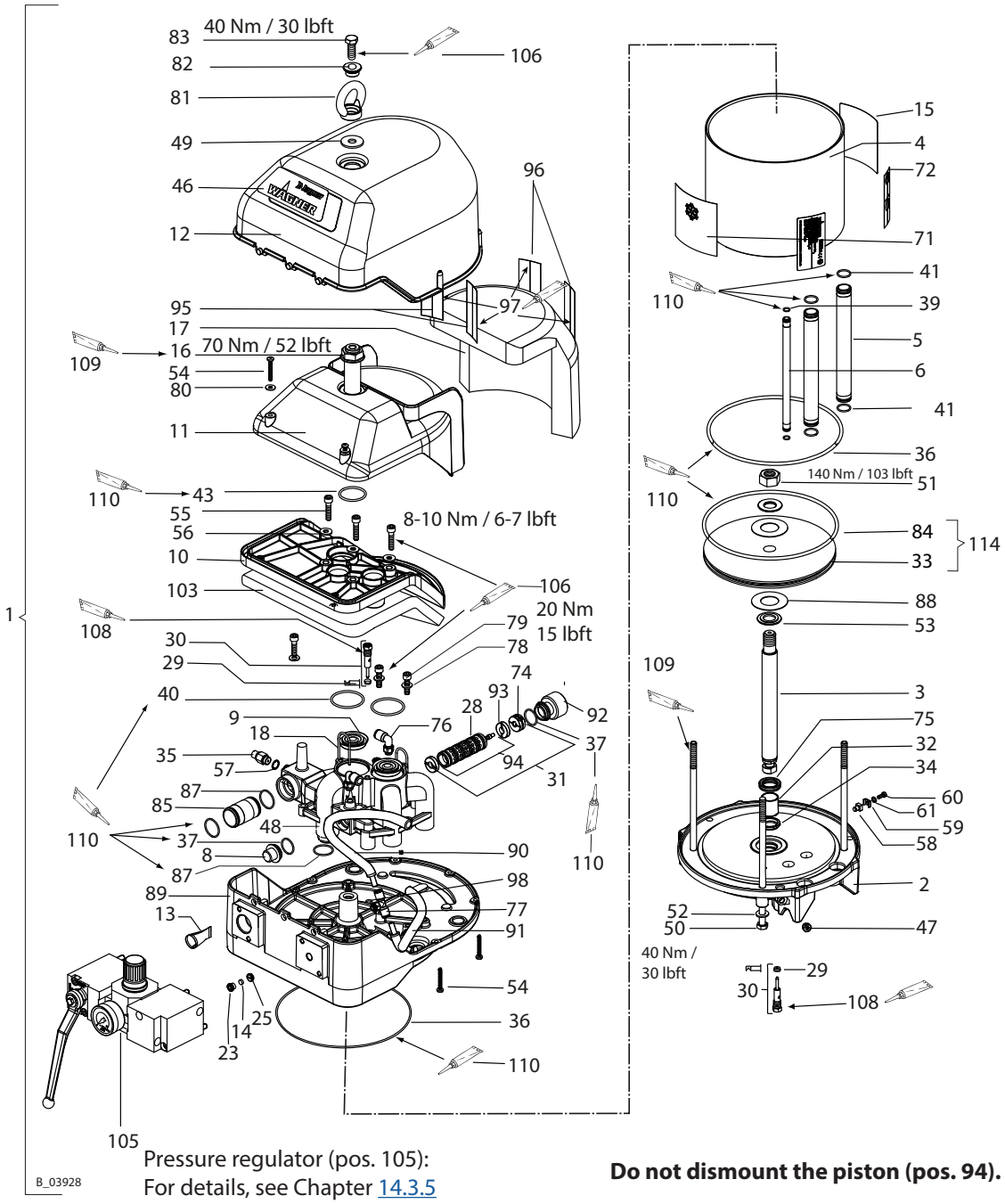


Pos 3: Screw in the pressure gauge only until the white sealing ring is completely inside the filter control valve. Thereafter continue turning the pressure gauge only to align the display scale.

Pos	K	Stk	LEOPARD 35-70 / LEOPARD 48-110 / 35-150 Order No.	Designation
1		1	2328607	Pressure regulator unit, 6" complete
2	◆	1	2309973	Pressure regulator valve, 6“
3	◆	1	9998725	Pressure gauge 0-10 bar (d50)
4		1	2309783	Distribution piece, 6"
5		2	3050699	Hexagon socket cylinder head screw
6		2	9907024	Hexagon socket cylinder head screw
7		2	9906020	Hexagon socket cylinder head screw
8	◆	1	9974166	O-ring
9	◆	1	9971018	O-ring
10	◆	1	3105540	O-ring
11	◆	1	9971137	O-ring
12	◆	1	2370107	Edge ball valve, 6“
13		1	9904307	Screw plug
14		1	9990506	Cone plug, GPN 600
15		1	9970154	Sealing ring
16		1	9992831	Loctite® 542
17		1	9992616	Molykote® DX grease
18		1	9998808	Mobilux® EP 2 grease

◆ = Wearing parts

14.3.4 JAGUAR AIR MOTOR



Pressure regulator (pos. 105):
For details, see Chapter 14.3.5

Do not dismount the piston (pos. 94).

Pos	K	Stk	JAGUAR 75-150 Order no.	Designation
1		1	--	Air motor
2		1	369316	Flange
3	◆	1	368402	Piston rod
4		1	369403	Cylinder pipe
5		2	368404	Compressed air pipe
6		1	367405	Control air pipe
8		1	369307	Sealing plug
9	◆ ★	2	369312	Outlet seal
10		1	369309	Connecting part
11		1	369310	Silencer
12		1	369905	Hood
13	◆ ★	1	369313	Compressed air filter
14	◆	1	367314	Control air filter
15		1	2332082	Fluid warning label
16		1	369318	Shoulder screw
17	◆	1	369906	Sound absorbing mat
18		2	369320	Cotter pin
23		1	367324	Filter holder
25		1	367325	Throttle
28	◆	6	9974143	O-ring
29	◆	2	9974217	Rod seal
30	◆	2	369290	Pilot valve
31	◆	1	369907	Spool-sleeve combination assembly, ISO3
32	◆	1	9962019	Permaglide bushing
33		1	369385	Piston 9
34	◆ ★	1	9974125	Seal wiper ring
35		1	368286	Safety valve, 7.5 bar
36	◆ ★	2	9974133	O-ring
37	◆ ★	2	9971056	O-ring
39	◆ ★	2	9974089	O-ring
40	◆ ★	2	9974132	O-ring
41	◆ ★	4	9971137	O-ring
43	◆ ★	1	9974165	O-ring
46		1	2330372	Label, WAGNER
47		2	9998675	Threaded plug
48		1	369315	Control housing
49		1	9925034	Washer
50		4	9907137	Hexagon screw
51		1	2386161	Self-locking hexagon nut (new)
		1	9910605	Hexagon nut, secured with Loctite® 243 (old version!)
52		4	9920106	Washer
53		2	369303	Washer
54		7	9907125	SFS screw
55		3	9900314	Socket cap screw
56		3	9925029	Washer
57	◆ ★	1	9970149	Sealing ring
58		1	9952668	Base
59		1	9952667	Clamping bracket
60		1	9900701	Socket cap screw

