



Condensate Recovery and
Return System

QuickCC

EN
English

Original Installation Instructions
850802-00

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Foreword

This installation & operating manual will help you use condensate recovery and return system QuickCC safely and efficiently for its intended purpose. The condensate recovery and return system QuickCC will be called unit in this document.

This installation & operating manual is intended for anyone commissioning, using, operating, servicing, cleaning or disposing of this equipment and, in particular, for professional after-sales service technicians, qualified personnel and authorised and trained staff.

All of these persons must read and understand the content of this installation & operating manual.

Following the instructions given in this installation & operating manual helps avoiding danger and increases the reliability and service life of the unit. Please note that in addition to the instructions given in this installation & operating manual you must also observe all locally applicable rules and regulations concerning the prevention of accidents as well as approved safety guidelines for good professional practice.

Availability

Keep this installation & operating manual together with the plant documentation for future reference. Make sure that this installation & operating manual is available to the operator.

The installation & operating manual is part of the equipment. Please hand over this installation & operating manual when selling the equipment or passing it on.

Other applicable documents

Further notes, instructions and information on the components of the system can be found in the documentation of the respective manufacturer.

These documents shall be deemed to form an integral part of these instructions.

Keep these documents together with these operating instructions.

Provide these documents if you sell the system or pass it on.

Formatting features in the document

Different types of information in the Installation & Operating Manual are formatted in different ways.

This helps you to distinguish easily between the following types of information:

Normal text

Cross references

► Lists

► Bullet points in lists

➤ Action to be taken.



These tips contain additional information, e.g. about cost-efficient use of the equipment.

Safety

Use for the intended purpose

Condensate flows either directly from the consumer or via the flash vessel into the condensate recovery and return system QuickCC where a level-controlled pump delivers the condensate to the feedwater deaerator or feedwater tank.

The unit must only be used within the allowable pressure and temperature limits and only if the chemical and corrosive influences on the equipment are taken into account.

Correct use includes compliance with the instructions given in this installation & operating manual, in particular obedience to all safety instructions. .

Any other use of the unit is considered to be improper.

Note that the unit is also used incorrectly if the materials of the unit are not suitable for the fluid.

Basic safety notes

Risk of severe injuries

- The unit may become hot during operation. Do not operate the unit unless thermal insulation or protection against accidental contact prevents you from touching hot surfaces.
- The unit maybe hot during operation. Before carrying out any work on the unit make sure that the following requirements are met:
 - The pipes and the plant must be shut off depressurized (0 bar).
 - The fluid must be completely removed from the unit.
 - The pipes and the unit must have cooled down to room temperature (approx. 20 °C)
- If the unit is used in contaminated areas there is a risk of severe injuries or death caused by harmful substances in or on the unit. Before working on the unit make sure that it is completely decontaminated. Always wear the protective clothing prescribed for contaminated areas when working on the unit.
- The unit must only be used with fluids that do not attack the material and the gaskets and sealings of the unit. Otherwise leaks may occur and hot or toxic fluid could escape.
- The unit and its component parts must only be mounted or removed by qualified personnel. A qualified person must be acquainted with and experienced in the following:
 - Making pipe, vessel and tank connections.
 - Selecting suitable lifting gear and understanding the rules for its safe use.
 - Working with dangerous (contaminated, hot or pressurized) fluids.
 - The electrical personnel must also have knowledge and experience in electrical connection as well as of the current and mains voltage used.
- If the admissible pressure and temperature ratings are exceeded, the equipment may be destroyed and hot fluid may escape. Make sure that the unit is always used within the admissible pressure and temperature ratings. You can find information on the pressure and temperature ratings on the name plate.
- If unsuitable lifting gear is used or the gear is used improperly the unit or parts of it could fall down.
- Make sure that only qualified personnel lifts the unit or parts of it.
- Make sure that nobody is standing or working below the hoisted unit.
- Make sure that the lifting gear is of sufficient strength for the load to be hoisted and that the load is properly secured and attached to it. For more information on the nature and weight of the components and safe lifting points please contact the manufacturer.
- Connections to the control cabinet as well as troubleshooting on the connected devices may only be made by trained GESTRA employees or specially trained electronics technicians. When working on electrical equipment, the operator must ensure a mains separation device.
- Make sure that all locally applicable regulations on safety and the prevention of accidents are strictly adhered to.

Risk of minor injuries

- Sharp edges on internals present the danger of cuts to hands. Always wear industrial gloves when servicing the unit.
- If the support of the unit during installation is insufficient the unit might fall down, thereby causing bruises or injuries. Make sure the unit is safely held in place during installation and cannot fall down. Wear protective safety footwear.

