

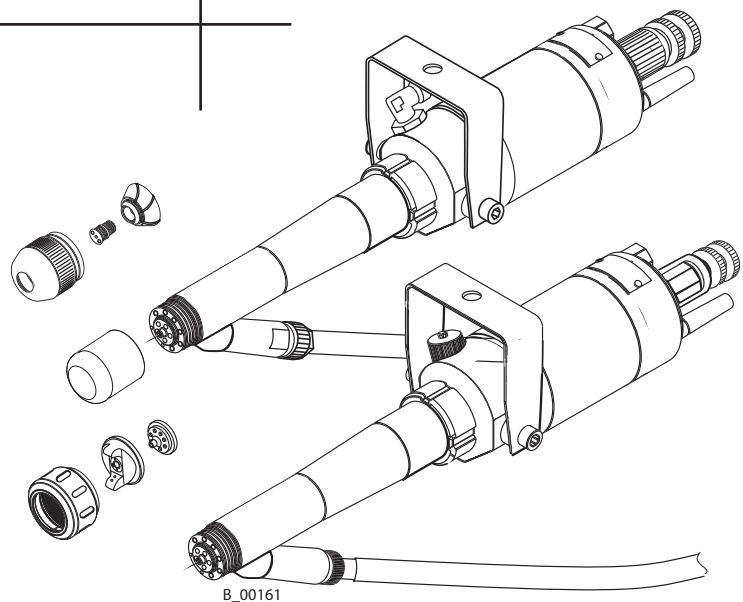


Translation of the original  
Operating manual

GA 2800EA  
GA 2805EA

Edition 12/2008

**Electrostatic Air spray gun**  
for automatic operating mode -  
with flat or round jet nozzles



CE 0102  II 2G EEx 0.24 mJ T6 (Atex 95)



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## 1 ABOUT THESE INSTRUCTIONS

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

→ Always follow these instructions when operating the unit.

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

Electrostatic spray guns may be operated only by trained personnel.

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

### 1.1 LANGUAGES

This operating manual is available in the following languages:

Language:	Part No.	Language:	Part No.
German	350730	English	350731
French	350732	Dutch	350733
Italian	350734	Spanish	350755
Danish	350737	Swedish	350736



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

Language:	Part No.	Language:	Part No.
German	350985	English	350986



### 1.2 WARNINGS, NOTES AND SYMBOLS IN THESE INSTRUCTIONS

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



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

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

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

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

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

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

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

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

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

## 2 GENERAL SAFETY INSTRUCTIONS

### 2.1 SAFETY INSTRUCTIONS FOR THE OPERATOR

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



#### 2.1.1 ELECTRICAL EQUIPMENT

Electrical plant and unit

- To be provided in accordance with the local safety requirements with regard to the operating mode and ambient influences.
- May only be maintained by skilled electricians or under their supervision.
- Must be operated in accordance with the safety regulations and electrotechnical regulations.
- Must be repaired immediately in the event of problems.
- Must be put out of operation if they pose a hazard.
- Must be de-energized before work is commenced on active parts. Inform staff about planned work, observe electrical safety regulations.



#### 2.1.2 PERSONNEL QUALIFICATIONS

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

#### 2.1.3 A SAFE WORK ENVIRONMENT

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



### 2.2 SAFETY INSTRUCTIONS FOR PERSONNEL

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



### 2.2.1 SAFE HANDLING OF WAGNER SPRAY UNITS

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

Avoid injection of paint or cleaning agents:

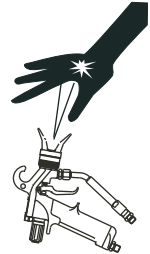
- Never point the spray gun at people.
- Never reach into the spray jet.
- Before all work on the unit, in the event of work interruptions and functional faults:
  - Switch off the energy/compressed air supply.
  - Secure the spray gun against actuation.
  - Relieve the pressure from the spray gun and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

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

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

Avoid danger of injury through recoil forces:

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



### 2.2.2 EARTH THE UNIT

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

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



### 2.2.3 MATERIAL HOSES

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



### 2.2.4 CLEANING

- De-energize the unit electrically.
- Disconnect the pneumatic supply line.
- Relieve the pressure from the unit.
- Ensure that the flash point of the cleaning agent is at least 5 K above the ambient temperature.
- To clean, use only solvent-free cloths and brushes. Never use hard objects or spray on cleaning agents with a gun.

An explosive gas/air mixture forms in closed containers.

- When cleaning units with solvents, never spray into a closed container.
- Earth the container.



### 2.2.5 HANDLING HAZARDOUS LIQUIDS, VARNISHES AND PAINTS

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



### 2.2.6 TOUCHING HOT SURFACES

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



#### Order No.

9998910 Information label

9998911 Safety label

### 2.3 CORRECT USE

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

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





## 2.4 SAFETY-RELEVANT INFORMATION ABOUT DISCHARGES

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

The corona discharge at the electrode end is visible during darkness at a distance of between 4 and 10 mm; 0.15 and 0.4 inches, between the spray gun and spray object.

## 2.5 USE IN AN EXPLOSION HAZARD AREA

### 2.5.1 CORRECT USE

The electrostatic spray gun GA 2800EA and GA2805EA is suitable for spraying liquid materials, particularly coating materials, using the air atomizing method.

Coating materials containing solvents of Explosion Class IIA may be used. The spray gun may only be used in combination with a control unit EPG 3000.

### 2.5.2 EXPLOSION PROTECTION IDENTIFICATION

As defined in the Directive 94/9/CE (ATEX 95), the unit is suitable for use in areas where there is an explosion hazard.

CE 0102  II 2G EEx 0.24mJ T6



CE: Communautés Européennes  
 0102: Nominated testing body: PTB  
 Ex: Symbol for explosion protection  
 II: Unit class II  
 2: Category 2 (Zone 1)  
 G: Ex-atmosphere gas  
 E: European standard  
 Ex: Explosion protection  
 0.24mJ: Max. ignition energy  
 T6: Temperature class

### 2.5.3 MAXI. SURFACE TEMPERATURE

- Max. surface temperature: 85°C; 185°F
- Permissible material temperature: 60°C; 140°F
- Permissible ambient temperature: +5- +40°C; +41- +104°F

### 2.5.4 SAFETY INSTRUCTIONS

#### Safe handling of WAGNER spray units

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

In an explosive atmosphere:

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

### Ignition temperature of the coating material

- Ensure that the ignition temperature of the coating material is above the maximum surface temperature.

### Surface spraying, electrostatic

- Do not spray unit parts with electrostatic (e.g. electrostatic spray gun).



### Medium supporting atomizing

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

### Cleaning

If there are deposits on the surfaces, the unit may form electrostatic charges. Flames or sparks can form if there is a discharge.

- Remove deposits from the surfaces to maintain conductivity.
- Use only a damp cloth to clean the unit.



## 2.6 ESTABLISHMENT OF STATIONARY ELECTROSTATIC SYSTEMS

The spraygun is a component of a stationary spraying system. When establish stationary spraying systems, strictly comply with regulation EN 50176. Among other things it is required, that switch on of high voltage is only possible with a key. But it must be possible to switch off high voltage without any key, for instance with a emergency stop button.

## 2.7 GERMAN REGULATIONS AND GUIDELINES

- |    |          |   |
|----|----------|---|
| a) | BGV A2   | Electrical units and equipment  |
| b) | BGV D15  | Working with liquid ejection devices  |
| c) | BGV D25  | Using coating materials   |
| d) | CHV 9    | Regulations on flammable liquids  |
| e) | CHV 11   | Regulations on electrical equipment in Ex areas                             |
| f) | BGR 104  | Explosion protection rules  |
| g) | BGR 132  | Avoiding ignition risks   |
| h) | BGR 180  | Setting up for cleaning with solvents for cleaning workpieces with solvents |
| i) | ZH 1/406 | Guidelines for liquid ejection devices                                      |
| j) | BGI 740  | Painting rooms and equipment  |
| k) | BGI 764  | Electrostatic coating   |

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

## **3 PRODUCT LIABILITY AND WARRANTY**

### **3.1 IMPORTANT NOTES ON PRODUCT LIABILITY**

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

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

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

### **3.2 WARRANTY**

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

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

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

This warranty does not cover damage caused by:

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

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

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

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

The unit should be inspected immediately upon receipt.

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

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

Warranty claims are subject to proof of purchase by submitting an invoice or delivery note.

If an inspection finds damage not covered by the present warranty, the repair will be carried out at the expense of the purchaser.

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

**3.3 CE-CONFORMITY**

Herewith we declare that the supplied version of

Electrostatic control unit EPG 3000 in conjunction with:
Automatic gun GA 2800 EA
Automatic gun GA 2805 EA

Complies with the following guidelines

98/37/EG	89/336/EWG	2002/95/EG
94/9/EG	73/23/EWG	2002/96/EG

Applied standards, in particular:

EN 12100-1	EN 1953	EN 55022	EN 61000-4-4	EN 61000-6-1	EN 61000-6-4
EN 12100-2	EN 50176	EN 60204-1	EN 61000-4-6	EN 61000-6-2	
EN 1050	EN 55011	EN 61000-4-2	EN 61000-4-11	EN 61000-6-3	

Applied national technical standards and specifications, in particular:

For Germany see paragraph 2.7
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Marking:

Electrostatic control unit

CE 0102  II (2) G

Automatic gun

CE 0102  II 2G EEx 0,24 mJ T6

**CE Certificate of Conformity**

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

**Part number:**

381891

### 3.5 PTB CONFORMITY CERTIFICATION



## Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin




### EG-Baumusterprüfbescheinigung

- (1) **EG-Baumusterprüfbescheinigung**
- (2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**
- (3) EG-Baumusterprüfbescheinigungsnummer  
**PTB 03 ATEX 5006**
- (4) Gerät: Sprüheinrichtungen für brennbare flüssige Beschichtungsmittel der Typenreihen GM und GA
- (5) Hersteller: J. Wagner AG
- (6) Anschrift: Industriestrasse 22, CH-9050 Altstätten
- (7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser Baumusterprüfbescheinigung festgelegt.
- (8) Die Physikalisch-Technische Bundesanstalt bescheinigt als benannte Stelle Nr. 0102 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.  
Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht PTB Ex 03-53020 festgehalten.
- (9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit  
**EN 50050:2001** **EN 50176:1996**
- (10) Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.
- (11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.
- (12) Die Kennzeichnung des Gerätes muß die folgenden Angaben enthalten:

Sprühpistolen:  II 2G EEx 0,24 mJ Steuergeräte:  II (2)G EEx 0,24 mJ

Zertifizierungsstelle Explosionsschutz  
Im Auftrag

Braunschweig, 27.06.2003

  
Dr.-Ing. M. Beyer  
Oberregierungsrat



Seite 1/2

EG-Baumusterprüfbescheinigungen ohne Unterschrift und ohne Siegel haben keine Gültigkeit.  
Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.  
Auszüge oder Änderungen bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.

