Operating Instructions

Filling Station

IBC-Filling System Mobile

Identification

Operating instructions	
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1 Introduction

1.1 General

1.1.1 Purpose

The main purpose of these operating instructions is to protect the operating staff from danger and the filling station from damage.

1.1.2 Warranty

Warranty and liability are determined by the contractual agreements and are subject to national and international legal provisions. Non-observance of the operating instructions will result in the warranty being void.

1.1.3 Copyright

1.2 Contents of the complete documentation

1.2.1 User documentation

- Operating instructions for IBC-Filling System Mobile DN50
- Declaration of conformity for CE marking
- Operating instructions for scale
- Operating instructions for manual lift truck
- General technical specifications
- Templates, program list, recipe list

1.2.2 Technical documentation

- Drawings and diagrams
- Control diagram
- Wiring diagram
- Spare parts list for IBC Filling System Mobile DN50
- Assembling/disassembling instructions for valves
- Assembling/disassembling of pneumatic actuators
- Assembling/disassembling of inner parts
- Assembling/disassembling of sampling valves

1.3 Addresses

1.3.1 Manufacturer

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1.4 Declaration of Conformity

The EC Declaration of Conformity is included in the *user documentation* for your filling station.

1.4.1 Pertinent regulations

- Directive 2006/42/EC – Machinery Directive
- Pressure Vessel Directive 97/23/EC

1.4.2 Standards

Reference to harmonized standards

- www.fda.gov – Title 21 – Food and Drugs

Applicable harmonized standards

- CFR

Technical standards and specifications applied

- DIN 11866 – Stainless steel tubes
- DIN 11864 – Fittings of stainless steel

1.5 Symbols and designations used in these operating instructions

1.5.1 Warning notes in the operating instructions

DANGER!

Indicates an imminently hazardous situation which, if not avoided, will result in death or highly serious injury (physical disability).

WARNING!

Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION!

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.

NOTE

Indicates a potentially harmful situation which, if not avoided, may result in damage to the product or damage in the surrounding area.

1.5.2 Pictograms in the operating instructions

Pictogram	Description
	General source of danger
	Electrical hazard, hazardous voltage
	Burn hazard
	Hand injury hazard

	Suspended load hazard
	Risk of damage to property or to the surrounding area

Example of a warning note

CAUTION!

During the operation of the filling station, steam and water lines are hot. These lines can cause burns if you come in contact with them.

Wear protective gloves.

1.5.3 Conventions used in the operating instructions

- Operating elements are placed in [square brackets].
  Example: Press [F1].
- References to other chapters or documents are formatted in *italics*.
  Example: See chapter *Operation*.

1.6 Definitions

1.6.1 Abbreviations

Abbreviation	Description
max.	maximum, at most
min.	minimum, at least

1.6.2 Units

Unit	Designation	Description
"	inch	Length, 1" = 25.4 mm
°	degree	Angle
m	metre	Length, 1 m = 1000 mm
mm	millimetre	Length
µm	micrometre	Length, 1 µm = 0.001 mm
min	minute	Time, 1 min = 60 s
m/s	metres per second	Speed
s	second	Time
kg	kilogram	Mass (weight)
t	tonne	Mass, 1 t = 1000 kg
A	ampere	Electrical current
AC	alternating current	
DC	direct current	
V	volt	Electrical voltage
W	watt	Power
kW	kilowatt	Power, 1 kW = 1000 W
Hz	hertz	Frequency
l	litre	Volume
l/min	litres per minute	Volume flow rate
m^3	cubic metre	Volume
°C	degrees Celsius	Temperature
bar	bar	Pressure, 1 bar = 105 Pa

1.6.3 Glossary

Term	Explanation
CIP	Cleaning In Place Cleaning process without dismantling. Cleaning of surfaces in contact with product is initiated via the control system.
SIP	Sterilization in Place Sterilization without dismantling. Sterilization of surfaces in contact with product is initiated via the control system.
WLAN	Wireless Local Area Network Cableless interface for data communication between electronic devices.
IBC	Intermediate Bulk Container Large container for transporting and storing fluid and free-flowing goods.

2 Safety

2.1 Target groups

2.1.1 Operator

The operator is responsible for the filling station, the ambient and working conditions and safety.

2.1.2 Operating staff

Persons with basic school education and appropriate technical understanding.

The operator trains the operating staff with regard to the handling of the filling station. Training covers the following tasks:

- Switching the filling station on and off
- Operating the filling station
- Daily checks and maintenance work

2.1.3 Service staff

Persons who have the special vocational training required for this type of work. This applies in particular to work on electrical and pneumatic equipment.

If several people work on the filling station, the responsibilities for the individual tasks must be clearly defined and observed.

Service staff is trained for the following tasks to be performed on the filling station:

- Checks and maintenance work in accordance with the maintenance schedule.
- Repair work in accordance with the instructions in these operating instructions.

2.2 Boundaries of the filling station

2.2.1 Intended use

The filling station is intended only for the aseptic filling of liquid products in accordance with the production data specified in the chapter entitled *Technical data*.

The filling station is designed for a service life of 10 years. A longer service life is possible, and has been experienced, under optimal conditions.

Operating the equipment within the limits of its intended use also involves observing the operating instructions set out in this document.

2.2.2 Improper use

WARNING!

Improper use can result in serious injury and considerable damage to property.

Observe the intended use of the filling station.

Any use of the filling station that deviates from or goes beyond the intended use specified is considered improper use.

Improper use in particular includes:

- Failure to observe the instructions displayed by the control system
- Operating the filling station in a defective condition or failure to observe the instructions in the operating instructions.
- Operating the filling station when it has faults that can adversely affect safety. These faults must be remedied before setting the equipment into operation.
- Any modification, by-passing or disabling of devices on the filling station which ensure the proper function, the unrestricted use and active or passive safety.

2.2.3 Modifications of the filling station

It is forbidden to perform design modifications in order to use the filling station for other applications, see chapter *Intended use*. This also applies for fitting components and systems from third-party suppliers and changes to the software.

2.3 Basic safety

2.3.1 Training

The manufacturer will instruct the operator during the commissioning of the filling station. Type and scope of the training are agreed in the contract.

2.3.2 Safety regulations for the operator

- Only operate the filling station when it is in perfect condition.
- Observe the instructions when operating the filling station and when carrying out maintenance and repair work.
- Immediately rectify changes on the filling station that could adversely affect safety.
- Keep the operating instructions available at the workplace.
- Keep the generally applicable and local and national regulations on accident prevention and environmental protection available. Ensure that all regulations are observed.
- All persons who operate or work on the filling station must have been instructed and must have read and understood the chapters of the operating instructions that are relevant for their work.
- Inform the manufacturer about any potential or detected hazards or risks that are not mentioned in the operating instructions.

2.3.3 Safety regulations for the operating staff

- Read the chapters of these operating instructions that are relevant for your work. Ask for explanations if you do not understand something or have any questions.
- Keep these operating instructions within easy reach at the filling station.
- Keep the safety regulations for accident prevention and environmentally compliant disposal applicable locally and at your factory within easy reach.
- Do not make any changes to the program (software) on the control system. This can adversely affect the safety of the filling station.
- Inform your superior if the filling station does not work properly or if you are in doubt about this.

2.3.4 Personal protective equipment

Task	Personal protective equipment
Operation	Waterproof protective footwear Heat-resistant gloves
Maintenance	Waterproof protective footwear
Repair	Waterproof protective footwear

2.4 Safety precautions

2.4.1 Safety concept

The filling station has an autonomous safety concept. Other machines and auxiliary systems are not affected by it. If the filling station is combined with other machinery to form a machine line, a higher level safety concept must be drawn up by the operator.

