SEPPELER
RIETBERGBEHÄLTER

HOLTE
INDUSTRI

holteindustri.no
Håtveitvg. 13, 3810 Gvarv
Tlf. 35 95 93 00

OPERATING INSTRUCTIONS
QUADRO-AG

450 1000 2000 3000

SEPPELER – WE MAKE IT WORK.

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1 GENERAL DESCRIPTION

This chapter contains information on these operating instructions as well as general safety information when handling the fuel container.
In the following, the fuel container is also referred to as a mobile supply tank.

1.1 INFORMATION ON THE OPERATING INSTRUCTIONS

These operating instructions are a central component of the mobile supply tank user documentation. Take note of all information, data and requirements contained within the operating instructions. The operating instructions will help you to operate the mobile supply tank safely and with a high degree of availability.
Technical changes of the specifications and illustrations in these operating instructions which serve to improve the mobile supply tank are reserved.

1.2 USE OF THE OPERATING INSTRUCTIONS

These operating instructions serve to allow you to familiarise yourself with the mobile supply tank and to use it according to its proper fields of application.
The operating instructions are to be complemented based on existing national accident prevention and environmental protection regulations.
The operating instructions must always be available at the site of the mobile supply tank and in a readable form.
The operating instructions must be read and applied by every person charged with working with/on the mobile supply tank, for example: Operation, including setting up, removing faults, care, disposal of operating and auxiliary materials, servicing (maintenance, inspection) and/or transportation.
As well as the operating instructions and the accident prevention regulations

applicable in the country and at the site of use, the recognised specialist rules for safe and proper working must also be observed.

1.3 LAYOUT OF THE OPERATING INSTRUCTIONS

Safety information is indicated with the appropriate symbols.

Enumerations

Enumerations of properties in an arbitrary, non-sequential manner are indicated with a point.

Example:

› Feature A
› Feature B
  › Sub-feature of feature B

Sequences

Working stages which must be carried out in the prescribed sequence are numbered and the result of the working stage is depicted in grey.

Example:

1. Stage 1
   Result of stage 1
2. Stage 2
   2.1 Partial stage of stage 2

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1.4 OBLIGATIONS OF THE OPERATING COMPANY

The operating company undertakes to only allow persons to work on the mobile supply tank if they:

- Are instructed in the fundamental requirements of safety at work and accident prevention and in the use of the mobile supply tank.
- Have read and understood the safety information and warnings in these operating instructions and have confirmed this with their signature.
- Have been trained or instructed and their responsibilities for operating, setting up, maintaining and repairing the system have been clearly set out.
- Are regularly instructed on complications, hazards and other special rules of conduct.

The operating company undertakes to:

- Observe and instruct the generally accepted legal and other binding regulations on accident prevention, environmental protection and handling dangerous substances, in addition to these operating instructions.
- Make available personal protective equipment.
- Determine the responsibility of the operator to allow the operator to refuse to follow the unsafe instructions of third parties.
- Check the safety-conscious work of the personnel at regular intervals.
- Observe the applicable legal requirements and regulations at the site of the mobile supply tank.

1.5 REQUIREMENTS FOR THE PERSONNEL

Before beginning the work, all persons who are tasked with working on the mobile supply tank undertake to:

- Observe the fundamental requirements of safety at work and accident prevention.
- Read the safety and warning information in these operating instructions.
- Apply or use personal/work-related protective equipment and tools during work which serve to ensure safety at work if this is deemed necessary for safety reasons.

› Adhere to the competence specifications.

In this way, for example, work on the electrical equipment of the mobile supply tank, if installed, may only be carried out by an expert who has been specially trained for the task or by instructed personnel under the guidance and supervision of such an expert in accordance with the applicable technical rules.
Use by unauthorised personnel is not permitted.

1.6 INFORMATION ON TRAINING

Only use trained or instructed personnel. Clearly set out the responsibilities of the personnel for the operation, setting up, maintaining and repairing the system.
Personnel being trained, introduced to or instructed in using the system, as well as personnel working as part of a general apprenticeship, may only be allowed to work on the mobile supply tank under the constant supervision of an experienced person.
The following knowledge and skills must be taught to the users:

› Accident prevention regulations.
› Measures to take in an emergency.
› Safety information for use.
› Tests and visual checks.
› Explanations of the operating instructions for the operating personnel.
› The meaning of symbols and labels.
› Knowledge about the transport documentation.
› Instruction of the personnel for transporting dangerous substances on public traffic routes in accordance with the ADR treaty section 8.2.3 in connection with chapters 1.3 and 1.10.

1.7 HAZARDS WHEN OPERATING THE MOBILE SUPPLY TANK

The mobile supply tank is built according to the most recent state of technology and the recognised safety regulations. However, dangers to the life and limb of the user or third parties or damage to the mobile supply tank or other material assets, or damage to the environment may occur if not used proper-

ly.
Only operate the mobile supply tank in a technically flawless state and according to the instructions on proper use.

DANGER

Observe the safety information!

- Only operate the mobile supply tank when all protective and safety-related features are present and functional.
- Remove faults which could have an impact on safety or have them removed immediately.
- Observe the other risks and hazards in chapter 2 "Safety information".

1.8 PROPER USE

The mobile supply tank serves to enable the mobile supply of power units directly on site. The permitted charge is diesel or fuel oil.
The mobile supply tank is approved as IBC (see chapter 3.4 "Fuel containers).
The mobile supply tank must be used exclusively within the performance limits listed in chapter 3 "Technical data".
Different uses or uses which go beyond this count as misuse and are not in accordance with the proper use requirements. The company Seppeler Rietbergwerke GmbH & Co. KG is not liable for any damage arising from this.
Proper use also includes:

- Observing all instructions and regulations in the operating instructions and all accompanying documents.
- Adhering to prescribed time limits for inspections and maintenance work and time limits listed in the operating instructions including their accompanying documents.

1.9 MISUSE

The following in particular count as misuse:

- Unauthorised changes. The operating company may not make any changes, extensions and renovations to the mobile supply tank which may affect its safety without permission from Seppeler Rietbergwerke GmbH & Co. KG. This applies in particular to the installation and setting up of safety devices and safety valves well as for welding to load-bearing components. Changes to the mobile supply tank may render its approval as transport container invalid.
- The operation, maintenance and repair of the mobile supply tank by unauthorised and/or uninstructed persons.
- The use of media which do not correspond to the product specification.
- The mixing of liquids.
- Operating damaged mobile supply tanks.
- Operating the mobile supply tank with bridged or incomplete safety devices.
- Using spare parts which are not original. Replacement parts used must meet the technical requirements given by Seppeler Rietbergwerke GmbH & Co. KG.
- Operating the mobile supply tank outside of the given parameters / operating data.
- Setting up on unsuitable base structures.
- Conveying contaminated media.
- Operating the mobile supply tank in explosive environments.
- Usage as a storage container without observing the water law requirements.
- The misuse of fuel oil in diesel motors. If you operate diesel vehicles, generators or transportable working machines with fuel oil, you are committing tax fraud. Furthermore, the operating permit of a motor vehicle expires, for example, with all legal consequences resulting from this.
- Working on a mobile supply tank operated outdoors during a storm.

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1.10 CLAIMS AND LIABILITY

Generally, our "general terms and conditions of sale and delivery" apply. These are available to the operating company of the mobile supply tank upon the signing of the contract at the latest.
The liability of Seppeler Rietbergwerke GmbH & Co. KG is 1 year from the date of delivery.
For galvanized tanks, there is a special durability guarantee of 10 years if the tank is used properly. Exceptions here are fittings, equipment, wearable parts and other accessories as well as damage caused by external violent impacts and improper handling.

If disruptions occur, please contact us at:

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Container technology
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If the disruption within the warranty period arose from inappropriate handling or arose after the warranty period ended, the service costs are at the expense of the owner.
Defect and liability claims for damage to persons or property are excluded if they arose from one or several of the following causes:

- Improper use.
- Damage due to inappropriate handling.
- Inappropriate assembly, commissioning, operation and maintenance.
- Operating the mobile supply tank with defective safety devices or safety and protection precautions which have not been set up properly or which are not functional.
- Not observing the information in the operating instructions regarding transportation, storage, assembly, commissioning, operation, maintenance and setting up.
- Unauthorised structural changes.
- Insufficient monitoring of supply tank parts which are subject to wear.
- Repair work which is carried out in an improper manner.
- Catastrophic events due to the influence of external forces and force majeure.
- Vandalism.

2 SAFETY INFORMATION

2.1 SAFETY SYMBOLS IN THESE OPERATING INSTRUCTIONS

DANGER

"DANGER" indicates an immediate threat of danger which will lead to severe physical injuries or death.

WARNING

"WARNING" indicates a potentially dangerous situation which could lead to severe physical injuries or death.

CAUTION

"CAUTION" indicates a potentially dangerous situation which could lead to minor physical injuries.

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INFORMATION

"INFORMATION" indicates a potentially dangerous situation which could lead to damage to property or the environment.
This signal word is also used for application information and other useful information.

2.2 GENERAL SAFETY INFORMATION

DANGER

Danger to persons and the mobile supply tank!

- Observe all safety and hazard information for the mobile supply tank and keep them in a complete and readable condition.
- Observe all general and specific safety information in these operating instructions and the operating instructions of external processors.
- Refrain from any unsafe working methods.
- Always store the operating instructions close to hand at the site of use.
- Shut down the mobile supply tank immediately and report the fault to the responsible body/person if safety-relevant changes have been undertaken or the operating behaviour of the mobile supply tank changes.
- Shut down the mobile supply tank immediately and report the fault to the responsible body/person if safety devices are damaged, defective or changed.
- Observe the applicable regulations for health safety at work (DGUV regulations) [German Social Accident Insurance].
- Do not remove or make changes to safety devices and warning labels on the mobile supply tank.

- Do not modify supply tank parts without authorisation.
- Do not make changes to the control and switch devices of the mobile supply tank.
- The personnel involved in the delivery of dangerous goods must undertake the corresponding safety measures in accordance with the type and scope of possible hazards in order to limit their consequences. The personnel must observe the relevant ADR regulations in all cases.
- If there is an immediate danger to the public, the personnel must inform the emergency services immediately and make the necessary information available to them. The personnel obligations can be found in the ADR regulations.
- The safety data sheets for the operator must be available for the dangerous substances which are transported and stored in the mobile supply tank and must be observed by the operating personnel.

WARNING

Danger through contact with harmful media!
Danger through breathing air contaminated with dangerous substances!

- Observe safety data sheets.
- Observe national laws, provisions and ordinances on limit values.
- Use the prescribed personal protective equipment.
- Do not eat or drink in the area surrounding the mobile supply tank.

WARNING

Danger of fire and explosion in the case of misconduct!
Diesel and fuel oil liquid and vapour are flammable.
As diesel and fuel oil have a flash point of more than 55 °C, dangers of explosion do not need to be taken into account under normal conditions. However, there is a danger of explosion if this flashpoint is exceeded.

- Fill the mobile supply tank only with diesel or fuel oil.
- Observe the safety data sheets for the charges.
- Be careful when handling dangerous substances.

