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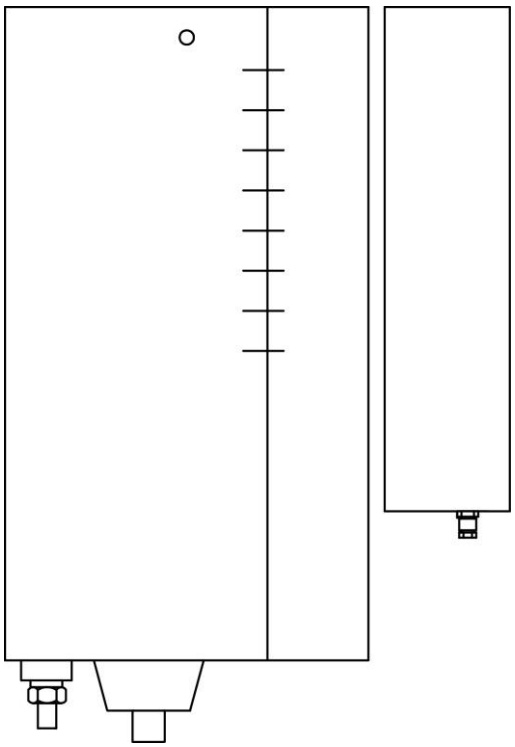

Professional Steam Bath Generators

Cleo Basic

Installation, maintenance and operation

Item no. 90549001
EN 2015/01 R03

EN

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Current as of: 20/10/2014

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Foreword

Thank you for buying the Cleopatra Cleo Basic steam generator. This will be referred to as Cleo Basic from now on. Please read this manual carefully before installing the device. Improper installation may cause property damage, severe personal injury, or death as a result of electric shock, burns, and/or fire. Read this manual carefully before you begin with the installation, operation or maintenance. Do not change anything inside the unit. Failure to comply with these instructions can damage the equipment.

Humidifiers are units for a fixed installation. Humidifiers are used to humidify the air. Do not use a humidifier for any another use than described. Do not change anything inside the humidifier. Do not change the original wiring. Do not use parts made by third parties inside the humidifier. Use a humidifier only when it is correctly installed and with the door closed. Do not connect external systems to the internal electric supply of the humidifier. The humidifiers cannot be installed outdoor.

Only qualified electrical personnel should perform field wiring installation procedures and maintenance. Improper wiring or contact with energized circuits may cause property damage, severe personal injury or cause death as a result of electric shock and/or fire. The steam pipes must be installed correctly. Make sure water from steam pipes can flow back to the steam cylinder.

External wirings must be in accordance with the correct wiring diagram, national and local electrical codes and by laws. The coding switches are set ex work to define the size of the humidifier, the heating voltage and the number of phases of the electric supply system. Do not change the position of these coding switches.

Maintenance
When performing maintenance on the Cleo Basic, disconnect all electrical supply systems. Wait until the temperature of the steam cylinder drops to the ambient temperature and empty the cylinder. Close the installed supply shut-off valve.
Regular maintenance and cleaning of the Cleo Basic is necessary.
Regularly check all parts, valves, and contactor and inspect the steam cylinder. A check of the unit and its components should be made every 500 hours of operation. Verify proper operation of the control system, humidistat, humidity probe, high limit humidistat and air flow proving switch. Good knowledge of electrode humidifiers, air-conditioning and control technology is essential to establish diagnostics or take any measures.

Safety
Instructions

Please read through the operating manual very carefully before performing any assembly or maintenance work and follow the instructions.
It is essential to observe them.

The Cleo Basic Steam Bath Generator is manufactured according to the latest TUV requirements and meets the technical safety regulations. Inappropriate use can nevertheless represent danger to the user or for third parties. The national and local regulations should also be observed in addition to these safety instructions.
Optimum operation of the product is secured when one follows the following instructions. Please contact the specialist dealer if you have any questions about the installation or steam moistening.

Appropriate use

The Cleo Basic Steam Bath Generator is specifically and exclusively designed for generating steam in steam baths. Any other or similar use is not seen as appropriate use and is therefore undertaken at one's own risk. The manufacturer/supplier is not liable for any damages made during installation.
The steam bath generator and all technical components may only be installed in a technical space except the cabin light and the temperature sensor.
The steam bath generator and all associated components must be fastened in place using screws and plugs.

Safety
Instructions

These instructions are intended for the installer. Read all instructions carefully to familiarize yourself with the product, components, known constructions and installation tips covered in this manual. This insures a correct and safe installation. The Cleo Basic should be installed by qualified and properly trained personnel.

The Cleo Basic complies with the applicable standards and regulations and therefore presents no hazards for the user providing the Cleo Basic is installed and used according to the instructions included by the manufacturer. The electrical and mechanical parts should be maintained for and kept fully operational. For this reason, these instructions are to be followed carefully.

All information and instructions in this manual have been composed taking into account the applicable standards and regulations, the state of the art technology and our many years of experience.

Please check the product for possible damage which could have occurred during transport. After installation a claim for surface damage will not be accepted by Cleopatra.

Any rights to make a warranty claim are excluded if any changes are made to the original product or parts of it. This operating manual should be kept close to the device, for rapid access to it when it is needed.


Use screws and plugs to attach Cleo Basic to the wall. Walls that support the Cleo Basic should be strong enough to carry the weight or otherwise be reinforced. The plugs supplied are intended for use in concrete/solid stone walls. In case the walls are made of a different material use plugs suitable for this type of wall.
(Not in scope of delivery)

Cleopatra accepts no liability for damage caused by:

- Non-observance of the manual
- Incorrect use
- The use of untrained personnel
- Unauthorized modifications
- Technical changes
- The use of unapproved spare parts

Don’t use the Cleo Basic when it is not in perfect condition

Correct use:
The Cleo Basic may only be used indoors.
Use in any other way is not permitted and is at the risk of the user.

Do not use in abrasive environment.

Safety
Symbols used in the instruction manual

The symbols described below appear in the installation instructions and on the product itself. It is imperative to follow the safety instructions to avoid accidents, injuries and damages. Procedures marked with these symbols require special attention.

Caution! Not following the correct procedure can damage the product or lead to malfunctions.

Hazard identification symbols
Indicates the possibility of a hazard

Attention general hazard
Informs the personnel concerned that the process described, unless performed in compliance with the safety rules, bears the risk of injury.

Attention, two people handling required
Use assistance when handling procedure. If this procedure is not observed, the product or objects within its environment may be damaged.

Pinch point hazard
Caution hand injury. Watch your hands.

Hot surface hazard
Don't touch. Danger of scalding. The surrounding area, including the floor, can be hot.

High voltage hazard / Electric shock risk
Procedures involving electricity are dangerous. All installation and inspection works must be carried out by an approved electrician.

Slippery when wet
Floors and surfaces can be slippery when wet.

Mandatory action
Indicates an action that should be taken to avoid a hazard

Specific instructions or information
Procedures marked with this symbol require special attention.

Read before use
Please read carefully before using product or proceeding with installation.

Gloves required
To prevent hand injury wear proper protective gear during installation of the product.

Foot protection required
To prevent foot injury wear proper protective gear during installation of the product.

Eye protection required
To prevent eye injury wear safety glasses during installation of the product.

Prohibition symbols
Indicates an action should not be taken or should be stopped

Do not stand or step on
Do not stand or step on products or parts of products. Includes roofs and walls of cabins.

Symbols used on product
Symbols used on the product and parts of the product or packaging

Steam outflow
Indicates the position where steam exits the steam generator.

Water connection
Indicates the position of the water inlet on the steam generator

Equipotential connection
Indicates the position of equipotential connection.

Disposal of parts, old electrical and electronic equipment
This symbol on the product or on its packaging indicates that this product can't be treated as household waste.

Safety
Safety precautions

The device should only be installed, commissioned and maintained by suitably trained personnel / a specialized dealer. National and local regulations should be followed.

Set the product to the zero energy state prior to any cleaning and repair work, i.e. trigger the RCCB protective switch.

For electrical installation, all applicable VDE, country-specific and EU regulations in their respectively valid versions must be observed. All installation and inspection works must be carried out by an approved electrician and in accordance with VDE 0100 Part 701 / E IEC 60364-7-701.

Sockets should be grounded. The complete power supply is connected via:
- AC connection
  < 3.2kW = 230V 1N ~50Hz (L, N, PE)
  > 3.2kW = 400V 2N ~50Hz (L1, L2, N, PE)
- A main switch for disconnection with 3 mm contact contactopening.

Sockets must have earth terminals. The electrical mains (230 VAC 50 Hz or 400 VAC 50 Hz) to which components are connected must have a lockable multi-pole breaker installed and a 30 mA fault current protector (residual current circuit breaker) installed as demanded by DIN EN 60335-2-41/VDE 0700. If the electrical connecting cable is damaged, replace it.

Non double isolated cables need to be laid inside a pipe or a cable conduit. Do not install cables for 230 / 400 V and 12 V inside the same pipe.

Personal protective equipment
Use safety shoes, safety glasses and safety gloves while installing the Cleo Basic.

Appropriate use

The Cleo Basic is manufactured according to the latest state-of -the-art technology and meets the requirements of the technical safety regulations. Inappropriate use can nevertheless represent danger to the user or to third parties. The national and local regulations should also be observed in addition to these safety instructions. Optimal operation of the product is secured when the following instructions are followed. Please contact a specialized dealer if you have any questions about the installation of the Cleo Basic.

Steam bath generators of the type Cleo Basic generate steam for heating steam bath cabins. Any other or similar use is seen as not appropriate and is therefore undertaken at one's own risk. The manufacturer / supplier is not liable for any damages arising by inappropriate use.

- The Cleo Basic should not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions.

- Children should not be allowed near the Cleo Total to ensure they do not play with the Cleo Basic.

Modification of the Cleo Basic

No other than original Cleopatra devices or components may be installed on the Cleo Total. Use of anything other than original Cleopatra spare parts will lead to limitation or termination of the manufacturer's liability and warranty.

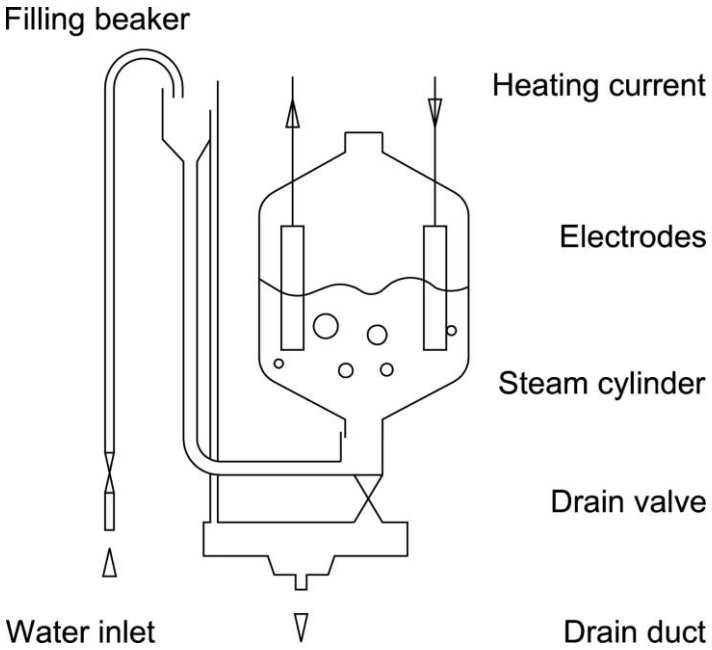
Function

Steam bath generators of the type Cleo Basic generate steam for heating steam bath cabins. They have a heating system which directly heats the water using electrodes. The supply water is passed through an entry valve and a special filling system into the steam cylinder. The electrodes connected with the mains power leads the heating current into the cylinder water. This heats the water up to boiling point and generates steam. During first commissioning of a new steam cylinder it can take a certain time (start phase) until the nominal power rating of the steam bath generator is reached. The amount of time is dependent on the conductivity of the supply water. The start phase can take up to a few hours for soft water; the nominal power rating will then be reached after the start phase has expired. A start phase will take place every time a new steam cylinder is installed.

Evaporation of the water increases the concentration of minerals in the cylinder water. The electronic regulating system therefore ensures automatic draining operations and continuously stabilizes the water conductivity.

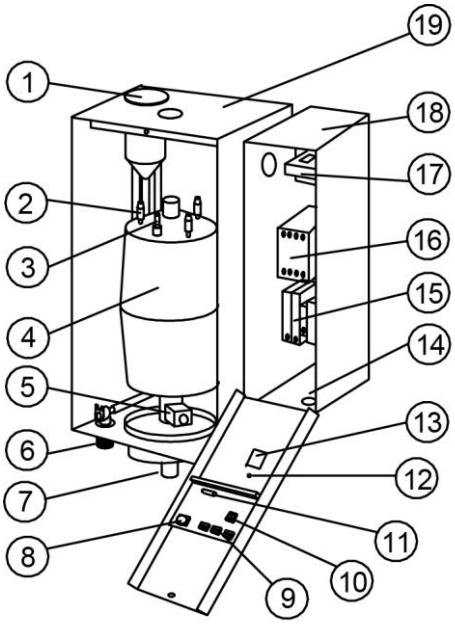
The generated steam warms up the steam bath cabin to the specified temperature. A temperature regulating circuit regulates the steam output according to the energy consumption of the cabin. This secures a stable temperature inside the cabin for optimal power consumption as well as a continuous steam flow.

Electrode steam generators generate steam at a very low pressure. Therefore the loss in pressure of the attached steam line or the steam nozzles must also be kept very low (a maximum of about 100 mm of water). Excess pressure can negatively affect achieving the nominal device output. It can result in malfunctions and can be dangerous and cause considerable damage to property or affect the nominal output and cause water spoilage.