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

## 4 DESCRIPTION

### 4.1 AREA OF APPLICATION, USING IN ACCORDANCE WITH THE INSTRUCTIONS

The electrostatic spray guns can only be used with the control units designed for that purpose:

Part No.	Description	Operating mode
381021	Control unit EPG 3000	Single control unit
381022	Control unit EPG 3000 USA	Single control unit
381020	Control unit EPG 3000	Modular painting system
350015	Control module HVM 2082	In control cabinet operation:
350017	Pneumatic module PPM 2000 S	
350023	Pneumatic module PPM 2000 S-2	

#### 4.1.1 WHAT KIND OF SPRAYING MATERIAL CAN BE APPLIED

- Paints containing solvents of the explosion class II A.
- Enamels, primers, textured paints etc., which have a specific resistance of  $> 50 \text{ k}\Omega$  (according to the WAGNER or Ransburg scale).
- The effectiveness of the spraying action is always dependant on the composition of the paint being used, e.g. pigments or resin.

#### Note

With very highly conductive materials or those with a very high electrical resistance, the electrostatic effect does not work as efficiently. The relationship between the values of the high-voltage (kV) and the current ( $\mu\text{A}$ ), shown on the HVM 2082, denotes the charging capacity of a spray material.

- High kV value, low  $\mu\text{A}$  value (no wrap around) = Paint with too high el. resistance.
- Low kV value, high  $\mu\text{A}$  value (no wrap-around) = Paint with too low el. resistance

In the event of application problems, contact your WAGNER branch and the paint manufacturer.

**4.2 SCOPE OF SUPPLY**

Qty	Part No.	Description
1	350028	Automatic spray gun GA 2800EA
1	350029	Automatic spray gun GA 2800EA USA
1	350046	Automatic spray gun GA 2805EA
1	350047	Automatic spray gun GA 2805EA USA
1	2301861	Automatic spray gun GA 2800EA with short cable
1	350074	Automatic spray gun GA 2805EA with short cable

The standard equipment includes:

Quantity							Part No.	Description
350028	350029	350046	350047	2301861	350074			
1	1	1	1	1	1	179901	Universal spanner	
1	1	1	1	1	1	353210	Nozzle spanner Air	
1	1	1	1	1	1	350910	Set of seals, valve rod	
1	1	1	1	1	1	350382	Hose fitting $\varnothing$ 10 mm; $\varnothing$ 0.39 inch, 1/4"	
1	1	1	1	1	1	350346	Hose fitting $\varnothing$ 10 mm; $\varnothing$ 0.39 inch, 3/8"	
1	1	1	1	1	1	9100579	Instruction tag	
1	1	1	1	1	1	381891	CE-Declaration of Conformity	
1	-	1	-	1	1	350730	Operating manual German	
-	1	-	1	-	-	350731	Operating manual English	
1	1	1	1	1	1	Chap.1	An operating manual in the local language	

The spray gun is delivered without nozzle set.

By the GA 2800 the form air adjustment is directly at the spray gun.

By the GA 2805 the form air for the beam spread adjustment is supplied by external.

The spray gun with note „short cable“ has a cable length of only 0.2 m; 0.7 ft

The standard cable length is 11 m; 36.1 ft 11 m; 36.1 ft.

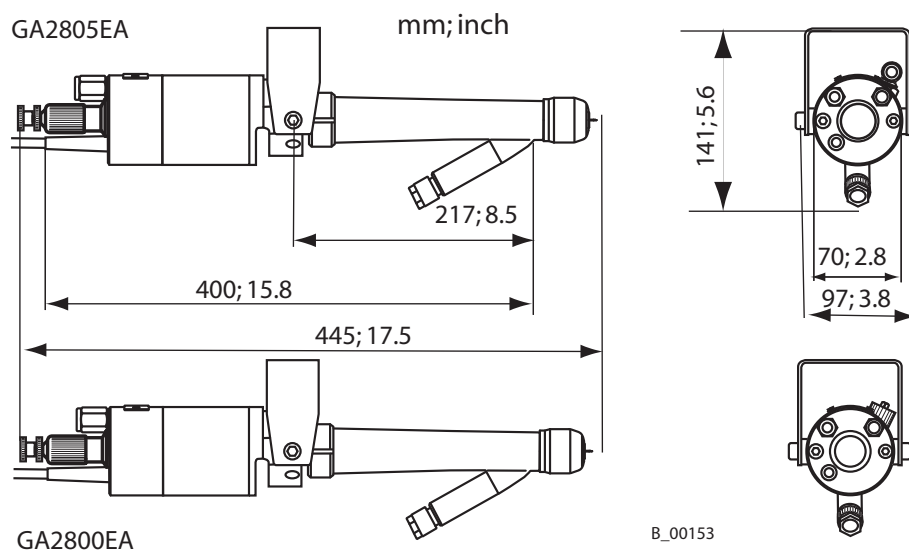
For special versions the delivery note applies.

### 4.3 TECHNICAL DATA

Maxi. air pressure	0.8 MPa; 8 bar; 116 psi
Maxi. atomizing air pressure	0.8 MPa; 8 bar; 116 psi
Maxi. material pressure	0.8 MPa; 8 bar; 116 psi
Input voltage	maxi. 17 Vpp
Input current	maxi. 0.9 A
Output voltage	maxi. 80 kV DC
Output current	maxi. 100 $\mu$ A DC
Polarity	negative
Maxi. discharge energy (accord. EN 50176 classification for type A)	0.24 mJ
Material hose connection	$\varnothing$ 10 mm; $\varnothing$ 0.39 inch
Length material hose	15 m; 49.2 ft
Atomizing air connection	$\varnothing$ 10 mm; $\varnothing$ 0.39 inch
Fan air connection	$\varnothing$ 8 mm; $\varnothing$ 0.31 inch
Control air connection	$\varnothing$ 8 mm; $\varnothing$ 0.31 inch
Cable length	11 m; 36.1 ft or 0.2 m; 0.7 ft
Weight (without cables)	1.440 kg; 3.17 lb
Working temperature range	+5 - +40 °C; +41 - +104 °F
Maxi. temperature material	60 °C; 140 °F
Min. el. material resistance	50 k $\Omega$ *
Maxi. el. material resistance	1250 k $\Omega$ *
Sound power at 0.4 MPa; 4 bar, 58 psi air pressure (depending on nozzle used)	82 dB(A)
Sound power at 0.2 MPa; 2 bar, 29 psi air pressure (depending on nozzle used)	65 - 79 dB(A)

\* after WAGNER/Ransburg scale

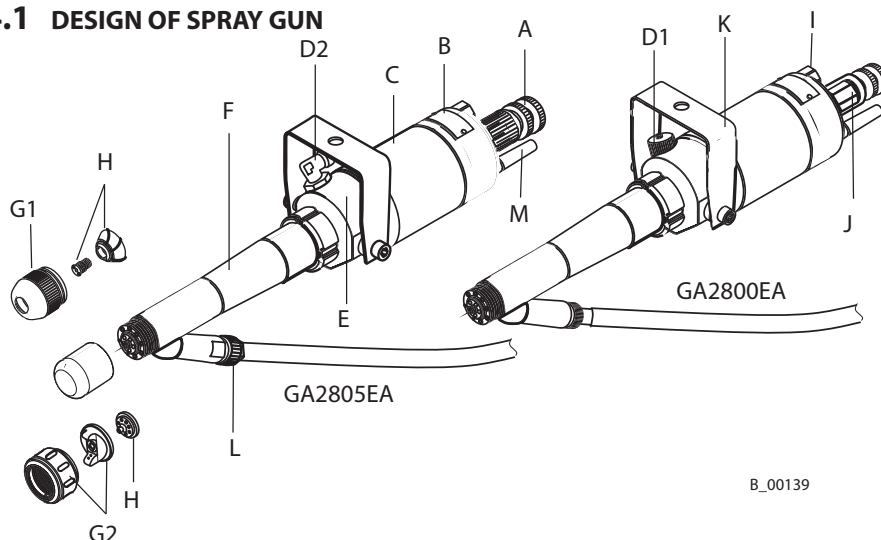
### Dimensions





## 4.4 FUNCTION

### 4.4.1 DESIGN OF SPRAY GUN



B\_00139

A	Tension nut for valve rod	G2	Air cap flat jet
B	Housing	H	Nozzle
C	Cascade	I	Control air connection (red)
D1	Fan air regulation GA 2800EA	J	Atomizing air connection (blue)
D2	Fan air connection GA 2805EA	K	Gun holder
E	Head piece	L	Paint hose connection
F	Gun barrel	M	Connection to control unit
G1	Nozzle nut round jet	N	Protection cap

### 4.4.2 FUNCTIONS OF THE GUN

#### Note

Operation of the spray gun in conjunction with the control unit EPG 3000 is described in this operating manual.

- The high voltage at the spray gun GA 2800EA or GA 2805EA is activated when the control unit EPG 3000 is switched on.
- The control piston integrated on the valve rod in housing (B) of the spray gun GA 2800EA or GA 2805EA is subjected to pressure at the same time and opens the air valve for the atomizing air.
- Paint valve in the gun barrel (F) is opened via valve rod movement after the valve for the atomizing air is opened.
- The spray jet width is adjusted via the air control knob on the control unit EPG 3000 or via the fan air regulation (D1) on the spray gun GA 2800EA in the case of flat jet spraying.
- The high voltage at the spray gun can be adjusted at the voltage regulator in the control unit EPG 3000 and can be adapted to the paint or to the spraying object.
- **Securing the gun:**
  1. Switch off the mains at the EPG 3000
  2. Switch off the air supply at the EPG 3000
  3. Relieve the pressure on the spray gun and the system.

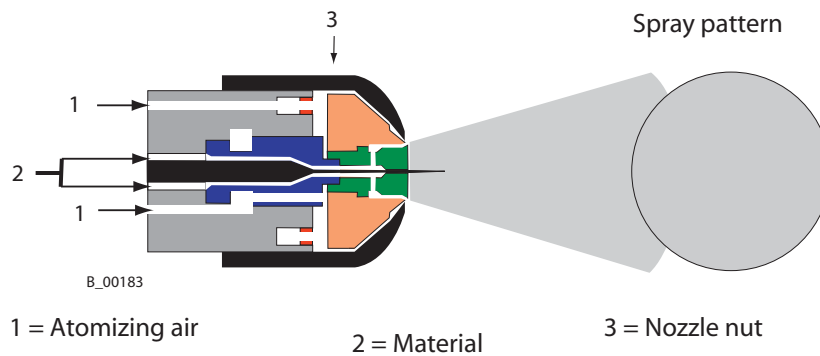
## 4.5 AIR ATOMIZING SPRAY PROCESS

### 4.5.1 ROUND AND FLAT JET

In this process, the material (paint) is fed to the nozzle with low pressure 0.05-0.2 MPa; 0.5-2 bar; 7-29 psi. The atomizing air at approx. 0.25-0.4 MPa; 2.5-4 bar; 36-58 psi produces a soft jet, which largely eliminates the problem of overlapping boundaries.

