

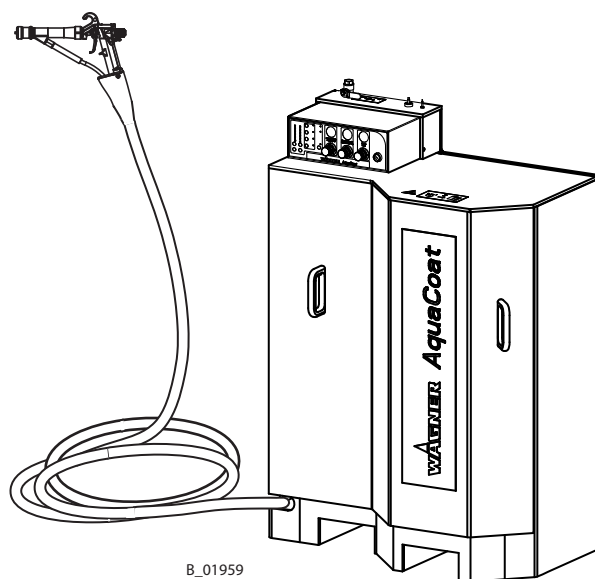


Translation of the original
Operating manual

AquaCoat AirCoat
-22-18S
-Puma 28-40
-VM 2900W

Edition 01/2008

AquaCoat
AirCoat spray system
for non-combustible liquids



B_01959



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1 ABOUT THESE INSTRUCTIONS

This operating manual contains information about the operation, repair and maintenance of the unit.

→ Always follow these instructions when operating the unit.

This equipment can be dangerous if it is not operated in accordance with this manual.

Electrostatic spray guns may be operated only by trained personnel.

Compliance with these instructions constitutes an integral component of the guarantee agreement.

1.1 LANGUAGES

This operating manual is available in the following languages:

Language:	Part No.	Language:	Part No.	Language:	Part No.
German	363820	English	363821	French	363822
Dutch	--	Italian	363824	Spanish	363825
Danish	--	Swedish	--	Greek	2309268



The corresponding service instructions are available under the following order number:

Language:	Part No.	Language:	Part No.
German	353895	English	353896



1.2 WARNINGS, NOTES AND SYMBOLS IN THESE INSTRUCTIONS

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



Danger - imminent danger. Non-observance will result in death, serious injury and serious material damage.

 SIHI_0100_GB	 DANGER
	<p>This line warns of the hazard! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

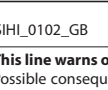
Warning - possible danger. Non-observance can result in death, serious injury and serious material damage.

 SIHI_0103_GB	 WARNING
	<p>This line warns of the hazard! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

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

 SIHI_0101_GB	 CAUTION
	<p>This line warns of the hazard! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

Caution - a possibly hazardous situation. Non-observance can cause material damage.

 SIHI_0102_GB	CAUTION
	<p>This line warns of the hazard! Possible consequences of failing to observe the warning instructions. The signal word points out the hazard level.</p> <p>→ The measures for preventing the hazard and its consequences.</p>

Note - provide information on particular characteristics and how to proceed.

2 GENERAL SAFETY INSTRUCTIONS

2.1 SAFETY INSTRUCTIONS FOR THE OPERATOR

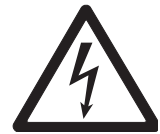
- Keep these operating instructions to hand near the unit at all times.
- Always follow local regulations concerning occupational safety and accident prevention.



2.1.1 ELECTRICAL EQUIPMENT

Electrical plant and unit

- 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.
- Must be operated in accordance with the safety regulations and electrotechnical regulations.
- Must be repaired immediately in the event of problems.
- Must be put out of operation if they pose a hazard.
- Must be de-energized before work is commenced on active parts. Inform staff about planned work, observe electrical safety regulations.

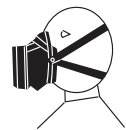


2.1.2 PERSONNEL QUALIFICATIONS

- Ensure that the unit is operated and repaired only by trained persons.

2.1.3 A SAFE WORK ENVIRONMENT

- Ensure that the floor of the working area is anti-static in accordance with EN 50053 Part 1, §7-2, measurement in accordance with DIN 51953.
- Ensure that all persons within the working area wear anti-static shoes, e.g. shoes with leather soles.
- Ensure that during spraying, persons wear anti-static gloves so that they are earthed via the handle of the spray gun.
- Customer to provide paint mist extraction systems conforming to local regulations.
- Ensure that the following components of a safe working environment are available:
 - Material/air hoses adapted to the working pressure
 - Personal safety equipment (breathing and skin protection)
- Ensure that there are no ignition sources such as naked flame, glowing wires or hot surfaces in the vicinity. Do not smoke.



2.2 SAFETY INSTRUCTIONS FOR STAFF

- Always follow the information in these instructions, particularly the general safety instructions and the warning instructions.
- Always follow local regulations concerning occupational safety and accident prevention.



2.2.1 SAFE HANDLING OF WAGNER SPRAY UNITS

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

Avoid injection of paint or cleaning agents:

- Never point the spray gun at people.
- Never reach into the spray jet.
- Before all work on the unit, in the event of work interruptions and functional faults:
 - Switch off the energy/compressed air supply.
 - Secure the spray gun against actuation.
 - Relieve the pressure from the spray gun and unit.
 - By functional faults: Identify and correct the problem, proceed as described in chap. „Trouble shooting“.

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

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

Avoid danger of injury through recoil forces:

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



2.2.2 EARTH THE UNIT

Electrostatic charges can occur on the unit due to the electrostatic charge and the flow speed involved in spraying. These can cause sparks and flames upon discharge.

- Ensure that the unit is always earthed.
- Earth the work pieces to be coated.
- Ensure that all persons inside the working area are earthed, e.g. that they are wearing antistatic shoes.
- When spraying, wear antistatic gloves to earth yourself via the spray gun handle.



2.2.3 PAINT HOSES

- Ensure that the hose material is chemically resistant to the sprayed materials.
- Ensure that the material hose is suitable for the pressure generated in the unit.
- Ensure that the following information is visible on the high-pressure hose:
 - Manufacturer
 - Permissible operating overpressure
 - Date of manufacture.
- The electrical resistance of the complete high-pressure hose must be less than 1 MOhm.



2.2.4 CLEANING

- De-energize the unit electrically.
- Disconnect the pneumatic supply line.
- Relieve the pressure from the unit.
- Ensure that only non-combustible detergents are used.
- To clean, use only cloths and brushes. Never use hard objects or spray on cleaning agents a gun.



2.2.5 HANDLING HAZARDOUS LIQUIDS, VARNISHES AND PAINTS

- When preparing or working with paint and when cleaning the unit, follow the working instructions of the manufacturer of the paints, solvents and cleaning agents being used.
- Take the specified protective measures, in particular wear safety goggles, protective clothing and gloves, as well as hand protection cream if necessary.
- Use a mask or breathing apparatus if necessary.
- For sufficient health and environmental safety: Operate the unit in a spray booth or on a spraying wall with the ventilation (extraction) switched on.
- Wear suitable protective clothing when working with hot materials.



2.2.6 TOUCHING HOT SURFACES

- Touch hot surfaces only if you are wearing protective gloves.
- When operating the unit with a coating material with a temperature of >43°C; 109.4°F:
 - Identify the unit with a warning label that says „Warning - hot surface“.



Order No.

9998910 Information label

9998911 Safety label

2.3 CORRECT USE

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

- Use the unit only to work with the materials recommended by WAGNER.
- Operate the unit only as an entire unit.
- Do not deactivate safety equipment.
- Use only WAGNER original spare parts and accessories.



2.4 SAFETY-RELEVANT INFORMATION ABOUT DISCHARGES

The plastic parts of the cabinet are charged electrostatically by the high-voltage field. Harmless discharges (brush discharges) are possible after contact with plastic parts. They are completely harmless for people.

3 PRODUCT LIABILITY AND WARRANTY

3.1 IMPORTANT NOTES ON PRODUCT LIABILITY

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

If other makes of accessory and spare parts are used, the manufacturer's liability could be fully or partially null and void.

The usage of original WAGNER accessories and spare parts guarantees that all safety regulations are observed.

3.2 WARRANTY

This unit is covered by our warranty on the following terms:

We will at our discretion repair or replace free of charge all parts which within 24 months in single-shift, 12 months in 2-shift or 6 months in 3-shift operation from date of receipt by the Purchaser are found to be wholly or substantially unusable due to causes prior to the sale, in particular faulty design, defective materials or poor workmanship.

The terms of the warranty are met at our discretion by the repair or replacement of the unit or parts thereof. The resulting costs, in particular shipping charges, road tolls, labour and material costs will be borne by us except where these costs are increased due to the subsequent shipment of the unit to a location other than the address of the purchaser.

This warranty does not cover damage caused by:

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

Abrasive coating products such as redlead, emulsions, glazes, liquid abrasives, zinc dust paints and similar reduce the service life of valves, packings, spray guns, nozzles, cylinders, pistons etc. Any wear resulting from the aforementioned causes is not covered by this warranty.

Components not manufactured by Wagner are subject to the warranty terms of the original maker.

The replacement of a part does not extend the warranty period of the unit.

The unit should be inspected immediately upon receipt.

To avoid loss warranty, any apparent defect should be notified to us or the dealer in writing within 14 days from date of sale of the unit.

The right to commission warranty services to a third party is reserved.

Warranty claims are subject to proof of purchase by submitting an invoice or delivery note. If an inspection finds damage not covered by the present warranty, the repair will be carried out at the expense of the purchaser.

Note that this warranty does not in any way restrict legally entitled claims or those contractually agreed to in our general terms and conditions.

3.3 CE-CONFORMITY

Herewith we declare that the supplied version of

363010	363023	Spraypack AquaCoat AirCoat
363020		Spraypack AquaCoat 22-185
363021	363022	Spraypack AquaCoat Puma 28-40

Complies with the following guidelines:

98/37/EG
73/23/EWG
89/336/EWG
2002/95/EG
2002/96/EG

Applied standards, in particular:

EN 12100-1
EN 12100-2
EN 1050
EN 1953
EN 563
EN 60204-1
EN 50059
EN 61000-6-1
EN 61000-6-2
EN 61000-6-3
EN 61000-6-4

Applied national technical standards and specifications, in particular:

BGI 740
BGI 764
BGR 500

Marking:



CE Certificate of Conformity

The certificate is enclosed with this product. The certificate of conformity can be reordered from your WAGNER representative, quoting the product and serial number.

Part number:

363890

3.4 GERMAN REGULATIONS AND GUIDELINES

- a) BGV A2 Electrical units and equipment
- b) BGR 500 Part 2, Chap. 2.36 Working with liquid ejection devices
- c) BGR 500 Part 2, Chap. 2.29 Using coating materials
- d) CHV 9 Regulations on flammable liquids
- e) CHV 11 Regulations on electrical equipment in Ex areas
- f) BGR 104 Explosion protection rules
- g) BGR 132 Avoiding ignition risks
- h) BGR 180 Setting up for cleaning with solvents for cleaning workpieces with solvents
- i) ZH 1/406 Guidelines for liquid ejection devices
- j) BGI 740 Painting rooms and equipment
- k) BGI 764 Electrostatic coating

Note: All titles can be ordered from Heymanns Publishing House in Cologne or download from Internet.

4 DESCRIPTION

4.1 FIELDS OF APPLICATION, USING IN ACCORDANCE WITH THE INSTRUCTIONS

AquaCoat Spray Packs are equipped ready-for-use with the VM 2900W control unit, a GM 2900EACW AirCoat spray gun and matching hose set, a high voltage generator, all safety devices and spray material supply, and are therefore suitable for AirCoat applications.

4.1.1 PROCESSIBLE MATERIALS

Water-dilutable paints are in principle divided into 3 groups:

Green	Non-flammable (non-combustible) paints
Yellow	Paints with low flammability
Red	Flammable paints

Only non-flammable (non-combustible) liquid spray materials (**green** group) can be processed with the present spray system. The specific resistance of the spray material must be between 1kΩ.cm and 1MΩ.cm.

The following formula can be used to determine whether the spray material is non-flammable:

$$\text{Weight \% H}_2\text{O} > 1.70 \times \text{Weight \% LM} + 0.96 \times \text{Weight \% ORG}$$

Where:

Weight %	weight percent
H ₂ O	water
LM	liquid organic phase (solvent mainly consisting of higher ethylene glycol esters)
ORG	solid organic phase (solids mainly consisting of binding agents and pigments)

Such paints behave like water in respect of flammability in liquid form (liquid phase) and in sprayed form. Cleaners and thinners must also be non-flammable. A possible cleaner and thinner is, e.g. water with less than 37 weight percent 1:1 butylene glycol/N-propanol.

Please contact your local WAGNER dealer and the paint manufacturer if you encounter application problems.

4.2 DELIVERY SCOPE

AquaCoat AirCoat Spray Packs can be assembled according to requirement and the desired accessories with the help of the Spray Pack configuration.

All devices are assembled ready-for-use in the factory on the basis of the resulting configuration number.

The scope of supply of each system includes:

Part-No.	Description
	AquaCoat Spraypack consisting of: - AquaCoat cabinet - Spray gun GM 2900EACW - Control unit VM 2900W - Pump - Accessories
363820	Operating manual German
see chapter 1	Operating manual in the local language
	Operating manual for pump German
	Operating manual for pump in the local language
see chapter 3.3	CE-Declaration of Conformity AquaCoat

The delivery note shows the exact scope of delivery.



4.2.1 SPRAYPACK-CONFIGURATION

To order the AquaCoat Spraypack, please use model identification *0363010-ABCDEFGH* together with the following tables.

	Table ->	A	B	C	D	E	F	G	H
Examples ->	0363010 -	1	411	1	1	4	2	1	2
->	0363010 -	6	R21	2	1	1	4	2	4

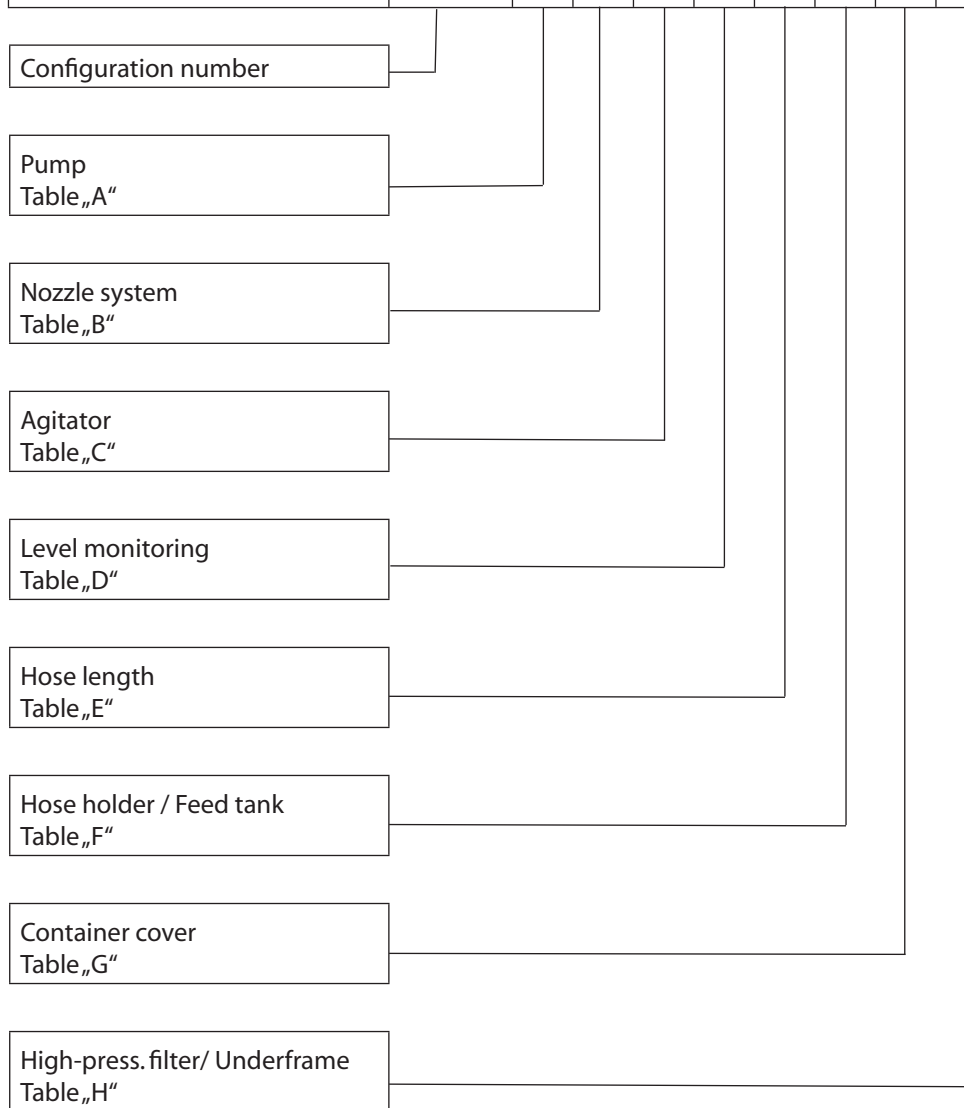


Table "A" Pump	
Number	Type
1	22-18S
2	Wildcat 10-70
3	Wildcat 18-40
4	Puma 15-70
5	Puma 28-40
6	Cobra 40-10
7	Cobra 40-10 of frame

