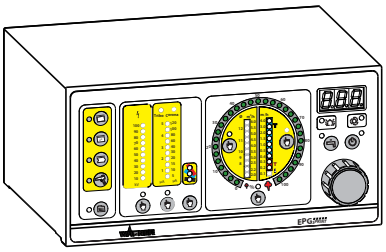
WAGNER

Translation of the Original Service Manual

EPG-SPRINT
EPG-SPRINT X

Universal Control Unit for Powder Coating Guns

Version 06 / 2014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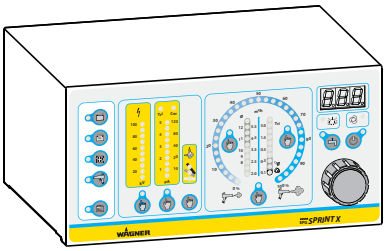
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CE 0102 Ex II 3(2)D IP64 80°C

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1 GENERAL INFORMATION

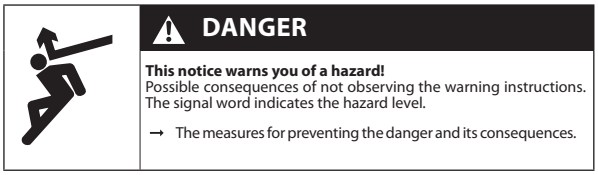
1.1 PREFACE

This service manual contains information and instructions for the operation, repair, service and maintenance of the control units.
This equipment can be hazardous if it is not operated in accordance with the information provided in this service manual and the corresponding operating manual.

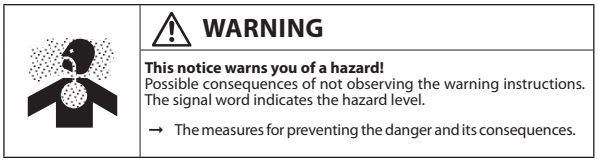
1.2 WARNINGS, NOTICES, AND SYMBOLS IN THIS OPERATING MANUAL

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:

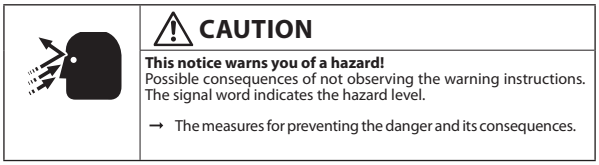
Danger - immediate risk of danger.
Non-observance will result in death or serious injury.



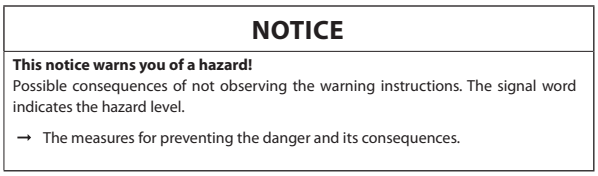
Warning - possible imminent danger.
Non-observance may result in death or serious injury.



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



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



Note - provides information about particular characteristics and how to proceed.

1.3 LANGUAGES

This service manual is available in the following languages:

German	2309349	English	2309350

EPG-SPRINT:
The operating manual is available in the following languages:

German	2305220	English	2305222
French	2305224	Italian	2305225
Spanish	2305226		

EPG-SPRINT X:
The operating manual is available in the following languages:

German	2327591	English	2329371
French	2330847	Italian	2330848
Spanish	2330849	Russian	2333349
Chinese	2333350		

1.4 ABBREVIATIONS

Stk	Number of pieces
Pos	Position
K	Marking in the spare parts lists
Order No.	Order number
ET	Spare part
SW	Wrench size

2 CORRECT USE

2.1 DEVICE TYPE

Universal control unit for controlling electrostatic manual and automatic spray guns

2.2 TYPE OF USE

The EPG-SPRINT / EPG-SPRINT X control unit is intended for controlling electrostatic manual and automatic spray guns of type A-P (2 mJ) according to DIN EN 50177.

⚠ WARNING

Incorrect use!
Risk of injury and damage to the device.

→ Only connect original Wagner spray guns to the EPG-SPRINT / EPG-SPRINT X control unit.
→ The PEM-C3R and PEM-T3R manual spray guns cannot be connected to the EPG-SPRINT / EPG-SPRINT X control unit.

2.3 USE IN POTENTIALLY EXPLOSIVE AREAS

The EPG-SPRINT / EPG-SPRINT X control unit is intended for use with powder spray guns of types A-P up to 2 mJ in accordance with the prototype test PTB 06 ATEX 03 / PTB 12 ATEX 5001.
The EPG-SPRINT / EPG-SPRINT X control unit may be used in the dust explosion zone (zone 22) under the following conditions:

- Control unit correctly fitted in rack.
- Rack correctly and securely sealed on rear with associated cover.

- All connections not needed (mains output, remote control) are sealed with dust protection caps.

2.4 SAFETY PARAMETERS

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

→ Electrostatic spray equipment may only be operated in an intact condition, damaged devices must be decommissioned immediately and repaired.
→ Use the device only to work with the products recommended by WAGNER.
→ Operate only the device as a whole.
→ Do not deactivate safety fixtures.
→ Spare parts and accessories may have safety-relevant properties:
Use only WAGNER original spare parts and accessories.

The use of the control unit is only permissible under the following conditions:
→ The operating staff have previously been trained on the basis of this operating manual,
→ the safety regulations listed in this service manual are observed,
→ the operating, maintenance and repair information in this service manual is observed,
→ and the statutory requirements and accident prevention regulations standards in the country of use are observed.

2.5 REASONABLY FORESEEABLE MISUSE

- Coating work pieces which are not grounded
- Use of defective components and accessories
- Use with not permissible powder coating guns

2.6 RESIDUAL RISKS

Residual risks are risks which cannot be excluded 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 powder lacquers and cleaning agents	Handling powder lacquers and cleaning agents	Skin irritation, allergies	Wear protective clothing, observe safety data sheets	Operation, maintenance, disassembly
Powder lacquer in air outside the defined working area	Lacquering outside the defined working area	Inhalation of substances which are hazardous to health	Observe work and operation instructions	Operation, maintenance

3 IDENTIFICATION

3.1 EXPLOSION PROTECTION IDENTIFICATION IN ACCORDANCE WITH ATEX

The device is suited for use in potentially explosive areas, in accordance with Test Certificate PTB 06 ATEX 5003 (EPG-SPRINT) or PTB 12 ATEX 5001 (EPG-SPRINT X).

CE 0102 Ex II 3(2)D IP 64 80 °C

CE: European Communities
0102: Number of notified body which issues the recognition of quality assurance in production.
Ex: Symbol for explosion protection
II: Device class II
3: Category 3 (Zone 22)
(2): Impact on equipment of category 2
D: Ex-atmosphere dust
IP64: Protection class 64
80 °C: Temperature class: maximum surface temperature < 80 °C; 176 °F

3.2 PERMISSIBLE DEVICE COMBINATIONS

The following powder spray guns may be connected to the EPG-SPRINT / EPG-SPRINT X:

Manual spray guns	
• Corona spray gun	PEM-X1, PEM-X1 CG, PEM-C3, PEM-C4, PEM-C4-Ergo
• Tribo spray gun	PEM-T3

Automatic spray guns	
• Corona spray gun	PEA-C3, PEA-C4
• Corona spray gun	PEA-C3XL, PEA-C4XL
• Tribo spray gun	PEA-T3
• Tribo spray gun	PEA-T3XL

Older or other gun types may only be connected to the control unit after first checking their suitability with Wagner.

For permissible device combinations for the USA and Canada, see Chapter 15.7 "FM Approval".

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 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.
→ 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.
→ Must be de-energized before work is commenced on active parts.
→ Secure the device against being switched back on without authorization. Inform staff about planned work.
→ Observe electrical safety regulations.

4.1.2 STAFF QUALIFICATIONS

→ Ensure that the device is operated, maintained, and repaired only by trained staff.

4.1.3 SAFE WORK ENVIRONMENT

→ The floor in the working area must be electrostatically conductive (measurements according to EN 1081 and EN 61340-4-1).
→ The footwear worn by the operators must comply with the requirements of EN ISO 20344. The measured insulation resistance must not exceed 100 megohms.
→ The protective clothing, including gloves, must comply with the requirements of EN ISO 1149-5. The measured insulation resistance must not exceed 100 megohms.
→ The powder release must be electrically interlocked with the powder spray system's exhaust air equipment.
→ Excess coating product (overspray) must be collected up safely.
→ Ensure that there are no ignition sources such as naked flames, sparks, glowing wires, or hot surfaces in the vicinity. Do not smoke.
→ Maintain sufficient quantities of suitable fire extinguishers and ensure that they are serviceable.
→ The operating company must ensure that an average concentration of powder lacquer in the air does not exceed 50% of the lower explosion limit (LEL = max. permitted concentration of powder to air). If no reliable LEL value is available, the average concentration may not exceed 10 g/m^3.

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.
→ Under no circumstances may people with pacemakers enter the area where the high-voltage field between the spray gun and the work piece to be coated builds up!

4.2.1 SAFE HANDLING OF WAGNER POWDER SPRAY DEVICES

→ Do not point spray guns at people.
→ Before all work on the device, in the event of work interruptions and functional faults:
- Switch off the energy/compressed air supply.
- Secure the spray gun against actuation.
- Relieve pressure on spray guns and device.
- In case of functional faults: Identify and correct the problem, proceed as described in the "Fault Rectification" chapter.

4.2.2 GROUNDING THE DEVICE

The electrostatic charge may, in certain cases, give rise to electrostatic charges on the device. This may result in the formation of sparks or flames when discharging.
→ Ensure that the device is grounded before each coating process.
→ Ground the work pieces to be coated.
→ Ensure that all persons inside the working area are grounded, e.g., by wearing electrostatically conductive shoes.
→ The functionality of grounding cables must be checked regularly (see EN 60204).

4.2.3 PRODUCT HOSES

→ Only use an original Wagner powder hose.

4.2.4 CLEANING

- → Before starting cleaning or any other manual work, the high-voltage in the spray area must be shut down and locked to prevent it from being switched back on.
- → Lock the compressed air supply and decompress the device.
- → Secure the device against being switched back on without authorization.
- → Use only electrically conducting and grounded tanks for cleaning fluids.
- → Preference should be given to non-flammable cleaning fluids.
- → Flammable cleaning liquids may only be used if, after switching off the high-voltage, all high-voltage conducting parts are discharged to a discharge energy of less than 0.24 mJ before they can be accessed.
  Most flammable solvents have an ignition energy of around 0.24 mJ or 60 nC.
- → The cleaning agent's flash point must be at least 15 K above the ambient temperature.
- → Only mobile industrial vacuum cleaners of design 1 (see EN 60335-2) may be used to remove dust deposits.

4.2.5 HANDLING POWDER LACQUERS

- → When preparing or processing the powder and cleaning the device, take note of the processing regulations laid down by the manufacturer of the powder lacquers being used.
- → Take note of the manufacturer's instructions and the relevant environmental protection regulations when disposing of powder lacquers.
- → Take the prescribed safety measures, in particular the wearing of safety glasses and safety clothing as well as the use of protective hand cream.
- → Use a mask or breathing apparatus if necessary.
- → To ensure sufficient protection of health and the environment, only operate the device in a powder booth or on a spray wall with activated ventilation (exhaust air).

4.3 PROTECTIVE AND MONITORING EQUIPMENT

⚠ WARNING

Protective and monitoring equipment!
Risk of injury and damage to the device.

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

4.4 SAFETY FEATURE IDENTIFICATION

Plates bearing information for the user have been attached to the work openings of the powder coating booth.
The plate size corresponds to the standard category Ø 100 mm; 3.94 inches.
The label plates, which must be attached, are shown below:

High-voltage!
In the control cabinet:
(25 mm; 0.98 inch)
Voltage before main switch

Danger of crushing!

Explosive atmosphere!

Risk of tripping!

Forbidden for persons with a cardiac pacemaker!

Do not jump on the booth floor!
Danger of slipping!

Smoking, fire, and open flames are prohibited!

Forbidden for unauthorized persons!

Wear electrostatically conductive footwear!

Follow the instructions in the operating manual!

5 DESCRIPTION

5.1 FIELDS OF APPLICATION, CORRECT USE

	**⚠ WARNING** **Incorrect use!** Risk of injury and damage to the device. → Only connect original Wagner spray guns to the EPG-SPRINT / EPG-SPRINT X control unit. → The PEM-C3R, PEM-T3R and PEM-C4R manual spray guns cannot be connected to the EPG-SPRINT / EPG-SPRINT X control unit.

The EPG-SPRINT / EPG-SPRINT X control unit can be used as a stand-alone unit in manual coating systems or can be connected to the PrimaTech automatic system together with other units.

- When a Corona gun is connected, Corona current scale and the high-voltage supply and control unit are active.
- When a Tribo gun is connected, the Tribo current scale is activated, while the high-voltage supply and control unit are deactivated.

The control unit recognizes if a manual or automatic spray gun is connected. If an automatic gun is connected, the control unit can only be controlled using the CCM Prima remote control.

5.2 PERMISSIBLE DEVICE COMBINATIONS

The following powder spray guns may be connected to the EPG-SPRINT / EPG-SPRINT X:

Manual spray guns	
• Corona spray gun	PEM-X1, PEM-X1 CG, PEM-C3, PEM-C4, PEM-C4-Ergo
• Tribo spray gun	PEM-T3

Automatic spray guns	
• Corona spray gun	PEA-C3, PEA-C4
• Corona spray gun	PEA-C3XL, PEA-C4XL
• Tribo spray gun	PEA-T3
• Tribo spray gun	PEA-T3XL

Older or other gun types may only be connected to the control unit after first checking their suitability with Wagner.

5.3 TECHNICAL DATA

Dimensions:	
Height	136 mm; 5.35 inches
Width	270 mm; 10.63 inches
Depth (without operating elements)	200 mm; 7.87 inches
Weight	3.3 kg; 7.28 lbs

Electrical:	
Mains (AC)	85 VAC-250 VAC
Frequency	47 Hz-440 Hz
Input power	maximum 40 W
Output voltage	maximum 22 Vpp
Output current	maximum 0.9 A
High-voltage	10-100 kV (adjustable in 1 kV steps)
Corona current limitation	5 µA-120 µA (adjustable in 1 µA steps)
Tribo current measuring range	0 µA-15 µA
Tribo current limitation	0 µA-5 µA (adjustable in 0.1 µA steps)
Tribo current cut off	greater than 12 µA (ATEX: switching off of the unit)
Protection class	IP 64
Ex zone	II 3(2)D 80 °C; 176 °F (Zone 22)

Pneumatic:	
Air input pressure	0.6-0.8 MPa; 6-8 bar; 87-116 psi
Air volume	maximum 15 m^3/h
Sum of dosing and feed air	1-6 m^3/h
Gun air	0.05-4.0 m^3/h
Required compressed air quality as per ISO 8573.1	3.5.2
Connection hose diameter	8 mm; 0.315 inches

Ambient conditions:	
Operating temperature range	5-45 °C; 41-113 °F

⚠ WARNING

Outgoing air containing oil!
Risk of poisoning if inhaled.

→ Provide compressed air free from oil and water
(Quality Standard 3.5.2 according to ISO 8573.1)
3.5.2 = 5 µm / +7 °C; 44.6 °F / 0.1 mg/m³.

NOTICE

Compressed air quality, accessories
Danger of damage to the device.

→ Operate the control unit only with the prescribed compressed air quality.
→ Only use the control unit with original Wagner accessories.
→ Non-observance of these conditions results in the warranty expiring!

Ambient conditions:
If low-melting powders are used, the ambient temperature may have to be lower than 30 °C; 86 °F.

Volume measures:
for volumes specified in Nm^3 (standard cubic meters). One cubic meter of a gas at 0 °C and 1.013 bar is called norm cubic meter.

5.4 PERMITTED ACCESSORIES

Only the accessories listed in the chapter "Accessories" of the operating manual may be connected to the EPG-SPRINT / EPG-SPRINT X control unit.
The accessories listed in the chapter "Accessories" were included in the EC type examination and are approved for use with the control unit.

