



Translation of the Original Operating Manual

Jaguar

75-150

55-200

PROTEC

60-240

Tiger

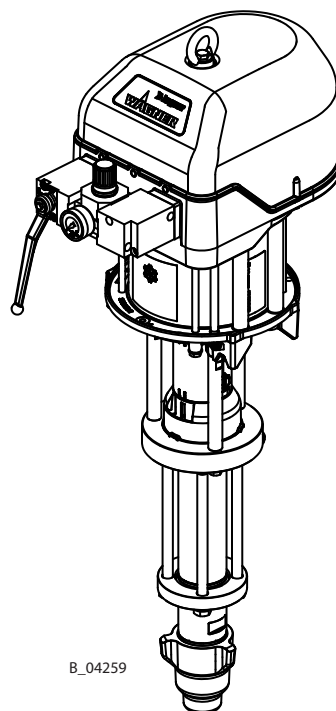
72-300

Protective Coating (PC)

Version 05/2015

IceBreaker Piston Pumps

Flow Rate $150 \text{ cm}^3 - 300 \text{ cm}^3$



B_04259



II 2 G c IIB T3/T4 X

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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 operating and service staff.

The device may only be operated by trained staff 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 operating 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.

	! DANGER This notice warns you of a hazard! Possible consequences of not observing the warning instructions. The signal word indicates the hazard level. → The measures for preventing the danger and its consequences.
---	---

Warning - possible imminent danger.
Non-observance may result in death or serious injury.

	! WARNING This notice warns you of a hazard! Possible consequences of not observing the warning instructions. The signal word indicates the hazard level. → The measures for preventing the danger and its consequences.
---	--

Caution - a possibly hazardous situation.
Non-observance may result in minor injury.

	! CAUTION This notice warns you of a hazard! Possible consequences of not observing the warning instructions. The signal word indicates the hazard level. → The measures for preventing the danger and its consequences.
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Notice - a possibly hazardous situation.
Non-observance may result in damage to property.

NOTICE This notice warns you of a hazard! Possible consequences of not observing the warning instructions. The signal word indicates the hazard level. → The measures for preventing the danger and its consequences.	
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Note - provides information about particular characteristics and how to proceed.

1.3 LANGUAGES

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

Language	Order No.	Language	Order No.	Language	Order No.
German	2340281	English	2340282	French	2340285
Italian	2340284	Spanish	2340286	Russian	2351798
Japanese	2359824				

The corresponding **service manuals** are available under the following order number:

Language	Order No.	Language	Order No.
German	2335993	English	2335994

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

1.3.1 OPERATING MANUALS FOR THE INDIVIDUAL COMPONENTS

Continuous-flow heater operating manual:

Language	Order No.	Language	Order No.
German	65860	English	65860
French	65860	Italian	65860

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

1.4 ABBREVIATIONS IN THE TEXT

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
PC	Protective Coating: Heavy duty corrosion protection

Materials

SSt	Stainless steel
PE	Polyethylene
UHMWPE	Ultra-high molecular weight polyethylene
PTFE	Polytetrafluorethylene
TG	PTFE with graphite
T	PTFE
L	Leather

1.5 TERMINOLOGY FOR THE PURPOSE OF THIS MANUAL

Cleaning	Manual cleaning of devices and device parts with cleaning agent
Flushing	Internal flushing of paint-wetted parts with flushing agent
Staff 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 and experience in relevant provisions.
Skilled person In the context of TRBS 1203 (2010 / Revision 2012)	A person who, based on his/her technical training, experience and recent vocational experience, has sufficient technical knowledge 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. → Additional requirements for skilled persons are given in the TRBS 1203 (2010/Revision 2012): Expert knowledge in the areas of protection against excessive pressure, electrical hazards, and explosion protection (where applicable).

2 CORRECT USE

2.1 DEVICE TYPES

Pneumatic pump with spraypack:

Jaguar	PROTEC	Tiger
75-150	60-240	72-300
55-200		

2.2 TYPE OF USE

The device is suitable for processing liquid materials like paints and lacquers in accordance with the classification into explosion classes IIA or IIB.

2.3 USE IN AN EXPLOSION HAZARD AREA

The pneumatic pump can be employed in explosion hazard zones (Zone 1). → See Chapter 3.



2.4 SAFETY PARAMETERS

WAGNER accepts no liability for any damage arising from incorrect use.

- Use the device only to work with the products recommended by WAGNER.
- Only operate the device as a whole.
- Do not deactivate safety fixtures.
- Use only WAGNER original spare parts and accessories.



The pneumatic pump may only be operated under the following conditions:

- The operating staff must be trained on the basis of this operating manual.
- The safety regulations listed in this operating manual must be observed.
- The operating, maintenance and repair information in this operating manual must be observed.
- The statutory requirements and accident prevention regulation standards in the country of use must be observed.

2.5 PROCESSIBLE WORKING MATERIALS

Working materials	Jaguar 75-150 55-200	PROTEC 60-240	Tiger 72-300
Water-dilutable products	↗	↗	↗
Solvent based materials	↗	↗	↗
Primers	↗	↗	↗
Epoxy and polyurethane lacquers, phenolic lacquers	↗	↗	↗
Underside protection, fire protection materials	↗	↗	↗

Legend

↗ recommended

→ limited suitability

↘ less suitable

NOTICE

Abrasive working materials and pigments!

Greater wear of parts carrying the product.

- Do not use any grainy and abrasive working materials with large, sharp-edged pigments.
- Use the application-related model (flow rate/cycle, material packaging, valve seat, etc.), as specified 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.

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

2.6 RECOMMENDED APPLICATION AREAS

Application area	Jaguar 75-150 55-200	PROTEC 60-240	Tiger 72-300
Steel-processing industry	↗	↗	↗
Rail vehicle	↗	↗	↗
Shipbuilding	↗	↗	↗
Tank construction	↗	↗	↗
Pipeline construction	↗	↗	↗
Wind energy	↗	↗	↗

Legend

↗ recommended

→ limited suitability

↘ less suitable

2.7 REASONABLY FORESEEABLE MISUSE

The forms of misuse listed below may result in physical injury or property damage:

- coating work pieces which are not grounded;
- unauthorized conversions or modifications to the pneumatic pump;
- processing dry or similar coating products, e.g., powder;
- using defective components, spare parts or accessories other than those described in the "Accessories" chapter of this operating manual;
- continuing work with a defective or kinked product hose;
- working with incorrectly set values;
- processing food.

2.8 RESIDUAL RISKS

Residual risks are risks which cannot be ruled out even in the event of correct use.

If necessary, warning and prohibition signs at the relevant points of risk indicate residual risks.

Residual risk	Source	Consequences	Specific measures	Lifecycle phase
Skin contact with lacquers and cleaning agents	Handling of lacquers and cleaning agents	Skin irritation, allergies	Use personal safety equipment. Observe safety data sheets	Operation, maintenance, disassembly
Lacquer in air outside the defined working area	Lacquering outside the defined working area	Inhalation of substances hazardous to health	Observe work and operation instructions. Use personal safety equipment	Operation, maintenance

3 IDENTIFICATION

3.1 EXPLOSION PROTECTION IDENTIFICATION

As defined in Directive 94/9/EC (ATEX 95), the device is suitable for use in potentially explosive areas.

CE  II 2 G c IIB T3/T4 X



CE CE mark (European Communities)

 Explosion-proof equipment

II Device class II (not mining)

2 Category 2 device (suitable for zone 1)

G Ex-atmosphere gas

c Constructional security

IIB Device class (Gas) IIB

T3 Temperature class T3: maximum surface temperature 200 °C; 392 °F

T4 Temperature class T4: maximum surface temperature 135 °C; 275 °F

X There are special notices for safe operation → See the following Chapter "Identification X".

3.2 IDENTIFICATION X

Maximum surface temperature

The maximum surface temperature T3 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.

Temperature class T3: No dry running protection.

Temperature class T4: With dry running protection.

Ignition temperature

→ 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 is: +5 °C to +50 °C; +41 °C to +122 °F.

Medium supporting atomizing

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

OPERATING MANUAL**Safe handling of WAGNER spray devices**

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

In an explosive atmosphere:

- Do not knock or push the device against steel or rusty iron.
- Do not drop the device.
- Use only tools that are made of a permitted material.

**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.

**National regulations**

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

Air in the pump fluid

Flammable gas mixtures can form if air reaches 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.

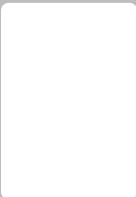
- Avoid operating the pump with damaged packing.
- Ensure that the separating fluid tank is filled with sufficient separating fluid.
- Periodically check that the pump is working smoothly, paying special attention to the presence of air in the pumped fluid.

Filling and emptying

Flammable gas mixtures can form in the fluid section or product hoses if the pump must be emptied for maintenance.

- Empty and fill the device slowly and in a controlled manner.
- Avoid potentially explosive atmosphere in the surroundings.

3.3 TYPE PLATE

1 	J. WAGNER AG CH-9450 ALTSTÄTTEN MADE IN SWITZERLAND	  II 2 G c IIB T3/T4 X
2 Pumpentyp / Pump type 3 Max. Materialdruck / Fluid pressure 4 Übersetzungsverhältnis / Ratio 5 Fördermenge DH / Delivery DS 6 Max. Luftdruck / Air pressure 7 Max. Temp. Material / Fluid 8 Baujahr - Serie Nr. / Year of manufacture - Serial No. 9 Vor Gebrauch Betriebsanleitung beachten / Check manual before use!		

- 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 operating manual before use!

4 GENERAL 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 EQUIPMENT

Electrical devices and equipment

- To be provided 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, there is a danger from line voltage.
- Must be operated in accordance with the safety regulations and electrotechnical regulations.
- Must be repaired immediately in the event of problems.
- Must be decommissioned if they pose a hazard or are damaged.
- Must be de-energized before work is commenced on active parts. Inform staff 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 PERSONNEL QUALIFICATIONS

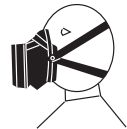
- Ensure that the device is only operated, maintained and repaired by trained persons.

4.1.3 SAFE WORK ENVIRONMENT

- Ensure that the floor in the working area is static dissipative in accordance with EN 61340-4-1 (resistance must not exceed 100 megohms).
- Paint mist extraction systems/ventilation systems must be fitted on site according to local regulations.
- Ensure that product / air hoses adapted to the working pressure are used.
- Ensure that personal protective equipment 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 megohms.

OPERATING MANUAL

- Ensure that during spraying, persons wear static dissipative gloves. The grounding takes place via the spray gun handle.
- Protective clothing, including gloves, must comply with EN 1149-5. The measured insulation resistance must not exceed 100 megohms.
- Ensure that there are no ignition sources such as naked flames, sparks, glowing wires, or hot surfaces in the vicinity. Do not smoke.
- 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 and 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.
- In the event of defects, immediately bring the device or system to a stop and arrange to have repairs carried out immediately.

**Grounding**

- Make sure that the ground and potential equalization of all system parts are performed reliably and continuously and can withstand the expected stress (e.g. mechanical stress, corrosion).

4.2 SAFETY INSTRUCTIONS FOR STAFF

- Always follow the information in this manual, particularly the general safety instructions and the warning instructions.
- Always follow local regulations concerning occupational safety and accident prevention.
- In electrostatics application: Anyone fitted with a pacemaker must not enter the high-voltage area!

**4.2.1 SAFE HANDLING OF WAGNER SPRAY DEVICES**

The spray jet is under pressure and can cause dangerous injuries.

Avoid injection of paint or flushing agents:

- Never point the spray gun at people.
- Never reach into the spray jet.
- Before all work on the device, in the event of work interruptions and functional faults:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
 - In the event of functional faults, remedy the fault as described in the "Troubleshooting" chapter.



- If needed, the liquid ejection devices must be checked by experts (e.g. Wagner service technician) at least every 12 months for their work-safe condition in accordance with DGUV regulation 100-500.
 - For shut down devices, the examination can be suspended until the next start-up.
- Carry out the work steps as described in the "Pressure Relief" chapter:
 - If pressure relief is required.
 - If the spraying work is interrupted or stopped.
 - Before the device is cleaned on the outside, checked or serviced.
 - Before the spray nozzle is installed or cleaned.

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

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

Avoid risk of injury from recoil forces:

- Ensure that you have firm footing when operating the spray gun.
- Only hold the spray gun briefly in a position.

4.2.2 GROUNDING THE DEVICE

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

- Ensure that the device is grounded. → See chapter "Grounding".
- 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.
- The spray substance supply (spray substance tank, pump, etc.) must be grounded.

**4.2.3 PRODUCT HOSES**

- Ensure that the hose material is chemically resistant to the sprayed products and the flushing agents used.
- Ensure that the product hose is 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
 - at sharp edges
 - on moving parts
 - on hot surfaces
- Ensure that the hoses are never run over by vehicles (e.g., fork lifts), 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.
- 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 megohm.
- 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.

4.2.4 CLEANING AND FLUSHING

- Relieve the pressure from the device.
- De-energize the device electrically.
- Preference should be given to non-flammable 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 paint 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.
- Take measures for workplace safety (see Chapter 4.1.3).
- When commissioning or emptying the device, please note that an explosive mixture may temporarily exist inside the lines and components of equipment:
 - depending on the coating product used,
 - depending on the flushing agent (solvent) used,explosive mixture inside the lines and items of equipment.



OPERATING MANUAL

- Only electrically conductive tanks may be used for cleaning and flushing agents.
- The containers must be grounded.

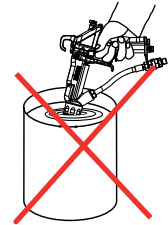
An explosive gas/air mixture forms in closed containers.

- 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:

- 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 gun. Cleaning the device must not damage it in any way.
- Ensure that no electric component is cleaned with or immersed into solvent.

**4.2.5 HANDLING HAZARDOUS LIQUIDS, VARNISHES AND PAINTS**

- 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, use personal protective equipment: safety goggles, protective clothing and gloves, as well as respiratory protection and skin 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.

**4.2.6 TOUCHING HOT SURFACES**

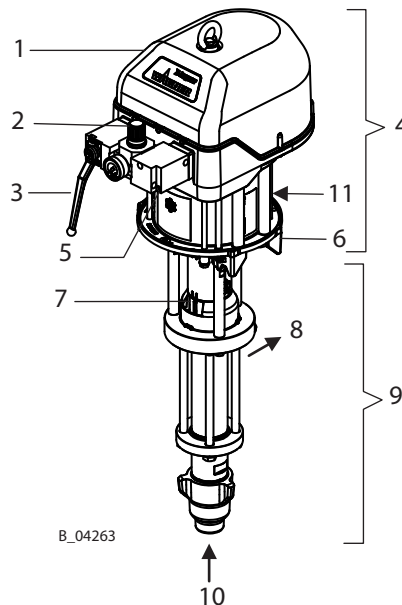
- Only touch hot surfaces if you are wearing protective gloves.
 - When operating the device with a coating product with a temperature of > 43 °C; 109 °F: identify the unit with a warning label that says "Warning - Hot Surface".
 - Instruction label Order No. 9998910
 - Protection label Order No. 9998911
- Note:** Order the two stickers together.



5 DESCRIPTION

5.1 DESIGN

- 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 Material outlet
- 9 Fluid section
- 10 Material 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.

Air motor (4)

The air motor 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).

Fluid section (9)

The fluid section 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 and the fluid section there is a separating agent cup (7) for separating the separating agent.

5.3 PROTECTIVE AND MONITORING EQUIPMENT

Safety valve

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 valve, which is held with a spring, automatically opens and releases the excess pressure.

	! WARNING Overpressure! Risk of injury from bursting components. → Never change the safety valve setting.
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5.4 SCOPE OF DELIVERY

Pneumatic piston pump

Consists of:

- Fluid section
- Air motor
- Connection elements
- Air pressure regulator for air motor

The scope of delivery also includes:

Separating agent 250 ml; 250 cc

Declaration of conformity

Operating manual, German

Operating manual in the local language

Order No.: 9992504

See Chapter 14

Order No.: 2340281

See Chapter 1.3

The delivery note shows the exact scope of delivery. Accessories: see Chapter 12.

5.5 DATA

5.5.1 MATERIALS OF PAINT-WETTED PARTS

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

PE = Ultra high molecular weight polyethylene

TG = PTFE with graphite

5.5.2 RECOMMENDED PACKINGS

WAGNER packings are manufactured in four different materials:

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:

	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

	 WARNING
	Outgoing air containing oil! Risk of poisoning if inhaled. Air motor switching problems. → Provide water-free and oil-free compressed air

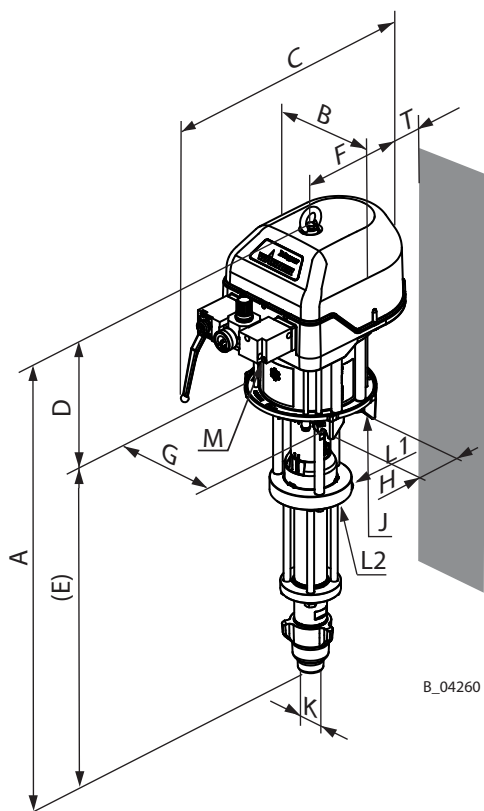
5.5.3.1 TECHNICAL DATA FOR JAGUAR AND PROTEC

Description		Measuring unit	Jaguar 75-150	Jaguar 55-200	PROTEC 60-240
Pump ratio			75:1	55:1	60:1
Volume flow per double stroke (DH)		cm ³ ; cc	150	200	240
Maximum operating overpressure		MPa	53	44	48
		bar	530	440	480
		psi	7687	6382	6962
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	0.25–0.71	0.25–0.80	
		bar	2.5–7.1	2.5–8.0	
		psi	36–103	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/m ³			
Ø Air inlet (inside thread)		inch	G1"		
Minimum Ø of the compressed air supply line		mm; inch	25; 0.98		
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke		nl	79.9		103.1
		scf	2.82		3.64
Air motor piston diameter		mm; inch	220; 8.7		250; 9.8
Air motor piston stroke		mm; inch	150; 6		
Sound pressure level at maximum permissible air pressure*		dB(A)	83		83
Sound pressure level at 0.6 MPa; 6 bar; 87 psi air pressure*		dB(A)	81		80
Sound pressure level at 0.4 MPa; 4 bar; 58 psi air pressure*		dB(A)	69		76
Product inlet connection (inside thread)		mm	G1½"		
Product outlet (outside thread)		mm	M24x1.5		
Weight		kg; lb	53; 117		60.5; 133.5
Product pH value		pH	3.5–9		
Maximum product pressure at pump inlet		MPa	2		
		bar	20		
		psi	290		
Material temperature		°C; °F	+5...+80; +41...+176		
Ambient temperature	Construction and assembly	°C; °F	+5...+50; +41...+122		
	Suspension	°C; °F	-20...+60 ; -4...+140		
Relative humidity		%	10–95 (without condensation)		
Allowable inclination for operation		<) °	± 10		

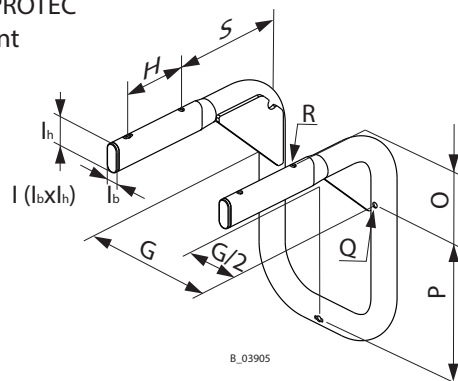
* A rated sound pressure level measured at 1 m distance, LpA1m, according to DIN EN 14462: 2005. Reference measurements have been made by SUVA (Swiss Accident Insurance Institute).

5.5.3.2 MEASUREMENTS AND CONNECTIONS FOR JAGUAR AND PROTEC

	Jaguar 75-150 mm; inch	Jaguar 55-200 mm; inch	PROTEC 60-240 mm; inch
A	1145; 45.0	1157; 45.5	1169; 46.0
B	304; 12		
C	~582; 22.9		
D	470; 18.5		483; 19.0
E	675; 26.6	687; 27.0	
F	244; 9.6		
G	230; 9.1		
H	110; 4.3		
I	20x48; 0.8x1.9		
J	M8		
K	G1½" (female thread)		
L1	M24x1.5 (outside thread)		
L2	G3/8"	G1/2"	
M	G1"		
O	135.5; 5.3		
P	238; 9.4		
Q	ø 9; ø 0.35		
R	ø 9; ø 0.35		
S	206; 8.1		
T	17; 0.67		



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Jaguar / PROTEC
wall mount

B_03905

5.5.3.3 TECHNICAL DATA FOR TIGER

Description		Measuring Unit	Tiger 72-300
Pump ratio		-	72 :1
Volume flow per double stroke (DH)		cm ³ ; cc	300
Maximum operating overpressure		MPa; bar; psi	53; 530; 7687
Maximum possible strokes in operation		DH/min.	40
Maximum recommended strokes per minute in continuous operation		DH/min.	30
Minimum/maximum air inlet pressure		MPa; bar; psi	0.25-0.74; 2.5-7.4; 36-107
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/m ³	
Ø Air inlet (inside thread)		inch	G 1"
Minimum Ø of the compressed air supply line		mm; inch	25; 1.0
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke		nl; scf	170; 6
Air motor piston diameter		mm; inch	300; 11.8
Air motor piston stroke		mm; inch	150; 5.9
Sound pressure level at maximum permissible air pressure*		dB(A)	82
Sound pressure level at 0.6 MPa; 6 bar; 87 psi air pressure*		dB(A)	80
Sound pressure level at 0.4 MPa; 4 bar; 58 psi air pressure*		dB(A)	75
Product inlet connection (inside thread)		mm	G1 1/2"
Product outlet (outside thread)		mm	M24x1.5
Weight		kg; lb	80; 176
Product pH value		pH	3.5–9
Maximum product pressure at pump inlet		MPa; bar; psi	2; 20; 290
Material temperature		°C; °F	+5...+80; 41...176
Ambient temperature	Construction and assembly	°C; °F	+5...+50; 41...122
	Suspension	°C; °F	-20...+60 ; -4...+140
Relative humidity		%	10–95 (without condensation)
Allowable inclination for operation		°	± 10

* A rated sound pressure level measured at 1 m distance, L pA1m, according to DIN EN 14462: 2005. Reference measurements have been made by SUVA (Swiss Accident Insurance Institute).

