



Pressure Pot

Operation manual

MPO00003EN, V03

N08160001V

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:

N08160001V
Pressure pot



Applicable documents

Pay attention to the following documents:

- Operation manual of fill level sensor

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

Figures

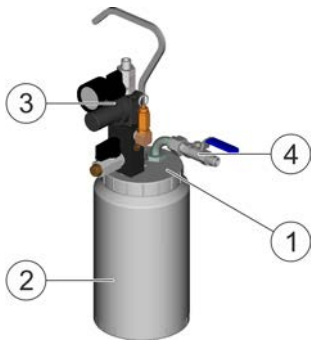


Fig. 1: Variant 1

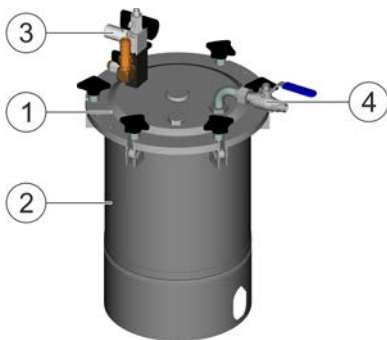


Fig. 2: Variant 2

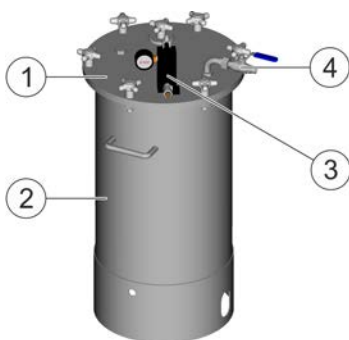


Fig. 3: Variant 3

Legend	
Item numbers	Meaning
1	Lid
2	Container
3	Compressed air inlet fitting
4	Upper material outlet (Standard)

Variants and denominations	
Variant	Denomination
Variant 1	2L AL 3bar
Variant 2	10L VA 6bar 20L VA 6bar
Variant 3	2L VA 6bar 45L VA 6bar 60L VA 6bar

1.2 Short description

The material is in the container (2), which is closed with the lid (1). The compressed air inlet fitting (3) conveys compressed air to the pressure pot. The compressed air forces the material through the upper material outlet (4) to the application device.

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 pressure pot is intended for pumping flammable and non-flammable fluid coating materials of the explosion group IIA and their approved detergents and cleaning agents to the application device.

The pressure pot may only be operated within the approved technical specifications ↪ 12 “Technical data”.

The pressure pot is only intended for use in industry and craftsmanship.

The pressure pot may be used under the following conditions:

- In non-explosive areas
- In explosive areas of Ex zones 1 and 2
- Application of compressed air
- With flammable and non-flammable fluid coating materials of the explosion group IIA and their approved detergents and cleaning agents
- Use of the container insert, which is approved for the pressure pot ↪ 13.2 “Accessories”

Misuse

Not using as intended entails danger to life.

Examples of wrong use are:

- Use in Ex zone 0
- Connecting multiple application devices to a material outlet
- Connecting multiple application devices to a compressed air connection
- Opening the pressure pot during operation
- Making conversions or changes on your own
- Use of unapproved materials
- Processing solid materials
- Use of PVC material, adhesives, gases, acids and lyes
- Use of component and parts that are not approved by Dürr Systems.
- Use of the pressure pot as means of transportation
- Use of the pressure pot for the long-term storage of operating media
- Use of materials, detergents or cleaning agents on halogenated hydrocarbon-basis
- Use of the pressure pot without complying to local regulations, such as regarding the occupational safety and the protection of the environment
- Pressurizing the pressure pot with toxic, flammable or aggressive gases
- Pressurizing the pressure pot with pure oxygen
- Use by other persons

2.3 Safety devices

2.3.1 Safety valve

Figures

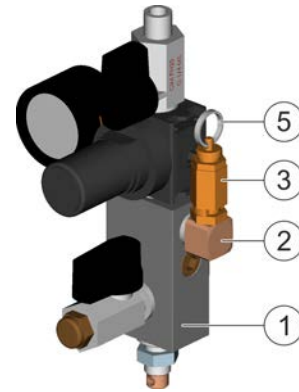


Fig. 4: Safety valve with lifting lever

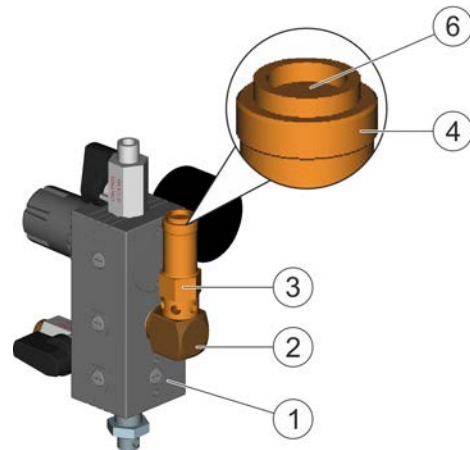


Fig. 5: Safety valve with lifting screw

Legend	
Item numbers	Meaning
1	Distributor block
2	Safety valve inlet
3	Safety valve
4	Lifting screw
5	Lifting lever
6	Adjustment seal

Function

The safety valve (2) protects the pressure pot and the connections from any damages resulting from too high pressure. The safety valve (2) has an adjustment pressure ↪ 12 “Technical data”. The safety valve releases air if the adjustment pressure is exceeded.

! WARNING!

Hazardous substances in the atmosphere

If the adjustment pressure of the safety valve is exceeded, the safety valve releases air and hazardous substances can enter the atmosphere. Serious injury and death could be the consequence.

- Before commissioning, ensure that the mechanical ventilation is operational.
- Adjust prior to commissioning.
- During operation, wear the specified personal protective equipment.

EX WARNING!

Removed or damaged adjustment seal

If the adjustment seal has been removed or is damaged, the proper adjustment pressure cannot be guaranteed and overpressure may cause an explosion. Serious injury and death could be the consequence.

- Replace safety valves with a removed or damaged adjustment seal.
- Operate pressure pot only if the safety valve is present and not damaged.
- Operate pressure pot only if the adjustment seal is present and not damaged.

ACHTUNG: BEHÄLTER STEHT UNTER DRUCK!
Bei Nachfüll-, Reinigungs-, Wartungs- und Reparaturarbeiten muss das komplette Gerät ausser Betrieb genommen und druckentlastet werden. Die Behälteranschlussverschraubungen sind vor jeder Inbetriebnahme auf festen Sitz zu überprüfen. Die Anschlüsse dürfen nicht während des Betriebes gelöst werden!
Die Hinweise der Betriebsanleitung sind zu beachten!

WARNING: VESSEL IS UNDER PRESSURE!
Before any re-filling, cleaning, maintenance or repair work is carried out, the vessel must be put out of operation and relieved of pressure. Before using the vessel each time, make sure that the screw fittings are securely tightened. The screw fittings must not be loosened while the vessel is being used!
The directions in the Operating Instructions must be observed at all times!

ATTENTION: RÉCIPIENT EST SOUS PRESSION!
Pour tous travaux de remplissage, nettoyage, maintenance et réparation, mettre l'appareil hors service et hors pression. Avant chaque mise en service, vérifier les vis de fermeture du récipient sont bien serrées. En service, ne jamais desserrer les vis!
Respecter les consignes de la notice d'utilisation.

Fig. 6: Safety sign 1

2.4 Safety signs

i The safety signs are part of the pressure pot:

- Do not remove safety signs.
- Replace illegible safety signs.

The following safety signs are attached to the pressure pot:

Item	Symbol	Meaning
1		Pressure
2		Observe the operating instructions
3		Open flames, open ignition source, fire and smoking prohibited.
4		Wear ear protection
5		Wear eye protection

Ziehen Sie die Sterngriffschrauben gleichmäßig über Kreuz an. Die Schrauben müssen handfest angezogen sein, ohne dass jedoch Gewalt angewendet wird! Dichtflächen und Dichtung immer sauber halten.

Tighten the star grip clamps cross-wise and evenly. The clamps must be screwed hand-tight without the use of excessive force. Keep the seal and sealing surfaces clean at all times.

Serrez régulièrement et sans forcer les vis étoile jusqu'à la butée: un joint torique assure l'étanchéité du couvercle. Veillez toujours à propreté des joints et des surfaces adjacentes.

Fig. 7: Safety sign 2

Product	Safety sign 1	Safety sign 2
2L AL 3bar	+	-
2L VA 6bar	+	+
10L VA 6bar	+	+
20L VA 6bar	+	+
45L VA 6bar	+	+
60L VA 6bar	+	+

2.5 Residual risks

Explosion

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 on the product, ensure a non-explosive atmosphere.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground the product.
- Wear suitable protective equipment.

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 Pressure pot at the cleaning areas with active technical ventilation, in painting booths, according to EN 16985.
- Observe explosion group of the coating materials and their detergents and cleaning agents.
- Follow the safety data sheet.
- Ensure that forced ventilation and fire protection equipment are in operation.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground the product.
- Wear suitable protective equipment.

Escaping material

Material escaping under pressure can cause serious injuries.

Before working on the product:

- Disconnect the system, in which the product is installed, from compressed air and material supply.
- Depressurize the lines.
- Secure the system against being switched on again.

Danger from harmful or irritant substances

Coming in contact with hazardous coating materials and their detergents can result in serious injury or death.

- Ensure that the forced ventilation is operational.
- Follow the safety data sheet.
- Wear specified protective clothing.

Noise

The sound pressure level during the checking of the safety valve may cause hearing damage.

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

2.6 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.

2.7 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 craftsmanship.

Cleaning staff

The cleaning staff receives regular instructions from the operator about the following contents:

- Using the product
- Handling cleaning tools
- Handling cleaning agents
- Technical Measures for occupational safety and health

Electrician

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

Furthermore, electrical engineers have the following knowledge:

- Guidelines, 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:

- Guidelines, 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.

Dürr Systems offers special product training for  “Hotline and Contact”.

2.8 Personal protective equipment

When working in explosive areas, the protective clothing, including gloves, must meet the requirements of DIN EN 1149-5. Footwear must meet the requirements of EN ISO 20344 and EN 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.



Respiratory protection device

The respiratory protection device protects from hazardous gases, vapors, dust and similar materials and media. The version of the respiratory protection device must be suitable for the media used as well as their usage.

3 Design and Function

3.1 Pressure pot

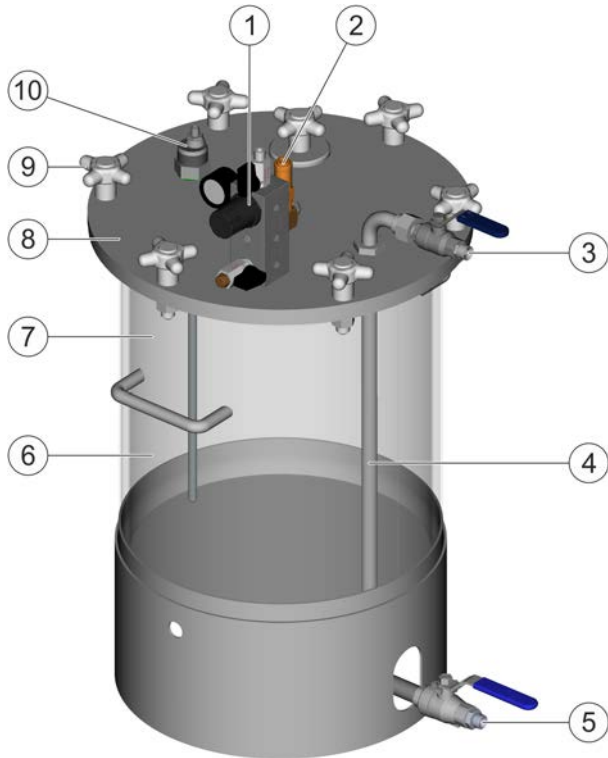


Fig. 8: Pressure pot

- 1 Compressed air inlet fitting
- 2 Safety valve
- 3 Upper material outlet (Standard)
- 4 Standpipe
- 5 Lower material outlet (optional)
- 6 Container
- 7 Container insert (optional, in the container)
- 8 Lid
- 9 Locking screw
- 10 Fill level sensor (optional)

The pressure pot conveys material to the application devices.

The container (6) accommodates material or a container insert (7) with material. The lid (8) rests on the container. The locking screws (9) center and fix the lid on the container. The compressed air inlet fitting (1) conveys compressed air to the pressure pot. The pressure controller at the compressed air inlet fitting (1) controls the operating pressure. The safety valve (2) protects the pressure pot and the connections from any damages resulting from too high pressure. The

compressed air forces the material through the standpipe (4) and the upper material outlet (3) or the lower material outlet (5) to the application device. The level sensor (10) measures the filling level and converts the readings into the corresponding signals.

3.2 Container insert

Figures

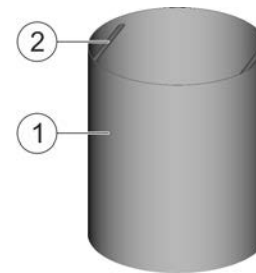


Fig. 9: Stainless steel container insert (optional)

- 1 Stainless steel container insert
- 2 Handle

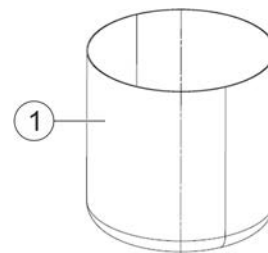


Fig. 10: Conductive plastic container insert (optional, 10L VA 6bar only)

- 1 Conductive plastic container insert

Description

The container insert reduces the contamination of the container by the material.

The container insert is inside the container and takes up the material. The material is conveyed through the upper material outlet to the application device. If the pressure pot conveys material through the lower material outlet to the application device, fill material directly into the container.

The container insert is not included in the scope of supply. For more information, refer to chapter [13.2 "Accessories"](#).

Use only container inserts that are approved for the pressure pot. For more information, refer to chapter [13.2 "Accessories"](#).

3.3 Compressed air inlet fitting

Figures

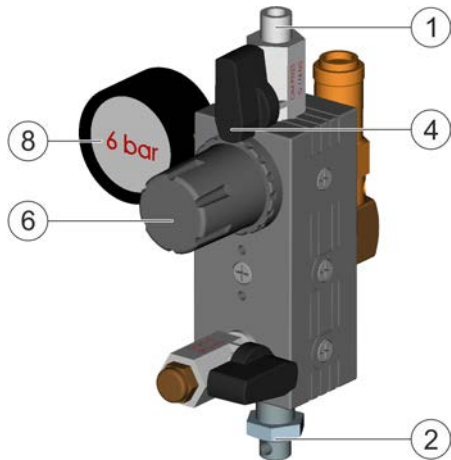


Fig. 11: Compressed air inlet fitting (standard)

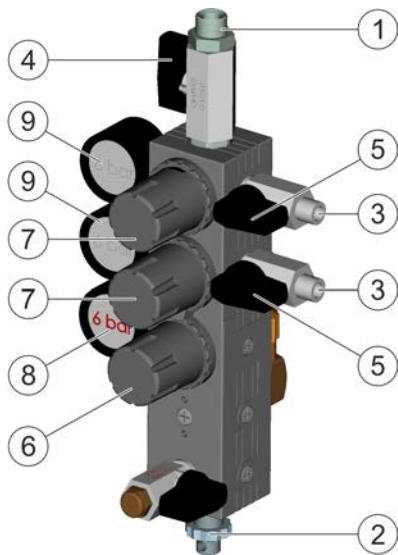


Fig. 12: Compressed air inlet fitting (optional)

Legend

Item numbers	Meaning
1	Compressed air grid connection
2	Pressure pot connection
3	Application device connection
4	Compressed air supply valve
5	Application device valve
6	Pressure pot pressure controller
7	Application device pressure controller
8	Pressure pot pressure gage
9	Application device pressure gage

Description

The compressed air inlet fitting supplies compressed air to the pressure pot and the application devices.

