

Operating Manual

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HiCoat-ED Pump



DANGER



High Voltage!
Turn power off
before servicing!



CAUTION

Read rules for safe
operation and
instructions
carefully!



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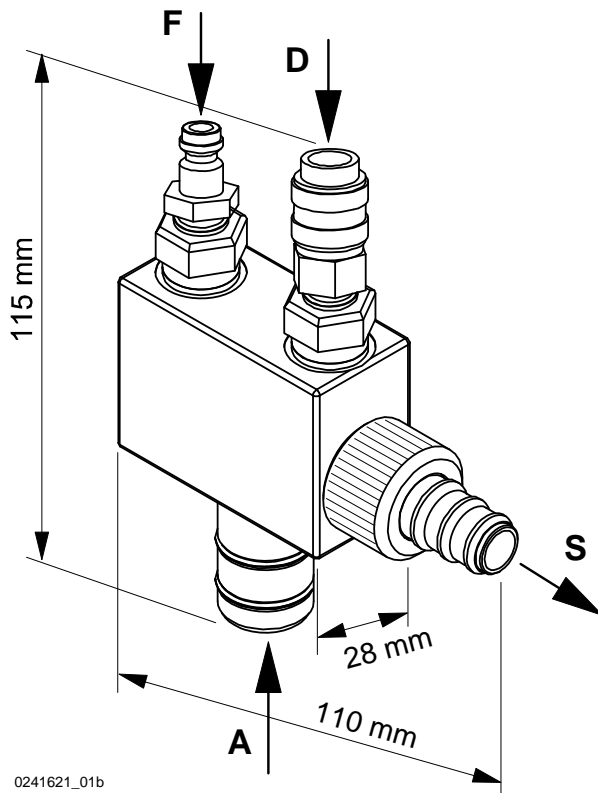
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HiCoat-ED Pump - P

Article No. 0241623

HiCoat-ED Pump - F

Article No. 0241624



- A Powder inlet from powder container
- F Feed air inlet
- D Dosage air inlet
- S Powder/air mixture outlet to gun

The switched air mode:

No powder is fed to **A** if the feed air **F** is switched off and, simultaneously, the dosage air quantity **D** is increased to maximum level.

No new powder **A** is fed to the spray gun, while the powder feed hose **S** is regularly purged with dosage air. The powder flow **A** starts immediately as soon as the feed air is switched on again and the dosage air is switched to normal quantity.

The HiCoat-ED Pump is used for powder feeding in manual as well as automatic powder coating systems.

All types of coating powder can be processed with the HiCoat-ED Pump.

A choice of two HiCoat-ED Pumps is available:

- HiCoat-ED Pump - P
- HiCoat-ED Pump - F

The **HiCoat-ED Pump - P** is connected to control units with pressure regulator.

The **HiCoat-ED Pump - F**, on the other hand, is connected to control units, which regulate compressed air quantity, making this HiCoat-ED Pump - F suitable for applications involving control units with **AFC technology** (flow rate control) and purging air mode for powder flow.

Both HiCoat-ED Pumps can be operated with the following control units:

- HiCoat-ED Pump - P with **EPG 2008/EPG Prima or PrimaTech**
- HiCoat-ED Pump - F with **EPG-D1 or ProfiTech**



Caution

The maximum temperature **should not exceed 95 °F (35 °C)**.
 Otherwise it cannot be ensured that the powder output quantity of the HiCoat-ED Pump can be reached.

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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. 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:

- 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.
- Over sprayed powder must be reliably collected.
- Adhere to the instructions given by the manufacturers and to the prevalent local laws on the environment when disposing of waste coating powder.
- Repairs may only be carried out by trained technicians and may never be carried out in an explosion hazardous area.
- **Guideline 94/9/EG:** The device is suited for the applications it was designed for, even in explosion-hazard areas.

