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Operating Manual

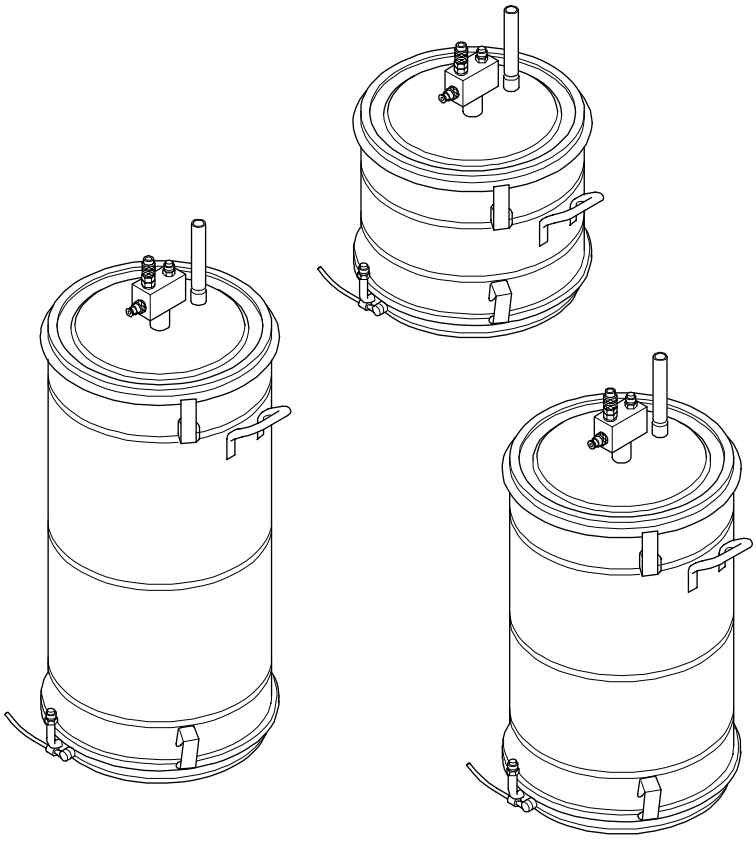
Powder Container

DANGER

High Voltage!
Turn power off
before servicing!

CAUTION

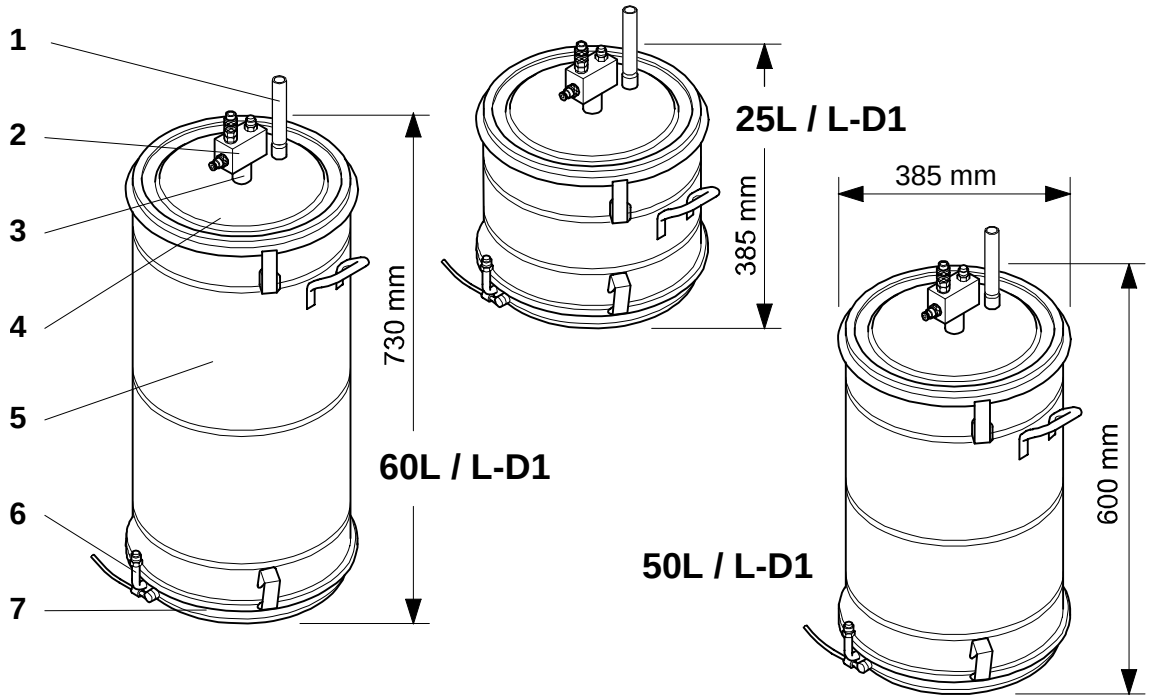
Read rules for safe operation and instructions carefully!



