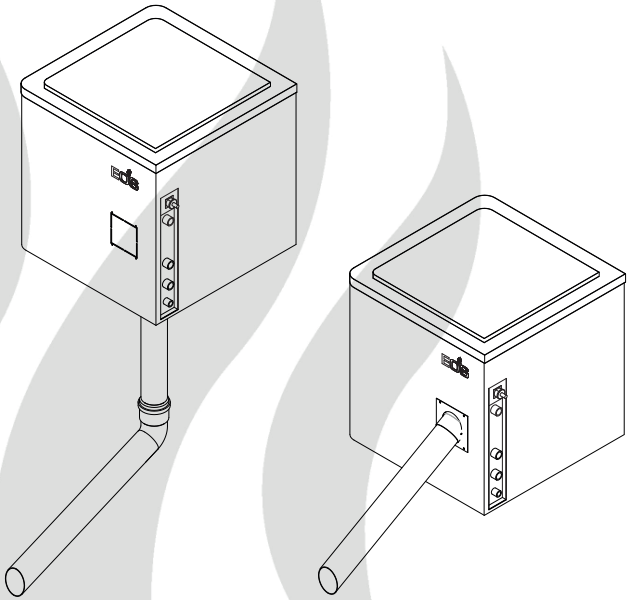
INNOVATIVE SAUNA TECHNOLOGY

Flake ice machine
E-Cool Wall



GB **Installation and operating manual**

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CE

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English

content

Dear customer

You have bought a high-quality technological device which will give you years of pleasure. This flake ice machine was designed and tested in compliance with the current European safety standards and was produced in the manufacturer's factory in compliance with the quality standard DIN EN ISO 9001:2008.

These assembly and operating instructions have been drawn up for your information. Please read the important information and the information about the electrical connection through carefully.

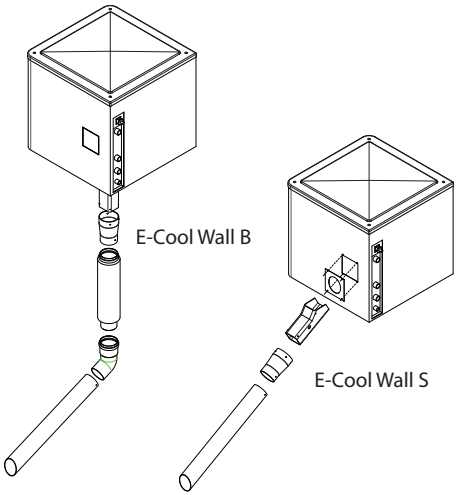
We wish you an exhilarating and refreshing recreational experience.

Delivery scope

The following are included in the scope of delivery:

1 flake ice machine
1 hose set
1 Reduction
1 Stainless steel tube
1 set of installation and operating instructions

Models with a floor outlet:
1 HT pipe 75 (1m)
1 elbow 67°
1 Armaflex hose (1m)



Appropriate use

The intended purpose of this flake ice machine is the continuous production of flake ice. The filling level of the collection tray is monitored by a sensor. The time during which the flake ice machine produces ice can be set via a programmable operating display.

Compliance with the standard operation, maintenance and repair conditions is also an element of appropriate use.

The manufacturer cannot be held liable for deviating, unauthorized alterations and any resulting damages: the initiator of these changes bears the full risk.

General information

Check first that the flake ice machine is undamaged on delivery. Please reclaim transport damages immediately with the forwarding company or contact the company who supplied you with the device.

The flake ice machine is designed for installation in rooms with room temperatures between 10 °C and 40 °C. If the machine is operated for longer periods outside this temperature range, this is deemed as incorrect handling and will invalidate the warranty.

Optimum ice preparation can only be guaranteed, if the input temperature of the connected water supply lies below 30 °C.

The water circuit must be disinfected on a regular basis so that no germs or bacteria can collect in it. You can set the time and frequency of the disinfection process via the operating display..

