LEADING IN
PRODUCTION
EFFICIENCY

EcoPump2 VP Package

Operation manual

MPU00030EN, V01

N92130001V

www.durr.com

Information about the document

This document describes the correct handling of the product.

- Read the document prior to every activity.
- Prepare the document for the application.
- Pass on the product only together with the complete documentation.
- Always follow safety instructions, handling instructions and specifications of every kind.
- Illustrations can deviate from the technical construction.

Validity range of the document

This document describes the following product:

N92130001V EcoPump2 VP Package	

Applicable documents

If you use accessories, follow the operating instructions for the accessories.

MFT00003*	-	Filter HP
MPU00029*	-	EcoPump2 VP
Operating instructions	-	Pressure controller
Operating instructions	-	Spray gun

An asterisk (*) in the document number replaces the symbol of the language variant.

Hotline and Contact

If you have queries or would like technical information, please contact your dealer or sales partner.

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1 Product overview

1.1 Overview

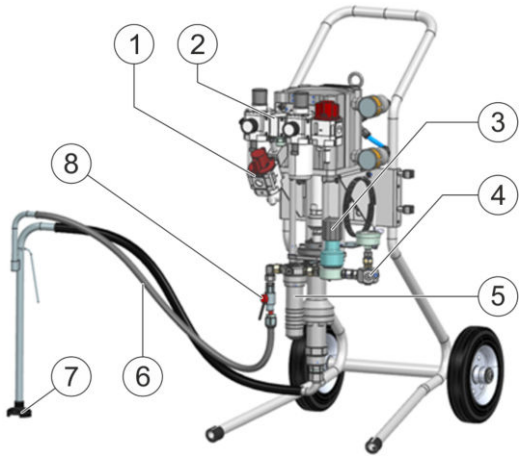

Fig. 1: Overview with transport trolley

1 Compressed air connection
2 Maintenance unit
3 Pressure controller
4 Distributor
5 High pressure filter
6 Return hose
7 Suction model
8 Pressure relief

1.2 Short description

The EcoPump2 VP Package (hereafter called "System") is a modularly constructed pneumatic high pressure paint supply system.

The system can be made out of the following components:

- Pump
- Transport carriage or wall support bracket
- Ball valve
- High pressure filter
- Pressure controller
- Maintenance unit
- Suction model
- Recirculation module

The system can be operated independently of the support bracket at a fixed or moving location. The system is not electric. The pump is operated exclusively with compressed air.

2 Safety

2.1 Presentation of Notes

The following notes can appear in this instruction:

DANGER!

High risk situation that can lead to serious injuries or death.

WARNING!

Medium risk situation that can lead to serious injuries or death.

CAUTION!

Low risk situations that can lead to minor injuries.

NOTICE!

Situations that can lead to material damage.

ENVIRONMENT!

Situations that can lead to environmental damage.

Additional information and recommendations.

2.2 Intended Use

Use

The system is exclusively intended for pumping and processing of low-viscosity to medium-viscosity coating materials of the explosion group IIA and other fluids.

The system is approved for pumping and working with the following media:

- Airless applications with flammable and non-flammable water-based and solvent -based coating materials
- Air-assisted applications with (flammable and non-flammable) water-based and solvent-based coating materials
- Its approved detergents and cleaning agents

Operate the system only within the approved technical data 12 “Technical data” .

The system is intended for use in industry and trade only.

The system may be used under the following conditions:

- In explosive areas of Ex zones 1 and 2
- In non-explosive areas
- With flammable fluid coating materials of the explosion group IIA
- With non-flammable fluid coating materials

Misuse

Not using as intended entails danger to life.

Examples of wrong use are:

- Installation of the system in an areas without technical ventilation
- Use of unapproved materials, see safety data sheets
- Making conversions or changes on your own
- Operation of the system in explosive areas without grounding
- Use of non-conductive lines in explosive areas
- Combination of the system with components that are not suitable for the operation and not approved by Dürr Systems.
- Use of the system in Ex zone 0

Ex-labeling

Ⓔx II 2G Ex h IIA T6 Gb X

II - Device group

2G - Device category

h - Ignition protection category

IIA - Explosion group

T6 - Temperature class

Gb - Device protection level

X - Ambient temperature of 15°C to 40°C

2.3 Residual risks

Danger of explosion due to sources of ignition in an explosive atmosphere.

Sparks, open flames and hot surfaces can cause explosions in explosive atmospheres. Serious injury and death could be the consequence.

- Before carrying out any work, make sure that there is no explosive atmosphere.
- Do not use any sources of ignition and no open light in the work area.
- Do not smoke.
- Do not unpack System in Ex zone.
- Dispose of packaging according to regulation outside of Ex zone or store it.
- Use tools with Ex approval.
- Ground System.
- Wear suitable protective equipment.

Danger from harmful or irritant substances

Serious injuries or death can result if you come into contact with dangerous fluids or steam.

- System Check regularly for leakage. Observe local regulations and maintenance schedule.
- Ensure that the forced ventilation is operational.
- Follow the relevant safety data sheets.
- Wear specified protective equipment.

Escaping material

Material escaping under pressure can cause serious injuries.

Before working on the system:

- Disconnect system from material supply.
- Depressurize the lines.
- Secure the system against being switched on again.

Noise

The sound pressure level during operation may cause severe hearing damage.

- Wear ear protection.
- Do not spend more time then necessary in the work area.

Compressed air

Hoses under pressure can tear or burst. Escaping compressed air can cause serious injury.

- Protect compressed air hoses from heat and sharp edges.
- Wear specified protective equipment.

If hoses under pressure come off loose, the hoses can lash around and cause injuries.

- Check that the hose connections are seated tightly.
- Check compressed air hoses for damage.
- Do not reach for lashing hoses.
- Switch compressed air supply off at the end of work.
- Before working on the product, disconnect the compressed air supply and secure it personalized from being switched on again.
- Depressurize compressed air hoses before carrying out any work.

Sparks due to electrostatic discharge

If the system is not properly grounded or the potential equalization fails, components may get charged electrostatically. Electrostatic discharge can cause sparks that in explosive atmosphere can cause a fire or an explosion. Serious injury and death could be the consequence.

- Ground System as specified.
- Check connection of grounding cable during operation.
- Measure volume resistivity.

2.4 Conduct in the event of a hazardous situation

Conduct in case of danger depends on the operator's installation situation.

Perform the following activities:

- Close lines.
- Secure against reconnection.
- Depressurize lines.

2.5 Staff qualification

⚠ WARNING!

Inadequate qualification

Wrong estimation of dangers can cause serious injury or death.

- Only sufficiently qualified persons may execute all work.
- Some work requires additional qualification. Additional qualifications of specialized personnel are marked with a "+".

This document is intended for qualified personnel in industry and craftmanship.

Electrician

Electricians assemble, install, service and repair electrical systems in a professional manner.

Furthermore, electrical engineers have the following knowledge:

- Directives, Standards and Rules of Engineering
- Local conditions
- Electrical Systems and Their Loading Limits
- Technical Measures for occupational safety and health

Mechanic

The mechanic is trained specifically for the field of work in which he works.

Furthermore, he has the following knowledge:

- Directives, Standards and Rules of Engineering
- Local conditions
- Technical Measures for occupational safety and health

The mechanic is responsible for the following activities on equipment and components:

- Assembly
- Waiting
- Maintenance
- Disassembly

Operator

The operator is trained specifically for the field of work in which he works.

Furthermore, the operator possesses the following knowledge:

- Technical Measures for occupational safety and health

The operator is responsible for the following work:

- Operate and monitor the system/ product.
- Introduce measures in the event of faults.
- Clean system/ product.

+ additional qualification explosion protection

In addition to the knowledge of the various specialist fields, the mechanic has knowledge of regulations and safety measures when working in potentially explosive areas.

+ additional qualification for high pressure

In addition, the mechanic has knowledge of the regulations and safety measures for high pressure systems > 20bar.

Dürr Systems offers special product training for
↬ "Hotline and Contact" .

2.6 Personal protective equipment

When working in explosive areas, the protective clothing, including gloves, must meet the requirements of EN 1149-5. Footwear must meet the requirements of ISO 20344 and IEC 61340-4-3. The volume resistivity must not exceed 100MΩ.

Wear the specified personal protective equipment when working. Provide the following personal protective equipment:

Anti-Static Safety Boots
Protect feet from crushing, falling items and slipping on slippery ground.
Moreover, anti-static safety boots reduce electrostatic charge by discharging the electrostatic charges.

Eye protection
Protects eyes from dust, paint drops and particles.

Protective gloves
Protect the hands from:
- mechanical forces
- Thermal forces
- Chemical effects

Protective workwear
Tight fitting workwear with low tear strength, tight sleeves and no hanging parts.

Use ear protection
Protects from auditory damage due to noise.

3 Design and Function

3.1 System

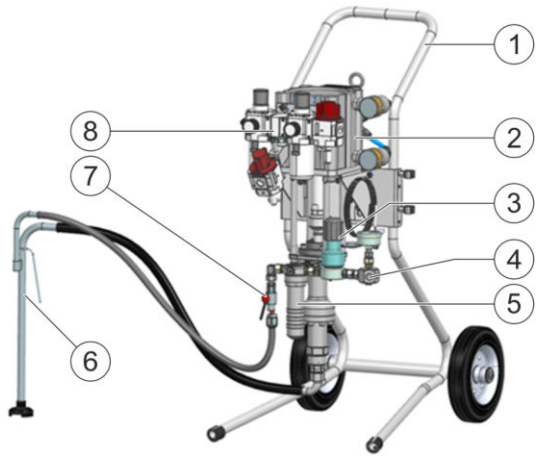

Fig. 2: System design (example)

The system can be made by combining various components.
- Transport trolley (1)
- Pump (2)
- Pressure controller (3)
- Distributor with pressure gauge (4)
- High pressure filter (5)
- Suction module (6)
- Pressure relief (7)
- Maintenance unit with filter regulator (8)

Air reaches the maintenance unit (8) through the compressed air connection. The maintnenance unit regulates the supply pressure of the pump. If a second regulator is present, it regulates the supply pressure up to the painting gun. The material is sucked into the pump (2) via the suction module (6). The pump (2) then increases the output pressure. Using the pressure relief (7) the excess pressure in the system can be reduced with the return hose or the pump can be ventilated. The medium can be filtered using the optional filter (5). The pump output pressure can be regulated with the optional pressure controller (3). Up to two or three paint guns can be connected to the distributor (4). The output pressure can read on the pressure gauge (4).