Overview

The Cleo Basic steam bath generator is fitted with the following functions:



1	Fill cup cover
2	Steam cylinder plug
3	Max. water level sensor plug
4	Steam cylinder
5	Drainage valve
6	Water inlet with valve G1/2 male thread
7	Drainage tube
8	Manual drain button
9	Coding switches
10	Potentiometer for capacity limitation
11	Fuse
12	Messages led
13	Main switch
14	Cable glands
15	Electric terminals
16	Contactor
17	Current transformer
18	Electronic control box
19	Housing water

Scope of delivery

Model 4

- Steam hose 215mm
- Support tube 22X50
- Clamp 22mm

Model 8

- Steam hose 145mm
- Support tube 22X50
- Clamp 22mm

Model 15 & 23

- Steam hose 140mm
- Support tube 35X60
- Clamp 43mm

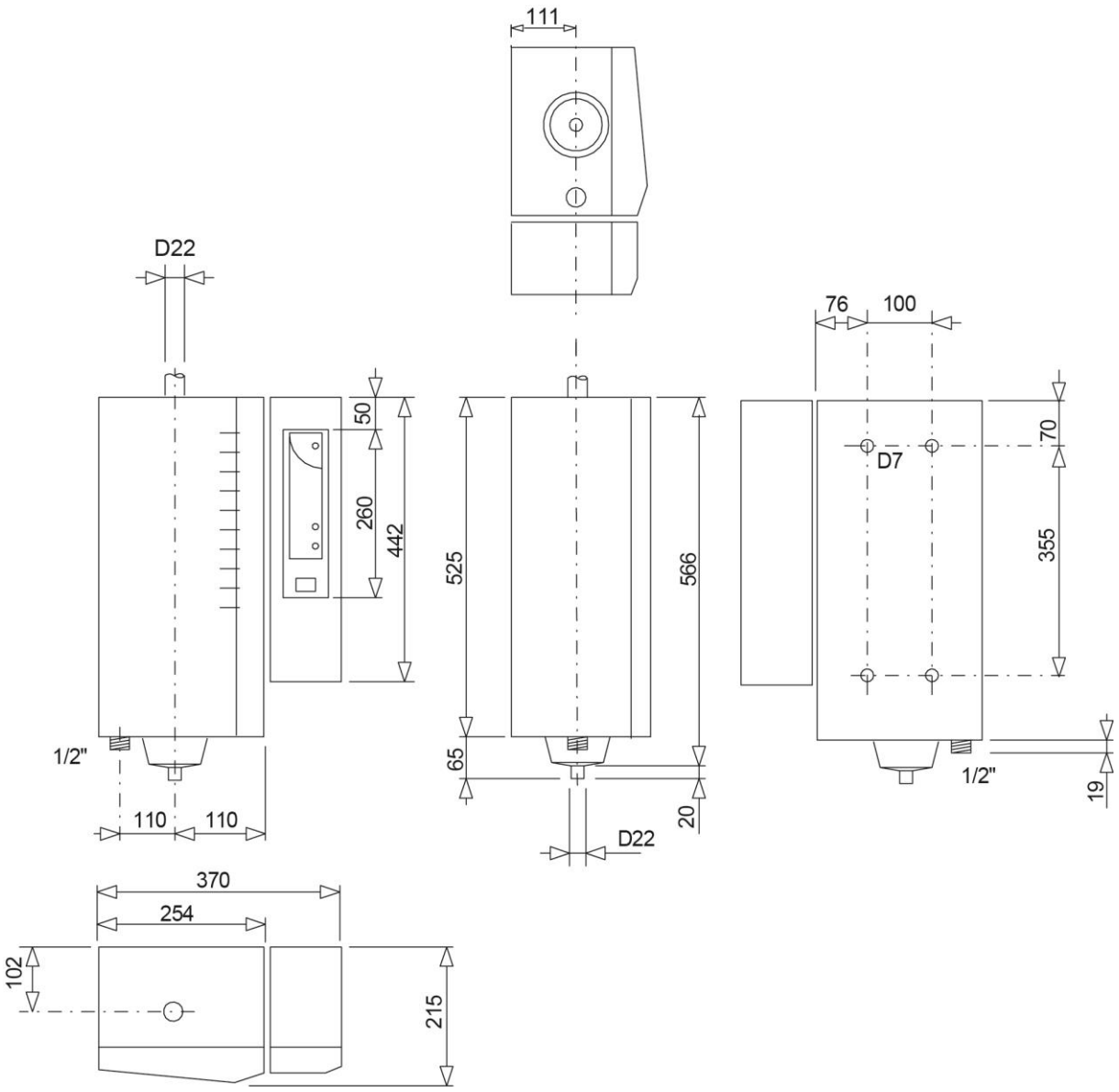
Model 32

- Steam hose 140mm
- Support tube 35X60
- Clamp 43mm

Model 45

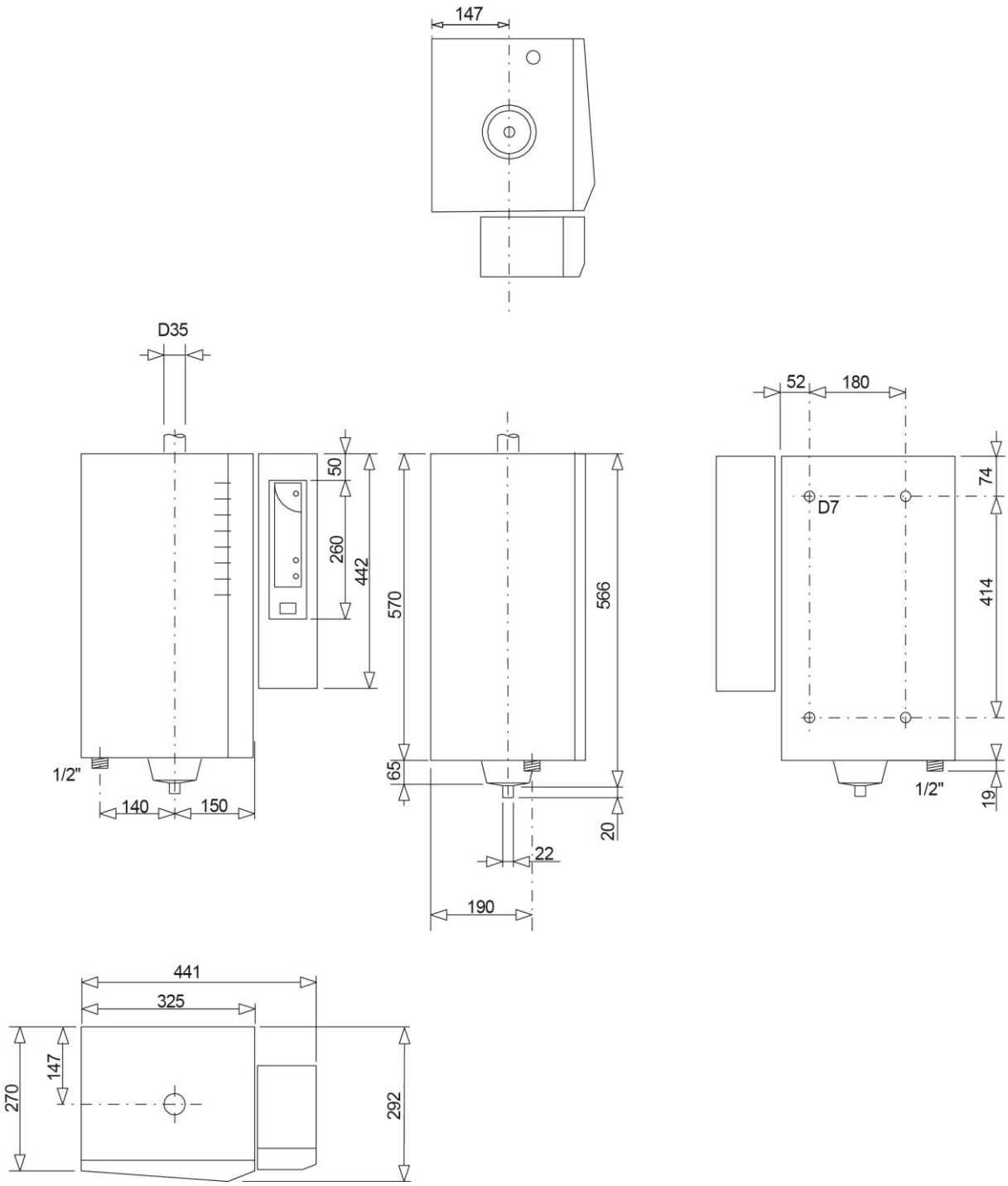
- Steam hose 140mm
- Support tube 35X60
- Clamp 2x43mm

Installation
Dimensions model 4 & 8



Model	Output kW	Steam tube	Drain	Netto weight kg	Bruto weight kg
4	3	Ø 22	Ø 22	10	13,5
8	6,1	Ø 22	Ø 22	11	17,5

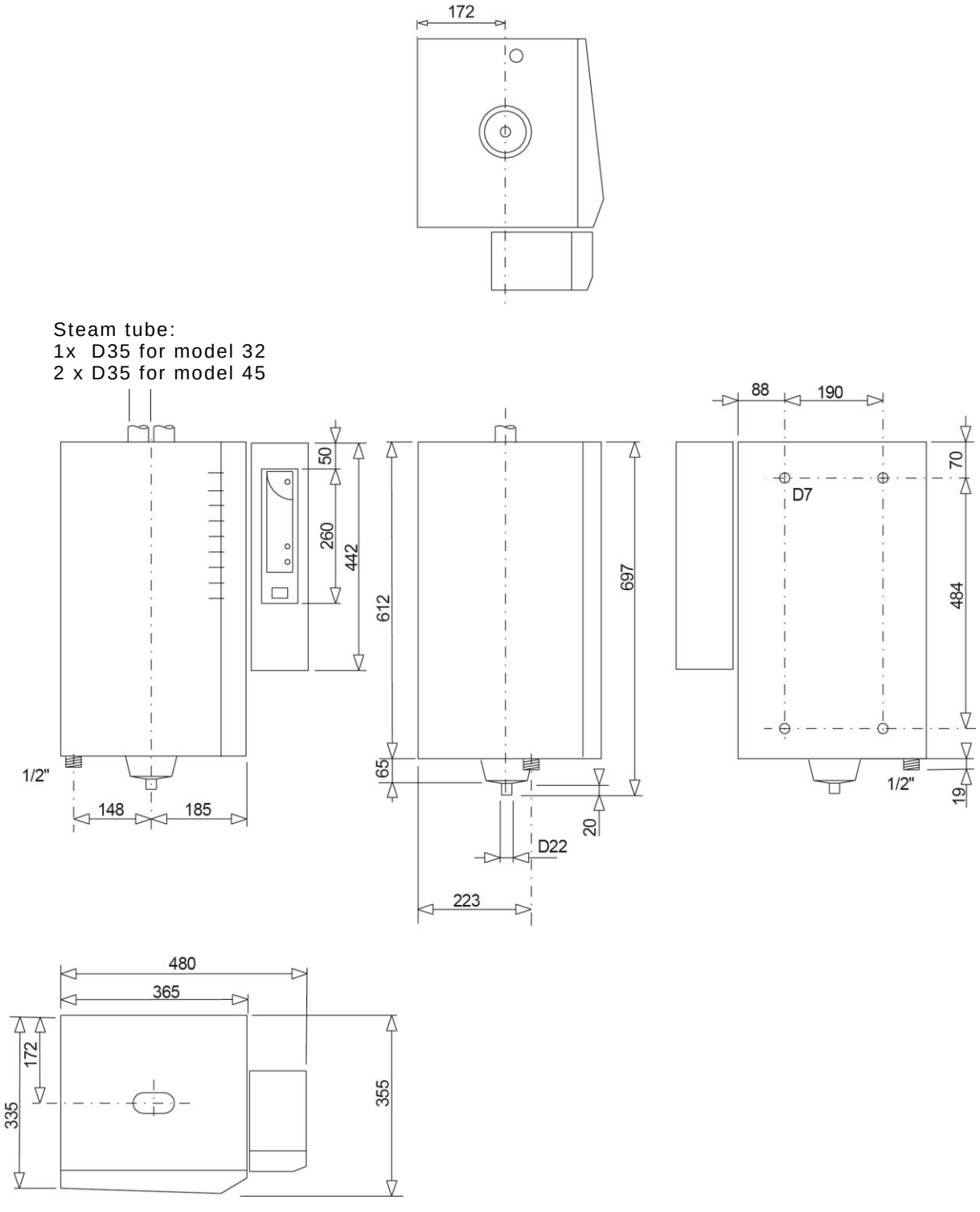
Installation
Dimensions model 15 & 23



Model	Output kW	Steam tube	Drain	Netto weight kg	Bruto weight kg
15	11,4	Ø 35	Ø 22	16	31
23	17,5	Ø 35	Ø 22	17	32

Installation

Dimensions model 32 & 45



Model	Output kW	Steam tube	Drain	Netto weight kg	Bruto weight kg
32	24,3	Ø 35	Ø 22	27	52
45	34,2	Ø 2x35	Ø 22	28	53

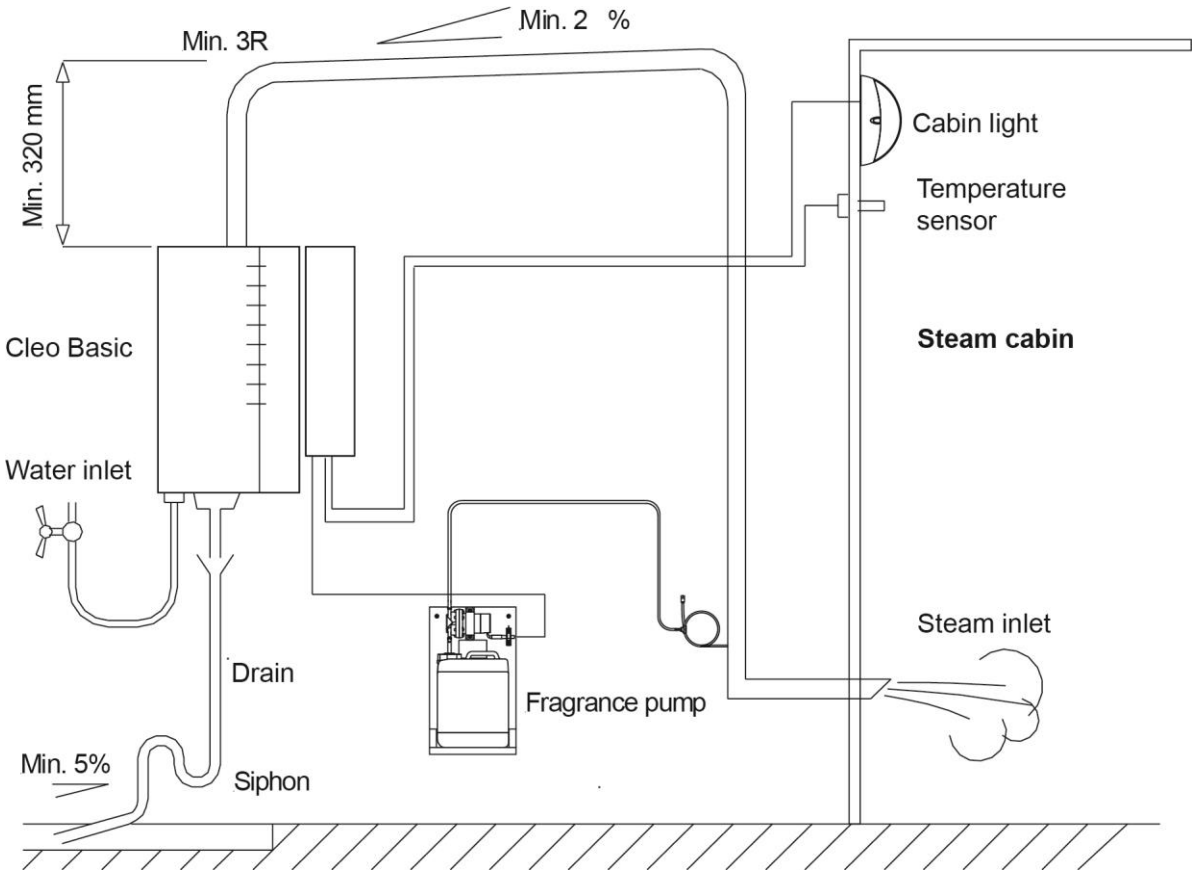
Installation

Installation in the technical space

For assembly work only use the original accessories.