5.5 SCOPE OF DELIVERY

5.5.1 SCOPE OF DELIVERY OF EPG-SPRINT

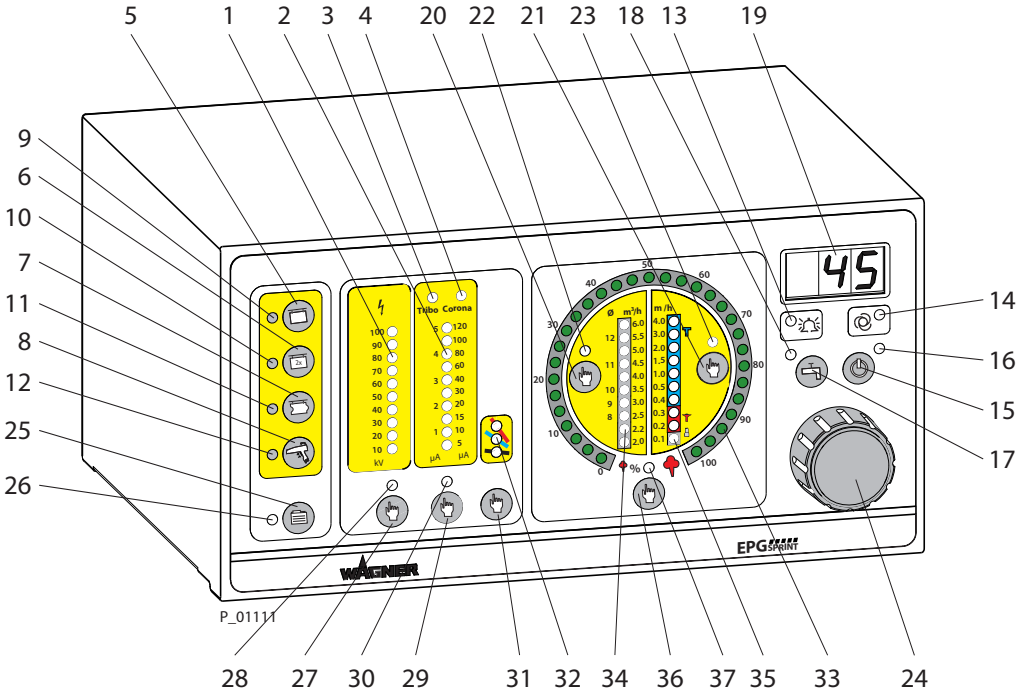
Stk	Order No.	Designation
1	2305109	EPG-SPRINT (for manual and automatic systems)
1	2305127	EPG-SPRINT FM (for United States)
The standard equipment includes:		
1	2305227	Conformity certificate
1	2305220	Operating manual, German
1	see Chapter 1.3	Operating manual in local language

5.5.2 SCOPE OF DELIVERY OF EPG-SPRINT X

Stk	Order No.	Designation
1	2324731	EPG-SPRINT X (for manual and automatic systems)
The standard equipment includes:		
1	2327595	Conformity certificate
1	2327591	Operating manual, German
1	see Chapter 1.3	Operating manual in local language

5.6 OPERATING ELEMENTS OF EPG-SPRINT

5.6.1 OVERVIEW OF CONTROL PANEL FRONT SIDE



1 Illuminated display: "High-voltage"

- Lights up green
- Display range: 0-100 kV
  Resolution 10 kV
- Single LED display: Nominal voltage
- Bar display: Working voltage

2 Illuminated display: "Corona or Tribo Current"

- Lights up green

Tribo scale:

- When a Tribo gun is connected and selected
- Bar display: When powder feed is activated
- Display range: 0-5 µA
  Resolution: 0.5 µA

Corona scale:

- When a Corona gun is connected and selected
- Display and adjusting range: 0 [5]-120 µA,
  0 [5]-20 µA resolution 5 µA
  20-40 µA resolution 10 µA
  40-120 µA resolution 20 µA
- Single LED display: "Trigger Point of Current Limitation"
- Bar display: Corona current

3 Display: "Tribo Gun"
- Lights up when a Tribo gun is connected and selected

4 Display: "Corona Gun"
- Lights up when a Corona gun is connected and selected

5 Push button: recipe for "Surface Parts"

6 Push button: recipe for "Second Coating"

7 Push button: recipe for "Profiles"

8 Push button: recipe for "Double Click"
- To access the recipe, press the trigger lever on the spray gun twice in quick succession and hold it down

9 Display LED: recipe for "Surface Parts"
- Lights up green when the recipe for surface part is selected

10 Display LED: recipe for "Second Coating"
- Lights up green when the recipe for "Second Coating" is selected

11 Display LED: recipe for "Profiles"
- Lights up green when the recipe for profile part is selected

12 Display LED: recipe for "Double Click"
- Lights up green, when the recipe for "Double Click" is selected

13 Display LED: "Fault"
- Lights up, when there is a fault on the device

14 Display LED: "Automatic Gun"
- Lights up, when an automatic gun is connected

15 Push button: "Standby"
- To switch into standby mode
- High-voltage and powder feed cannot be activated in this mode
- To reactivate normal mode, press the button again

16 Display LED: "Standby"
- Lights up when the unit is in standby mode

17 Push button: "Purge"
- To activate the injector and the hose rinsing

18 Display LED: "Purge"
- Lights up blue, when the purge function is activated

19 Display LED: 7 segments, three-digit number
- Indicates the exact value depending on the activated function:
  "Total air volume; atomizing, ionizing and Tribo air; additional recipes; high-voltage; current limitation; powder quantity"
- Display showing error number in the event of warnings and malfunctions

20 Push button: "Total Air Volume"
- To activate the function, the value is precisely adjusted with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 1-6 m^3/h
- Resolution: 0.05 m^3/h

21 Push button: "Atomizing, Ionizing and Tribo Air"
- To activate the function, the value is precisely adjusted with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 0.05-4 m^3/h
- Resolution: 0.05 m^3/h

22 Display LED: "Overall Air"
- Lights up yellow, when the setting "Overall Air" is selected

23 Display LED: "Atomizing, Ionizing and Tribo Air"
- Lights up yellow, when the setting "Atomizing, Ionizing and Tribo Air" is selected

24 Universal control dial
- Dynamic digital control dial with 32 positions per revolution
- Adjustment speed is proportional to rotational speed
- Used to set: "Total air volume; atomizer, ionizer and Tribo air; additional recipes; high-voltage; current limitation; powder quantity"
- For setting parameter values in configuration mode

25 Push button: "Additional Recipes"
- To activate the function, the additional recipe is set with the rotary controller 24 and is indicated in the LED display 19
- Selection of the recipes 5 to 50

26 Display LED: "Additional Recipes"
- Lights up yellow, when an additional recipe is selected

27 Push button: "High-voltage"
- To activate the function, the high-voltage is set with Rotary Controller 24 and is indicated in LED Display 19
- Adjusting range: 10-100 kV
- Resolution: 1 kV

28 Display LED: "High-voltage"
- Lights up yellow. The high-voltage is selected and can be adjusted using rotary controller 24

29 Push button: "Current Limitation"
- To activate the function, the current limitation is set with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 5-120 µA
- Resolution: 1 µA

30 Display LED: "Current Limitation"
- Lights up yellow. The current limitation is selected and can be adjusted using rotary controller 24

31 Push button: "Characteristic Slope"
- To switch the characteristic slope
- Display with LED 32

32 Display LED: "Characteristic Slope"
- Lights up green
- Lower LED characteristic curve, flat
- Middle LED characteristic curve, medium
- Upper LED characteristic curve, steep

33 Illuminated display: "Powder Quantity"
- Lights up green
- Display range: 0-100%
- Resolution: 3.33%
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

34 Illuminated display: "Total Air Volume"
- Lights up green
- Display range: 1-6 m^3/h
- Resolution: 0.2-0.5 m^3/h
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

35 Illuminated display: "Atomizing, Ionizing and Tribo Air Volume"
- Lights up green
- Display range: 0.1-4 m^3/h
- Resolution: 0.1-1.0 m^3/h
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

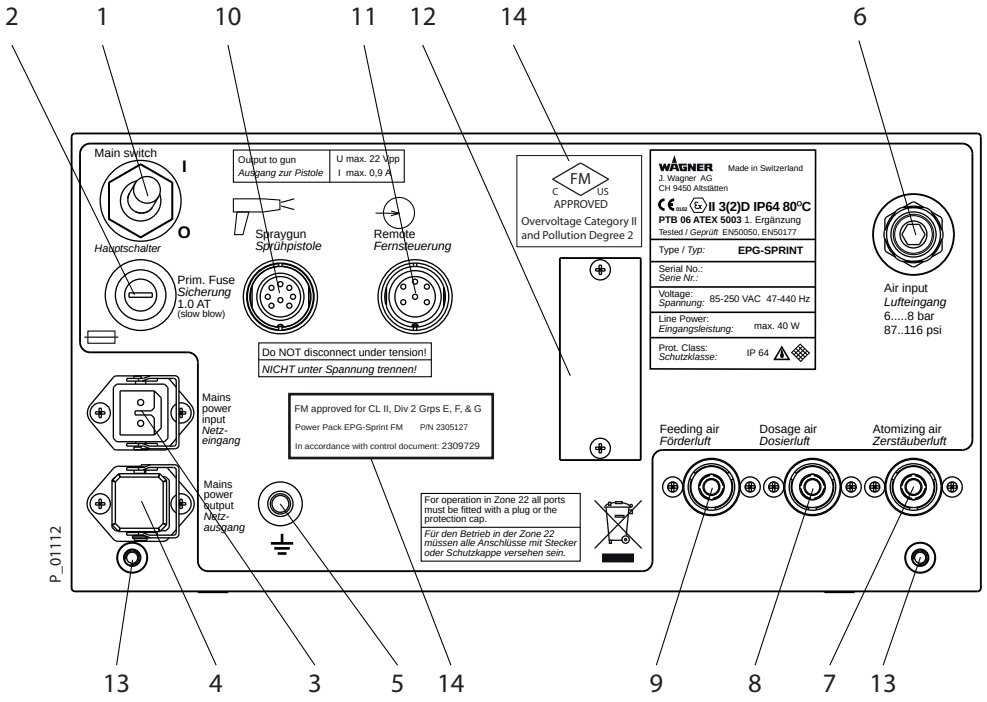
36 Push button: "Powder Quantity"

- To activate the function, the powder quantity is set with rotary controller 24 and is indicated in LED display 19.
- Adjusting range: 1-100%
- Resolution: 1%

37 Display LED: "Powder Quantity"

- Lights up yellow, when the powder quantity is selected

5.6.2 CONNECTIONS ON THE REAR SIDE OF THE EPG-SPRINT



1 Mains supply switch

0 = The control unit is deactivated

I = the control unit is activated

2 Primary fuse

- 1 Ampere slow-acting

3 Mains input terminal

- Universal input: 85 V AC - 250 V AC

4 Mains power output

- Direct, not through the mains switch
- To loop the mains through the PrimaTech system

5 Knurled nut

- To connect the signal ground

6 Compressed air inlet

- Pressure range: 0.6-0.8 MPa; 6-8 bar; 87-116 psi
- Air volume: max. 15 m/^{3}
- Connection hose diameter 8 mm; 0.315 inches

7 Compressed air outlet for additional air

- With a Corona gun: Atomizing air
- With a Tribo gun: Tribo air

8 Compressed air outlet for dosing air

- For the powder injector

9 Compressed air outlet for feed air

- For the powder injector

10 Gun connection

- To connect a Corona or Tribo gun

11 Connection for the CCM Prima

- For connecting to the CCM Prima when fitting in a PrimaTech automatic system

12 Cover of the service connection

- For Wagner service personnel only!

13 Fixations

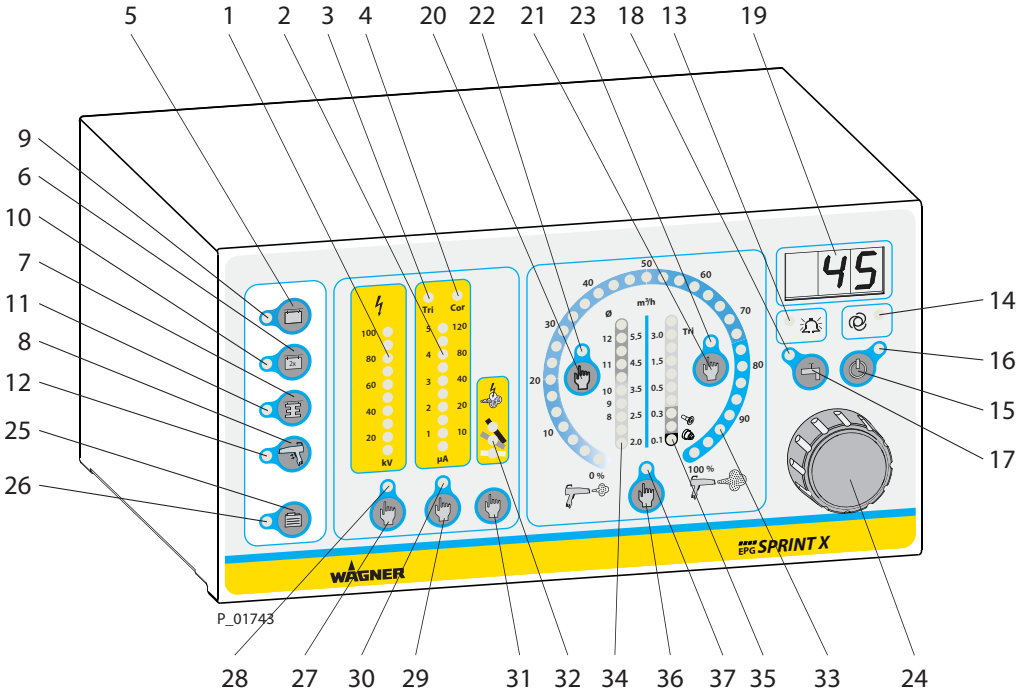
- For screwing to the rack

14 FM-Identification

- Only on USA edition control unit

5.7 OPERATING ELEMENTS OF EPG-SPRINT X

5.7.1 OVERVIEW OF CONTROL PANEL FRONT SIDE



1 Illuminated display: "High-voltage"

- Lights up green
- Display range: 0-100 kV
  Resolution 10 kV
- Single LED display: Nominal voltage
- Bar display: Working voltage

2 Illuminated display: "Corona or Tribo Current"

- Lights up green

Tribo scale:

- When a Tribo gun is connected and selected
- Bar display: When powder feed is activated
- Display range: 0-5 µA
  Resolution: 0.5 µA

Corona scale:

- When a Corona gun is connected and selected
- Display and adjusting range: 0 [5]-120 µA,
  0 [5]-20 µA resolution 5 µA
  20-40 µA resolution 10 µA
  40-120 µA resolution 20 µA
- Single LED display: "Trigger Point of Current Limitation"
- Bar display: Corona current

3 Display: "Tribo Gun"
- Lights up when a Tribo gun is connected and selected

4 Display: "Corona Gun"
- Lights up when a Corona gun is connected and selected

5 Push button: recipe for "Surface Parts"

6 Push button: recipe for "Second Coating"

7 Push button: recipe for "Profiles"

8 Push button: recipe for "Double Click"
- To access the recipe, press the trigger lever on the spray gun twice in quick succession and hold it down

9 Display LED: recipe for "Surface Parts"
- Lights up green when the recipe for surface part is selected

10 Display LED: recipe for "Second Coating"
- Lights up green when the recipe for "Second Coating" is selected

11 Display LED: recipe for "Profiles"
- Lights up green when the recipe for profile part is selected

12 Display LED: recipe for "Double Click"
- Lights up green, when the recipe for "Double Click" is selected

13 Display LED: "Fault"
- Lights up, when there is a fault on the device

14 Display LED: "Automatic Gun"
- Lights up, when an automatic gun is connected

15 Push button: "Standby"
- To switch into standby mode
- High-voltage and powder feed cannot be activated in this mode
- To reactivate normal mode, press the button again

16 Display LED: "Standby"
- Lights up when the unit is in standby mode

17 Push button: "Purge"
- To activate the injector and the hose rinsing

18 Display LED: "Purge"
- Lights up blue, when the purge function is activated

19 Display LED: 7 segments, three-digit number
- Indicates the exact value depending on the activated function:
  "Total air volume; atomizing, ionizing and Tribo air; additional recipes; high-voltage; current limitation; powder quantity"
- Display showing error number in the event of warnings and malfunctions

20 Push button: "Total Air Volume"
- To activate the function, the value is precisely adjusted with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 1-6 m^3/h
- Resolution: 0.05 m^3/h

21 Push button: "Atomizing, Ionizing and Tribo Air"
- To activate the function, the value is precisely adjusted with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 0.05-4 m^3/h
- Resolution: 0.05 m^3/h

22 Display LED: "Overall Air"
- Lights up yellow, when the setting "Overall Air" is selected

23 Display LED: "Atomizing, Ionizing and Tribo Air"
- Lights up yellow, when the setting "Atomizing, Ionizing and Tribo Air" is selected

24 Universal control dial
- Dynamic digital control dial with 32 positions per revolution
- Adjustment speed is proportional to rotational speed
- Used to set: "Total air volume; atomizer, ionizer and Tribo air; additional recipes; high-voltage; current limitation; powder quantity"
- For setting parameter values in configuration mode

25 Push button: "Additional Recipes"
- To activate the function, the additional recipe is set with the rotary controller 24 and is indicated in the LED display 19
- Selection of the recipes 5 to 50

26 Display LED: "Additional Recipes"
- Lights up yellow, when an additional recipe is selected

27 Push button: "High-voltage"
- To activate the function, the high-voltage is set with Rotary Controller 24 and is indicated in LED Display 19
- Adjusting range: 10-100 kV
- Resolution: 1 kV

28 Display LED: "High-voltage"
- Lights up yellow. The high-voltage is selected and can be adjusted using rotary controller 24

29 Push button: "Current Limitation"
- To activate the function, the current limitation is set with rotary controller 24 and is indicated in LED display 19
- Adjusting range: 5-120 µA
- Resolution: 1 µA

30 Display LED: "Current Limitation"
- Lights up yellow. The current limitation is selected and can be adjusted using rotary controller 24

31 Push button: "Characteristic Slope"
- To switch the characteristic slope
- Display with LED 32

32 Display LED: "Characteristic Slope"
- Lights up green
- Lower LED characteristic curve, flat
- Middle LED characteristic curve, medium
- Upper LED characteristic curve, steep

33 Illuminated display: "Powder Quantity"
- Lights up green
- Display range: 0-100%
- Resolution: 3.33%
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

34 Illuminated display: "Total Air Volume"
- Lights up green
- Display range: 1-6 m^3/h
- Resolution: 0.2-0.5 m^3/h
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

35 Illuminated display: "Atomizing, Ionizing and Tribo Air Volume"
- Lights up green
- Display range: 0.1-4 m^3/h
- Resolution: 0.1-1.0 m^3/h
- Single LED display: Set point (high-voltage and powder are deactivated)
- Bar display: Actual value (high-voltage and powder are activated)

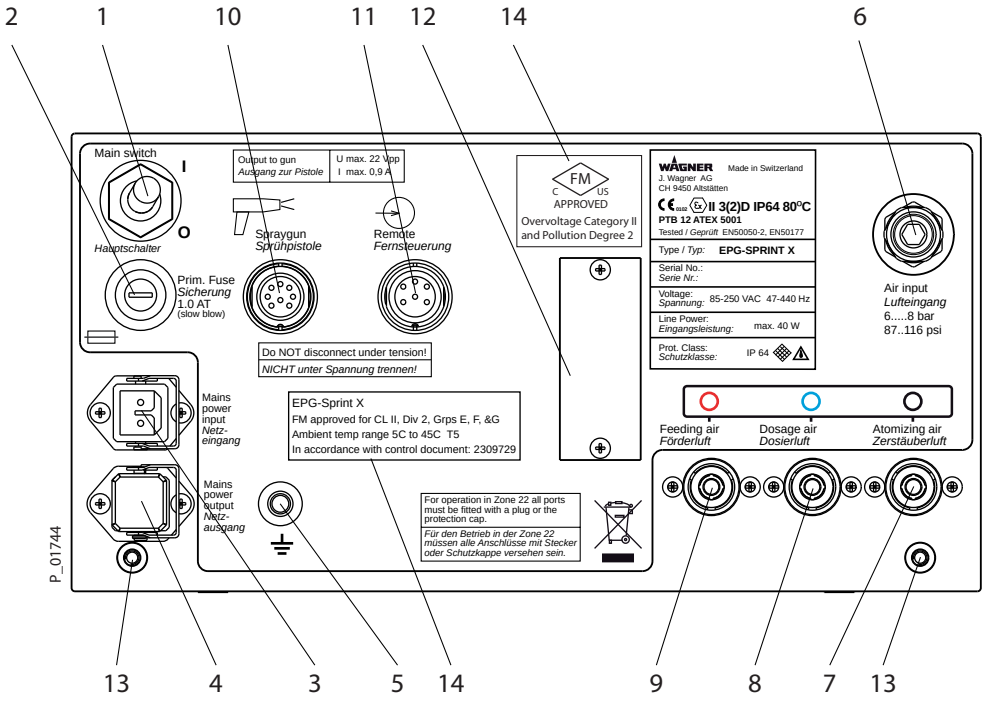
36 Push button: "Powder Quantity"

- To activate the function, the powder quantity is set with rotary controller 24 and is indicated in LED display 19.
- Adjusting range: 1-100%
- Resolution: 1%

37 Display LED: "Powder Quantity"

- Lights up yellow, when the powder quantity is selected

5.7.2 CONNECTIONS ON THE REAR SIDE OF THE EPG-SPRINT X



1 Mains supply switch

0 = The control unit is deactivated

I = the control unit is activated

2 Primary fuse

- 1 Ampere slow-acting

3 Mains input terminal

- Universal input: 85 V AC - 250 V AC

4 Mains power output

- Direct, not through the mains switch
- To loop the mains through the PrimaTech system

5 Knurled nut

- To connect the signal ground

6 Compressed air inlet

- Pressure range: 0.6-0.8 MPa; 6-8 bar; 87-116 psi
- Air volume: max. 15 $m/^3$
- Connection hose diameter 8 mm; 0.315 inches

7 Compressed air outlet for additional air

- With a Corona gun: Atomizing air
- With a Tribo gun: Tribo air

8 Compressed air outlet for dosing air

- For the powder injector

9 Compressed air outlet for feed air

- For the powder injector

10 Gun connection

- To connect a Corona or Tribo gun

11 Connection for the CCM Prima

- For connecting to the CCM Prima when fitting in a PrimaTech automatic system

12 Cover of the service connection

- For Wagner service personnel only!