Important notes

- Please read these assembly and operating instructions carefully. In particular, please observe the dimensions stated and the following notes.
- This device can be used by children aged 8 and above or by persons with physical, sensory, or mental disabilities, or who have inadequate experience and knowledge, if they are instructed or initially supervised in the use of the device and the associated risks. Do not allow children to play with this appliance. Children may not clean or carry out any user maintenance if unsupervised.
- Children should be supervised to make sure that they will not play with the unit.
-  When installing the flake ice machine, ensure that it is not placed near a heat source or in direct sunlight.
- The flake ice machine must be fitted in a manner that ensure that it cannot tip over.
-  Before servicing or opening the machine, disconnect it from the local mains supply by removing the earthed socket.
- Please take precautions when cleaning components with sharp edges.
- Do not use high-pressure cleaners to clean the flake ice machine.

Machine description

Overview

E-Cool Wall B
Art. No. 94 6096

E-Cool Wall S
Art. No. 94 6087

TECHNICAL DATA

General

Voltage: 230 V AC / 50 Hz
Power: 500 W
Fuse: 10 A
Height: 525 mm
Width: 560 mm
Depth: 530 mm
Weight: 49 kg.
Water consumption: 100 l/h

Important notes:

The regulations of EN 1717 or DIN 1988 part 4 must be observed. Suitable measures must be taken to avoid water flowing back into the drinking water mains. Pipe dividers or system dividers are suitable for this. Ask your drinking water supplier or a specialist sanitary dealer.

Water connection

Provide a suitable on-site check valve or back-flow preventer to protect the drinking water pursuant to DIN 1717.

Water quality: Drinking water
Incoming pressure: min. 1 bar, max. 5 bar
Connection: 3/4"
Drain: 3/4"
Ø 21 mm *(condensate)*

Note!

If water with a low mineral content is used, the flake ice that is produced is relatively dry.

Working principle

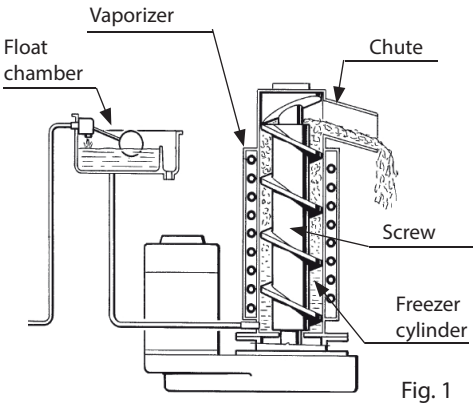


Fig. 1

The supply water flows from the back of the machine through a float valve to the float chamber. The float chamber is designed so that a regular and correct water level is maintained within the freezer cylinder.

The water reaches the inside of the freezer cylinder through a connecting hose from the float chamber. This is where it becomes ice.

There is a screw inside the freezer cylinder that turns anti-clockwise. It moves the ice upwards. When moved, the ice becomes thicker until it reaches the ice breaker.

A certain amount of pressure is generated here so that the ice is split into small grains, which drop through the ice duct and into the ice tray.

Assembly

Unpacking the machine

The flake ice machine is delivered on a wooden pallet wrapped in film.

- Remove the packaging. Ensure that the machine is not damaged when using sharp-edged tools.

Installation location

When selecting the position for the flake ice machine, please not the following:

- The flake ice machine may only be placed indoors.
- Verify that the ambient temperature of the system is between +10°C and +40°C.
- The flake ice machine may not stand next to sources of heat.
- Avoid direct sunlight.