Information on property damage or malfunctions

- ▶ Malfunctions will occur if the unit is installed in a wrong position or with the flow pattern in the opposite direction of the fluid flow. This may result in damage to the unit or the installation. Make sure that the flow pattern indicated in this installation and operating manual matches the direction of the fluid flow in the pipe.
- ▶ If the material is unsuitable for the fluid, increased wear may occur and fluid may escape. Make sure that the material is suitable for the fluid used in your installation.
- ▶ The operator must ensure that the integration into an assembly is reliable and suitable for the operating conditions. In doing so, the information in the operating instructions must be observed.
- ▶ The operator must check the compatibility of the fluid with the housing material before commissioning. The selection of a suitable housing material and suitable coating is the responsibility of the operator.

Qualification of personnel

A qualified person must be acquainted with and experienced in the following:

- ▶ the pertinent on-site rules and regulations for preventing fire and explosions
- ▶ working on pressure equipment
- ▶ making pipe connections
- ▶ working with dangerous (hot or pressurized) fluids
- ▶ lifting and transporting loads
- ▶ observing all notes and instructions in this installation & operating manual and the applicable documents
- ▶ The electrical personnel must also have knowledge and experience in electrical connection as well as of the current and mains voltage used.

Further information on the personnel qualifications required for individual activities can be found in the relevant documents.

Protective gear

The required protective gear depends on the types of fluid used and the regulations on site. For more information on suitable safety clothing and safety gear refer to the safety data sheet of the fluid in question.

Protective gear comprises the following items:

- ▶ Protective helmet in compliance with EN 397
- ▶ Work boots in compliance with EN ISO 20345
- ▶ Industrial leather gloves in compliance with EN 388
- ▶ Protective goggles in compliance with DIN EN 166

Typographic features of safety notes

Danger note



DANGER

Instructions with the word DANGER warn of a dangerous situation that will result in death or serious injury.



WARNING

Instructions with the word WARNING warn of a dangerous situation that may possibly result in death or serious injury.



CAUTION

Instructions with the word CAUTION warn of a situation that may result in minor or moderate injury.

Information on environmental and property damage

Attention!

These notices warn of a situation resulting in material or environmental damage.

Description

Scope of supply and unit specification

Scope of supply

Our equipment is delivered ready for assembly.

- Condensate collecting tank
- Level electrode
- Condensate pump(s)
- Isolating valves
- Non-return valve(s)
- Pressure gauge
- Water level gauge
- Thermometer
- Base
- Pump control

Task and function

Task

Condensate flows either directly from the consumer or via the flash vessel into the condensate recovery and return system where a level-controlled pump delivers the condensate to the feedwater deaerator or feedwater tank.

Function

Condensate with a max. temperature of 98 °C flows into the collecting tank. When the condensate level reaches the upper switch point of the conductivity electrode, the duty pump is automatically started and will continue to run until the condensate level in the tank reaches the lower switch point.

Name plate

The following items are indicated on the name plate:

- ▶ Manufacturer
- ▶ Type designation
- ▶ Min. service temperature
- ▶ Max. service temperature
- ▶ Max. service pressure
- ▶ Mark e.g. CE, UKCA (if required)
- ▶ Year of construction
- ▶ Serial number
- ▶ Type of vessel
- ▶ Weight
- ▶ Body of regulations
- ▶ Test pressure
- ▶ Test date
- ▶ Volume

Application of European Directives

Pressure Equipment Directive

The equipment conforms to this directive (see "Manufacturer's Declaration" section) and can be used for the following media:

- ▶ Fluids of group 2

ATEX

The system must not be used in potentially explosive atmospheres.

Storing and transporting the unit

Attention!

Unit can be damaged if stored or transported improperly.

- Close all openings with the sealing plugs or covers supplied with the unit or use similar sealing covers.
- Protect the unit against moisture and corrosive atmospheres.
- Please contact the manufacturer if the specified transport and/or storage requirements cannot be met.

Storing the unit

- Please observe the following items when storing the unit:
 - ▶ Do not store the unit for more than 12 months.
 - ▶ Use the supplied sealing plugs or other suitable seal caps in order to seal off all openings of the unit.
 - ▶ Protect the sealing surfaces and contact areas against mechanical damage.
 - ▶ Protect the unit and all components against hard shocks and impacts.
 - ▶ Store the unit only in closed rooms that meet the following environmental conditions:
 - ▶ Air humidity below 50 %, not condensing
 - ▶ Indoor air: clean, salt-free and non-corrosive
 - ▶ Temperature 5–40 °C
- Make sure that all these requirements are always met when storing the unit.
- Please contact the manufacturer if you cannot comply with the recommended storage conditions.

Transporting the unit



DANGER

Risk of bruises if the unit or component parts fall down.

- Use suitable lifting gear when moving or lifting the unit and/or component parts.
- Make sure that the unit cannot topple over.
- Make sure that nobody is standing below the lifted unit.