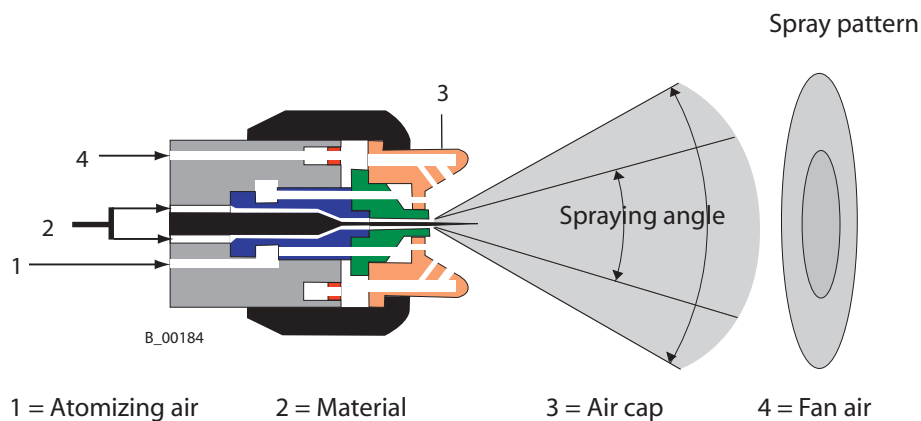
### 4.5.2 ROUND JET

The jet is cone-shaped.



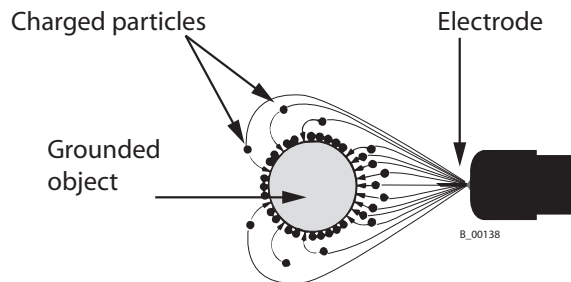
### 4.5.3 FLAT JET

The spraying angle can be changed by adjusting the „fan air“. Depend on the material and the output, a large range of nozzles and air caps are available to suit your needs (see paragraph 9.1).



#### 4.5.4 ELECTROSTATIC EFFECT

The spray gun produces an electrostatic field by means of the high voltage electrode. As a result, the particles of paint, which have been atomized by the spray gun, are carried to the earthed object by kinetic and electrostatic energy where they adhere, finely distributed, to the object being sprayed.



#### Advantages of electrostatics:

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

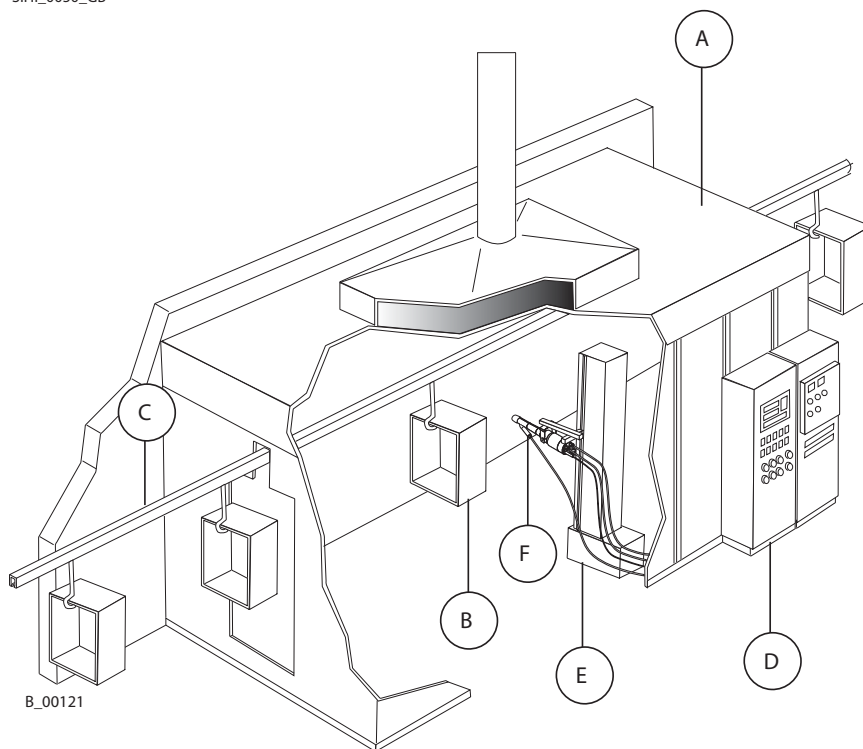
## 5 PREPARATION BEFORE STARTING WORK

### 5.1 SET UP AND CONNECT

#### 5.1.1 TYPICAL ELECTROSTATIC SPRAYING SYSTEM

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



SIHI\_0050\_GB



A	Spraying booth
B	Object
C	Conveyor
D	Control cabinet
E	Movement device system
F	Electrostatic automatic air spray gun

The spray gun GM 2800EA or GA 2805EA must be used a part of an air electrostatic spraying system. The spraying system shown in the figure is only one example of an electrostatic air spraying system. It is not an actual system design. Contact your WAGNER distributor for assistance in designing a system to meet your needs. The operating instructions and the safety regulations for the additional system components used must be read before starting-up.

### 5.1.2 VENTILATION OF THE SPRAY BOOTH

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

SIHI\_0028\_GB



### 5.1.3 AIR SUPPLY

The use of an air filter with the air regulator (D) ensures that only dry, clean atomising air gets into the spray gun. Dirt and moisture in the atomising air reduce the spraying quality and the appearance of the finished piece.

### 5.1.4 FLUID (PAINT) HOSES

<h2 style="margin: 0;">CAUTION</h2>	
<p><b>Impurities in the spraying system!</b> Spray gun blockage, materials harden in the spraying system.</p> <p>→ Flush the spray gun and paint supply with a suitable cleaning agent.</p>	



SIHI\_0001\_GB

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



SIHI\_0029\_GB

### 5.1.5 EARTHING

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

	 <b>WARNING</b>
	<p><b>Discharge of electrostatically charged components in atmospheres containing solvents!</b> Explosion hazard from electrostatic sparks or flames.</p> <p>→ Earth all unit components. → Earth the workpieces being painted.</p>

SIHI\_0027\_GB

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

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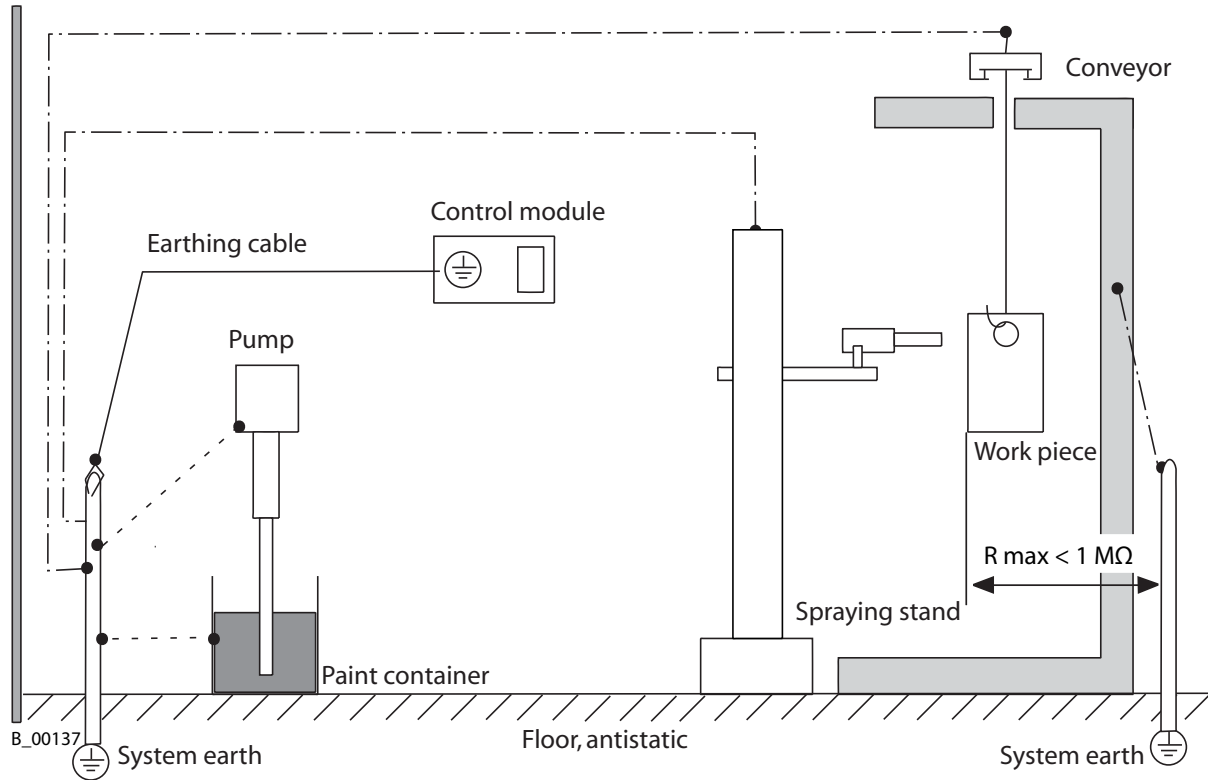
#### A badly earthed work-piece will result in:

- Very poor wrap-around
- Uneven coating thickness
- Spray-back onto the spray gun, i.e. contamination

#### The prerequisites for perfect earthing and coating are:

- Clean work piece suspension
- Earthing of spray booth, conveyor system and hangers to the building earth in accordance with the operating instruction or the manufacturer's information
- Earthing of all conductive parts within the working area
- The earthing resistance of the work piece must not exceed 1 MΩ (Mega Ohm).
- Connect the control unit to the mains system earth.

### Earthing scheme (example)



### Minimum cable cross-section

Control unit	4 mm <sup>2</sup> (AWG 12)
Pump	4 mm <sup>2</sup> (AWG 12)
Paint container	4 mm <sup>2</sup> (AWG 12)
Movement unit	16 mm <sup>2</sup> (AWG 6)
Conveyor	16 mm <sup>2</sup> (AWG 6)
Spraying booth	16 mm <sup>2</sup> (AWG 6)
Spraying stand	16 mm <sup>2</sup> (AWG 6)

## 5.2 PREPARATION OF PAINT

The viscosity of the paints is of great importance. The best results are obtained with paints between 15 and 30 DIN sec. (measured in immersion flow cup DIN 4 mm ; 0.16 inches).