13 Fixations

- For screwing to the rack

14 FM-Identification

6 SPARE PARTS

6.1 HOW CAN SPARE PARTS BE ORDERED?

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

Order number, designation, and quantity

The quantity need not be the same as the number given in the quantity column "Stk" on the 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

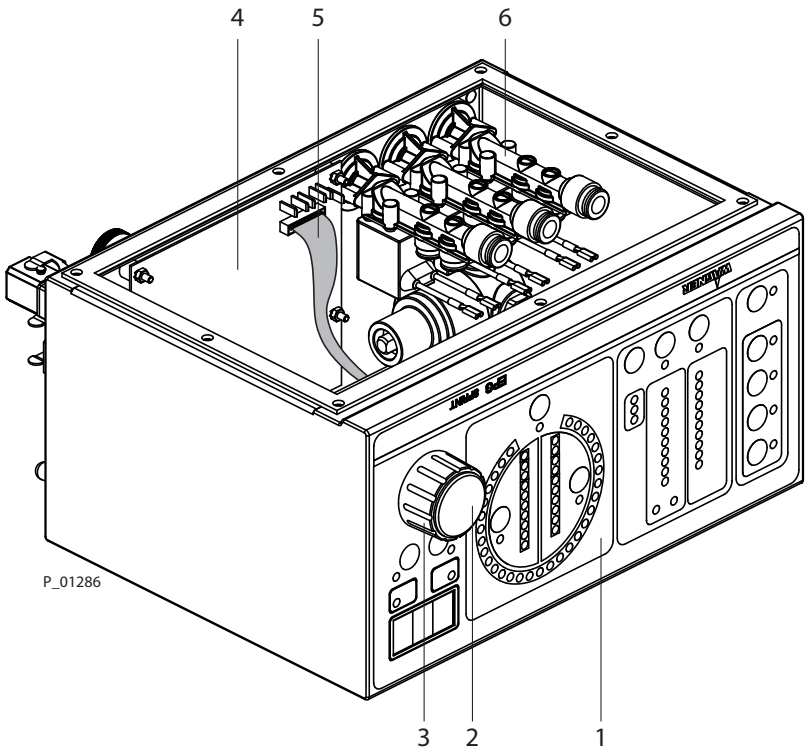
Explanation of column "K" (labeling) in the following spare parts lists.

◆ = Wearing parts
Note: These parts are not covered by warranty terms

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

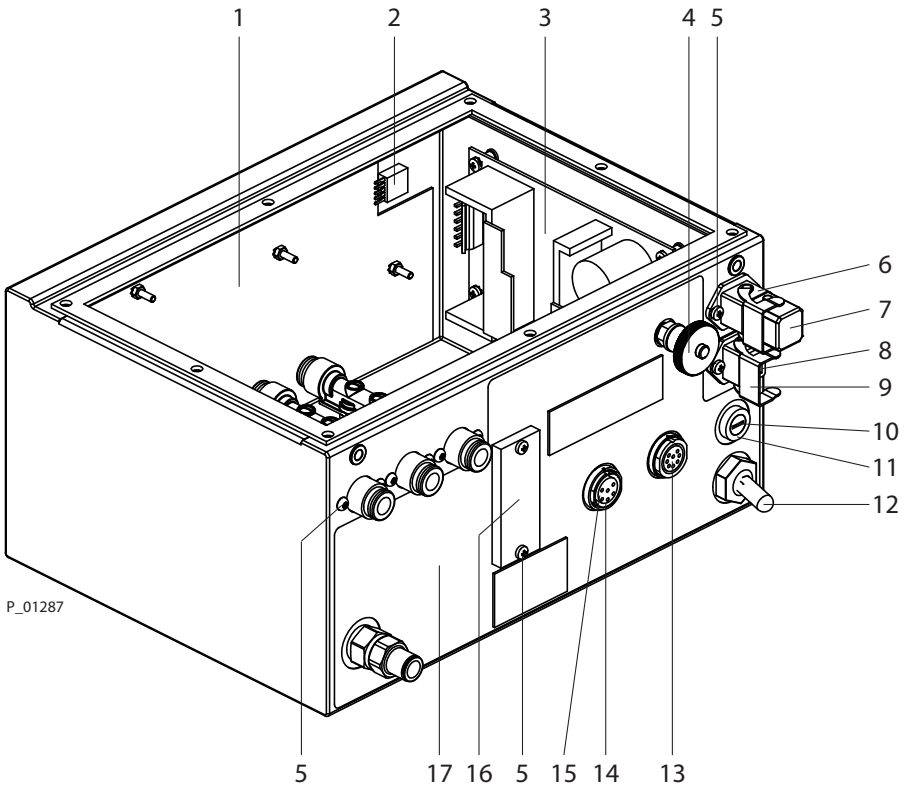
	**⚠ WARNING** **Incorrect maintenance/repair!** Risk of injury and damage to the device. → Repairs and part replacement may only be carried out by specially trained staff or a WAGNER service center. → Before all work on the device and in the event of work interruptions: - Switch off the energy/compressed air supply. - Ensure that all system components are grounded. - Secure the device against being switched back on without authorization. → Observe the operating and service manual at all times when carrying out work!

6.2 EPG-SPRINT CONTROL UNIT



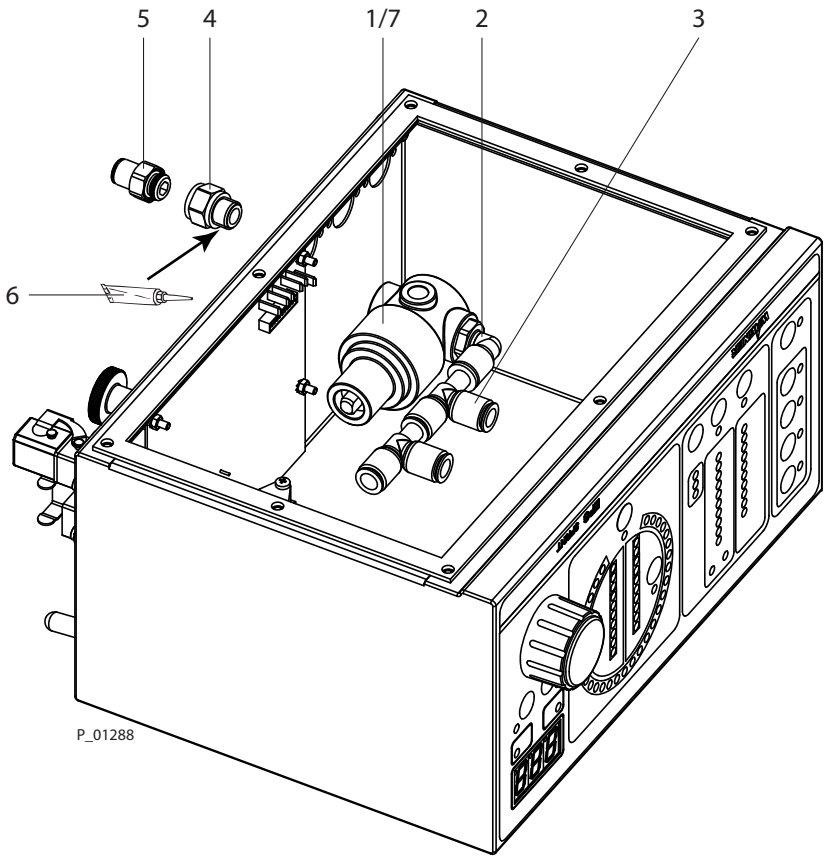
Pos	K	Stk	Order No.	Designation
1		1	2304361	Front display
2		1	2304462	Rotary knob for cover, gray
3		1	2304461	Rotary knob
4		1	2310722	EPG-SPRINT rear panel print complete with sensor hoses
5		1	2304487	Print connection cable
6	★	3	2311873	Wagner proportional valve with O-ring

◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Up to unit serial number 1119, a round valve body is fitted.
This can be replaced with the valve with order number 2311873.



Pos	K	Stk	Order No.	Designation
1		1	2310723	EPG-SPRINT display print complete without encoder
2		1	2311875	Incremental encoder
3		1	9955176	Switching power supply
4		1	9910522	Knurled nut
5	★	1	2312335	Set of screws for EPG-SPRINT rear wall
6		1	9952587	Connector plug STAKEI 200
7		1	360472	Cover cap
8		1	9952586	Socket STAKEI 200
9		1	9950330	Safety clip
10		1	9951117	1 ampere slow-acting fuse
11		1	9955021	Fuse socket
12	★	1	241208	2-pin rocker switch complete with rubber sleeve
13		1	9952506	Socket
14		1	9952585	Socket
15		1	9955130	Protective cap
16		1	241323	Cover, white
17		1	2304354	EPG-SPRINT rear label (enter serial number manually)

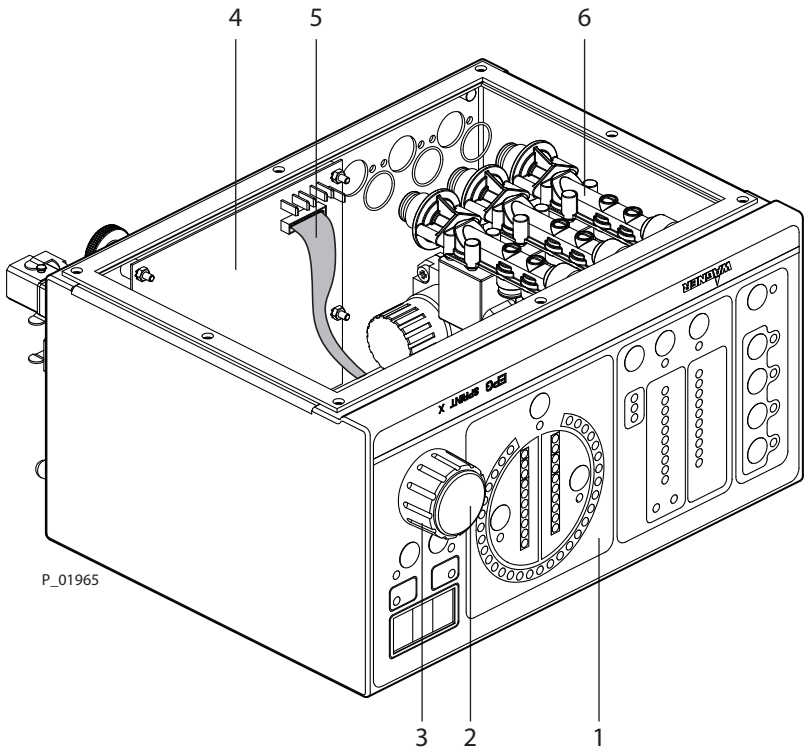
◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Only available as a set



Pos	K	Stk	Order No.	Designation
1		1	2311879	0-116 psi (0-8 bar) pressure regulator, preset to 87 psi (6 bar)
2		1	9998253	Threaded elbow fitting
3		2	9955628	L plug connection
4		1	9999310	Extension piece
5		1	9998254	Straight screw-in fitting
6		1	9992511	Sealing adhesive
7	★	1	2334272	Pressure regulator, preset to 87 psi (6 bar)

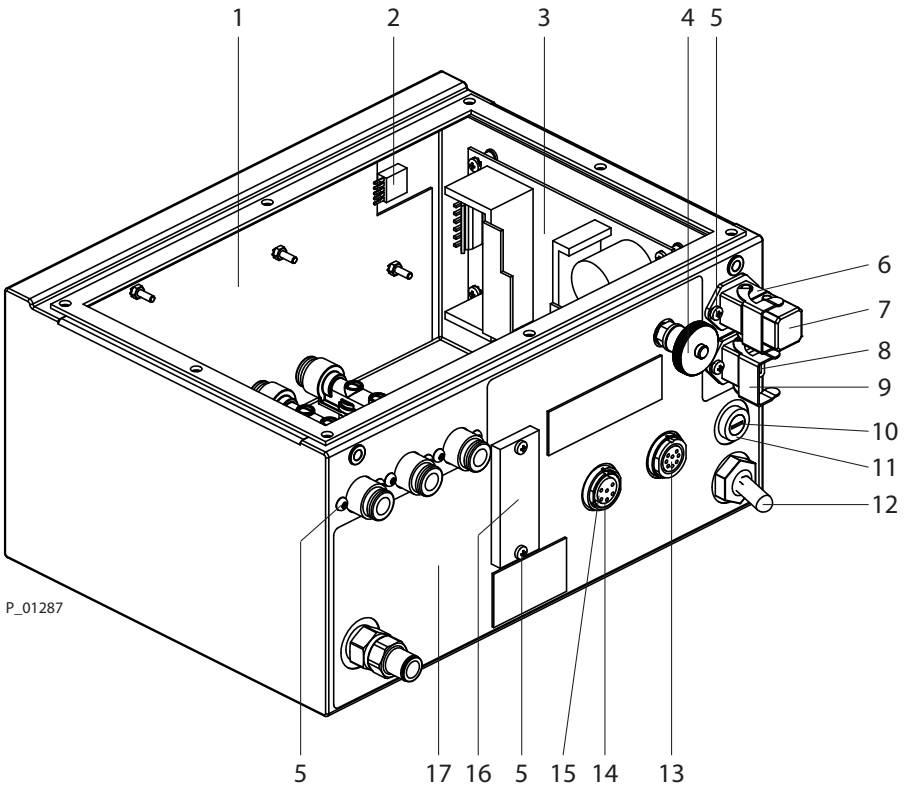
◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Pressure regulator item 7 can replace item 1

6.3 EPG-SPRINT X CONTROL UNIT



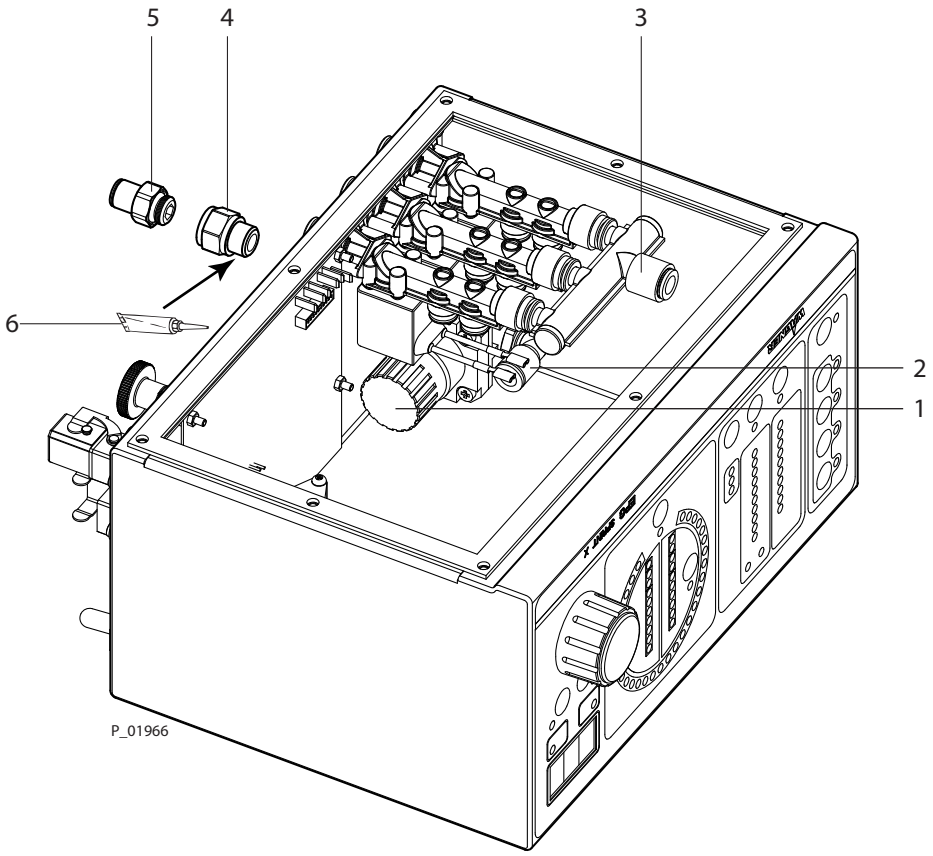
Pos	K	Stk	Order No.	Designation
1		1	2324581	Front display
2		1	2324595	Rotary knob for cover, blue
3		1	2304461	Rotary knob
4		1	2334230	EPG-SPRINT X rear panel print complete with sensor hoses
5		1	2304487	Print connection cable
6	★	3	2311873	Wagner proportional valve with O-ring

◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Only available as a set



Pos	K	Stk	Order No.	Designation
1		1	2333661	EPG-SPRINT X display print complete without encoder
2		1	2311875	Incremental encoder
3		1	9955176	Switching power supply
4		1	9910522	Knurled nut
5	★	1	2312335	Set of screws for EPG-SPRINT rear wall
6		1	9952587	Connector plug STAKEI 200
7		1	360472	Cover cap
8		1	9952586	Socket STAKEI 200
9		1	9950330	Safety clip
10		1	9951117	1 ampere slow-acting fuse
11		1	9955021	Fuse socket
12	★	1	241208	2-pin rocker switch complete with rubber sleeve
13		1	9952506	Socket
14		1	9952585	Socket
15		1	9955130	Protective cap
16		1	241323	Cover, white
17		1	2324730	EPG-SPRINT X rear label (enter serial number manually)

◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Only available as a set



Pos	K	Stk	Order No.	Designation
1		1	2334272	Pressure regulator, preset to 87 psi (6 bar)
2		1	9998253	Threaded elbow fitting
3		1	2320486	Air diffuser
4		1	9999310	Extension piece
5		1	9998254	Straight screw-in fitting
6		1	9992511	Sealing adhesive

◆ Wearing parts
● Not part of the standard equipment but available as a special accessory
★ Only available as a set

6.4 RESOURCES AND SPECIAL TOOLS

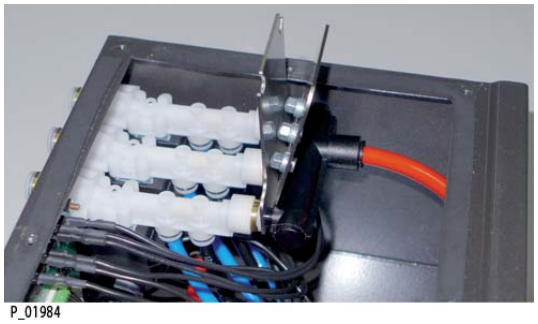
Description	Article No.	Application
USB/TTL cable for updating software	2305858	PC/laptop connection for updating software
Cable adapter	2312065	Transfer cable for connecting diagnosis for the menu items of the high-voltage setting
Gun simulator	2312448	For testing and calibrating the production of high-voltage
Hose release tool	2311907	For releasing the 6-mm hose from the proportional valve
Air diffuser release tool	2324755	For releasing the triple air diffuser from the proportional valves
Mounting key	259377	For loosening and tightening the equipment socket's screw ring on the rear panel of the control unit
Recessed head screwdriver no. 1		
Open-end wrench		
Socket wrench no. 5.5		
Sealing adhesive	9992511	For sealing the screw connections

6.5 HANDLING THE RELEASE TOOL FOR THE AIR DIFFUSER


P_01969

Procedure:

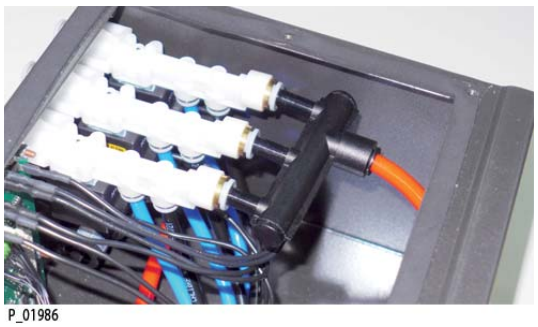
1. Place tool part 1 at air diffuser.


P_01984

2. Place tool part 2 at air diffuser.


P_01985

3. Carefully push both parts together.


P_01986

4. The air diffuser can now be pulled off of the proportional valves.

7 REPAIR WORK

7.1 PERSONNEL QUALIFICATIONS

Only specialist staff trained by Wagner or Wagner staff may carry out maintenance or repair work.

The following hazards may arise during repair work:

- Health hazard from inhaling powder lacquer
- Use of unsuitable tools and aids

Once the repair work is complete, the device must be checked by a qualified person to ensure a reliable condition.

7.2 SAFETY INSTRUCTIONS

⚠ DANGER

Explosive powder/air mixes!
Danger to life and damage to the device.

→ Before starting cleaning or other manual work, the high-voltage must be shut down and locked to prevent it from being switched back on!
→ The spray gun must be separated from the high-voltage supply before any cleaning work is started!
→ Use only electrically conductive tanks for cleaning liquids. Ground the tank.
→ Preference should be given to non-flammable cleaning fluids.
→ Flammable cleaning liquids may only be used if, after switching off the high-voltage, all high-voltage conducting parts are discharged to a discharge energy of less than 0.24 mJ before they can be accessed.
Most flammable solvents have an ignition energy of around 0.24 mJ or 60 nC.
→ The cleaning agent's flash point must be at least 15 K above the ambient temperature.
→ Only mobile industrial vacuum cleaners of design 1 (see EN 60335-2) may be used to remove dust deposits.

DANGER

Incorrect maintenance/repair!
Danger to life and damage to the device.

→ Repair or replacement of devices or parts of devices are only allowed to be performed outside the hazard area by qualified personnel.

DANGER

Incorrect maintenance/repair!
Risk of injury and damage to the device.

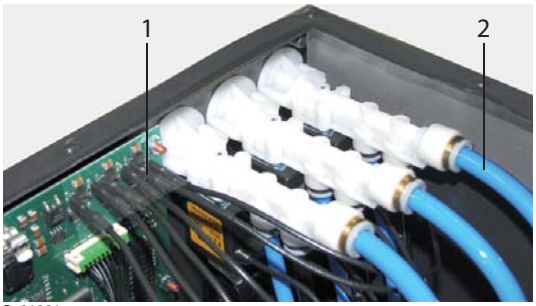
→ Have repairs and part replacements carried out only by specially trained staff or a WAGNER service center.
→ Before all work on the device and in the event of work interruptions:
- Switch off the energy/compressed air supply.
- Relieve spray gun and device pressure.
- Secure the spray gun against actuation.
→ Observe the operating manual and service manuals at all times when carrying out work.

WARNING

Incorrect maintenance!
Risk of injury and damage to the device.

→ If contact with powder products or cleaning agents causes skin irritation, appropriate precautionary measures must be taken, e.g., wearing protective clothing.
→ The footwear worn by operating staff must comply with EN ISO 20344. The measured insulation resistance must not exceed 100 megohms.
→ The protective clothing, including gloves, must comply with EN ISO 1149-5. The measured insulation resistance must not exceed 100 megohms.

7.3 REPLACING A PROPORTIONAL VALVE



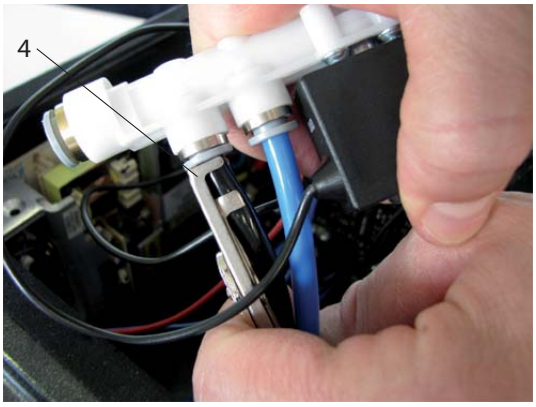
P_01381

Procedure:

1. Remove cable 1 from connections.
2. Remove hose 2 from valve.

P_01382

3. Unscrew screws 3 and carefully pry out valve.



P_01383

4. Mark depth of insertion on both hoses.
5. Use tool 4 (order no. 2311907) to loosen black hose from the valve.
6. Use tool 4 to loosen blue hose from valve.
7. Insert blue hose on new valve up to mark.
8. Insert black hose on new valve up to mark.

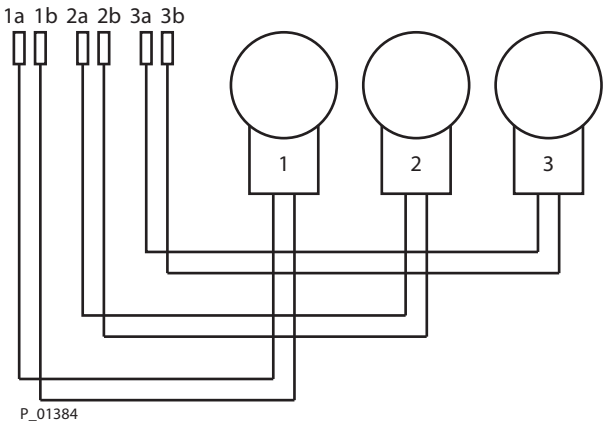
Note:
The hoses must be inserted up to the mark, otherwise functional problems may arise.

P_01382

9. Use screws 3 to fasten valve back onto housing.

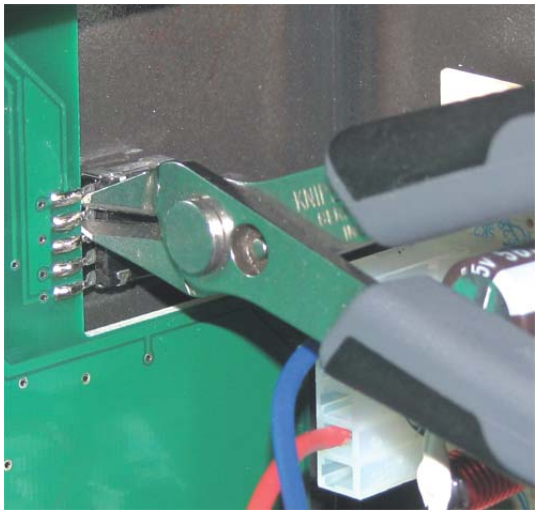
P_01381

10. Insert hose 2 on valve.
11. Attach cable to connections as shown in the diagram below.



P_01384

7.4 REPLACING THE INCREMENTAL ENCODER



P_01385

Procedure:

1. Use side cutter to cut through connection wires.
   This makes it easier to unsolder the individual wires from the print.

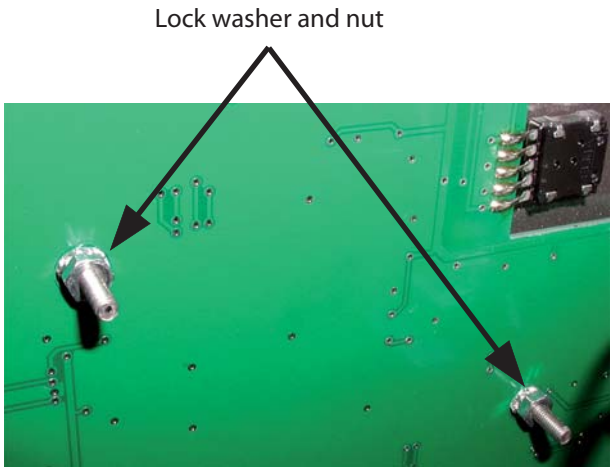
P_01386

2. Remove cover from rotary knob 1.
3. Unscrew nut 2 and remove rotary knob 1 from axis.
4. Unscrew nut from axis and remove encoder from control unit.
5. Insert new encoder into drilled hole and fasten with nut.
   Note:
   Ensure O-ring is seated correctly, otherwise seal integrity is not guaranteed.
6. Attach rotary knob 1 to axis and fasten with nut 2.
7. Place cover on rotary knob 1.
8. Solder encoder with connection wires.

7.5 REPLACING THE DISPLAY PRINT

The control units are delivered with two housing wall thicknesses: 1 mm and 1.5 mm.
To ensure precise spacing of the buttons, two different designs of the replacement print are available.
To select the correct replacement part, the control unit must be opened and the print mount compared with the following images.

Variant 1 with lock washers and nut (order no. 2310723)



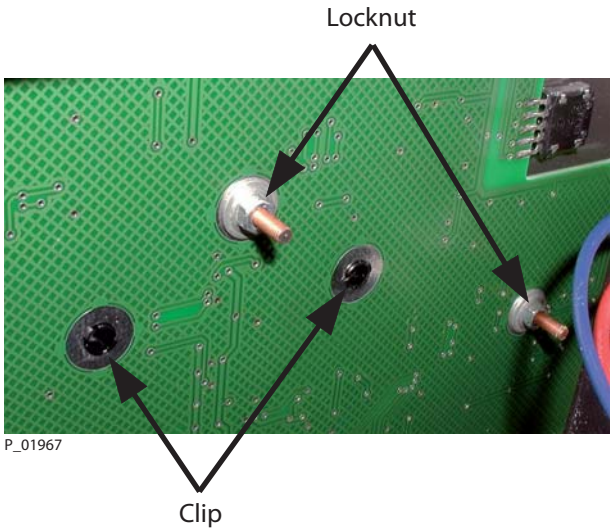
P_01968

Housing wall thickness 1.0 mm

Note:
If a print (order no. 2333661) is used, an additional 9 spacer sleeves (order no. 2324703) must be used.

Variant 2 with clip and locknut (order no. 2333661)

This part can be used in EPG-SPRINT and in EPG-SPRINT X.



P_01967

Housing wall thickness 1.5 mm

8 PARAMETERS FOR SERVICE PURPOSES

DANGER

Incorrect maintenance/repair!
Danger to life and damage to the device.

→ Maintenance, repair or replacement of the control unit or its components may only be performed by trained personnel in a suitable location outside the hazard area.
→ In order to avoid the destruction of electronic components (especially when packed), an ungrounded person may never touch the print.
→ Before starting any repair, it must be ensured that there is no power connection.
→ Irrespective of the extent of repair, all electric and pneumatic supply lines must be separated from the control unit.

Various parameters can be used to check and if necessary calibrate the individual air outlets and production of high-voltage on the low-voltage side.

DANGER

Incorrect calibration!
ATEX/FM approval ceases to apply.

→ Only allow a technical expert from a tested Wagner Service Team to carry out the calibration.

Note:
Recalibration is usually only needed if individual valves or the rear panel print boards are replaced. If an air valve incurs water or oil damage, it cannot be repaired by recalibrating it. It must first be cleaned or replaced.
Recalibration undertaken inaccurately or with unsuitable measuring equipment may quickly be outside the tolerance established by Wagner. In such cases, it is better not to undertake calibration.

8.1 TEST PARAMETERS

The test parameters can be found at the service level C31-C34 (see Chapter 9.1).

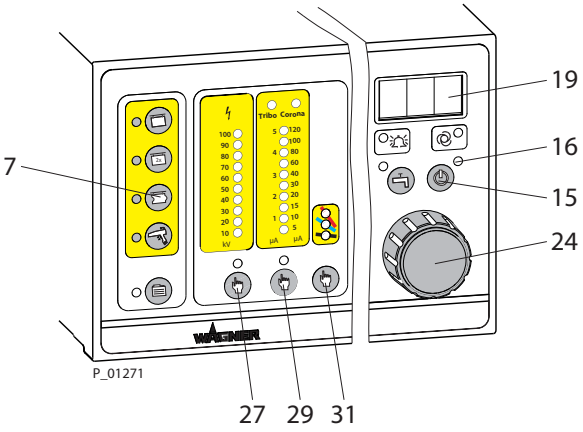
Parameter	Display	Description
C31	"AFC"	Check air outlets: Indication of offset values / correction factors, check air controllers individually
C32	---	Not assigned; this is indicated by "---"
C33	"LEd"	Display and operating elements test
C34	"Iot"	Input and output test
C35 - C40	"---"	Not assigned; this is indicated by "---"

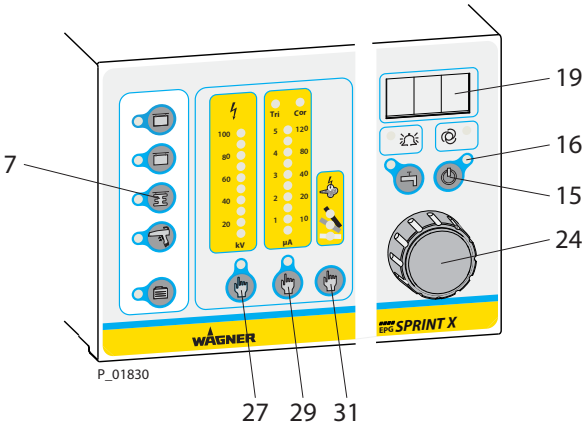
8.2 CALIBRATION PARAMETERS

The calibration parameters can be found at the plant level C41-C44 (see Chapter 10.1).

Parameter	Display	Description
C41	"PrE"	Pressure = operating pressure measured inside the equipment (readjust pressure regulator)
C42	"AFA"	Calibrate air outlets: Indication of offset values, calibrate and manually adjust the correction factors, check air controllers individually
C43	"rES"	Master reset: Reset entire EEPROM to Wagner's default setting
C44	"HVA"	High-voltage calibration
C45	"AFo"	Default setting of offset for air channels This is a default setting that must be performed in case of a sensor or PCB replacement. The menu is also used for controlling the setting.
C46 - C50	"---"	Not assigned; this is indicated by "---"

8.3 ACCESSING THE SERVICE LEVEL (C31-C34)



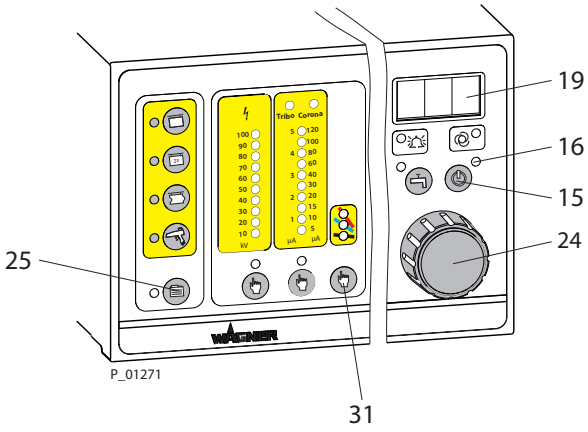


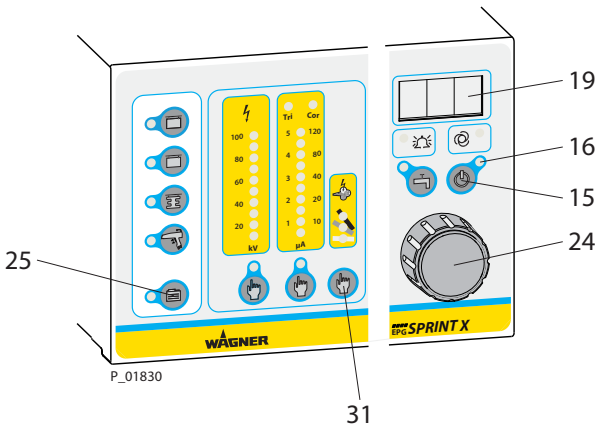
Procedure:

1. Press "Standby" button 15. The yellow "Standby" LED 16 lights up.
2. Press "Characteristic Slope" button 31 and hold it down.
3. With your other hand, turn the Universal rotary controller 24 clockwise until "10" is shown in LED display 19.
4. Release the "Characteristic Slope" button 31.
5. The unit is now in configuration mode. The scrolling text "Configuration" is displayed on LED display 19.
6. Press and hold "Profile Part" button 7.
7. With your other hand, turn the Universal rotary controller 24 counterclockwise until "930" is shown in LED display 19.
8. Release the "Profile Part" button 7. Parameter C31 is selected.
9. Use "High-voltage" button 27 or "Current Limitation" button 29 to select parameter C33 or C34.