60 / 50 / 25L / L-D1

DIN ISO 9001 WAGNER CERTIFIED

Powder container 60 / 50 / 25L / L-D1



1 Exhaust air hose
2 Powder injector: **PI-F1** or **PI-P1**
3 Suction system
4 Lid
5 Powder container
6 Fluid air inlet
7 Fluid base

The powder containers serve as storage of the color powder and are available as accessories to the manual powder systems. The powder containers are designed to be used in small series and laboratory production.

Two types of powder containers are available:

- Powder containers **60L-D1**, **50L-D1**, **25L-D1** and
- Powder containers **60L**, **50L**, **25L**

The **60L-D1**, **50L-D1**, **25L-D1** powder containers are equipped with powder injector **PI-F1** and a control unit that regulates the amount of the compressed air that activates the powder injector.

The **60L-D1**, **50L-D1**, **25L-D1** powder containers are equipped with powder injector **PI-P1** and a control unit that regulates the pressure of the compressed air that activates the powder injector.

Via the powder injector **2,** the powder from the powder container **5** is fed to the spray gun. By feeding fluid air into the fluid base **7** of the powder container, a homogeneous powder/air mixture is generated and maintained during the entire process of the powder feed from the container.

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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:

- **Under no circumstance may persons with a cardiac pacemaker come close to the area between the tip of the spray gun and the work piece to be coated!**
- The user has to observe particularly the safety guidelines of the VdS or the local professional and security institutions.
- 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.
- In the event of faults or defects, repair work is to be performed at the user's discretion.
- 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 7.1 on page 13 "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. 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.

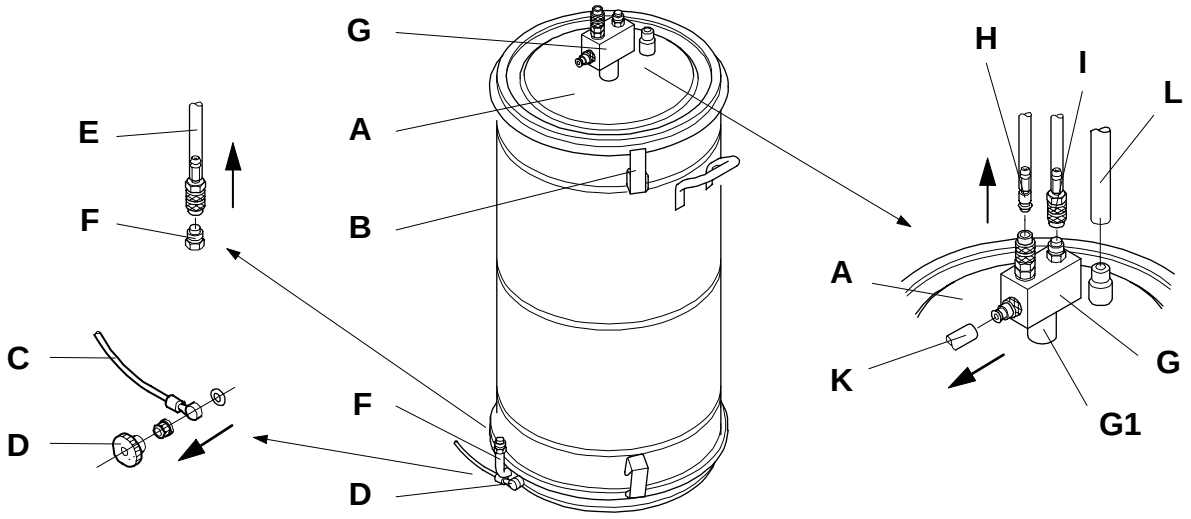
Use only original Wagner replacement parts!