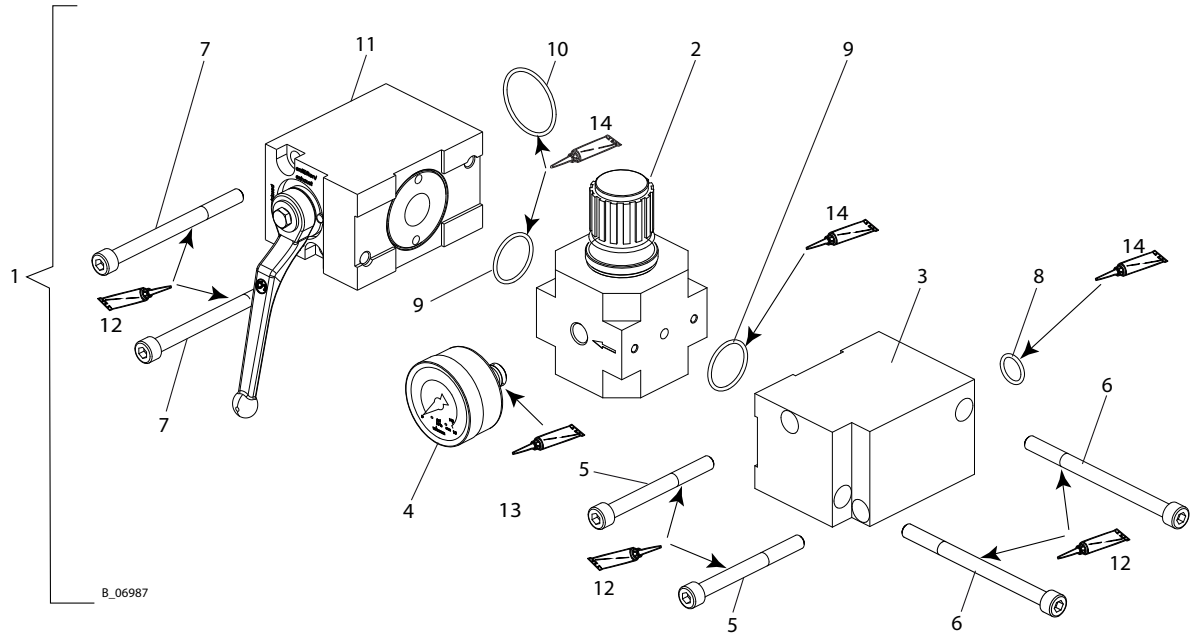
Pos	K	Stk	JAGUAR 75-150 Order no.	Designation
61		1	9921505	Spring washer
71		1	2330382	IceBreaker label
72		1	2332077	Warning label
74	◆	1	369027	Detent body
75		1	9974124	Rod seal profile E5
76		2	9992757	Threaded elbow fitting
77		1	9992758	Screw connector T
78		4	9920102	Washer
79		4	9900313	Socket cap screw
80		2	9925031	Washer
81		1	369325	Lifting eye nut
82		1	369324	Shoulder ring
83		1	9900150	Hexagon screw
84	◆ ★	1	9974262	O-ring
85		1	369306	Air pipe
87	◆	3	9971004	O-ring
88		2	369304	Damping washer
89		1	369317	Control flange
90		1	369026	Air hose, rear
91		1	369025	Air hose, front
92		1	369326	Lock space 9
93	◆	2	369329	Damper ISO3
94	◆	1	9943131	Spool & sleeve assembly, ISO3
95	◆	1	9999151	Velcro fastener adhesive part
96	◆	1	9999152	Velcro fastener coating part
97		1	9992816	Miranit contact adhesive
98	◆	1	9971372	Viton B O-ring
103	◆	1	369330	Sound absorbing mat 9/12"
105		1	2328609	Pressure regulator unit, 9", complete. For details, see Chapter 14.3.3
106		1	9992590	Loctite® 222 50 ml; 50cc
108		1	9992831	Loctite® 542 50 ml; 50cc
109		1	9992616	Molykote® DX grease
110		1	9998808	Mobilux® EP 2 grease
114	●	1	369971	Piston 9 with SOFT O-ring
		1	369987	Service set
		1	9992511	Loctite® 243 50 ml; 50cc

◆ = Wearing parts

★ = Included in service set

● = Not part of the standard equipment but available as a special accessory

14.3.5 JAGUAR AIR MOTOR REGULATOR



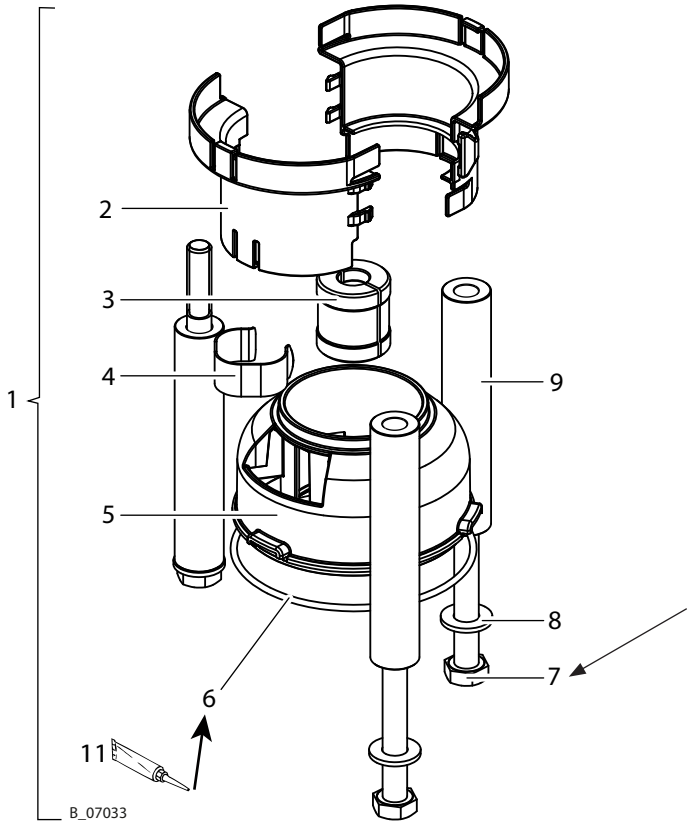
Pos 4: Screw in the pressure gauge only until the white sealing ring is completely inside the filter control valve. Thereafter continue turning the pressure gauge only to align the display scale.

Pos	K	Stk	JAGUAR 75-150 Order no.	Designation
1		1	2328609	Pressure regulator unit, 9" complete
2	◆	1	2309974	Pressure regulator valve, 9“
3		1	2309963	Distribution piece, 9"
4	◆	1	9998725	Pressure gauge 0-10 bar (d50)
5		2	9900360	Hexagon socket cylinder head screw
6		2	9907087	Hexagon socket cylinder head screw
7		2	9900356	Hexagon socket cylinder head screw
8	◆	1	9974166	O-ring
9	◆	2	3105540	O-ring
10	◆	1	9971405	O-ring
11	◆	1	2371922	Edge ball valve, 9“
12		1	9992616	Molykote® DX grease
13		1	9992831	Loctite® 542, 50 ml; 50cc
14		1	9998808	Mobilux® EP 2 grease

◆ = Wearing parts

14.4 CONNECTION SETS

14.4.1 CONNECTION SETS FOR 40–70 CM³

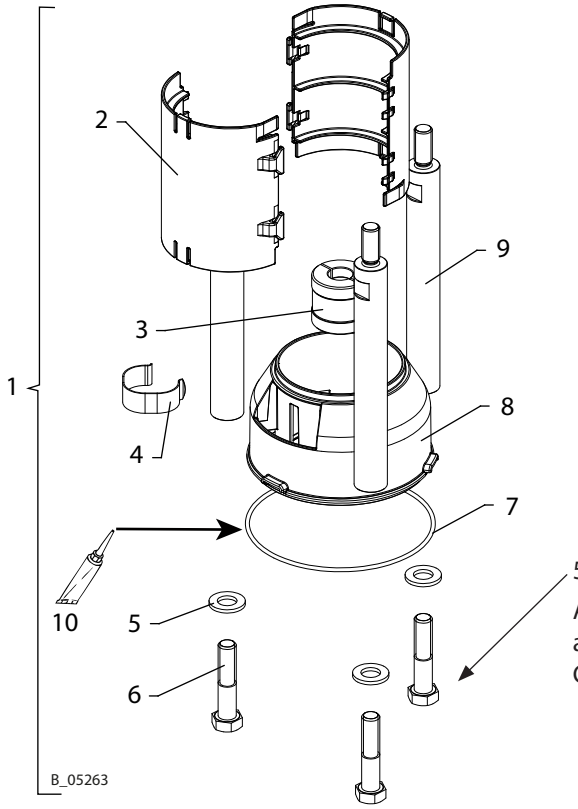


Pos	K	Stk	Wildcat 18-40 Puma 28-40 LM-FS 1 Order No.	Wildcat 10-70 Puma 15-70 LM-FS 2 Order No.	Leopard 35-70 LM-FS 4 Order No.	Designation
1		1	2350028	2350030	2350032	Connection set LM-FS …
2		2	367532			Coupling cover stroke 75
3		1	367529	367579	368529	Coupling
4		1	367530		368530	Spring
5		1	367531			Separating agent cup, stroke 75
6	◆ ★	1	9974093			O-ring
7		3	9900225			Hexagon screws
8		3	9920106			Washer
9		3	367306			Connecting tube stroke 75
11		1	9998808			Mobilux® EP 2 grease

◆ = Wearing parts

★ = Included in the service set of the fluid section PE/TG or PE/T (see Chapter 14.5).

14.4.2 CONNECTION SETS FOR 110–150 CM³



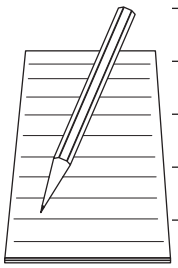
50 Nm; 37 lbft

Assembly with air motor and fluid section: see Chapter 14.5.2

Pos	K	Stk	Puma 15-150 / 21-110 LM-FS 3 Order No.	Leopard 35-150 / 48-110 Jaguar 75-150 LM-FS 5 Order No.	Designation
1		1	2350031	2350033	Connection set LM-FS …
2		2	368532		Coupling cover stroke 150
3		1	367579	368529	Coupling
4		1	367530	368530	Spring
5		3	9920107		Washer, A12, DIN 125-1
6		3	9900157		Hexagon screws
7	◆ ★	1	9974116		O-ring
8		1	368531		Separating agent cup, stroke 150
9		3	368533		Threaded bolt, M12x169
10		1	9998808		Mobilux® EP 2 grease

