

Operating Manual

WAGNER

WAGNER

WAGNER

Powder Spray Gun

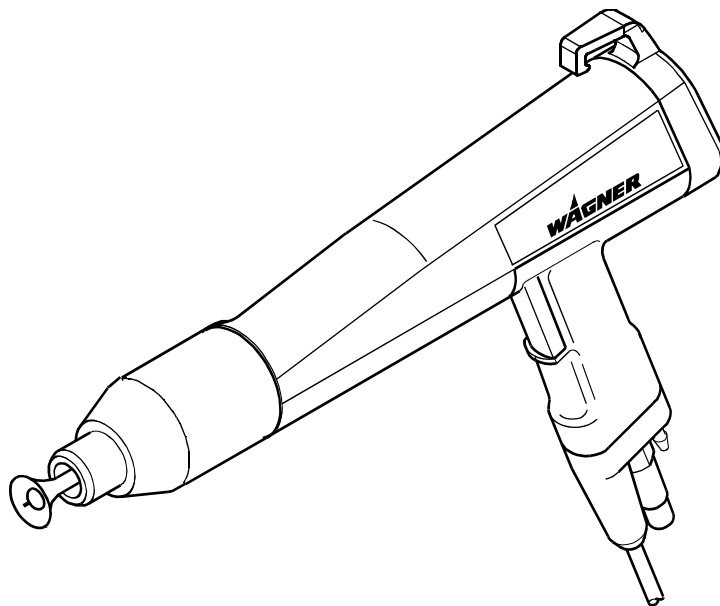
STOP DANGER



High Voltage!
Turn power off
before servicing!

! CAUTION

Read rules for safe
operation and
instructions
carefully!



PEM-C3



WAGNER

WAGNER

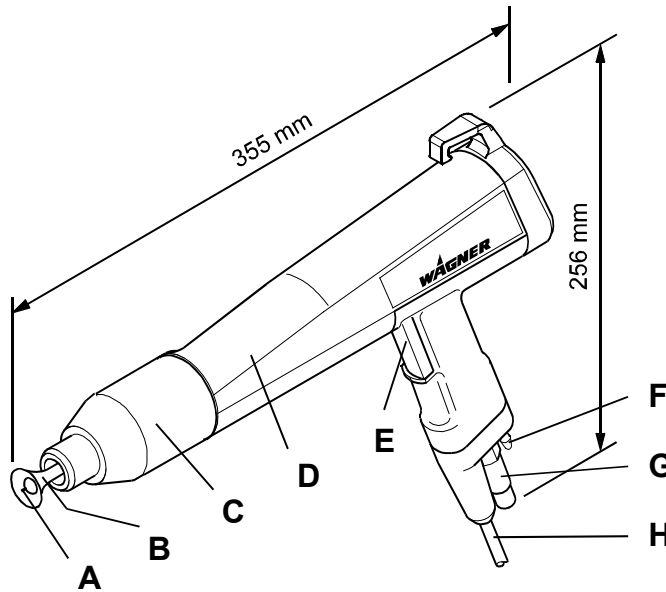
WAGNER

WAGNER

WAGNER

Powder spray gun PEM-C3

Article No. 0351 020



- | | | | |
|---|----------------|---|--------------------------|
| A | Electrode | E | Trigger |
| B | Deflector cone | F | Atomizing air connection |
| C | Outer nut | G | Powder hose connection |
| D | Spray gun body | H | Electrical connection |

The manual Corona gun **PEM-C3** can be used for conventional types of powder and metal powder that can be electrostatically charged.

The powder spray gun **PEM-C3** is used for industrial powder coating.

This spray gun can be operated with the following control units:

- | | | | |
|---|---------------------------|----------------------|---------------|
| • | EPG 2007 | with powder injector | PI-P1 |
| • | EPG-D1 | with powder injector | PI-F1 |
| • | Control unit Bravo | with powder injector | PI-FM1 |

Pressing the trigger activates the high voltage in the spray gun. At the same time, the powder and compressed air supplies to the gun are turned on.



Caution

The operator **must** ensure that the spray gun **PEM-C3** is only connected to **Wagner** devices!

High room temperatures and, in particular, laying hoses in areas exposed to sunlight in factory buildings **must** be avoided!

To secure the spray guns, the control unit **must** be switched off!