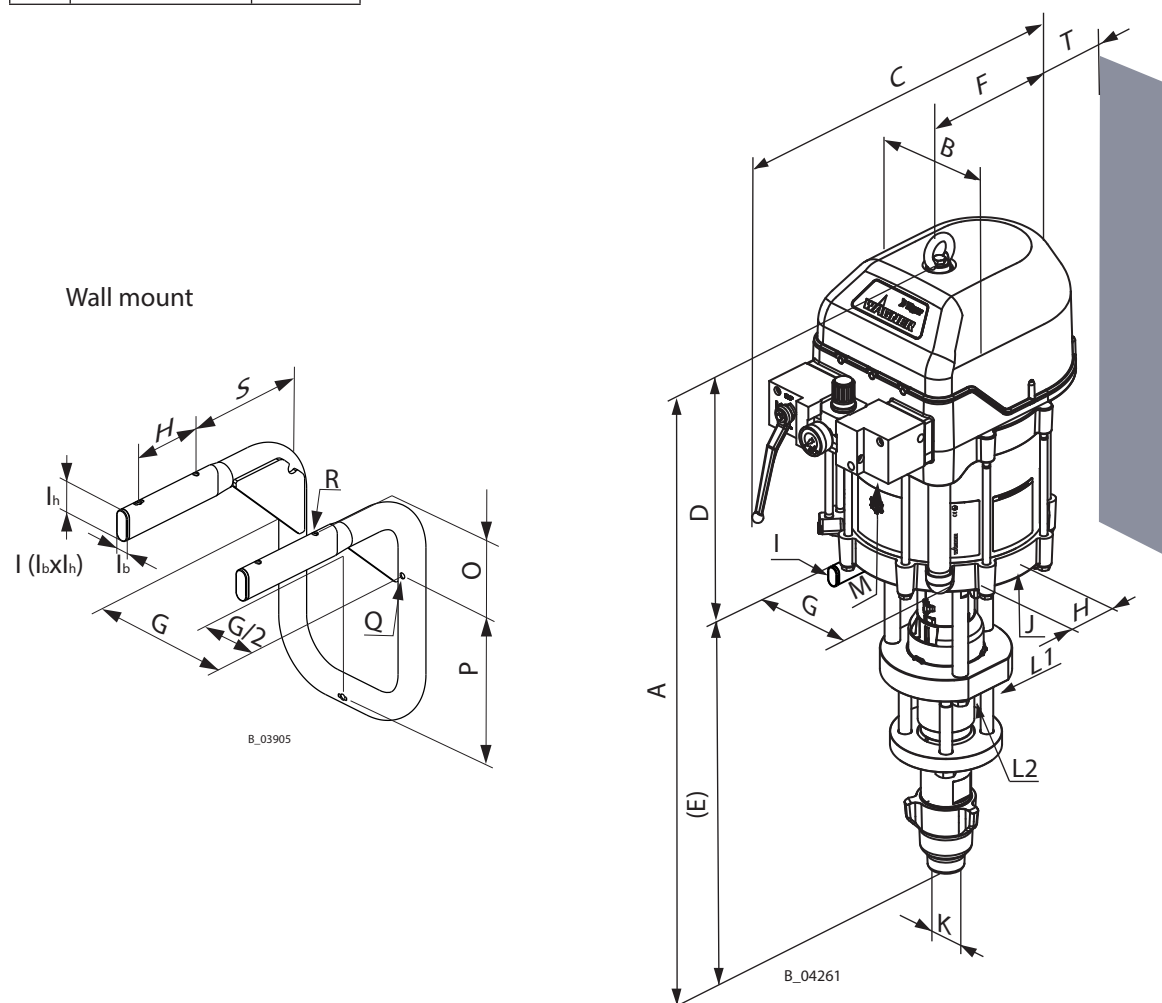
	 WARNING
	Outgoing air containing oil! Risk of poisoning if inhaled. Air motor switching problems. → Provide water-free and oil-free compressed air

5.5.3.4 MEASUREMENTS AND CONNECTIONS FOR TIGER

	Tiger 72-300	Unit
A	1106 43.5	mm inch
B	340 13.4	mm inch
C	562 22.1	mm inch
D	518 20.4	mm inch
E	588 23.1	mm inch
F	244 9.6	mm inch
G	230 9.1	mm inch

	Tiger 72-300	Unit
H	110 4.3	mm inch
I	20x48 0.8x1.9	mm inch
J	M8	mm
K	G1 1/2"	mm
L1	M24x1.5	mm
L2	G3/4"	inch
M	G 1"	inch
O	135 5.3	mm inch
P	238 9.4	mm inch

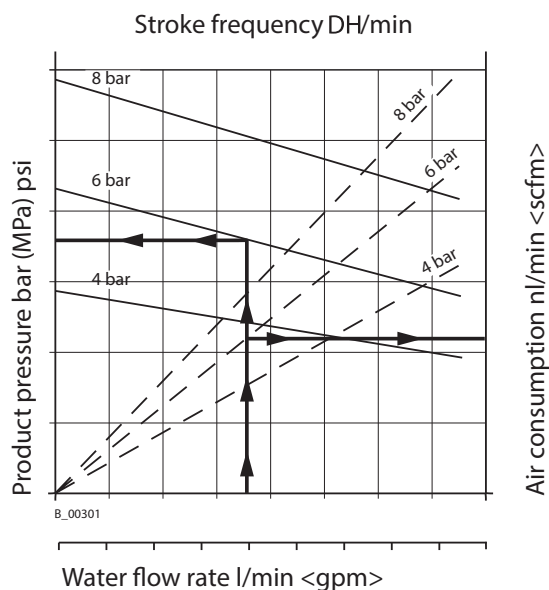
	Tiger 72-300	Unit
Q	ø 9 ø 0.35	mm inch
R	ø 9 ø 0.35	mm inch
S	206 8.1	mm inch
T	32 1.3	mm inch



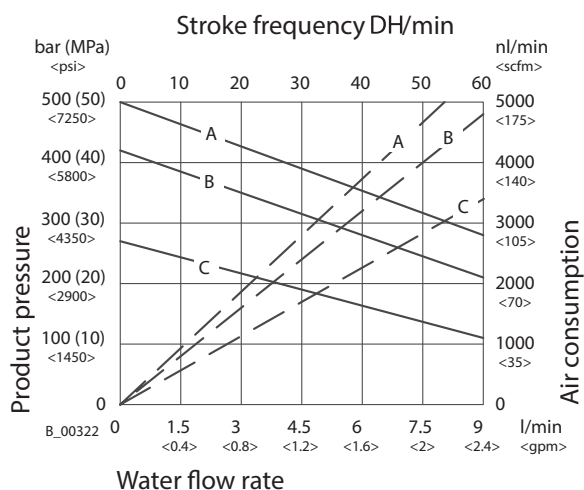
5.5.4 VOLUME FLOW**Wagner AL nozzles****Volume flow* in l/min**

Ø inch	Ø mm	Spray angle	at 7 MPa 70 bar 1015 psi	at 10 MPa 100 bar 1450 psi	at 15 MPa 150 bar 2175 psi	at 20 MPa 200 bar 2900 psi	Maximum ranges for continuous operation at 40 DH/min (Jaguar, PROTEC) or 30 DH/min (Tiger)
0.007	0.18	40°	0.17	0.20	0.21	0.22	Jaguar 75-150
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	
0.019	0.48	20-30-40-50-60-70-80°	0.93	1.09	1.37	1.47	
0.021	0.53	20-40-50-60-80°	1.14	1.36	1.69	1.78	
0.023	0.58	20-40-50-60-70-80°	1.37	1.59	2.01	2.24	
0.025	0.64	20-40-50-60-80°	1.62	1.91	2.40	2.60	
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	
0.035	0.90	20-40-50-60°	3.22	3.74	4.69	5.14	
0.043	1.10	20-50°	5.07	6.04	7.46	7.84	Jaguar 55-200 PROTEC 60-240
0.052	1.30	50°	5.12	6.10	7.52	8.06	Tiger 72-300

* Volume flow refers to water.

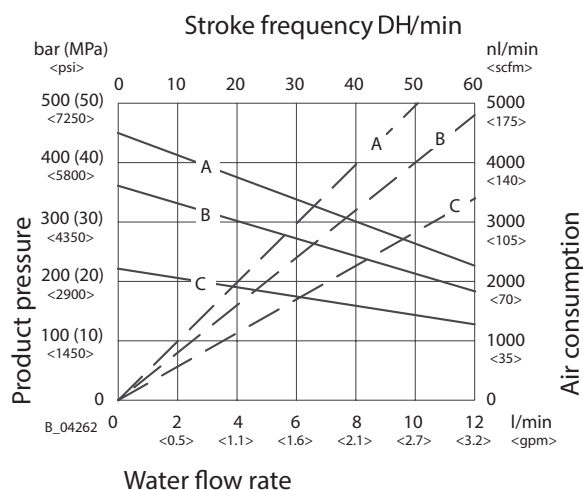
5.5.5 PERFORMANCE DIAGRAMS**Example diagram**

JAGUAR 75-150



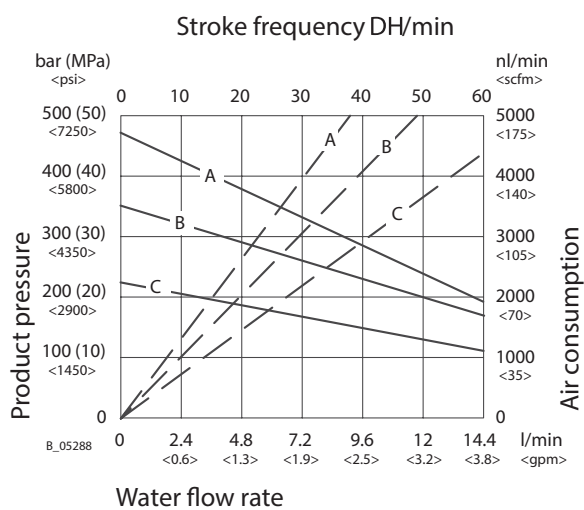
A = 7.1 bar (0.71 MPa; 103 psi) air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

JAGUAR 55-200



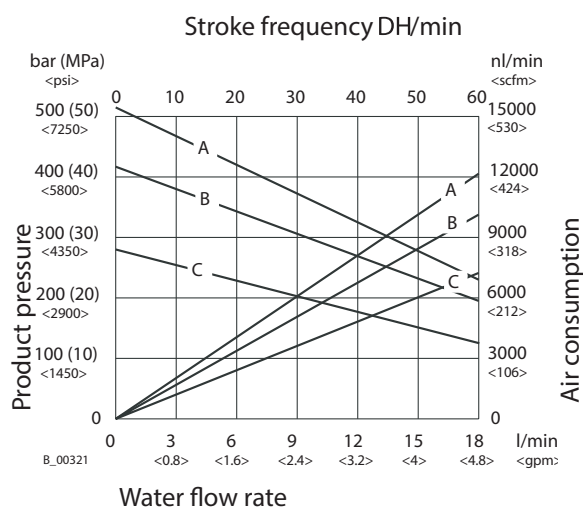
A = 8 bar (0.8 MPa; 116 psi) air pressure
B = 6 bar; 0.6 MPa; 87 psi air pressure
C = 4 bar; 0.4 MPa; 58 psi air pressure

PROTEC 60-240



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

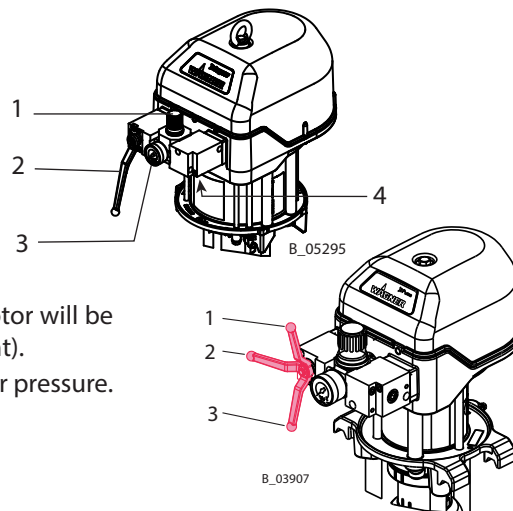
Tiger 72-300



A = 7.4 bar (0.74 MPa; 107 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 PRESSURE REGULATOR UNIT

- 1 Pressure regulator
- 2 Ball Valve
- 3 Pressure gauge
- 4 Compressed air Inlet



Positions of the ball valve

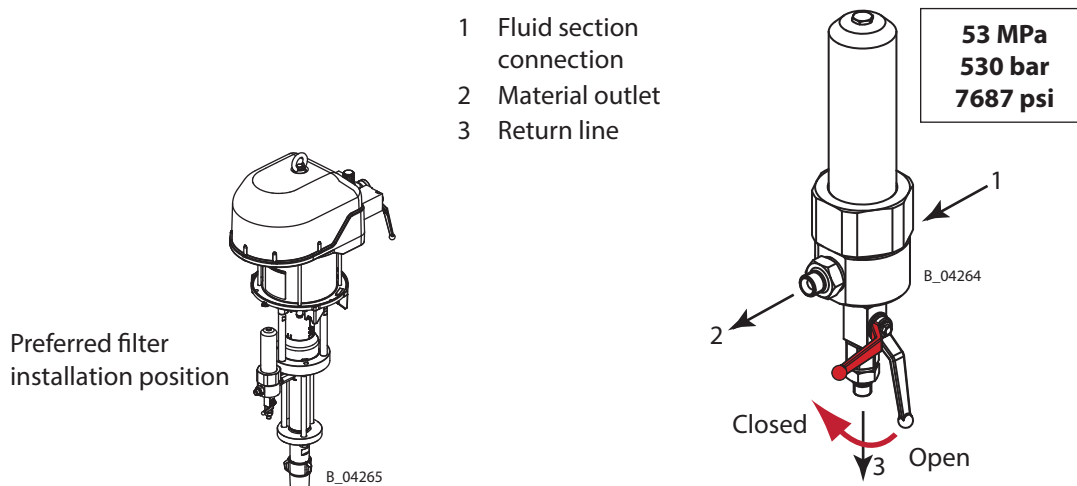
- 1 Closed: working pressure in the air motor will be relieved (control pressure is still present).
- 2 Closed: the air motor may still be under pressure.
- 3 Open: working position

5.7 PRESSURE RELIEF

So that the complete pressure relief of the pump can be performed (see Chapter 7.5), a high-pressure filter with a return flow 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 corresponding to the device can be found in the "Accessories" chapter; the compatible filter inserts can be found in the "Spare parts" chapter.



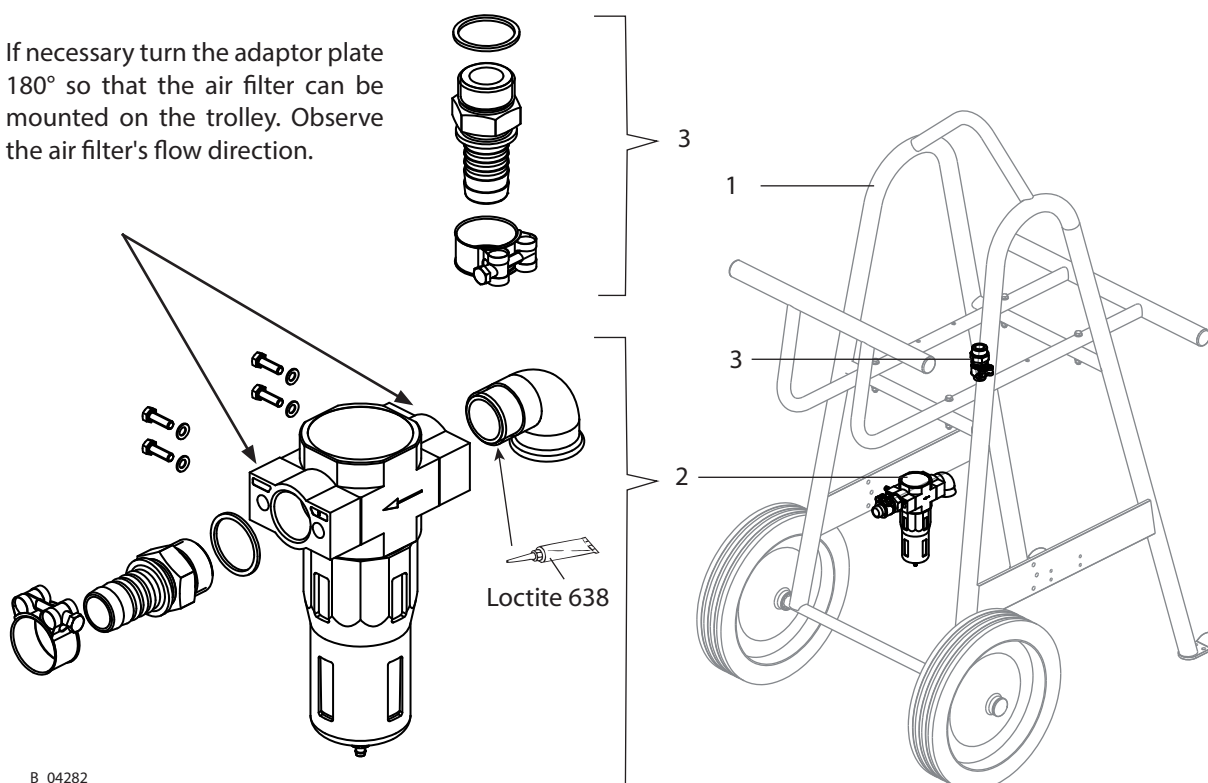
5.8 AIR FILTER SET PC (OPTION)

The air filter serves to filter the inlet's compressed air.

Assembly of the air filter set PC on the PC heavy duty trolley (1):

1. Mount the air filter (2).
2. Mount the air filter (2) on trolley (1).
3. Mount the air connection (3) on the air motor.
4. Mount the air hose between (2) and (3).

If necessary turn the adaptor plate 180° so that the air filter can be mounted on the trolley. Observe the air filter's flow direction.



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5.9 HEATER SET PC (OPTION)

The electric, continuous-flow heater with explosion protection is downstream of the pump. The coating product can only be heated to maximum 80 °C. The continuous-flow heater is fitted with a temperature limiter.

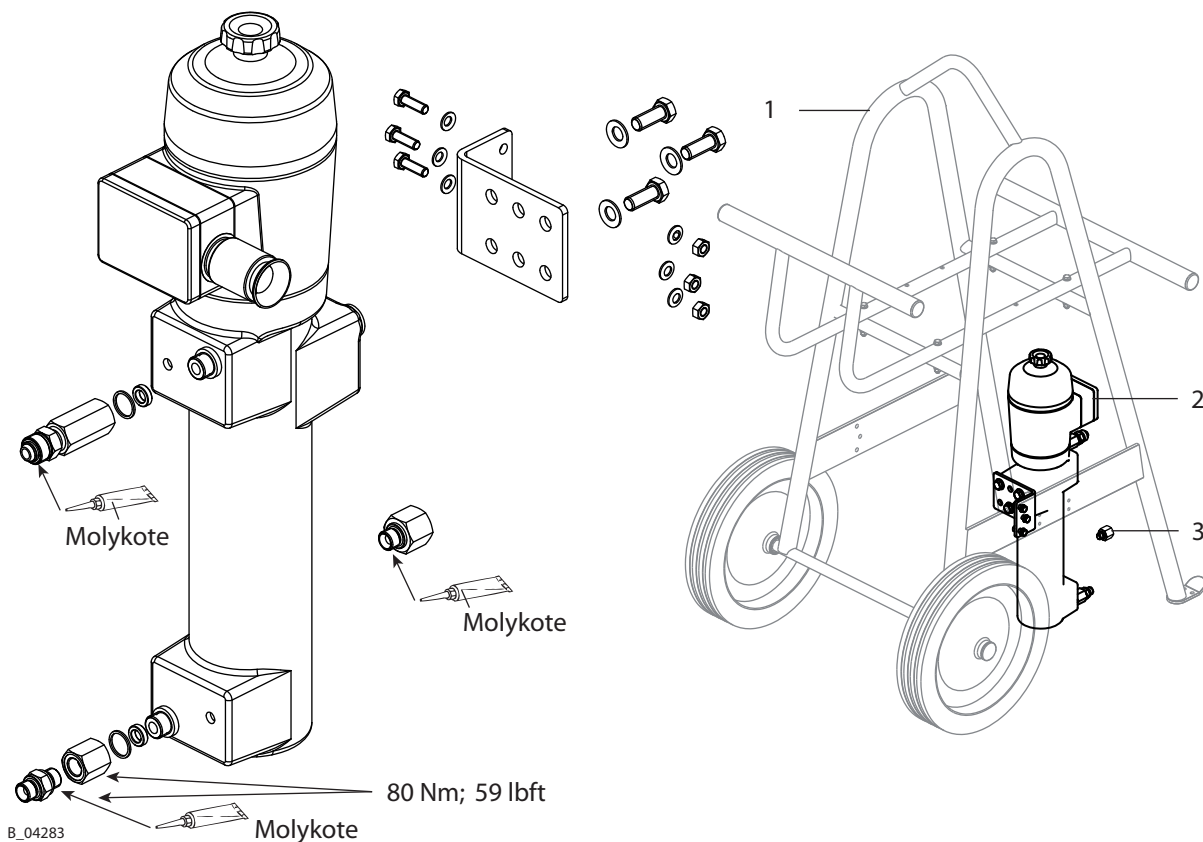
The temperature is set using the temperature regulator. The coating product temperature is read off the thermometer on the coating product output.

Heater and thermometer description

→ see heater operating manual (Order No. 65860).

Assembly of the heater set PC on the PC heavy duty trolley:

1. Mount heater (2).
2. Mount heater (2) on trolley (1).
3. Connect heater in accordance with the operating manual.
4. Mount enclosed fitting (3) on the fluid section's outlet fitting.



5.10 FEED PUMP (OPTION)

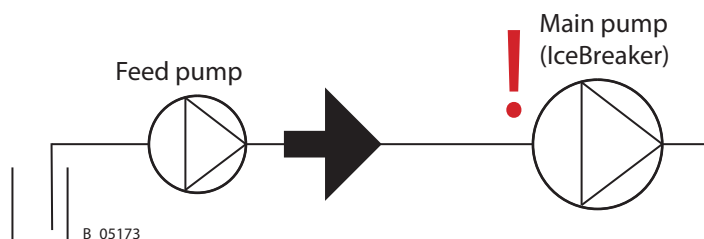
A feed pump can be used with high-viscosity products or longer feed lines.