General safety rules

- Wear suitable work clothing.
- Use breathing protection or a vizard for work which produces powder and when developing solvent steams: Avoid health dangers by inhalation and skin contacts of solvent steams and lacquer aerosols; Cornea injuries by splashes in the eye.



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!

Alteration or repair of Wagner original spare parts may cause fatal accidents or explosions in the coating system!

2. Start up

2.1 Preparing the HiCoat-ED Pump



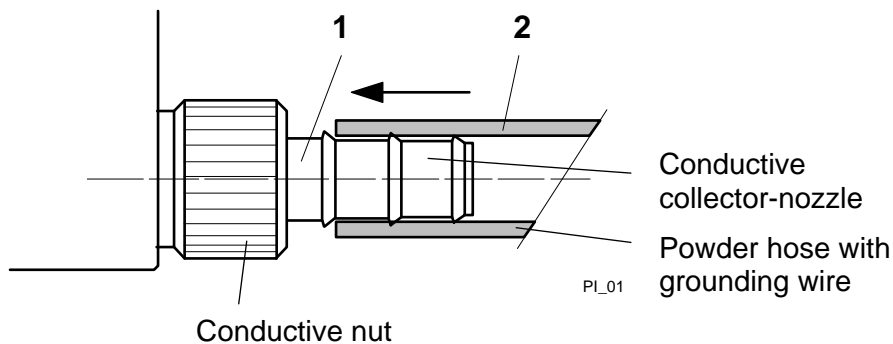
Caution

The HiCoat-ED Pump **must** be grounded to prevent static charging!
In this case, you must use the Wagner Special hose!

2.1.1 Connecting the powder hose

Push the powder hose **2** onto the collector-nozzle **1** until it is firmly fixed.

Here, you should use the **Special hose** with an inner diameter of 8, 9 or 10 mm, as illustrated in chapter [5.4 "Special accessories"](#). This hose is equipped with an integrated grounding wire, which contributes greatly to preventing powder charging.



2.1.2 Grounding

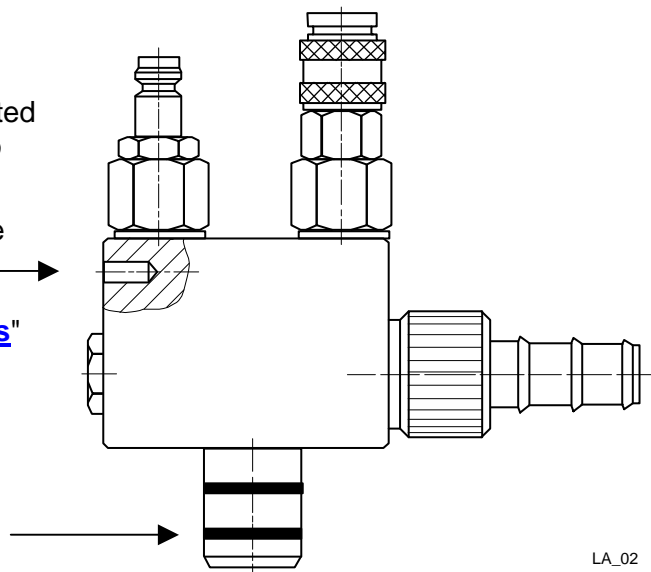
The HiCoat-ED Pump **must** be fitted with a grounding cable in application modes.

The grounding cable **must** be connected to the rear side of the control unit or to the system ground:

M5 threaded hole with 4 mm core hole diameter for grounding cable

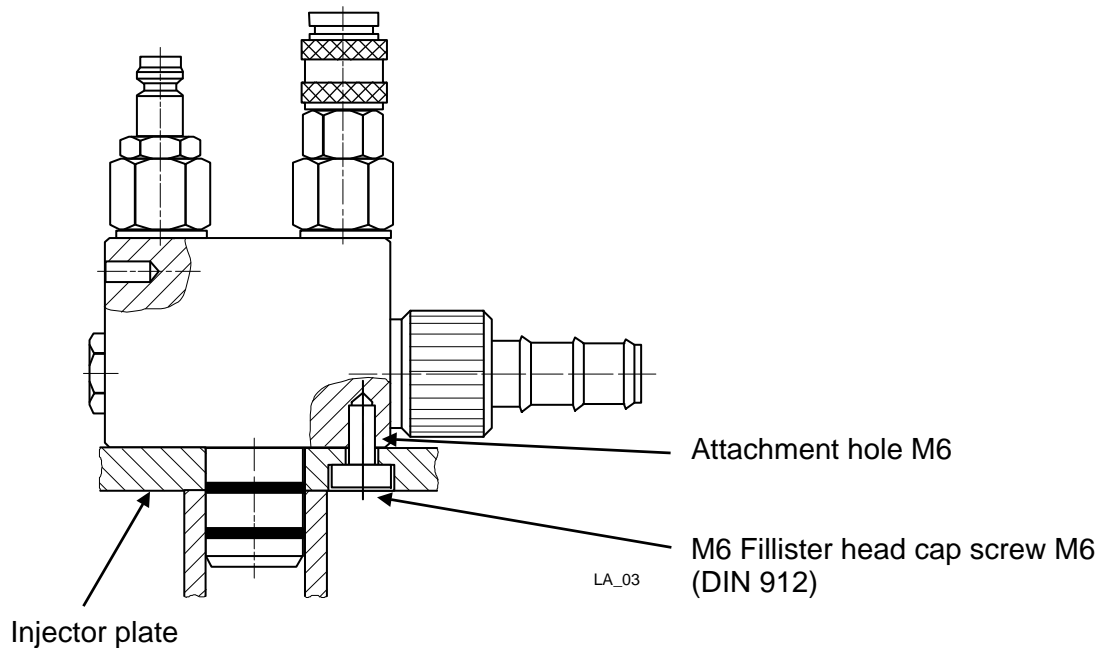
See chapter [5.4 "Special accessories"](#) for article numbers.

Use only conductive O-ring.



Mounting the HiCoat-ED Pump to the injector plate.

The HiCoat-ED Pump can be fitted to an injector plate.



Caution

The injector plate **must** be grounded!

2.2 Adjusting the HiCoat-ED Pump to the desired powder output quantity

Rule of thumb for setting the HiCoat-ED Pump:

- **Feed air quantity:** The greater the feed air quantity, the larger the powder output quantity.
- **Overall air quantity:** The greater the overall air quantity, the smaller the powder output quantity.

This means: The **ratio of the feed air quantity to the overall air quantity** is determined by the powder output quantity.



Hint

The achievable powder output depends on a number of factors:

- the length and diameter of the hose
- the suction system
- the manner in which the hose is laid
- the type of powder
- wear on the HiCoat-ED Pump.

The HiCoat-ED Pump powder output quantity values in the following tables have been determined under the following conditions:

- Test structure:**
- Control unit **EPG-D1**
 - Spray gun **PEA-C4-HiCoat** with fan spray nozzle
 - Powder container fluidized and shaken

Powder density: 1.6 kg/dm³



Hint

The feed air quantity **must** be reduced for pulsing powder feed. However, the overall air quantity **must** remain the same.

Recommended powder output quantity: The optimally powder output quantity lies between the range 30 – 180g/min.

1. HiCoat-ED Pump Powder hose inside diameter 8 mm

Overall air quantity 2.5 Nm³/h

This setting is recommended for **increased coating quality**.

Feed air (Nm ³ /h)	Powder hose length 6 m	Powder hose length 12 m
	Powder output quantity (g/min)	Powder output quantity (g/min)
1.0	30	10
1.5	105	40
2.0	155	95
2.5	190	135

2. HiCoat-ED Pump Powder hose inside diameter 9 mm

Overall air quantity 3.0 Nm³/h

This setting is recommended for **standard coating quality**.