Table "C" Agitator	
Number	Type
1	no agitator
2	Agitator

Table "E" Hose length	
Number	Type
1	7.5 m; 24.6 ft
2	10 m; 32.8 ft
3	15 m; 49.2 ft
4	20 m; 65.6 ft

Table "G" Barrel cover	
Number	Type
1	no
2	Ø 350 mm; Ø 13.8 inch

Table "B" Nozzle system (examples) (*)	
Number	Description
411	Flat jet with nozzle 11/40
413	Flat jet with nozzle 13/40
513	Flat jet with nozzle 13/50
615	Flat jet with nozzle 15/60
R12	Round jet with nozzle R 12
R13	Round jet with nozzle R 13
R14	Round jet with nozzle R 14

Table "D" Level monitoring	
Number	Designation
1	no
2	yes

Table "F" Hose holder/ Feed tank	
Number	Description
1	no
2	Hose holder
3	Feed tank
4	Hose holder + Feed tank

Table "H" High-pressure filter/ Under frame	
Number	Description
1	Filter discharge combination
2	High-pressure filter
3	Filter discharge combination + Under frame
4	High-pressure filter + Under frame
5	Under frame
6	no

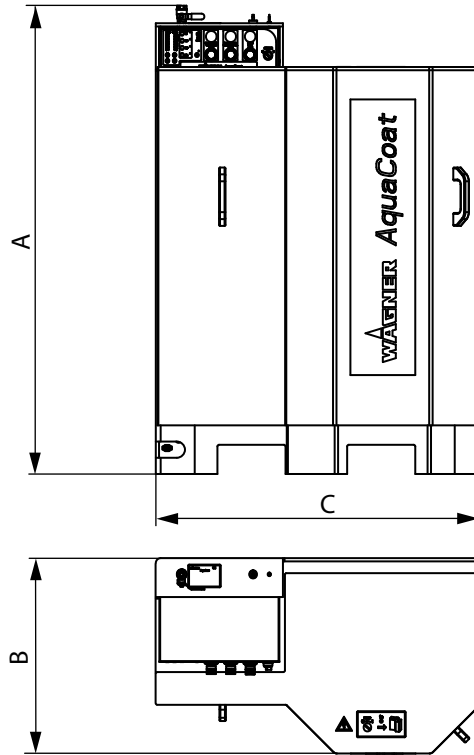
(*) **Note to table „B“:** The complete Wagner nozzle range can be found in the accessories in Chapter 10. For flat-jet nozzles, the last 3 digits of the order number are used, and for round-jet nozzles the identification digits with preceding „R“ are used.



4.3 TECHNICAL DATA

Weight (without Paint reservoir and Pump)	70 kg; 154 lb
Working temperature range	5-40°C; 41-104°F
Maximum material temperature	60°C; 140°F
Sound pressure level	<i>When the cabinet is open:</i> Dependent on the installed pump; data can be found in the enclosed operating instructions. <i>When the cabinet is closed:</i> The values are 10 - 12 dB(A) lower.

Dimensions



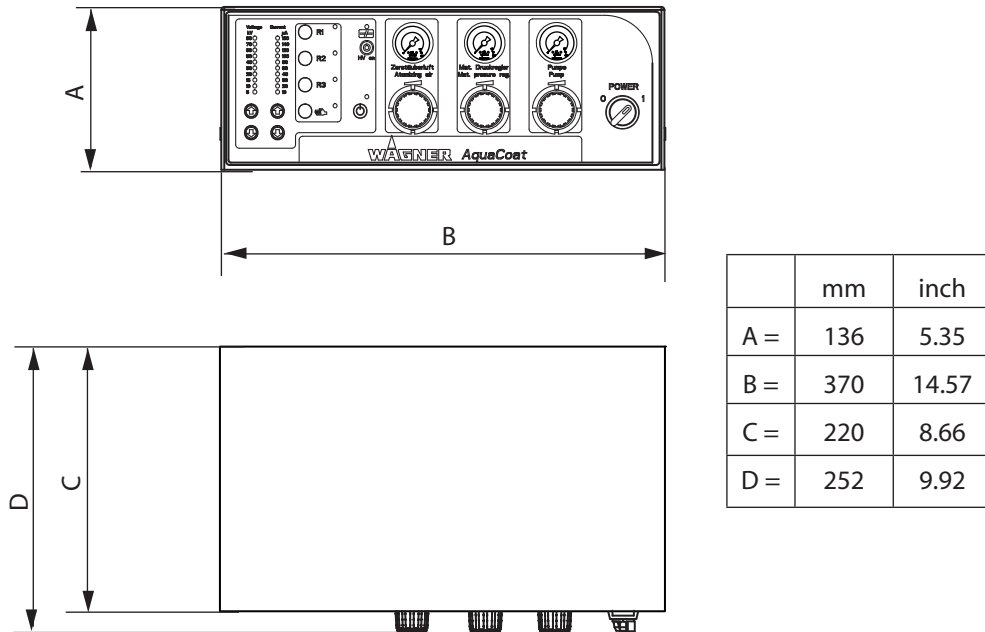
	mm	inch
A =	1390	54.72
B =	616	24.25
C =	1000	39.37

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4.3.1 CONTROL UNIT VM 2900W

Description	Data	
Input voltage	85-264 VAC 47-440 Hz	
Input power	maxi. 25 W	
Output voltage	maxi. 22 Vpp	
Output current	maxi. 1.2 A	
High voltage limiter	70 kV DC	
Spraying current limit	120 µA DC	
Polarity	for positive and negative high voltage generator	
Weight (without cable)	6.2 kg	13.67 lb
Working temperature range	5-40°C	41-104°F

Dimensions

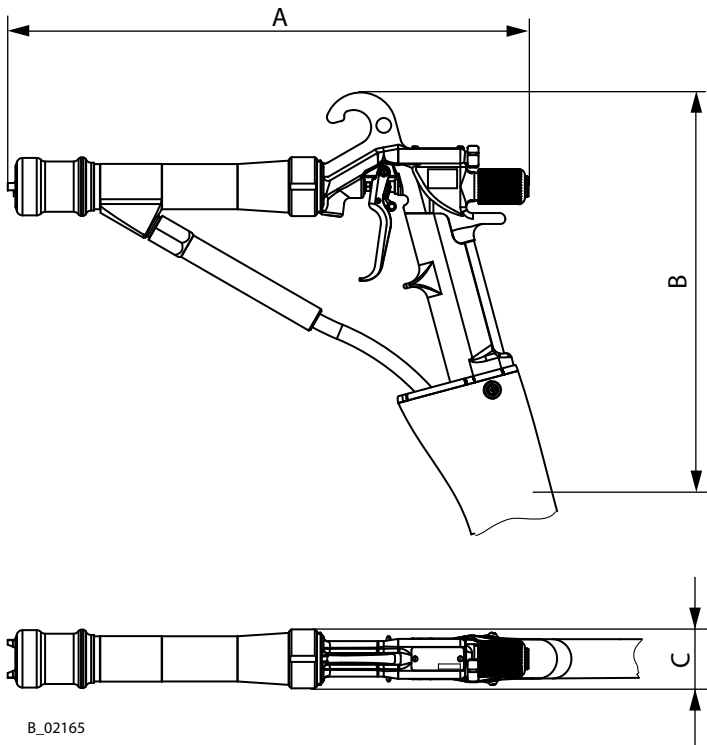


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4.3.2 SPRAY GUN GM 2900EACW

Description	Data		
Air pressure maxi.	0.8 MPa	8 bar	116 psi
Material pressure maxi.	25 MPa	250 bar	3626 psi
Paint connection	M16x1.5		
Air connection	R 1/4"		
Hose set lengths	7.5 m	24.6 ft	
	10 m	32.8 ft	
	15 m	49.2 ft	
	20 m	65.6 ft	
Weight (without cables)	0.8 kg	1.76 lb	
Working temperature range	5-40°C	41-104°F	
Maxi. material temperature	60°C	140°F	
Quantity of fluid	according to nozzle sizes (See nozzle list on accessories)		
Sound power at 0.2 MPa; 2 bar; 29 psi air pressure (depending on nozzle used)	65 - 79 dB(A)		

Dimensions

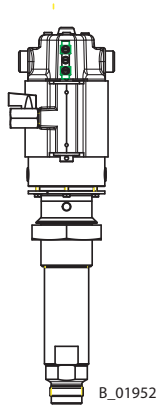


	mm	inch
A =	347	13.66
B =	255	10.04
C =	40	1.58

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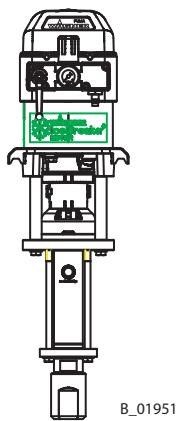
4.3.4 PNEUMATIC PISTON PUMP 22-18S PE+TG

See separate operating instructions

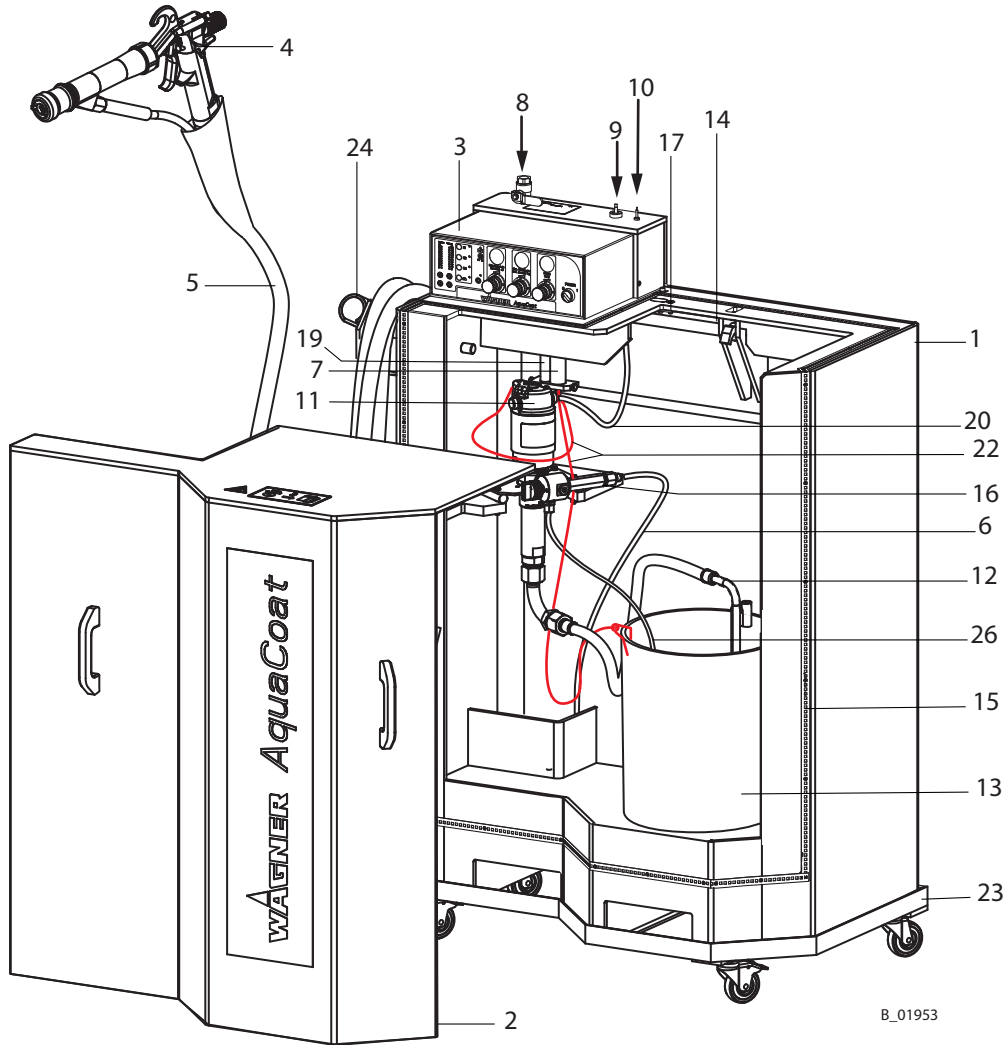


4.3.5 PNEUMATIC PISTON PUMP PUMA 28-40 PE+TG

See separate operating instructions



4.4 FUNCTIONAL DESCRIPTIONS



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Pos	Description
1	Cabinet AquaCoat assy.
2	Front panel with 2 handles
3	Control unit VM 2900W
4	Spray gun GM 2900EACW-F or GM 2900EACW-R
5	Hose set EACW
6	Material hose (Filter-relief combination for spray gun)
7	Cascade AquaCoat
8	Air inlet assembly with ball valve
9	Inlet for mains cable
10	Earthing cable

Pos	Description
11	Material pressure generator such as pneumatic pump or double membrane pump
12	Suction system assembly
13	Paint container
14	Earthing switch (Cylinder AquaCoat)
15	Earthing band
16	Filter-relief combination
17	Door switch
19	Resistance AquaCoat
20	Air hose (Material pressure generator)
22	High voltage cable (2 pieces)
23	Base frame assy. (available, however, as additional extra)
24	Hose holder assy. (available, however, as additional extra)
26	Return hose

The AquaCoat spray system is designed for processing non-combustible liquids in accordance with the AirCoat spraying method.

The spray product is regulated via the trigger guard on the spray gun (4) and by the VM 2900W control unit (3), drawn in with a material pressure generator (11) via a suction system (12), electrostatically charged in the sealed off inner chamber of the AquaCoat cabinet (1) and sprayed in the nozzle of the spray gun with the help of AirCoat air

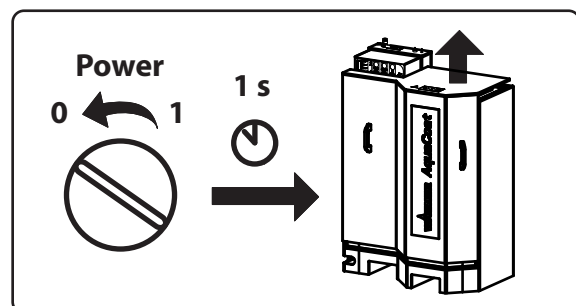
The material pressure generator and spray gun are connected by the shielded material hose.

The following functions are provided for system safety:

The earthing switch (14), the door switch (17), the earthing strip (15) and the integrated AquaCoat resistor (19).