Table of contents		Page
1.	Introduction	5
1.1	Safety regulations.....	6
2.	Preparing the spray gun for application	8
2.1	Select the suitable nozzle system	8
2.2	Connecting the spray gun	9
2.3	Grounding.....	9
3.	Working with the spray gun	10
3.1	Commissioning the spray gun	10
3.2	Switching off the spray gun	10
3.3	Performing a color change	11
4.	Maintenance and cleaning.....	12
4.1	Replacing the spray gun.....	12
4.2	Cleaning the spray gun and replacing the consumables.....	13
4.3	Mounting the gun extension	14
5.	Rectification of malfunctions	15
6.	Spare parts lists	16
6.1	How to order spare parts.....	16
6.2	Spray gun PEM-C3	16
6.3	Gun extension	17
7.	Technical data	17
8.	Supplement.....	18
8.1	Applicable safety regulations and list of sources.....	18
8.2	Warranty.....	19
8.3	EU Declaration of conformity.....	20

1. Introduction

This manual contains information and hints for the service, repair and maintenance of the equipment. The user must obey all the rules of operation found in this manual, failure to do so will render the warranty invalid.

Wagner powder systems are designed to meet the most stringent safety requirements. They can be operated in compliance with generally applicable safety codes and applicable national safety regulations.

Please pay particular attention to the parts marked by the following symbols. Follow the instructions exactly, in the interests of both your own safety and the correct functioning of the unit.



Warning

This symbol draws attention to the fact that if the operating instructions, working instructions, prescribed working sequences etc. are not followed exactly, this can lead to injury or even fatal accidents.



Caution

This symbol indicates that failure to follow the operating instructions, working instructions, prescribed working sequences etc. exactly can lead to material damage.



Hint

This symbol draws your attention to useful additional information and tips. Failure to observe these instructions can cause malfunctions.

1.1 Safety regulations



Warning

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

There might be additional regulations to be observed, put into effect by governmental, state or other official agencies or local security (fire) departments!

The following rules must be observed in order to ensure a safe and efficient use of the equipment:

- **Under no circumstance may persons with a cardiac pacemaker come close to the area between the tip of the spray gun and the workpiece to be coated!**
- The user has to observe particularly the safety guidelines of the VdS or the local professional and security institutions.
- The spray gun may only be operated in the hazard zone created by operation of the manual spraying equipment itself.
- The spray gun may only be operated in powder spray booths or powder spray benches equipped with industrial ventilation.
- The user has to make sure, that the average powder/air concentration does not exceed 50% of the LEL (maximum allowed concentration of powder in air). If a reliable LEL value is not available, the average powder/air concentration may not exceed 10 g/m³.
- The main power connection for operation of the Wagner powder equipment **must** be electrically interlocked with the exhaust system of the powder coating booth.
- The Wagner control unit must be installed outside the hazard area.
- The user must conduct periodic checks of the powder spray equipment (at least every year) with regard to explosion-protection.
- In the event of faults or defects, repair work is to be performed at the user's discretion.
- The user must keep a test certificate of the device type on file at the installation site.
- The execution of repairs must not lead to an alteration in the explosion-protection.
- Specially trained personnel may only carry out repairs.
- Repairs must never be performed in an explosion-hazard area.
- The work area **must** have an electrostatically conductive floor (measured in accordance with EN 1081).
- All conductive parts in the work area **must** be electrostatically grounded (work area = 1 m around every spray location or opening in the booth).
- All persons inside the work area **must** wear electrostatically conductive footwear.
- Gloves are not to be worn! If gloves are used they **must** be made of conductive material.

Also refer to Chapter [8.1 "Applicable safety regulations and list of sources"](#).

General Safety Rules

- **Wear suitable work clothing**
- **Use breathing protection for work, which produces powder.**
- **Check your equipment for damage**
Before using the system; carefully inspect slightly worn parts for proper operation. Check whether the moving parts operate properly, whether they jam and whether parts are damaged.
All parts must be properly assembled in order to ensure proper operation of the unit. Damaged parts should be repaired or replaced by a Wagner customer service.



Warning

For your own safety, use only accessories and equipment listed in the operating manual. The use of individual parts other than those recommended in the operating manual may create a hazard to personal safety.

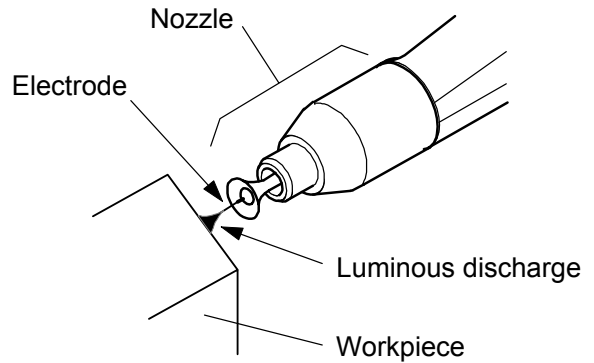
Use only original Wagner replacement parts!