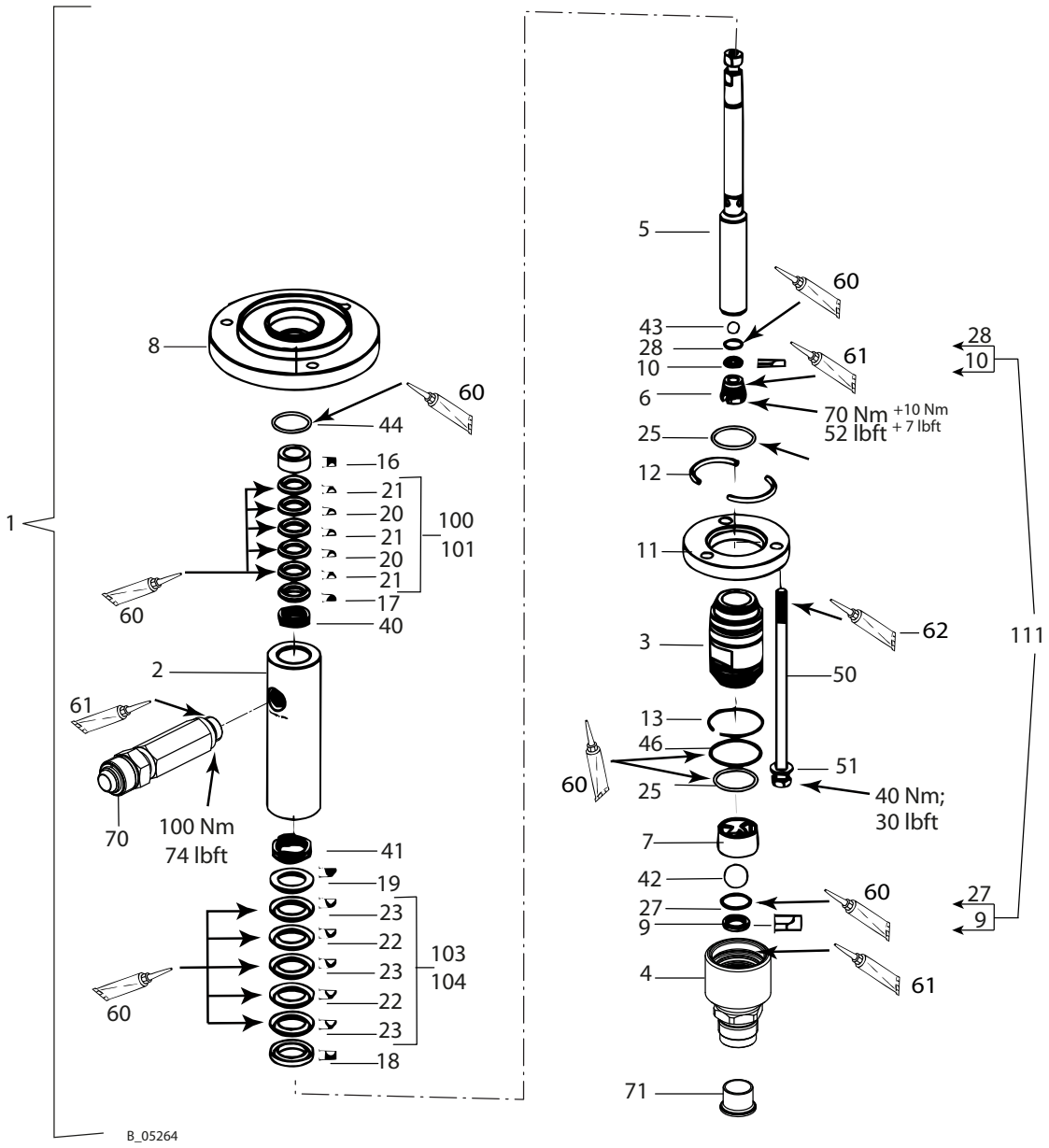
◆ = Wearing parts

★ = Included in the service set of the fluid section PE/TG or PE/T or PE/L (see Chapter 14.5).



14.5 FLUID SECTIONS

14.5.1 FLUID SECTIONS 40 CM³



Pos. 4 Tighten by hand on block.
Use a standard wrench only if necessary. In this case, use a wrench to counterhold pos. 3.
* Notice regarding pos. 111: Stainless steel valve seat set 40, consisting of: pos. 28, 10, 27, 9, but in stainless steel version.

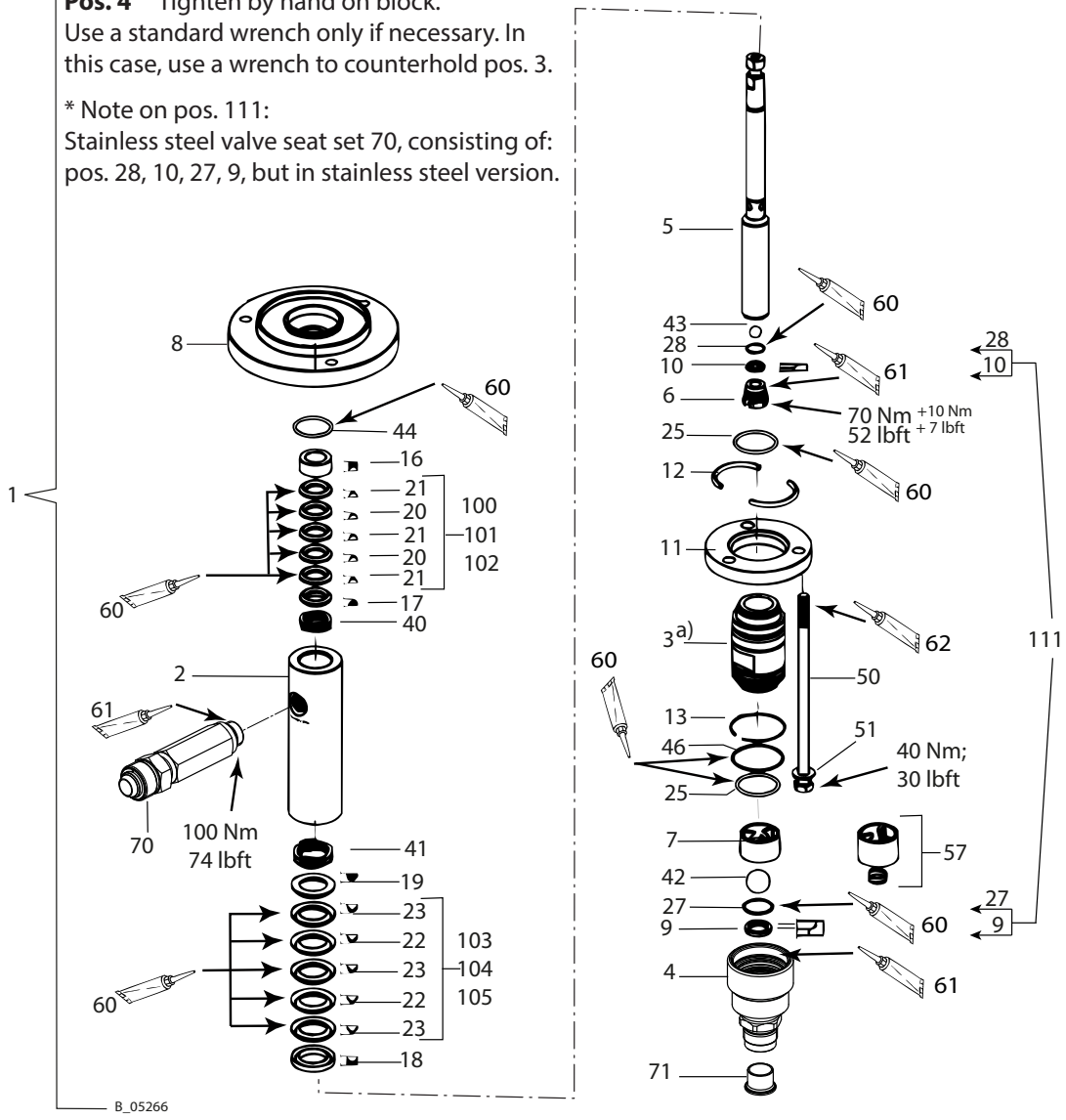
Pos	K	Stk	PE/TG Order No.	PE/T Order No.	Designation
1		1	2329641	2329643	Fluid section 40 cm³
2		1	367502		Pipe
3		1	367503		Cylinder
4		1	2322467		Inlet housing 40
5	◆	1	367505		Piston
6		1	367506		Valve screw
7	◆ ★	1	367507		Ball guide, inlet
8		1	367501		Connecting flange
9	◆	1	367509		Valve seat, inlet
10	◆	1	367510		Valve seat, outlet
11		1	367511		Snap ring flange
12		2	367512		Snap ring half
13		1	367513		Securing ring
16		1	367516		Support ring
17		1	367517		Pressure ring
18		1	367518		Support ring
19		1	367519		Pressure ring
100	◆	1	115805	/	Packing PE/TG, complete (small)
101	◆	1	/	123219	Packing PE/T, complete (small)
20	◆ ★	2	123398	/	Sealing collar TG (small)
20	◆ ★	2	/	123426	Sealing collar T (small)
21	◆ ★	3	123427		Sealing collar PE (small)
103	◆	1	367991	/	Packing PE/TG, complete (large)
104	◆	1	/	367992	Packing PE/T, complete (large)
22	◆ ★	2	367522	/	Sealing collar TG (large)
22	◆ ★	2	/	367900	Sealing collar T (large)
23	◆ ★	3	367523		Sealing collar PE (large)
25	◆ ★	2	367525		O-ring
27	◆ ★	1	367527		O-ring
28	◆ ★	1	367528		O-ring
40	◆ ★	1	9998669		Wave spring (small)
41	◆ ★	1	9998670		Wave spring (large)
42	◆ ★	1	9941513		Ball (large)
43	◆ ★	1	9941518		Ball (small)
44	◆ ★	1	9974094		O-ring
46	◆ ★	1	9974106		O-ring
50		3	9907124		Hexagon screw
60		1	9998808		Mobilux® EP 2 grease
61		1	9992609		Anti-seize paste tube
62		1	9992616		Molykote® DX grease
70		1	2329922		Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt
71		1	2329898		Sealing sleeve
111	●	1	2331582		Valve seat set 40, stainless steel*
		1	367990	/	Service set PE/TG
		1	/	367994	Service set PE/T

◆ = Wearing parts
★ = Included in the service set (For more parts, see Chapter 14.4.1.)
● = Not part of the standard equipment but available as a special accessory

14.5.2 FLUID SECTIONS 70 CM³

Pos. 4 Tighten by hand on block.
Use a standard wrench only if necessary. In this case, use a wrench to counterhold pos. 3.