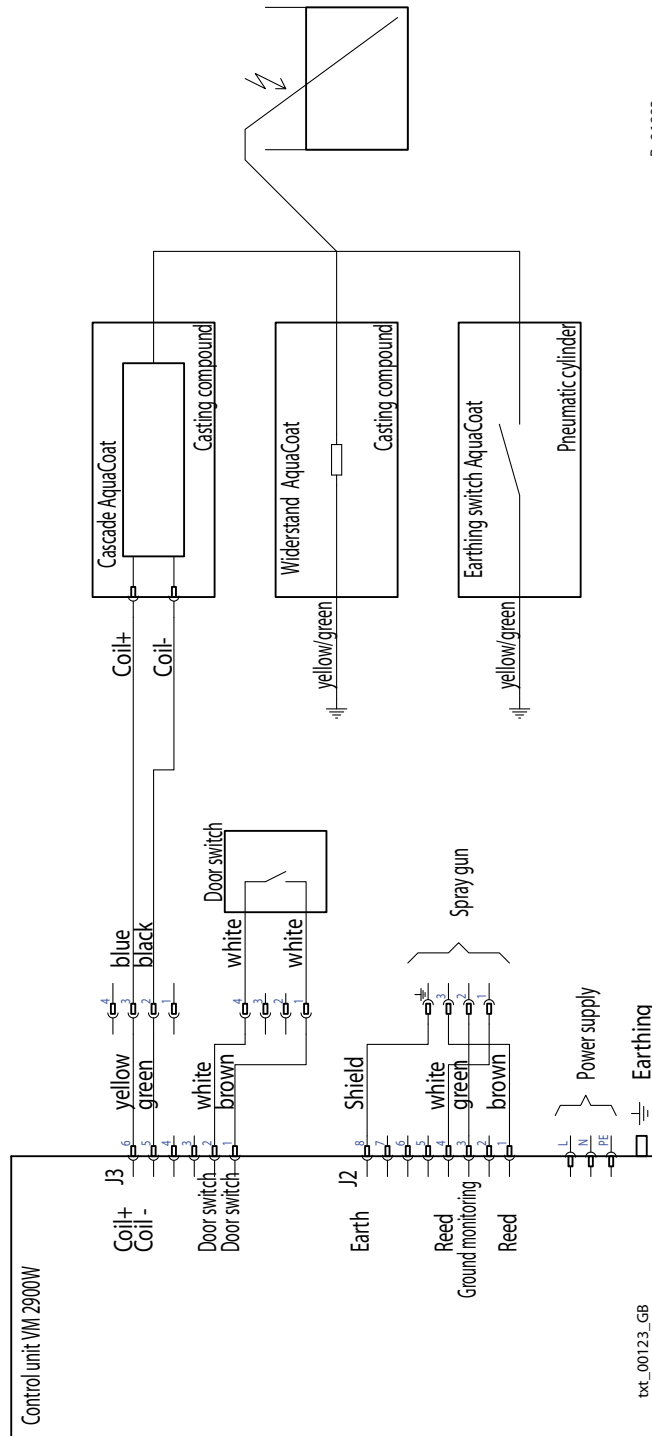
Note:

Only mount or remove the front panel (2) when the control unit (3) is switched off. 1 second after the control unit (3) has been switched off, the system is earthed and the door lock opened.



B_01925

Electrical block diagram AquaCoat

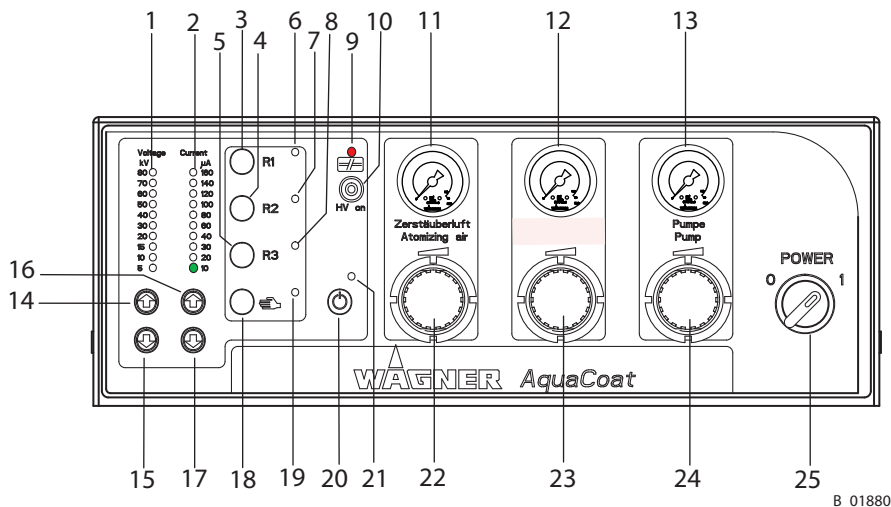


B_01903

4.4.1 CONTROL UNIT VM 2900W

The assembled spray system can be operated and regulated with the VM 2900W control unit.

Front of the control unit

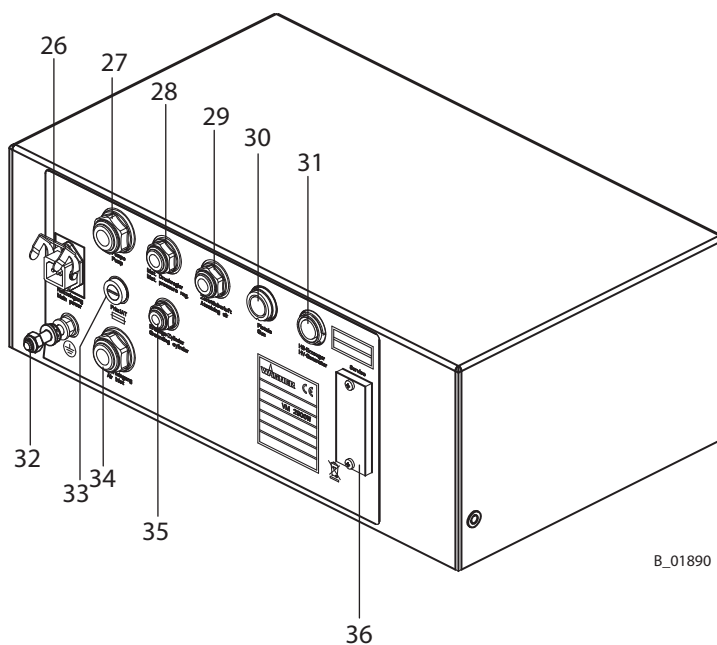


B_01880

- 1 High voltage display** (Luminous display green)
 Readings between 0 to 80 kV.
 (Resolution of 0 - 20 kV -> 5 kV and 20 - 80 kV -> 10 kV)
 - Single LED display: Indicates the required high-voltage value in kV.
 (with the spray gun switched off)
 - Bar graph LED display: Indicates the actual high-voltage value in kV.
 (with the spray gun switched on)
- 2 Spraying current display** (Luminous display green)
 Readings between 0 to 120 μ A
 (Resolution of 0 to 80 μ A = 10 μ A; and 80 - 120 μ A = 20 μ A)
 - Single LED display: Current limiter activation point
 (with the spray gun switched off).
 - Bar graph LED display: Indicates the actual corona current value
 (with the spray gun switched on).
- 3 Push-button:** formula R1
- 4 Push-button:** formula R2
- 5 Push-button:** formula R3
- 6 Formula LED display R1:**
 Lights up green when formula R1 is selected.
- 7 Formula LED display R2:**
 Lights up green when formula R2 is selected.
- 8 Formula LED display R3:**
 Lights up green when formula R3 is selected.
- 9 Fault LED display** (Illuminated display, red)
 Lights up in the event of a fault in the AquaCoat -> see also description in chap. 7.

- 10 High voltage LED display** (Illuminated display, green)
Lights up when the high voltage on the gun is switched on.
- 11 Pressure gauge**
- Atomization air pressure display for the spray gun
- Readings between 0-1 MPa; 0-10 bar; 0-145 psi.
- 12 Pressure gauge**
- No function
- 13 Pressure gauge**
- Air pressure display, when a 22-18S pump is in use
- Readings between 0-1 MPa; 0-10 bar; 0-145 psi.
- 14 Push-button:** high-voltage, „higher“
- 15 Push-button:** high-voltage, „lower“
- 16 Push-button:** Spraying current limit more“
- 17 Push-button:** Spraying current limit less“
- 18 Push-button:** Formula - Manual setting of parameters
- 19 Formula LED display Manual setting:**
Lights up green when manual formula setting is selected.
- 20 Push-button: Stand By**
To switch to stand-by mode.
High voltage cannot be activated in this mode.
Press the button again for normal operation.
- 21 Stand-By LED display**
Lights up when stand-by mode is activated.
- 22 Regulator**
Adjust pressure for the atomization air.
Adjustment between 0-1.0 MPa; 0-10 bar; 0-145 psi.
- 23 Regulator**
- No function
- 24 Regulator**
Air pressure for pump pressure when using a 22-18S pump.
Adjustment between 0-1.0 MPa; 0-10 bar; 0-145 psi.
- 25 Mains switch (Power)**
0 = Control unit switched off
1 = Control unit switched on

Rear of the control unit

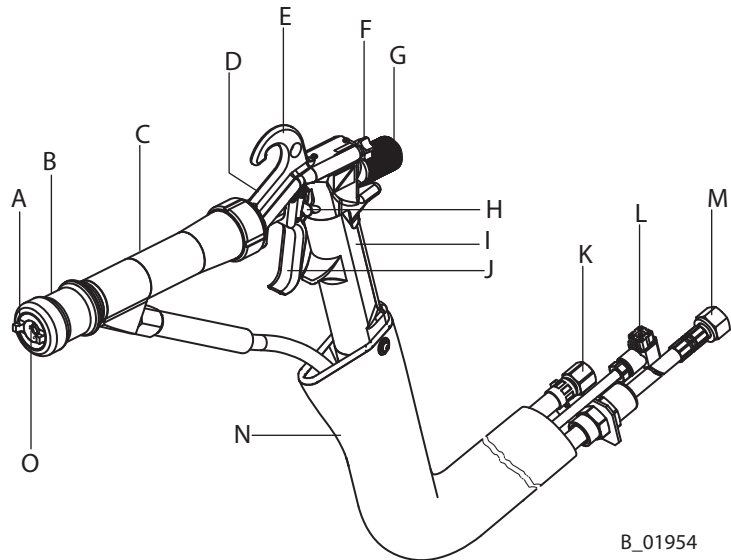


B_01890

- 26 Connection socket**
Connection for mains cable with securing clip
- 27 Connection Pump air**
Hose connection \varnothing 10 mm; \varnothing 0.39 inch.
- 28 Connection Material pressure regulator**
Hose connection \varnothing 8 mm; \varnothing 0.32 inch.
- 29 Connection Atomizing air**
Hose connection \varnothing 8 mm; \varnothing 0.32 inch.
- 30 Connection socket**
Connection for gun cable
- 31 Connection socket**
Connection for high voltage generator
- 32 Self-locking nut Earthing**
Connection for the earthing cable (system earth)
- 33 Primary fuse**
1.0 ampere slow-acting
- 34 Compressed air connection**
Hose connection \varnothing 10 mm; \varnothing 0.39 inch.
- 35 Connection Earthing switch, air**
Hose connection \varnothing 6 mm; \varnothing 0.24 inch.
- 36 Cover**
Service connection

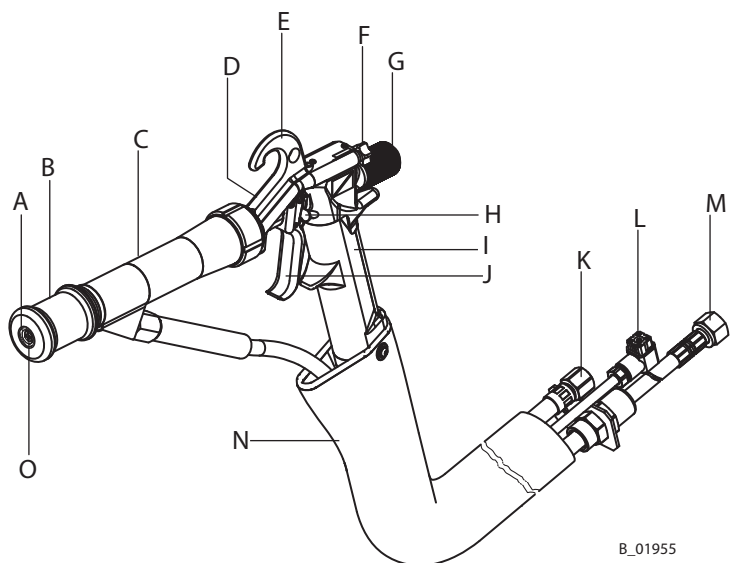
4.4.2 DESIGN OF SPRAY GUN GM 2900EACW-F

- A Air cap
- B Union nut EACW-F
- C Gun barrel
- D Spray gun body
- E Suspension hook
- F Fan air regulator
- G Clamping nut
- H HV flip switch (integrated into trigger)
- I Handle
- J Trigger guard
- K Air hose
- L Gun cable
- M Material hose
- N Protective tube
- O Nozzle ACF-Brillant ../.(see chap. 9.1)

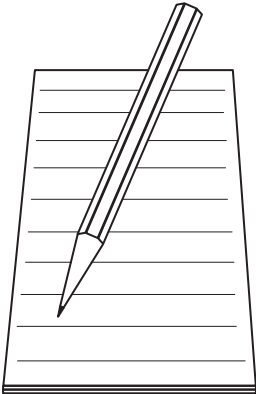


4.4.3 DESIGN OF SPRAY GUN GM 2900EACW-R

- A Nozzle body 2900EACW
- B Union nut EACW-R
- C Gun barrel
- D Spray gun body
- E Suspension hook
- F Fan air regulator (for flat jet process)
- G Clamping nut
- H HV flip switch (integrated into trigger)
- I Handle
- J Trigger guard
- K Air hose
- L Gun cable
- M Material hose
- N Protective tube
- O Nozzle insert R..(see chap. 9.2)



OPERATING MANUAL



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

4.4.4 OPERATION OF THE GUNS

The trigger can be used to activate, one after the other, the various functions of the spray gun.

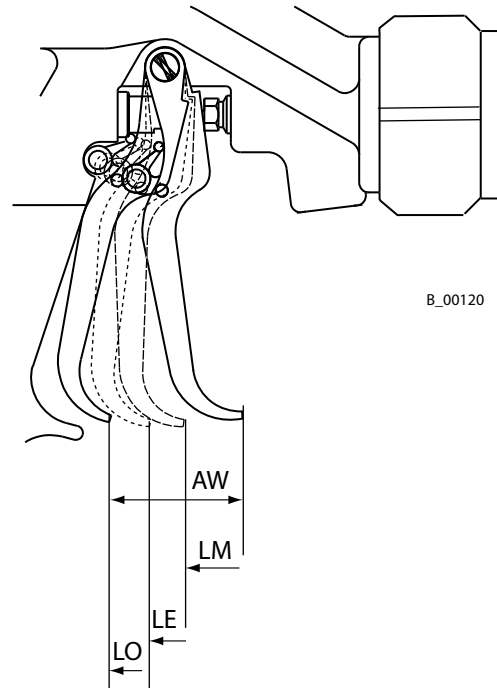
AW = Maxi way of trigger

LM = AirCoat air open

LE = AirCoat air open and electrostatics activated

LO = AirCoat air open and electrostatics activated and material valve open.

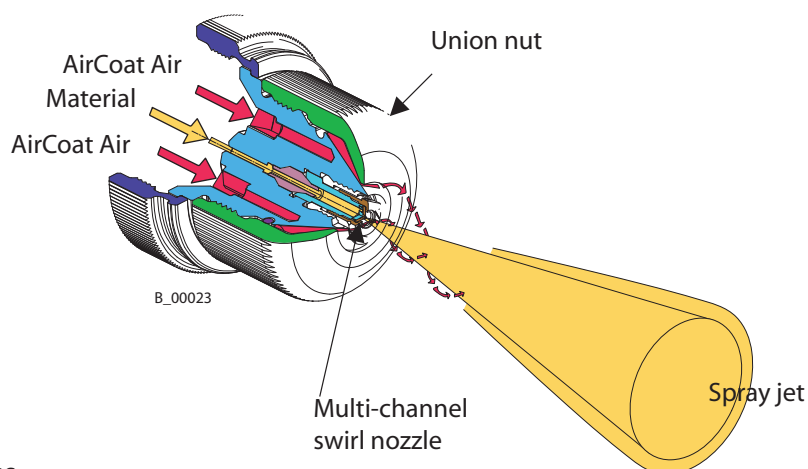
- An increase in the tension needed to pull the trigger back will be felt at the position where the material valve opens.
- In order to overcome Faraday cages in corners, the high voltage can be switched off by flipping the HV switch (F) down.
- When using a flat jet, the spray jet width is adjusted using the fan air regulator (F).



4.4.5 SPRAYING PROCESS

4.4.5.1 AIRCOAT ROUND JET PROCESS

With the AirCoat spraying process the spray material is atomized at a pressure of approx. 3-15 MPa; 30-150 bar; 435-2176 psi. A soft, flat spray is achieved with help of the air, which has a pressure of 0-0.25 MPa; 0-2.5 bar; 0-36 psi. The spray jet can be adjusted by turning the union nut..