Feed air (Nm ³ /h)	Powder hose length 6 m	Powder hose length 12 m
	Powder output quantity (g/min)	Powder output quantity (g/min)
1.0	35	10
2.0	150	90
2.5	190	130
3.0	240	165

3. HiCoat-ED Pump

Powder hose inside diameter 10 mm

Overall air quantity

3.5 Nm³/h

This setting is recommended for **standard coating quality**.

Feed air (Nm ³ /h)	Powder hose length 6 m	Powder hose length 12 m
	Powder output quantity (g/min)	Powder output quantity (g/min)
1.0	55	20
2.0	175	135
3.0	280	215
3.5	320	250

2.3 Performing a color change



Hint

When changing colors, all powder transporting components **must** be cleaned thoroughly.

2.3.1 HiCoat-ED Pump - F

The control unit (with AFC technology) for the **HiCoat-ED Pump - F** is switched to automatic purging. The HiCoat-ED Pump is completely cleared of residual powder during this procedure.

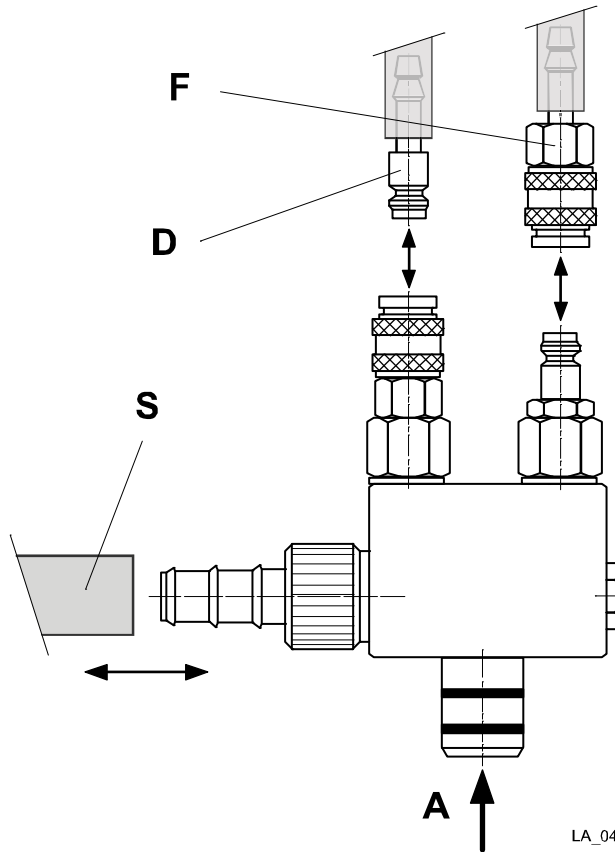
Please consult Wagner Service if the control unit is not yet equipped with this purging procedure function, or proceed as in the following description for the **HiCoat-ED Pump - P**.

2.3.2 HiCoat-ED Pump - P



Caution

Deactivate the high voltage!



Proceed as follows:

1. Check that the high voltage has been deactivated.
2. Connect the feed air and dosage air.
3. Disconnect powder feed hose **S**, plug-in nipple **F** for the feed air and coupling **D** for the dosage air from the HiCoat-ED Pump - P.
4. Pull the HiCoat-ED Pump - P out of the injector connection.
5. Blow through the HiCoat-ED Pump - P from the powder intake **A** with spurts of compressed air and clear of all powder residue or deposits.
6. Connect the powder feed hose **S**, plug-in nipple **F** for the feed air and coupling **D** for the dosage air to the HiCoat-ED Pump - P again.
7. Check the grounding before re-starting.