2. Preparing the powder container for use

2.1 Setting up and connecting the powder container

Hint

Before setting up and connecting the powder container, check if all components are available and ready for assembly!



1. Open the spring clip **B** on the lid **A**.

Caution

The powder container may **only be filled to the half-way mark**, because the volume of powder is increased by fluidizing.

Powder container **60L / 60L-D1**:	max. volume	**30 ... 35 kg** powder
Powder container **50L / 50L-D1**:	max. volume	**20 ... 25 kg** powder
Powder container **25L / 25L-D1**:	max. volume	**8 ... 12 kg** powder

2. Open the lid **A** and fill the powder container halfway with powder.
3. Close the lid **A** and lock it with the spring clip **B**.
4. Connect the grounding cable **C** to the grounding screw **D**.
5. Connect the fluid air hose **E** to the fluid air supply **F**.
6. Connect the feed air hose **H** and the dosing air hose **I** to the powder injector **G**.
7. Connect the powder feed hose **K.**
8. Connect the exhaust air hose **L** and lead it in the direction of the exhaust air system of the powder coating booth.

2.2 Grounding the powder container

For safety reasons, the **powder container must** be properly grounded. Connect the grounding cable **C** to the grounding screw of the control unit.

Caution

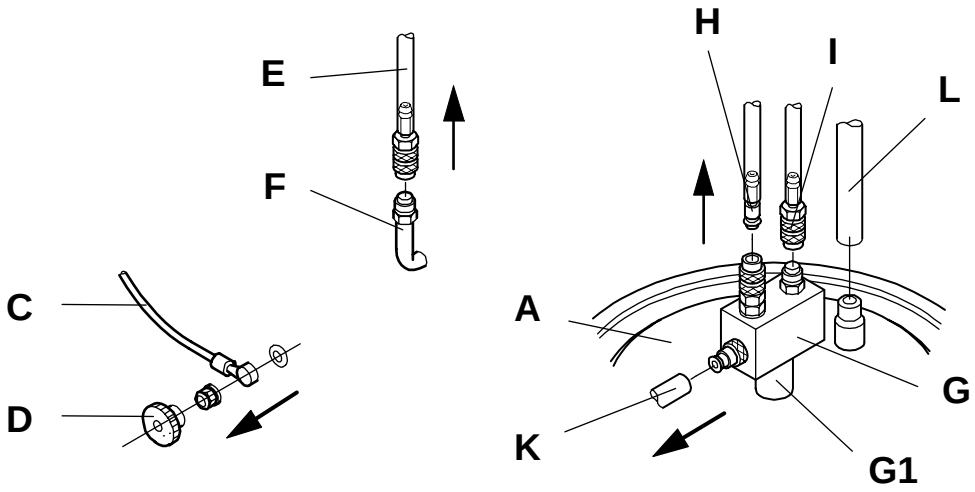
Make sure the control unit is correctly grounded.

2.3 Performing a color change

Hint

All powder feeding parts should be blown through and cleaned of powder residue with every interruption of work.

Use a separate powder container for each color if you want to shorten the cleaning time for the powder coating equipment.



1. Switch the control unit off and secure against inadvertent switching on.
2. Disconnect the grounding cable **C** from the grounding screw **D** of the powder container.
3. Disconnect all hoses from the powder injector **G** and the powder container:
   fluid air hose **E**, supply hose **H**, dosing air hose **I** and the exhaust air hose **L**.
4. Disconnect the powder feed hose **K** from the powder injector **G** and the spray gun.
5. Pull the powder injector **G** from the holder **G1** and remove the lid **A** from the powder container.
6. Lift the powder container off from the equipment trolley for cleaning and thoroughly blow out the container and the powder suction system (suction off if required).
7. Clean the powder container and pay special attention to the fluid base.
8. Dry all components with a dry cloth.