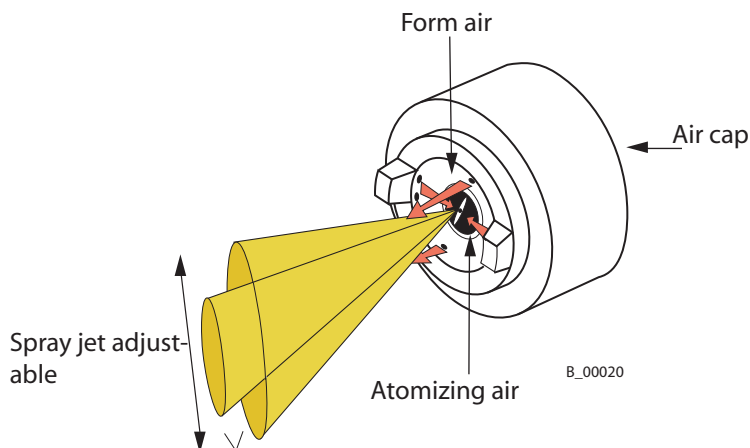


Advantages

- High painting capacity
- Low fogging tendency
- Good finish
- High- viscosity paints can easily be applied

4.4.5.2 AIRCOAT FLAT JET PROCESS

In the Brilliant AirCoat process, high pressure of 3-15 MPa; 30-150 bar; 435-2176 psi is used to atomize the material. The AirCoat air at 0-0.25 MPa; 0-2.5 bar; 0-36 psi produces a soft jet, which largely eliminates the problem of overlapping boundaries. There's a possibility to reduce the jet by form air.

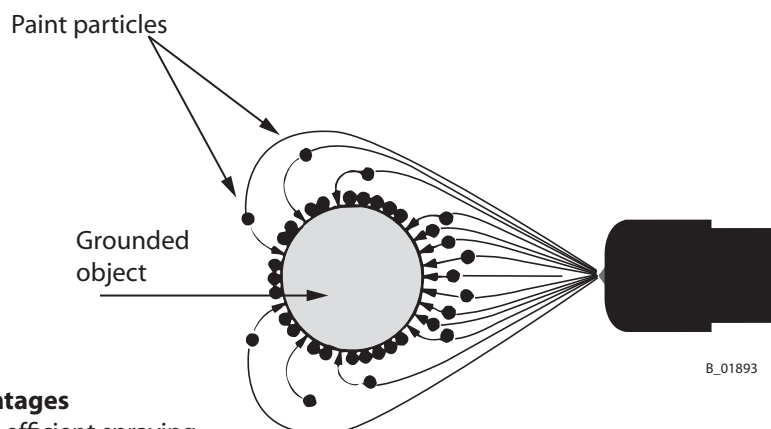


Advantages

- High painting capacity
- Low fogging tendency
- Good finish
- High- viscosity paints can easily be applied
- High endurance of Brilliant- nozzles
- Up to 20% less air consumption
- Change in width the jet

4.4.5.3 THE ELECTROSTATIC EFFECT

After being electrically charged in the system and atomized by the spray gun, the paint particles are now transported by kinetic and electrostatic energy to the earthed workpiece and adhere to the sprayed object, finely distributed over the entire surface.

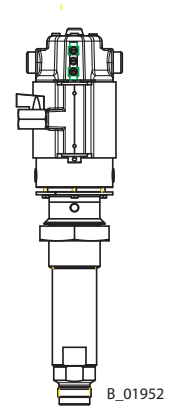


Advantages

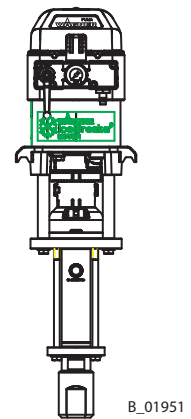
- Very efficient spraying
- Little over spray
- Coating of entire circumferences due to an electrostatic field
- Less working time

4.4.6 PNEUMATIC PISTON PUMP 22-18S PE+TG

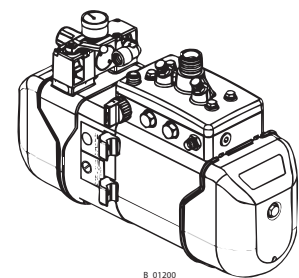
Functional descriptions see separate operating instructions

**4.4.7 PNEUMATIC PISTON PUMP PUMA 28-40 PE+TG**

Functional descriptions see separate operating instructions



**4.4.8 DOUBLE DIAPHRAGM PUMP COBRA 40-10**

Functional descriptions see separate operating instructions



5 STARTING UP AND OPERATING



5.1 INSTALLATION AND CONNECTION

	 WARNING
	<p>Incorrect installation/operation! Risk of injury and damage to equipment</p> <p>→ When putting into operation and for all work, read and follow the operating instructions and safety regulations for the additionally required system components.</p>

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Check the individual components of the AquaCoat spray system against the delivery note. Familiarize yourself with the mode of functioning of the individual components of the AquaCoat spray system, reading the enclosed operating instructions thoroughly. Note the special requirements of the electrostatic air spray procedure.

5.1.1 VENTILATION OF THE SPRAY BOOTH

	 WARNING
	<p>Toxic and/or flammable vapor mixtures! Risk of poisoning and burns</p> <p>→ Operate the unit in a spraying booth approved for the working materials. -or- → Operate the unit on an appropriate spraying wall with the ventilation (extraction) switched on. → Observe national and local regulations for the outgoing air speed.</p>

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5.1.2 AIR SUPPLY

You must ensure that only dry, clean atomizing air is used in the spray gun. Dirt and moisture in the atomizing air reduce the spraying quality and the appearance of the finished piece.

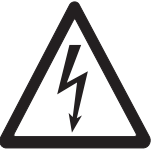
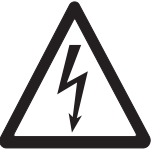
5.1.3 FLUID (PAINT) HOSES

CAUTION	
Impurities in the spraying system!	
Spray gun blockage, materials harden in the spraying system	
→ Flush the spray gun and paint supply with a suitable cleaning agent.	

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 DANGER	
	Bursting hose, bursting threaded joints!
	Danger to life from injection of material
	→ Ensure that the hose material is chemically resistant.
	→ Ensure that the spray gun, threaded joints and material hose between the unit and the spray gun is suitable for the pressure generated in the unit.
	→ Ensure that the following information can be seen on the high-pressure hose:
	- Manufacturer
	- Permissible operating pressure
	- Date of manufacture.



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 CAUTION	
	Electrical discharges!
	Danger due to electrically charged material lines
	→ The conductive sheath of the material hose must not be removed and the connections to the earth potential must not be loosened.
	1. Earth connection in the cabinet.
	2. Earth connection in the gun.

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5.1.4 EARTHING

Perfect earthing of all system components (workpieces, conveyor, paint supply system, control unit, spraying cabin or spraying stand, see illustration) is a prerequisite for optimum coating efficiency and safety.

	 WARNING
	<p>Heavy paint mist if earthing is insufficient! Risk of poisoning Insufficient paint application quality</p> <p>→ Earth all unit components. → Earth the workpieces being painted.</p>

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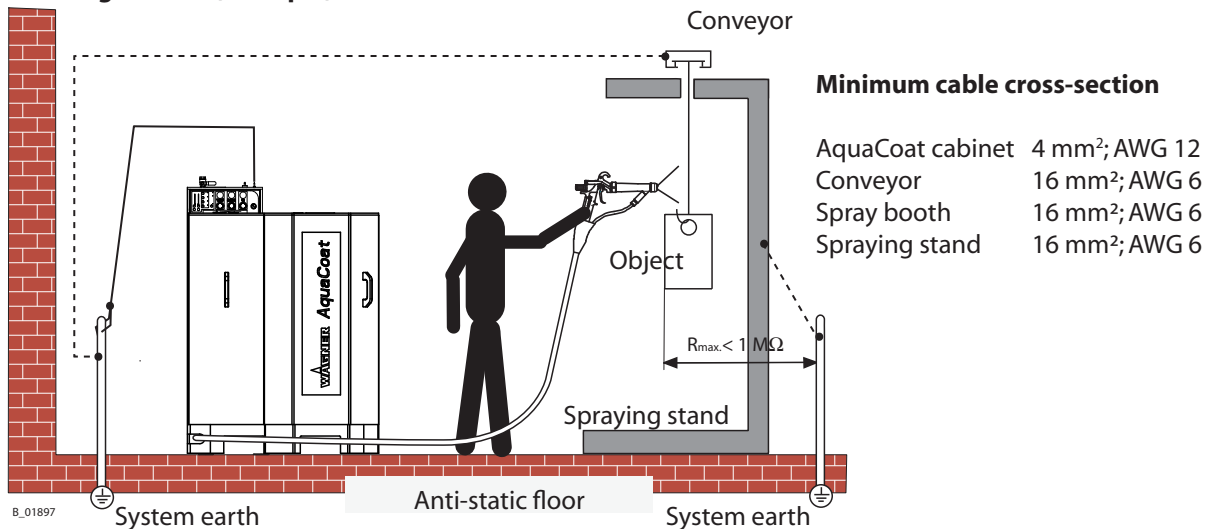
The imperfect earthing of a workpiece will result in:

- Very poor wrap-around
- Uneven coating thickness
- Backspraying to the spray gun, i.e. contamination.

The prerequisites for perfect earthing and coating are:

- Clean workpiece suspension
- Earthing of spraying cabin, conveyor system and suspension on the building side in accordance with the operating instruction or the manufacturer's information
- Earthing of all conductive parts within the working area
- The earthing resistance of the workpiece may not exceed 1 M Ω (Mega Ohm).
- Connect the AquaCoat cabinet to the system earth.

Earthing schema (example)



B_01897

5.1.5 SAFETY CHECKS

5.1.5.1 EARTHING CHECK

Every days:

Before starting work, carry out a visual check to ensure that the earthing connection is present in the AquaCoat cabinet and in all relevant components.

5.1.5.2 INSPECTION OF THE SAFETY ELEMENTS

Every days:

- General visual inspection:
 - Earthing band, all cables and connections for damage or loose contacts examine.

Monthly:

- Door switch test:
 - Remove the front panel.
 - Turn on control unit.
 - Actuate the trigger guard on the spray gun.
 - The high voltage must remain switched off.
- Earthing cylinder test:
 - Insert front panel.
 - Turn on control unit.
 - Acoustically ascertain switch movement.
 - Check that the front panel is locked.
 - Switch off the control.
 - Acoustically ascertain switch movement.

5.2 PREPARATION OF WATER PAINT

The viscosity of the paints is of great importance. The best results are obtained with paints between 25 and 40 DIN-sec (measured in immersion flow cup DIN 4 mm; 0.16 inch).

Processing of up to 60 DIN-s is generally possible without problem, if high coating thicknesses are required.

In the case of application problems contact the paint producer.

5.2.1 VISCOSITY CONVERSION TABLE

milli Pascal x Sec mPas	Centipoise	Poise	DIN Cup 4 mm; 0.16 inch	Ford Cup 4	Zahn 2
10	10	0.1		5	16
15	15	0.15		8	17
20	20	0.2		10	18
25	25	0.25	14	12	19
30	30	0.3	15	14	20
40	40	0.4	17	18	22
50	50	0.5	19	22	24
60	60	0.6	21	26	27
70	70	0.7	23	28	30
80	80	0.8	25	31	34
90	90	0.9	28	32	37
100	100	1	30	34	41
120	120	1.2	33	41	49
140	140	1.4	37	45	58
160	160	1.6	43	50	66
180	180	1.8	46	54	74
200	200	2	49	58	82
220	220	2.2	52	62	
240	240	2.4	56	65	
260	260	2.6	62	68	
280	280	2.8	65	70	
300	300	3	70	74	
320	320	3.2			
340	340	3.4			
360	360	3.6	80		
380	380	3.8			
400	400	4	90		

5.3 START-UP

5.3.1 GENERAL RULES FOR HANDLING THE SPRAY GUN

→ Observe general **safety instructions** in chapter 2.

	DANGER
	<p>High voltage field! Danger to life from malfunctioning heart pacemakers</p> <p>Ensure that persons with heart pacemakers:</p> <ul style="list-style-type: none"> → Do not work with the electrostatic spray gun. → Remain outside the area of the electrostatic spray gun/work piece.

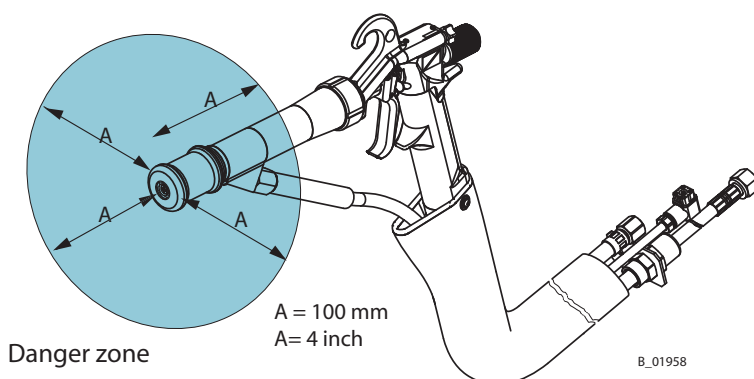
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	WARNING
	<p>Unintentional putting into operation! Risk of injury</p> <p>Before all work on the unit, in the event of work interruptions and functional faults:</p> <ul style="list-style-type: none"> → Switch off the energy/compressed air supply. → Relieve the pressure from the spray gun and unit. → Secure the spray gun against actuation. → By functional faults: Identify and correct the problem, proceed as described in chap. „Trouble shooting“.

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	CAUTION
	<p>Electrical discharge! Risk of injury</p> <ul style="list-style-type: none"> → Maintain a safety distance of 100 mm; 4 inches from the nozzle area of the spray gun during the spraying process and at least 20 seconds after the end of the spraying process.

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Danger zone

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Note:

In order to avoid electrical discharges, a distance of 100 mm; 4 inches must be maintained from the workpiece and other earthed objects during the spray process.

5.3.2 PREPARATION FOR STARTING UP

CAUTION

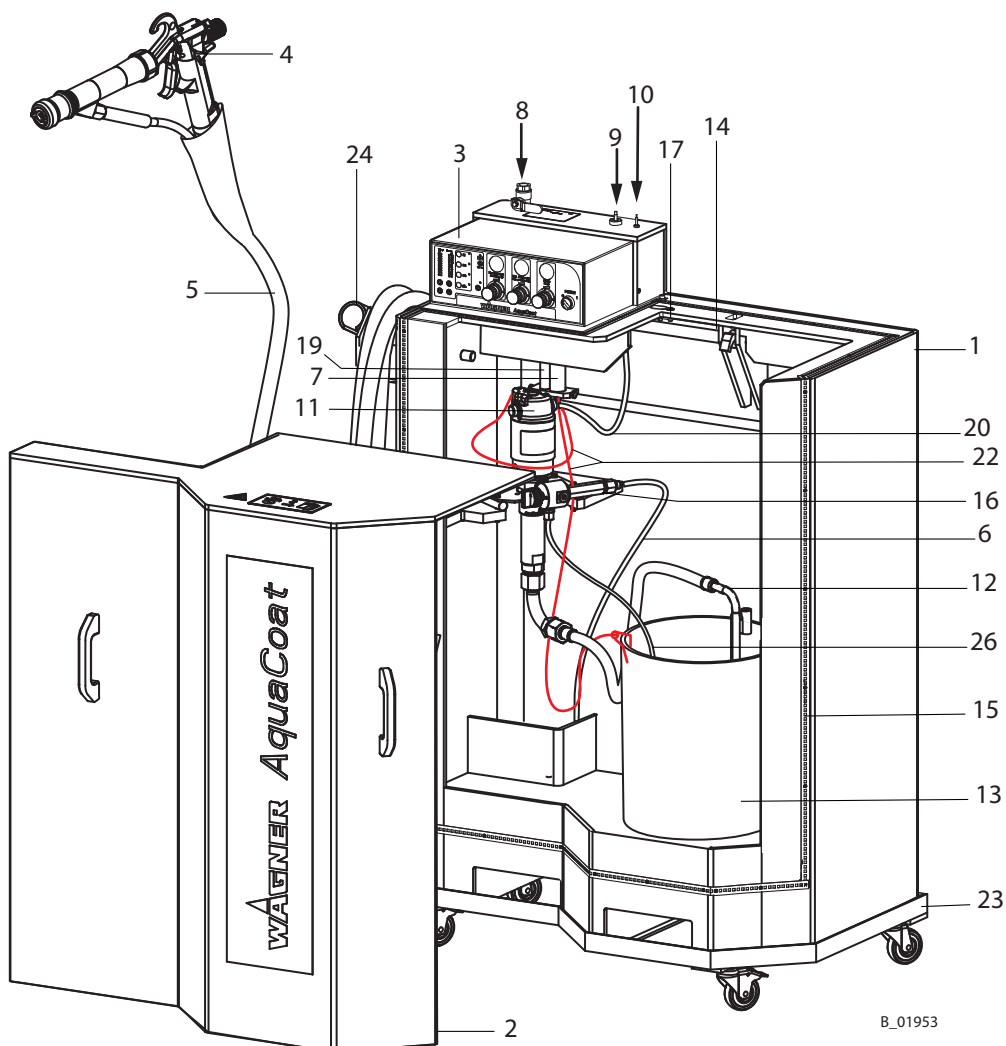
Impurities in the spraying system!