Dimensioning of the feed pump

- The IceBreaker piston pumps pump the working material 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.

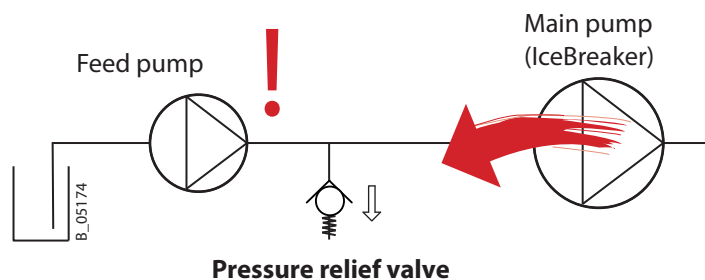
Main pump protection

- 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.



- 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 ASSEMBLY/COMMISSIONING STAFF

- The assembly and commissioning staff must have the technical skills to safely undertake commissioning.
- 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 before commissioning.

6.2 STORAGE AND INSTALLATION CONDITIONS

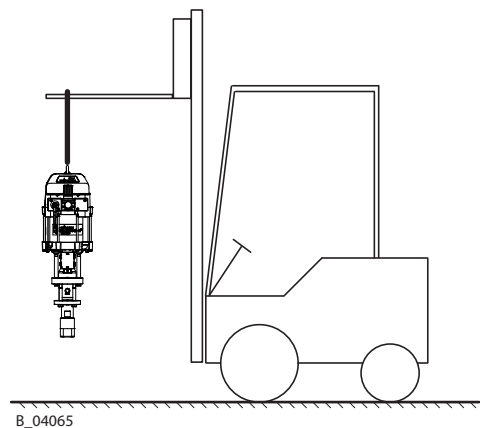
Until the point of assembly, the device must be stored in a dry location, free from vibrations and with a minimum of dust. The device must be stored in closed rooms. For specifications on temperatures and relative humidity, see Technical Data.

Long-term storage: Thoroughly clean the pump, if a long-term decommissioning is planned. See Chapter "Cleaning". For recommissioning, proceed according to following chapters.

6.3 TRANSPORTATION

The pump must be moved on a trolley (PC heavy duty trolley) or with lifting equipment or a crane.

Only the pump without trolleys may be lifted by the ring nut or lifting eye bolt (see accessories) and transported short distances.



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	 WARNING
	Inclined ground! Risk of accidents if the device rolls away/falls. → Position the trolley with the piston pump horizontally. → If the surface is inclined, position the feet of the trolley towards the gradient. → Secure the trolley.

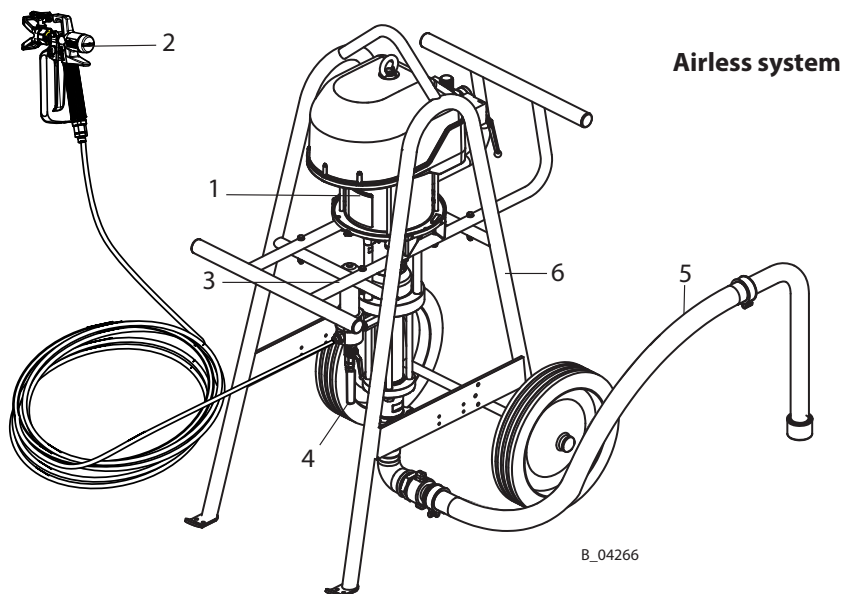
6.4 ASSEMBLING THE PUMP

Note:

This pump can be used as part of a spraying system for Airless 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 gun operating manual.

Procedure:

- Mount pump (1) on frame, trolley (6), or wall mount. When using a wall mount, the fluid section must be turned by 180°.
- Mount high pressure filter (3).
- Mount suction system (5).
- Mount return tube (4) or return hose.
- Connect high-pressure hose and gun (2) as laid down in the operating manual for the gun.



6.4.1 VENTILATION OF THE SPRAY BOOTH

Observe the safety instructions in Chapter 4.1.3.

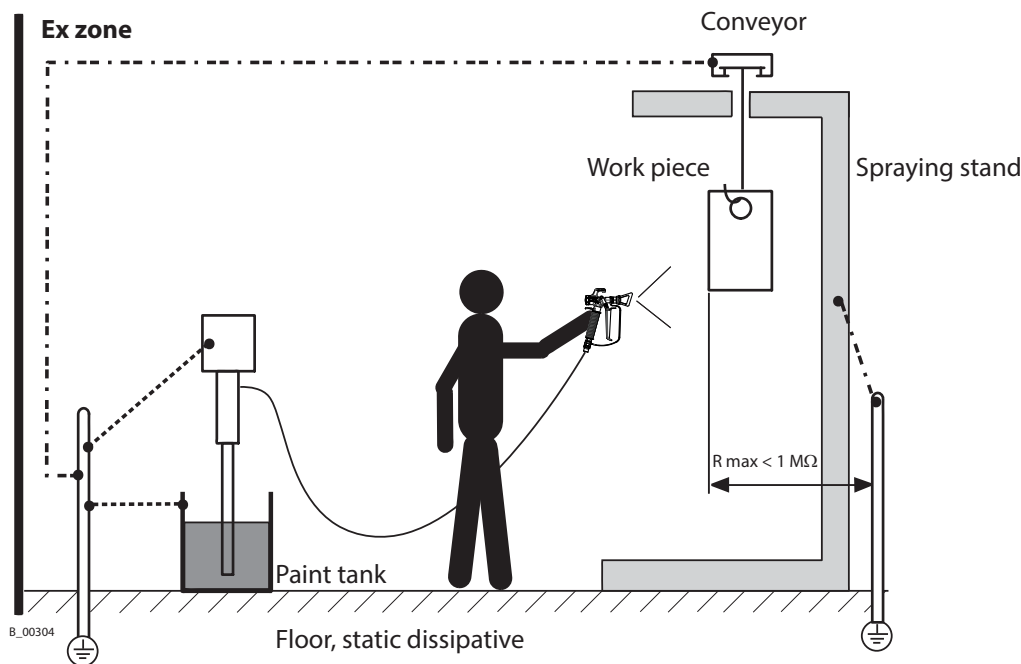
- Operate the device in a spray booth approved for the working materials.
- or-
- Operate the device on an appropriate spraying wall with the ventilation (extraction) switched on.
- Observe national and local regulations for the outgoing air speed.

6.5 GROUNDING

	⚠ WARNING Discharge of electrostatically charged components in atmospheres containing solvents! Explosion hazard from electrostatic sparks. → Clean the piston pump only with a damp cloth. → Ground all device components. → Ground the work pieces to be coated.
---	--

	⚠ 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)



Cable cross sections

Pump	4 mm ² ; AWG 12	Conveyor	16 mm ² ; AWG 6
Product tank	6 mm ² ; AWG10	Booth	16 mm ² ; AWG 6
		Spraying stand	16 mm ² ; AWG 6

OPERATING MANUAL

Safe operation of the IceBreaker pump is only guaranteed with a ground connection.

Connect all ground cables using a short and direct route.

Procedure:

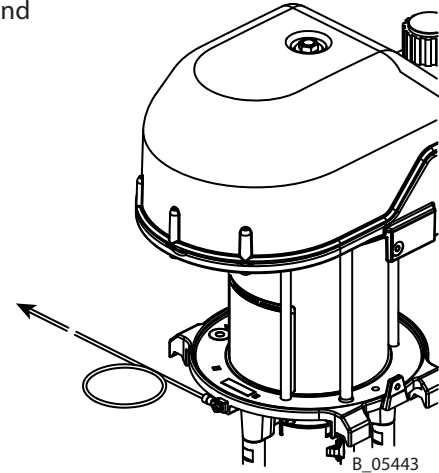
1. Ground the pump, connect the grounding cable to potential equalization on-site.
2. Ground the product tank.
3. Ground the other parts of the system to an on-site grounding connection. 16 mm²; AWG 6

Ex zone

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

Tank

- All paints, flushing agents and waste containers have to be electrically conductive.
- All containers must be grounded.

**6.6 COMMISSIONING**

- Observe all safety regulations in accordance with Chapter 4 and Chapter 7.2.
- Emergency stop, see Chapter 7.3.

Preparation

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

- Secure gun with safety clip.
- Check the permissible pressures.
- Check all connections for leaks.
- Check hoses for damage in accordance with Chapter 8.2.8.

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 separating agent in accordance with Chapter 8.2.4.
- Fill the empty device with flushing agent in accordance with Chapter 8.2.6.

Pressure tightness test

- 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 7.5.

Filling with working material

- In accordance with Chapter 7.6.1.

7 OPERATION

7.1 TRAINING THE OPERATING STAFF

- The operating staff must be qualified and fit to operate the entire system.
- The operating staff 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 staff must receive appropriate system training.

7.2 SAFETY INSTRUCTIONS

Before carrying out any work, the following points must be observed in accordance with the operating manual:

- Observe all safety regulations in accordance with Chapter 4.
- Carry out commissioning in accordance with Chapter 6.6.

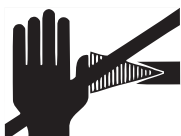
	 WARNING
	Incorrect operation! Risk of injury and damage to the device. → If contact with lacquers or cleaning agents causes skin irritation, appropriate precautionary measures must be taken, e.g., wearing protective clothing. → The footwear worn by operating staff must comply with EN ISO 20344. The measured insulation resistance must not exceed 100 megohms. → The protective clothing, including gloves, must comply with EN ISO 1149-5. The measured insulation resistance must not exceed 100 megohms.

	 WARNING
	Unintentional putting into operation! Risk of injury Before any work on the device, in the event of work interruptions and malfunctions: → Relieve the pressure from the spray gun and unit. → Secure the spray gun against actuation. → Switch off the energy/compressed air supply. → Disconnect the control unit from the network. → In the event of functional faults: remedy the fault as described in the "Troubleshooting" chapter.

	! 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 material. → Do not spray the device empty after cleaning.
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7.2.1 GENERAL RULES FOR MAKING ADJUSTMENTS TO THE SPRAY GUN

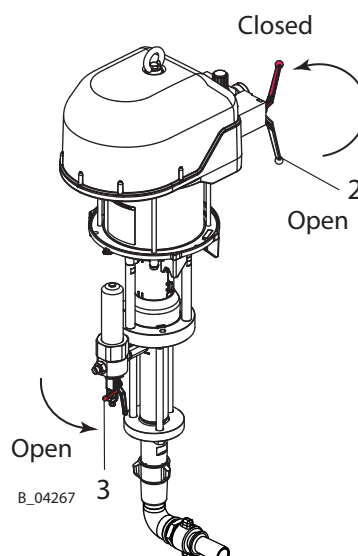
→ Observe spray gun operating manual.

	! WARNING High pressure spray jet! Danger to life from injecting paint or solvent. → Never reach into the spray jet. → Never point the spray gun at people. → Consult a doctor immediately in the event of skin injuries caused by paint or solvent. Inform the doctor about the paint or solvent used. → Never seal defective high-pressure parts; instead relieve the pressure from them and replace them. → Use personal protective equipment (protective clothing, gloves, eyewear and respiratory protection).
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7.3 EMERGENCY STOP

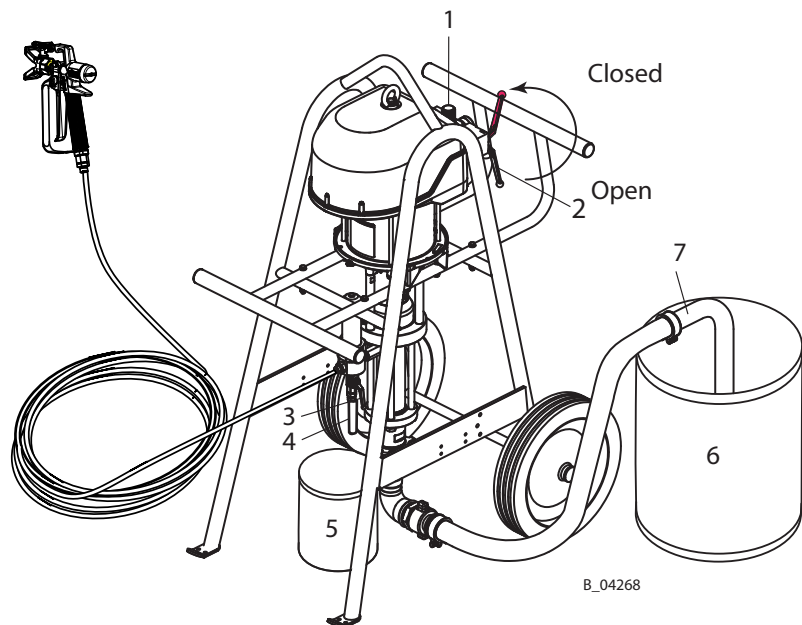
In the case of unforeseen occurrences, immediately:

- close ball valve (2);
- open return valve (3).



7.4 SPRAYING

1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Secure the spray gun and place the nozzle in the gun.
3. Set required working pressure on the pressure regulator (1).
4. Slowly open the ball valve (2).
5. Optimize the spraying results as laid down in the gun instructions.
6. Start work process.

**7.5 PRESSURE RELIEF/WORK INTERRUPTION**

1. Close the spray gun.
2. Close ball valve (2).
3. Release the system by opening the 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 gun.
5. Open and close the return valve (3) slowly to completely depressurize the system.

If the system has been used with 2K products:

NOTICE

Hardened working material in the spraying system when 2K product is processed!
Destruction of pump and injection system.

- Follow the manufacturer's processing rules, particularly regarding the pot life.
- Flush thoroughly before the end of the pot life.
- The pot life is decreased by warmth.

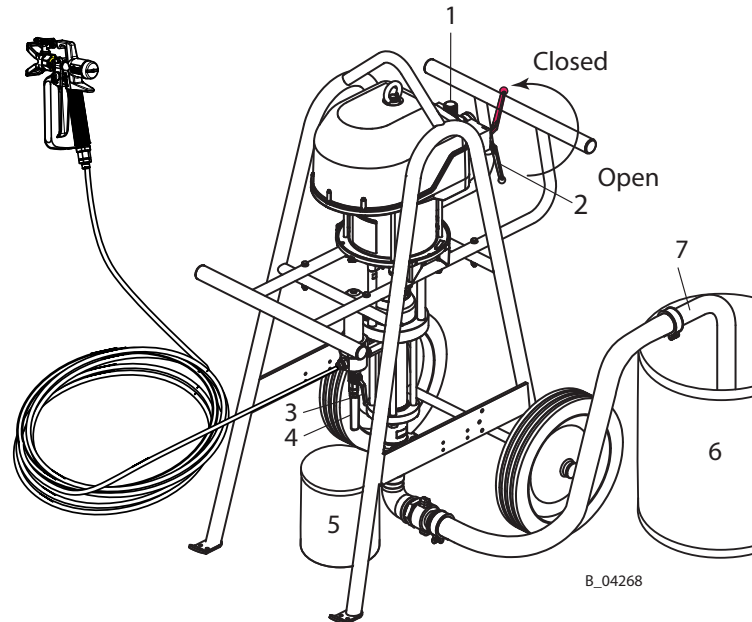
7.6 BASIC FLUSHING

Flush regularly

Regular flushing, cleaning and maintenance ensures the pumps' high pumping and suction capacity.

Hardener pumps in 2K systems

Do not flush hardener pumps with water, rather only using suitable flushing agents (solvents).



B_04268

Procedure

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.

Flush via the return flow 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).

Flush using gun

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

7.6.1 FILLING WITH WORKING MATERIAL

After basic flushing, the system can be filled with working material.
Proceed according to Chapter 7.6, but use working material instead of flushing agent.

8 CLEANING AND MAINTENANCE

8.1 CLEANING

8.1.1 CLEANING STAFF

Cleaning work should be undertaken regularly and carefully by qualified and trained staff. 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 SAFETY INSTRUCTIONS

- Clean the piston pump only with a damp cloth.
- Observe safety instructions in Chapter 4.

	 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. → Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit. → Before all work on the device and in the event of work interruptions: - Relieve pressure from spray guns and devices. - Secure spray guns against actuation. - Switch off the energy/compressed air supply. - Disconnect the control unit from the mains. → Observe the operating manual and service manuals at all times when carrying out work.
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8.1.3 DECOMMISSIONING AND CLEANING

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

1. Carry out work interruption → Chapter 7.5.
2. Carry out basic flushing → in accordance with Chapter 7.6.
3. Empty the pump in a controlled manner → in accordance with Chapter 8.2.5.
4. Maintain the gun according to the operating manual.
5. Clean and check the suction system and the suction filter.
6. When using a material filter, check filter insert and filter housing and clean or replace them. → Chapter 8.2.7.
7. Clean the outside of the system.

	 WARNING
	Brittle filter pressure regulator! The tank on the filter pressure regulator becomes brittle through contact with solvents and can burst. Flying parts can cause injury. → Do not clean the tank on the filter pressure regulator with solvents.

8. Fully assemble the system.
9. Check fill level of the separating agent → Chapter 8.2.4.
10. Fill the system with flushing agent in accordance with Chapter 8.2.6.

	 WARNING
	Gas mixtures can explode if there is an incompletely filled pump! Danger to life from flying parts. Ignition of potentially explosive surrounding atmosphere. → Ensure that the pump and suction system are always completely filled with flushing agent or working material. → Do not spray the device empty after cleaning.

8.1.4 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. Carry out points 1 to 9 of Chapter 8.1.3 "Decommission and clean".
2. Fill the system with preservative in accordance with Chapter 8.2.6.
3. Empty the pump in a controlled manner in accordance with Chapter 8.2.5 and seal the openings.

8.2 MAINTENANCE

8.2.1 MAINTENANCE STAFF

Maintenance work should be undertaken regularly and carefully by qualified and trained staff. 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 SAFETY INSTRUCTIONS

→ Observe the safety instructions in Chapter 4 and Chapter 8.1.2.

Prior to maintenance

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

- Release pressure from the pump, high-pressure hose and gun.
- The gun should be secured with the safety clip.
- The air supply should be interrupted.

After maintenance

- Commissioning in accordance with Chapter 6.6.

→ According DGUV regulation 100-500:

- 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.

	 DANGER Incorrect maintenance/repair! Danger to life and equipment damage. → Repair or replacement of devices or parts of devices are only allowed to be performed outside the hazard area by qualified personnel.
---	---

8.2.3 REGULAR MAINTENANCE WORK

1. Check the level of separating agent in the separating agent cup every day, and top up if necessary.
2. Check and clean the high-pressure filter every day or as required. (See Chapter 8.2.7)
3. Every shut down should be carried out as laid down in Chapter 8.1.3!
4. Check hoses, pipes, and couplings every day and replace if necessary.

If the pump has to be emptied for maintenance work, proceed according to Chapter 8.2.5.

The service manual is available in German and English.

For order number see Chapter 1.3.

8.2.4 FILLING 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 fluid tank is filled with sufficient separating fluid. Filling level 1 cm; 0.4 inch under the cup edge.

Place the supplied separating agent into the separating agent cup.

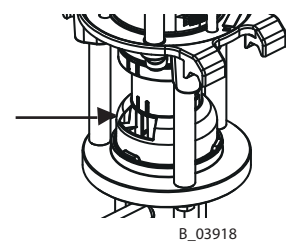
Filling level: 1 cm; 0.4 inch under the cup edge.

Separating agent: Order No. 9992504

Inclination angle of the pump

Maximum permissible inclination of pump for moving, transportation, etc. after filling it with separating agent $\pm 30^\circ$.

The pump must be vertical during operation.



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

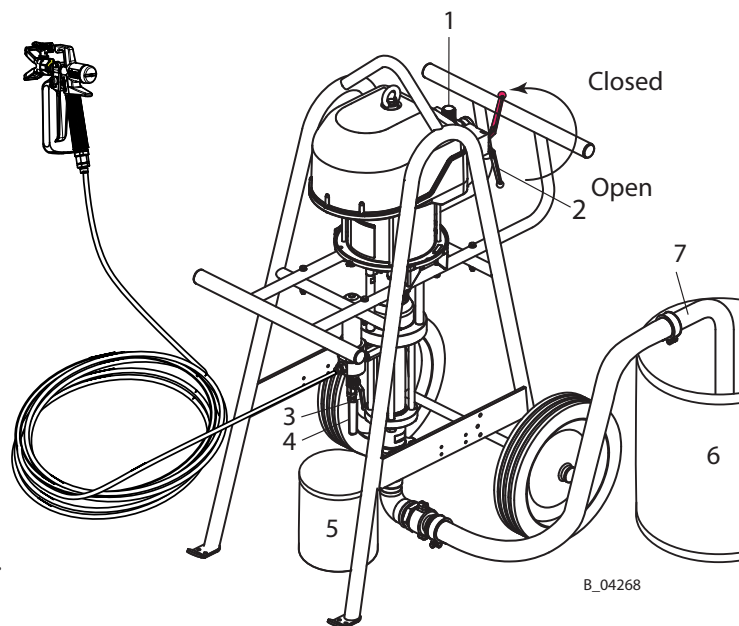
1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Carry out basic flushing in accordance with Chapter 7.6.
3. Place grounded collection tank (5) under the return tube (4).
4. Place the suction hose (7) in an empty, grounded tank (6).
5. Close pressure regulator (1) (0 MPa; 0 bar; 0 psi).

Empty using return line

6. Open return valve (3).
7. Slowly open the ball valve (2).
8. 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).
9. 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).
10. As soon as working material is no longer flowing from the return tube (4), close ball valve (2).
11. Close return valve (3).

