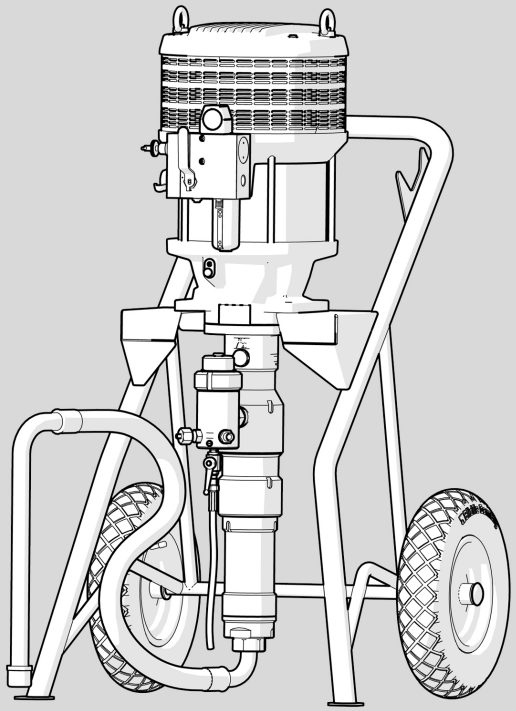
WIWA®
because it works

Operation manual

GX SERIE

Airless spraying devices



Original operation manual
AirlessGX_BA_en_1608 • jw

Technical data

Manufacturer	WIWA Wilhelm Wagner GmbH & Co. KG 35633 Lahnau, Germany
Description	Herkules 270 / 333 GX Professional 230 GX

Type	
Article no.	
Serial no.	
Date of manufacturing	
Pressure ratio	
Max. output at 60 DS (ccm/fl.oz.)	
Delivered volume per double stroke (ccm/fl.oz.)	
Max. air inlet pressure (bar/psi) / safety valve	
Max. permissible operating pressure (bar/psi)	
Air consumption at 20 DS (l/min/US gpm)	
Air inlet (maintenance unit) / connecting thread	
Material outlet (high pressure filter)	
Weight (kg/lbs) approx.	
Dimensions (LxWxH in mm/inch) approx.	

DS = double stroke

Emitted sound pressure level at the work place

was determined in accordance with the DIN EN ISO 3744, DIN EN 31200, DIN EN 31201 and DIN 45635-20 standards

	270	333
Sound pressure level at 15 DS with 8 bar L_P	83 dB(A)	84,5 dB(A)
Sound power level L_W	94 dB(A)	95,5 dB(A)
Ambient temperature	-30°C — +50°C -22° F — +122° F	
Max. operating temperature	80 °C / 176° F	

Contents

1 Foreword

Valued Customer!

We are delighted that you have chosen one of our machines.

This operation manual is directed towards operating and maintenance personnel. It contains all information required in order to work with this machine.

The machine owner must ensure that the operating and maintenance personnel always have access to a copy of the operation manual in a language that they understand.

In addition to the operation manual, further information is also essential for the safe operation of the machine. Read and observe the directives and accident prevention regulations valid in your country.

In Germany, these are:

- ZH 1/406 "Guidelines for fluid jets (spray devices)" from the Federation of Institutions for Statutory Accident Insurance and Prevention,
- BGR 500, chap. 2.29 "Processing Coating Materials",
- BGR 500, chap. 2.36 "Working with fluid jets", both from the Professional Association for Gas, District Heating and Water Management.

We recommend enclosing all relevant directives and accident prevention regulations with the operation manual.

Furthermore, always observe the manufacturer's instructions and processing guidelines for coating or conveyance materials.

If questions should arise, we shall be happy to assist you.

We wish you excellent working results with your machine

WIWA Wilhelm Wagner GmbH & Co. KG

2 Safety

This machine has been designed and manufactured with consideration to all safety aspects. It reflects current engineering practice and the valid accident prevention regulations. The machine left the factory in faultless condition and guarantees a high level of technical safety. However, erroneous operation and misuse result in a risk to:

- the life and limb of the operator or third parties,
- the machine and other property of the owner,
- the efficient function of the machine.

It is fundamentally prohibited to implement any method of work that has a negative influence on the safety of the operating personnel and the machine. All persons involved in the installation, commissioning, operation, care, repair and maintenance of the machine must have read and understood the operation manual beforehand - in particular the "Safety" chapter.

Your safety depends on it!

We recommend that the machine owner have this confirmed in writing.

2.1 Explanation of symbols

Safety information warns of potential accident risks and describes the measures required for accident prevention.
In the operation manual from **WIWA**, safety information is highlighted and labeled as follows:

DANGER

Signals a risk of accidents that are very likely to result in serious injuries and even death, if the safety information is not observed!

WARNING

Signals a risk of accidents that may result in serious injuries and even death, if the safety information is not observed!

CAUTION

Signals a risk of accidents that may result in injuries, if the safety information is not observed!

Signals important information for correct work with the machine. A failure to observe this may result in damage to the machine or its environment.

A range of pictograms are used in the safety information for accident risks that may result in injury, depending on the hazard source - examples:

General risk of accident

Risk of explosion due to explosive atmosphere

Risk of explosion due to explosive substances

Risk of accident due to electricity or electrostatic charge

Risk of crushing due to moving machine parts

Risk of burning due to hot surfaces

The first line of the safety instructions indicates the personal protective equipment that must be worn. This is also highlighted and labelled as follows:

Wear protective clothing
Signals an instruction to wear the prescribed protective clothing, in order to prevent skin injuries due to spray material or gases.

Use eye protection
Signals an instruction to wear protective goggles, in order to prevent eye injuries due to material spray, gases, vapours or dust.

Use ear defenders
Signals an instruction to wear ear defenders, in order to prevent damage to hearing caused by noise.

Use respiratory protection
Signals an instruction to use respiratory protection, in order to prevent damage to the respiratory tract caused by gases, vapours or dust.

Wear protective gloves
Signals an instruction to wear protective gloves with forearm protection,
in order to prevent a risk of burns due to heated material.

Wear safety shoes
Signals an instruction to wear safety shoes, in order to prevent foot injuries due to falling, toppling or rolling objects, as well as slipping on slippery floors.

Signals references to directives, operating instructions and manuals that contain very important information and must be observed.

2.2 Safety information

Always remember that the machine operates in a high pressure process and can cause life-endangering injuries if handled incorrectly!

Always observe and follow all information in this operation manual and in the separate operation manuals for the individual machine parts or the optionally available auxiliary devices.

2.2.1 Working pressure

WARNING

Parts that are not designed for the maximum permissible working pressure may rupture and cause serious injuries.

➤ It is essential to observe the prescribed maximum working pressures for all parts. With varying working pressures, the lowest value always applies as the maximum operating pressure for the complete machine.

- ➤ Material hoses and hose connections must comply with the maximum operating pressure including the required safety factor.
- ➤ Material hoses must not exhibit leaks, kinks, signs of wear or bulges.
- ➤ Hose assemblies must be tight.

2.2.2 Risks due to the spray jet

WARNING

The material exits the spray gun under very high pressure. The spray jet can cause serious injuries through its cutting action, or by penetrating the skin or eyes.

- ➤ Never aim the spray gun at yourself, other persons or animals!
- ➤ Never hold the finger or hand in front of the spray gun!
- ➤ Never reach into the spray jet!

WARNING

An unintended ejection of material from the spray gun can cause personal injury and property damage.

- ➤ Lock the spray gun with all interruptions to work!
- ➤ Prior to each commissioning, always check the spray gun lock!

2.2.3 Risks due to electrostatic charging

WARNING

The high flow velocities with the airless spray process can result in an electrostatic charge.
Static discharges can result in fire and explosions.

- ➤ Ensure that the machine is correctly grounded outside of EX zones!
- ➤ Ground the object that is to be coated.

- ➤ Always use open containers!
- ➤ Never spray solvents or materials containing solvents into narrow-mouthed cans or barrels with a bung opening!
- ➤ Set the container down on an grounded surface.
- ➤ Use electrically conductive containers.
- ➤ Always ensure contact between the spray gun and the container wall.
- ➤ Only use electrically conductive material hoses.
  All original material hoses from **WIWA** are conductive and designed for our machines.
- ➤ Only use electrically conductive accessories / accessory parts.

WARNING

If the machine becomes contaminated with material during operation, an electrostatic charge may be generated with the increasing coating thickness. Static discharges can result in fire and explosions.

- ➤ Clean the machine of contaminants immediately.
- ➤ Perform the cleaning work outside of EX zones.

2.2.4 Dangers due to hot / cold surfaces

CAUTION

When using material heaters, the machine surfaces may become hot. A risk of burns exists.

- ➤ When processing heated materials always wear protective gloves with forearm protection.

CAUTION

The air motor becomes very cold during operation. Localized freezing can arise with contact.

