

HDM-Nr. A1.164.9101
1st edition 03.00

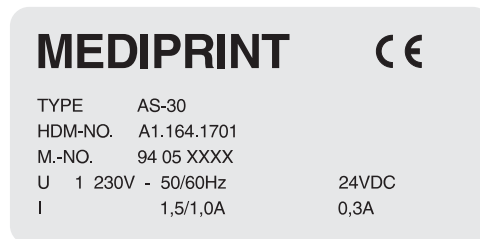
Manufacturer:

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 E-mail: info@mediprint.com
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Type:

AS-30

Type plate:



Electrical connection:

230 V 1.5/1.0 A ~50/60 Hz
 24 VDC 290 mA

Total weight:

13 kg

Noise emission:

55 dB(A)

Maximum filling quantity (powder):

225 ml

We reserve the right to make changes without notice

1. Overview

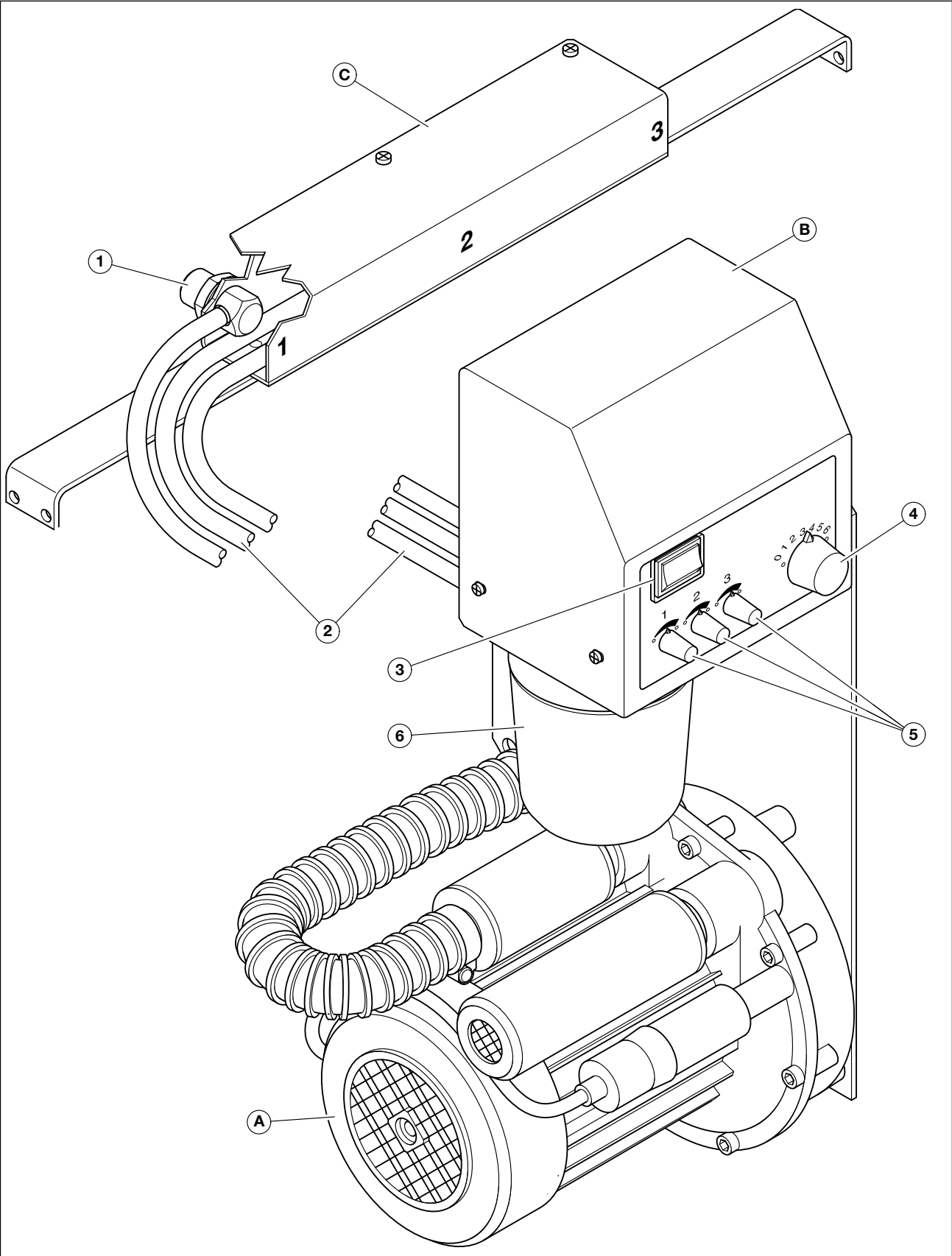


Fig. 1 Overview

Key to overview

- ① Powder nozzles
- ② Powder hoses
- ③ Master switch
- ④ Mixture control unit
- ⑤ Nozzle valve head
- ⑥ Powder glass