* Note on pos. 111:
Stainless steel valve seat set 70, consisting of: pos. 28, 10, 27, 9, but in stainless steel version.

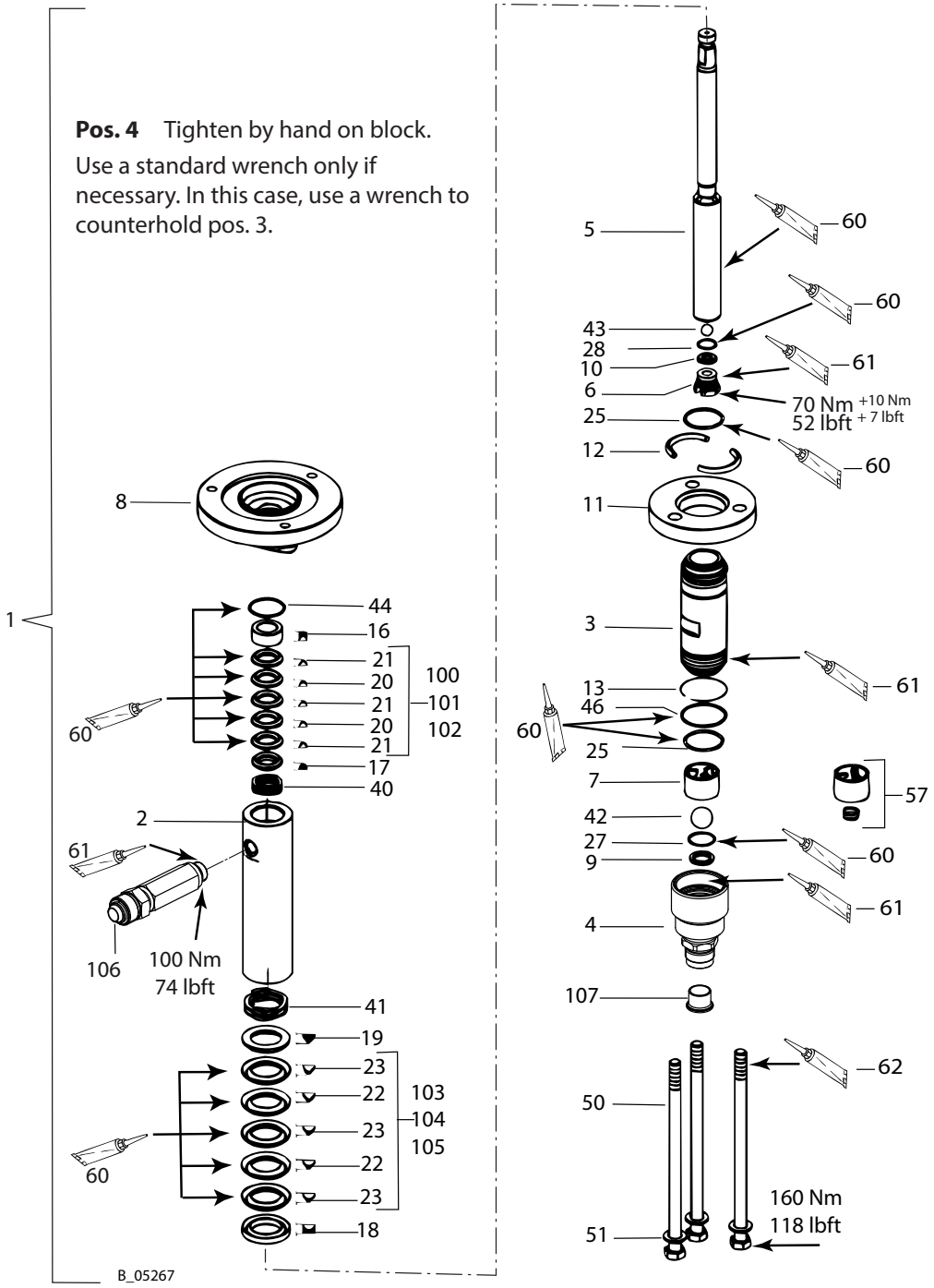


Pos	K	Stk	PE/TG Order No.	PE/L Order No.	PE/T Order No.	PE/T TC 1.4401 Order No.	Designation
1		1	2329645	-	2329647	2366710	Fluid section
2		1	368502			2370141	Pipe
3		1	368503			2370139	Cylinder
4		1	2322465			2370138	Inlet housing 70
5	◆	1	368505			2370129	Piston
6		1	368506			2370137	Valve screw
7	◆ ★	1	368507			2338788	Ball guide, inlet
8		1	368501				Connecting flange
9	◆	1	368509				Valve seat, inlet
10	◆	1	368510				Valve seat, outlet

Pos	K	Stk	PE/TG Order No.	PE/L Order No.	PE/T Order No.	PE/T TC 1.4401 Order No.	Designation
11		1	368511				Snap ring flange
12		2	368512				Snap ring half
13		1	368513				Securing ring
16		1	368516			2370142	Support ring
17		1	367519			2366649	Pressure ring
18		1	368518			2370140	Support ring
19		1	368519			2366647	Pressure ring
100	◆	1	367991	/	/	--	Packing PE/TG, complete (small)
101	◆	1	/	/	367992		Packing PE/T, complete (small)
102	◆	1	/	367993	/	--	Packing PE/L, complete (small)
20	◆ ★	2	367522	/	/	--	Sealing collar TG (small)
	◆ ★	2	/	/	367900		Sealing collar T (small)
	◆	2	/	367922	/	--	Sealing collar L (small)
21	◆ ★	3	367523			--	Sealing collar PE (small)
103	◆	1	368991	/	/	--	Packing PE/TG, complete (large)
104	◆	1	/	/	368992		Packing PE/T, complete (large)
105	◆	1		368993	/	--	Packing PE/L, complete (large)
22	◆ ★	2	368522	/	/	--	Sealing collar TG (large)
	◆ ★	2	/	/	368900		Sealing collar T (large)
	◆	2	/	368922	/	--	Sealing collar L (large)
23	◆ ★	3	368523			--	Sealing collar PE (large)
25	◆ ★	2	368525				O-ring
27	◆ ★	1	368527				O-ring
28	◆ ★	1	368528				O-ring
40	◆ ★	1	9998670			2366668	Wave spring (small)
41	◆ ★	1	9998671			2366673	Wave spring (large)
42	◆ ★	1	9943082			9943103	Ball (large)
43	◆ ★	1	9941512			9943017	Ball (small)
44	◆ ★	1	9974092				O-ring
46	◆ ★	1	9974107				O-ring
50		3	9907124				Hexagon screw
57	●	1	369926			/	Ball guide for high-viscosity products
60		1	9998808				Mobilux® EP 2 grease
61		1	9992609				Anti-seize paste tube
62		1	9992616				Molykote® DX grease
70		1	2329922			2370580	Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt
71		1	2329898			2367066	Sealing sleeve
		1	368990	/	/	/	Service set PE/TG
		1	/	/	368994	/	Service set PE/T
			/	/	/	2371972	Service set PE/T TC 1.4404
		1	/	2342071	/	/	Service set PE/L
111	●	1	2331585			/	Valve seat set 70, stainless steel*

◆ = Wearing parts
★ = Included in the service set (For more parts, see Chapter 14.4.1.)
● = Special accessories