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3. Maintenance and cleaning

3.1 Dismantling the collector-nozzle

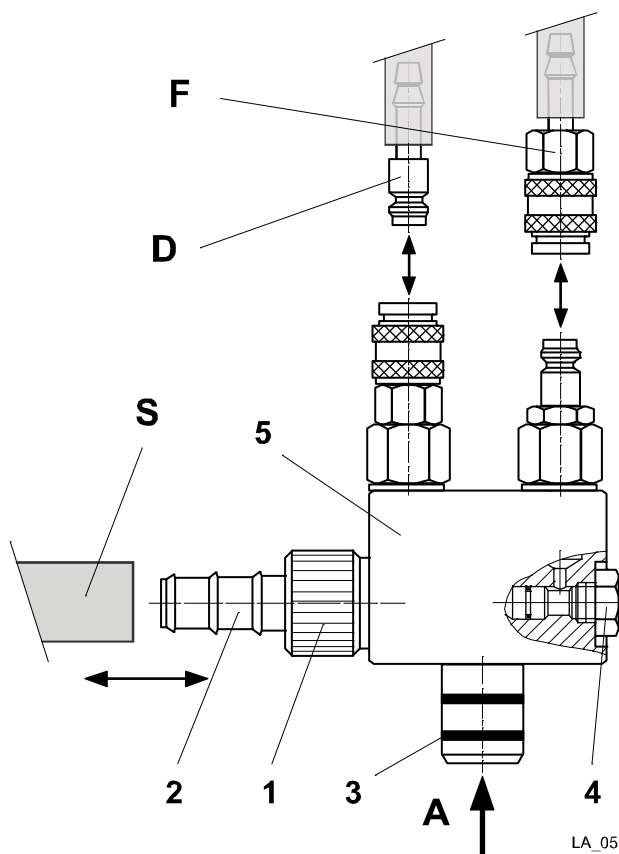


Caution

Always deactivate the high voltage before starting any maintenance work and ensure that it cannot be reactivated again!

The collector-nozzle **2** and O-ring **3** are parts subject to wear and **must** be checked regularly (weekly) and replaced if the powder feed is inadequate.

The injector nozzle **4** should be checked at longer intervals and examined for wear.



Proceed as follows:

1. Disconnect all air connections and powder hoses **F/D/S** from the HiCoat-ED Pump - P and remove from the injector holder on the powder container.
2. Loosen the outer nut **1** and remove the collector-nozzle **2** from the injector housing **5**.
3. Clean the injector housing (blow out with compressed air).
4. Loosen the collector-nozzle, check it for wear and replace if necessary.

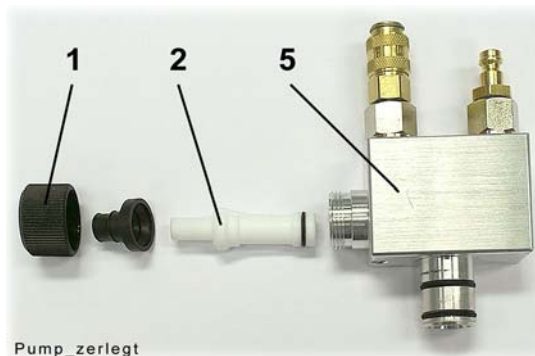
Parts subject to wear and spare parts are listed in chapter [5](#).

The condition of the collector-nozzle can be checked by using the testing gauge.



Hint

The powder output can sink by 30% or more in relation to the set value due to collector-nozzle wear.



3.2 Checking the collector-nozzle for wear

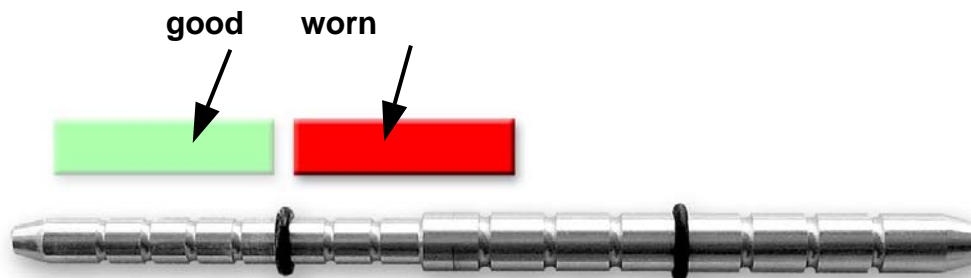
Penetration depths:



Hint

- Green:** the collector-nozzle does not have to be exchanged
- Red:** the collector-nozzle **must** be exchanged

The O-rings are located according to the specific quality demands.