- Ⓐ Blower
- Ⓑ Control unit
- Ⓒ Nozzle arrangement

Instruction manual AS-30

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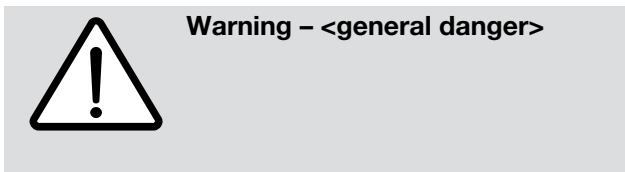
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2. Please note!

2.1 User notes on the documentation

Important notes which must be complied with are emphasised in the instructions as follows:

Warning notice



This safety note warns you about potentially dangerous situations.

Non-compliance could lead to severe injuries. In extreme circumstances to loss of life!

In addition, machines and auxiliary equipment could be severely damaged.

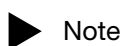
Caution notice



This safety note warns you about potentially dangerous situations.

Non-compliance could lead to damage to machines and auxiliary equipment.

General notice



Test instruction/control instruction/chapter note or note regarding supplementary documents

This note gives you additional information and tips regarding use when operating the printing machines and their auxiliary equipment.

Handling instruction

- ① Execute instruction.

Supplementary explanation of the necessary operating steps.

2.2 Use in accordance with the regulations

- The powder unit is supplied ready-assembled for use as auxiliary equipment to the Heidelberg printing machine Quickmaster QM46. The attachment of the powder unit to another type of printing machine is not permitted.
It serves:
 1. for powdering of the printed paper sheets in order to prevent their adhesion,
 2. as a stacking aid for the printed sheets.
- The unit may only be used in accordance with the specifications of these instructions. Any other type of use can lead to personal injury and damage to property.

2.3 Safety notes

2.3.1 General notes

- The operating instructions must be completely read and all notes taken into consideration before the installation and commissioning of the unit.

2.3.2 Storage and transport

- In the event of temporary storage before installation the machine components must be protected against wet and damp.

2.3.3 Attachment and installation

- Electric shock from touching live parts!
- Fundamentally work on the electrical parts of the equipment may only be undertaken by qualified electricians.
- Before working on the electrical parts, disconnect the unit from the mains or switch off the master switch and secure it against being switched on.
- Check protective conductor connections regularly for faultless fastening, especially after repair work.

2.3.4 Modifications on the unit

- Only execute reconstruction or retrofit changes to the unit after approval of the manufacturer.

2.3.5 Familiarisation notes

- The unit may only be operated by trained persons. Unless expressly otherwise described, maintenance and repair work may only be undertaken by qualified service technicians.

2.3.6 Safe working

- The unit may only be operated with closed control unit housing.
- Disconnect the installation from the mains supply or switch off the master switch before opening the housing.
- When working with expendable supplies or auxiliary agents you must observe the relevant instructions for handling dangerous substances.

2.3.7 Action in the event of danger

- Stop the machine and secure it against being switched on.

2.3.8 Stipulations and regulations

- You must comply with the relevant national ordinances as well as safety, accident and environmental protection regulations. In addition, you must observe the safety instructions of the manufacturer of the printing machine.

3. General description


3.1 Structure of the unit

The unit is constructed from three principal components (Fig. 1/Page 17):

- Ⓐ **Blower**
- Ⓑ **Control unit**
- Ⓒ **Nozzle arrangement**

The powder sprayer is selected by means of the operating console of the printing machine (for this see the operating instructions of the printing machine).

Power supply



Warning – live connections!

When working on live connections there is an increased danger to life from electric shock. When working on the electrical parts of the equipment it must be switched free of current and protected against inadvertent switching on.

Power supply

The control unit (Ⓑ) obtains the necessary operating voltage (230 V AC) by means of a 3-wire cable fixed in the switch cabinet of the printing machine. The timing control is likewise effected by the printing machine (24 V DC). Both power circuits run via the master switch (Ⓒ). The motor protection switch and a unit fuse are located on the rear wall of the control unit housing.