- ➤ Prior to all work on the machine, the air motor should be heated up to a temperature above 10°C.
- ➤ Wear suitable protective gloves!

2.2.5 Explosion protection

WARNING

Machines and accessories that are not explosion-protected may not be used in operating facilities that fall under the explosion protection ordinance!

Explosion-protected machines and accessories can be identified by the corresponding Ex mark on the type plate and/or the ATEX declaration of conformity provided.

Explosion-protected machines fulfil the requirements of the ATEX Directive for the device group, device category and temperature class cited on the type plate or in the declaration of conformity.

The owner is responsible for designating the zoning in accordance with ATEX Directive, Annex II, No. 2.1-2.3 in accordance with the provisions of the responsible regulatory body. The owner is required to check and ensure that all technical data and labelling comply with the applicable stipulations according to ATEX.

Please note that some parts have their own type plate with separate labelling according to ATEX. In this case, the lowest explosion protection of all labels displayed applies to the entire machine. The owner is required to implement appropriate safety measures for applications in which a failure of the device could lead to dangers to personnel.

If agitators, heaters or other electrically operated accessories are attached, the explosion protection must be checked. Plugs for heaters, agitators, etc. that do not have explosion protection may only be plugged in outside of areas that fall under the explosion protection ordinance, also if the accessory itself is explosion protected.

WARNING

Heating solvents can lead to an explosion. Serious personal injuries and property damage may result.

- ➤ Observe the flashpoint and ignition temperature of solvents.
- ➤ Switch all material fluid heaters off when carrying out the following work: Cleaning, pressure testing, decommissioning, maintenance and repair.

2.2.6 Health risks

CAUTION

Depending on the materials being processed, solvent vapours may arise, which could lead to damage to health and property.

- ➤ Make sure the workplace is sufficiently ventilated and aired. It is necessary to guarantee at least 5-times air exchange.
- ➤ Always observe the processing instructions of the material manufacturer.

When handling paint, cleaning agents, oils, greases, and other chemical substances, observe the safety and portioning instructions of the manufacturer and the generally applicable regulations.

Only use suitable skin protection, skin cleansing and skincare products for cleansing the skin.

In systems that are closed or under pressure, dangerous chemical reactions may arise, if parts produced from aluminium or galvanised parts come into contact with 1.1.1 - trichloroethane, methylene chloride or other solvents that contain halogenated chlorinated hydrocarbons (CFCs). If you wish to process materials that contain the aforementioned substances, we recommend that you contact the material manufacturer in order to clarify their suitability for use.

A range of machines in rust and acid-resistant designs is available for these types of materials.

2.3 Information signs on the machine

The information signs attached to the machine, such as for example the safety card (Fig. 1), indicate possible hazard points and must be observed.

They may not be removed from the machine.

Damaged and illegible information signs must be replaced immediately.

Also read and observe the safety information in the operation manual!

Fig. 1: Safety card

2.4 Safety features

WARNING

If safety feature is missing or is not fully functional, the operating safety of the machine is not guaranteed!

- ➤ Put the machine out of operation immediately if you detect safety equipment defects or any other faults on the machine.
- ➤ Only put the machine back into operation once the faults have been fully rectified.

Check the safety equipment on the machine:

- ➤ Prior to commissioning,
- ➤ Always prior to starting work,
- ➤ After all set-up work,
- ➤ After all cleaning, maintenance and repair work

The machine is equipped with the following safety features:

- ➤ Safety valve
- ➤ Compressed air shut-off valve with automatic ventilation
- ➤ Ground cable

Checklist

on the pressureless machine:

- ☑ Seal on the safety valve OK?
- ☑ Safety valve externally free of damage?
- ☑ Ground cable free of damage?
- ☑ Mobility of the compressed air shut-off valve OK?

on the pressurized machine:

- ☑ Function of the safety valve OK? (For function test, see chap. 2.2.1 ‘Working pressure’ on page 12)

When checking further safety equipment, observe the operation manual for the optional accessories.

2.4.1 Safety valve

A safety valve is located on the air motor behind the maintenance unit on the machine.

The safety valve prevents the maximum permissible air inlet pressure from being exceeded. If the air inlet pressure exceeds the permanently set threshold value, the safety valve blows off.

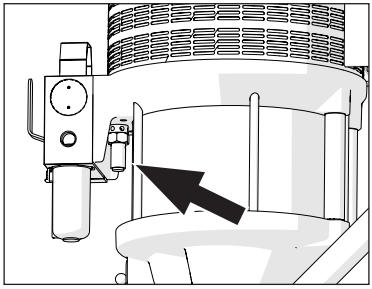


Fig. 2 Safety valve

This is how to check the function of the safety valve:

Increase the air inlet pressure briefly by approx. 10% over the maximum permissible pressure according to the type plate. –
The safety valve must discharge.

WARNING

If the maximum permissible air inlet pressure is exceeded, parts may rupture. The consequences may be personal injuries and property damage.

- ➤ Never operate the machine without a safety valve or with a defective safety valve!
- ➤ If it is necessary to replace the safety valve, please refer to the spare parts list for the order number.
- ➤ With new safety valves, make sure that these are set to the maximum permissible air inlet pressure of the machine (see type plate or technical data) and sealed.

2.4.2 Compressed air shut-off valve

The compressed air shut-off valve on the maintenance unit interrupts the air supply to the entire machine. The machine immediately stops.

The functional principle:

- ➤ To open / opened ⇨ set in the flow direction

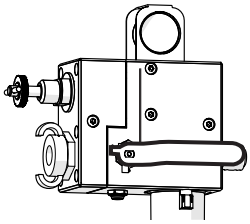


Fig. 3 Compressed air shut-off valve OPEN

- ➤ To close / closed ⇨ set transverse to the flow direction

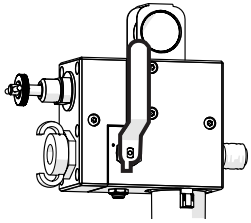


Fig. 4 Compressed air shut-off valve CLOSED

After shutting off the air, the machine is automatically vented. However, pressure can still be present on the material side. Perform a complete pressure release before all work on the machine!

2.4.3 Ground cable

The ground cable serves to prevent an electrostatic charging of the machine.

The ground cable is already connected to the machine at the time of delivery (e.g. to the high pressure filter, the grounding rail, or the like).

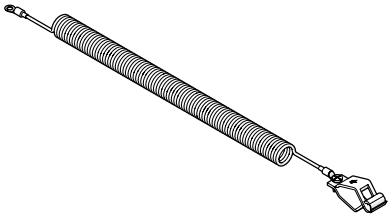


Fig. 5: Ground cable

If the ground cable is lost or defective, replace it immediately (art. no. 0659675)!

2.5 Operating and maintenance personnel

2.5.1 Obligations of the machine owner

The machine owner:

- is responsible for training the operating and maintenance personnel,
- must instruct the operating and maintenance personnel on correct handling of the machine, and on wearing the correct work clothing and protective equipment,
- must make work aids, such as e.g. lifting gear for transporting the machine or container, available to the operating and maintenance personnel,
- must make the user manual accessible to the operating and maintenance personnel and must ensure that this remains constantly available,
- must ensure that the operating and maintenance personnel have read and understood the user manual.

Only then are they permitted to put the machine into operation.

2.5.2 Personnel qualifications

Differentiation is made between 2 groups of personnel, depending on their qualifications:

- Instructed operator has received verified instruction from the machine owner regarding the tasks entrusted to him and the possible risks in the event of incorrect procedure.

➤ Trained personnel has received instruction provided by the machine manufacturer and is capable of carrying out maintenance and repair work on the machine, independently recognizing possible dangers and avoiding risks.

2.5.3 Authorised operator

Activity	Qualification
Set-up and operation	Instructed operator
Cleaning	Instructed operator
Maintenance	Trained personnel
Repair	Trained personnel

Young persons under the age of 16 are not permitted to operate this machine.

2.5.4 Personal protective equipment

Wear protective clothing
Always wear the protective clothing stipulated for your working environment (e.g. antistatic protective clothing in potentially explosive areas) and also observe the recommendations in the safety data sheet of the material manufacturer.

Use eye protection
Wear safety goggles, in order to prevent eye injuries due to material spray, gases, vapours or dust.

Use ear defenders
Suitable noise protection equipment must be made available to the operating personnel. The machine owner is responsible for compliance with the accident prevention regulation "Noise" (BGV B3). It is therefore necessary to pay particular attention to the conditions at the installation site – for example noise pollution can increase if the machine is installed in or on hollow bodies.

Use respiratory protection
Although the airless spray process minimises the paint mist with the right pressure adjustment and correct method of work, we recommend that you wear a respirator.

Wear protective gloves
Wear antistatic protective gloves. When processing heated materials, protective gloves must be additionally equipped with forearm protection in order to prevent burns.