Spray gun blockage.

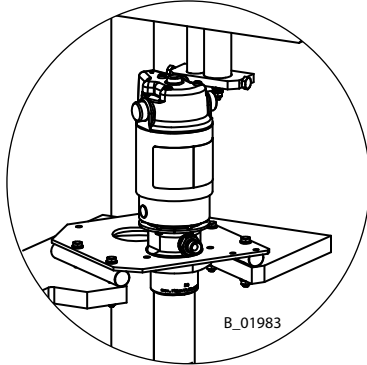
→ Flush the spray gun and paint supply with a suitable cleaning agent before putting into operation.

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5.3.2.1 SPRAYPACK WITH PNEUMATIC PUMP 22-18S



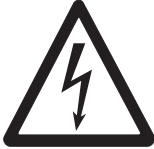

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**Note:**

The 22-18S pump must be mounted in the front hole of the mounting plate, as shown in the illustration.

The following points must be noted:

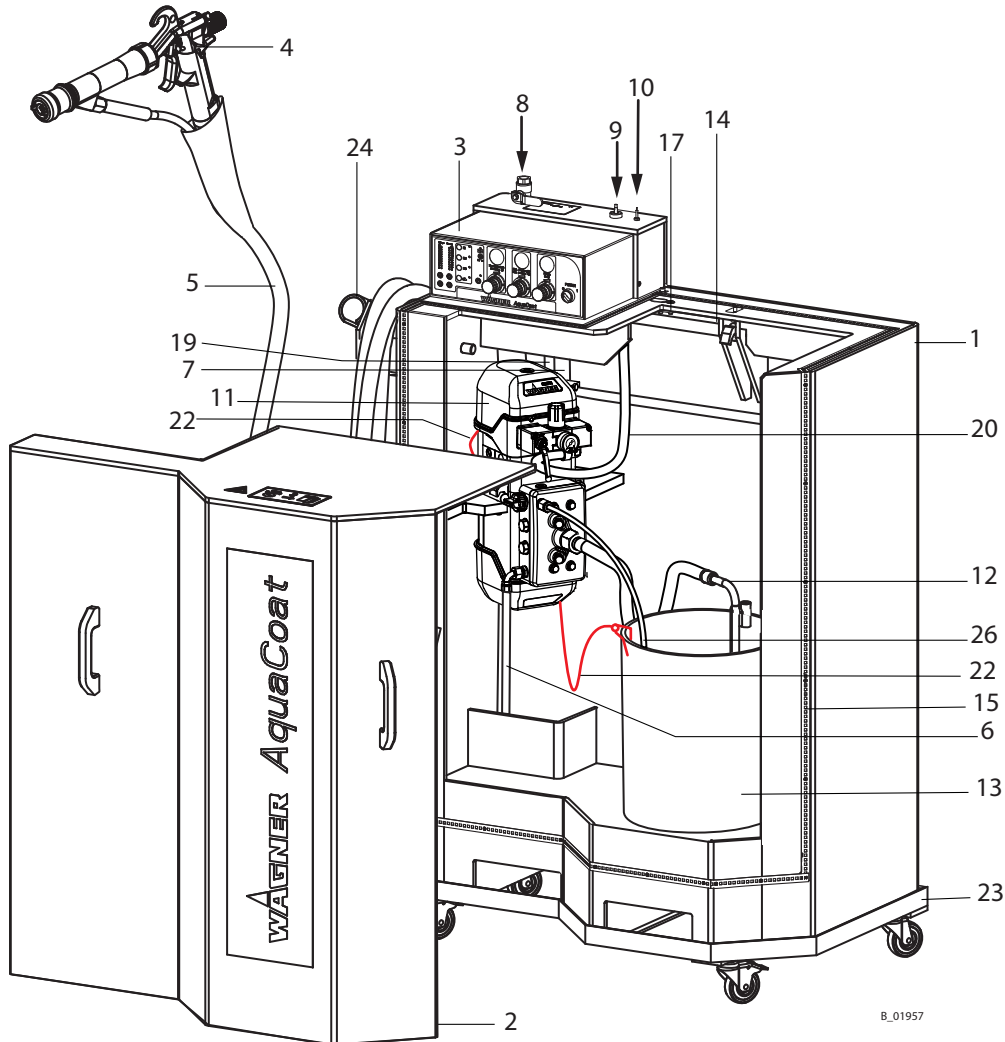
1. Place container (13) with suitable detergent into the AquaCoat cabinet and immerse the suction system, so that the system can be checked for leaks.
2. Connect the earth.
3. Connect the AquaCoat system to the compressed air source (8). Set maximum pressure 0.8 MPa; 8 bar; 116 psi on the material pressure control unit. Maintain the pressure for 5 minutes and check all connecting parts for leaks.
4. When the tightness of the system has been ascertained, the spray gun can be unlocked and the system flushed through.
5. Depressurize the system and secure the spray gun (4).
6. Remove the detergent.
7. Fill the material container (13) with paint, place in the cabinet and immerse the suction system (12).
8. Clamp HV cable (22) to the metal material container (13) or, in the case of a plastic container, to the metal part of the suction system (12).
9. Connect the AquaCoat system to the electric socket with the electric cable (9).
10. Insert front panel (2). Switch on mains switch on the VM 2900W.

	 CAUTION
	<p>Electrical discharge when using coated material containers! Risk of injury, material charge not optimal</p> <p>→ Ensure that the metal part of the container is connected to the HV cable (e.g. remove coating from around the connection point).</p>

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11. The system is ready for use.

5.3.2.2 SPRAYPACK EXAMPLES WITH DOUBLE DIAPHRAGM PUMP COBRA 40-10



Cobra 40-10 vertical mounted with suction system

The following points must be noted:

1. Place container (13) with suitable detergent into the AquaCoat cabinet and immerse the suction system, so that the system can be checked for leaks.
2. Connect the earth.
3. Connect the AquaCoat system to the compressed air source (8). Set maximum pressure 0.6 MPa; 6 bar; 87 psi on the regulator unit Cobra 10-40. Maintain the pressure for 5 minutes and check all connecting parts for leaks.
4. When the tightness of the system has been ascertained, the spray gun can be unlocked and the system flushed through.
5. Depressurize the system and secure the spray gun (4).
6. Remove the detergent.
7. Fill the material container (13) with paint, place in the cabinet and immerse the suction system (12).
8. Clamp HV cable (22) to the metal material container (13) or, in the case of a plastic container, to the metal part of the suction system (12).

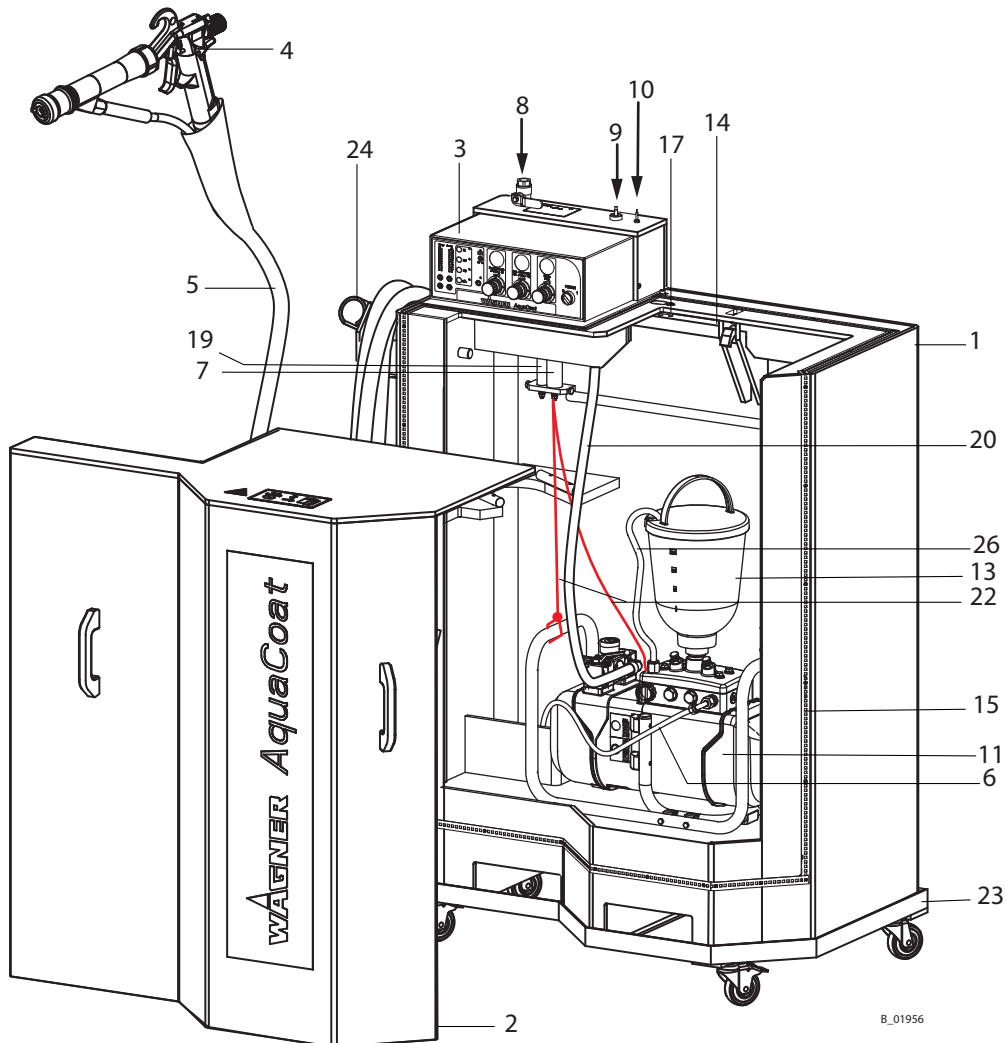
9. Connect the AquaCoat system to the electric socket with the electric cable (9).
10. Insert front panel (2). Switch on mains switch on the VM 2900W.

	CAUTION
	<p>Electrical discharge when using coated material containers! Risk of injury, material charge not optimal</p> <p>→ Ensure that the metal part of the container is connected to the HV cable (e.g. remove coating from around the connection point).</p>

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11. The system is ready for use.

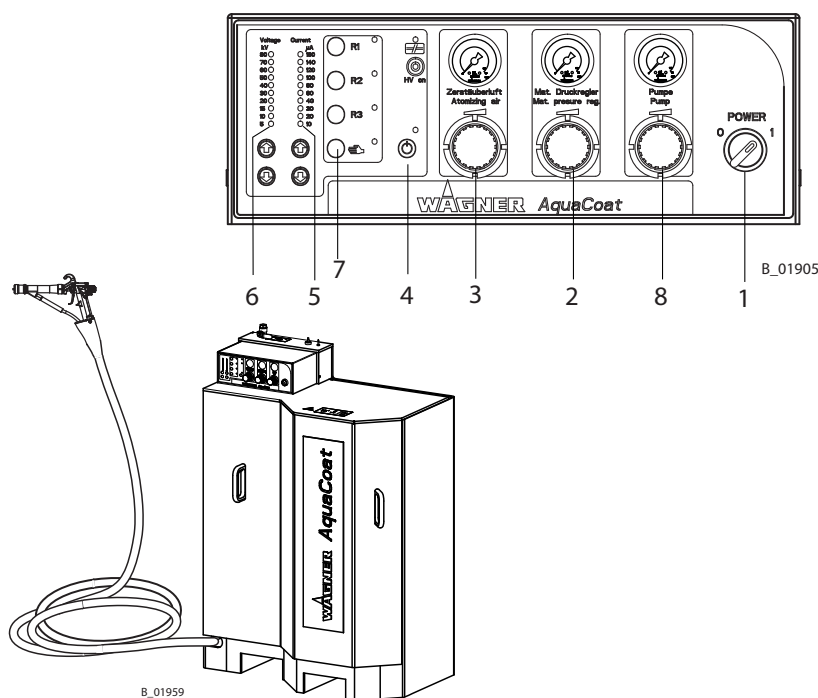
Cobra 40-10 mounted on frame with upper hopper set



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5.4 WORKS

5.4.1 START-UP FOR SPRAYING AIRCOAT



1. Turn on the control unit VM 2900W. Set main switch (1) to position 1. During the start-up phase, the device automatically performs an internal function test and then automatically switches to manual formula setting (7).
2. Set the desired formula.
3. Set material pressure on the regulator for pump (8) at approx. 8 MPa; 80 bar; 1160 psi.

Note:

In the case of material pressure generators with attached control unit, use the regulator on the device.

4. Release the spray gun with the clamping nut (turn to the left, viewed in the spraying direction)
5. Spray on a test object (press the trigger), the high voltage is switched on and both displays (6) and (5) change from point to bar display, i.e. the actual value of the high voltage (6) and the actual value of the spray current (5) are displayed.
6. The high voltage can be switched on and off with the push button (4).
7. Now open AirCoat air (3), approx. 1-2.5 bar; 0.01-0.25 MPa; 14.5-36 psi, and adjust for the optimal atomization.

When using a round jet:

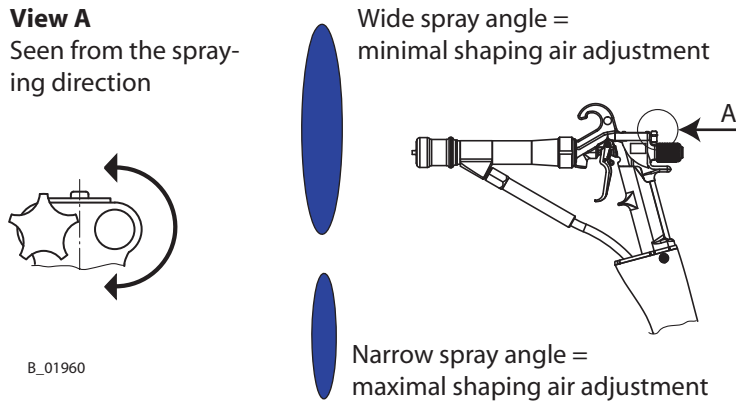
8. By turning the tip nut, the atomizing air jet can additionally be adjusted.

Note

Do not turn the nozzle nut until it is flush with the nozzle body. Always allow play between the nozzle nut and body for the atomizing air.

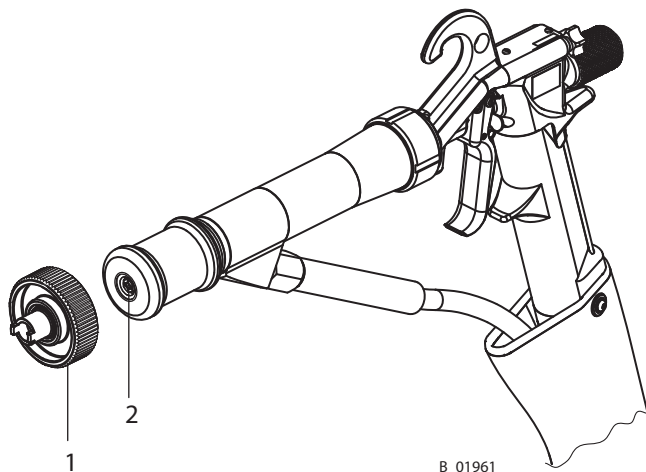
When using a flat jet:

8. Change the spray jet width by turning the shaping air control on the spray gun or by selecting the appropriate nozzle.