3.2 Function of the unit

3.2.1 Ⓐ Blower



Caution – danger of damage due to sucked-in parts

When operating the unit without air filter parts can be sucked in and the blower wheel or the blower motor be damaged.
Never operate the unit without air filter.

The blower sucks in fresh air via the air filter and creates a compressed, oil-free air stream.

3.2.2 Ⓑ Control unit

The metering and the composition of the powder-air mixture is regulated with the control unit by which the printed sheets are sprayed with powder. By means of a blower air hose the blower air stream reaches the distributor on the control unit. When the solenoid valve is open a part of this air stream is guided into the powder glass (Ⓔ) (Fig. 1/Page 17) and whirls up the powder. In this way a powder-air mixture is created.

The other part of the blower air stream flows through the channels of the distributor and draws off the powder-air mixture created in the powder glass to the three powder nozzles (Ⓘ) (Fig. 1/Page 17). The powder nozzles are linked with the distributor by means of the powder hoses (Ⓛ) (Fig. 1/Page 17).

3.2.3 Ⓒ Nozzle arrangement

The individual powder nozzles spray the powder-air mixture onto the printed sheet when it passes the nozzle arrangement (online procedure).

3.2.4 Powdering cycle control

The time of powdering and the powdering duration are controlled by a solenoid valve. The powdering is effected with an opened solenoid valve (trip coil associated with stream flow). The solenoid valve is triggered by the timing control device of the printing machine.

4. Operation

4.1 Switching on the unit

- ① Switch on master switch of the printing machine.
- ② Set unit master switch ③ (Fig. 1/Page 17) to setting "I".

► Note

Operating noise of the blower must be audible.

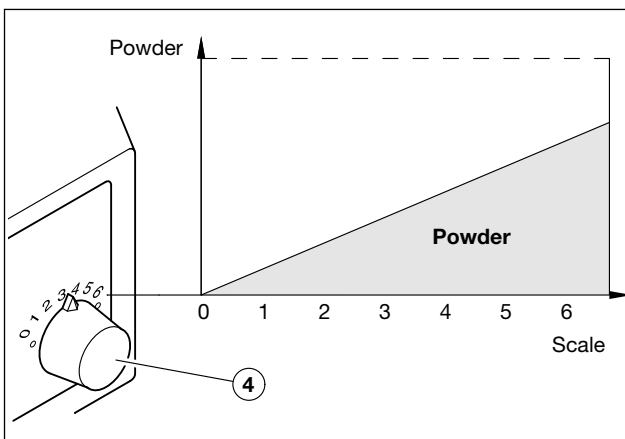


Fig. 2 Regulate mixture ratio

4.2 Regulate powder-air mixture

The powder-air mixture can be regulated on the scale to the desired powder quantity by the mixture control unit ④ (Fig. 2)

The higher the selected scale setting, the more powder is output.

Basic setting: between 2 and 3 on the scale.

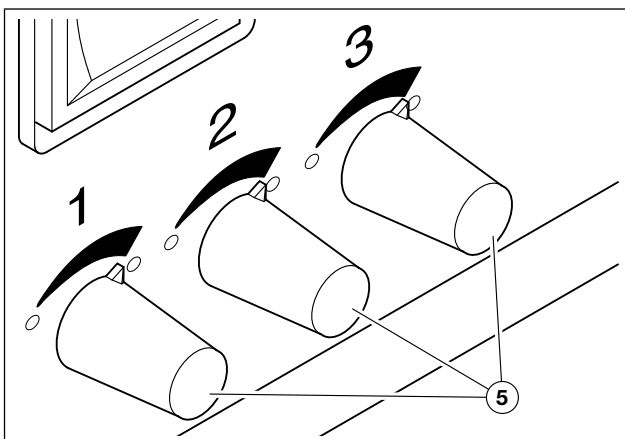


Fig. 3 Regulate partial powder quantity

4.3 Fine adjustment powder quantity

The powder quantity sprayed by each powder nozzle can be finely adjusted at the respective nozzle valve head ⑤ (Fig. 3). Starting from the maximum setting an uneven powder output onto the printed sheet can be compensated by a partial closure of the relevant powder nozzle.

If the fine adjustment of the powder nozzles at the nozzle valve heads does not lead to a sufficient balancing of the powder output then Customer Service is to be informed.