3.2 Pumping

Fig. 3: Pump (example)

Depending on the requirement, the system can be fitted with a suitable pump. Various versions are available for the system:

Description	Material number
EcoPump2 VP 40 230	N24170034
EcoPump2 VP 80 120	N24170035
EcoPump2 VP 80 300	N24170036
EcoPump2 VP 120 80	N24170037
EcoPump2 VP 120 200	N24170039

For further information, refer to operating instructions for **Eco**Pump2 VP ↳ “Applicable documents” .

3.3 Pneumatic maintenance unit for compressed air preparation

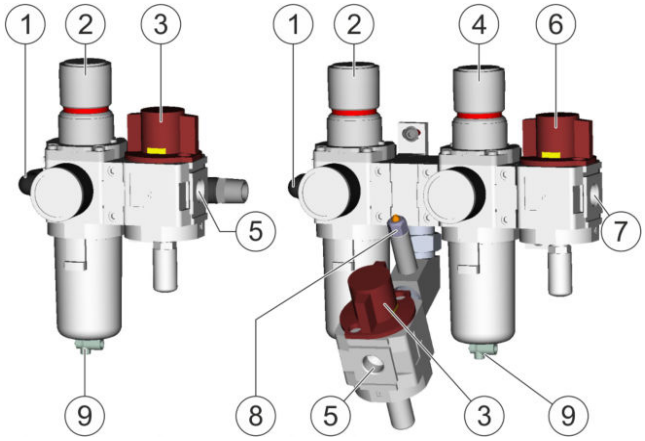

Fig. 4: Pneumatic maintenance units

1 Pump connection
2 Regulator for pump pressure
3 Ball valve compressed air supply
4 Regulator for atomizer air
5 Compressed air supply connection
6 Ball valve for atomizer air
7 Atomizer air connection
8 Nozzle cleaning
9 Condensate discharge

Depending on the requirement, the system can be fitted with a suitable pneumatic maintenance unit.

Two versions of the maintenance unit are available for the system:

- With one filter for airless applications
- With two filters for air-assisted applications

The pneumatic maintenance unit is available with a 3/8" or 1/2" compressed air supply connection.

Condensate forms in the maintenance unit due to contaminated compressed air. Condensate must be drained regularly. A semi-automatic drain on the underside of the maintenance unit controls the condensate drain (9). If the condensate drain (9) is below the center position, the air escapes out automatically. The air can also be vented manually ↳ 8.2 “Cleaning” .

The pneumatic maintenance unit for air-assisted applications has a nozzle cleaning facility (8). Nozzles can be cleaned with air pressure using the nozzle cleaning unit (8). A separator connection for atomizer air (7) is also available as an option.

When using the nozzle cleaning (8), remember the following:

- During operation, leave the protective cap on the nozzle cleaning (8) to avoid unintended switching-on. Remove protective cap only for using the nozzle cleaning (8).
- Dissipate Ex atmosphere before using the nozzle cleaning (8).
- Wear specified protective equipment during nozzle cleaning (8). Do not stand in front of the cleaning valve (outlet valve).

3.4 Suction module

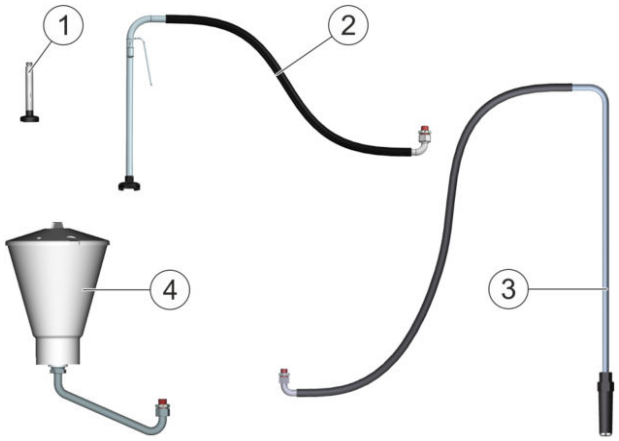

Fig. 5: Suction module

1 Suction lance 0.175 m with filter
2 Suction lance 0.5 m complete with hose 0.85 m
3 Suction lance 0.95 m complete with hose 1.5 m and filter
6 Flow cup 6L with skew pipe

Allowable fluids are suctioned into the pump through the suction module.

Depending on purpose of use, the following suction modules are available:

- Direct rigid suction from material container, usually a 30l hobbock
- Flexible suction with filtration from the material container, usually a 30l hobbock
- Flexible suction with filtration from vessels or containers, usually through a bunghole of 200l barrels
- Suction from a connected feed cup

Feed cup

When using the feed cup, remember the following:

- Operate feed cup only with lid (1).
- Open the lid (1) (e.g. for topping up) only if the system is depressurized.
- Do not open during operation or during purging.
- Do not circulate fluids.
- Clean the feed cup only if the system is not under pressure.

3.5 Filter

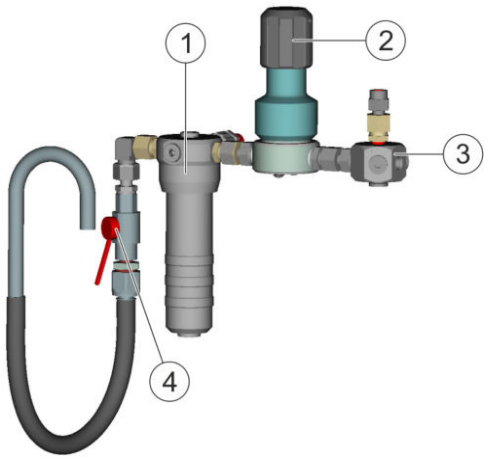

Fig. 6: High pressure filter

The high pressure filter (1) on the suction module protects the system from coarse dirt particles. The high pressure filter (1) filters out dirt from the material before the material is sucked into the pump via the suction module.

The following accessories can be connected to the high pressure filter (1):

- Pressure controller (2)
- Distributor (3) for the connection of paint guns
- Ball valve (4) for pressure relief

For further information, refer to operating instructions of the filter ↳ “Applicable documents” .

3.6 Distributor block

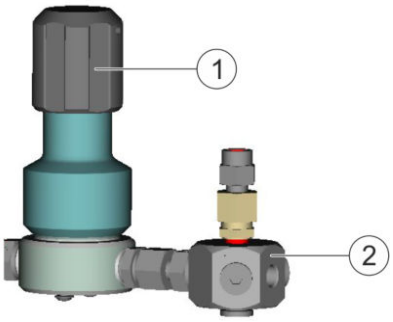

Fig. 7: Distributor block

The distributor block (2) can be assembled onto the pressure controller(1). The distributor block (2) has three connection spots, e.g. for spray guns.

3.7 Transport carriage

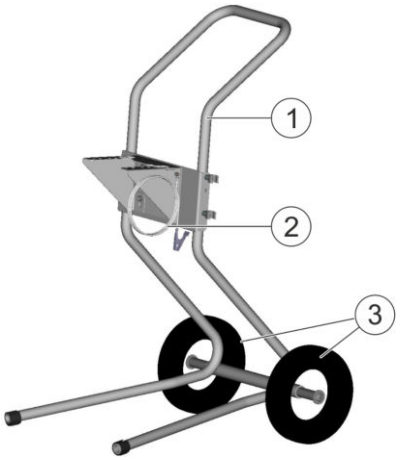

Fig. 8: Transport trolley

The system can be mounted onto a transport trolley (1). The pump can be easily transported using the Transport carriage (1). The rollers (3) of the transport trolley (1) are conductive. A grounding cable (2) is attached to a transport trolley (1).

3.8 Console

Fig. 9: Console

The console has two functions:
- System wall mount with stationary installation
- Support bracket on the transport trolley

3.9 Interfaces

Mechanical interfaces	
Detail	**Value**
Internal threads on the distributor for the media lines of the consumer	4 x G1/4"
Wall fastening	4 x ∅13
Stroke sensor attachment (optional)	1 x M5
Attachment **Eco**PUC	4 x M5

Pneumatic interfaces	
Detail	**Value**
Internal threads on the connection of a pneumatic quick coupling or of a plug connection	1 x G 3/8" 1 x G 1/2"
Internal threads on the connection of a pneumatic screw connection for the paint guns air hose	1 x G 3/8" 1 x G 1/2"

4 Transport, scope of supply and storage

4.1 Transport

NOTICE!

Incorrect Transport

Improper transportation of the system may cause the agitator the systemto fall and suffer damage.
- Protect System from moisture.
- Protect System from vibrations.

Transport conditions	
Detail	**Value**
Temperature, min. short-term	- 30°C
Temperature, max. short-term	60 °C
relative humidity, min.	35%
relative humidity, max.	90%

WARNING!

Raising heavy loads

When lifting heavy loads, it could cause back injuries, crushing or compression.
- Lift heavy loads only by using hoists and suitable stoppers.
- Ensure that the hoists and stoppers have adequate bearing capacity.

WARNING!

Danger of crushing

If the product tilts, it can tip over and fall on persons. This can cause serious injuries.
- Do not tilt the product.
- Ensure that the transport path is free from barriers.