- For devices weighing about 25 kg or more, you need support from a second person or a suitable hoist.

The exact weight of unit from which support is required depends on your physical abilities and local regulations and conditions.

- Meet the requirements for storage also when transporting the unit.
- Prior to transport seal off connections with sealing plugs.



If you do not have the sealing plugs supplied with the unit use appropriate seal caps to seal off the connections.

- For short distances (only a few metres) you can transport the unit unpacked.
- When transporting the unit over larger distances use the original packaging.
- If you do not have the original packaging use a box that protects the unit adequately against corrosion and physical damage.



For a short period of time the unit may be transported even if the temperature is below 0 °C, provided that the unit is completely empty and dry.

Mounting and connecting the unit

Preparing installation



DANGER

Risk of bruises if the unit or component parts fall down.

- Use suitable lifting gear when moving or lifting the unit and/or component parts.
- Make sure that the unit cannot topple over.
- Make sure that nobody is standing below the lifted unit.

- Take the unit out of the transport packaging.
- Check the unit for transport damage.
- Contact the manufacturer if you detect any kind of shipping damage.

When supplied by the factory, the connections may be sealed off with sealing plugs.

- Remove sealing plugs before mounting the unit.

Keep the sealing plugs and the packing for further use.



DANGER

Personnel working on pipes, vessels and tanks are exposed to safety risks and may suffer severe injuries, poisoning or even loss of life.

- Make sure that no hot or hazardous fluid is in the unit or the vessels / tanks.
- Make sure that the connections are depressurised.
- Make sure that the unit and the pipes have cooled down to room temperatures.
- Wear protective clothing that is suitable for the fluid and, if necessary, wear protective gear.

For more information on suitable safety clothing and safety gear refer to the safety data sheet of the fluid in question.

Connecting the unit



DANGER

Incorrectly connected equipment can cause fatal accidents or severe injuries.

- Make sure that only qualified skilled personnel connect the system.
- Make sure that the system is only connected to the mains by qualified electrical personnel.
- Make sure that the vent line is neither closed nor constricted.

Specialist personnel must be highly qualified and fully experienced in making pipe connections for the respective type of end connection.

- Connect the system only as described in this operating manual.



CAUTION

Environmental damage caused by leaking medium in case of damaged seal!

- Make sure that the sealing surfaces are undamaged.
- Clean the sealing surfaces before installing a new seal.
- Replace each seal after removal.
- Tighten the screw connections to the specified torque.

Attention!

The unit can be damaged if connections are too weak.

- Make sure that the connected unit is not subjected to any forces or torques.

- Make sure that the unit is free from foreign matter.

- Position the system.

The operator has to ensure that the equipment and the sealing material is suitable for the fluid used in his system.

- Inspect all seals before installation to ensure they are in perfect condition.
- Provide connections for condensate inlet and outlet.
- Provide the connections for venting.
- Have the control cabinet mounted in a suitable place.
- Connect the control cabinet to the power supply.
- Provide the electrical connections between the unit and the control cabinet according to the wiring diagram.

- Check the flange connections for tightness in warm state.

- Tighten screw connections if necessary

- Make sure that all parts of the equipment are protected against corrosion.

During operation the surface of the unit gets hot. This presents the risk of burns.

- Lag the surface of the equipment with suitable insulating material.

Commissioning

Attention!

The unit can be damaged by corrosion or other chemical influences.

- Check the compatibility of the fluid with the housing material before commissioning.

The selection of a suitable housing material and suitable coating is the responsibility of the operator.

- Observe the installation and operating instructions for the individual components.
- Check all piping connections before commissioning.
- Check the electrical wiring before commissioning.
- Ensure the correct direction of rotation of the condensate pumps. For description see operating instructions of the pumps.
- Close the drain shut-off valve.
- Check if there is condensate in the tank.
- Open the shut-off valve(s) on the pump suction side.
- Vent the condensate pump(s) according to the associated operating instructions.
- Switch on the level control and check the switching points.
- Throttle the condensate pump(s) to the specified delivery head (shut-off valve(s) with throttling plug in the pump pressure line).
- Check the flange connections for tightness in warm state. Tighten the flange connections if necessary.

Operation

Do not work on the unit while it is operating.

After Operation



DANGER

If the unit is used in contaminated areas there is a risk of severe injuries or death caused by harmful substances in or on the equipment.

- Only qualified personnel are allowed to perform work on contaminated equipment.
- Always wear the protective clothing prescribed for contaminated areas when working on the unit.
- Make sure that the unit is completely decontaminated before carrying out any service work.
- Follow the pertinent instructions for handling the hazardous substances in question.

The operator must ensure on site that the system can be drained safely.

Attention!

Frost damage may occur when the installation is shut down.

- Drain the equipment if ambient temperatures below 0 °C (frost) are to be expected.
- Empty the system via the drain valve.