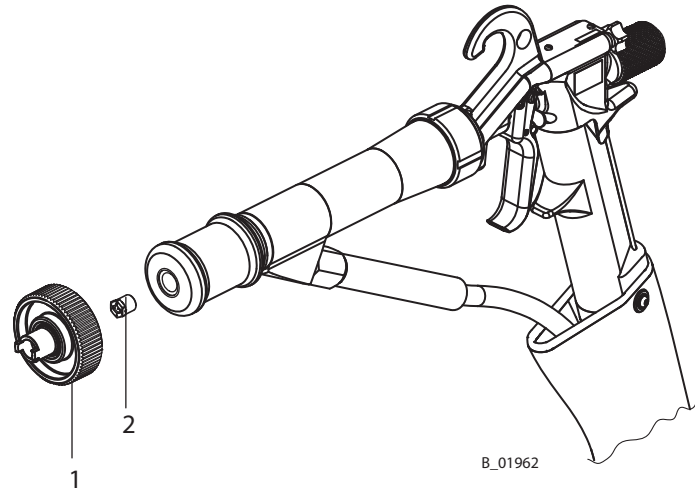
5.4.2 CLEANING OF CLOGGED ROUND JET NOZZLES

1. Use the nozzle spanner (2) to undo the nozzle insert (1) by half a turn.
2. Remove nozzle spanner and switch on for a short amount of time.
3. After cleaning the nozzle retighten.



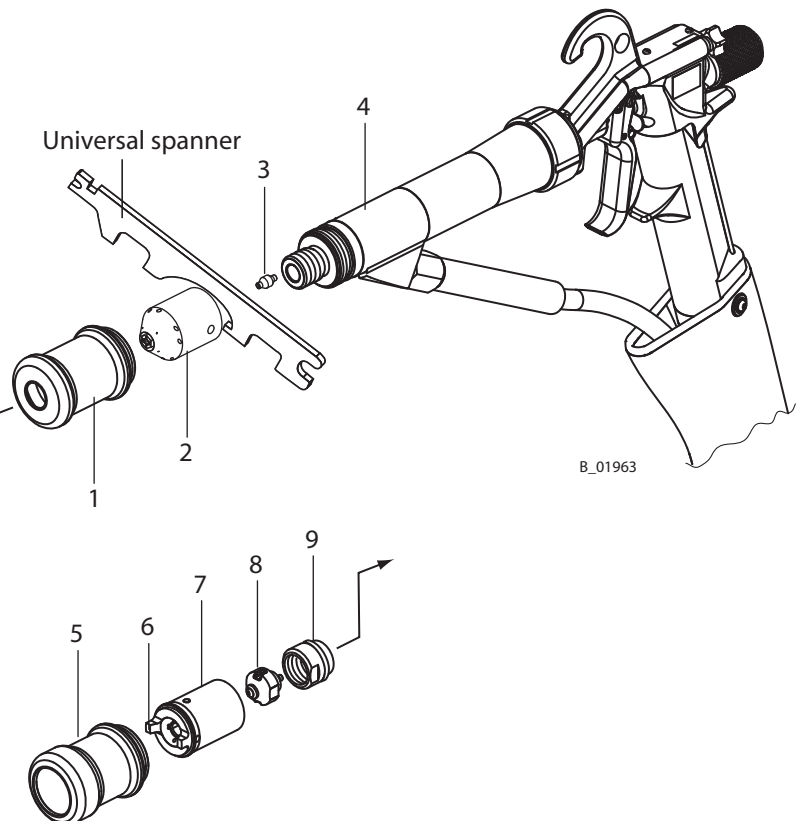
5.4.3 REPLACING THE NOZZLE INSERT (EAC ROUND)

1. Remove nozzle insert (2) with nozzle spanner (1).
2. Fit the new insert.



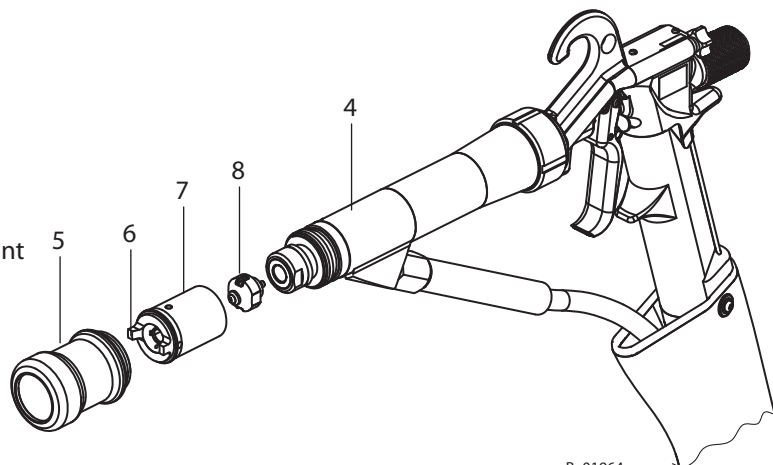
5.4.4 CHANGING FROM AIRCOAT ROUND JET NOZZLE TO FLAT JET NOZZLE AIRCOAT

1. Thoroughly flush spray gun with cleaning solvent
2. Relieve the pressure of gun and device.
3. Secure the gun. Turn tension cap clockwise until stop. (viewed from back of gun)
4. Unscrew connection nut EAC-R (1).
5. Loosen sealing nipple (3) and nozzle body (2) from end piece (4) with universal spanner.
6. Screw sealing ring including O-ring (9) onto end piece (4) and tighten lightly.
7. Insert Brillant flat-jet nozzle (8) on colour channel into the end piece (4).
8. Place the air cap (7) on the Brillant flat-jet nozzle (8).
Attention: fit teeth of the air cap into the grooves in the Brillant flat jet nozzle.
9. Mount connection nut EAC-F (5) over the air cap (7) onto the end piece (4).
10. Set the desired jet level with the air cap clamps (6) and tighten connection nut EAC-F (5) as far as the stop by hand



5.4.5 REPLACING AIRCOAT FLAT JET NOZZLE

1. Switch off control unit.
2. Relieve spray gun and unit pressure!
3. Secure gun (Turn locking nut to the right)
4. Unscrew union nut EAC-F (5) and remove air cap (7).
5. Remove AirCoat nozzle (8) and brush cleaning solvent until all traces of paint are dissolved.



B_01964

CAUTION

Defective AirCoat nozzle!



Insufficient paint application quality

→ Do not use sharp-edged objects to treat hard metal on the AirCoat nozzle.

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6. **Assembly:** Fit AirCoat nozzle (8) on the paint channel in the attachment (4).
7. Screw air cap (7) on the flat jet nozzle (8);
Attention: fit teeth of the air cap into the grooves in the flat jet nozzle.
8. Screw union nut (5) with air cap (7) on the attachment (4).
9. Adjust desired jet level by means of air cap horns (6) and tighten cap ring (5) by hand.

5.4.6 CLEANING OF AIRCOAT FLAT JET NOZZLES

	 WARNING
	<p>Defective parts! The gun develops a leak Parts lose their strength</p> <p>→ Do not put the union nut (5) and air cap (7) into cleaning agent.</p>

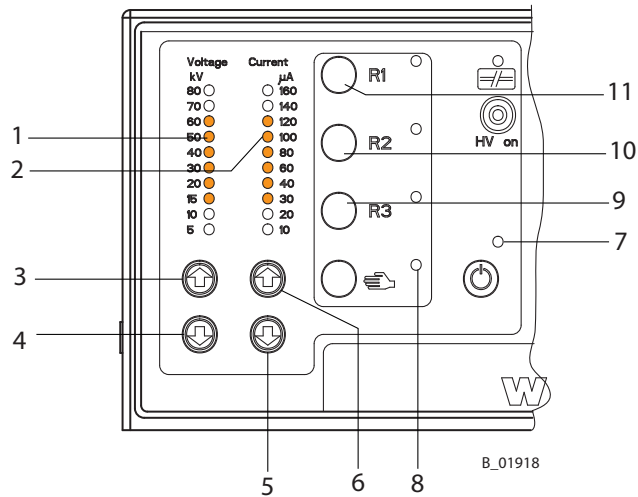
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For disassembly and assembly of AirCoat nozzles see chapter 5.4.5. The AirCoat nozzle (7) can be placed into a cleaning solvent which has been recommended by the paint manufacturer.

5.4.7 CONTROL UNIT VM 2900W - FORMULAS

The VM 2900W control unit has 4 preset formulas.
These formulas are set in the factory as follows:

R1: Profiled parts (11)	70 kV	120 μ A
R2: Re-coating (10)	60 kV	100 μ A
R3: Surface parts (9)	40 kV	60 μ A
Manual setting: (8)	60 kV	80 μ A



5.4.8 CONTROL UNIT VM 2900W - MODIFICATION AND STORAGE OF FORMULAS

1. Increase or reduce the high voltage with key 3 or 4.
2. Set the current limiter higher or lower with key 5 or 6
3. The device has switched to manual formula setting 8.
4. Keep the formula key pressed down until the middle six diodes light up on both bar displays 1 and 2.
5. The new values are now stored in this formula and are preserved even when the control unit is switched off.

6 MAINTENANCE

→ Observe general **safety instructions** in chapter 2.

The AquaCoat system must be cleaned every day. Use only the cleaning solvent recommended by the material manufacturer.

CAUTION

Cleaning agent in the air duct!

Functional faults caused by swollen seals.

→ Never immerse the spray gun in cleaning agent or water.

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WARNING

Incorrect maintenance/repair!

Risk of injury and damage to the equipment

- Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center.
- Before all work on the unit and in the event of work interruptions:
 - Switch off the energy/compressed air supply.
 - Relieve the pressure from the spray gun and unit.
 - Secure the spray gun against actuation.
- Observe the operating and service instructions when carrying out all work.

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6.1 FINISHING WORK AND CLEANING

1. Switch off the control unit and remove the front panel.
2. Ensure that the material pressure is relieved and shut off the air supply to the gun.
3. Remove round-jet or flat-jet nozzle and clean separately.
4. Connect the system to the detergent supply.
5. Actuate the trigger guard and flush the gun through thoroughly.
6. Relieve the pressure of gun and device and remove the detergent supply.
7. Switch on the air supply to the gun and blow through the air channels.
8. Switch off the air supply to the gun.
9. Relieve unit pressure and spray gun.
10. Clean the body of the gun and other AquaCoat components with a washing solution recommended by the paint manufacturer and dry with a cloth or an air-jet gun.

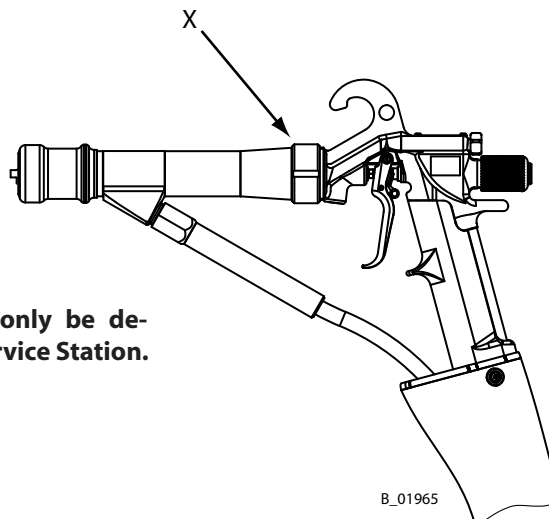
CAUTION

Cleaning agent in the air duct!

Functional faults caused by swollen seals

- Always point the spray gun down when cleaning.
- Ensure that neither paint nor cleaning agent enters the air duct.

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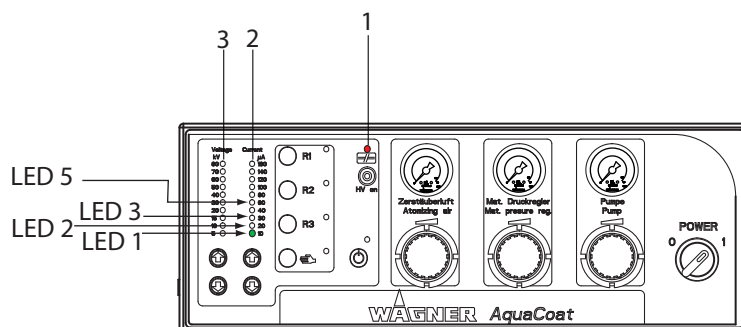
The gun barrel (X) may only be detached by the WAGNER Service Station.

B_01965

7 TROUBLE SHOOTING AND SOLUTION



Fault	Cause	Solution
Insufficient material discharge	• Nozzle too small	• Select larger nozzle (see nozzle table)
	• Material pressure to low	• Increase material pressure
	• Material viscosity to high	• Thin material in accordance with the manufacturer,s instructions
	• Filter in material supply clogged	• Clean or replace filter
	• Nozzle is clogged	• Clean or replace nozzle
	• Tension nut is screwed in to far	• Turn tension nut anticlockwise
Poor spray pattern	• Wrongly adjusted atomizing air	• Readjust atomizing air
	• Nozzle to large	• Select smaller nozzle (see nozzle table)
	• Material viscosity to high	• Thin material in accordance with the manufacturer's instructions
	• Material pressure to low	• Increase material pressure at pump
	• Damaged nozzle	• Replace new nozzle
Air leaks	• Air valve seal on valve tappet leaking	• Have seal replaced by WAGNER Service Department
	• Seal on air regulating pin leaking	• Have seal replaced by WAGNER Service Department
	• Tappet seal leaking	• Have tappet seal replaced by WAGNER Service Department
Poor wrap-around	• Poor earthing at object	• Check earthing of object or hanger with ohmmeter.
	• Paint resistance to high / to low	• Check resistance of paint in accordance with chap. 4.1.1
	• Spraying pressure to high	• Readjust pressure
Spray-back	• Object not earthed	• Check earthing
	• Distance between spray gun and object to large.	• Reduce distance between spray gun and object
	• High voltage set wrongly (to high)	• Adapt high voltage to material

Fault	Cause	Solution
No wrap-around	• No high voltage	• Check function of control unit in accordance with its manual • Switch on HV
	• Seal in end piece defective	• Repair by Wagner Service Center
	• Air-passages damp	• Cleaning air-passages and drying
Leaking material at the nozzle	• Valve seat (10) worn	• Replace part and check for leaks with air in water (see chap. 8.1). If still leaking, change valve rod tip.
	• Seal in front or seal behind over-tightened	• Loosen the sealing screw at the back until the valve rod closes If still leaking -> Wagner-Service.
VM 2900W: No green LED displays (2) and (3) visible	• Mains not switched on	• Turn on mains power
	• Stand-by mode	• Deactivate stand-by mode
	• Fuse defective	• Replace fuse
VM 2900W: „Fault“ display (1) lights up together with LED 1	• Internal error	• High voltage module defective -> Wagner Service
VM 2900W: „Fault“ display (1) lights up together with LED 2	• Calibration value lost	• High voltage module defective -> Wagner Service
VM 2900W: „Fault“ display (1) lights up together with LED 3	• Cascade not connected or defective	• Connect or replace cascade
VM 2900W: „Fault“ display (1) lights up together with LED 5	• Earth monitoring	• Check spray gun earth



B_01907

8 REPAIRS

	 WARNING
	<p>Incorrect maintenance/repair! Danger to life and equipment damage</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 chapter "Spare parts catalog".→ Before all work on the unit and in the event of work interruptions:<ul style="list-style-type: none">- Disconnect the control unit from the mains.- Relieve the pressure from the spray gun and unit.- Secure the spray gun against actuation.→ Observe the operating and service instructions when carrying out all work.

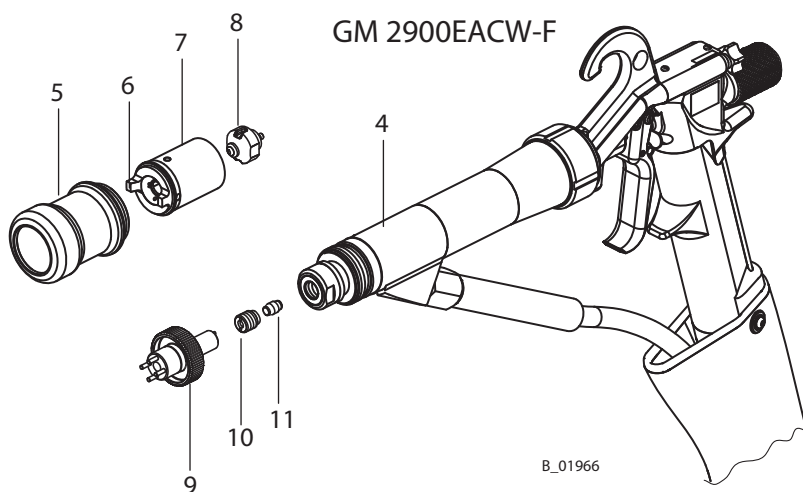
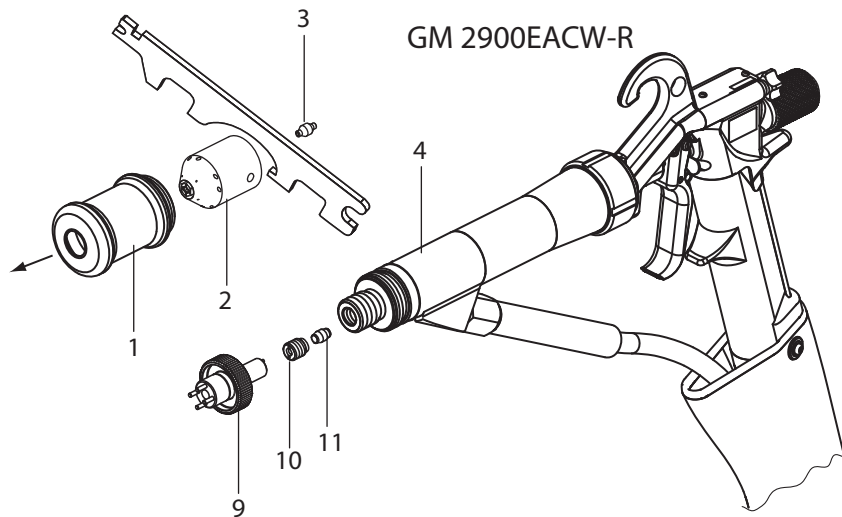
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8.1 REPLACING THE VALVE SEAT ASSY.