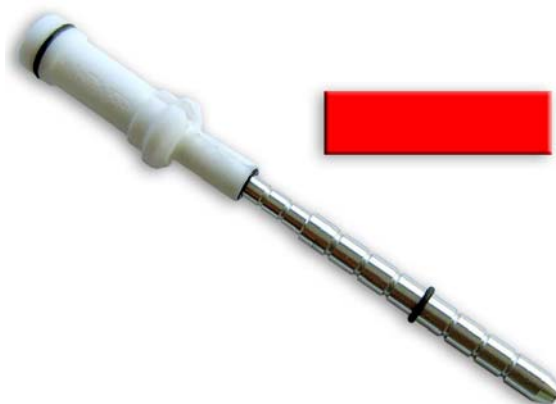


Collector-nozzle 0241229

Testing gauge 0241929



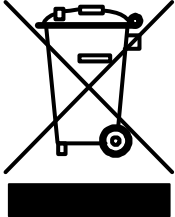
- Push the testing gauge into the collector-nozzle right **up to the limit stop**.
- This collector-nozzle is **not** worn (new collector-nozzle).



- This collector-nozzle is worn and **must** be exchanged.
- Push the cleaned or new collector-nozzle into the housing right **up to the limit stop**.
- Push the outer nut over the collector-nozzle and tighten it **securely** again.

3.3 Disposal

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Only for EU countries

Do not dispose of electric tools together with household waste material!

In observance of the European Directive 2002/96/EC on waste electrical and electronic equipment and implementation in accordance with national law, this product is not to be disposed of together with household waste material but must be recycled in an environmentally friendly way!

Wagner or one of our dealers will take back your used Wagner waste electrical or electronic equipment and will dispose of it for you in an environmentally friendly way. Please ask your local Wagner service center or dealer for details or contact us direct.

4. Rectification of malfunctions

Malfunction	Cause	Remedy
Insufficient powder delivery	<ul style="list-style-type: none"> - Collector-nozzle clogged - Collector-nozzle worn - Leak between container and HiCoat-ED Pump 	<ul style="list-style-type: none"> - Replace and clean collector-nozzle - Replace collector-nozzle - Replace O-ring
Pulsed powder delivery	<ul style="list-style-type: none"> - Insufficient overall air - Collector-nozzle not mounted correctly 	<ul style="list-style-type: none"> - Increase overall air quantity - Clean thread of the outer nut and tighten nut securely

5. Spare parts lists and accessories

5.1 How to order spare parts

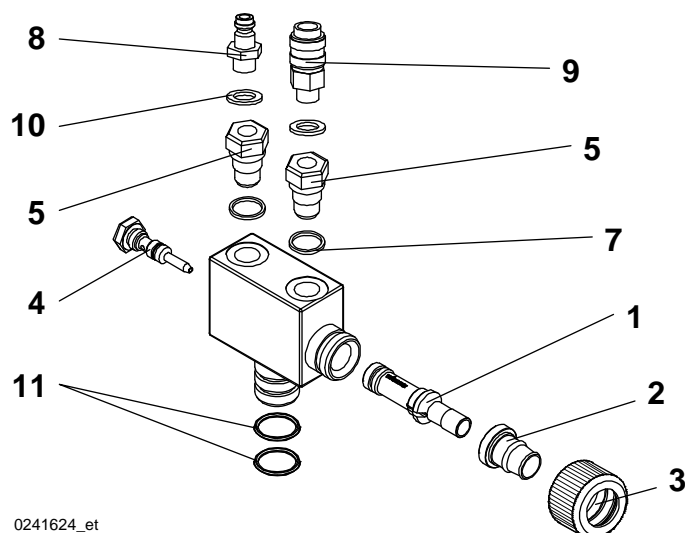
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Faulty and unserviceable parts are replaced in accordance with our General Terms and Conditions of Delivery.