Personnel:
- Mechanic

Protective equipment:
- Protective gloves
- Anti-Static Safety Boots

Requirements:
- The system has been purged and emptied ↳ 7.5 “Purging” .

1. Secure the system onto a pallet with tension belts.
2. Check system for firm seating.
3. Transport palette with a fork lift.

4.2 Scope of delivery

Depending on the order, the following components are included in the scope of delivery:
- Pump
- Console
- Transport trolley
- Distributor block
- Maintenance unit with filter regulator
- High pressure filter
- Ball valve for pressure release
- Pressure controller
- Suction model

Check system on receipt for completeness and integrity.
Report defects immediately ↳ “Hotline and Contact” .

4.3 Handling of packaging material

ENVIRONMENT!

Incorrect disposal

Incorrectly disposed packaging material can damage environment.

- Dispose of material no longer required in an environment-friendly manner.
- Observe local disposal specifications.

4.4 Storage

Storage provisions:

- Do not store outdoors.
- System only store when in a clean and dry condition.
- Store in a dust-free place.
- Do not expose to aggressive media.
- Protect from solar radiation.
- Avoid mechanical vibrations.
- Temperature: 10°C to 40°C
- Relative humidity: 35% to 90%

5 Assembly

5.1 Safety recommendations

WARNING!

Raising heavy loads

When lifting heavy loads, it could cause back injuries, crushing or compression.

- Lift heavy loads only by using hoists and suitable stoppers.
- Ensure that the hoists and stoppers have adequate bearing capacity.

WARNING!

Danger of fire and explosion

Sources of ignition in explosive atmosphere can cause a fire or an explosion. Serious injury and death could be the consequence.

- Before carrying out any work, make sure that there is no explosive atmosphere.

5.2 Requirements for the Installation point

- Compressed air supply can be interrupted and secured against reconnecting.
- Requirements for the operation of pneumatic motors
  - Dry and suitable ambient air
  - Avoidance of excessive heating of the compressed air inside of the motor by sufficient dimensioning of the pneumatic motor
- Technical ventilation
- Grounding facility
- For transport trolley:
  - Firm and flat ground without slope
  - Shear force may not exceed a maximum 70 N.
- For wall mounting: Wall that withstands the weight of the system and vibrations during operation
  12 “Technical data” .

5.3 Assembly

Assembling wall mount

Assemble the system under the following conditions:

- Work in pairs when assembling the system.
- Use M8 anchor bolts.
- Ensure that the wall mount is seated firmly.

Personnel:
- Mechanic
- + additional qualification explosion protection
- + additional qualification for high pressure

Protective equipment:
- Eye protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

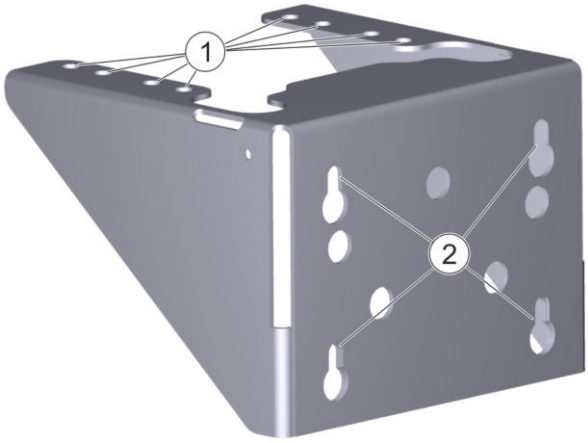

Fig. 10: Mark the drill holes

1. Mark the drill holes (2) for the console.
   Depending on the suction module, maintain a sufficient height from the floor.
2. Assemble the console horizontally.
3. Assemble the pump onto the upper side of the console.
   ⇨ Use bores (1) according to the configured pump.

5.4 Connecting

Connect compressed air hose

Personnel:
- Mechanic
- + additional qualification explosion protection

Protective equipment:
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

⚠ WARNING!

Use of wrong hose types

The ue of wrong hose types may cause severe injuries and damages.
- Ensure that the resistance of the hose is higher than the max. compressed air ↳ 12 “Technical data” .

Compressed air supply

If the compressed air supply is not sufficiently dimensioned, the optimum pump power may not be reached.

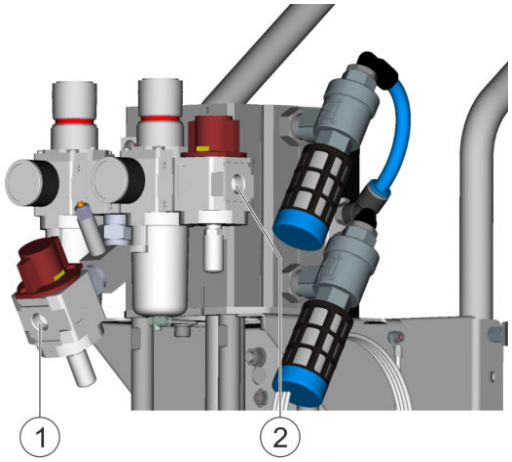

Fig. 11: Screw on the compressed air hoses

1. Screw the compressed air hose onto the maintenance unit (1).

Optional

2. Connect the atomizer air (2).

Connect paint hose

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

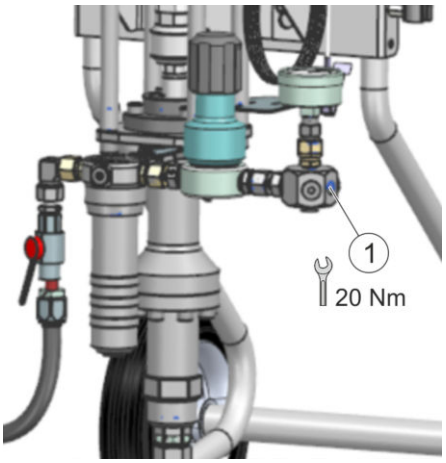

Fig. 12: Connect paint hose example

1. Screw paint hose to outlet (1).
   - Observe the tightening torque.

5.5 Assembling ground conductor

WARNING!

Sparks due to electrostatic discharge

If the system is not grounded, there can be an electrostatic charge on the the system. Electrostatic discharge can cause sparks that in explosive atmosphere can cause a fire or an explosion. Serious injury and death could be the consequence.

- Ground System as specified.
- Before carrying out any work, make sure that there is no explosive atmosphere.

Personnel:

- Electrician
- + additional qualification explosion protection

Protective equipment:

- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

System with wall mount

With a system with a wall mount, the ground conductor is not part of the scope of delivery. Selection of a suitable line is the responsibility of the operator.

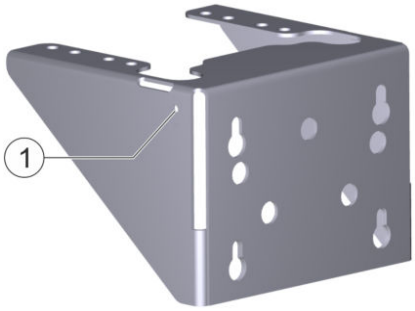

Fig. 13: Ground connection of console

1. Assemble grounding line to the ground connection (1).
2. Measure grounding resistance.
   For further information, refer to operating instructions for **Eco**Pump2 VP ↳ “Applicable documents” .

System with transport trolley

A ground conductor with grounding clamp is assembled on the transport trolley.

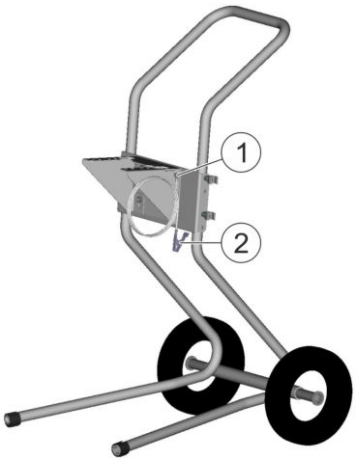

Fig. 14: Ground conductor with grounding clamp

1. Attach grounding clamp (2) of the ground conductor (1) to a groundied component.
   ⇨ Check for firm seating of the grounding clamp (2).
2. Measure grounding resistance.

6 Commissioning

6.1 Safety notes

WARNING!

Danger of fire and explosion

Sources of ignition in explosive atmosphere can cause a fire or an explosion. Serious injury and death could be the consequence.

- Before carrying out any work, make sure that there is no explosive atmosphere.

WARNING!

Hoses whipping around

If hoses under pressure come off loose, the hoses can lash around and cause injuries.

- Check that the hose connections are seated tightly.
- Check hoses for damage.
- Do not reach for lashing hoses.
- Before carrying out any work:
  - Disconnect the compressed air supply and secure it personalized from being switched on again.
  - Depressurize hoses.

WARNING!

Excessive input pressure

Charging the pump with excessive input pressure will damage the pump. Serious injuries and death can be the consequence.

- Charge the pump with low pressure at the time of commissioning.
- Before increasing the pressure, check that hoses and connections are seated tightly.
- Increase pressure gradually, until the maximum input pressure is reached.
- Do not exceed maximum input pressure. 12.5 “Operating values” .

WARNING!

Risk of injury due to escaping material

If material escapes at high pressure, the material can penetrate the body. The injury can look like a harmless cut wound. Death or serious injuries may result.

Before commissioning:

- Check ball valve for functioning.

WARNING!

Noise

Leakages in compressed air lines can generate a high noise level. This might damage the hearing.

In case of leakages:

- Switch off system and secure personally against reconnection.
- Relieve cables from pressure.
- Rectify the defect.

6.2 Commissioning

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

- Protective gloves
- Protective workwear
- Anti-Static Safety Boots
- Use ear protection
- Eye protection

Requirements:

- System is assembled ↳ 5 “Assembly” .
- System is grounded ↳ 5.5 “Assembling ground conductor” .
- There is still some test medium in the pump.
- Ball valve of the compressed air supply is closed.
- Regulator of the pneumatic maintenance unit is closed.
- Ball valve is closed.
- Application device (e.g. gun) is closed.