- Keep the mobile supply tank and dangerous substance away from heat, sparks, open flames, hot surfaces and other sources of ignition. Do not smoke.
- Have a suitable extinguishing agent on hand (details in the dangerous substances safety data sheet).
- The mobile supply tank may not be constantly exposed to direct sunlight.
- In the case of fire, move away from the mobile supply tank immediately and observe the instructions of the operator in the event of fire.
- Keep the dangerous substance out of reach of children.
- Do not throw objects into the mobile supply tank.
- Stop the consumer immediately in the case of faults. Only operate the consumer again once the fault has been removed.
- Do not work on the mobile supply tank outside during a storm.

WARNING

Danger of injury due to insufficient protective equipment!

- For all work on the mobile supply tank, wear the operationally prescribed protective equipment.
- Wear personal protective clothing.
- Observe the information in the safety data sheets about the media being transported.
- Obey instructions such as using the personal protective equipment made available, keeping it in good working order and storing it properly.

CAUTION

Risk of persons tripping and falling!

- The mobile supply tank is neither intended nor designed to serve as a climbing aid or standing surface.
- Refrain from any unsafe working methods.
- Lay the power supply cable in such a way as not to be a tripping hazard.
- The tank may not be filled without supervision.
- After removing the charge, roll up the discharge hose and place it in the storage space.

CAUTION

Danger of crushing when closing the storage box cover!

› Ensure that no persons are in the hazard area, then close the storage box cover.

2.3 SAFETY INFORMATION FOR OPERATION

DANGER

Danger of death due to electric voltage!

› In the event of electrical transfer of defective components and cables, leave the hazard area immediately.

› In the event of disruptions of the electrical power supply, switch off the mobile supply tank immediately and interrupt the current feed.

› Before switching on the heater (optional), ensure that the power supply connection cable and the power supply plug are not damaged. Have damaged parts changed immediately by a qualified electrician.

› The electrical connection between the plug and socket must be kept away from water and moisture.

› Do not touch the plug or socket with wet hands.

WARNING

Danger to persons due to improper operation of the mobile supply tank!

- Be cautious and alert in the whole working area around the mobile supply tank.
- Only qualified personnel with authorisation to operate the mobile supply tank may operate the mobile supply tank.
- Clearly determine responsibilities and working areas.
- Remove spilled dangerous substances immediately. Observe the information in the safety data sheet.
- Do not expose the mobile supply tank to any large mechanical forces.

WARNING

Danger to persons due to improper operation of the mobile supply tank!

- Use the mobile supply tank in accordance with the conditions of proper use.
- Use the mobile supply tank in a technically flawless operational and functional state.
- First, have any damage to the mobile supply tank properly repaired, then you may operate the mobile supply tank.
- In the case of damage to liquid-carrying parts, switch off the mobile supply tank and inform the responsible body/person immediately.
- Work on liquid-carrying parts of the mobile supply tank may only be carried out by an authorised professional.
- Leakages must be fixed immediately. Catch and immediately remove any leaking liquid. Observe the information in the safety data sheet.
- Secure the mobile supply tank against unauthorised use after operation: e.g. lock the storage box cover with a key. Store the key somewhere safe so that unauthorised persons cannot gain access.
- Unsealed mobile supply tanks or mobile supply tanks with damage which restricts safe use may not be reused and must be taken out of operation immediately.

2.3.1 SAFETY INFORMATION FOR TRANSPORTATION AND SETUP

DANGER

Danger to persons and the mobile supply tank due to improper transportation!

- Only qualified specialist personnel may transport the mobile supply tank.
- Before transporting a mobile supply tank, perform a visual check of the vacuum-leakage monitoring system. The needle must be in the green area.
- Before transportation, check the mobile supply tank for damage.
- Do not transport a damaged mobile supply tank.
- Before transportation, ensure that the ball valve of the vent pipe, the ball valve of the suction line and the filler neck are sealed with the safety bolt.
- Before transportation, close and lock the storage box.
- Before transportation, ensure that the requirements set by the special legal provisions relating to the transport of dangerous goods are fulfilled. Before transportation, check the labels for completeness and readability.
- Before transportation, clean the mobile supply tank if necessary. There may be no dangerous substances stuck to the container body.
- Comply with the legal requirements for cargo securing.
- The mobile supply tank may only be transported on routes with good visibility and which have been approved by the operating company.
- After transportation, ensure that the mobile supply tank has not been damaged. In the case of damage caused by transportation, inform your superior and, if applicable, take the mobile supply tank out of operation.

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DANGER

Danger to persons due to improper setup!

- Only operate the mobile supply tank at suitable sites.
- Do not set up the mobile supply tank in stairways, passages and on transport routes (e.g. transport lanes, entry and exit ways and small yards).
- Do not place the mobile supply tank on emergency escape and rescue routes, at emergency exits and on transport routes.
- Observe the storage conditions, e.g. on protection against exposure to fire.
- The opening of the ventilation nozzle must be at least 5 m apart from flue and exhaust gas openings, openings in downpipes and windows that can be opened (horizontal distance).
- Set up the mobile supply tank in such a way that displacement and sloping cannot occur, as this endangers safety.
- Set up the mobile supply tank in such a way that it is sufficiently protected from possible external damage (e.g. not under trees).
- Only place the mobile supply tank on even, flat and stable ground.
- Only set up the mobile supply tank on base structures where leaking liquid can be noticed, caught and removed immediately.
- Set up the mobile supply tank in such a way that it is protected from damage caused by oncoming vehicles.

DANGER

Danger when transporting the mobile supply tank via crane!

- Transportation via crane is only permitted with the lifting lugs provided for this purpose.
- Before fastening, ensure that the lifting lugs are in the proper condition.
- Use only flawless, suitable and sufficiently-sized load attachment devices.
- Always pick up loads symmetrically.
- Transportation over persons is forbidden.
- Standing under suspended loads is forbidden.
- Move away from the loads before lifting or lowering them.
- Keep unauthorised persons away from the work.

- Avoid jerky crane movements.
- Ensure that no persons are in the hazard area, then transport and put down the load.
- The crane operator must always have the load and the hazard area in view.
- Use personal protective equipment. Wear safety boots.
- Observe and adhere to the maximum stacking height stated in these operating instructions.
- Only stack the same type of mobile supply tank with the same base area and suitable stacking corners on top of one another.

DANGER

Danger when transporting the mobile supply tank via forklift!

- Transportation via forklift is only permitted with forklift receivers.
- Standing under raised loads is forbidden.
- Keep unauthorised persons away from the work.
- Ensure that no persons are in the hazard area, then transport and put down the load.
- Do not step in front of the forklift.
- The lifting and transport method operator must always have the load and the hazard area in view.
- Use personal protective equipment. Wear safety boots.
- Observe and adhere to the maximum stacking height stated in these operating instructions.
- Only stack the same type of mobile supply tank with the same base area and suitable stacking corners on top of one another.

2.3.2 SAFETY INFORMATION ON FILLING WITH DIESEL OR FUEL OIL

WARNING

Danger to persons and the mobile supply tank due to filling the mobile supply tank!

- Before filling the tank, observe the operating instructions and/or other documentation and information on the dispensing facility.
- The mobile supply tank may only be filled with an automatic nozzle (ZVA) or with a firmly connected fill pipe. If the filler neck is firmly connected to the filler neck (e.g. of a tank vehicle), the tank may only be filled with a connected overfill protection (fill limit indicator).
- Before filling, ensure that the mobile supply tank is in a proper condition.
- Before filling a mobile supply tank, perform a visual check of the vacuum-leakage monitoring system. The needle must be in the green area.
- Before filling, check the fill level using the fuel gauge or dipstick.
- Before filling, open the ball valve of the vent pipe.
- Fill the mobile supply tank up to max. 95 %. Observe the needle on the fuel gauge.
- Do not overfill the mobile supply tank.
- During filling, the operator must supervise the process and may not walk away.
- To prevent damage to the pump system, do not fill with contaminated charge.
- After filling the mobile supply tank, tightly seal the filler neck with the safety bolt.
- After filling the mobile supply tank, close the ball valve of the vent pipe.
- Avoid drip losses.
- Remove dripping liquids from the storage box immediately. Observe the information in the safety data sheet.
- Do not fill the mobile supply tank during a storm.

2.3.3 SAFETY INFORMATION ON REMOVING DIESEL OR FUEL OIL

WARNING

Danger to persons and the mobile supply tank when removing diesel or fuel oil!

- Observe the consumer's operating instructions.
- Before removing diesel or fuel oil, ensure that the mobile supply tank is in a proper condition.
- Before removing the liquid from a mobile supply tank, perform a visual check of the vacuum-leakage monitoring system. The needle must be in the green area.
- During removal, the operator must supervise the process and must not walk away.
- Liquids may only be dispensed to the consumers directly.
- Do not overfill the consumers.
- Before switching on the consumers, open the ball valve of the suction line.
- Before switching on the consumers, open the ball valve in the vent pipe.
- Stop the consumer immediately in the case of leakages. Leakages must be fixed immediately. Only operate the consumer again once the fault has been removed.
- Switch off the consumer when the supply tank is empty.
- The person entrusted with operation is responsible for ensuring no smoking or that no open flames or other sources of ignition are handled in the area of the supply tank before and during the removal process.
- First connect the consumer properly, then switch on the consumer.
- After loosening the hose connections, take suitable measures to prevent dripping.
- After removing the fuel from the supply tank, close the ball valve in the vent pipe.
- After removing the fuel from the supply tank, close the ball valve of the suction line.

› After removing the fuel, secure the supply tank against unauthorised access: e.g. Remove the power supply cable and lock the storage box with a key.
› Remove dripped or spilled liquids from the storage box immediately. Observe the information in the safety data sheet.

2.4 SAFETY INFORMATION FOR SETTING UP, MAINTENANCE, REPAIRS, TROUBLESHOOTING

DANGER

Danger of injury due to unexpected restart!
› In the event of setting up and maintenance work, repairs and troubleshooting, secure the mobile supply tank from unexpected restarts.

DANGER

Danger of electrocution to persons!
› Only authorised specialist personnel may perform maintenance and repairs on the electric heater according to the information provided by the heater manufacturer.
› Only have electric installations carried out by a professional.
› Before any interference in electric cabling or before opening the terminal body, switch off the mobile supply tank and disconnect it from the power supply.
› Regularly inspect or check the electrical equipment of the mobile supply tank. Immediately remove loose connections, cables with damaged insulation or other defects.

WARNING

Danger to persons and the mobile supply tank due to improper work!

- Repair work may only be carried out by qualified specialist personnel.
- Carry out work while system is not connected to power.
- First, make yourself familiar with the individual maintenance and repair guidelines, then carry out the work.
- Regularly check the mobile supply tank for damages or leaks.
- Observe and implement the maintenance intervals.
- Only original spare parts may be used.
- After setting up, maintenance and repair work, servicing and trouble-shooting, remove all tools and objects from and out of the mobile supply tank.
- Regularly check all cabling, hoses, sealings, connecting elements, hose couplings and screws for leaks and externally visible damage. Remove any damage immediately.
- Swap leaking or cracked cabling or connections immediately.
- Remove leaking liquid immediately. Observe the information in the safety data sheet.
- Dispose of cleaning materials and unusable liquid appropriately. Observe the information in the safety data sheet.
- The correct position and seal of liquid-carrying parts must be checked before every operation, after all work on liquid-carrying parts and in accordance with the maintenance plan.