E-Cool Wall B
Art. No. 94 6096

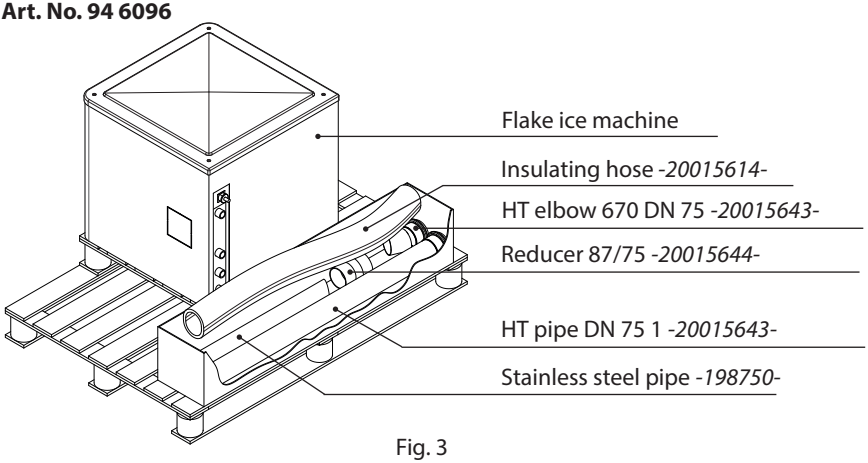


Fig. 3

E-Cool Wall S
Art. No. 94 6087

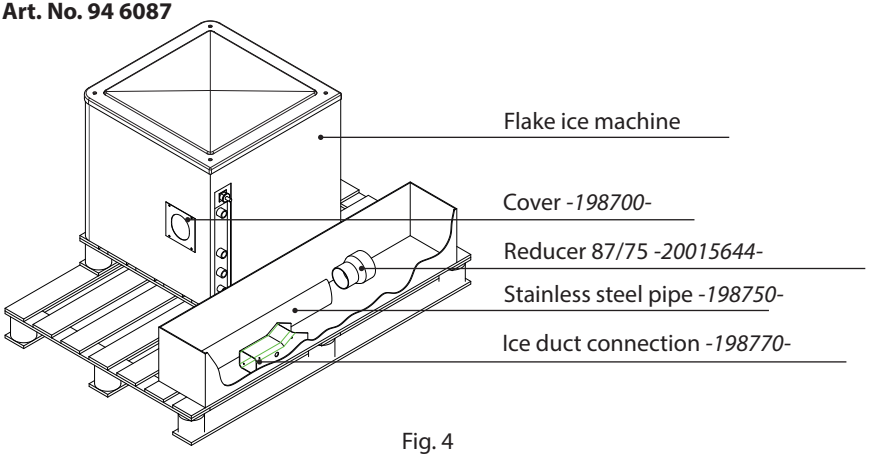


Fig. 4

Aligning the machine

- Put up the flake ice machine at its intended place.
- Unit not connected to the power or water supply.
- Use a spirit level to ensure that it stands horizontally.

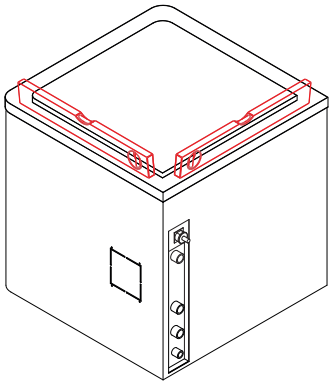


Fig. 5

Attaching the machine

- Fasten the flake ice machine to the place of installation.
- Unit not connected to the power or water supply.
- Take off the hood to fasten the unit.
- Leave at least 150 mm between the wall and all sides of the unit.

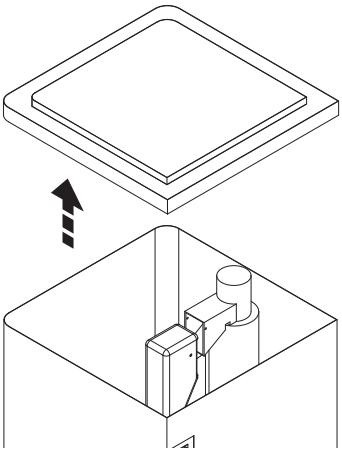


Fig. 6

Mounting in the ground

- Mark the fastening points through the floor.
- Drill an appropriately sized hole into the fastening points and fasten the unit.
- Put the hood back on

