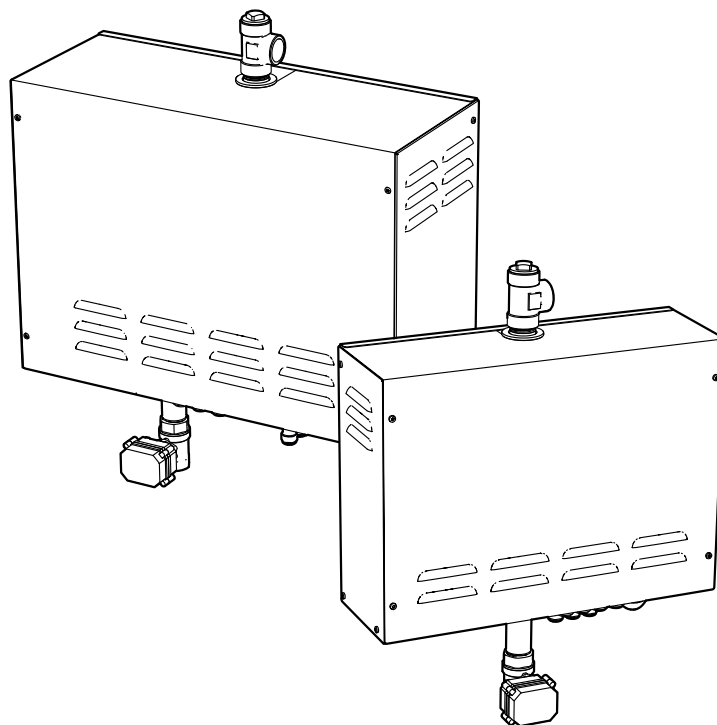


TYLÖ STEAM HOME / COMMERCIAL

2024-11-11



SVENSKA

INSTALLATION-/BRUKSANVISNING

ENGLISH

INSTALLATION/USER GUIDE

DEUTSCH

INSTALLATIONS-/BEDIENUNGSANLEITUNG

FRANÇAIS

INSTALLATION/MODE D'EMPLOI

РУССКИЙ

РУКОВОДСТВО ПО УСТАНОВКЕ/ЭКСПЛУАТАЦИИ

POLSKI

INSTRUKCJA INSTALACJI/OBSŁUGI

NEDERLANDS

INSTALLATIE-/GEBRUIKERSHANDLEIDING

Installations- /bruksanvisning och felsökningslista..... Svenska sid 1

Läs igenom hela anvisningen noggrant. För att anläggningen alltid skall fungera perfekt, måste våra instruktioner efterföljas i alla avseenden. Efter installationen överlämnas denna anvisning till den person som skall sköta anläggningen.

SPARA ANVISNINGEN - INNEHÅLLER VIKTIG INFORMATION OM SERVICE OCH SKÖTSELFÖRESKRIFTER.

Installation/user guide and fault tracing list (For markets inside EU).....English page 32

Carefully read through the whole user guide. In order for the system to work perfectly, our instructions must be followed in every respect. After installation this guide is to be given to the person who will operate the system.

SAVE THESE INSTRUCTIONS – THEY CONTAIN IMPORTANT INFORMATION ABOUT SERVICING AND MAINTENANCE REGULATIONS

Installations-/Bedienungsanleitung und Liste zur Fehlerdiagnose.....Deutsch Seite 63

Lesen sich das gesamte Benutzerhandbuch sorgfältig durch. Um ein einwandfreies Funktionieren des Systems zu gewährleisten, sind unsere Anweisungen in jeder Hinsicht zu befolgen. Nach der Installation ist diese Anleitung der für den Betrieb des Systems zuständigen Person auszuhändigen.

ANLEITUNG AUFBEWAHREN – ENTHÄLT WICHTIGE INFORMATION ZU SERVICE UND WARTUNGSVORSCHRIFTEN

Installation/mode d'emploi et dépannage..... Français page 94

Lisez soigneusement l'intégralité du présent manuel. Pour que l'installation fonctionne parfaitement, nos instructions doivent être pleinement respectées. Une fois l'installation terminée, le présent manuel doit être remis à la personne chargée de l'entretien.

CONSERVEZ LE MANUEL – IL CONTIENT DES INFORMATIONS IMPORTANTES CONCERNANT LES PRESCRIPTIONS DE MAINTENANCE ET D'ENTRETIEN

Руководство пользователя/руководство по установке и контрольный перечень для поиска неполадок...Русский стр. 125

Внимательно прочтите руководство пользователя. Для обеспечения идеальной работы системы, необходимо четко придерживаться данной инструкции. После выполнения установки, данное руководство надлежит передать лицу, которое будет осуществлять эксплуатацию системы.

СОХРАНИТЕ ДАННУЮ ИНСТРУКЦИЮ – В НЕЙ СОДЕРЖИТСЯ ВАЖНАЯ ИНФОРМАЦИЯ О ПРАВИЛАХ УХОДА И ТЕХНИЧЕСКОГО ОБСЛУЖИВАНИЯ

Instrukcja instalacji/obsługi oraz lista usterek.....polski strona 156

Należy uważnie przeczytać całą instrukcję. Aby system działał prawidłowo, należy zawsze postępować zgodnie z wytycznymi zawartymi w instrukcji. Po zakończeniu instalacji należy przekazać niniejszą instrukcję operatorowi systemu.

ZACHOWAJ TĘ INSTRUKCJĘ — ZAWARTE SĄ W NIEJ WAŻNE INFORMACJE O CZYNNOŚCIACH SERWISOWYCH I KONSERWACJI

Installatie-/gebruikershandleiding en fouttraceringslijst.....Nederlands pagina 187

Lees de volledige gebruikershandleiding zorgvuldig. Voor een perfecte werking van het systeem moeten onze instructies in alle opzichten worden opgevolgd. Na installatie moet deze handleiding worden overhandigd aan de persoon die het systeem zal bedienen.

SLA DEZE INSTRUCTIES OP – ZE BEVATTEN BELANGRIJKE INFORMATIE OVER SERVICE- EN ONDERHOUDSVOORSCHRIFTEN

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Please keep these instructions!
In the event of problems, please contact the retailer where you purchased the equipment.
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IMPORTANT!

- **The steam piping must not have any sharp bends.**
- **Do not direct the steam jet against walls, seats or other objects. Always keep a space of at least 80 cm clear in front of the steam nozzle.**
- **There must not be any water pockets in the steam piping or ventilation ducts. IMPORTANT! There must not be any kind of blockage in the steam piping (e.g. taps or valves). The internal diameter of the steam piping must not be reduced.**
- **All steam rooms in continuous use for more than two hours must have an air exchange rate of 10-20 m³ air per person per hour.**
- **The power supply for the steam generator must not be cut off. Therefore avoid installing a power switch, etc. in the power supply line.**
- **The drain pipe must have a continuous fall all the way from the steam generator to the drain.**
- **The ambient temperature for the steam room and steam generator must not exceed 35°C.**
- **The sensor must be located as far from the steam jet as possible.**
- **Descale the steam generator regularly in accordance with the instructions, refer to the heading "Descaling". In areas with hard water, exceeding 4°dH hardness, a water softener or Tylö MACH 2020 water softener must be installed (Tylö Item no. 9090 8025)**
- **Clean the steam room regularly**
- **NB! The steam generator drain must always lead to a drainage channel outside the steam room. The steam generator empties its tank 1 hour after each bath, the water will then be 80-85°C!**
- **WARNING! There is a jet of hot steam from the steam nozzle. Never leave small children unattended.**
- **This appliance can be used by children aged from 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.**
- **Children shall not play with the appliance.**
- **Cleaning and user maintenance shall not be made by children without supervision.**
- **Children aged from 3 to 8 years are only allowed to operate the tap connected to the water heater.**
- **The incoming water pressure must be between min. 0.2 and max 10 bar (min. 20kPa and max 1000kPa).**
- **Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.**

General information

Installation requirements



WARNING! Electrical wiring must be performed by a qualified electrician pursuant to applicable regulations.



WARNING! The water and pipework installation must be performed by a qualified plumber pursuant to applicable regulations.

Installation planning

Before starting to install your steam generator, you should consider:

- Location of steam generator – see Figures 3, 4, 5
- Electrical installation – see Figures 26-36, 37
- Water connection and drain – see Figures 10, 14
- Steam pipe – see the "Steam pipe connection" section and Figures 17-20
- Steam nozzle – see the "Steam nozzle" section and Figures 21-25
- Steamroom ventilation – see the Ventilation section
- Location of temperature sensor – see the "Location of temperature sensor" section and Figure 37

Steam generator components

Check that the following components are included:

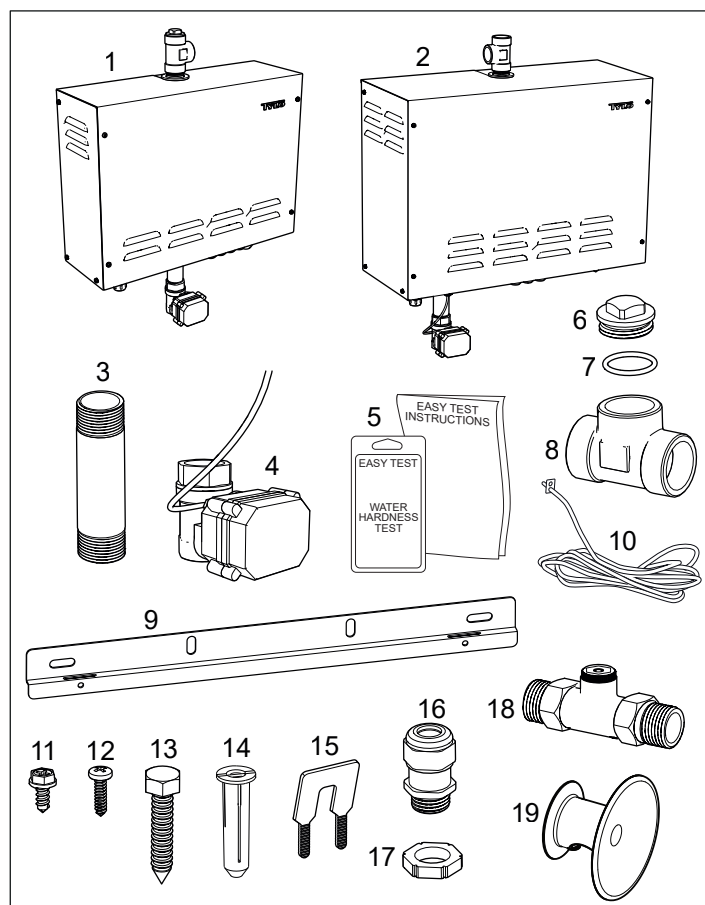


Figure 1 Steam generator components

1. Steam Home steam generator
2. Commercial Steam Generator
3. Pipe adapter 1 inch
4. Motorised ball valve
5. Easy test - for testing the water hardness
6. T-connector lock nut 1 inch
7. Lock nut O-ring
8. Steam pipe connection T-connector 1 inch
9. Wall bracket
10. Temperature sensor
11. 2 x Lock screws 9.5
12. 1 x Screw B6x13
13. 4 x Screws B14x35
14. 4 x Plastic plugs 45 mm
15. 3 x Connectors
16. 2 x Cable lead-throughs
17. 2 x Cable lead-through nuts
18. Non-return valve
19. Essential steam nozzle (Steam Home)

Steamroom

The steamroom must not have any other heat source than the steam generator. The ambient temperature for the steamroom and steam generator must not exceed 35°C. If there is a sauna adjacent to the steamroom, it must be well insulated and there must be at least 10 cm of air space between the sauna and the steamroom.

