



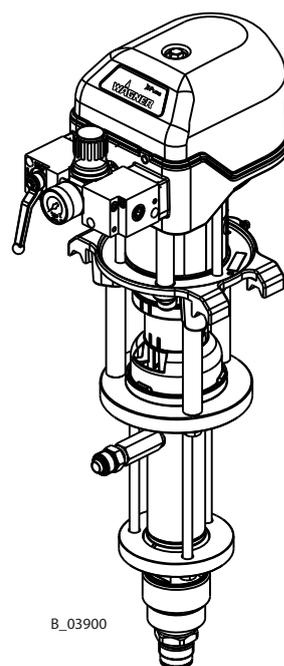
Translation of the Original Operating Manual

Wildcat	Puma
18-40	28-40

IceBreaker Piston Pumps

Flow rate of 40 cm³

Version 05/2015



B_03900

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1 ABOUT THIS MANUAL

1.1 PREFACE

The operating manual contains information about safely operating, maintaining, cleaning and repairing the device.

The operating manual is part of the device and must be available to the operating and service personnel.

The device may only be operated by trained personnel and in compliance with this operating manual. Operating and service personnel should be instructed according to the safety instructions.

This equipment can be dangerous if it is not operated according to the instructions in this operating manual.

1.2 WARNINGS, NOTICES, AND SYMBOLS IN THIS OPERATING MANUAL

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 hazard and its consequences are listed here.

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 hazard and its consequences are listed here.

Caution – a potentially 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 hazard and its consequences are listed here.

Notice – a potentially hazardous situation.
Non-observance may result in material damage.

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 hazard and its consequences are listed here.

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	2302505	English	2303659	French	2303661
Italian	2303663	Spanish	2303665	Dutch	2303662
Danish	2303666	Swedish	2303667	Portuguese	2339146

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

1.4 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

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. → Refer to TRBS 1203 (2010 / revision 2012) for further requirements for qualified persons: Special skills in the areas of protection against pressure and electrical hazards and explosion protection (if applicable).

2 CORRECT USE

2.1 DEVICE TYPES

Pneumatic pump with spraypack:

Wildcat	Puma
18-40	28-40

2.2 TYPE OF USE

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

2.3 FIELD OF APPLICATION

The pneumatic pump can be used in potentially explosive areas (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.
- Operate the device only 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 personnel 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 PROCESSABLE WORKING MATERIALS

Working materials	WILDCAT 18-40	PUMA 28-40
Water-dilutable products	↗	↗
Solvent-based lacquers and paints	↗	↗
Primers	⇒	⇒
Epoxy and polyurethane lacquers, phenolic lacquers	⇒	↗
Liquid plastics	↘	⇒
Wax-based underside protection	↘	↘
Chemically aggressive products that attack carbide seats	↘	↘

Legend: ↗ recommended ⇒ limited suitability ↘ less suitable

NOTE

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	WILDCAT 18-40	PUMA 28-40
Furniture industry	↗	↗
Kitchen manufacturers	↗	↗
Joinery	↗	↗
Window factories	⇒	⇒
Steel-processing industry	↘	⇒
Construction of vehicles	↗	↗
Shipbuilding	↘	↘

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 safety |
| 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 instructions 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: Without dry-running protection.

Temperature class T4: With dry-run protection.

Ignition temperature

- Ensure that the ignition temperature of the surrounding gas (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 °F to +122 °F.

Medium supporting atomizing

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

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.
- Only use 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 agent tank is filled with sufficient separating agent.
- Periodically check that the pump is working smoothly, paying special attention to the presence of air in the pumped fluid.

Filling and emptying

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	1 Manufacturer and CE Identification
2	Pumpentyp / Pump type	2 Pump type
3	Max. Materialdruck / Fluid pressure	3 Maximum product pressure
4	Übersetzungsverhältnis / Ratio	4 Pump ratio
5	Fördermenge DH / Delivery DS	5 Flow rate per double stroke
6	Max. Luftdruck / Air pressure	6 Maximum air inlet pressure
7	Max. Temp. Material / Fluid	7 Maximum product temperature
8	Baujahr - Serie Nr. / Year of manufacture - Serial No.	8 Model year - serial number
9	Vor Gebrauch Betriebsanleitung beachten / Check manual before use!	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 operated, maintained and repaired only 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 hoses / 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.

- 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.
- For electrostatic 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 any work on the device, in the event of work interruptions and malfunctions:
 - 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 an expert (e.g. a WAGNER service technician) at least every 12 months to verify that they are safe to use in accordance with DGUV regulation 100-500.

- If devices have been shut down, 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.

→ Hold the spray gun in one position only briefly.

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 the "Grounding" chapter.

→ 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. Do not lay hoses:
 - in high-traffic areas,
 - on sharp edges,
 - on moving parts or
 - on hot surfaces.
- Ensure that the hoses are never run over by vehicles (e.g. fork lifts), or subjected to an external force 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 device.
- The electrical resistance of the product hose, measured at both fittings, must be less than 1 megohm.
- Suction hoses must 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 lacquer manufacturer.
- Ensure that the flash point of the cleaning agent is at least 15 K above the ambient temperature or that cleaning is undertaken at a cleaning station with technical ventilation.
- Take measures for workplace safety (see Chapter 4.1.3).
- When commissioning or emptying the device, please note the following:
 - depending on the coating product used,
 - depending on the flushing agent (solvent) used,explosive mixture inside the lines and items of equipment.



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

An explosive gas/air mixture forms in closed tanks.

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

External cleaning

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

- Disconnect the pneumatic supply line.
- Use only damp 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 electrical component is cleaned with or immersed in the solvent.



4.2.5 HANDLING HAZARDOUS LIQUIDS, LACQUERS AND PAINTS

- When preparing or working with lacquer and when cleaning the device, follow the processing instructions of the manufacturer of the lacquers, solvents and cleaning agents being used.
- Take the prescribed protective measures; in particular, use the personal protective equipment: Wear safety glasses, protective clothing and safety gloves and, if necessary, respiratory protection and a skin protection product.
- 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

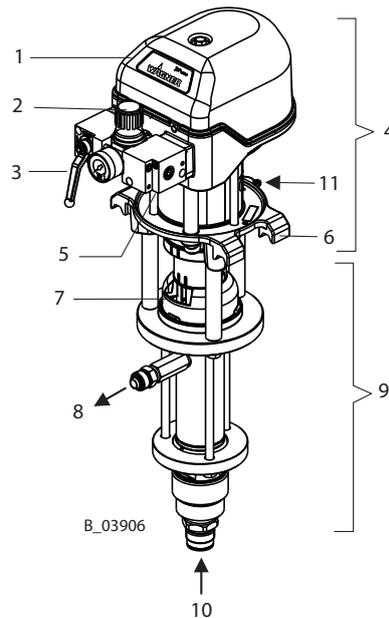
- Only touch hot surfaces if you are wearing protective gloves.
 - When operating the device with a coating product with a temperature > 43 °C; 109.4 °F: Mark the device with a warning label "Warning – hot surface".
 - Instruction label Order No. 9998910
 - Protection label Order No. 9998911
- Note:** Order the two labels together.



5 DESCRIPTION

5.1 COMPONENTS

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



5.2 MODE OF OPERATION

The piston pump is driven with compressed air (2). This compressed air moves the air piston up and down in the air motor (4) and it also moves the associated pump piston up and down in the fluid section (9).

In the control housing (1), the air pressure is redirected at the end of each stroke with the help of the reversing valve. The working material is sucked up during the upwards stroke and is continuously conveyed towards the product outlet (8) in both stroke directions.

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
	<p>Overpressure! Risk of injury from bursting components.</p> <p>→ Never change the safety valve setting.</p>

5.4 SCOPE OF DELIVERY

Pneumatic piston pump

Consists of:

- Fluid section
- Air motor
- Connection set for air motor - fluid section
- 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 14.3

Order No.: 2302505

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
	Exhaust 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 WILDCAT AND PUMA

Description		Units	WILDCAT 18-40	PUMA 28-40
Pump ratio			18 :1	28 : 1
Volume flow per double stroke (DH)		cm ³ ; cc	40	40
Maximum operating overpressure		MPa	14.4	22.4
		bar	144	224
		psi	2089	3249
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	0.25-0.8	
		bar	2.5-8	
		psi	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 connection (inside thread)		inch	G 1/2"	
Minimum Ø of the compressed air supply line		mm; inch	9; 0.35	
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke		nl	5.3	8.3
		scf	0.19	0.29
Air motor piston diameter		mm; inch	80; 3.2	100; 4
Air motor piston stroke		mm; inch	75; 3	75; 3
Sound pressure level at maximum permissible air pressure*		dB(A)	77	78
Sound pressure level at 0.6 MPa; 6 bar; 87 psi air pressure*		dB(A)	74	74
Sound pressure level at 0.4 MPa; 4 bar; 58 psi air pressure*		dB(A)	69	69
Product inlet (outside thread)		mm	M 36x2	
Product outlet (outside thread)		mm	M 24x1.5	
Weight		kg; lb	15; 33	16; 35
Product pH value		pH	3.5-9	
Maximum product pressure at pump inlet		MPa	2	
		bar	20	
		psi	290	
Product temperature		°C; °F	+5...+80; +41...+176	
Ambient temperature		Construction and assembly	+5...+50; +41...+122	
		Suspension	-20...+60; -4...+140	
Relative humidity		%	10–95 (without condensation)	
Allowable inclination for operation		<) °	± 10	

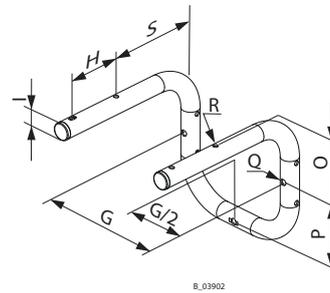
* A-rated sound pressure level measured at 1 m distance, LpA1m, in accordance with DIN EN 14462: 2005. SUVA (Swiss Accident Insurance Fund) carried out the reference measurements.



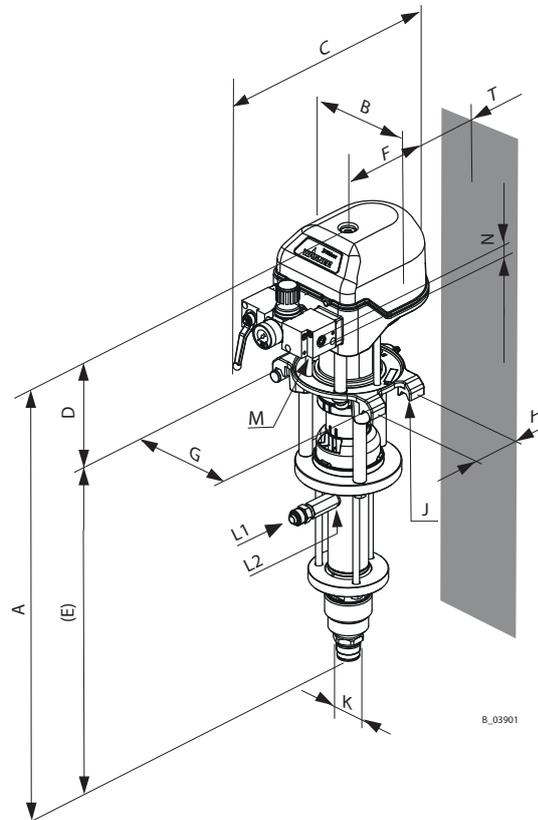
5.5.3.2 MEASUREMENTS AND CONNECTIONS FOR WILDCAT AND PUMA

	WILDCAT 18-40 mm; inch	PUMA 28-40 mm; inch
A	722; 28.4	
B	169; 6.7	
C	~ 321; 12.6	
D	261.5; 10.3	
E	460.5; 18.1	
F	134; 5.3	
G	182; 7.2	
H	80; 3.2	
I	ø 25; ø 1	
J	M6	
K	M36x2	
L1	M24x1.5	
L2	G3/8"	
M	G1/2"	
N	G1/4"	
O	106; 4.2	
P	96.5; 3.8	
Q	ø 9; ø 0.35	
R	ø 7; ø 0.28	
S	149; 5.9	
T	55; 2.2	

Wall mount



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

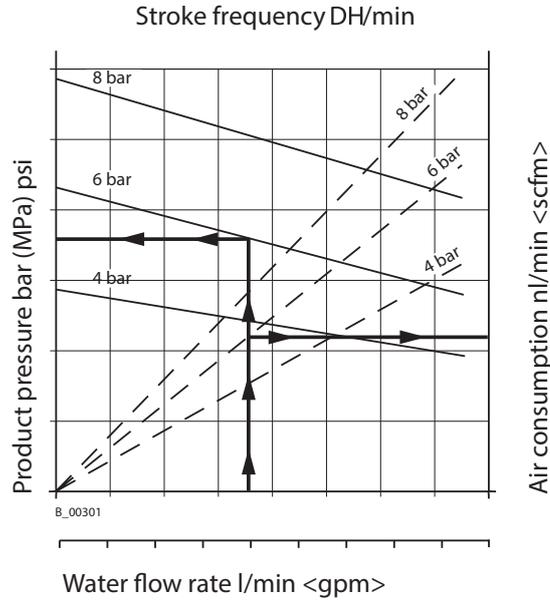
Ø inch	Ø mm	Spray angle	at	at	at	Maximum ranges for continuous operation at 50 DS/min
			7 MPa 70 bar 1015 psi	10 MPa 100 bar 1450 psi	15 MPa 150 bar 2175 psi	
0.007	0.18	40°	0.17	0.20	0.21	Wildcat 18-40 Puma 28-40
0.009	0.23	20-30-40-50-60°	0.21	0.25	0.31	
0.011	0.28	10-20-30-40-50-60°	0.30	0.35	0.43	
0.013	0.33	10-20-30-40-50-60-80°	0.45	0.53	0.62	
0.015	0.38	10-20-30-40-50-60-80°	0.58	0.67	0.81	
0.017	0.43	20-30-40-50-60-70°	0.73	0.79	1.06	
0.019	0.48	20-30-40-50-60-70-80°	0.93	1.09	1.37	
0.021	0.53	20-40-50-60-80°	1.14	1.36	1.69	
0.023	0.58	20-40-50-60-70-80°	1.37	1.59	2.01	
0.025	0.64	20-40-50-60-80°	1.62	1.91		
0.027	0.69	20-40-50-60-80°	1.83			

* Volume flow refers to water.