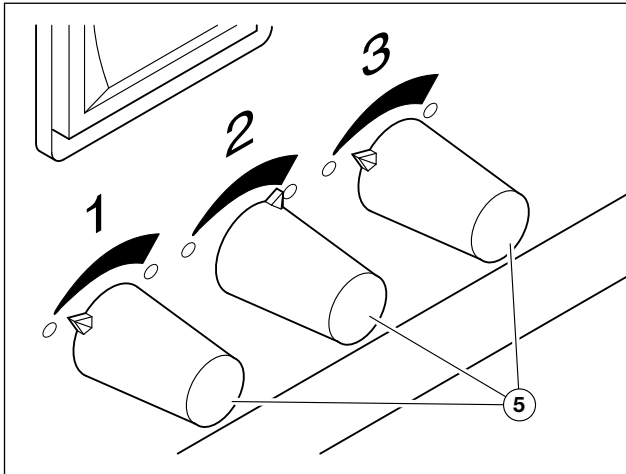


Fig. 4 Set powdering width

4.4 Set powdering width

You can adjust the powdering width to the width of the printed sheet by completely closing the outer nozzle valve heads ⑤ (Fig. 4). If wide sheets are to be powdered all nozzles remain open. For powdering less wide sheets the outer nozzles can be closed. For this purpose the relevant nozzle valve heads ⑤ are turned completely to the left.

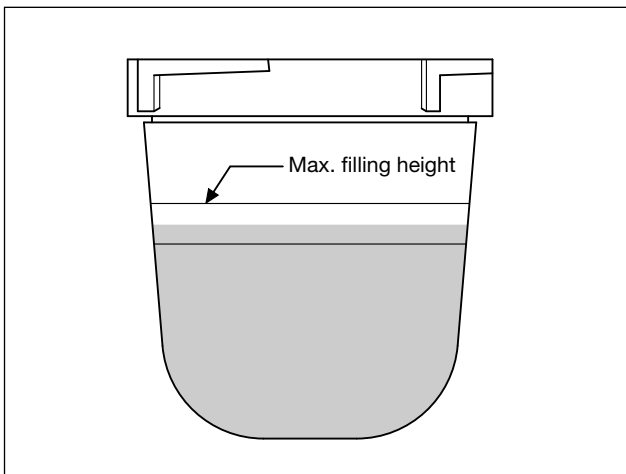


Fig. 5 Refill powder

4.5 Refill powder

Refill with powder in good time (the delivery quantity diminishes with the filling height).

! Caution – beware of an inadequate powder result owing to unsuitable powder

The use of unsuitable powder can lead to an inadequate powdering result. Only use commercially available print spraying powder, which is dry, sprinklable and tempered. The maximum particle size may not exceed 45 µm. A particle size of 15–20 µm has proved to be optimal. Stir up the powder at least once daily.

! Caution – danger of damaging the powder glass thread

The powder glass thread can be damaged by excessively strong turning. Tighten the powder glass with consideration.

- ① Turn powder glass ⑥ (Fig. 1/Page 17) to the left and take off downwards.
- ② Refill powder to the filling height shown (Fig. 5) and insert and twist the powder glass again.

5. Replacement parts

5.1 Replacement parts list and parts subject to wear

No.	Designation	Mediprint no.	HDM no.
Ⓑ	Control unit, complete	BG 0156C	A1.164.1711
Ⓔ	Powder glass, complete	BG 1506A	22.164.1761
⑤	Rotary knob, small	BG 3902	22.164.1763
④	Rotary knob (mixture control unit)	BG 3904	22.164.1723
Ⓒ	Nozzle arrangement, complete	BG 0248	A1.164.1731
①	Powder nozzle, complete	BG 1317	A1.164.1766
②	Powder hose, Ø 7.5 x 1.5 x 1320 mm	BG 3343	A1.164.1751
Ⓐ	Blower complete	BG 0414	22.164.1611
–	Blower air hose Ø 20 x 450 mm	BG 3354 B	G2.164.1771

► Note

In order to ensure the correct replacement part ordering and supply, the following information must be provided:

- Machine no. of the affected printing machine
- Part designation with HDM number
- The type designation, the make and machine no. of the powder sprayer

Example:

For machine: AS 952 118

1 Powder glass, complete
 HDM no.: 22.164.1761/01
 for powder sprayer AS-30
 Mediprint machine no.: 9405 3542
 (see type plate)