Wear safety shoes
Wear antistatic safety shoes, in order to prevent foot injuries due to falling, toppling or rolling objects, as well as slipping on slippery floors.

2.6 Guarantee information

Observe our general terms and conditions of business (T&Cs) at www.wiwa.de.

2.6.1 Spare parts

- When repairing and maintaining the machine, only original spare parts from **WIWA** may be used.
- If spare parts are used, that have not been produced or supplied by **WIWA** then the guarantee is voided and all liability shall be excluded.

2.6.2 Accessories

- If you use original accessories from **WIWA** that are designed for the working pressure, their suitability for use in our machines is guaranteed.
- If you use third-party accessories, these must be suitable for the machine - in particular with respect to the working pressure, the current connection data and the connection variables. **WIWA** shall not be liable for any damage or injuries arising due to these parts.
- It is essential to observe the safety provisions applicable to the accessories. You can find these safety provisions in the separate operation manual for the accessories.

2.7 Behaviour in an emergency

2.7.1 Shut down the machine and relieve the pressure

In an emergency, bring the machine to an immediate standstill and relieve the pressure.

1. Close the compressed air shut-off valve.
2. Actuate the spray gun briefly once more.
3. Open the relief valve on the high pressure filter, so that no further material pressure is present and the machine has been fully relieved of pressure.

This process is not suitable for decommissioning. The machine is not flushed.

- ➤ For controlled decommissioning, please see chap. 5.7 ‘Work interruption’ on page 45.
- ➤ After remedying the emergency situation, the machine must be flushed (see chap. 5.3 ‘Flushing’ on page 42*)*.
  Observe the pot life of the materials used.

2.7.2 Leaks

WARNING

In case of leaks, material may escape under very high pressure and cause serious physical injuries and property damage.

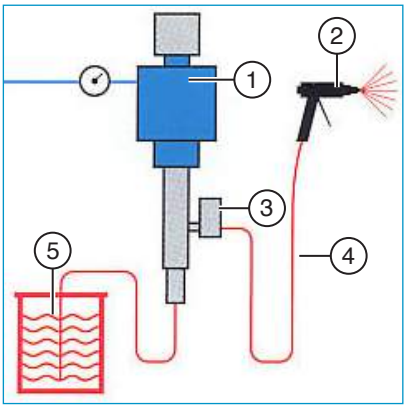
- ➤ Bring the machine to an immediate standstill and relieve the pressure.
- ➤ Tighten threaded connections and replace defective parts (must be performed by trained personnel).
- ➤ Do not seal leaks at connections and on high pressure hoses with the hand or by wrapping.
- ➤ Do not patch material hoses!
- ➤ Check hoses and threaded connections for leak-tightness before starting the machine up again.

2.7.3 Injuries

In case of injuries caused by processing material or cleaning agents, always have the safety datasheet ready to show the doctor (supplier or manufacturer address, their telephone number, material designation and material number).

3 Machine description

Airless indicates a spray process in which the spray material is applied to the surface under high pressure without an additional air supply. The atomization of the spray material is achieved solely through the material pressure and the nozzle incorporated in the spray gun.



No.	Description
1	Airless spray device
2	Airless spray gun
3	High pressure filter
4	Spray hose
5	Container with spray material

Fig. 6: Flow chart during airless operation

The technical data for your machine can be found at the technical data sheet (see p. 3) or on the type plate.

3.1 Intended use

The WIWA airless devices are suitable exclusively for airless spraying of coating materials and additives in surface technology.

Die Herkules GX Serie wurde speziell für den Einsatz bei großen Flächen mit hohen Schichtstärken entwickelt.

Intended use also includes:

- observing the technical documentation and
- complying with the operating, maintenance and servicing guidelines.

3.2 Erroneous use

Any use other than that stipulated in the technical documentation is deemed to be erroneous use and will void the warranty.

Erroneous use applies in particular if

- impermissible materials are processed,
- unauthorised modifications or changes are implemented,
- safety equipment is modified, removed or bypassed,
- spare parts are installed that were not manufactured or delivered by WIWA (see chap. 2.6.1 on page 22),
- accessories are used that are not suitable for the machine (see chap. 2.6.2 on page 22),
- machines without Ex identification are used in potentially explosive atmospheres.
- the machine is operated outside of the operating limits according to the type plate.

3.3 Machine design

3.3.1 HERKULES 270 GX

No.	Designation	Further information
1	Crane eyes for lifting	
2	Muffler	
3	Maintenance unit	Chap. 3.4 on page 30
4	Air motor	
5	Filler opening for release agent	
6a	Airless device type plate	Chap. 8.1 on page 59
6b	Lift trolley type plate	
7	Inspection glass for release agent	Chap. 6.4.2 on page 50
8	High pressure filter	Chap. 6.4.3 on page 51
9	Connection for material hose	
10	Relief valve with hose	
11	Fluid pump	
12	Suction strainer	

No.	Designation	Further information
13	Overflow (concealed, under the bracket)	
14	QR code	Chap. 8.2 on page 59
15	Hose holder	
16	Parking tube for suction hose	

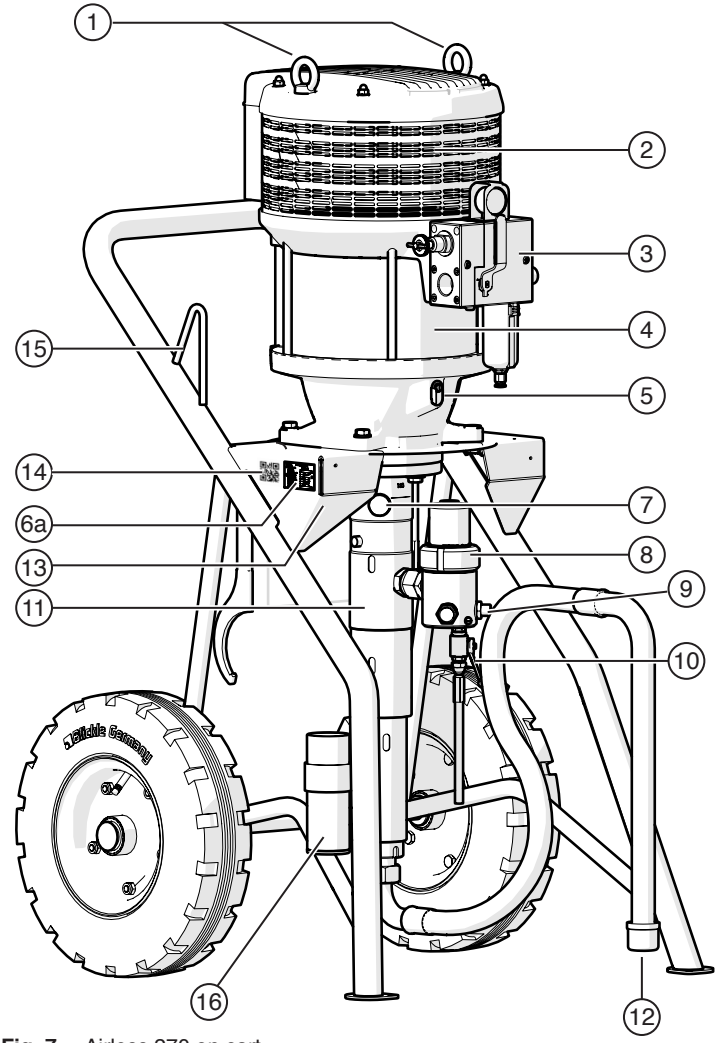


Fig. 7 Airless 270 on cart

No.	Designation	Further information
17	Operation for lift trolley	
18	Temperature gauge	
19	Material outlet	
20	Material inlet	
21	Material fluid heater	separate operation manual
22	Parking brake	