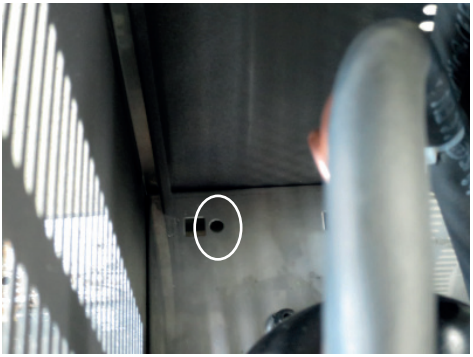


Fig. 7

Connection

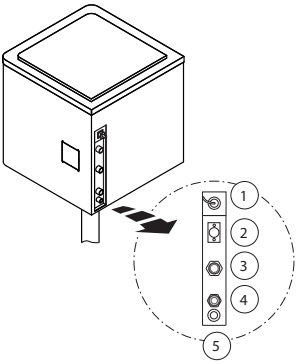


Fig. 8

1	Mains cable with plug
2	Feed line / flake ice machine
3	Feed line / cooling
4	Drain / cooling
5	Drain

Before taking out ice for use, remove the ice added to the ice tray during the disinfection phase.

- Connect the supply and return lines in compliance with the national and international guidelines.
- Connect the water supply in compliance with DIN EN 1717. Observe the technical data for the water supply.
- Connect the power supply.

Note!

Do not interconnect but separately fit water drains 4 and 5 to a floor drain. This prevents water from the cooling system's return pipe from being pressed into the drain of the condensate dish.

Note!

Excessive voltage fluctuations can impact on the function of the machine and lead to serious damage to the electronic control system.

Operations

Operating display

The operating display indicates the operating status.

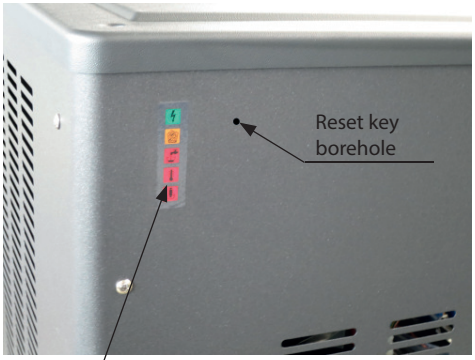


Fig. 9

Reset of the disinfection/descaling monitoring.

The Reset button is located behind the 3 mm hole. To activate the Reset button, take a pin (Ø 3 mm) and push it into the borehole as far as it will go.

The various displays have the following meaning:

Machine in operation (goes out automatically outside the programmed operating time).

Maximum filling level of the ice tray has been reached.

Lack of water in the float chamber.

On: condenser temperature too high.

Flashes: pressure equalisation runs, ice production within approx. 6 minutes

On: Screw turns in wrong direction.

Flashes: Evaporator temperature is too high.

Switch the machine on

- Check if the machine is connected correctly.
  - Mains plug connected?
  - Supply water connected?
  - Supply and return lines of the cooling circuit connected?
  - Feed and drain lines installed in compliance with valid regulations?
- Open the water supply at customer's site.
- Plug in to the mains.
- The green LED of the operating display is on.

Fig. 10

- The middle red LED flashes. After a waiting period of 3 minutes, the middle red LED goes out and the screw drive and the compressor start.
- The first ice is available about 2 to 3 minutes after starting the compressor.

Note!

As the evaporation temperature is still too high initially, you should wait for about 10 minutes. The ice only has the required consistency after about 10 minutes.

Machine produces

The flake ice machine continuously produce flake ice which drops into the ice duct.

Ice feeding is monitored by a sensor at the ice duct. If the maximum filling level has been reached, the flake ice production is stopped automatically.

Flake ice production starts automatically when the ice level in the duct reduces.

Switch off the machine

- Unplug from the mains

Decommissioning

- Close the water supply at customer's site.
- Disconnect the flake ice machine from the mains.
- Remove the mains plug.
- Disinfect and empty the water circuit.
- Disconnect all connections.
  - Release the water supply hose.
  - Release the connection for the supply and return lines of the cooling circuit.
  - Release the hose of the supply and return line connections.
- Release and remove the hood from the housing.
- Verify that there is no water in the ice machine.
- Dry the flake ice machine with a soft cloth

Malfunctions

If a malfunction occurs that you cannot remedy, please contact the customer service. The contact data is stated in the service address.