14.5.3 FLUID SECTIONS 110 CM³

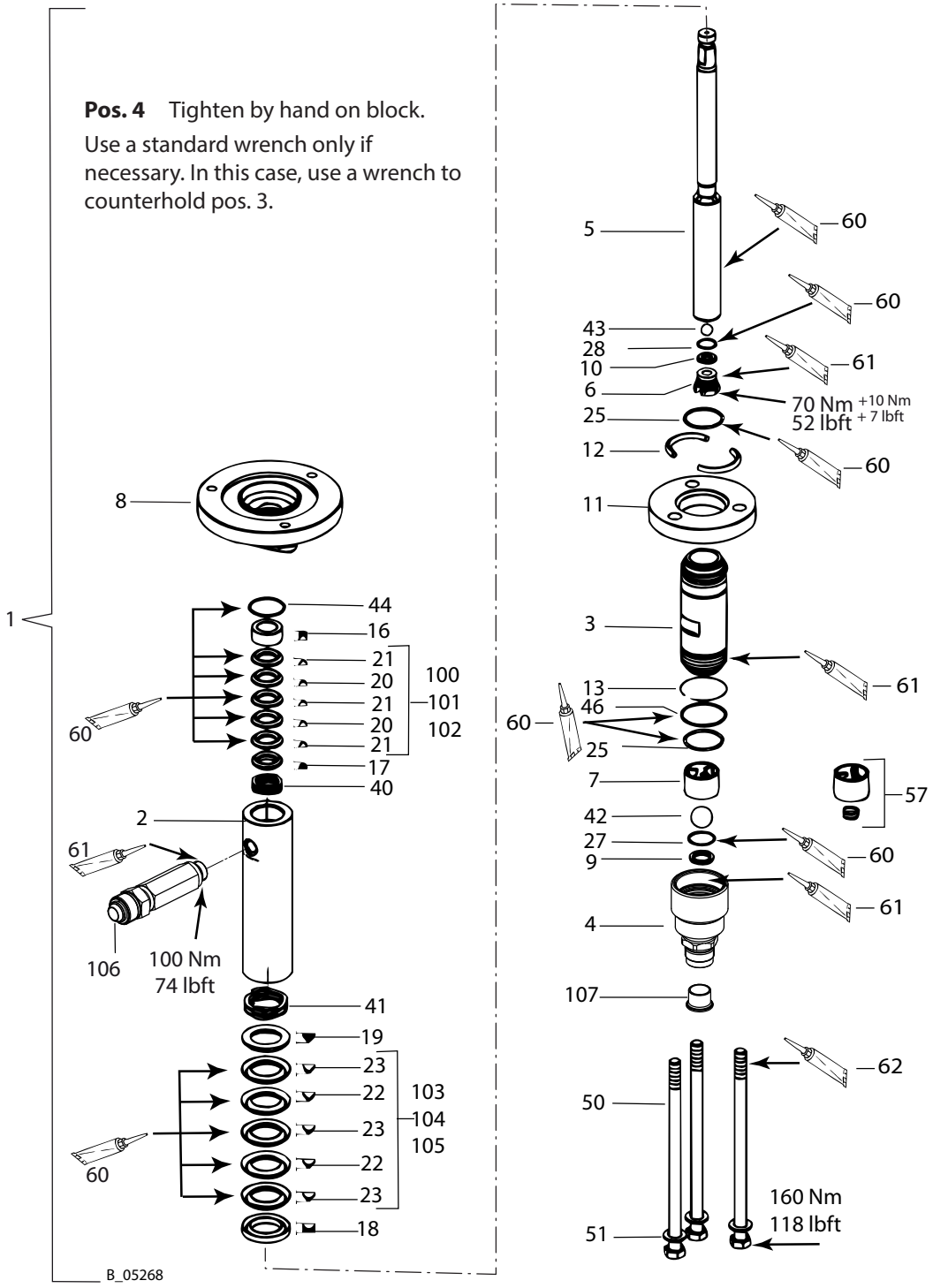


Pos	K	Stk	PE/TG Order No.	PE/L Order No.	PE/T Order No.	Designation
1		1	2329654	2329658	2329656	Fluid section
2		1	368434			Pipe
3		1	368435			Cylinder
4		1	2327888			Inlet housing 150

Pos	K	Stk	PE/TG Order No.	PE/L Order No.	PE/T Order No.	Designation
5	◆	1		368433		Piston
6		1		367506		Valve screw
7	◆ ★	1		368507		Ball guide, inlet
8		1		368551		Connecting flange
9	◆	1		368509		Valve seat, inlet
10	◆	1		367510		Valve seat, outlet
11		1		368561		Snap ring flange
12		2		368512		Snap ring half
13		1		368513		Securing ring
16		1		368428		Support ring
17		1		368425		Pressure ring
18		1		368430		Support ring
19		1		368432		Pressure ring
100	◆	1	368253	/	/	Packing PE/TG, complete (small)
101	◆	1	/	/	368297	Packing PE/T, complete (small)
102	◆	1	/	368295	/	Packing PE/L, complete (small)
20	◆ ★	2	368426	/	/	Sealing collar TG (small)
20	◆ ★	2	/	/	368436	Sealing collar T (small)
20	◆ ★	2	/	368437	/	Sealing collar L (small)
21	◆ ★	3		368427		Sealing collar PE (small)
103	◆	1	368299	/	/	Packing PE/TG, complete (large)
104	◆	1	/	/	368296	Packing PE/T, complete (large)
105	◆	1	/	368294	/	Packing PE/L, complete (large)
22	◆ ★	2	368429	/	/	Sealing collar TG (large)
22	◆ ★	2	/	/	368438	Sealing collar T (large)
22	◆ ★	2	/	368439	/	Sealing collar L (large)
23	◆ ★	3		368431		Sealing collar PE (large)
25	◆ ★	2		368525		O-ring
27	◆ ★	1		368527		O-ring
28	◆ ★	1		367528		O-ring
40	◆ ★	1		9998670		Wave spring (small)
41	◆ ★	1		9998671		Wave spring (large)
42	◆ ★	1		9943082		Ball (large)
43	◆ ★	1		9941518		Ball (small)
44	◆ ★	1		9974092		O-ring
46	◆ ★	1		9974107		O-ring
50		3		9907142		Hexagon screw
51		3		9925011		Washer
57	●	1		369926		Ball guide for high-viscosity products
60		1		9998808		Mobilux® EP 2 grease
61		1		9992609		Anti-seize paste tube
62		1		9992616		Molykote® DX grease
106		1		2329922		Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt
107		1		2329898		Sealing sleeve
		1	368997	/	/	Service set PE/TG
		1	/	/	2304930	Service set PE/T
		1	/	2319924	/	Service set PE/L

◆ = Wearing parts
★ = = Included in the service set (For more parts, see Chapter 14.5.1.)
● = Special accessories

14.5.4 FLUID SECTIONS 150 CM³



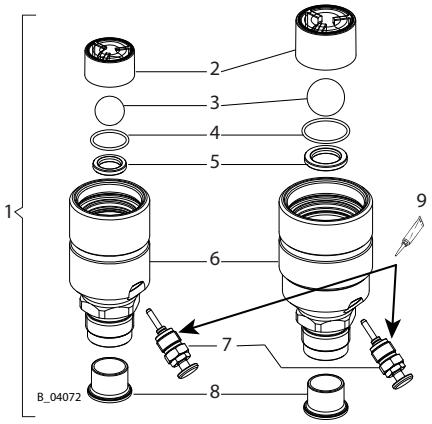
Pos	K	Stk	PE/TG	PE/L	PE/T	Designation
1		1	2329650	2329664	2329652	Fluid section
2		1	368552			Pipe
3		1	368553			Cylinder
4		1	2327888			Inlet housing 150
5	◆	1	368555			Piston
6		1	368506			Valve screw
7	◆ ★	1	368507			Ball guide, inlet
8		1	368551			Connecting flange
9	◆	1	368509			Valve seat, inlet
10	◆	1	368510			Valve seat, outlet
11		1	368561			Snap ring flange
12		2	368512			Snap ring half
13		1	368513			Securing ring
16		1	368516			Support ring
17		1	367519			Pressure ring
18		1	368518			Support ring
19		1	368519			Pressure ring
100	◆	1	367991	/	/	Packing PE/TG, complete (small)
101	◆	1	/	/	367992	Packing PE/T, complete (small)
102	◆	1	/	367993	/	Packing PE/L, complete (small)
20	◆ ★	2	367522	/	/	Sealing collar TG (small)
	◆ ★	2	/	/	367900	Sealing collar T (small)
	◆	2	/	367922	/	Sealing collar L (small)
21	◆ ★	3	367523			Sealing collar PE (small)
103	◆	1	368991	/	/	Packing PE/TG, complete (large)
104	◆	1	/	/	368992	Packing PE/T, complete (large)
105	◆	1	/	368993	/	Packing PE/L, complete (large)
22	◆ ★	2	368522	/	/	Sealing collar TG (large)
	◆ ★	2	/	/	368900	Sealing collar T (large)
	◆	2	/	368922	/	Sealing collar L (large)
23	◆ ★	3	368523			Sealing collar PE (large)
25	◆ ★	2	368525			O-ring
27	◆ ★	1	368527			O-ring
28	◆ ★	1	368528			O-ring
40	◆ ★	1	9998670			Wave spring (small)
41	◆ ★	1	9998671			Wave spring (large)
42	◆ ★	1	9943082			Ball (large)
43	◆ ★	1	9941512			Ball (small)
44	◆ ★	1	9974092			O-ring
46	◆ ★	1	9974107			O-ring
50		3	9907142			Hexagon screw
51		3	9925011			Washer
57	●	1	369926			Ball guide for high-viscosity products
60		1	9998808			Mobilux® EP 2 grease
61		1	9992609			Anti-seize paste tube
62		1	9992616			Molykote® DX grease
106		1	2329922			Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt
107		1	2329898			Sealing sleeve
		1	368990	/	/	Service set PE/TG
		1	/	/	368994	Service set PE/T
		1	/	2342071	/	Service set PE/L

◆ = Wearing parts

★ = = Included in the service set (For more parts, see Chapter 14.4.2.)