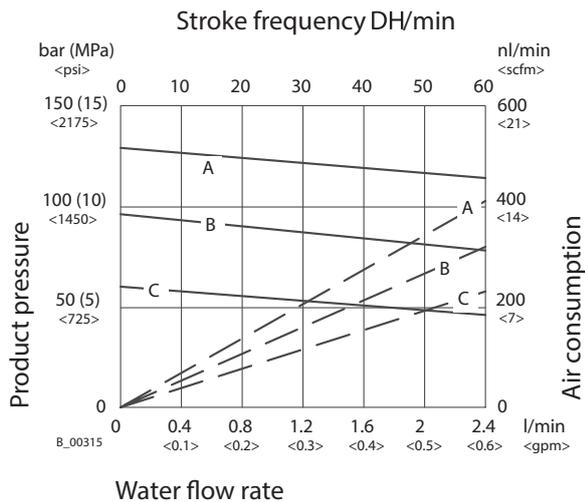


5.5.5 PERFORMANCE DIAGRAMS

Example diagram



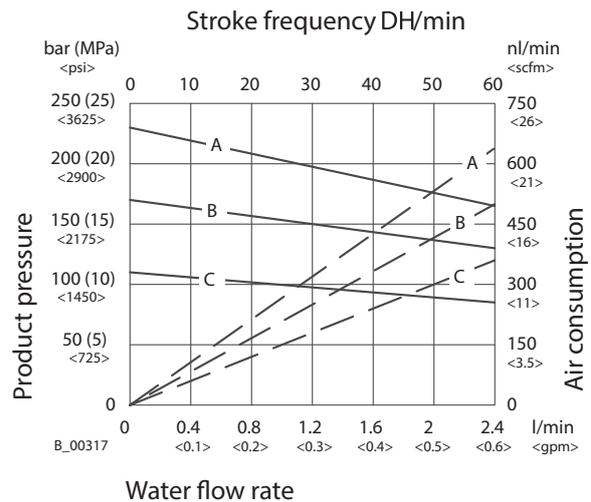
WILDCAT 18-40



Water flow rate

- 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

PUMA 28-40

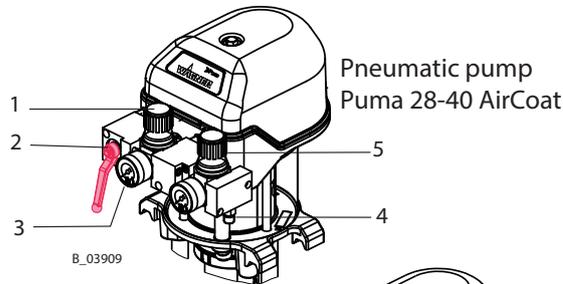


Water flow rate

- 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

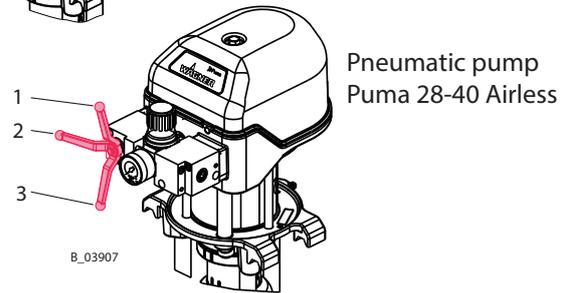
5.6 PRESSURE REGULATOR UNIT

- 1 Pressure regulator
- 2 Ball valve
- 3 Pressure gauge
- 4 Compressed air inlet
- 5 AirCoat regulator (option)



Positions of the ball valve

- 1 Closed: Operating pressure in the air motor is vented (control air pressure is still present).
- 2 Closed: The air motor may still be under pressure.
- 3 Open: Working position

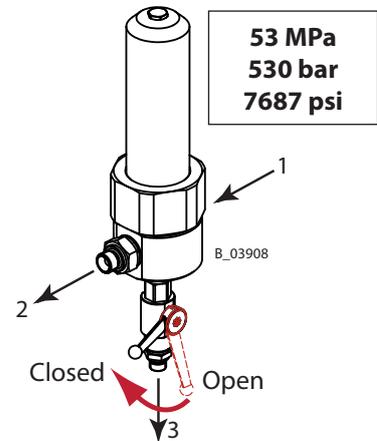


5.7 PRODUCT FILTER AND RETURN FLOW

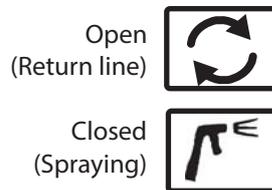
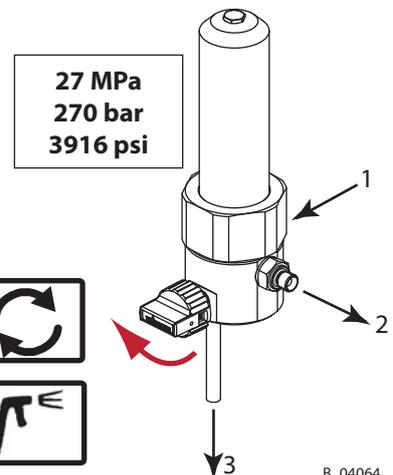
So that the complete pressure relief of the pump can be performed (see Chapter 7.5), a high-pressure filter with a return flow or a relief combination, is mandatory.

5.7.1 HIGH-PRESSURE FILTER (OPTION)

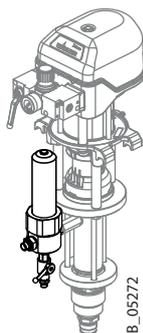
To ensure problem-free operation it is recommended that a WAGNER high-pressure filter be used. These have been developed especially for WAGNER pneumatic pumps. The filter inserts can be exchanged depending on the product to be used. The high-pressure filter corresponding to the device can be found in the "Accessories" chapter; the compatible filter inserts can be found in the "Spare parts" chapter.



- 1 Fluid section connection
- 2 Product outlet
- 3 Return line



Preferred filter installation position



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

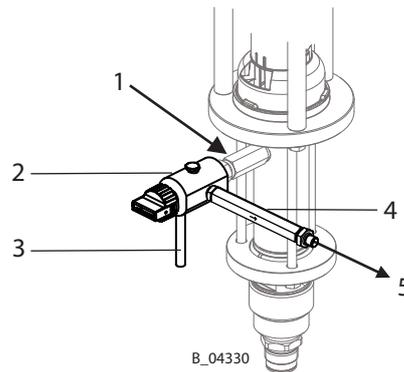
Instead of the standard high-pressure filter, the lower-cost ventilation combination can be used if only a small volume of product is to be processed.

Application: in pumps with a maximum product pressure of 270 bar; 3,916 psi.

27 MPa; 270 bar; 3916 psi

You will find the relief combination and the suitable filter inserts in the accessories list.

- 1 Fluid section connection
- 2 Relief combination
- 3 Return line
- 4 Paint filter
- 5 Product outlet

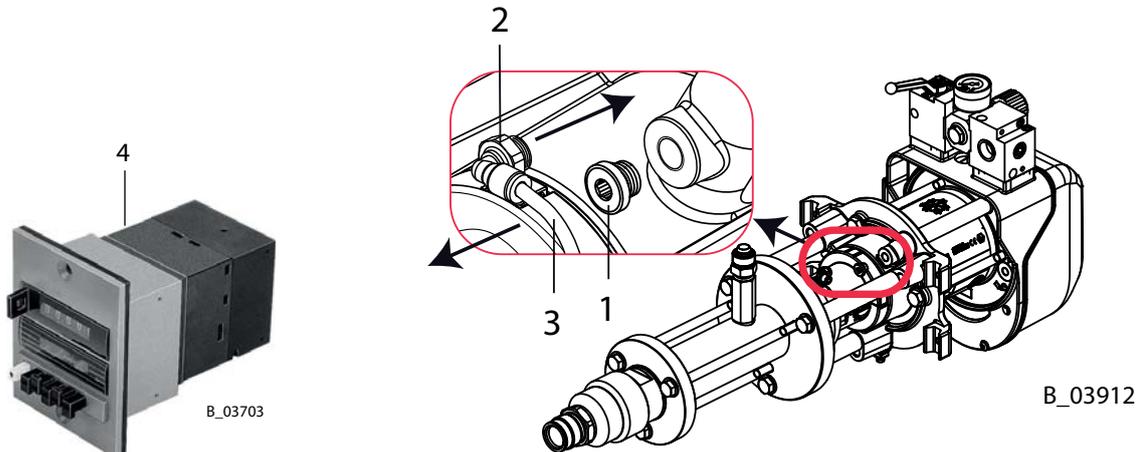


5.8 STROKE COUNT (OPTION)

Each air motor has a 1/8" air connection with which the air pressure in the lower air motor chamber can be measured. This signal can be used for counting the strokes in an external control, for example.

The pressure signal corresponds to the set working air pressure and is available during the complete upwards stroke of the pump. If both of the signal flanks are evaluated, the upper and lower reversal point can be determined. A 4/2-mm; 0.16/0.08-inch air hose is used as an air signal line.

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



5.9 FEED PUMP (OPTION)

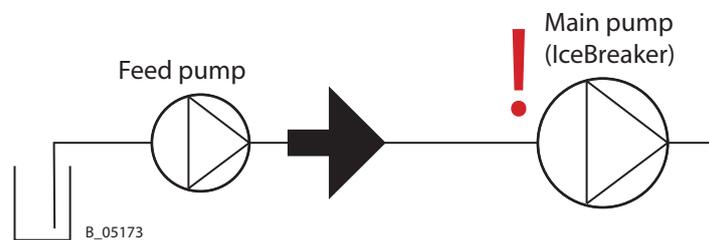
A feed pump can be used with high-viscosity products or longer feed lines.

Dimensioning of the feed pump

→ The IceBreaker piston pumps pump the working 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

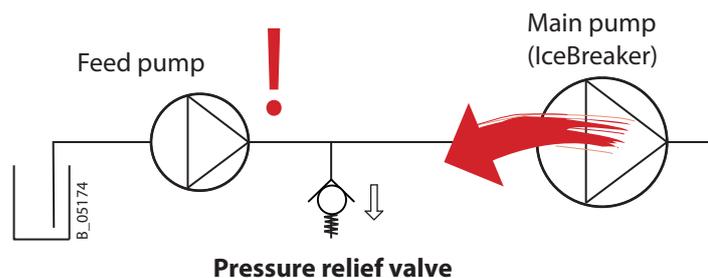
→ The maximum product pressure at the pump inlet of the IceBreaker pump must not be exceeded.



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 all technical skills necessary to safely commission the device.
- When assembling, commissioning and carrying out all work, read and follow the operating manuals and safety regulations for the additionally required system components.

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

6.2 STORAGE AND INSTALLATION CONDITIONS

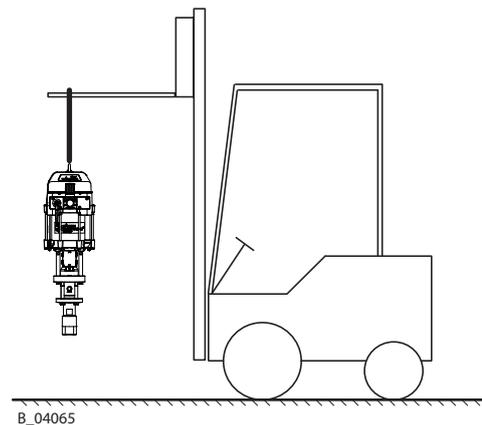
Until the point of assembly, the device must be stored in a dry location, free from vibrations and with a minimum of dust. The device must be stored in closed rooms. For specifications on temperatures and relative humidity, see Technical Data.

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

6.3 TRANSPORTATION

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

The pump can be moved on a trolley(4"-trolley) or manually without lifting equipment or a crane.

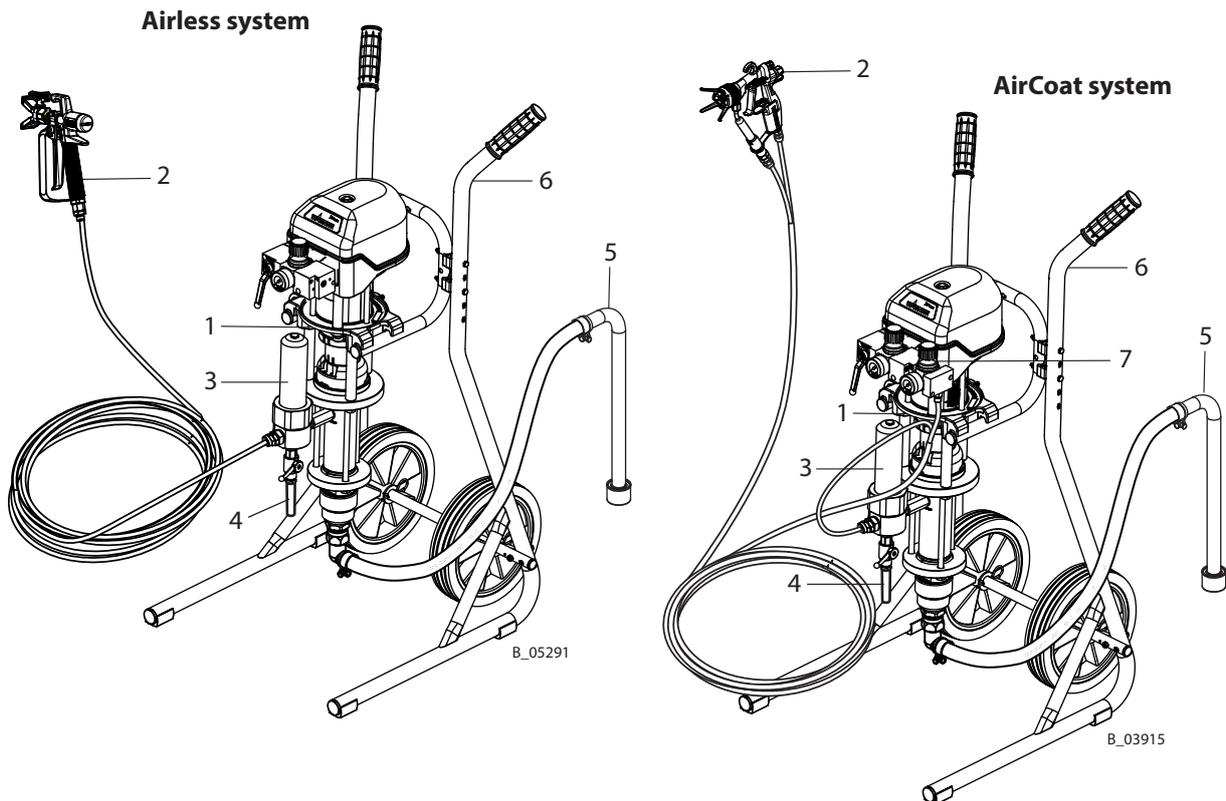


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	 WARNING
	<p>Inclined ground! Risk of accidents if the device rolls away/falls.</p> <ul style="list-style-type: none"> → Position the trolley with the piston pump horizontally. → If the surface is inclined, position the feet of the trolley towards the gradient. → Secure the trolley.

