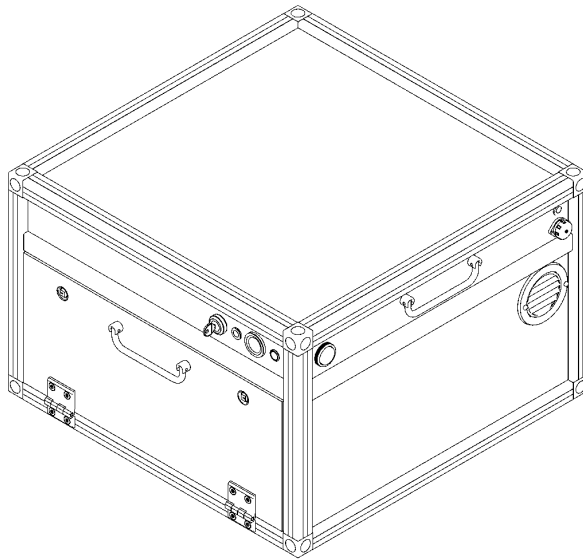




FIRE SAFETY CONCEPTS



Translation of the **Original**
Operating instructions

RACLAN SQUARE-Box

RQ9900

FISACON GmbH

Augsburger Straße 2-6

33378 Rheda-Wiedenbrück



Identification data

Tool/machine/system:

Model designation: RACLAN SQUARE-Box

Type: RQ9900 V1

Year of construction, starting from: 2024

Manufacturer's address:

Company name: FISACON GmbH

Street: Augsburgur Straße 2-6

Location: 33378 Rheda-Wiedenbrück

Phone: +49 (0)5242 / 5505888

Fax: +49 (0)5242 / 3781888

E-Mail: info@fisacon.com

Homepage: www.fisacon.com

Customer service:

Phone: +49 (0)5242 / 5505888

Fax: +49 (0)5242 / 3781888



E-Mail: info@fisacon.com



Operating instructions:



Version: END [EN]



Creation date: 23.08.2024

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1 Foreword

1.1 Introduction

The operating instructions contain important information on how to operate the RACLAN SQUARE-Box safely, properly and economically in a private environment. Observance of these instructions avoids hazards, reduces repair costs and increases the reliability and service life of the RACLAN SQUARE-Box .

The operating instructions must be available at all times and must be read and applied by every person who uses the RACLAN SQUARE box.

These include, among others

- the operation and elimination of malfunctions during operation,
- the care,
- transportation.

1.2 Copyright and intellectual property rights

The operating instructions are protected under copyright law.

The passing on and reproduction of documents, even in part, as well as the utilization and communication of their contents are not permitted unless it is expressly agreed in writing.

Infringements are punishable by law and will result in compensation for damages. All rights to exercise industrial property rights are reserved to FISACON GmbH.



1.3 Information for the operator

The operating instructions are an integral part of the RACLAN SQUARE-Box.

- Ensure that all persons who work with or use the RACLAN SQUARE box are familiar with these operating instructions.
- Any repair work on the RACLAN SQUARE-Box that requires the housing to be opened, with the exception of the front flap provided, may only be carried out by specialist companies authorized by FISACON GmbH. You can find these either on our homepage (www.fisacon.com) or contact us directly (see customer service information at the beginning of these operating instructions)
- Unauthorized opening of the housing of the RACLAN SQUARE box, except at the front flap provided, will void the warranty with immediate effect. This applies in particular to loosening the corner connections and struts, removing the housing plates or similar measures that ensure the overall function and safety of the RACLAN SQUARE box.
- Spare parts must comply with the the FISACON GmbH's technical requirements. This is always guaranteed for original spare parts. The functional guarantee is invalidated if third-party components are used. Repairs may only be carried out by authorized specialist companies.



1.4 Information for the commercial operator

The operating instructions are an integral part of the RACLAN SQUARE-Box.

- Ensure that all persons working with the RACLAN SQUARE-Box are familiar with these operating instructions.



2 Safety

The RACLAN SQUARE-Box has been developed and built in accordance with the state of the art and recognized safety regulations.

When operating the RACLAN SQUARE box, there is a risk of danger to persons working on or with the RACLAN SQUARE box or damage to the RACLAN SQUARE box and other material assets if it is:

- operated by untrained or uninstructed persons,
- operated by persons under the age of 16,
- not used as intended and/or
- improperly maintained.

2.1 Notes on signs and symbols

The following designations or signs and symbols are used in the operating instructions for particularly important information:

- Work and/or operating steps are marked with the "eye-catching point". Carry out the steps in this order.
- The "dash" is used to indicate enumerations.



DANGER

This is a warning of an imminently dangerous situation, with the inevitable consequence of serious injury or death if the designated instruction is not followed exactly.



WARNING

Draws attention to a potentially dangerous situation that could lead to serious injury or death if the designated instruction is not followed exactly.



CAUTION

This is a warning of a potentially hazardous situation that could result in moderate or minor injuries if the designated instruction is not followed exactly.

NOTE

This is a warning of a potentially hazardous situation, which may result in material damage if the designated instruction is not followed exactly.



This is a reference to useful information on safe and proper handling.



-
- Observe the warning signs, operating signs or component markings attached to the RACLAN SQUARE box. They must not be removed.
 - Always keep these instructions and symbols in a fully legible condition.



2.2 Intended use

The RACLAN SQUARE-Box is used exclusively for charging and storing lithium-ion-batteries.



- Observe the information in chapter 3, section technical data, in particular "Batteries and chargers approved for the RACLAN SQUARE-Box". Always adhere to this information.

Intended use also includes compliance with the instructions

- for safety,
- for transportation and assembly,
- for operation,
- for care,

described in these operating instructions.

Any other use or use beyond the scope of this document is considered improper use. The user alone is liable for any resulting damage. This also applies to unauthorized modifications to the RACLAN SQUARE-Box.



2.3 Reasonably foreseeable misuse

The following examples of misuse are considered improper use:

- The use and/or storage of explosive or flammable substances.
- The storage of pressure vessels.
- The storage and charging of batteries other than those specified as intended.
- Operating and/or setting up the RACLAN SQUARE-Box:
 - in an explosive atmosphere,
 - in damp rooms,
 - in the vicinity of explosive or highly flammable substances,
 - in unprotected, weather-accessible rooms or halls,
 - in poorly ventilated rooms (living areas) without the installation of a ventilation duct (see chapter 4.2.3 Installation of the ventilation duct),
 - in areas exposed to direct sunlight,
 - in areas that are exposed to rain or moisture,
 - in areas where the smoke outlet of the RACLAN SQUARE-Box is directly or indirectly covered.



2.4 Residual risk

Even if all safety regulations are observed, a residual risk described below remains when operating the RACLAN SQUARE-Box.

- Make sure that all persons using the RACLAN SQUARE-Box are aware of the residual risks.
- Follow the instructions to prevent residual risks leading to accidents or damage.