The compressed air inlet fitting is available with a pressure controller (standard) or several pressure controllers (optional). The number of connections, pressure controllers, valves and pressure gages depends on the compressed air inlet fitting selected.

The compressed air grid connection (1) connects the compressed air inlet fitting with the compressed air network. The pressure pot pressure controller (6) adjusts the operating pressure for the pressure pot. The higher the operating pressure, the higher the material pressure at the application device. The pressure pot pressure gage (8) displays the operating pressure of the pressure pot. The compressed air supply valve (4) opens or closes the connection to the compressed air grid.

The application device connection (3) supplies compressed air to an application device. The application device pressure controller (7) adjusts the operating pressure for the application device. The application device pressure gage (9) displays the operating pressure of the application device. The application device valve (5) opens or closes the connection to the application device.

3.4 Material outlet

Figures

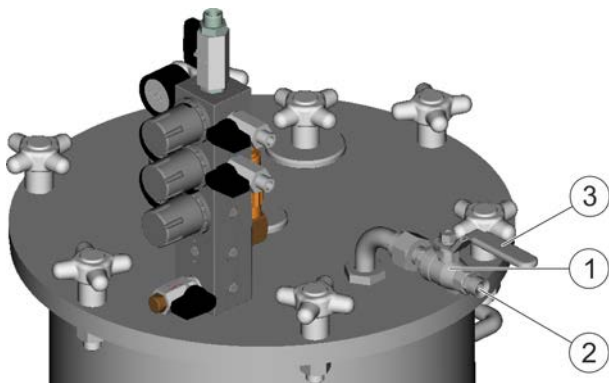


Fig. 13: Upper material outlet with one connection (standard)

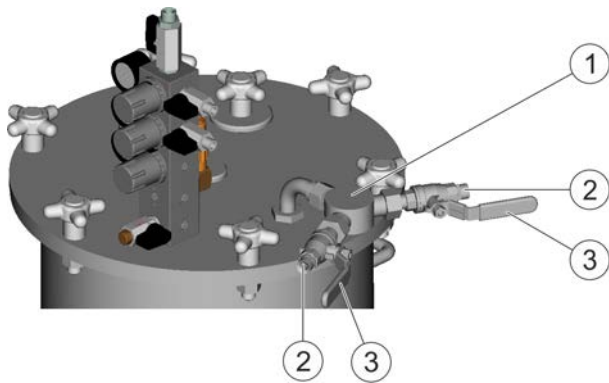


Fig. 14: Upper material outlet with two connections (optional)

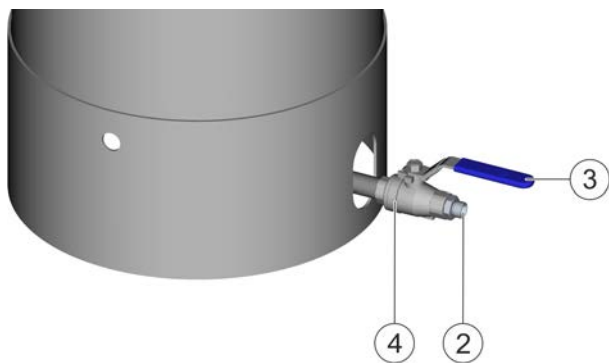


Fig. 15: Lower material outlet (optional)

Legend

Item numbers	Meaning
1	Upper material outlet
2	Application device connection
3	Valve
4	Lower material outlet

Description

The pressure pot has two bores for the material outlets:

- on the lid for the upper material outlet (Standard)
- on the container bottom for the lower material outlet (optional)

The upper material outlet is available with one connection (standard) or two connections (optional). If the upper material outlet is used, close the bore for the lower material outlet using a plug.

The connection (2) supplies material to an application device. The valve (3) opens or closes the material outlet.

The lower material outlet is not included in the scope of supply. For more information, refer to chapter 13.2 "Accessories".

The upper material outlet with several connections is not included in the scope of supply. For more information, refer to chapter 13.2 "Accessories".

If the pressure pot conveys material through the lower material outlet to the application device, fill material directly into the container.

3.5 Level sensor

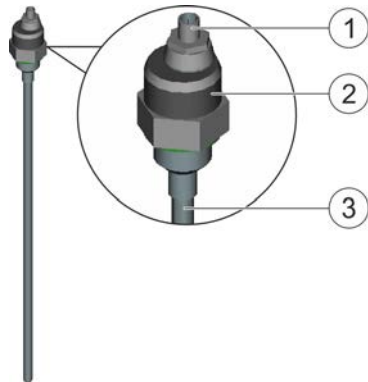


Fig. 16: Fill level sensor (optional)

- 1 Connection
- 2 Sensor
- 3 Probe

The level sensor is fastened to the lid of the pressure pot. The probe (3) reaches into the material in the pressure pot. The sensor (2) measures the filling level of the material and issues signals. The level sensor for the message for an empty container issues a signal upon reaching the minimum filling level. The level sensor for the continuous measuring issues a permanent signal in accordance with the filling level. The signals are at the connection (1).

Depending on the measuring method, an additional isolating switch amplifier can be required for processing the signals.

For more information on the fill level sensor, refer to the operating manual of the fill level sensor ↪ “Applicable documents”.

4 Transport, scope of supply and storage

4.1 Transport

NOTICE!

Incorrect Transport

Improper transportation of the pressure pot may cause the pressure pot to fall. That can damage the pressure pot and the hoses fastened to the pressure pot.

- Do not carry the pressure pot by the hoses.
- Only use suitable means of transport. ↪ 13.2 “Accessories”
- Protect the pressure pot from vibrations.

Personnel:

- Operator

- + additional qualification explosion protection

Protective equipment:

- Anti-Static Safety Boots
- Protective gloves

Requirements:

- Pressure pot is switched off ↪ 7.4 “Delivering material”.
- Compressed air supply is paused ↪ 7.3 “Empty and fill up pressure pot.”.
- Observe minimum and maximum transport temperature ↪ 12 “Technical data”.
- Observe minimum and maximum relative humidity ↪ 12 “Technical data”.

1. Transport pressure pot by using a suitable means of transport.

Suitable transport means are available as accessories ↪ 13.2 “Accessories”.

4.2 Scope of delivery

The scope of supply includes the following components:

- Pressure pot (with configured options, without accessories)

1. Inspect delivery on receipt for completeness and integrity.
2. 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

Requirements for the warehouse:

- Do not store outdoors.
- Store in a dry and dust-free place.
- Do not expose to aggressive media.
- Protect from solar radiation.
- Observe minimum and maximum storage temperature ↪ 12 “Technical data”.
- Observe minimum and maximum relative humidity ↪ 12 “Technical data”.

5 Assembly

5.1 Safety recommendations

EX WARNING!

Sparks due to electrostatic discharge

If the pressure pot is not grounded, there can be an electrostatic charge on the the pressure pot. 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 Pressure pot as specified.
- Before carrying out any work, make sure that there is no explosive atmosphere.

WARNING!

Incorrect traverse of lines and hoses

Mechanical stresses can damage cables and hoses. Damaged cables and hoses can cause malfunctioning. Serious injuries or death can result.

- Route lines and hoses in a professional manner.
- Use only standard connections.
- Observe the period of use of the lines and hoses.

CAUTION!

Tipping pressure pot

If the pressure pot is wrongly set up, misalignments can occur and cause the pressure pot to tilt. This may cause injuries.

- Place the pressure pot onto a horizontal surface.
- Secure pressure pots on transport carriage against rolling away by using stoppers.
- Wear safety shoes.

NOTICE!

Incorrect setup

If the pressure pot is wrongly set up, misalignments can occur and cause the pressure pot to tilt. The pressure pot and the hoses can become damaged.

- Place the pressure pot onto a horizontal surface.
- Secure pressure pots on transport carriages against rolling away by using stoppers.

NOTICE!

Wrong tightening torque for locking screws

Overtightening the locking screws can damage the locking screws and the lid seal.

Observe the following when closing the pressure pot:

- Tighten locking screws by hand.
- Tighten locking screws in a crosswise sequence.

5.2 Requirements for the installation point

The installation location must meet the following requirements:

- Flat surface
- Necessary protective zones
- Adjustable compressed air supply
- The lines, seals and screw connections must be designed to conform to the requirements of the pressure pot ↪ 12.5 "Operating values".
- The flow rate of the on site pressure reducer is lower than the blowing rate of the safety valve ↪ 12 "Technical data".
- The flow rate of the on site pressure reducer is lower than the entry pressure of the pressure controller ↪ 12 "Technical data".
- Ambient temperature ↪ 12.4 "Operating conditions"
- Relative humidity of environment ↪ 12.4 "Operating conditions"

5.3 Assemble material outlet

5.3.1 Assemble upper material outlet

Figures

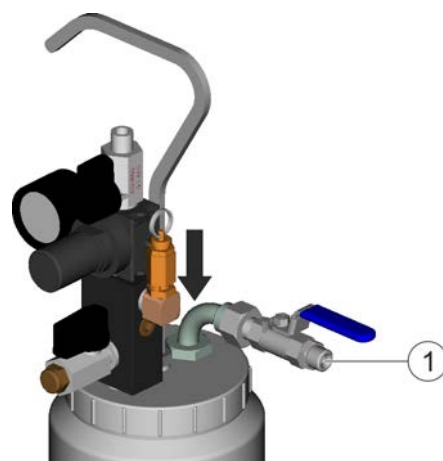


Fig. 17: Assemble upper material outlet (variant 1)

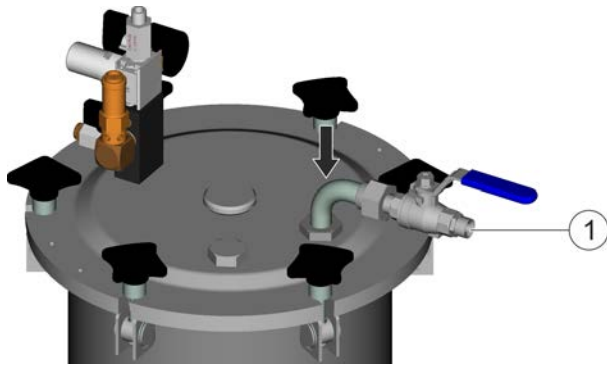


Fig. 18: Assemble upper material outlet (variant 2)

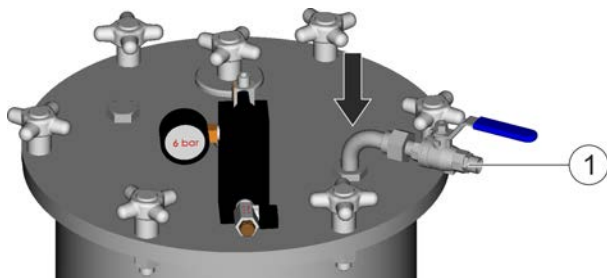


Fig. 19: Assemble upper material outlet (variant 3)

Instruction

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Material hose is disassembled ↪ 11.3 “Disassemble material hose.”.
- Upper material outlet is disassembled ↪ 11.4.1 “Upper material outlet”.
- Lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

1. Insert upper material outlet (1).
2. Screw on upper material outlet (1).

5.3.2 Assemble lower material outlet

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Material hose is disassembled ↪ 11.3 “Disassemble material hose.”.
- Lower material outlet is disassembled ↪ 11.4.2 “Lower material outlet”.
- Lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

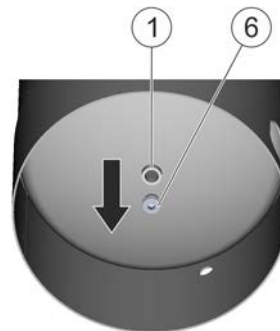


Fig. 20: Unscrew plug

1. Unscrew plug (6) from the thread in the container bottom (1).

Store the plug (6) for future disassembly.

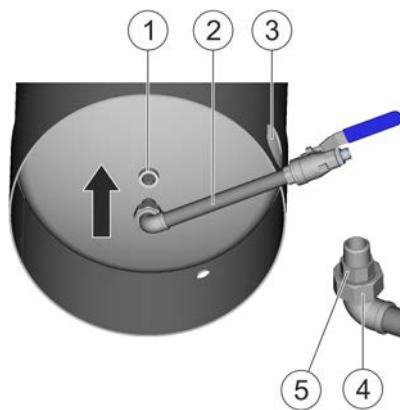


Fig. 21: Screw in lower material outlet

2. Loosen nut (4) and remove threaded end (5).
3. Screw threaded end (5) into the thread in the container bottom (1).
4. Guide lower material outlet (2) through the opening in the base (3).
5. Fit lower material outlet (2) on the threaded end (5).
6. Tighten nuts (4) on the lower material outlet (2).