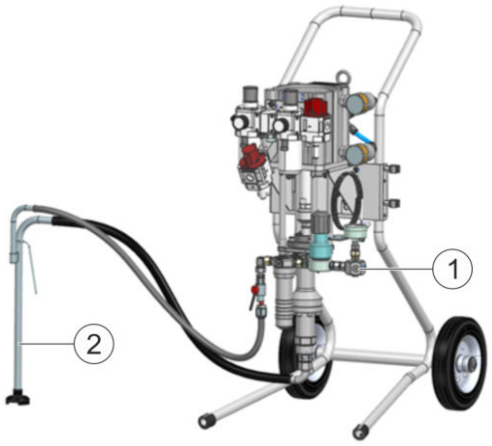

Fig. 15: Suction module (example)

1. Assemble the painting hose onto the distributor (1).
2. Place or lay suction module (2) in a vessel with suitable detergent. Secure against falling out. When using a feed cup: Fill up feed cup with suitable detergent.
3. Place or lay recirculation into a collection tray. Secure against falling out. If flammable media are used, the colleciton tray must be connected with a suitable pontential equalization line.

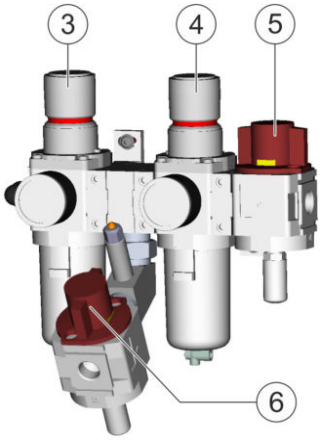

Fig. 16: Set maintenance unit

4. Open ball valve of the compressed air supply.
5. Open the shut-off valves (5 and 6) on the maintenance unit.

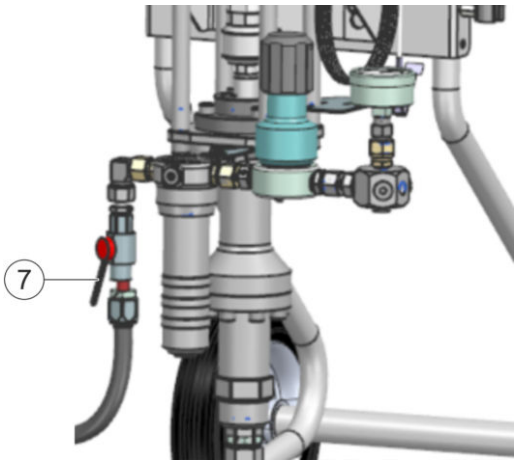

Fig. 17: Open ball valve

6. Open the ball valve (7) on the depressurization module.
7. Set the compressed air on the controller (3) step-by-step to a value of max. 1bar.
   ⇨ The pump begins to pump detergent.

   Keep pumping the detergent until there is no more air coming out of the pressure release hose.
8. Fix regulator (3).
9. Set the compressed air on the regulator (3) to a value of max. 1 bar.
10. Fix regulator (3).

11. Optionally, set atomizer air on the controller (4) according to paint data sheet.
12. Fix regulator (4).
13. Purge system until pure detergent flows out.
14. Close the shut-off valve (6) on the maintenance unit.
    ⇨ The pump stops.
15. Close ball valve (7) on the depressurization module.
16. Unlock application device (e.g. spray gun). Align the application device nozzle onto the container wall of the collecting tray.
17. Open application device.
    ⇨ The pump starts.
18. Purge application device until pure detergent flows out.
19. Close and lock application device.
    ⇨ The pump stops.
20. Check hose lines and connection points for tightness and firm seating.
21. Close ball valve of the compressed air supply.
22. Ensure proper disposal of contaminated detergent in the collecting tray.
    ⇨ The system is ready for operation.

7 Operation

7.1 Safety recommendations

WARNING!

Risk of injury due to noise

The sound pressure level during normal operation may cause severe hearing damage.

- Wear ear protection.
- Put the pump only with assembled sound muffler into operation.

WARNING!

Danger of fire and explosion

Flammable coating materials, detergents and cleaning agents can cause a fire or an explosion.

- When purging, avoid back-spray of the combustible fluids.
- Do not spray into a closed container with the application device.
- Ensure that forced ventilation and fire protection equipment are in operation.

WARNING!

Danger of explosion due to sources of ignition in an explosive atmosphere.

Sparks, open flames and hot surfaces can cause explosions in explosive atmospheres. Serious injury and death could be the consequence.

- Do not use any sources of ignition and no open light in the work area.
- Ensure that the forced ventilation is operational.
- Do not smoke.
- Ground System.
- Wear suitable protective equipment.

WARNING!

Danger due to squirting material

This can cause serious injuries.

- Use only spray guns designed for the maximum pressure of the pump.
- Perform a tightness test according to the maintenance schedule.
- Use feed cup only with lid.

Before every operation:

- Check the system for damages and leakages.
- Check sealing paint of the pump nuts for distortion.

WARNING!

Use of wrong hose types

The use of unapproved hose types can cause damage to personal injury and property damage.

- The hose materials are process-dependent.
- Only use approved hose types.

WARNING!

Hot Surface

In operation, the surfaces of the product can heat intensely. Contact can cause burn injuries.

- Wear safety gloves.
- Before each use, check suction module for clogging.

WARNING!

Tip and roll away

The system with the transport trolley can become unstable with imbalances.

Only operate on the following subground:

- Tight
- Plane
- Without gradient

7.2 General notes

NOTICE!

Material damage due to unsuitable rinsing agent

If the rinsing agent reacts chemically with the components or the material, components get damaged.

- Use only the rinsing agents that are compatible with the components and the material.
- Refer to safety data sheet of material manufacturer.

NOTICE!

Dried material residues

If material residues dry in the system, that can harm components.

- Purge system immediately after each use.

7.3 Switching on

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

- Protective gloves
- Protective workwear
- Anti-Static Safety Boots
- Eye protection

Requirements:

- Compressed air supply is switched on 5.4 “Connecting” .
- System is grounded 5.5 “Assembling ground conductor” .
- System has been put into operation 6.2 “Commissioning” .
- Coating material is prepared.

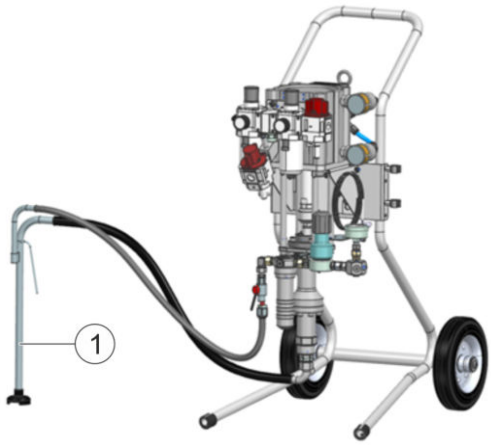

Fig. 18: Suction module (example)

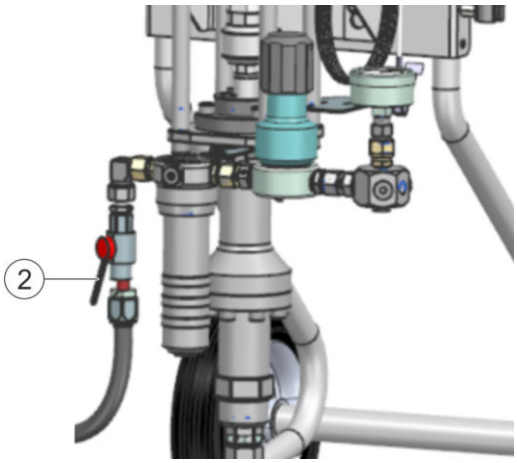

Fig. 19: Open ball valve

1. Remove suction module (1) from the vessel with suitable detergent. Dip into the prepared coating material.
   When using a feed cup, open ball valve (2) on the depressurization module. Let the remainder of the detergent in the collecting tray flow out. Close ball valve (2). Fill prepared coating material in the feed cup.
2. Lay recirculation into a collection tray or the suction assembly. Secure against falling out.
   If flammable media are used, the colleciton tray must be connected with a suitable pontential equalization line.
3. Open ball valve of the compressed air supply.

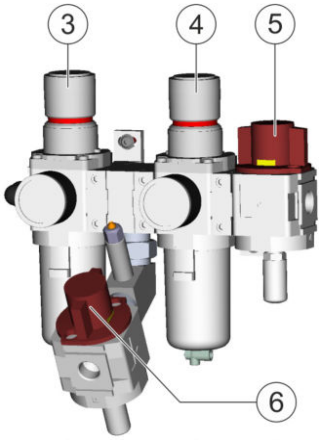

Fig. 20: Set maintenance unit

4. Open shut-off valves (5 and 6).
5. Set the compressed air on the controller (3) step-by-step to a value of max. 1bar. Respect maximum pressures ↳ 12.7 “Type plate” .
6. Fix regulator (3).
7. Open shut-off valve (6) on the maintenance unit.
   ⇨ The remaining detergent from the purging process flows into the collecting tray.
8. Once the system begins to pump the coating material, set compressed air on regulator (3) to a value of max. 1bar.
   ⇨ The coating material flows into the collecting tray.
9. Close ball valve (2) on the depressurization module.
   ⇨ The pump stops.
10. Unlock application device (e.g. spray gun). Align the application device nozzle onto the container wall of the collecting tray.
11. Open application device.
    ⇨ The pump starts. The coating material flows out.
12. Close and lock application device.
    ⇨ Coating material is under pressure.
13. Adjust compressed air on regulator (3) to the required value. Respect maximum pressures ↳ 12 “Technical data” .
14. Check hose lines and connection points for tightness and firm seating.
15. In the case of air assisted application, adjust the required atomizer pressure on the regulator (4).
16. Fix regulator (4).
17. Check following parameters:
    - Atomizer air
    - Pump air
    - Material pressure

    Readjust, if necessary.
18. Ensure proper disposal of contaminated detergent in the collecting tray.
19. Set application parameters.
20. Test spray jet on a suitable surface. Set pump to the lowest pressure, at which a qualitative atomization is achieved.
    ⇨ The system is ready for operation.