Note:

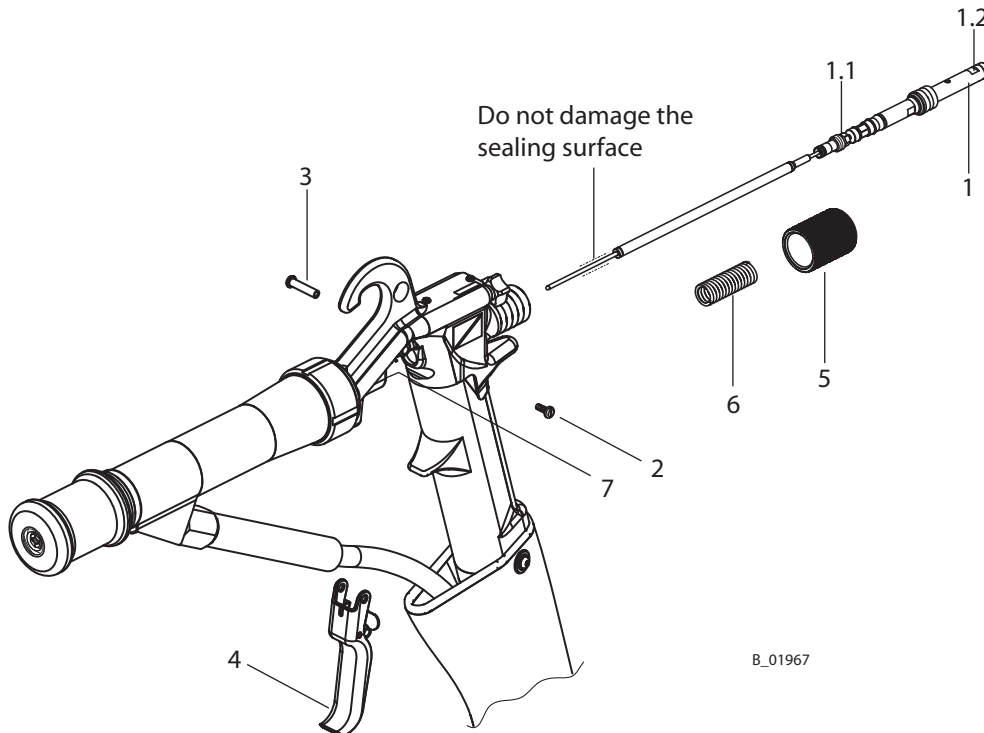
This repair must be carried out with the material hose mounted.

1. Remove nozzle according to chapter 5.4.3 or 5.4.4.
2. With the trigger guard actuated (prevents damage to the valve rod sealing surfaces) loosen and unscrew the complete valve seat (10) with the air nozzle key (9). If necessary, remove sealing nipple (11).
3. Assemble in reverse order.



B_01966

8.2 REPLACING THE VALVE ROD



CAUTION

Defective sealing surface!

Equipment damage to the gun.
Coating error.

→ Do not damage the sealing surface.

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1. Pull trigger (4) and unscrew locking nut (5); remove compression spring (6).
2. Loosen screw (2) and remove trigger guard (4) with shaft sleeve (3).
3. Unscrew sealing screw (1.1) from sealing sleeve (7).

CAUTION

Leaking spray gun!

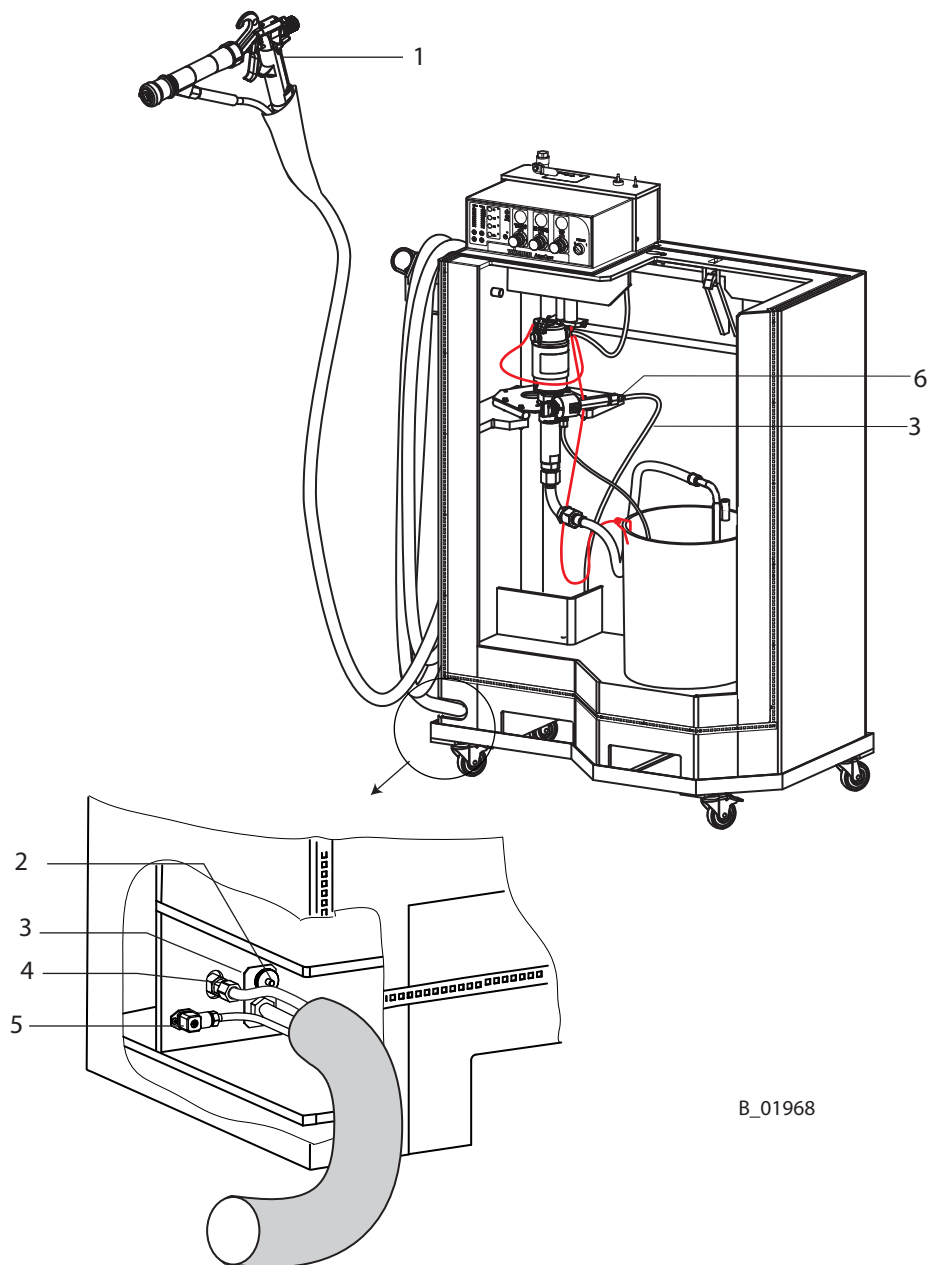
Risk of injury from coating material coming out.

→ Do not remove the paint sealing sleeve.

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4. Carefully pull out complete valve rod (1) using surface (1.2) and replace.
5. Replace in reverse order (Do not forget to screw the sealing screw (1.1) into the sealing sleeve (7)). Place the locking nut (5) with pressure spring (6) in position and tighten with the trigger (4) open until a considerable resistance is noticeable

8.3 REPLACING THE SPRAY GUN INCLUDING HOSE SET



B_01968

Disassembly of gun (1)

1. Loosen the connection nut (6) on the bared part of the material hose (3) with a universal spanner.
2. Loosen knurled nut (2).
3. Loosen the connection nut (4) of the air hose at the AquaCoat cabinet.
4. Loosen the locking screw on the gun cable (5) and remove connector.
5. Carefully remove the gun (1) together with the hose set.

4 preassembled guns are available, with different hose set lengths:

AirCoat flat jet-guns:

Part Number	Description
363960	Spray gun GM 2900EACW-F with the hose set 7.5 m; 24.6 ft
363961	Spray gun GM 2900EACW-F with the hose set 10 m; 32.81 ft
363962	Spray gun GM 2900EACW-F with the hose set 15 m; 49.2 ft
363963	Spray gun GM 2900EACW-F with the hose set 20 m; 65.6 ft

AirCoat round jet-guns

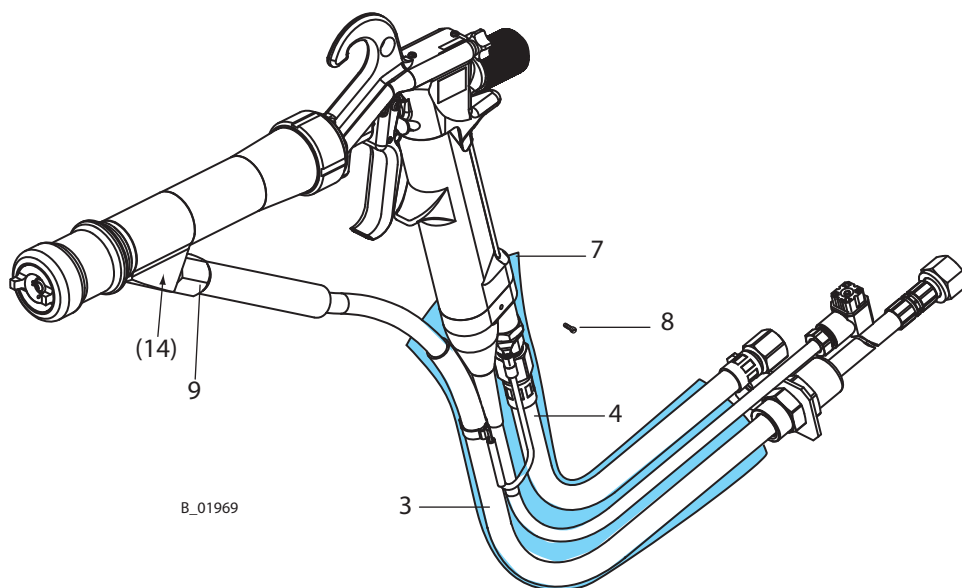
Part Number	Description
363964	Spray gun GM 2900EACW-R with the hose set 7.5 m; 24.6 ft
363965	Spray gun GM 2900EACW-R with the hose set 10 m; 32.81 ft
363966	Spray gun GM 2900EACW-R with the hose set 15 m; 49.2 ft
363967	Spray gun GM 2900EACW-R with the hose set 20 m; 65.6 ft

Assembly gun (1)

1. Secure the spray gun. Turn tension cap clockwise until stop (viewed from back of gun).
2. Connect gun cable (5) to AquaCoat cabinet and secure with screw.
3. Screw air hose for the spray gun (4) to the AquaCoat cabinet.
4. Push bared part of material hose approx. 1.15 m; 3.77 ft through the opening as far as the mounting plate.
5. Fix mounting plate (3) to earthing screw with knurled nut (2).
6. Screw bared end of material hose (3) with connection nut (6) to relief combination or to pressure generator.

8.4 EXCHANGE OF MATERIAL HOSE AND/ OR AIR HOSE

1. Isolate spray gun and hose set from the AquaCoat cabinet in accordance with chapter 8.5.
2. Loosen 2 screws (8), remove cable ties and push protective tube (7) back.
3. Loosen material connection (9) with universal spanner and remove material hose (3) from the attachment. Make sure that the sealing nipple (14) is also removed from the end piece.
4. Unscrew connection nut (10) from the air hose (4).
5. Support the clamping sleeve (13) with the universal spanner and unscrew the double nipple (11).
7. Remove the cable lug (12).
8. Carefully remove the air hose (4) backwards from the protective tube (7).
9. Carefully remove the completely assembled material hose (3) backwards from the protective tube (7).
10. Assemble in reverse order.



4 preassembled material hoses and 4 preassembled air hoses are available in the corresponding hose set lengths:

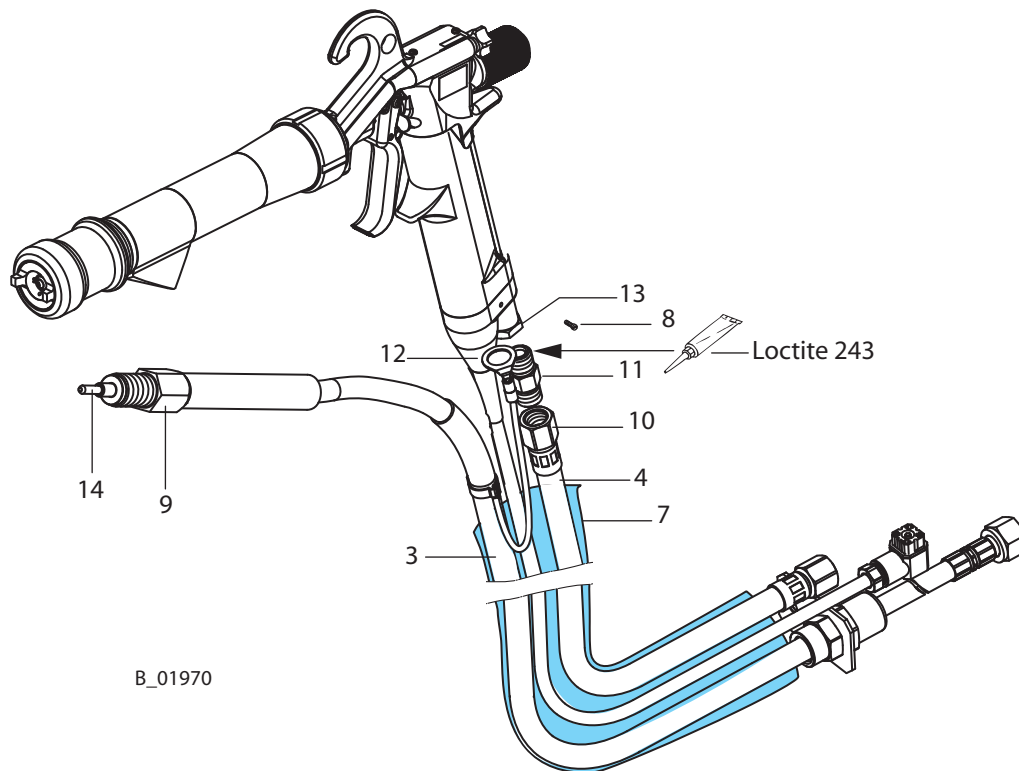
Hose set Length	Material hose AC assy. Part No.	Air hose assy Part No..
7.5 m; 24.6 ft	363968	353212
10 m; 32.81 ft	363969	353213
15 m; 49.2 ft	363970	353214
20 m; 65.6 ft	363971	353215

Assembly instructions:

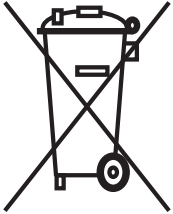

Mounting materials.