5.4 Connecting

5.4.1 Assembly drawing

Automatic spray gun

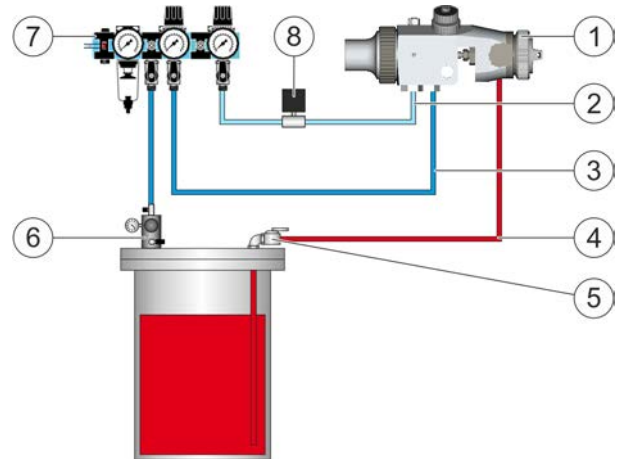


Fig. 22: Automatic spray gun

- 1 Automatic spray gun
- 2 Main needle for control air open/closed.
- 3 Atomizer air
- 4 Material hose
- 5 Upper material outlet (1 outlet)
- 6 Compressed air inlet fitting (1 controller)
- 7 Compressed air supply
- 8 Main valve needle

Manual spray gun

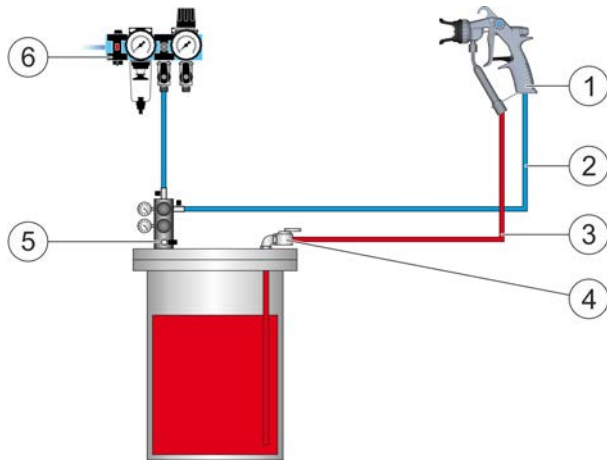


Fig. 23: A manual spray gun with compressed air via the pressure pot

- 1 Manual spray gun
- 2 Compressed air hose
- 3 Material hose
- 4 Upper material outlet (1 connection)
- 5 Compressed air inlet fitting (2 controllers)
- 6 Compressed air supply

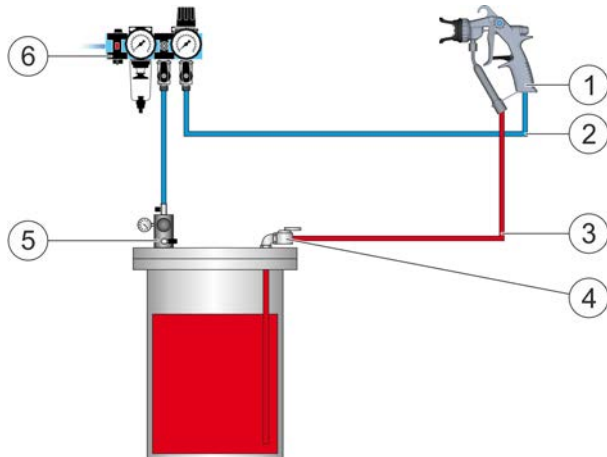


Fig. 24: A manual spray gun with compressed air via the compressed air supply

- 1 Manual spray gun
- 2 Compressed air hose
- 3 Material hose
- 4 Upper material outlet (1 connection)
- 5 Compressed air inlet fitting (1 controller)
- 6 Compressed air supply

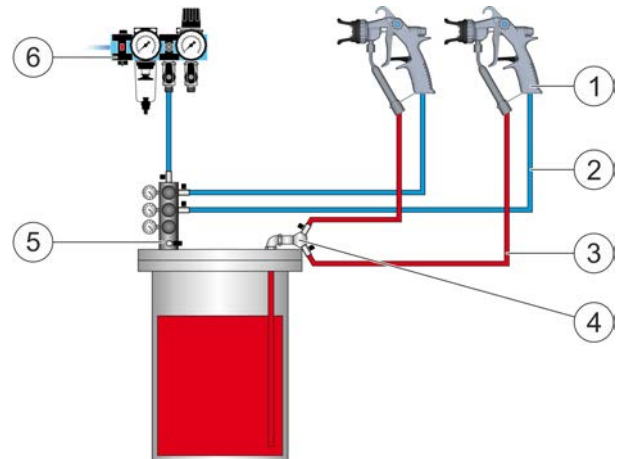


Fig. 25: Two manual spray guns

- 1 Manual spray gun
- 2 Compressed air hose
- 3 Material hose
- 4 Upper material outlet (2 connections for application devices)
- 5 Compressed air inlet fitting (3 controllers)
- 6 Compressed air supply

5.4.2 Connect the pressure pot to ground.

Assemble grounding line

EX WARNING!

Sparks due to electrostatic discharge

If the pressure pot is not grounded, there can be an electrostatic charge on the the pressure pot. 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 Pressure pot as specified.
- Before carrying out any work, make sure that there is no explosive atmosphere.

Personnel:

- Electrician
- + additional qualification explosion protection

Protective equipment:

- Protective gloves
- Anti-Static Safety Boots

i The ground cable is not included in the scope of supply.

- 1. Mount grounding line to the ground connection.

2. Mount grounding line to the ground connection of the installation location.
3. Measure grounding resistance. Observe maximum allowable grounding resistance ↪ 12 “Technical data”.

5.4.3 Connect compressed air supply

Figures

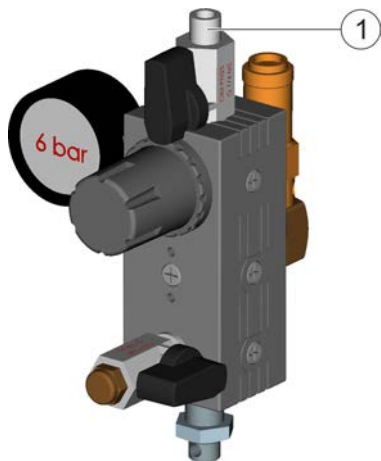


Fig. 26: Compressed air inlet fitting (standard, 1 pressure controller)

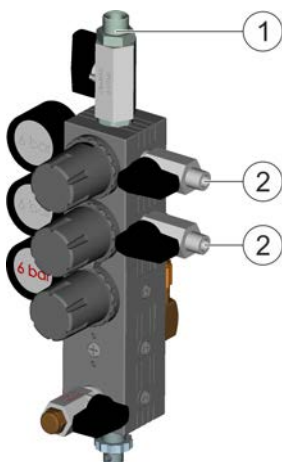


Fig. 27: Compressed air inlet fitting (optional, 3 controllers)

Instruction

Use electrostatically conductive hoses that can withstand at least 4x operating pressure ↪ 12.5 “Operating values”.

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot is grounded ↪ 5.4.2 “Connect the pressure pot to ground.”.
- Compressed air hose is blown out using compressed air.
- Pressure pot is free from packaging materials.

1. Connect the compressed air hose to the main compressed air supply (1).
2. Connect the compressed air hose to the compressed air supply.
3. Check compressed air hose for firm seating.
4. For each compressed air hose from the pressure pot to an application device:
 - Connect compressed air hose to the application device connection (2).
 - Connect compressed air hose to the application device. Follow operating instructions of the application device.
 - Check compressed air hose for firm seating.

5.4.4 Connect application devices

5.4.4.1 Connect upper material outlet

Figures

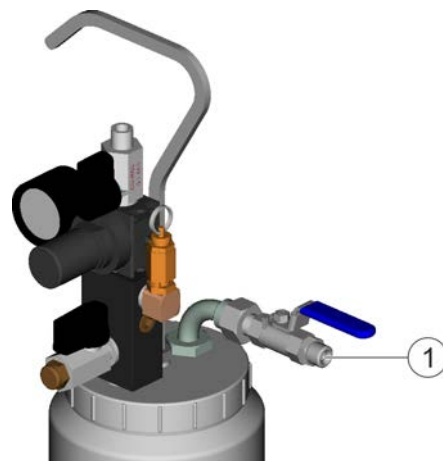


Fig. 28: Connect the application device to upper material outlet (variant 1)

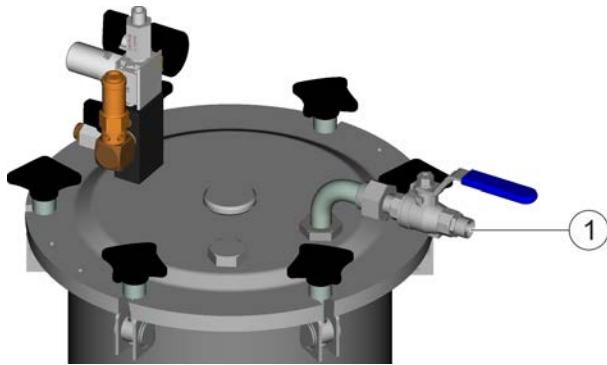


Fig. 29: Connect the application device to upper material outlet (variant 2)

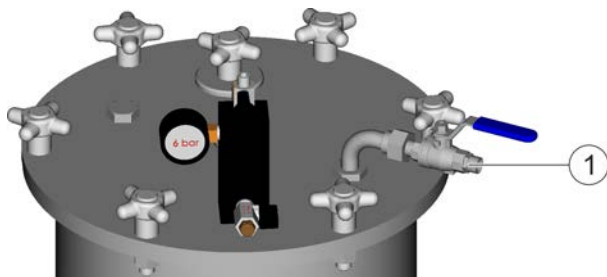


Fig. 30: Connect the application device to upper material outlet (variant 3)

Instruction

- Only connect one application device to each material connection.
- Use electrostatically conductive hoses that can withstand at least 4x operating pressure ↪ 12.5 “Operating values”.

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Material hose has been rinsed and blown out dry with compressed air.

1. Connect material hose to the upper material outlet (1).
2. Connect material hose to the application device. Follow operating instructions of the application device.
3. Check material hose for firm seating.

5.4.4.2 Connect lower material outlet

- Only connect one application device to each material connection.
- Use electrostatically conductive hoses that can withstand at least 4x operating pressure ↪ 12.5 “Operating values”.
- The lower material outlet is not included in the scope of supply. For more information, refer to chapter ↪ 13.2 “Accessories”.
- If the pressure pot conveys material through the lower material outlet to the application device, fill material directly into the container.

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Material hose has been rinsed and blown out dry with air.

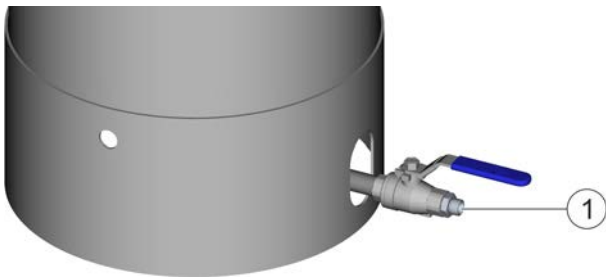


Fig. 31: Connect application device to lower material outlet

1. Connect material hose to the lower material outlet (1).
2. Connect material hose to the application device. Follow operating instructions of the application device.
3. Check material hose for firm seating.

6 Commissioning

6.1 General notes

Commissioning is done after:

- Shift breaks
- Weekends
- Company holidays
- and longer operational interruptions
- Initial commissioning

6.2 Commissioning

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Local regulations for occupational safety are met, such as check before commissioning according to BetrSichV in Germany.
- Pressure pot is clean and dry.
- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is switched off ↪ 7.3 “Empty and fill up pressure pot.”.
- Bleeder valve is closed ↪ 7.3 “Empty and fill up pressure pot.”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.

1. Check components for damage.
2. Check if the safety valve is present and not damaged ↪ 2.3.1 “Safety valve”.
3. Check if all safety signs are present and not damaged ↪ 2.4 “Safety signs”.
4. Check if all locking screws are present.
5. Check grounding ↪ 5.4.2 “Connect the pressure pot to ground.”.
6. Check application devices for correct connection and operational status. Follow operating instructions of the application device.
7. Check compressed air hose for correct connection and firm seating ↪ 5.4.3 “Connect compressed air supply”.
8. Check material hose for correct connection and firm seating ↪ 5.4.4 “Connect application devices”.
9. Close pressure pot ↪ 7.3 “Empty and fill up pressure pot.”.
10. Check if locking screws are tightened.
11. Switch on compressed air supply ↪ 7.4.2 “Switch on compressed air supply”.
12. Set operating pressure ↪ 7.4.3 “Set the operating pressure”.
13. Open material outlet.
14. Operate application device. Follow operating instructions of the application device.

7 Operation

7.1 Safety recommendations

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.

- Before carrying out any servicing and maintenance work, ensure a non-explosive atmosphere.
- Do not use any sources of ignition and no open light in the work area.
- Do not smoke.
- Ground the product.
- Ground the work piece.
- Wear suitable protective equipment.

WARNING!

Danger of explosion due to chemical reactions

Material, halogenated hydrocarbon-based rinsing agent or cleaning agent can chemically react with aluminum components of the product. Chemical reactions can cause explosions. Serious injury and death could be the consequence.

- Only use purging agents and cleaning agents that do not contain any halogenated hydrocarbons.

WARNING!

Unsuitable container insert

Unsuitable container inserts can be charged electrostatically or move uncontrolled inside of the container. Serious injury and death could be the consequence.

- Use only container inserts that are approved for the pressure pot.
- Ground the container insert through contact with the container.

WARNING!

Sparks due to electrostatic discharge

Pressure pots can be charged electrostatically during the stirring process. Electrostatic discharges can cause sparks. In an explosive atmosphere, these sparks can prove to be the source of ignition for an explosion. Serious injury and death could be the consequence.

- Ground the pressure pot as specified.
- Check grounding.

WARNING!

Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 "Replace safety valve".
- Prior to opening:
 - Switch off compressed air supply and secure it against being switched on again.
 - Depressurize the lines.
 - Disconnect pressure pot from the compressed air supply.
- After the closing:
 - Check if the container is correctly closed.
 - Check if the lines are tightly connected.

WARNING!

Danger from harmful or irritant substances

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

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

WARNING!
Risk of injury from whipping hoses

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.
- Before carrying out any work:
 - Depressurize hoses.
 - Secure the system against reconnection.

WARNING!
Escaping compressed air and material

Compressed air hoses and material hoses can tear if under pressure. Escaping compressed air or material can cause serious injuries.

- Disconnect the product from the compressed air supply after the end of working hours.
- Observe the service life of the compressed air hoses. Replace outdated compressed air hoses.

WARNING!
Danger due to damaged components

Operating the product with damaged components can result in serious injury or death.

- Check components at specified intervals for damage.
- If you detect unusual operating sounds or any other noticeable aspects, put the product out of service.
- Contact the manufacturer ↪ “Hotline and Contact”.
- Replace damaged components promptly.

CAUTION!
Tipping pressure pot

If the pressure pot is wrongly set up, misalignments can occur and cause the pressure pot to tilt. This may cause injuries.

- Place the pressure pot onto a horizontal surface.
- Secure pressure pots on transport carriage against rolling away by using stoppers.
- Wear safety shoes.

NOTICE!
Unsuitable cleaning agents

Unsuitable cleaning agents can damage the pressure pot.

- Only use cleaning agents approved by the material manufacturer.
- Follow the safety data sheet.
- Do not clean in an ultrasound bath.
- Do not clean with hard or sharp objects.
- Do not sand blast or grind.
- Do not immerse into a solvent.
- Do not clean with cleaning agents that cause chemical or thermal reactions.
- Do not clean with cleaning agents that contain halogenated hydrocarbons, acids, regenerated solvents or paint removal agents.

NOTICE!
Incorrect setup

If the pressure pot is wrongly set up, misalignments can occur and cause the pressure pot to tilt. The pressure pot and the hoses can become damaged.