HAZARD	PREVENTION
<p>Electrostatic arcing may cause an explosion or fire. Mixtures of powder and air can explode or ignite causing property damage and/or severe injury.</p>	<ul style="list-style-type: none"> • Operator must be grounded. Grounding straps must be used when wearing rubber soled shoes. • Operator must remove all metallic objects from his or her person, which are not grounded. • The object being sprayed must be grounded. • All metallic objects within the spray area must be grounded (including spray booth, part hangers, fire extinguishers, etc.) • Grounded conductive floor must be provided in spray area. • Turn off the Power Pack and unplug from outlet before flushing out the gun, cleaning or replacing parts on the gun such as changing tips.
<p>Explosion or fire. Mixtures of powder and air can explode or ignite causing property damage and/or severe injury.</p>	<ul style="list-style-type: none"> • Exhaust and fresh air introduction must be provided to keep the air within the spray area free of accumulation of flammable atmosphere. • Smoking must not be allowed in spray area. • Fire extinguishing equipment must be present and in working order. • Electrostatic arcing must be prevented. (See Electrostatic arcing) • When cleaning the system, use only materials recommended by the coatings manufacturer. Be sure Power Pack is turned off and unplugged. • Avoid all ignition sources such as static electricity sparks, open flames such as pilot lights, hot objects such as cigarettes and sparks from connecting and disconnecting power cords and working light switches. • To prevent hazardous concentrations of flammable atmospheres, spray only in a properly ventilated spray booth. • Never operate spray gun unless ventilation fans are operating properly. • Check and follow all National, State and Local codes regarding air exhaust velocity requirements. • Ventilation must be maintained during the cleaning operation.
<p>Toxic Substances: Some materials may be harmful if swallowed or come in contact with the skin.</p>	<ul style="list-style-type: none"> • Follow the requirements of the Material Safety Data Sheet supplied by the coatings manufacturer. • Exhaust and fresh air introduction must be provided within the spray area to keep the air free of high powder accumulations. • Wear a mask or respirator. Read all instructions for the mask to insure that it will provide the necessary protection against the inhalation of powder.
<p>General</p>	<ul style="list-style-type: none"> • Read all instructions and safety precautions before operating. • Comply with all appropriate local, state and national codes governing ventilation, fire prevention, and operation of Electrostatic equipment usage. • The United States Government Safety Standards have been adopted under the Occupational Safety and Health Act. These standards, particularly the General Standards, Part 1910 and the Construction Standard, Part 1926, should be consulted. • NFPA Standard No. 33 is to be followed when setting up your spray area. Contact the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts, 02269 for more information. • Check with insurance company for additional requirements. • Use only identical replacement parts. • Personnel must be given training in accordance with the requirements of NFPA Standard No. 33 Chapter 15. • It is the duty of all personnel responsible for the spray equipment operation and maintenance to read and understand all safety information furnished with this equipment.

Note on harmless discharges

With the high voltage switched on, a luminous or corona discharge occurs at the electrode tip; this can only be seen in the dark. This physical effect can be seen when the electrode is near the grounded workpiece.



This luminous discharge does not involve any ignition energy and has no effect on the usage of the plant. When the electrode approaches the workpiece, the control unit automatically reduces the high voltage to a safe value or switches the high voltage off, depending on the setting.



If you touch plastic parts of the **spray gun** with the finger, harmless discharges may occur due to the high voltage field around the spray gun (so-called brush discharges). However, these do not contain any ignition energy.