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 persons for check back**
- **Type of delivery**
- **Quantity ordered, article number and designation**

5.2 Spare parts list HiCoat-ED Pump - F

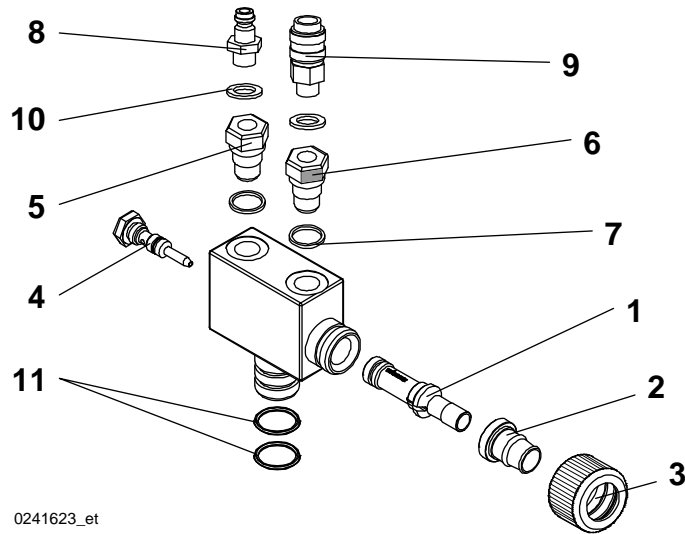


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Item	Article No.	Article No.
	0241624	HiCoat-ED Pump - F
1	0241229 *	Collector nozzle low air
2	0241479	Hose sleeve Ø9
3	0241466	Outer nut
4	0241930	Injector nozzle LA ET
5	0241460	Spring check valve
7	9970149	Sealing ring
8	9992709	Quick-release plug
9	9992710	Quick-release socket
10	9970150	Sealing ring
11	9974023 *	O-ring conductive

* Wearing part


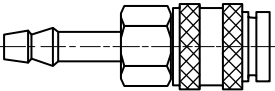
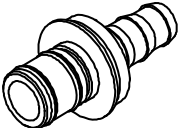
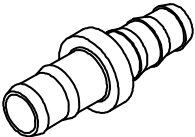

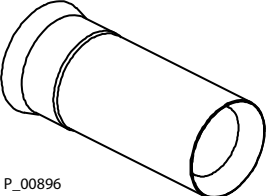
5.3 Spare parts list HiCoat-ED Pump - P



Item	Article No.	Designation
	0241623	HiCoat-ED Pump - P
1	0241229 *	Collector nozzle low air
2	0241479	Hose sleeve Ø9
3	0241466	Outer nut
4	0241930	Injector nozzle LA ET
5	0241460	Spring check valve
6	0241461	Spring check valve with orifice (marked in black)
7	9970149	Sealing ring
8	9992709	Quick-release plug
9	9992710	Quick-release socket
10	9970150	Sealing ring
11	9974023 *	O-ring conductive