8.4 ACCESSING AND ADJUSTING PARAMETER VALUE

Example: Accessing test LED "C33"





Procedure:

1. Access parameter C33 (refer to Chapter 8.3 for procedure).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn Universal rotary controller 24 one step clockwise. "LEd" is displayed in LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The LED test starts, all scales are tested and all LEDs light up at the end.
5. Pressing the "Standby" button 15 stops the LED test, the unit is then in standby mode.

Gradual sequence control is accessed with the other examples.

9 SERVICE LEVEL

9.1 PARAMETER C31, CHECKING AIR OUTLETS

Purpose:

- To check ADC channels with an air flow measuring device
- To display calibration values and check the air volume controller

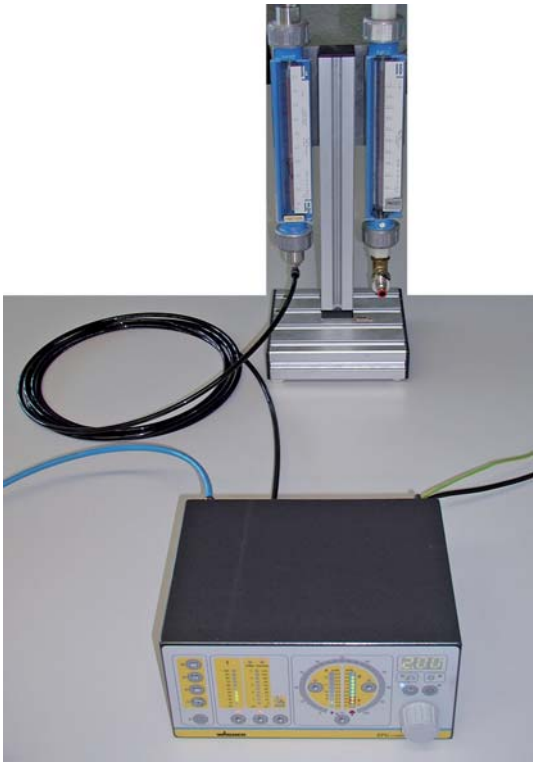
Note:
This function can only be undertaken with an appropriate air flow measuring device (see Chapter 11, Measuring Equipment).
No values are changed for parameter C31.
The input pressure must remain at least 0.65 MPa; 6.5 bar; 94.27 psi during the test.

We would recommend using only high-quality flow measuring equipment. Simple measuring equipment, be it electronic or based on the float principle, is too imprecise over the entire range and will provide poor absolute values.

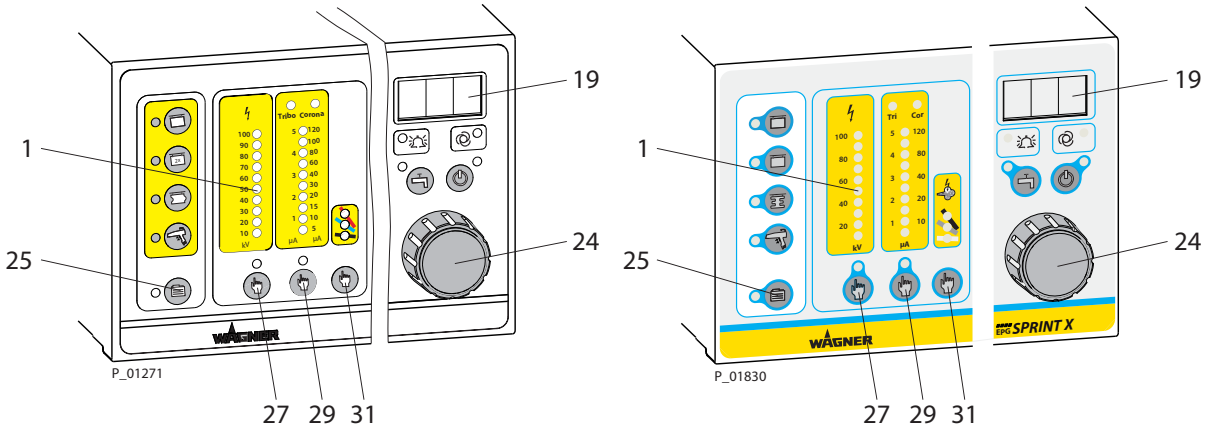
Measuring equipment

P_01272

Measurement structure

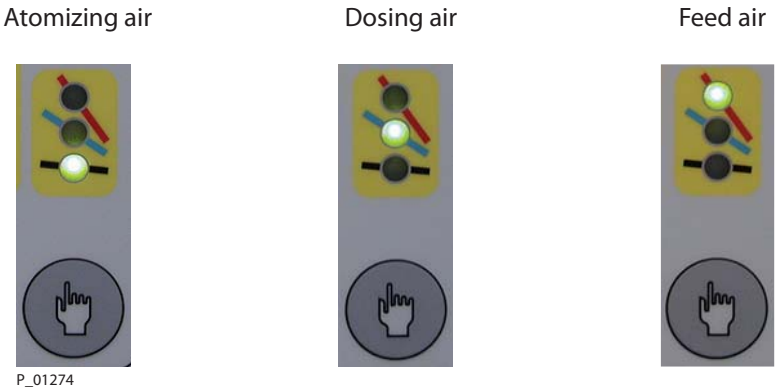


P_01273



Procedure:

1. Access parameter C31 (refer to Chapter 8.3 for procedure).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn Universal rotary controller 24 one step clockwise. "AFC" is displayed on LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The display briefly goes out as a confirmation that the AFC test is now activated.
5. In step 0 (no LED is lit in the "High-voltage" LED display 1), the desired air channel can now be selected by pressing the "Characteristic Slope" button 31.



6. The "High-voltage" button 27 and "Current Limitation" button 29 can now be used to select the following 5 steps.

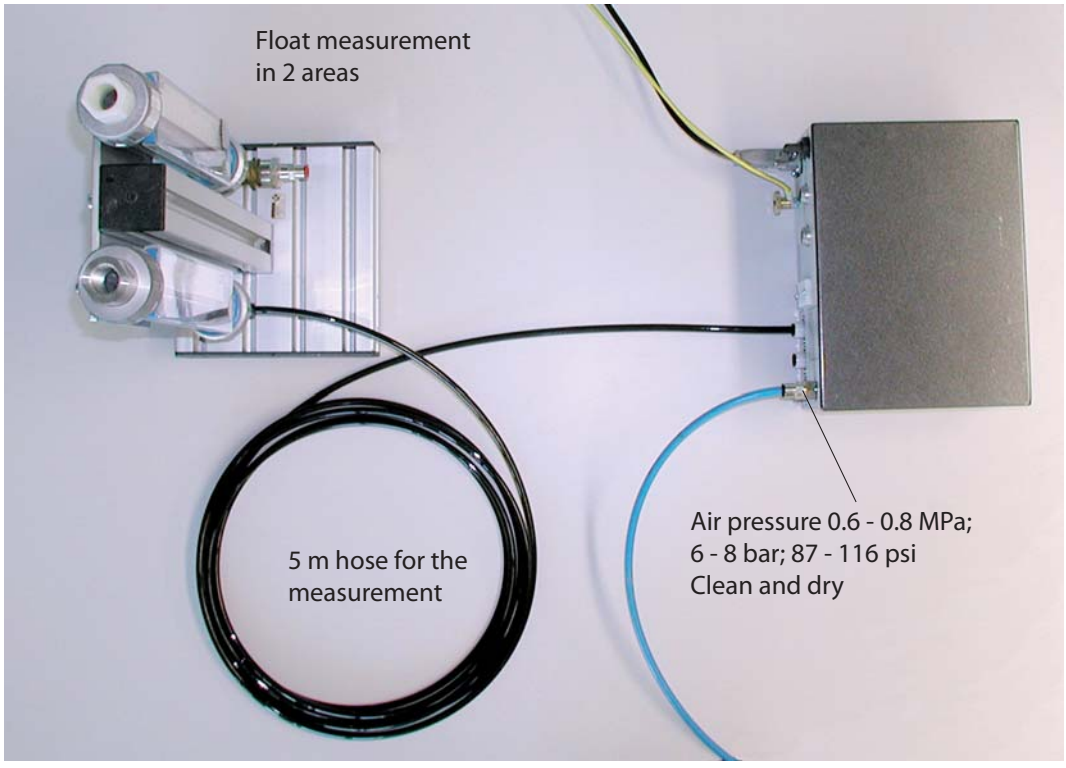
Step	Display	Description	Possible values
1	e.g., 262	High-gain offset	200-700
2	e.g., 23	Low-gain offset	2-100
3	0.00	Use rotary controller 24 to set value and compare with measuring device. The air volume is controlled as normal.	0.00 to 6.00
4	e.g., -13	High-gain correction factor [default is 0]	±99
5	e.g., -3	Low-gain correction factor [default is 0]	±99

Steps 1, 2, 4 and 5 display numerical values of little interest.

Step 3 permits a set-point specification for the air volume controller selected of between 0.00 and 6.00 m^3/h.
The volume of air ejected can be compared with a suitable measuring device.
The total range of 0.00 - 6.00 m^3/h should be checked.

Possible causes of error:

- Proportional valves jammed due to oil and water display large jumps or remain in one particular setting.
- The valve does not close all the way and air flows without control.
- An air leak in the unit may result in huge deviations.



P_01275

The comparison measurement should be within 0.2 m^3/h of the limit position. If the values are too far apart or once a valve has been replaced, the device can be recalibrated (see parameter C42, chapter 10.4).

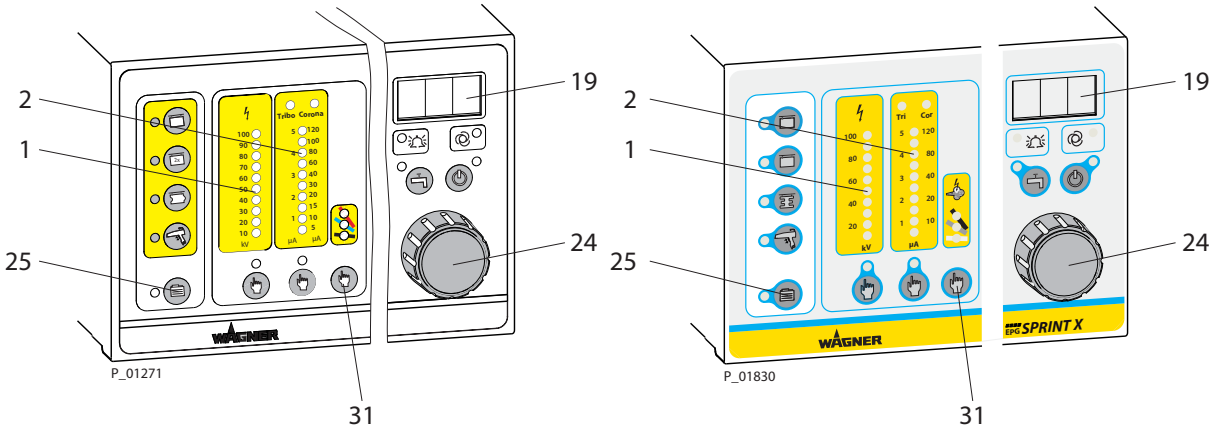
7. Pressing the "Standby" button 15 stops the test; the unit is then in standby mode.

9.2 PARAMETER C34, IO TEST (INPUT AND OUTPUT)

Purpose:

- To test the electrical inputs and outputs

Note:
A manual gun and CCM 2007/CCM Prima control unit are needed to test the parameter.



Procedure:

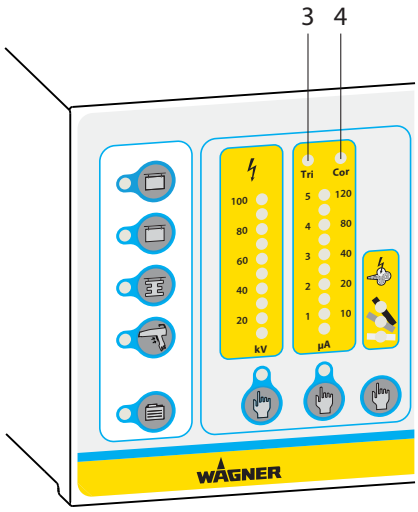
1. Access parameter C34 (refer to Chapter 8.3 for procedure).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn Universal rotary controller 24 one step clockwise. "Iot" is displayed in LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The display briefly goes out as a confirmation that the I/O test is now activated.

   The ground monitoring and gun trigger signals can be displayed at the gun input.

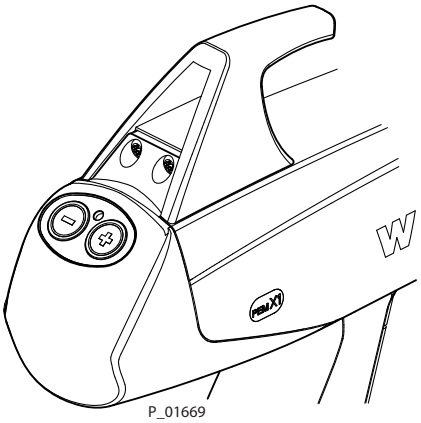
5. Connect manual gun. Ground monitoring allows the LED bar 1 (kV) to light up.
6. Press gun trigger (no high-voltage is produced). LED bar 2 (µA) lights up.

Test of gun remote control:
(only for manual gun PEM-X1 in conjunction with EPG-SPRINT X control unit)

7. If the remote control button "Powder +" is pressed, the "Corona" LED 4 lights up.
8. If the remote control button "Powder -" is pressed, the "Tribo" LED 3 lights up.
9. The LED display of the gun remote control flashes with a bright phase of 250 ms and a dark phase of 250 ms.



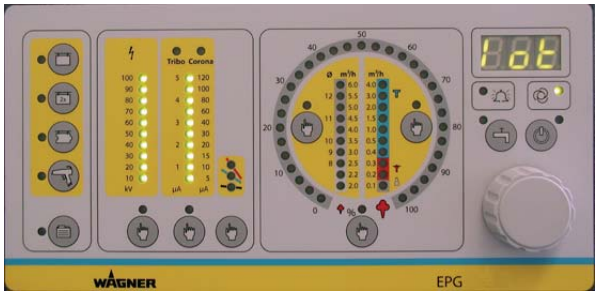
P_01758



P_01669

Note:
This test can also be used as a function test for the gun cable. If the ground monitoring circuit is interrupted, the LED bar 1 does not light up. A loose connection in the plug or gun connection can also be detected by moving the cable.

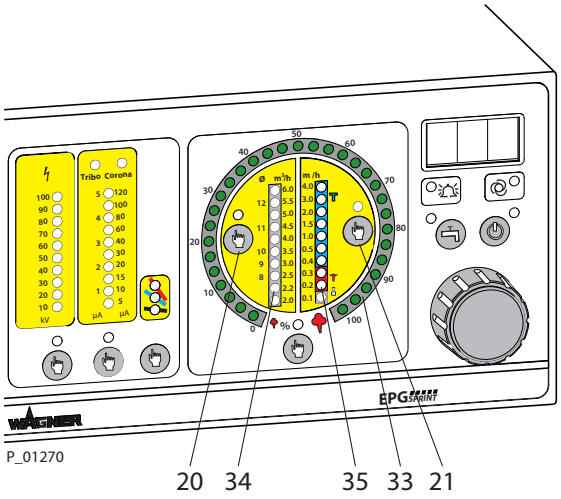
P_01276



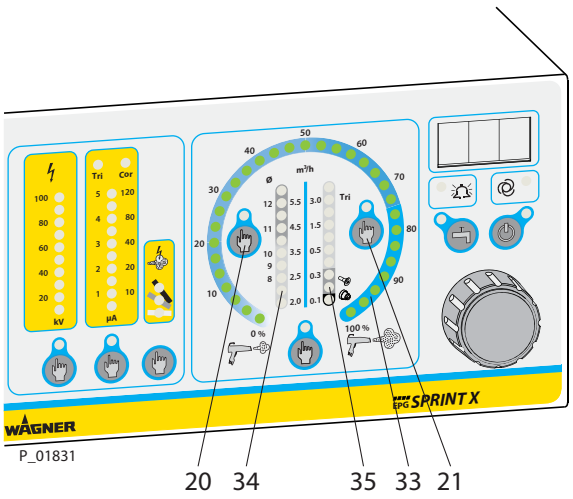
P_01277

Testing the 3 inputs of the CCM bushing for remote control:

1. Connect control unit CCM2007/CCM Prima with EPG-CCM cable (order no. 263214).
2. Press "Total Air Volume" button 20; 24 VDC is activated on pin 4 of the CCM bushing.
3. Switch on "System" and "Coating" on CCM control unit. "Total Air Volume" LED bar 34 lights up.
4. Press "Reset" button on CCM control unit. The "Powder Quantity" indicator 33 lights up.
5. Press "Coating Surface Parts" button on CCM control unit. "Atomizing Air" LED bar 35 flashes.



P_01270



P_01831

Testing the 2 outputs of the CCM bushing for remote control:

1. If the input test functions as described above, the output for pin 4 is fine.
2. Press "Atomizing Air" button 21; a fault is triggered in the CCM (red lamp lights up).
3. Press "Atomizing Air" button 21 again, then the "Reset" button on the CCM. The fault is reset on the CCM, the red lamp goes out.