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DANGER

Environmental pollution!

› Observe the safety data sheet.
› Dispose of operational and auxiliary substances safely and in a way which protects the environment.
› Dispose of dangerous substances in accordance with the manufacturer's information.
› Do not allow dangerous substances to enter the sewer system/soil.
› Remove dangerous substances from the mobile supply tank, from storage boxes or from the base immediately.

3 TECHNICAL DATA

3.1 GENERAL DATA

Environmental temperatures:	-20 °C to 40 °C
Relative humidity:	max. 90%
Container:	Steel, inside and outside is hot dip galvanized – optional: inside raw and outside coated Special stainless-steel design
For double-walled mobile tanks:	Permanent off-grid vacuum-leakage monitoring at both walls
Permissible media/storage goods:	Diesel or fuel oil For use as a storage container, observe the water legislation requirements
Permissible media temperatures:	-10 °C to 30 °C
Approvals:	See chapter 3.4 "Supply tank" QUADRO-AG 450 – 3000 l UN approval as transport container (IBC) for road (ADR), railway (RID), inland shipping (ADN) and maritime (IMDG code) transport of dangerous substances for an unlimited time German general building inspection approval as storage container

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3.2 DIMENSIONS

	QUADRO-AG 450	QUADRO-AG 1000	QUADRO-AG 2000	QUADRO-AG 3000
Nominal volume (l):	450	1000	2000	3000
Max. fill volume 95 % (l):	428	950	1900	2850
Length (mm):	1215	1215	2215	2390
Width (mm):	815	1000	815	1190
Height (mm):	800	1200	1620	1510
Empty weight[1] (kg):	200	285	629	838
Max. weight with diesel/fuel oil (kg)[2]:	551	1064	2187	3175

3.3 PERMISSIBLE STACKING

Permissible stacking	QUADRO-AG 450	QUADRO-AG 1000	QUADRO-AG 2000	QUADRO-AG 3000
2x high	–	–	●	●
3x high	●	●	–	–

1 Empty weight of the mobile supply tank with standard equipment.
2 Weight of the filled mobile supply tank: Fill volume 95 %, density of the charge is 0.82 kg/dm^3.

3.4 SUPPLY TANK

3.4.1 QUADRO-AG 450/1000 NAMEPLATE

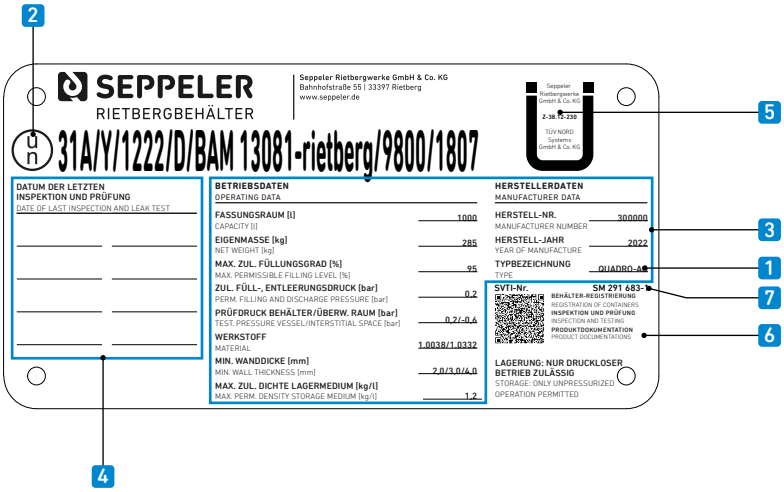

Fig. 3-1: QUADRO-AG 450/1000 nameplate

Pos.	Name
1	Type designation
2	Basic labelling in accordance with ADR
3	Additional labelling pursuant to ADR and approval
4	Test stamp for inspection and testing pursuant to ADR
5	Mark of conformity with general type approval no.
6	QR code Link to product documentation, approvals and service of Rietbergwerke Behältertechnik
7	Additional label only for containers with SVTI approval for Switzerland (Swiss Association for Technical Inspection)

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3.4.2 QUADRO-AG 2000/3000 NAMEPLATE

Fig. 3-2: QUADRO-AG 2000/3000 nameplate

Pos.	Name
1	Basic labelling in accordance with ADR
2	Type designation
3	Test stamp for inspection and testing pursuant to ADR
4	Mark of conformity with general type approval no.
5	Additional labelling pursuant to ADR and approval
6	Additional label only for containers with SVTI approval for Switzerland (Swiss Association for Technical Inspection)
7	QR code Link to product documentation, approvals and service of Rietbergwerke Behältertechnik

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3.4.3 APPROVALS

The approvals for the QUADRO-AG series containers are available at the following link:

https://www.seppeler.de/rietberg-behaelter/service/produktdokumentationen

Approvals:	QUADRO-AG 450	QUADRO-AG 1000	QUADRO-AG 2000	QUADRO-AG 3000
TRANSPORT				
D/BAM/13080/31A	●			
D/BAM/13081/31A		●		
D/BAM/14552/31A			●	
D/BAM/12180/31A				●
STORAGE				
Z-38.12-230	●	●		
Z-38.12-223			●	●
SVTI no. SM 291 '683-1		●		
SVTI no. SM 291 '683-2	●			
SVTI no. SM 291 '683-3			●	
SVTI no. SM 291 '683-4				●
LEAK INDICATOR				
Z-65.22-262	●	●	●	●

4 STRUCTURE AND FUNCTION

4.1 OVERALL MOBILE SUPPLY TANK

The mobile supply tank serves to enable the mobile supply of power units directly on site. The permitted charge is diesel or fuel oil.

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4.1.1 QUADRO-AG 450/1000

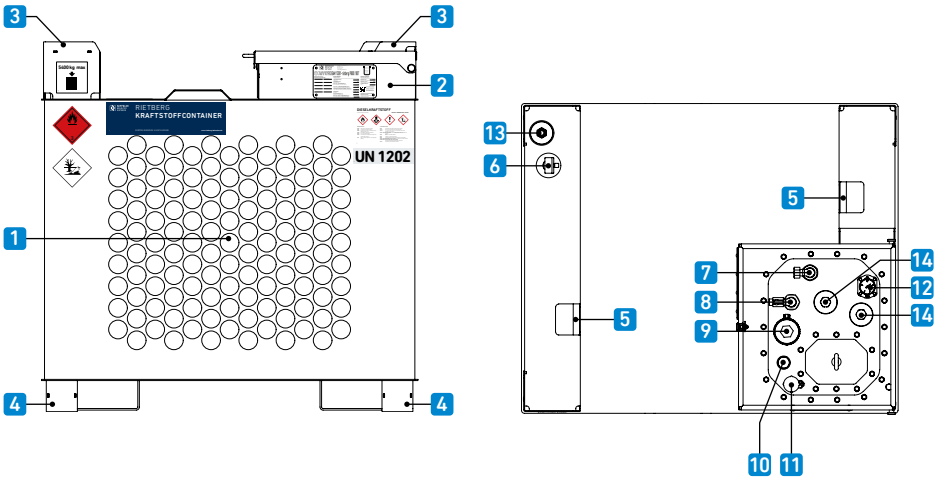

Fig. 4-1: QUADRO-AG 450/1000 overall

Pos.	Name	Function
1	Supply tank	Takes diesel or fuel oil.
2	Storage box with closing lid	Opens and closes storage box. Protects fittings. Secures mobile supply tank against unauthorised access.
3	Stacking corners (4x)	Accepts a mobile supply tank of the same type (stacking).
4	Forklift receiver	Transports the mobile supply tank with a forklift truck.
5	Lifting lugs (2x)	Transports the mobile supply tank with lifting gear.
6	Vacuum-leakage monitoring system	Indicates leakage.
7	Return connection with cap	Guides liquids back into the mobile supply tank.
8	Suction line with shutter ball valve	Connects the suction line to set up the connection to the external consumer and remove liquid. The ball valve serves to close the suction line during transport and interim storage.

Pos.	Name	Function
9	Filler neck	Fills the mobile supply tank with diesel or fuel oil.
10	Reserve sleeve G 1"	–
11	Ventilation nozzle with shutter ball valve	Aerates and vents the mobile supply tank. The ball valve serves to close the ventilation nozzle during transport and interim storage.
12	Fuel gauge	Continuous display of the filling level.
13	Safety valve	Balances out excessive overpressure during transportation and storage caused by temperature influences. Safety valve preset pressure: 0.2 bar.
14	Reserve sleeve G 2"	–
–	Fill limit indicator (optional)	Prevents overfilling when filling the mobile supply tank from a tank vehicle with a firmly coupled connection.
–	Heater (optional)	Protects diesel or fuel oil from paraffin separation.

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4.1.2 QUADRO-AG 2000

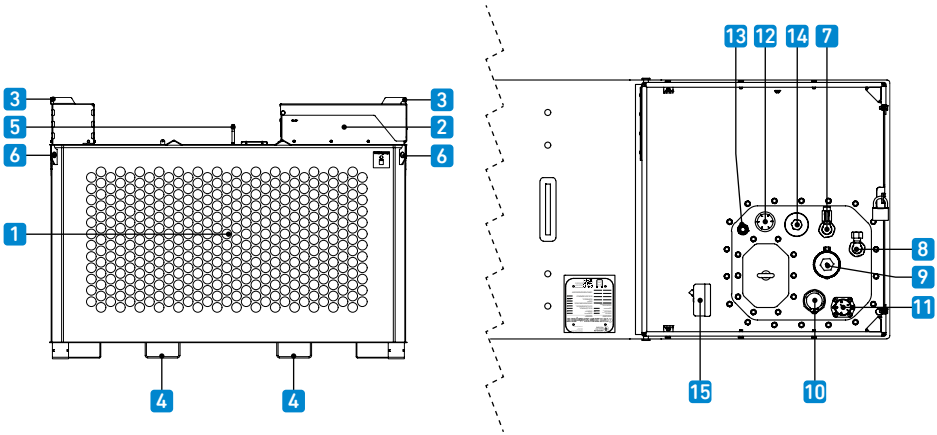

Fig. 4-2: Entire QUADRO-AG 2000

Pos.	Name	Function
1	Supply tank	Takes diesel or fuel oil.
2	Storage box with closing lid	Opens and closes storage box. Protects fittings. Secures mobile supply tank against unauthorised access.
3	Stacking corners (4x)	Accepts a mobile supply tank of the same type (stacking).
4	Forklift receiver	Transports the mobile supply tank with a forklift truck.
5	Lifting lug	Transports the mobile supply tank with lifting gear.
6	Lashing lug (4x)	Rigs the mobile tank for transportation.
7	Suction line with shutter ball valve	Connects the suction line to set up the connection to the external consumer and remove liquid. The ball valve serves to close the suction line during transport and interim storage.
8	Return connection with cap	Guides liquids back into the mobile supply tank.
9	Filler neck	Fills the mobile supply tank with diesel or fuel oil.

Pos.	Name	Function
10	Ventilation nozzle with shutter ball valve	Aerates and vents the mobile supply tank. The ball valve serves to close the ventilation nozzle during transport and interim storage.
11	Fuel gauge	Continuous display of the filling level.
12	Fill limit indicator	Prevents overfilling when filling the mobile supply tank from a tanker with a firmly coupled connection.
13	Safety valve	Balances out excessive overpressure during transportation and storage caused by temperature influences. Safety valve preset pressure: 0.2 bar.
14	Reserve sleeve G 2"	–
15	Vacuum-leakage monitoring system	Indicates leakage.
–	Heater (optional)	Protects diesel or fuel oil from paraffin separation.