Empty up to the gun

12. Point the gun, without nozzle, into tank (5) and open it.
13. Slowly open the ball valve (2). Be ready for the switch from working material to air.
14. As soon as working material is no longer flowing from the return tube, close the ball valve (2).
15. Close and secure gun.
16. Depressurization in accordance with Chapter 7.5.
17. Dispose of the contents of the tank (5) according to the local regulations.



8.2.6 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. → Empty and fill the device slowly and in a controlled manner. → Avoid potentially explosive atmosphere in the surroundings.
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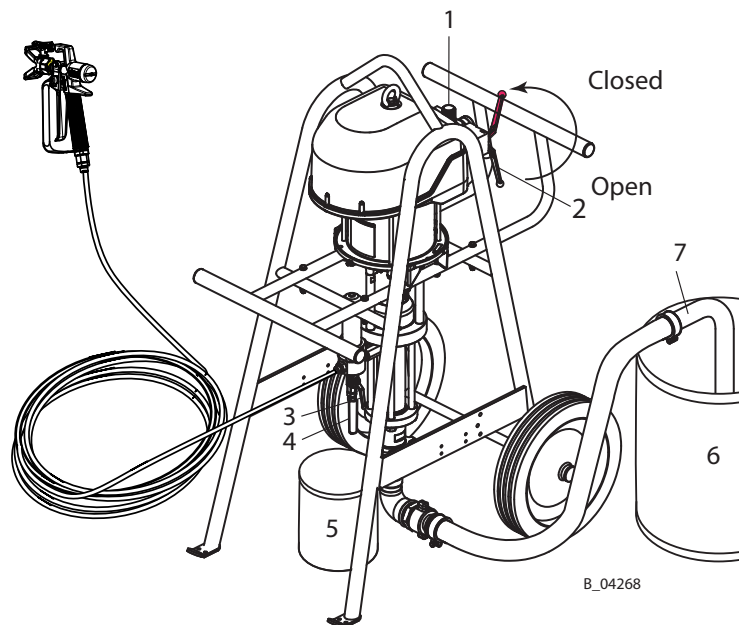
1. Visual check: personal safety equipment, grounding and all devices ready to use.
2. Place grounded collection tank (5) under the return tube (4).
3. Place the suction hose (7) in a grounded tank with working material (6).

Note:

If the pump is equipped with a rigid suction system, it should only be dipped in into the working material 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 working material to air and prevent back spray.

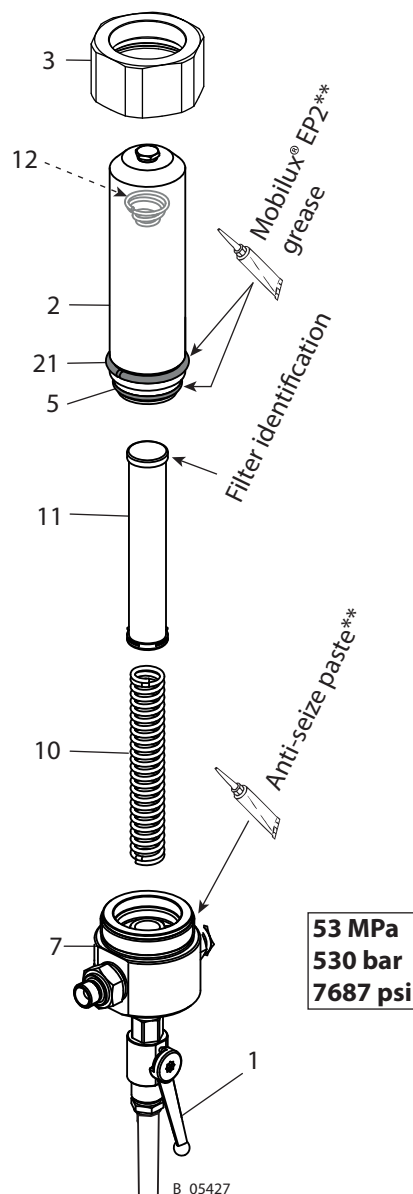
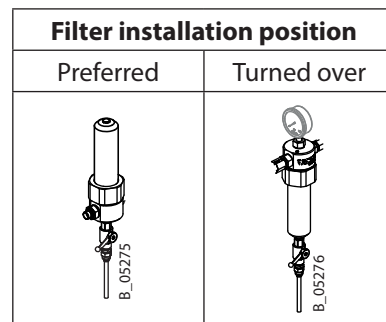


8. Close ball valve (2) as soon as pure working material starts coming from the return tube (4).
9. Close return valve (3).
10. Point the spray gun, without nozzle, into the tank (5) and open it.
11. Slowly open the ball valve (2). Be ready to switch from working material to air and prevent back spray.
12. As soon as pure working material without air bubbles is flowing, close ball valve (2).
13. Close and secure the spray gun.
14. Depressurization in accordance with Chapter 7.5.
15. Dispose of the contents of the tank (5) according to the local regulations.

8.2.7 CLEANING AND REPLACING THE HIGH-PRESSURE FILTER

1. Flush the pump and HP filter in accordance with Chapter 7.6, and while doing so:
 - At the preferred filter installation position: Flush via the return flow 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.
 - At the reversed filter installation position: Flush using the 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 8.2.5.
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 support (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, secure 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 13.6.
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 8.2.6.

** Order No., see Chapter 10.2.



8.2.8 PRODUCT HOSES, TUBES AND COUPLINGS



DANGER

Bursting hose, bursting threaded joints!
 Danger to life from injection of product and from flying parts.

- Ensure that the hose material is chemically resistant to the sprayed products and the used flushing agents.
- Ensure that the spray gun, threaded joints, and product hose between the device and the spray gun are suitable for the generated pressure.
- Ensure that the following information can be seen on the hose:
 - Manufacturer
 - Permissible operating pressure
 - Date of manufacture.

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.
- Undamaged complete hoses are to be replaced when 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 (if present)	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 (27MPa)	Pressure
XX	Internal code
DNxx (e.g., DN10)	Nominal diameter

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 gage (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 material.
	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.
	Pump stops at the stroke end occasionally.	Check detent element (see service manual).
Poor spray pattern	See the gun instructions.	
Irregular operation of product pump: spray jet collapses (pulsation)	Viscosity is too high.	Thin spraying product.
	Spraying pressure is too low.	Increase incoming air pressure. Use a smaller nozzle.
	Valves are clogged.	Clean product pump, if necessary leave to soak in flushing 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 incoming line -> Technical Data, Chapter 5.5.3.
	Valves, packings, or pistons are worn out.	Replace the parts.
	Control air filter or work air filter is clogged.	Check filter and clean it if necessary.
The pump runs smoothly but does not suck up any 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 with flushing agent (if necessary vent device).
Pump runs when the gun is closed	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 REPAIRS

10.1 REPAIR STAFF

Repair work must be carried out carefully by qualified and trained staff. They should be informed of specific hazards during their training. The repairs must be carried out in accordance with the corresponding service manual.

The following hazards may arise during repair work:

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

A skilled person must ensure that the device is checked for being in a reliable state after repair work is completed.

10.2 MOUNTING MATERIALS

In Chapter 13 the order numbers for device spare parts can be found, as well as for wearing parts such as seals. → Use torques, greases and glues in accordance with Chapter 13.

Mounting materials

Order No.	Quantity	Designation	Smaller containers
9992590	1 pc ± 50 ml	Loctite® 222	
9992511	1 pc ± 50 ml	Loctite® 243	
9992528	1 pc ± 150 g	Loctite® 270	
9992831	1 pc ± 50 ml	Loctite® 542	
9999042	1 pc ± 50 ml	Loctite® 638	
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	
Z102.00	1 pc ± 1000 ml	Tecni oil 1000 ml	125 cc ± Order No. Z101.00
9992698	1 pc ± 200 g can	Vaseline white PHHV II	

Brand notice

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

11 DISPOSAL

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

Steel	Aluminum	Plastics	Carbide
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Consumable products

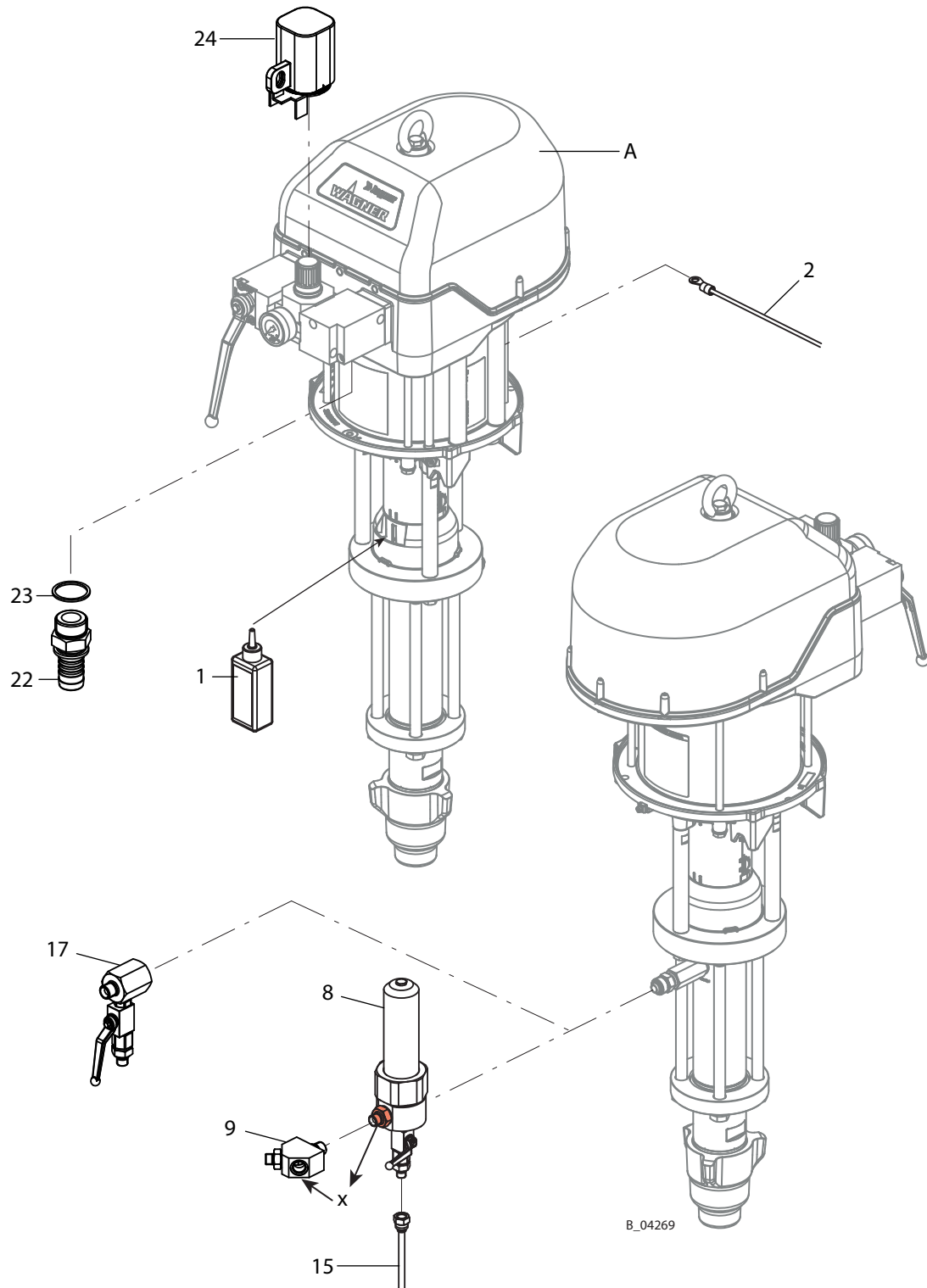
Consumable products (lacquers, adhesives, flushing and cleaning agents) must be disposed of in accordance with all applicable legal requirements.

12 ACCESSORIES

12.1 ACCESSORIES FOR PRODUCT OUTLET

Accessories list		Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
Pos	K Designation	Order No.	Order No.	Order No.	Order No.
A	Piston pump PE/TG (Tiger: PE/L)	2339845	2339846	2351205	2339847
1	Separating agent 250 ml; 250 cc	9992504			
2	Grounding cable 3 m; 9.8 ft	236219			
8	HP filter DN12 PN530-SSt with carbon steel ball valve	2339900			
9	Y-distributor with 2 gun connections M3/8" NPS	2339850			
15	◆ Return tube DN6-G1/4"-100mm-PE	2331752			
17	◆ Relief combination complete	2347275			
22	Outside thread grommet 1"-NW25	9985671			
23	Sealing ring 1"	9974135			
24	Regulator lock	2334958			

◆ = Wearing part



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12.2 ACCESSORIES FOR PRODUCT INLET

12.2.1 SUCTION HOSE

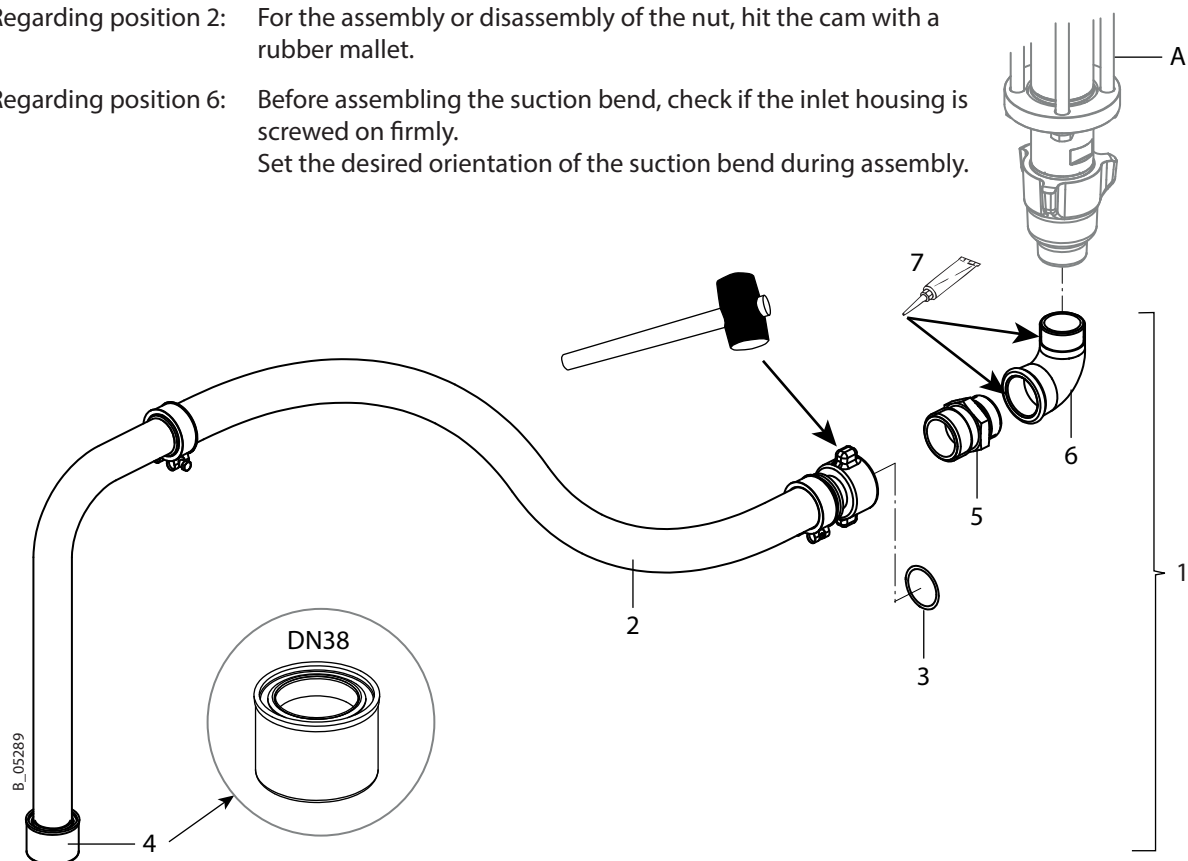
For trouble-free intake, use hoses which are as short as possible. The maximum hose length is dependent upon the viscosity of the product, the suction height, and the nominal diameter of the hose.

Accessories for product inlet		Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
Pos	K Designation	Order No.	Order No.	Order No.	Order No.
A	Piston pump PE/TG (Tiger: PE/L)	2339845	2339846	2351205	2339847
1	Suction hose set DN38-PC-G1 1/2	2352549			
2	◆ Suction hose DN38-PC (including Pos 3, 4). For details, see Chapter 13.7.	2325815			
3	◆ O-ring for suction hose quick coupler	367525			
4	◆ Suction filter DN38-12.8mesh-SSt	2329596			
5	Fitting-DF-MM-G1 1/2-Rd55x1/6-PN25-CS	2336489			
6	Fitting-EF-FM-G1 1/2-G1 1/2-PN25-TG	2329019			
7	Loctite® 638	9992833			

◆ = Wearing part

Regarding position 2: For the assembly or disassembly of the nut, hit the cam with a rubber mallet.

Regarding position 6: Before assembling the suction bend, check if the inlet housing is screwed on firmly.
Set the desired orientation of the suction bend during assembly.

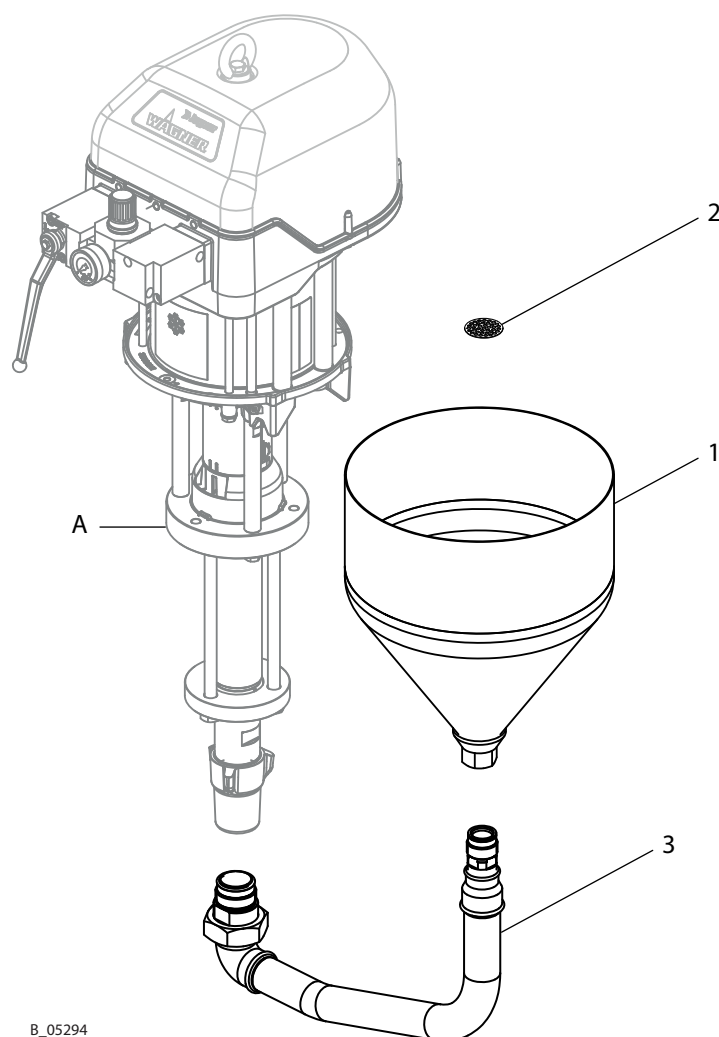


12.2.2 20 LITER TANK

Accessories for product inlet

Pos	K	Designation	Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
			Order No.	Order No.	Order No.	Order No.
A		Piston pump PE/TG (Tiger: PE/L)	2339845	2339846	2351205	2339847
1		20 liter tank	2341278			
2		Coarse sieve	2348279			
3		Suction tube PC complete. For details, see Chapter 13.8.	2348257			

◆ = Wearing part



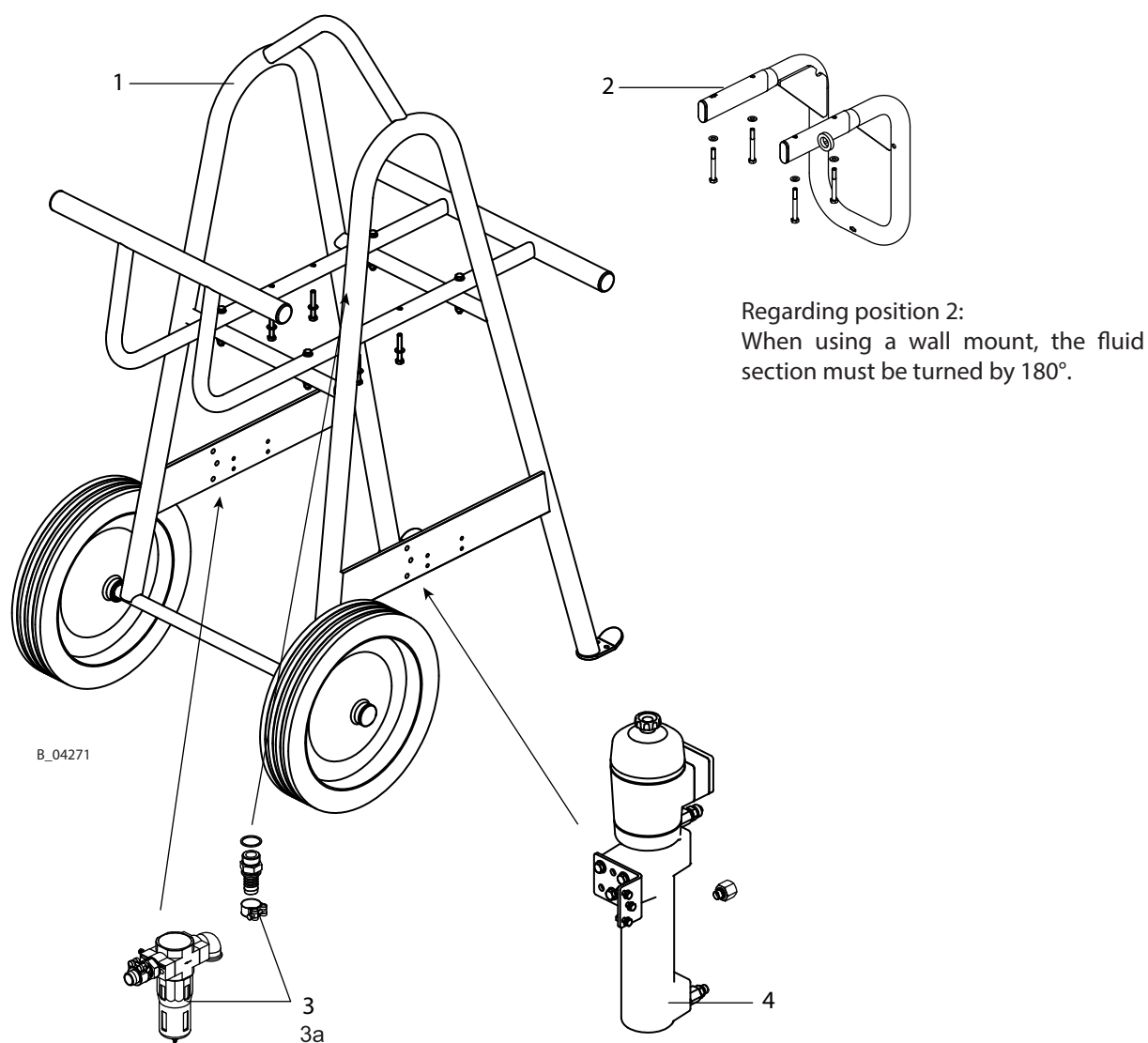
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12.3 ACCESSORIES FOR TROLLEY AND WALL MOUNT

Accessories for trolley and wall mount

		Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
Pos	K	Designation	Order No.	Order No.	Order No.
A		Piston pump PE/TG (Tiger: PE/L)	2339845	2339846	2351205
1		Heavy-duty PC trolley, complete. For details, see Chapter 13.9.	2339705		
2		Wall mount 9", complete	369020		
3		Air filter set PC (for details, see Chapter 13.9.1)	2339851		
3a	◆	Filter cartridge	2347890		
4		Heater set PC (for details, see Chapter 13.9.2)	2339728		

◆ = Wearing part



13 SPARE PARTS

- Observe "Repair" chapter: Repair personnel and mounting materials.
- The service manuals are available separately. See Chapter 1.3.