P_01278

10 PLANT LEVEL

10.1 PLANT LEVEL PARAMETERS

DANGER

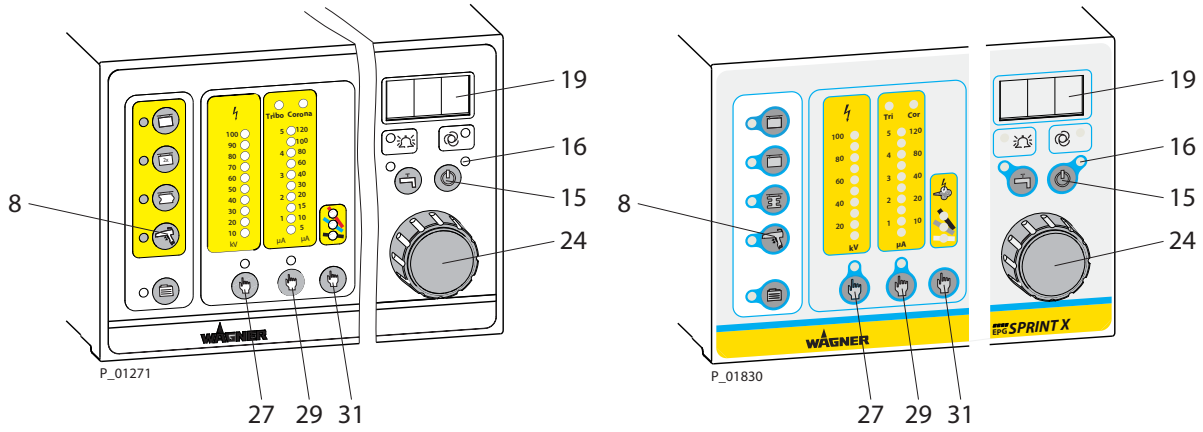
Incorrect calibration!
ATEX/FM approval ceases to apply.

→ Only allow a technical expert from a tested Wagner Service Team to carry out the calibration.

The following parameters are available at plant level:

Parameter	Display	Description
C41	"PrE"	Pressure = operating pressure measured inside the equipment (for readjusting pressure regulator, see Chapter 10.3)
C42	"AFA"	Calibrate air outlets: Indication of offset values, calibrate and manually adjust the correction factors, check air controllers individually
C43	"rES"	Master reset: Reset entire EEPROM to Wagner's default setting
C44	"HVA"	High-voltage calibration
C45	"AFo"	Default setting of offset for air channels This is a default setting that must be performed in case of a sensor or PCB replacement. The menu is also used for controlling the setting.
C46 - C50	"---"	Not assigned; this is indicated by "---"

10.2 ACCESSING THE PLANT LEVEL PARAMETERS



Procedure:

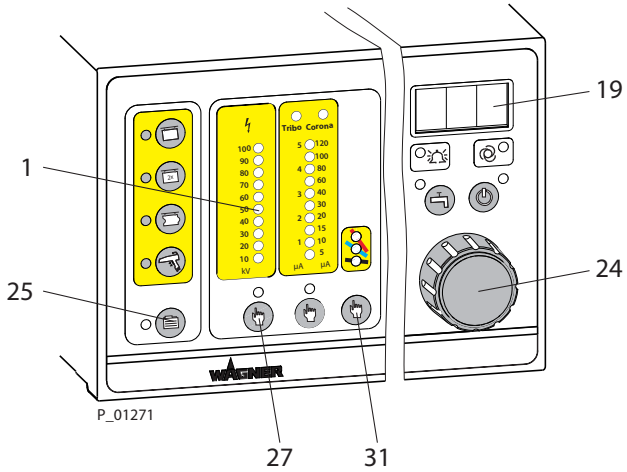
1. Press "Standby" button 15. The yellow "Standby" LED 16 lights up.
2. Press "Characteristic Slope" button 31 and hold it down.
3. With your other hand, turn the Universal rotary controller 24 clockwise until "10" is shown on LED display 19.
4. Release the "Characteristic Slope" button 31.
5. The unit is now in configuration mode. The scrolling text "Configuration" is displayed on LED display 19.
6. Press and hold "Double Click" button 8.
7. With your other hand, turn the Universal rotary controller 24 clockwise until "123" is shown in LED display 19.
8. Release "Double-Click" button 8. Parameter C41 is selected.
9. Use "High-voltage" button 27 or "Current Limitation" button 29 to select parameter C42, C43, C44 or C45.

10.3 PARAMETER C41, MEASURING AND CALIBRATING OPERATING PRESSURE

Purpose:

- To test the operating pressure and internal preliminary pressure controller

Note:
We would only recommend adjusting the preliminary pressure controller in the event of major deviations due to a difficult installation position.



Procedure:

1. Access parameter C41 (refer to Chapter 10.2).
2. Connect compressed air (at least 0.65 MPa; 6.5 bar; 97.27 psi) on control unit's compressed air inlet.
3. Connect suitable pressure gauge directly to air outlet of atomizing air.
4. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
5. Turn Universal rotary controller 24 one step clockwise. "PrE" is displayed in LED display 19.
6. Press "Additional Recipes" button 25 for 1 second. The display goes out briefly as a confirmation that the pressure test has been activated.
7. Access step 1 by pressing the "High-voltage" button 27.

Step 1:
The atomizing air valve is opened. The pressure gauge now indicates the internal pressure of 0.6 MPa; 6 bar; 87 psi (0.58-0.6 MPa; 5.8-6 bar; 87-87 psi). If a lower value is displayed, the input pressure may be less than 0.63 MPa, 6.3 bar; 91 psi or the internal pressure controller is set incorrectly.
If a higher value is displayed, the pressure controller is defective or set too high.

The internal preliminary pressure controller may only be adjusted if the input pressure is sufficient.

Note:
The locked pressure controller can only be adjusted using a special tool.

8. Switch off the input pressure to vent the system.
9. Press "High-voltage" button 27 to access step 2.

Step 2:
The dosing air valve is opened and the system's residual air is blown out.

10. Press "High-voltage" button 27 to access step 3.

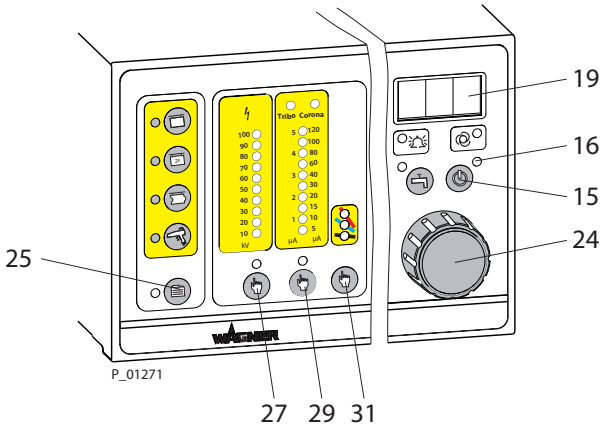
Step 3:
Both valves are closed and the test completed.

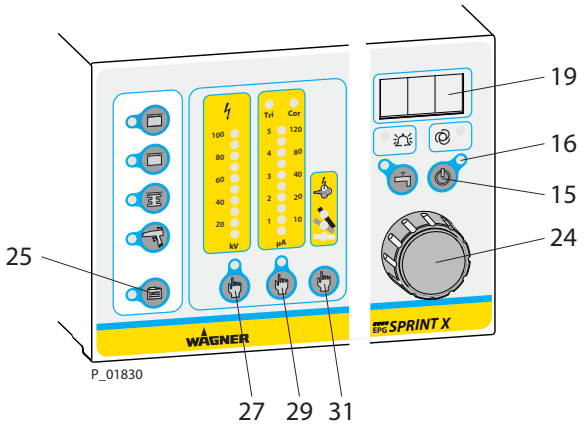
10.4 PARAMETER C42, CALIBRATING AIR OUTLETS

Purpose:

- To calibrate the electronic flow measurement for any air outlet

Note:
The accuracy of the measuring unit is critical and can also impair the calibration result if necessary.
Calibration is only recommended if one or more valves are replaced.
The first step is to check the accuracy with function C31. If a major deviation is found, calibration with function C42 is required.





Procedure:

1. Access parameter C42 (refer to Chapter 10.2).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn Universal rotary controller 24 one step clockwise, "AFA" is indicated in the LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The display goes out briefly as a confirmation.
5. In step 0 (no LED is lit in the "High-voltage" LED display 1), the desired air channel can now be selected by pressing the "Characteristic Slope" button 31.

Atomizing air | Dosing air | Feed air

6. The "High-voltage" button 27 and "Current Limitation" button 29 can now be used to select the following 9 steps.

Step	Display	Description	Possible values
1	e.g., 263	High-gain offset is determined automatically.	200-700
2	e.g., 23	Low-gain offset is determined automatically.	2-100
3	0.0-100%	Turn rotary controller 24 clockwise until 1.00 m^3/h is displayed on the external measuring device. Confirm the value by pressing "Additional Recipes" button 25 for approx. 1 second. The system jumps to step 4.	External measuring device 1.00±0.1 m^3/h accurate
4		Control operation for checking the range between 0 - 1.00 m^3/h. If the display is imprecise, use "Current Limitation" button 29 to return to step 3.	
5	0.0-100%	Turn rotary controller 24 clockwise until 4.00 m^3/h is displayed on the external measuring device. Confirm the value by pressing "Additional Recipes" button 25 for approx. 1 second. The system jumps to step 6.	External measuring device 4.00±0.1 m^3/h accurate
6		Control operation for checking the range between 1-5.00±0.1 m^3/h. If the display is imprecise, use "Current Limitation" button 29 to return to step 3.	
7	e.g., -13	High gain correction factor [after reset = 0]	±99
8	e.g., -3	Low-gain correction factor [after reset = 0]	±99
9	End	The new values are saved to the memory.	

Note:
All nine steps must be selected to successfully complete this process.

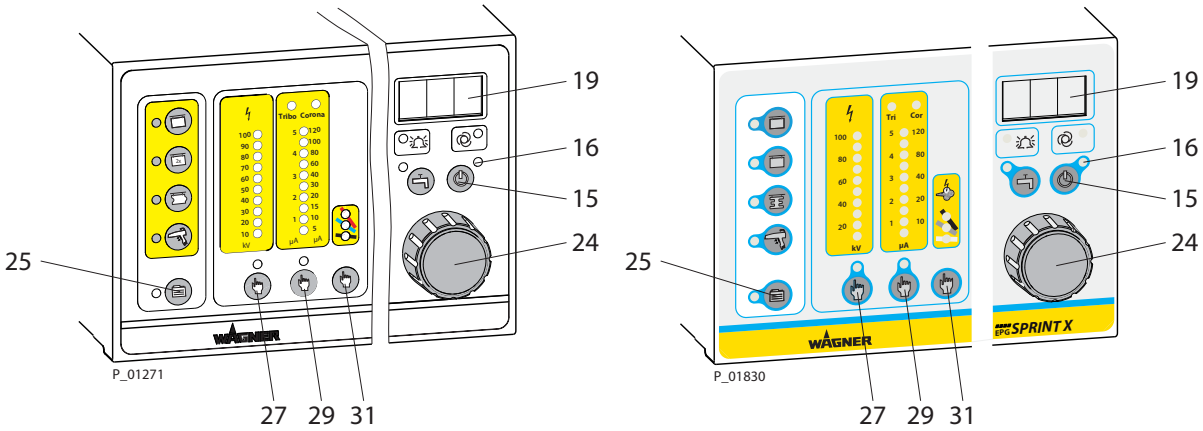
7. Press "Standby" button 15 to exit the configuration.

10.5 PARAMETER C43, MASTER RESET

Purpose:

- To reset all values in the memory.
  All air and high-voltage calibration values, all recipes and configuration values are reset to a basic value.

Note:
We would not recommend using this function in the field as the air and high-voltage have to be recalibrated.



Procedure:

1. Access parameter C43 (refer to Chapter 10.2).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn Universal rotary controller 24 one step clockwise, "rES" is indicated in the LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The display goes out briefly as a confirmation.
5. Press "Standby" button 15 to exit the configuration.

10.6 PARAMETER C44, HIGH-VOLTAGE CALIBRATION

DANGER

Incorrect calibration!
ATEX/FM approval ceases to apply.

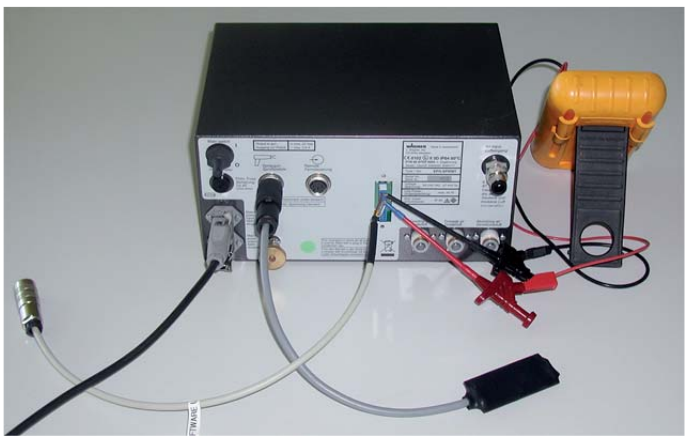
→ Only allow a technical expert from a tested Wagner Service Team to carry out the calibration.

Purpose:

- To check internal offset values and calibrate the maximum operating voltage for high-voltage production
- To check the high-voltage produced on a spray gun

Note:
The high-voltage can be calibrated using a high-quality voltmeter at the specified measurement points on the diagnosis plug (order no. 2312065). The voltage to be measured should be 21 VDC-1%+0% and must never be exceeded as otherwise the FM/ATEX approval ceases to apply.
This measurement voltage is only correctly produced if a spray gun or gun simulation device is connected. Given the fact that handling is easier and safer without high-voltage, we recommend a gun simulation device (order no. 2312448).

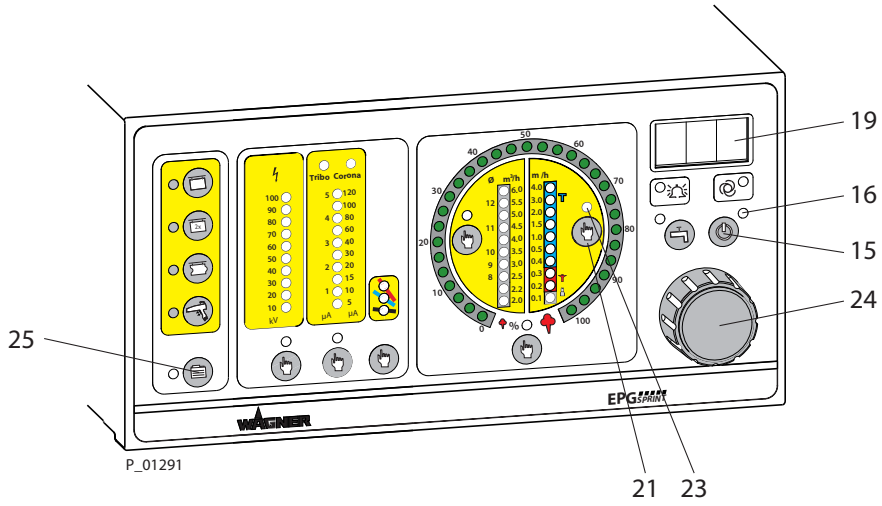
P_01357
Diagnosis connection with measurement points


P_01358
Measurement with gun simulation

CAUTION!

If a spray gun is used in place of a gun simulation unit, maximum high-voltage is produced during calibration and the corresponding protective measures should be applied to surrounding devices:

- Maintain distance from other electrical devices
- Ground metal parts and devices



Procedure:

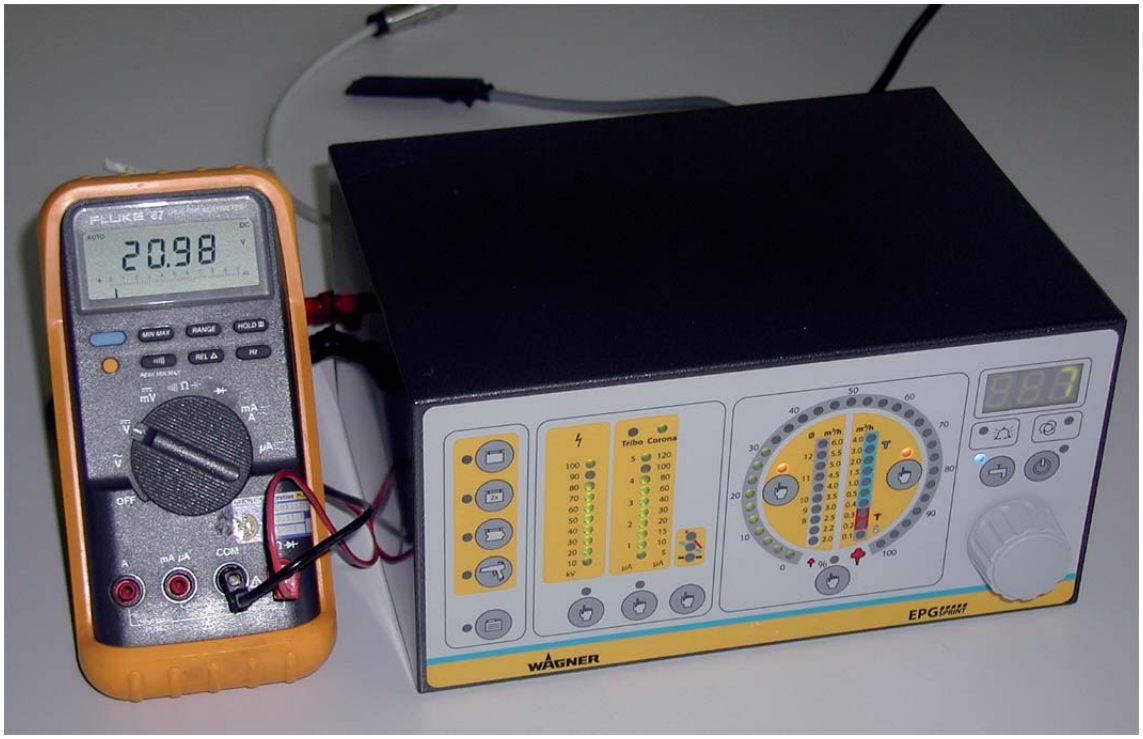
1. Plug in gun simulation (order no. 2312448).
2. Switch the unit on at the main power switch. An automatic gun is being recognized.
3. Plug adapter cable (order no. 2312065) into diagnosis port and connect voltmeter to measurement points.
4. Access parameter C44 (refer to Chapter 10.2).
5. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
6. Turn Universal rotary controller 24 one step clockwise; "HVA" is indicated in the LED display 19.
7. Press "Additional Recipes" button 25 for 1 second. The "Atomizing Air" LED 23 flashes.
8. Press "Atomizing Air" button 21.
   Step 1: "Offset Spray Current" display
9. Press "Atomizing Air" button 21 again.
   Step 2: "Offset Coil Current" display

   If a manual gun is used for the next step rather than gun simulation, the gun trigger must be pressed.