Floor and drain

There must be a drain inside the steamroom. The floor should slope down towards the drain. The flooring may be seamless vinyl, tiles, etc. The foundation and jointing must be of the same design as is required for a wetroom.

Note: Where the flooring and walls are made of plastic, minor colour changes may occur underneath the steam nozzle due to contact with steam and hot water.

Ventilation

Generally, steamrooms that are in use for periods of less than 2 hours do not need any ventilation. All steamrooms in continuous operation for more than 2 hours must have an air exchange rate of 10-20 m³ air per person per hour, for reasons of hygiene and functionality.

Any cavity above the steamroom ceiling must not be completely sealed. Leave at least one vent hole (100cm²) on the same wall as the steamroom door.

Inlet vent

Must be an opening at a low level through the door wall or a gap under the door, see Figure 37.

Outlet vent

Must be placed high on a wall or on the ceiling (see any instructions provided with the steamroom) although not above the door or the seating, see Figure 37. The outlet vent must be connected to a ventilation duct that conducts the air outdoors. An existing duct could be utilised. The ventilation duct must be completely sealed and made of a material that tolerates high air humidity. Water pockets, where condensed water can collect and cause blockages, must not be present. If the ventilation duct is required to have a water pocket, a water trap must be installed to drain condensate into the drain system.

The size of the outlet vent must be adapted to the requirement that it must be able to evacuate 10-20 m³ air per person per hour.

Mechanical extractor

If the outlet vent is not sufficiently effective using natural ventilation alone, perhaps due to low pressure in the room from which air is supplied to the steamroom, the outlet vent must be connected to a mechanical extractor and adjusted to extract a minimum of 10 and a maximum of 20 m³ per person per hour.

The exhaust air fan must support high air humidity.

Note: The mechanical extractor must not be connected to the Commercial steam generator connection terminal F,F.

Drying fan

Upon relapse to the standby mode, any drying fan connected to the steam generator (Commercial connection terminal F,F) will start from use and after completed use of the steamroom, the function is set via the Elite control panel. The drying fan is only intended for use in steamrooms used to a limited extent and installing the fan is optional, not required. Note: The drying fan is not used as a mechanical extractor.

Opening the steam generator

To open the steam generator (*Figure 2*):

1. Loosen the 4 screws on the front.
2. Carefully lift the front cover slightly.
3. Pull the front cover straight out.

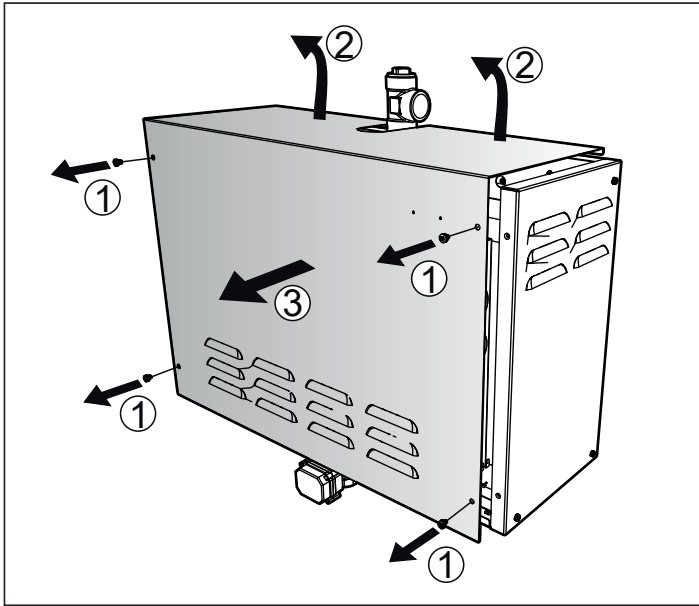


Figure 2 Opening the steam generator

Positioning the steam generator

Installation must be carried out by an authorised electrician and authorised plumber. The steam generator must be connected with a fixed connection. It is installed outside the steamroom but as close to it as possible. The maximum length of the steam pipe is 15 metres.

Lock the steam generator into place with the lock screw, see *Figures 6,7*.

Take care to respect the specified installation distances (*Figures 3, 4*). The distances indicated are generous to allow sufficient space for maintenance and servicing.

The steam generator is to be located in a dry and ventilated space with drainage, above, below or on the same level as the steamroom (never in an aggressive environment that can cause corrosion/rust). The steam generator may not be installed outdoors. The maximum difference in height between the steam generator and the steamroom is 3 metres. (*Figure 5*)

The steam generator must be installed horizontally, at such a height above the floor so that the drainage pipe will have a good fall to its drain.

The wall material must support the steam generator's total weight during installation.

Weight of steam generator incl. water:

Steam Home - 16 kg

Steam Commercial - 29 kg

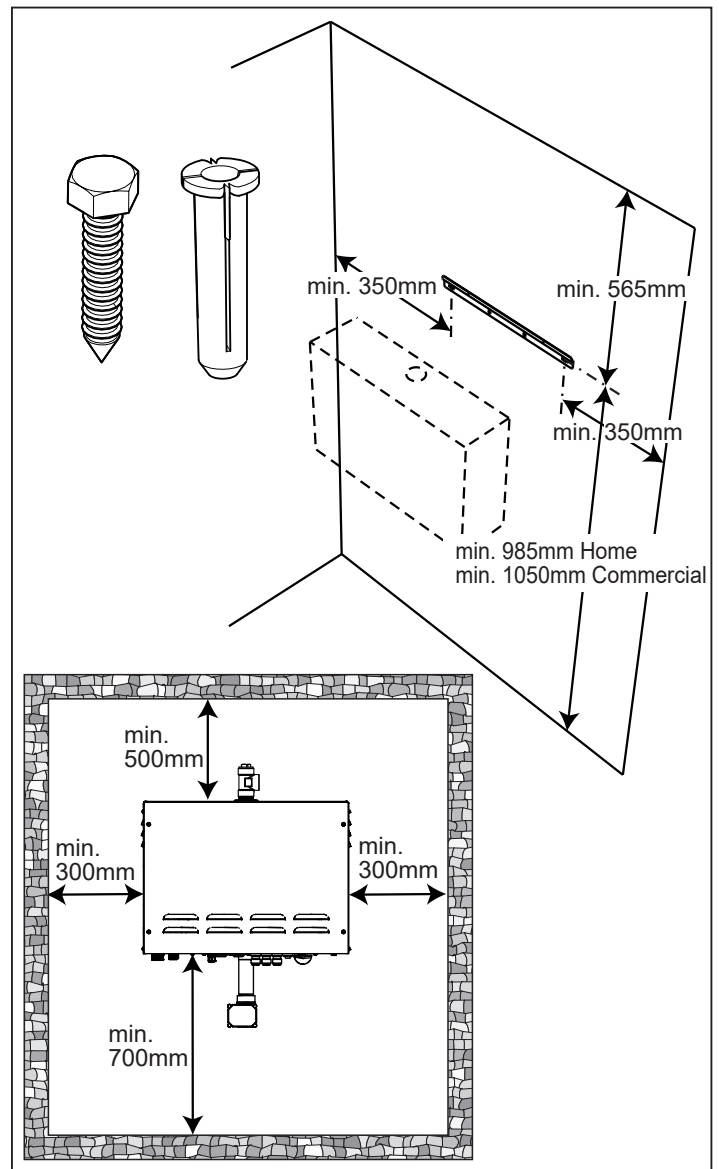


Figure 3 Suspending the steam generator

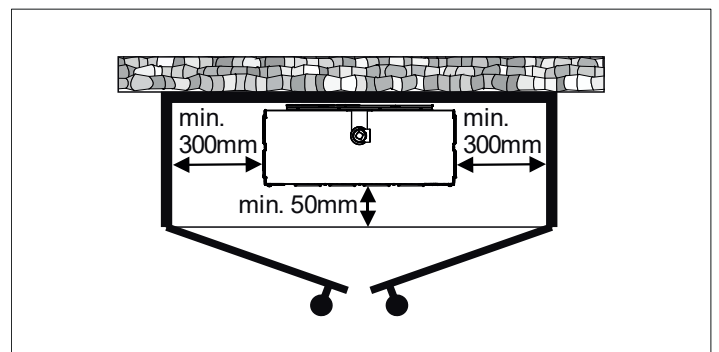


Figure 4 Minimum dimensions for positioning steam generator inside a ventilated cabinet