	 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. → Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit. → Before all work on the device and in the event of work interruptions: - Relieve pressure from spray guns and devices. - Secure spray guns against actuation. - Switch off the energy/compressed air supply. - Disconnect the control unit from the mains. → Observe the operating manual and service manuals at all times when carrying out work.	

13.1 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:

- Address for the invoice
- 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:

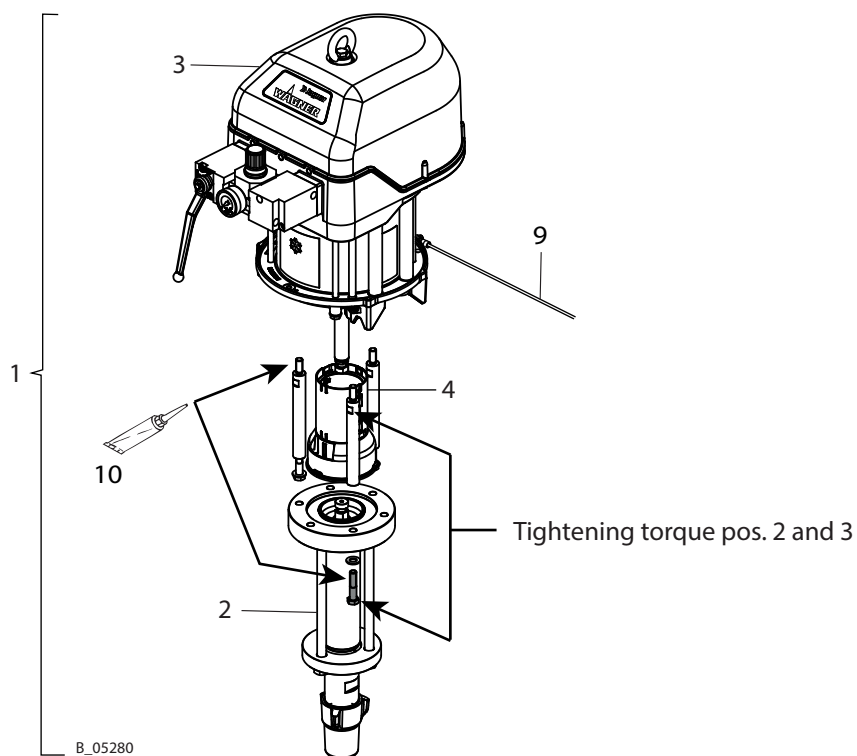
- ◆ Wearing parts

Note: These parts are not covered by warranty terms.

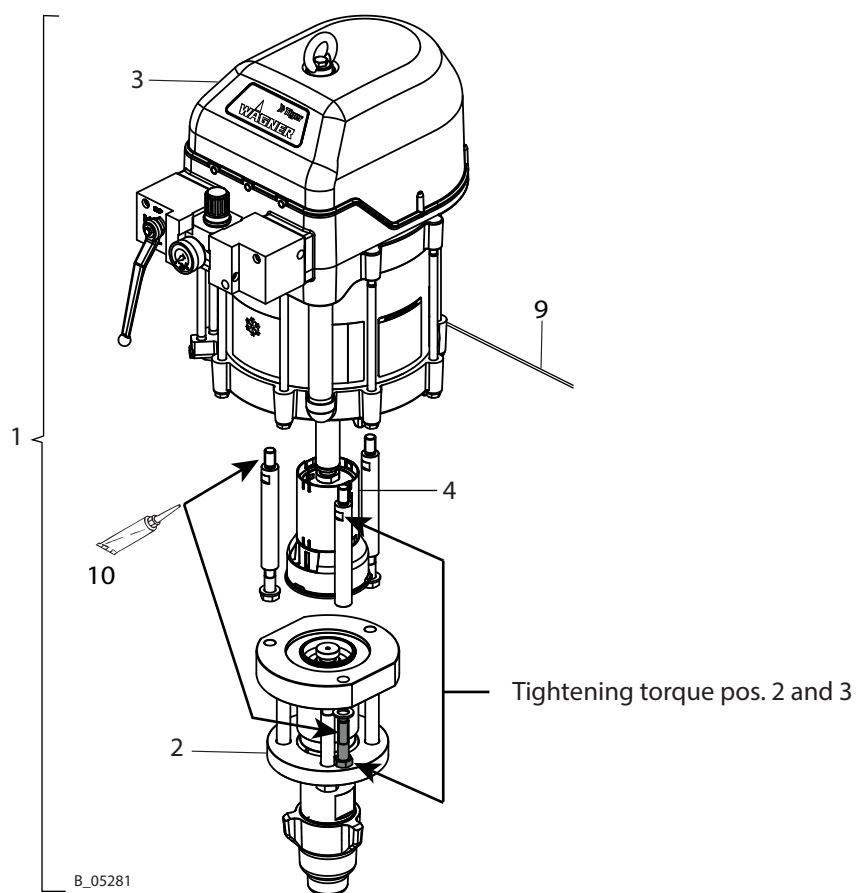
- Not part of standard equipment, available, however, as additional extra.

13.2 OVERVIEW OF THE COMPONENTS

		Jaguar 75-150 PE/TG	Jaguar 55-200 PE/TG	PROTEC 60-240 PE/TG
Pos	Designation	Order No.	Order No.	Order No.
1	Piston pump	2339845	2339846	2351205
2	Fluid section	2340007	2340008	2349152
3	Air motor	2329625	2342487	2351208
4	Connection set for air motor - fluid section	2350033	2350036	2351190
9	Grounding cable, complete	236219		
10	Molykote® DX grease	9992616		
Tightening torque for air motor/fluid section		50 Nm; 37 lbft	70 Nm; 52 lbft	70 Nm; 52 lbft



		Tiger 72-300 PE/L
Pos	Designation	Order No.
1	Piston pump	2339847
2	Fluid section	2340009
3	Air motor	2329627
4	Connection set for air motor - fluid section	2350037
9	Grounding cable, complete	236219
10	Molykote® DX grease	9992616
Tightening torque for air motor/fluid section		70 Nm; 52 lbft



13.3 AIR MOTORS

13.3.1 JAGUAR AIR MOTOR 9"




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.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
- Observe the operating manual and service manuals at all times when carrying out work.

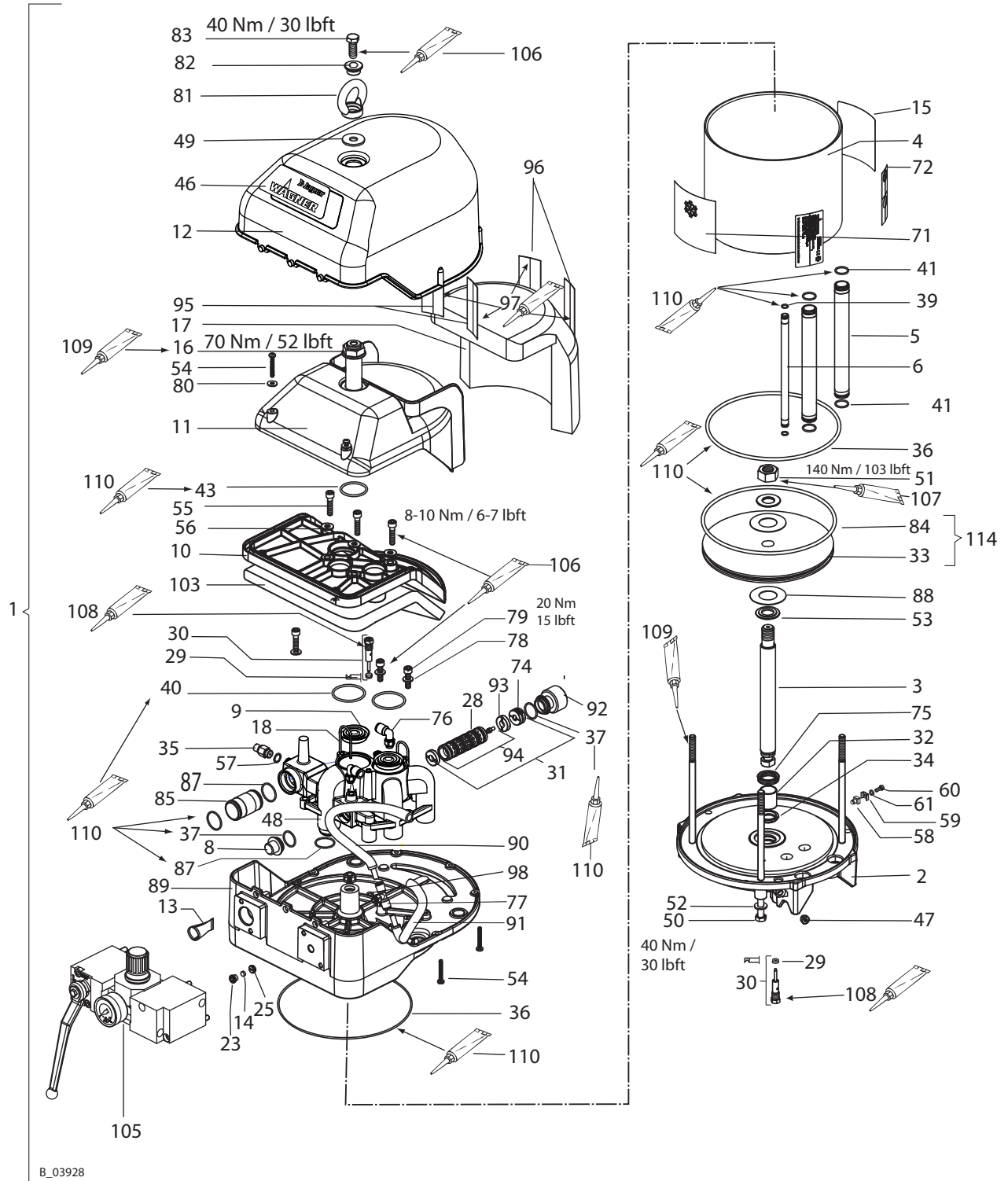
Jaguar air motor 9" spare parts list

				Jaguar 75-150	Jaguar 55-200
Pos	K	Stk	Designation	Order No.	Order No.
1		1	Air motor	2329625	2342487
2		1	Flange	369316	
3	◆	1	Piston rod	368402	
4		1	Cylinder pipe	369403	
5		2	Compressed air pipe	368404	
6		1	Control air pipe	367405	
8		1	Sealing plug	369307	
9	◆ ★	2	Outlet seal	369312	
10		1	Connecting part	369309	
11		1	Silencer	369310	
12		1	Hood	369905	
13	◆ ★	1	Compressed air filter	369313	
14	◆ ★	1	Control air filter	367314	
15		1	Fluid warning label	2332082	
16		1	Shoulder screw	369318	
17	◆	1	Sound deadening pad	369906	
18		2	Cotter pin	369320	
23		1	Filter holder	367324	
25		1	Throttle	367325	

◆ = Wearing part

★ = Included in service set

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

OPERATING MANUAL

Pressure regulator (pos. 105).
Details see Chapter 13.3.2.

Do not dismount the piston of the spool and sleeve assembly (pos. 94).

OPERATING MANUAL



Jaguar air motor 9" spare parts list

			Jaguar 75-150	Jaguar 55-200
Pos	K	Stk	Designation	Order No.
28	◆	6	O-ring	9974143
29	◆	2	Rod seal	9974217
30	◆	2	Pilot valve	369290
31	◆	1	Spool-sleeve combination assembly, ISO3	369907
32	◆	1	Permaglide bushing	9962019
33		1	Piston 9	369385
34	◆ ★	1	Seal wiper ring	9974125
35		1	Safety valve 7.5 bar	368286
		1	Safety valve 8.4 bar	368288
36	◆ ★	2	O-ring	9974133
37	◆ ★	2	O-ring	9971056
39	◆ ★	2	O-ring	9974089
40	◆ ★	2	O-ring	9974132
41	◆ ★	4	O-ring	9971137
43	◆ ★	1	O-ring	9974165
46		1	WAGNER label	2330372
47		2	Threaded plug	9998675
48		1	Control housing	369315
49		1	Washer	9925034
50		4	Hexagon screw	9907137
51		1	Hexagon nut	9910605
52		4	Washer	9920106
53		2	Washer	369303
54		7	SFS screw	9907125
55		3	Socket cap screw	9900314
56		3	Washer	9925029
57	◆ ★	1	Sealing ring	9970149
58		1	Base	9952668
59		1	Clamping bracket	9952667
60		1	Socket cap screw	9900701
61		1	Spring ring	9921505
71		1	IceBreaker label	2330382
72		1	Warning label	2332077
74	◆	1	Detent body	369027
75	◆ ★	1	Rod seal profile E5	9974124
76		2	Threaded elbow fitting	9992757
77		1	Screw connector T	9992758
78		4	Washer	9920102
79		4	Socket cap screw	9900313
80		2	Washer	9925031
81		1	Lifting eye nut	369325

◆ = Wearing part

★ = Included in service set

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

OPERATING MANUAL



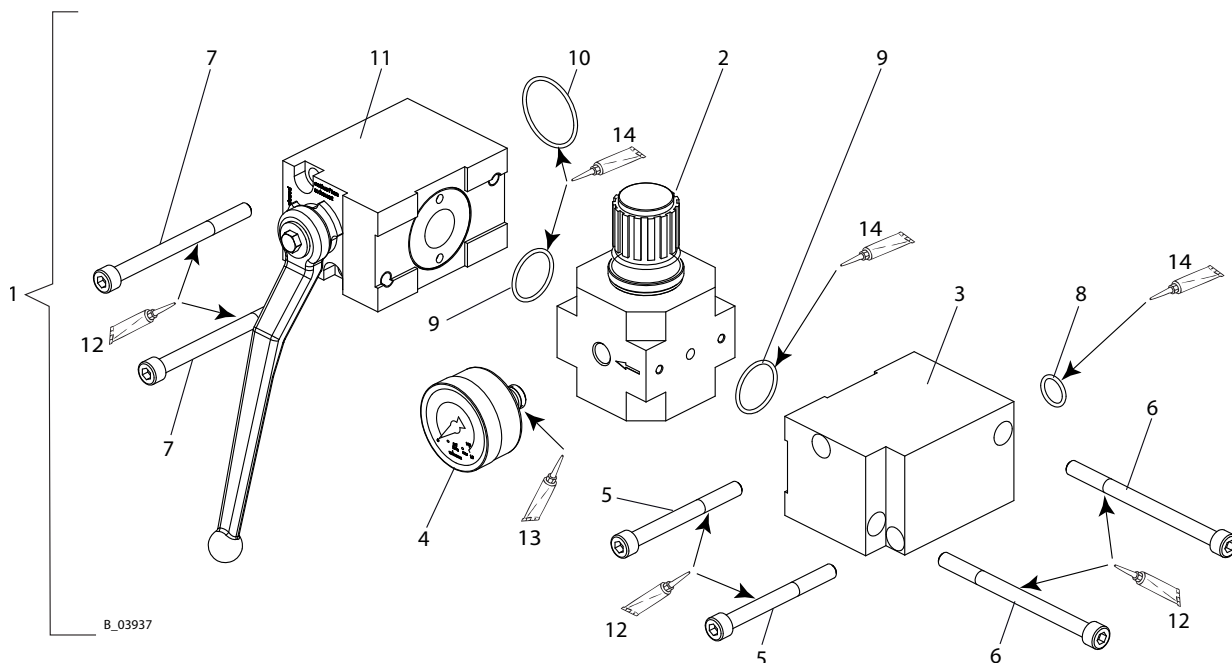
Jaguar air motor 9" spare parts list

				Jaguar 75-150	Jaguar 55-200
Pos	K	Stk	Designation	Order No.	Order No.
82		1	Shoulder ring	369324	
83		1	Hexagon screw	9900150	
84	◆ ★	1	O-ring	9974262	
85		1	Air pipe	369306	
87	◆ ★	3	O-ring	9971004	
88		2	Damping washer	369304	
89		1	Control flange	369317	
90		1	Air hose back	369026	
91		1	Air hose front	369025	
92		1	Lock space 9	369326	
93	◆	2	Damper ISO3	369329	
94	◆	1	Spool & sleeve assembly ISO3	9943131	
95	◆	1	Velcro fastener adhesive part	9999151	
96	◆	1	Velcro fastener coating part	9999152	
97		1	Miranit contact adhesive	9992816	
98	◆	1	Viton B O-ring	9971372	
103	◆	1	Sound deadening pad 9/12"	369330	
105		1	Pressure regulator unit 9 complete (for details, see Chapter 13.3.2)	2328609	
106		1	Loctite® 222 50ml; 50cc	9992590	
107		1	Loctite® 243 50ml; 50cc	9992511	
108		1	Loctite® 542 50ml; 50cc	9992831	
109		1	Molykote® DX grease	9992616	
110		1	Mobilux® EP 2 grease	9998808	
114	●	1	Piston 9 with SOFT O-ring	369971	
		1	Service set air motor 9"	369987	

◆ = Wearing part

★ = Included in service set

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

13.3.2 AIR MOTOR REGULATOR FOR JAGUAR AND PROTEC

Jaguar air motor regulator spare parts list

Pos	K	Stk	Designation	9"	10"
				Order No. for Jaguar 75-150 55-200	Order No. for PROTEC 60-240
1		1	Pressure regulator unit, complete	2328609	--
2	◆	1	Pressure regulator valve 9"	2309974	
3		1	Distribution piece	2309963	2346229
4	◆	1	Pressure gauge 0-10 bar (d50)	9998725	
5		2	Hexagon socket cylinder head screw	9900360	
6		2	Hexagon socket cylinder head screw	9907087	
7		2	Hexagon socket cylinder head screw	9900356	
8	◆	1	O-ring	9974166	
9	◆	2	O-ring	3105540	
10	◆	1	O-ring	9971405	
11	◆	1	Edge ball valve 9"	2310637	
12		1	Molykote® DX grease	9992616	
13		1	Loctite® 542, 50ml; 50cc	9992831	
14		1	Mobilux® EP 2 grease	9998808	

◆ = Wearing part

13.3.3 PROTEC AIR MOTOR 10"

PROTEC 10" air motor spare parts list

				PROTEC 60-240
Pos	K	Stk	Designation	Order No.
1		1	Air motor 10", complete	2351208
2		1	Hexagon screw without shaft	9900150
3		1	Shoulder ring	369324
4		1	Lifting eye nut	369325
5		1	Washer	9925034
6		1	WAGNER PROTEC 10 label	2353725
7		1	Hood 9	369311
8	◆	2	Velcro fastener adhesive part	9999151
9	◆	2	Velcro fastener coating part	9999152
10	◆	1	Sound deadening pad 9	369319
11		1	Shoulder screw 9	369318
12		7	Screw SFS Plastite 45	9907125
13		2	Washer 6.4	9925031
14		1	Silencer 9	369310
15	◆ ★	1	O-ring	9974165
16		3	Socket cap screw; hexagon socket M8X35	9900314
17		3	Washer 8.4	9925029
18		1	Connecting part 9	369309
19	◆	1	Sound deadening pad 9/12"	369330
20	◆ ★	2	O-ring	9974132
21		1	Safety valve 8.4 bar	368288
22		1	Angular plug connection	9992718
23		2	Air hose	369026
24		2	Straight screw-in fittings	9998993
25	◆	2	Pilot valve	369290
25a	◆	2	Rod seal	9974217
26	◆ ★	2	Outlet seal 9	369312
27		1	Y-plug connection	3159464
28		1	Hose 8x1 L=42mm	9982078
29		1	Male stud elbow, 8-1/8	9992757
30		2	Cotter pin	2355809
31		1	Control-flange 10	2345960
33		1	Pressure regulator unit 10": see Chapter 13.3.2	--
34		1	Plug 10	2354547
35	◆ ★	2	O-ring	2310252
36	◆	1	Spool-sleeve combination assembly, ISO3	369907
37	◆	1	Spool & sleeve assembly ISO3	9943131
38	◆	6	O-ring	9974143
39	◆	2	Damper ISO3	369329

◆ = Wearing part

★ = Included in service set

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

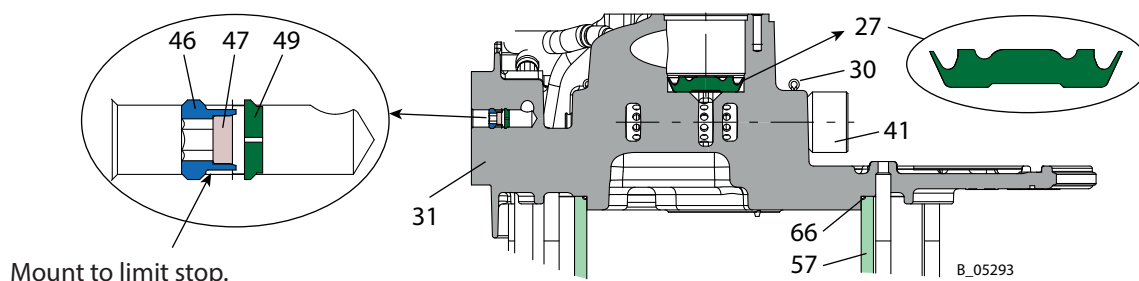
PROTEC 10" air motor spare parts list

				PROTEC 60-240
Pos	K	Stk	Designation	Order No.
40	◆	1	Detent element, complete ISO 3	369027
41		1	Lock space 10	2354548
42		1	Cover	2354549
43		1	O-ring	9971375
44		1	Securing ring	9999360
45		1	Threaded plug G1/4"	9998274
46		1	Filter holder	367324
47	◆ ★	1	Control air filter	367314
48	◆ ★	1	Filter compressed air 9	369313
49		1	Throttle	367325
51		1	Hexagon nut	9913051
52		1	Piston 10	2347028
53	◆ ★	1	O-ring	2347183