2.4.2 Safety devices

See chapter *Design and function*.

2.4.3 Safety symbols on the filling station

Do **not** remove the safety symbols on the filling station; they must be legible.

Pictogram	Description	Location
	Electrocution hazard warning	Control box
	Hot surface hazard warning	Filling station

2.5 Specific dangers

2.5.1 Dangers due to electrical energy

When the [main switch] is turned on, live parts carry current. Touching live parts can cause serious injury.

- Keep the control box closed.
- Only allow qualified specialist staff to establish the connection to the mains supply and to perform work on the electrical equipment.
- Check the electrical equipment of the filling station at regular intervals. Remedy defects immediately.

2.5.2 Danger from suspended loads

During transport, there is a danger of accidents resulting from material failure, tilting, slipping and falling of loads.

- Observe the transport weight and transport mass in accordance with chapter *Technical data*.
- Observe the orientation of the loads and the attachment points.
- Only use suitable, undamaged and fully functional transport devices with sufficient load-bearing capacity.
- Clear escape and transport routes before transporting.
- Lift loads smoothly.

2.5.3 Danger from hot surfaces, hot water and steam

When operating and carrying out maintenance work on the filling station you can come in contact with hot water, steam or hot surfaces. This can result in burns.

- Wear waterproof and heatproof protective gloves.
- Wear waterproof protective footwear.

2.5.4 Danger from pneumatic equipment

When carrying out maintenance and repair work on the pneumatic system there is a danger of personal injury due to parts blown off by pressure.

- Only allow properly qualified service staff to perform this type of work.
- Depressurize the pneumatic system before starting any maintenance or repair work.

3 Design and Function

3.1 Overview

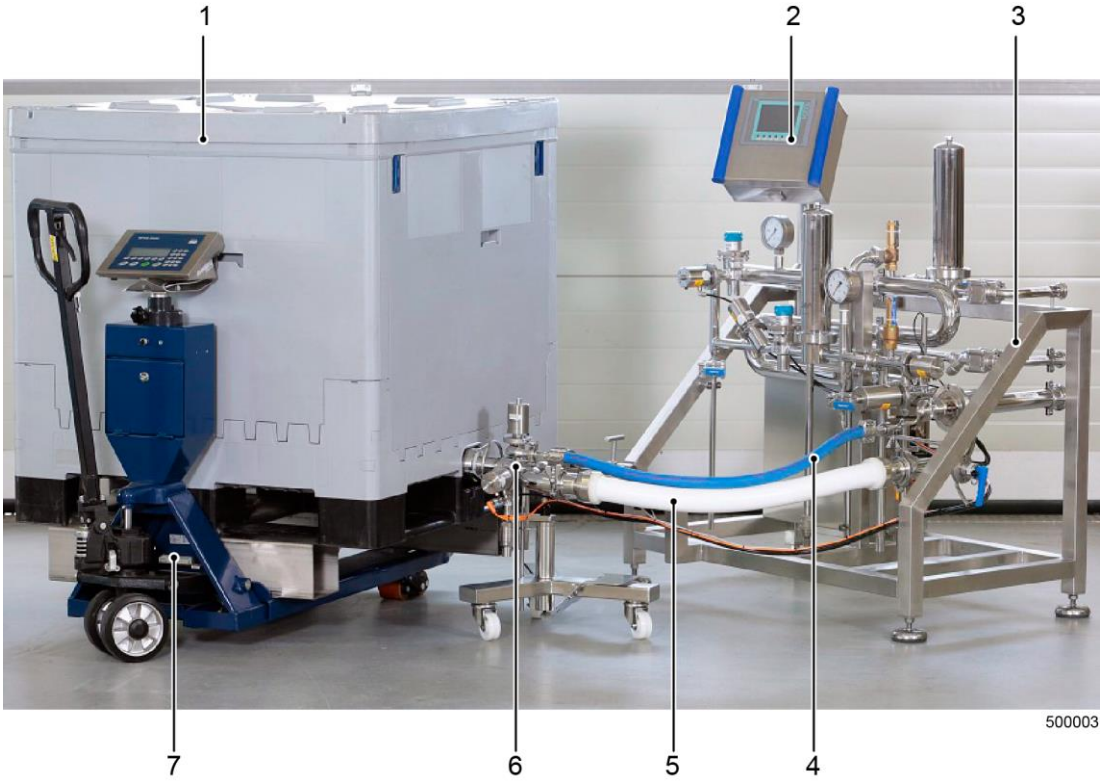


Fig. 1 Overview

Item	Designation	Function
1	Container	Transport container for the product
2	Control panel	Operation of the control system WLAN connection to the scale
3	Main system	Design elements for conveying product and process media, and the control box
4	Water / steam line	Tubing for water for rinsing and steam for sterilization
5	Product / CIP line	Tubing for the product and the cleaning medium
6	Filling head	Mobile connection for the product line to the container
7	Manual lift truck with scale	Monitoring of container weight. Device to transport the containers to and away from the filling station