The Cleo Basic steam generators and all its technical components must be installed in a ventilated technical room. The Cleo Basic steam generators are not intended for the end user. Do not install The Cleo Basic steam generator inside multifunctional shower facilities or inside steam cabins. The Cleo Basic should be installed as described in EN 60335-2-105. The Cleo Basic and all its components must be secured by means of screws where necassery. Do not install the Cleo steam generators and all its technical components directly on the Cabin wall.

The steam bath generator should be installed as close as possible to the steam room. The steam lines can have a maximum length of 10 meters. The humidifier is made for use in industrial installations. Install the humidifier horizontally on a wall. The wall must have a structurally stable surface. Avoid any deformation of the casing. The temperature of the wall on which the humidifier is fixed should not produce condensation on the inside of the humidifier. The humidifier should be installed in a ventilated technical room only. Take care of enough space for maintenance. Do not use the humidifier in an explosion-proof environment or if ignitable air mixtures can flow back into the steam cylinder. During the service, water can flow out of the humidifier. If sensitive parts or appliances are placed under the humidifier, an efficient and safe protection against water must be provided. The max. pressure of the outlet of the steam cylinder should not exceed 100 mm water column.



Installation
Installation in the technical space

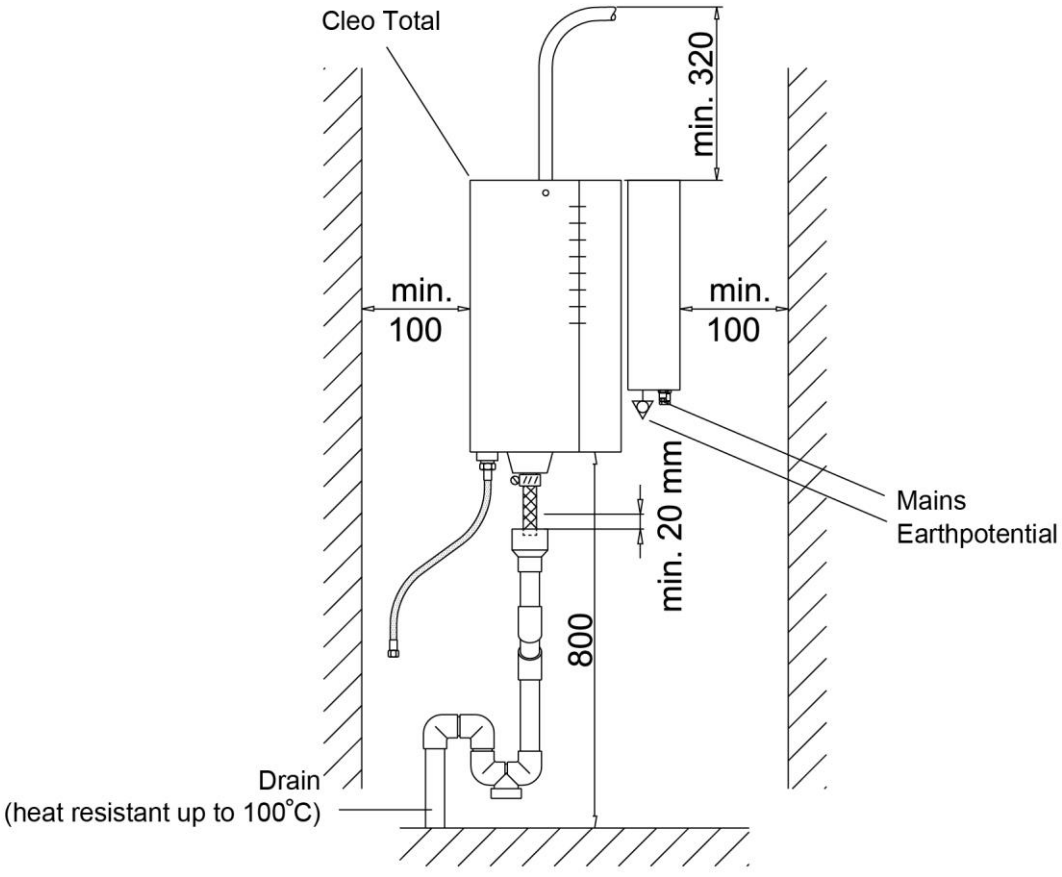
The steam lines must consist of copper piping. Always use a bending rod to bend this pipe because of its resistance to bending (no knees).

Observe the minimum distances.

To open or close the steam bath generator the screws should be turned counter clockwise using an appropriate screwdriver so that the door to the steam cylinder or electronics area opens.
Press the doors onto the screw to close them (no screwdriver required).
Please ensure, when mounting the device, that sufficient space is left for maintenance work and that the steam bath generator is easily accessible. It is best to mount it at 1.80 meter in order to achieve optimum operation and maintenance space.
Mount the steam generator in a well-ventilated technical space outside the steam cabin.
One must avoid chlorine containing air, high temperatures and moist surroundings A maximum of 35°C and a room relative humidity of maximum 80% is advised.

The generator must be earthed electrically and mechanically;
Electrically on the power supply terminals at the inside of the steam generator and mechanically and on the earth potential terminal at the outside of the steam generator. There is a clamp (min. 4 mm2) attached to the generator for this purpose

Local and national regulations must be observed.
We recommend that the steam bath generator should be installed as close as possible to a steam inlet. The steam bath generator functions most efficiently when it is connected with the steam inlet via a steam line which is as short as possible.
Note: Do not install the Cleo steam generators and all its technical components directly on the cabin wall.



Installation
Installation conditions

Installation values:	
Maximum ambient temperature:	35°C
Minimum ambient temperature:	5°C
Maximum ambient relative humidity:	80%, not condensing
Mains voltage:	depending on model 230V or 400V (-8% +10%)
Maximum pressure at the outlet of the steam cylinder :	0,1 bar
Water conductivity of the supply:	125 to 1250 micro Siemens / cm

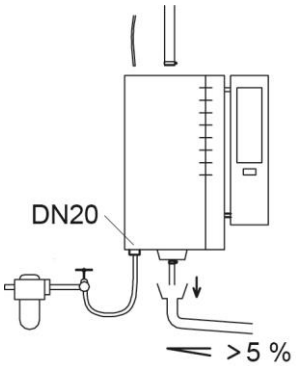
Water quality: Cleo Basic steam bath generators can be supplied with either hard water; the best water is tap water without any treatment. The 16-bit processor automatically adjusts the operating conditions according to the water quality. Deionized water should not be used since the electrical conductivity is too low. Softened water hardly provides any operational advantages and should not be used. A minimum hardness value of about 6 German Hardness, degrees of water hardness (DH) is recommended. Ion exchangers can produce such water but the salt concentration in it can make it aggressive and cause signs of corrosion on the electrodes. We therefore discourage use of water treatment plant before operating.

Electrical conductivity of the supply water: this should lie within the limits of 125 to 1250 micro-Siemens / cm.

Hardness range: measured in terms of the international unit - milimol of calcium and magnesium ions per liter (previously the DH measure)

Soft water:	< 1,3 mmol/l	-	< 7° dh
Medium hard water:	1,3 – 2,5 mmol/l	-	7° - 14° dh
Hard water:	2,5 – 3,8 mmol/l	-	14° - 21° dh
Very hard water:	> 3,8 mmol/l	-	> 21° dh

1° dh corresponds:
1,05° American hardness
1,25° Englisch hardness
1,79° French hardness
10,0 mg/l CaO
17,9 mg/l $CaCO_3$ (ppm)



The connection of the water supply is located on the bottom of the Cleo Basic steam generator. Local regulations should be observed.

The mains water supply connection has a male thread of DN20. Use a flexible hose to connect the inlet to the connecting supply line. A stop cock, a revers flow valve, a water filter and a mechanical earth grounding must be in the water supply line and a siphon in the drain line.

During installation please pay attention to the following:
- All work on the Cleo Basic may only be carried out in a de-energized state
- The mains water supply must also be connected to the PA earth potential

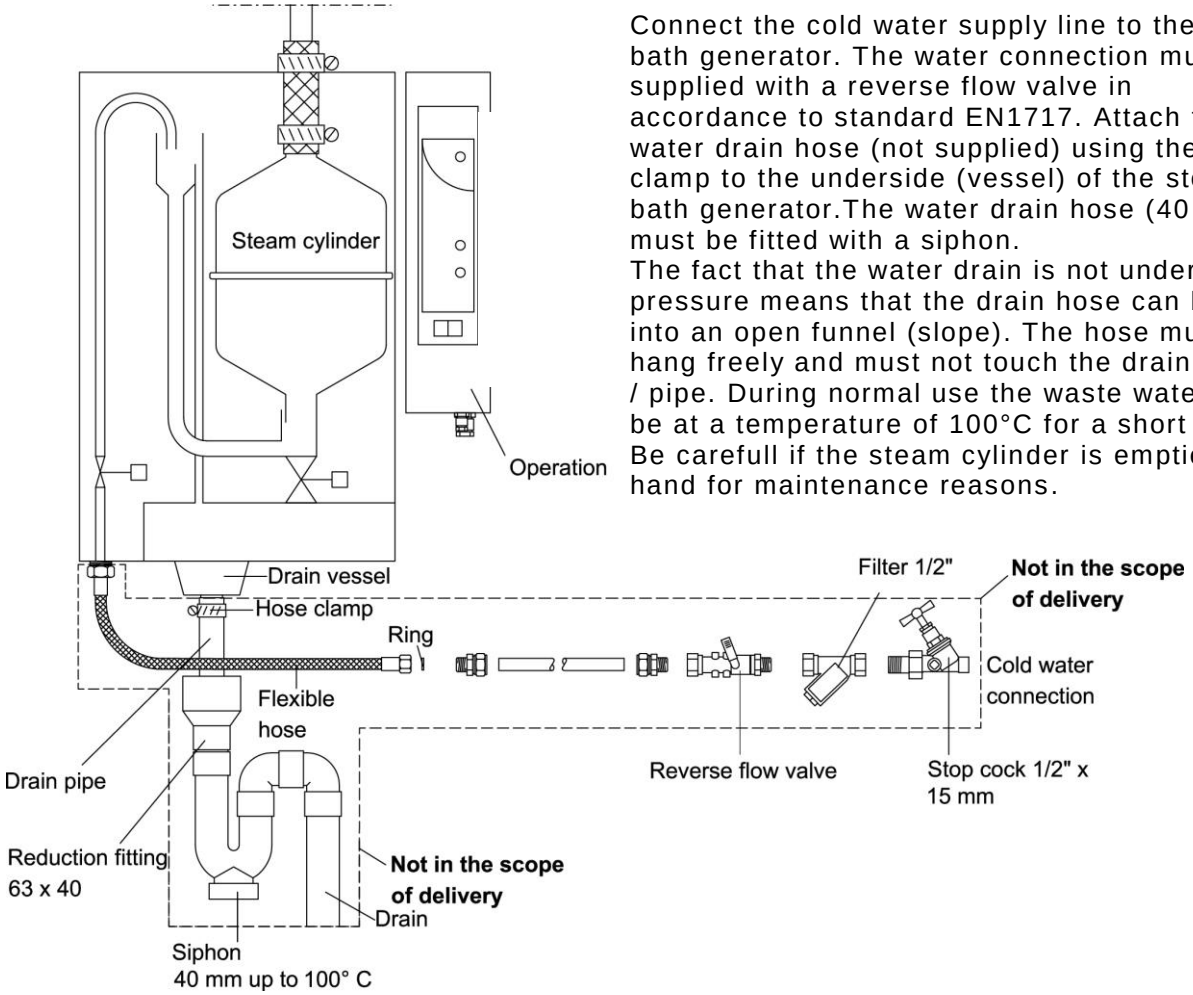
Installation
Connecting the water supply

The customer is required to have all assembly work performed by a recognized installation company. Observe local regulations for connecting up devices.
Only use normal tap water. It is important to contact the supplier of the steam bath generator before using treated or demi water.

Either use copper, iron or plastic pipes may be used. In case plastic are used make sure they are the right quality. Plastic or rubber lines can produce foam in the steam cylinder and affect the performance or even expose people to serious dangers.

The water pressure in the supply must not exceed 1MPa/10 bar. The water pressure must be at least 1 bar. If the pressure is lower the inlet valve cannot open. For optimum operation the water pressure should be set to 4 bar with a pressure reducing valve. The supplied water should not exceed a temperature of max. 40 degrees. Prior to the initial procedure, the water supply lines must be thoroughly flushed to remove dirt particles, fat or residues. The built-in pre-filter of the inlet valve should be cleaned after the first 100 hours of operation.
The Cleo-Total should be inspected regularly. All water lines should be water tight so that no water leaks from the system. Potential equalization must be mounted according to local regulations.

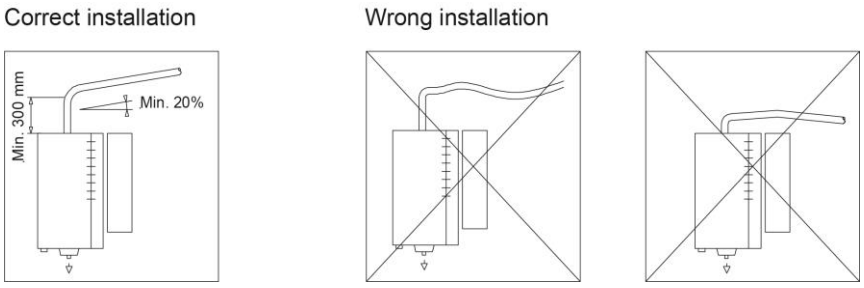
Please ensure when installing the drain that it must be possible to service it and clean it without difficulty. The drain pipe must lead to the waste water pipe with an adequate downward slope. Installation of a filter in the water inlet to the steam bath generator is always recommended so that the sieve at the inlet to the inlet valve does not clog up too quickly with settling sediments.



Connect the cold water supply line to the steam bath generator. The water connection must be supplied with a reverse flow valve in accordance to standard EN1717. Attach the water drain hose (not supplied) using the hose clamp to the underside (vessel) of the steam bath generator.The water drain hose (40 mm) must be fitted with a siphon.
The fact that the water drain is not under pressure means that the drain hose can be led into an open funnel (slope). The hose must hang freely and must not touch the drain funnel / pipe. During normal use the waste water will be at a temperature of 100°C for a short time. Be carefull if the steam cylinder is emptied by hand for maintenance reasons.