- Place the pressure pot onto a horizontal surface.
- Secure pressure pots on transport carriages against rolling away by using stoppers.

NOTICE!
Operating pressure too high

Exceeding maximum operating pressure can damage the pressure pot.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 “Replace safety valve”.
- Do not exceed the maximum operating pressure ↪ 12 “Technical data”.

NOTICE!
Wrong tightening torque for locking screws

Overtightening the locking screws can damage the locking screws and the lid seal.

Observe the following when closing the pressure pot:

- Tighten locking screws by hand.
- Tighten locking screws in a crosswise sequence.

7.2 General notes

Perform the following checks before beginning the shift:

- Check cleanliness.
Ensure there are no material residues and other contaminants. Damage and leaks can only be seen on clean components.
- Check the tightness of the following components:
 - Connections
 - Lines
 - Safety valve
 - Stopcock
 - Bleeder valve
 - Pressure controller
- Check the functioning of the following components:
 - Bleeder valve
 - Pressure controller
 - Safety valve ↪ 10.5.2 “Check safety valve”
- Check for unusual noises during operation.
- Check grounding before every use ↪ 5.4.2 “Connect the pressure pot to ground.”.
- Check if all safety devices are present and not damaged ↪ 10.5.2 “Check safety valve”.

7.3 Empty and fill up pressure pot.

7.3.1 Close material outlet

7.3.1.1 Connect upper material outlet

Figures

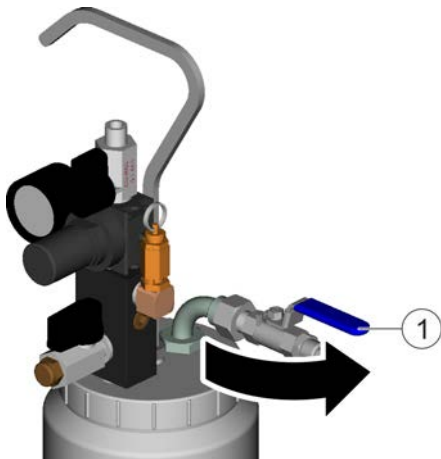


Fig. 32: Close upper material outlet (variant 1)

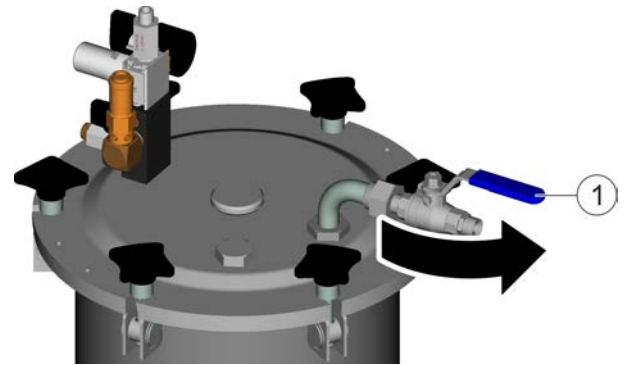


Fig. 33: Close upper material outlet (variant 2)

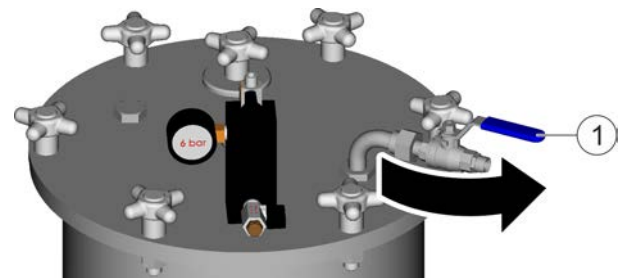


Fig. 34: Close upper material outlet (variant 3)

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

1. Swivel valve (1).

⇒ Upper material outlet is closed.

7.3.1.2 Close lower material outlet

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

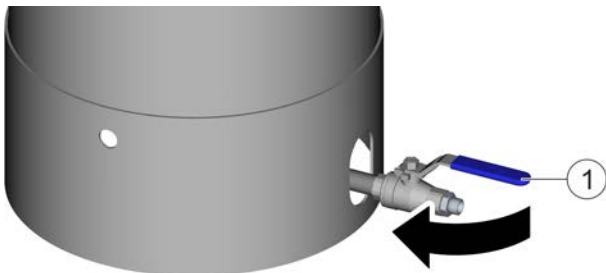


Fig. 35: Close lower material outlet

1. Swivel valve (1).
⇒ Lower material outlet is closed.

7.3.2 Switch off compressed air supply

Figures

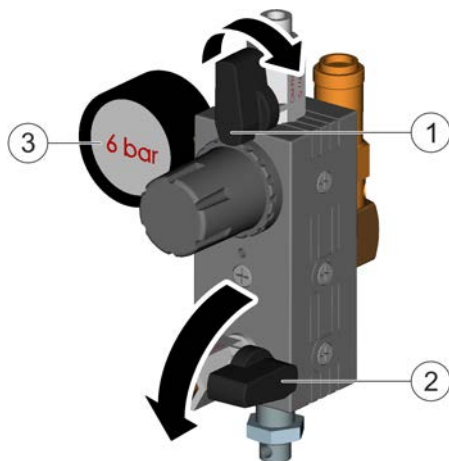


Fig. 36: Switch off compressed air supply (standard)

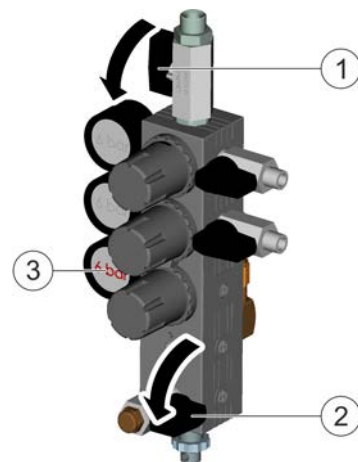


Fig. 37: Switch off compressed air supply (optional)

Legend	
Item numbers	Meaning
1	Valve on compressed air supply
2	Valve on bleeder valve
3	Pressure gage

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
1. Swivel valve on compressed air supply (1).
⇒ Compressed air supply is paused.
 2. Disconnect compressed air supply from the compressed air grid. Secure against reconnection. Depressurize compressed air supply.
⇒ Compressed air line is depressurized.

3. **WARNING!**

Wrong venting

If the pressure pot is under pressure and not vented via the bleeder valve, it can cause serious injury or death.

Properly venting of the pressure pot:

- Vent pressure pot using the bleeder valve. Check pressure at the pressure gage display.
- Do not vent the pressure pot via the pressure controller.
- Do not vent the pressure pot via the safety valve.
- Do not vent the pressure pot by loosening the locking screws.
- Do not vent the pressure pot by loosening the filling plug.

Slowly swivel the valve on the bleeder valve (2).
 ⇒ Air escapes from the pressure pot until the pressure pot is vented. Pressure gage (3) displays the pressure.

4. Depressurize the application device. Follow operating instructions of the application device.
 ⇒ Material line is depressurized.

7.3.3 Open pressure pot

Figures

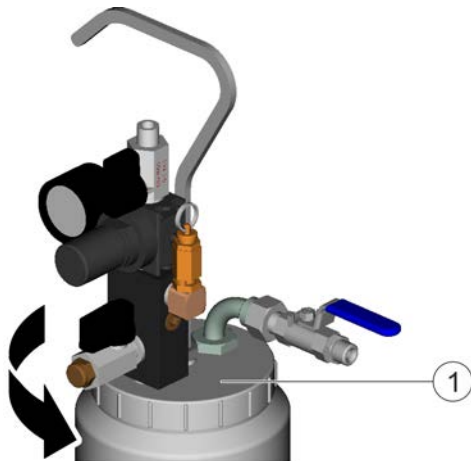


Fig. 38: Open pressure pot (variant 1)

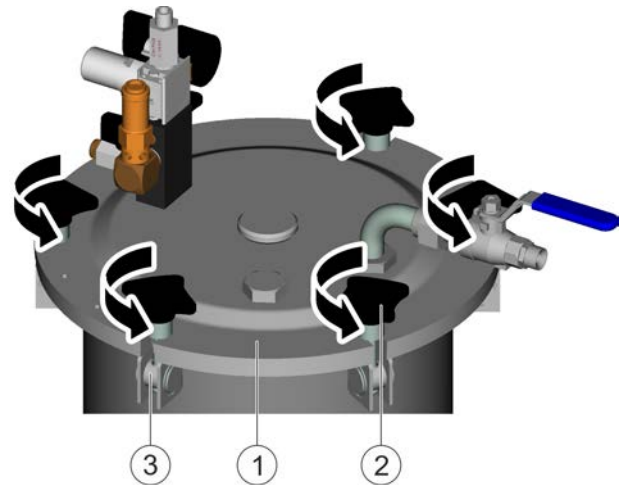


Fig. 39: Open pressure pot (variant 2)

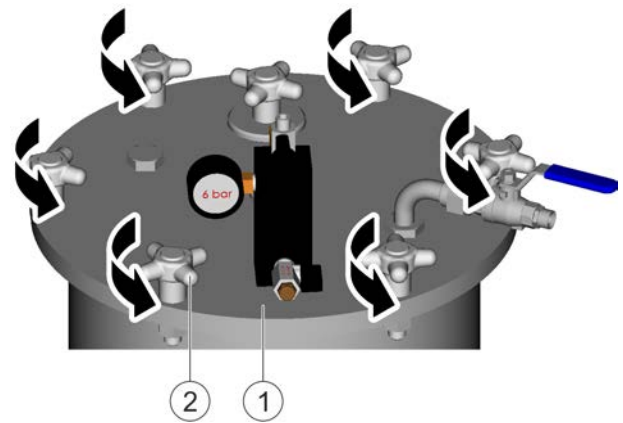


Fig. 40: Open pressure pot (variant 3)

Legend	
Item numbers	Meaning
1	Lid
2	Star grip
3	Screw

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is switched off ↪ 7.3 “Empty and fill up pressure pot.”.
- Pressure pot, compressed air line and material line are depressurized ↪ 7.3 “Empty and fill up pressure pot.”.

WARNING!

Compressed air

If the pressure pot is under pressure and then opened, serious injury and death could be the consequence.

Before opening the pressure pot:

- Relieve pressure on pressure pot:
 - Close the material outlet.
 - Switch off compressed air supply and secure it against being switched on again.
 - Relieve pressure on compressed air lines and material lines.
- Check pressure by opening the bleeder valve.
- Check pressure at the pressure gage display.

Open pressure pot (variant 1)

1. Loosen lid (1).
2. Remove lid (1) carefully and place it on the side, so that the components on the lid (1) do not become damaged.
3. Wipe material drops with a cloth.

Open pressure pot (variant 2)

1. Loosen star handles (2).
2. Fold down screws (3).
3. Carefully remove lid (1).

4. Carefully place lid (1) on the side, so that the components on the lid (1) do not become damaged.
5. Wipe material drops with a cloth.

Open pressure pot (variant 3)

1. Loosen star handles (2).
2. Carefully remove lid (1).
3. Carefully place lid (1) on the side, so that the components on the lid (1) do not become damaged.
4. Wipe material drops with a cloth.

7.3.4 Emptying and filling

NOTICE!

Unfiltered material

Foreign particles in the material can cause blockage in the material hoses and application devices.

- Filter the material before filling.

Please note the maximum filling quantity ↪ 12.4 “Operating conditions”.

The container insert is not included in the scope of supply. For more information, refer to chapter ↪ 13.2 “Accessories”.

i If the material flows through the lower material outlet to the application device, do not use a container insert and fill material directly into the container.

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is switched off ↪ 7.3 “Empty and fill up pressure pot.”.
- Pressure pot is opened ↪ 7.3.3 “Open pressure pot”.
- Container or container insert is free from objects.

1. If required, empty container or container insert.

2. Fill container or container insert:

- During the application, fill container or container insert with the same material.
- When replacing the material, fill container or container insert with cleaning agent.
- When rinsing, fill container or container insert with cleaning agent.

7.4 Delivering material

7.4.1 Close pressure pot

Figures

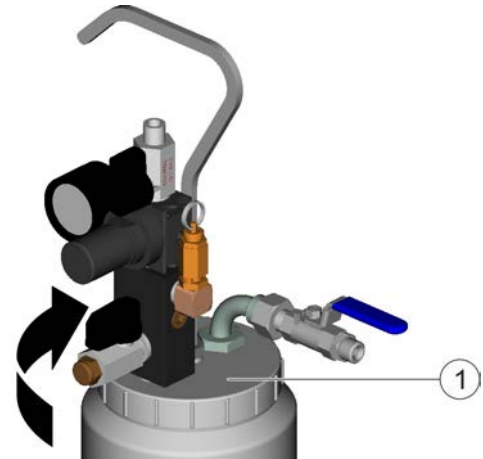


Fig. 41: Close pressure pot (variant 1)

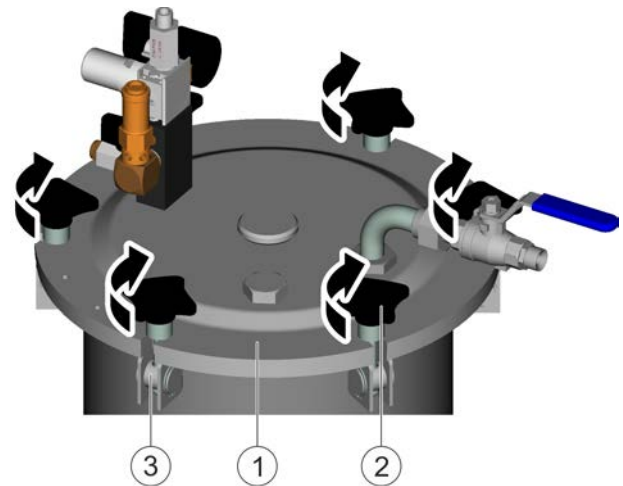


Fig. 42: Close pressure pot (variant 2)

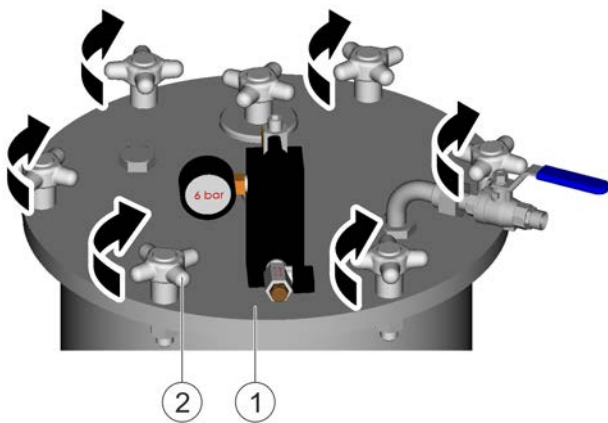


Fig. 43: Close pressure pot (variant 3)

Legend	
Item numbers	Meaning
1	Lid
2	Star grip
3	Screw

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Lid seal, seal groove and seal surfaces are clean.
- Lid seal fits properly in the seal groove.