When using the RACLAN SQUARE-Box, various residual risks and potential hazards arise which every operator must be aware of:



DANGER

Danger to life due to electric shock

An electric shock can result in fatal injuries.

- **Disconnect the RACLAN SQUARE box from the power supply before carrying out any cleaning work.**
- **To do this, pull out the mains plug.**
- **Secure the RACLAN SQUARE-Box against unintentional switch-on.**



DANGER

Risk of severe and fatal burns

The RACLAN SQUARE-Box may fail if an unauthorized battery is charged or stored.

The extinguished accumulator can re-ignite after a fire. Burns due to hot surface after a fire.

- Keep the RACLAN SQUARE box closed during and after a fire!
- Do not touch the RACLAN SQUARE box!
- In the event of a fire, notify the fire department or appropriate safety authorities.
- Observe the maximum individual and total capacity as well as the cell chemistry specified in these operating instructions.
- Information on the individual capacity and cell chemistry can be found either directly on the battery or charger or in the corresponding operating instructions.
- Only use approved original chargers from the manufacturer. Follow the operating instructions for the chargers.



- Do not use force to close the front flap.
- After a fire incident, the RACLAN SQUARE-Box must no longer be used due to its toxicity and the triggered fire extinguishing system.
- Ensure that the RACLAN SQUARE box and its contents are disposed of in accordance with local regulations.



DANGER

Risk of fatal injuries due to explosion!

The reaction of the lithium-ion battery with the extinguishing agent can produce hydrogen.

- Leave the RACLAN SQUARE box closed after a fire.
- After a fire incident, the RACLAN SQUARE-Box must no longer be used due to its toxicity and the triggered fire extinguishing system.
- Ensure that the RACLAN SQUARE box and its contents are disposed of in accordance with local regulations.



DANGER

Danger of severe poisoning.

Flue gas produced in the event of fire can lead to poisoning.

- **In poorly ventilated rooms, a ventilation duct to the outside must be installed by a specialist (fire prevention).**
- **Do not inhale any flue gas.**
It is normal for smoke to escape during a fire.
- **Ventilate the area around the RACLAN SQUARE box immediately.**
- **Do not use force to close the front flap.**



WARNING

Warning of severe and fatal burns

The reaction of the burning lithium-ion battery can produce hydrofluoric acid or phosphoric acid!

- Avoid any contact with escaping liquids.
- Remove contaminated clothing immediately.
- If contact is suspected, rinse the affected area immediately with plenty of water in the event of eye or skin contact. In the event of skin contact, apply a calcium gluconate gel afterwards.
- If swallowed, do not induce vomiting. If possible, spit out the liquid. Rinse out the mouth and drink plenty of water immediately if you remain conscious.
- Contact a doctor if you experience symptoms, even 1-2 days after possible contact with liquids. Inform them of the possible contact with hydrofluoric acid.



CAUTION

Irritation to the eyes and skin on contact with the extinguishing agent. Irritation in the oral cavity, esophagus and stomach if swallowed.

The extinguishing agent contains components which have an irritant effect on contact.

- Remove contaminated clothing immediately.
- If smoke fumes are inhaled, move affected persons to fresh air immediately.
- In case of skin contact, wash the affected area with plenty of soap and water. If irritation persists, seek medical advice.
- In case of eye contact, wash your eyes under running water for at least 15 minutes.
- If swallowed, do not induce vomiting. If possible, spit out the liquid. Rinse out the mouth and drink plenty of water immediately if you remain conscious.
- Seek medical advice if symptoms persist.
- Observe the additional information in the safety data sheet in the appendix to these operating instructions.



CAUTION

Bruises on the fingers.

The front flap can fall down and crush your fingers.

- Always hold the front flap firmly when opening and closing.
- Make sure there is enough space to open the front flap.

2.5 Description of the safety concept

2.5.1 Basic prerequisite for the complete protective function

- The RACLAN SQUARE-Box must be connected to an external power source for permanent operation.
- In the event of an interruption to the external power source, e.g. due to a power failure, ensure that the internal battery of the RACLAN SQUARE-Box is charged. This ensures the function of the RACLAN SQUARE-Box for a limited period of time.
- The RACLAN SQUARE-Box must be operated in a fully closed state.
- The front flap must be closed properly.
- The RACLAN SQUARE box is switched on by the key switch



2.5.2 Sequence of the safety concept during a fire

- An integrated temperature switch controls the interior temperature. If the temperature rises above a set value, the safety protocol begins
- The charging current is automatically disconnected to prevent further energy from flowing into the lithium-ion battery
- A warning tone sounds to signal a fire.
- The internally installed pump delivers the extinguishing agent into the interior and cools the lithium-ion battery to prevent the propagation to further cells.
- At the same time, the extinguishing agent also serves to cool the housing walls and the flue gas.
- Toxic flue gases are formed during the fire. These are filtered in the flue gas management system and discharged to the outside (to the left and right of the RACLAN SQUARE box) to prevent an increase in internal pressure.
- Explosions can also occur during the fire. The RACLAN SQUARE-Box can withstand the resulting pressure waves.



DANGER

Risk of severe and fatal burns

The RACLAN SQUARE-Box may fail if an unauthorized battery is charged or stored.

The extinguished accumulator can re-ignite after a fire. Burns due to hot surface after a fire.

- Keep the RACLAN SQUARE box closed during and after a fire!
- Do not touch the RACLAN SQUARE box!
- In the event of a fire, notify the fire department or appropriate safety authorities.
- After a fire incident, the RACLAN SQUARE-Box must no longer be used due to its toxicity and the triggered fire extinguishing system.
- Ensure that the RACLAN SQUARE box and its contents are disposed of in accordance with local regulations.



2.5.3 Behavior in case of fire

- Keep calm.
- Keep the RACLAN SQUARE box closed during and after the fire!
- Do not touch the RACLAN SQUARE box!
- Contact the fire department immediately. Remember the “five W’s”:
 1. Where is the scene?
 2. What happened?
 3. Who’s involved? Are there casualties?
 4. When did it happen?
 5. Wait for follow-up questions
- The extinguishing time is approx. 4 minutes.
- If it is safe to do so, remove the power cord on the house side, not on the RACLAN SQUARE box.
- Observe the RACLAN SQUARE box for at least 1 hour after the fire. Do not touch the RACLAN SQUARE box during this time.
- Hire a specialist company for cleaning and disposal.



Incorporate the RACLAN SQUARE-Box into the fire protection concept for commercial use.