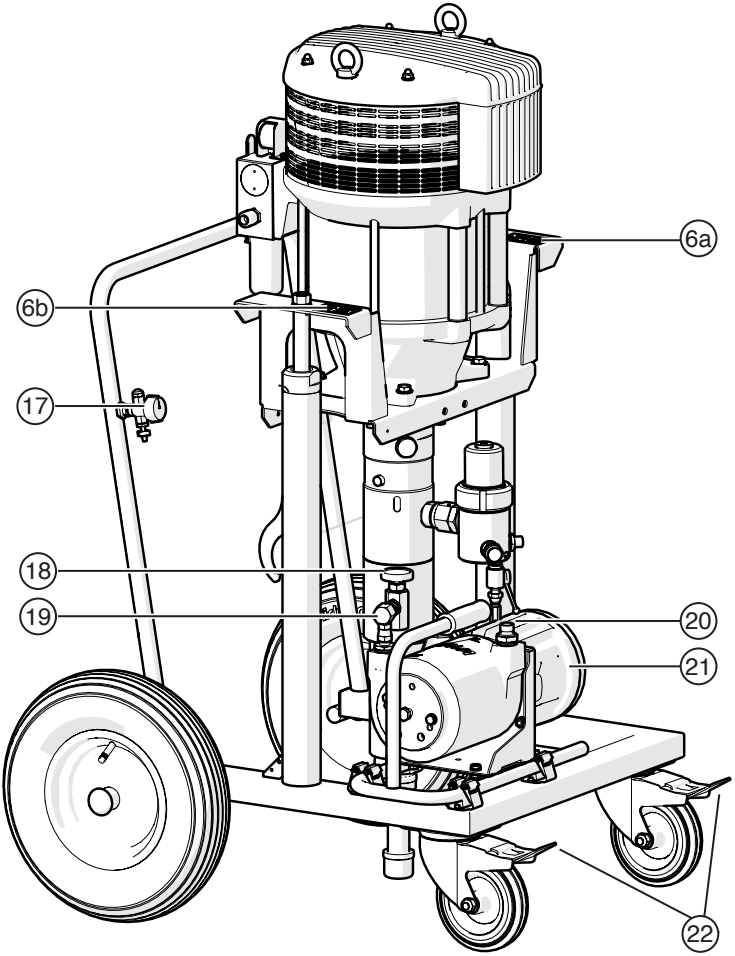


Fig. 8 Airless 270 on lift trolley
(with material fluid heater as optional accessory)

3.3.2 HERKULES 333 GX

The construction of the Hercules 333 GX is absolutely identical with the Hercules 270 GX (s. Fig. 7). It differs from this only in the size of the air motor.

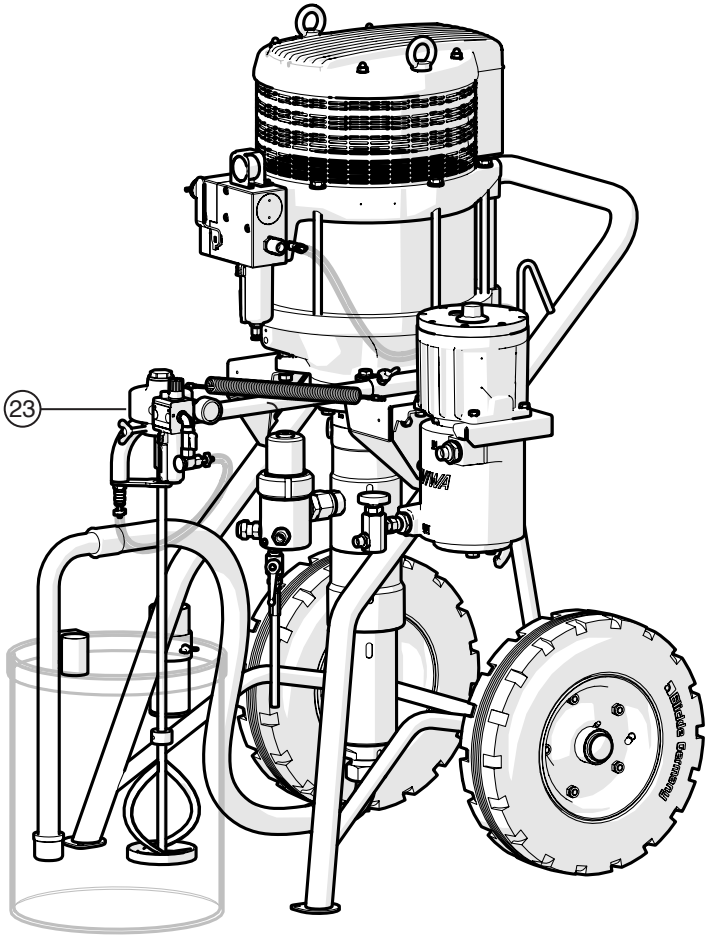


Fig. 9 Herkules 333 GX on cart with optional accessories (attachment kits for agitator and material fluid heater as optional accessory)

No.	Designation	Further information
23	Anbausatz Rührwerk	Kap. 3.5.3 on page 32

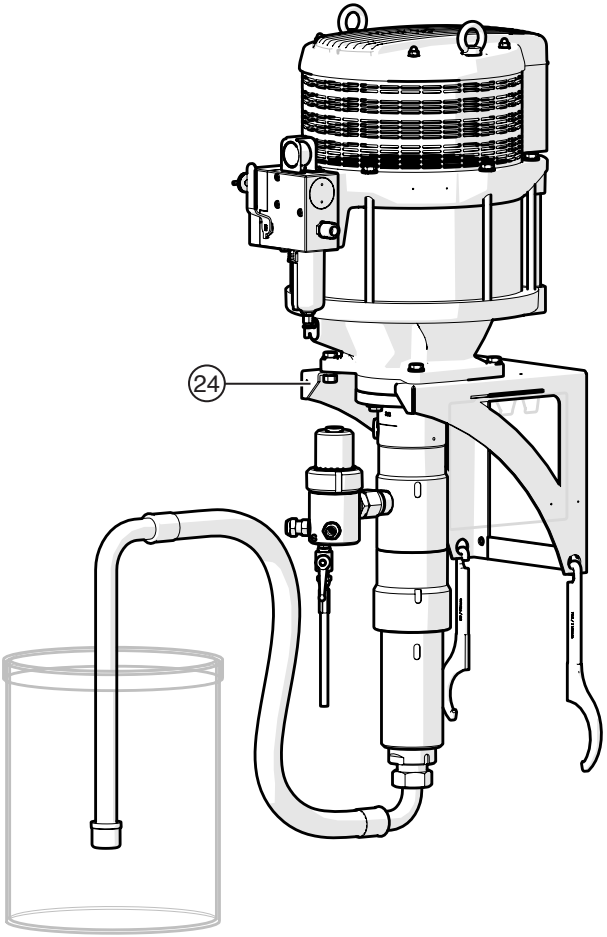


Fig. 10 Herkules 333 GX on wall bracket

No.	Designation	Further information
24	wall bracket	Kap. 4.3.1 on page 36

3.4 Maintenance unit

The maintenance unit prevents the penetration of condensation water and dirt particles into the machine.

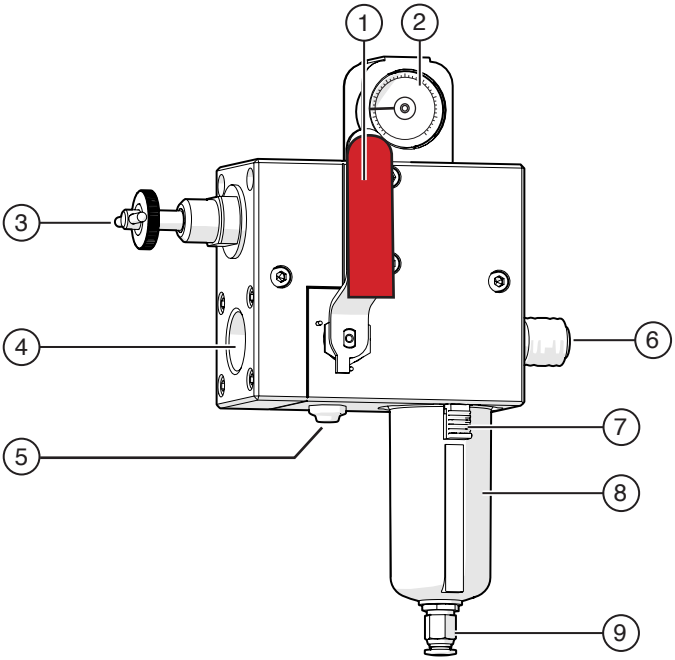


Fig. 11 Maintenance elements

No.	Designation
1	Compressed air shut-off valve with automatic ventilation function / EMERGENCY OFF
2	Pressure gauge for displaying the air inlet pressure
3	Compressed air regulator
4	Compressed air connection / input (G 1") (coupling piece is to be provided by the owner)
5	Air outlet for the automatic ventilation
6	Connection for optional accessories (e.g. agitator), compressed air plug coupling DN 7.2
7	Valve for opening the water separator
8	Container for the water separator
9	Semi-automatic drainage valve

3.5 Optional expansions and accessories

The following list contains just some of the most common accessories and expansions.

You can find the detailed accessory catalogue at www.wiwa.de. For further information and order numbers, you can also contact a WIWA dealer or WIWA customer service.

3.5.1 Spraying accessory kits

The spraying accessory is not part of the scope of delivery by default, since the materials used and the application areas are too diverse. In the spraying accessory kits, you will compile the best suited spraying accessories for your specific application.

The spraying accessory kits include

- Airless spray gun
- Spray hose
- Standard or reversible nozzle

Observe and adhere to the separate operation manual for the spray gun.