3.2 Process description

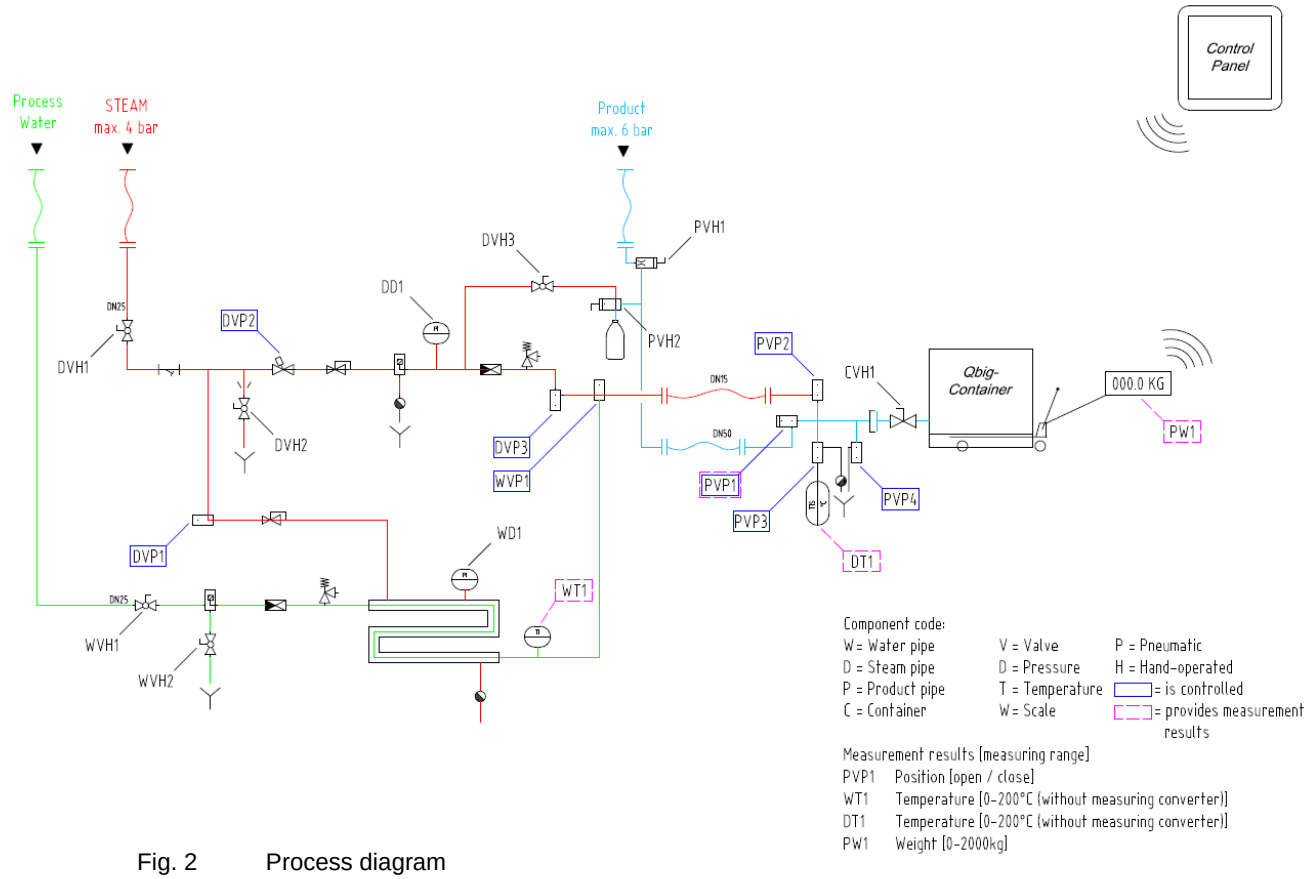


Fig. 2 Process diagram

Filling

The product line is connected to the empty container, the connecting valve is rinsed and sterilized, then the container is filled. The scale monitors the weight. The control system monitors the filling process. The WLAN connection automatically transfers the weight from the scale to the control system.

Once the program has been selected, the individual process steps are displayed on the touchscreen. Operation is guided by the control system.

Changing the container

The product line is detached from the container. The manual lift truck with scale is used as a transport device for the containers. The connecting valve is rinsed and sterilized whenever the container is changed.

CIP

Once a lot is complete, the product line is emptied and CIP is carried out. The control system monitors the CIP process.

Once the program has been selected, the individual process steps are displayed on the touchscreen. Operation is guided by the control system.

3.3 Components

3.3.1 Main system

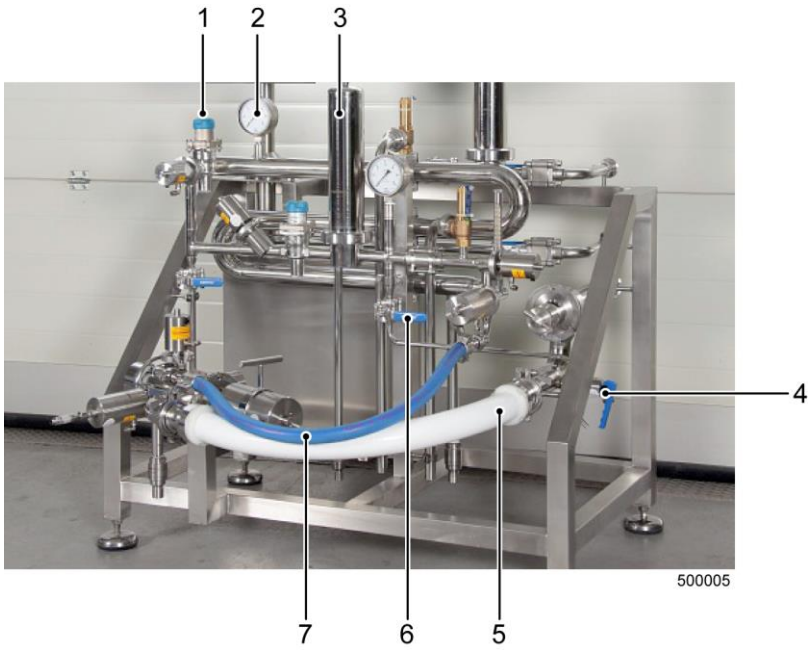


Fig. 3 Main system

Item	Designation	Function
1	Pressure controller (2x)	Regulating the pressure in the water and steam line
2	Pressure gauge (2x)	Pressure monitoring
3	Filter housing (2x)	Keeping water and steam clean
4	Sampling valve	Sampling; sterilizable sampling point in the product line for taking a product sample
5	Product / CIP line	
6	Ball valve (7x)	Opening and closing of lines
7	Water / steam line	

3.3.2 Filling head

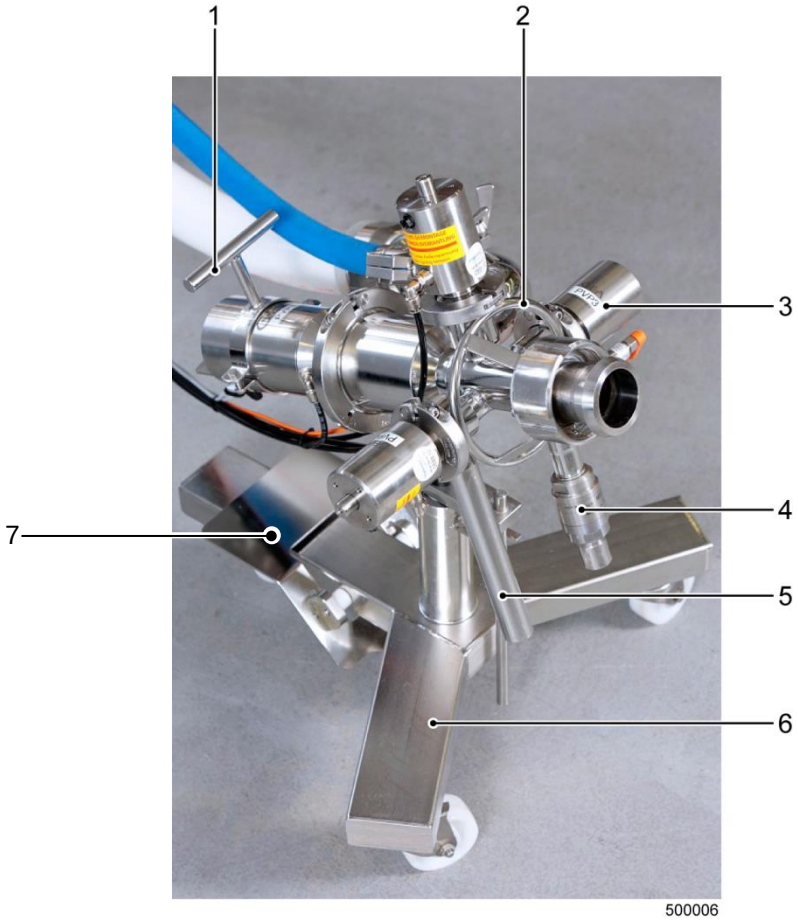


Fig. 4 Filling head with mobile lift

Item	Designation	Function
1	Handle	Moving the mobile lift
2	Rotary wheel	Connecting the filling head to the container
3	Process valves (4x)	Routing the media into and out of the filling head
4	Condensate trap	Discharges condensated steam
5	Rinsing tube	Outlet for rinsing process
6	Mobile lift	Free movement of the filling head within the radius of the line; height and filling angle can be adjusted, see chapter *Technical data*.
7	Foot pedal	Height adjustment of the filling head