! NOTICE!

Wrong tightening torque for locking screws

Overtightening the locking screws can damage the locking screws and the lid seal.

Observe the following when closing the pressure pot:

- Tighten locking screws by hand.
- Tighten locking screws in a crosswise sequence.

Close pressure pot (variant 1)

- Carefully place and align lid (1).
- Tighten lid (1).

Close pressure pot (variant 2)

- Carefully place and align lid (1).
- Fold up screws (3).
- Tighten star handles (2) crosswise.

Close pressure pot (variant 3)

- Carefully place and align lid (1).
- Tighten star handles (2) crosswise.

7.4.2 Switch on compressed air supply

Figures

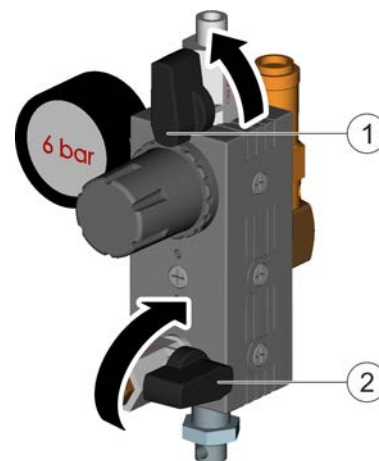


Fig. 44: Switch on compressed air supply (standard)

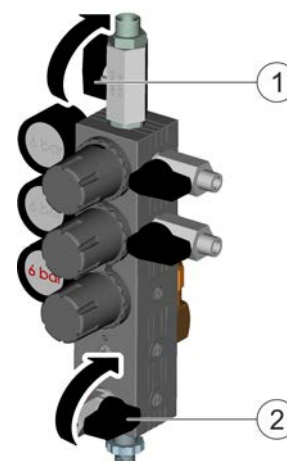


Fig. 45: Switch on compressed air supply (optional)

Legend	
Item numbers	Meaning
1	Valve on compressed air supply
2	Valve on bleeder valve

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Safety valve is clean and not damaged.
- Material connection is tight ↪ 5.4.4 “Connect application devices”.
- Compressed air connection is tight ↪ 5.4.3 “Connect compressed air supply”.
- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Pressure pot is closed ↪ 7.4.1 “Close pressure pot”.
- Compressed air supply is switched off ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is paused ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Bleeder valve is opened ↪ 7.3.2 “Switch off compressed air supply”.

! WARNING!

Hazardous substances in the atmosphere

If the adjustment pressure of the safety valve is exceeded, the safety valve releases air and hazardous substances can enter the atmosphere. Serious injury and death could be the consequence.

- Before commissioning, ensure that the mechanical ventilation is operational.
- Adjust prior to commissioning.
- During operation, wear the specified personal protective equipment.

i If the input pressure exceeds the maximum input pressure of the pressure controller, compressed air escapes through the safety valve. Observe the working range of the pressure controller ↪ 12.5 “Operating values”.

1. Switch on compressed air supply on the compressed air grid.
2. Swivel the valve on the bleeder valve (2).
⇒ Bleeder valve is closed.
3. Swivel valve on compressed air supply (1).
⇒ Compressed air supply is switched on.

7.4.3 Set the operating pressure

Figures

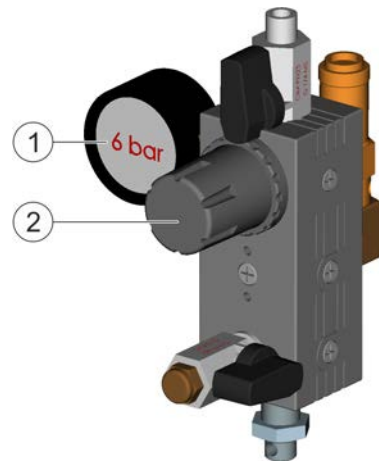


Fig. 46: Set operating pressure (standard)

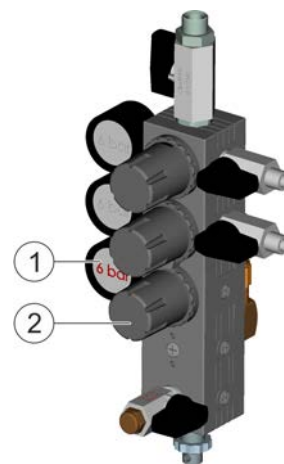


Fig. 47: Set operating pressure (optional)

Legend	
Item numbers	Meaning
1	Pressure gage
2	Pressure controller

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Pressure pot is closed ↪ 7.4.1 “Close pressure pot”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is switched on ↪ 7.4.2 “Switch on compressed air supply”.
- Bleeder valve is closed ↪ 7.4.2 “Switch on compressed air supply”.
- Compressed air supply is opened ↪ 7.4.2 “Switch on compressed air supply”.

WARNING!

Hazardous substances in the atmosphere

If the operating pressure is reduced using the pressure controller, air escapes through the pressure controller out of the pressure pot and hazardous substances can enter the atmosphere. Serious injury and death could be the consequence.

- Before commissioning, take on site safety and protection measures.
- Adjust prior to commissioning.
- During operation, wear the specified personal protective equipment.

NOTICE!

Operating pressure too high

Exceeding maximum operating pressure can damage the pressure pot.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 “Replace safety valve”.
- Do not exceed the maximum operating pressure ↪ 12 “Technical data”.

In order to avoid problems when setting a lower operating pressure, the desired pressure valve should be controlled by a lower pressure value. When setting a lower operating pressure, it is advisable to first set the pressure value below the desired pressure value and then increase this value to the desired pressure value.

Switching on

1. Pull pressure controller (2).
 - ⇒ Pressure controller (2) is unlocked.
2. Slowly pull pressure controller (2) to the right in order to increase the operating pressure.
 - ⇒ Operating pressure increases. The higher the operating pressure, the faster the pressure pot conveys material to the application device. Pressure gage (1) displays the pressure value.
 - or:
3. Slowly pull pressure controller (2) to the left in order to decrease the operating pressure.
 - ⇒ Operating pressure decreases. The lower the operating pressure, the more slowly the pressure pot conveys material to the application device. Pressure gage (1) displays the pressure value.
4. Press pressure controller (2).
 - ⇒ Pressure controller (2) is locked.
5. Open material outlet ↪ 7.4.4 “Open material outlet”.
6. Operate application device. Follow operating instructions of the application device.

Switching off

1. Close material outlet ↪ 7.3.1 “Close material outlet”.
2. Pull pressure controller (2).
 - ⇒ Pressure controller (2) is unlocked.

3. Slowly pull pressure controller (2) completely to the left.
4. Press pressure controller (2).
⇒ Pressure controller (2) is locked.

7.4.4 Open material outlet

7.4.4.1 Open upper material outlet

Figures

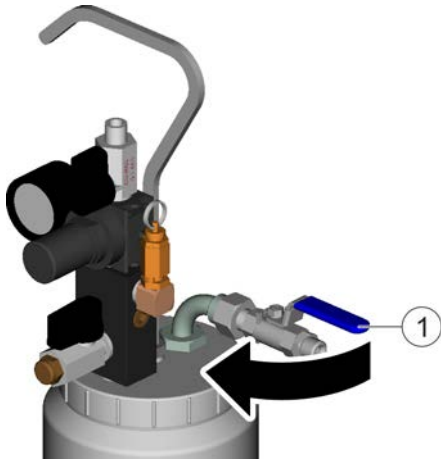


Fig. 48: Open upper material outlet (variant 1)

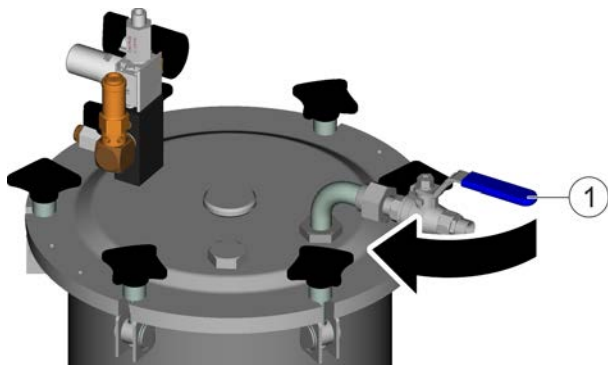


Fig. 49: Open upper material outlet (variant 2)

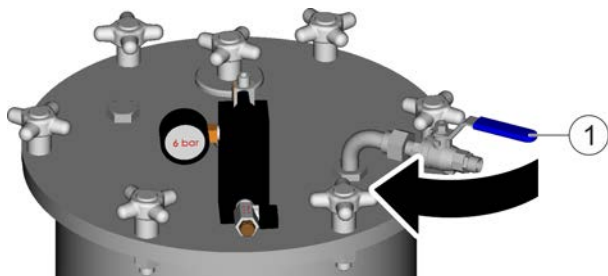


Fig. 50: Open upper material outlet (variant 3)

Instruction

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

1. Swivel valve (1).
⇒ Upper material outlet is opened.

7.4.4.2 Open lower material outlet

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

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

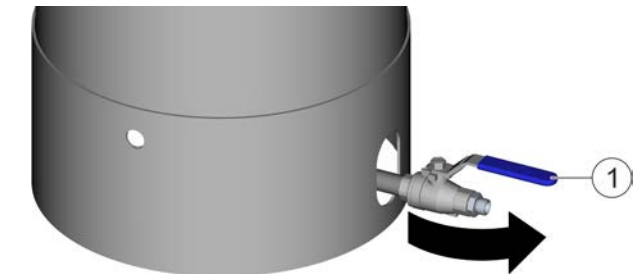


Fig. 51: Open lower material outlet

1. Swivel valve (1).
⇒ Lower material outlet is opened.

7.5 After end of operation

Personnel:

- Operator
- + additional qualification explosion protection

Protective equipment:

- Eye protection
 - Respiratory protection device
 - Protective workwear
 - Protective gloves
 - Anti-Static Safety Boots
1. Rinse pressure pot ↪ 8.2 “Rinse pressure pot”.
 2. Close material outlet and secure against re-opening ↪ 7.3.1 “Close material outlet”.
 3. Switch off compressed air supply and secure it against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
 4. Relieve pressure on compressed air lines and material lines ↪ 7.3.2 “Switch off compressed air supply”.
 5. Disassemble material hose ↪ 11.3 “Disassemble material hose”.
 6. Disassemble compressed air hose ↪ 11.2 “Disassemble compressed air hose”.
 7. Put pressure pot aside at an even, dry and dust-free place.

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 Pressure pot 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.
- Follow the safety data sheet.
- Ensure that forced ventilation and fire protection equipment are in operation.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground Pressure pot.

WARNING!

Danger of explosion due to chemical reactions

Material, halogenated hydrocarbon-based rinsing agent or cleaning agent can chemically react with aluminum components of the product. Chemical reactions can cause explosions. Serious injury and death could be the consequence.

- Only use purging agents and cleaning agents that do not contain any halogenated hydrocarbons.

WARNING!

Sparks due to electrostatic discharge

If the pressure pot is not grounded, there can be an electrostatic charge on the the pressure pot. 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 Pressure pot as specified.
- Before carrying out any work, make sure that there is no explosive atmosphere.

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

Metal parts falling into the container can cause sparking. Sparks can cause explosions in explosive atmospheres. Serious injury and death could be the consequence.

- Perform maintenance work outside the reach of the container.
- Prevent metal parts from falling into the container.
- After completing the maintenance work, tools from the danger zone.

 **WARNING!**
Unsuitable container insert

Unsuitable container inserts can be charged electrostatically or move uncontrolled inside of the container. Serious injury and death could be the consequence.

- Use only container inserts that are approved for the pressure pot.
- Ground the container insert through contact with the container.

 **WARNING!**
Unsuitable tools in explosive areas

Tools that do not have Ex approval can generate sparks and cause a fire or an explosion in Ex zones. It can cause serious injuries or death.

- If possible, carry out cleaning and maintenance work outside the Ex zones.
- For work within the Ex zone, use tools with the corresponding Ex labeling.

 **WARNING!**
Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

- Prior to opening:
 - Switch off compressed air supply and secure it against being switched on again.
 - Depressurize the lines.
 - Disconnect pressure pot from the compressed air supply.
- After the closing:
 - Check if the container is correctly closed.
 - Check if the lines are tightly connected.

 **WARNING!**
Danger from harmful or irritant substances

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

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

 **NOTICE!**
Unsuitable cleaning agents

Unsuitable cleaning agents can damage the pressure pot.

- Only use cleaning agents approved by the material manufacturer.
- Follow the safety data sheet.
- Do not clean in an ultrasound bath.
- Do not clean with hard or sharp objects.
- Do not sand blast or grind.
- Do not immerse into a solvent.
- Do not clean with cleaning agents that cause chemical or thermal reactions.
- Do not clean with cleaning agents that contain halogenated hydrocarbons, acids, regenerated solvents or paint removal agents.

 **NOTICE!**
Wrong tightening torque for locking screws

Overtightening the locking screws can damage the locking screws and the lid seal.

Observe the following when closing the pressure pot:

- Tighten locking screws by hand.
- Tighten locking screws in a crosswise sequence.

8.2 Rinse pressure pot

Purge pressure pot before every change of material and after end of operation.

The application device is purged during the ringing sequence.

Personnel:

- Cleaning staff
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Collecting device with suitable capacity for cleaning agents and material residues is present.
- Local regulations, such as regarding the occupational safety and the protection of the environment, are adhered to.

1. Fill pressure pot with cleaning agent ↪ 7.3 “Empty and fill up pressure pot.”.
2. Purge pressure pot above application device until only clear cleaning agent escapes the application device ↪ 7.4 “Delivering material”. Follow operating instructions of the application device.
3. Close material outlet ↪ 7.3.1 “Close material outlet”.
4. Switch off compressed air supply and secure it against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
5. Relieve pressure on compressed air lines and material lines ↪ 7.3.2 “Switch off compressed air supply”.
6. Open pressure pot ↪ 7.3.3 “Open pressure pot”.
7. Empty container ↪ 7.3 “Empty and fill up pressure pot.”.
8. Remove residual contaminants with a clean cloth. If required, wipe off residual contaminants using a cloth and cleaning agent.
9. Wipe components dry with a dry clean cloth.
10. Dispose of any contaminated rags, cleaning agents and material residues ↪ 11.5 “Disposal”. Observe local regulations.

9 Maintenance

9.1 Safety notes

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 Pressure pot 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.
- Follow the safety data sheet.
- Ensure that forced ventilation and fire protection equipment are in operation.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground Pressure pot.

WARNING!

Unsuitable tools in explosive areas

Tools that do not have Ex approval can generate sparks and cause a fire or an explosion in Ex zones. It can cause serious injuries or death.

- If possible, carry out cleaning and maintenance work outside the Ex zones.
- For work within the Ex zone, use tools with the corresponding Ex labeling.

WARNING!