● = Special accessories

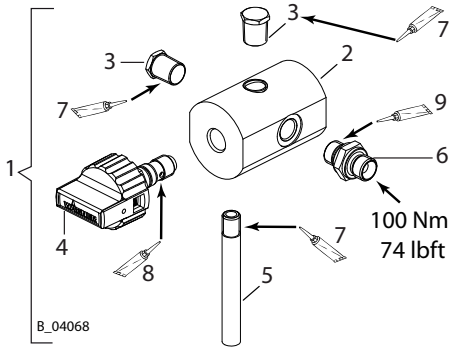
14.6 INLET VALVE WITH VALVE DEPRESSOR



Pos	K	Stk	Fluid section 40 cm3 Order No.	Fluid section 70 cm3 Order No.	Designation
1		1	2329689	2329688	Inlet valve with valve depressor
2	◆	1	367507	368507	Ball guide, inlet
3	◆	1	9941513	9943082	Ball
4	◆	1	367527	368527	O-ring
5	◆	1	367509	368509	Valve seat, inlet
6		1	2329412	2329413	Inlet housing
7		1	368037		Valve tappet, complete
8		1	2329898		Sealing sleeve
9		1	9992528		Loctite® 270

◆ = Wearing parts

14.7 RELIEF COMBINATION 270 BAR



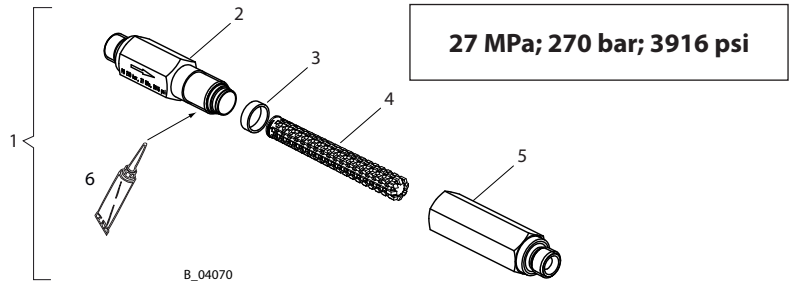
27 MPa; 270 bar; 3916 psi

Pos	K	Stk	Order no.	Designation
1		1	2329023	Relief combination, 270 bar
2		1	2324549	Relief housing
3		2	2323718	Hexagon plug
4	◆	1	169248	Relief valve, complete
	●	1	2356467	Ball valve set (option)
5		1	2324552	Outlet pipe
6		1	3204611	Fitting DF-MM-G1/4"-G1/4"-PN530-SSt
7		1	9992831	Loctite® 542, 50 ml; 50cc
8		1	9992616	Molykote® DX grease
9		1	9992609	Anti-seize paste tube

◆ = Wearing parts

● = Not part of the standard equipment but available as a special accessory.

14.8 STRAIGHT INLINE FILTER, 270 BAR

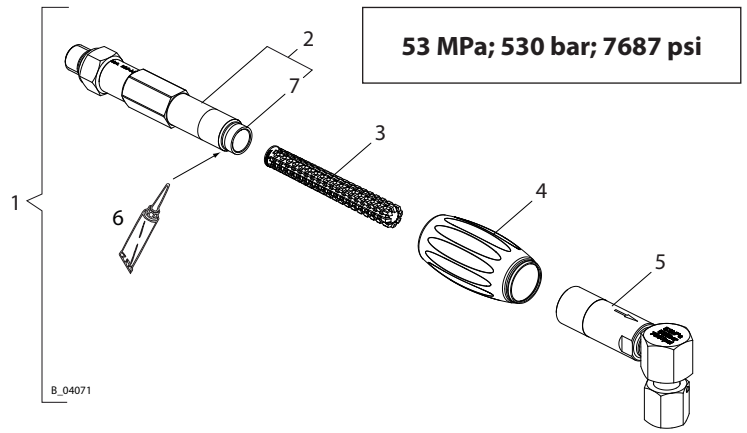


Pos	K	Stk	Order no.	Designation
1		1	2324558	Inline filter DN6-PN270-G1/4"-SSt
2		1	2324550	Filter inlet housing
3	◆	1	128389	Seal
4	◆ ●	1	2315723	* Filter insert, red (fine), 200 mesh per inch – 10 pieces
	◆ ●	1	2315724	* Filter insert, blue (middle), 150 mesh per inch – 10 pieces
	◆ ●	1	2315725	* Filter insert, yellow (middle), 100 mesh per inch – 10 pieces
	◆ ●	1	2365429	* Filter insert, green (coarse), 30 mesh per inch – 10 pieces
	◆ ●	1	2315726	* Filter insert, white (coarse), 50 mesh per inch – 10 pieces
5		1	2324551	Filter outlet housing
6		1	9992609	Anti-seize paste tube

◆ = Wearing parts

● = Not part of the standard equipment but available as a special accessory.

14.9 ANGLED INLINE FILTER, 530 BAR

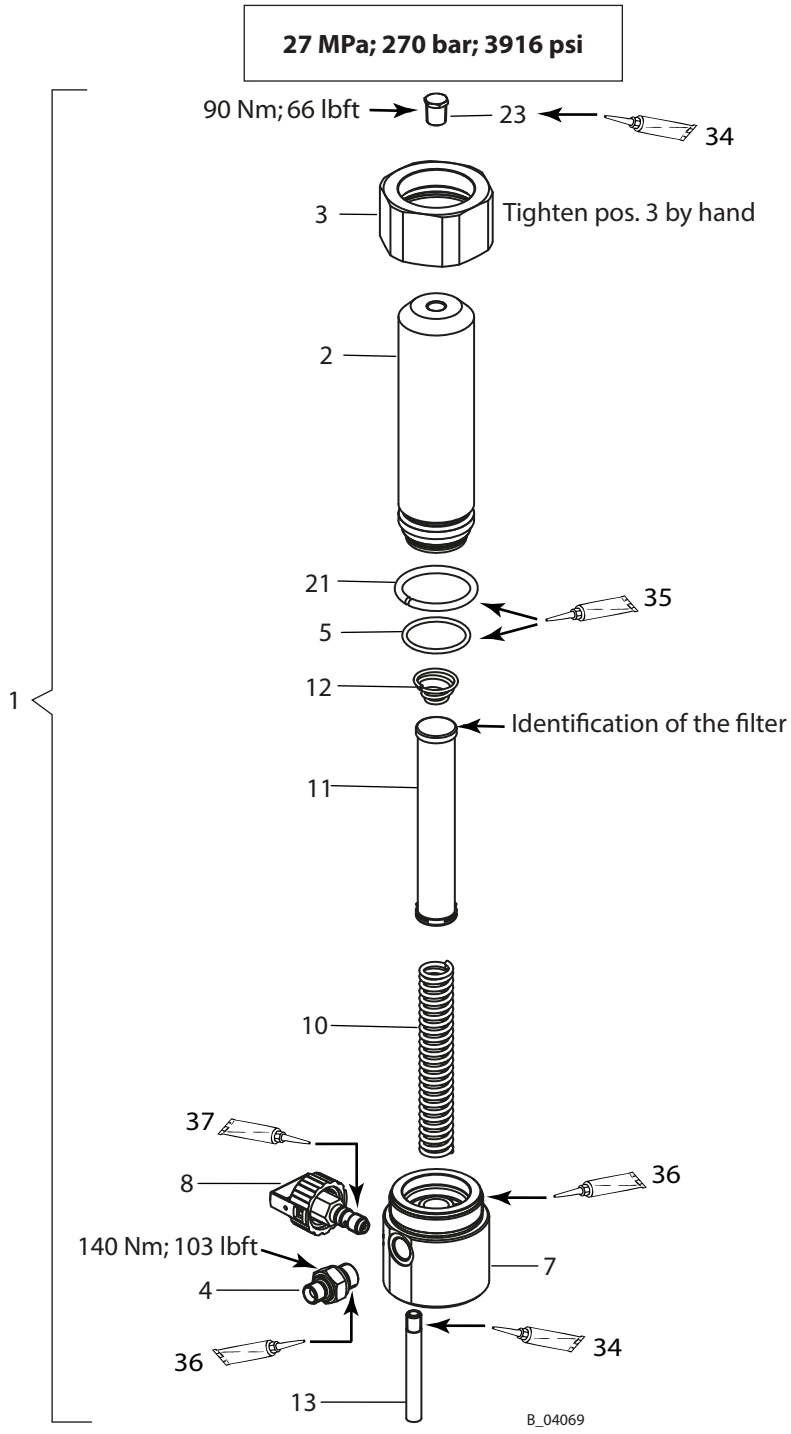


Pos	K	Stk	Order no.	Designation
1		1	2329026	Inline filter HL DN6-PN530-G1/4"-SSt
2		1	2326045	Filter inlet housing, pre-assembled
3	◆ ●	1	2315723	* Filter insert, red (fine), 200 mesh per inch – 10 pieces
	◆ ●	1	2315724	* Filter insert, blue (middle), 150 mesh per inch – 10 pieces
	◆ ●	1	2315725	* Filter insert, yellow (middle), 100 mesh per inch – 10 pieces
	◆ ●	1	2365429	* Filter insert, green (coarse), 30 mesh per inch – 10 pieces
	◆ ●	1	2315726	* Filter insert, white (coarse), 50 mesh per inch – 10 pieces
4		1	2311491	Turning handle
5		1	2325950	Filter outlet housing 90°, pre-assembled
6		1	9992609	Anti-seize paste tube
7	◆	1	128389	Seal

◆ = Wearing parts

● = Not part of the standard equipment but available as a special accessory.