7.4 Switching off

Personnel:
- Operator
- + additional qualification explosion protection

Protective equipment:
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots
- Eye protection

1. Close and lock application device.
   ⇨ The pump stops.
2. Purge the system ↳ 7.5 “Purging” .
3. Close ball valve of the compressed air supply.

7.5 Purging

Purge and clean system after end of work every time.
It is advisable to create a purging program and cleaning program in relation to the coating material used, to ensure reliable functioning of the system.

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

- Protective gloves
- Protective workwear
- Anti-Static Safety Boots
- Eye protection

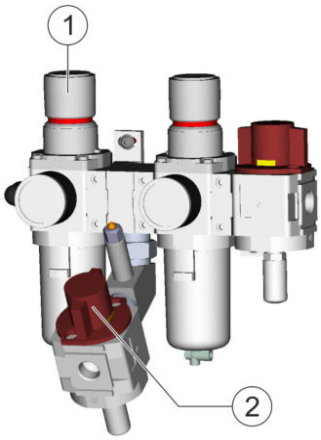

Fig. 21: Set maintenance unit

1. Set the compressed air on the regulator (1) to a value of max. 1.5 bar.
2. Fix regulator (1).
3. Close ball valve of the compressed air supply.

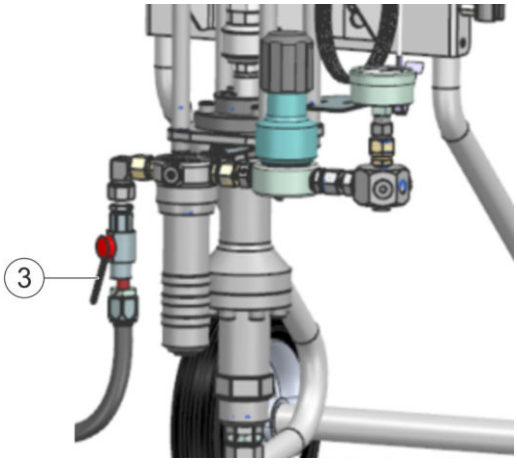

Fig. 22: Open ball valve

4. Open ball valve (3) on the depressurization module. Collect the medium flowing out in a container.
   ⇨ The system is de-pressurized.
5. When using a multi-component medium with corresponding processing time, ensure proper disposal of the medium.

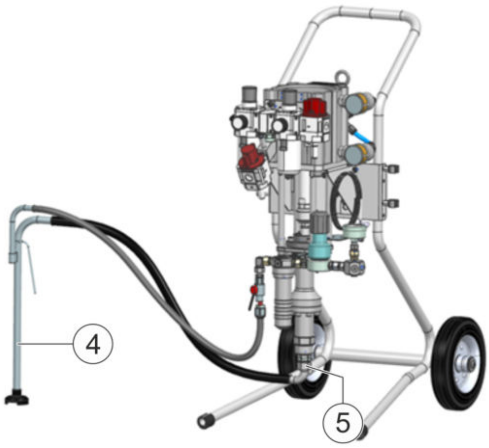

Fig. 23: Suction module (example)

6. Align the suction module if needed:
   - Loosen cap nut (5).
   - Align hose.
   - Tighten cap nut (5).
7. Clean suction module (4) from outside.
   When using a feed cup, clean the feed cup from inside by means of suitable brushes or cloths.
8. Put or place suction module (4) in a vessel with suitable detergent. Secure against falling out.
   When using a feed cup, fill up the feed cup with suitable detergent.
9. Place or lay recirculation into a collection tray. Secure against falling out.
   If flammable media are used, the colleciton tray must be connected with a suitable pontential equalization line.
10. Open the shutoff valve (2) of the pneumatic maintenance unit.
    ⇨ The pump begins to pump detergent.
11. Set the compressed air on the regulator (1) to a value of max. 1 bar.
12. Fix regulator (1).
13. Close ball valve (3) on the depressurization module.
    ⇨ The pump stops.
14. Unlock application device (e.g. spray gun). Align the application device nozzle onto the container wall of the collecting tray.

15. Open application device.
    ⇨ The pump starts.
16. Purge application device until pure detergent flows out.
17. Close and lock application device.
    ⇨ Coating material is under pressure.
18. Place or lay recirculation into a collection tray. Secure against falling out.
    If flammable media are used, the colleciton tray must be connected with a suitable pontential equalization line.
19. Open ball valve (3) on the depressurization module.
    ⇨ The system is de-pressurized.
20. If needed, remove, clean and reassemble filter inserts.
21. If applicable, disassemble suction module (4). Clean using suitable cleaning agent. Assemble again.
22. If applicable, disassemble suction piece. Clean using suitable cleaning agent. Assemble again
    ↳ “Applicable documents” .
23. Clean hose lines and application device ↳ “Applicable documents”
24. Repeat steps for commissioning ↳ 6.2 “Commissioning” .
    ⇨ The system is ready for operation.

8 Cleaning

8.1 Safety recommendations

WARNING!

Danger of fire and explosion

Flammable coating materials and their detergents and cleaning agents can cause a fire or an explosion.

- Ensure that the flashpoint of the cleaning agent is at least 15K above the ambient temperature or clean System at the cleaning areas with active technical ventilation, in painting booths, according to EN 16985.
- Only electrically conductive containers may be used for the cleaning fluid. Containers must be grounded.
- Note explosion group of the fluid.
- Observe safety data sheets of all media used.
- Ensure that forced ventilation and fire protection equipment are in operation.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground System.

WARNING!

Danger of fire and explosion

Sources of ignition in explosive atmosphere can cause a fire or an explosion. Serious injuries and death can be the consequence.

- Before carrying out any cleaning and maintenance work, ensure there is no explosive atmosphere.

WARNING!

Danger from harmful or irritant substances

Serious injuries or death can result if you come into contact with dangerous fluids or steam.

- System Check regularly for leakage. Observe local regulations and maintenance schedule.
- Ensure that the forced ventilation is operational.
- Follow the relevant safety data sheets.
- Wear specified protective equipment.
- Avoid contact (e.g. with eyes, skin).

WARNING!

Danger due to freezing

The pneumatic drive unit can cool down significantly. Contact with it can result in frostbite.

- Wear protective hand gloves.
- Before conducting any maintenance and cleaning work, ensure that the pneumatic drive unit has room temperature.

WARNING!

Hot medium

Medium may become heated due to process temperatures. Contact with it can cause burns.

- Do not touch hot medium.
- Before carrying out any work:
  - Let the medium cool down.
  - Wear protective hand gloves.

NOTICE!

Unsuitable cleaning agents

Unsuitable detergents can cause material damage.

- Only use cleaning agents approved by the material manufacturer.
- Follow safety data sheets.

NOTICE!

Unsuitable Cleaning Tools

Unsuitable cleaning tools can cause damage.

- Only use cloths, soft brushes and paintbrushes.
- Do not use abrasive cleaning tools.
- Do not use compressed air for cleaning.
- Do not use any thinner spray guns.
- Do not use high pressure for cleaning agents.

8.2 Cleaning

Clean the nozzle

WARNING!

Danger of fire and explosion

In explosive atmosphere, the nozzle cleaning can cause a fire or an explosion.

- Before nozzle cleaning, ensure that the atmosphere is not explosive.
- If the atmosphere is explosive, ensure that the protective cap fits on the nozzle cleaning.

WARNING!

Damage to hearing due to escaping compressed air

Setting the nozzle incorrectly on the nozzle cleaner will allow compressed air to escape. This could lead to damage to hearing.

- Wear ear protection during nozzle cleaning.
- Ensure that the nozzle cleaning fits well on the nozzle.
- Do not stand in front of the cleaning valve (outlet valve) during nozzle cleaning.

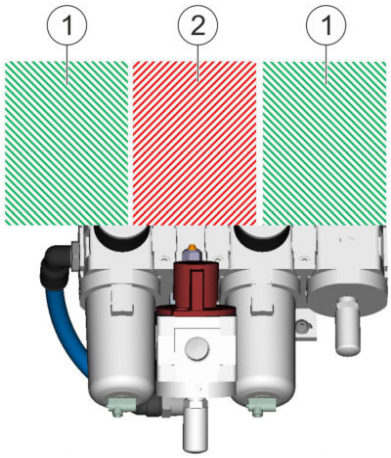

Fig. 24: Danger zone nozzle cleaning

1 Safe area
2 Danger Zone

Personnel:
- Operator
- + additional qualification explosion protection

Protective equipment:
- Use ear protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots
- Eye protection

Nozzle cleaning is available as a spare part ↳ 13.1 “Spare parts” .

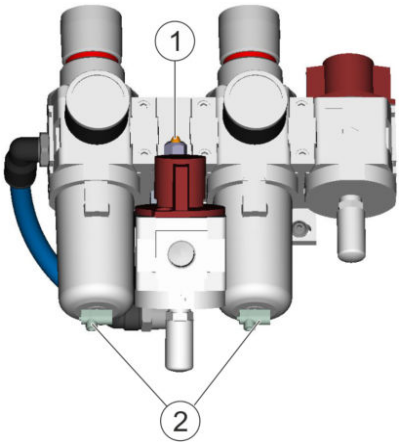

Fig. 25: Maintenance unit

1. Remove the captive protective cap from the cleaning valve.
2. Press nozzle on the nipple (1) of the cleaning valve.
   ⇨ The nozzle is cleaned with compressed air.
3. After the cleaning procedure, fit the captive protective cap back on the cleaning valve again.
   If worn out: Replace nozzle.