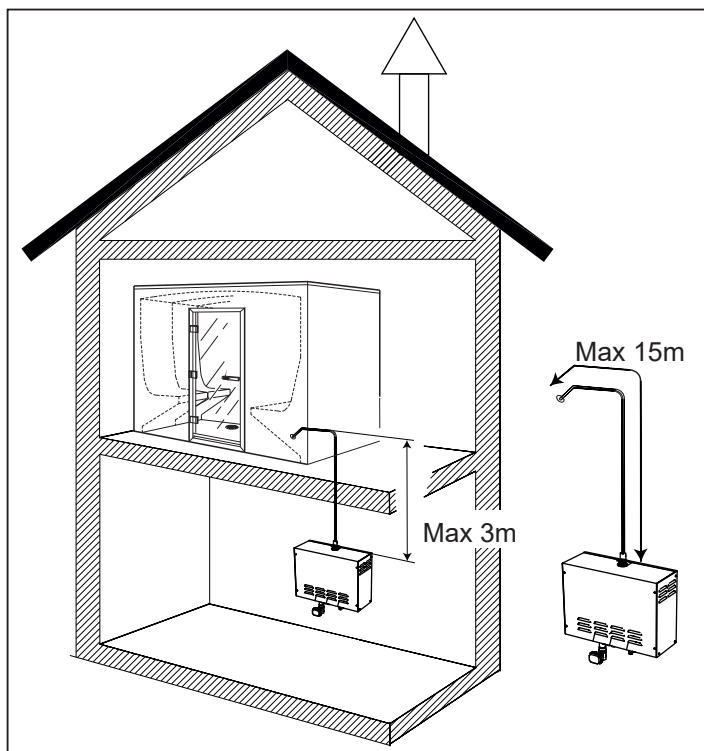


Figure 5 Maximum length of the steam pipe

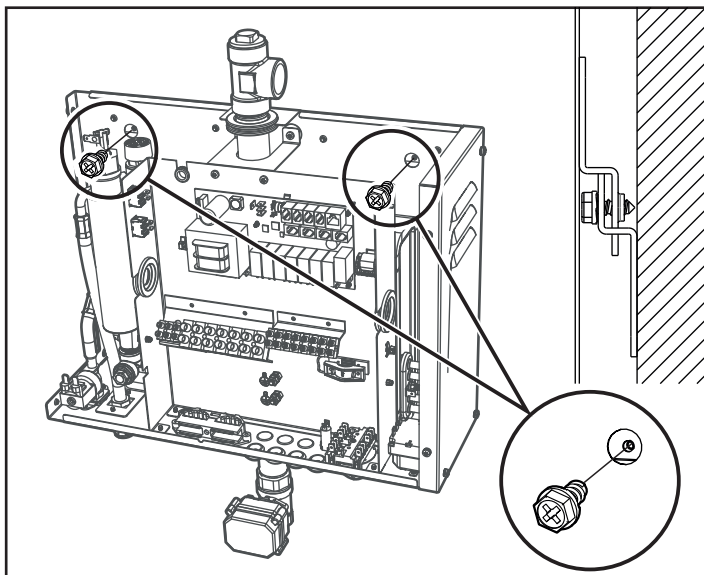


Figure 6 Lock screw for bracket - Steam Home

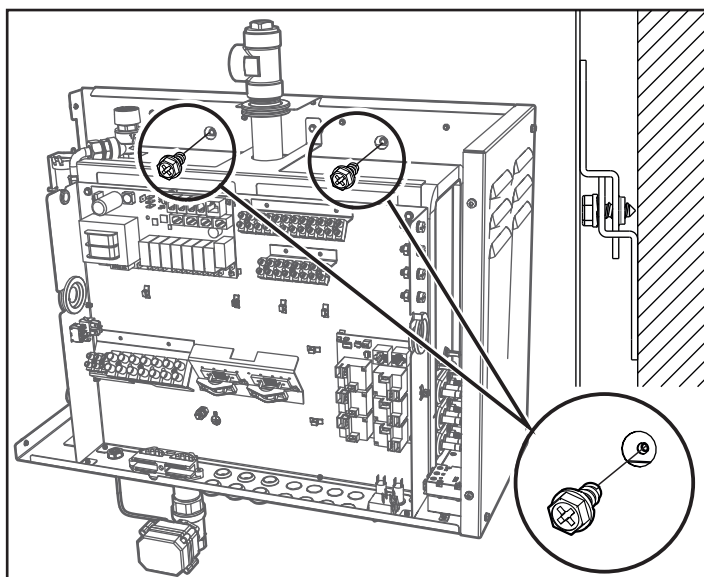


Figure 7 Lock screw for bracket - Steam Commercial

Technical specifications

Steam generators are equipped with:

- A stainless steel water reservoir
- Water reservoir volume during operation:
Home - approx.: 2.4 litres
Commercial - approx.: 8.4 litres
- Acid-proof stainless steel pipe elements
- Automatic draining 60 minutes after the steam bath has been switched off
- Automatic flushing after draining
- 3-stage output
- Electronic water level regulation
- Electronic level protection
- Acid-proof stainless steel electrodes
- Continuous steam production
- Always use the correct power output, regardless of the water quality and level
- Built-in safety valve (0.5 bar)
- Built-in temperature cut-out
- Built-in dirt filter
- Automation for remote control
- Splashproof design
- IP class 21
- Fault code clearing
- Automatic draining during operation, adjustable
- Non-return valve
- Backflow protection
- Manual water control for service purposes
- Weight incl. water:
Steam Home - 16 kg
Steam Commercial - 29 kg

Selecting steam generator

Recommended type of steam generator in relation to the number of hours of steamroom use.

Home Steam Generator: Recommended maximum continuous operation 3h – Designed for home use and small installations that do not require long operating times.

Information! However, the control panel connected to the Home Steam Generator allows longer operating times than 3 hours. However, setting a longer operating time is not recommended, as it may affect both the function and product lifespan of the steam generator.

Commercial Steam Generator: Recommended maximum continuous operation 24 hours – Designed for public use.

Correct power output in relation to room volume.

kW	Min/Max steamroom volume (m³)				Steam produc- tion kg/h	Water consump- tion l/h
	Toughened glass lightweight wall. Im- pression, Panacea, etc.		Heavyweight wall made of concrete, brick, tiles, etc.			
	with ventilation	without ventilation	with ventilation	without ventilation		
3	-	max. 3	-	max. 2	3,5	3,5
6	3-8	4-15	2-5	2,5-8	8	8
9	6-16	13-24	4-10	7-16	12	12
12	14-22	22-30	8-15	14-20	16	16
15	18-25	28-38	10-19	18-25	20	20
2x9	20-30	28-40	13-20	18-30	24	24
2x12	28-40	38-50	18-30	28-40	32	32
2x15	36-50	56-76	32-42	42-57	40	40
3x9	38-45	46-60	28-40	38-52	36	36
3x12	43-60	58-70	38-50	48-60	48	48
3x15	54-75	84-114	47-63	60-75	60	60

Table 1 Suitable steam generator output depending on room volume and steam production and water production

Dimensions

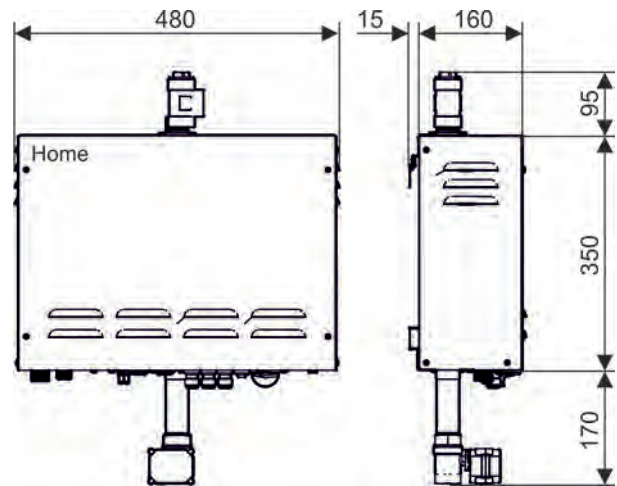


Figure 8 Tylö Home type Steam Generator, dimensions in millimetres

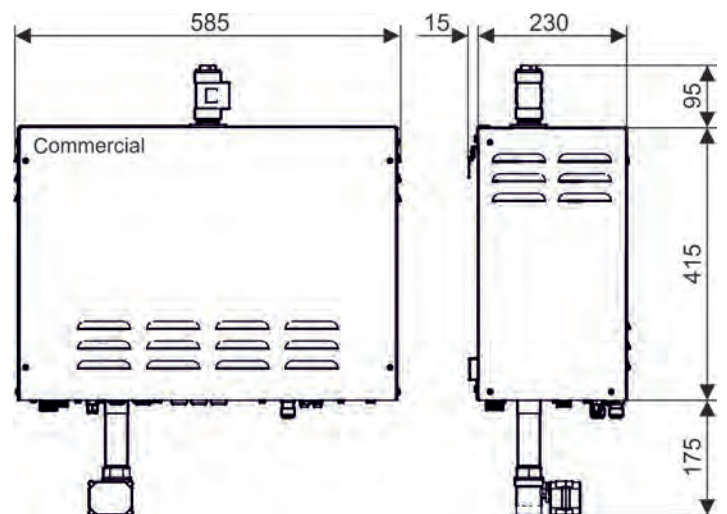


Figure 9 Tylö Steam Generator Commercial type, dimensions in millimetres

Pipework installation

To be done by an authorised plumber.