2. Preparing the spray gun for application

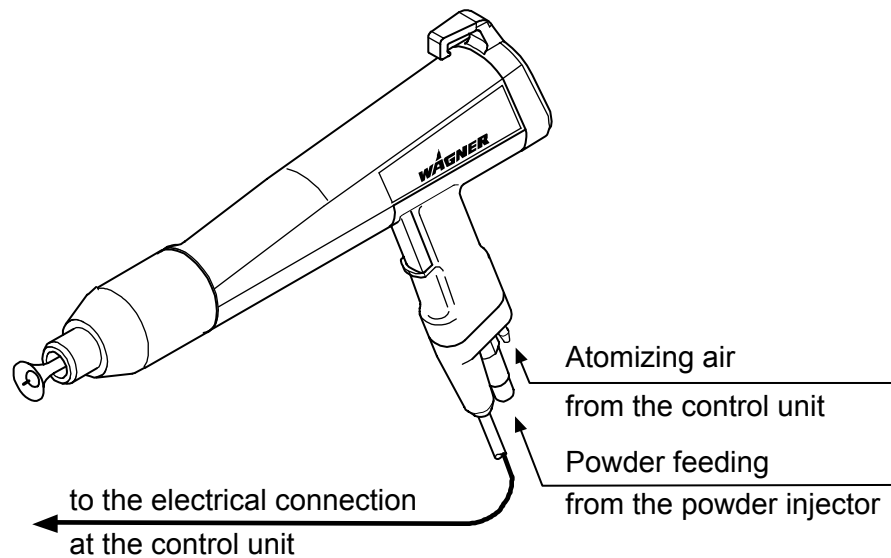
2.1 Select the suitable nozzle system

Nozzle	Workpiece	Spray pattern	Remarks
Deflector cone 	Wire goods Grid designs Aluminum sections	Round Spray pattern: the size is dependent on the diameter of the deflector cone	for powder quantities from 50 ... 300 g/min
Fan spray nozzle 	Difficult workpieces: Undercuts Edges of recesses	Widely spread jet	for powder quantities from 50 ... 150 g/min

You will find the article numbers in chapter [6 "Spare parts lists"](#).

2.2 Connecting the spray gun

Before you commence connecting the gun, switch off the high voltage power supply. For information on this activity refer to the related operating instruction for the control unit.



- Connect the electrical cable to the control unit.
- Connect the powder hose to the spray gun and to the powder injector.
- Connect the hose for atomizing air to the spray gun and to the control unit.

2.3 Grounding

In order to achieve a good powder coating, proper grounding for the **workpiece** is absolutely essential. A poorly grounded workpiece causes:

- dangerous electric charging of the workpiece
- back-spray onto spray gun and user
- very bad wrap-around
- uneven coating



Warning

If the mains cable does not have a separate protective ground terminal, it is absolutely necessary to connect the control unit to the system ground by a separate Ground strap via the Ground screw at the rear wall of the control unit!

Sparks between workpiece and conveyor hooks (hangers) can occur if hooks or other hanger parts are not completely cleaned!

These sparks can cause heavy radio frequency interference.

3. Working with the spray gun

3.1 Commissioning the spray gun

- Switch on the control unit.
- Select the type of gun **Manual** and charging **Corona** on the control unit.
- Refer to the operating instructions of the control unit for this.



Caution

To minimize the wear on the consumables, the total feed air and dosage air must be between **3.5 and 6 Nm³/h!**

- Hold the **spray gun** in the spray booth, press the trigger and set the powder volume and the powder speed to a test piece by adjusting the volume of feed air and dosage air.
- You can alter the size of the powder cloud during powdering by adjusting the atomizing air.

3.2 Switching off the spray gun

The spray gun is switched off differently depending on the type of powder injector.

Hint



On each interruption to work, the powder spray gun should be blown through (purged) and powder residue removed. In this way **powder deposits** and a **surge** the next time the spray gun is switched on can be largely avoided.

The flushing procedure can be set on the control unit if the spray gun is connected to an **EPG-D1** or a **Control unit Bravo** in conjunction with the **PI-F1** powder injector. In this case the spray gun is blown free of powder as soon as the trigger is released.

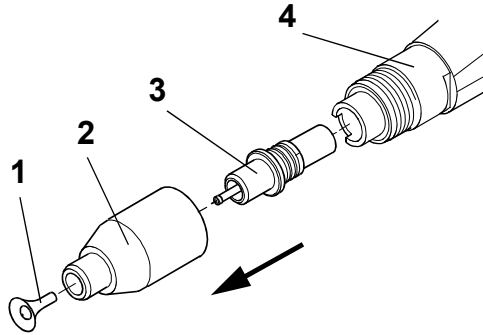
If the spray gun is operated with an **EPG 2007** control unit and a **PI-P1** powder injector, proceed as follows:

- Release the trigger on the spray gun so that the powder supply and high voltage generator are switched off.
- If you do not wish to alter the settings for the feed air and dosage air, in order to carry on coating with the same powder cloud, pull out the powder injector from the powder container's injector connection. No more powder will be delivered when switching on again.
- Press the trigger on the spray gun so that the spray gun is blown free of powder.
- Switch the control unit off and secure it against being switched on unintentionally.

3.3 Performing a color change

During a color change all parts carrying powder in the entire coating plant **must** be **thoroughly** cleaned of powder residue. In the following only the procedure for the powder spray gun is described. You will find hints on cleaning the other components in the related operating instructions.

- Switch off the control unit and secure it against being switched on again.



- If you do not use automatic purging:

Release the trigger on the spray gun so that the powder supply and high voltage generation are switched off.

Pull the powder injector out of the powder container's injector connection so that no powder can be delivered during flushing.

Press the trigger on the spray gun so that the spray gun is blown free of powder.

Switch the control unit off and secure it against being switched on unintentionally.