6.4 ASSEMBLY AND INSTALLATION

This pump can be used as part of a spraying system for Airless or AirCoat applications. The individual components are shown in the accessories, or can be arranged with a spraypack configurator. The nozzles must be selected according to the gun operating manual.



Procedure:

- Mount pump (1) on frame, trolley (6) or wall mount.
- Mount the AirCoat regulator (7) with an AirCoat system.
- Mount high-pressure filter (3) or filter relief combination.
- 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.

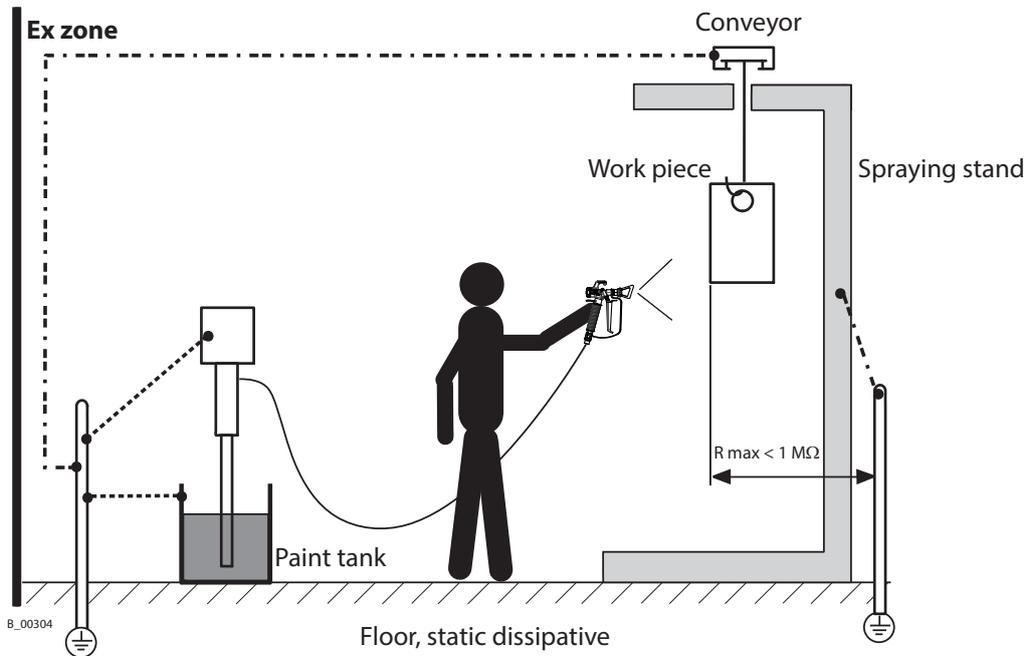
- Operate the device in a spray booth approved for the working materials.
 - or –
- Operate the device on an appropriate spraying wall with the ventilation (extraction) switched on.
- Observe national and local regulations for the exhaust air speed.

6.5 GROUNDING

	WARNING
	<p>Discharge of electrostatically charged components in atmospheres containing solvents! Explosion hazard from electrostatic sparks.</p> <ul style="list-style-type: none"> → Clean the piston pump only with a damp cloth. → Ground all device components. → Ground the workpieces to be coated.

	WARNING
	<p>Heavy paint mist if grounding is insufficient! Danger of poisoning. Insufficient paint application quality.</p> <ul style="list-style-type: none"> → 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

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

Connect all ground cables using a short and direct route.

Procedure:

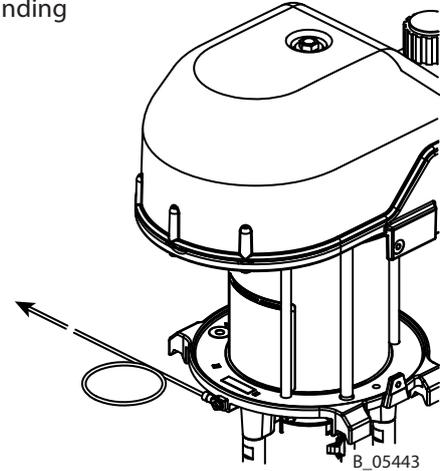
1. Ground the pump, connect the grounding cable to potential equalization on-site.
2. Ground the product tank.
3. Ground the other parts of the system to an on-site grounding connection. 16 mm²; AWG 6

Ex zone

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

Tank

- All paints, flushing agents and waste tanks have to be electrically conductive.
- All tanks 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 connecting parts for leaks.
- Check hoses for damage in accordance with Chapter 8.2.9.

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 8.2.7.

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
	<p>Incorrect operation! Risk of injury and damage to the device.</p> <ul style="list-style-type: none"> → 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 personnel 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
	<p>Unintentional putting into operation! Risk of injury</p> <p>Before all work on the device, in the event of work interruptions and malfunctions:</p> <ul style="list-style-type: none"> → Relieve the pressure from the spray gun and device. → Secure the spray gun against actuation. → Switch off the energy/compressed air supply. → Disconnect the control unit from the network. → In the event of a malfunction: remedy the fault as described in the "Troubleshooting" chapter.

	WARNING
	<p>Gas mixtures can explode if there is an incompletely filled pump! Danger to life from flying parts.</p> <ul style="list-style-type: none"> → 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.

7.2.1 GENERAL RULES FOR MAKING ADJUSTMENTS TO THE SPRAY GUN

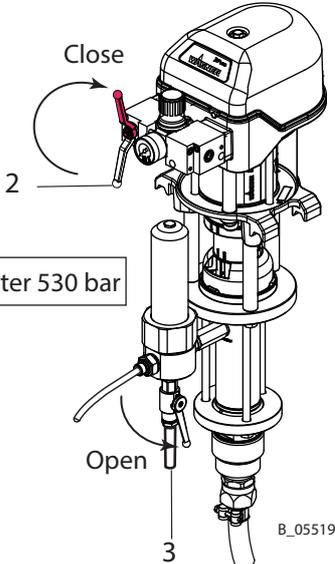
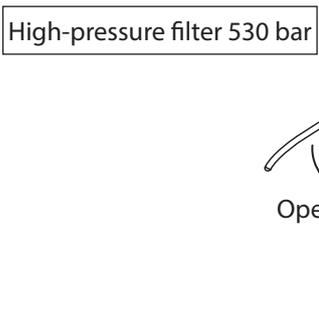
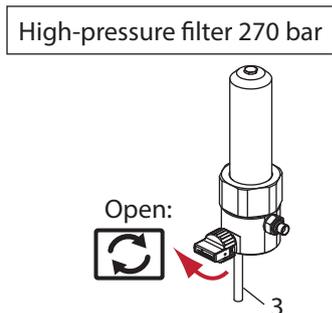
→ Observe the spray gun operating manual.

	WARNING
	<p>High-pressure spray jet! Danger to life from injecting paint or solvent.</p> <ul style="list-style-type: none"> → 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 immediately. → Use personal protective equipment (protective clothing, gloves, eyewear and respiratory protection).

7.3 EMERGENCY STOP

In the case of unforeseen occurrences, immediately:

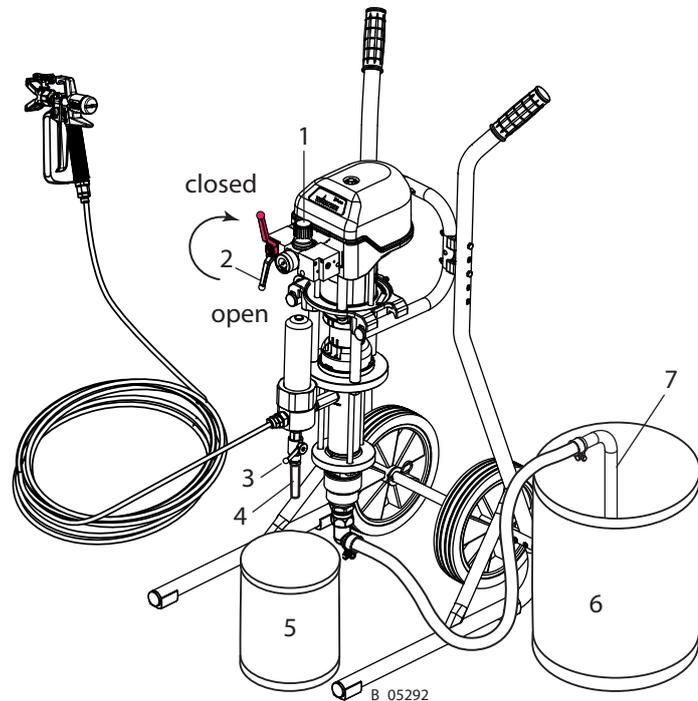
- Close ball valve (2);
- Open return valve (3).



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7.4 SPRAYING

1. Visual check: personal protective 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 ventilation, 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:

NOTE

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 heat.

7.6 BASIC FLUSHING

Procedure

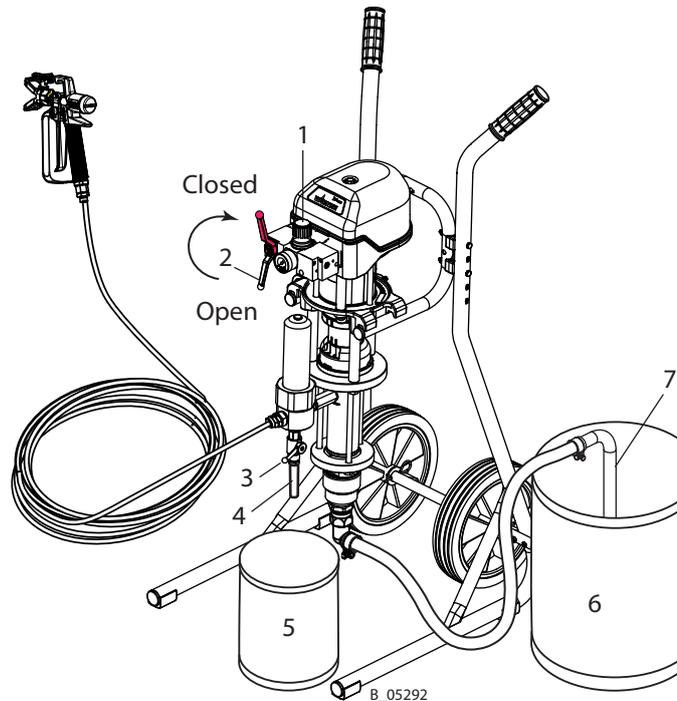
1. Visual check: personal protective equipment, grounding and all devices ready to use.
2. Place an empty, grounded collection tank (5) under the return tube (4).
3. Place the suction hose (7) in the grounded tank with flushing agent (6).
4. Adjust the pressure regulator (1) to approx. 0.05 MPa; 0.5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



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).

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 damage to the device.

- 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 "Spare Parts" chapter and that are assigned to the device.
- 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 and service manual for all work.

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 8.2.6.
4. Maintain the gun according to the operating manual.
5. Clean and check the suction system and the suction filter.
6. When using a product filter: Check and clean/replace filter insert and filter housing. → Chapter 8.2.8.
7. Clean the outside of the system.

	 WARNING
	<p>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.</p> <p>→ Do not clean the tank on the filter pressure regulator with solvents.</p>

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 8.2.7.

	 WARNING
	<p>Gas mixtures can explode if there is an incompletely filled pump! Danger to life from flying parts. Ignition of potentially explosive surrounding atmosphere.</p> <p>→ 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.</p>

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 8.2.7.
3. Empty the pump in a controlled manner in accordance with Chapter 8.2.6 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 to DGUV regulation 100-500:

- The liquid ejection devices should be checked by an expert (e.g. WAGNER service technician) to ensure their safe operational condition as required and at least every 12 months.
- If devices have been shut down, the examination can be suspended until the next start-up.

	 DANGER
	<p>Incorrect maintenance/repair! Danger to life and damage to the device.</p> <p>→ Repair work, replacement of devices or parts of devices are only allowed to be performed outside the hazard area by qualified personnel.</p>

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 8.2.8)
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 8.2.6.

The service manual is available in German and English.
For order number see Chapter 1.3.

8.2.4 FILLING SEPARATING AGENT

NOTE

Piston pump dry run!

High wear/damage to the packings.
Paint or solvent can escape if the seals are dry.

- Ensure that the separating agent tank is filled with sufficient separating agent.
Filling level 1 cm; 0.4 inch under the cup edge.

Place the supplied separating agent into the separating agent cup.

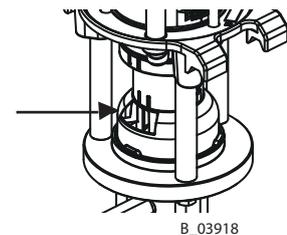
Filling level: 1 cm; 0.4 inch under the cup edge.

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 CONDENSATE DRAIN FROM THE AIRCOAT FILTER REGULATOR

- Frequently drain the condensate that may accumulate in the air filter.
- Make sure the water level in the filter cup never reaches the max. level marked on the cup itself.

8.2.6 EMPTYING THE PUMP

	<p>⚠ WARNING</p> <p>Gas mixtures can explode if there is an incompletely filled pump! Danger to life from flying parts. Ignition of potentially explosive surrounding atmosphere.</p> <p>→ Empty the device slowly and in a controlled manner. → Avoid potentially explosive atmosphere in the surroundings.</p>
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→ If the pumping product becomes heated, switch off all heaters and let the product cool off.