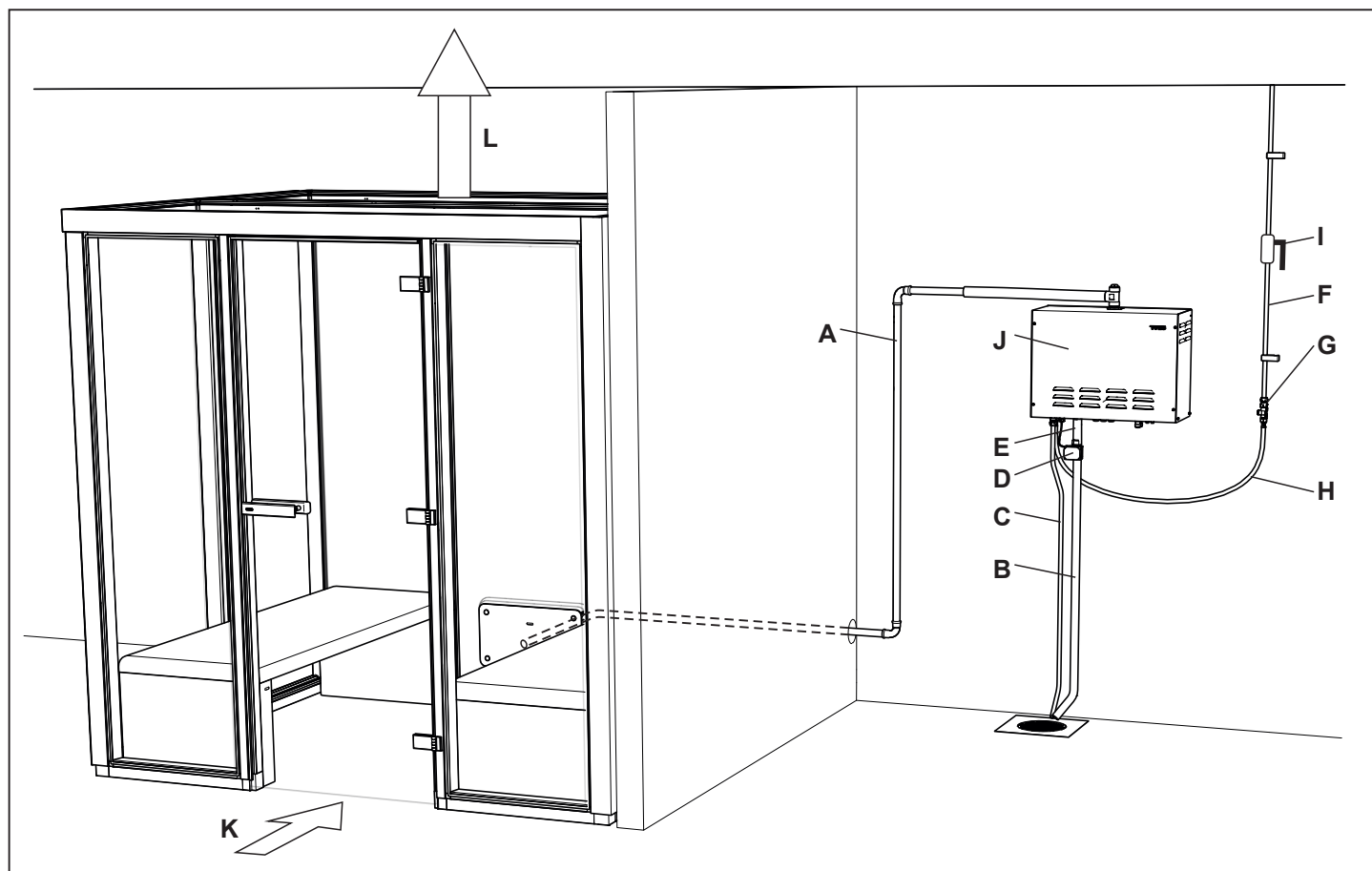


Figure 10 Pipework installation diagram

- A. Steam pipe - should be insulated if longer than 3 metres
- B. Drain piping
- C. Safety valve piping (0.5 bar)
- D. Motorised ball valve (included with the steam generator)
- E. Motorised ball valve pipe adapter (included with the steam generator)
- F. Water piping
- G. Non-return valve (included with the steam generator)
- H. Reinforced rubber hose for steam generator water connection
- I. Shut-off valve for incoming water
- J. Steam Home/Steam Commercial
- K. Supply air into the steamroom under the door
- L. The outlet vent must be connected to a ventilation duct that conducts the air outdoors (see the Ventilation section)

Water connection

IMPORTANT! Before the incoming water supply is connected to the steam generator, the piping system must be flushed through. Flushing prevents metal particles and other impurities entering the steam generator system from the piping. Also remember to install the accompanying non-return valve into the incoming water connection.

IMPORTANT! The incoming water pressure must be between 0.2 and 10 bar (min 20kPa and max 1,000kPa).

IMPORTANT! Read the "Water quality" section.

It is better to install a shut-off valve (see Figure 13-E) in the water supply line just before the non-return valve being installed to facilitate repairs/servicing.

An reinforced rubber hose is recommended between the incoming water piping and the steam generator to avoid banging.

Connect the water as follows:

1. Connect the non-return valve (B) to a water supply line (A) with an inner diameter of at least 12 mm.
2. It is best to connect an reinforced rubber hose (C) approximately 1 metre from the non-return valve (B).
3. Connect the reinforced rubber hose (C) to the steam generator water connection (D).

When connecting a water hardener or water hardener+water filter (reverse osmosis water filter) this must be done between the incoming water supply line and the non-return valve (see Figure 13-B). (Tylö water hardener item no. 9090 8027).

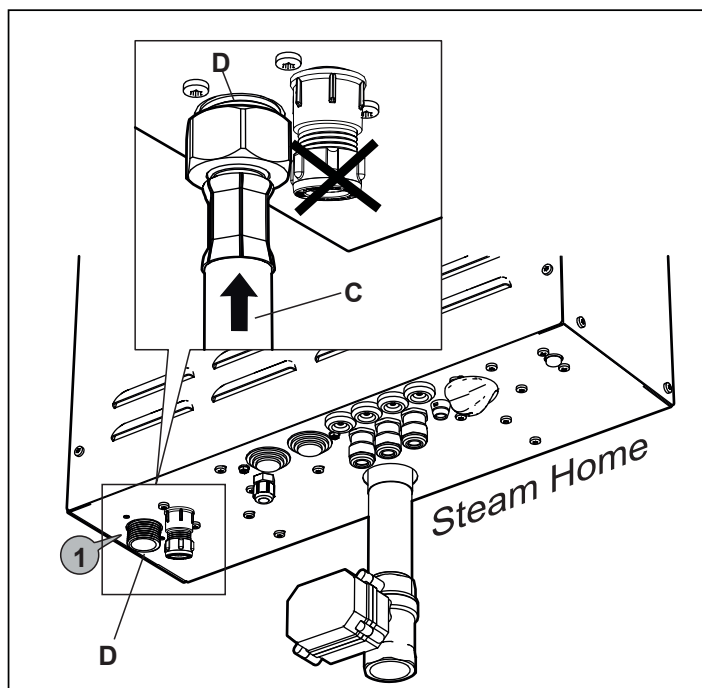


Figure 11 Connection of water Steam Home

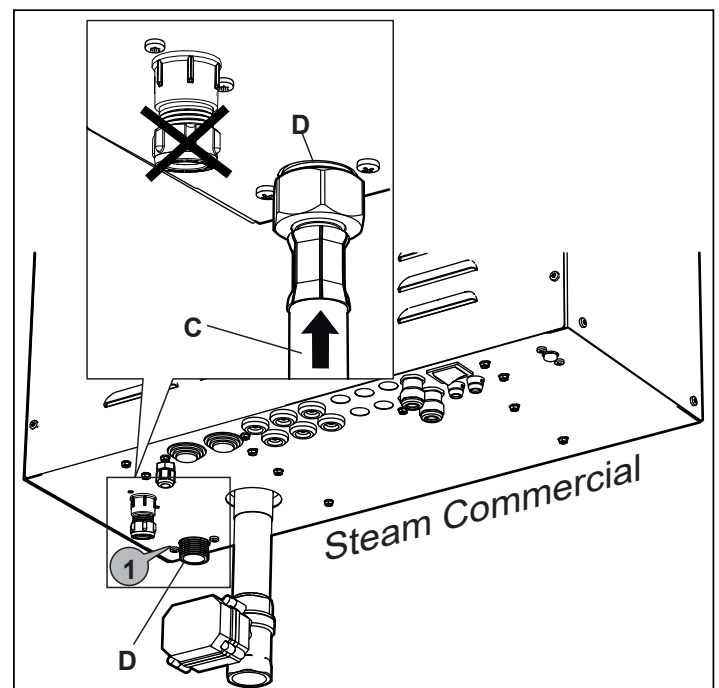


Figure 12 Connection of water Steam Commercial

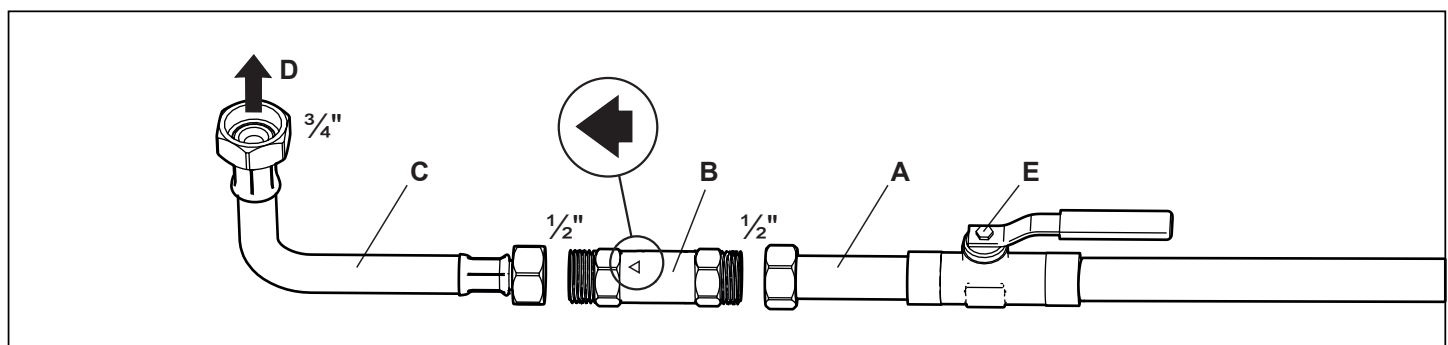


Figure 13 Connections and lines for the incoming water

Figs. 11, 12 and 13:

- A. Incoming water line
- B. Non-return valve 1/2 inch
- C. Reinforced rubber hose with connectors 1/2 inch and 3/4 inch
- D. Water connection steam generator 3/4 inch with built-in dirt filter
- E. Shut-off valve (if there is one)

Drain connections

IMPORTANT! Drain pipes from the steam generator drain connections must lead to a drainage channel outside the steamroom. If the drain pipes lead into the steamroom, there is a risk of burn injuries when draining the water reservoir.