* Wearing part

5.4 Special accessories

Article No.	Designation	
9992200 	Plug-in nipple joint for connecting the dosage air line for connecting to an automatic gun	
9992711 	Coupling joint for connecting the feed air line for connecting to an automatic gun	
0390937 	Hose coupling D9 ET for connecting the powder hose D8 or D9 to an XL automatic gun	
0390936 	Hose adapter D9/D10 including hose 9987080 (inside diameter 10 mm) for connecting the powder hose D8 or D9 to a manual or automatic gun	
0351798	Special hose	Inside diameter 8 mm available by the meter
0351794	Special hose	Inside diameter 9 mm available by the meter
9987080	Special hose	Inside diameter 10 mm available by the meter
0264245	Grounding cable with \varnothing 4 mm bunch plug 0.5 m long (second cable end with M6 wire lug)	
0241929 	Testing gauge: Application: used for checking collector- nozzle for wear See chapter: "Maintenance and cleaning"	
0241580  <small>P_00896</small>	Inside diameter reduction 10 mm for use at the suction side	

6. Warranty

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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.



ADDRESSES

Germany

J. WAGNER GmbH
Otto-Lilienthal-Str. 18
D-88677 Markdorf

Phone +49/7544/505-0
Fax +49/7544/505-200
service.standard@wagner-group.com

Switzerland

J. WAGNER AG
Postfach 109
Industriestrasse 22
CH-9450 Altstätten

Phone +41/71/7572211
Fax +41/71/7572222
rep-ch@wagner-group.ch

Austria

J. WAGNER GmbH
Otto-Lilienthal-Str. 18
Postfach 1120
D- 88677 Markdorf

Phone: +49/7544/505-0
Fax: +49/7544/505-200
service.standard@wagner-group.com

Netherlands

Wagner Systemen Nederland B.V.
Proostwetering 105 C
NL-3543 AC UTRECHT

Phone +31/30/2410688
Fax +31/30/2410765
info@wagnersystemen.nl

Belgium

Estee Industries

Leenbeekstraat 9
B-9770 Kruishoutem

Phone +32/9/3885410
Fax +32/9/3885440
info@estee-industries.com

Denmark

WAGNER Industrial Solution Scandinavia AB
(WISS)
Kabingatan 28
S-25467 Helsingborg

Phone +46/42/150020
Fax +46/42/150035
info@wagner-industri.com

Sweden

WAGNER Industrial Solutions Scandinavia AB
Skolgatan 61
Sverige - 56831 Skillingaryd

Phone +46/370/79830
Fax +46/370/79848
info@wagner-industri.com

Great Britain

WAGNER Spraytech (UK) Ltd.
The Coach House
2, Main Road
Middleton Cheney OX17 2ND

Phone +44/1295/714200
Fax +44/1295/710100
enquiry@wagnerspraytech.co.uk

USA

WAGNER Systems Inc.
300 Airport Road, Unit 1
Elgin, IL 60123

Phone +1/630/503-2400
Fax +1/630/503-2377
info@wagnersystemsinc.com

Japan

WAGNER- HOSOKAWA Micron Ltd.
No. 9, 1-Chome
Shodal Tajka, Hirakata-Shi
Osaka 673-1132

Phone +81/728/566751
Fax +81/728/573722
sempara@kornet.net

China

WAGNER SPRAYTECH SHANGHAI CO LTD.
4th Flr, No. 395
Jiangchangxi Road, Shibe Industrial Zone
Shanghai, 200436

Phone +86/2166521858
Fax +86/2166529819
wagnersh@public8.sta.net.cn

France

Wagner – Division Solutions Industrielles
Parc Gutenberg - Bâtiment F
8 voie la Cardon
F-91127 PALAISEAU Cedex

Phone +33/1/825/011111
Fax +33/1/69194655
Division.solutionsindustrielles@wagner-france.fr

Italy

WAGNER Itep S.p.A.
Via Santa Vecchia, 109
I-22049 Valmadrera - LC

Phone +39/0341/212211
Fax +39/0341/210200
wagnerit@tin.it

Spain

WAGNER Spraytech Iberia S.A.
P.O. Boc, 132, Crtra. N-340, KM 1245,4
E-08750 Molins de Rei (Barcelona)

Phone +34/93/6800028
Fax +34/93/6800555
info@wagnerspain.com