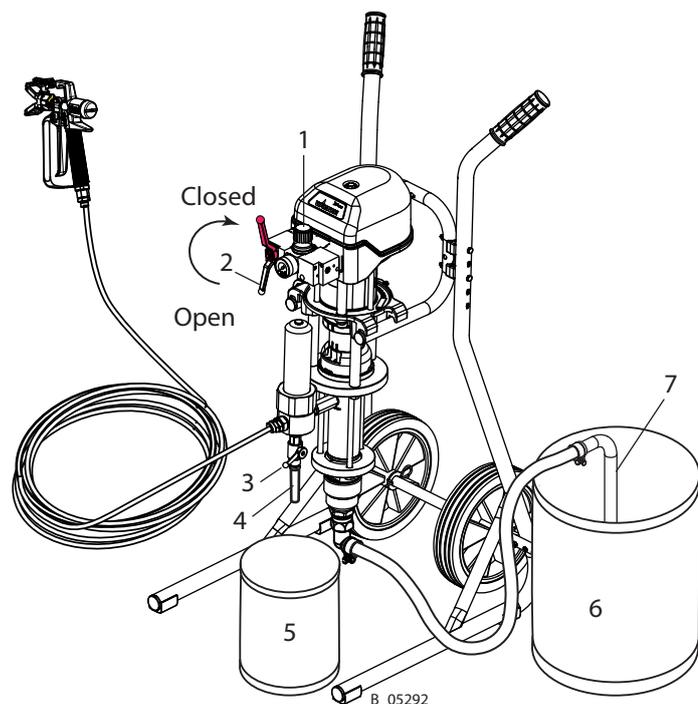
1. Visual check: personal protective equipment, grounding and all devices ready to use.
2. Carry out basic flushing in accordance with Chapter 7.6.
3. Place grounded collection tank (5) under the return tube (4).
4. Place the suction hose (7) in an empty, grounded tank (6).
5. Close pressure regulator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



8.2.7 FILLING THE EMPTY PUMP

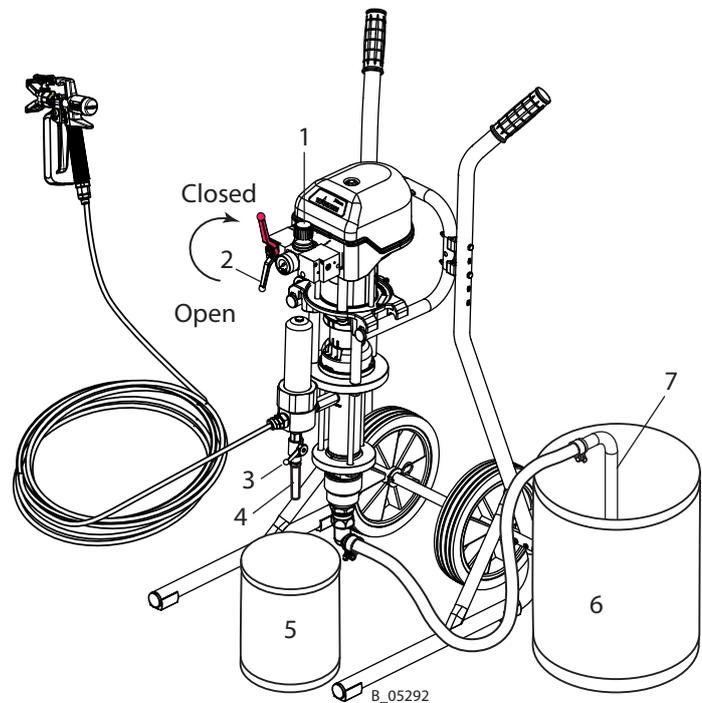
	<p>⚠ WARNING</p> <p>Gas mixtures can explode if there is an incompletely filled pump! Danger to life from flying parts. Ignition of potentially explosive surrounding atmosphere.</p> <p>→ Fill the device slowly and in a controlled manner. → Avoid potentially explosive atmosphere in the surroundings.</p>
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1. Visual check: personal protective 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!

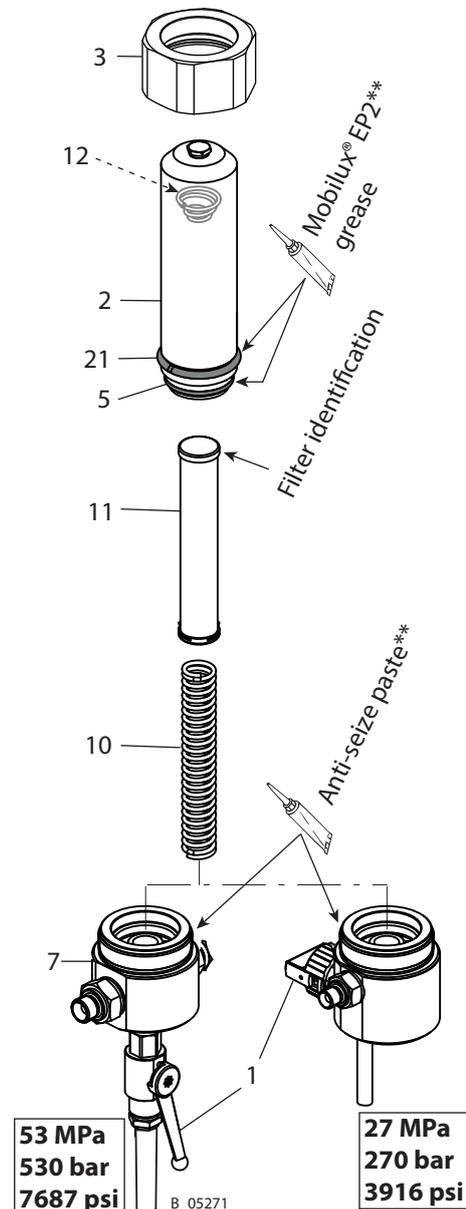
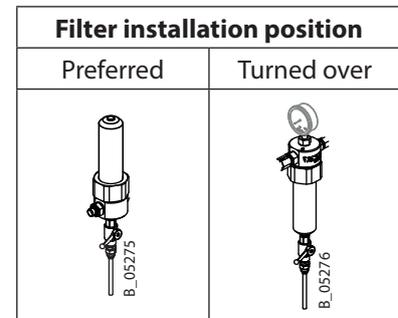
4. Close pressure regulator (1) (0 MPa; 0 bar; 0 psi).
5. Open return valve (3).
6. Slowly open the ball valve (2).
7. Slowly turn the air pressure up on the pressure regulator (1) and only until the pump is running normally (approx. 0–0.05 MPa; 0–0.5 bar; 0–7.25 psi). Be ready to switch from working material to air and prevent back spray.
8. Close ball valve (2) as soon as pure working material starts coming out of 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.



8.2.8 CLEANING THE HIGH-PRESSURE FILTER

- 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 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).
- Empty the pump in a controlled manner in accordance with Chapter 8.2.6.
- Place the grounded collection tank under the HP filter.
- Loosen the union nut (3) (wrench size 70).
- Unscrew the union nut (3) and lift slightly so that it does not get dirty in the next step.
- 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).
- Remove the filter cartridge (11) and filter support (10) from the filter housing (2).
- 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.
- If necessary, replace the O-ring (5) and/or filter cartridge (11). Order No., see Chapter 13.10 or 13.11.
- 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**.
 - Note the installation position of the filter cartridge (11). Push the closed end with the filter marking in the front 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.
- Fill the pump in accordance with Chapter 8.2.7.

** Order No., see Chapter 10.2.



8.2.9 PRODUCT HOSES, TUBES AND COUPLINGS

	 DANGER
	<p>Bursting hose, bursting threaded joints! Danger to life from injection of product and from flying parts.</p> <ul style="list-style-type: none"> → 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: <ul style="list-style-type: none"> - 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 (27 MPa)	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 gauge (air pressure regulator defective).	Disconnect compressed air supply briefly or repair or change pressure regulator.
	Spray nozzle is clogged.	Clean the nozzle according to the instructions.
	Insufficient compressed air supply.	Check compressed air supply.
	Filter insert in spray gun or high-pressure filter is clogged.	Clean the parts and use a suitable working 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.	Dilute the working material.
	Spraying pressure is too low.	Increase air inlet 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 supply 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.
Pump is running uniformly, but does not take in any working material	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 PERSONNEL

Repair work should be undertaken carefully by qualified and trained personnel. 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 check to ensure that the device is in a reliable state after it is repaired.

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

Brand notice

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

11 DISPOSAL

When the equipment must be scrapped, please differentiate the disposal of the waste materials.

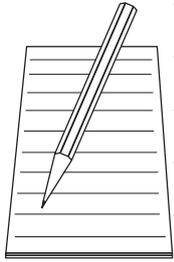
The following materials have been used:

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.

OPERATING MANUAL



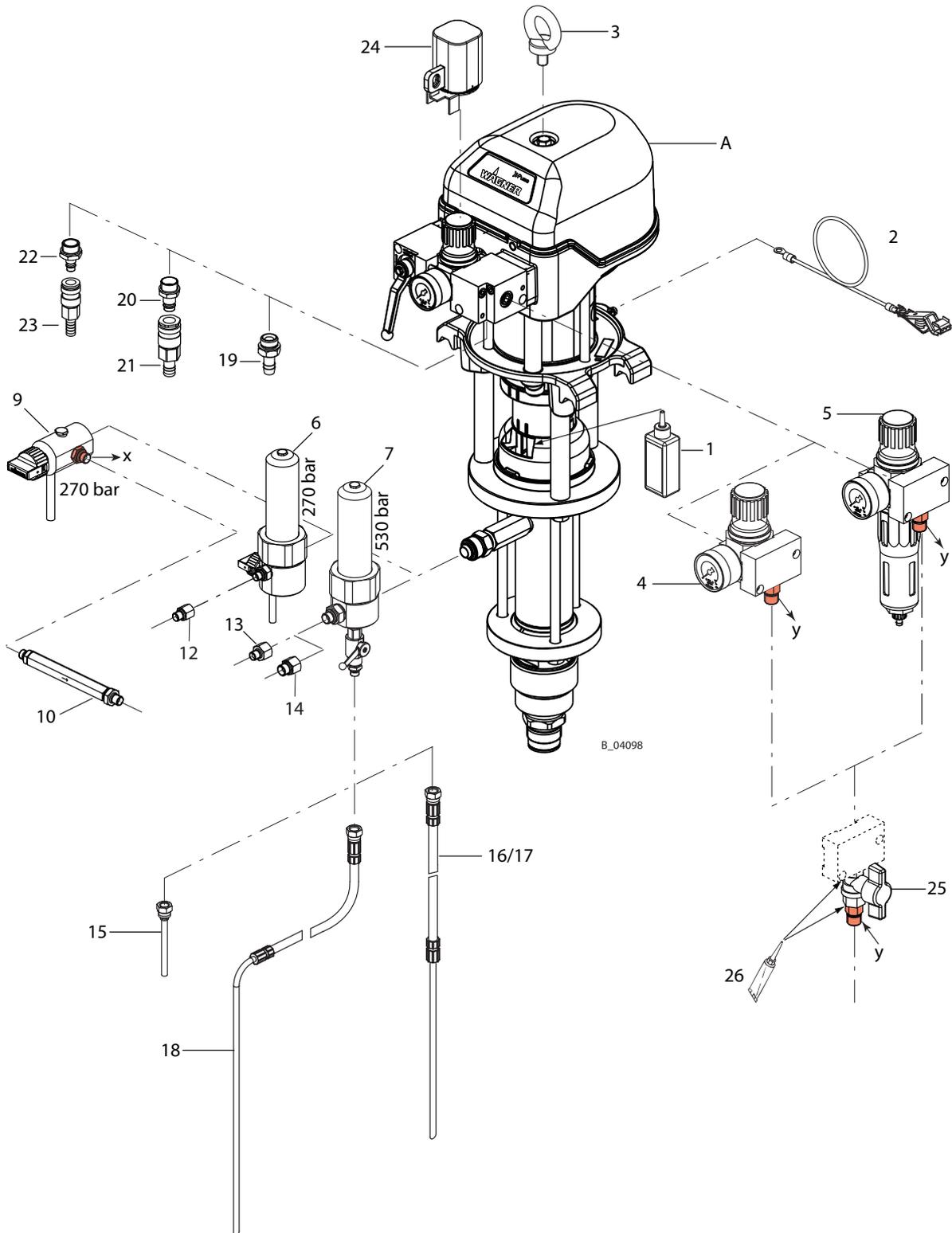
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12 ACCESSORIES

12.1 PRODUCT OUTLET

Accessories list		WILDCAT 18-40	PUMA 28-40
Pos	K	Designation	Order No.
A		Piston pump PE/TG	2329456
A		Piston pump PE/T	2329467
1		Separating agent 250 ml; 250 cc	2329458
2		Grounding cable 3 m; 9.8 ft	2329469
3		Lifting eye bolt	9992504
4		AirCoat regulator	236219
5		AirCoat filter regulator, complete	9907133
6		HP filter DN10-PN270-SSt, complete	2328611
7		HP filter DN12-PN530-SSt, complete	2333478
9		Filter relief combination	2329024
10		Paint filter DN6-PN270-G1/4"-1/4"NPS-SSt	2329025
12		Adapter G1/4"-NPS1/4"	367135
13		Adapter G3/8"-NPS1/4"	2329978
14		Adapter G3/8"-NPS 3/8"	2332619
15	◆	Return tube, DN6-G1/4"-100mm-PA	2332621
16	◆	Circulation hose DN6-PN310-G1/4"-1.8m-PA	2332620
17	◆	Circulation hose DN6-PN310-G1/4"-2.8m-PA	2331752
18	◆	Return hose DN6-PN310-G1/4"-PA	2331017
19		Plug-in fitting with hose connector DN13	2331014
20		Plug-in fitting with quick-release coupling DN13	2329046
21		Quick release coupling with hose connector DN 13	9985619
22		Plug-in fitting with quick-release coupling DN10	9998813
23		Quick release coupling with hose connector DN10	9998812
24		Regulator lock	9998810
25		Ball valve DN7-PN10-G1/4-R1/4-CB	9998811
26		Loctite® 542, 50 ml; 50 cc	2334956
			2335815
			9992831

◆ Wearing part

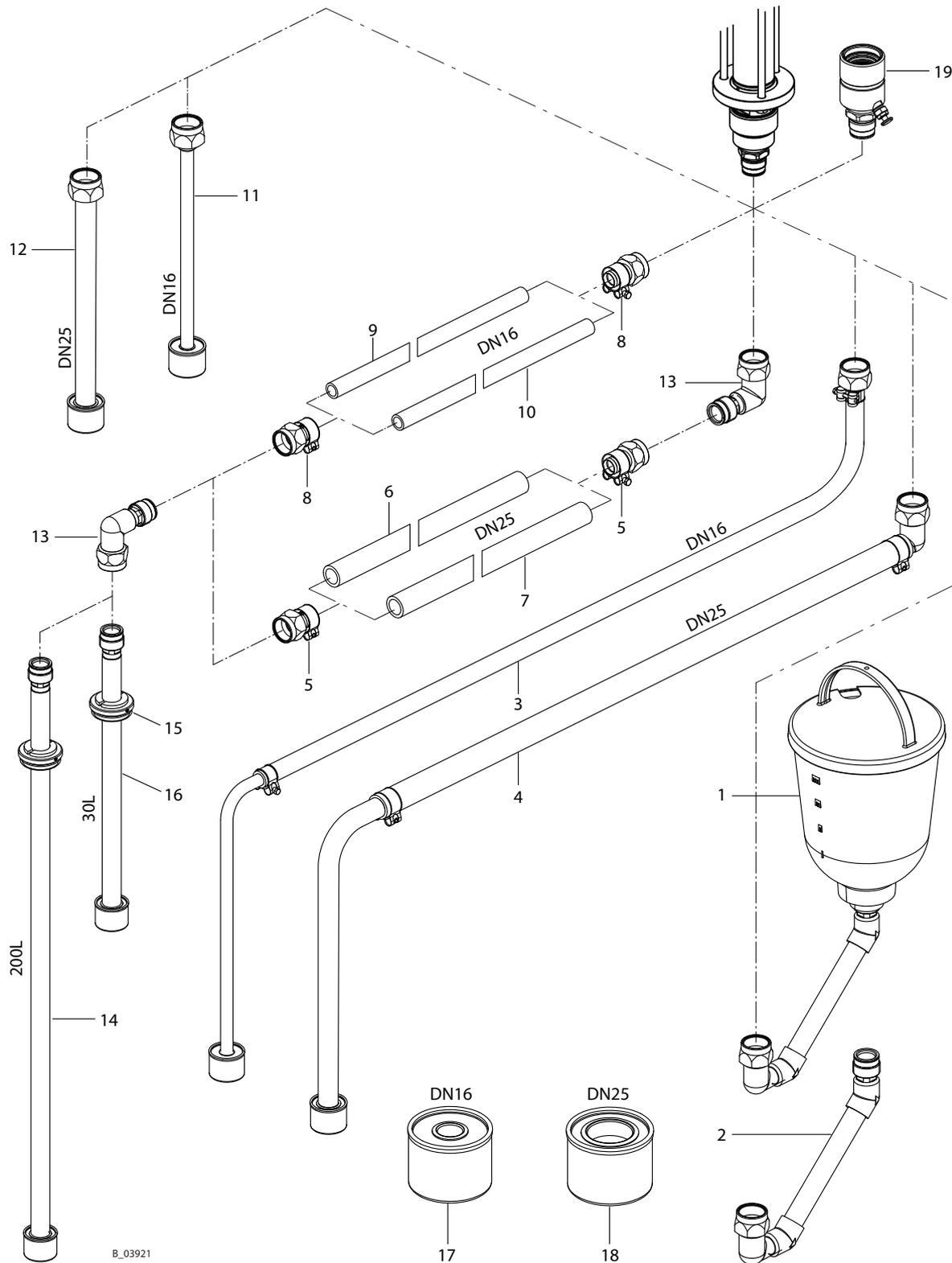


12.2 PRODUCT INLET

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.