- Pull the deflector cone **1** off the nozzle insert **3**.
- Unscrew the outer nut **2** from the gun housing **4**.
- Carefully pull the nozzle insert **3** out of the spray gun housing **4**.





Caution

When pulling out and inserting the nozzle insert, ensure that the insert is not damaged!

- Remove powder residue from the parts removed and the spray gun.
- Prior to re-fitting, check whether the mating faces on the nozzle insert **3** and in the spray gun housing **4** have been thoroughly cleaned so that the electrode tip is electrically connected to the high voltage generator.
- Carefully refit the nozzle insert **3** in the spray gun housing **4** and tighten using the outer nut **2**.
- Slide the deflector cone back over the nozzle insert.
- The spray gun is ready for use again and you may begin with the setting of the powder cloud in accordance with Chapter [3.1](#).

4. Maintenance and cleaning

 WARNING	 CAUTION
<p>WHEN CLEANING THE ELECTROSTATIC SYSTEM, THESE SAFETY PROCEDURES MUST BE FOLLOWED. FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN AN EXPLOSION/FIRE.</p> <ul style="list-style-type: none"> • Turn power pack to the "OFF" position and unplug from power source before starting to clean. • Exhaust and fresh air introduction must be maintained during the clean up operation. • Keep cleaning materials in approved safety containers. • All personnel and cleaning equipment, including container used in cleaning operation, must be grounded. • DO NOT turn on the POWER PACK until the cleaning operation has been completed, all cleaning materials have been removed from spray area, and spray area is free of any mixtures of powder and air produced by the cleaning operation. • If defects in the equipment are found, DO NOT use until repairs are completed. 	<ul style="list-style-type: none"> • Clean equipment immediately after use. • NEVER IMMERSE SPRAY GUN OR PARTS OF IT IN ANY FLUID AT ANY TIME. • Be sure the Power Pack is turned off and unplugged from the power source. <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • The powder passages of the spray gun should be cleaned while cleaning the powder hose and powder pump, following instructions, provided with the powder pump (injector). (See powder injector operating manual) • Clean the spray tip by removing from spray gun, flushing with air and replacing on spray gun.

4.1 Replacing the spray gun

Before you commence the replacement of the spray gun, remove any powder residue as per chapter [3.3](#).



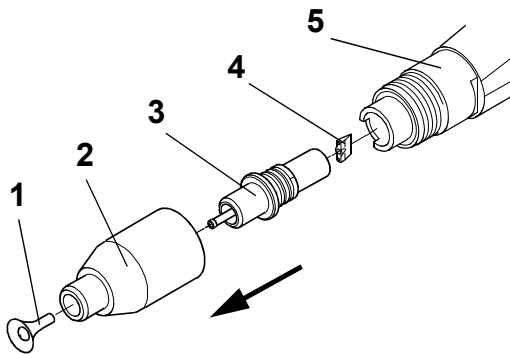
Caution

Repair or replacement of the spray gun or parts of the spray gun are only allowed to be performed outside the hazard area and in a suitable place by specialist personnel!

The consumables in the spray gun, marked in the spare parts list with *, must be regularly checked and, if necessary replaced.

- Switch off the control unit or the high voltage generator and disconnect the gun cable from the control unit.
- Disconnect the hoses for powder feed and atomizing air from the spray gun.
- Replace the spray gun to be maintained with a new gun and fit this is in the reverse order of removal.

4.2 Cleaning the spray gun and replacing the consumables



- Pull the deflector cone **1** off the nozzle insert **3**.
- Unscrew the outer nut **2** from the spray gun housing **5**.
- Carefully pull the nozzle insert **3** out of the spray gun housing **5**.
- Disconnect the safety wedge **4** from the nozzle insert **3**.



Caution

Never place the spray gun or parts of the spray gun in cleaning agent!

- Clean the parts removed and spray gun of powder residue.
- As a rule you only need to check the safety wedge **4** for wear and replace it as necessary.
- Prior to re-fitting, check whether the mating surface on the nozzle insert **3** and in the spray gun housing **5** have been thoroughly cleaned so that the electrode tip is electrically connected to the high voltage generator.
- Carefully fit the nozzle insert in the spray gun housing and fasten in place using the outer nut.
- Slide the deflector cone back over the nozzle insert.
- The spray gun is ready for use again.