Drain condensate

1. Keep container ready to collect the condensate.
2. Open condensate drain (2).
   ⇨ The condensate is drained.

9 Maintenance

9.1 Safety notes

WARNING!

Danger of fire and explosion

Sources of ignition in explosive atmosphere can cause a fire or an explosion. Serious injuries and death can be the consequence.
- Before carrying out any cleaning and maintenance work, ensure there is no explosive atmosphere.

WARNING!

Unsuitable spare parts in explosive areas

Spare parts not compliant with the specifications of the ATEX directives can cause explosions in an explosive atmosphere. Serious injury and death could be the consequence.
- Use exclusively original spare parts.

WARNING!

Danger from poisonous aerosols

When the diaphragm is defective, a mixture of paint, solvent and air is leaking from the muffler.
- Wear respiratory protection when working on the diaphragm.
- Carry out larger work on the pump at a suitable work station in the workshop.

WARNING!

Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

Before carrying out any work:
- Disconnect the system from compressed air and material supply system.
- Secure system personalized from being switched on again.
- Depressurize the lines.

WARNING!

Danger due to freezing

The pneumatic drive unit can cool down significantly. Contact with it can result in frostbite.

- Wear protective hand gloves.
- Before conducting any maintenance and cleaning work, ensure that the pneumatic drive unit has room temperature.

WARNING!

Hot medium

Medium may become heated due to process temperatures. Contact with it can cause burns.

- Do not touch hot medium.
- Before carrying out any work:
  - Let the medium cool down.
  - Wear protective hand gloves.

9.2 Maintenance schedule

The maintenance intervals given below are based on experiential values. Adapt the maintenance intervals to suit requirements.

Interval	Maintenance work
Before every use	Check system for damages and leakages.
	Check system for contamination and rust formation.
	Check paint for damage.
	Check suction module for damage and clogging.
	Check grounding. Assemble new ground conductor if there is any damage. ↳ 5.5 “Assembling ground conductor”
	Check input pressure and control pressure.
weekly	Check state and tightness of the components, connections and lines.
	Check noise generation.
	Check for steady delivery pressure.
monthly	Check filter of feed cup and suction lance. Replace worn out filters. ↳ 9.4 “Replacing filter disk” ↳ 9.5 “Replace filter cartridge”
annually	Check grounding for damage. Measure grounding resistance. Assemble new ground conductor if there is any damage. ↳ 5.5 “Assembling ground conductor”
every 2 years or after 1000 operating hours	Replace the filter of the maintenance unit. ↳ 9.3 “Replace filter of the maintenance unit.”
	Have the motor inspected by Customer Service.
every 3 years	Check hoses for tightness.
after every replacement of components	Pressure verification
As necessary	Drain condensate on the maintenance unit. ↳ 8.2 “Cleaning”

9.3 Replace filter of the maintenance unit.

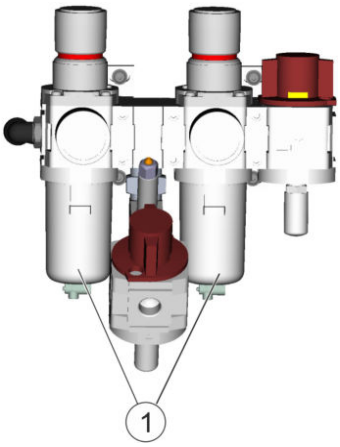

Fig. 26: Replace filter

1 Tank assembly with filter

Personnel:

- Mechanic
- + additional qualification explosion protection
- + additional qualification for high pressure

Protective equipment:

- Protective workwear
- Protective gloves
- Anti-Static Safety Boots
- Eye protection

Requirements:

- System is switched off ↳ 7.4 “Switching off” .

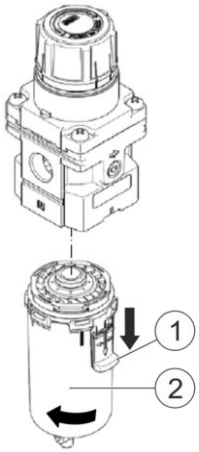

Fig. 27: Disassemble tank assembly

1. Pull the locking knob (1) downward.
2. Rotate tank assembly (2) in the direction of the arrow.
   ⇨ The tank assembly (2) separates itself from the maintenance unit.
3. Remove tank assembly (2).

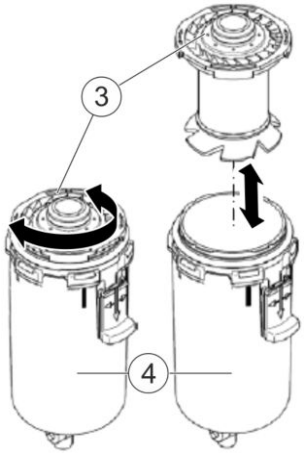

Fig. 28: Filter element

4. Rotate filter element (3) by 45°.
5. Remove filter element (3) from the container (4).
6. Set new filter element (3) into the container (4).
7. Rotate filter element (3) by 45°.
   ⇨ The filter element (3) sits firmly.

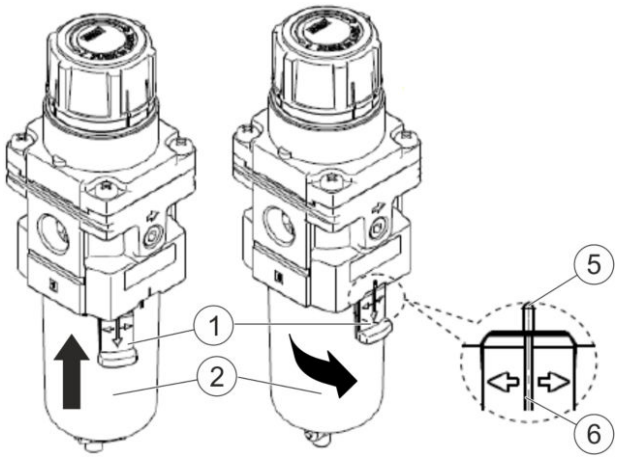

Fig. 29: Assemble tank assembly

8. Rotate tank assembly (2) by 30° and approach the regulator.
9. Turn the tank assembly (2) tightly until the locking knob (1) latches.
   ⇨ The groove on the regulator (5) must match with the groove on the locking knob (6).

   The filter is replaced.

9.4 Replacing filter disk

Personnel:
- Mechanic
- + additional qualification explosion protection
- + additional qualification for high pressure

Protective equipment:
- Eye protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

Requirements:
- System is purged ↳ 7.5 “Purging” .
- System is switched off ↳ 7.4 “Switching off” .
- System is depressurized and secured against restarting.

Fig. 30: Replace filter disk

1. Loosen circlip (1).
2. Replace filter disk (2).
3. Insert circlip (1).
   ⇨ The filter disk is replaced.

9.5 Replace filter cartridge

Personnel:
- Mechanic
- + additional qualification explosion protection
- + additional qualification for high pressure

Protective equipment:
- Eye protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

Requirements:
- System is purged ↳ 7.5 “Purging” .
- System is switched off ↳ 7.4 “Switching off” .
- System is depressurized and secured against restarting.

Fig. 31: Replace filter cartridge

1. Loosen bayonet catch in the direction of the arrow (1).
2. Pull out filter housing (2).
3. Replace filter cartridge.
4. Push in filter housing (2).
5. Close bayonet catch.
   ⇨ The filter cartridge is replaced.

9.6 Dismantling

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

- Eye protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

Requirements:

- System is purged ↳ 7.5 “Purging” .
- System is switched off ↳ 7.4 “Switching off” .
- System is depressurized and secured against restarting.

Disassemble maintenance unit

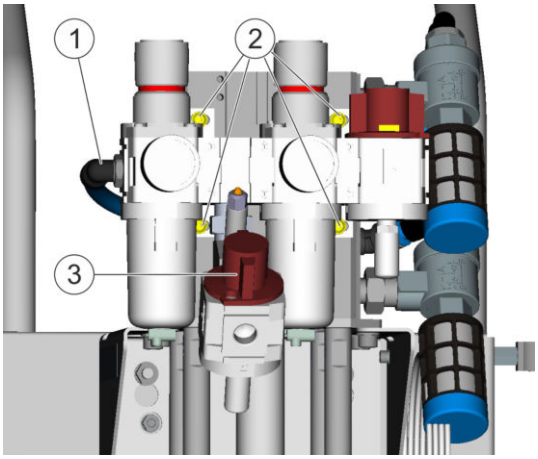

Fig. 32: Disassemble maintenance unit

1. Close the shut-off valve (3) on the maintenance unit.
2. Disconnect system from compressed air supply.
3. Disassemble the compressed air hose (1).
4. Secure maintenance unit against toppling.
5. Unscrew the screws (2) from the support bracket.
6. Remove the maintenance unit.

Disassemble distributor

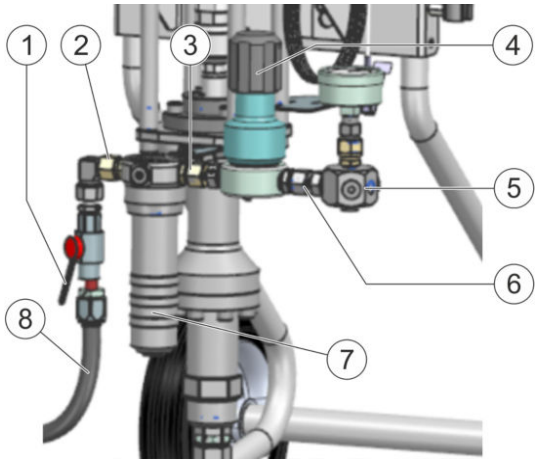

Fig. 33: Distributor, high pressure filter, pressure controller

7. Loosen screw connection (6).
8. Remove distributor (5).

Disassemble pressure controller.

9. Loosen screw connection (3).
10. Unscrew pressure controller (4) from the retaining plate.
11. Remove pressure controller (4).