In the case of application problems contact the paint producer.

### 5.2.1 VISCOSITY CONVERSION TABLE



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





## 5.3 START-UP

### 5.3.1 GENERAL RULES FOR HANDLING THE SPRAY GUN

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

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



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

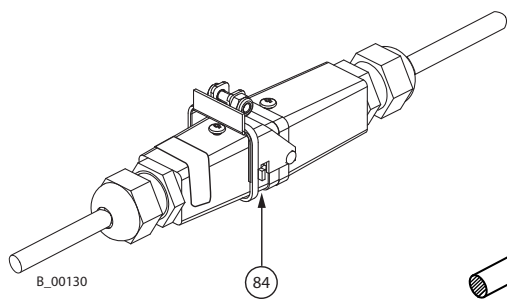
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### 5.3.2 PREPARATION

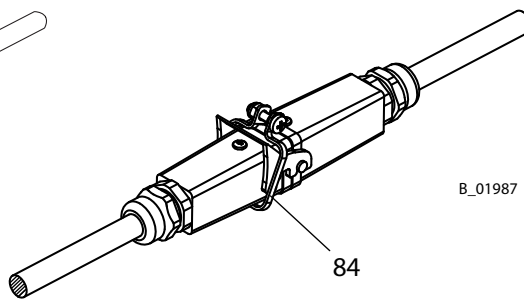
- Earthing the spraying system and make sure that all other conductive parts within the work area are earthed.
- Secure the spray gun to the lifting unit with the suspension bracket or suspension bolt (accessories)
- Connect material hose to pump.
- Connect the air hose  $\varnothing$  10 mm;  $\varnothing$  0.39 inches (marked blue) to oil-free, dry air supply (approx 0.25 MPa; 2.5 bar; 36.3 psi with regulator).
- Connect the air hose  $\varnothing$  8 mm;  $\varnothing$  0.31 inches (marked red) for the control air to the control unit EPG 3000.
- When using flat jet nozzles: Connect the air hose  $\varnothing$  8 mm;  $\varnothing$  0.31 inches (marked green) for the fan air to the control unit EPG 3000.
- Connect electrical cable to the control unit.

	 <b>WARNING</b>
	<p><b>Sparks form when the plug is removed!</b> Explosion hazard.</p> <p>When using the spray gun in explosion hazard areas: → Secure the cable connection with the supplied locking clamp (84).</p>

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Old equipment



New equipment

- Visually check the permissible pressures for all the system components.
- Set material pressure and use a suitable medium (solvent or water) to check that connections do not leak.
- Relieve system pressure and spray gun.

## 5.4 WORKING

### 5.4.1 START-UP FOR SPRAYING

1. Switch on the material supply, adjust from approx. 0.05-0.15 MPa; 0.5-1.5 bar; 7-22 psi, and the control unit.
2. Spray on a test object.
3. Adjust the spray pressure and atomizing air in accordance with the nozzle and object.

#### Note

The paint output volume can be changed by:

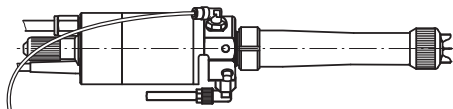
- Changing the material pressure.
- or
- Fitting another flat. See accessories.

### 5.4.2 ADJUST THE SPRAY ANGLE WITH FLAT JET NOZZLES

#### Spray gun GA 2800EA

The spray pattern can be adjusted to suit the object being sprayed using the fan air regulator on the gun.

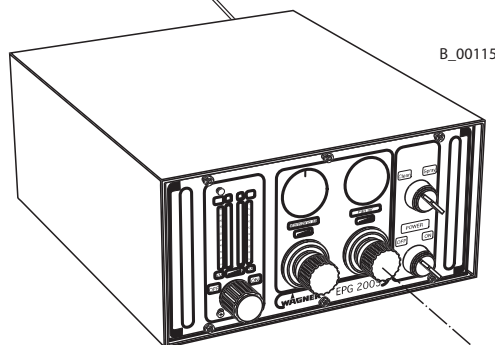
Other nozzle sizes can be used to obtain larger or smaller spraying patterns.



#### Spray gun GA 2805EA

The spray pattern can be adjusted to suit the object being sprayed using the fan air regulator on the EPG 3000.

Other nozzle sizes can be used to obtain larger or smaller spraying patterns



Higher fan air pressure =  
Wide spray angle

Smaller fan air pressure =  
Narrow spray angle

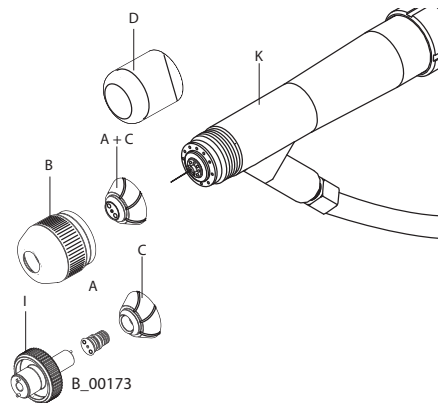
Fan air regulator

### 5.4.3 FITTING OR CHANGING ROUND JET NOZZLE

1. Switch off control unit.
2. Relieve spray gun and unit pressure!
3. Replace paint with cleaning solvent, and
4. Thoroughly flush spray gun.
5. Relieve spray gun and unit pressure!
6. Unscrew nozzle nut (B) by hand and remove it.
7. Remove the nozzle body (C) and the nozzle insert Supra (A).
8. Unscrew nozzle insert Supra (A) with the nozzle spanner (I) from the nozzle body (C).
9. Re-assembly in reverse order.

**Note:**

To protect the electrode needle replace the cap (D) when the gun is not in use.



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

### CAUTION

#### Defective electrode!

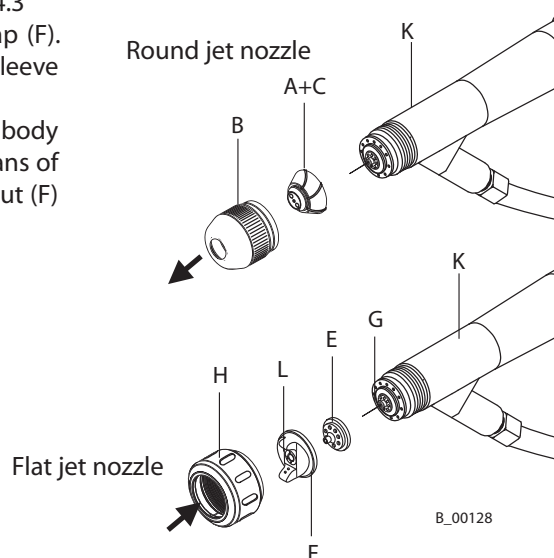
Material damage due to functional faults.

→ Do not damage the electrode.

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Perform steps 1 and 7 of paragraph 5.4.3

8. Place flat jet nozzle (E) into air cap (F). Place booth of them onto the sleeve (G)
9. Screw nozzle nut (H) on the gun body (K). Adjust desired jet level by means of air cap horns (L). Tighten air cap nut (F) by hand on the gun body (K)



#### 5.4.5 FITTING OR CHANGING FLAT JET NOZZLE

Perform steps 1 and 5 of paragraph 5.4.3

6. Unscrew nozzle nut (H) by hand.
7. Remove air cap (F) and flat jet nozzle (E)
8. **Mounting:**  
According to steps 8 and 9 of paragraph 5.4.4

## 6 MAINTENANCE

→ See **safety regulations** in chapter 2

The spray gun and the unit must be cleaned every day. Use only the cleaning solvent recommended by the material manufacture.

### CAUTION

#### Cleaning agent in the air duct!

Functional faults caused by swollen seals

→ Never immerse the spray gun in cleaning agent.

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### WARNING



#### Incorrect maintenance/repair!

Risk of injury and damage to the equipment

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

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## 6.1 FINISHING WORK AND CLEANING

	 <b>DANGER</b>
	<p><b>Exploding gas/ air mixture!</b>            Danger to life from flying parts and burns</p> <p>→ Never spray into a closed container.            → Earth the container.</p>

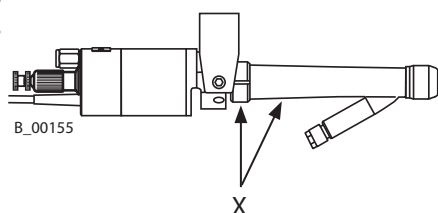
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1. Switch off control unit.
2. Relieve spray gun and system pressure.
3. Replace the cleaning supply.
4. Close down the atomization air supply, i.e., turn air regulator on the EPG 3000 to 0.
5. Thoroughly flush spray gun !
6. Relieve spray gun and system pressure.
7. Clean gun with solvent recommended by the manufacturer and dry with a cloth or blow gun.

<h2>CAUTION</h2>
<p><b>Solvent in air conduit !</b>            Functional faults caused by swollen seals.</p> <p>→ Always point the spray gun down when cleaning.            → Ensure that neither paint nor cleaning agent enters the air duct.</p>

SIHI\_0116\_GB

**The gun attachment (X) may only be changed by the WAGNER Service Station.**



## 7 TROUBLESHOOTING AND MAINTENANCE

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Insufficient material output	• Nozzle too small	• Select larger nozzle (see chapter 9.1)
	• Material pressure too low	• Increase material pressure
	• Material viscosity too high	• Thin material in accordance with the manufacturers instructions
	• Filter in material supply clogged	• Clean or replace filter
	• Nozzle is clogged	• Clean or replace nozzle
	• Union screw is screwed in too far.	• Turn union screw anticlockwise
Poor spray pattern	• Wrongly adjusted atomizing air and / or fan air	• Readjust the atomizing air or fan air
	• Nozzle too large	• Select smaller nozzle (see chapter 9.1)
	• Material viscosity too high	• Thin material acc. to manufacturers instruction.
	• Material pressure too high	• Reduce material pressure
	• Damaged nozzle	• Replace nozzle
	• Damaged electrode	• See chapter 8.4 for repairs
Leaking air valve	• Damaged seals on the valve rod	• Exchange seals (see chapter 8.3)
	• Sealing screw loose	• Tighten sealing screw
Poor wrap round or electrostatic effect	• Poor earthing at object	• Check earthing of object or hanger with ohmmeter
	• Paint resistance too high / to low	• Check resistance of paint in accordance with paragraph 4.1.1
	• Spraying pressure too high	• Adjust spraying pressure
Back spraying	• Object not earthed	• Check earthing
	• Distance between spray gun and work piece too large	• Reduce distance between spray gun and work piece





**Troubleshooting and Maintenance**

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
No wrap round	• No high voltage	• Check function of control unit in accordance with its manual
	• Air-passages damp	• Cleaning air-passages and drying
	• Conductive sediments in the material hose	• Clean or replace the material hose
	• High conductive paint	• Use original Wagner material hose with at least 7.5 m; 25 ft length
	• Paint conductivity too high	• Check resistance of paint in accordance with paragraph 4.1.1
Leaking material at the nozzle	• Damaged needle head (20)*	• Changing needle head
Leaking air valve	• Damaged seals on the valve rod	• Exchange seals (see paragraph 8.3)

**Attention:**

\* = Positions are shown in the part lists and drawings of chapter 10.