14.10 HIGH-PRESSURE FILTER, 270 BAR

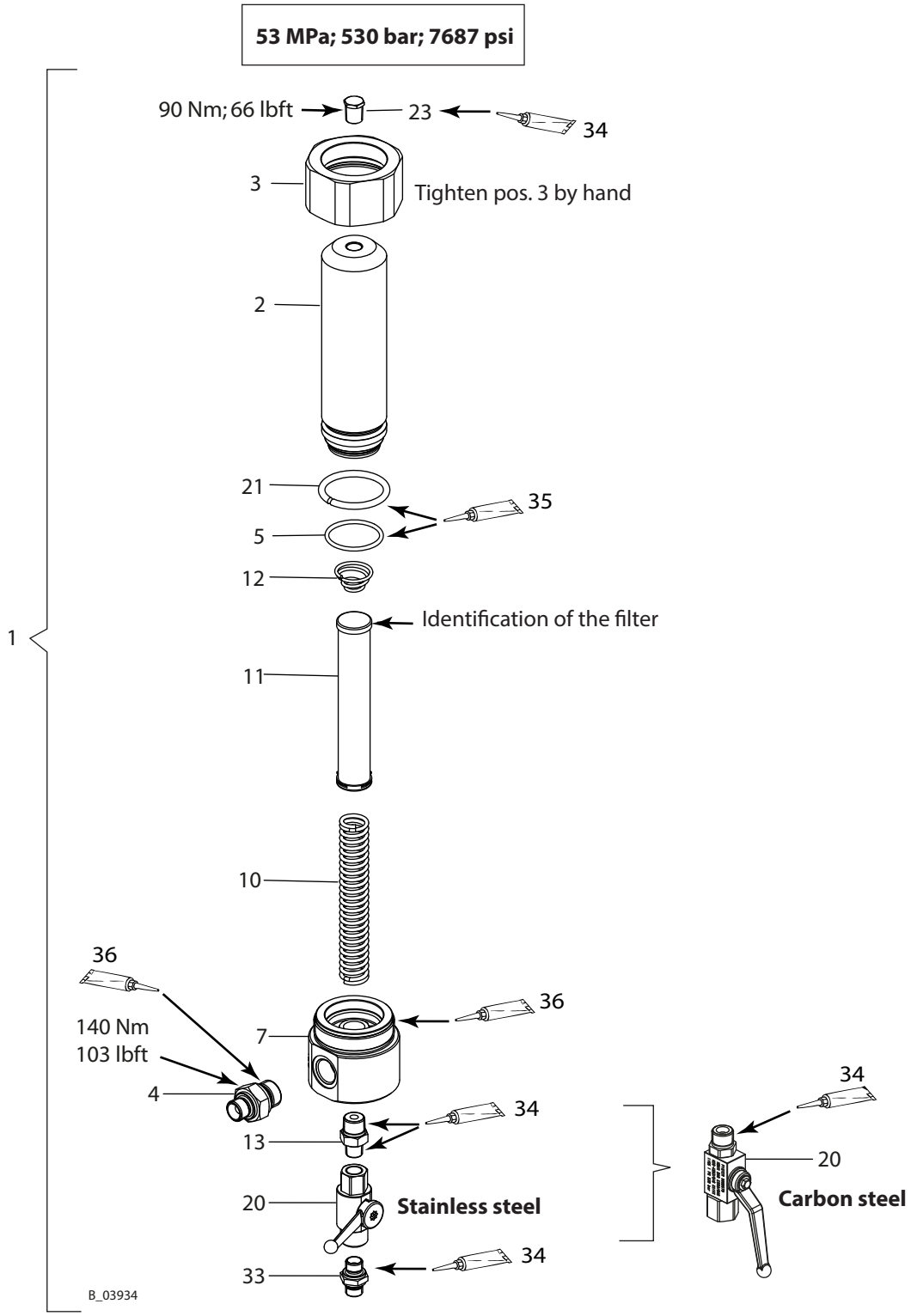


Pos	K	Stk	Order no.	Designation
1		1	2329024	HP filter DN10-PN270 SSt, complete
2		1	2324542	Filter housing
3		1	2324543	Union nut
4		1	2325826	Reducing double fitting with 2x60°
5	◆	1	9955863	O-ring
7		1	2324544	Distribution housing
8	◆	1	169248	Relief valve
	●	1	2356467	Ball valve set (option)
10		1	9894245	Filter support
11		1	--	Filter cartridge *
	◆ ●		295721	* Filter sieve, 200 mesh per inch (fine)
	◆		3514068	* Filter sieve, 100 mesh per inch (medium), mesh width 0.16 mm
	◆ ●		3514069	* Filter sieve, 50 mesh per inch (rough)
	◆ ●		291564	* Filter sieve, 20 mesh per inch (rough)
12	◆	1	3514058	Cone spring
13		1	2324552	Outlet pipe
21		1	2325562	Pressure ring d45
23		1	2323718	Hexagon plug
34		1	9992831	Loctite® 542 50 ml; 50 cc
35		1	9998808	Mobilux® EP2 grease
36		1	9992609	Anti-seize paste tube
37		1	9992616	Molykote® DX grease

◆ = Wearing parts

● = Not part of the standard equipment but available as a special accessory.

14.11 HIGH-PRESSURE FILTER, 530 BAR



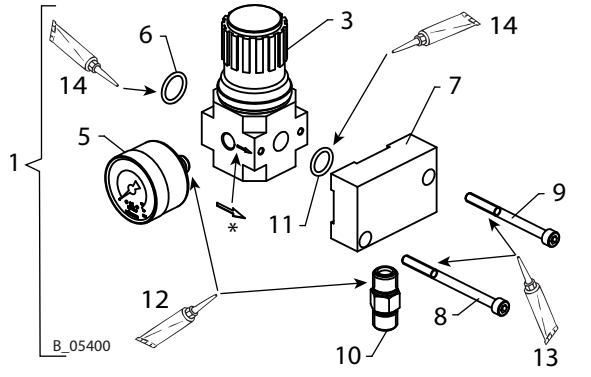
Pos	K	Stk	Stainless steel Order No.	Carbon steel Order No.	Designation
1		1	2329025	2335334	HP filter DN12-PN530, complete
2		1	2324542		Filter housing
3		1	2324543		Union nut
4		1	2330780		Fitting DF-MM-G1/2-G3/8-PN530-SSt
5	◆	1	9955863		O-ring
7		1	2324670		Distribution housing for ball valve
10		1	9894245		Filter support
11		1			Filter cartridge *
	◆ ●		295721		* Filter sieve, 200 mesh per inch (fine)
	◆		3514068		* Filter sieve, 100 mesh per inch (medium), mesh width 0.16 mm
	◆ ●		3514069		* Filter sieve, 50 mesh per inch (rough)
	◆ ●		291564		* Filter sieve, 20 mesh per inch (rough)
12	◆	1	3514058		Cone spring
13		1	2328291	/	Fitting-DF-MM-R3/8-R1/4-PN530-SSt
20	◆	1	2330156	9998679	Ball valve
21		1	2325562		Pressure ring d45
23		1	2323718		Hexagon plug
33		1	3204611	2325826	Double connector
34		1	9992831		Loctite® 542 50 ml; 50 cc
35		1	9998808		Mobilux® EP2 grease
36		1	9992609		Anti-seize paste tube

◆ = Wearing parts

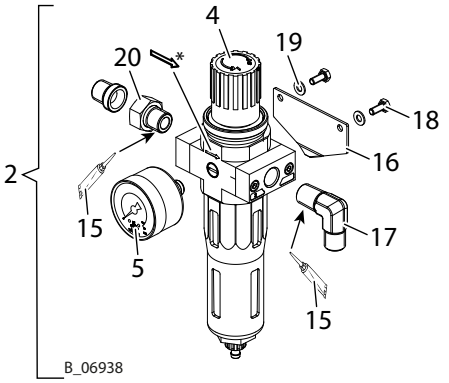
● = Not part of the standard equipment but available as a special accessory.