3.3.3 Manual lift truck with scale

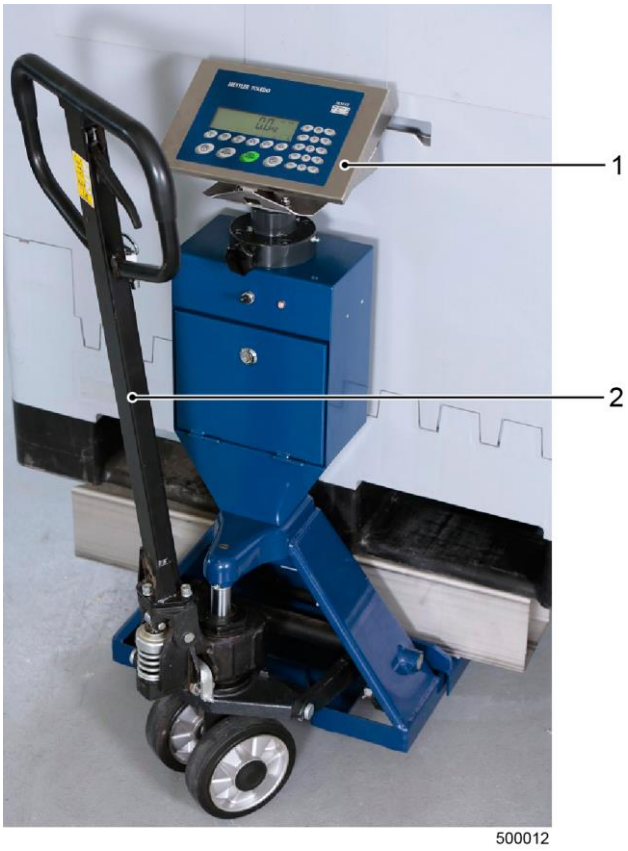


Fig. 5 Manual lift truck with integrated scale

Item	Designation	Function
1	Control panel for scale	Monitoring the container weight
2	Manual lift truck with integrated scale	Moving containers to and away from the filling station. Moving the filling station when changing the location within the building. Weighing the container

3.4 Safety devices

WARNING!

Manipulating safety devices can result in serious injury and considerable damage to property.

Only operate the filling station when the safety devices are in perfect condition.

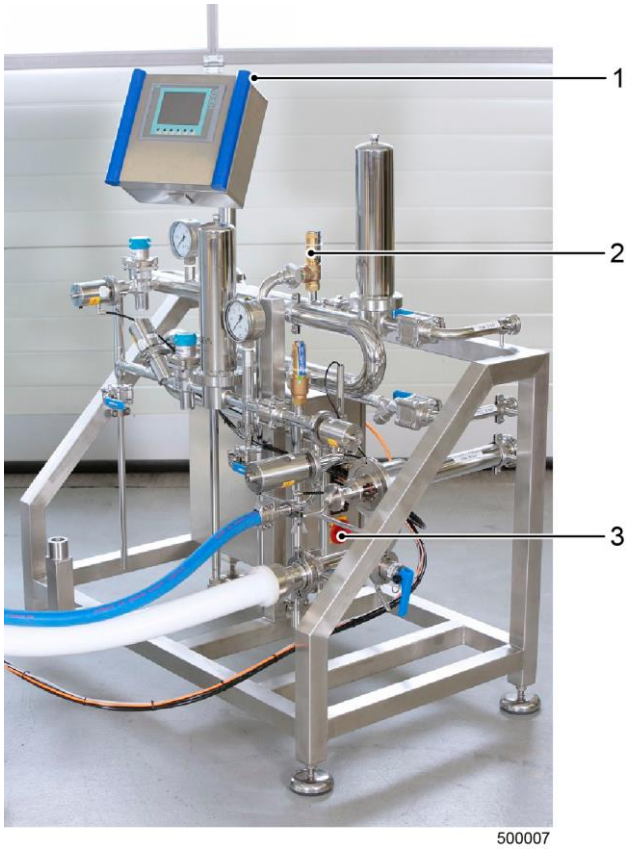


Fig. 6 Safety devices

Item	Designation	Function
1	[Emergency stop] button	Initiates a safe stop of the filling station. Pneumatic components can still be under pressure, electrical components can still be live. A fault message is displayed on the screen. After unlocking the [emergency stop] button and acknowledging the fault message, the filling station starts to work again, the program is continued.
2	Safety valve (2x)	Protection against overpressure in the water and the steam line. If the pressure rises above the defined limit, the valve opens automatically.
3	Main switch	The main switch disconnects the entire filling station from the mains.

4 Technical data

4.1 Filling station

4.1.1 Main components

Component	Designation
Filling station	IBC-Filling System Mobile
Type	DN50
Year of manufacture	2012
Control system	Elpex AG
Manual lift truck including scale	Mettler Toledo weighing hand pallet truck BTA425 / BTA445
Control panel for scale	Mettler Toledo weighing terminal IND449

4.1.2 Identification

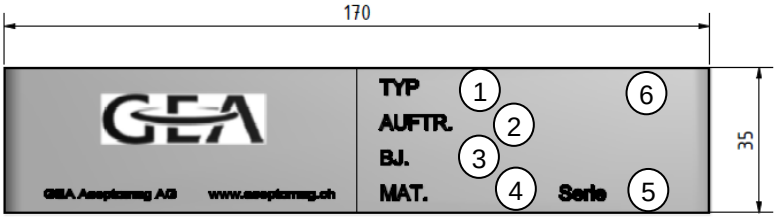


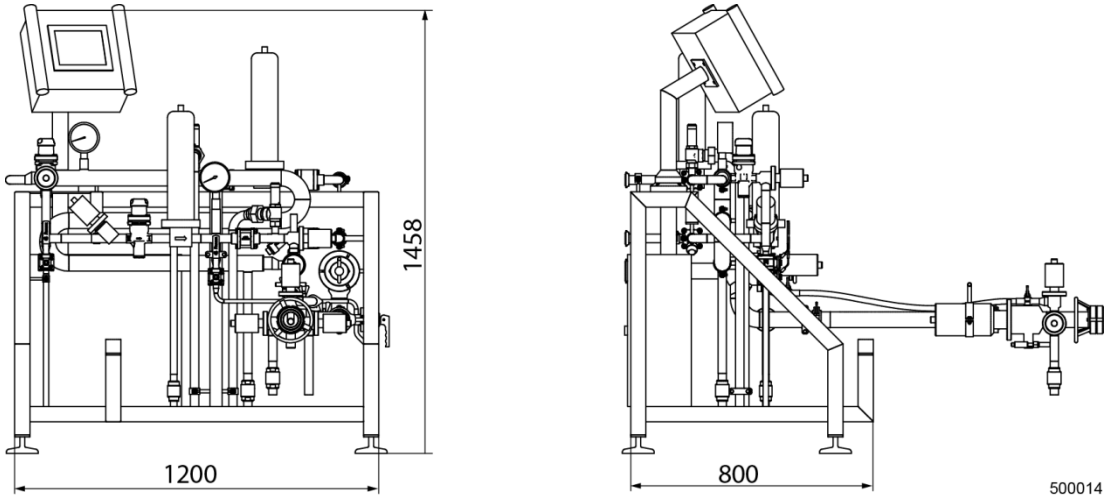
Fig. 7 Position of type plate/serial number/CE symbol/mark of conformity

Item	Designation	Description
1	TYP	Type name of the machine
2	AUFTR.	Order number (KB-xx-xxxx)
3	BJ	Year of manufacture
4	MAT.	Material used (in contact with product)
5	Serie	Specific serial number
6	CE	CE conformity marking

4.1.3 Production data

Designation	Value and unit
Filling quantities per minute	0 – 60 kg
Filling quantity per container	0 – 2000 kg

4.1.4 Dimensions and weights



Designation	Value and unit
Main system: length x width x height	1200 x 800 x 1458 mm
Weight	300 kg
Filling head: length x width (without mounting)	568.5 mm x 412 mm
Filling head: height for valve connection	416 mm – 616 mm
Filling head: connecting angle	±30°

4.2 Supply

4.2.1 Electrical power supply

Designation	Value and unit
Voltage	230 V
Frequency	50 Hz
Phases	3

4.2.2 Pneumatic supply

Designation	Value and unit
Pressure	6 bar
Filter	0.5 µm
Quality	Free of oil

4.2.3 Water supply (CIP/SIP media)

Designation	Value and unit
Pressure	0.1 – 6 bar
Temperature	200 °C max.