Hint

Proper fluidization is not possible with a damaged and/or clogged fluid base.

9. Fill the powder container **only to the halfway point** with new powder and reconnect the powder container as described in chapter 2.1.

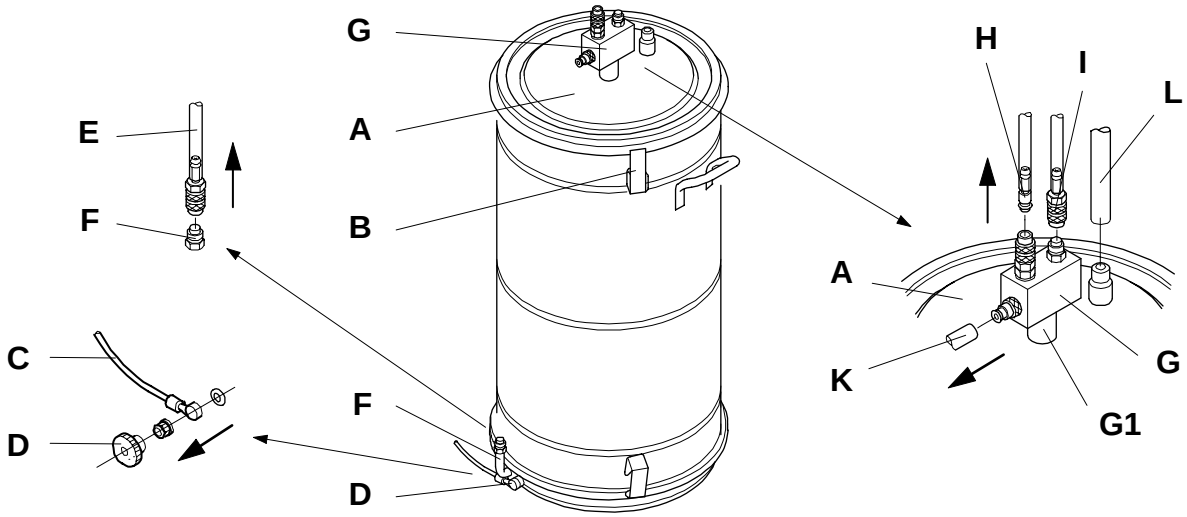
3. Maintenance and cleaning

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!

A weekly cleaning cycle of the powder container assures trouble-free operation.

The components of the **powder injector** must be checked for wear and replaced whenever necessary.



1. Switch the control unit off and secure against inadvertent switching on.
2. Disconnect the grounding cable **C** from the grounding screw **D** of the powder container.
3. Disconnect all hoses from the powder injector **G** and the powder container: fluid air hose **E**, supply hose **H**, dosing air hose **I** and the exhaust air hose **L**.
4. Disconnect the powder feed hose **K** from the powder injector **G** and the spray gun.
5. Pull the powder injector **G** from the holder **G1** and remove the lid **A** from the powder container.
6. Lift the powder container out from the equipment trolley if it is used in a manual coating system. Thoroughly blow out the container (suction off if required).
7. Clean the powder container and dry it with a dry cloth.
8. Completely remove all residual powder from the suction system.
9. Pay special attention when cleaning the fluid base, check it for blockage or damage and replace it if necessary.

Caution

The quality of the compressed air **must meet the requirements** stated in chapter 6 "Technical data" to prevent premature dirt build up on the fluid base.

10. Check the powder injector for wear and replace worn parts.

Wearing and spare parts are listed in the operating manual of the powder injector.

4. Rectification of malfunctions

Malfunction	Cause	Rectification
No powder feed	- The powder container is empty. - The powder feed hose is clogged. - The powder suction system in the powder container is clogged. - The feed air hose is bent. - The powder feed hose is bent.	- Refill with powder. - Blow out the powder feed hose thoroughly. - Blow out the powder suction system thoroughly. - Straighten or replace the feed air hose. - Straighten or replace the powder feed hose.