14.12 AIRCOAT REGULATOR AND AIRCOAT FILTER REGULATOR

AirCoat Regulator



AirCoat filter regulator



Pos 3 or 4:

* Observe the flow direction (direction of arrow on the housing)

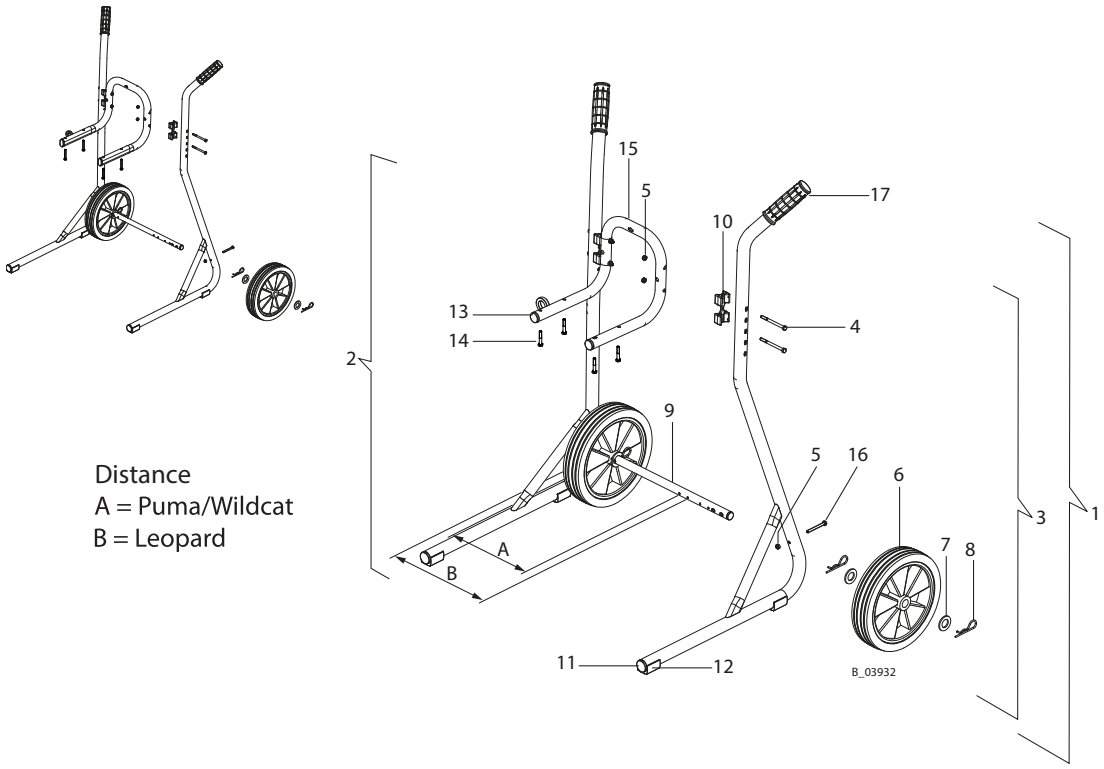
Pos 5:

Screw in the pressure gauge only until the white sealing ring is completely inside the filter control valve. Thereafter continue turning the pressure gauge only to align the display scale.

Pos	K	Stk	AirCoat Regulator Order No.	AirCoat filter regulator Order No.	Designation
1		1	2328611	/	AirCoat regulator set
2		1	/	2382997	AirCoat filter regulator set
3	◆	1	2309972	/	Pressure regulator LR-1/4-D-O-I-Mini
4	◆	1	/	2331950	Filter control valve (manual drain)
			/	2360259	Option: filter pan (automatic drain)
5	◆	1	9998677		Pressure gauge, 0-10 bar RF40 (d40)
6	◆	1	9974166	/	O-ring
7		1	2325527	/	Holding plate
8		1	9906021	/	Hexagon socket cylinder head screw
9		1	9900320	/	Hexagon socket cylinder head screw
10		1	9994627	/	Double fitting R1/4-R1/4
11	◆	1	9971313	/	O-ring
12		1	9992831	/	Loctite® 542
13		1	9992616	/	Molykote® DX grease
14		1	9998808	/	Mobilux® EP 2 grease
15		1	/	9992528	Loctite® 270
16		1	/	2366466	Contact plate
17		1	/	2389277	Fitting EF-MM-G1/4-R1/4-530 bar
18		2	/	9900152	Hexagon screw without shaft
19		3	/	9920104	Washer
20		1	/	9998719	Detachable double fitting

◆ = Wearing parts

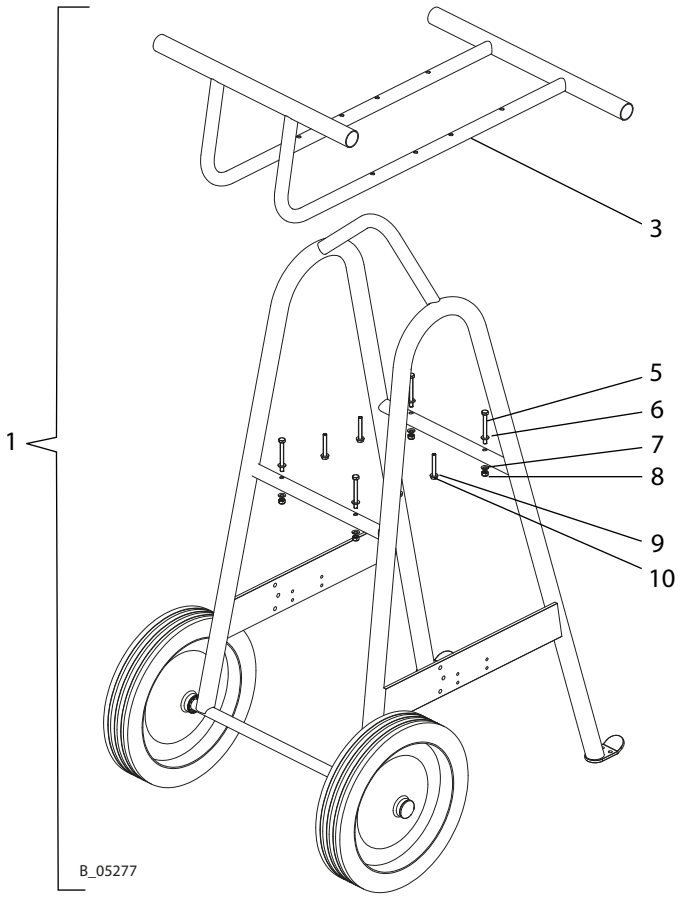
14.13 TROLLEY FOR WILDCAT, PUMA AND LEOPARD



Pos	K	Stk	Wildcat / Puma Order No.	Leopard Order No.	Designation
1		1	2325901	2325916	Trolley, complete
2		1	--		Frame, left, 4"-6" (welded)
3		1	--		Frame, right, 4"-6" (welded)
4		4	9907140		Hexagon screw DIN931 M6x75
5		6	9910204		Self-locking hexagon nut, M6
6	◆	2	2304440		Wheel, D250
7		4	340372		Washer
8		4	9995302		Cotter pin
9		1	--		Wheel axle, 4"-6"
10	◆	2	367943		Connecting part, 4"-6"
11		2	--		Tube plug, ribbed
12		2	--		Saddle feet for round tubes
13		2	--		Plug
14		4	9900218	9900126	Hexagon screw
15		1	2332143	2332145	Wall mount
16		2	3061695		Hexagon screw without shaft, M6x55
17	◆	2	9998747		Handle

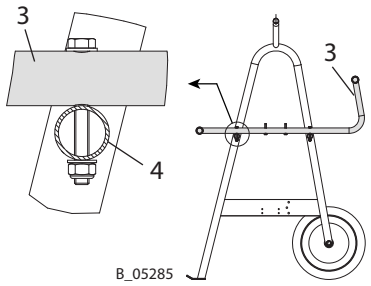
◆ = Wearing parts

14.14 TROLLEY FOR LEOPARD 48-110 AND JAGUAR



Assembly

Mount bracket holder (3) above the crossbar (4).



Pos	K	Stk	Leopard 48-110 (6") Order No.	Jaguar 75-150 (9") Order No.	Designation
1		1	2339705		PC heavy duty trolley
3		1	--		Bracket holder
5		4	9900246		Hexagon screw
6		4	9920102		Washer, A8.4
7		4	3155404		Contact washer, M8
8		4	9910208		Self-locking hexagon nut, M8
9		4	9925031	9920102	Washer, A6.4 or A8.4
10		4	9900126	9900130	Hexagon screw

15 EU DECLARATION OF CONFORMITY

Herewith we declare that the supplied version of pneumatic pumps and their spraypacks:

Wildcat	Puma		Leopard		Jaguar
10-70	28-40	21-110	35-70	48-110	75-150
18-40	15-70	15-150	35-150	/	/

complies with the following guidelines:

2006/42/EC	2014/34/EU

Applied standards, in particular:

DIN EN ISO 12100: 2010	DIN EN ISO 13732-1: 2008	EN ISO 80079-36:2016
DIN EN 809: 1998+A1: 2009+AC: 2010	DIN EN 14462:2015	EN ISO 80079-37:2016
DIN EN ISO 4413: 2010	DIN EN 12621: 2006+A1: 2010	EN ISO/IEC 80079-34:2011
DIN EN ISO 4414: 2010	DIN EN 1127-1: 2011	

Applied national technical standards and specifications, in particular:

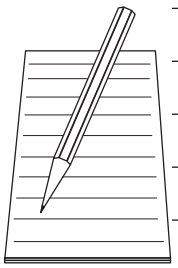
DGUV regulation 100-500 (Chapter 2.29 and 2.36)	TRGS 727

Identification: CE Ex II 2 G Ex h IIB T3/T4 Gb X

T3: without dry running protection.

T4: with dry running protection.

EU Declaration of Conformity
The EU Declaration of Conformity is enclosed with this product. If needed, further copies can be ordered through your WAGNER dealer by specifying the product name and serial number.
Order number: 2302304



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