4.2.4 Interfaces

Designation	Value and unit
Product line: connection to filling head	Dairy union / conical coupling, nominal width 50
Product line: connection to filling station	Aseptic groove clamp, nominal width 50
Connection for CIP return	DN50
Connection for electrical power supply	Connector type J (SEV 1011)
Water line: connection to filling station	Aseptic clamp with groove, nominal width 25
Steam line: connection to filling station	Aseptic clamp with groove, nominal width 25

5 Transport and commissioning

5.1 Safety

5.1.1 Target groups

Operator, service technician

5.1.2 Taking safety measures

- Observe the instructions in the *Safety* chapter.
- Hire a specialized forwarding company to transport the equipment if required.
- Only use suitable, undamaged and fully functional transport devices with sufficient load-bearing capacity.
- Observe the transport weight and transport dimensions in accordance with the *Technical data* chapter.
- Clear escape and transport routes before transporting.
- Observe the orientation of the loads and the attachment points.
- Lift loads smoothly.

5.2 Scope of delivery and packaging

The filling station is delivered in accordance with the contract. It is packed in a palletized wooden crate.

5.2.1 Checking the scope of supply

1. Check the delivery for damage in transit immediately.
2. Document any visible or suspected damage in transit (photos).
3. Notify the manufacturer of damage in transit immediately.
4. Check the delivery for completeness against the delivery note.

5.3 Transport

DANGER

The load can slip, tilt or fall down during transport. This can result in highly serious injury.
Observe the safety instructions.

5.3.1 Permitted means of transport

- Crane
- Fork lift

Transporting with a crane

- Only lift the filling station using the attachment points specified.
- Lift the filling station vertically and protect it against tilting.

Transporting with a fork lift / manual lift truck

- Only lift the filling station using the attachment points specified.
- Lift the filling station vertically and protect it against tilting.
- Only move the fork lift on level ground

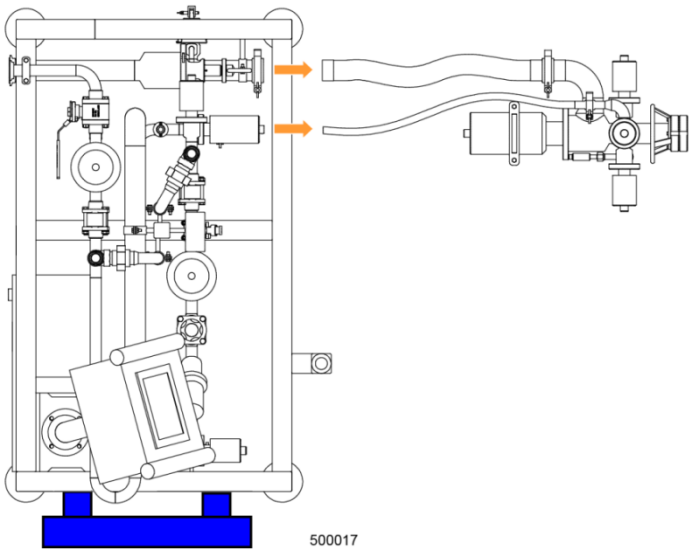


Fig. 8 Attachment points for fork lift / manual lift truck

5.4 Installation

5.4.1 Layout diagram

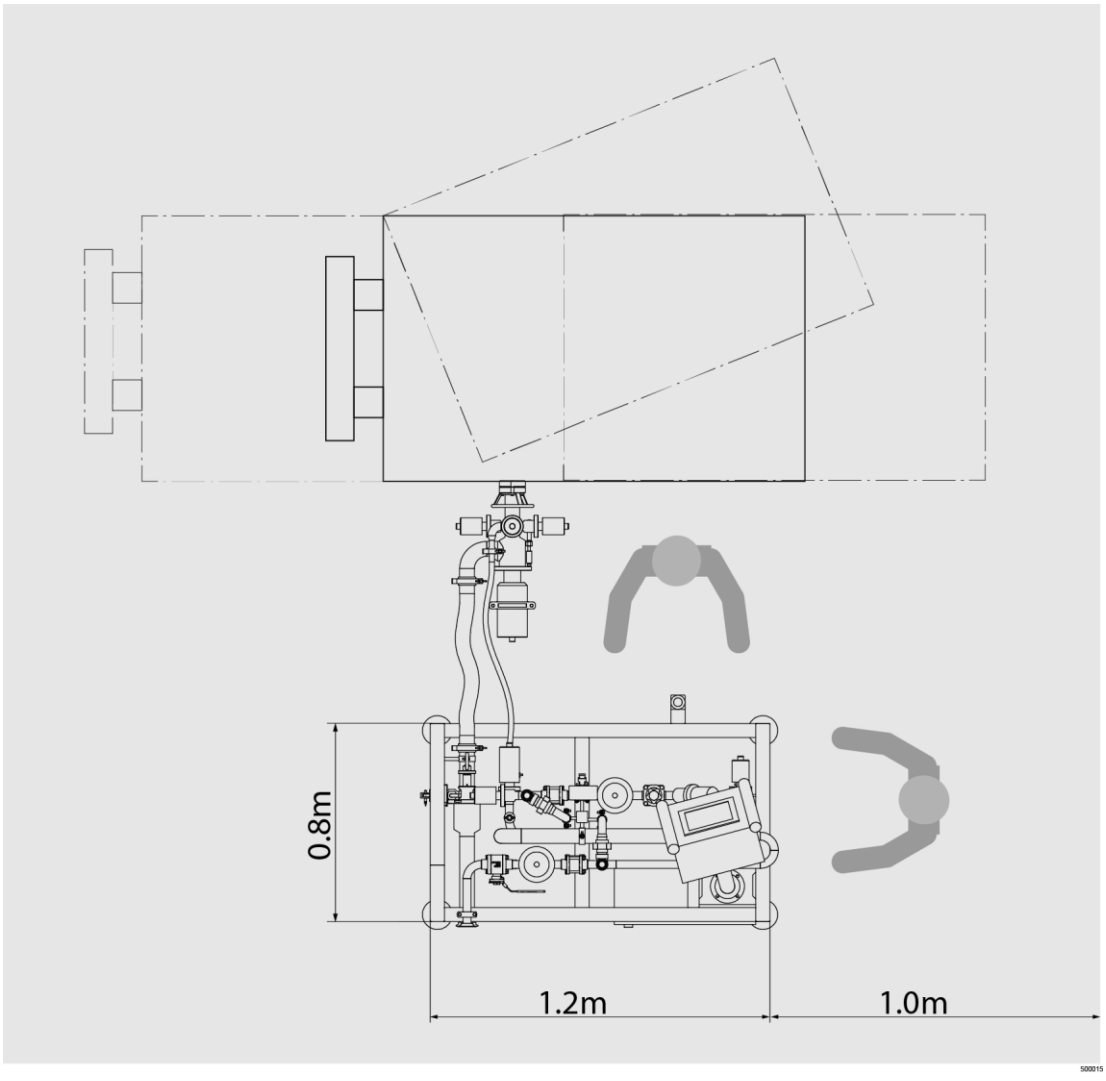


Fig. 9 Layout diagram

5.4.2 Ambient conditions

- Use in a closed workshop.
- No transmission of electromagnetic fields.
- No transfer of dust, dirt, heat or aggressive vapours.
- No air draughts.
- Constant temperature and humidity.