Removing external dirt deposits

- To remove dirt deposits rinse the equipment with fresh water and wipe it with a clean, lint-free cloth.
- To remove any persistent residues use a cleaning agent that is suitable for the material and carefully wipe the equipment with a clean, lint-free cloth.

Maintaining the unit

The installation and operating instructions for the individual devices / assemblies must be observed.

- Check condensate collection tank, measuring pot and level indicator at regular intervals on dirt and soiling, if necessary flush the components.
- Examine the equipment at regular intervals and check it for correct operation.
- If necessary, clean the equipment.

Spare parts

Various components of the system can be replaced in the event of damage.

Information on the components can be found in the specifications of the respective manufacturers as well as the relevant documents.

Putting the unit out of operation

Removing harmful substances



DANGER

If the unit is used in contaminated areas there is a risk of severe injuries or death caused by harmful substances in or on the equipment.

- Only qualified personnel are allowed to perform work on contaminated equipment.
- Always wear the protective clothing prescribed for contaminated areas when working on the unit.
- Make sure that the unit is completely decontaminated before carrying out any service work.
- Follow the pertinent instructions for handling the hazardous substances in question.

Qualified personnel must have extensive experience with and a working knowledge of:

- ▮ pertinent rules and regulations concerning handling hazardous substances
- ▮ special regulations for handling the hazardous substances encountered on site
- ▮ using the required personal protective equipment (PPE) and clothing.



CAUTION

Environmental damage may be caused by poisonous fluid residues.

- Before disposing of the unit make sure that it is clean and free of fluid residues.
 - For the disposal of all materials observe the pertinent legal regulations concerning waste disposal.
-
- Remove all residues from the unit.
 - For the disposal of all residues observe the pertinent legal regulations concerning waste disposal.

Removing the unit



DANGER

Personnel working on pipes are exposed to safety risks and may suffer severe injuries, poisoning or even loss of life.

- Make sure that no hot or hazardous fluid is in the unit or the pipes.
- Make sure that the pipes upstream and downstream of the equipment are depressurised.
- Make sure that the installation is switched off and protected against unauthorised or unintended activation.
- Make sure that the unit and the pipes have cooled down to room temperatures.
- Wear protective clothing that is suitable for the fluid and, if necessary, wear protective gear.

For more information on suitable safety clothing and safety gear refer to the safety data sheet of the fluid in question.



DANGER

Risk of bruises if the equipment or component parts fall down.

- Use suitable lifting gear when moving or lifting the equipment and/or component parts.
- Make sure that the equipment cannot topple over.
- Make sure that nobody is standing below the lifted equipment.

- Store the equipment as described in section “Storing the unit”.

Re-using unit after storage

Observe the following instructions if you want to remove the unit and use it again somewhere else:

- Make sure that the unit is free of any fluid residues.
- Make sure that all connections are in good condition and leak-free.
- Use the unit only for its intended purpose and the service conditions for which it was specified.

Disposing of the unit



CAUTION

Environmental damage may be caused by poisonous fluid residues.

- Before disposing of the unit make sure that it is clean and free of fluid residues.
- For the disposal of all materials observe the pertinent legal regulations concerning waste disposal.

Returning the unit

You can return the unit to your contractual partner.

- Make sure that all harmful substances are removed from the unit.
- Pay attention to the instructions in section „Transporting the unit“.
- Pack the unit in its original packaging or in suitable transport packaging.

The transport packaging must protect the unit from damage in the same way as the original packaging.

- Send the completed and signed decontamination declaration with the equipment. The decontamination declaration must be attached to the packaging so that it is accessible from outside.
- Register the return delivery with your contractual partner before returning the equipment.

Technical data

Pressure & temperature ratings

You can find the values for your equipment on the name plate.

Weights

You can find the values for your equipment on the name plate.

Manufacturer's Declaration

You can find details on the conformity of the equipment in our Declaration of Conformity or Manufacturer's Declaration.

You can download the latest Declaration of Conformity or Manufacturer's Declaration at www.gestra.com or request it from the address below:

GESTRA GmbH

Münchener Strasse 77
28215 Bremen
Germany

Tel. +49 421 3503-0

Fax +49 421 3503-393

E-mail info@de.gestra.com

Website www.gestra.com

Modifications to the equipment not approved by us will invalidate this Declaration.



You can find our authorised agents around the world at: **www.gestra.com**

GESTRA GmbH

Münchener Strasse 77

28215 Bremen

Germany

Tel. +49 421 3503-0

Fax +49 421 3503-393

E-mail info@de.gestra.com

Website www.gestra.com

UK Importer:

GESTRA UK Ltd

Unit 1 Sopwith Park, Royce Close,
West Portway Business Park, Andover,
Hampshire SP10 3TS
United Kingdom