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4.1.3 QUADRO-AG 3000

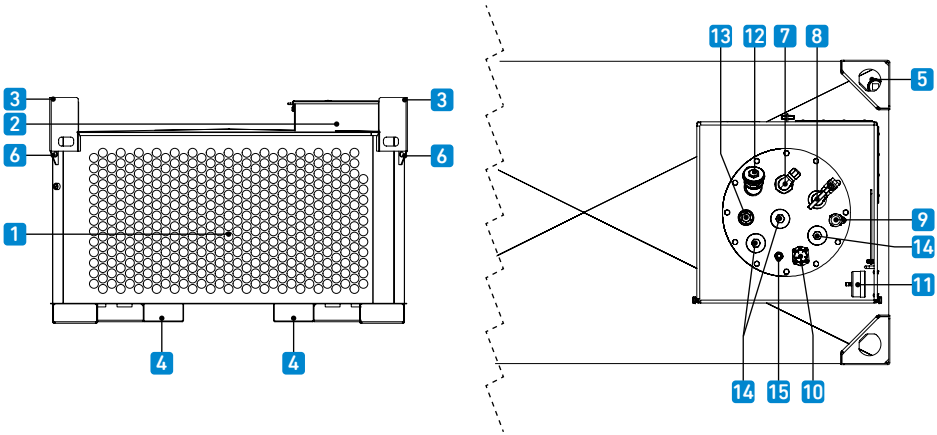

Fig. 4-3: Entire QUADRO-AG 3000

Pos.	Name	Function
1	Supply tank	Takes diesel or fuel oil.
2	Storage box with closing lid	Opens and closes storage box. Protects fittings. Secures mobile supply tank against unauthorised access.
3	Stacking corners (4x)	Accepts a mobile supply tank of the same type (stacking).
4	Forklift receiver	Transports the mobile supply tank with a forklift truck.
5	Lifting lugs (4x)	Transports the mobile supply tank with lifting gear.
6	Lashing lug (4x)	Rigs the mobile supply tank for transportation.
7	Return connection with cap	Guides liquids back into the mobile supply tank.
8	Suction line with shutter ball valve	Conveys liquids. The ball valve serves to close the suction line during transport and interim storage.

Pos.	Name	Function
9	Ventilation nozzle with shutter ball valve	Aerates and vents the mobile supply tank. The ball valve serves to close the ventilation nozzle during transport and interim storage.
10	Fuel gauge	Continuous display of the filling level.
11	Vacuum-leakage monitoring system	Indicates leakage.
12	Filler neck	Fills the mobile supply tank with diesel or fuel oil.
13	Fill limit indicator	Prevents overfilling when filling the mobile supply tank from a tanker with a firmly coupled connection.
14	Reserve sleeve G 2" (3x)	–
15	Safety valve	Balances out excessive overpressure during transportation and storage caused by temperature influences. Safety valve preset pressure: 0.2 bar.
–	Heater (optional)	Protects diesel or fuel oil from paraffin separation.

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5 TRANSPORTATION, SETUP AND COMMISSIONING

5.1 SAFETY INFORMATION

DANGER

Observe the safety information!

› Observe the safety information in chapter 2 "Safety Information", in particular in chapter 2.4 "Safety information for setting up, maintenance, repairs, troubleshooting".

5.2 TRANSPORTATION, SETUP AND COMMISSIONING

The load-bearing capacity of the ground must be sufficient for the weight of the mobile supply tank. The ground must be created in such a way that leaking liquid can be identified and removed.
When transporting the mobile supply tank from the manufacture site to the operating site, you must observe the regulations for cargo securing.
You must check that the mobile supply tank is in a proper condition before commissioning.
The mobile supply tank must be made operational by authorised specialist personnel working for the operator.

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6 OPERATION

The mobile supply tank may only be used in accordance with its conditions for proper use (see chapter 1.8 "Proper use"). Here, particular regulations and safety information apply for the different operation modes of the mobile supply tank.
The mobile supply tank operates in the following modes:

- Transporting the mobile supply tank.
- Filling the mobile supply tank with diesel or fuel oil.
- Removing diesel or fuel oil from the mobile supply tank.
- Storing diesel or fuel oil.

The operating, setting up, maintenance and troubleshooting work can be sorted into these operating modes.

6.1 SAFETY INFORMATION

DANGER

Observe the safety information!

- Observe the safety information in chapter 2 "Safety information", in particular in chapter 2.3 "Safety information on operation".

6.2 BASIC CHECKS BEFORE AND DURING OPERATION

Before beginning work, familiarise yourself with your working environment. Each time before filling or removing liquid and before each transportation, the mobile supply tank must be checked for visible defects (visual check). Before beginning work, the time periods for checks and maintenance work in accordance with chapter 7 "Maintenance and care" must be complied with.
Before commissioning the mobile supply tank and during its operation, you must always watch out for irregularities in the area of the whole mobile supply tank. The following characteristics indicate irregularities with the mobile supply tank:

- Increased noise or abnormal/unusual sounds.
- Unusual smell.
- Smoke emission.
- Stains from operating materials on the mobile supply tank, in the storage box or on the ground.
- A drop in performance during operation.
- Leakage.
- Vacuum-leakage monitoring system is not in the green range.

At the first sign of the characteristics mentioned above, shut down the mobile supply tank immediately. Inform the maintenance personnel immediately for a precise assessment of its technical condition.
Unsealed mobile supply tanks or mobile supply tanks with damage which restricts safe use may not be reused and must be taken out of operation immediately.
The maintenance personnel must decide whether operation can continue without further restrictions on the functionality of the mobile supply tank. If downtime is expected due to the damage established, repair measures must be introduced without delay.

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6.3 TRANSPORTING THE MOBILE SUPPLY TANK

6.3.1 INFORMATION ON TRANSPORTING DANGEROUS GOODS

Under defined conditions, ADR[3] section 1.1.3.6 enables transport of dangerous substances under simplified conditions (without ADR certificate or vehicle marking, etc.) if the specified maximum capacity per transport unit is not exceeded, for example.

Medium	Packing group	Transport category	Max. capacity
Petrol	II	2	333 litres
Diesel	III	3	1,000 litres

A transport unit is, for example, a motor vehicle without a trailer or a unit consisting of a motor vehicle with a trailer.
If goods with different transport categories are transported in the same unit, the 1000 points rule applies. For determination of the total score, the volumes of transport category 2 are multiplied by a factor of 3 and the volumes of transport category 3 by a factor of 1. For simplified transport, the total score of 1000 points must not be exceeded. For example:

- Petrol (transport category 2): 150 litres x 3 = 450 points
- Diesel / fuel oil (transport category 3): 500 litres x 1 = 500 points
- Total: 950 points

Even though numerous ADR regulations do not need to be taken into account for simplified transport, a few rules still have to be observed:

- The marking and labelling (ADR chapter 5.2) must be complete and readable.

3 ADR: European Agreement concerning the international carriage of dangerous goods by road

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- A 2 kg fire extinguisher (ADR section 8.1.4.1 (a)) must be carried.
- A shipping document (ADR section 5.4.1) must be carried.
- Parties involved must be trained in accordance with ADR section 8.2.3 in connection with chapter 1.3 and 1.10.

It is also generally required that the container:
- Is technically intact.
- Is tightly sealed during transport and, as applicable.
- That repeated inspection and testing have been carried out.

INFORMATION

If more than 1000 litres of diesel/fuel oil are transported, there are other ADR regulations which must be followed. This means:
- The driver must be trained in accordance with ADR section 8.2.1.
- Particular requirements relating to the vehicle crew must be observed.
- The vehicle must also be labelled.
- The sites of loading and unloading must fulfil particular requirements.
- Restrictions on the transportation of people must be observed.
- Particular requirements relating to the vehicle and equipment must be observed.

6.3.2 INFORMATION ON LABELLING

IBCs are to be marked as follows according to ADR chapter 5.2:
- The UN no. of the transported substance (e.g. diesel: UN 1202)
- The marking for "Environmentally hazardous substances"
- Hazard label "Flammable liquids"

The specified markings have to be attached on two opposite sides of IBCs with a capacity of more than 450 l and on one side of smaller IBCs.
Additionally, the containers are to be labelled with substance-related hazard warnings according to GHS[4].
In addition to the container, we provide a set of adhesive labels for initial

4 GHS: Globally Harmonised System for the classification and labelling of chemicals

marking.
In addition, a pictogram on the IBC specifies whether the container is stackable or not.

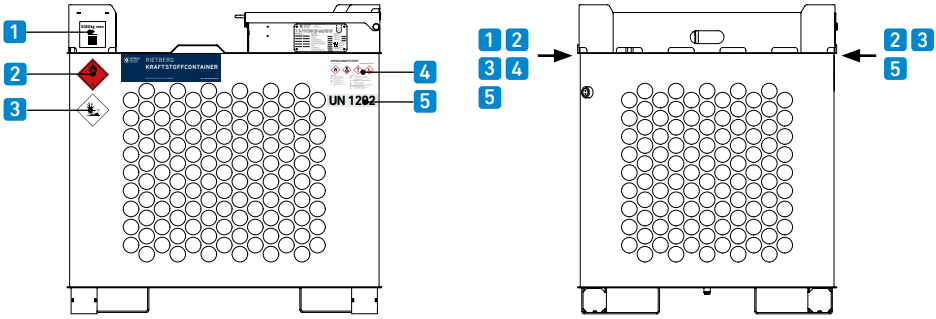

Fig. 6-1: Example depiction of the labelling of a mobile supply tank

			Quantity/volume Mobile supply tank	
Pos.	**Type**	**Description**	**< 450 l**	**> 450 l**
1		"Stackable" pictogram (permitted stacking load is specified!)	1	1
2		Hazard label "Flammable liquids" (class 3)	1	2
3		Marking "Environmentally hazardous substances"	1	2
4		Hazard warnings according to GHS	1	1
5	**UN 1202**	UN number of the transported substance (diesel)	1	2

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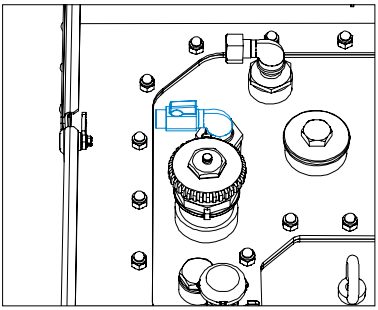
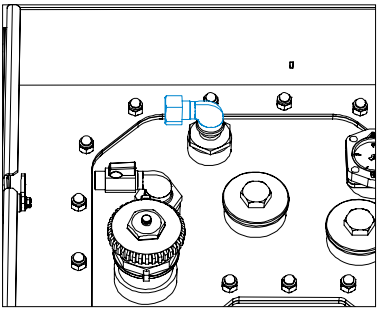
6.3.3 PREPARING THE MOBILE SUPPLY TANK FOR TRANSPORTATION

Working stages:

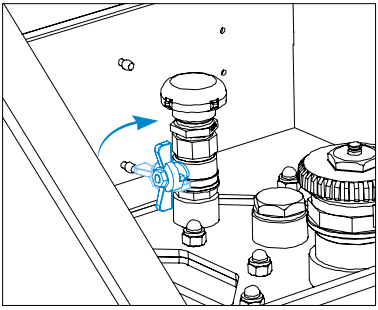
1. Open the storage box cover.