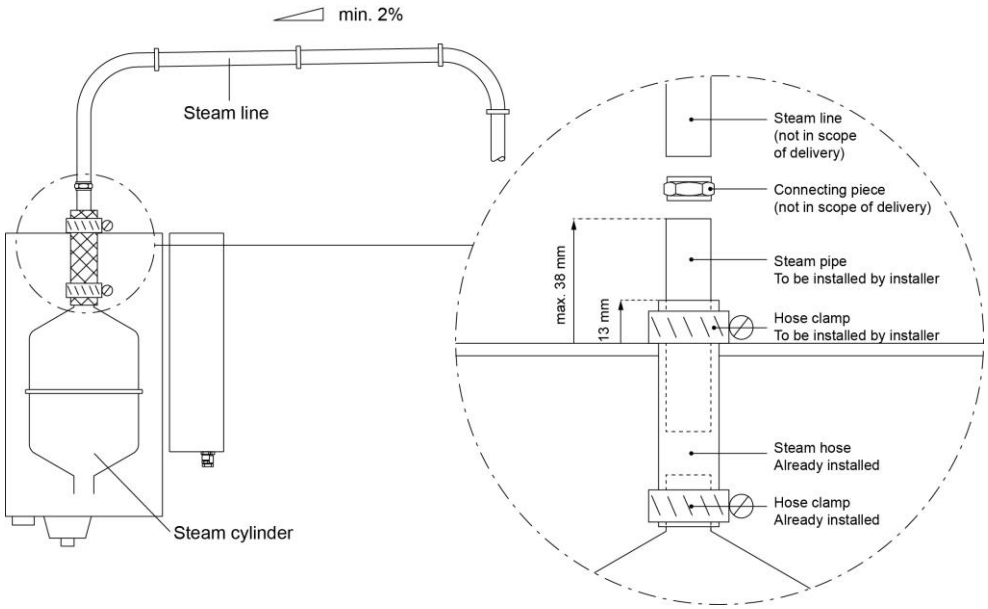
Installation
Connecting the steam line

Always use the largest possible radii if straight pipe routing is not possible. Steam lines must be properly supported in order to avoid development of water sacks. Please take into account expansion and contraction of the copper pipe when it's heated or cooled down. Thermal insulation at least 20 mm thick is recommended for copper pipes. The steam must be able to pass through the line unhindered: no barriers, no sagging, kinking or crushing etc. Counter-pressure or condensation can be caused though wrong routing of the line. It can have a negative effect on the optimal steam process. When installing the steam line one should ensure that condensation always flows in the opposite direction as the steam.



The pressure loss in the steam lines and steam nozzles should not exceed 100 mm, 1000 Pa of water. The steam lines should be checked for changes of routing in a warm condition during commissioning. One must ensure that the no water sacks can develop in the steam lines.

If the steam line is laid in a pipe or insulation etc.: environmental materials must be temperature resistant to a minimum of 100°C.



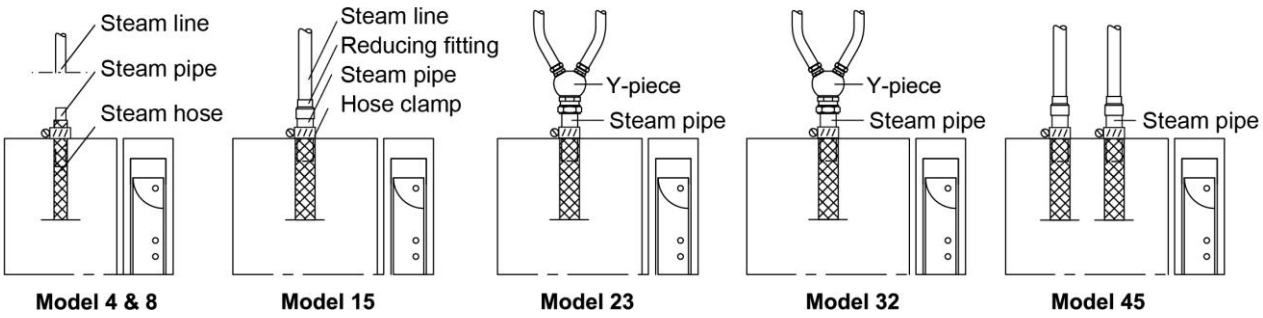
The steam cylinder is attached to the steam line using the steam hose supplied. CLEOPATRA will not accept any liability in case of damages occurring if another steam hose is used. The steam hose should be as short as possible.
It is attached to the steam cylinder and the steam line using hose clamps.

During installation please pay attention to the following:
- All work on the Cleo Basic may only be carried out in a de-energized state
- Make sure no Electrical wiring gets damaged during installation
- Test according to BGV A3

Connection of the steam line to the steam bath generator

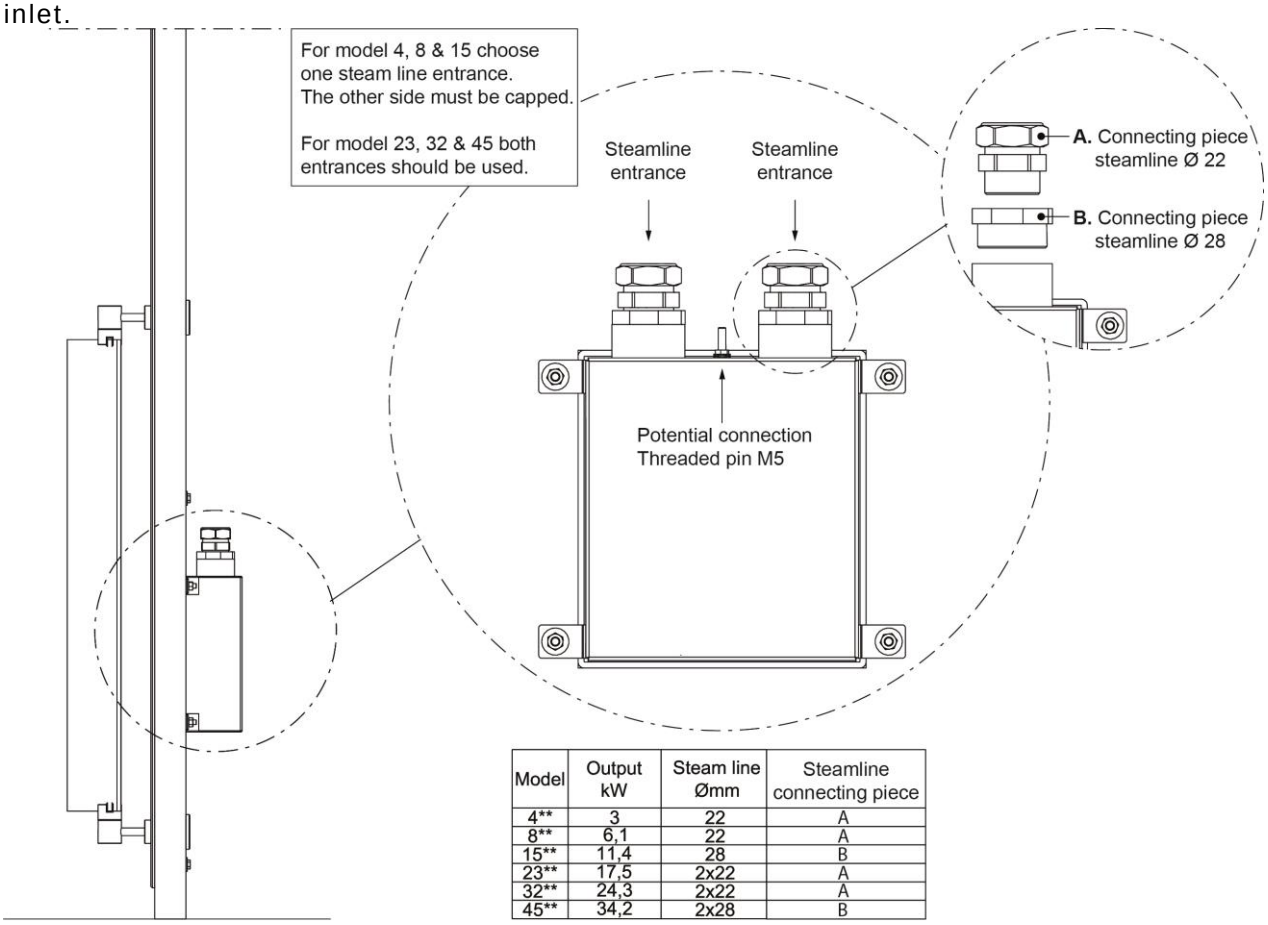
Connect the steam line or steam lines via a connecting piece with the steam pipe or steam pipes of the Cleo Basic. The connection piece is not included in the scope of delivery. The following table shows the options for connecting the steam line to the steam bath generator (according to the model of steam bath generator).

Model	Output kW	Steam pipe	Steam line Ømm	Steam hose Ømm	Hose clamp Ømm	Reducing fitting Ømm	Y-piece Ømm
4**	3	22x50	22	22/29	25-40		
8**	6,1	22x50	22	22/29	25-40		
15**	11,4	35x60	28	35/43	45-55	35-28	
23**	17,5	35x60	2x22	35/43	45-55		35x22x22
32**	24,3	35x60	2x22	35/43	45-55		35x22x22
45**	34,2	2x35x60	2x28	2x35/43	2x45-55	2x35-28	



Connecting the steam line / steam inlet

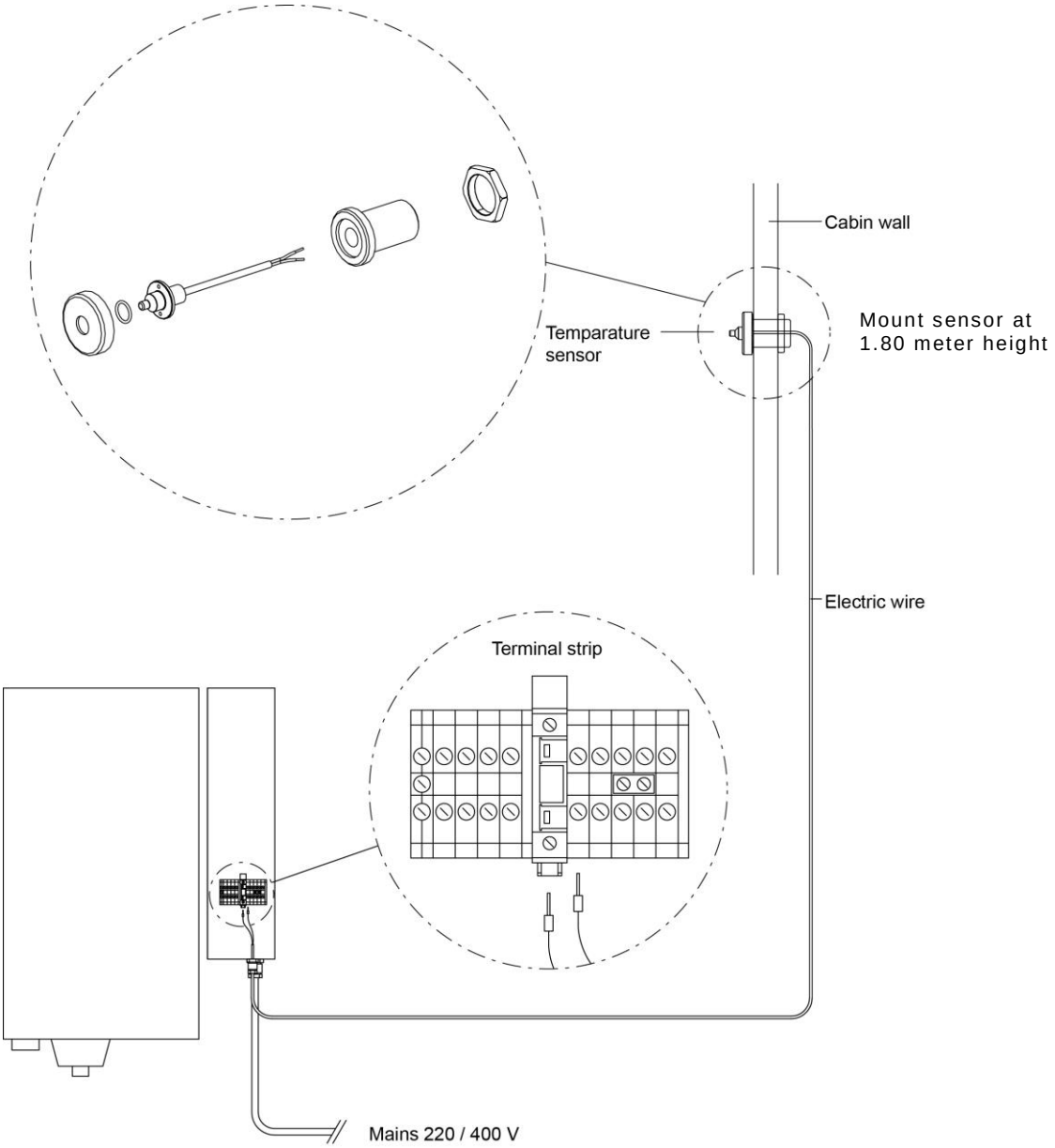
Connect the steam line or steam lines via the included connecting pieces on the steam inlet.



Model	Output kW	Steam line Ømm	Steamline connecting piece
4**	3	22	A
8**	6,1	22	A
15**	11,4	28	B
23**	17,5	2x22	A
32**	24,3	2x22	A
45**	34,2	2x28	B

The steam inlet has to be mechanically grounded. A PA-potential earth connection is located on the steam inlet. Local and national regulations must be observed.

Installation
Connecting the temperature sensor



The temperature sensor must be connected according to the enclosed connection diagram. The temperature sensor must be placed in the steam room so that a representative temperature can be measured. The temperature sensor should be clean and not covered with debris. The standard length of the connecting cable is 10 meters. An extension of the sensor cable must be avoided: careless connection points can distort the temperature measurement and interfere with proper operation of the steam generator. The internal electronics are pre connected and the external temperature sensor consists of two-pole cables of 0.75 mm2 by 1 meter length.
A dust-proof housing should be used when connecting this cable to the cable of the Temperature sensor. Poor connections affect the measurement temperature.

Lay the cable between the steam generator and cabin in a conduit or a cable duct.

Temperature probe: Only the original probe may be used as a temperature probe. The temperature probe must not be covered by other objects. The temperature probe should be installed at a height of 1.80 meters above the floor at a distance of 125 mm from the hinge side of the door.