3.5.2 Material fluid heater attachment kit

Observe and adhere to the separate operation manual for the material fluid heater.

Material fluid heaters can be optionally used as:

- ➤ Heater for the spraying material
- ➤ Additional heater for longer hose lines
- ➤ Spray air heating during air combined spray process (see separate operation manual)

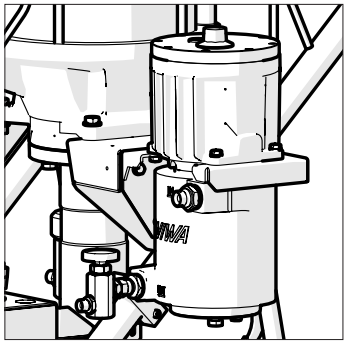


Fig. 12 Material fluid heater on cart

3.5.3 Agitator attachment kit

Since many coating materials have a solids content, the use of an agitator can make sense in order to create the greatest possible homogeneity in the delivery container.

No.	Designation
1	Air motor of the agitator
2	Fog oiler (see chap. 6.5 on page 53)
3	Ground cable
4	Connect compressed air to the maintenance unit (page 29 no. 6)
5	Pipe mount for fastening the agitator to the frame
6	Agitator holder
7	Compressed air shut-off valve
8	Regulator for setting the rotational speed
9	Impeller

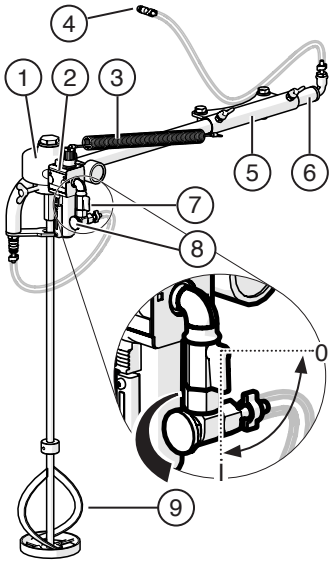


Fig. 13 Pneumatic agitator as attachment kit

Proceed as follows for the subsequent installation of an agitator on the cart:

1. Remove the screws with which the right air motor is fastened to the frame. Screws are included in the attachment kit with which the pipe mount will be screwed tight together with the air motor.
2. Slide the agitator holder through the pipe mount and clamp it in the pipe mount with both wing screws.

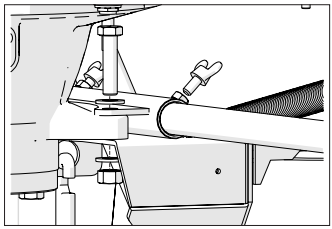


Fig. 14 Screw on pipe mount and clamp agitator holder

3. Attach the ground cable to the frame next to the agitator holder.
4. Attach the compressed air hose to the plug coupling for optional accessories on the maintenance unit (page 29 no.6).

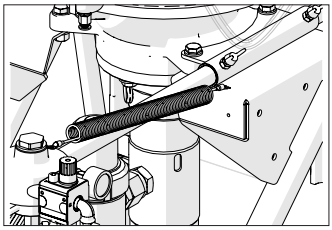


Fig. 15 Attach ground cable

5. Change the position of the agitator depending on the distance to the container by loosening the wing screws and pulling out or pushing in the agitator holder.

CAUTION

Splashing may occur if the impeller is not fully immersed in the material during agitator operation.

➤ Always insure an adequate fill level of the container during agitation.

WARNING

If the rotating impeller grinds on the edge of the container, sparks can arise in metal containers which can trigger fires and explosions.

➤ Position the agitator in such a way that sufficient distance between the impeller and the edge of the container remains.

Open the compressed air shut-off valve to operate the agitator. The quantity of air for the agitator air motor is metered using the regulator on the air intake. Little air = slow rotation, a lot of air = fast rotation.

WARNING

The rotating agitator can cause serious injuries.

➤ Remove the agitator from the container only after it has stopped completely.

➤ Operate the agitator only inside a container.

In order to stop the regulator, turn the controller completely back and close the compressed air shut-off valve.

4 Transport, installation and assembly

The machine left the factory in faultless condition, packaged correctly for transport.

Check the machine at the time of receipt for any transport damage
and for completeness.

4.1 Transport

When transporting the machine, observe the following information:

- When loading the machine ensure sufficient load-bearing capacity of the lifting gear and lifting accessories. The dimensions and weight of the machine can be found in the technical data sheet (see p.3) and type plate.
- In order to lift machine, fasten suitable lifting devices to the eyelets provided for this (see Fig. 7). The eyelets are only designed for the load of the high pressure pump. Do not lift the complete device (incl. accessories, hoses or frame)!
- To lift and load the machine, secure the machine (high pressure pump incl. frame and/or additional accessories) properly on a pallet.
- Do not transport any unsecured objects (e.g. material drum, tools) with the machine.
- Never stand under suspended loads or in the loading area. There is a risk of death here!
- Secure the load on the transport vehicle to prevent sliding and falling.

If the machine has previously been in operation, please observe the following:

- Disconnect the entire energy supply to the machine - also for short transport distances.
- Empty the machine prior to transport - residual liquids may still leak out of the machine during transport.
- Remove all loose parts (e.g. tools) from the machine.

4.2 Installation site

The machine can be installed inside or outside spray booths. However, in order to avoid contamination an external installation is preferable.

WARNING

If the machine is used outdoors during a storm, a life-endangering situation may arise for the operating personnel due to lightning!

- ➤ Never operate a machine outdoors during a storm!
- ➤ The machine owner must ensure that the machine is equipped with suitable lightning protection equipment.

Position the machine horizontally on floor that is level, firm and free of vibrations. The machine must not be tilted or tipped. Make sure that all controls and safety devices are easy to reach.

Safety measures at the installation site:

- ➤ For safe operation of the machine, stability and sufficient free space must be guaranteed.
- ➤ Keep the working area clean, in particular all running and parking surfaces. Remove any spilled material and cleaning agents immediately.
- ➤ In order to prevent harm to health and damage to property, ensure sufficient ventilation and airing of the workplace. It is necessary to guarantee at least 5-times air exchange.
- ➤ Always observe the processing instructions of the material manufacturer.
- ➤ Although no legal regulations apply to the low-mist airless spray process, dangerous solvent vapours and paint particles must be extracted.
- ➤ Protect all items neighbouring the spray object against possible damage due to material mist.

4.3 Assembly

WARNING

If untrained personnel carry out assembly work, they endanger themselves and others, as well as risking the operational safety of the machine.

➤ Electrical and electronic parts may only be installed by specialist personnel with electrical training - all other parts, e.g. the spraying hose or spray gun, may only be installed by personnel trained for this.

WARNING

During installation work ignition sources may arise (e.g. due to mechanical sparks, electrostatic discharge, etc.).

➤ Carry out all assembly work outside of potentially explosive areas.

➤ Prior to commissioning, correctly refit any parts or equipment items removed for transport purposes, as required for the intended use.

4.3.1 Installing the wall bracket

The machine can be optionally installed on a wall bracket.

Observe the weight of the machine (see technical data) and select the appropriate fastener considering the condition of the wall.

Make sure there is a distance of at least 10 cm between the suction angle and the floor.

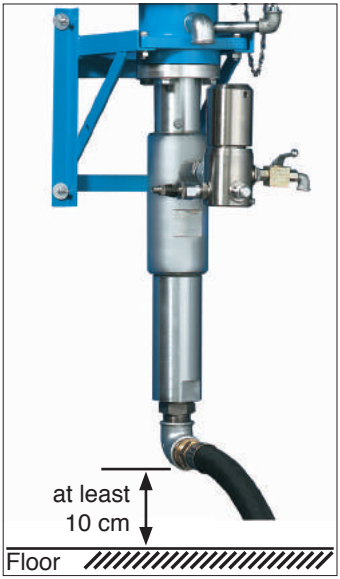


Fig. 16 Installing the wall bracket

4.3.2 Installing the spray hose and spray gun

WARNING

Parts that are not designed for the maximum permissible working pressure of the machine may rupture and cause serious injuries.

➤ Prior to installation check the maximum permissible working pressure of the spray hose and the spray gun. It must be greater than or equal to the maximum working pressure stated on the type plate.

➤ Only use conductive material hoses.
All original material hoses from **WIWA** are conductive and designed for our machines.

1. Connect the spraying hose to the material outlet on the high pressure filter (Fig. 17).

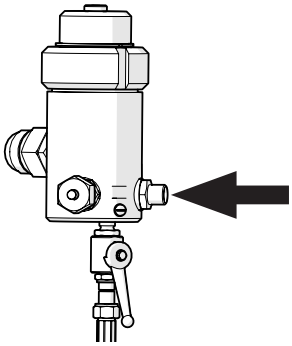


Fig. 17 Connecting the spray hose to the high pressure filter

2. Connect the other end of the spraying hose to the spray gun (Fig. 18).

Fig. 18 Connecting the spray hose to the gun (example)

4.3.3 Grounding the machine

WARNING

The high flow velocities with the airless spray process can result in an electrostatic charge.
Static discharges can result in fire and explosions.