IMPORTANT! There must not be any kind of blockage (e.g. taps or valves) in the drain pipe to the drain connection on the motorised ball valve (C). The drain pipe must have a continuous down-slope all the way from the steam generator to the drain.

IMPORTANT! The drain pipe to the drain connection for the safety valve (E) must be installed in a continuous downward direction and may not be equipped with any kind of blockage (e.g. taps or valves).

IMPORTANT! Check that the planned drain can handle the amount of water in the steam generator draining sequence. Amount of water initially emptied when the motorised ball valve opens 1 hour after completion of a steam bath session:

- Steam Commercial - approx: 9 litres in 20 secs
- Steam Home - approx: 3 litres in 10 secs

Connect the drain and the safety valve as follows:

Note: It is important to tighten all the pipe connectors!

1. Connect the pipe adapter 1 inch (A) to the steam generator drain connection (B).
2. Connect the motorised ball valve (C) to the pipe adapter 1 inch (A). The electric cable is inserted into the steam generator via lead-through (F) och connected by an authorised electrician.
3. Connect the pipe (minimum inner diameter 25 mm) to the drain connection 1 inch (D) on the motorised ball valve (C) leading to the drain.
4. Connect the pipe (outer diameter 15 mm) to the drain connection for the safety valve (E) leading to the drain.

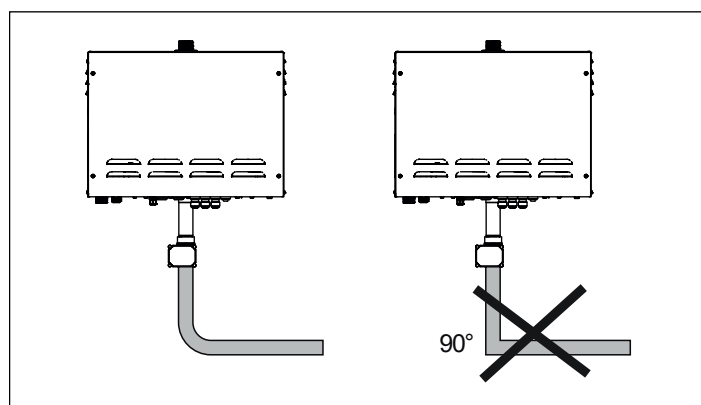


Figure 14 The drain pipe should not have any sharp angles

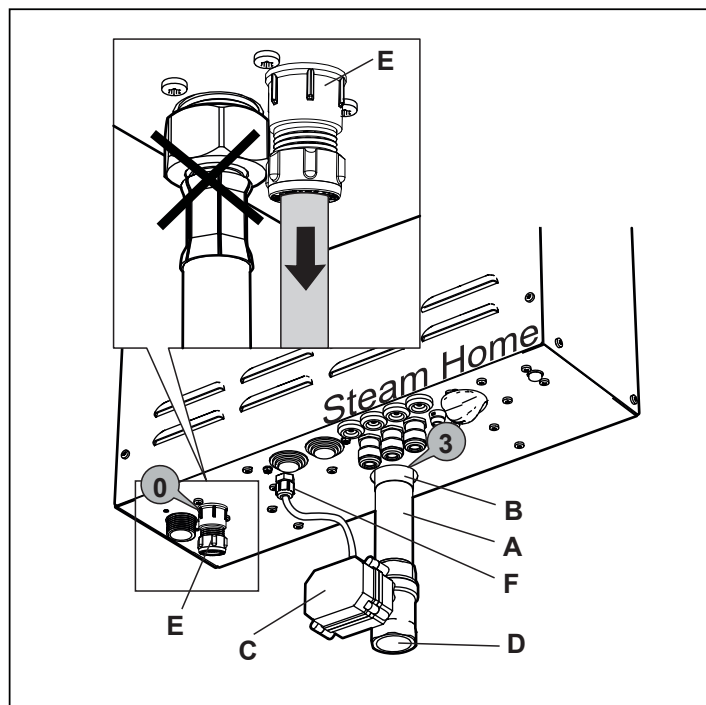


Figure 15 Connection of the drain Steam Home

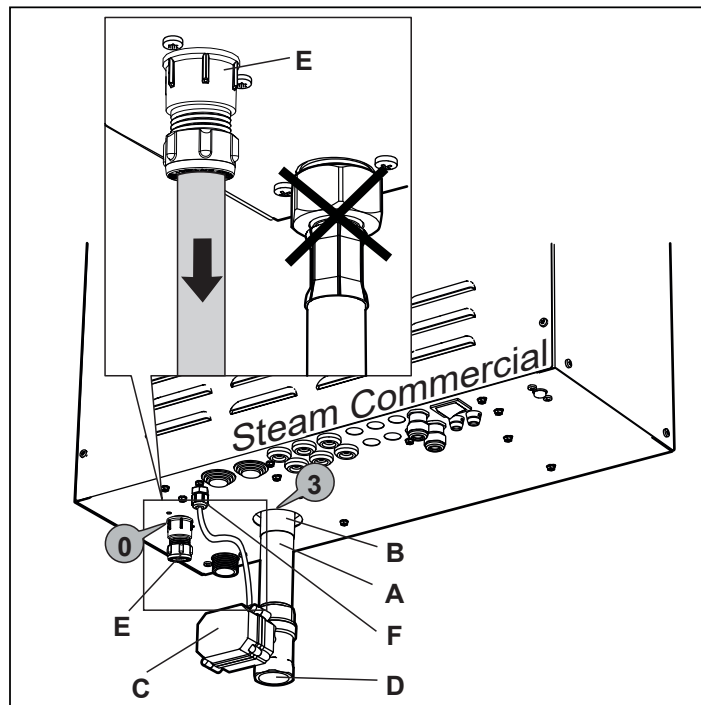


Figure 16 Connection of the drain Steam Commercial

Figs. 15 and 16:

- A. Pipe adapter 1 inch
- B. Steam generator drain connection 1 inch
- C. Motorised ball valve
- D. Drain connection on motorised ball valve 1 inch (R25 thread , internal 31 mm)
- E. Steam connection for safety valve, clamping clutch ½ inch (pipe exterior 15 mm)
- F. Lead-through for electrical wiring of motorised ball valve

Steam pipe connection

IMPORTANT! There must not be any water pockets in the steam pipe between the steam generator and the steamroom, where condensed water can accumulate. The steam pipe should have as few bends as possible, and these must be smoothly rounded with a minimum radius of 5 cm; sharp angles must not be present, see Figure 17.

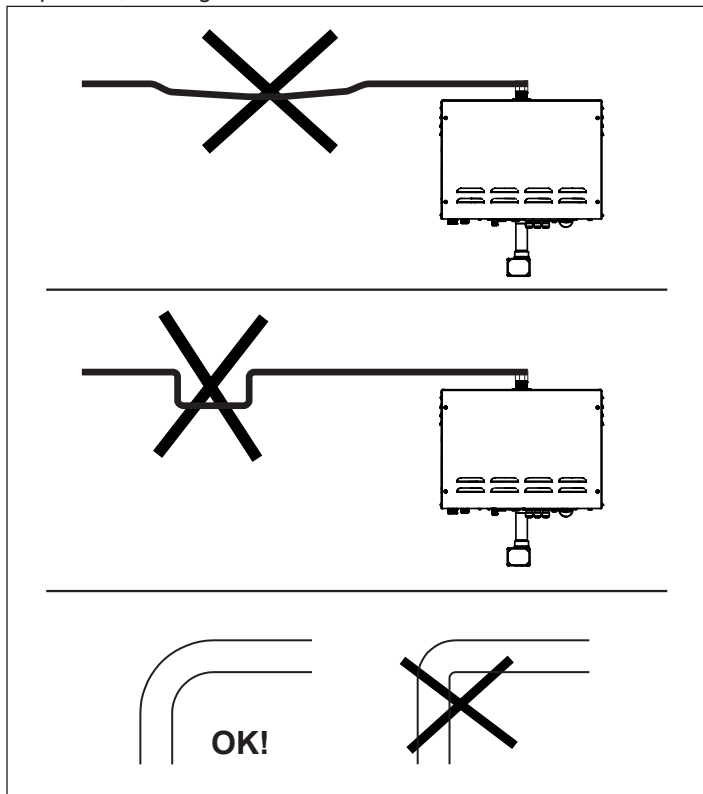


Figure 17 Running piping for the steam pipe

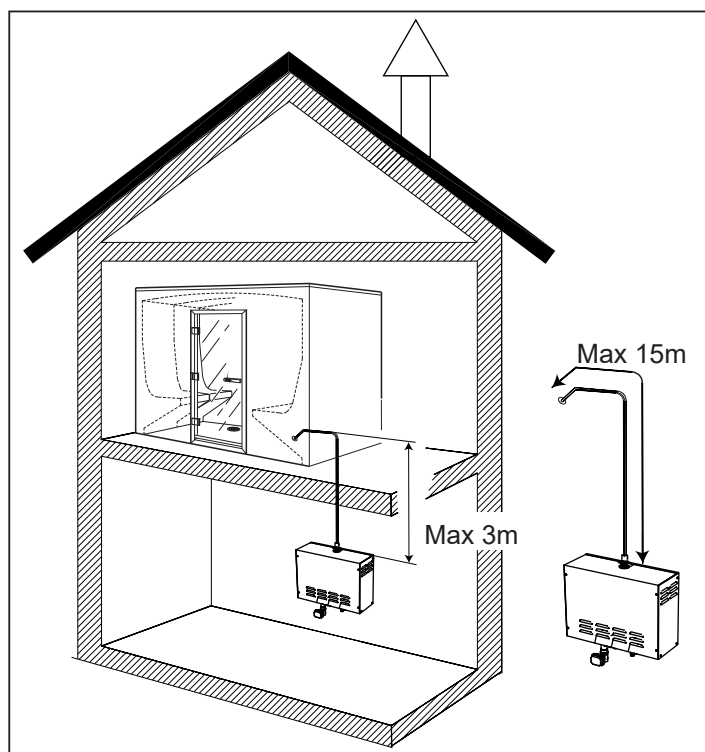


Figure 18 Maximum length of the steam pipe

IMPORTANT! Maximum capillary height 3 metres and maximum length 15 metres from the steam generator to the steamroom, see Figure 18.