		WILDCAT 18-40	PUMA 28-40
Accessories list		Order No.	Order No.
Pos	K Designation		
A	Piston pump PE/TG	2329456	2329467
A	Piston pump PE/T	2329458	2329469
1	Top reservoir set, 5 l for piston pump	2332169	
2	Suction elbow for top reservoir SSt	2323225	
3	◆ Suction hose DN16-SSt, complete	2324110	
4	◆ Suction hose DN25-SSt, complete	2324116	
5	LP hose fitting DN25-M36-SSt	2325408	
6	◆ LP hose DN25-PN10-EPDM (per meter)	2323474	
7	◆ LP hose DN25-PN10-PE (per meter)	2323595	
8	LP hose fitting DN16-M36-SSt	2325390	
9	◆ LP hose DN16-PN10-EPDM (per meter)	2323329	
10	◆ LP hose DN16-PN10-PE (per meter)	2323597	
11	Suction tube DN16-SSt, complete	2324158	
12	Suction tube DN25-SSt, complete	2323239	
13	Suction elbow DN25-SSt	2324247	
14	Suction tube DN25-200L-SSt, complete	2324238	
15	Bung adapter DN25-G2"	2315163	
16	Suction tube DN25-30L-SSt, complete	2324241	
17	◆ Suction filter, DN16-18mesh-SSt	2323396	
18	◆ Suction filter, DN25-18mesh-SSt	2323325	
19	Inlet valve with valve depressor	2329689	

◆ Wearing part

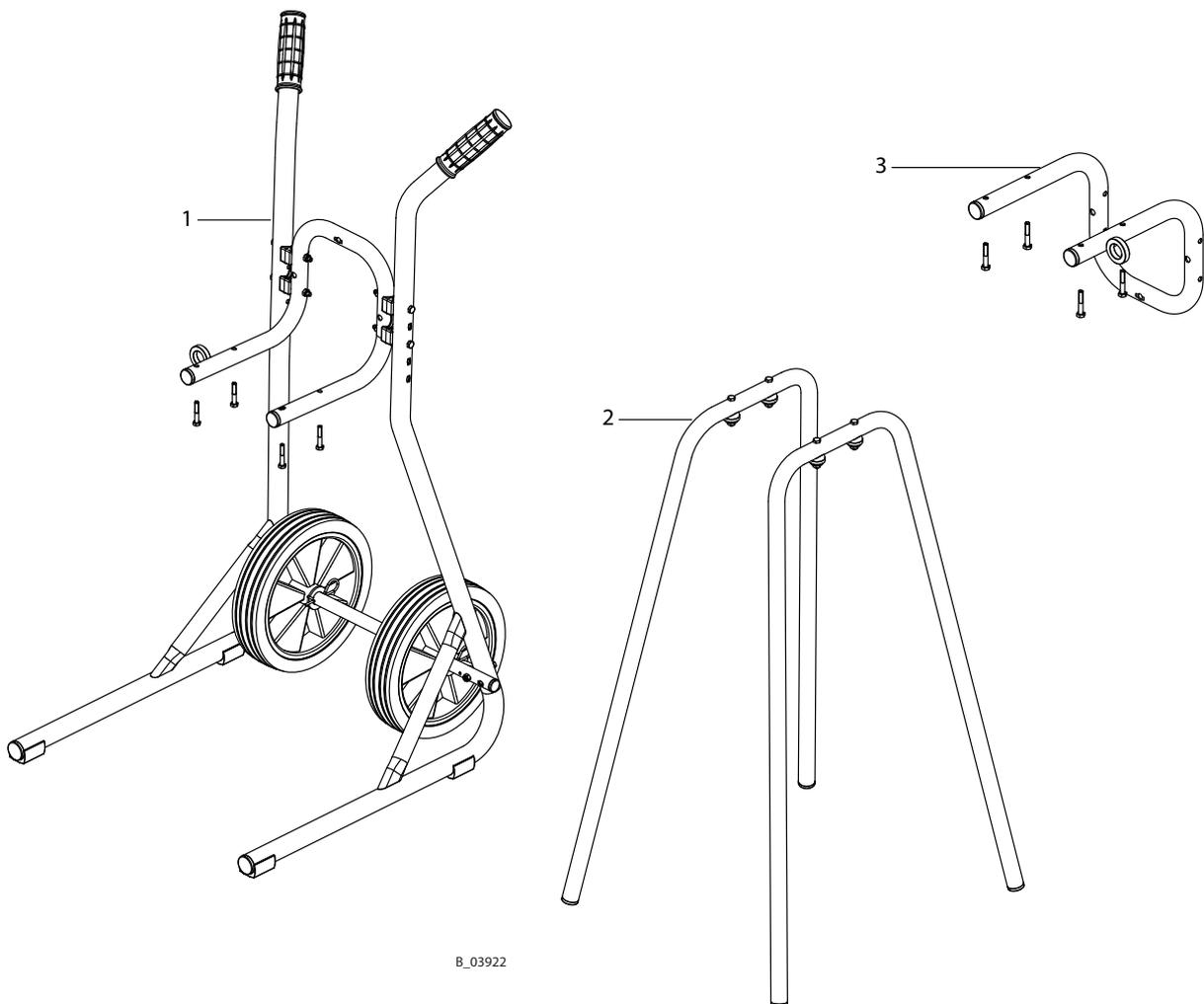


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12.3 TROLLEY, RACK AND WALL BRACKET ACCESSORIES

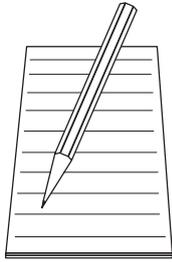
Accessories list		WILDCAT 18-40	PUMA 28-40
Pos	K	Designation	Order No.
A		Piston pump PE/TG	2329456
A		Piston pump PE/T	2329467
1		Trolley 4", complete	2325901
2		Frame 4", complete	2332374
3		Wall mount 4", complete	2332143

◆ Wearing part



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OPERATING MANUAL



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13 SPARE PARTS

- Observe the "Repairs" chapter: Repair personnel and mounting materials.
- The service manual is available separately. See Chapter 1.3

	 DANGER
	<p>Incorrect maintenance/repair! Danger to life and damage to the device.</p> <ul style="list-style-type: none"> → 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 "Spare Parts" chapter and that are assigned to the device. → Before all work on the device and in the event of work interruptions: <ul style="list-style-type: none"> - 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 and service manual for all 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 does not need be the same as the numbers given in the columns "**Stk**" of the lists. This number merely indicates how many of the respective parts are used in each component.

The following information is also required to ensure smooth processing of your order:

- Billing address
- Delivery address
- 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:

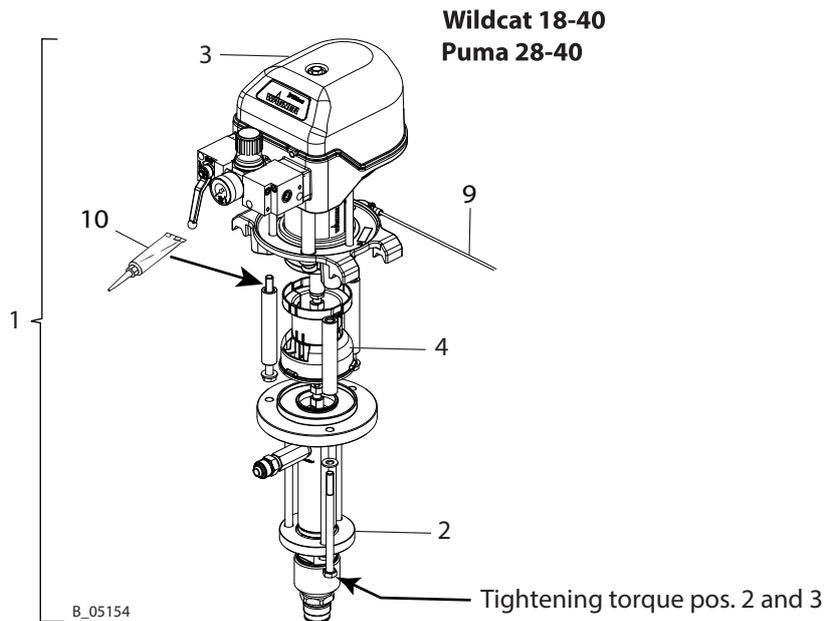
- ◆ Wearing parts

Note: These parts are not covered by warranty terms.

- Not part of the standard equipment, however, it is available as a special accessory.

13.2 OVERVIEW OF THE COMPONENTS

Pos	Designation	WILDCAT 18-40		PUMA 28-40	
		PE/TG Order No.	PE/T Order No.	PE/TG Order No.	PE/T Order No.
1	Piston pump	2329456	2329458	2329467	2329469
2	Fluid section	2329641	2329643	2329641	2329643
3	Air motor	2329613		2329617	
4	Connection set for air motor - fluid section	2350028			
9	Grounding cable, complete	236219			
10	Molykote® DX grease	9992616			
Tightening torque for air motor/fluid section		25 Nm; 18 lbft			



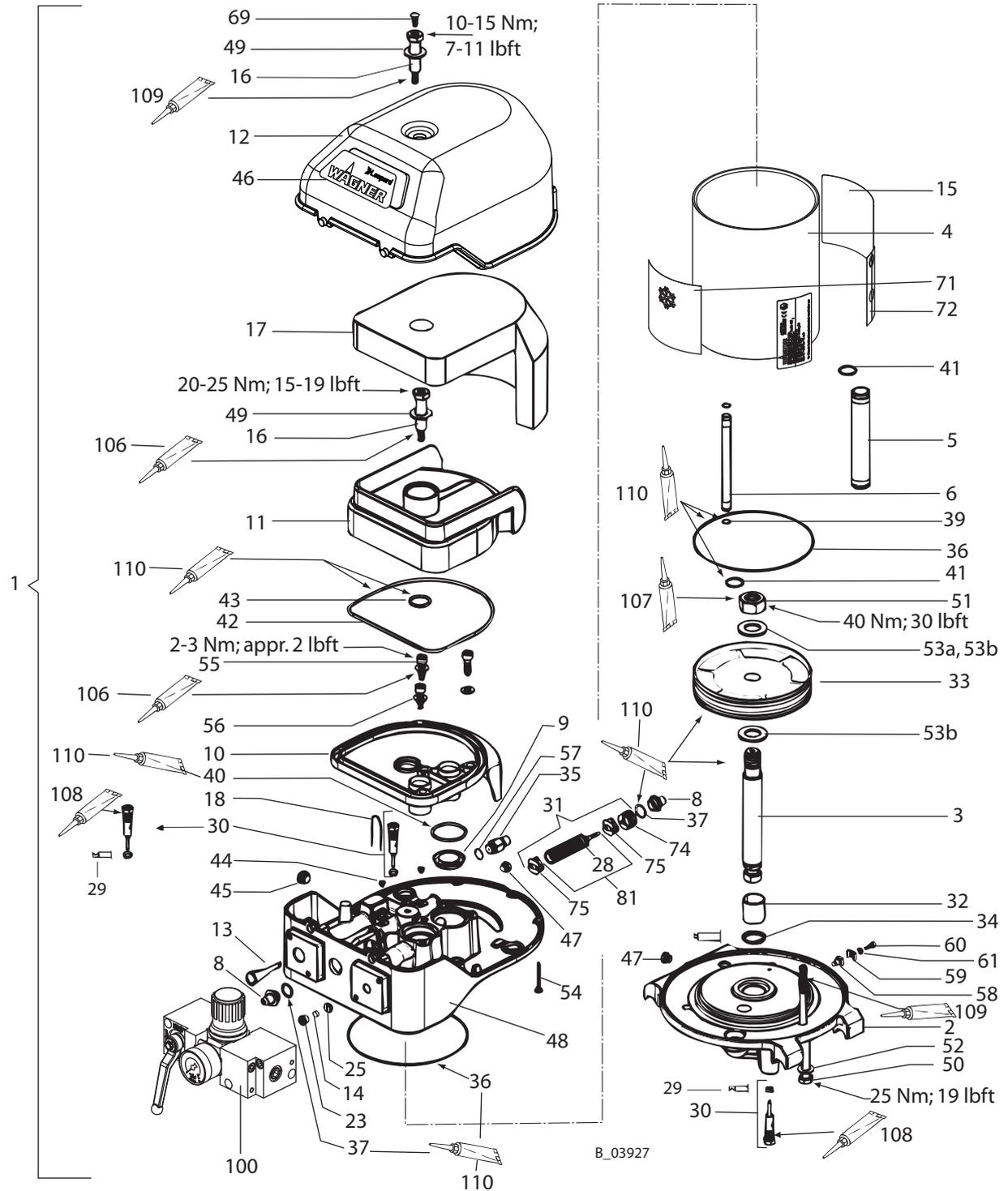
13.3 AIR MOTORS

	 DANGER
	<p>Incorrect maintenance/repair! Danger to life and damage to the device.</p> <ul style="list-style-type: none"> → 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 "Spare Parts" chapter and that are assigned to the device. → Before all work on the device and in the event of work interruptions: <ul style="list-style-type: none"> - 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 and service manual for all work.