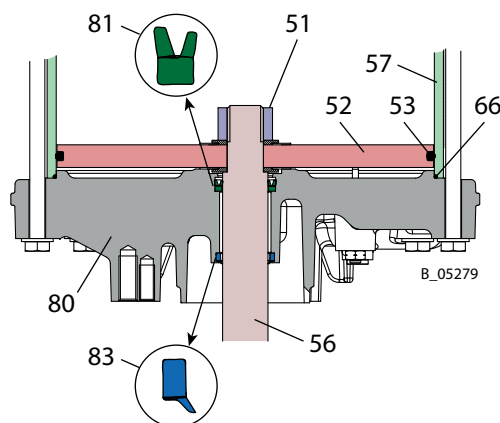
◆ = Wearing part

★ = Included in service set

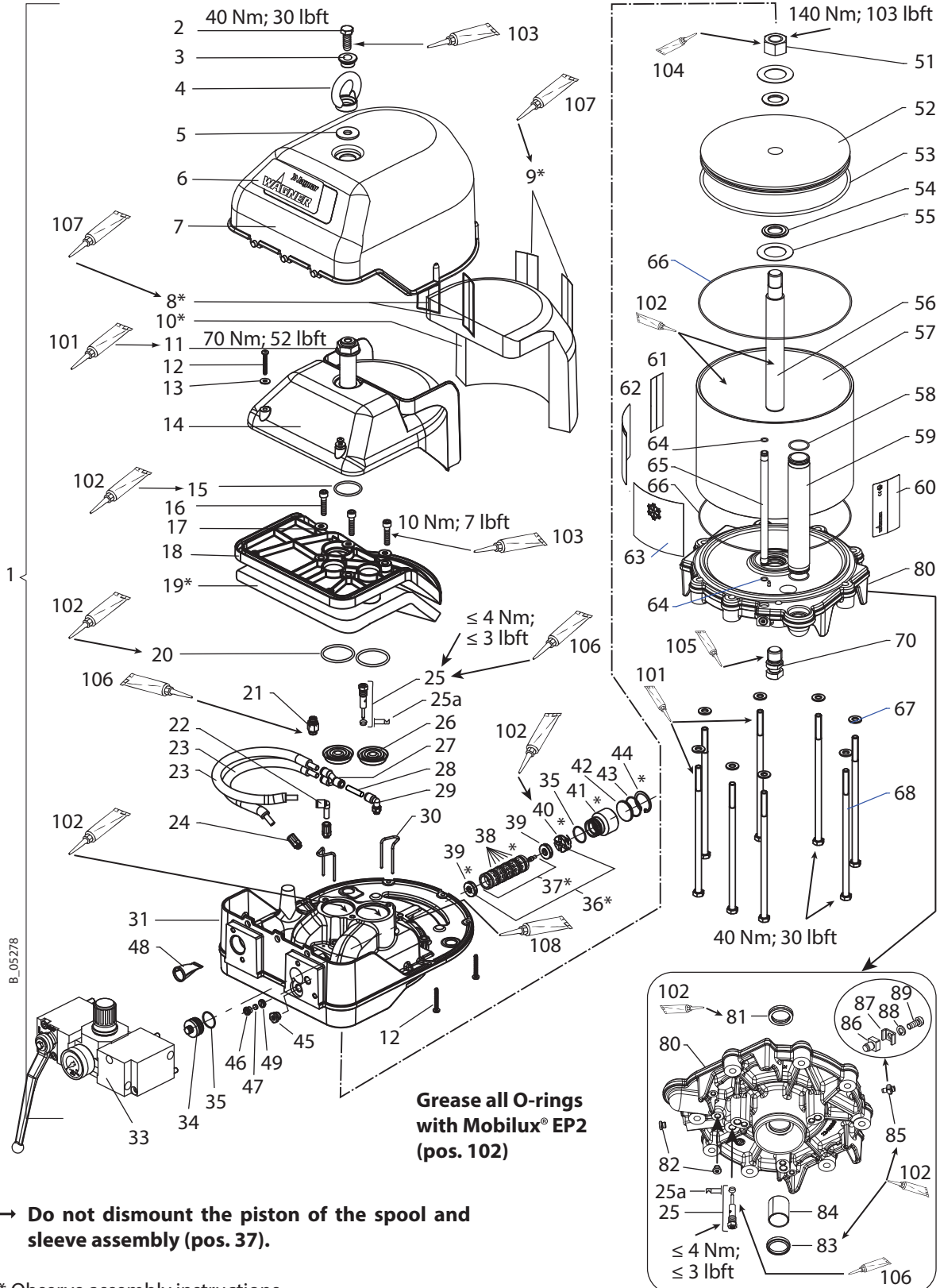
● = Not part of the standard equipment but available as a special accessory



Pos	Assembly instructions
8	Stick the adhesive part to the inside of the hood. "Miranit" adhesive (pos. 107).
9	Stick velvet label to fleece side of the deadening pad. "Miranit" adhesive (pos. 107).
10	Insert the deadening pad into the hood (tight-fitting). Fleece side outwards.
19	Stick deadening pad with fleece side outwards holohedral to the connecting part. "Miranit" adhesive (pos. 107).
36-44	Before assembling, lightly oil the housing bore of pos. 31 with Tecni oil (pos. 108). Do not dismount the piston of the spool and sleeve assembly (pos. 37).



OPERATING MANUAL



OPERATING MANUAL



PROTEC 10" air motor spare parts list

				PROTEC 60-240
Pos	K	Stk	Designation	Order No.
54		2	Pistonwasher 12	370303
55		2	Damping washer 12	370304
56	◆	1	Piston rod 10	2348760
57		1	Tube 10	2347029
58	◆ ★	2	O-ring	9971004
59		1	Compressed air tube 10	2347257
60		1	Type plate PP3000	--
61		1	Warning label	2332077
62		1	Fluid warning label	2332082
63		1	IceBreaker label	2330382
64	◆ ★	2	O-ring	9974089
65		1	Control air pipe 150	367405
66	◆ ★	2	O-ring	2347178
67		8	Washer	9920106
68		8	Hexagon screws	9907137
70		1	Connection fluid section	2348761
80		1	Flange 10	2345964
81	◆ ★	1	Rod seal	2347218
82		2	Threaded plug G1/8"	9998675
83	◆ ★	1	Scraper ring	2347211
84	◆	1	Permaglide bushing	2347187
85		1	Grounding, complete	367258
86		1	Base	--
87		1	Clamping bracket	9952667
88		1	Spring washer	9921505
89		1	Socket cap screw with slit	9900701
101		1	Molykote® DX grease	9992616
102		1	Mobilux® EP 2 grease	9998808
103		1	Loctite® 222	9992590
104		1	Lock screw Loctite® 243	9992511
105		1	Loctite® 270	9992528
106		1	Loctite® 542	9992831
107		1	Miranit contact adhesive	9992816
108		1	Tecni oil 1000 ml	Z102.00
		1	Service set air motor 10"	2353088

◆ = Wearing part

★ = Included in service set

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

13.3.4 TIGER AIR MOTOR 12"




DANGER

Incorrect maintenance/repair!
Danger to life and equipment damage.

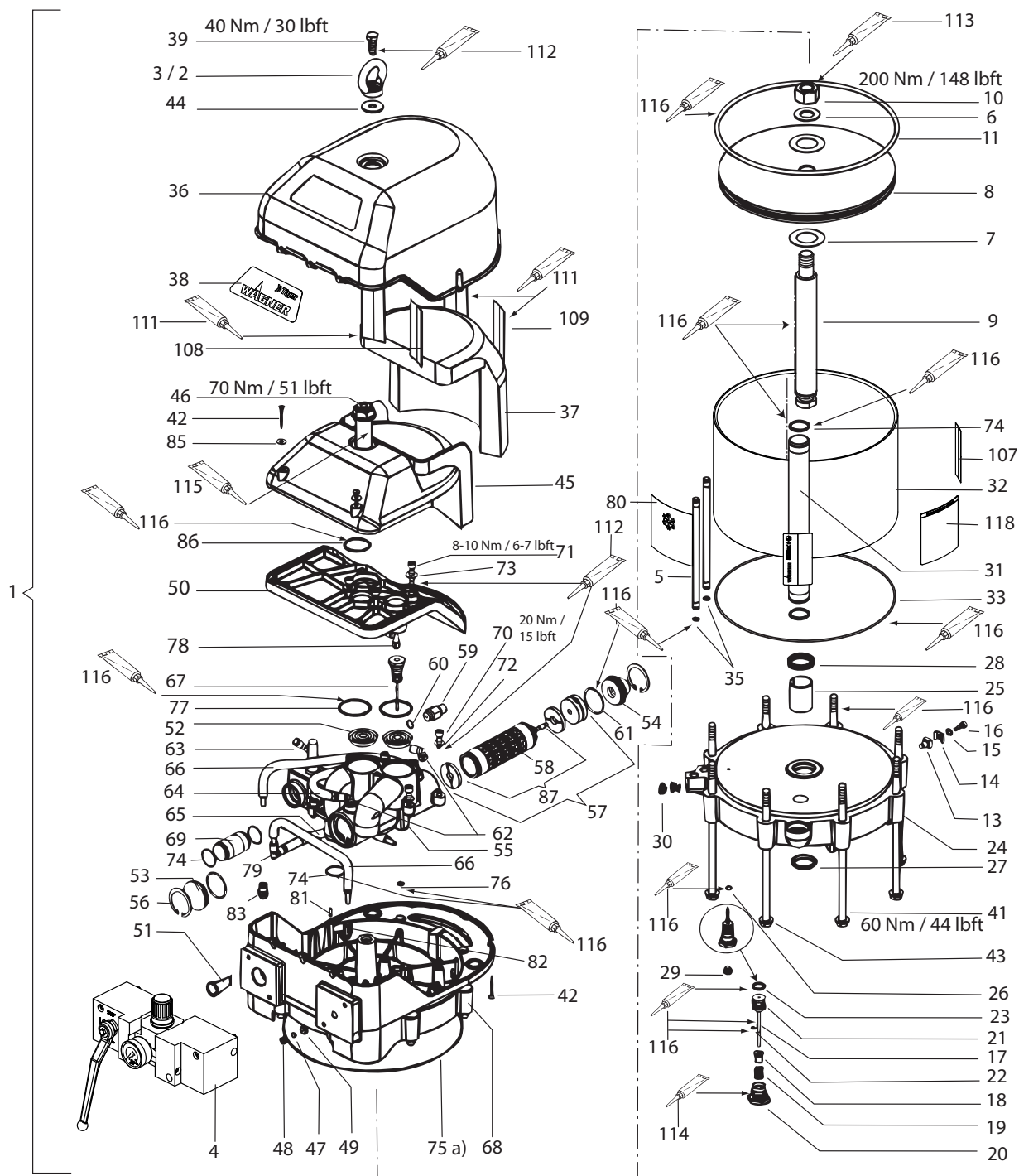
- Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
- Observe the operating manual and service manuals at all times when carrying out work.

Tiger air motor 12" spare parts list

Pos	K	Stk	Designation	Order No.
1		1	Air motor, complete	2329627
2		1	Shoulder ring	369324
3		1	Lifting eye nut	369325
4	◆	1	Pressure regulator unit 12 (incl. Pos. 40)	2328610
5		2	Control air pipe 150	367405
6		1	Pistonwasher 12	370303
7		2	Damping washer 12	370304
8		1	Piston 12	370385
9	◆	1	Piston rod 12/150	370402
10		1	Hexagon nut	9913051
11	◆ ★	1	O-ring	9974261
13		1	Base	9952668
14		1	Clamping bracket	9952667
15		1	Spring washer	9921505
16		1	Socket cap screw with slit	9900701
17		1	Gauging pin	370307
18		2	Valve cover	370309
19		2	Spiral spring	370310
20		2	Screw plug	370311
21	◆	2	Valve body	370312
22		2	Lock washer	9922724

◆ = Wearing part

★ = Included in service set



B 03954

Do not dismount the piston of the spool and sleeve assembly (pos. 87).

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Tiger air motor 12" spare parts list

Pos	K	Stk	Designation	Order No.
23	◆	2	O-ring	9974102
24		1	Flange 12	370316
25	◆	1	Permaglide bushing	9962026
26	◆	1	O-ring	9971446
27	◆ ★	1	Scraper ring d35	9974158
28	◆ ★	1	Rod seal d35	9974159
29		1	Threaded plug	9998675
30		2	Threaded plug	9998274
31		1	Air tube 12	370306
32		1	Cylinder tube 12/150	370403
33	◆ ★	1	O-ring	9971129
35	◆ ★	4	O-ring	9974089
36		1	Hood 9	369311
37	◆	1	Sound absorbing mat 9	369319
38		1	WAGNER 12 Tiger label	2330374
39		1	Hexagon screw	9900150
41		8	Hexagon screw	9907208
42		5	Screw	9907125
43		8	Washer	9920107
44		1	Washer	9925034
45		1	Silencer 9	369310
46		1	Shoulder screw 9	369318
47	◆ ★	1	Control air filter	367314
48		1	Filter holder	367324
49		1	Throttle	367325
50		1	Connecting part 9	369309
51	◆ ★	1	Filter compressed air 9	369313
52	◆ ★	2	Discharger Gasket DE 50	369312
53		1	Stop plate 12	370313
54		1	Sealing plug 12	370314
55		1	Control housing 12	370315
56		2	Securing ring	370330
57	◆	1	Spool and sleeve assembly	9943121
58	◆	6	O-ring	9974160
59		1	Safety valve 7.8 bar	2302480
60	◆ ★	1	Sealing ring	9970149
61	◆ ★	2	O-ring	9974092
62		2	Threaded elbow fitting, 8-1/4"	9998253
63		2	Threaded elbow fitting, 8-1/8"	9992757
64		1	Air hose front	370233
65		1	Air hose back	370234
66		2	Air hose down	370235
67		1	Gauging pin	370308

◆ = Wearing part

★ = Included in service set

OPERATING MANUAL



Tiger air motor 12" spare parts list

Pos	K	Stk	Designation	Order No.
68		1	Control-flange 12	370317
69		1	Compressed air tube 12	370404
70		4	Socket cap screw	9900313
71		3	Socket cap screw	9900314
72		4	Washer	9920102
73		3	Washer	9925029
74	◆	5	O-ring	9971004
75	◆ ★	1	O-ring	9971129
76	◆	1	O-ring	9971372
77	◆ ★	2	O-ring	9974132
78		1	Threaded elbow fitting, 8-1/8"	9992757
79		1	Screw connector L	9998613
80		1	IceBreaker label	2330382
81		2	Pin for control flange	370318
82		1	Straight threaded fitting	9992744
83		1	Straight threaded fitting	9992743
84		2	Screw SFS Plastite 45	9907125
85		2	Washer	9925031
86	◆ ★	1	O-ring	9974165
90		1	Elbow ball valve housing 12	370323
107		1	Warning label	2332077
108	◆	1	Velcro fastener adhesive part	9999151
109	◆	1	Velcro fastener coating part	9999152
111		1	Miranit contact adhesive	9992816
112		1	Loctite® 222 50 ml; 50 cc	9992590
113		1	Loctite® 243 50 ml; 50 cc	9992511
114		1	Loctite® 542 50 ml; 50 cc	9992831
115		1	Molykote® DX grease	9992616
116		1	Mobilux® EP 2 grease	9998808
118		1	Fluid warning label	2332082

	1	Service set, air motor 12"	370987
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◆ = Wearing part

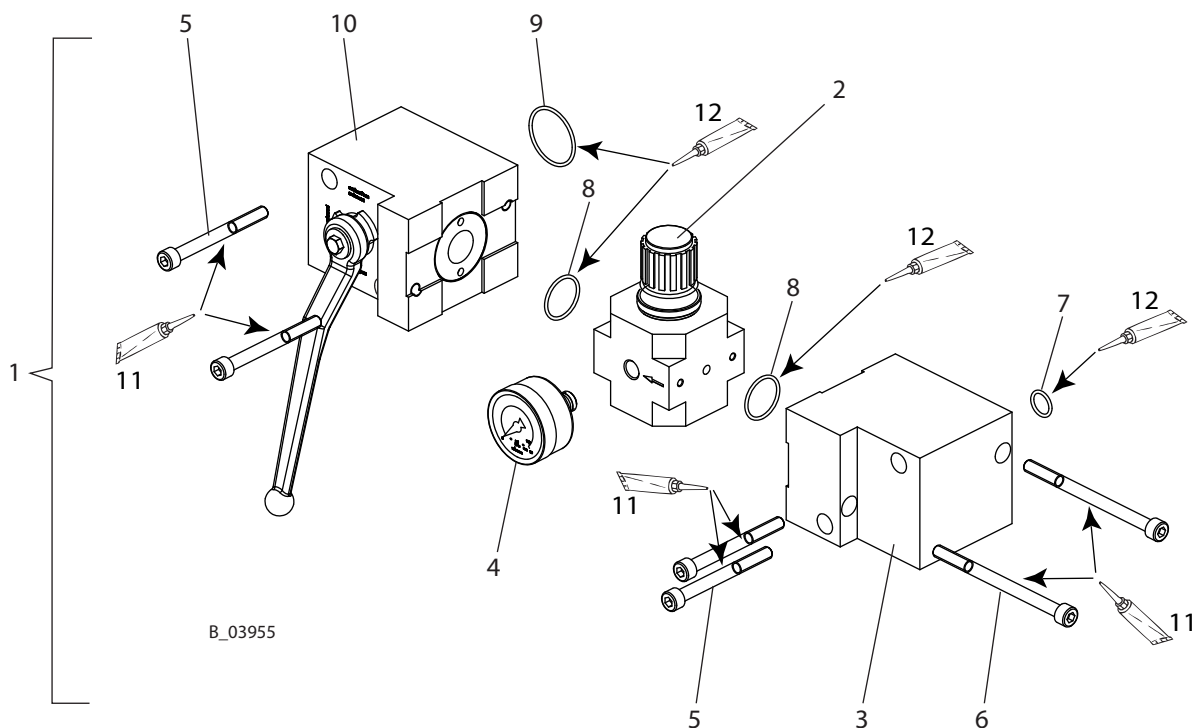
★ = Included in service set

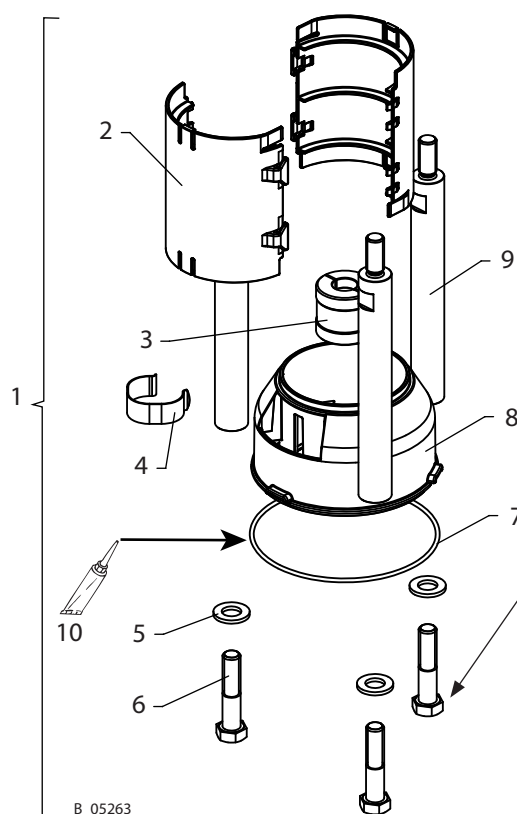
13.3.5 TIGER AIR MOTOR REGULATOR

Tiger air motor regulator spare parts list

Pos	K	Stk	Designation	Order No.
1		1	Pressure regulator unit 12", complete	2328610
2	◆	1	Pressure regulator valve 12"	2309974
3		1	Distibutor block LR-D Maxi 12	2310588
4	◆	1	Pressure gauge 0-10 bar (d50)	9998725
5		4	Hexagon socket cylinder head screw	9900360
6		2	Hexagon socket cylinder head screw	9907087
7	◆	1	O-ring	9974166
8		2	O-ring	3105540
9	◆	1	O-ring	9971405
10	◆	1	Elbow ball valve LR-D Maxi 12	2310638
11		1	Molykote® DX grease	9992616
12		1	Mobilux® EP 2 grease	9998808

◆ = Wearing part



13.4 CONNECTION SETS

Tightening torque			
Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
50 Nm; 37 lbft	70 Nm; 52 lbft		

Assembly with air motor and fluid section: see Chapter 13.2

Spare parts list for connection sets

				Jaguar 75-150	Jaguar 55-200	PROTEC 60-240	Tiger 72-300
				Connection set			
				LM-FS 5	LM-FS 8	LM-FS 11	LM-FS 9
Pos	K	Stk	Designation	Order No.	Order No.	Order No.	Order No.
1		1	Connection set LM-FS ...	2350033	2350036	2351190	2350037
2		2	Coupling cover stroke 150	368532			
3		1	Coupling	368529	2337924	2337929	370529
4		1	Spring	368530	370530		
5		3	Washer, A12, DIN 125-1	9920107			9925011
6		3	Hexagon screws	9900157			9907209
7	◆ ★	1	O-ring	9974116			
8		1	Separating oil cup stroke 150	368531			
9		3	Threaded bolt	368533		2359164	370533
10		1	Mobilux® EP 2 grease	9998808			

◆ = Wearing parts

★ = Included in the service set of the fluid section PE/TG or PE/L (see Chapter 13.5).