IMPORTANT! The fragrance pump must be installed so as not to allow the essence to run back into the steam generator tank, see Figure 19.

IMPORTANT! If the steam pipe is longer than 3 metres, it should be heat insulated with an insulation that can tolerate at least 100°C. If the steam pipe is not insulated, there is a risk that the steam will cool and condense, resulting in water in the steam pipe.

IMPORTANT! The distance between inflammable material, such as wood, and an uninsulated steam pipe must not be less than 10 mm.

IMPORTANT! When running piping through walls, the hole for the lead-through must have a diameter that is at least 10 mm greater than the outer diameter of the pipe. When running pipes through a moisture-sealed wall, e.g. a bathroom, make sure the lead-through is carried out in accordance with applicable wetroom regulations.

IMPORTANT! The steam nozzle is installed inside the steamroom. Do not locate the nozzle so that the steam jet will hit the wall, seating area or any other object. Always keep a space of at least 80 cm clear in front of the steam nozzle. If the steamroom is to be used by children or anyone with a lower ability to react, there must be protection present that will prevent unintentional contact with the steam jet nearest to the steam nozzle.

IMPORTANT! There must not be any kind of blockage in the steam piping or the steam nozzle (e.g. taps or valves).

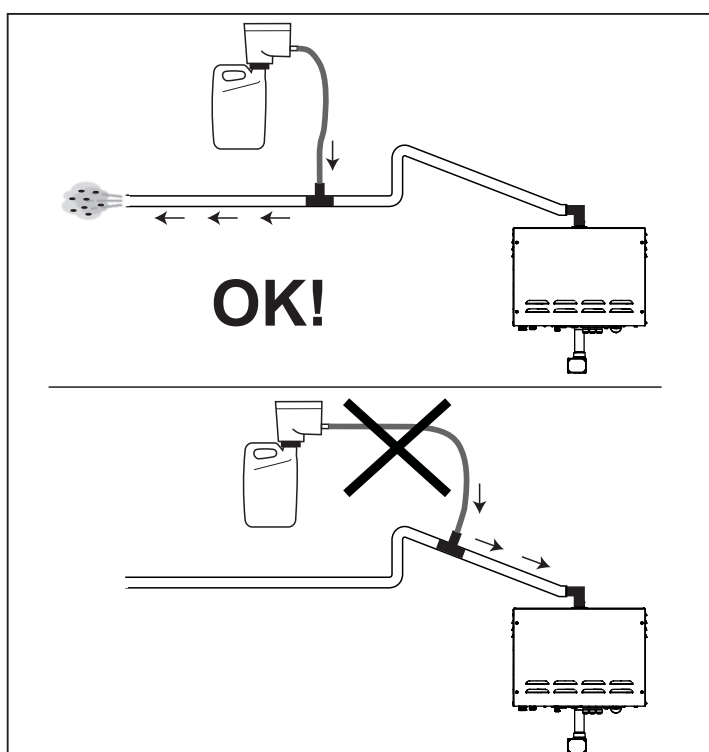


Figure 19 Fragrance pump installation

Steam pipe dimensions

When installing a new steam generator or steam pipe

For all new installations, use a steam pipe with a minimum inner diameter of 19 mm/minimum outer diameter of 22 mm. It is recommended to use a pipe with an inner diameter of 26.5/outer diameter of 28 as this will generate a lower working pressure and a lower noise level. This provides better steam generator operating conditions and an increased product life.

When replacing an existing steam generator with an older/existing steamroom

If you are replacing a Tylö steam generator (model VA/VB) that was installed according to obsolete steam pipe recommendations (1/2 inch - French 12/14), Tylö recommends increasing the steam pipe to meet the requirements for installing a new pipe. However, if the old/existing installation has worked to your satisfaction, you can continue using the old/existing steam pipe for the Commercial/Home steam generator provided that the rated output for the steam generator is the same.

Note: When replacing another, non-Tylö steam generator with the Commercial/Home steam generator, Tylö's steam pipe requirements for new installations must be followed.

Connect the steam pipe as follows:

The steam pipe can be installed with a down-slope either towards the steamroom or towards the steam generator. Alternatively the steam pipe can be installed with a slope down towards both the steamroom and towards the steam generator.

IMPORTANT! Read the steam nozzle user guide before starting the steam pipe installation.

Note: It is important to tighten all the pipe connectors!

1. Install the T-connector 1 inch (B) on the steam generator steam outlet (A), with the lock nut hole facing up.
2. Install the lock nut (C) in the T-connector 1 inch (B) intended for descaling.
3. Connect a copper or stainless steel pipe to the T-connector (D). Then lead the steam pipe to the steam nozzle inside the steamroom.

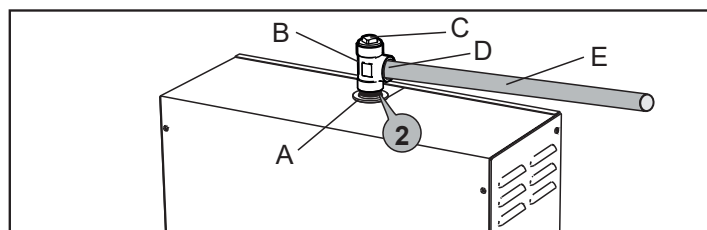


Figure 20 Connection of steam pipe

- A. Steam generator steam outlet 1 inch.
 B. T-connector 1 inch.
 C. T-connector lock nut 1 inch.
 D. T-connector 1 inch steam pipe connection (R25 thread, internal 31 mm)
 E. Copper or stainless steel steam pipe.
- Min. - inner diameter 19 mm/outer diameter 22 mm
 - Max. - inner diameter 25.6 mm/outer diameter 28 mm

Steam nozzle

Tylö's product range includes the following three steam nozzles (see also Figs. 23-25):

- Essential - Personal use (part of Steam Home)
- Bahia Home - Personal/public use
- Bahia Pro - Personal/public use

For installation, please see the instructions supplied with the steam nozzle.

If installing the steam nozzle in a Tylö steamroom, also see the installation instructions supplied with the steamroom.

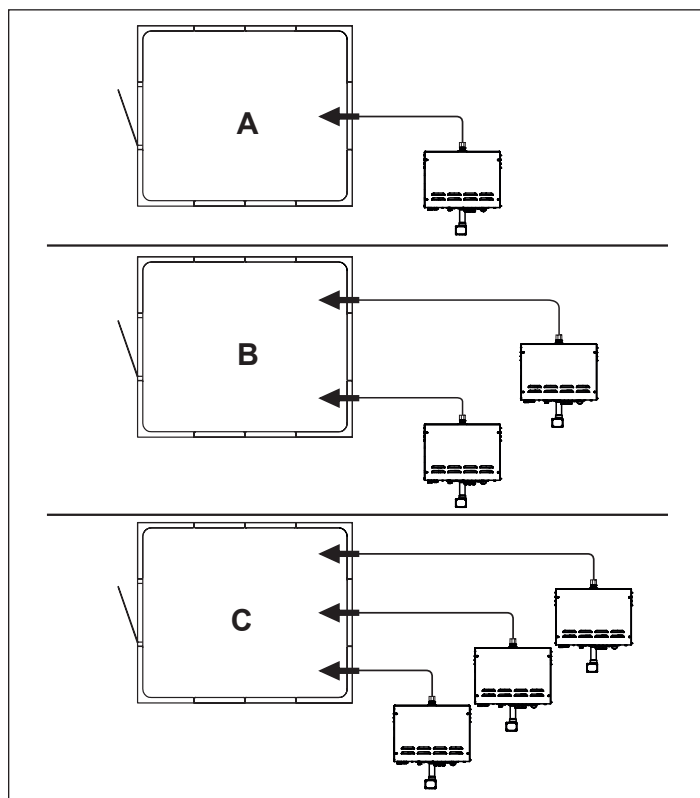


Figure 21 Example of connection of steam pipe

- A. Steam Home/Commercial with 1 steam generator to 1 steam nozzle.
 B. Multisteam with 2 steam generators to 2 steam nozzles.
 C. Multisteam with 3 steam generators to 3 steam nozzles.

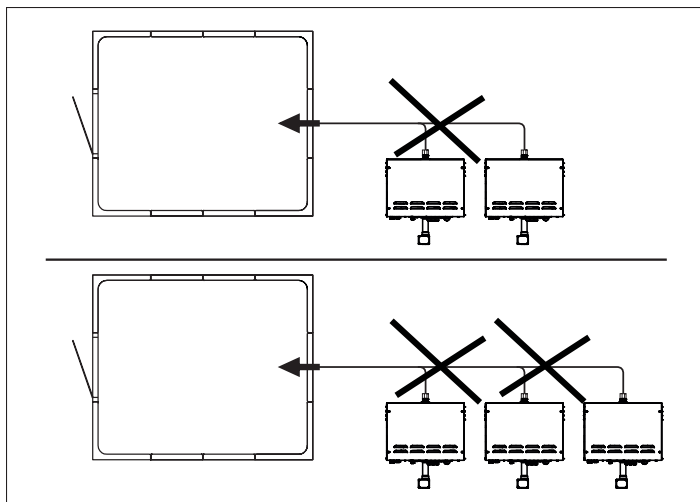


Figure 22 The steam pipes from each steam generator must not be connected together