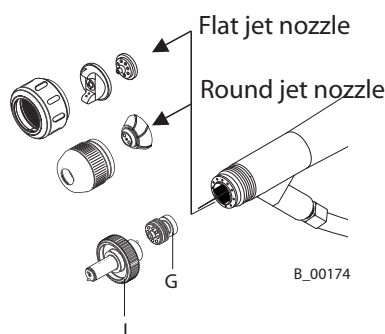
## 8 REPAIR WORK

	 <b>WARNING</b>
	<p><b>Incorrect maintenance/repair!</b> Danger to life and equipment damage</p> <p>→ Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.</p> <p>→ Only repair and replace parts that are listed in the chapter "Spare parts catalog".</p> <p>→ Before all work on the unit and in the event of work interruptions:</p> <ul style="list-style-type: none"> <li>- Disconnect the control unit from the mains.</li> <li>- Relieve the pressure from the spray gun and unit.</li> <li>- Secure the spray gun against actuation.</li> </ul> <p>→ Observe the operating and service instructions when carrying out all work.</p>

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### 8.1 REPLACING THE VALVE SEAT

1. Remove nozzle according to paragraph 5.4.3 or 5.4.5.
2. Use nozzle key 2800 (I) to unscrew valve seat. Replace, and tighten carefully.
3. Reassemble nozzle in reverse order.



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## 8.2 EXCHANGE OF COMPLETE VALVE ROD

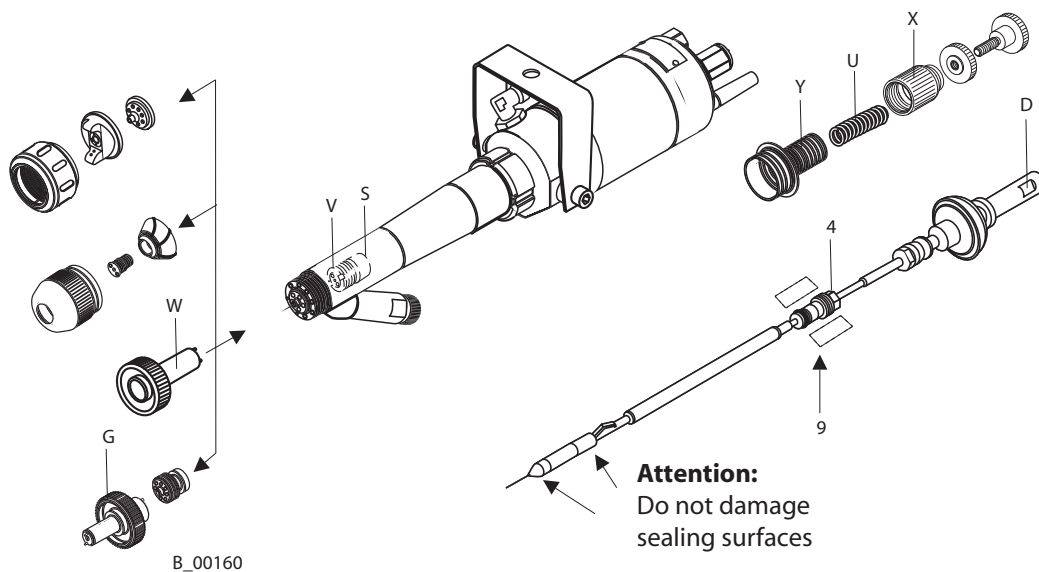
### CAUTION

#### Defective sealing surface!

Equipment damage to the gun.  
Coating error.

→ Do not damage the sealing surface.

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1. Remove nozzle according to paragraph 5.4.3 and 5.4.5
2. Remove valve seat according to paragraph 8.1.
3. Loosen front packing screw (V) 1/2 to 1 turn, using the packing key (W) (available as accessory), in order to relieve the packing from the valve stem.
4. Unscrew tension nut (X), and remove compression spring (U).
5. Unscrew locking piece (Y) using spanner, size 17 mm; 0.70 inches.
6. Remove sealing screw (4) using spanner, size 6 mm; 0.28 inches, from the paint seal housing (9).

### CAUTION

#### Leaking spray gun!

Risk of injury from coating material coming out.

→ Do not remove the paint sealing sleeve.

SIHI\_0035\_GB

7. Carefully pull out complete valve rod using surface (D) – replace if necessary.
8. Reassemble in reverse order – do not forget to screw in the centre packing screw (4).
9. Carefully tighten the packing screw (V) using the packing key (W) until light resistance is felt on the valve stem when pulling the valve rod.
10. Fit valve seat (G) according to paragraph 8.1
11. Fit nozzle according to paragraph 5.4.3 resp. 5.4.5

### 8.3 EXCHANGE OF VALVE ROD SEALS

## CAUTION

#### Defective sealing surface!

Equipment damage to the gun.  
Coating error.

→ Do not damage the sealing surface.

SIHI\_0034\_GB

1. Remove valve rod as described in paragraph 8.2
2. Hold with universal spanner at surface (D) and unscrew valve sealing element (1/E) using a small pliers.
3. Remove compression ring with O-ring (2) and seal (3).
4. If the tappet seal is faulty, undo the nut (6) with the universal spanner and pull out the tappet seal (7).
5. Replace the O-ring (2), the front seal (3) and, if necessary, the tappet seal (7) or the piston seal (5).
6. Reassemble valve rod in reverse order and secure thread with Loctite 270. See paragraph 8.2.

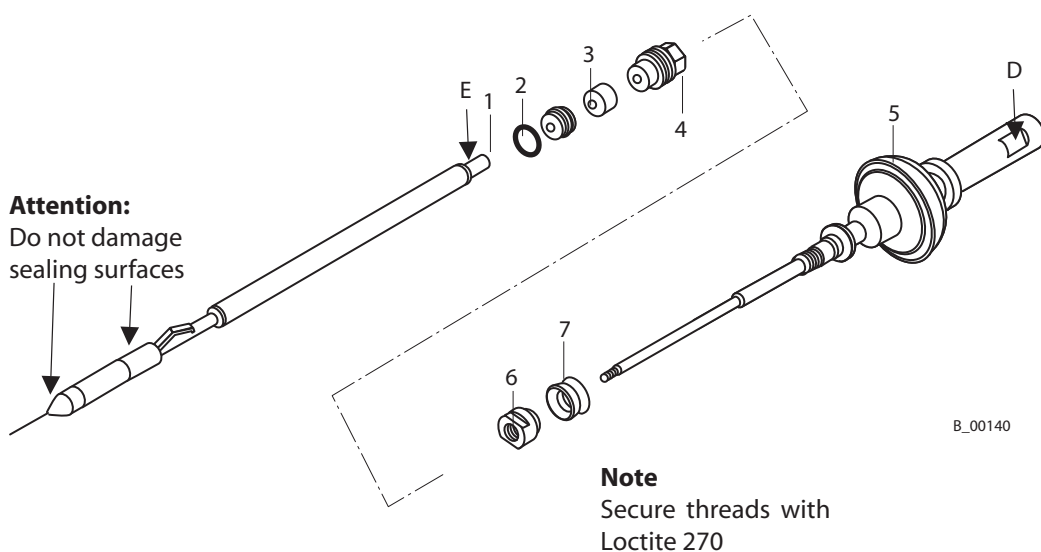
## CAUTION

#### Unsuitable tool!

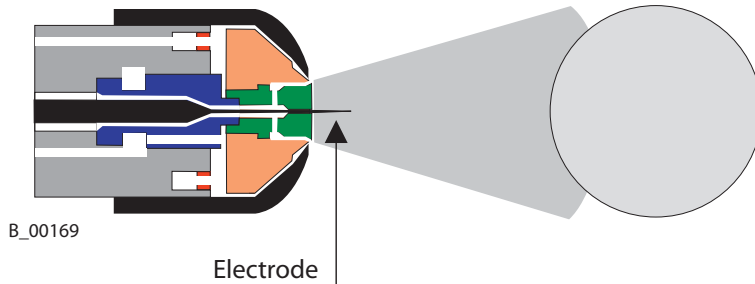
Damage to seals and sealing surfaces

→ Do not hold the valve rod with pliers or a similar tool.

SIHI\_0006\_GB



## 8.4 ELECTRODE REPLACEMENT



If the electrode is damaged (bent or broken) by incorrect handling, the valve needle head (12) must be replaced.

### CAUTION

#### Defective sealing surface!

Equipment damage to the gun.  
Coating error.

→ Do not damage the sealing surface. (15)

SIHI\_0034\_GB

1. Remove valve rod as described in paragraph 8.2.
2. Carefully clamp the valve rod extension (11) and pull off the needle head (12) using small pliers.
3. Manually press the new needle head (12) onto the resistor housing (13).

#### Note

For easier assembly fit the valve needle with the electrode pressed into a cork.

4. Refit valve rod as described in paragraph 8.2.

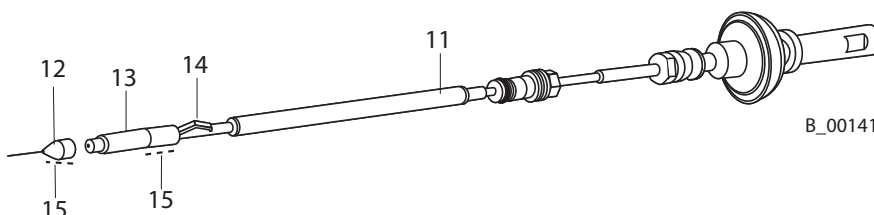
### CAUTION

#### Contact spring incorrectly fitted!

Poor coating result.

→ Ensure that contact spring (14) engages.