Danger of explosion due to chemical reactions

Material, halogenated hydrocarbon-based rinsing agent or cleaning agent can chemically react with aluminum components of the product. Chemical reactions can cause explosions. Serious injury and death could be the consequence.

- Only use purging agents and cleaning agents that do not contain any halogenated hydrocarbons.

 **WARNING!**
Sparks due to electrostatic discharge

If the pressure pot is not grounded, there can be an electrostatic charge on the the pressure pot. 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 Pressure pot as specified.
- Before carrying out any work, make sure that there is no explosive atmosphere.

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

Metal parts falling into the container can cause sparking. Sparks can cause explosions in explosive atmospheres. Serious injury and death could be the consequence.

- Perform maintenance work outside the reach of the container.
- Prevent metal parts from falling into the container.
- After completing the maintenance work, tools from the danger zone.

 **WARNING!**
Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 "Replace safety valve".
- Prior to opening:
 - Switch off compressed air supply and secure it against being switched on again.
 - Depressurize the lines.
 - Disconnect pressure pot from the compressed air supply.
- After the closing:
 - Check if the container is correctly closed.
 - Check if the lines are tightly connected.

 **WARNING!**
Unsuitable replacement parts


Replacement 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 replacement parts.

 **WARNING!**
Danger from harmful or irritant substances

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

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

 **NOTICE!**
Unsuitable cleaning agents

Unsuitable cleaning agents can damage the pressure pot.

- Only use cleaning agents approved by the material manufacturer.
- Follow the safety data sheet.
- Do not clean in an ultrasound bath.
- Do not clean with hard or sharp objects.
- Do not sand blast or grind.
- Do not immerse into a solvent.
- Do not clean with cleaning agents that cause chemical or thermal reactions.
- Do not clean with cleaning agents that contain halogenated hydrocarbons, acids, regenerated solvents or paint removal agents.

 **NOTICE!**
Wrong tightening torque for locking screws

Overtightening the locking screws can damage the locking screws and the lid seal.

Observe the following when closing the pressure pot:

- Tighten locking screws by hand.
- Tighten locking screws in a crosswise sequence.

9.2 Maintenance schedule



If a maintenance assistant is used in the system visualizer, the maintenance intervals of the maintenance assistant are valid.

Interval	Maintenance work
annually	Check pressure pot for damage.
	Check lid gasket for damage.
	Check material outlet for tightness.
	Check pressure controller, bleeder valve, safety valve for tightness.
	Regular checks in accordance with local regulations, such as according to BetrSichV in Germany with recommended inspection intervals ↪ 12.5 “Operating values”.

10 Faults

10.1 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 Pressure pot 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.
- Follow the safety data sheet.
- Ensure that forced ventilation and fire protection equipment are in operation.
- Do not use sources of ignition and open light.
- Do not smoke.
- Ground Pressure pot.



WARNING!

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

Metal parts falling into the container can cause sparking. Sparks can cause explosions in explosive atmospheres. Serious injury and death could be the consequence.

- Perform maintenance work outside the reach of the container.
- Prevent metal parts from falling into the container.
- After completing the maintenance work, tools from the danger zone.



WARNING!

Unsuitable tools in explosive areas

Tools that do not have Ex approval can generate sparks and cause a fire or an explosion in Ex zones. It can cause serious injuries or death.

- If possible, carry out cleaning and maintenance work outside the Ex zones.
- For work within the Ex zone, use tools with the corresponding Ex labeling.

 **WARNING!**

Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 “Replace safety valve”.
- Prior to opening:
 - Switch off compressed air supply and secure it against being switched on again.
 - Depressurize the lines.
 - Disconnect pressure pot from the compressed air supply.
- After the closing:
 - Check if the container is correctly closed.
 - Check if the lines are tightly connected.

 **WARNING!**

Unsuitable replacement parts

Replacement 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 replacement parts.

 **WARNING!**

Danger from harmful or irritant substances

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

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

10.2 Behavior during faults

If faults occur:

1. Close material outlet ↪ 7.3.1 “Close material outlet”.
2. Interrupt compressed air supply. Switch off compressed air supply. Depressurize pressure pot ↪ 7.3.2 “Switch off compressed air supply”.
3. Disassemble compressed air hose ↪ 11.2 “Disassemble compressed air hose”.
4. Follow the defects table to correct the fault ↪ 10.3 “Defects table”.

10.3 Defects table

Fault description	Cause	Remedy
Too little or no material comes out from the application device.	Operating pressure is too low.	Increase the operating pressure of the pressure pot ↪ 7.4.3 “Set the operating pressure”.
	Compressed air supply is paused.	Switch on compressed air supply ↪ 7.4 “Delivering material”.
	Standpipe is clogged.	Check standpipe for soiling. If required, clean standpipe.
Too much material comes out from the application device.	Operating pressure is too high.	Decrease the operating pressure of the pressure pot ↪ 7.4.3 “Set the operating pressure”.
Bleeder valve releases air.	Bleeder valve is opened.	Close bleeder valve ↪ 7.4.2 “Switch on compressed air supply”.
Safety valve releases air.	The maximum allowable operating pressure is exceeded.	<ul style="list-style-type: none"> ▪ Close material outlet ↪ 7.3.1 “Close material outlet”. ▪ Set operating pressure ↪ 7.4.3 “Set the operating pressure”. ▪ Respect maximum allowable input pressure and operating pressure ↪ 12.5 “Operating values”.
Safety valve does not open after reaching the preset pressure.	Safety valve is defective.	Check safety valve ↪ 10.5.2 “Check safety valve”. Replace safety valve if necessary ↪ 10.5 “Replace safety valve”.
Pressure gage display is not correct.	Pressure gage is defective.	Check pressure gage ↪ 10.4.2 “Check pressure gage”. Replace pressure gage if necessary ↪ 10.4 “Replace pressure gauge.”.
Sealing surface between lid and container is not tight.	Lid seal, seal groove or sealing surfaces between lid and container are soiled.	Clean lid seal, seal groove and sealing surfaces between lid and container.
	Pressure pot is not correctly connected.	Close pressure pot ↪ 7.4.1 “Close pressure pot”.
	Lid seal is damaged.	Check lid seal. If necessary, replace lid seal.
Compressed air supply is leaking.	Compressed air connection piece is not tight.	Re-tighten compressed air connection piece.
	Fitting connections are leaking.	<ul style="list-style-type: none"> ▪ Re-tighten leaking fitting connections. ▪ Replace damaged fitting seals. ▪ Replace defective fittings.
	Compressed air inlet fitting is defective.	Check compressed air inlet fitting. If necessary, replace compressed air inlet fitting.
Material outlet is leaking.	Material hose connection is not tight.	Re-tighten material hose connection.
	Fitting connections are leaking.	<ul style="list-style-type: none"> ▪ Re-tighten leaking fitting connections. ▪ Replace damaged fitting seals.

Fault description	Cause	Remedy
		<ul style="list-style-type: none"> Replace defective fittings.

10.4 Replace pressure gauge.

10.4.1 Disassemble pressure gauge

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is paused ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Bleeder valve is opened ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

10.4.2 Check pressure gauge

Requirements:

- Pressure gauge has been disassembled ↪ 10.4.1 “Disassemble pressure gauge”.
1. Check pressure gauge with a reference pressure gauge. The displayed pressure of the pressure gauge must match the pressure displayed by the reference pressure gauge.
 2.
 - If the pressure gauge displays the same pressure, assemble the pressure gauge ↪ 10.4.3 “Assemble pressure gauge”.
 - If the pressure gauge displays a different pressure, replace the pressure gauge by a pressure gauge of the same type and assemble it ↪ 10.4.3 “Assemble pressure gauge”.

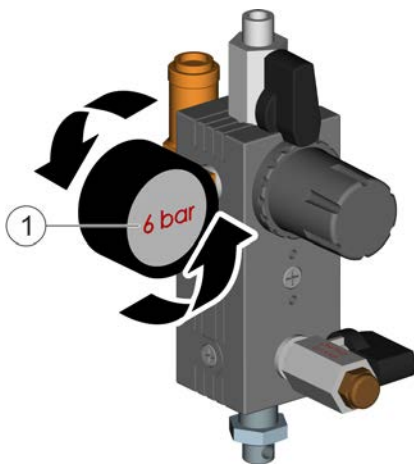


Fig. 52: Disassemble pressure gauge

1. Unscrew pressure gauge (1).
⇒ Pressure gauge has been disassembled.

10.4.3 Assemble pressure gage

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3 “Empty and fill up pressure pot.”.
- Compressed air supply is paused ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Bleeder valve is opened ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

2. Place thread seal on the outer threads (1).
3. Screw in pressure gage (1).
⇒ Pressure gage (1) is assembled.

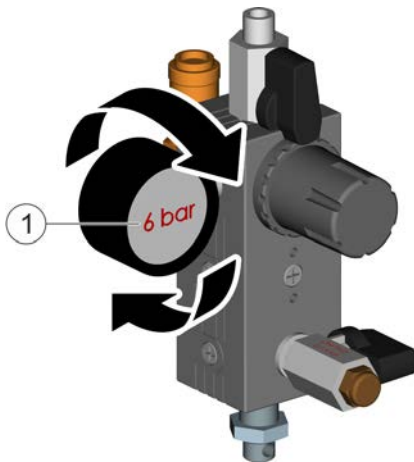


Fig. 53: Assemble pressure gage

1. Clean outer threads of the pressure gauge (1).

! NOTICE!

Contamination

If you use a sealing tape, frayed threads from the sealing tape and damage the product.

- Only use thread seal.

10.5 Replace safety valve

10.5.1 Disassemble safety valve

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3 “Empty and fill up pressure pot.”.
- Compressed air supply is paused ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Bleeder valve is opened ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

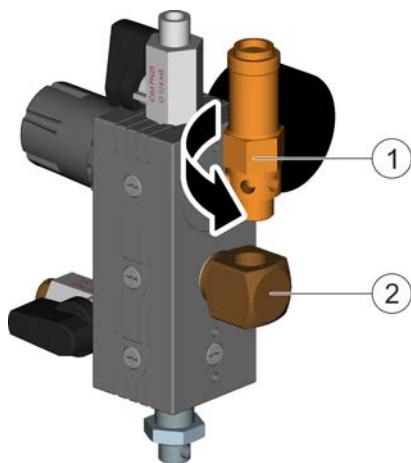


Fig. 54: Disassemble safety valve

1. Unscrew safety valve (1).
2. Remove safety valve (1) from the safety valve inlet (2).
⇒ Safety valve (1) is disassembled.

10.5.2 Check safety valve

Requirements:

- Safety valve is assembled ↪ 10.5.3 “Assemble safety valve”.
- Operating pressure is at least 80-90% of the preset pressure ↪ 7.4.3 “Set the operating pressure”.

For the preset pressure, refer to the technical data ↪ 12 “Technical data”.

Check safety valve (variant 1)

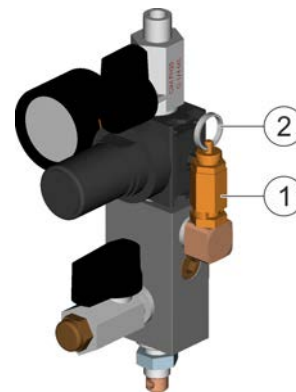


Fig. 55: Check safety valve (variant 1)

1. Engage lifting lever (2).
⇒ Safety valve (1) must open and release air.
2. Release lifting lever (2).
⇒ Safety valve (1) must close.

3. Check adjustment seal.
 - ⇒ Adjustment seal must be present and not damaged.
4. If the safety valve is not working properly, or is incomplete or damaged, replace the safety valve by a safety valve of the same type.

The safety valves are available as replacement parts ↪ 13.1 “Replacement parts”.

Check safety valve (variant 2, variant 3)

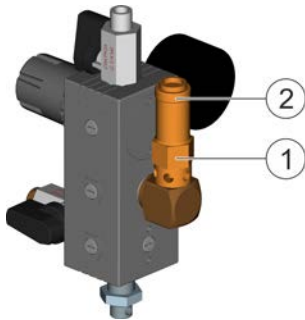


Fig. 56: Check safety valve (variant 2, variant 3)

1. Turn lifting screw (2) to the left.
 - ⇒ Safety valve (1) must open and release air.
2. Turn lifting screw (2) to the right.
 - ⇒ Safety valve (1) must close.
3. Check adjustment seal.
 - ⇒ Adjustment seal must be present and not damaged.
4. If the safety valve is not working properly, or is incomplete or damaged, replace the safety valve by a safety valve of the same type.

The safety valves are available as replacement parts ↪ 13.1 “Replacement parts”.

10.5.3 Assemble safety valve

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.3 “Empty and fill up pressure pot.”.
- Compressed air supply is paused ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure controller is completely turned to the left ↪ 7.3.2 “Switch off compressed air supply”.
- Bleeder valve is opened ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

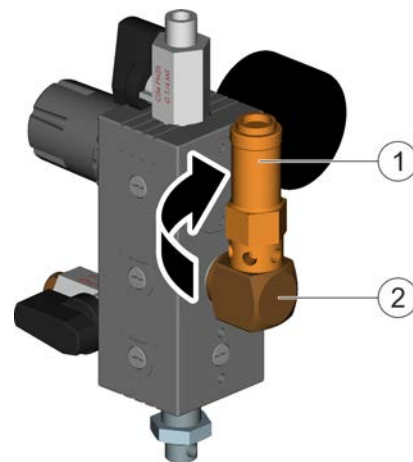


Fig. 57: Assemble safety valve

1. Clean out threads of the safety valve (1).
2. Insert safety valve into the inlet (2).
3. Screw in safety valve (1).
 - ⇒ Safety valve (1) is assembled.

11 Disassembly and Disposal

11.1 Safety recommendations

! WARNING!

Escaping material and compressed air

Escaping material under pressure can cause serious injuries.

- Operate pressure pot only if the safety valve is operational. Check safety valve regularly, replace if necessary ↪ 10.5 “Replace safety valve”.
- Prior to opening:
 - Switch off compressed air supply and secure it against being switched on again.
 - Depressurize the lines.
 - Disconnect pressure pot from the compressed air supply.
- After the closing:
 - Check if the container is correctly closed.
 - Check if the lines are tightly connected.