2.6 Markings and signs on the RACLAN SQUARE box

Shield	Meaning	Mounting location
	<p>Nameplate with the details:</p> <ul style="list-style-type: none"> Name and full address of the manufacturer Technical data (e.g. approved accumulators) 	<p>Easy to read on the RACLAN SQUARE box</p>
	Observe the operating instructions	Easy to read on the RACLAN SQUARE box
	Note that a lithium-ion rechargeable battery is integrated	Easy to read on the RACLAN SQUARE box
	CE marking	Easy to read on the RACLAN SQUARE box
	The product must not be disposed of with household waste	Easy to read on the RACLAN SQUARE box
	Serial number	Easy to read on the RACLAN SQUARE box
	Date of manufacture (MM/YY)	Easy to read on the RACLAN SQUARE box
	Expiration date (MM/YY) [date of manufacture + 10 years]	Easy to read on the RACLAN SQUARE box
	Warning of dangerous electrical voltage	At the connection of the IEC plug.



2.7 Operating personnel / user groups

Persons handling the RACLAN SQUARE-Box must meet the following requirements:

Personnel	Activities	Required qualification
Operators, private users	Assembly, operation	Read and understand the operating instructions. Minimum age 16 years.
Operators, commercial users	Assembly, operation	Read and understand the operating instructions. Briefing by fire safety officer. Minimum age 16 years.
Maintenance personnel for electricians	On electrical parts: Troubleshooting Maintenance/inspection Decommissioning	Qualified electrician
Disposer	Disposal of the RACLAN SQUARE-Box	Waste disposal specialist*

** A specialist is a person who is able to assess the work assigned to him and recognize possible dangers on the basis of his technical training, knowledge and experience as well as knowledge of the relevant regulations.*



2.8 Safety instructions for the operator

Every person using the RACLAN SQUARE-Box must have read and understood these operating instructions in full.

- Only use the RACLAN SQUARE-Box if it is in proper technical condition and in accordance with its intended use and in compliance with these operating instructions.
- Pay attention to the expiration date (10 years from production).

No liability is assumed for damage and accidents caused by failure to comply to the operating instructions.

- Eliminate all faults immediately.
- Always keep the operating instructions of the RACLAN SQUARE box on hand.
- If the RACLAN SQUARE-Box is used commercially, only reliable, trained and tested personnel of the minimum age permitted by the Youth Employment Protection Act may work on it.
- Personnel to be trained, instructed or undergoing general training may only work under the constant supervision of an experienced person.



If safety-relevant changes to the RACLAN SQUARE-Box occur:

- Shut down the RACLAN SQUARE box immediately.
- Secure the RACLAN SQUARE box.
- In the case of commercial use, report the event to the competent authority/person.
- Please contact the customer service of FISACON GmbH.

2.9 Thermal runaway

A "thermal runaway" is a possible chain reaction that can occur when a lithium-ion-battery catches fire.

The highest probability of occurrence is the time of charging.

This can be triggered by internal or external factors, such as

- Internal short-circuit caused by an accident or similar mechanical impact that causes the device to fall from a great height.
- Overcharging the battery or charging an exhausted battery
- Charging the batteries in the unauthorized temperature range

Lithium-ion batteries have a very high energy density, which is thermally converted in the event of a fire. Temperatures of well over 850° C can occur.

This creates explosions that can be clearly heard.



2.10 Notes on special types of danger

2.10.1 Electrics

Work on the electrical equipment of the RACLAN SQUARE-Box may only be carried out by qualified electricians commissioned by authorized specialist companies or by instructed personnel under the supervision of a qualified electrician in accordance with the electrotechnical regulations.

Private use

- No work on the electrical equipment of the RACLAN SQUARE-Box may be carried out by private persons.
- If necessary, contact the customer service of FISACON GmbH.

Commercial use

- Before starting work, disconnect the RACLAN SQUARE box from the power supply by pulling out the mains plug.
- Secure the RACLAN SQUARE-Box against re-connection.
- Discharge electrical components on which inspection, maintenance and repair work is being carried out.
- Only use original fuses with the specified current ratings.



- Secure the equipment used for disconnection against unintentional or automatic reconnection (lock fuses, block disconnectors, etc.).
- First check that no voltage is present in disconnected electrical components, then provide protection against adjacent live parts.
- When carrying out repairs, ensure that design features are not modified in a way that reduces safety (e.g. do not reduce creepage distances, clearances or distances by using insulation).

If work is required on live components (only in exceptional situations!):

- Call in an additional person to operate the emergency stop button or the mains disconnection device in an emergency.
- Only use voltage-insulated tools.

Proper grounding of the electrical system must be ensured by protective conductor systems. If the discharge current to ground (PE) is >3.5 mA, a fixed installation is required.

- Check cables regularly for damage.
- Replace defective cables immediately.

For further information, see also chapter 6.2.2 Safe maintenance of electrical equipment.



2.10.2 Chemical substances

When handling chemical substances, observe and comply with the applicable regulations and safety data sheets of the manufacturers of these substances regarding storage, handling, use and disposal.

- Therefore, wear personal protective equipment when working with chemical substances:
 - Protective goggles,
 - Protective gloves,
 - protective clothing resistant to the substances,
 - Safety shoes.
- In the event of eye or skin contact, rinse the affected area immediately with plenty of water. Suitable facilities (eye wash bottle, wash basin, shower) must be available near the workplace!
- Care for skin compromised by cleaning agents and disinfectants after washing. Preventive use of skin protection products and appropriate skin care can prevent skin damage.
- Select the care product to be used depending on the level of pollution and the individual condition of the skin. Oily care products are the most suitable.
- Do not eat, drink, smoke or store food in rooms where chemicals are present!



2.10.3 Noise

In the event of a fire, a warning tone sounds at over 80 dB(A). This warning tone sounds until the box is switched off with the key switch (5). Otherwise, no noise is emitted by the RACLAN SQUARE box

- As a commercial operator, equip the operating personnel with the appropriate protective equipment if the local conditions result in a higher sound pressure level at the installation site of the RACLAN SQUARE-Box.

2.10.4 Vibration

The total vibration value to which the upper limbs are exposed does not exceed 2.5 m/s^2 .



3



Product description

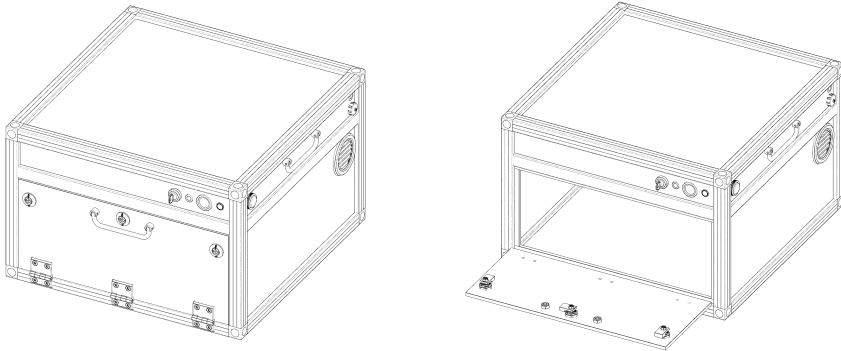


Figure 1

Left: RACLAN SQUARE-Box closed, Right: RACLAN SQUARE-Box opened

3.1 Functional description

The RACLAN SQUARE-Box is a system for minimizing hazards in the environment when storing and charging lithium-ion batteries. It is divided into two separate compartments. The extinguishing system and the electrical components are installed in the upper room. The exhaust gas management system is installed in the lower room, as is the loading space for the external battery to be charged.