Installation
Connecting the electrical power supply

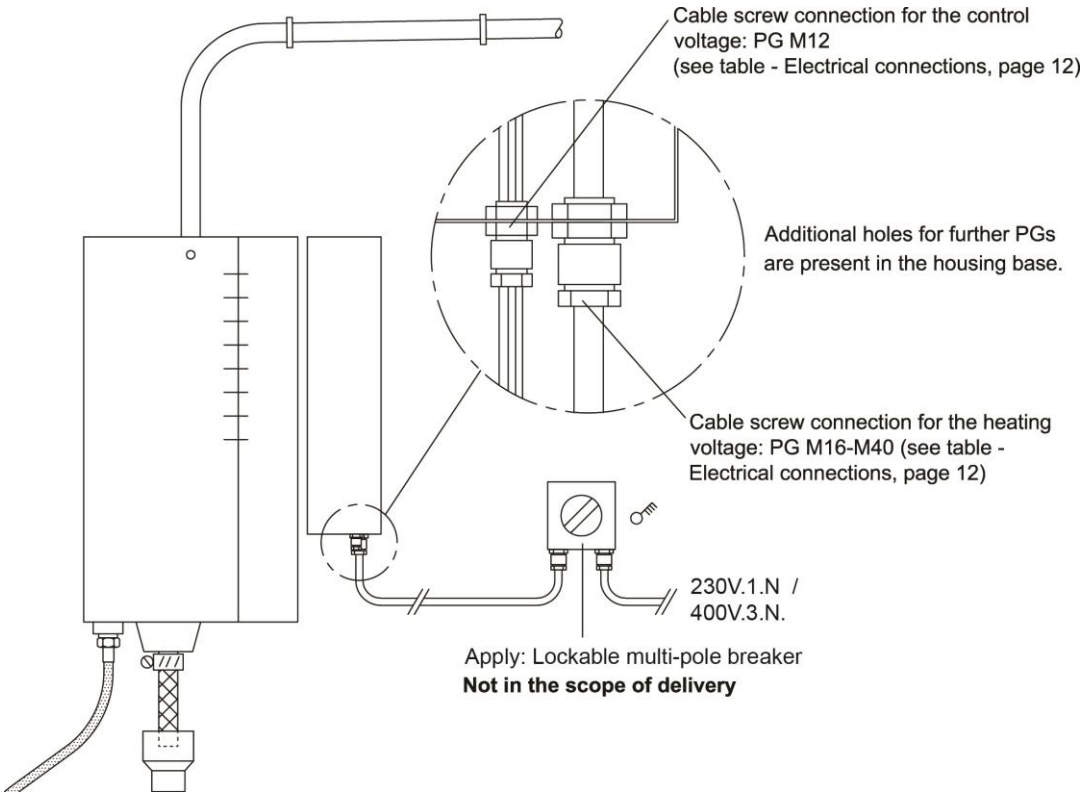
All power circuits should be interrupted before and during work on a steam bath generator!

National and local regulations should be observed. Please note that the steam bath generator should be installed in the area foreseen for it. A lockable multi pole breaker must be installed during installation (not in the scope of delivery) which separates the device at all poles from the electrical mains with a contact opening width of at least 3 mm.

The power supply must be fitted with a residual current circuit breaker (RCCB) for a maximum of 30 mA. Components which must carry a voltage greater than the safety voltage of 12V must not be reachable by persons.

The steam bath generators are made according to Protection Class I (electrical devices) and are designed to be connected to a net protective conductor.
The steam bath generator, as well as all electronic apparatuses on which Protection Class I applies, should be installed according to Protection Measures Class I.
The appropriate electrical circuit diagram is included this manual.
All connections should be made according to the electrical circuit diagram. Local and national regulations must be observed. Electrical connection work should only be undertaken by a suitably qualified electrician. Pa terminal compensating connections must be arranged. There are earth terminal terminals on the steam bath generator and steam inlet and Climate control.

The connection diagram contains details of the maximum loading of the internal supply circuits. These loads should not be exceeded.
There should be no alterations made on the original cabling. External components should only be connected to the external terminals designed for this.



After the completed installation of electronics, steam and water an electronic test should be performed according to VDE0100T01 / EN60335-2-105 and according to BGV A3. This test must be documented.

Control voltage: The internal voltage is taken up by the two terminals L2 and N. Therefore the neutral lead of the three-phase supply voltage must be attached externally. The electronics and options are supplied by an internal 12 V power circuit which is fused. A 6.3 amp fuse protects the 230 V power circuit. Electronics and options are supplied with an internal 24Vac circuit.

Heating voltage: Cleo Basic steam bath generators are designed for heating voltage connections of 3-400 V, 50 Hz with a neutral lead (N) and an earth terminal (PE). The connections for the heating voltage should be made via a switching element with a contact width of at least 3 mm. The cross-section of the electrical feed lines and the minimum fusing should be determined professionally according to the device model. We recommend checking the clamp connection some days after first commissioning and tightening as required.

Electrical connections

Model	Output kW	Terminals mm2	Cable screw connection for heating voltage	Cable screw connection for heating voltage
4**	3	4	PG M16	PG M12
8**	6,1	4	PG M16	PG M12
15**	11,4	6	PG M25	PG M12
23**	17,5	10	PG M25	PG M12
32**	24,3	10	PG M40	PG M12
45**	34,2	16	PG M40	PG M12

⇨ Additional holes are available for further PGs in the housing base

Current

Heating voltage V	Model					
	422	834	1534	2364	3264	4564
230	20A					
400		16A	25A	35A	50A	70A

One must observe the local connection requirements as well as the safety regulations.

Electrical connection values

Cabin light	12V	AC	25W	Internal steam generator
Fragrance pump	14V	DC	75W	Internal steam generator

Further installed fuses

Fuses are installed in the following circuits:

Light circuit 12 V: 6.3 A

Fragrance pump 12 V: 2.5 A

Operation
Regulation of steam temperature

The steam bath generators Cleo Basic regulate the temperature of the steam room automatically after the set temperature set point. The amount of steam is automatically kept current by the energy demand of the steam room. Thus optimal energy consumption is ensured. The appliance is supplied with a scheme for connections. Only the original temperature sensor must be used.

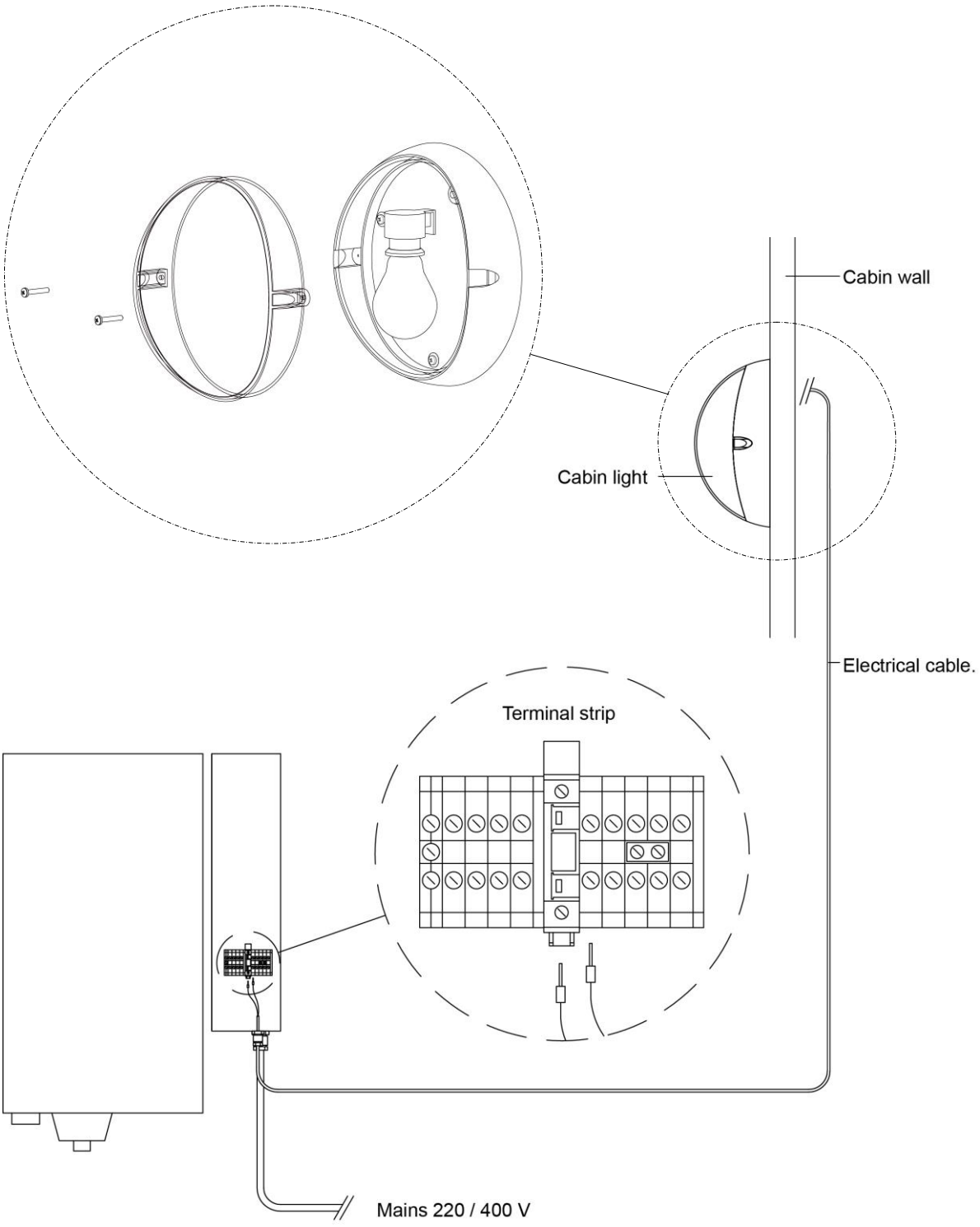
Light operation for stand-by

If the stand-by function “onoff”, “noSb” or “30-45” is programmed the light can be switched off with delay after opening the external switch. The delay can be programmed as follows with the function “Llt.d” in the menu “adjustments”:

- “oFF” = The light switches off without delay
- “1 to 600” = The light switches off with a delay (Delay of between 1 and 600 seconds)
- “on” = The light is always switched on.

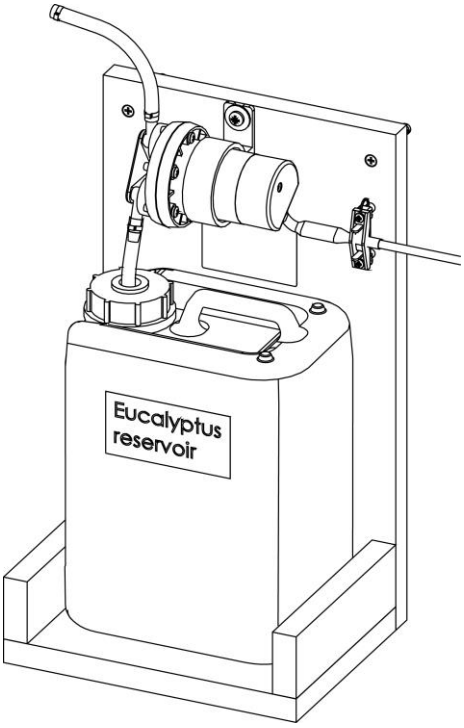
Options
Installing the light

The standard length of the connecting cable is 10 meters. An extension of the cable must be installed by a certified electrician. Careless installation can lead interfere with proper operation of the steam generator. Lay the cable between the steam generator and cabin light in a conduit or a cable duct.

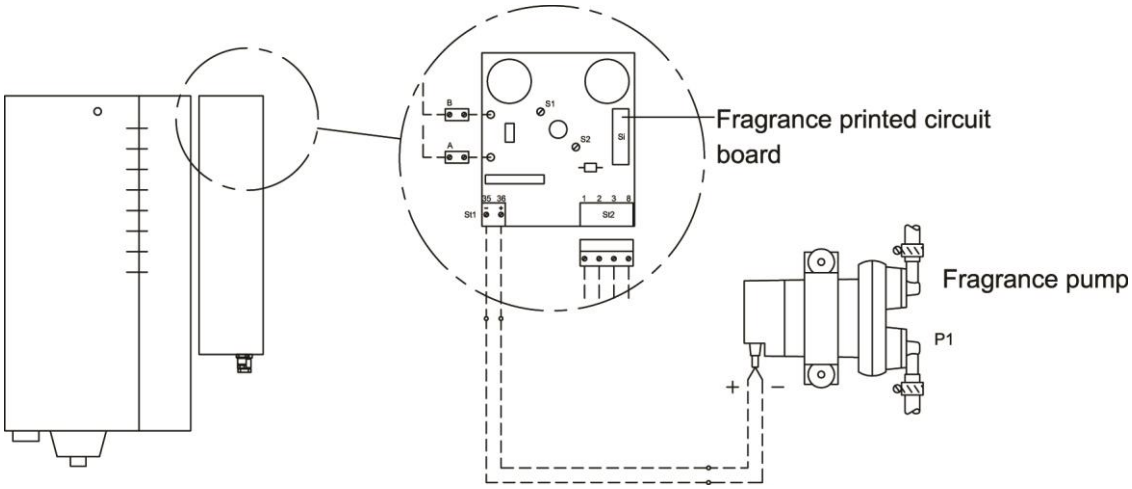


Options
Fragrance pump

Please look in the fragrance pump manual for the correct way of installation. Lay the cable between the steam generator and fragrance pump in a conduit or a cable duct.