Disassembling ball valve

12. Loosen screw connection (2).
13. Remove ball valve (1).
14. Unscrew hose (8) from the ball valve (1).

Disassemble high pressure filter

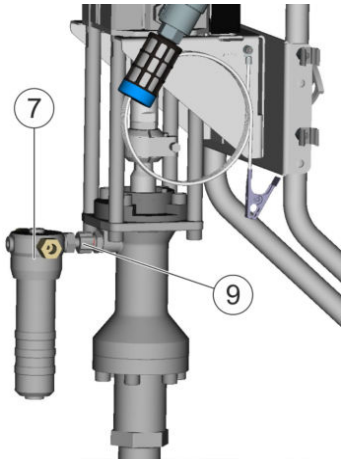

Fig. 34: High pressure filter

15. Loosen screw connection (9).

16. Remove high pressure filter (7).

Disassemble pump

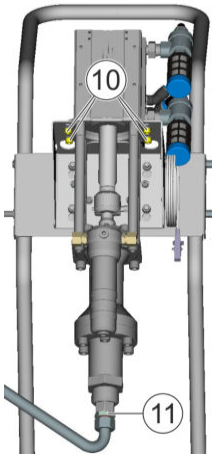

Fig. 35: Disassemble pump

17. Loosen screw connection (11).
18. Remove the connection of the suction model.
    ⇨ Collect the material in a container.
19. Unscrew the screws (10) on the support bracket.
20. Remove pump.
    ⇨ The system is dismantled.

Dismantling of pump, high pressure filter and spray guns, see operating instructions for the components ↳ “Applicable documents” .

9.7 Assembly

CAUTION!

Risk of injury due to screw connections disengaging themselves

Bolted connections could loosen up if there are vibrations. This can cause serious injuries and material damage.

- Use screw locking.
- Comply with manufacturer’ data.
- If it is a chemical thread protection, observe the drying time as specified by the manufacturer.

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

- Eye protection
- Protective workwear
- Anti-Static Safety Boots
- Protective gloves

Requirements:

- Individual components are assembled as described in the operating instructions ↳ “Applicable documents” .

Assemble pump

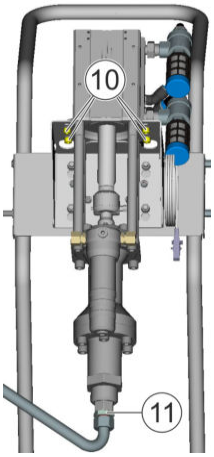

Fig. 36: Assemble pump

1. Place pump onto the support bracket.
2. Wet the thread of the screws (10) with threadlocker ↳ 12.9 “Operating and auxiliary materials” .
3. Tighten the screws (10) on the support bracket.
   - Observe tightening torque of 12Nm.
4. Assemble the connection of the suction model.
   - Attach pipe at the connection.
   - Tighten the screw connection (11) with a key until you feel resistance.
   - With an additional key holding against it and the screw connection (11), tighten 1/4 turn more.
   ⇨ With stainless steel screw connection, tighten by 1/2 turn.

Assemble high pressure filter

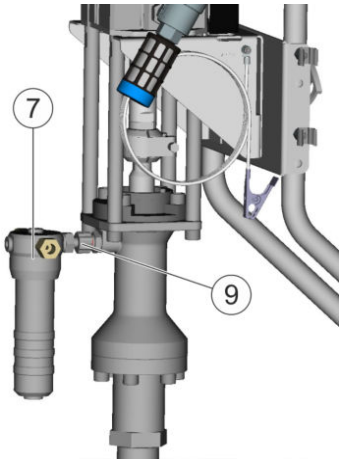

Fig. 37: High pressure filter

5. Attach the high pressure filter (7) at the pump connection.
6. Tighten screws of screw connection (9).
   - Observe tightening torque of 40Nm.

Assembling ball valve

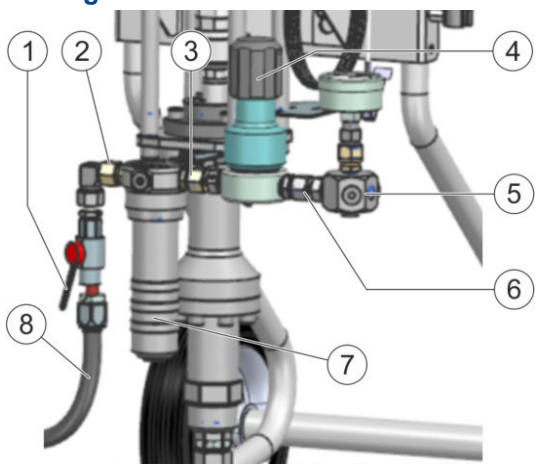

Fig. 38: Distributor, high pressure filter, pressure controller

7. Attach ball valve (1) onto the high pressure filter (7).
8. Tighten screw connection (2).
   - Observe tightening torque of 40Nm.
9. Tighten the hose (8) of the recirculation on the ball valve (1).
   - Observe tightening torque of 40Nm.

Assemble pressure controller

10. Tighten screws of pressure controller (4) with screw connection (3) on the high pressure filter (7).
    - Observe tightening torque of 40Nm.

Assemble distributor

11. Tighten screws of distributor (5) with the screw connection (6) on the pressure controller (4).
    - Observe tightening torque of 40Nm.

Attach the Maintenance unit.

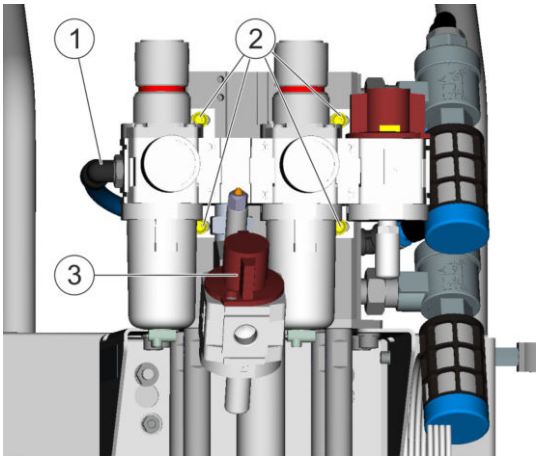

Fig. 39: Disassemble maintenance unit

12. Position the maintenance unit on the pump.
13. Screw (2) together the maintenance unit onto the pump.
    - Observe tightening torque of 6Nm.
14. Connect compressed air hose (1).
15. Connect the compressed air supply onto the maintenance unit.
    ⇨ The system is assembled.

10 Faults

10.1 Behavior during faults

If faults occur:

- Switch off compressed air supply. Secure against reconnection.
- Depressurize lines.
- Follow the defects table to correct the fault.

10.2 Defects table

Fault description	Cause	Remedy
Pump pressure and material pressure are too low.	The high pressure filter is clogged.	Replace high pressure filter. ↳ 9.6 “Dismantling” and ↳ 9.7 “Assembly”
	The pressure controller is set incorrectly.	Set the pressure controller. ↳ 12.5 “Operating values”
	Pressure regulator is defective.	Replace pressure controller. ↳ 9.6 “Dismantling”
	Pneumatic maintenance unit is incorrectly set.	Check setting of the pneumatic maintenance unit.
	Air hose is bent.	Check air hose.
Material pressure is too low.	The filter of the feed cup or suction lance is dirty.	↳ 9.4 “Replacing filter disk” . ↳ 9.5 “Replace filter cartridge” .
If the trigger is drawn, no material is discharged.	The pressure controller is completely closed.	Set the pressure controller. ↳ 12.5 “Operating values”
	Pump pressure too low	Increase pump pressure.
	The high pressure filter is clogged.	Replace high pressure filter. ↳ 9.6 “Dismantling” and ↳ 9.7 “Assembly”
	Nozzle clogged	Clean the nozzle. Disassemble nozzle, see operating instructions “Spray gun”.
Rise in the pump frequency	Hose line defective	Replace hose line.
Pump delivery is not uniform.	Material too viscous	Thin the material according to manufacturer’s data. Use a filter with a larger mesh size.
	Filter of feed cup of suction lance is dirty	Clean or replace filter. ↳ 9.4 “Replacing filter disk” . ↳ 9.5 “Replace filter cartridge” .

11 Disassembly and Disposal

11.1 Safety recommendations

WARNING!

Danger from harmful or irritant substances

Serious injuries or death can result if you come into contact with dangerous fluids or steam.

- System Check regularly for leakage. Observe local regulations and maintenance schedule.
- Ensure that the forced ventilation is operational.
- Follow the relevant safety data sheets.
- Wear specified protective equipment.
- Avoid contact (e.g. with eyes, skin).

WARNING!

Escaping material

If material escapes with high pressure, it can penetrate the body. The injury can look like a harmless cut. This can result in death or serious injuries.

Before disassembly:

- Check ball valve for functioning.
- Switch off system and secure personally against reconnection.
- Depressurize the lines.

11.2 Disassembly

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

- Eye protection
- Protective workwear
- Protective gloves
- Anti-Static Safety Boots

Requirements:

- System is purged ↳ 7.5 “Purging” .
- System is depressurized ↳ 7.4 “Switching off” .
- Compressed air supply is switched off.
- All ball valves are closed.
- The system has cooled off.
- All shut-off valves are closed.
- Collecting vessel is under the pump.

1. Unscrew compressed air hose from the maintenance unit.
2. If needed, disassemble the console from the wall.
3. Dismantle system into the individual components ↳ 9.6 “Dismantling” .

11.3 Disposal

ENVIRONMENT!

Improper waste disposal

Improper waste disposal threatens the environment and prevents re-use and recycling.

- Clean components before their disposal.
- Always dispose of components in accordance with their characteristics. ↳ 12.8 “Materials used”
- Collect leaked out utilities and auxiliaries completely.
- Dispose of work equipment soaked in coating materials or operating substances according to the disposal provisions in force.
- Dispose of utilities and auxiliaries according to the disposal provisions in force.
- In case of doubt, refer to the local disposal authorities.