➤ Ensure that the machine is properly grounded outside of EX zones!

➤ Also ground the object that is to be coated.

1. Connect the machine's ground cable to an electrically conductive object outside of EX zones.
2. Ensure correct grounding of the object to be coated.

4.3.4 Connecting the compressed air

In order that the required quantity of air is guaranteed, the compressor output must comply with the air requirement of the machine and the diameter of the air supply hoses must match with the connections.

Operation with contaminated or moist compressed air leads to damage in the machine's pneumatic system.

➤ Only use air that is dried, and free of oil and dust!

1. Ensure that
   - the compressed air shut-off valve is closed,
   - the compressed air regulator is completely throttled back.
2. Attach a coupling piece suitable for your compressed air system to the compressed air inlet (G 1") of the maintenance unit.
3. Connect the compressed air supply line.

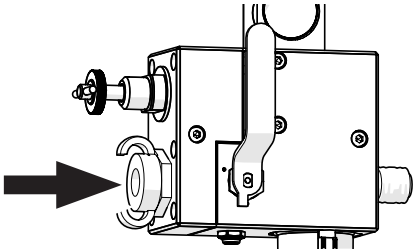


Fig. 19 Connecting the compressed air (coupling is an example, not in scope of delivery)

5 Operation

- The machine must be correctly installed and fully assembled.
- Only put the machine into operation if you are equipped with the prescribed personal protective equipment. Details on this can be found in 2.5.4 ‘Personal protective equipment’ on page 21.
- The spray material must be available in sufficient quantity.

Observe the safety datasheet of the material manufacturer.

- You will need:
  2 collecting vessels for surplus material. These containers are not included in the scope of delivery.

WARNING

If fluid pumps run dry, this can lead to fire or an explosion due to the resultant friction heat.

- During operation ensure that the containers never run empty. Never leave the machine running when unattended.
- However, if this were to happen, bring the respective pump to an immediate standstill and add material.

5.1 Putting the machine into operation

- Properly ground the machine and the object to be coated (see chap. 4.3.3 on page 38).
- Check if all safety equipment is present and fully functional (see 2.4 ‘Safety features’ on page 17).
- Check the release agent level in the pump and top it off if necessary (see 6.4.2 ‘Filling the release agent and checking the fill level’ on page 50). For airless devices on wall brackets, release agent must be filled during the initial commissioning.
- Flush the machine (see 5.3 ‘Flushing’ on page 42) in order to flush out the factory-made test substance (during initial commissioning) or the remains of the previous spray material.
- During commissioning (flushing), check that all machine parts are leak-tight and tighten the connections if necessary.

5.2 Spraying

Before spraying, the work steps for commissioning must have been performed (see 5.1 ‘Putting the machine into operation’ on page 39).

1. Put the intake into the spray material.
2. Open the compressed air shut-off valve.
3. Adjust the air inlet pressure such that the pump runs slowly.
4. Unlock the spray gun and trigger it until the spray material runs out clean and free of bubbles.
   Pump and hoses are now completely filled with material.
5. Let go of the gun trigger and lock the spray gun.
   The pump should stop when the trigger is released.
6. Close the compressed air shut-off valve.
7. Relieve the pressure in the machine (see 5.6 ‘Relieving the pressure’ on page 45).
8. Install a spray nozzle suitable for the material used and the nozzle protector.

Observe the operation manual for the spray gun. It contains a table for selecting the spray nozzle and explanations for the correct installation.

9. Open the compressed air shut-off valve and adjust the spray pressure on the compressed air regulator of the pump (see 5.2.1 ‘Setting the spray pressure’ on page 41).

5.2.1 Setting the spray pressure

Observe the following information when setting the spray pressure:

- The optimum spray pressure has been attained when an even material application is obtained, with fading edge zones.
- Only operate the machine with as much air pressure as is required to attain good atomization at the recommended spray distance of approx. 30 - 40 cm.
- An overly high spray pressure leads to increased material consumption and paint mist.
- If the spray pressure is too low then this leads to streaking and varying coating thicknesses.

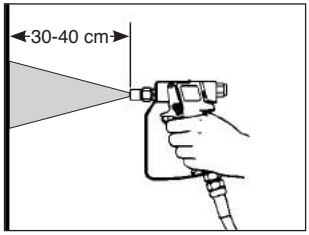


Fig. 20: Spray distance

Observe the operation manual for the spray gun. They contain further tips for the optimization of the spray pattern.

5.2.2 Tips for good coatings

- Hold the spray gun at a right angle (90°) to the surface to be coated. As soon as you hold the spray gun at a different angle, the coating will become uneven and patchy (Fig. 21).
- Ensure an even speed and guide the spray gun parallel to the coating surface. Weaving with the spray gun leads to an uneven coating (Fig. 22).
- Move the spray gun with the arm and not with the wrist.

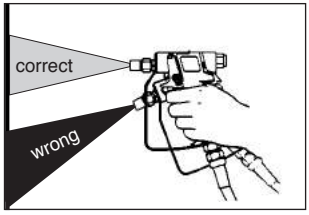


Fig. 21: Spray angle

- Move the spray gun prior to activating the trigger. In this way you will achieve a faultless, soft and smooth overlapping of the spray jet and avoid an excessively thick material application at the start of the coating process.
- Release the trigger before stopping the movement.

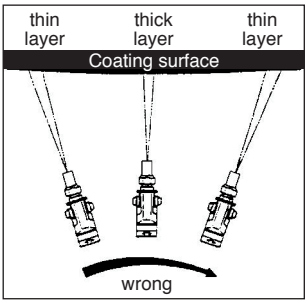


Fig. 22: Do not swing!

- Change the spray nozzle before this becomes worn.

Worn nozzles lead to excessively high material consumption and adversely affect the quality of the coating.

5.3 Flushing

Flushing the machine is necessary

- during initial commissioning
  so that the spray material is not adversely affected by the test substance that was used to test the faultless function of the machine in the factory, the machine must be flushed with a cleaning agent.
- when material is changed
- when work is interrupted and when decommissioning
  in order to flush spray material out of the machine during an interruption to the spray operation before it hardens.

Observe the pot life of the materials used, in particular when using a 2-component material (2K).

WARNING

Heating cleaning agents can lead to an explosion. Serious personal injuries and property damage may result.

- Before flushing the machine, turn off the material fluid heater (optional) and let it cool off completely.

➤ You will need:
- at least 5 l benzine or cleaning agent, that is suitable for the material processed and is recommended by the material manufacturer, in an open container
- an additional electrically conductive container for the cleaning agent that is flushed out

  These containers are not included in the scope of delivery.

1. Close and lock the spray gun.
2. Completely reduce the working pressure on the compressed air regulator. The pressure gauge must display 0 bar.
3. Close the compressed air shut-off valve.
4. Hold the relief hose in the collecting vessel.
5. Briefly open the relief valve to relieve the pressure.

CAUTION

If parts of the machine are clogged (e.g. spray nozzle, material filter for the spray gun, material hose, high pressure filter, suction strainer, etc.), the pressure can not completely escape. Material can escape under high pressure when threaded connections are released and injure you.

➤ Protect yourself against the sudden emergence of material by covering threaded connections with a cloth while loosening them.

➤ Loosen threaded connections particularly cautiously and allow the pressure to escape slowly.

➤ Remove the blockages.
Observe the fault table (chap. 7 ‘Trouble shooting’ on page 56).

6. Remove the nozzle from the spray gun.
Observe and follow the information in the user manual for the spray gun.
7. Remove the filter element from the high pressure filter (see 6.4.4 ‘Clean filter element’ on page 51).
8. Remove the suction tube from the material drum.
Scrape the paint residue off the suction tube and strainer.
9. Position the suction tube with strainer in the container with the cleaning agent.

10. Open the compressed air shut-off valve.
11. Set a low working pressure on the compressed air regulator so that the pump runs slowly.
12. Open the relief valve on the high pressure filter until clean cleaning agent runs out.
13. Close the relief valve.
14. Hold the spray gun sideways against the inner wall of the collecting vessel.
15. Trigger the gun until clean cleaning agent runs out.
16. Close and lock the gun.

5.4 Operating the lift trolley

The lift trolley (optional) is operated on the rotary switch on the frame (see page 28 no. 17)

Fig. 23 Operating the lift truck

5.5 Material change

1. Flush the machine as described in chap. 5.3 ‘Flushing’ on page 42.
2. Let the machine run to empty by taking the intake out of the cleaning agent and triggering the spray gun until air escapes.
3. Close and lock the gun.
4. Completely reduce the air inlet pressure (0 bar).
5. Relieve the pressure in the device (see 5.6 ‘Relieving the pressure’ on page 45).
6. Check the filter element in the high pressure filter (see 6.4.4 ‘Clean filter element’ on page 51).
7. After completing the work, spraying may begin with a new material (see 5.2 ‘Spraying’ on page 40).