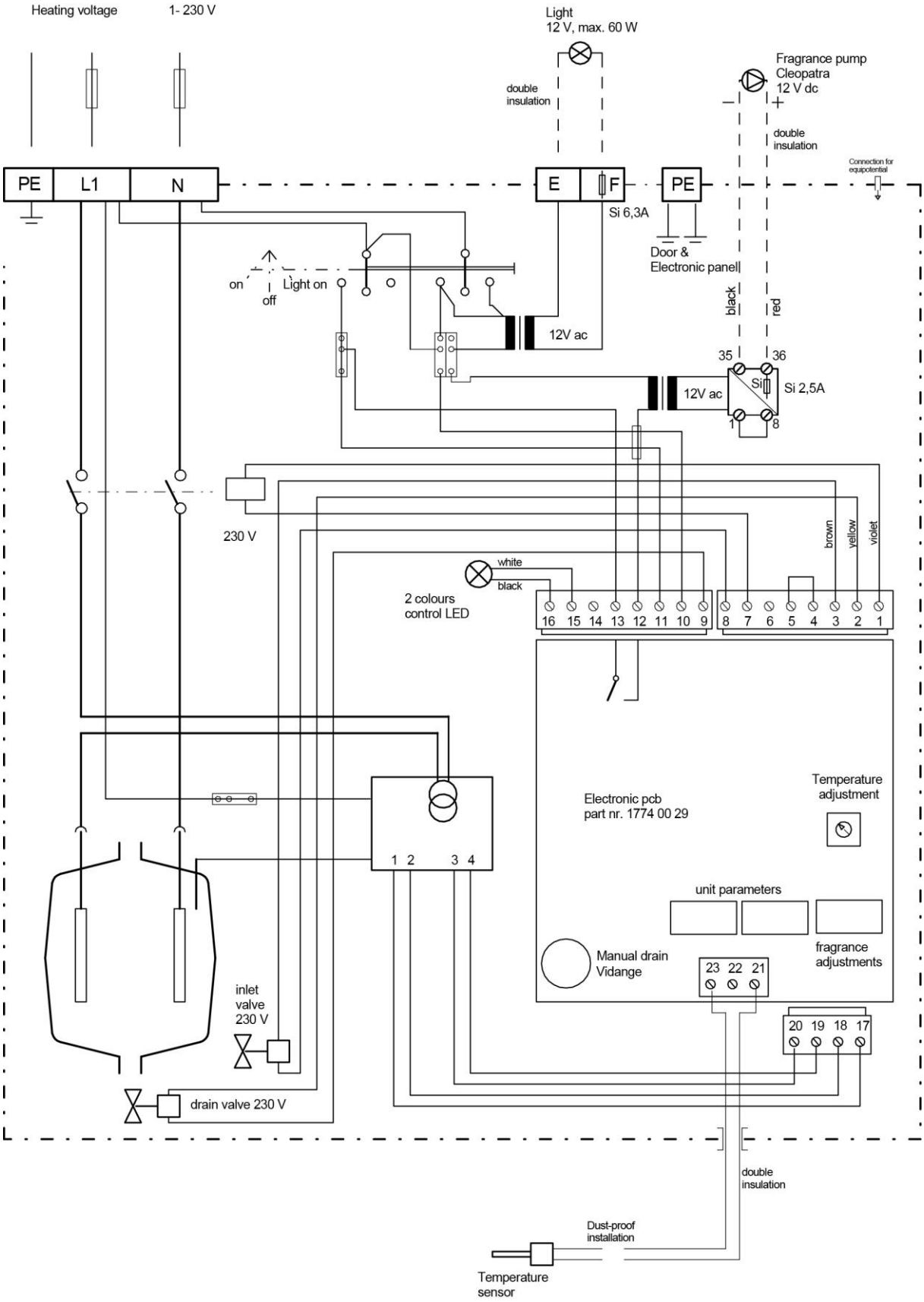


Please observe minimum cable lengths between fragrance pump and steam generator.



Circuit diagram Cleo Basic 422

Protection methods must be according to local regulations



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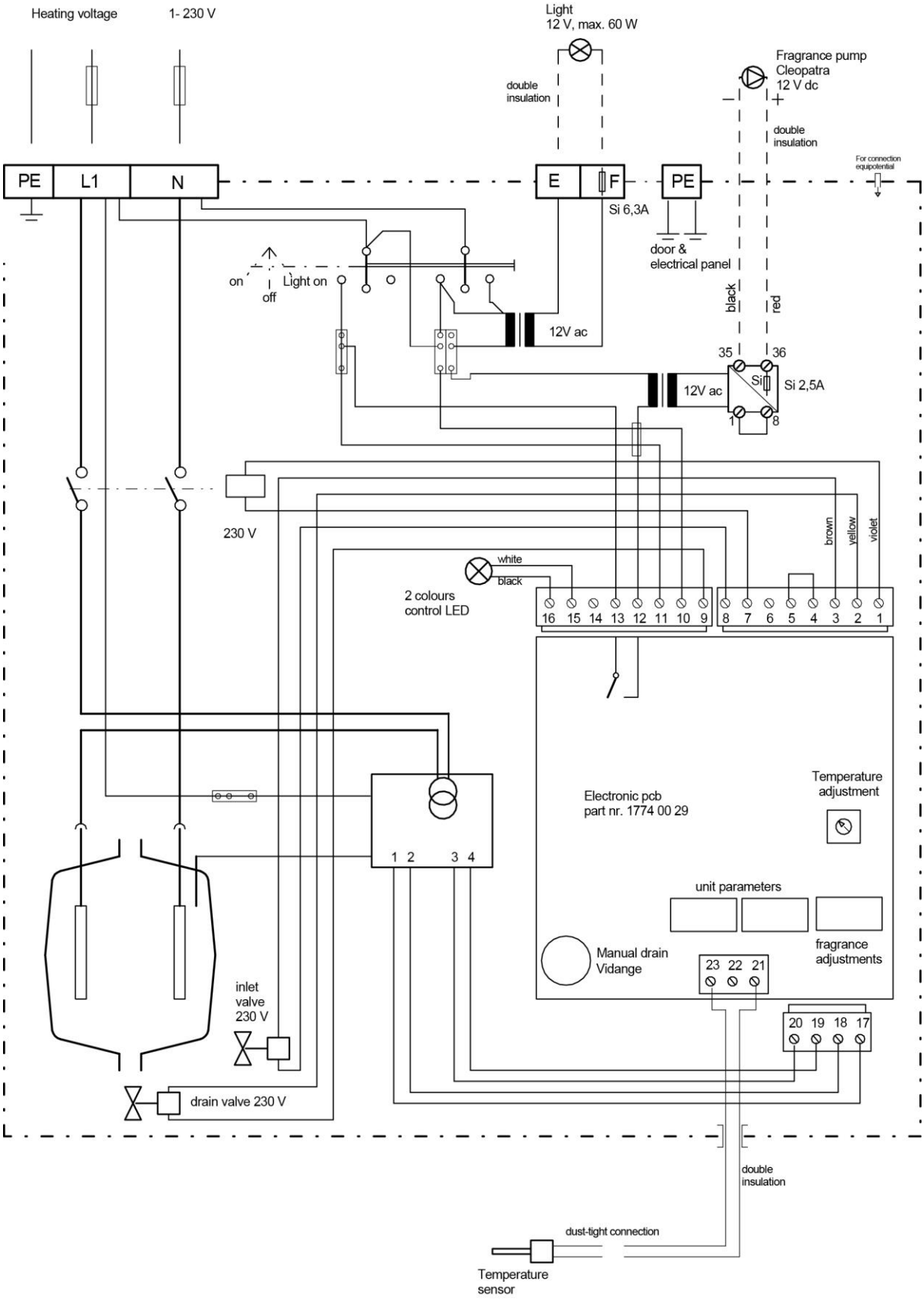
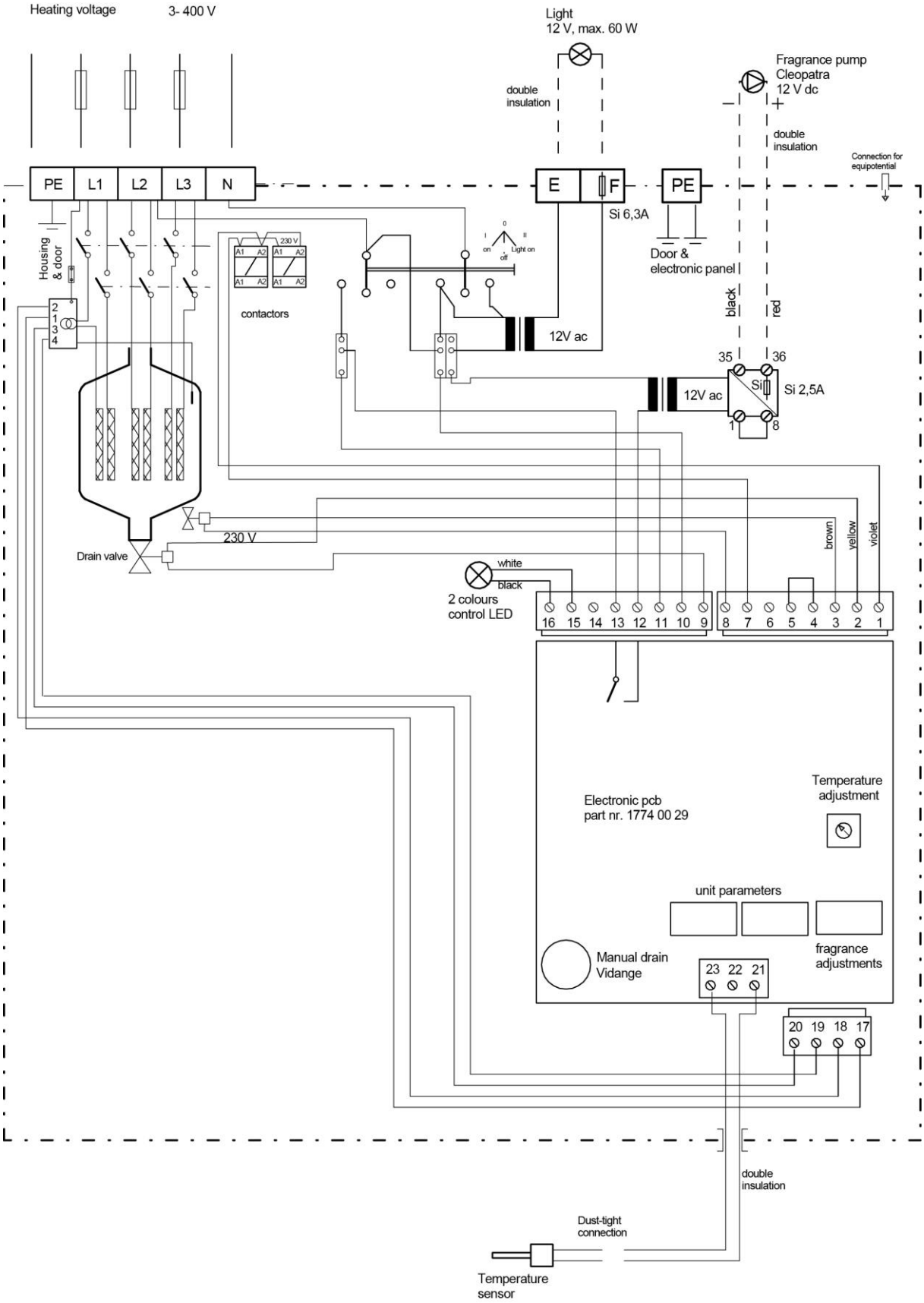
Circuit diagram Cleo Basic 834 & 1534

Protection methods must be according to local regulations



Circuit diagram Cleo Basic 2364 & 3264 & 4564

Protection methods must be according to local regulations



Commissioning
Preparation

Following DIN VDE 0100 T560 and T610 and the instructions in this manual by Cleopatra.

Safety Instructions
Check: The delivered safety instructions for the user must be in sight while entering the cabin (see: operating manual).

Preparation for commissioning
The water feed, pipes and hoses, water drain, steam line and the electrical cabling must be connected by trained experts according to the blocal safety measures and the schemes delivered with the device.

Ensure that the desired stand-by function is set.

Open the water supply and switch on the main device switch. The cabin temperature is displayed on the steam bath generator digital indicator.

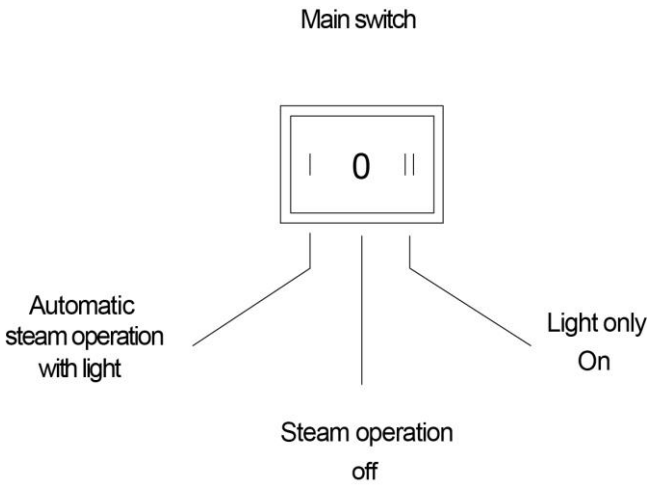
The steam bath generator is now ready to operate for the operation.

Commissioning
Steam operation

Before the steam mode, the preparations that are specified on page 35 must be made. The main switch should be set on "I" (on).

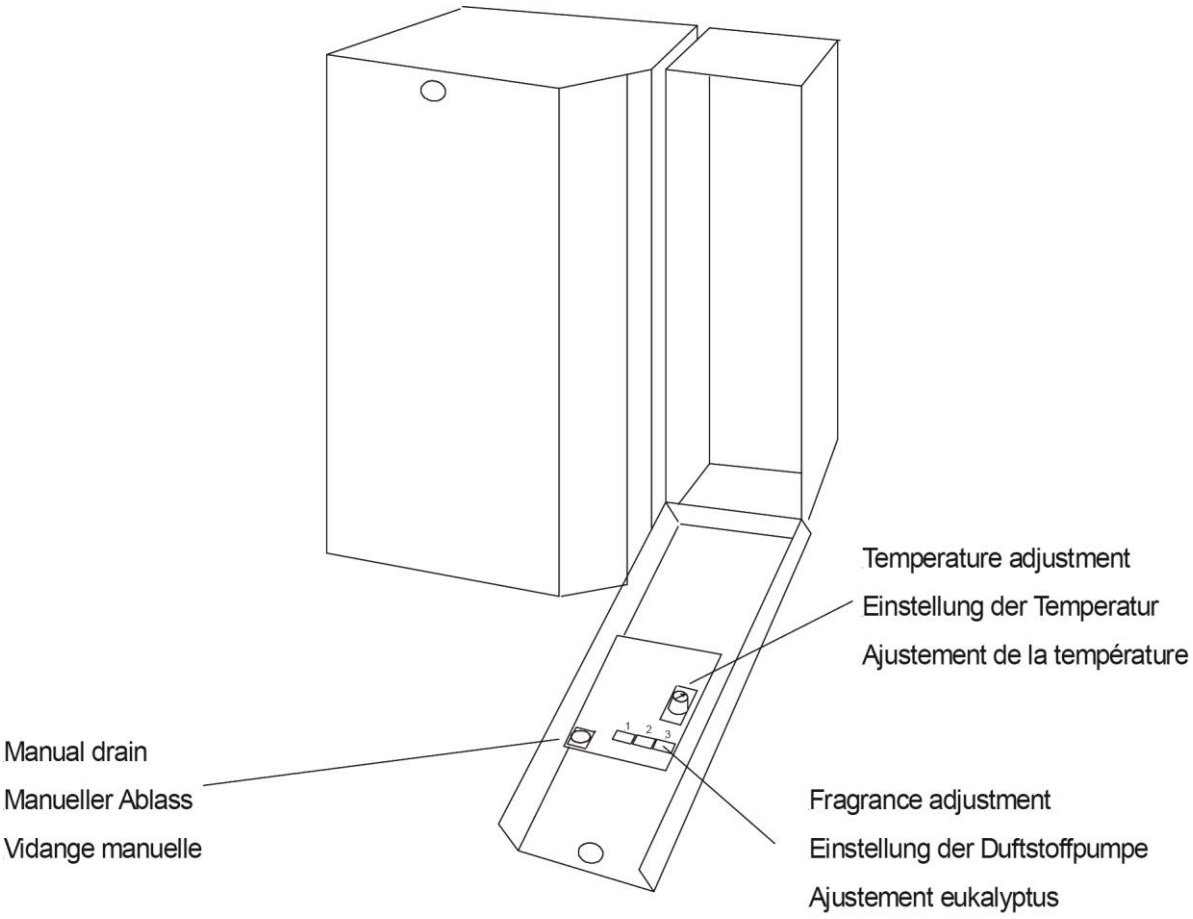
The automatic operation

Once the mode of operation and nominal temperature has been set up the steam bath generator is ready to be operated automatically. Initiating automatic steam bath operation switches on the protection and the inlet and outlet valves are actuated to supply the steam cylinder automatically. The water eventually reaches the electrodes, electrical current flows and the water is heated until steam is generated. The nominal output is not reached immediately for first commissioning of a new steam cylinder according to the quality or electrical conductivity of the supply water. The steam bath generator requires a certain period of time operating before it reaches its nominal output. This time is called the “start phase”. It is only after the start phase is completed that the steam bath generator will reach its nominal output. The nominal output can then be reached again quite shortly once the start phase has been completed. A start phase is needed each time a new steam cylinder is installed.