Air motor spare parts list				WILDCAT 18-40	PUMA 28-40
Pos	K	Designation	Stk	Order No.	Order No.
1		Air motor	1	2329613	2329617
2		Flange	1	367316	
3		Piston rod	1	367302	
4		Cylinder pipe	1	366303	367303
5		Compressed air pipe	1	367304	
6		Control air pipe	1	367305	
8		Plug	2	367307	
9	◆ ★	Outlet seal	2	L414.06C	
10		Connecting part	1	367309	
11		Muffler	1	367310	
12		Hood	1	367311	
13	◆ ★	Compressed air filter	1	367313	
14	◆ ★	Control air filter	1	367314	
15		Fluid warning label	1	2332082	
16		Shoulder screw	2	367318	
17	◆	Sound deadening pad	1	367319	
18		Cotter pin	2	367320	
23		Filter holder	1	367324	
25		Throttle	1	367324	
28	◆	O-ring	6	9971123	
29	◆	Rod seal	2	9974217	

◆ = Wearing parts

★ = Included in service set.



Pressure regulator (pos. 100):
For details, see Chapter 13.3.1

Do not dismount the piston (pos. 81).

Air motor spare parts list				WILDCAT 18-40	PUMA 28-40
Pos	K	Designation	Stk	Order No.	Order No.
30	◆	Pilot valve	2	369290	
31	◆	Spool and sleeve assembly, complete	1	9943080	
32	◆	Permaglide bushing	1	9962018	
33	◆	Complete piston	1	9998663	
34	◆ ★	Seal wiper ring	1	9974090	
35		Safety valve 8.4 bar	1	368288	
36	◆ ★	O-ring	2	9974115	9974084
37	◆ ★	O-ring	2	9974085	
39	◆ ★	O-ring	2	9974089	
40	◆ ★	O-ring	2	9974095	
41	◆ ★	O-ring	2	9971448	
42	◆ ★	O-ring	1	9974097	
43	◆ ★	O-ring	1	9974098	
44		Threaded plug	1	9998674	
45		Threaded plug	1	9998274	
46		WAGNER label	1	2330369	2330370
47		Threaded plug	2	9998675	
48		Control housing	1	367315	
49		Washer	2	9925033	
50		Hexagon screw	3	9900225	
51		Hexagon nut	1	9910101	
52		Washer	3	9920106	
53a		Washer	1	9920107	
54		SFS screw	2	9907126	
55		Socket cap screw M6x16	3	9900325	
56		Washer	3	9920103	
57	◆ ★	Sealing ring	1	9970149	
58		Base	1	9952668	
59		Clamping bracket	1	9952667	
60		Socket cap screw	1	9900701	
61		Spring washer	1	9921505	
69		Drive fastener	1	9998718	
71		IceBreaker label	1	2330382	
72		Warning label	1	2332077	
74	◆	Detent element, complete ISO 1/2	1	368038	
75	◆	Damper ISO 1/2	2	368313	
81	◆	Spool and sleeve assembly ISO1 or ISO2	1	9943097	
100		Pressure regulator unit, 4", complete For details, see Chapter 13.3.2	1	2328606	
106		Loctite® 222 50ml; 50cc	1	9992590	
107		Loctite® 243, 50ml; 50cc	1	9992511	

◆ = Wearing parts

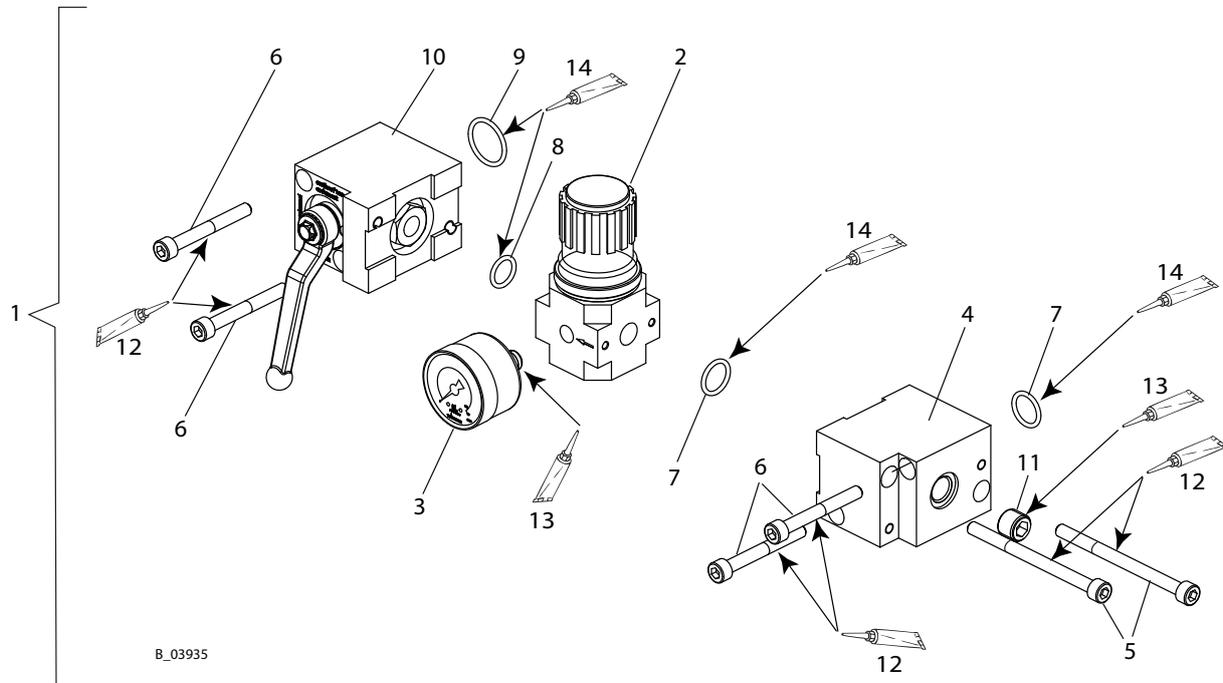
★ = Included in service set.

Air motor spare parts list				WILDCAT 18-40	PUMA 28-40
Pos	K	Designation	Stk	Order No.	Order No.
108		Loctite® 542, 50ml; 50cc	1	9992831	
109		Molykote® DX grease	1	9992616	
110		Mobilux® EP 2 grease	1	9998808	
		Service set	1	366995	367995

◆ = Wearing parts

★ = Included in service set.

13.3.1 WILDCAT AND PUMA AIR MOTOR REGULATORS



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

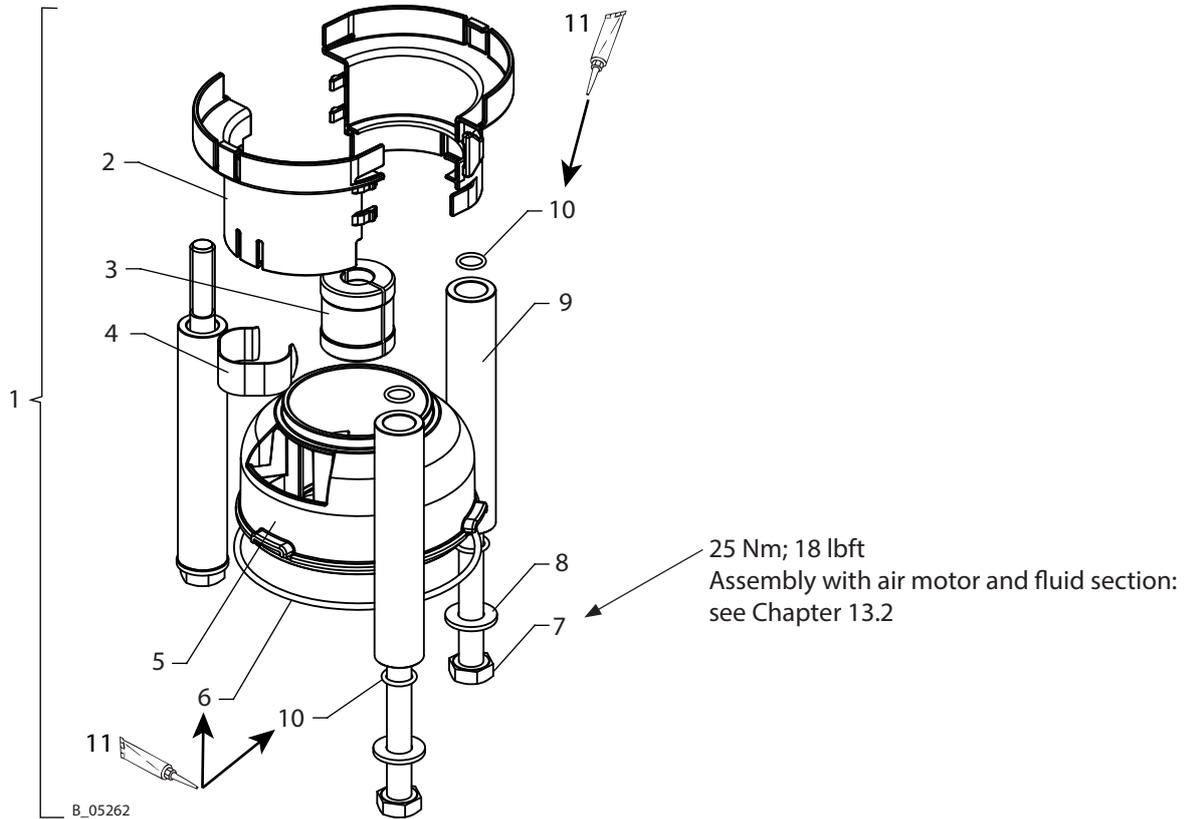
Air motor regulator spare parts list

Pos	K	Designation	Stk	WILDCAT	PUMA
				18-40	28-40
				Order No.	
1		Pressure regulator unit 4", complete	1		2328606
2	◆	Pressure regulator valve 4"	1		2309972
3	◆	Pressure gauge 0-10 bar (d40)	1		9998677
4		Distribution piece 4"	1		2309744
5		Hexagon socket head cap screws	2		9907039
6		Hexagon socket head cap screws	4		9900316
7	◆	O-ring	2		9974166
8	◆	O-ring	1		9971313
9	◆	O-ring	1		9971137
10	◆	Edge ball valve 4"	1		2310635
11		Screw plug	1		104376
12		Molykote® DX grease	1		9992616
13		Loctite® 542, 50ml; 50cc	1		9992831
14		Mobilux® EP 2 grease	1		9998808

◆ = Wearing parts

★ = Included in service set.

13.4 CONNECTION SETS



Spare parts list for connection sets

Pos	K	Stk	Designation	WILDCAT 18-40	PUMA 28-40
				Connection set	
				LM-FS 1	
				Order No.	
1		1	Connection set LM-FS ...		2350028
2		2	Coupling cover stroke 75		367532
3		1	Coupling		367529
4		1	Spring		367530
5		1	Separating oil cup stroke 75		367531
6	◆ ★	1	O-ring		9974093
7		3	Hexagon screws		9900225
8		3	Washer		9920106
9		3	Connecting tube stroke 75		367306
10	◆ ★	6	O-ring		9974089
11		1	Mobilux® EP 2 grease		9998808

◆ = Wearing parts

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

13.5 FLUID SECTIONS

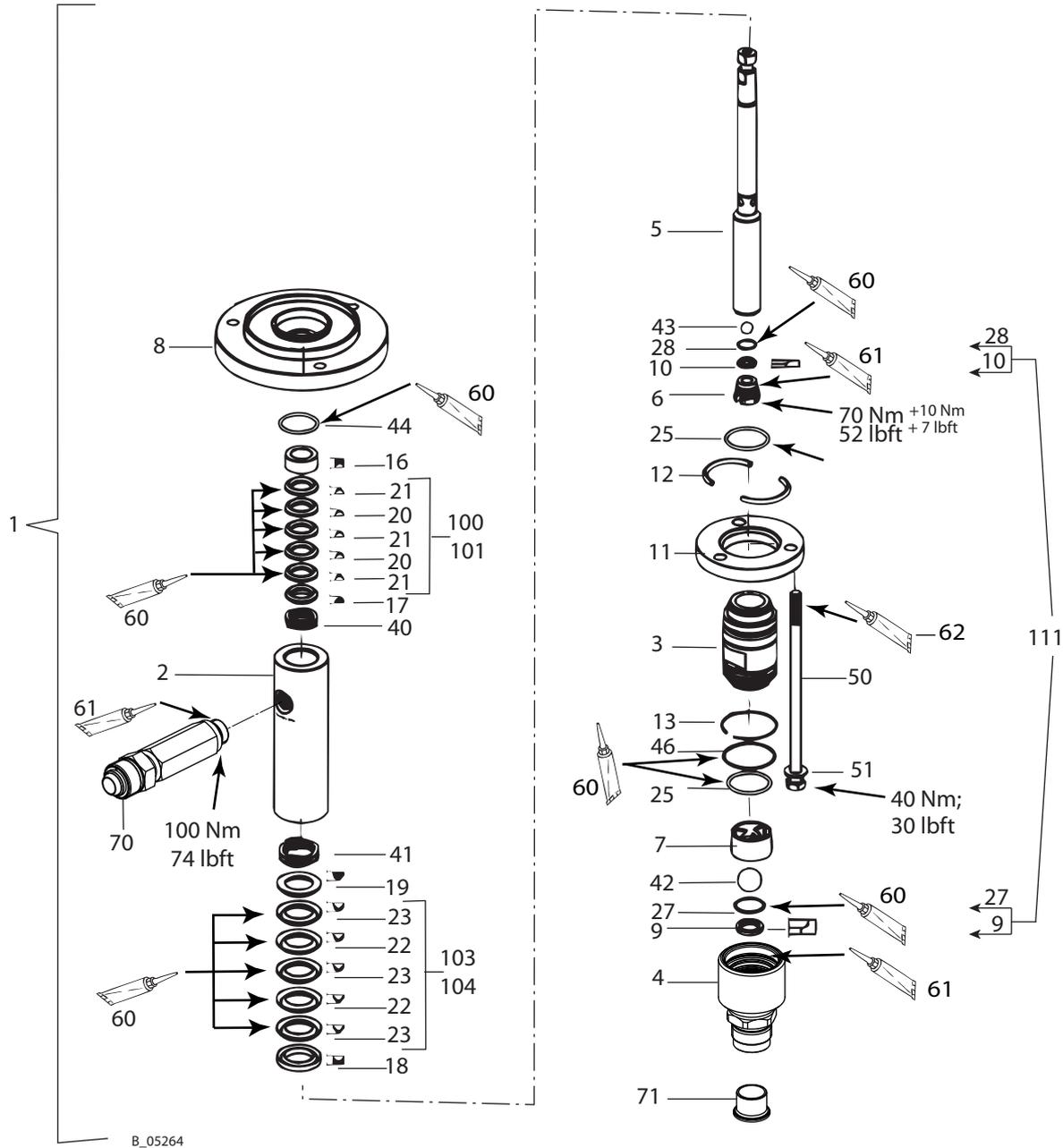
	 DANGER
	<p>Incorrect maintenance/repair! Danger to life and damage to the device.</p> <p>→ Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.</p> <p>→ Only repair and replace parts that are listed in the "Spare Parts" chapter and that are assigned to the device.</p> <p>→ Before all work on the device and in the event of work interruptions:</p> <ul style="list-style-type: none"> - 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. <p>→ Observe the operating and service manual for all work.</p>