Designation	Value and unit
Ambient temperature	10-35°C
Humidity	40-75%
Ventilation	Not necessary, but recommended

5.5 Setting into operation

- The filling station is set into operation for the first time by the manufacturer. The manufacturer instructs the operator on how to set the filling station into operation and how to operate it.
- When the filling station is brought to another location, the operator sets the station into operation again.

5.6 Changing the location

5.6.1 Shutting down

Shutting the filling station down

Requirements:

– The filling station is switched on.

1. Execute the cleaning program.
2. Switch the filling station off.
3. Turn off the [main switch].
4. Disconnect the filling station from all interfaces.
5. Remove the filling head.

5.6.2 Moving over short distances

Transporting the filling station within the building

Requirements:

– The filling station has been shut down.

1. Secure the control panel.
2. Push the manual lift truck with scale under the filling station at the attachment points, lift the filling station.
3. Pack the filling head in a box.

> The filling station is ready for transport within the building/factory.

5.6.3 Moving over longer distances

Transporting the filling station outside of the building

Requirements:

– The filling station has been shut down.

1. Secure the control panel.
2. Push the manual lift truck with scale under the filling station at the attachment points, lift the filling station.
3. Move the filling station into a palletized wooden crate and secure it.
4. Pack the filling head in a box and safely store it in the wooden crate.

> The filling station is ready for transport outside of the building/factory.

5.6.4 Setting into operation again after changing the location

Setting the filling station into operation again after taking it to a different location

Requirements:

– See chapter *Installation*.

1. Put the filling station in place.
2. Remove the transport securing device from the control panel.
3. Connect the filling head.
4. Connect all supply lines.
5. Check the safety devices.
6. Start the filling station.

6 Operation

6.1 Safety

6.1.1 Target groups

Operating staff

6.1.2 Taking safety measures

- Observe the instructions in the Safety chapter.
- Wear personal protective equipment.
- Stop the filling station immediately if safety is at risk.

6.2 Operating elements and monitoring devices

6.2.1 Main system

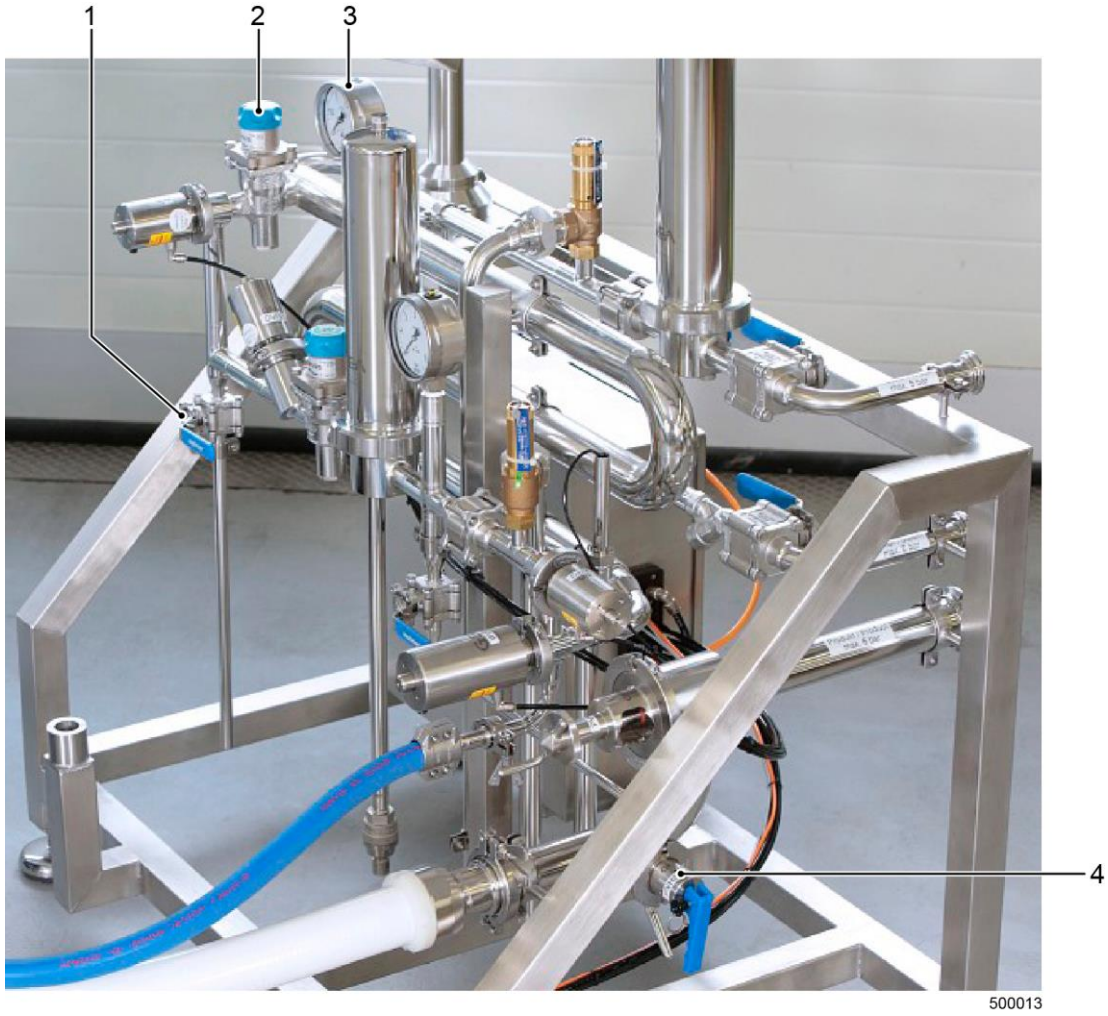


Fig. 10 Operating/monitoring devices on the filling station

Item	Type	Designation	Description
1	Ball valve (7x)	[xxHx]	Opening and closing of lines. Example [PVH1] = manual product valve 1. 1 ball valve [CVH1] is also provided at the container
2	Pressure controller		Regulating the pressure in the water and steam line
3	Pressure gauge (2x)	[WD1]/[DD1]	Indicating the pressure in the water and steam line
4	Sampling valve	[PVH2]	Sterilizable sampling point in the product line for taking a product sample