In the event of a fire, the fire extinguishing system triggers and prevents the fire from spreading to the area around the RACLAN SQUARE box.



3.2 Assemblies of the RACLAN SQUARE-Box



The numbering of the modules of the RACLAN SQUARE-Box is the same throughout the operating instructions.

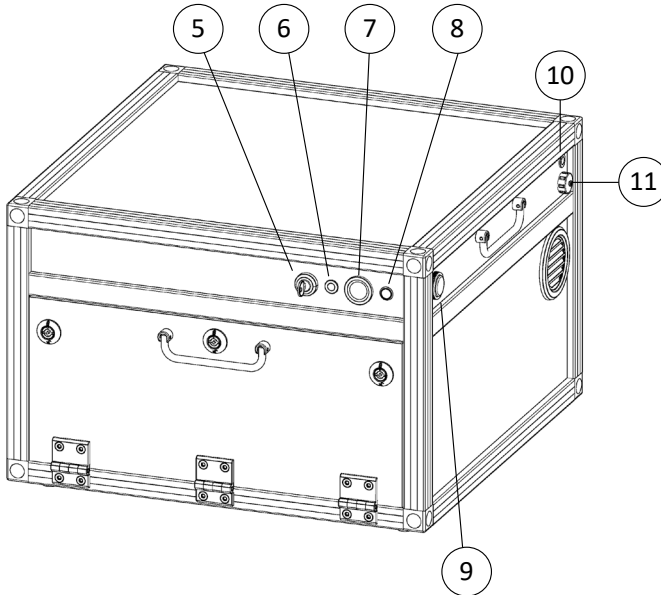


Figure 2 RACLAN SQUARE-Box, external view

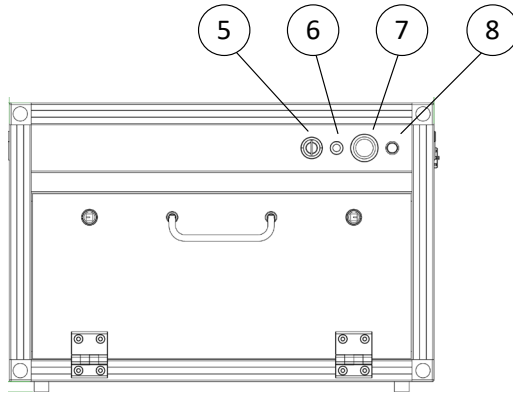


Figure 3 RACLAN SQUARE-Box, front view

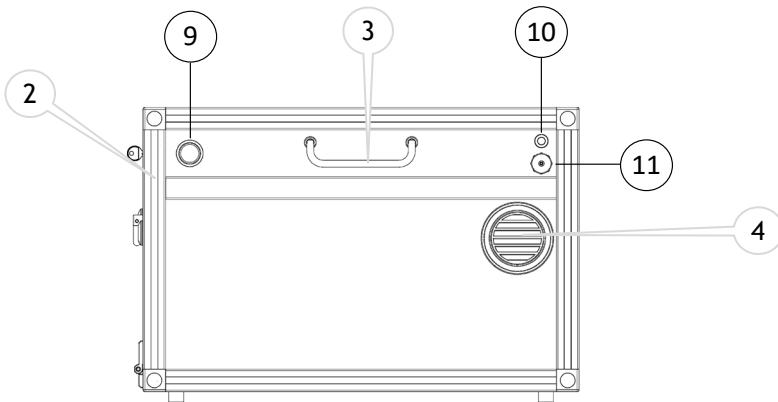


Figure 4 RACLAN SQUARE-Box, right view

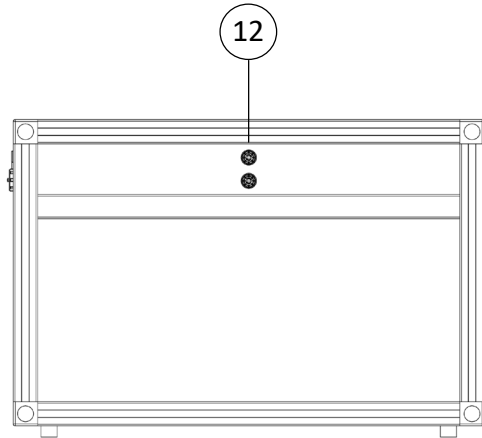


Figure 5 RACLAN SQUARE-Box, rear view

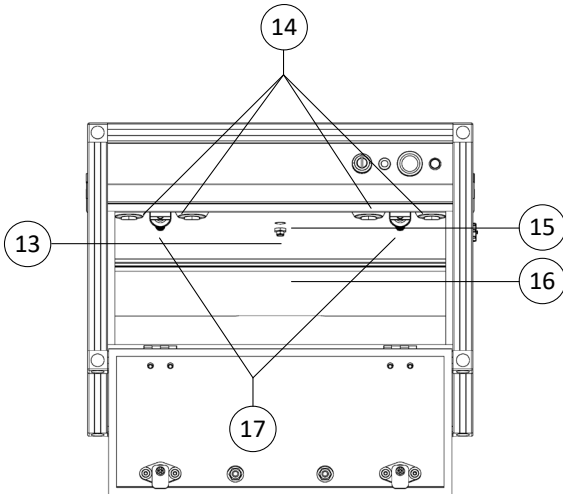


Figure 6 RACLAN SQUARE box inside

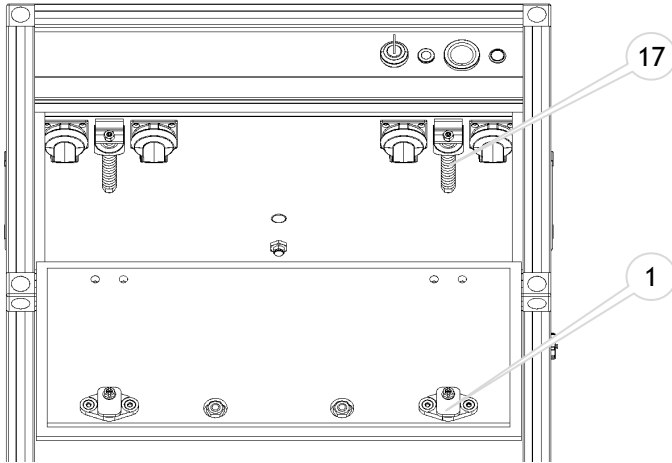


Figure 7 RACLAN SQUARE-Box front clamping unit

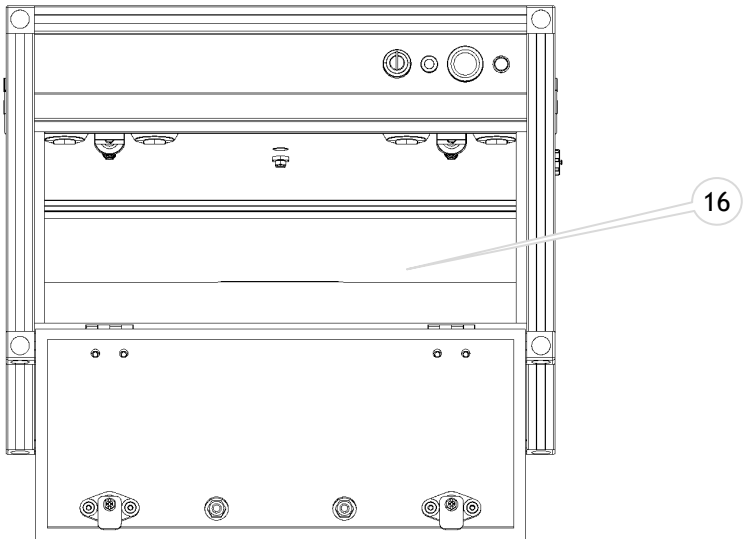


Figure 8 RACLAN SQUARE-Box front exhaust gas management



Pos.	Designation
1	Compression rotary bolt lock (incl. 2 keys)
2	Housing
3	Handles
4	Exhaust pipe outlet
5	Key switch (incl. 2 keys)
6	Indicator light green
7	Voltage display (internal power supply)
8	Push-button for voltage display
9	Buzzer
10	Indicator light green
11	Power connection
12	Fine-wire fuse
13	Thermal switch
14	Socket outlet with ground contact
15	Nozzle
16	Exhaust gas management system
17	Spring-loaded clamping unit

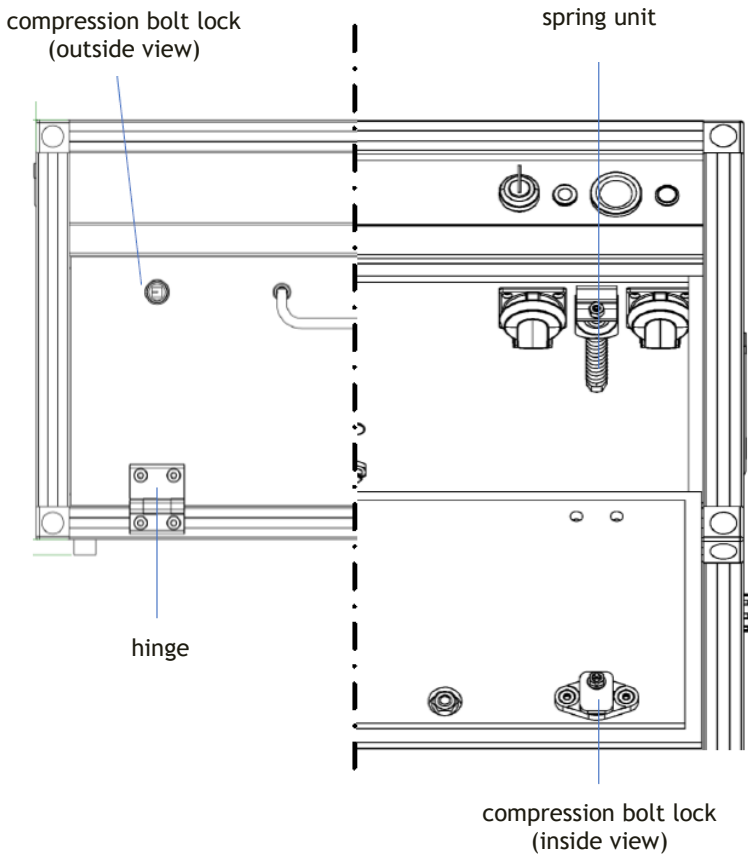


The individual components may vary slightly depending on the design.



3.3 Spring-loaded clamping unit

The RACLAN SQUARE-Box has a spring-loaded closing unit to relieve pressure peaks during a potential explosion and thus prevent possible destruction / deformation of the unit. The main components are





3.4 Integrated fire extinguishing system

The RACLAN SQUARE box has an integrated extinguishing system that is triggered in the event of a fire. It is located in the upper, inaccessible area between the top and middle panels of the RACLAN SQUARE-Box. The extinguishing agent is discharged by a pump and the entire system is therefore free of pressurized gas.

The extinguishing agent used is TRIDENT, which has been optimized for lithium-ion fires (see safety data sheet in the appendix).

3.5 Electrical components