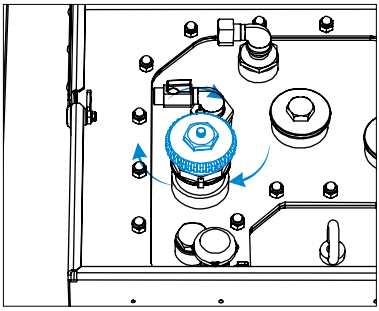
2. Close the ball valve of the suction line.



3. Detach the feed line to the consumer.
4. Detach the return line from the consumer (if present).

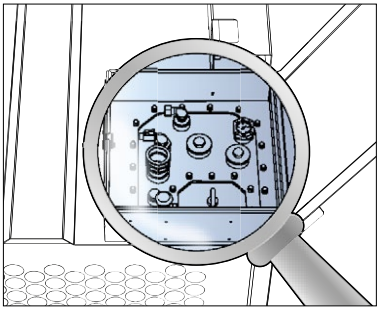


5. Close the ball valve of the vent pipe.

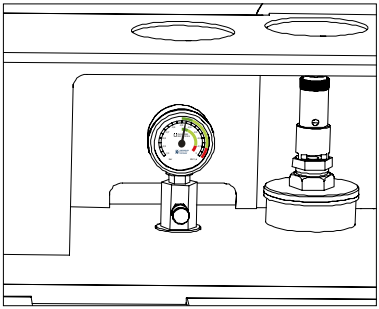


6. Seal the filler neck firmly.

7. Remove objects such as tools from the storage box.



8. Carry out visual checks of the operating materials in the storage box.



9. Check the vacuum-leakage monitoring system. The needle must be in the green area.

10. Close and lock the cover of the storage box.

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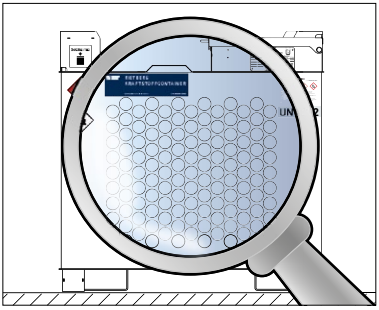


11. Carry out a visual check to ensure the mobile supply tank is in a proper condition. Dangerous substances may not be stuck to the container body and must be removed by cleaning.

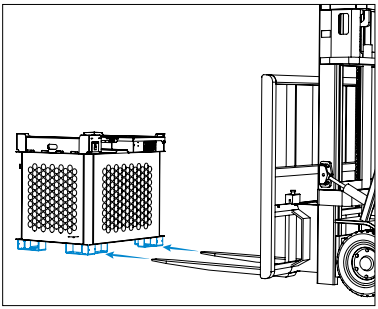
12. Attach labels corresponding to the regulations on the transport of dangerous goods (see chapter 6.3.2 "Information on labelling").

6.3.4 TRANSPORTING THE MOBILE SUPPLY TANK USING A FORKLIFT

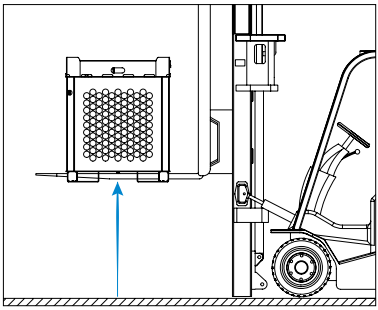
Conditions:

- The mobile supply tank is prepared for transportation (see chapter 6.3.3 "Preparing the mobile supply tank for transportation").
- Objects such as tools have been removed from the mobile supply tank.
- Forklift receivers are in a perfect condition.
- Lifting gear (e.g. forklift truck) with a sufficient minimum bearing capacity is ready.

Working stages:



1. Drive into forklift with the forks of the lifting gear in a proper manner.



2. Lift the mobile supply tank.

3. Transport the mobile supply tank to the determined location.
4. Put down the mobile supply tank at the determined location.
5. Reverse to drive out of the forklift shoes with the forks of the lifting gear.

6.3.5 TRANSPORTING THE MOBILE SUPPLY TANK USING LIFTING LUGS

Conditions:

- The mobile supply tank is prepared for transportation (see chapter 6.3.3 "Preparing the mobile supply tank for transportation").
- The lifting lugs are in a perfect condition.
- Lifting gear (e.g. crane) with a sufficient minimum bearing capacity is ready.
- Load chains are of a sufficient size and in a perfect condition.

Working stages:

1. Connect the load chains with the lifting gear in a proper manner.
2. Position the chain hook of the load chains over the lifting lugs or lug (QUADRO-AG 2000) using the lifting gear.
3. Attach the mobile supply tank. Properly connect the chain hook of the load chains with the present lifting lug(s).
4. Lift the mobile supply tank with the lifting gear.

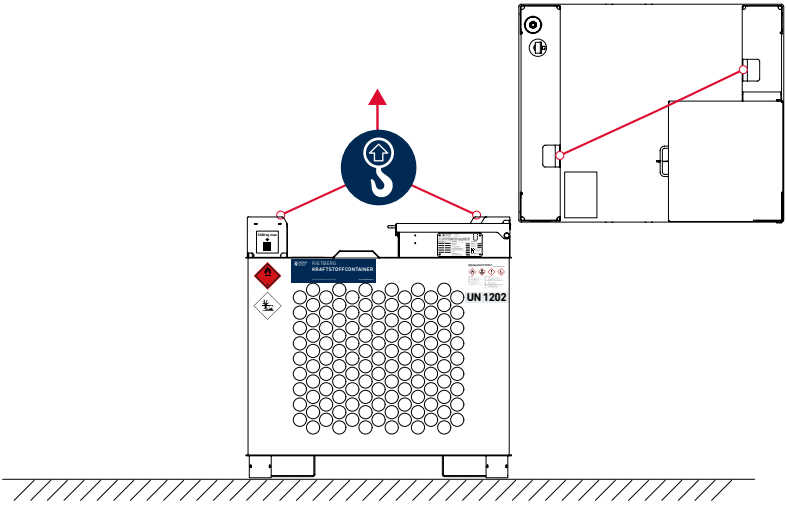


Fig. 6-2: QUADRO-AG 450/ 1000

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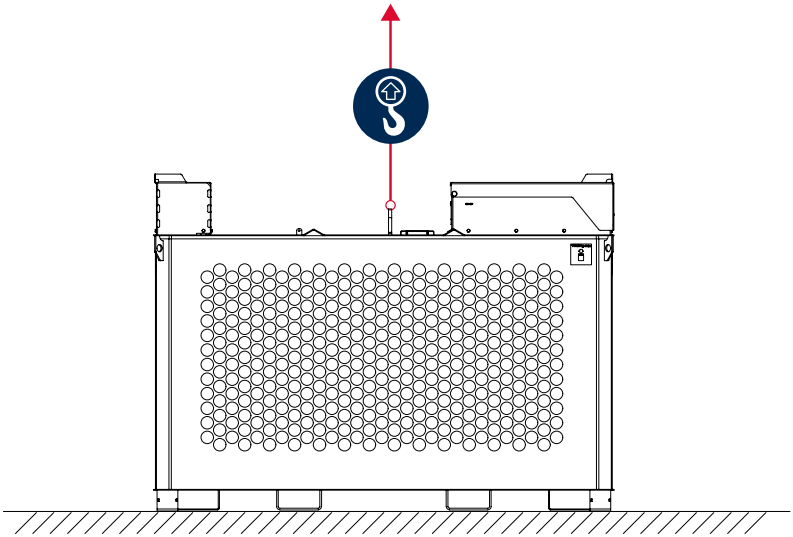

Fig. 6-3: QUADRO-AG 2000

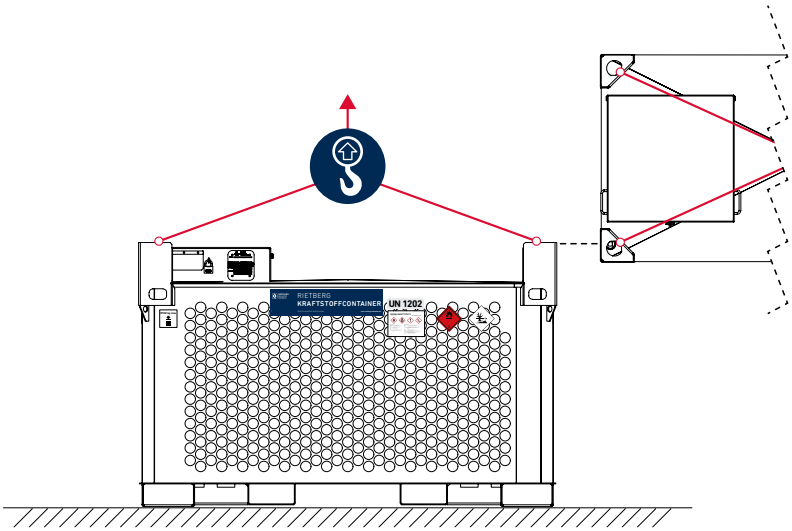

Fig. 6-4: QUADRO-AG 3000

5. Transport the mobile supply tank to the determined location using the lifting gear.

6. Putting down the mobile supply tank with the lifting gear at the determined location.
7. Release the chain hook of the load chains from the mobile supply tank lifting lug(s).
8. Take away the load chains.

6.3.6 TRANSPORTING THE MOBILE SUPPLY TANK VIA A TRUCK BED

Conditions:

› The requirements relating to the transportation of dangerous goods are fulfilled (see chapter 6.3.1 "Information on transporting dangerous goods" and chapter 6.3.2 "Information on labelling").
› The mobile supply tank is prepared for transportation (see chapter 6.3.3 "Preparing the mobile supply tank for transportation").
› Lashing materials are of a sufficient size and in a perfect condition.

Working stages:

1. Place the mobile supply tank on the truck bed using the lifting gear in accordance with chapter 6.3.4 "Transporting the mobile supply tank using a forklift" or chapter 6.3.5 "Transporting the mobile supply tank using the lifting lugs".
2. Before transportation on the truck bed, lash the mobile supply tank to the lashing lugs in a proper manner. The regulations for cargo securing must be observed.