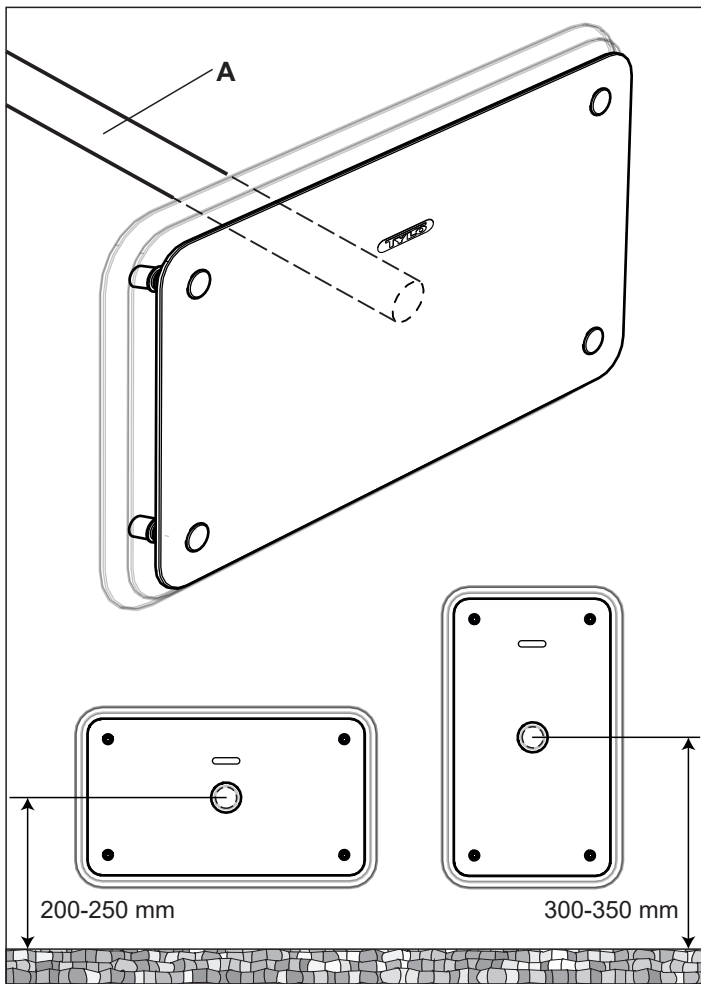


Figure 23 Tylö Bahia Pro steam nozzle

- A. Steam pipe, min.-max. outer diameter 28-35 mm
- The measurements show the distance from the floor to the location of the steam pipe with the steam nozzle installed horizontally and vertically.

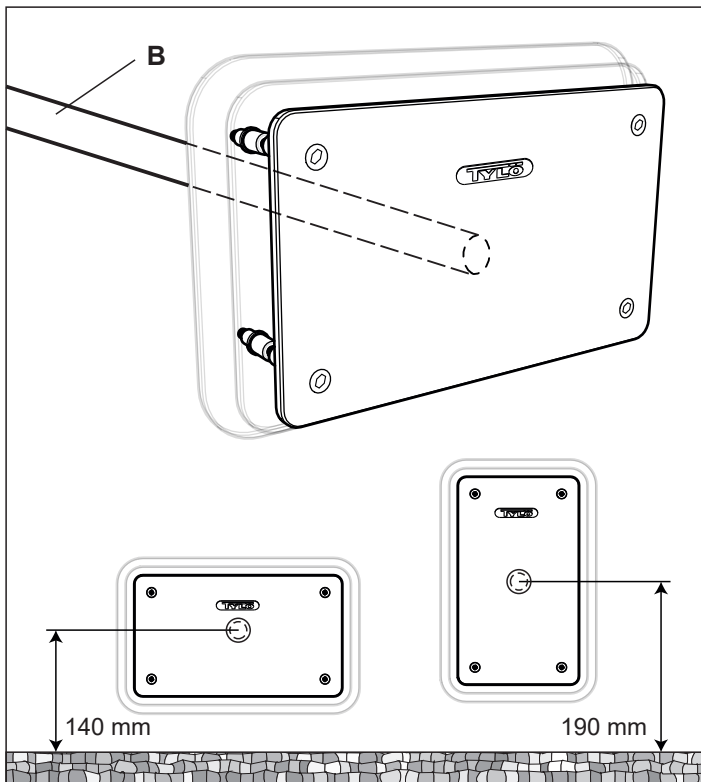


Figure 24 Tylö Bahia Home steam nozzle

- B. Steam pipe, min.-max. outer diameter 15-32 mm
- The measurements show the distance from the floor to the location of the steam pipe with the steam nozzle installed horizontally and vertically.

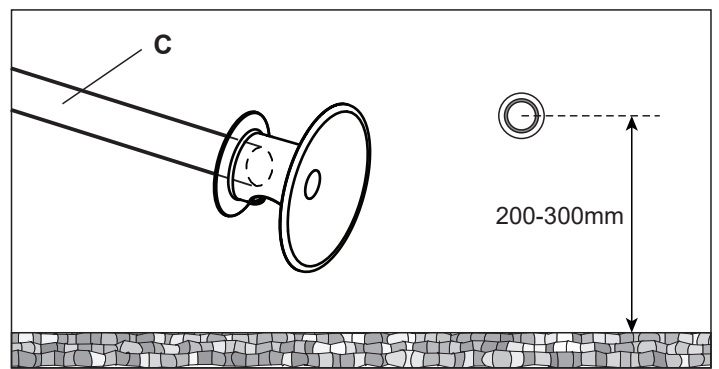


Figure 25A Tylö Essential steam nozzle

- C. Steam pipe, min.-max. outer diameter 28 mm
- The measurements show the distance from the floor to the location of the steam pipe.

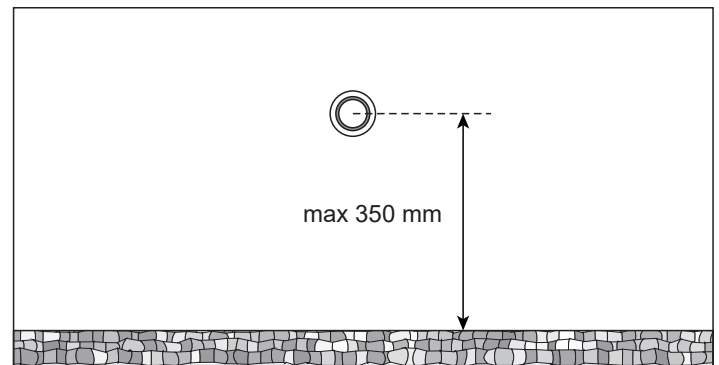


Fig. 25B Steam nozzle from a manufacturer other than Tylö.

- The measurement shows the distance from the floor to the location of the steam pipe.
- If the steam pipe is placed higher up it can affect operation, and the steam room feels colder.

Electrical installation



WARNING! Electrical wiring must be performed by a qualified electrician pursuant to applicable regulations.

The steam generator power supply line comes directly from the electrical distribution board. In this line it is an advantage to install a circuit breaker to be able to temporarily switch off the steam generator during servicing.

The fixed installation must include a switch-off function in accordance with valid regulations.

The wiring diagram *Figure 26* shows the ball valve connection. The wiring diagram *Figs. 27-32* shows the Steam Home connection and *Figs. 33-36* show the Steam Commercial connection. Up to 3 steam generators can be connected together with the Elite control panel. Read the "Multisteam" section and see *Figure 43*.

Connection/wiring diagram

WIRING DIAGRAM Motorised ball valve

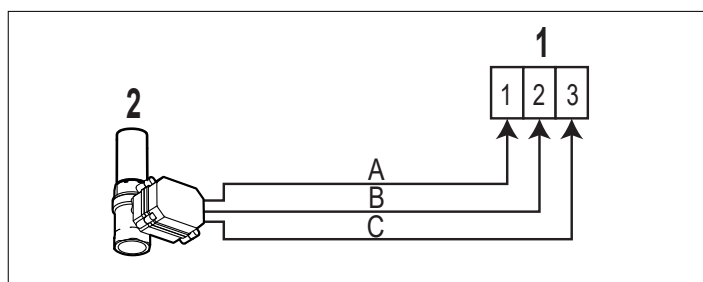


Figure 26: Motorised ball valve

1. Steam Commercial 9-15, Steam Home 3-9
2. Motorised ball valve

- A. Green cable - Open/Close
B. Red cable - Power supply
C. Black cable - Power supply