Commissioning
Setting temperature

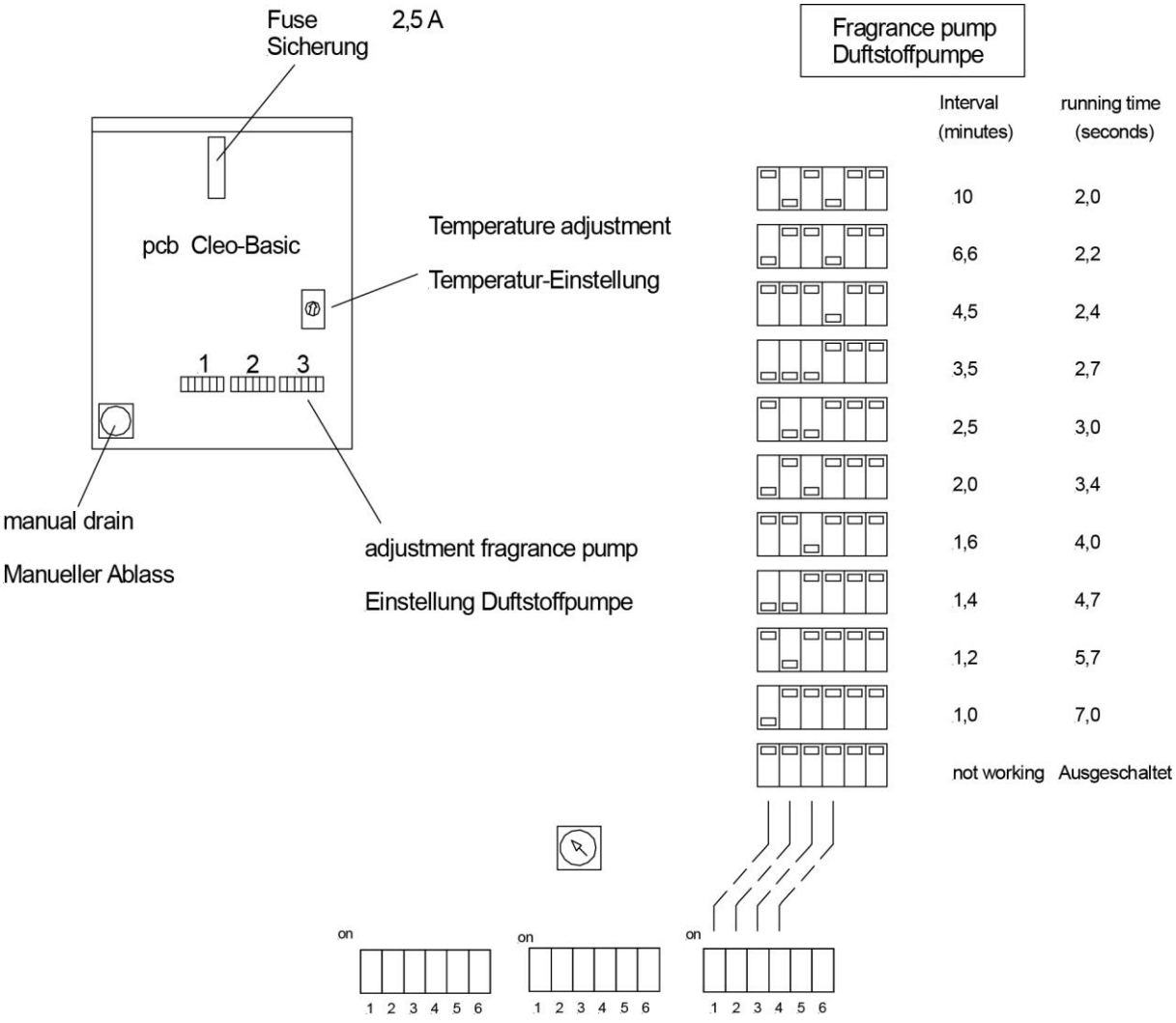
The desired cabin temperature can be set between 25 and 55 degrees C
on the scaled potentiometer on the electronics plate of the Cleo Basic. To increase the temperature value turn counter clockwise. To decrease the temperature turn clock wise.



The fragrance pump

The operation of the fragrance pump can be programmed via coding on the electronics plate of the Cleo Basic where a wide range of pulses and intervals be set manually.

The fragrance pump is put into automatic operating mode when the cabin temperature exceeds 30°C.



Maintenance

Maintenance may only be performed by suitably qualified engineers.
All power supply circuits must be interrupted before conducting any work on the generator such as cleaning or replacing the cylinder.
Valves, the water filling system, steam cylinder and drain system require regular checking and must be cleaned if necessary. Check all other parts and clean them if necessary. The condition of the steam cylinder must be checked regularly if it must be replaced. After every 500 hours of operation the humidifier must be checked for proper installation.

The internal maintenance counter LFLI can be set to remind one of the maintenance schedules.

Ensure that the electronics are clean or not covered in dust or damp through environmental influences. The steam bath generator should generally be kept and run in a clean condition.

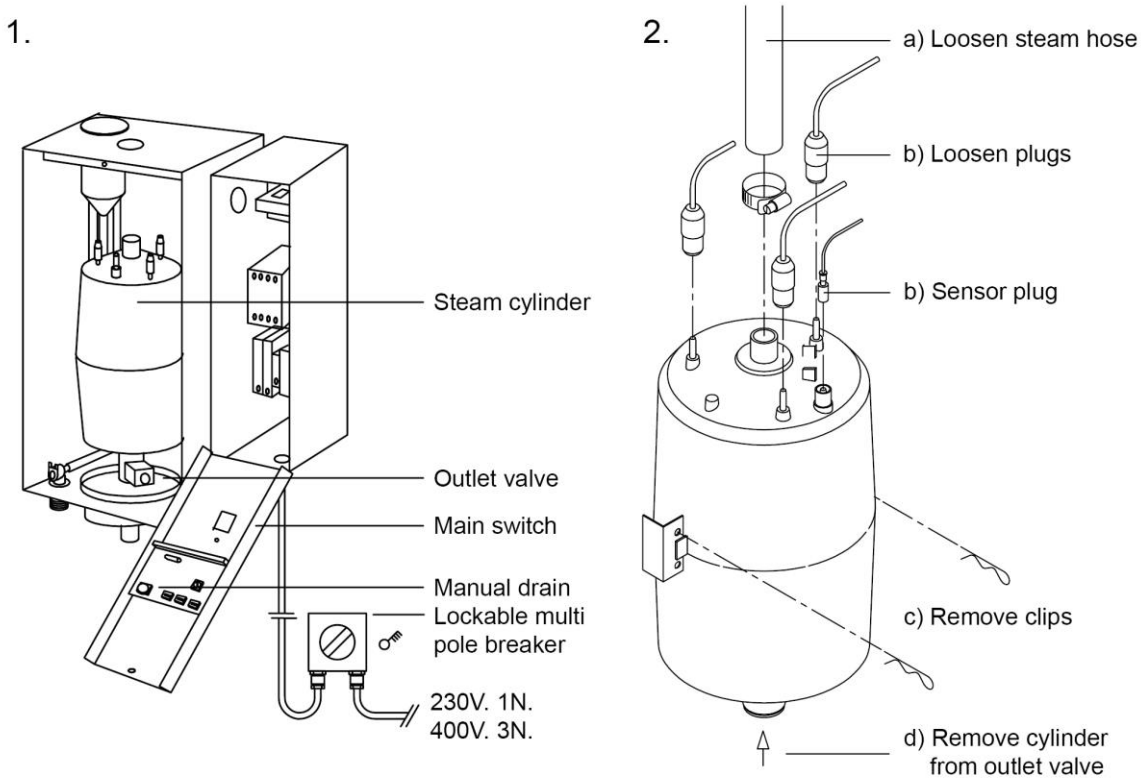
Keep a report log on all maintenance work performed.

Maintenance
Cleaning or replacing the cylinder

All power supply circuits must be interrupted before conducting any work on the generator. Close the multi pole breaker and the field installed water shut-off valve.

Danger of scalding. Wait until the steam cylinder has cooled down completely.

Steam cylinder, drain systems and steam lines must be checked for leaks and must, if necessary, be cleaned or serviced. Use a damp cloth. Do not use any chemicals, acids, vinegar etc. to clean. Use of these products could lead to later foaming in the cylinder and could negatively affect correct operation.



Removing the steam cylinder:

1. Open the drain valve manually to completely empty the cylinder:
Set the mains switch to "I". Push the manual drain button. Once the drain valve has been opened, wait until the cylinder has been emptied completely. Close the drain valve by pressing the drain button, set the mains switch to position "O".

2. a) Disconnect the steam hose
b) Disconnect the electrode plugs and sensor plug to cylinder pins
* Look at page 41 for steam generator type specific pin combinations.
c) Remove fixation clamps oft he steamcylinder
d) Remove the steam cylinder from the drain valve pushing it up

Cleaning the cylinder:

Remove the drain filter and clean with clear water. Also clean the cylinder with clean water and flush off any loose residues. Only use clean water to clean. The incrustation on the electrodes should not be removed.

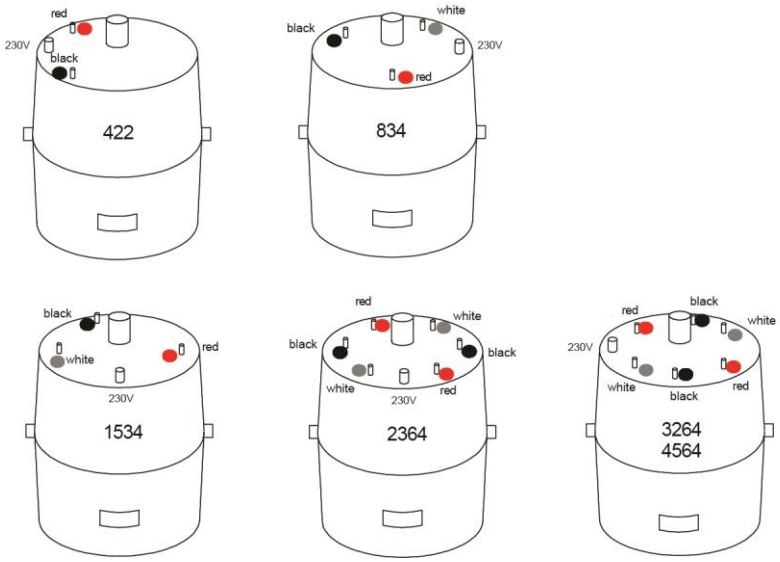
Insert a (new) steam cylinder:

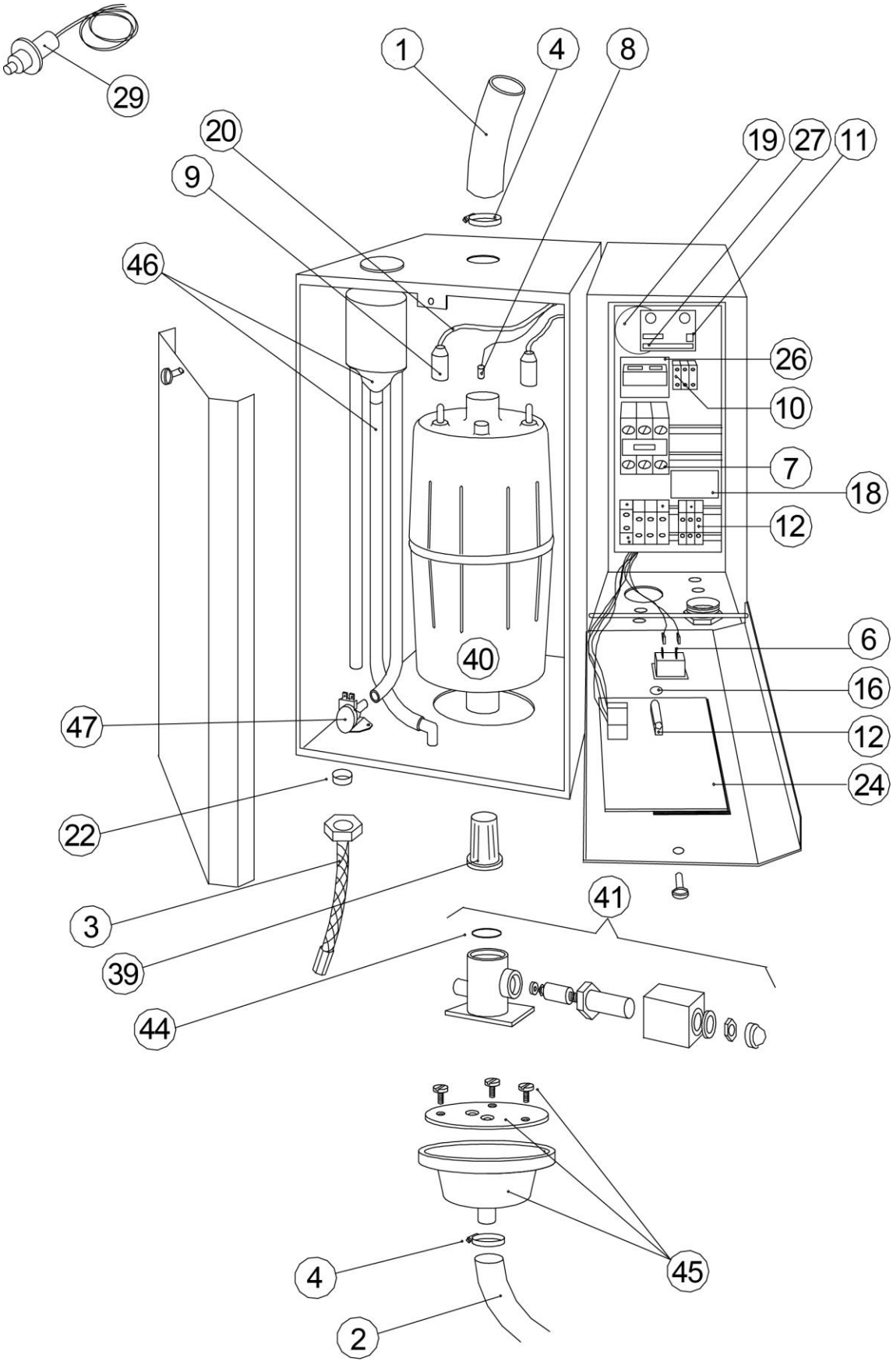
Ensure that the O-ring for the drain valve is correctly placed and in a good condition. Dampen the O-ring seals with water before replacing the steam cylinder. Do not use lubricant or any other substance.