13.5 FLUID SECTIONS

13.5.1 FLUID SECTION 150 CM3



! DANGER

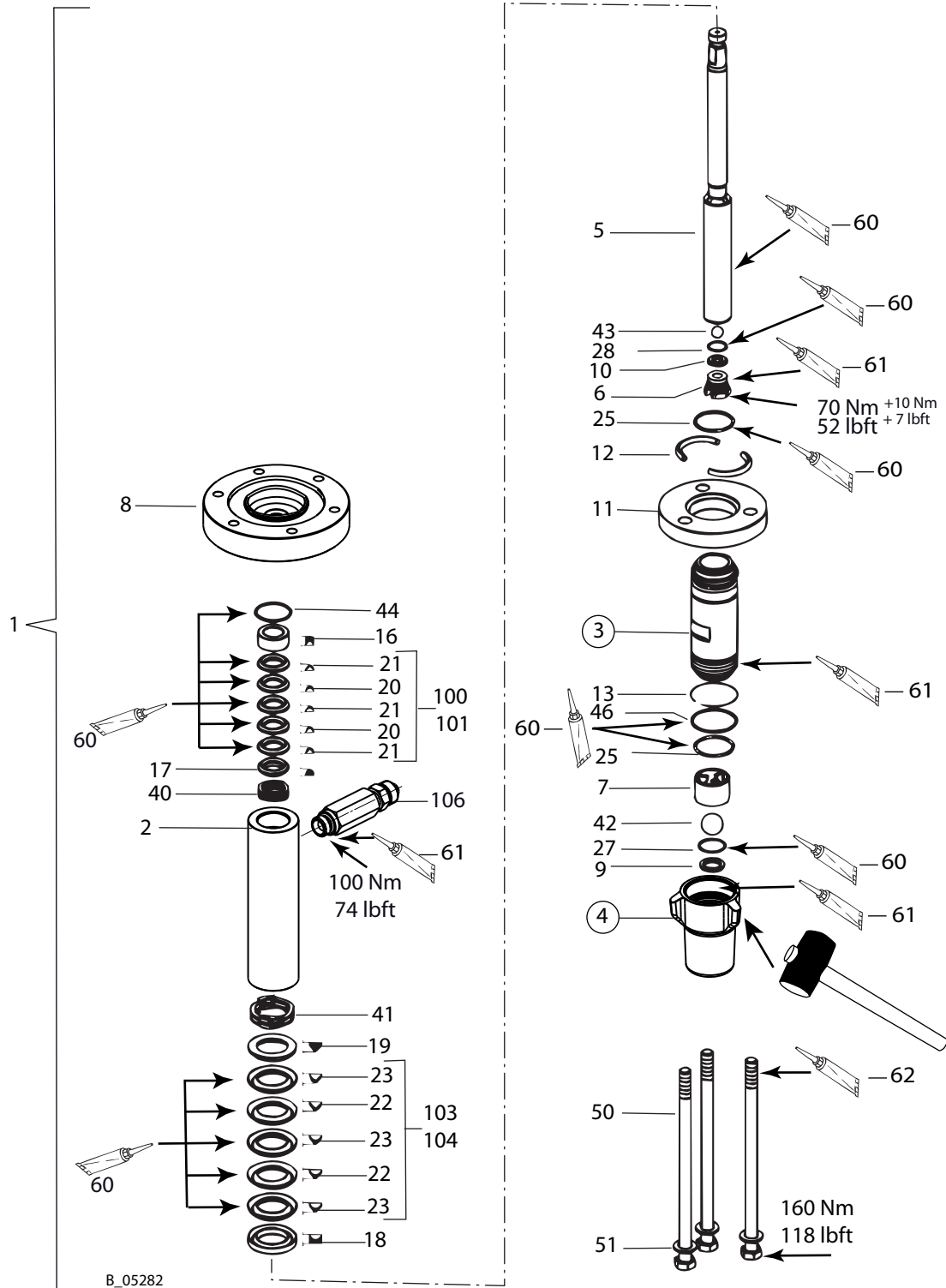
Incorrect maintenance/repair!
Danger to life and equipment damage.

- Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
- Observe the operating manual and service manuals at all times when carrying out work.

Spare parts list for fluid section				150 cm ³		Only for 2K systems (hardener pump)
				PE/TG	PE/L	150 cm ³ PE/T
Pos	K	Stk	Designation	Order No.	Order No.	Order No.
1		1	Fluid section	2340007		
2		1	Pipe		368552	
3		1	Cylinder		368553	
4		1	Inlet housing 150-PC		2338688	
5	◆	1	Piston		368555	
6		1	Valve screw		368506	
7	◆ ★	1	Ball guide, inlet		2338788	
8		1	Connecting flange		368551	
9	◆	1	Valve seat, inlet		368509	
10	◆	1	Valve seat, outlet		368510	
11		1	Snap ring flange		368561	
12		2	Snap ring half		368512	
13		1	Securing ring		368513	
16		1	Support ring		368516	
17		1	Pressure ring		367519	
18		1	Support ring		368518	
19		1	Pressure ring		368519	

◆ = Wearing parts

★ = Included in service set. (More parts, see Chapter 13.4)



Regarding position 4:

Tighten by hand on block.

If necessary, hit the cam with a rubber mallet and use a spanner to hold position 3.

OPERATING MANUAL



Spare parts list for fluid section				150 cm ³		Only for 2K systems (hardener pump)
				PE/TG	PE/L	150 cm ³ PE/T
Pos	K	Stk	Designation	Order No.	Order No.	Order No.
100	◆	1	Packing PE/TG, complete (small)	367991		
	◆	1	Packing PE/L complete (small)		367993	
101	◆ ●	1	Packing PE/T, complete (small)			367992
20	◆ ★	2	Sealing collar TG (small)	367522		
	◆ ★	2	Sealing collar L (small)		367922	
	◆ ★	2	Sealing collar T (small)			367900
21	◆ ★	3	Sealing collar PE (small)	367523		
103	◆	1	Packing PE/TG, complete (large)	368991		
	◆	1	Packing PE/L, complete (large)		368993	
104	◆	1	Packing PE/T, complete (large)			368992
22	◆ ★	2	Sealing collar TG (large)	368522		
	◆ ★	2	Sealing collar L (large)		368922	
	◆ ★	2	Sealing collar T (large)			368900
23	◆ ★	3	Sealing collar PE (large)	368523		
25	◆ ★	2	O-ring	368525		
27	◆ ★	1	O-ring	368527		
28	◆ ★	1	O-ring	368528		
40	◆ ★	1	Wave spring (small)	9998670		
41	◆ ★	1	Wave spring (large)	9998671		
42	◆ ★	1	Ball (large)	9943082		
43	◆ ★	1	Ball (small)	9941512		
44	◆ ★	1	O-ring	9974092		
46	◆ ★	1	O-ring	9974107		
50		3	Hexagon screw	9907142		
51		3	Washer	9925011		
60		1	Mobilux® EP 2 grease	9998808		
61		1	Anti-seize paste tube	9992609		
62		1	Molykote® DX grease	9992616		
106		1	Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt	2329922		

Service-Sets

	1	Service set PE/TG	368990		
	1	Service set PE/L		2342071	
	1	Service set PE/T			368994

◆ = Wearing parts

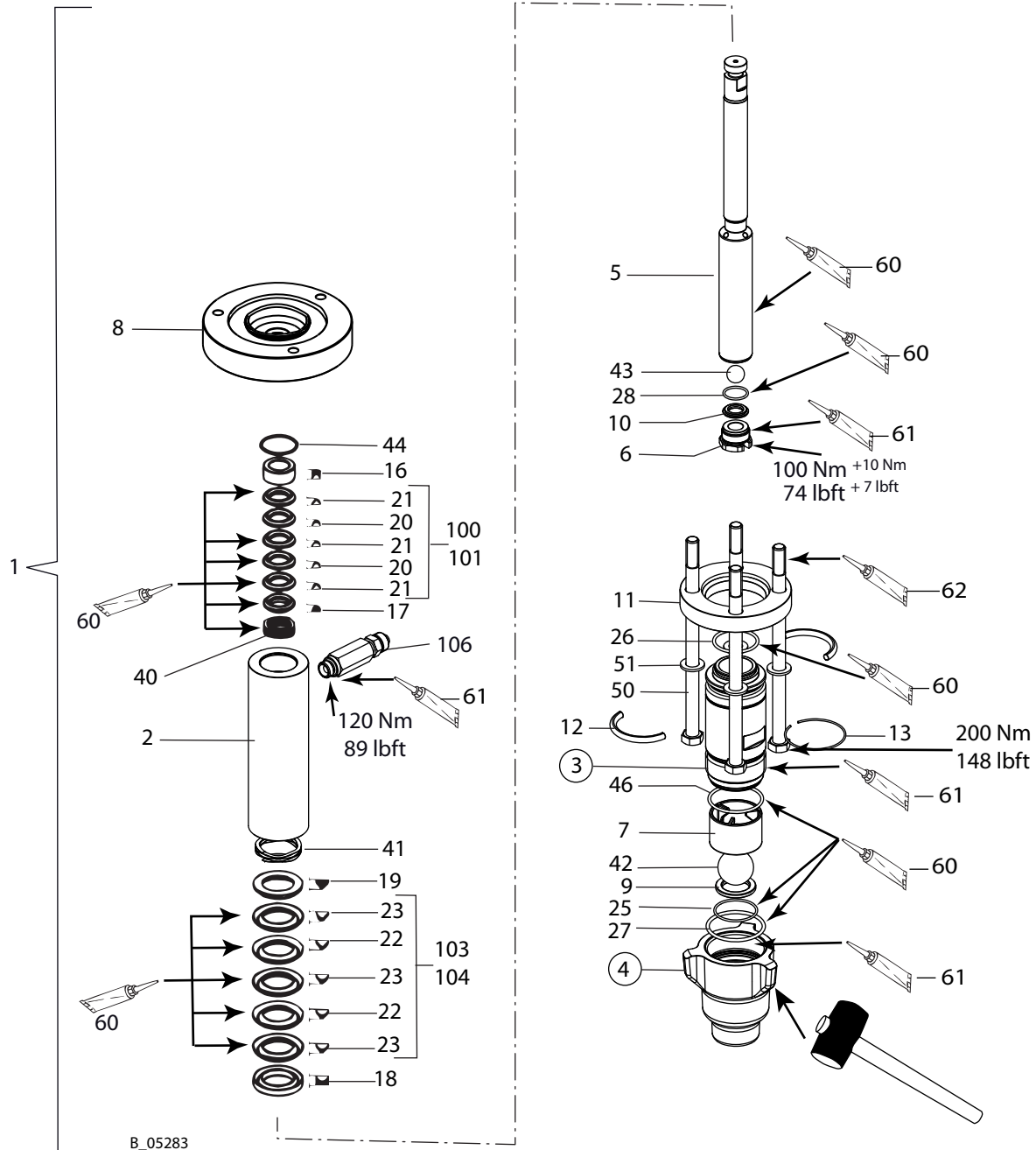
★ = Included in service set. (More parts, see Chapter 13.4)

13.5.2 FLUID SECTIONS 200 CM³ – 240 CM³

Spare parts list for fluid section				200 cm ³		Only for 2K systems (hardener pump)	240 cm ³		Only for 2K systems (hardener pump)
				PE/TG	PE/L	PE/T	PE/TG	PE/L	PE/T
Pos	K	Stk	Designation	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
1		1	Fluid section	2340008			2349152		
2		1	Pipe		2336658			2346793	
3		1	Cylinder		2336669			2346786	
4		1	Inlet housing			2338107			
5	◆	1	Piston		2336666			2346787	
6		1	Valve screw			2336692			
7		1	Ball guide, inlet			2336668			
8		1	Connecting flange			2336661			
9	◆	1	Valve seat, inlet			369509			
10	◆	1	Valve seat, outlet			2336695			
11		1	Snap ring flange			2336689			
12		2	Snap ring half			2336785			
13		1	Securing ring			2336690			
16		1	Support ring		2336670			2346767	
17		1	Pressure ring		2336680			2346789	
18		1	Support ring		2336686			2346780	
19		1	Pressure ring		2336694			2346774	
100	◆	1	Packing PE/TG, complete (small)	2341473			2353071		
	◆	1	Packing PE/L, complete (small)		2342073			2353072	
101	◆	1	Packing PE/T, complete (small)			2345985			2353074
20	◆ ★	2	Sealing collar TG (small)	2336679			2346790		
	◆ ★	2	Sealing collar L (small)		2341945			2353078	
	◆ ★	2	Sealing collar T (small)			2343776			2348802
21	◆ ★	3	Sealing collar PE (small)		2336674			2346791	

◆ = Wearing parts

★ = Included in service set (more parts, see Chapter 13.4).



Regarding position 4:

Tighten by hand on block.

If necessary, hit the cam with a rubber mallet and use a spanner to hold position 3.

OPERATING MANUAL



Spare parts list for fluid section				200 cm ³		Only for 2K systems (hardener pump)	240 cm ³		Only for 2K systems (hardener pump)
				PE/TG	PE/L	PE/T	PE/TG	PE/L	PE/T
Pos	K	Stk	Designation	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
103	◆	1	Packing PE/TG, complete (large)	2341474			2353075		
	◆	1	Packing PE/L, complete (large)		2342074			2353076	
104	◆	1	Packing PE/T, complete (large)			2345986			2353077
22	◆ ★	2	Sealing collar TG (large)	2336688			2346778		
	◆ ★	2	Sealing collar L (large)		2341943			2353079	
	◆ ★	2	Sealing collar T (large)			2343775			2348801
23	◆ ★	3	Sealing collar PE (large)	2336687			2346779		
25	◆ ★	1	O-ring	369527					
26	◆ ★	1	O-ring	2336684			2346782		
27	◆ ★	1	O-ring	9974194					
28	◆ ★	1	O-ring	2338256					
40	◆ ★	1	Wave spring (small)	2338091					
41	◆ ★	1	Wave spring (large)	2338092					
42	◆ ★	1	Ball (large)	9943086					
43	◆ ★	1	Ball (small)	9941513					
44	◆ ★	1	O-ring	9974132					
46	◆ ★	1	O-ring	2336683					
50		3	Hexagon screw	9907142					
51		3	Washer	9925011					
60		1	Mobilux® EP 2 grease	9998808					
61		1	Anti-seize paste tube	9992609					
62		1	Molykote® DX grease	9992616					
106		1	Fitting SF-MM-G1/2"-M24-PN530-SSt	2337413					

Service sets:

	1	Service set PE/TG	2341476			2352899		
	1	Service set PE/L		2342072			2353053	
	1	Service set PE/T			2345981			2353055

◆ = Wearing parts

★ = Included in service set (more parts, see Chapter 13.4).

13.5.3 FLUID SECTION 300 CM3




DANGER

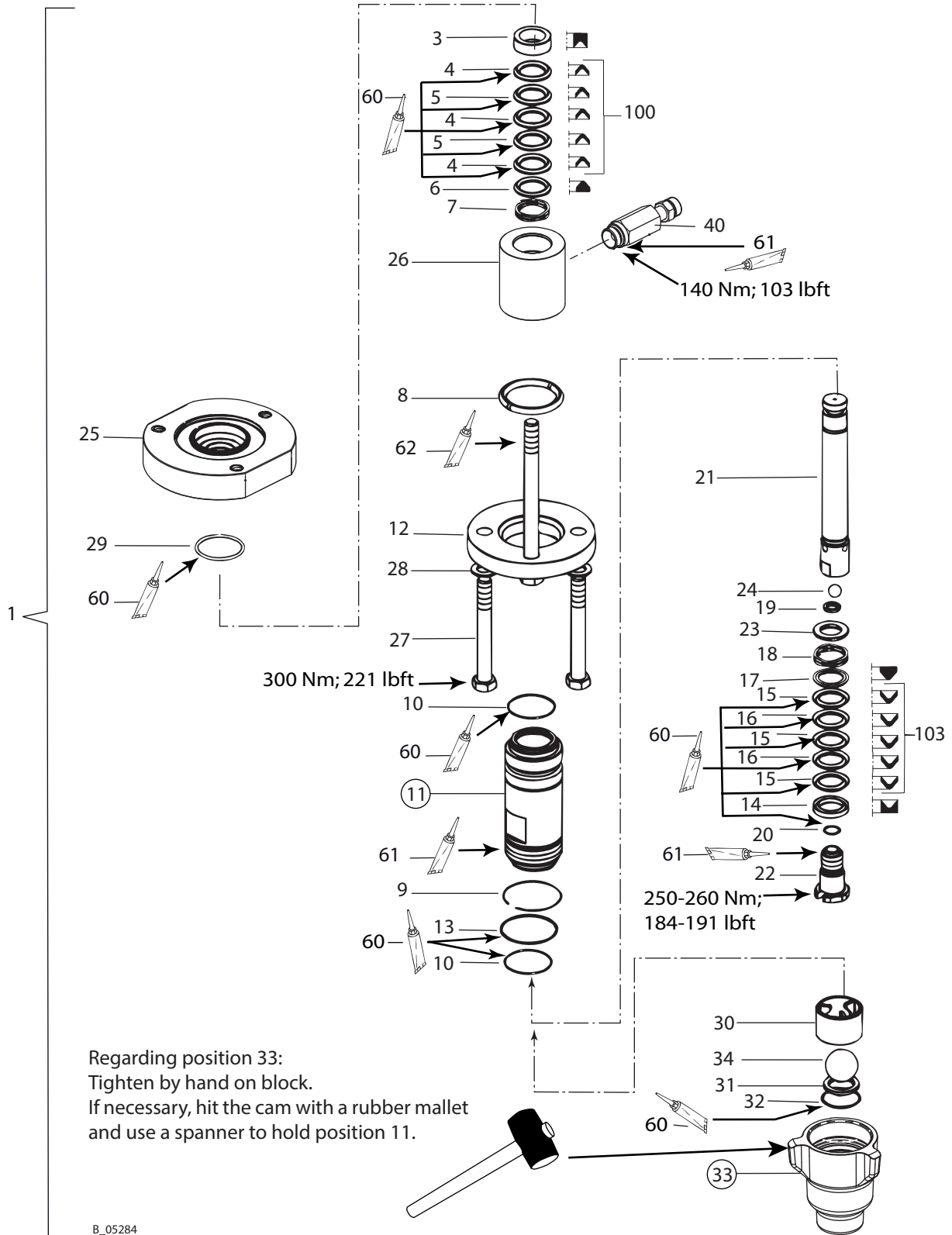
Incorrect maintenance/repair!
Danger to life and equipment damage.

- Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
- Observe the operating manual and service manuals at all times when carrying out work.

Spare parts list for fluid section				Only for 2K systems (hardener pump)	
				300 cm ³ PE/L	300 cm ³ PE/T
Pos	K	Stk	Designation	Order No.	Order No.
1		1	Fluid section 300 cm ³	2340009	--
3		1	Support ring 35.8/52-300	369516	
4	◆ ★	3	Sealing collar PE 35.8/52	368523	
5	◆ ★	2	Sealing collar L 35.8/52	368922	
	◆ ★	2	Sealing collar T 35.8/52		368900
6		1	Pressure ring 35.8/52	368519	
7	◆ ★	1	Spirawave, crest-to-crest 35.8/52	9998671	
8		2	Snap ring half 300	369512	
9		1	Retaining ring 300	369513	
10	◆ ★	2	O-ring	369525	

◆ = Wearing part

★ = Included in service set (more parts, see Chapter 13.4).



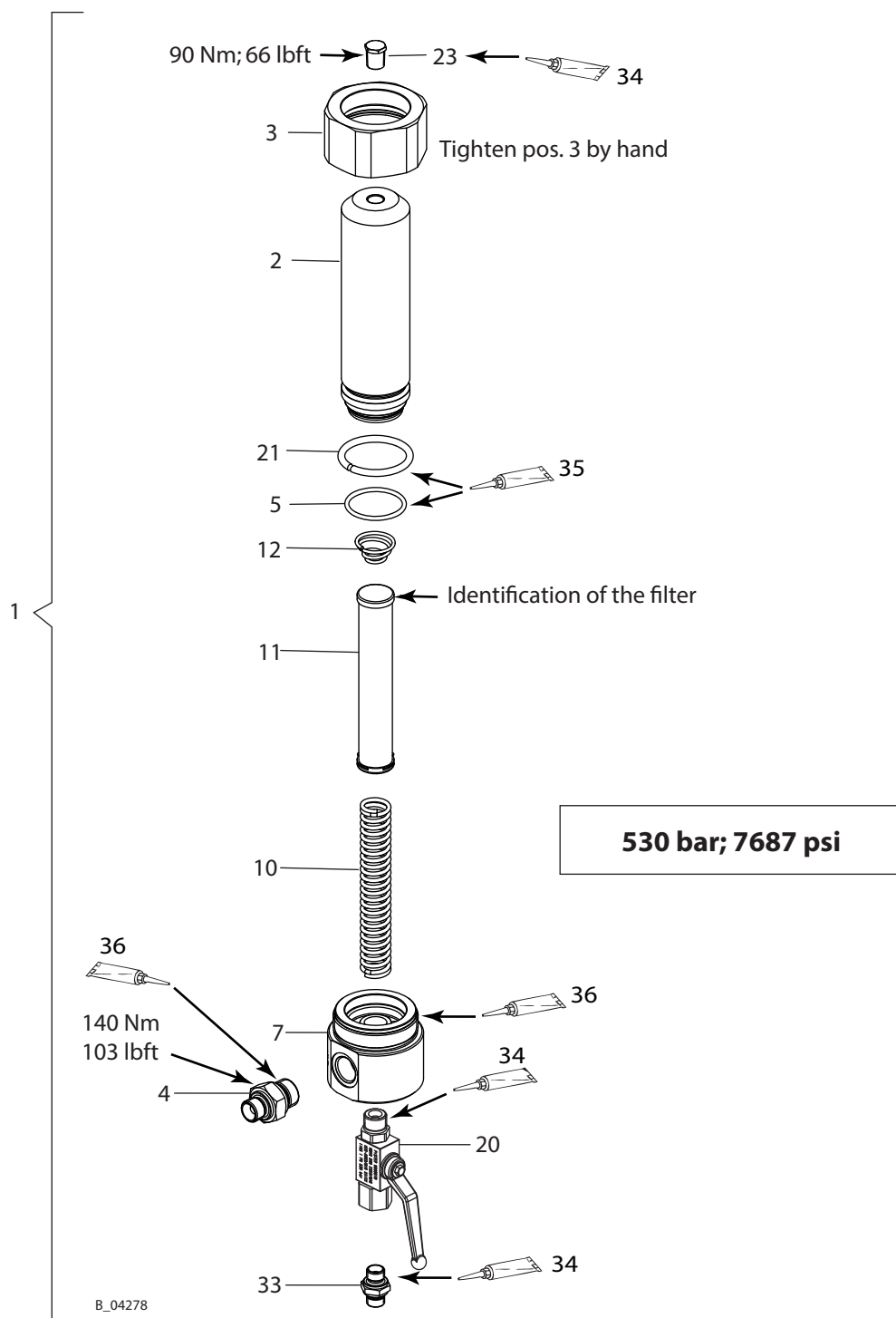
OPERATING MANUAL



Spare parts list for fluid section				Only for 2K systems (hardener pump)	
Pos	K	Stk	Designation	300 cm ³ PE/L Order No.	300 cm ³ PE/T Order No.
11	◆	1	Cylinder 300	370503	
12		1	Snap ring flange 300	370511	
13	◆ ★	1	O-ring	9974118	
14		1	Support ring 34/50-300	369518	
15	◆ ★	3	Sealing collar PE 34/50	369523	
16	◆ ★	2	Sealing collar L 34/50	369922	
	◆ ★	2	Sealing collar T 34/50		369900
17		1	Pressure ring 34/50	369519	
18	◆ ★	1	Spirawave, crest-to-crest 35.8/52	9998671	
19	◆	1	Valve seat outlet 300	369510	
20	◆ ★	1	O-ring	369528	
21	◆	1	Piston 300	370505	
22		1	Valve screw 300	370506	
23		1	Shoulder ring 300	370514	
24	◆ ★	1	Ball	9941505	
25		1	Connecting flange	370501	
26		1	Tube 300	370502	
27		4	Hexagon screw	9907210	
28		4	Washer	9920110	
29	◆ ★	1	O-ring	9974117	
30	◆ ★	1	Ball guide	2336668	
31	◆	1	Valve seat inlet 300	369509	
32	◆ ★	1	O-ring	369527	
33		1	Inlet housing 300	2338595	
34	◆ ★	1	Ball	9943086	
40		1	Rotary connection G3/4"	2329923	
60		1	Mobilux® EP 2 grease	9998808	
61		1	Anti-seize paste tube	9992609	
62		1	Molykote® DX grease	9992616	
Packing, upper:					
100	◆	1	Packing PE/L, complete	368993	
	◆	1	Packing PE/T, complete		368992
Packing, lower:					
103	◆	1	Packing PE/L, complete	369993	
	◆	1	Packing PE/T, complete		369992
Service sets:					
			Service set 300 PE/L	370989	
			Service set 300 PE/T		369964

◆ = Wearing part

★ = Included in service set (more parts, see Chapter 13.4).