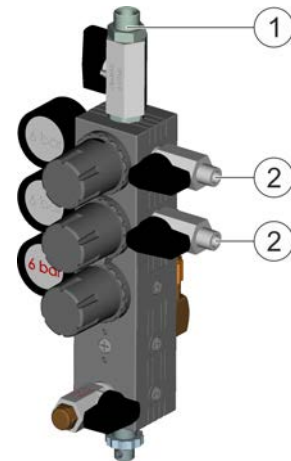


Fig. 59: Disassemble compressed air hose (optional)

Legend	
Item numbers	Meaning
1	Compressed air main supply
2	Compressed air connection to application device

11.2 Disassemble compressed air hose

Figures

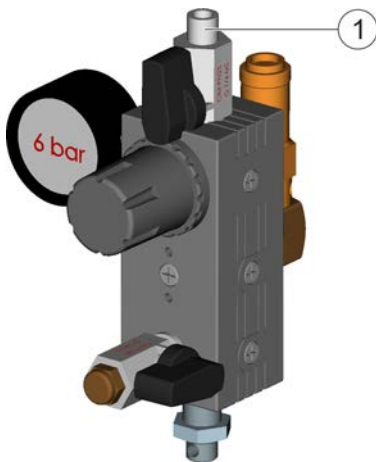


Fig. 58: Disassemble compressed air hose (standard)

Instruction

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Material outlet is closed ↪ 7.4.1 “Close pressure pot”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

Pressure pot

1. Disconnect compressed air hose from the compressed air grid.
2. Open hose clamp hose to the main compressed air supply (1).
3. Disconnect the compressed air hose from the compressed air supply (1).

Application device (optional)

1. Disconnect compressed air hose from the application device.
2. Disconnect compressed air hose from the compressed air connection (2).

11.3 Disassemble material hose.

11.3.1 Upper material outlet

Figures

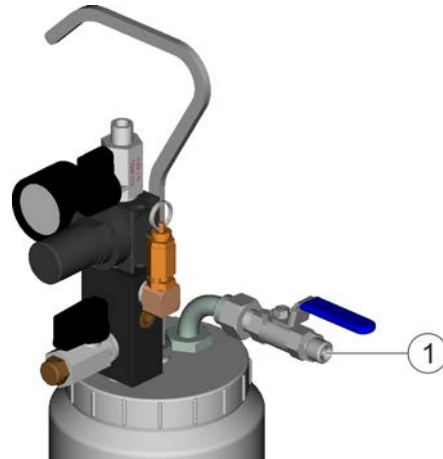


Fig. 60: Disassemble material hose from the upper material outlet (type 1)

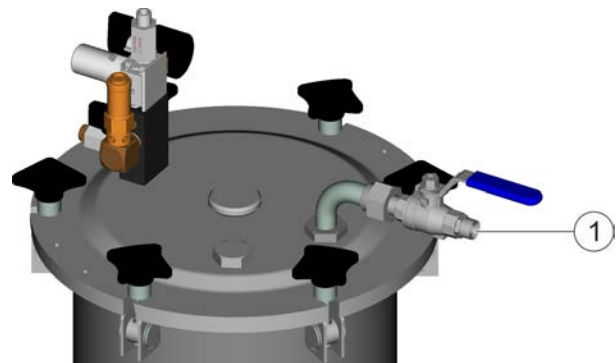


Fig. 61: Disassemble material hose from the upper material outlet (type 2)

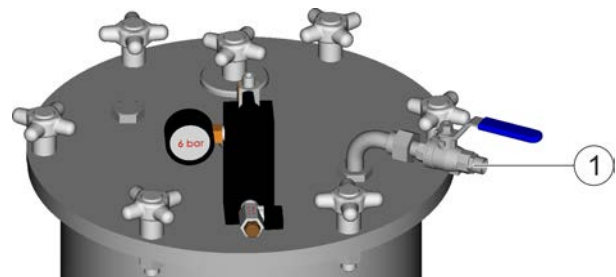


Fig. 62: Disassemble material hose from the upper material outlet (type 3)

Instruction

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

1. Disconnect material hose from upper material outlet (1).
2. Disconnect material hose from the application device.

11.3.2 Lower material outlet

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Material outlet is closed ↪ 7.3.1 “Close material outlet”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.

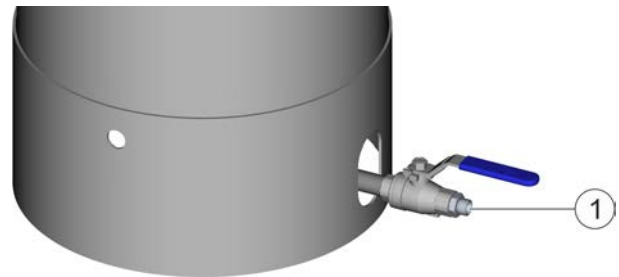


Fig. 63: Disassemble material hose from lower material outlet

1. Disconnect material hose from upper material outlet (1).
2. Disconnect material hose from the application device.

11.4 Disassemble material outlet

11.4.1 Upper material outlet

Figures

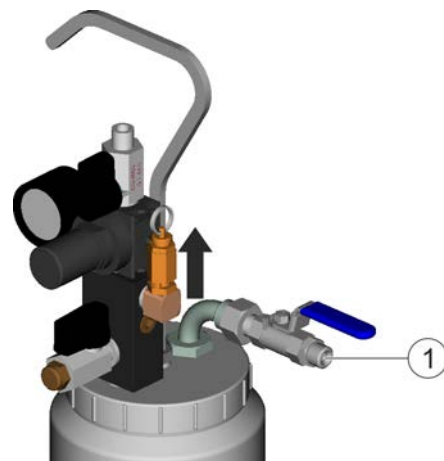


Fig. 64: Disassemble upper material outlet (variant 1)

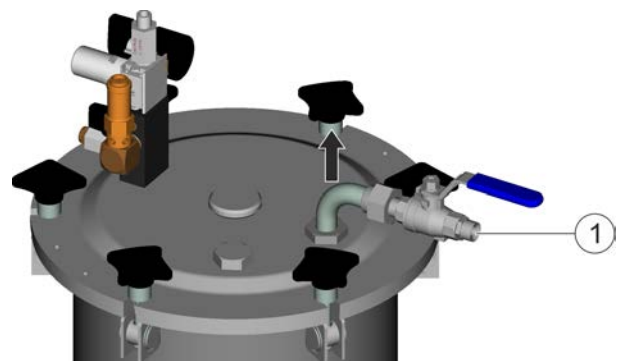


Fig. 65: Disassemble upper material outlet (variant 2)

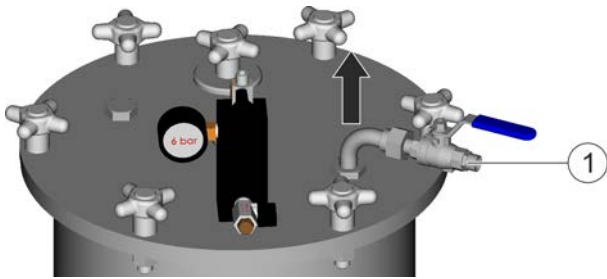


Fig. 66: Disassemble upper material outlet (variant 3)

Instruction

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure pot is opened ↪ 7.3.3 “Open pressure pot”.
- Material hose is disassembled ↪ 11.3 “Disassemble material hose.”.

1. Unscrew upper material outlet (1).

11.4.2 Lower material outlet

Personnel:

- Mechanic
- + additional qualification explosion protection

Protective equipment:

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

Requirements:

- Pressure pot has been rinsed ↪ 8.2 “Rinse pressure pot”.
- Compressed air supply is switched off and secured against being switched on again ↪ 7.3.2 “Switch off compressed air supply”.
- Compressed air lines and material lines are depressurized ↪ 7.3.2 “Switch off compressed air supply”.
- Pressure pot is opened ↪ 7.3.3 “Open pressure pot”.
- Material hose is disassembled ↪ 11.3 “Disassemble material hose.”.

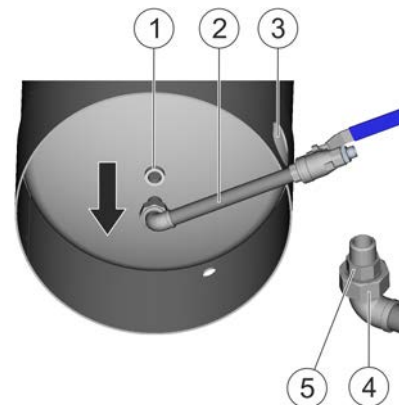


Fig. 67: Unscrew lower material outlet

1. Loosen nut (4) on the lower material outlet (2).
2. Loosen screw (5) on the lower material outlet (2).
3. Remove lower material outlet (2) through the opening in the base (3).

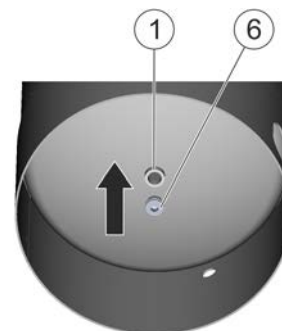


Fig. 68: Screw in plug

4. Screw plug (6) into the thread in the container bottom (1).

11.5 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.
↳ 12.7 “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

Figures

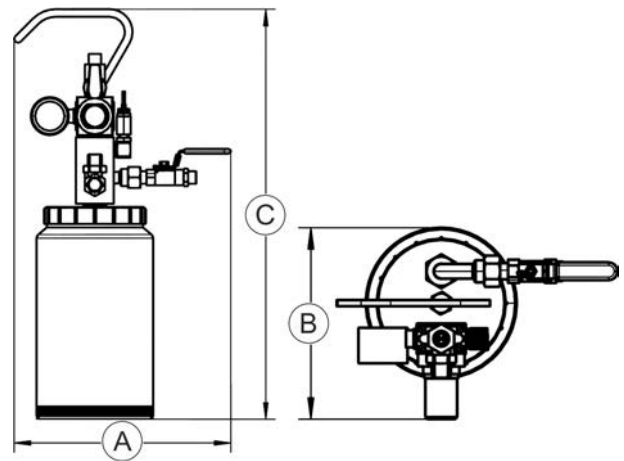


Fig. 69: Dimensions (variant 1)

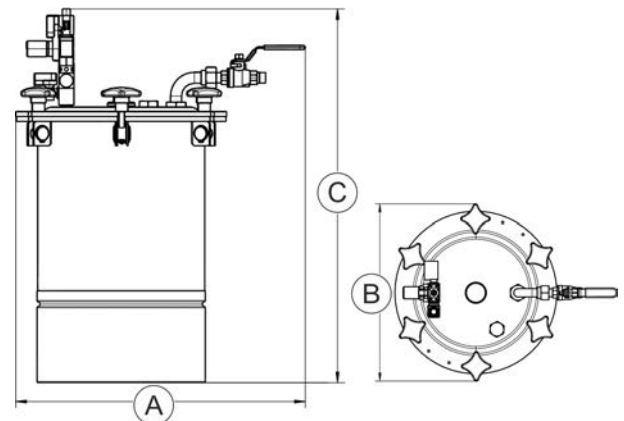


Fig. 70: Dimensions (variant 2)

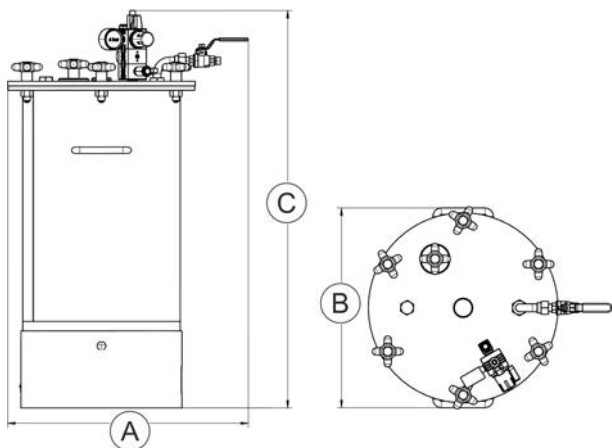


Fig. 71: Dimensions (variant 3)

Product	Width (A)	Depth (B)	Height (C)
2L AL 3bar	approx. 238mm	approx. 156mm	approx. 432mm
2L VA 6bar	approx. 303mm	approx. 175mm	approx. 395mm
10L VA 6bar	approx. 401mm	approx. 315mm	approx. 516mm
20L VA 6bar	approx. 463mm	approx. 377mm	approx. 613mm
45L VA 6bar	approx. 551mm	approx. 460mm	approx. 776mm
60L VA 6bar	approx. 551mm	approx. 460mm	approx. 926mm

12.2 Weight

Product	Weight
2L AL 3bar	from 1,800g
2L VA 6bar	from 4,100g
10L VA 6bar	from 8,700g
20L VA 6bar	from 17,200g
45L VA 6bar	from 38,500g
60L VA 6bar	from 42,500g

12.3 Connections

Compressed air connections

Product	Pressure pot	Application device
2L AL 3bar	G1/4"	G1/4"
2L VA 6bar	G1/4"	G1/4"
10L VA 6bar	G1/4"	G1/4"
20L VA 6bar	G1/4"	G1/4"
45L VA 6bar	G1/4"	G1/4"
60L VA 6bar	G1/4"	G1/4"

Material connections

Product	Lid	Container bottom
2L AL 3bar	G1/4"	-
2L VA 6bar	G1/4"	-
10L VA 6bar	G1/4"	G1/2"
20L VA 6bar	G3/8"	G1/2"
45L VA 6bar	G3/8"	G1/2"
60L VA 6bar	G3/8"	G1/2"

Paint filter

Product	Paint filter
2L AL 3bar	G1/4"
2L VA 6bar	G1/4"
10L VA 6bar	G1/4"
20L VA 6bar	G3/8"
45L VA 6bar	G3/8"
60L VA 6bar	G3/8"

12.4 Operating conditions

Product	Ambient temperature	Media temperature	Relative humidity, operation	Viscosity
2L AL 3bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s
2L VA 6bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s
10L VA 6bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s
20L VA 6bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s
45L VA 6bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s
60L VA 6bar	10 - 50°C	10 - 50°C	35 - 90%	30 - 250mPa.s

Product	Pressure device volume	Net capacity without container insert, max.	Net capacity with container insert, max.
2L AL 3bar	2.3L	2L	-
2L VA 6bar	2L	1.8L	-
10L VA 6bar	10L	9L	6.2L
20L VA 6bar	20 l	15L	12.3L
45L VA 6bar	45L	42.8L	32.9L
60L VA 6bar	60L	58.6L	46.6L

12.5 Operating values

Product	Safety valve, preset pressure	Safety valve, blowing rate	Pressure controller, work area	Pressure controller, input pressure max.	Operating pressure, max.
2L AL 3bar	3 bar	50Nm ³ /h	0 - 3bar	6bar	3 bar
2L VA 6bar	6bar	93Nm ³ /h	0 - 6bar	6bar	6bar
10L VA 6bar	6bar	204Nm ³ /h	0 - 6bar	6bar	6bar
20L VA 6bar	6bar	204Nm ³ /h	0 - 6bar	6bar	6bar
45L VA 6bar	6bar	204Nm ³ /h	0 - 6bar	6bar	6bar
60L VA 6bar	6bar	204Nm ³ /h	0 - 6bar	6bar	6bar

Product	Medium	Module	Category	Allowable load changes
2L AL 3bar	Fluid group 1, IIA	-	-	-
2L VA 6bar	Fluid group 1, IIA	-	-	-
10L VA 6bar	Fluid group 1, IIA	H	II	6,500 (0-6.0bar)
20L VA 6bar	Fluid group 1, IIA	H	II	10,000 (0-6.0bar)
45L VA 6bar	Fluid group 1, IIA	H	III	-
60L VA 6bar	Fluid group 1, IIA	H	III	-