The RACLAN SQUARE-Box is connected to the external power supply via an IEC plug (11). The plug must be pulled to disconnect it from the mains.

The internal rechargeable battery of the RACLAN SQUARE-Box supplies the fire extinguishing system with electrical energy for approx. 90 days. The charging function of the lithium-ion battery is not activated during this period. To ensure trouble-free continuous operation, a permanent external power supply must be guaranteed.



3.6 Technical data

3.6.1 General information

Dimensions approx. (L x W x H)	580 x 580 x 380	mm
Total weight approx. (incl. extinguishing agent)	42	kg
Power supply (external)	110-230/50-60	V / Hz
Power supply (internal) Lithium-iron-phosphate battery	12	V
Max. permissible room temperature	40	°C

3.6.2 Information on the extinguishing device

Extinguishing agent	TRIDENT for lithium-ion fires	
Extinguishing agent quantity approx.	10	L
Durability of the extinguishing agent	10	years
Spraying time approx.	4	Min



3.6.3 Batteries and chargers approved for the RACLAN SQUARE-Box

Maximum individual capacity	3.500	Wh
Approved cell chemistry of the batteries	NMC Lithium-Nickel-Manganese-Cobalt-Oxides	
Approved chargers	Only the chargers approved by the manufacturer of the lithium-ion battery	



4 Transportation and assembly

4.1 Transportation

The RACLAN SQUARE-Box was developed by the FISACON GmbH.

If the RACLAN SQUARE-Box needs to be transported, please observe the following instructions.

The RACLAN SQUARE box has a recessed grip (3) on the left and right side to simplify occasional manual transportation and handling.

If the RACLAN SQUARE box is to be transported in a vehicle, e.g. a camping van, it is essential to ensure that it is properly secured in accordance with the road traffic regulations. This also applies to the battery inside the RACLAN SQUARE box.



CAUTION

Crushing when lifting and transporting the RACLAN SQUARE box

Improper lifting and transportation can cause the RACLAN SQUARE box to tip and fall.

- Remove any remaining chargers and accumulators from the RACLAN SQUARE box.
- Close the RACLAN SQUARE box completely.
- Remove the power cord.
- Only lift and transport the RACLAN SQUARE box when it is empty.
- Never stand under suspended loads.



Do not install the RACLAN SQUARE box in areas exposed to direct sunlight.