Error	Cause	Remedy/comments
Flake ice machine does not work.	Mains plug not in	Plug in to the mains
	Machine outside the set operating time.	Set operating time correctly (see section 'Set time control').
Orange LED shines although there is not ice in the ice tray.	Filling level sensor faulty.	Clean filling level sensor or arrange for it to be replaced by a specialist.
	No cooling	Check the supply line to the cooling system.
The upper red LED shines.	No´water for the ice production.	Check water supply.
	No cooling	Check the supply line to the cooling system.
The middle red LED shines.	Pressure is too high.	Contact customer service.
	Room temperature is too low	Regulate room temperature
Lowest red LED flashes.	Evaporation temperature is too high.	Check the feed and return lines of the cooling system.
Lowest red LED shines.	Screw turns in wrong direction.	Contact customer service.
	Rotational speed of the screw is too low.	Check ball bearings. Contact customer service.
Compressor works irregularly.	Low voltage.	An electrician should check the power circuit for overload. Check power supply.
	Gas that cannot condense in the system.	Contact customer service.
	Faulty compressor cable.	Contact customer service.

Error	Cause	Remedy/comments
Low ice production.	Insufficient water in the cooling circuit.	Increase flow quantity.
	Cooling water is too warm.	Reduce water temperature.
Machine works but does not produce ice.	Water supply hose blocked.	Replace the water supply hose.
	Worn gears	Contact customer service.
	No´water for the ice production.	Ensure a supply of water for the ice production.
Ice is wet.	Room temperature is too high.	Position the flake ice machine in a cool place.
	Too much coolant in the system.	Contact customer service.
	Too much water in the ice tray.	Check water drain. Contact customer service.
	Faulty compressor.	Contact customer service.
Very loud.	Faulty ball bearings.	Contact customer service.

Maintenance

Maintenance interval

The flake ice machine must be serviced every six months.

Maintenance work

Caution!

Risk of injury from electrical voltage.

Always disconnect the machine from the power supply before carrying out any maintenance.

Maintenance involves the following tasks:

- Lubricate the ball bearing
- Refill the disinfectant or replace the tank.
- Descale the water circuit.De-scale the water circuit.

Lubricate the ball bearings.

- Cut the cable ties.
- Lift the foam cover off.
- Grease the ball bearings.
- Place the foam cover on top and affix with a cable tie.

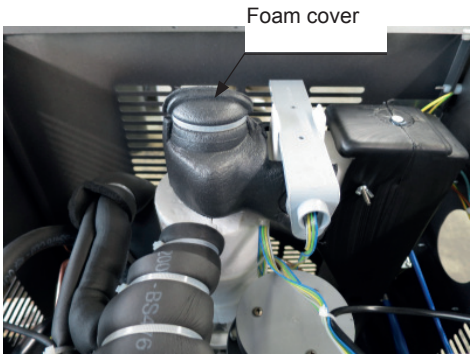


Fig. 11

Remove the covers

Servicing requires the hood to be open.

- Remove the mains plug.
- Lift the hood off the housing.

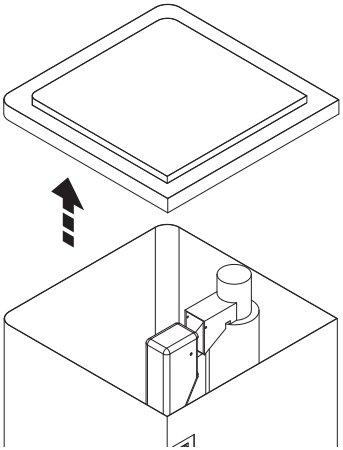


Abb.10

- **Before servicing or opening the machine, disconnect it from the local mains supply by removing the earthed socket.**
- **Please take precautions when cleaning components with sharp edges.**
- **Do not use a pressure washer to clean the flake ice machine.**

Caution!

Risk of injury from chemical substances.