10. Press "Atomizing Air" button 21.
    Step 3: Correction value and +21V displayed on multimeter.
11. Use rotary controller 24 to set display to max. +21 V. One step below 21 V is OK. A new correction is displayed.
12. Press "Atomizing Air" button 21.
    Step 4: New correction is saved to the memory. "End" is displayed on LED display 19.

Step	Display	Description	Possible values
1	e.g., 532	Spray current offset value	200-700
2	e.g., 0	Coil current offset value	0-100
3	e.g., 7	Use rotary controller 24 to calibrate to maximum of 21 V	16.5 - 22.5 V on multimeter
4		New correction is saved to the memory.	

13. Exit the configuration by pressing "Standby" button 15.

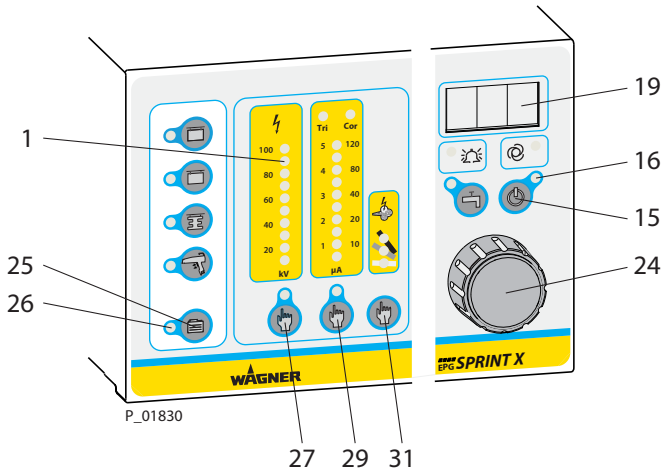


P_01359

The high-voltage produced can finally be measured again using a HV200N high-voltage tester. Please follow the instructions in the high-voltage tester operating manual. Depending on air humidity, temperature, cleaning state and handling, a maximum value between 80 kV and 95 kV is displayed. The maximum theoretical value can be measured again only under lab conditions.

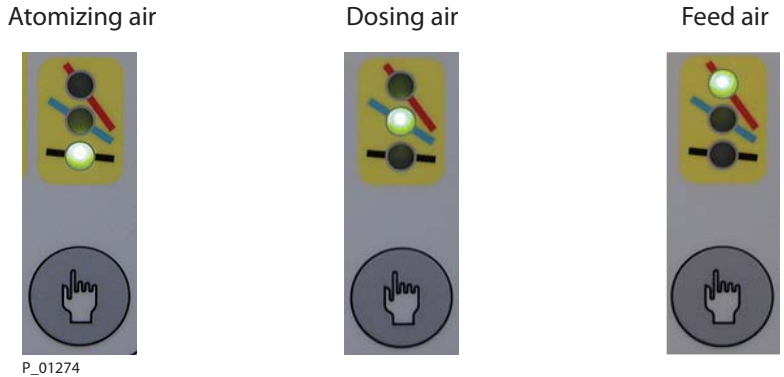
10.7 PARAMETER C45, DEFAULT SETTING OF OFFSET FOR AIR CHANNELS

Purpose:
In standard operation of the unit, it automatically performs a repeating offset correction (automatic offset correction) of the air channels. But it can be performed only in certain limits, otherwise it triggers a fault message. With the presetting of the offset described below, the possible range of automatic offset correction is placed in the middle of the range.



Procedure for the preparation:

1. Access parameter C45 (refer to Chapter 10.2).
2. Press the "Characteristic Slope" button 31. "no" is displayed on LED display 19.
3. Turn universal rotary controller 24 one step clockwise; "AFo" is indicated in the LED display 19.
4. Press "Additional Recipes" button 25 for 1 second. The display goes out briefly as a confirmation.
5. In step 0 (no LED is lit in the "High-voltage" LED display 1), the desired air channel can now be selected by pressing the "Characteristic Slope" button 31.



6. The "High-voltage" button 27 and "Current Limitation" button 29 can now be used to select the steps according to the following table. The display of the step number is done by the number of illuminated LEDs on the "High-voltage" LED display 1.

Step	Display	Description	Possible values
0	AFo	Preselection of air channel	AFo
1	e.g., 1	Display of actual offset stage	[0, 1, 2, 3]
2	e.g., 20	Offset value (ADC value low gain) measured by the unit. This value must be in the range listed on the right.	Optimum range: 14-45 Range 7 - 57: Calibration is recommended Other values: Calibration is mandatory
3		Start of internal calculation of offset stage by pressing the "Additional Recipes" button 25 for at least 2 seconds. After completing the calculation, the LED 26 lights up, the remainder of the display turns dark. The system jumps to step 4 upon releasing the button.	
4	e.g., 1	Display of the actual offset stage. The stage can also be adjusted manually with rotary controller 24.	[0, 1, 2, 3]
5	e.g., 20	Calibration check: Offset value (ADC value low gain) measured by the unit. If the value does not fall in the range specified on the right, you have to return to step 4 and manually change the stage. Another check is required.	Range 14 - 45
6	e.g., 200	Offset value (ADC value high gain) measured by the unit. Check	Range 2 - 700
7	End	The new values are saved to the memory.	

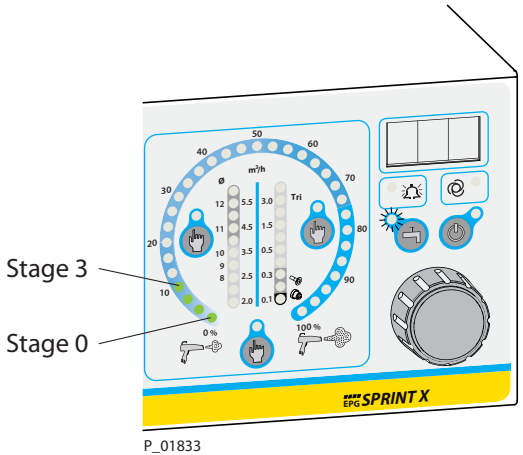
Procedure for the check:

7. Perform the preparation. Preselect the corresponding channel.
8. Select step 2 by pressing the "High-voltage" button 27.
9. The display value on LED display 19 must be compared with the limits in the previous table. If the display value falls outside the limits, a calibration must be performed (step 12).
10. Return to step 0 with the "Current Limitation" button 29. Do not select steps 3 - 7!
11. Press "Standby" button 15 to exit the configuration.

Procedure for the calibration:

12. Perform the preparation. Preselect the corresponding channel.
13. Perform all steps according to the preceding table. The values are not stored in EEPROM until the last step has been selected.
14. Press "Standby" button 15 to exit the configuration.

Display of offset stage:



P_01833

The "Powder Quantity" LED display 33 displays the offset stage currently used as point, e.g., the first LED lights up if stage 0 is selected.

11 MEASURING EQUIPMENT

The quality and accuracy of the measuring equipment ultimately determines the calibration accuracy. If this quality measuring equipment is not available or if it is not correctly used, the EPG control units should not be calibrated.

11.1 AIR FLOW MEASURING EQUIPMENT

P_01272

Float flow measuring devices is the easiest to work with. It delivers the highest quality reading in terms of absolute air volume and fluctuations.

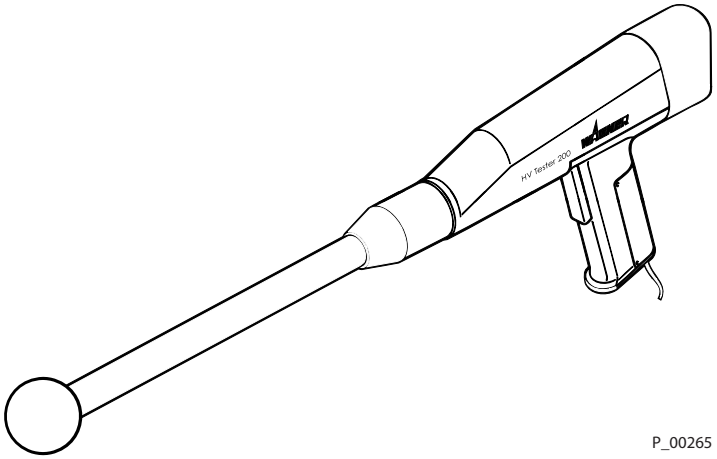
Two flow measuring devices from Krohne (www.krohne.com) are shown here. They are VA40V types with an accuracy of 1% and the two measuring ranges of 0 to 1.1 m^3/h and 0 to 5 m^3/h.
The values 1 m^3/h and 4 m^3/h are set during calibration.

11.2 AIR PRESSURE MEASURING DEVICE

P_01289

Mechanical or electrical measuring device with an accuracy of 1% and resolution of 2 decimal places is suited to the pressure measurement.

11.3 HIGH-VOLTAGE MEASURING EQUIPMENT



P_00265

High-ohm high-voltage measuring device such as the Wagner HV200 tester is needed for the high-voltage measurement. The internal resistance should be at least 20 Gohm such that a measuring current of maximum 5 µA is possible.

HV 200N high-voltage measuring device
Order No. 259010

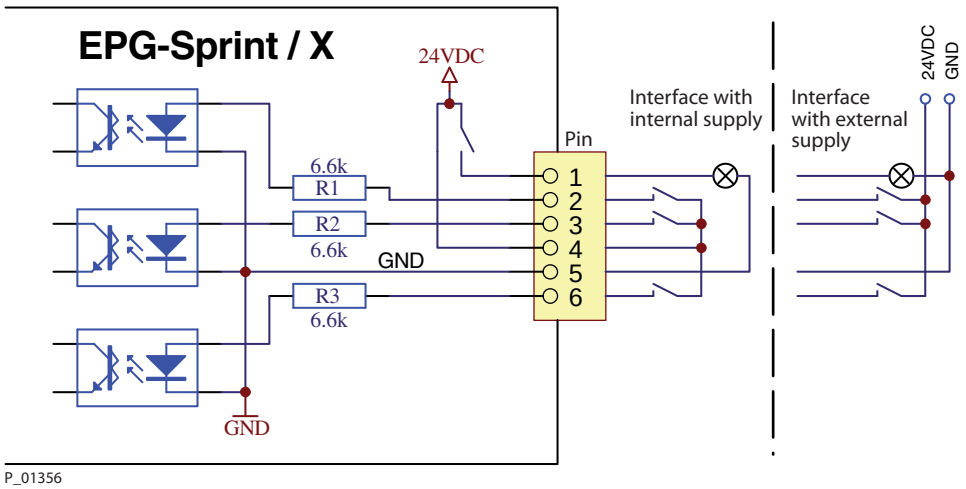
11.4 VOLTMETER

High-quality voltmeter with 4 digits for measuring the 21.00 VDC.

P_01290

12 EXTENDED INTERFACE FOR REMOTE CONTROL

The "Remote Control" interface changes the assignments of the signals depending on the operating mode.



6-pin plug order no. 9952951 or 2302240

12.1 MANUAL GUN MODE

Control of valve for vibrator

Hardware interface/signal description:
Pin1 = vibrator control output 24 VDC/300 mA maximum
Pin5 = GND reference mass for output

12.2 AUTOMATIC GUN MODE

The "Remote Control" connection allows the EPG to be switched on/off, faults to be displayed, a fault to be reset and 50 recipes to be selected.

Hardware interface/signal description:

Pin1 = fault output 24 VDC/300 mA maximum
Pin2 = fault reset input 24 VDC/3.3 mA
Pin3 = input ON/OFF 24 VDC/3.3 mA
Pin4 = output 24 VDC/300 mA maximum
Pin5 = GND reference mass for signals
Pin6 = recipe selection input 24 VDC/3.3 mA

12.3 MANUAL GUN WITH EXTERNAL CONTROL

(Function possible only for EPG-SPRINT X starting with software version B200/C200)

The operating mode must be selected specifically via configuration parameter C26.

Hardware interface/signal description:
Pin1 = fault output 24 VDC/300 mA maximum
Pin2 = cleaning input ON/OFF 24 VDC/3.3 mA (high level: continuous purging ON)
Pin3 = release input 24 VDC/3.3 mA (high level: release for coating and cleaning is present)
Pin4 = supply output 24 VDC/300 mA maximum
Pin5 = GND reference mass for signals
Pin6 = recipe selection input 24 VDC/3.3 mA (for protocol, see separate chapter)

12.4 PROGRAM SELECTION INPUT

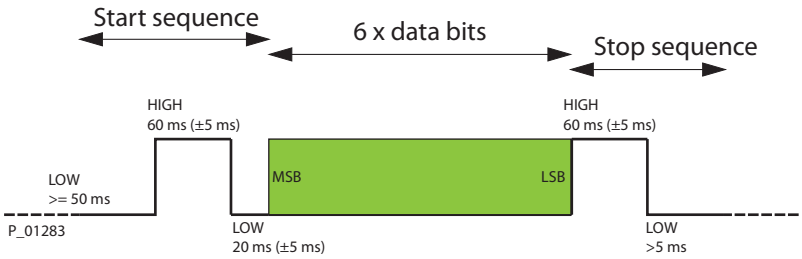
This input is analyzed only for the operating modes automatic gun mode and manual system network

Two signal protocols are available:

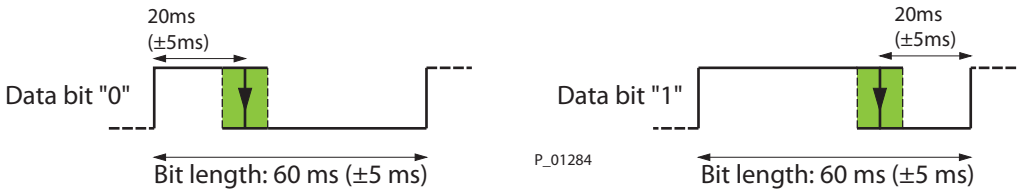
- Analysis of pulse lengths for use in PrimaTech systems
  The recipes 1, 2, 3, 4 can be selected (factory setting).
- The expanded transfer protocol with a data bit sequence for the selection of all 50 recipes.
  This transfer protocol must be selected via configuration parameter C16.

12.4.1 DETAILED OVERVIEW OF TRANSFER PROTOCOL

A simple serial protocol is used to transfer a 6-bit piece of information. First, a start sequence must be transmitted, followed by the 6 data bits and a stop sequence. The MSB is transmitted as the first data bit.



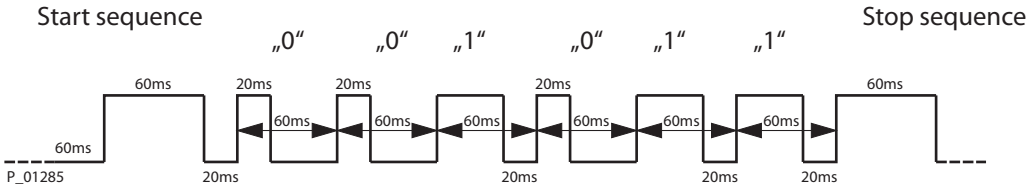
Depending on information "0" or "1", a data bit appears as follows:



Example for accessing recipe 11

If recipe 11 is to be selected by way of example, the 0 0 1 0 1 1 data bit combination must be transferred.
The complete transfer frame is shown below:

Example: accessing recipe 11 binary 001011 → decimal 11



1 → Recipe 60+60+20+6*60+60 = 560

Conditions:

Recipe: 1 … 50 [range of values]

The control unit must be in coating mode (not standby, not purge, not configuration menu, not when starting the unit, etc.).

The C16 setting parameter must be set to "on" in the "Service" configuration menu.
The maximum/minimum times of the transfer protocol must be observed.

Purge function (via the same protocol):
Purge can be activated/deactivated via the serial transfer protocol.

There are two different purge modes:

- Continuous purging Transfer "Recipe Number" 60 to start
- Pulse purging Transfer "Recipe number" 62 to start

Purging can only be activated if the control unit is in coating mode (not standby, not purge, not configuration menu, etc.). The coating must be OFF, .e.g., "Prima Input EPG ON" to LOW.

The C16 setting parameter must be set to "on" in the "Service" configuration menu.
The maximum/minimum times of the transfer protocol must be observed.

- Command for activating continuous purge function: Transfer "Recipe number" 60
- Command for activating pulse purge function: Transfer "Recipe number" 62
- Command for deactivating continuous purge function: Transfer "Recipe number" 61 or 0

The same protocol can be used to correct the powder quantity (for description, see page 80).

Powder quantity increase / decrease (over the same protocol)

The control unit must be in coating mode (not standby, not purge, not configuration menu, not when starting the unit, etc.).

The C16 setting parameter must be set to "on" in the "Service" configuration menu.

- Increase powder quantity by 1% Transfer "Recipe number" 51
- Reduce powder quantity by 1% Transfer "Recipe number" 52

If one of the two commands was detected and performed, the control unit changes to the powder quantity selection. The change only affects the temporary powder quantity set point and is not stored in EEPROM. Saving must be done using the program buttons. The two commands can be called several times successively to increase the powder quantity, for example by 5%.

Carry out spray current reset one time (using the same protocol)

(only for EPG-SPRINT X software version 2.10 or later)

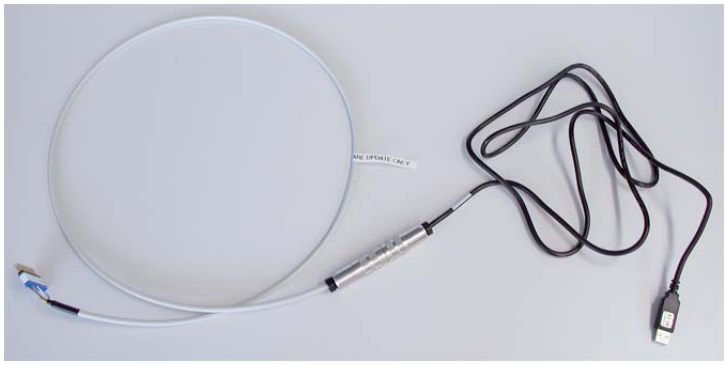
High-voltage must not be switched on when calling up the command. A blocking period of 10 seconds also takes affect after switching off the high-voltage manual. The command is not run during this blocking period.
There is no feedback as to whether the reset was run successfully.