Fluid sections spare parts list				40 cm ³ PE/TG	40 cm ³ PE/T
Pos	K	Stk	Designation	Order No.	Order No.
1		1	Fluid section	2329641	2329643
2		1	Pipe	367502	
3		1	Cylinder	367503	
4		1	Inlet housing 40	2322467	
5	◆	1	Piston	367505	
6		1	Valve screw	367506	
7	◆ ★	1	Ball guide, inlet	367507	
8		1	Connecting flange	367501	
9	◆	1	Valve seat, inlet	367509	
10	◆	1	Valve seat, outlet	367510	
11		1	Snap ring flange	367511	
12		2	Snap ring half	367512	
13		1	Securing ring	367513	
16		1	Support ring	367516	
17		1	Pressure ring	367517	
18		1	Support ring	367518	
19		1	Pressure ring	367519	
100	◆	1	Packing PE/TG, complete (small)	115805	/
101	◆	1	Packing PE/T, complete (small)	/	123219

◆ = Wearing parts

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

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



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

Fluid sections spare parts list				40 cm³ PE/TG	40 cm³ PE/T
Pos	K	Stk	Designation	Order No.	Order No.
20	◆ ★	2	Sealing collar TG (small)	123398	
20	◆ ★	2	Sealing collar T (small)		123426
21	◆ ★	3	Sealing collar PE (small)	123427	123427
103	◆	1	Packing PE/TG, complete (large)	367991	
104	◆	1	Packing PE/T, complete (large)		367992
22	◆ ★	2	Sealing collar TG (large)	367522	
22	◆ ★	2	Sealing collar T (large)		367900
23	◆ ★	3	Sealing collar PE (large)	367523	367523
25	◆ ★	2	O-ring	367525	
27	◆ ★	1	O-ring	367527	
28	◆ ★	1	O-ring	367528	
40	◆ ★	1	Wave spring (small)	9998669	
41	◆ ★	1	Wave spring (large)	9998670	
42	◆ ★	1	Ball (large)	9941513	
43	◆ ★	1	Ball (small)	9941518	
44	◆ ★	1	O-ring	9974094	
46	◆ ★	1	O-ring	9974106	
50		3	Hexagon screw	9907124	
60		1	Mobilux® EP 2 grease	9998808	
61		1	Anti-seize paste tube	9992609	
62		1	Molykote® DX grease	9992616	
70		1	Fitting SF-MM-G3/8"-M24x1.5-PN530-SSt	2329922	
71		1	Sealing sleeve	2329898	
		1	Service set PE/TG	367990	
		1	Service set PE/T		367994
111	●	1	Valve seat set 40 stainless steel*	2331582	

◆ = Wearing parts

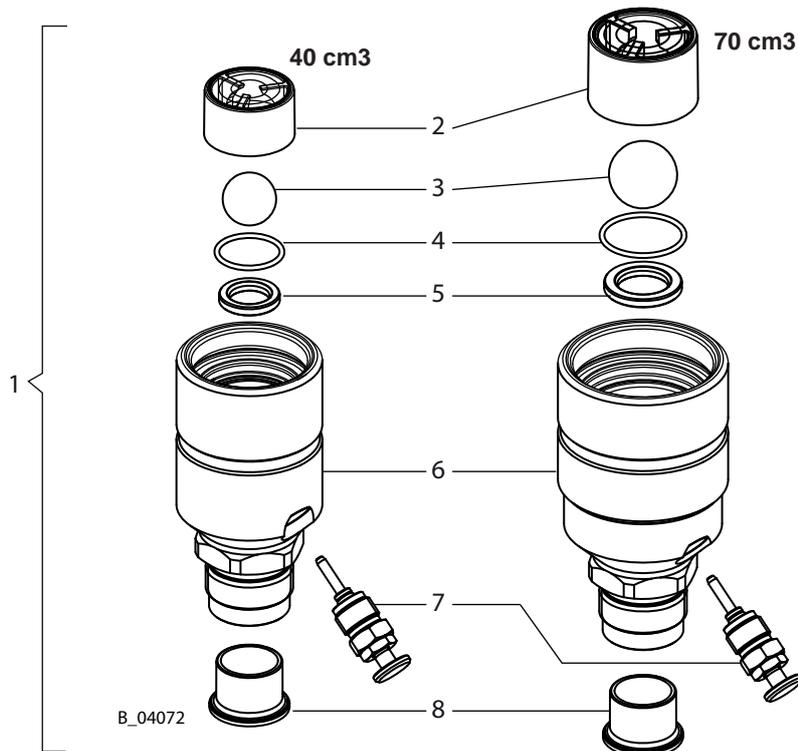
★ = Included in service set. (More parts, see Chapter 13.4).

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

* Note on pos. 111:

Valve seat set 40 stainless steel consisting of: Pos. 28, 10, 27, 9, but in stainless steel version.

13.6 INLET VALVE WITH VALVE DEPRESSOR

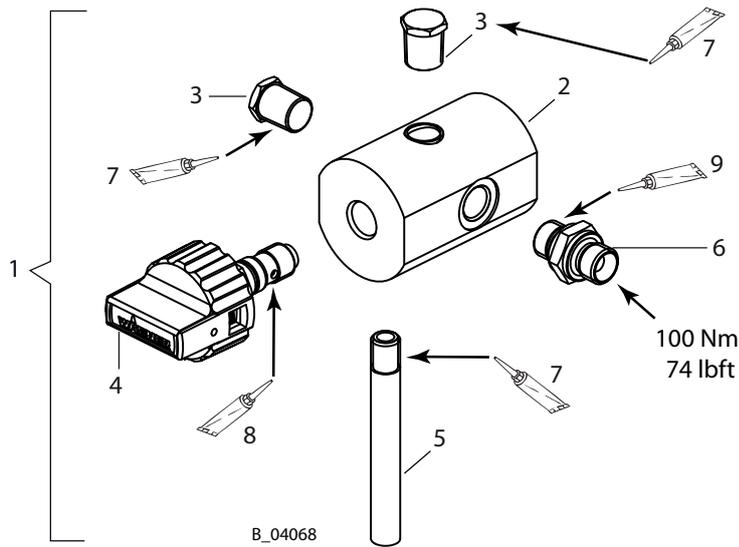


Spare parts list for inlet valve with valve depressor

Pos	K	Stk	Designation	Order No. for fluid section 40 cm3
1		1	Inlet valve with valve depressor	2329689
2	◆	1	Ball guide, inlet	367507
3	◆	1	Ball	9941513
4	◆	1	O-ring	367527
5	◆	1	Valve seat, inlet	367509
6		1	Inlet housing	2329412
7		1	Valve tappet, complete	368037
8		1	Sealing sleeve	2329898

◆ = Wearing parts

13.7 RELIEF COMBINATION 270 BAR



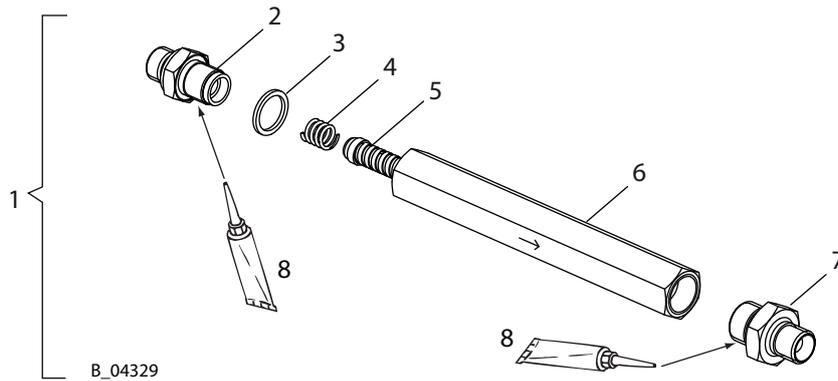
27 MPa; 270 bar; 3916 psi

Spare parts list for relief combination 270 bar

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

◆ = Wearing parts

13.8 PAINT FILTER (UP TO 270 BAR; 3,916 PSI)

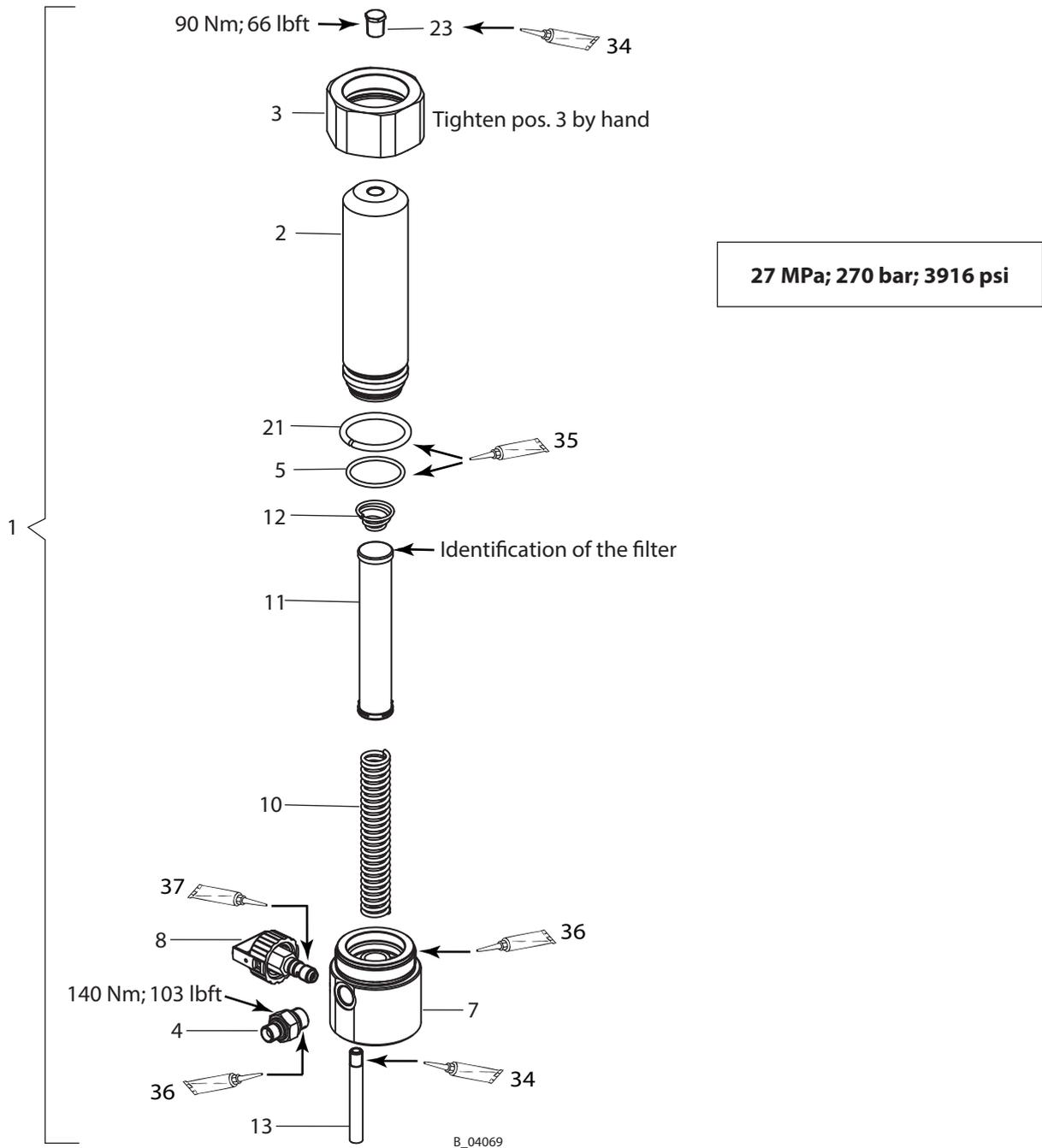


Pos	K	Stk	Order No.	Designation
1		1	2329978	Paint filter DN6-PN270-G1/4"-1/4"NPS-SSt
2		1	2329940	Fitting piece G1/4"
3	◆	1	9970123	Sealing ring
4	◆	1	43590	Pressure spring
5	◆	1		Filter insert *
	◆ ●		34383	* 200-mesh filter insert (red)
	◆ ●		43235	* 100-mesh filter insert (yellow)
	◆		34377	* 50-mesh filter insert (white)
	◆ ●		89323	* 30-mesh filter insert (green)
6		1	--	Housing
7		1	2310575	Fitting-DF-MM-M16x1,5-1/4"NPS-PN530-SSt
8		1	9992609	Anti-seize paste tube