Loctite 243

Double nipple (11): Threaded joint with clamping sleeve (13)



9 DISPOSAL OF THE PRODUCT

Note	
 	<p>Do not dispose of waste electrical equipment with the household refuse!</p> <p>In accordance with European Directive 2002/96/EC on the disposal of waste electrical equipment and its implementation in national law, this product may not be disposed of with the household refuse, but must rather be recycled in an environmentally correct manner. Your waste Wagner device will be taken back by us or our representatives and disposed of environmentally correctly. Please contact one of our service points or one of our representatives or us directly to this purpose.</p>

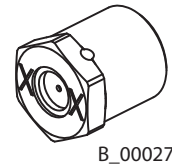
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10 ACCESSORIES

10.1 AIRCOAT NOZZLE INSERTS ROUND JET

The round jet tips are especially suited to spray pipes, profiles and complex workpieces.

Part No.	Marking	Jet width mm; inch	Recommended gun filter
132720	11	ca. 250; 10	red (200 meshes)
132721	12	ca. 250; 10	
132722	13	ca. 250; 10	
132723	14	ca. 250; 10	
132724 *	15	ca. 250; 10	
132725	16	ca. 250; 10	yellow (100 meshes)
132726	17	ca. 250; 10	
132727	18	ca. 250; 10	
132728	19	ca. 250; 10	
132729	20	ca. 250; 10	white (50 meshes)
132730	21	ca. 250; 10	
132731	22	ca. 250; 10	

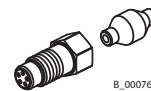


* = Standard nozzle

Jet width in mm; inch at a distance of 30 cm; 11.8 inch from the object and at a pressure of 10 MPa; 100 bar; 1450 psi.

10.1.1 NOZZLE SCREWED CONNECTION COMPLETE

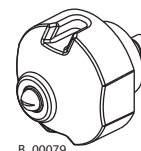
Part No.	Description
132922	Nozzle screwed connection complete



10.2 AIRCOAT FLAT JET NOZZLES BRILLANT

Part-No	Marking	Size mm; inch	Spraying angle
148107	07/10	0.18; 0.007	10°
148407	07/20		20°
148209	09/20	0.23; 0.009	20°
148309	09/30		30°
148409	09/40		40°
148509	09/50		50°
148609	09/60		60°
148111	11/10		0.28; 0.011
148211	11/20	20°	
148311	11/30	30°	
148411	11/40	40°	
148511	11/50	50°	
148611	11/60	60°	
148113	13/10	0.33; 0.013	10°
148213	13/20		20°
148313	13/30		30°
148413	13/40		40°
148513	13/50		50°
148613	13/60		60°
148813	13/80		80°
148115	15/10		0.38; 0.015
148215	15/20	20°	
148315	15/30	30°	
148415	15/40	40°	
148515	15/50	50°	
148615	15/60	60°	
148815	15/80	80°	
148217	17/20	0.43; 0.017	20°
148317	17/30		30°
148417	17/40		40°
148517	17/50		50°
148617	17/60		60°
148817	17/80		80°

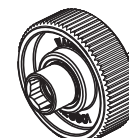
Part-No	Marking	Size mm; inch	Spraying angle
148219	19/20	0.48; 0.019	20°
148319	19/30		30°
148419	19/40		40°
148519	19/50		50°
148619	19/60		60°
148819	19/80		80°
148221	21/20		0.53; 0.021
148421	21/40	40°	
148521	21/50	50°	
148621	21/60	60°	
148821	21/80	80°	
148423	23/40	0.58; 0.023	40°
148623	23/60		60°
148823	23/80		80°
148425	25/40	0.64; 0.025	40°
148625	25/60		60°
148825	25/80		80°
148427	27/40	0.69; 0.027	40°
148627	27/60		60°
148827	27/80		80°
148429	29/40	0.75; 0.029	40°
148629	29/60		60°
148829	29/80		80°
148431	31/40	0.79; 0.031	40°
148631	31/60		60°
148831	31/80		80°
148435	35/40	0.90; 0.035	40°
148635	35/60		60°
148835	35/80		80°



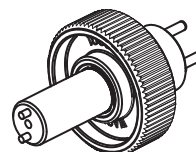
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10.3 SPECIAL TOOLS

Part No.	Description
128901	Nozzle spanner (for replace round jet nozzles)
353210	Air nozzle spanner 2800 EA (for replace the valve seat)
179901	Universal spanner



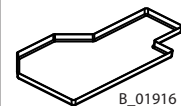
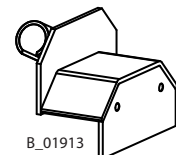
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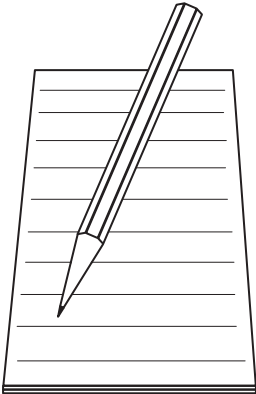
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10.4 MISCELLANEOUS

Part No.	Description
9992511	Loctite 243 50 ml; 50 cc (for air connection -> assembly)
9994682	Glove against ink mist precipitation
259005	H.V. tester HV 200
999080	Wet film thickness gauge
50342	Viscosity cup DIN4
353050	Hose holder assy.
353051	Base frame assy.
353052	Feed tank



OPERATING MANUAL



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11 SPARE PARTS

11.1 HOW TO ORDER SPARE PARTS?

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

Part Number, description and quantity

The quantity need not be the same as the number given in the „Quantity“ column. This number merely indicates how many of the respective parts are used in each subassembly.



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

- Address for the invoice
- Address for delivery
- Name of the person to be contacted in the event of any queries
- Type of delivery required (air freight or mail, sea route or overland route, etc.)

Marks in spare parts lists

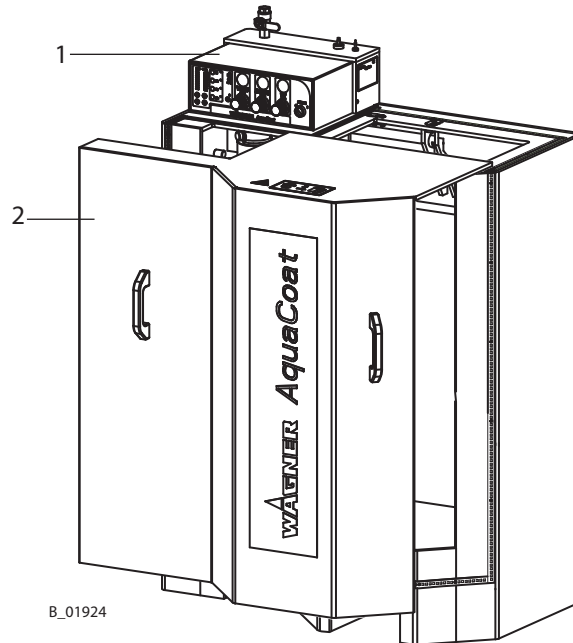
Note to column „K“ in the following spare parts lists.

- ◆ = Wearing parts
Note: No liability is assumed for wearing parts
- = Not part of standard equipment, available, however, as additional extra.

	 WARNING
	<p>Incorrect maintenance/repair! Risk of injury and damage to the equipment</p> <ul style="list-style-type: none"> → Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center. → Before all work on the unit and in the event of work interruptions: <ul style="list-style-type: none"> - Switch off the energy/compressed air supply. - Relieve the pressure from the spray gun and unit. - Secure the spray gun against actuation. → Observe the operating and service instructions when carrying out all work.

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11.2 SPARE PART LIST AQUACOAT BASIC UNIT



Spare part list AquaCoat basic unit

Pos	K	Qty	Part No	Description
1		1	353862	Control unit VM 2900W
2		1	353867	Front plate assy.

Note: For repairs, please use service instructions article number 353895.



WARNING

Incorrect maintenance/repair!

Risk of injury and damage to the equipment

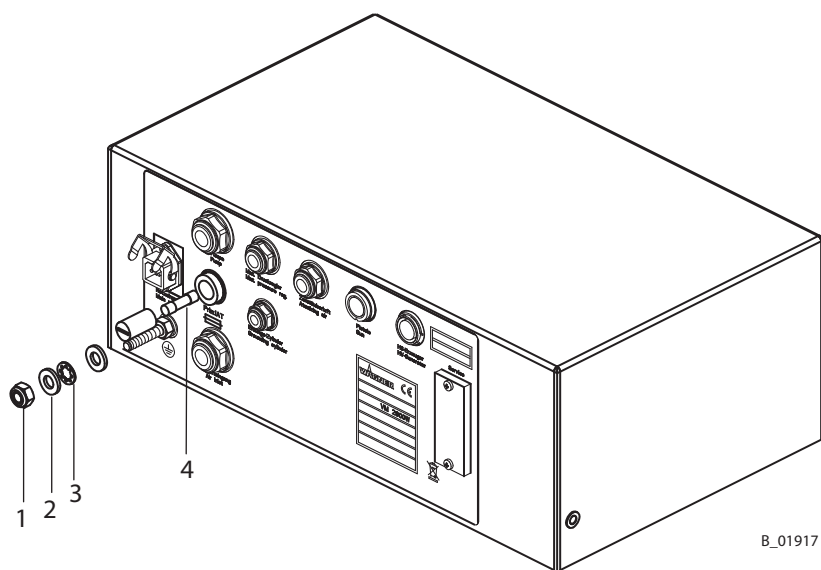
- Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center.
- Before all work on the unit and in the event of work interruptions:
 - Switch off the energy/compressed air supply.
 - Relieve the pressure from the spray gun and unit.
 - Secure the spray gun against actuation.
- Observe the operating and service instructions when carrying out all work.



11.3 SPARE PARTS LIST VM 2900W

	WARNING
	<p>Incorrect maintenance/repair! Risk of injury and damage to the equipment</p> <ul style="list-style-type: none"> → Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center. → Before all work on the unit and in the event of work interruptions: <ul style="list-style-type: none"> - Switch off the energy/compressed air supply. - Relieve the pressure from the spray gun and unit. - Secure the spray gun against actuation. → Observe the operating and service instructions when carrying out all work.

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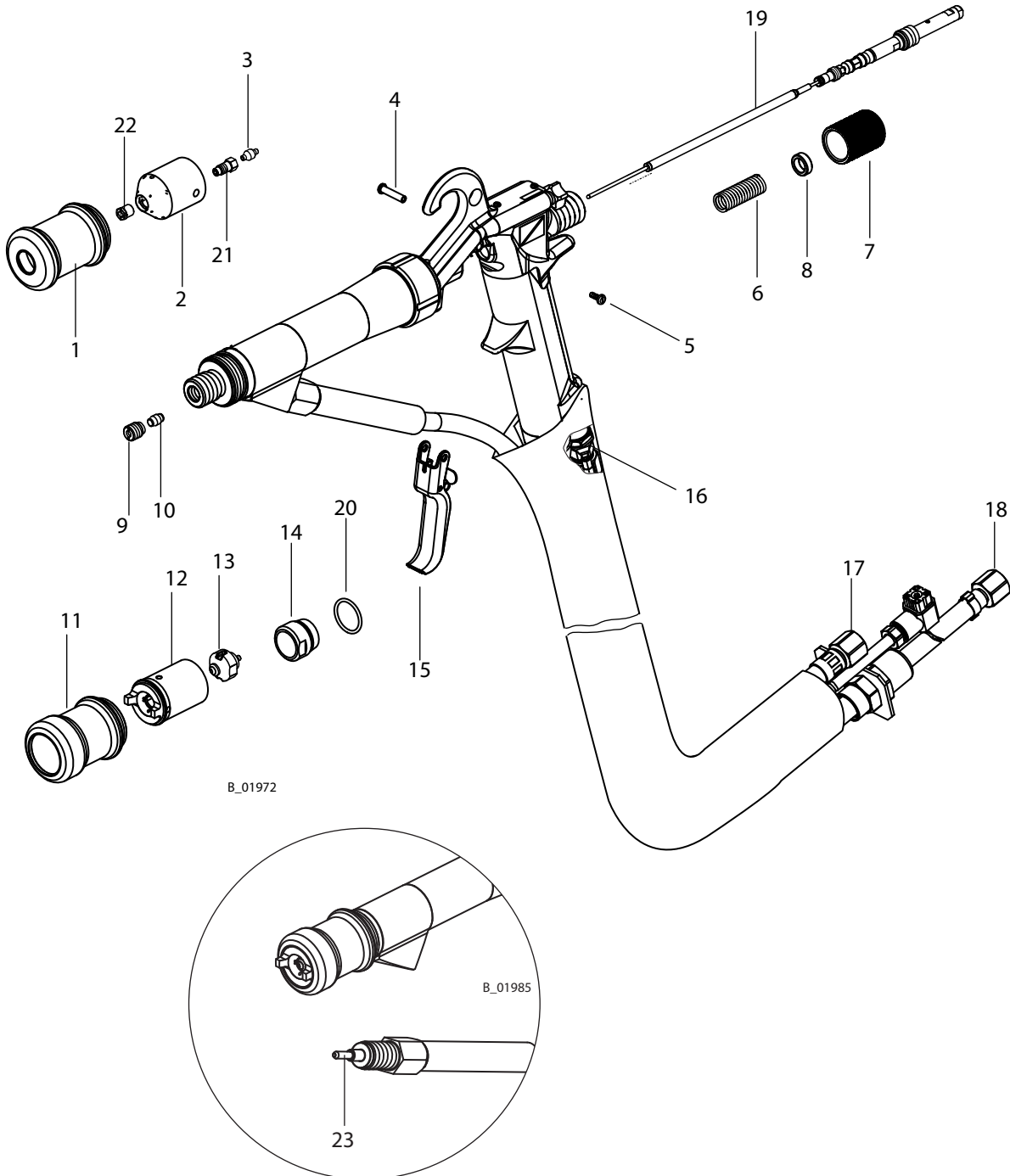
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Spare parts list VM 2900W				
Pos	K	Qty	Part No.	Description
1		1	9910204	Hexagon nut with clamp
2		2	9920118	Washer
3		1	9922109	Spring washer
4	◆	1	9951117	Delay-action fuses 1.0 A

◆ = Wearing part

Note: For repairs, please use service instructions article number 353895.

11.4 SPARE PARTS LIST GM 2900EACW



Spare parts list GM 2900EACW

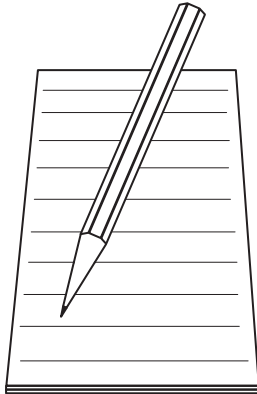
Pos	K	Qty	Part No.	Description
1		1	363407	Union nut EAC-R
2	◆	1	363974	Nozzle body 2900EACW
3	◆	1	128327	Sealing nipple
4		1	179396	Shaft collar
5		1	9900808	Screw, Flat Head M3x8 mm; 0.31 inch
6		1	9994248	Pressure spring
7		1	179784	Clamping nut assy.
8		1	363418	Clamping ring
9	◆	1	363973	Valve seat assy.
10	◆	1	363411	Sealing nipple
11		1	363405	Union nut EACW-F
12		1	363975	Air cap EACW assy.
13	◆	1	see 10.2	AirCoat nozzle Brillant
14	◆	1	350380	Sealing ring
15	◆	1	179219	Trigger
16	◆	1	9994627	Double nipple with 2x 90°
17	◆	1	353212	Air hose assy. (for hose set 7.5 m; 24.6 ft)
17	◆	1	353213	Air hose assy. (for hose set 10 m; 32.808 ft)
17	◆	1	353214	Air hose assy. (for hose set 15 m; 49.2 ft)
17	◆	1	353215	Air hose assy. (for hose set 20 m; 65.6 ft)
18	◆	1	363968	Material hose AC assy. (for hose set 7.5 m; 24.6 ft)
18	◆	1	363969	Material hose AC assy. (for hose set 10 m; 32.8 ft)
18	◆	1	363970	Material hose AC assy. (for hose set 15 m; 49.2 ft)
18	◆	1	363971	Material hose AC assy. (for hose set 20 m; 65.6 ft)
19	◆	1	363972	Valve rod 2900EACW assy.
20	◆	1	9971414	O-ring
21	◆	1	132516	Nozzle screwed connection assy.
22	◆	1	see 10.1	Nozzle insert
23	◆	1	363417	Sealing nipple AC

◆ = Wearing part

● = Not part of standard equipment for spray gun. Available, however, as additional extra

▼ = Available in different sizes

OPERATING MANUAL



A series of horizontal lines for writing, starting from the top right of the notepad illustration and extending across the page.

OPERATING MANUAL



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