5. Spare parts lists and accessories

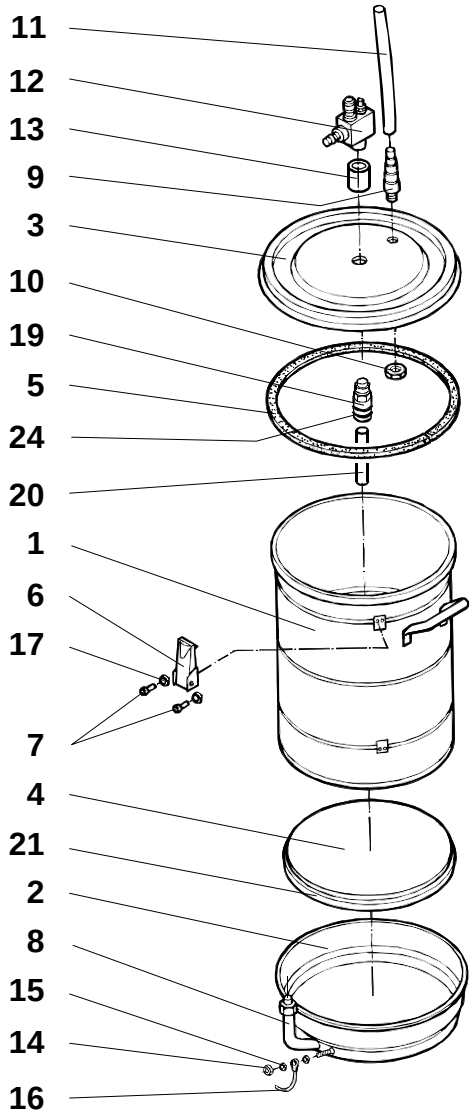
5.1 How to order spare parts

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

5.2 Spare parts list for powder container 60/50/25L

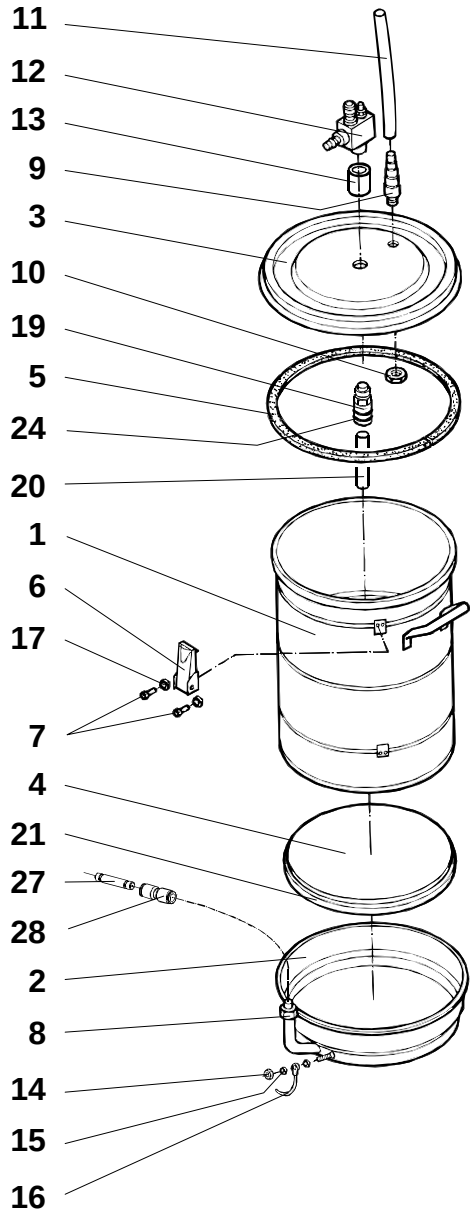


Item	Article No.	Description
	0264006	**Powder container 25L**
	0264005	**Powder container 50L**
	0263089	**Powder container 60L**
1	0263375	Container 60L
1	0264211	Container 50L
1	0264212	Container 25L
2	0264215	Base housing
3	0264381	Lid
4	0264382 *	Fluid base
5	9971527	Seal (10x5)
6	9994703	Spring clip (stroke = 7.6 mm)
7	- **	Fillister head cap screw (M3x5)
8	9992270	Quick-release plug / quick-release connector
9	0184336	Hose nipple
10	- **	Hex nut (BM 16x1.5)
11	9982058 *	Exhaust air system (powder hose 17x3)
12	0241621 *	Powder injector PI-P1
13	0241279 *	Injector connector assembly / complete (with o-ring)
14	- **	Knurled nut (M6)
15	- **	Washers (A 6.4)
16	0241276	Grounding cable assembly / complete
17	- **	Star washer
19	0241376	Cabling screws
20	0263357*	Suction tube (60L)
20	0264421 *	Suction tube (50L)
20	0264420 *	Suction tube (25L)
21	8324008	Seal (6x5)
24	9971178 *	O-ring (16x2; in position 13 included)

* Consumable

** No spare part (for clarification only); is not available as single part!

5.3 Spare parts list for powder container 60/50/25L



Item	Article No.	Description
	0265031	**Powder container 25L-D1**
	0265032	**Powder container 50L-D1**
	0265033	**Powder container 60L-D1**
1	0263375	Container 60L
1	0264211	Container 50L
1	0264212	Container 25L
2	0264215	Base housing
3	0264381	Lid
4	0264382 *	Fluid base
5	9971527	Seal (10x5)
6	9994703	Spring clip (stroke = 7.6 mm)
7	- **	Fillister head cap screw (M3x5)
8	9992270	Quick-release plug / quick-release connector
9	0184336	Hose nipple
10	- **	Hex nut (BM 16x1.5)
11	9982058 *	Exhaust air system (powder hose 17x3)
12	0241622 *	Powder injector PI-F1
13	0241279 *	Injector connector assembly / complete (with o-ring)
14	- **	Knurled nut (M6)