Repeat the steps on page 40 in reverse order:
d) Insert the new cylinder in the drain valve.
c) Insert the fixation clamps
b) Connect the electrode plugs and sensor plug to cylinder pins.
    * Look at illustration below for steam generator type specific pin combinations.
a) Attach the steam hose using a clamp.

Turn on the main switch. Do a test run with steam. Check the sealing of the steam cylinder and check the functioning of the cylinder. Make a report of the replacement.

Steam generator type specific pin combinations:




29
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Pos.	Category	Description	Art.nr.
1A	CleoB&T	Steam hose 22/29 mm for 3 - 6,1 kW	19568222
1B	CleoB&T	Steam hose 35/43 mm from 11,4 kW	19568235
2	CleoB&T	Drainhose 22/28 0,5 m.	19560300
3	CleoB&T	Waterinlethose	19566459
4A	CleoB&T	Hose clamp 20-32 mm	19516113
4B	CleoB&T	Hose clamp 32-50 mm	19516114
5	CleoT	Main switch on/off CleoTotal	19585600
6	CleoB	Main switch on/off CleoBasic	19585601
7	CleoB&T	Switch 3RT	19585602
8	CleoB&T	Plug waterlevel sensor	19585603
9	CleoB&T	Electrode plug	19566453
10	CleoB&T	Fuse 1,6A	19585605
11	CleoB&T	Fuse 2,5A	19503006
12	CleoB&T	Fuse 6,3A	19585606
16	CleoB	2-colour led v. easy	19585607
18	CleoT	Transformer 230/24V 36VA	19585608
19	CleoB&T	Transformer 230/12V S/L	19585609
20A	CleoB&T	Cable for electrode plug 422	19585610
20B	CleoB&T	Cable for electrode plug 434, 832, 834	19585611
20C	CleoB&T	Cable for electrode plug 1562, 2364	19585612
20D	CleoB&T	Cable for electrode plug 1534	19585613
20E	CleoB&T	Cable for electrode plug 2362	19585614
20F	CleoB&T	Cable for electrode plug 3262, 4564	19585615
20G	CleoB&T	Cable for electrode plug 3264	19585616
21	CleoT	Feed supply print (left)	19585617
22	CleoT	Relay print	19585618
23	CleoT	Processor print	19585619
24	CleoB	Processor print	19585620
26	CleoB&T	Coil for Cleo-Total and Cleo Basic	19585643
27	CleoB&T	Rectifier 1 fragrance pump	19585622
29	CleoB&T	Temperaturesensor	19582210
39	CleoB&T	Sieve for outlet cilinder	19585625
40A	CleoB&T	Steamcilinder 3 kW - 230 V (422)	19551714
40B	CleoB&T	Steamcilinder 6,1 kW - 400 V (834)	19551717
40C	CleoB&T	Steamcilinder 11,4 kW - 400 V (1534)	19551719
40D	CleoB&T	Steamcilinder 17,5 kW - 400 V (2364)	19551721
40E	CleoB&T	Steamcilinder 24,3 kW - 400 V (3264)	19551723
40F	CleoB&T	Steamcilinder 34,2 kW - 400 V (4564)	19551724
41	CleoB&T	Outlet valve complete	19585632
44	CleoB&T	O-Ring pertaining outlet valve body	19585639
45	CleoB&T	Water outlet cup horizontal	19585633
46A	CleoB&T	Inlet valve incl. hose (422/432/432)	30941910
46B	CleoB&T	Inlet valve incl. hose (832/834)	30941911
46C	CleoB&T	Inlet valve incl. hose (1532/1534/2364)	30941912
46D	CleoB&T	Inlet valve incl. hose (3264/4564)	30941913
47A	CleoB&T	Inlet valve yellow, 3 kW	19585634
47B	CleoB&T	Inlet valve green, 6 kW	19585635
47C	CleoB&T	Inlet valve red, 11/17 kW	19585636
47D	CleoB&T	Inlet valve white, 23/34 kW	19585637
48	CleoT	Remote control	19583010
49	CleoT	Cable for remote control	19511110

Maintenance
Cleaning or replacing the outlet valve

All power supply circuits must be interrupted before conducting any work on the generator. Close the field installed water shut-off valve.

Danger of scalding. Wait until the steam cylinder has cooled down completely.

Outlet valve, steam cylinder, drain systems and steam lines must be checked for leaks and must, if necessary, be cleaned or serviced. Use a damp cloth. Do not use any chemicals, acids, vinegar etc. to clean. Use of these products could lead to later foaming in the cylinder and could negatively affect correct operation.

The outlet valve
The outlet valve is fitted with a pre-filter. This must always be kept clean so that water can flow through it unhindered.

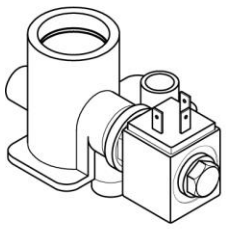
Cleaning the outlet valve:

The outlet valve and the drainage can be removed after the mounting screws are loosened. Unscrew the magnet coil and clean all parts. Flush the water drainage pipe thoroughly. Inspect steam and condensate hoses and replace if necessary. Check that the screws on the hose clamps are tight.

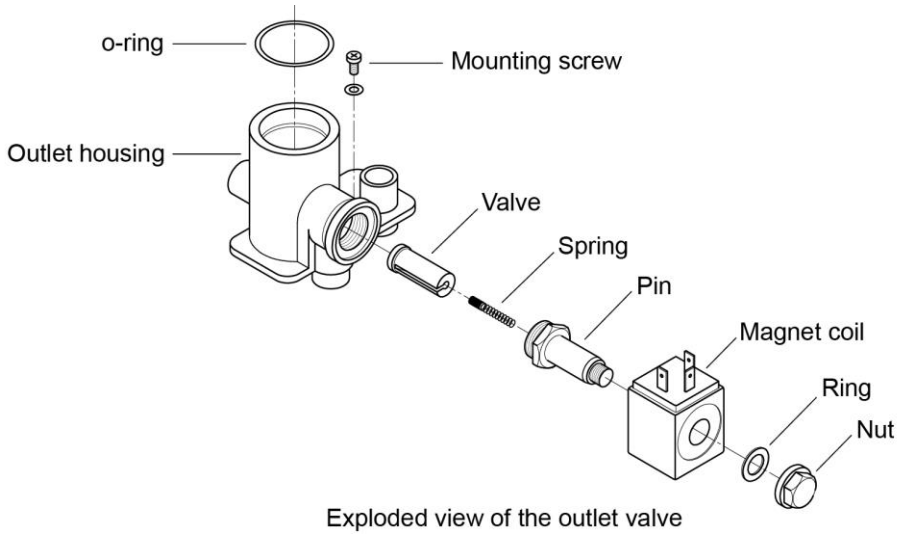
Replacing the outlet valve:

Ensure that the O-ring for the drain valve is correctly placed and in a good condition. Dampen the O-ring seals with water before replacing the outlet valve. Do not use lubricant or any other substance.

a) Unscrew the mounting screws.
b) Disassemble the hose clamp.
c) Take the new valve and connect the fill hose with the hose clamp
d) Place the valve in the bottom hole and fixate with 2 mounting screws.
e) Start the steam generator to run a test and check the valve for leakage.



Outlet valve



Exploded view of the outlet valve

Deviations from normal operation

Deviations occurring during operation with steam can be due to a number of causes. First check the whole plant. The procedure requires some specialist knowledge.

During the search we recommend:

- Observe
- Deliberate
- Act

Check for:

- The electrical conductivity of the supply water (start-up phase for the new cylinder)
- Installation of the steam hose: jammed, blocked up or bent very strongly
- Function of the temperature probe
- The electrical power supply
- The water supply: condition of the stop cock
- The inlet valve: filter or nozzle blocked up or damaged?
- Are all fuses OK?

If an operating message is issued please evaluate the contents of the message. Take all necessary measures.

Safety precautions

Without supervision and without instructions, the use of the steam cabin is prohibited for the following persons:

- Children
- Adults with physical, mental and/or sensory restrictions.
- Persons who were not trained in the safe use of the steam cabin.
- Persons under the influence of alcohol or drugs.

Please remove all make-up before entering the steam cabin.

Bringing electric devices into the steam cabin is strictly prohibited!

Warning hot surfaces
The steam inlet and its near surrounding are hot. Don't touch danger of scalding. Do not directly touch the hot out coming steam because of danger of scalding. Make sure the warning label is applied on the steam inlet glass cover plate.

Slippery when wet
The floor inside the steam cabin can be slippery.

Before using the steam cabin, read the instructions very carefully!
Maximum stay inside the steam cabin: 20 min (max. 3 sessions with a 20 minute break between each session to cool down)
Humidity inside the steam cabin: 100 %
Maximum temperature inside the steam cabin: 60°C

General use

Tips for using

- People who are restricted in their action should only use the steam cabin with special diligence
- Please contact your doctor if you have health concerns.
- The door opens to the outside of the cabin. Pushing the door inwards can lead to damage to the door or the hinges
- Only use essential oil that are registered with the Food Standard Agency

Examples for non-using

- The Cleo Basic steam bath generator may not be used in public areas.
- Children must not be left unattended in the steam shower cabin.

Danger of scalding!
The steam inlet and the surrounding area are hot.

Do not use climbing aids inside a steam cabin.
Using climbing aids can lead to dangerous situations and damage to the cabin.

The Cleo-Basic steam bath generators are fitted with a two-color LED on the panel.
The LED reports the operating conditions as follows:

LED green	> Steam operation
LED green flashing	> Signal for cylinder maintenance
LED red-red-red, red-red-red	> Maximum water level reached in the cylinder
LED red flashing	> The water supply is interrupted (Device switches off automatically)
LED red	> An over-current has been detected (Device switches off automatically)
LED red-green-red-green	> The drain valve was opened manually
LED red-red-green, red-red-green	> The temperature probe is not connected or the connection was interrupted (Device switches off automatically)

All operating messages should be noted and evaluated.

EC Declaration of Conformity according to Low Voltage Directive 2014/35/EU

Cleopatra B.V.
Handelsweg 45
1525 RG Westknollendam, Holland

herewith declares that the following described multifunctional steam cabin in our delivered version complies with the appropriate basic safety and health requirement of the EC Directives based on its design and type, as brought into circulation by us. In case of alteration of the product, not agreed upon by us, this declaration will lose its validity.

Product:	**Multifunctional Steam Cabin**
Intended use:	**personal Hygienic**
System of the certificate of conformity:	**4**
Models:	**Cleopatra „Proline Square"**

Characteristics:

Type	**Steam Cabin Measures [LxB mm]:**		
1-3	1674/2492/3242x2086	Art. Nr. 21039000	with E1-E7
4-6	1674/2492/3242x2336	Art. Nr. 21093000	with E1-E7
7+8	2492/3242x2436	Art. Nr. 21093000	with E1-E7
9+10	2492/3242x3186	Art. Nr. 21093000	with E1-E7
11+12	2492/3242x3436	Art. Nr. 21093000	with E1-E7

E1 = Steam generator Type Cleo Basic:	**E2 = Steam generator Type Cleo Total:**
230V 1N AC, 50Hz, max. 3 kW, max. 13A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	230V 1N AC, 50Hz, max. 3 kW, max. 13A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)
400V 3N AC, 50Hz, max. 6,1 kW, max. 8,8A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	400V 3N AC, 50Hz, max. 6,1 kW, max. 8,8A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)
400V 3N AC, 50Hz, max. 11,4 kW max. 16,5A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	400V 3N AC, 50Hz, max. 11,4 kW, max. 16,5A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)
400V 3N AC, 50Hz, max. 17,5 kW, max. 25,3A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	400V 3N AC, 50Hz, max. 17,5 kW, max. 25,3A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)
400V 3N AC, 50Hz, max. 24,3 kW, max. 35,1A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	400V 3N AC, 50Hz, max. 24,3 kW, max. 35,1A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)
400V 3N AC, 50Hz, max. 34,2 kW, max. 49,4A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)	400V 3N AC, 50Hz, max. 34,2 kW, max. 49,4A, IPX4 (inside)/ IP20 (outside), Class I, max.1,0MPa(10bar), max. 176°F(80°C)

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EC Declaration of Conformity according to Low Voltage Directive 2014/35/EU

E3 = Light:	12VAC 50Hz, SELV, 25W, IP66, Class II
E4 = Speaker:	18VAC, SELV, 60W, 4 Ohm, IP65 (front side)
E5 = Fragrance Pump:	12VDC SELV), 15W, 1,5A, IPX5, Class III, max. 2L/min, S3 25% 15s/45s
E6 = Turbo Stoom:	230VAC, 50Hz, 64W, IPX2, Class I
E7 = Climate Control:	230VAC, 50Hz, 40W, IPX5, Class I

Applicable EC-Directives:

(1) Low Voltage Directive 2014/35/EU
(2) Directive of Electromagnetic Compatibility (EMC) 2014/30/EU
(3) Construction Product Regulation 305/2011/EU

Applicable Harmonized Standards:

(1) DIN EN 60335-2-98:2002 + A1:2004 + A2:2008
(1) DIN EN 60335-1:2010
(2) DIN EN 61000-6-2:2006-03
(2) DIN EN 61000-6-3:2011-09
(2) DIN EN 62233:2008-11
(2) DIN EN 60335-1:2012-10 Section 19.11.4.1 – 19.11.4.7

Testing Laboratory: Type examination by

TÜV Product Service GmbH
Daimlerstr. 40
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Date / Authorized Signature:

Westknollendam,
the 22nd.ofSeptember 2015

Title of Signatory:

Marcel Mol
(Director Cleopatra)

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Installation and operation manual Cleo Total. We reserve the right to make technical changes and printing-related colour deviations.
Item no. 90549001. Printed in The Netherlands.
01-2015

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