13.6 HIGH-PRESSURE FILTER (UP TO 530 BAR; 7687 PSI)

Ball valve version in:				Carbon steel
Pos	K	Stk	Designation	Order No.
1		1	HP filter DN12-PN530, complete	2339900
2		1	Filter housing	2324542
3		1	Union nut	2324543
4		1	Fitting DF-MM-G1/2-3/8NPSM-530 bar-SSt	2330781
5	◆	1	O-ring	9955863
7		1	Distribution housing for ball valve	2324670
10		1	Filter support	9894245
11	◆	1	Filter cartridge *	
	◆		* Filter sieve, 20 mesh per inch (rough)	291564
	◆ ●		* Filter sieve, 50 mesh per inch (rough)	3514069
	◆ ●		* Filter sieve, 100 mesh per inch (medium)	3514068
	◆ ●		* Filter sieve, 200 mesh per inch (fine)	295721
12	◆	1	Cone spring	3514058
20	◆	1	Ball Valve	9998679
21		1	Pressure ring d45	2325562
23		1	Hexagon plug	2323718
33		1	Double connector	2325826
34		1	Loctite® 542 50 ml; 50 cc	9992831
35		1	Mobilux® EP2 grease	9998808
36		1	Anti-seize paste tube	9992609

◆ = Wearing parts

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

**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.
- Only repair and replace parts that are listed in the Chapter "Spare parts" and that are assigned to the unit.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure from spray guns and devices.
 - Secure spray guns against actuation.
 - Switch off the energy/compressed air supply.
 - Disconnect the control unit from the mains.
- Observe the operating manual and service manuals at all times when carrying out work.

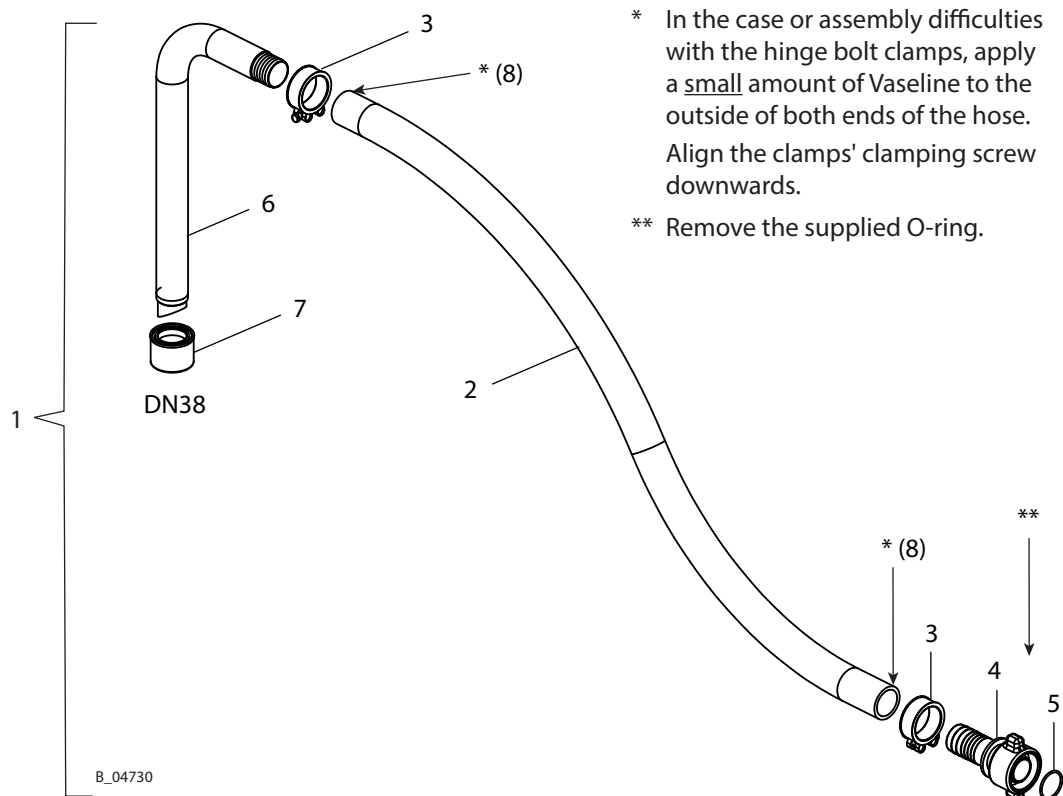
13.7 SUCTION HOSE DN38

For trouble-free intake, 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	Designation	Order No.
1	◆	Suction hose DN38-PC, complete	2325815
2	◆	LP hose DN38-PN10-EPDM	2329134
3		Heavy duty clamp 48-51 mm	2329591
4		Cone coupling ID38	2336488
5	◆	O-ring	367525
6		Suction pipe DN38	--
7	◆	Suction filter DN38-12.8mesh-SSt	2329596
8		Vaseline white PHHV II	9992698

◆ = Wearing part

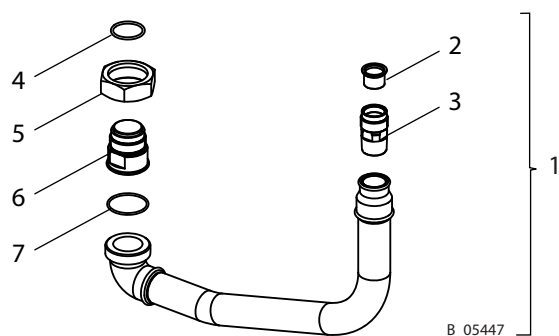
Assembly on the pump: see Chapter 12.2.1.



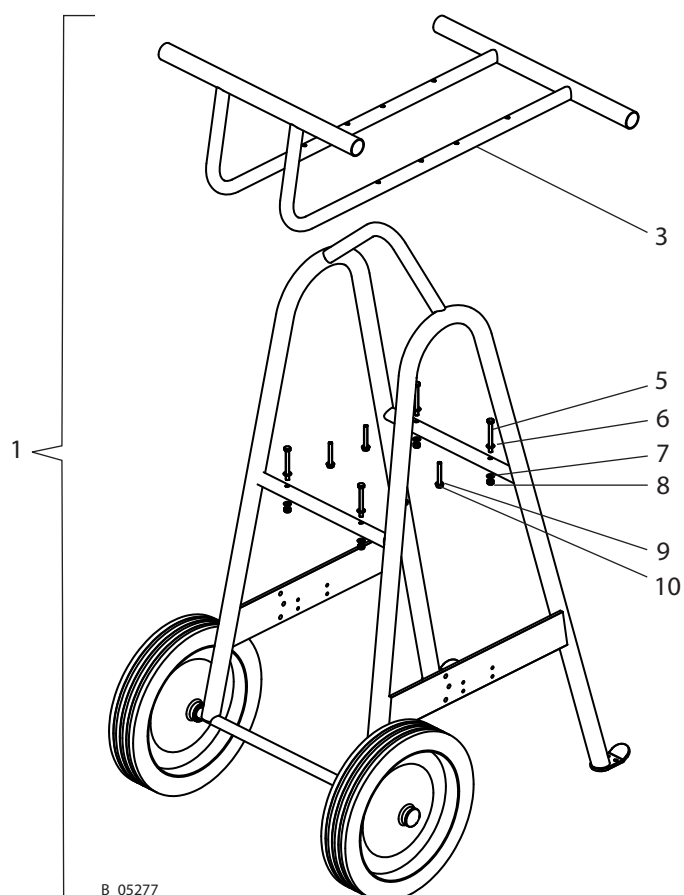
13.8 SUCTION TUBE PC

Pos	K	Designation	Order No.
1		Suction tube PC complete	2348257
2		Sealing sleeve	2329898
3		Fitting-DF-MM-R1"-M36x2-SSt	2328438
4	◆	O-ring, PTFE	9955863
5		Union nut GF-374	2348210
6		Suction adapter	2348094
7	◆	O-ring, PTFE	369527

◆ = Wearing part

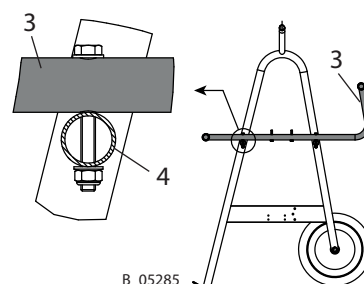
Assembly on the pump and 20 liter tank: see Chapter 12.2.2.

13.9 PC HEAVY DUTY TROLLEY



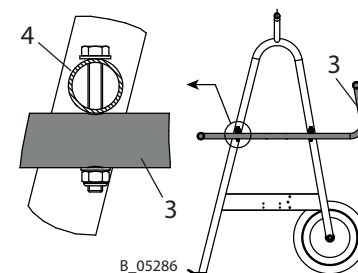
Assembly for Jaguar and PROTEC

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



Assembly for Tiger

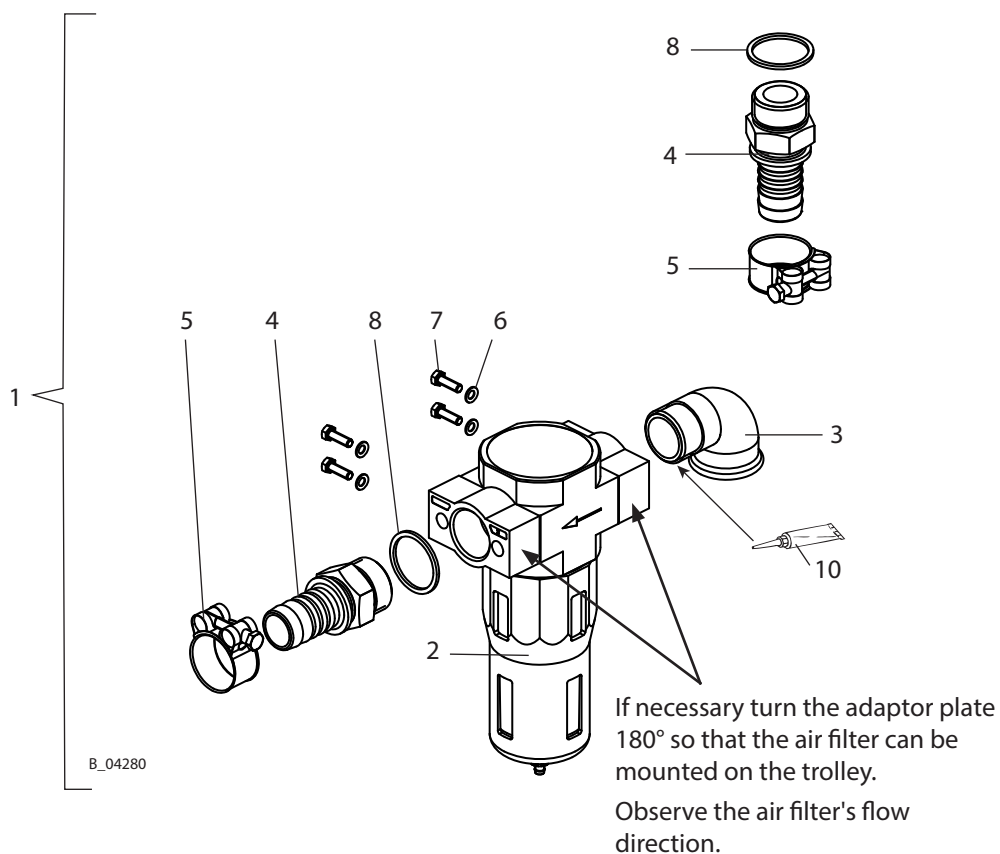
Mount bracket holder (3) below the crossbar (4).



Spare parts list for PC heavy duty trolley

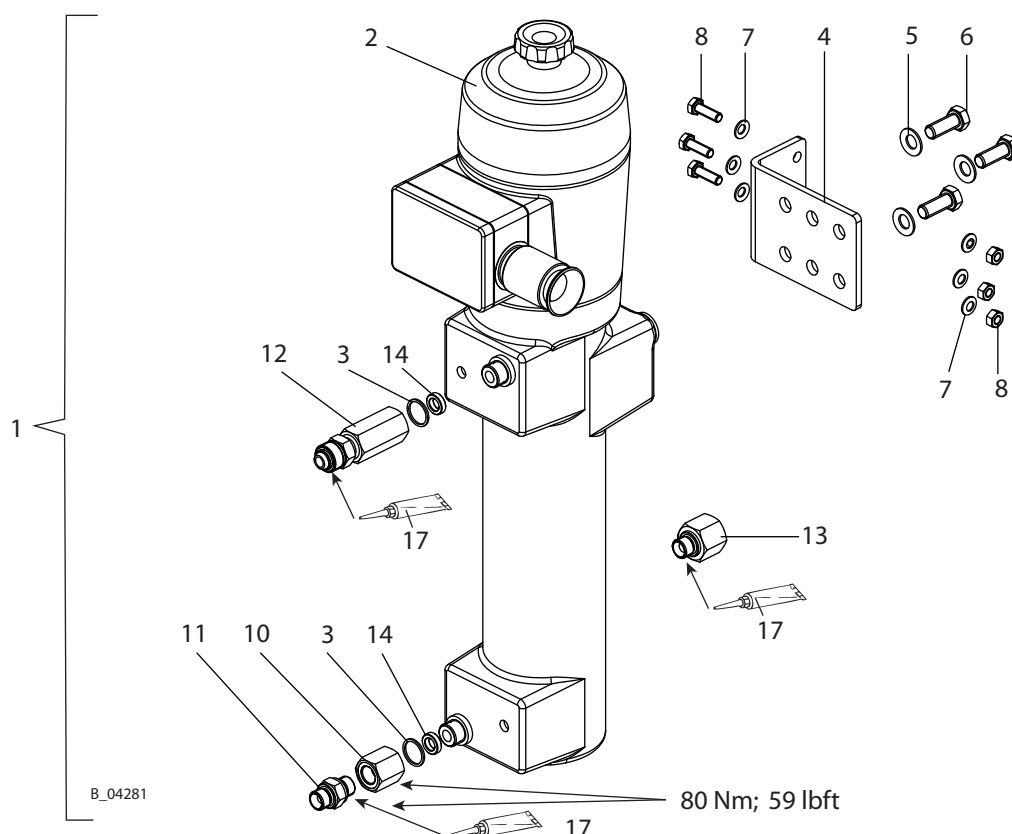
Pos	K	Stk	Designation	9" Order No. for Jaguar 75-150 55-200	10" Order No. for PROTEC 60-240	12" Order No. for Tiger 72-300
1		1	PC heavy duty trolley	2339705		
3		1	Bracket holder	--		
5		4	Hexagon screw	9900246		
6		4	Washer, A8.4	9920102		
7		4	Contact washer, M8	3155404		
8		4	Self-locking hexagon nut, M8	9910208		
9		4	Washer, A6.4 or A8.4	9920102		
10		4	Hexagon screw	9900130		

◆ = Wearing parts

13.9.1 AIR FILTER SET PC

Pos	K	Stk	Designation	Order No.
1		1	Air filter set PC. For installation, see Chapter 12.3.	2339851
2	◆	1	Filter LF-1-D-Maxi	2330030
2a	◆	1	Filter cartridge 40 µm	2347890
3		1	Elbow 90° GF-92	9985613
4		2	Hose fitting-G1"- NW25	9985671
5		2	Heavy duty clamp	2336526
6		4	Contact washer	9955841
7		4	Hexagon screw without shaft	9900140
8		2	Sealing ring 1"	9974135
9		1 m	LP hose DN25-PN10-EPDM	2323474
10		1	Loctite® 638	9999042

◆ = Wearing parts

13.9.2 HEATER SET PC

Pos	K	Stk	Designation	Order No.
1		1	Heater set PC (for installation, see Chapter 12.3)	2339728
2	◆	1	Heater (for details and spare parts, see the operating manual, continuous-flow heater, order No. 65860.)	65021
3	◆	2	Sealing ring	9970110
4		1	Elbow	393369
5		3	Contact washer	3306773
6		3	Hexagon screw without shaft	9900150
7		6	Contact washer, M08	3155404
8		3	Hexagon nut, M8	9910107
9		3	Hexagon screw without shaft	9900109
10		1	Fitting-RF-FF-M20x1.5-G3/8-PN530-SSt	2333393
11		1	Fitting-DF-MM-G3/8-G3/8-PN530-SSt	2330775
12		1	Fitting-SF-FM-M20-M24-PN530-SSt	2339609
13		1	Fitting-RF-FM-M24-G3/8-PN530-SSt	2339606
14	◆	2	Filling part	2339756
15	◆	1	HPP hose DN10-PN550 PA W-G 0.735 m	2334063
16		1	Mobilux® EP 2 grease	9998808
17		1	Molykote® DX grease	9992616
18		1	Continuous-flow heater operating manual	65860

◆ = Wearing parts

14 WARRANTY AND CONFORMITY DECLARATIONS

14.1 IMPORTANT NOTES REGARDING PRODUCT LIABILITY

As a result of an EC regulation effective from January 1, 1990, the manufacturer shall only be liable for his product if all parts originate from him or are approved by him, and if the devices are properly mounted, operated and maintained.

The manufacturer will not be held liable or will only be held partially liable if third-party accessories or spare parts have been used.

With genuine WAGNER accessories and spare parts, you have the guarantee that all safety regulations are complied with.

14.2 WARRANTY CLAIM

Full warranty is provided for this device:

We will at our discretion repair or replace free of charge all parts which within 36 months in single-shift, 18 months in double-shift or 9 months in triple-shift operation from date of receipt by the purchaser are found to be wholly or substantially unusable due to causes prior to the sale, in particular faulty design, defective materials or poor workmanship.

The type of warranty provided is such that the device or individual components of the device are either replaced or repaired as we see fit. The resulting costs, in particular shipping charges, road tolls, labour and material costs will be borne by us except where these costs are increased due to the subsequent shipment of the device to a location other than the address of the purchaser.

We do not provide warranty for damage that has been caused or contributed to for the following reasons:

Unsuitable or improper use, faulty assembly or commissioning by the purchaser or a third party, normal wear, negligent handling, defective maintenance, unsuitable coating products, substitute products and the influence of chemical, electrochemical or electrical agents, except when the damage is attributable to us.

Abrasive coating products such as red lead, emulsions, glazes, liquid abrasives, zinc dust paints and so forth reduce the service life of valves, packaging, spray guns, nozzles, cylinders, pistons etc. Wear and tear due to such causes are not covered by this warranty.

Components that have not been manufactured by WAGNER are subject to the original warranty of the manufacturer.

Replacement of a component does not extend the period of warranty of the device.

The device should be inspected immediately upon receipt. To avoid losing the warranty, we or the supplier company are to be informed in writing about obvious faults within 14 days upon receipt of the device.

We reserve the right to have the warranty compliance met by a contracting company.

The services provided by this warranty are dependent on evidence being provided in the form of an invoice or delivery note. If the examination discovers that no warranty claim exists, the costs of repairs are charged to the purchaser.

It is clearly stipulated that this warranty claim does not represent any constraint on statutory regulations or regulations agreed to contractually in our general terms and conditions.

14.3 CE DECLARATION OF CONFORMITY

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

Jaguar		PROTEC	Tiger
75-150	55-200	60-240	72-300

complies with the following guidelines:

2006/42/EC	94/9/EC
------------	---------

Applied standards, in particular:

DIN EN ISO 12100: 2010	DIN EN ISO 13732-1: 2008	DIN EN 13463-1: 2009
DIN EN 809: 1998+A1: 2009+AC: 2010	DIN EN 14462: 2005+A1: 2009	DIN EN 13463-5: 2011
DIN EN ISO 4413: 2010	DIN EN 12621: 2006+A1: 2010	DIN 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	TRBS 2153
-------------------------	-----------

Identification:

CE **Ex** II 2 G c IIB T3/T4 X

T3: Without dry running protection.

T4: With dry running protection.

EC Certificate of Conformity

The CE certificate 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

14.4 NOTES ON NATIONAL REGULATIONS AND GUIDELINES

- a) Betr.Sich.V. Plant Safety Ordinance
 - b) BGI 740 Painting rooms and equipment
 - c) BGR 180 Equipment for cleaning work pieces with solvents
 - d) DGUV regulation 100-500 Operating working materials
 - e) TRBS 2153 Avoidance of ignition dangers due to electrostatic charges
 - f) TRBS 1201 Checking working materials and systems which require monitoring
- Part 1: Checking systems in areas subject to explosion hazards and checking of work stations in areas subject to explosion hazards
- Part 3: Repairs to devices, protective systems, safety, control and regulation fixtures, in the sense of the 94/9/EC Directive - Determination of checking necessity according to § 14 sec. 6 BetrSichV (Industrial Safety Regulations)

Note: All titles can be ordered from Heymanns Publishing House in Cologne, or they can be found on the Internet.



Order No. 2340282
Edition 05/2015

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