- Run spray current reset one time Transfer "Recipe number" 63

Attention:
The higher-level controller must ensure that no high-voltage module was switched on in the system 10 seconds before calling up the command!
The exact application is described in more detail in the appendix of the EPG-SPRINT X operating manual.

13 SOFTWARE UPDATE

The software for the EPG-SPRINT control unit can be updated using a PC/laptop with a USB connection. Please follow the steps listed below to install the hardware and software needed on your PC/laptop.



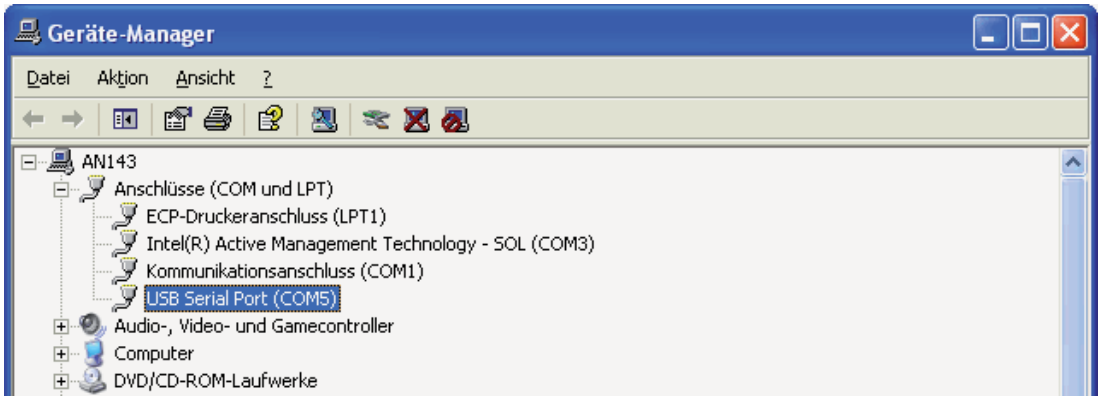
P_01360

Two cables are needed for this purpose:

- Black USB connection cable to TTL interface (order no. 2305858)
  This cable requires driver software which is available from the development department in Altstätten.
- Gray round connection piece for 24-pin test port
  (Order no. 2312065).

Driver software USB cable:

1. Before the USB cable is used for the first time, please install the FTDI driver (CDM 2.04.16.exe) on your PC/laptop (double click on the *.exe file).
2. Connect the USB connector to the USB port of the PC/laptop. We recommend always using the same USB port and the same cable. A virtual COM port is being created on the PC/laptop that is used for the programming software.
3. Now launch the device manager to find the COM port number produced by the driver.



P_01361

The COM5 port which must be preselected for the programming software has been produced in this example.

Connect cable to EPG-SPRINT:

Attention!

4. Before connecting the programming cable to the EPG-SPRINT, switch off the control unit using its main switch.
5. Connect the 24-pin connection piece to the control unit as shown below.

Do not connect connection piece in any other way.

P_01362

P_01363

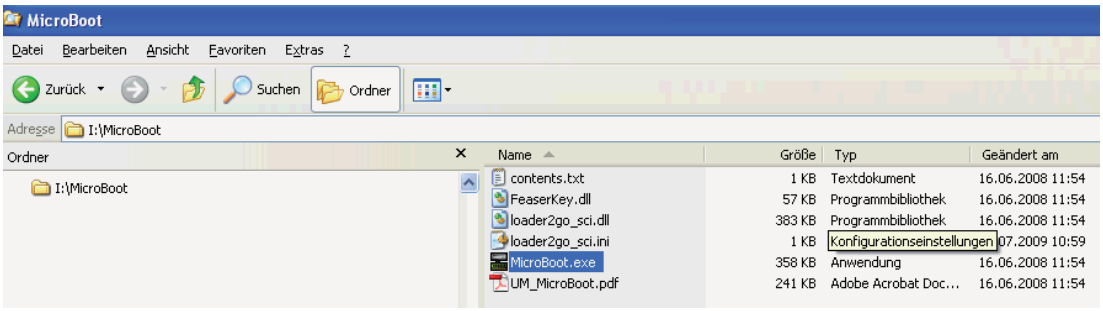
6. Switch control unit back on using main switch.

P_01364

The software update mode starts in the EPG-SPRINT control unit, the display on the front of the control unit shows a random display that does not affect the update process.

7. Copy the folder containing the MicroBoot program to any location on your PC/laptop. You can obtain the MicroBoot program for loading the software from the development department in Altstätten.

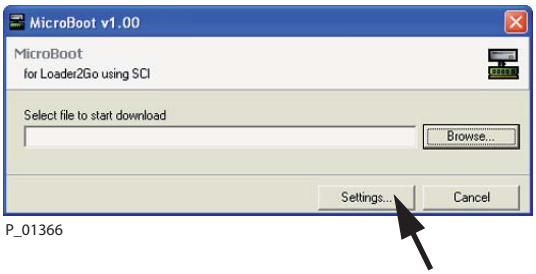
Launching the loading program:



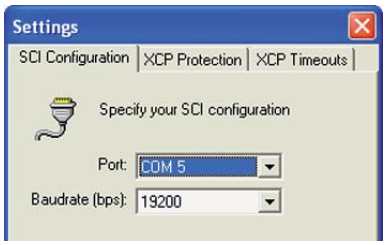
P_01365

8. Launch the application by double-clicking on the *.exe file.
9. To simplify use, create a link on the desktop.

Load the software for the EPG control units:



P_01366

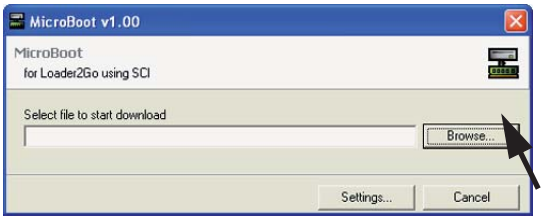


P_01367

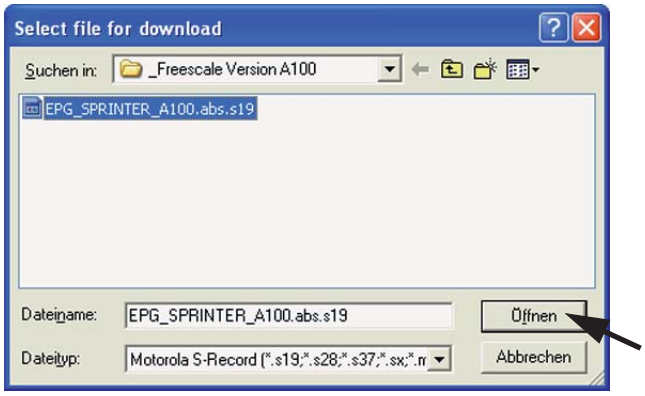
10. When the program runs for the first time, you must check the COM port settings.
11. Click on "Settings…", then click on "Options…" and select the COM port produced by your USB driver.

Updating the software:

12. To update the software in the EPG-SPRINT, you must load a correct program file to the MicroBoot.

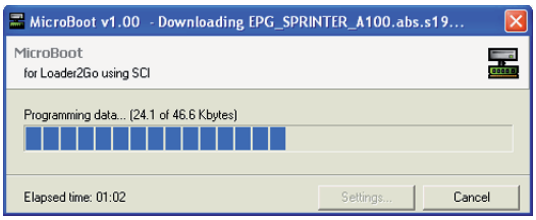


P_01366



P_01368

13. Select the EPG-SPRINT file you received from the development department in Altstätten.
14. Once you have clicked on "Open", the update starts immediately. Update progress is shown in a bar display.



P_01369

15. This window disappears once the update is complete.
16. Switch off the EPG-SPRINT, disconnect the connection cable from the control unit and refasten the white cover to the rear of the control unit.
17. Switch the control unit back on. During the start-up, the new program version is displayed on the 7-segment display.

14 SOFTWARE HISTORY

14.1 EPG-SPRINT

Software version	Introduced from	Modification/Description
A100	July 2009	First serial version
A101	August 2009	Changes in the calibration menu (configuration parameter "C41" and "C42")
A102	July 2010	Problems with the input of the buttons at the front control are rectified.
A111	June 2011	1. Increase/reduce powder quantity via the extended interface for remote control (see service manual on page 79). 2. Behavior changed after exit standby. The recipe number and the recipe values (incl. temporary ones) are retained just like before the standby. 3. Behavior changed so that the high-voltage can be switched on or off via the kV set point. 4. Purging button is deactivated in automatic mode. 5. Behavior changed at remote control input: In older versions, the positive edge of the signal at the ON/OFF input was crucial. Now, only the status is evaluated. 6. Lock adds: Additionally, the setting "PRO" (program storage locked) exists in the configuration parameter "C13". 7. Monitoring function "E12: No coil current/cascade interrupt" will be deactivated at setpoint settings less than 20 kV or less than 15 µA.
A120	August 2012	Blocked purging in automatic mode is activated again. Behavior changed, new with linkage of gun release for exhaust air/ interlocking. See operating manual.

14.2 EPG-SPRINT X

Software version	Introduced from	Modification/Description
B195	March 2012	First version of EPG-SPRINT X
B200 C200	December 2012	1. New operating mode: Manual gun in automatic system network (new configuration parameter C26 and new fault message E60) 2. Spray current measurement plausibility check (new fault message E18)
B210 C210	August 2014	1. Special operation with field controller) Configuration parameters "C27" and "C28" added

15 WARRANTY AND CONFORMITY DECLARATIONS

15.1 IMPORTANT NOTES REGARDING PRODUCT LIABILITY

As a result of an EC regulation effective from January 1, 1990, the manufacturer shall only be liable for his product if all parts originate from him or are approved by him, and if the devices are properly mounted, operated and maintained.
The manufacturer will not be held liable or will only be held partially liable if third-party accessories or spare parts have been used.
With genuine WAGNER accessories and spare parts, you have the guarantee that all safety regulations are complied with.

15.2 WARRANTY CLAIM

Full warranty is provided for this device:
We will at our discretion repair or replace free of charge all parts which within 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 type of warranty provided is such that the device or individual components of the device are either replaced or repaired as we see fit. The resulting costs, in particular shipping charges, road tolls, labor and material costs will be borne by us except where these costs are increased due to the subsequent shipment of the device to a location other than the address of the purchaser.
We do not provide warranty for damage that has been caused or contributed to for the following reasons:
Unsuitable or improper use, faulty assembly or commissioning by the purchaser or a third party, normal wear, negligent handling, defective maintenance, unsuitable coating products, substitute products and the influence of chemical, electrochemical or electrical agents, except when the damage is attributable to us.
Components that have not been manufactured by WAGNER are subject to the original warranty of the manufacturer.
Replacement of a component does not extend the period of warranty of the device.
The device should be inspected immediately upon receipt. To avoid losing the warranty, we or the supplier company are to be informed in writing about obvious faults within 14 days upon receipt of the device.
We reserve the right to have the warranty compliance met by a contracting company.
The services provided by this warranty are dependent on evidence being provided in the form of an invoice or delivery note. If the examination discovers that no warranty claim exists, the costs of repairs are charged to the purchaser.
It is clearly stipulated that this warranty claim does not represent any constraint on statutory regulations or regulations agreed to contractually in our general terms and conditions.

J. Wagner AG

15.3 CE DECLARATION OF CONFORMITY EPG-SPRINT

Herewith we declare that the supplied version of

- EPG-SPRINT, order no. 2305109

complies with the following provisions applying to it:

- 94/9/EC (ATEX Directive)
- 2004/108/EC (EMV Directive)
- 2002/95/EC (RoHs Directive)
- 2002/96/EC (WEEE Directive)

Applied standards, in particular:

- DIN EN 1127-1: 2008
- DIN EN 50050: 2007
- DIN EN 50177: 2007
- DIN EN 50053-2: 1990
- DIN EN 61241-0: 2007
- DIN EN 61241-1: 2005
- DIN EN 61241-14: 2005
- DIN EN 60529: 2000
- DIN EN 61000-6-2: 2000
- DIN EN 61000-6-4: 2002
- BGI 764

Identification:

CE 0102 Ex II 3(2)D IP 64 80 °C

CE 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:

EPG-SPRINT 2305227

15.4 EC TYPE EXAMINATION CERTIFICATE EPG-SPRINT

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2nd SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 06 ATEX 5003

(Translation)

Equipment: Control module EPG-Sprint to control electrostatic powder spraying equipment of model series PEM and PEA of the generations C2, C3 und C4.

Marking: Ⓔx **II 3(2)D IP64 80°C**

Manufacturer: J. Wagner AG

Address: Industriestrasse 22, 9450 Altstätten, Schweiz

Description of supplements and modifications

The control module EPG-Sprint is designed to control electrostatic powder spraying equipment of category 2 to handle flammable coating powder.

It is intended to be used together with electrostatic powder spraying equipment according the following tables:

types of electrostatic powder spraying equipment	control module EPG-Sprint PTB 06 ATEX 5003-2
Corona handheld PEM-C2 PTB 03 ATEX 5005	applicable
Corona handheld PEM-C3 PTB 03 ATEX 5005	applicable
Corona handheld PEM-C4 PTB 05 ATEX 5008	applicable
Corona handheld PEM-CG4 PTB 05 ATEX 5008	applicable
Corona handheld PEM-C4 Ergo PTB 05 ATEX 5008	applicable
Tribo handheld PEM-T3 PTB 04 ATEX 5008	applicable

ZSEx10101e.dot

Sheet 1/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • 38116 Braunschweig • GERMANY

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2nd SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 06 ATEX 5003

types of electrostatic powder spraying equipment	control module EPG-Sprint PTB 06 ATEX 5003-2
Corona Automatic PEA-C2 PTB 03 ATEX 5005	applicable
Corona Automatic PEA-C3 PTB 03 ATEX 5005	applicable
Corona Automatic PEA-C3XL PTB 03 ATEX 5005	applicable
Corona Automatic PEA-C4 PTB 05 ATEX 5008	applicable
Corona Automatic PEA-C4XL PTB 05 ATEX 5008	applicable
Tribo Automatic PEA-T3 PTB 04 ATEX 5008	applicable
Tribo Automatic PEA-T3XL PTB 04 ATEX 5008	applicable

Applied standards

EN 50050:2006, EN 50177:2009

Assessment and test report: PTB Ex 10-50055

Zertifizierungssektor Explosionsschutz
By order:

Dr.-Ing. M. Beyer
Direktor und Professor

Braunschweig, 26th March 2010

Sheet 2/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
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15.5 CE DECLARATION OF CONFORMITY EPG-SPRINT X

Herewith we declare that the supplied version of

- EPG-SPRINT X, Order No. 2324731

complies with the following provisions applying to it:

- 94/9/EC (ATEX Directive)
- 2004/108/EC (EMV Directive)
- 2002/95/EC (RoHs Directive)
- 2002/96/EC (WEEE Directive)

Applied standards, in particular:

- pr DIN EN 50050-2: 2011
- DIN EN 50050: 2007
- DIN EN 50177: 2010
- DIN EN 1127-1: 2011
- DIN EN 60079-0: 2010
- DIN EN 60079-7: 2007
- DIN EN 60079-31: 2010
- DIN EN 60204-1: 2007
- DIN EN ISO 80079-34: 2012
- DIN EN 62061: 2009
- DIN EN ISO 13849-1: 2008
- DIN EN 60529: 2000
- DIN EN ISO 12100: 2011
- DIN EN 61000-6-2: 2011
- DIN EN 61000-6-4: 2011
- BGI 764

Identification:

CE 0102 Ex II 3(2)D IP 64 80 °C

CE 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:
EPG-SPRINT X 2327595

15.6 EC TYPE EXAMINATION CERTIFICATE EPG-SPRINT X

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(1)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 12 ATEX 5001

(4) Equipment: EPG-Sprint X control module and EPG S2 dual control module, for controlling electrostatic powder coating devices of the types PEM and PEA of the C2, C3, C4, T3, T4, and X1 generations

(5) Manufacturer: J. Wagner AG

(6) Address: Industriestrasse 22, 9450 Altstätten, Switzerland

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report PTB Ex 12-51176.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

DIN EN 50050:2007, prEN 50050-2:2011, DIN EN 50177:2010

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 3(2)D IP64 80 °C

ZSEx10100e.dotm

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, 6 August 2012

Dr.-Ing. M. Beyer
Direktor und Professor

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 29

sheet 1/3

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

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15.7 FM IDENTIFICATION EPG-SPRINT/EPG-SPRINT X

The EPG-SPRINT X control unit is approved in the USA and Canada using configuration drawing no. 2309729.

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT
PER CANADIAN REQUIREMENTS

The Sprint AF USA and Sprint 60L USA Manual Powder Spray Systems for use in Electrostatic Powder Finishing Applications using Class II Spray Materials when configured in accordance with drawing 2309729. The Sprint AF USA and Sprint 60L USA Trolleys are rated for use in Class II, Division 2, Groups E, F and G Hazardous (Classified) Locations. The PEM-X1, PEM-X1-CG, PEM-C4-HiCoat FM and PEM-C4-ERGO FM Manual Applicators, and PEA-C4-HiCoat FM and PEA-C4XL-HiCoat FM Automatic Applicators with either EPG-Sprint X, EPG-Sprint FM, EPG-S2 FM, EPG-Prima and EPG-2008 Control Units for use in Electrostatic Powder Finishing Applications using Class II Spray Materials when configured in accordance with drawing 2309729. Control Units are rated for use in Class II, Division 2 Hazardous (Classified) Locations. The EPG-Sprint X, EPG-Sprint FM Control Units have an indoor environmental rating of IP64. The PEM-C4-ERGO FM Manual Applicator, and PEA-C4-HiCoat FM and PEA-C4XL-HiCoat FM Automatic Applicators have an environmental rating of IP54.

Special conditions of use:
The source electrical connection for the Control Units are to be connected in an unclassified (ordinary) location only.

Equipment Ratings:

The applicators are rated for use in Electrostatic Powder Finishing Applications using Class II Spray Materials when configured in accordance with drawing no. 2309729. The associated control units and mobile powder systems are rated for use in Class II, Division 2, Group E, F and G Hazardous Locations. The EPG-Sprint X EPG-Sprint FM Control Units have an environmental rating of IP64. The PEM-C4-ERGO FM Manual Applicator, PEA-C4-Hicoat FM, PEA-C4XL-HiCoat FM Automatic Applicators have an environmental rating of IP54.

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