Detail	Value
Grounding resistance, max	<10MΩ
Temperature, transport	-40 - 60°C
Temperature, storage	-10 - 40°C
Relative humidity, transport	35 - 90%
Relative humidity, storage	35 - 90%

12.6 Type plate

The type plate is on the container and features the following details:

- Type number
- Product name
- Material number
- Serial number
- Year of manufacture
- Maximum operating pressure
- Allowable load changes
- Pressure device volume
- Net capacity
- Fluid group
- Allowable operating temperature (min./max.)
- Number of locking screws
- Conformity assessment procedure
- Pressure device category
- Container materials
- Manufacturer's name
- Manufacturer's address
- If applicable, CE labeling and notified body
- QR Code

12.7 Materials used

Component	Product	Material
Lid	2L AL 3bar	AL
	2L VA 6bar up to 60L VA 6bar	VA
Container	2L AL 3bar	AL
	2L VA 6bar up to 60L VA 6bar	VA
Stainless steel container insert	10L VA 6bar up to 60L VA 6bar	VA
Conductive plastic container insert	10L VA 6bar	PPeI
Standpipe	2L AL 3bar	VA
	2L VA 6bar up to 60L VA 6bar	
Seal kit FEP	2L AL 3bar	FEP
	2L VA 6bar up to 60L VA 6bar	
Seal kit FKM	2L AL 3bar	FKM
	2L VA 6bar up to 60L VA 6bar	
Plug G1/2"	10L VA 6bar up to 60L VA 6bar	VA
Plug M34	10L VA 6bar up to 60L VA 6bar	VA
Plug G3/4"	10L VA 6bar up to 60L VA 6bar	VA

12.8 Operating and auxiliary materials

Material	Material number
Thread seal Loctite 511	–
Lubricant VG 32 0.2 l	W32020045

12.9 Compressed air

Compressed air quality

- Purity classes according to ISO 8573-1:2010 3:4:3

13 Replacement parts and accessories

13.1 Replacement parts

Figures

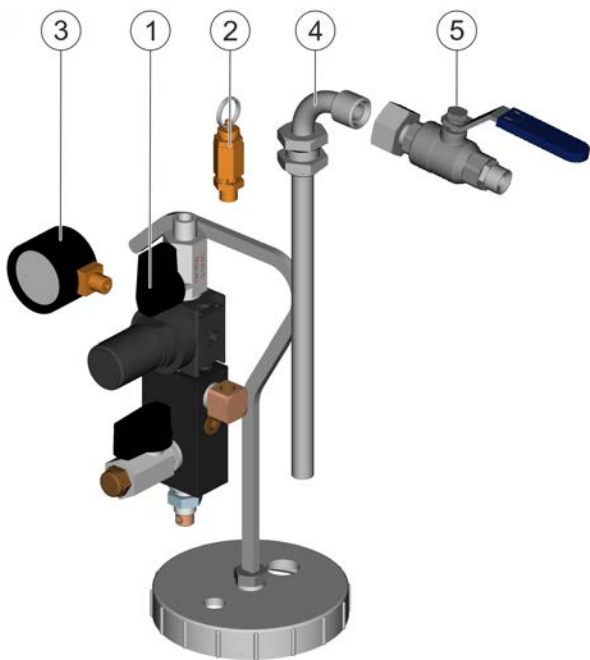


Fig. 72: Lid (variant 1)

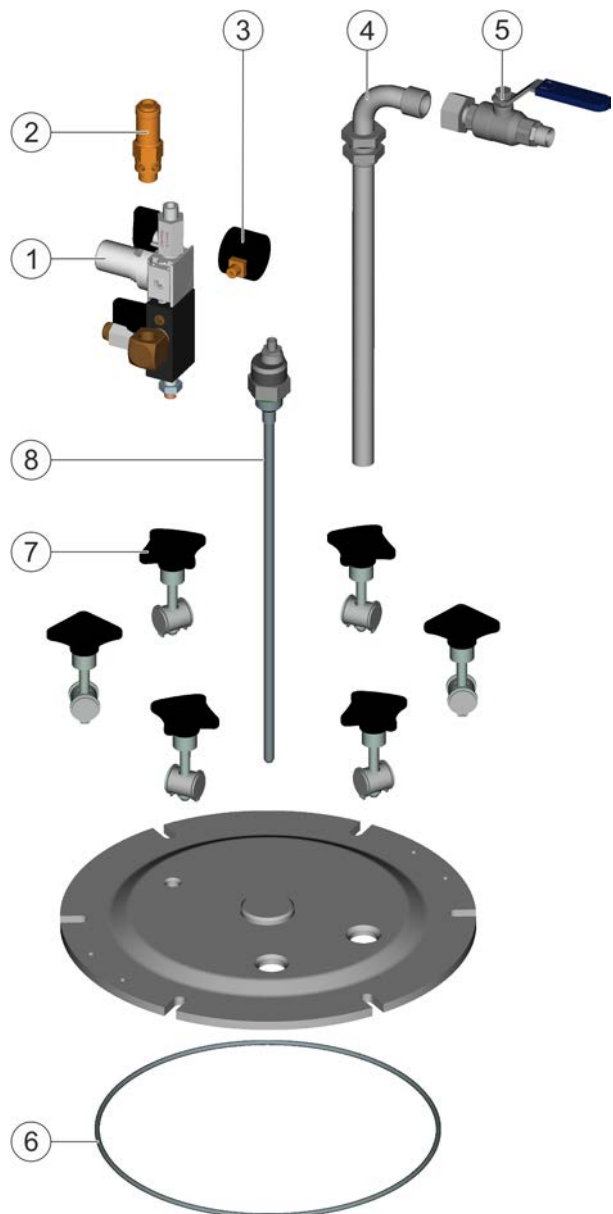



Fig. 73: Lid (example for variant 2, variant 3)

Replacement parts				
Item	Denomination	Amount	Product	Material number
1	Compressed air inlet fitting 1 controller	1	2L AL 3bar	N26050203
	Compressed air inlet fitting 1 controller	1	2L VA 6bar	N26050213
	Compressed air inlet fitting 1 controller	1	10L VA 6bar 20L VA 6bar	N26050197
	Compressed air inlet fitting 1 controller	1	45L VA 6bar 60L VA 6bar	N26050199
	Compressed air inlet fitting 2 controllers	1	2L AL 3bar	N26050194

Item	Denomination	Amount	Product	Material number
	Compressed air inlet fitting 2 controllers	1	2L VA 6bar	N26050214
	Compressed air inlet fitting 2 controllers	1	10L VA 6bar 20L VA 6bar	N26050198
	Compressed air inlet fitting 2 controllers	1	45L VA 6bar 60L VA 6bar	N26050200
	Compressed air inlet fitting 3 controllers	1	10L VA 6bar 20L VA 6bar	N26050209
	Compressed air inlet fitting 3 controllers	1	45L VA 6bar 60L VA 6bar	N26050208
2	Safety valve 3bar	1	2L AL 3bar	M54390191
	Safety valve 6bar	1	2L VA 6bar	M54390199
	Safety valve 6bar	1	10L VA 6bar up to 60L VA 6bar	M54390190
3	Pressure gage	1	2L AL 3bar	W07010395
			2L VA 6bar up to 60L VA 6bar	
	Pressure gage	1	2L VA 6bar up to 60L VA 6bar	W07010405
	Pressure gage	1	2L AL 3bar	W07010396
4	Standpipe short G1/4"	1	10L VA 6bar	M34010737
	Standpipe short G3/8"	1	45L VA 6bar	M34010721
	Standpipe short G3/8"	1	60L VA 6bar	M34010723
	Standpipe long G1/4"	1	2L AL 3bar 2L VA 6bar	M34010716
	Standpipe long G1/4"	1	10L VA 6bar	M34010713
	Standpipe long G3/8"	1	20L VA 6bar	M34010714
	Standpipe long G3/8"	1	45L VA 6bar	M34010722
5	Material valve G1/4" with hose connection	1	2L AL 3bar 2L VA 6bar 10L VA 6bar	M54300682
	Material valve G3/8" with hose connection	1	20L VA 6bar 45L VA 6bar 60L VA 6bar	M54300681
6	Lid seal	1	2L VA 6bar up to 60L VA 6bar	Included in the seal kit
7	Star grip	4 pieces	2L VA 6bar	M21050184
	Star grip	6 pieces	10L VA 6bar	M21050180
	Star grip	6 pieces	20L VA 6bar	M21050179

Item	Denomination	Amount	Product	Material number
	Star grip	6 pieces	45L VA 6bar 60L VA 6bar	M21050178
8	Level sensor, message for empty container	1 level sensor 1 nut	20L VA 6bar	E22090177
	Level sensor, message for empty container	1	45L VA 6bar	E22090168
	Level sensor, message for empty container	1	60L VA 6bar	E22090169
	Level sensor, continuous measurement	1 level sensor 1 nut	20L VA 6bar	E22090176
	Level sensor, continuous measurement	1	45L VA 6bar	E22090165
	Level sensor, continuous measurement	1	60L VA 6bar	E22090166

 The level sensors for the pressure pot 20L VA 6bar are supplied with a nut. The level sensor is threaded from above into the bore of the lid. The level sensor is locked from below with a nut.

Item	Denomination	Components	Amount	Product	Material number
-	Sticker with warnings	Sticker with warnings, operate pressure pot	1	2L AL 3bar	W20130015
-	Sticker with warnings	Sticker with warnings, operate pressure pot Sticker with procedural information, tighten locking screws	1 of each	2L VA 6bar up to 60L VA 6bar	W20130017
-	Seal kit FKM	Flat seal 102x85x3 FKM O-RING 17.5x2 FKM	1 of each	2L AL 3bar	M08810210
-	Seal kit FKM	O-RING 134.5x3 FKM O-RING 17.5x2 FKM	1 of each	2L VA 6bar	M08810211
-	Seal kit FKM	O-RING 237x4 FKM O-RING 23,47x2,62 FKM O-RING 34x3 FKM	1 of each	10L VA 6bar	M08810212
-	Seal kit FKM	O-RING 280x4 FKM O-RING 23,47x2,62 FKM O-RING 34x3 FKM	1 of each	20L VA 6bar	M08810214
-	Seal kit FKM	O-RING 370x5 FKM O-RING 23,47x2,62 FKM O-RING 58x3 FKM O-RING 16x3 FKM O-RING 34x3 FKM	1 of each	45L VA 6bar 60L VA 6bar	M08810216
-	Seal kit FEP	Flat seal 102x85x3 FEP O-ring 18x2 FEP	1 of each	2L AL 3bar	M08810222
-	Seal kit FEP	O-RING 134.5x3 FEP O-RING 18x2 FEP	1 of each	2L VA 6bar	M08810223
-	Seal kit FEP	O-RING 237x4 FEP O-RING 24x2.62 FEP O-RING 34x3 FEP	1 of each	10L VA 6bar	M08810221
-	Seal kit FEP	O-RING 280x4 FEP O-RING 24x2.62 FEP O-RING 34x3 FEP	1 of each	20L VA 6bar	M08810219
-	Seal kit FEP	O-RING 370x5 FEP O-RING 24x2.62 FEP O-RING 58x3 FEP O-RING 16x3 FKM O-RING 34x3 FEP	1 of each	45L VA 6bar 60L VA 6bar	M08810217

13.2 Accessories

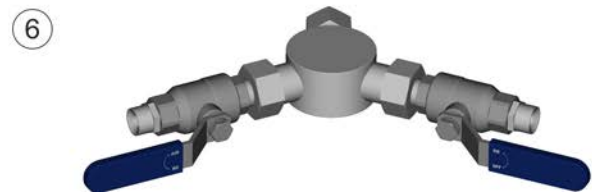
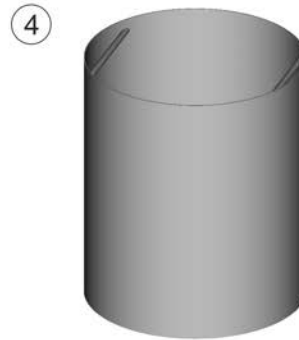
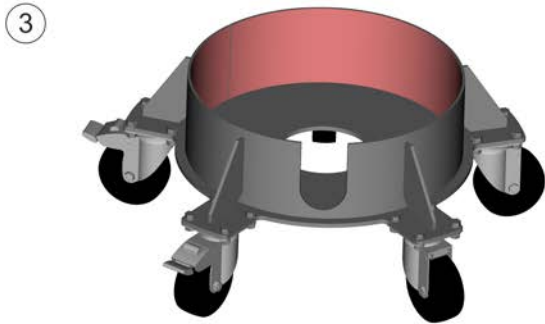
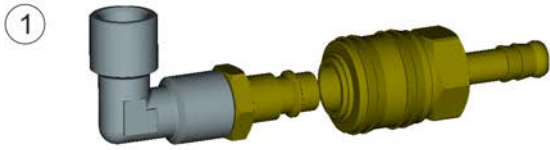


Fig. 74: Accessories

Item	Denomination	Amount	Product	Material number
1	Quick coupling, compressed air line DN9	1	all	N40060004
2	Lower material outlet G3/8"	1	45L VA 6bar 60L VA 6bar	M01010247
	Lower material outlet G3/8"	1	10L VA 6bar	M01010249
	Lower material outlet G3/8"	1	20L VA 6bar	M01010250
3	Transport trolley	1	10L VA 6bar	N25090039
	Transport trolley	1	20L VA 6bar	N25090041
	Transport trolley	1	45L VA 6bar 60L VA 6bar	N25090042
4	Stainless steel container insert 10L	1	10L VA 6bar	M38060022
	Stainless steel container insert 20L	1	20L VA 6bar	M38060024
	Stainless steel container insert 45L	1	45L VA 6bar	M38060014
	Stainless steel container insert 60L	1	60L VA 6bar	M38060026
-	Conductive plastic container insert	1	10L VA 6bar	M38060027
5	Handle	2	10L VA 6bar 20L VA 6bar	M21050182
6	Distributor G3/8" with two material valves G3/8"	1	20L VA 6bar 45L VA 6bar 60L VA 6bar	N31010044
-	Distributor G1/4" with two material valves G1/4"	1	2L VA 6bar 10L VA 6bar	N31010043
-	Paint filter housing G1/4"	1	2L AL 3bar 2L VA 6bar 10L VA 6bar	N35030082
	Paint filter housing G3/8"	1	20L VA 6bar 45L VA 6bar 60L VA 6bar	N35030081
-	Paint filter sieve 300µm with seal	1	Paint filter housing G1/4" Paint filter housing G3/8"	M13020087
-	Paint filter sieve 150µm with seal	1	Paint filter housing G1/4" Paint filter housing G3/8"	M13020085
-	Paint filter sieve 100µm with seal	1	Paint filter housing G1/4" Paint filter housing G3/8"	M13020083


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