12 Technical data

12.1 Dimensions and weight

The dimensions and weight information refer to the support bracket being used.

Transport trolley

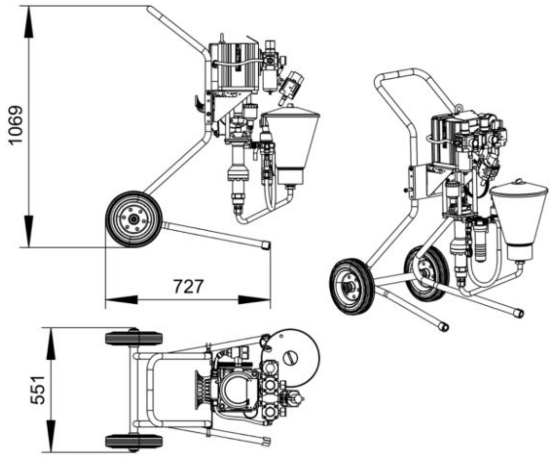

Fig. 40: Transport trolley

Transport trolley	
Detail	**Value**
Height	1069 mm
Width	551 mm
Depth	727 mm
Weight	approx. 17kg

Console

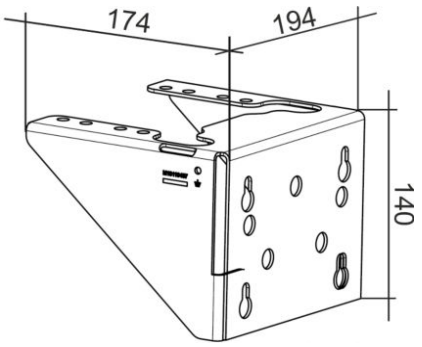

Fig. 41: Console

Console without pump	
Detail	**Value**
Height	140mm
Width	194mm
Depth	174mm
Weight	approx. 1.35kg

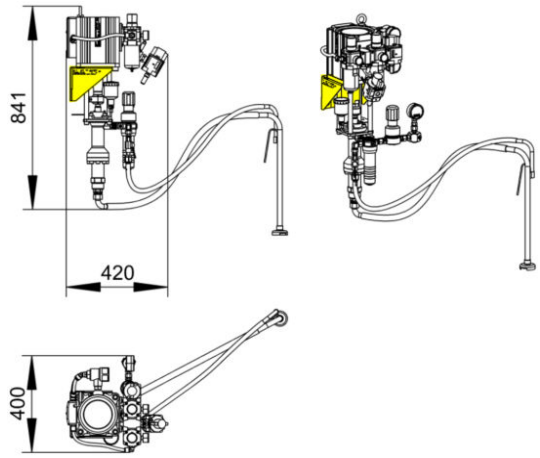

Fig. 42: Console with pump

Console with pump	
Detail	**Value**
Height	841mm
Width	400 mm
Depth	420mm

Total weight of system	
Detail	**Value**
Weight, min.	24 kg
Weight, max.	90kg

12.2 Connections

Connection	Value
Material outlet distributor	G 1/4"
Material inlet pump	See pump data sheet.
Compressed air supply (depending on the version)	G 3/8", G 1/2"

12.3 Operating conditions

Detail	Value
Operating temperature, min.	15°C
Operating temperature, max.	60°C
Ambient temperature, min.	15°C
Ambient temperature, max.	40 °C
Material temperature, min.	10°C
Material temperature, max.	60°C
Relative humidity, min.	35 %
Relative humidity, max.	90 %

For hand-guided spray guns, the maximum media temperature drops to 43°C. For media temperatures above 43°C, wear protective gloves.

12.4 Emissions

Detail	Value
Sound pressure level	<80 dB (A)
Sound power level	<88 dB (a)

12.5 Operating values

The performance data depend on the pump used. See operating instructions for the pump ↳ “Applicable documents” .

12.6 Compressed air quality

- Purity classes in accordance with ISO 8573-1: 1:4:1
- Limitations for purity class 4 (pressure dew point max.):
  - ≤ -3°C at 7bar absolute
  - ≤ +1°C at 9bar absolute
  - ≤ +3°C at 11bar absolute

12.7 Type plate

The type plate is placed on the drive housing of the pump and contains the following details:

- Product name
- Material number
- Year of manufacture
- Serial number
- Maximum air pressure
- Maximum material pressure
- Ex-labeling
- CE labeling
- Manufacturer
- QR Code

12.8 Materials used

Component	Material
Connections	Stainless steel
Suction hose	Polyethylene Nylon
Feed cup	Nylon
Suction model	Stainless steel
High pressure filter	Stainless steel

For materials used for the pump, spray gun, hose line, pressure controller and high pressure filter, see operating instructions of the product ↳ “Applicable documents” .

12.9 Operating and auxiliary materials

Cleaning agents

Cleaning agents must meet the following requirements:

- Suitable for use in explosive areas.
- Compatible with the materials used
- Flashpoint of the cleaning agent is at least 15 K over the ambient temperature
  or
  Cleaning at workplaces with technical ventilation, in painting booths according to EN 16985

Detergent

Only use approved detergents that meet the following requirements:

- Suitable for use in explosive areas.
- Compatible with the material used
- Compatible with the materials used

Auxiliary materials

Specification	Material	Material number
Klüber Syntheso GLEP 1	Lubricating grease	W32020009 W32020010
Molykote TP-42 Paste 1kg	Lubricant for screws	W32020044
Loctite 222 10mL	Thread protection	W31010001

12.10 Material specification

Suitable Material:

- Flammable and non-flammable fluid coating materials and their detergents
- Coating materials of the Explosion group IIA

Material specifications:

- Temperature max. 60 °C, always 5 K below the flashpoint of the cleaning materials used
  In the case of hand-guided spray guns, the maximum media temperature drops to 43°C.
- Viscosity: 3 to 5000 mPas

13 Spare parts and accessories

13.1 Spare parts

Filter insert for suction modules	
Value	**Material number**
74 µm	M13010054
210 µm	M13010055
400 µm	M13010056
840 µm	M13010057

Retainer ring filter housing	
	Material number
	M66020025

Filter for feed cup	
Value	**Material number**
840 µm	M13010030
595 µm	M13010031
300 µm	M13010032

Filter cartridges for suction modules and high pressure filter	
Value	**Material number**
30mesh/500µm	M13020061
60mesh/250µm	M13020062
100mesh/149µm	M13020063
150mesh/105µm	M13020073
200mesh/74µm	M13020064

Distributor with pressure gauge	
Description	**Material number**
4x G1/4 250 bar	N31010059
4x G1/4 400 bar	N31010060

Maintenance units	
Description	**Material number**
3/8" Airless	N35070243
3/8" Air assisted	N35070244
1/2" Airless	N35070245
1/2" Air assisted	N35070242

System bracket	
Description	**Material number**
Transport trolley	N25090048
Console	M19110457

Ball valve for pressure release	
Description	**Material number**
Ball valve	N13560010

Nozzle cleaning	
	Material number
	M34080011

Pressure controller	
	Material number
	N26070036

High pressure filter	
	Material number
	N35430057

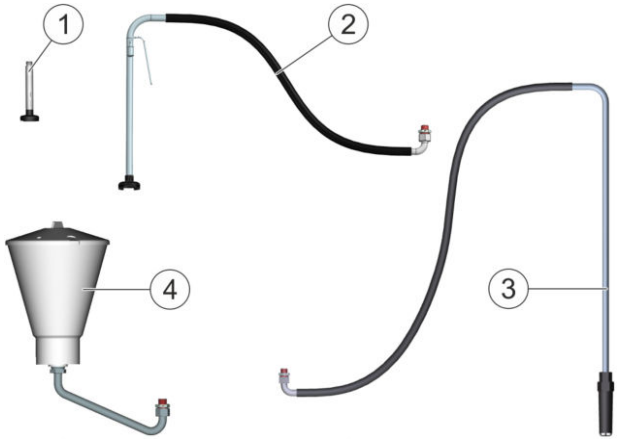

Fig. 43: Suction module

Suction module		
Item	**Denomination**	**Material number**
1	Suction lance 0.175 m with filter	M47320003
2	Suction lance 0.5 m complete with hose 0.85 m	M47320001
3	Suction lance 0.95 m complete with hose 1.5 m and filter	M47320004
4	Flow cup 6L with skew pipe	N08010086

Compressed air hoses for maintenance unit and pump	
Description	**Material number**
6 x 8	W40030002
9 x 12	W40030019

13.2 Accessories

Spray guns	
Value	**Material number**
EcoGun 2100 AirCombi SF 120bar 6-KT	N36280001
EcoGun 2100 AirCombi SF 250bar 6-KT	N36280002
EcoGun 2100 AirCombi LF 120bar 6-KT	N36280003
EcoGun 2100 AirCombi LF 250bar 6-KT	N36280004
EcoGunAL MAN 300 043 50 NF N14 B	N36240110

Hose lines	
Denomination	**Material number**
Hose lines, configurable	W40650001V
Air hose for Air Assist Painting, DN 6, 8000 mm, 1/4"	W40130201
Protective hose for hose line, 8000mm	W40070078

13.3 Order

WARNING!

Unsuitable spare parts in explosive areas

Spare parts not compliant with the specifications of the ATEX directives can cause explosions in an explosive atmosphere. Serious injury and death could be the consequence.

- Use exclusively original spare parts.

WARNING!

Unsuitable spare parts

Spare parts of third-party suppliers may possibly not be able to hold the loads. Serious injury and death could be the consequence.

- Use exclusively original spare parts.

Ordering spare parts, tools and accessories as well as information on products that are listed without order number ↳ “Hotline and Contact” .

14 INDEX

LEADING IN
PRODUCTION
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Translation of the original operation manual
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