4.2 Assembly

4.2.1 Scope of delivery

- 1 x RACLAN SQUARE-Box
- 2 x keys for the key switch
- 1 x key for locking the front flap via the rotary bolt lock
- 1 x operating instructions

4.2.2 Mounting the RACLAN SQUARE-Box

- Check the scope of delivery.
- Register a complaint about any missing parts with precise details.
- Check that the RACLAN SQUARE box is securely in place.
- Set up the RACLAN SQUARE box. Make sure that the RACLAN SQUARE box is not exposed to direct sunlight.

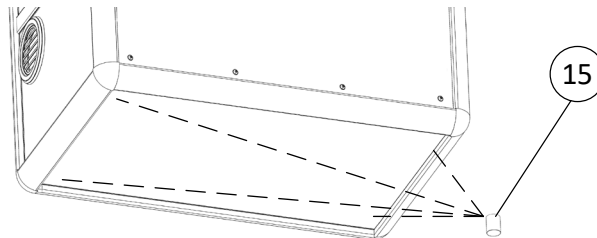


Figure 9 Mounting the adjustable feet

- Screw the adjustable feet (15) into the four openings provided on the base of the RACLAN SQUARE box.
- Use a suitable tool for mounting the adjustable feet.



4.2.3 Installing the ventilation duct

If the appliance is installed in poorly ventilated rooms, flue gas must be routed to the outside.



DANGER

Danger of severe poisoning.

Flue gas produced in the event of fire can lead to poisoning.

- **In poorly ventilated rooms, a ventilation duct to the outside must be installed by a specialist (fire prevention).**

The ventilation duct is not included with the RACLAN SQUARE box. A corresponding adapter and can be ordered separately from FISACON GmbH.

The installation and commissioning of the ventilation duct from the installation site to the outside must only be carried out by qualified personnel (fire prevention). Please follow the instructions in the operating instructions for the ventilation duct.



4.2.4 Electrical connection

You as the operator/owner must ensure the power supply.

- The electrical connection is established by plugging the power cable into a 110 / 230 V socket with a protective contact.



If the power supply is not designed with protective contacts, the supply line must be equipped with a residual current protection system.

Such a device connection can be purchased as an accessory from Fisacon.



5 Operation

Every person involved in the operation of the RACLAN SQUARE-Box must have thoroughly read and understood this chapter "5 Operation".

5.1 Safe operation

The RACLAN SQUARE-Box may only be used by persons who have read and understood the operating instructions. Improper use may result in danger to life and limb.

- Use the RACLAN SQUARE-Box only for the purpose intended or customary by the manufacturer.
- Only ever operate the RACLAN SQUARE box when it is in proper technical condition in order to avoid accidents.
- Do not use any third-party parts on the RACLAN SQUARE-Box, otherwise compliance with the required safety is not ensured.
- Refrain from any work that could compromise the safety of the RACLAN SQUARE box.
- Immediately report any changes to the RACLAN SQUARE box (which affect safety) to the responsible supervisor, the responsible customer service and/or contact the FISACON GmbH.
- Shut down the RACLAN SQUARE box immediately in the event of a fault that affects safety. Do not put the RACLAN SQUARE box back into operation until the fault has been rectified.



5.1.1 Notes for the commercial operator

- As the operator, ensure that the functional test of the safety devices on the RACLAN SQUARE-Box is carried out by trained personnel both before the first start-up and before each new start-up.

5.1.2 Electrotechnical information



DANGER

Danger to life due to electric shock

An electric shock can result in fatal injuries.

Only have repair and maintenance work carried out when the appliance is switched off (de-energized) and only by a qualified electrician*.

*A qualified electrician is a person who is able to assess the work assigned to him and recognize possible dangers due to his technical training, knowledge and experience as well as knowledge of the relevant regulations.



5.2 Commissioning

Check the following points before commissioning the RACLAN SQUARE-Box:

Type of test	Activity
Visual inspection of the RACLAN SQUARE-Box	<ul style="list-style-type: none"> ● Check the RACLAN SQUARE box for correct assembly. ● Check the RACLAN SQUARE box for damage and remove any foreign objects. ● Check that the exhaust vents on the left and right are clear.

Leak test

- Check whether extinguishing agents or extinguishing agent residues are visible in the interior
- The total empty weight of the RACLAN SQUARE box should not be less than 41.8 kg.

Then proceed as follows:

- You as the operator/owner must ensure the power supply.
- The electrical connection is established by plugging the supplied power cord into the power plug (11) in the RACLAN SQUARE-Box and into a 110 - 230 V wall socket with grounding contact.
- Switch on the RACLAN SQUARE box (see chapter 5.4 Switching on).



-
- Leave the RACLAN SQUARE box connected to the external power source for at least 3 hours without inserting the lithium-ion battery. This charges the internal battery.
 - As soon as the voltage indicator (7) lights up green when the button (8) is pressed, the RACLAN SQUARE-Box is ready for use.



5.3 Control elements

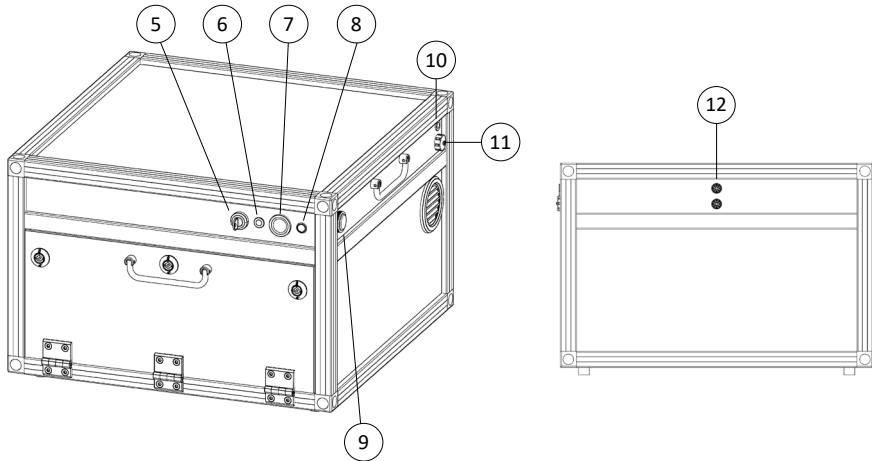


Figure 10 Control elements of the RACLAN SQUARE-Box

Pos.	Designation
5	Key switch (incl. 2 keys)
6	Indicator light green
7	Voltage display (internal power supply)
8	Push-button for voltage display
9	Buzzer
10	Indicator light green
11	Power connection
12	Fine-wire fuse



5.4 Switch on

5.4.1 Connection with external power source

- Connect the RACLAN SQUARE box to the external power source via the power connection cable (11). The green indicator light (10) lights up as soon as power is applied to the RACLAN Square Box.
- Switch on the RACLAN SQUARE box with the key switch (5) by turning the key to position "I".
- Green indicator light (6) lights up.
- The RACLAN-Square Box is switched on.
- The connected accumulator begins charging.