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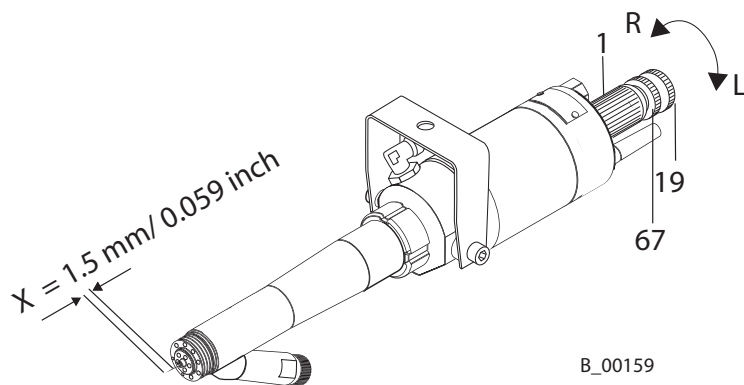
## 8.5 ADJUSTING THE VALVE MOVEMENT

After changing a nozzle or needle nozzle, the valve movement can be adjusted by turning the union screw (19) of the tension nut (1). The adjustment can be locked with union nut (67).

X Set by the factory: Distance = 1.5 mm; 0.06 inch.

R Turning right = Reducing the valve movement, that means less material output.

L Turning left = Enlarging the valve movement, that means more material output.





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## 8.6 REPLACING THE PAINT HOSE

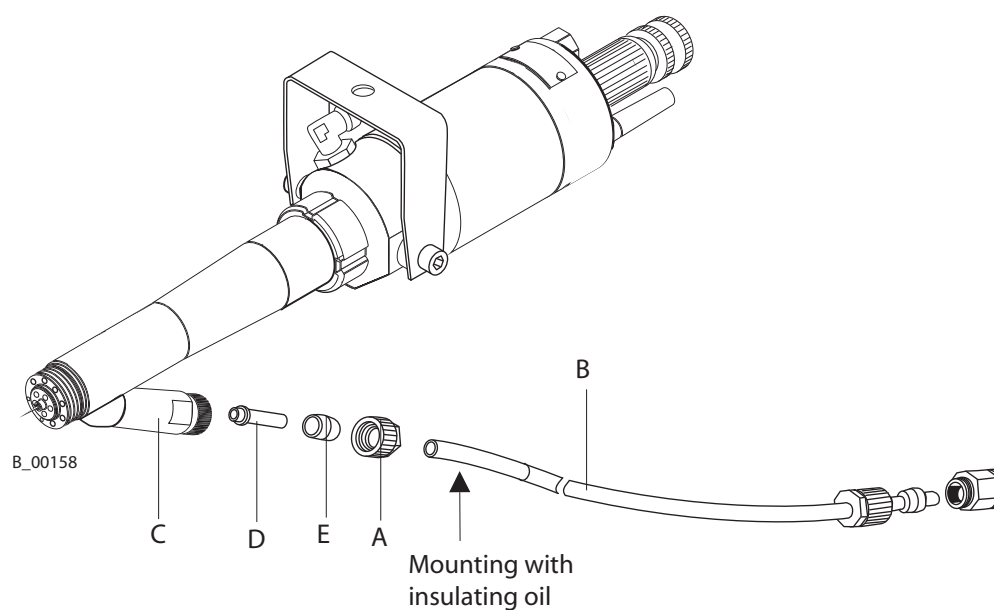
1. Unscrew nut (A) using the universal spanner.
2. Pull material hose (B) out of the connection (C).
3. Remove insert (D), clamping ring (E) and nut (A) from material hose.
4. Pull the material hose back through the protective sleeve (F) and remove it.

If the material hose has been ordered per meter, strip the insulation from 75 mm; 3.0 inch at both ends (see special accessory 9.4)

	 <b>WARNING</b>
	<p><b>Damaged material hose!</b> Risk of injury from coating material coming out. Electric shock risk.</p> <p>→ When removing insulation, ensure that the inner hose is not damaged.</p>

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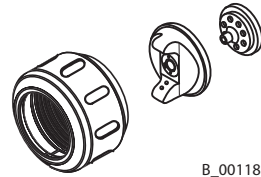
5. Fit the nut (A) and clamping ring (E) over the material hose (B).
  6. Insert the cleaned or new sealing sleeve (D) into the material hose (B).
  7. Wet the material hose (B) on the insert length with high voltage oil
- Note**  
The high voltage oil protects against high voltage burn-through (leakage to earth or atmosphere)
8. Insert material hose (B) into the connection (C) as far as it will go.
  9. Pull the union nut (A) over the clamping ring (E) and gently tighten it with the universal spanner.



## 9 ACCESSORIES

### 9.1 NOZZLES EA FLAT-JET

Part No.	Description	Colour
363228	Nozzle set EAF 0.6	black
363229	Nozzle set EAF 0.8	yellow
363230	Nozzle set EAF 1.0	red
363231	Nozzle set EAF 1.2	green
363232	Nozzle set EAF 1.4	brown
363233	Nozzle set EAF 1.6	white
363234	Nozzle set EAF 1.8	blue
363235	Nozzle set EAF 2.0	black
2303641	Air cap assy. EAF 0.6	black
353968	Air cap assy. EAF 0.8	yellow
353973	Air cap assy. EAF 1.0	red
353960	Air cap assy. EAF 1.2	green
353961	Air cap assy. EAF 1.4	brown
353962	Air cap assy. EAF 1.6	white
353963	Air cap assy. EAF 1.8	blue
353964	Air cap assy. EAF 2.0	black
2303640	Flat jet nozzle EAF 0.6	black
353969	Flat jet nozzle EAF 0.8	yellow
353970	Flat jet nozzle EAF 1.0	red
353955	Flat jet nozzle EAF 1.2	green
353956	Flat jet nozzle EAF 1.4	brown
353957	Flat jet nozzle EAF 1.6	white
353958	Flat jet nozzle EAF 1.8	blue
353959	Flat jet nozzle EAF 2.0	black



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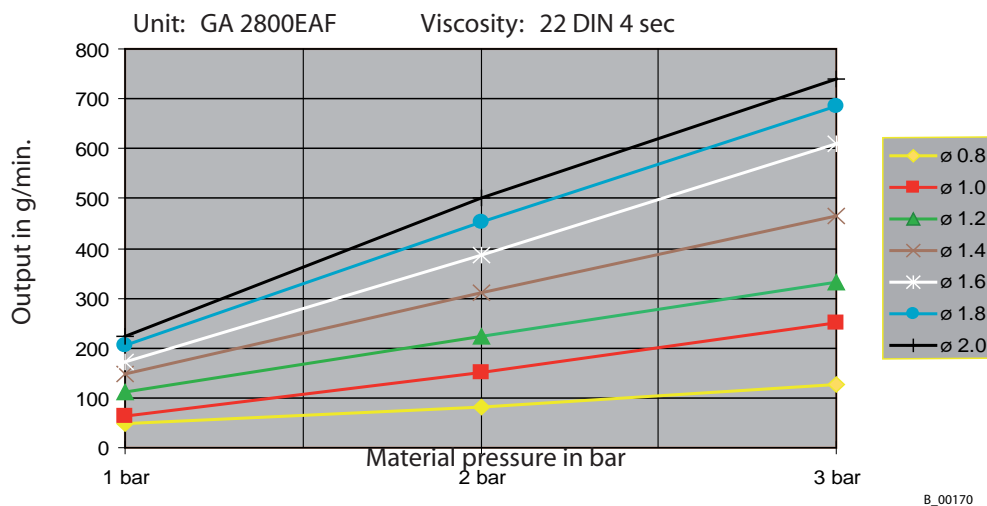
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**Note:** Only install EAF nozzles parts with the same colour (air cap colour and nozzle colour must be identical).

#### 9.1.1 PAINT OUTPUT MEASURED WITH SYNTHETIC ENAMEL

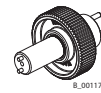
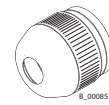
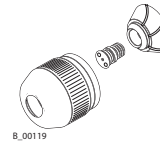


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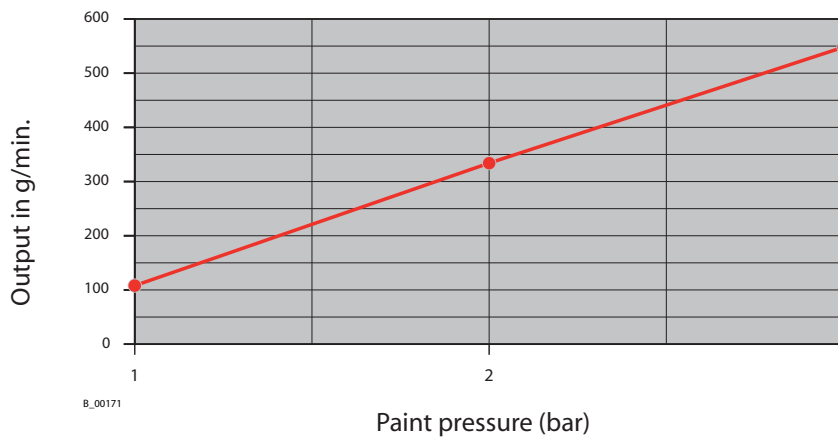
**9.2 EA ROUND JET NOZZLES (SUPRA)**

Part No.	Description
363238	Nozzle set EAR Supra
353966	Outer nut Supra
353965	Nozzle body Supra
353952	Nozzle insert Supra EA
353210	Nozzle spanner 2800 EA



**9.2.1 PAINT OUTPUT MEASURED WITH SYNTHETIC ENAMEL**

Unit: GA 2800EAR  
 Viscosity: 22 DIN 4 sec



**9.3 ELECTRICAL CABLES**

Part No.	Description
350272	Gun cable extension 7.5 m; 24.6 ft
350513	Gun cable extension 10 m; 32.8 ft
350514	Gun cable extension 15 m; 49.2 ft
236219	Earth cable 4 mm <sup>2</sup> ; AWG 12 assy. 3 m; 9.8 ft with clamp
130215	Earth cable 4 mm <sup>2</sup> ; AWG 12 assy. 10 m; 32.8 ft with clamp

**9.4 HOSES AND FITTINGS**

Part No.	Description
381150	Air hose $\varnothing$ 7/10 mm; $\varnothing$ 0.28/0.39 inches black (order by the meter)
9987095	Air hose $\varnothing$ 7/10 mm; $\varnothing$ 0.28/0.39 inches blue (order by the meter)
381151	Air hose $\varnothing$ 5.5/8 mm; $\varnothing$ 0.22/0.31 inches red (order by the meter)
381152	Air hose $\varnothing$ 5.5/8 mm; $\varnothing$ 0.22/0.31 inches green (order by the meter)
-	Material hose $\varnothing$ 6/12 mm; $\varnothing$ 0.24/0.47 inches Contact your WAGNER branch for special precut lengths
353701	Material hose set EA. The set includes 7.5 m; 24.6 ft material hose $\varnothing$ 6/12 mm; $\varnothing$ 0.24/0.47 inch stripped, union nut, clamping ring and insert (for hose replacement see paragraph 8.6)

**9.5 VALVE SEAT AND VALVE NEEDLE HEAD - PLASTIC**

Part No.	Description
350902	Nozzle needle head assy. PEEK
350904	Valve seat assy. PEEK
<i>Replace set metal</i>	
179052	Material valve metal GA 2800EA/ GA 2805EA/ GM 2800EA (see spare parts list valve rod pos. 18 and 20)