6.2.2 Manual lift truck and scale

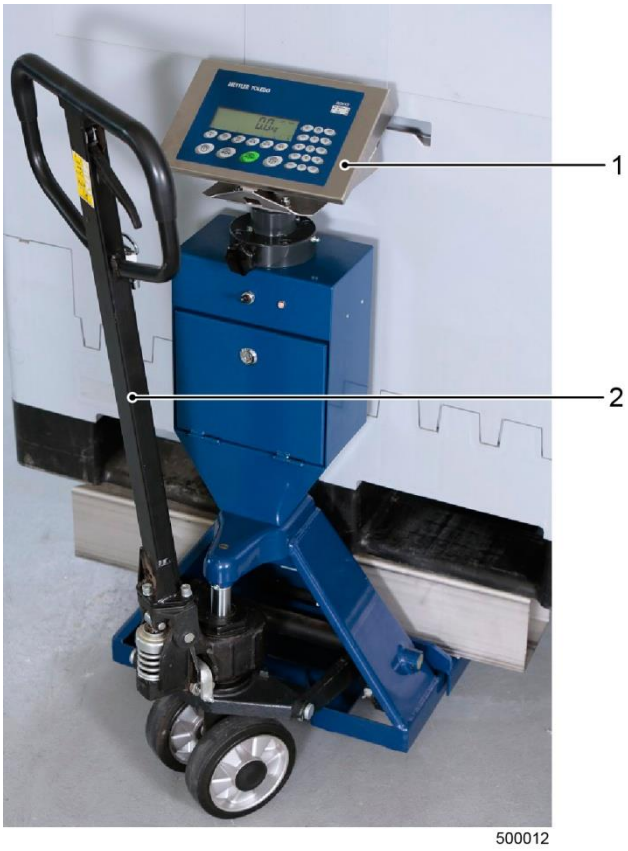


Fig. 11 Operating/monitoring devices on the manual lift truck and scale

Item	Type	Description
1	Control panel for scale	Monitoring the container weight
2	Manual lift truck with integrated scale	Moving containers to and away from the filling station. Moving the filling station when changing the location within the building. Weighing the container

6.2.3 Control panel

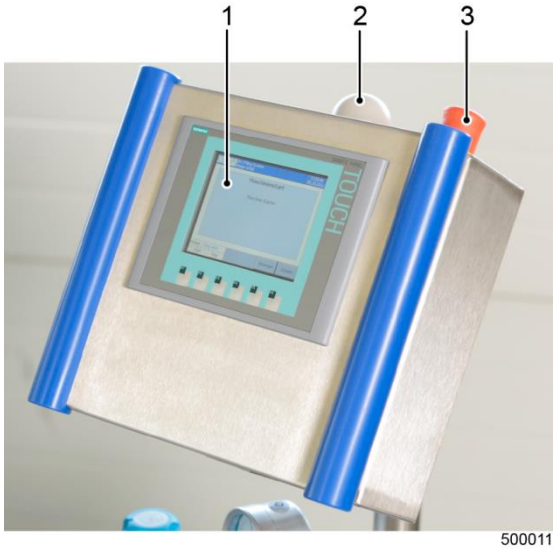


Fig. 12 Control panel

Item	Type	Designation	Description
1	Touch-sensitive screen	Touchscreen	Displaying programs, system information, error messages, etc. Entering data Initiating control commands
2	Interface	WLAN	Wireless data exchange with the scale
3	Button	[Emergency stop]	See chapter *Design and function/Safety devices*

6.3 Screen pages

6.3.1 Main menu

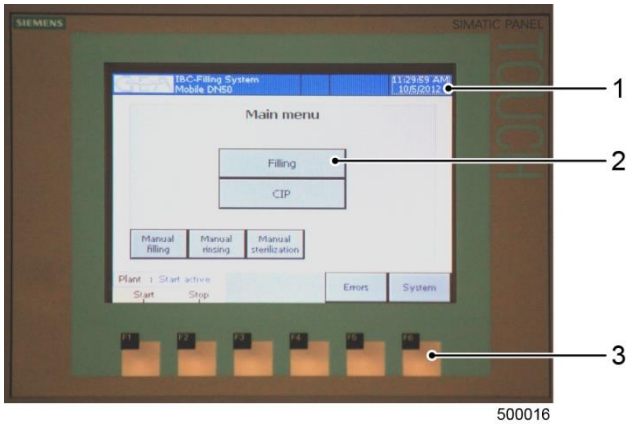


Fig. 13 Main menu

Item	Type	Designation	Description
1	Display	Information bar	Shows system data.
2	Button	[Filling]	Touch-sensitive button. Initiating control commands.
3	Button	[F1] – [F6]	Context-sensitive functions as displayed at the bottom of the touchscreen Initiating functions using buttons

6.3.2 System screen

Fig. 14 System screen

6.3.3 User rights

Level	Task	Access
Operating staff (not logged on)	Starting / stopping the machine, filling, CIP, acknowledging faults, language switch-over	Free
Technician	System settings, manual functions, resetting the sequence, initiating functions of the scale	Password-protected
Administrator (Adm)	System settings, manual functions, resetting the sequence, initiating functions of the scale, recipe management	Password-protected
GEA Aseptomag	System settings, manual functions, resetting the sequence, initiating functions of the scale, recipe management, user management	Password-protected

6.4 Operating the filling station

6.4.1 Starting the filling station

Starting the filling station

Requirements:

- The supply lines are connected.
- The product line is connected.
- The safety devices are intact.
- The battery of the scale is sufficiently charged.

1. Turn on the [main switch].
   > The electrical and pneumatic supply systems start up.
   > The control system starts up.
   > The main menu is displayed on the touchscreen.
2. Start the scale.
   > The connection to the control system is established automatically.

6.4.2 Filling a container

CAUTION!

Lines carrying water and steam are hot during the operation. This can cause burns upon contact.

Do not touch lines!

Filling a container

Requirements:

- The filling station has been started.
- A container is ready on the manual lift truck.
- The tare scale has started up.
- A WLAN connection has been established.

1. Press the [Filling] button.
   > The selection options for container, product, weight are displayed on the touchscreen.
2. Connect the container.
3. Observe the instructions on the touchscreen.
   > Filling runs automatically.
   > When the selected weight has been reached, the control system closes the relevant valves.
   > Rinsing, draining and sterilization of the connecting valve is initiated via the touchscreen.

NOTE

Filling can be carried out manually. To do so, the program steps are started one after the other via the control panel.

Manual filling is used, among other things, to ensure safety when carrying out test runs for new recipes.

6.4.3 Changing the container

CAUTION!

There are hot surfaces on the filling head during the operation. This can cause burns upon contact.

Wear heat-resistant gloves.

Only grip the filling head by the handle and the rotary wheel.

Changing the container

Requirements:

- The filling program is active.
- A connected container has been filled.

1. Close the container valve [CVH1].
2. Disconnect the container from the filling head.
3. Take the container away on the manual lift truck.
4. Place an empty container on the manual lift truck and move it to the filling head.
5. Connect the container to the filling head.
6. Observe the displays on the touchscreen.

6.4.4 Taking a sample

Sampling product

Requirements:

- The line is filled with product.
- Steam is present in the steam line.

1. Open the manual valve [DVH3], rinse and sterilize with steam.
2. Close the manual valve [DVH3].
3. Hold the pre-sterilized container under the filling nozzle.
4. Open the sampling valve [PVH2] and take a sample.
5. Close the sampling valve [PVH2].
6. Open the manual valve [DVH3] and rinse.
7. Close the manual valve [DVH3].

6.4.5 Carrying out CIP

Carrying out CIP

Requirements:

- The required lot of containers has been filled.
- The container has been disconnected from the filling head.

1. Press the [Main menu] button on the touchscreen.
2. Press the [CIP] button.
3. Connect the CIP return line.
4. Observe the displays on the touchscreen.
5. Disconnect the CIP return line.

NOTE

Rinsing and sterilization can be carried out manually. To do so, the program steps are started one after the other via the control panel.

Manual rinsing and sterilization is used, among other things, to ensure safety when carrying out test runs for new recipes or after repair work.