5.4.2 Connection without external power source

- Switch on the RACLAN SQUARE box with the key switch (5) by turning the key to position "I".
- Press the button (8) for approx. 3 seconds to check the charge status of the battery. If the voltage display (7) is in the green range, the RACLAN Square Box is ready for use.
- The RACLAN-Square Box is switched on.



- If a battery is connected, it will not start charging.



Note: The voltage indicator (7) for the charge status of the internal power supply only lights up when the button (8) is operated. This enables a longer autonomous period.

5.5 Switch off

5.5.1 Connection with external power source

- Switch off the RACLAN SQUARE box with the key switch (5) by turning the key to position "0".
- Green indicator light (6) goes out
- The RACLAN-Square Box is switched off.

5.5.2 Connection without external power source



DANGER

Fire hazard!

The monitoring and extinguishing system are not functional when the RACLAN SQUARE-Box is switched off.

- Only switch off the RACLAN SQUARE box when it is empty.
- Switch off the RACLAN SQUARE box with the key switch (5) by turning the key to position "0".
- Press the button (8). The charge status of the internal power supply does not light up.
- The RACLAN SQUARE Box is switched off.



5.6 Operation

5.6.1 Charging batteries

Opening the front flap



DANGER

Risk of severe and fatal burns

The extinguished accumulator can re-ignite after a fire. Burns due to hot surface after a fire.

- Keep the RACLAN SQUARE box closed during and after a fire!
 - Do not touch the RACLAN SQUARE box!
 - In the event of a fire, notify the fire department or the relevant safety authorities.
 - Make sure that the flap of the RACLAN SQUARE box is completely closed before starting to charge.
 - After a fire incident, the RACLAN SQUARE-Box must no longer be used due to its toxicity and the triggered fire extinguishing system.
 - Ensure that the RACLAN SQUARE box and its contents are disposed of in accordance with local regulations.
-
- Unlock the locks with the corresponding key.
 - To do this, turn the 3 compression rotary bolt locks (1) to the green position
 - The front flap opens.



CAUTION

Risk of crushing your fingers

The front flap can fall down and crush your fingers

- Always hold the front flap firmly when opening and closing.
 - Make sure there is enough space to open the front flap.
-
- Position the lithium-ion battery pack(s) and its/their charger(s) inside the RACLAN SQUARE box.
 - Insert the mains plug of the charger into the socket (16) on the inside of the RACLAN SQUARE box.
 - Close the front flap.
 - Press the front flap against the housing.
 - Turn the turnbuckle (1) clockwise so that a slight resistance can be felt
 - Turn the rotary bolt 1 until it engages in the locked position
 - The front flap is closed.
 - Check that the front flap is properly closed. The edges close completely with the frame. No gap remains.
 - Turn the key switch (5).
 - The indicator light I (8) now shows you that the RACLAN SQUARE box is activated.



5.6.2 Internal power supply charge status (5 + 6)

The charge status of the extinguishing system's internal battery can be read on a digital display with a color scale. To do this, press the button (8). For continuous (> 90 days) fault-free operation, the RACLAN SQUARE-Box must be connected to an external power supply.

Color	Function
Green	Internal accumulator charged
Yellow	Please charge the internal battery (connect to external power supply soon)
Red	Internal battery empty. Function can no longer be guaranteed (connect to external power supply immediately)



The charge status can only be checked when the key switch (5) is in position "I".

5.7 Malfunctions

Some of the malfunctions listed here can be rectified with the help of the operating instructions.

Only when the RACLAN SQUARE-Box is out of operation may the housing be opened in order to rectify a possible fault.

Contact the manufacturer in the event of faults that cannot be rectified using the following instructions.

Work on the electrical system may only be carried out by FISACON GmbH authorized specialist companies.



Signs	Cause	Measures
strange noises during transportation	Foreign objects in the interior of the RACLAN-SQUARE Box	Disconnect the power cable and remove foreign objects.
Unintentional shutdown	Overload	Remove and check chargers
	Green indicator light (10) does not light up	Check the fine-wire fuse (12), 10A, 250V
Power failure	fine-wire fuse defective Green indicator light (10) does not light up	Replace fine-wirefuse (12), 10A, 250V Employ a qualified electrician
	Cable break	Replace power connection cable
	Internal battery empty (voltage display does not work when the button is pressed)	Restore external power supply to charge internal battery (plug in power connection cable)
	Green indicator light (6) does not light up	Check that the key switch (5) is correctly in position "I".
	Green indicator light (10) does not light up	Check power supply on the house side



Signs	Cause	Measures
Front flap does not close	Foreign object in sealing area or external battery too large	Remove foreign objects and check the seal for damage. Do not force the front flap closed.



6



Maintenance

The *Maintenance* chapter is divided into the areas of care, maintenance and repair. This should make it easier for you to plan the necessary maintenance work.

The RACLAN SQUARE-Box is designed for a service life of 10 years from the date of manufacture and is maintenance-free during this period. The operator only has to carry out cleaning activities.

- Ensure the safe and environmentally friendly disposal of the RACLAN SQUARE box at the end of its service life or after a fire incident.

In a **commercial** environment, however, recurring inspections/maintenance are necessary.

The instructions described in this chapter are to be understood as minimum requirements. Depending on the operating conditions, further instructions may be necessary to keep the RACLAN SQUARE box in optimum condition. The specified time intervals refer to single-shift operation.

The maintenance work described in this chapter may only be carried out by the operator's specially trained maintenance personnel.

Maintenance work in special areas, e.g. electricians, may only be carried out by specialists trained in the relevant area.



6.1 Care/cleaning

Maintenance of the RACLAN SQUARE-Box is essentially limited to cleaning all surfaces of dust and other deposits.



DANGER

Danger to life due to electric shock

An electric shock can result in fatal injuries.

- **Disconnect the RACLAN SQUARE box from the power supply before carrying out any cleaning work.**
 - **To do this, pull out the mains plug.**
 - **Secure the RACLAN SQUARE-Box against unintentional switch-on.**
-
- Only sweep or wipe the RACLAN SQUARE box. We do not recommend using it on sensitive surfaces.
 - Clean the thermal switch (13) and the nozzle (15) with extreme caution.



NOTE

Material damage due to improper cleaning

Improper cleaning of the RACLAN SQUARE box can lead to malfunctions and damage.

- **Do not use aggressive cleaning agents that attack metal and plastic surfaces.**
- **Never clean sensitive components with coarse brushes and strong mechanical pressure. Do not use fibrous cleaning cloths.**
- **Never clean the RACLAN SQUARE box with a water jet or high-pressure cleaner.**
- **All aqueous industrial cleaners can be used without restriction.**

Appropriate care helps to keep the RACLAN SQUARE box in a functional condition in the long term.