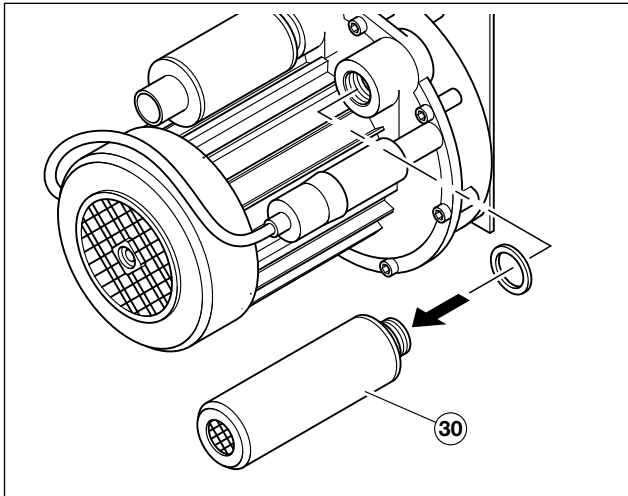


Fig. 6 Clean air filter grill

6. Maintenance and replacement

6.1 Clean the air filter grill in the sound damper on the suction side ③ every month

Clean the protective grill if there is diminished powder output or visible contamination

! **Caution – danger of damage from sucked-in parts**

When operating the unit without air filter, parts can be sucked in and damage the blower wheel or the blower motor.
Never operate the unit without air filter.

- ① Unscrew sound damper ③.
- ② Blow out the sound damper from the air outlet by means of compressed air (see arrow, Fig. 6).
- ③ Screw on sound damper again.



Warning – danger of injury when handling compressed air!

Ensure responsible handling of the compressed air pistol. There is a considerable danger of injury if the compressed air pistol is improperly handled. When blowing out with compressed air detached solid bodies or whirled-up powder dust can cause eye injuries. Always wear protective goggles when cleaning the powder hoses.



Warning – danger to health by inhaling powder dust!

The inhalation of airborne particles can endanger your health. When cleaning the powder hoses always wear a dust protection mask.



Caution – clogging of powder nozzles and powder channels by oily or fat-containing substances

When using “oily” compressed air lumping of the powder can occur and in this way can lead to clogging of the powder nozzles and powder channels in the unit. If the end of a powder hose comes into contact with fatty substances, powder deposits can lead to clogging of the hose.

Therefore for blowing out powder channels always use compressed air from oil-free systems.

When hose ends are contaminated by fat-containing substances shorten them by 10–15 mm.

6.2 Clean powder channels weekly

When there is irregular powder output clean the powder channels. In the case of frequent use blow out the powder hoses weekly.

► Note

All part designations on this page refer to Fig. 1/Page 17.

- 1 Draw off powder hoses ② and blower air hose at the rear side of the control unit ⑧.
- 2 Fully open the nozzle valve heads ⑤ and mixture control unit ④.
- 3 Take off powder glass ⑥.
- 4 Blow out the holes on the underside and hose connection on the rear side of the control unit ⑧ with compressed air.
- 5 Blow out powder hoses ② with compressed air.
- 6 Replace defective powder hoses.
- 7 Only clean powder nozzle slot with plastic or wood stick, then blow out with compressed air.
- 8 Fit back powder hoses ②, blower air hose and powder glass ⑥.

► Note

Powder hoses must be laid free of kinks and safe from contact with moving parts.

► Note

The markings of powder nozzle ①, powder hose ② and nozzle valve head ⑤ must match.

7. Clearance of malfunctions

Possible cause	Fault clearance	Note
1. Blower motor does not run		
1.1 Unit fuse defective	• Inform HDM Service	
1.2 Motor protection switch triggered on printing machine	• Inform HDM Service	
1.3 Cable break	• Inform HDM Service	
1.4 Blower motor defective	• Inform HDM Service	
2. Cycling of the blowing air no longer audible		
2.1 Solenoid valve defective	• Inform HDM Service	
2.2 Cable break	• Inform HDM Service	
2.3 Cycle control of printing machine defective	• Inform HDM Service	
2.4 Photocoupler defective	• Inform HDM Service	
3. Powder quantity at the powder nozzles can no longer be metered		
3.1 Powder channels blocked	• Clean powder channels	• Page 27
3.2 Powder hoses ② defective	• Replace defective powder hoses	• Page 27
3.3 Valves blocked	• Inform HDM Service	
4. Powdering air stream too weak		
4.1 Air filter blocked	• Clean/replace air filter	• Page 26
4.2 Powder channels blocked	• Clean powder channels	• Page 27
4.3 Blower air hose, powder hoses ② leaky or defective	• Clear leakages; replace defective hoses	• Page 27
4.4 Valves blocked	• Inform HDM Service	

► Note

The part designations given here refer to Fig. 1/Page 17.

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