**9.6 MISCELLANEOUS**

Part No.	Description
353805	Packing key (for replacing the front valve rod seal)
350364	Mounting bolt $\varnothing$ 12 mm; $\varnothing$ 0.47 inch (alternative to mounting bracket)
9994682	Protection glove against over spray
259005	High voltage tester HV 200
139008	Paint resistance measuring unit
999080	Wet film thickness gauge
50342	Viscosity cup DIN 4
353702	HV-oil for fitting the material hose see paragraph 8.5

## 10 SPARE PARTS

### 10.1 HOW TO ORDER SPARE PARTS?

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

#### Part Number, description and quantity

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



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

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

#### Marks in spare parts lists

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

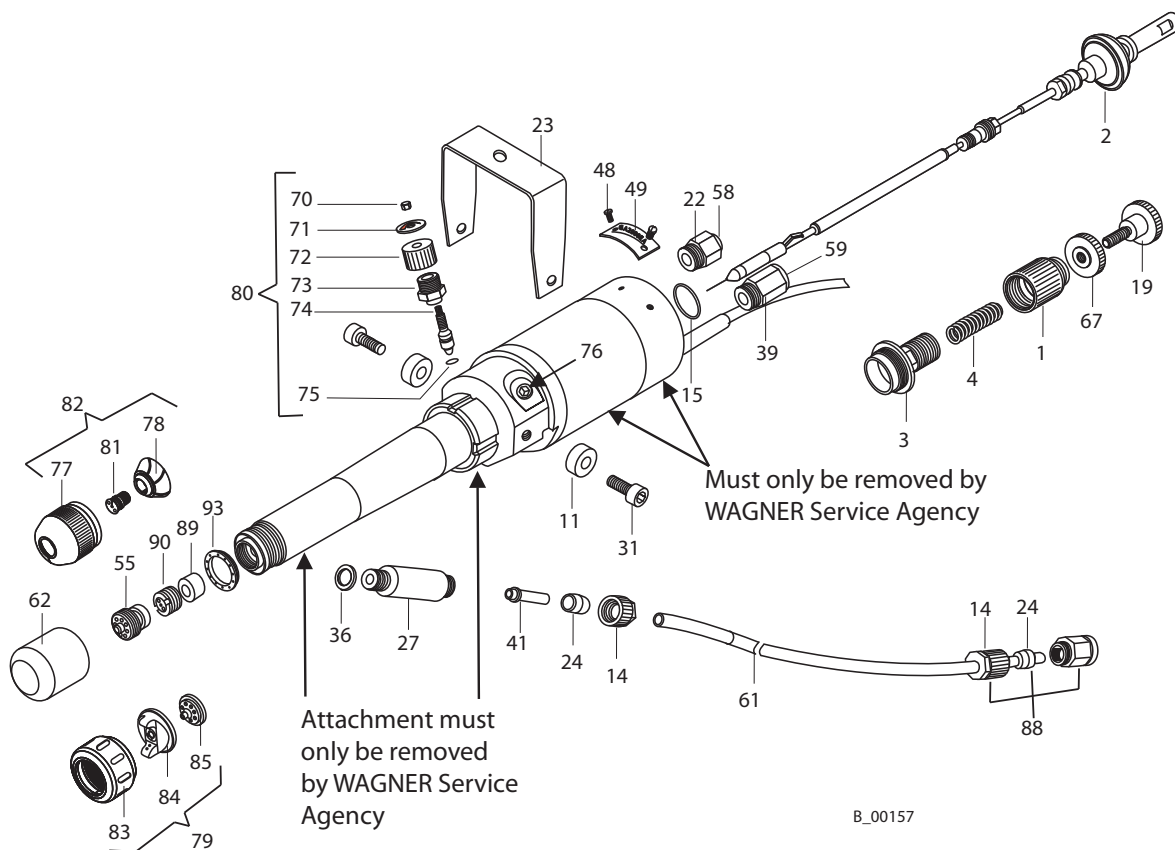
- ◆ = Wearing parts  
**Note:** No liability is assumed for wearing parts
- = Not part of standard equipment, available, however, as additional extra.

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

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**10.2 SPARE PARTS LIST GA 2800EA**



Item	K	Qty	Part No.	Description
1		1	350507	Tension nut
2		1	350108	Valve rod , assembled
3		1	350300	Stopper piece
4		1	9999143	Compression spring
11		2	350319	Distance bush
14		1	9913015	Union nut
15	◆	1	9971164	O-ring
19		1	9902505	Union screw
22		1	9998254	Screw-in fitting, straight
23		1	350309	Gun holder
24		1	9998290	Clamping ring
27		1	353362	Material connection

When assembling gun parts, the Loctite has to be used in accordance with the instructions

◆ = Wearing part

▼ = Various dimensions see accessories in chapter 9

● = Not part of standard equipment for the spray gun, but is available as an optional extra

**Spare parts list GA 2800EA**

Item	K	Qty	Part No.	Description
31		2	9900318	Hexagon socket head cap screw
36	◆	1	9971142	O-ring
39		1	9998987	Screw-in fitting, straight
41		1	353350	Sealing sleeve
48		2	9900810	Pan-head screw M2, 4 mm; 0.16 inches long
49		1	350617	Data plate GA 2800EA
55	◆	1	350127	Valve seat assy. metal
58		1	9998617	Compression ring red
59		1	9998770	Compression ring blue
61		1	350600	Stripped hose, length 15 m; 49.2 ft, $\varnothing$ 6/12 mm; $\varnothing$ 0.24/0.47 inches
62		1	353390	Protection cap
65		1	9920130	Washer
66		1	9900743	Slotted cheese head screw with slit
67		1	9910508	Knurled nut
70		1	9913002	Cap nut
71		1	350344	Plate
72		1	9998041	Union nut
73		1	350342	Nipple
74		1	350341	Air control knob
75	◆	1	9971319	O-ring
76		1	9904407	Screw plug
77	●	1	353966	Outer nut, Supra
78	●	1	353965	Nozzle body Supra
79	●	1	▼	Nozzle set EAF
80		1	350214	Air control knob, assy.
81	●	1	353952	Nozzle insert Supra
82	●		363238	Nozzle set EA Supra
83	●	1	353967	Outer nut EAF
84	●	1	▼	Air cap EAF
85	●	1	▼	Flat jet nozzle EAF
88		1	350382	Hose nipple $\varnothing$ 10 mm; $\varnothing$ 0.39 inches, 1/4"
88		1	350346	Hose nipple $\varnothing$ 10 mm; $\varnothing$ 0.39 inches, 3/8"
89		1	350392	Sealing ring
90		1	350393	Sealing screw
93		1	353358	Attachment ring
			9992560	Loctite 307, 250 ml
			9992538	Loctite Activator (7471 set)
			9992590	Loctite 222, 50 ml

When assembling gun parts, the Loctite has to be used in accordance with the instructions

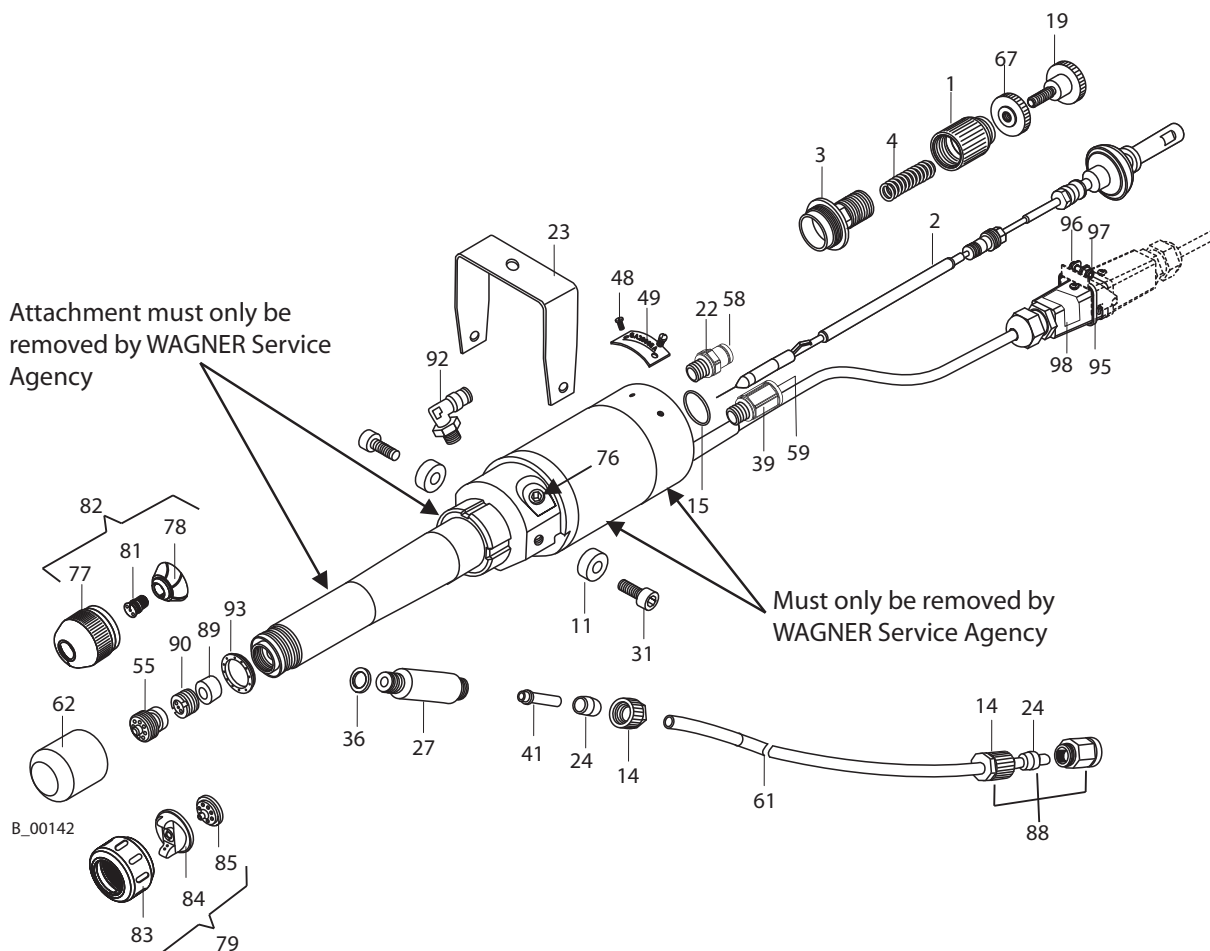
◆ = Wearing part

▼ = Various dimensions see accessories in chapter 9

● = Not part of standard equipment for the spray gun, but is available as an optional extra