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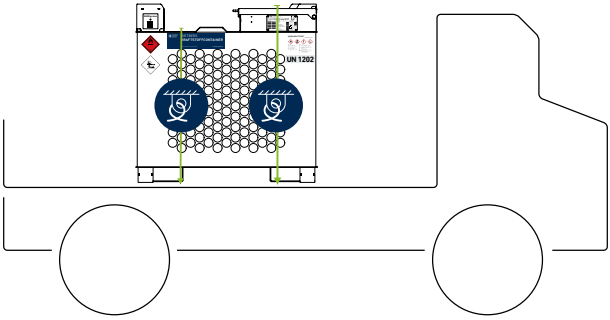


Fig. 6-5: Tension the lashing material above the supply tank (QUADRO-AG 450/1000)

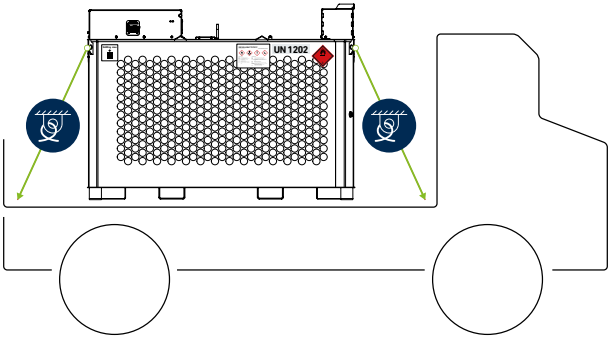


Fig. 6-6: Lashing material on lashing lugs (QUADRO-AG 2000)

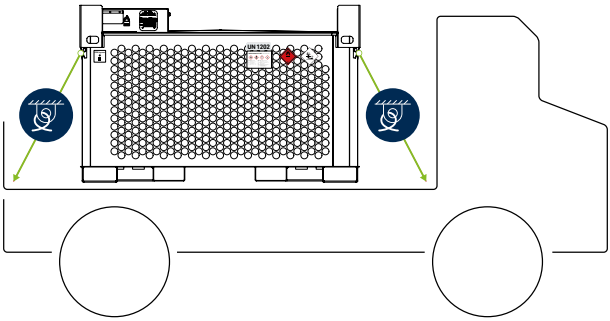


Fig. 6-7: Lashing material on lashing lugs (QUADRO-AG 3000)

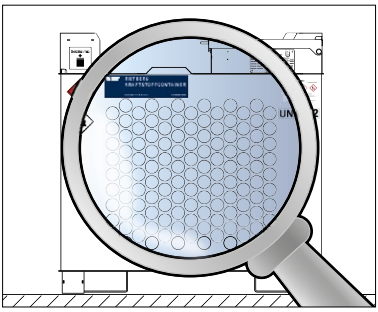
3. Transport the mobile supply tank to the determined location.
4. After transportation, release and remove the lashing material from the truck bed.
5. Lift the mobile supply tank from the truck bed using the lifting gear in accordance with chapter 6.3.4 "Transporting the mobile supply tank using a forklift" or chapter 6.3.5 "Transporting the mobile supply tank using the lifting lugs".

6.4 FILLING THE MOBILE SUPPLY TANK

Conditions:

› The mobile supply tank is in a proper condition.
› The diesel or fuel oil is not contaminated.

Working stages:



1. Check the exterior of the mobile supply tank for damage.

2. Open the storage box cover.

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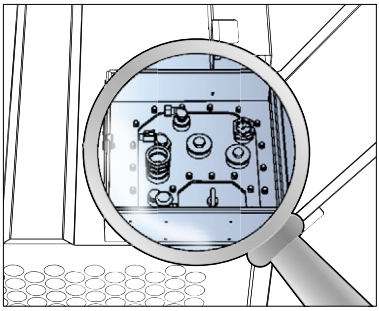
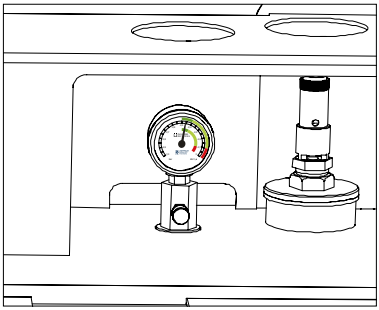
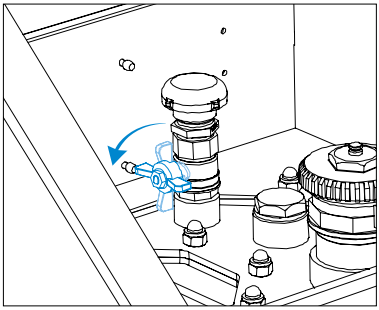


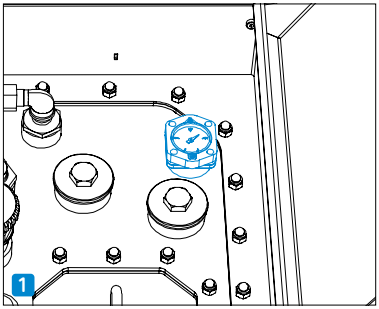
3. Check the operating materials in the storage box for damage.
4. Remove any contamination in the storage box.



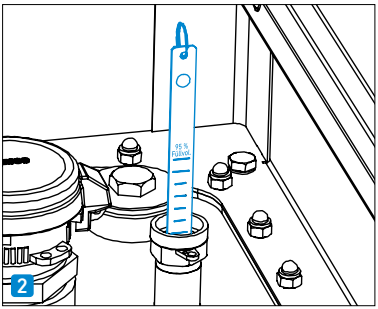
5. Check the vacuum-leakage monitoring system. The needle must be in the green area.

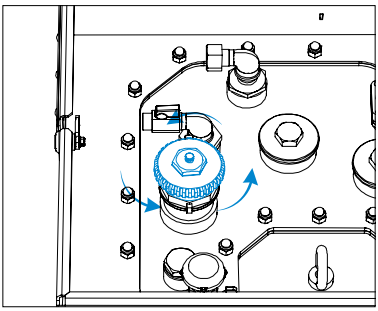


6. Open the ball valve of the vent pipe.

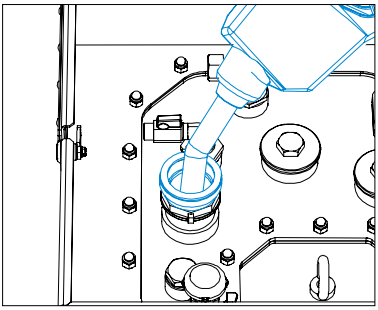


7. Read the remaining quantity in the mobile supply tank from the fuel gauge 1, or determine it using the dipstick 2.



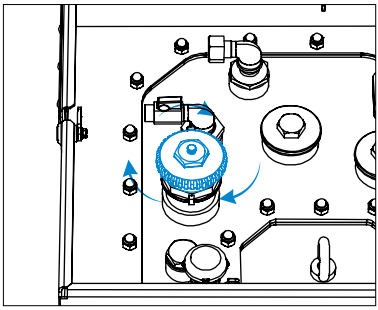


8. Open the filler neck.

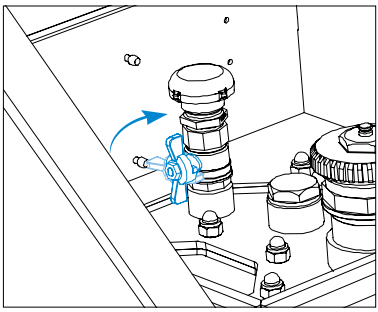


9. Fill the mobile supply tank via the filler neck. The tank may only be filled with an automatically closing nozzle or with a firmly attached connection (e.g. TW coupling) with proper overfill protection (fill limit indicator).

10. Once the filling process is complete, remove the automatically closing nozzle from the filler neck or unscrew the filling pipe of the dispensing facility and disconnect the overfill protection (fill limit indicator) and the dispensing facility.



11. Close the filler neck with the safety bolt.



12. Close the ball valve of the vent pipe.

13. Close and lock the cover of the storage box for storage or transportation.

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6.5 REMOVING DIESEL OR FUEL OIL

INFORMATION

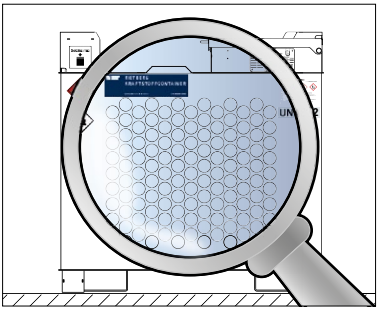
If the vent pipe ball valve is closed, an excessive low pressure builds up in the mobile supply tank which can lead to irreparable damage.

› Before filling the mobile supply tank or before removing diesel or fuel oil, the vent pipe ball valve must be opened.
› Always supervise the removal process.

Conditions:

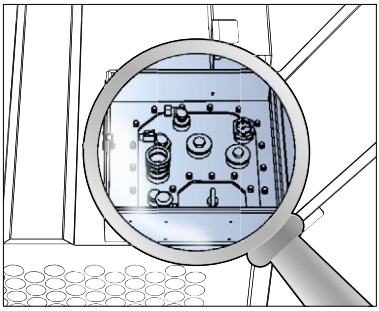
› The power unit is in a proper condition.
› Before the removal process, there must be enough charge in the mobile supply tank.

Working stages:

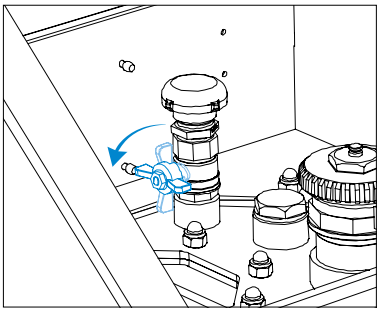


1. Check the exterior of the mobile supply tank for damage.

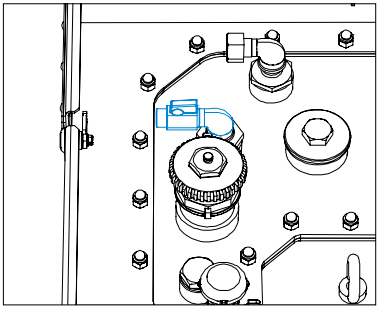
2. Open the storage box cover.



3. Check the operating materials in the storage box for damage.



4. Open the ball valve of the vent pipe.



5. Open the ball valve of the suction line.

6. Remove the diesel or fuel oil.
7. Once the removal process is complete, close the ball valve of the suction line.

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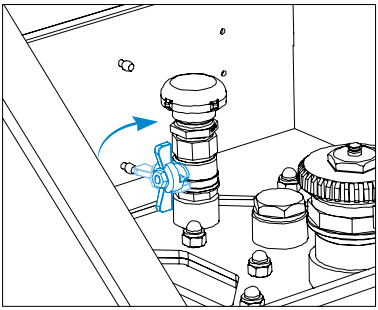

8. Close the ball valve of the vent pipe.

6.6 USING THE MOBILE SUPPLY TANK AS A STORAGE CONTAINER

You must observe the applicable technical regulations and the regulations relating to water legislation.
The mobile supply tank must be secured against unauthorised access before storage: e.g. by locking the storage box.
German general type approval as storage container (see chapter 3.6.3 "Approvals").
No suitability evaluation is required for the storage container in accordance with section 63 of the Federal Water Act (WHG).

INFORMATION

› Mobile supply tanks which are operated in one place for a specific operational purpose for a period of more than six months are regarded as stationary.

7 MAINTENANCE AND CARE

To ensure flawless, proper use of the mobile supply tank, the care and maintenance tasks discussed in this chapter are necessary. Regular care and maintenance extend the life cycle of the tank and increase its performance.
The maintenance work must be carried out regularly for the safe operation of the mobile supply tank and the intervals between each service must be adhered to. Not adhering to these can lead to damage and the increased risk of accidents.
Only use materials, operating or auxiliary agents recommended by the manufacturer. Recommended lubricants are listed, if necessary. Mixing lubricants is generally not permitted.

7.1 SAFETY INFORMATION

DANGER

Observe the safety information!