5.6 Relieving the pressure

1. Close the compressed air shut-off valve.
   The machine vents automatically.
2. To also relieve the pressure on the material side, guide the relief hose into a container and open the relief valve.
3. Trigger the gun until all pressure has escaped. Lock the gun.

CAUTION

If parts of the machine are blocked (e.g. spray nozzle, material filter for the spray gun, material hose, high pressure filter, suction screen, etc.), it is not possible to fully relieve the pressure. During disassembly work, residual pressures can escape and cause serious injuries

- ➤ Protect yourself against the sudden emergence of material by covering threaded connections with a cloth while loosening them.
- ➤ Loosen threaded connections particularly cautiously and allow the pressure to escape slowly.
- ➤ Remove the blockages (see fault table in chap. 7 ‘Trouble shooting’ on page 56).

5.7 Work interruption

Lock the spray gun for even the shortest interruptions to work. Lock the spray gun for short interruptions to work.

Observe the pot life of the materials used, in particular when using a multi-component material.

The system must be flushed with the prescribed cleaning agent within the pot life specified by the manufacturer and be completely cleaned. Please note:

- ➤ At higher temperatures, the hardening time shortens.
- ➤ Let the cleaning agent circulate for some time.
- ➤ No paint residues may remain in the pump or the filter.

5.8 Decommissioning

For a longer decommissioning, proceed as follows:

1. Flush the machine as described (see 5.3 ‘Flushing’ on page 42).
2. Do not completely empty the pump.
   As soon as clean solvent runs out of the spray gun or the relief hose on the high pressure filter, completely reduce the working pressure (0 bar).
3. Close the compressed air shut-off valve.
4. Hold the spray gun sideways against the inner wall of the collecting vessel and trigger it again.
5. Hold the relief hose in the collecting vessel and briefly open the relief valve to relieve the pressure.

The cleaning agent that is still in the machine remains in the machine until it is restarted so that the machine parts do not stick together.

During a longer standstill, fill the machine with a mould oil since the cleaning agent evaporates over time.

5.9 Storage

The location for storing the machine must be

- ➤ clean
- ➤ dry
- ➤ frost-free and
- ➤ protected against direct sunlight.

Storage temperature	minimum		maximum	
	0 °C	32 °F	40 °C	104 °F

5.10 Disposal

- ➤ It is necessary to collect residues of spray material, cleaning fluids, oil, greases and other chemical substances according to the legal regulations for recycling or disposal. The official local waste water protection laws apply.

At the end of the machine's use it must be put out of use, disassembled and disposed of according to the legal regulations.

- ➤ Thoroughly clean the machine of material residues.
- ➤ Disassemble the machine and separate the materials - metals must be taken to a scrap metal depot, plastic parts can be disposed of with household waste.

6 Maintenance

WARNING

If untrained personnel carry out maintenance and repair work, they endanger themselves and others, as well as risking the operational safety of the machine.

➤ Maintenance and repair work on electrical parts must be carried out by specialist personnel with an electrical qualification - all other maintenance and repair work must be carried out by **WIWA** customer service or specially trained personnel.

WARNING

During maintenance work ignition sources may arise (e.g. due to mechanical sparks, electrostatic discharge, etc.).

➤ Carry out all maintenance work outside of potentially explosive areas.

Observe the maintenance information in the operation manual for the optional accessories.

Prior to maintenance and repair work:

1. Close the compressed air shut-off valve and remove the compressed air hose.
2. Completely de-pressurize the machine.

WARNING

If parts of the machine are blocked (e.g. spray nozzle, material filter for the spray gun, material hose, high pressure filter, suction screen, etc.), it is not possible to fully relieve the pressure. During disassembly work, residual pressures can escape and cause serious injuries

➤ Protect yourself against the sudden emergence of material by covering threaded connections with a cloth while loosening them.

➤ Loosen threaded connections particularly cautiously and allow the pressure to escape slowly.

➤ Remove the blockages (see fault table in chap. 7 on page 56).

After completion of the maintenance and repair work, check the

function of all safety equipment and faultless function of the machine.

6.1 Regular testing

The machine must be inspected and maintained by a specialist:

- prior to first commissioning,
- after changes to / the servicing of parts of the installation that affect safety,
- after an interruption to operation lasting more than 6 months,
- although at least every 12 months.

In the case of machines that have been put out of use, the test can be delayed until the next time commissioning takes place.

The results of the tests must be recorded in writing and stored until the next test. The test certificate or a copy of this must be available at the machine's place of use.

6.2 Maintenance schedule

The information in the maintenance schedule constitutes recommendations only. The time frames may vary depending on the characteristics of the materials used, as well as external influences.

Time frame	Activity	For further reading
Prior to each COMM	Check the release agent level of the high pressure pump, fill release agent if necessary	see chap. 6.4.2 on page 50
1 time per wk.	Check the water separator and clean container	see chap. 6.3.1 and chap. 6.3.2 on Page 50
	Visual inspection of the compressed air and material hoses	
Every 50 oper. hrs.	Check the high pressure pump release agent for material residues	see chap. 2.2.1 on page 12
Every 3 years	Have the compressed air and material hoses checked by a specialist and replace if necessary	

COMM = commissioning; wk. = week; oper. hrs. = operating hours

6.3 Water separator

6.3.1 Checking the water separator

Any condensation water that occurs is semi-automatically drained via the drainage valve.

➤ Guide the hose into an empty collecting vessel.

The drainage valve opens as soon as the compressed air shut-off valve is closed.

6.3.2 Cleaning the container

➤ Check the container (see Fig. 11) regularly for dirt residue and clean it if necessary.

6.4 High pressure pump

6.4.1 Checking the release agent for material residues

Drain a small amount of release agent (see Fig. 24).

If material residues are discovered in the release agent, you must assume that the packing for the respective fluid pump is worn.

In this case, have the pump packing replaced as quickly as possible.

After performing the check, add an appropriate quantity of fresh release agent through the filler openings. We recommend using the release agent from **WIWA** (order no. 0163333).

6.4.2 Filling the release agent and checking the fill level

Prior to every commissioning, check the release agent level if possible. Top off the release agent if necessary.

The total filling quantity is approx. 120 ml.

No.	Description
1	To fill the release agent, slide the cover for the filler opening to the side and press the release agent in by means of the dosing bottle.
2	The release agent should be at the center of the inspection glass for optimal filling.
3	To drain release agent, unscrew the screw.

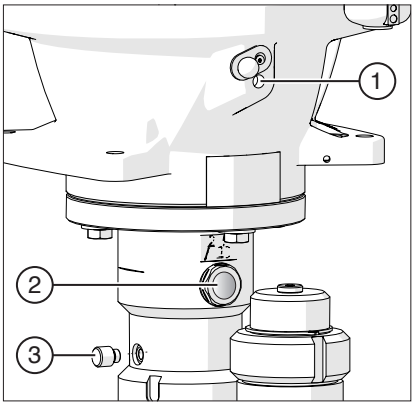


Fig. 24 Filling, checking, draining the release agent

6.4.3 High pressure filter

6.4.4 Clean filter element

The cleaning interval for the filter elements in the high pressure filters is dependent on the type and cleanliness of the material. Clean the filter elements at least 1x per week and with every material change.

WARNING

If the pressure in the machine is not relieved when the high pressure filter is opened, material can escape under very high pressure and cause serious injuries.

➤ Fully relieve pressure in the machine before opening the high pressure filter (see 5.6 ‘Relieving the pressure’ on page 45)!

1. Open the relief valve (1) and briefly trigger the gun to make sure that the machine is absolutely pressureless.
2. Unscrew the sleeve nut (2) on the cap with the attached hook wrench and remove the cap (3) from the high pressure filter.
3. Unscrew the nut (4) and remove the filter element (5).
4. Clean the filter element with solvent. If the filter element has damage, it should be replaced with a new filter element.
5. Attach the filter element onto the stud bolt (6) again and tighten it with the nut (4).
6. Screw the cap (3) with the sleeve nut (2) onto the high pressure filter and tighten it with the hook wrench.