**10.3 SPARE PARTS LIST GA 2805EA**



Item	K	Qty	Part No.	Description
1		1	350507	Tension nut
2		1	350108	Valve rod , assembled
3		1	350300	Stopper piece
4		1	9999143	Compression spring
11		2	350319	Distance bush
14		1	9913015	Union nut
15	◆	1	9971164	O-ring
19		1	9902505	Union screw
22		1	9998254	Screw-in fitting, straight
23		1	350309	Gun holder
24		1	9998290	Clamping ring

When assembling gun parts, the Loctite has to be used in accordance with the instructions

◆ = Wearing part

▼ = Various dimensions see accessories in chapter 9

● = Not part of standard equipment for the spray gun, but is available as an optional extra

**Spare parts list GA 2805EA**

Item	K	Qty	Part No.	Description
27		1	353362	Material connection
31		2	9900318	Hexagon socket head cap screw
36	◆	1	9971142	O-ring
39		1	9998987	Screw-in fitting, straight
41		1	353350	Sealing sleeve
48		2	9900810	Pan-head screw M2, 4 mm; 0.16 inches long
49		1	350621	Data plate GA 2805EA
55	◆	1	350127	Valve seat assy. metal
58		1	9998617	Compression ring red
59		1	9998770	Compression ring blue
61		1	350600	Stripped hose, length 15 m; 49.2 ft, ø 6/12 mm; ø 0.24/0.47 inches
62		1	353390	Protection cap
65		1	9920130	Washer
66		1	9900743	Slotted cheese head screw with slit
67		1	9910508	Knurled nut
76		1	9904407	Screw plug
77	●	1	353966	Outer nut, Supra
78	●	1	353965	Nozzle body Supra
79	●	1	▼	Nozzle set EAF
81	●	1	353952	Nozzle insert Supra
82	●		363238	Nozzle set EA Supra
83	●	1	353967	Outer nut EAF
84	●	1	▼	Air cap EAF
85	●	1	▼	Flat jet nozzle EAF
88		1	350382	Hose nipple ø 10 mm; ø 0.39 inches, 1/4"
88		1	350346	Hose nipple ø 10 mm; ø 0.39 inches, 3/8"
89		1	350392	Sealing ring
90		1	350393	Sealing screw
92		1	9998074	Screwed fitting elbow
93		1	353358	Attachment ring
95		1	350427	Locking bracket
96		1	9903314	Phillips head screw M4x16
97		1	9910202	Hexagonal nut self locking M4
98		1	350521	Sticker
			9992560	Loctite 307, 250 ml
			9992538	Loctite Activator (7471 set)
			9992590	Loctite 222, 50 ml

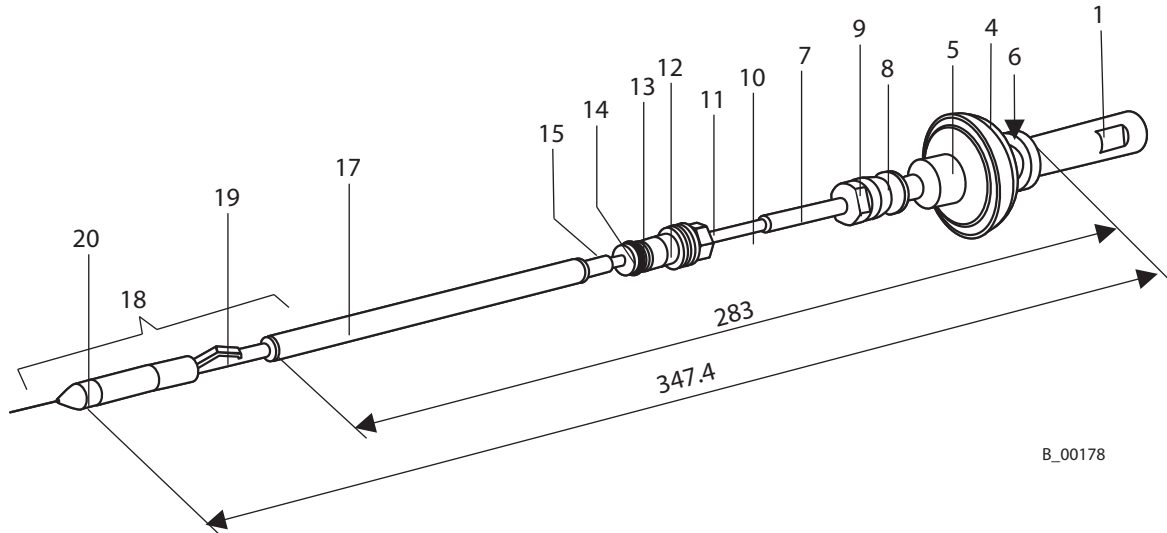
When assembling gun parts, the Loctite has to be used in accordance with the instructions

◆ = Wearing part

▼ = Various dimensions see accessories in chapter 9

● = Not part of standard equipment for the spray gun, but is available as an optional extra

## 10.4 SPARE PARTS LIST VALVE ROD EA



B\_00178

Item	K	Qty	Part No.	Description
1		1	350324	Valve rod holder
4	◆	1	350388	Piston seal
5		1	350321	Piston
6		1	9998040	Compression spring
7		1	350354	Valve rod, spring guide
8	◆★	1	179339	Tappet seal
9		1	350323	Nut
10		1	350508	Valve rod
11		1	179342	Sealing screw
12	◆★	1	350505	Seal
13	◆★	1	9971182	O-ring
14		1	179343	Compression ring
15		1	353351	Connecting piece
17		1	353352	Valve rod extension
18		1	350903	Nozzle needle assy. (metal)
19	◆	1	179409	Contact spring
20	◆	1	350236	Nozzle needle head assy. (metal)

◆ = Wearing part

★ = Included in set of seals valve rod 350910



## OPERATING MANUAL



<p><b>Germany</b> J. WAGNER GmbH Otto-Lilienthal-Str. 18 Postfach 1120 D- 88677 Markdorf Telephone: ++49/ (0)7544 / 5050 Telefax: ++49/ (0)7544 / 505200 E-Mail:service.standard@wagner-group.com</p>	<p><b>Switzerland</b> J. WAGNER AG Industriestrasse 22 Postfach 663 CH- 9450 Altstätten Telephone: ++41/ (0)71 / 757 2211 Telefax: ++41/ (0)71 / 757 2222 E-Mail: rep-ch@wagner-group.ch</p>
<p><b>Belgium</b> WAGNER Spraytech Benelux BV Veilinglaan 58 B- 1861 Wolvertem Telephone: ++32/ (0)2 / 269 4675 Telefax: ++32/ (0)2 / 269 7845 E-Mail: info@wagner-wsb.eu</p>	<p><b>Denmark</b> WAGNER Spraytech Scandinavia A/S Helgeshøj Allé 28 DK- 2630 Tåstrup Telephone: ++45/ 43 271 818 Telefax: ++45/ 43 43 05 28 E-Mail wagner@wagner-group.dk</p>
<p><b>United Kingdom</b> WAGNER Spraytech (UK) Ltd. Haslemere Way Tramway Industrial Estate GB- Banbury, OXON OX16 8TY Telephone: ++44/ (0)1295 / 265 353 Telefax: ++44/ (0)1295 / 269861 E-Mail: enquiry@wagnerspraytech.co.uk</p>	<p><b>France</b> J. WAGNER France S.A.R.L. 5, Ave. du 1er Mai – BP 47 F- 91122 Palaiseau-Cedex  Telephone: ++33/ (0)1 / 69 19 46 76 Telefax: ++33/ (0)1 / 69 81 72 57 E-Mail: division.batiment@wagner-france.fr</p>
<p><b>Netherlands</b> WAGNER SPRAYTECH Benelux BV Zonnebaan 10 NL- 3542 EC Utrecht PO Box 1656 3600 BR Maarssen Telephone: ++31/ (0)30 / 241 4155 Telefax: ++31/ (0)30 / 241 1787 E-Mail: info@wagner-wsb.eu</p>	<p><b>Italy</b> WAGNER COLORA S.r.l Via Fermi, 3 I- 20040 Burago di Molgora (MI)  Telephone: ++39/ 039 / 625021 Telefax: ++39/ 039 / 6851800 E-Mail: info@wagnercolora.com</p>
<p><b>Japan</b> WAGNER Spraytech Ltd. 2-35, Shinden Nishimachi J- Daito Shi, Osaka, 574-0057  Telephone: ++81/ (0)720 / 874 3561 Telefax: ++81/ (0)720 / 874 3426 E-Mail: marketing@wagner-japan.co.jp</p>	<p><b>Austria</b> J. WAGNER GmbH Otto-Lilienthal-Str. 18 Postfach 1120 D- 88677 Markdorf Telephone: ++49/ (0)7544 / 5050 Telefax: ++49/ (0)7544 / 505200 E-Mail:service.standard@wagner-group.com</p>
<p><b>Sweden</b> WAGNER Industrial Solutions Scandinavia AB Karbingatan 28 S- 25467 Helsingborg Telephone: ++46/ (0)42 150 020 Telefax: ++46/ (0)42 150 035 E-Mail: mailbox@wagner.se</p>	<p><b>Spain</b> WAGNER Spraytech Iberica S.A. Ctra. N- 340, Km. 1245,4 E- 08750 Molins de Rei (Barcelona) Telephone: ++34/ (0)93/ 680 0028 Telefax: ++34/ (0)93/ 668 0156 E-Mail: info@wagnerspain.com</p>
<p><b>Czechoslovakia</b> WAGNER s.r.o. Na Belidle 1/63 C- 15000 Praha 5 Telephone: ++420/ (0)2/ 573 123 24 Telefax: ++420/ (0)2/ 545 001 E-Mail: wagner.s.r.o.@telecom.cz</p>	<p><b>USA</b> Walter Pilot North America 46890 Continental Drive Chesterfield, MI 48047 USA Telephone: ++1/ 877 / 925-8437 Telefax: ++1/ 586 / 598-1457 <a href="http://www.waltherpilotna.com">http://www.waltherpilotna.com</a></p>





# WAGNER



Order number 350731

**Germany**

J.WAGNER GmbH  
Otto-Lilienthal-Str. 18  
Postfach 1120  
D- 88677 **Markdorf**  
Telephone ++49/ (0)7544 / 5050  
Telefax ++49/ (0)7544 / 505200  
E-Mail: service.standard@wagner-group.com

**Switzerland**

J.WAGNER AG  
Industriestrasse 22  
Postfach 663  
CH- 9450 **Altstätten**  
Telephone ++41/ (0)71 / 757 2211  
Telefax ++41/ (0)71 / 757 2222  
E-Mail: rep-ch@wagner-group.ch

[www.wagner-group.com](http://www.wagner-group.com)