Take heed of the data sheet associated with the disinfectant you are handling. Wear personal protective equipment as appropriate

Descale the water circuit

- Disconnect the flake ice machine from the mains.
- Remove the mains plug.
- Take the ice from the ice tray to ensure it does not come into contact with the descaling solution.
- Connect the water supply.
- Lift the hood off the housing.
- Take the lid off the fresh water supply's float housing.
- Connect a jumper between the two sensor rods M3 on the lid of the float chamber. Ensure that the sensor rods do not touch the housing of the flake ice machine. This would mean that current would be sent from the condenser sensor to the PCB. As a result, the machine would shut down due to an excessive temperature.
- Disconnect the lower side of the connection hose between the float housing and freezer cylinder and collect the released water in a tank.
- Remount the connection hose again.
- Mix the descaling solution by adding 0.2 to 0.3 ltr of SCOTSMAN scale remover to 2 to 3 ltr of warm water (45°C - 50°C).
- Pour the descaling solution slowly in to the float chamber.
- Close the lid of the unit.
- Switch on the flake ice machine by plugging it in.
- Once the flake ice machine is in operation, gradually pour the descaling solution slowly in to the float chamber.
- Wait until the entire descaling solution has run through the system.
- Open the water supply. Allow the machine to run until the ice that is produced is clean and compact again. The ice that contains traces of descaling solution will look yellow and be soft.

Caution!

Risk of injury from corrosive substances.

The de-scaling solution contains phosphoric acid and acetic acid. Can seriously damage you eyes on contact. Swallowing or skin contact can lead to burns.

When handling the de-scaling solution, always wear protective clothing in compliance with the health & safety regulations.

Caution!

Electric shock hazard!

Risk of injury from chemical substances.

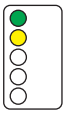
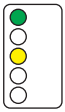
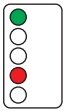
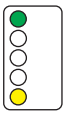
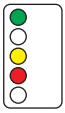
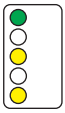
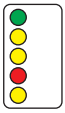
- **The ice that contains traces of descaling solution must be removed. It cannot be used.**

Note!

The machine may sound louder during the descaling process. This is an indication of heavy scaling inside the freezer cylinder. If this is the case, you should switch off the flake ice machine for a few minutes to allow the lime deposits inside the freezer cylinder to come loose.

- Switch off the flake ice machine by plugging it out.
- Take the ice from the ice tray or unfreeze with warm water.
- The descaling process is complete.

Status Description

LED	STATUS	BESCHREIBUNG - *REASON WHY*
	**Ständig an** *On steady*	**Maschine AUS, Speicher voll** *Unit off at bin full*
	Blinkt langsam *Blinking slow*	**Lichtschranke unterbrochen!** *I/R beam cutted*
	Blinkt schnell *Blinking fast*	**Speicher entleert, Maschine startet gleich** *I/R on after trip off at bin full*
	**Ständig an** *On steady*	**Kein Wasser!** *No water*
	**Ständig an** *On steady*	**Zu hoher Kondensationsdruck oder Raumtemperatur (<+3˚C)** *Too hi discharge pressure/temp or to low room temp (<+3˚C)*
	Blinkt *Blinking*	**6 min** *6 min.*
	**Ständig an** *On steady*	**Keine, zu langsame oder schwere Getrieberotation** *No, slow or wrong rotation of drive motor*
	Blinkt *Blinking*	**Zu hohe Verd.temp. >0˚C 10 min. nach dem Start oder zu niedrige Verd.temp. < -25˚C** *Too hi evap. temp. (>0˚C) after 10' from start up or too low evap. temp (<-25˚C)*
	**Ständig an** *On steady*	**Kondensatorfühler defekt!** *Condenser sensor out of order*
	Blinkt *Blinking*	**Verdampferfühler defekt!** *Evaporator sensor out of order*
	Blinkt im Wechsel *Blinking alternate*	**Lichtschranke defekt!** *Optical ice level control out of order*
	**Blinkt** *Blinking*	**6 Monate Reinigungshinweis für Wassersystem je nach Jumper Konfig.!** *6 months water system cleaning remind (according to the Jumper setting)*
	**Blinken nacheinander** *Blinking in sequence*	**Spülzyklus läuft, bei Maschinen mit Ablaßventil** *Purge cycle in operation (only on units equipped with purge valve)*
	Blinken *Blinking*	**Jumper Konfig. im Testmodus** *Unit off due to the jumper on test contacts*