- If the RACLAN SQUARE box is dirty, clean it inside and out.
- Do not use metal objects such as scrapers or screwdrivers for cleaning.
- Do not use any aggressive cleaning agents or solvents (these will damage the seals) or sandpaper for cleaning.



NOTE

- Do not clean the RACLAN SQUARE box with compressed air. This can cause dust and/or dirt particles to reach the seals and sealing surfaces and damage them.

6.2 Maintenance / commercial use

6.2.1 General maintenance instructions

The RACLAN SQUARE-Box is designed for a service life of 10 years and is maintenance-free during this period. In a commercial environment, however, periodic inspections are necessary.

The information summarized in this chapter is only intended for **commercial** users. The applicable accident prevention regulations must be observed for commercial use.

- Therefore, check the RACLAN SQUARE-Box regularly and inform the person responsible if repair and maintenance work is necessary.
- All maintenance work that goes beyond an inspection may only be carried out by or in consultation with the FISACON GmbH.



6.2.2 Safe maintenance of electrical equipment

Work on the electrical supply may only be carried out by a qualified electrician.



DANGER

Danger to life due to electric shock

An electric shock can result in fatal injuries.

- Disconnect the RACLAN SQUARE box from the power supply before carrying out any cleaning work.
 - To do this, pull out the mains plug.
 - Secure the RACLAN SQUARE-Box against unintentional switch-on.
-
- As a commercial operator, define the type and scope of required inspections.
 - Set the deadlines for the periodic inspections so that the RACLAN SQUARE box can be used safely until the next specified inspection.



The test must be carried out in accordance with the applicable electrotechnical regulations. In addition, a test interval of once a year is required for all mobile electrical appliances.

- Eliminate possible faults caused by loose connections and damaged cables immediately.



- Never work under voltage. This is only permitted in exceptional cases where there are compelling reasons.
- As the operator, record these compelling reasons in writing before starting live work.
- Only carry out work on live parts in accordance with national requirements and procedures.

The work may only be carried out by qualified electricians or electrically instructed persons who have the appropriate special training.

6.2.3 Behavior in the event of defects

If defects are found during testing, the RACLAN SQUARE-Box may only be put back into operation after appropriate repairs have been carried out and approval has been given by a responsible person of the operator.



6.3 Maintenance schedule

Carry out the maintenance work at the intervals specified below. The times given correspond to single-shift operation. Adjust the times accordingly for multi-shift operation. This work will ensure that the RACLAN SQUARE box functions consistently and trouble-free.

The maintenance plan shows which work must be carried out at the designated points on a weekly, monthly or biannual basis.

Interval	Work to be carried out	Responsible personnel
daily	<ul style="list-style-type: none"> ● Visual inspection. ● Check display elements. 	Operating personnel
every 12 months	<ul style="list-style-type: none"> ● Testing electrical systems and equipment 	Service personnel / maintenance personnel

6.4 Repair

Repair work on the RACLAN SQUARE-Box may only be carried out by trained and authorized specialists from of FISACON GmbH.



7 Disposal

7.1 Environmental protection

NOTE

Environmental pollution caused by substances hazardous to water

These substances can pollute the soil and groundwater or enter the sewage system.

- When working on and with the RACLAN SQUARE-Box, comply with the legal obligations regarding waste avoidance and proper recycling/disposal.
- When disposing of the RACLAN SQUARE-Box, follow the applicable legal regulations.
- Please note that substances hazardous to water must not pollute the ground or enter the sewage system.
- Please note that these substances must be stored, transported, collected and disposed of in suitable containers.



7.2 Electrical and electronic waste



Electrical and electronic waste

Appliances with this logo on the packaging or on the appliance must be disposed of separately. These devices must not be disposed of with normal household waste.

You are responsible for ensuring that any electrical or electronic waste is disposed of through the appropriate channels.

7.3 Final utilization

After 10 years (from the manufacturer's date) or when the extinguishing system is triggered, the RACLAN SQUARE-Box must be disposed of or professionally refurbished.

7.3.1 Waste disposal

The applicable regulations of the responsible local institutions and legal requirements must be met.

7.3.2 Revision

The RACLAN SQUARE box can be returned to the manufacturer in consultation with the responsible sales partners. This only applies to boxes without external damage. In the event of external damage, transportation safety is no longer guaranteed and the RACLAN SQUARE box must be disposed of on site. The refurbishment can be carried out either by authorized partners on site or by FISACON GmbH directly.



The requirements for this are regulated in the separate business process.

In principle, the following applies:

- The extinguishing system has not been triggered.
- The extinguishing agent container is not defective and the extinguishing agent has not leaked.
- The electrical functionality is still given.
- The housing is not damaged.
- All keys are still available.

After the overhaul process, the customer generally receives their own box back. Only the general terms and conditions of FISACON GmbH

7.3.3 Disposal after triggering

The RACLAN SQUARE-Box is designed for single use.

After the fire extinguishing system has been triggered, the RACLAN SQUARE-Box must be disposed of as hazardous material together with the damaged lithium-ion battery.

The dangerous goods are subject to the special transport regulations ADR P911.

- Disposal may only be carried out by an appropriate specialist/company.
- The local regulations and laws on proper waste recycling and disposal of hazardous substances must be complied with.



- Suitable protective equipment must be worn:
 - Sturdy work clothes,
 - Safety shoes protection class 1,
 - Hand protection according to EN ISO 374,
 - Safety goggles of strength class T,
 - Respiratory protection FFP3 mask

8



Appendix

- Safety data sheets (extinguishing agent, lithium-ion battery (internal))
- EC / EU Declaration of Conformity

8.1 Safety data sheets

The safety data sheets for the internal lithium-ion battery and the extinguishing agent can be requested at info@fisacon.com or downloaded from the homepage www.fisacon.com.

8.2 EC / EU Declaration of Conformity

The manufacturer

FISACON GmbH, Augsburg Str. 2-6, 33378 Rheda-Wiedenbrück, Germany

hereby declares that the following product

Product designation: RACLAN SQUARE-Box

Model designation: RQ9900

Year of construction: from 2024

complies with all relevant provisions of the applicable legal regulations (hereinafter) - including their amendments in force at the time of the declaration. The sole responsibility for issuing this declaration of conformity lies with the manufacturer.

The following legal provisions were applied:

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

The following harmonized standards - or parts thereof - were applied:

DIN EN 60320-1 VDE 0625-1:2023-06

Appliance couplers for household and similar general purposes - Part 1: General requirements (IEC 60320-1:2021)

DIN EN 60335-1 VDE 0700-1:2024-07

Household and similar electrical appliances - Safety - Part 1: General requirements (IEC 60335-1:2020, modified + COR1:2021);

The following other technical standards/specifications - or parts thereof - have been applied:

M02/2022:2022 Storage means for lithium-ion batteries

Rheda-Wiedenbrück, August 15, 2024, Rainer Daniel

FISACON GmbH
Augsburger Straße 2-6
33378 Rheda Wiedenbrück
Germany