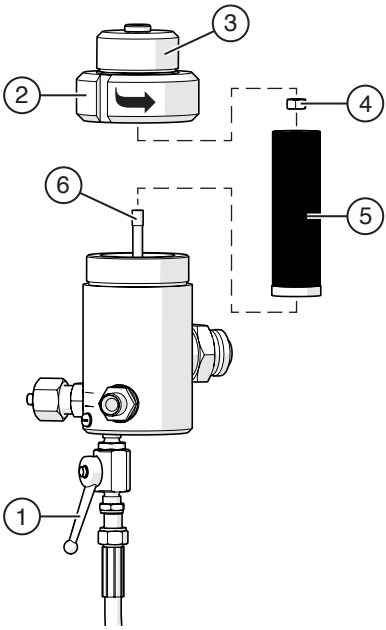


Fig. 25 Remove filter element

No.	Designation
1	Relief valve
2	Sleeve nut
3	Cap
4	Nut
5	Filter element
6	Stud bolt

6.4.5 Filter elements for high pressure filters

Insert a filter element in the high pressure filter that is appropriate for the spray product and fits the spray nozzle. The mesh size should always be somewhat finer than the hole in the nozzle used:

Filter element	Nozzle size		WIWA order number
M 200 (white)		up to 0.23 mm/.009“	0659107-200
M 150 (red)	> 0.23 mm/.009“	up to 0.33 mm/.013“	0659107-150
M 100 (black)	> 0.33 mm/.013“	up to 0.38 mm/.015“	0659107-100
M 70 (yellow)	> 0.38 mm/.015“	up to 0.66 mm/.026“	0659107-070
M 50 (orange)	> 0.66 mm/.026“		0659107-050
M 30 (blue)			0659107-030
M 20 (green)			0659107-020

Do not use a filter element with coarse pigmented or fibre-filled materials. The suction screen installed as standard should remain in the screen housing or be replaced with a coarse-meshed screen. In the case of a material change, the filter element of the high pressure filter and the material screen of the suction system must be cleaned or replaced if necessary.

6.5 Fog oiler

Only present if an agitator is installed.

6.5.1 Checking lubricant level in the fog oiler

The device must only be put into operation if sufficient pneumatic oil is present in the oil tank for the fog oiler.
In case of high humidity levels, use anti-freeze agent for lubrication in place of pneumatic oil, or an optional de-icing system in order to prevent icing up of the air motors.

Check the lubricant level daily as follows:

1. Push up the locking slide on the back of the oil tank and unscrew the oil tank counter clockwise.

Be aware of the O-ring that is used to seal the oil tank. It can slip during disassembly or even fall out.

No.	Designation
1	Adjusting screw
2	Inspection glass
3	Oil filling screw
4	Safety slide
5	Oil tank

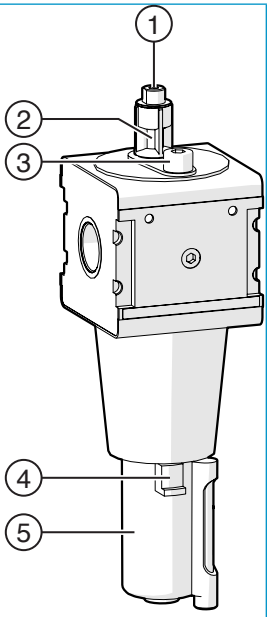


Fig. 26: Fog oiler

2. Check that the O-ring is correctly seated - insert it correctly if necessary.
3. Check that sufficient lubricant is present - with maximum filling, the lubricant lies approx. 2 cm below the top edge of the oil container.
4. If necessary, refill the lubricant. We recommend using pneumatic oil (order number 0632579) or anti-freeze agent (order number 0631387) from WIWA.
5. Firmly screw the oil tank back onto the fog oiler.

6.6 Checking and adjusting the fog oiler

1. Allow the proportioning pump to run slowly under load.
2. At the inspection glass for the fog oiler, check whether compressed air is fed with 1 drop of lubricant after 15 to 20 double strokes of the air motors respectively.
3. If this is not the case, set this proportioning rate with a screwdriver at the adjusting screw of the fog oiler.

6.7 Recommended operating fluids

Only use original operating fluids from **WIWA**:

Operating fluid	WIWA order number
Release agent, yellow (0.5 l) [1] (used by default)	0163333
Release agent, red (0.5 l).[1] (e.g. for isocyanate in the PU area)	0640651

[1] Plasticizer for filling the release agent vessels of the main pump and feed pumps

Materials required during maintenance and repair work (see information in the spare parts lists)

The release agents are also available in larger containers upon request.

6.8 Special tool

The following special tool is enclosed in the delivery for maintenance and repair work:

➤ Hook wrench
for opening the high pressure filter and for disassembly/assembly of the fluid pump

Wrench size	Art no.
80/90 mm	0660287
110/115 mm	0660288

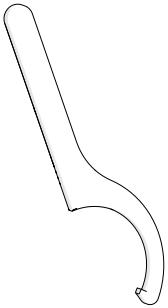


Fig. 27: Hook wrench

7 Trouble shooting

Fault	Possible cause	Elimination
Pressure release not possible (compressed air shut-off valve closed)	– Relief hose or ball valve clogged. – High pressure filter clogged.	➤ Carefully loosen threaded connections and cover them with a cloth ➤ Remove hardened material with a solvent if possible, soak parts in solvent if necessary, otherwise mechanically remove or replace ➤ Contact WIWA service if necessary
Pump does not start up despite operation of the spray gun and the relief valve (on the high pressure filter) being opened.	– Compressed air shut-off valve closed.	– Open the compressed air shut-off valve.
	– No air inlet pressure (compressed air regulator at 0 bar)	– Increase air inlet pressure
	– Spray gun clogged	– Check, clean and, if necessary, replace nozzle, filter element.
	– Relief hose or ball valve clogged.	– Clean relief hose or ball valve, replace if necessary.
	– Air motor defective.	– Repair air motor using the spare parts list - if necessary contact customer service.
Pump is running, but no spray material is being conveyed to the gun.	– Suction strainer clogged.	– Clean the strainer, replace if necessary
	– Suction hose clogged.	– Replace hose.

Fault	Possible cause	Elimination
(Continuation) Pump is running, but no spray material is being conveyed to the gun.	– The ball in the bottom valve does not lift (stuck).	– Open the spray gun without nozzle. – Open the relief valve on the high pressure filter. – Move the bottom valve to the side with a slight impact (hammer). – Unscrew suction system and press out the ball in the bottom valve from the bottom using a pin or a screwdriver
	– Bottom valve does not close.	– Unscrew the bottom valve and clean the ball and the seat thoroughly.
Pump is conveying material, but does not stop when the spray gun is closed.	– Packing or valve worn out.	– Replace parts.
Pump running smoothly, but the required spray pressure is not achieved.	– Air pressure is too low or too little air.	– Increase the air pressure on the compressed air regulator or check the air line for the correct cross-section.
	– Spray nozzle (new) is too large.	– Insert the smaller nozzle or use a larger pump.
	– Spray nozzle worn (too large).	– Insert a new nozzle.

Fault	Possible cause	Elimination
The pump does not run consistently (recognisable by the different stroke speed of the upward and downstroke) and does not reach the required spray pressure.	– Viscosity of the spraying material is too high (loss of suction).	– Dilute spray material. – Use a larger pump.
	– Suction system is leaking (fluctuations in spray jet).	– Check the seals on all threaded connections of the suction tube and the suction hose and replace if necessary (see the spare parts list for the suction hose and the direct intake).
	– Bottom valve is leaking (pump only stops in the upstroke when spray gun is closed).	– Unscrew the bottom valve and clean the ball and the seat thoroughly, if necessary replace the ball or the valve seat.
	– Piston valve is leaking (pump only stops in the downstroke when spray gun is closed).	– Clean and check the ball and seat in the double piston, replace the valve seat as required.
	– Lower or upper packing leaks (wear).	– Replace sleeve sets.
Material runs out of the overflow on the air motor.	– Packings are worn.	– Replace sleeve sets. Note: Do not close the overflow!

8 Technical information

8.1 Type plate

The type plate is located on the front on the cart (see Fig. 7).

It contains the most important technical data for the machine.

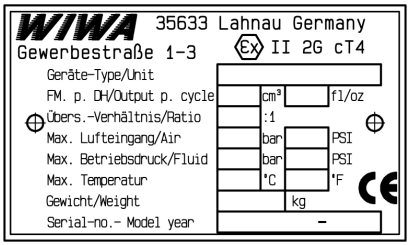


Fig. 28: Example of a type plate

Please ensure that the data on the type plate matches the information on the technical data sheet (see p.3). In case of errors or a missing type plate, please inform us immediately.

8.2 QR code

The QR code is located on the front on the cart (see Fig. 7) and on the back of this operation manual and contains a link which will direct you to machine support for your device type on the WIWA website.

You can find further information for your device there, such as e.g. spare parts lists, repair instructions, etc.

➤ Scan the QR code using your mobile device (e.g. smartphone, tablet).

In order to decrypt the QR code, you will need a QR code reader which can be obtained on the Internet as an APP free of charge.

because it works

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QR-Code

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