› Observe the safety information in chapter 2.2 "General safety information" and in chapter 2.4 "Safety information for setting up, maintenance, repairs, troubleshooting".

7.2 MAINTENANCE TABLE

Machine part	Work to be carried out	Interval
Entire mobile supply tank	Check the proper condition and cleanliness of the mobile supply tank.	Before each transportation, each filling process and each emptying process At least once per month
	Check all screws and connections and tighten these if applicable.	Twice per year
	Check sealings and replace these, if necessary.	Twice per year
	Inspect hoses for damage and leakages. Replace defective parts.	Before each transportation, each filling process and each emptying process At least once per month
Leak indicator	The operating company must check and record the displayed negative pressure.	At least once per week
	Check the functional and operational safety in accordance with the manufacturer's Technical Description.	At least once per year
Electrical equipment	Check electrical equipment. Replace damaged cables immediately.	Monthly
Fill limit indicator	Service according to manufacturer information.	According to manufacturer information

INFORMATION

You can find maintenance instructions for third-party manufacturers in the third-party manufacturer documentation (see chapter 10.1 "Related documents").

7.3 INSPECTIONS AND RECURRING TESTS ON THE IBCS

All QUADRO-AG series types are subject to mandatory repeated inspections in a rhythm of 2 ½ years as of the date of the first inspection (factory inspection):

Inspection after 2½ years
By an inspection body II registered by BAM in accordance with BAM-GGR 002 – part B, sections B 1.2.1, B 2.1 and B 3.1

Scope of inspection:
- Inspection of the external condition
- Inspection of marking
- Inspection of the function of the control equipment
- Leakage test with air with an overpressure of 0.2 bar

Inspection after 5 years
By an inspection body I registered by BAM in accordance with BAM-GGR 002 – part A, sections A 1.2.1, A 2.1 and A 3.1

Scope of inspection:
- Scope of inspection after 2 ½ years
- Checking of compliance with the type testing certificate
- Internal inspection

INFORMATION

Each IBC tested must correspond to the model. A test report must be produced for every inspection and leakage test. This report must be stored by the owner at least until the next inspection.

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7.4 RECURRING TESTS ON THE EQUIPMENT

For the leakage indicator and, if applicable, the fill limit indicator, the inspection/test intervals can be found in the approval documentation. You can find the approval documentation online at: http://www.rietberg-behaelter.de/de/downloadsmedien/produktdokumentationen.php
If present, the electrical heaters must be tested once per year according to the Industrial Safety Regulation.

8 TROUBLESHOOTING

8.1 SAFETY INFORMATION

DANGER

Observe the safety information!

› Observe the safety information in chapter 2.2 "General safety information", in particular in chapter 2.4 "Safety information for setting up, maintenance, repairs, troubleshooting".

8.2 FAULTS DURING OPERATION

In the case of faults during operation, stop the mobile supply tank and inform the maintenance personnel.
In the case of faults in the controls and/or electrics, call a professional who can determine and remove the fault using the circuit diagrams.

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8.3 FAULT TABLE

INFORMATION

To remove faults, observe and implement the information in the third-party documentation (see chapter 10.1 "Related documents").

Fault	Cause	Remedy
Little or no conveyed amount.	Low liquid level in the mobile supply tank.	Fill the mobile supply tank.
	Intake circuit is blocked.	Remove the cause of the blockage in the intake circuit.
	Suction line not airtight.	Check suction line and replace if necessary.
Unusual noises/ increased noise production.	Removal if ball valves are closed.	Open the suction line and ball valve of the vent pipe.
	Air in the liquid.	Check the suction connections.
Leaks.	Wear on sealings.	Replace sealings.
	Wear on the lines carrying liquid.	Replace lines.
Vacuum meter in the red range.	Vacuum meter in the leak indicator system.	The mobile supply tank must be shut down. Inspection by a specialist company.

8.4 REPAIR

To ensure the flawless, proper use of the mobile supply tank, repair work is necessary or cannot be avoided.
The use of original replacement parts and wearing parts, as well as authorised

accessories, serves to ensure operational safety of the mobile supply tank and protects personnel and the environment from unpredictable hazards.

Repairs

If the packaging tank (container walls, nozzles) must be repaired, e.g. by welding, the inspection must then be carried out according to ADR section 6.5.4.4.1 a).

After the test has been passed, the following information must be stamped onto the nameplate:

- State in which the inspection took place.
- Abbreviation for the approved body.
- Date (month/year) of the test and inspection.

Details on this can be found in ADR section 6.5.4.5.

Repair work may only be carried out by qualified specialist companies.

Only approved welders in accordance with EN ISO 9606-1 are permitted to weld to load-bearing components, and this may only be carried out by businesses which are recognised by BAM.

Businesses which have a quality assurance programme (QAP) recognised by BAM for repairing IBCs for transporting hazardous goods in accordance with BAM-GGR 001 are entitled to carry out all the tests and inspections stipulated in sub-section 6.5.4.4 and to use the "manufacturer symbol" for the corresponding marking which was issued along with the recognition of the quality assurance system.

If there are flammable liquids in the mobile supply tank, it must be emptied, cleaned and de-gassed by a professional company before the welding work begins.

The cleaning and de-gassing tasks may only be carried out by specialist companies according to the German Federal Water Act (WHG) and qualified professionals.

Damaged, leaking mobile supply tanks or mobile supply tanks which no longer correspond to the model may no longer be used and must be disposed of.

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9 DISASSEMBLY AND DISPOSAL

9.1 SAFETY INFORMATION

DANGER

Observe the safety information!

› Observe the safety information in chapter 2 "Safety Information", in particular in chapter 2.4 "Safety information for setting up, maintenance, repairs, troubleshooting".

WARNING

Danger of injury due to improper disassembly work!

› Only specialist personnel may be tasked with disassembling the mobile supply tank.
› Keep unauthorised persons away from the work.
› Use personal protective equipment.
› Before disassembly, pump out the liquid into suitable containers.
› Before disassembly, disconnect the mobile supply tank from the power supply.
› If necessary, ensure that there is a lot of space around the disassembly area.
› Keep away from sources of ignition.
› Smoking, open light and fire are forbidden.
› Clean remaining liquid from the tank supply tank and recycle these appropriately. Observe the information in the safety data sheet.

- Dispose of cleaning materials and unusable residual liquid appropriately. Observe the information in the safety data sheet.
- Use only flawless, suitable and sufficiently-sized lifting gear.
- Standing under raised loads is forbidden.
- The lifting and transport method operator must always have the load and the hazard area in view.

INFORMATION

Environmental pollution!

- Mobile supply tank parts must be properly disposed of in accordance with the local regulations.
- Operating materials must be properly disposed of in accordance with the local regulations.

9.2 DISASSEMBLY AND DISPOSAL

The mobile supply tank must be disassembled properly for disposal and recycled appropriately in individual parts.
Observe the following points before disassembly:

- Before beginning the disassembly process, pump out the liquid into suitable containers.
- Before starting disassembly, disconnect the mobile supply tank from the power supply.
- Before beginning the disassembly process, clean the mobile supply tank thoroughly.
- If necessary, ensure that there is a lot of space around the disassembly area.

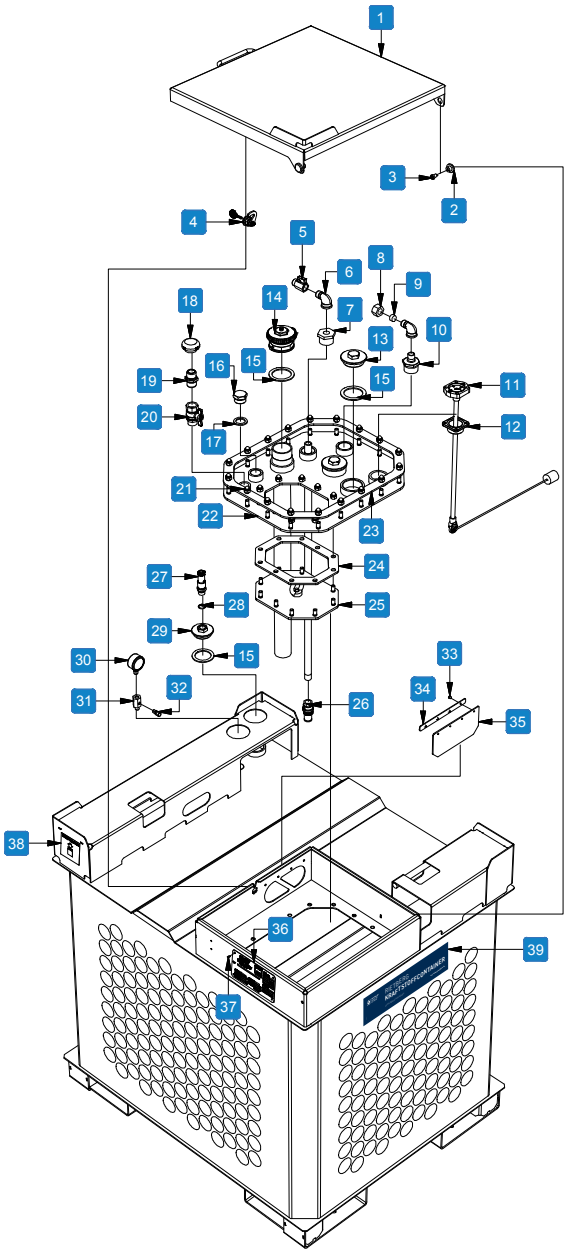
10 APPENDIX

10.1 RELATED DOCUMENTS

Documentation on	Manufacturer
Electric heater	Optional
Siphon protection valve	Optional
Fill limit indicator	Optional

10.2 REPLACEMENT PARTS LISTS

10.2.1 QUADRO-AG 450/1000



Pos.	Quantity	Description	Art. no.
1	1	Cover for QUADRO-AG	96801
2	2	Cover attachment	41621
3	2	Screw M8 x 10	37890
4	1	Complete lock (QUADRO-C/-AG)	44036
5	1	Ball valve G ½"	44725
6	2	Bracket G ½"	54522
7	1	Reducing adapter G 1 ¼" – G ½"	55557
8	1	Cap G ½"	39292
9	1	Sealing D = 19	73871
10	1	Reduction double nipple G 1 ¼" x G ½"	44873
11	1	Fuel gauge for QUADRO-B/C/CV 450	42651
	1	Fuel gauge for QUADRO-AG 1000	44767
12	1	Flange for fuel gauge	42403
13	2	Locking screw G 2"	50599
14	1	Inlet cap with sealing	42450
15	3	Sealing G 2"	46465
16	1	Locking screw G 1"	50598
17	1	Sealing G 1"	50284
18	1	Vent cap G ¾"	58941
19	1	Double nipple G ¾"	55571
20	1	Ball valve G ¾"	41913
21	28	Cap nut M10	42631
22	1	Dome lid for QUADRO-AG	45010
23	1	Dome lid sealing for QUADRO	44485
24	1	Sealing 260 x 205 x 30 x 5	45012
25	1	Cover 2	45011
26	1	Foot valve with strainer	39083
27	1	Safety valve G ½", 0.2 bar	39611
28	1	O-ring sealing 20.00 x 2.50	47449
29	1	Locking screw G 2" / G 1"	45013
30	1	Vacuum-leakage monitoring system for tank ≤ 1000 l	37251
31	1	Screw fitting G ¼" / G ⅛"	44574
32	1	Vacuum valve for vacuum-leakage monitoring system NPT ⅛	37006
33	4	Blind rivet 4.8 x 16.5 aluminium	34161
34	1	Clamping strip	44600
35	1	Cover mat 110 x 230 x 3 mm	44558
36	1	IBC nameplate with conformity mark (QUADRO-AG)	300948
37	4	Blind rivet 4.8 x 9 aluminium	39962
38	1	Adhesive film "Stacking load"	44715
39	1	Adhesive film "Fuel tank", 690 x 280 mm	46901
40	1	Labelling set, diesel	81175
–	1	Copy of tank documentation (please state: prod. no., year of production & capacity)	11320