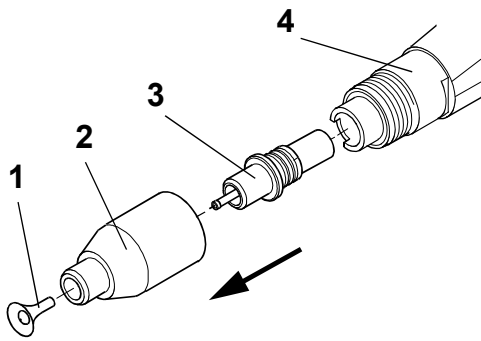
4.3 Mounting the gun extension



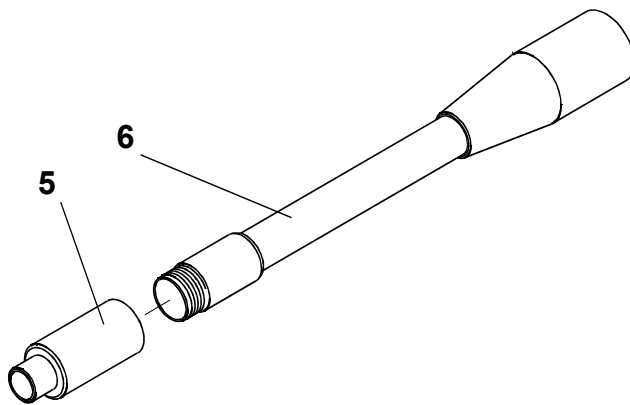
Caution

Always select a spray gun, which has been thoroughly cleaned when mounting a gun extension.

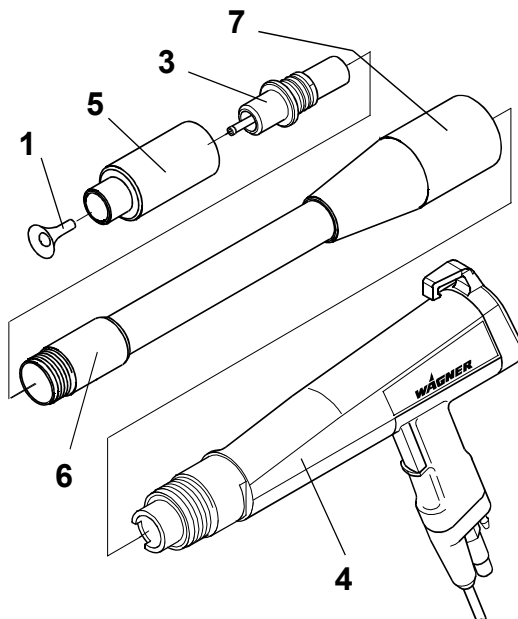
A better alternative is to only select a new spray gun in such cases.



- Pull the deflector cone **1** off the nozzle insert **3**.
- Unscrew the outer nut **2** (standard) from the gun housing **4** and put aside. The outer nut **2** is not necessary for the extension.
- Carefully pull the nozzle insert **3** out of the spray gun housing **4**.



- Unscrew the outer nut **5** from the extension **6**.



- Slide the extension **6** into the gun housing **4** and tighten it up with the outer nut **7**.
- Carefully fit the nozzle insert **3** in the extension **6** fasten in place using the outer nut **5**.
- Slide the deflector cone **1** over the nozzle insert **3**.

5. Rectification of malfunctions

Malfunction	Cause	Rectification
No electrostatic (e.g. no wrap around or no powder adhesion)	<ul style="list-style-type: none"> - Fault in the high voltage generator - Electrical cable from spray gun to control unit faulty - Cascade in spray gun faulty 	<ul style="list-style-type: none"> - Contact Wagner Service
Poor wrap around Back spray	<ul style="list-style-type: none"> - Inadequate or no ground 	<ul style="list-style-type: none"> - See chapter 2.2
Powder outlet un-even or inadequate	<ul style="list-style-type: none"> - Soiling - Powder sintering - Feed device soiled - Feed air / dosage air ratio incorrect - Wear on powder injector nozzle 	<ul style="list-style-type: none"> - Blow through parts carrying powder - Clean parts carrying powder - See operating instructions for the related devices connected - Adjust at control module - Replace worn parts in the powder injector 1.)
Spray pattern is uneven	<ul style="list-style-type: none"> - Nozzle system wear 	<ul style="list-style-type: none"> - Replace nozzle system

1.) You will find the consumables and spare parts in the operating instructions for the powder injector.