15	- **	Washers (A 6.4)
16	0241276	Grounding cable assembly / complete
17	- **	Star washer
19	0241376	Cabling screws
20	0263357*	Suction tube (60L-D1)
20	0264421 *	Suction tube (50L-D1)
20	0264420 *	Suction tube (25L-D1)
21	8324008	Seal (6x5)
24	9971178 *	O-ring (16x2; in position 13 included)
27	0263404	Valve (D 1.3)
28	9998553	Connector

* Consumable

** No spare part (for clarification only); is not available as single part!

6. Technical data

Container	60L and 60L-D1	50L and 50L-D1	25L and 25L-D1
Container weight	appr. 10 kg	appr. 9.6 kg	appr. 7.5 kg
Effective volume	60 liters	50 liters	25 liters
max. filling capacity	30 ... 35 kg powder	20 ... 25 kg powder	8 ... 12 kg powder
Fluid air pressure	1 ...2 bar	1 ...2 bar	1 ...2 bar
Air throughput	5 ... 8 Nm^3/h	5 ... 8 Nm^3/h	5 ... 8 Nm^3/h

Compressed air quality according to ISO 8573-1, class 2:

Residual water in the compressed air: ..... max. 1.3 g H_2O/Nm^3
Residual oil in the compressed air: ..... max. 0.01 mg oil/Nm^3
Residual dust in the compressed air: ..... max. 1 mg dust/Nm^3
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.

Volume measures:

All volume indications (m^3/h) are Nm^3/h (norm cubic meters per hour). One cubic meter of a gas at 0 °C and 1.013 bar is called norm cubic meter.

7. Supplement

7.1 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 1953	Safety requirements for injector and spraying devices for coating system	(Published by Beuth-Verlag, Berlin)
EN 50050	Electrostatic manual spraying systems	(Published by Beuth-Verlag, Berlin)
EN 50053 - 2	Guidelines for the selection, installation and application of electrostatic spraying systems, electrostatic manual spraying system for powders	(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)

7.2 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.

Directory of Wagner subsidiaries

USA:

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Hong Kong:

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