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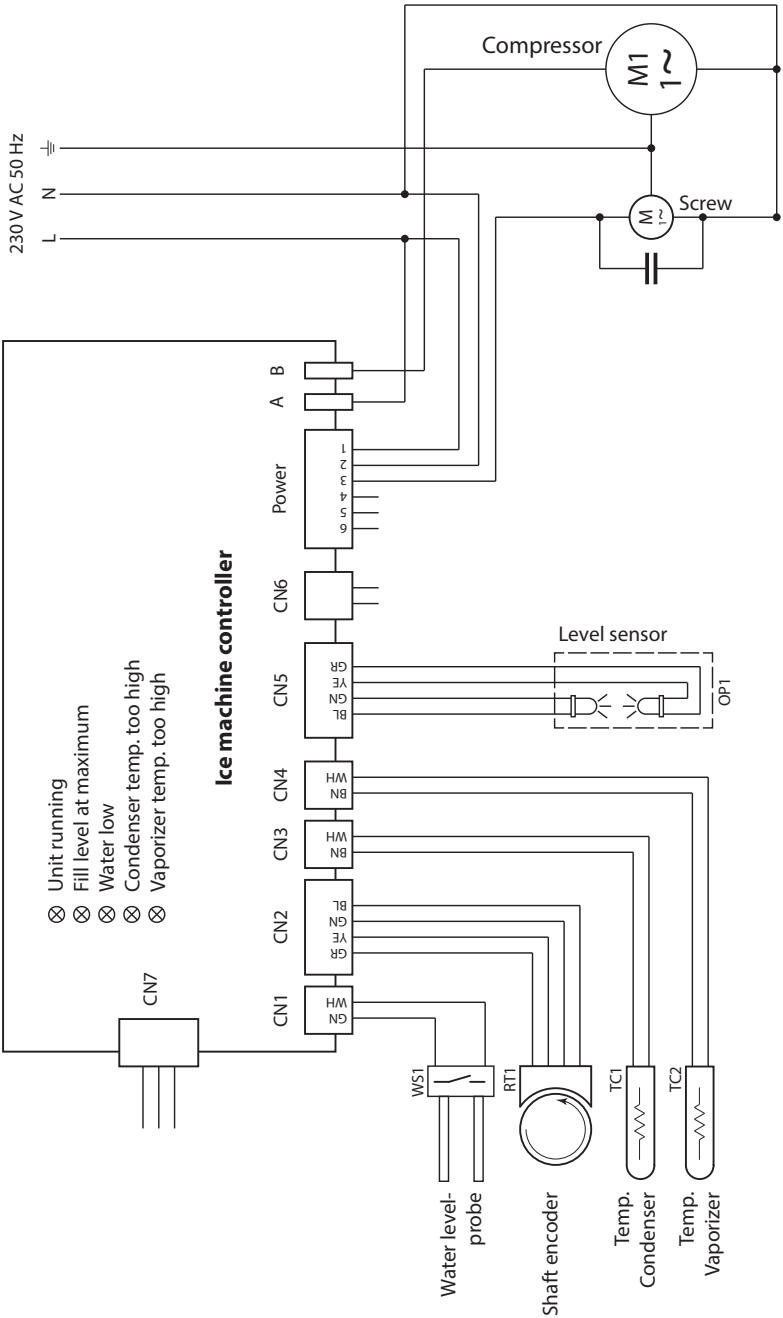
Wiring diagram



Please keep this address in a safe place together with the installation guide.

To help us answer your questions quickly and competently please provide the information printed on the type shield including the model, item no. and serial no., in all inquiries.

Service Address:

EOS Saunatechnik GmbH
Schneiderstriesch 1

35759 Driedorf, Germany

Tel: +49 (0)2775 82-514
Fax: +49 (0)2775 82-431

servicecenter@eos-sauna.de
www.eos-sauna.de

WARRANTY

The warranty is provided according to the legal regulations at present.