6. Spare parts lists

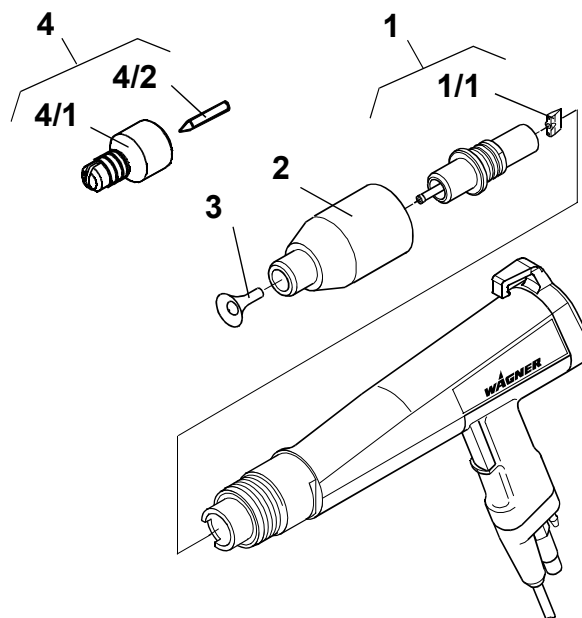
6.1 How to order spare parts

Faulty and unserviceable parts are replaced in accordance with our General Terms and Conditions of Delivery.

In order to be able to guarantee safe and smooth spare parts delivery, the following information is necessary:

- Invoicing address
- Delivery address
- Name of contact person for check back
- Type of delivery
- Quantity ordered, article number and description

6.2 Spray gun PEM-C3

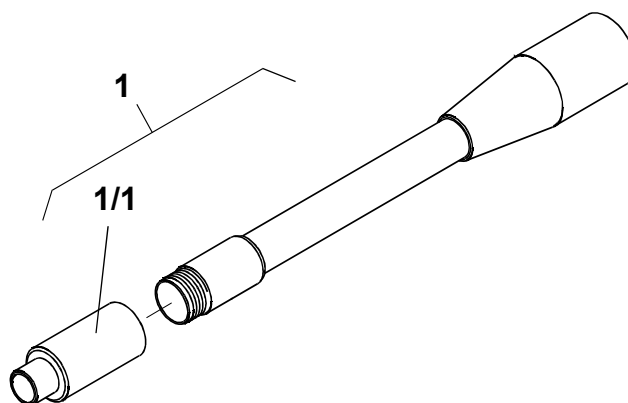


Item	Article No.	Description
	0351020	Spray gun PEM-C3
1	0351940 *	Nozzle insert **
1/1	0351339 *	Wedge
2	0351620	Outer nut ET
3	0351225 *	Deflector cone (Ø17)
3	0351226 *	Deflector cone (Ø25)
3	0351227 *	Deflector cone (Ø32)
4	0351901 *	Fan spray nozzle **
4/1	0351232 *	Fan spray nozzle
4/2	0351346 *	Air nozzle

* Consumable

** Only available as a set

6.3 Gun extension



Item	Article No.	Description
1	0351958 *	Extension 300 mm C3 **
1/1	0351372	Outer nut

* Consumable

** Only available as a set

7. Technical data

Weight: 498 g

Electrical:

Input voltage: max. 22 Vpp
 Input current: max. 0.9 A
 Frequency: 19 ... 30 kHz
 Output voltage: max. 100 kV DC
 Output current: max. 160 µA DC
 Polarity: negative
 Design: as per EN 50050
 Protection class: IP 54

Pneumatic:

Input air pressure (atomizing air): max. 3 bar / 43.5 psi
 Powder output quantity: max. 450 g/min

Compressed air quality in accordance with ISO 8573-1, classe 2:

Residual water in the compressed air: max. 1.3 g H₂O/Nm³
 Residual oil in the compressed air: max. 0.01 mg oil /Nm³
 Residual dust in the compressed air: max. 1 mg dust /Nm³
 Particle size in the compressed air: max. 1 µm

Ambient conditions:

On the usage of low melting point types of powder, an ambient temperature below 30 °C/86 °F may be necessary.

8. Supplement

8.1 Applicable safety regulations and list of sources

EN 292-1/-2	Machine Safety	(Published by Beuth-Verlag, Berlin)
EN 50281-1-1/-2	Electrical equipment for use in areas with flammable dust	(Published by Beuth-Verlag, Berlin)
EN 61000-6-1	Electro-magnetic compatibility (EMC) generic standard resistance to interference	(Published by Beuth-Verlag, Berlin)
EN 61000-6-2	Electro-magnetic compatibility (EMC) Basic Standards – Interference resistance within industry	(Published by Beuth-Verlag, Berlin)
EN 61000-6-3	Electro-magnetic compatibility (EMC) generic standard interference emissions	(Published by Beuth-Verlag, Berlin)
EN 60204-1	VDE guidelines for the electrical equipment of machines	(Published by Beuth-Verlag, Berlin)
BGI 764	Safety regulations for electrostatic powder coating in coating equipment's (Operating conditions)	(Published by C. Heymanns-Verlag, Cologne)
BGR 132 (ZH1/200)	Safety regulations governing prevention of combustion during electrical charging	(Published by C. Heymanns-Verlag, Cologne)
prEN 12981	Safety requirements for coating equipment in spray booths for organic powder	(Published by Beuth-Verlag, Berlin)
EN 50050	Electrostatic manual powder coating equipment	(Published by Beuth-Verlag, Berlin)
EN 50053-2	Regulations for selecting, installing and operating electrostatic powder coating systems, electrostatic manual powder coating systems	(Published by Beuth-Verlag, Berlin)
VDE 0132	Instructions for fire fighting in electric equipment and nearby	(Published by Beuth-Verlag, Berlin)
VDE 0134	Instructions for first aid in case of accident	(Published by Beuth-Verlag, Berlin)