6.4.6 Switching the filling station off

Switching off under normal operating conditions

Requirements:

- The required lot of containers has been filled.
- The container has been disconnected from the filling head.

1. End the program via the touchscreen.
2. Turn off the [main switch].

Emergency stop

Requirements:

- People at risk.
- Risk of damage to machinery, materials or product.

1. Press the [Emergency stop] button.
   > The filling station switches to the basic / safety status.

NOTE

Do not use the [Emergency stop] button for switching off under normal operating conditions. This can result in faults or defects.

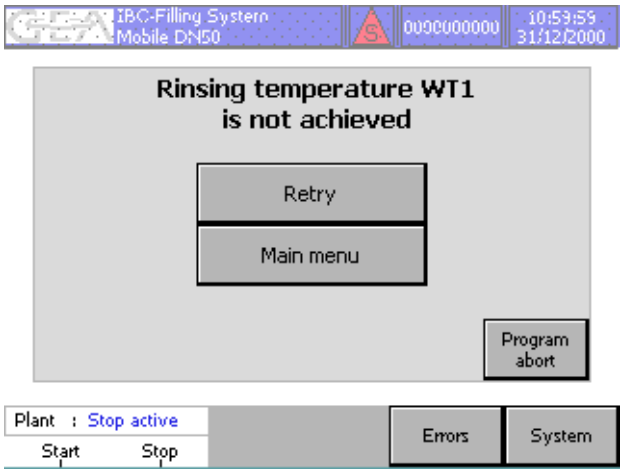
Restarting after an emergency stop

1. Eliminate the cause of the fault.
2. Unlock the [Emergency stop] button.
3. Acknowledge the fault message on the touchscreen.
   > The filling station starts, the control system continues the program.

6.4.7 Faults

Fault display

Faults identified by the control system are displayed as follows:



Fault messages generated by the control system

Fault	Possible Cause	Remedy	Who
Rinsing temperature is not achieved	Steam pressure and temperature too low	Check steam pressure and temperature	Service staff
Sterilization temperature is not achieved	Steam pressure and temperature too low	Check steam pressure and temperature	Service staff
Sterilization time exceeded	Check steam pressure and temperature	Check steam pressure and temperature	Service staff
PVP1 does not open	Air pressure inadequate	Check air pressure	Service staff
No connection to scale	Rechargeable battery in manual lift truck scale does not supply enough power	Charge the rechargeable battery on the manual lift truck	Operating staff

List of faults

Fault	Possible Cause	Remedy	Who
Filling station does not start	No electrical power supply	Check the electrical power supply and repair if necessary	Service staff
No function	Fuse blown	Replace the fuse	Service staff
No function	[Emergency stop] button pressed	Unlock the [Emergency stop] button	Operating staff
No WLAN connection	The battery in the tare scale is flat	Charge the battery	Operating staff
Product does not flow	PVH1 and/or CVH1 closed	Open PVH1 and/or CVH1	Operating staff
CIP not working	Water line closed	Open WVH1	Operating staff
Rinsing temperature is not reached	Not enough steam pressure	Carry out maintenance on the steam system	Service staff

7 Maintenance

7.1 Safety

7.1.1 Target groups

Operating staff, service staff

7.1.2 Taking safety measures

- Observe the instructions in the *Safety* chapter.
- Perform the maintenance tasks described in the specified intervals and document as required.
- Inform the operating staff before starting any maintenance work.
- Perform maintenance work when the filling station is switched off. Switch off the filling station using the main switch. Padlock the main switch.
- Switch off the pneumatic system and prevent it from being switched back on again unintentionally while maintenance work is being performed.
- After completing maintenance work check that the safety devices are functioning correctly.

7.2 Maintenance schedule

See *General technical specifications* in the *technical documentation*.

To effectively prevent production downtime,
GEA Aseptomag AG offers service contracts.

7.3 Maintenance work

7.3.1 Filling station

Work area

1. Tidiness: clear away articles and tools which are not required during the operation of the filling station.
2. Cleanliness: remove obvious soiling on the filling station and in the work area.
   Clean the entire filling station with a dry cloth.
3. Safety: ensure free access to all operating elements and safety devices.

Checks

1. No damage?
2. No abnormal signs of wear?

Overall maintenance

1. Ask the manufacturer to carry out overall maintenance.

7.3.2 Safety devices

WARNING!

Faulty safety devices can result in serious injury and considerable damage to property.

Repair faulty safety devices immediately.

Checking the [Emergency stop] button

Requirements:

- The filling station is switched on.
- The program sequence is started.

1. Press the [Emergency stop] button:
   > The filling station stops.
   If this is not the case: troubleshooting and repair
2. Unlock the [Emergency stop] button.
3. Acknowledge the fault message on the touchscreen.
   > The filling station starts, the control system continues the program.
   If this is not the case: troubleshooting and repair

Checking the main switch

Requirements:

- The filling station is switched on.

1. Turn off the [main switch]:
   > The filling station is switched off and de-energized.
   If this is not the case: troubleshooting and repair

7.3.3 Electrical equipment

Checking

1. No loose connections?
2. No damaged cables?
3. No blackened parts?

7.3.4 Pneumatic system

Checking

1. Is there any noise from escaping air?

7.4 Repair

- See *General technical specifications* in the *user documentation*.
- See *Spare parts list for IBC Filling System Mobile DN50* in the *technical documentation*.
- See *Assembling/disassembling instructions for valves* in the *technical documentation*.
- See *Assembling/disassembling of pneumatic actuators* in the *technical documentation*.
- See *Assembling/disassembling of inner parts* in the *technical documentation*.
- See *Assembling/disassembling of sampling valves* in the *technical documentation*.

8 Storage and disposal

8.1 Safety

8.1.1 Target groups

Service staff, operator

8.1.2 Taking safety measures

- Be familiar with and observe local disposal regulations.
- Observe the instructions in the *Safety* chapter.
- Wear personal protective equipment.
- Only use certified and undamaged lifting gear.
- Only attach lifting gear to the attachment points provided.

8.2 Storage

8.2.1 Storing the filling station

Storing the filling station

Requirement:

– A dry and frost-protected storeroom is necessary.

1. Make a back-up copy of the software and keep it in a safe place.
2. Shut down the filling station, see chapter *Transport and commissioning*.
3. Remove the battery from the scale and keep it in a safe place.
4. Move the filling station to the storage building.
5. Cover the filling station with plastic sheeting if necessary.

8.3 Disposal

8.3.1 Disposing of the filling station

NOTE

If materials are not disposed of correctly, this can cause harm to the environment.

Observe all pertinent regulations for the disposal of materials applicable at your location.

Disposing of the filling station

Requirements:

– The filling station has been shut down, see chapter *Transport and commissioning*.

1. Dismantle the filling station into individual components.
2. Dismantle the components according to their materials.
3. Sort the materials and dispose of them.

Designation	Disposal
Metal	Material recycling facility
Rubber	
Plastic	
Cables	Special disposal facility
Electronic components	

9 Spare parts

9.1 Ordering spare parts

To ensure a smooth ordering process we need the following information:

- Type and number of the filling station.
- Description and article number of the maintenance object.
- Description and article number of the spare part.

You will find this information in the spare parts list in the *technical documentation*.

9.1.1 Ordering address

GEA Aseptomag AG	Phone:	+41 (0)34 426 29 29
Industrie Neuhof 28	Email:	info@aseptomag.ch
3422 Kirchberg	http://	www.aseptomag.ch
Switzerland		