Manufacturer's guarantee:

- The guarantee begins with the date of purchase and lasts for 3 years by commercial and private use.
- Always include the completed guarantee certificate when returning equipment.
- The guarantee is void for appliances which have been modified without manufacturer's explicit agreement.
- Damages caused by incorrect operation or handling through non-authorized persons are not covered under the terms of guarantee.
- In the event of a claim please indicate the serial number as well as the item number and model name with detailed description of the fault.
- This guarantee covers defective parts and labour but not the defects caused by wear and tear.

In case of complaint please return the equipment in its original packaging or other suitable packaging (caution: danger of transport damage) to our service department.

Always include the completed warranty certificate when returning equipment.

Possible shipping costs arising from the transport to and from point of repair cannot be overtaken by us.

Outside of Germany please contact your specialist dealer in case of warranty claims. Direct warranty processing with our service department is in this case not possible.

Equipment commissioning date:

Stamp and signature of the authorized electrician:

General Terms and Conditions of Service

I. Scope

Unless otherwise agreed in writing in a specific case, these terms and conditions of service shall apply to service operations, including examining and repairing complaints. All our existing or future legal relationships shall be governed solely by the following terms and conditions of service. Our recognition of any conflicting terms and conditions of the Ordering Party shall be conditional upon our having given our express written consent to their applicability. We hereby expressly object to any terms and conditions of the Ordering Party contained in its General Terms and Conditions of Business or order confirmation. If order confirmations or deliveries are accepted without reservation, this shall not be deemed to constitute recognition of such terms and conditions. Any ancillary agreements or amendments must be confirmed in writing.

II. Prices and Payment Terms

The Ordering Party shall bear the following costs in connection with the service operation:

- Disassembly/assembly and electrical (de-) installation
- Transportation, postage and packaging
- Function testing and troubleshooting including inspection and repair costs

There shall be no third-party billing.

III. Performance Obligations / Ordering Party's Cooperation

The Ordering Party shall provide free-of-charge assistance to the manufacturer in carrying out the service operation.

In the case of a warranty claim, the manufacturer shall make the replacement parts necessary for the service available to the Ordering Party free of charge.

IV. Service Visit by the manufacturer

In the event that it is essential that a manufacturer employee carry out the service operation on site, this must be agreed in advance. Where the main reason for the service call is not the fault of the manufacturer, any costs incurred shall be recharged to the Ordering Party after the service visit.

V. Liability

The manufacturer shall assume liability in accordance with the currently applicable statutory regulations. The packaging for all of our products is designed for the shipping of individually packed goods (pallet). We expressly point out that our packaging is not suitable for individual shipments via parcel post. The manufacturer shall accept no liability for damage incurred as a result of improper packaging in an individual shipment.

VI. Manufacturer's Warranty

The manufacturer's warranty shall apply only in the event that installation, operation and maintenance have been carried out in accordance with the manufacturer's specifications contained in the assembly instructions and instructions for use.

• The warranty period shall commence from the date on which proof of purchase is provided and shall be limited, in principle, to 36 months.

• Warranty services shall be performed only if the proof of purchase relating to the equipment can be presented.

• Any and all warranty claims shall become void if modifications are made to the equipment without the manufacturer's express consent.

• Any warranty claim shall likewise become void in the case of defects that arise due to repairs or interventions made by unauthorized persons or due to improper use.

• In the case of warranty claims, the serial and article numbers must be indicated together with the designation and a meaningful description of the fault.

• This warranty shall cover defective equipment parts, with the exception of normal wear parts. Wear parts shall include, among other things, light sources, starters, gas or oil pressure dampers as well as acrylic glass panes, tubular heating elements and sauna heater stones.

• Only original replacement parts may be used within the warranty.

• Service visits by outside companies shall require a written order to be issued by our service department.

• The equipment in question shall be sent to our service department by the Ordering Party and at its expense.

• Electrical assembly and installation work, including in the event of service or replacement, shall be carried out at the Customer's expense and shall not be borne by the manufacturer.

Complaints in respect of our products shall be reported to the specialist trader responsible and shall be exclusively handled via the latter.

The manufacturers General Terms and Conditions of Business, as amended, shall apply in addition to the foregoing terms and conditions of service.

As of 06/2015