8.2 Warranty

What is covered by this warranty?

Faulty or defective parts are replaced according to our general delivery conditions.

Within the applicable warrant period, Wagner will repair or replace, at our option, defective parts without charge if such parts are returned with transportation charges prepaid to the nearest authorized service center. If Wagner is unable to repair this product so as to conform to this Limited Warranty after a reasonable number of attempts, Wagner will provide, at our option, either a replacement for this product or a full refund of the purchase price of this product.

These remedies are the sole and exclusive remedies available for breach of express and implied warranties.

What is not covered by this warranty?

This warranty does not cover any of the following damages or defects:

1. Damages or defects caused by use or installation of repair or replacement parts or accessories not manufactured by Wagner,
2. Damages or defects caused by repair performed by anyone other than a Wagner authorized service center, or
3. Damages or defects caused by or related to abrasion, corrosion, abuse, misuse, negligence, accident, normal wear, faulty installation or tampering in a manner which impairs normal operation.

Limitation of remedies:

IN NO CASE SHALL WAGNER BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS, INCLUDING TRANSPORTATION COSTS, WHETHER SUCH DAMAGES ARE BASED UPON A BREACH OF EXPRESS OR IMPLIED WARRANTIES, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY.

Disclaimer of implied warranties:

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.


No ability to transfer:

This warranty is extended to the original purchaser only and is not transferable.

Your rights under state law:

Some states do not allow limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights; you may also be entitled to other rights, which vary from state to state.

8.3 EU Declaration of conformity

 Wagner hereby declares that the unit described in these operating instructions has been designed and manufactured according to the provisions of EU Directives 98/37/EC, 94/9/EC, 73/23 EEC and 89/336 EEC.

The following **European** standards have been applied:

EN 292-1/-2	EN 50281-1-1/-2	EN 61000-6-2
EN 61000-6-3	EN 61000-6-1	EN 60204-1
EN 50053-2	EN 50050	

The following **German** standard or guideline has been applied:

BGI 764

An **EC declaration of conformity certificate (no. 0351952)** exists for this product. This can be ordered again if necessary from your WAGNER dealer by giving details of the product and serial number involved.

Directory of Wagner subsidiaries

USA:

WAGNER Systems Inc.	Phone	++1-630-784-8900
175 Della Court	Fax	++1-630-784-8970
Carol Stream, IL 60188		
USA		

Great Britain:

WAGNER Spraytech (UK) Ltd.	Phone	++44-1295-265-353
Unit 3 Haslemere Way	Fax	++44-1295-269-861
Tramway Industrial Estate		
Banbury, Oxon OX 16 8TY		
Great Britain		

Hong Kong:

WAGNER Spraytech (HK) Ltd.	Phone	++852-2515-2862
Unit G, 20 F, Seabright Plaza	Fax	++852-2889-1792
9-23 Shell Street		
North Point		
Hong Kong		

Japan:

WAGNER Spraytech Japan Ltd.	Phone	++81-720-74-8181
2-35, Shinden Nishimachi	Fax	++81-720-74-3426
Daito Shi		
Osaka 574-0057		
Japan		

Sweden:

Wagner Sverige AB	Phone	++46-42-150020
Muskötgatan 19	Fax	++46-42-150035
S-254 66 Helsingborg		
Sweden		

Switzerland:

J. WAGNER AG	Phone	++41-71-7572211
Postfach 663	Fax	++41-71-7572222
Industriestrasse 22		
CH-9450 Altstätten		
Switzerland		

Germany:

J. WAGNER GmbH	Phone	++49-7544-505-0
Postfach 1120	Fax	++49-7544-505-200
Otto-Lilienthal-Str. 18		
D-88677 Markdorf		
Germany		

Italy:

WAGNER Itep S.p.a.	Phone	++39-0341-210100
Via Santa Vecchia 109	Fax	++39-0341-210200
I-22049 Valmadrera		
Italy		