◆ = Wearing parts

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

13.9 HIGH-PRESSURE FILTER 270 BAR



Spare parts list for high-pressure filter 270

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

◆ = Wearing parts

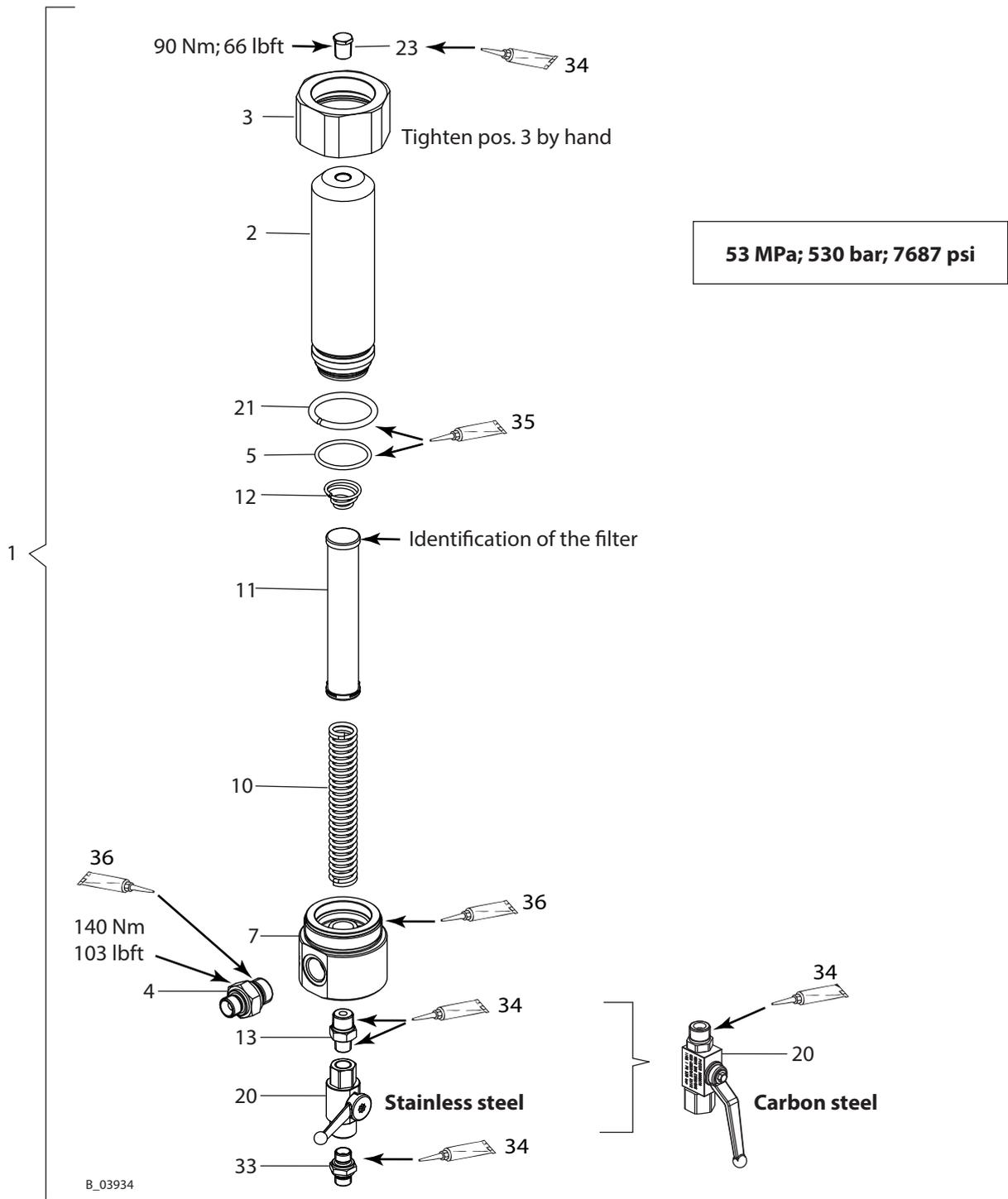
● = Not part of the standard equipment but available as a special accessory.

**DANGER****Incorrect maintenance/repair!**

Danger to life and damage to the device.

- 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 "Spare Parts" chapter and that are assigned to the device.
- 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 and service manual for all work.

13.10 HIGH-PRESSURE FILTER 530 BAR



Spare parts list for high-pressure filter 530

			Ball valve version in:	Stainless steel	Carbon steel
Pos	K	Stk	Designation	Order No.	Order No.
1		1	HP filter DN12-PN530, complete	2329025	2335334
2		1	Filter housing	2324542	
3		1	Union nut	2324543	
4		1	Fitting-DF-MM-G1/2-G3/8-PN530-SSt	2330780	
5	◆	1	O-ring	9955863	
7		1	Distribution housing for ball valve	2324670	
10		1	Filter support	9894245	
11		1	Filter cartridge *		
	◆ ●		* Filter sieve, 200 meshes per inch (fine)	295721	
	◆ ●		* Filter sieve, 150 meshes per inch (fine)	2325816	
	◆		* Filter sieve, 100 meshes per inch (medium), mesh width 0.16 mm	3514068	
	◆ ●		* Filter sieve, 50 meshes per inch (rough)	3514069	
	◆ ●		* Filter sieve, 20 meshes per inch (rough)	291564	
12	◆	1	Cone spring	3514058	
13		1	Fitting-DF-MM-R3/8-R1/4-PN530-SSt	2328291	
20	◆	1	Ball valve	2330156	9998679
21		1	Pressure ring d45	2325562	
23		1	Hexagon plug	2323718	
33		1	Double connector	3204611	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

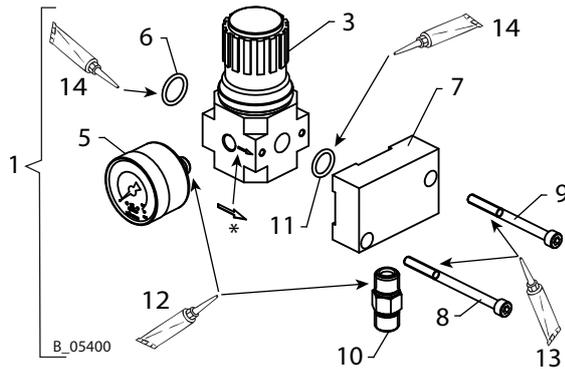
Incorrect maintenance/repair!

Danger to life and damage to the device.

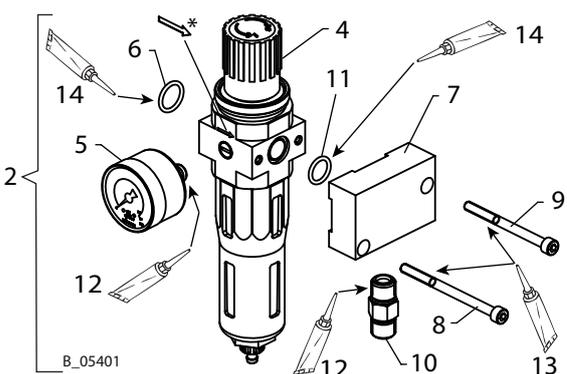
- Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- Only repair and replace parts that are listed in the "Spare Parts" chapter and that are assigned to the device.
- Before all work on the device and in the event of work interruptions:
 - Relieve pressure 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 and service manual for all work.

13.11 AIRCOAT REGULATOR AND AIRCOAT FILTER REGULATOR

AirCoat Regulator



AirCoat filter regulator

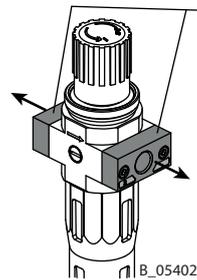


Pos 3 or 4:

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

Pos. 5:

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



Pos. 4:

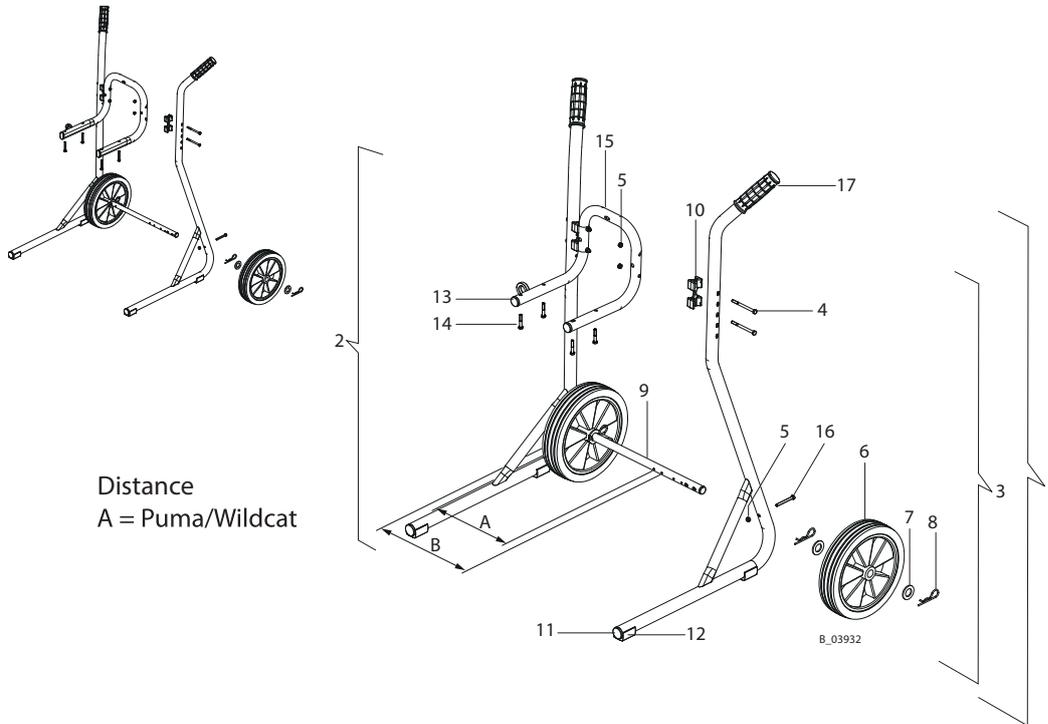
Before assembling, remove both threaded plates and four screws.

Spare parts list AirCoat regulator and AirCoat filter regulator

Pos	K	Stk	Designation	AirCoat Regulator Order No.	AirCoat filter regulator Order No.
1		1	AirCoat regulator set	2328611	
2		1	AirCoat filter regulator set		2333478
3	◆	1	Pressure regulator, LR-1/4-D-O-I-Mini	2309972	
4	◆	1	Filter control valve		2331950
5	◆	1	Pressure gauge, 0-10 bar RF40 (d40)		9998677
6	◆	1	O-ring		9974166
7		1	Holding plate		2325527
8		1	Hexagon socket head cap screws		9906021
9		1	Hexagon socket head cap screws		9900320
10		1	Double fitting R1/4-R1/4		9994627
11	◆	1	O-ring		9971313
12		1	Loctite® 542		9992831
13		1	Molykote® DX grease		9992616
14		1	Mobilux® EP 2 grease		9998808

◆ = Wearing parts

13.12 TROLLEY FOR WILDCAT AND PUMA

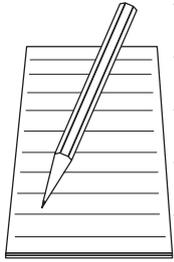


Trolley spare parts

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

◆ = Wearing parts

OPERATING MANUAL



A series of horizontal lines for writing, starting from the top of the page and extending down to the footer area.

14 3+2 YEARS GUARANTEE FOR PROFESSIONAL FINISHING

14.1 SCOPE OF GUARANTEE

All Wagner professional color application devices (hereafter referred to as "products") are carefully inspected, tested, and subject to strict checks under WAGNER quality assurance. WAGNER exclusively issues extended guarantees to commercial or professional users (hereafter referred to as "customer") who have purchased the product in an authorized specialist shop, and which relate to the products listed on the Internet at www.wagner-group.com/profi-guarantee.

The buyer's claim for liability for defects from the purchase agreement with the seller and statutory rights are not impaired by this guarantee.

We provide a guarantee in that we decide whether to replace or repair the product or individual parts, or take the device back and reimburse the purchase price. The costs for products and working hours are our responsibility. Replaced products or parts become our property.

14.2 GUARANTEE PERIOD AND REGISTRATION

The guarantee period amounts to 36 months. For industrial use or equal wear, such as shift operations in particular, or in the event of rentals, it amounts to 12 months.

Systems driven by petrol or air are also guaranteed for a 12 month period.

The guarantee period begins with the day of delivery by the authorized specialist shop. The date on the original purchase document is authoritative.

For all products bought in authorized specialist shops from 02/01/2009 the guarantee period is extended to 24 months providing the buyer of these devices registers in accordance with the following conditions within 4 weeks of the day of delivery by the authorized specialist shop.

Registration can be completed on the Internet at www.wagner-group.com/profi-guarantee

The guarantee certificate is valid as confirmation, as is the original purchase document that carries the date of the purchase. Registration is only possible if the buyer agrees to the data that is entered during registration being stored.

When services are carried out under guarantee the guarantee period for the product is neither extended nor renewed.

Once the guarantee period has expired, claims made against the guarantee or from the guarantee can no longer be enforced.

14.3 HANDLING

If defects can be seen in the materials, processing, or performance of the device during the guarantee period, guarantee claims must be made immediately, or at the latest within a period of 2 weeks.

The authorized specialist shop that delivered the device is entitled to accept guarantee claims. Guarantee claims may also be made to the service centers named in the operating manual. The product has to be sent without charge or presented together with the original purchase document that includes details of the purchase date and the name of the product. In order to claim for an extension to the guarantee, the guarantee certificate must be included.

The costs as well as the risk of loss or damage to the product in transit or by the center that accepts the guarantee claims or who delivers the repaired product, are the responsibility of the customer.

14.4 EXCLUSION OF GUARANTEE

Guarantee claims cannot be considered

- for parts that are subject to wear and tear due to use or other natural wear and tear, as well as defects in the product that are a result of natural wear and tear, or wear and tear due to use. This includes in particular cables, valves, packings, nozzles, cylinders, pistons, medium-conveying housing components, filters, hoses, seals, rotors, stators, etc. Damage due to wear and tear that is caused in particular by sanded coating products, such as dispersions, plasters, putties, adhesives, glazes, quartz foundation.
- in the event of errors in devices that are due to non-compliance with the operating instructions, unsuitable or unprofessional use, incorrect assembling and/or commissioning by the buyer or by a third party, utilization other than is intended, abnormal ambient conditions, unsuitable coating products, the influence of chemical, electrochemical, or electrical agents, unsuitable operating conditions, operation with the incorrect mains voltage supply/frequency, overload, or defective servicing or care and/or cleaning.
- for errors in the device that have been caused by using accessory parts, additional components, or spare parts that are not original WAGNER parts.
- for products to which modifications or additions have been carried out.
- for products where the serial number has been removed or is illegible.
- for products to which attempts at repairs have been carried out by unauthorized persons.
- for products with slight deviations from the target properties, which are negligible with regard to the value and usability of the device.
- for products that have been partially or fully taken apart.

14.5 ADDITIONAL REGULATIONS

The above guarantees apply exclusively to products that have been bought from authorized specialist shops in the EU, CIS, Australia and are used within the reference country.

If an inspection finds damage not covered by the present guarantee, repairs are carried out at the expense of the buyer.

The above regulations manage the legal relationship to us conclusively. Additional claims, in particular for damages and losses of any type, which occur as a result of the product or its use, are excluded from the product liability act except with regard to the area of application.

Claims for liability for defects to the specialist trader remain unaffected.

German law applies to this guarantee. The contractual language is German. In the event that the meaning of the German and a foreign text of this guarantee deviate from one another, the meaning of the German text has priority.

J. Wagner GmbH
Professional Finishing Division
Otto Lilienthal Strasse 18
88677 Markdorf
Germany

Wagner Professional Guarantee
(As of 02/01/2009)

14.6 CE DECLARATION OF CONFORMITY

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

Wildcat	Puma
18-40	28-40

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

14.7 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 Verlag in Cologne, or they can be found on the Internet.

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Munich

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www.grimmer-sc.de

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