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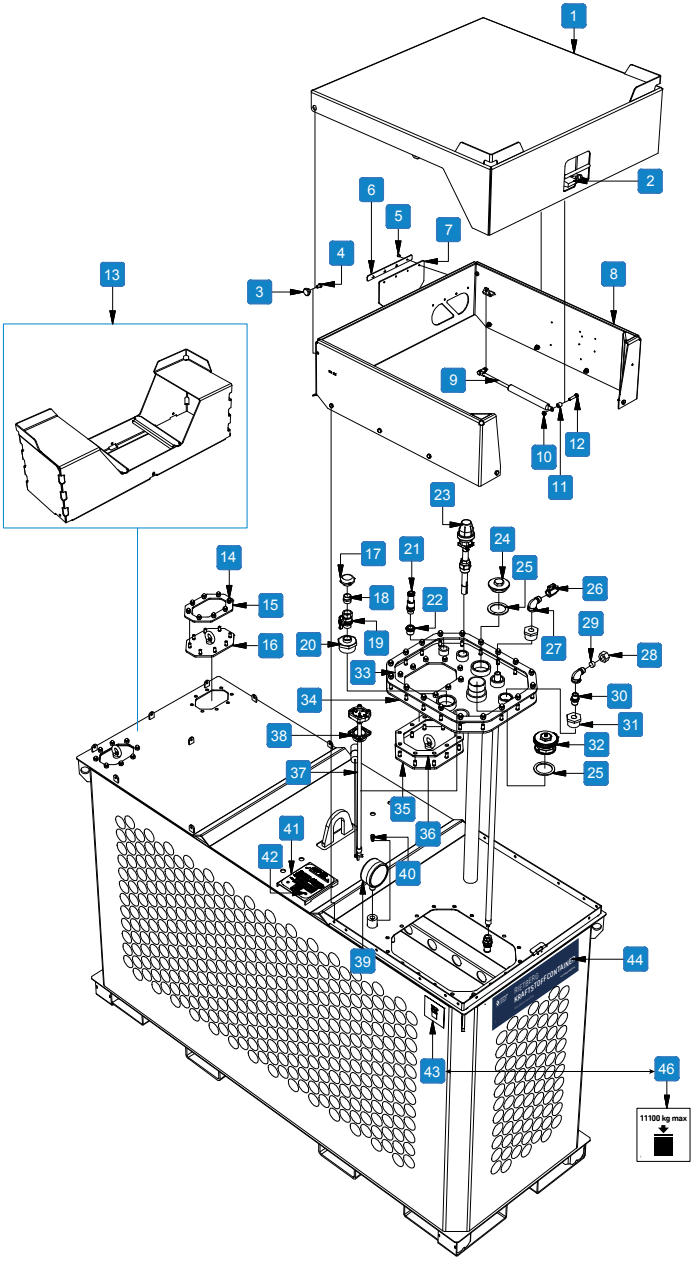
10.2.1 QUADRO-AG 2000



Pos.	Quantity	Description	Art. no.
1	1	Galvanized cover	97763
2	1	Padlock	42451
3	2	Cover attachment	41621
4	2	Screw M8 x 10	37890
5	4	Blind rivet 4.8 x 16.5 aluminium	34161
6	1	Clamping strip	44600
7	1	Cover mat 110 x 230 x 3 mm	44558
8	1	Galvanized box	97746
9	2	Gas pressure spring 150/1000N ST-1	45656
10	4	Nut M 8	50499
11	4	Distance sleeve	41756
12	4	Screw M 8 x 35	56764
13	1	Galvanized stacking surface	97766
14	44	Cap nut M10	42631
15	2	Dome lid sealing, small	44486
16	2	Dome lid, small	44488
17	1	Vent cap G ¾"	58941
18	1	Double nipple G ¾"	59861
19	1	Ball valve G ¾"	41913
20	1	Reducing adaptor G 2" x G ¾"	55550
21	1	Safety valve G ½", 0.2 bar	39611
22	1	Reducing adapter G ¾" x G ½"	55804
23	1	Fill limit indicator 150 mm	42892
24	1	Locking screw G 2"	50599
25	2	Sealing G 2"	46465
26	1	Ball valve G ½"	44725
27	1	Bracket G ½"	54522
28	1	Cap G ½"	39292
29	1	Sealing D = 19	73871
30	1	Double nipple G ½"	55391
31	1	Reducing adapter G 1 ¼" – G ½"	55557
32	1	Inlet cap with sealing	42450
33	1	Dome lid sealing for QUADRO	44485
34	1	Dome lid for QUADRO-AG	45010
35	1	Cover 2	45011
36	1	Sealing 260 x 205 x 30 x 5	45012
37	1	Fuel gauge for QUADRO 2000	46096

Pos.	Quantity	Description	Art. no.
38	1	Flange for fuel gauge	42403
39	1	Vacuum leakage indicator for tank ≤ 1000 l	37648
40	1	Vacuum valve for vacuum-leakage monitoring system NPT ⅛	37006
41	1	Nameplate for IBC with conformity mark (QUADRO-C/-D; KC-S/-K)	300941
42	4	Blind rivet 4.8 x 9 aluminium	39962
43	1	Adhesive film "not stackable"	44050
44	1	Adhesive film "Fuel tank", 400 x 90 mm	44838
45	1	Labelling set, diesel	81175
46	1	Adhesive film "Stacking load"	46097
46	1	Adhesive film "Stacking load" (QUADRO-AG 2000-2/4/5)	46097
–	1	Copy of tank documentation (please state: prod. no., year of production & capacity)	11320

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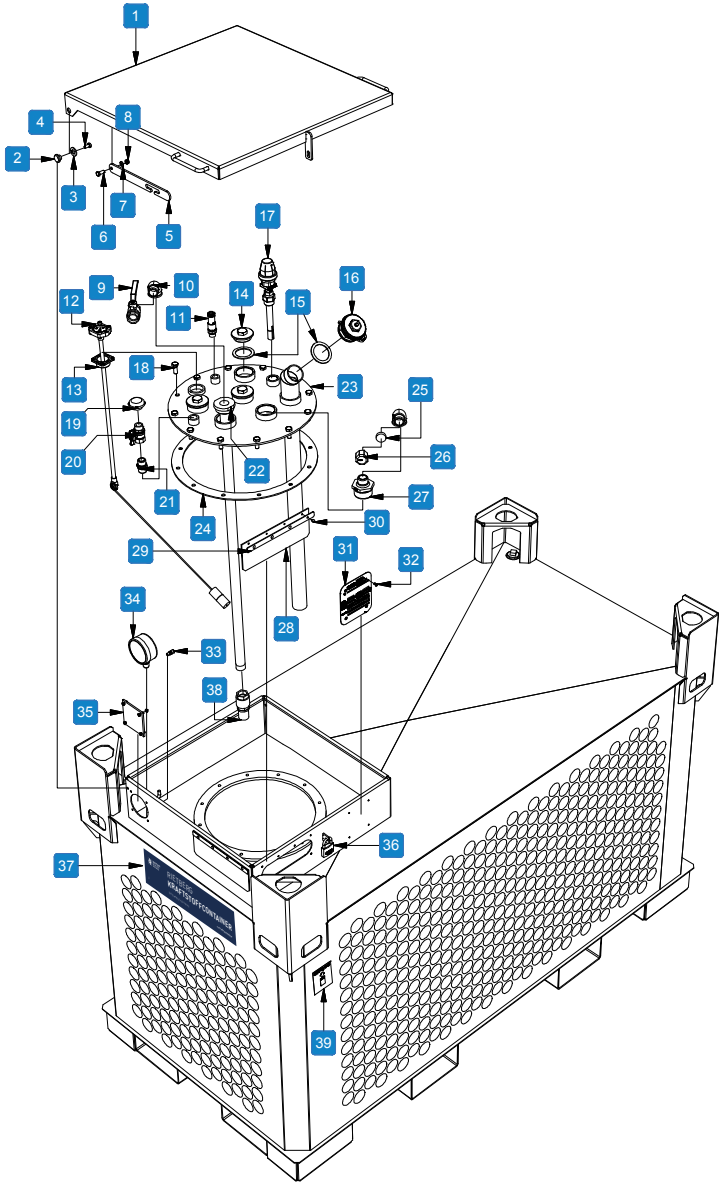
10.2.1 QUADRO-AG 3000



Pos.	Quantity	Description	Art. no.
1	1	Cover for QUADRO-C 3000	85021
2	2	Cover attachment	41621
3	2	Washer A15	54464
4	2	Screw M8 x 16	54338
5	1	Control lever for cover	72941
6	1	Screw M 8 x 20	56760
7	1	Washer A 8.4	50830
8	1	Nut M 8	50499
9	1	Ball valve G 1"	56163
10	1	Bracket G 1"	54664
11	1	Safety valve G ½", 0.2 bar	39611
12	1	Fuel gauge for QUADRO-C 3000	42888
13	1	Flange for fuel gauge	42403
14	1	Locking screw G 2"	50599
15	2	Sealing G 2"	46465
16	1	Inlet cap with sealing	42450
17	1	Fill limit indicator 150 mm	42892
18	12	Screw M12 x 30 SKT	56040
19	1	Vent cap G ¾"	58941
20	1	Ball valve G ¾"	41913
21	1	Double nipple G ¾"	55571
22	1	Reducing adaptor G 2" x G 1"	53513
23	1	Dome lid D = 500 x 6	45572
24	1	Sealing 500 x 425 x 5	81654
25	1	Sealing 31 x 10	45573
26	1	Cap G 1"	50062
27	1	Reducing double nipple G 2" x G 1"	59851
28	2	Cover mat 110 x 300 x 3 mm	42970
29	2	Terminal strip for QUADRO-C 3000	77268
30	8	Blind rivet 4.8 x 16.5 aluminium	34161
31	1	Nameplate for IBC with conformity mark (QUADRO-C/-D; KC-S/-K)	300941
32	4	Blind rivet	41340
33	1	Vacuum valve for vacuum leakage indicator NPT ⅛	37006
34	1	Vacuum leakage indicator for tank ≤ 1000 l	37648
35	1	PVC plate for vacuum-leakage monitoring system	77233
36	1	Padlock	42451
37	1	Adhesive film "Fuel tank", 600 x 160 mm	46902
38	1	Foot valve G 1" with filter and pressure relief	42758
39	1	Adhesive film "Stacking load"	44049
40	1	Labelling set, diesel	81175
–	1	Copy of tank documentation (please state: prod. no., year of production & capacity)	11320

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