WIRING DIAGRAM Steam Home 3 kW 200-240 V~

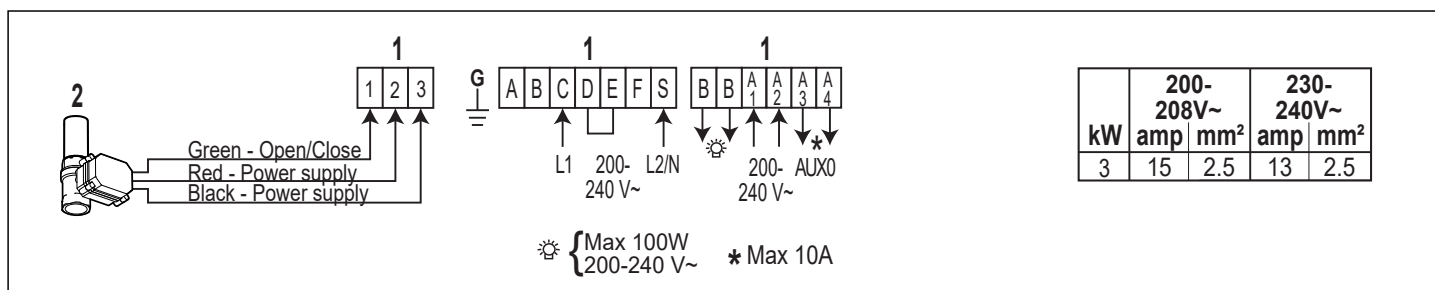


Figure 27: Steam Home 3 kW

1. Steam Home 3
2. Motorised ball valve

WIRING DIAGRAM Steam Home 6 kW 200-240 V~

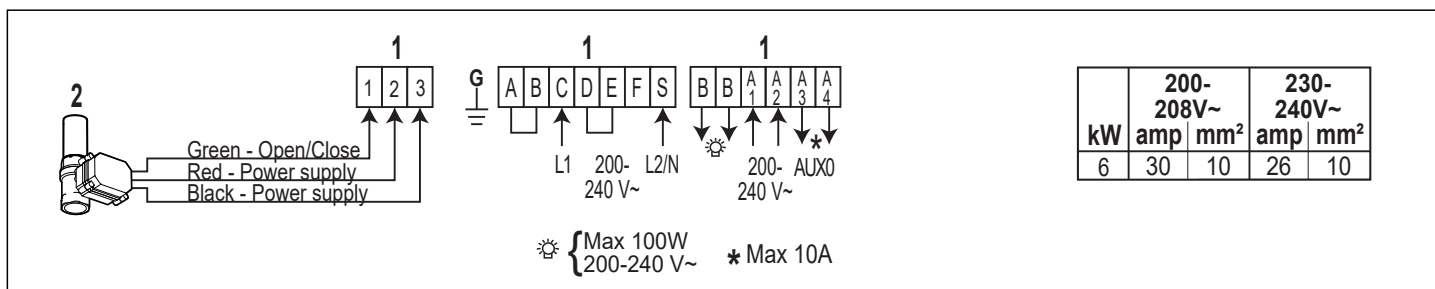


Figure 28: Steam Home 6 kW

1. Steam Home 6
2. Motorised ball valve

WIRING DIAGRAM Steam Home 9 kW 200-240 V~

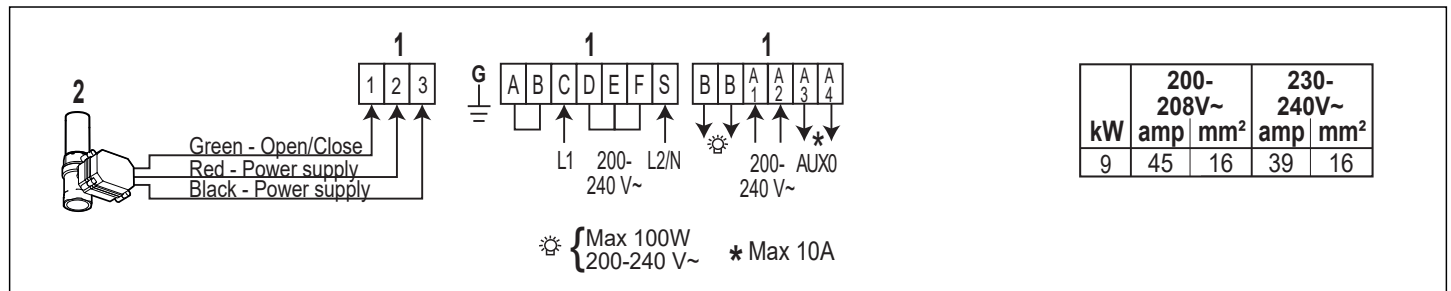


Figure 29: Steam Home 9 kW

1. Steam Home 9
2. Motorised ball valve

WIRING DIAGRAM Steam Home 9 kW 200-230 V 3~

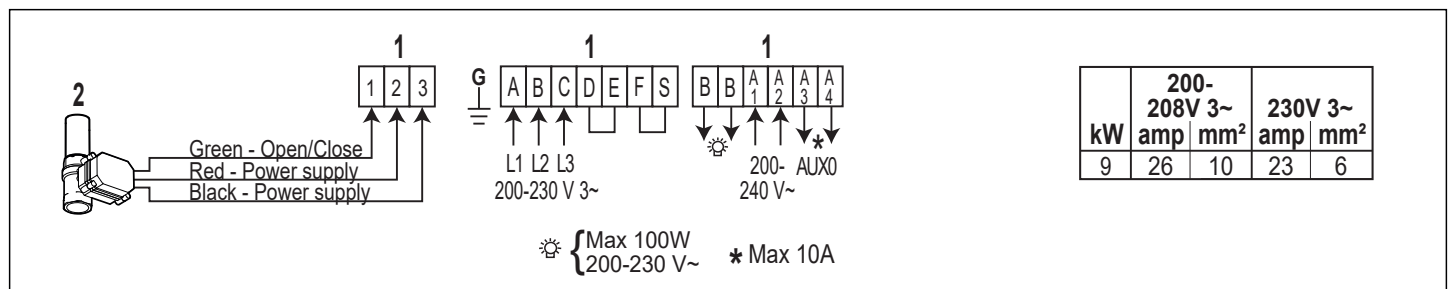


Figure 30: Steam Home 9 kW

1. Steam Home 9
2. Motorised ball valve

WIRING DIAGRAM Steam Home 6 kW 400-415 V 2N~

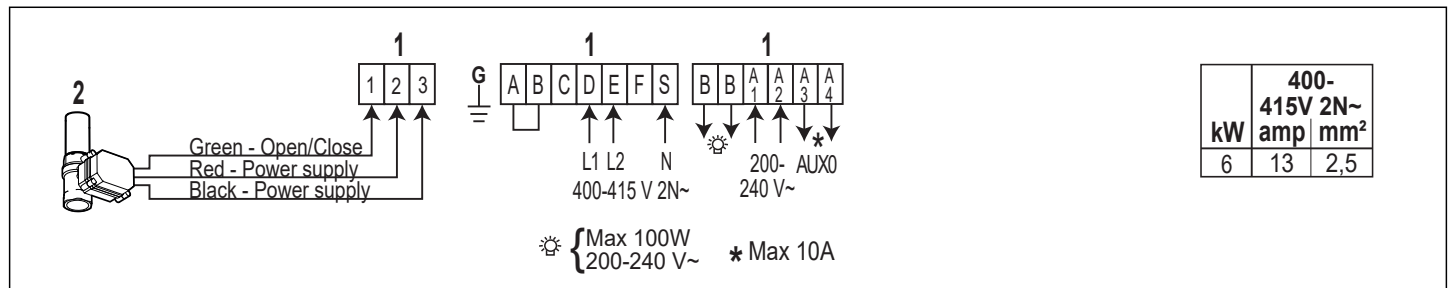


Figure 31: Steam Home 6 kW

1. Steam Home 6
2. Motorised ball valve

WIRING DIAGRAM Steam Home 9 kW 400-415 V 3N~

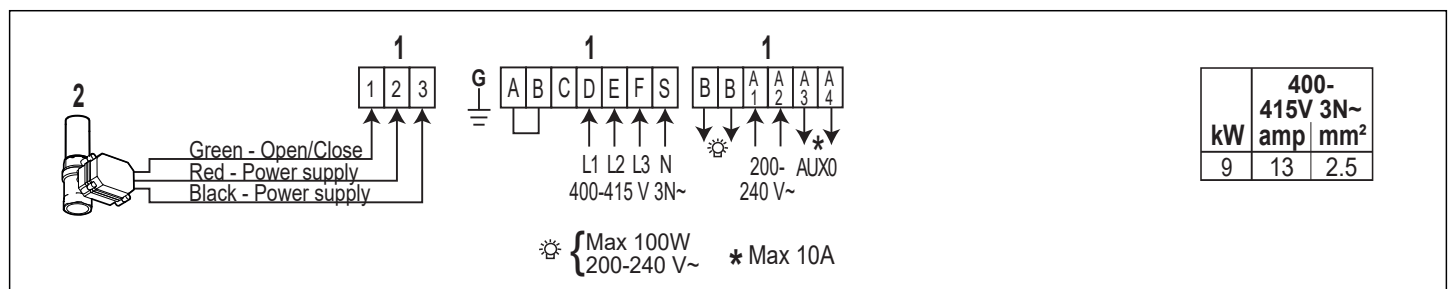


Figure 32: Steam Home 9 kW

1. Steam Home 9
2. Motorised ball valve

WIRING DIAGRAM Steam Commercial 9 kW 200-240 V~

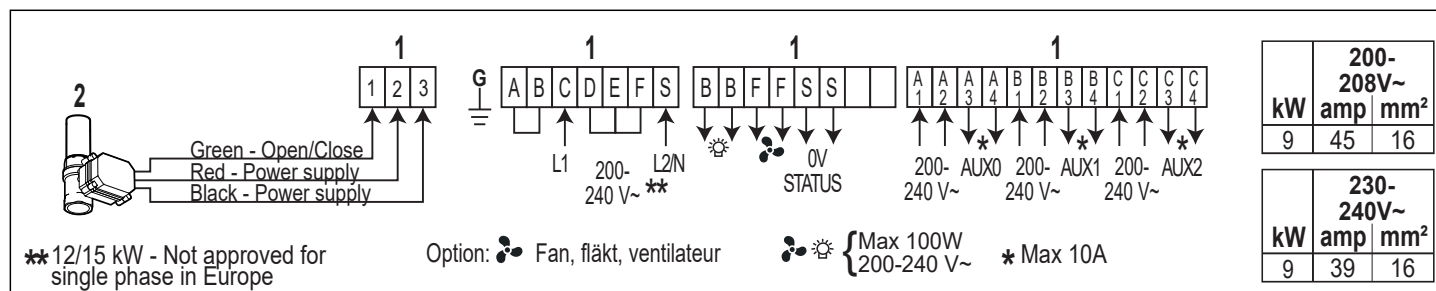


Figure 33: Steam Commercial 9 kW

1. Steam Commercial 9-15
2. Motorised ball valve

WIRING DIAGRAM Steam Commercial 9-12-15 kW 400-415 V 3N~

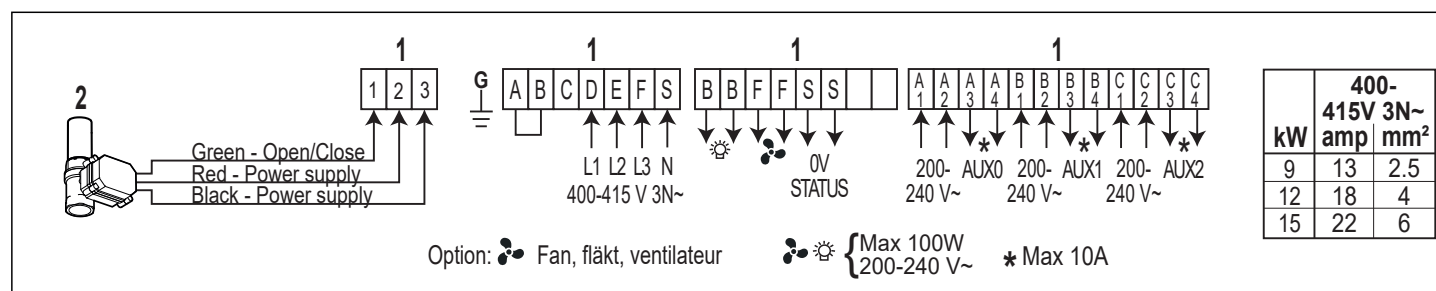


Figure 34: Steam Commercial 9-15 kW

1. Steam Commercial 9-15
2. Motorised ball valve

WIRING DIAGRAM Steam Commercial 9-12-15 kW 200-230 V 3~

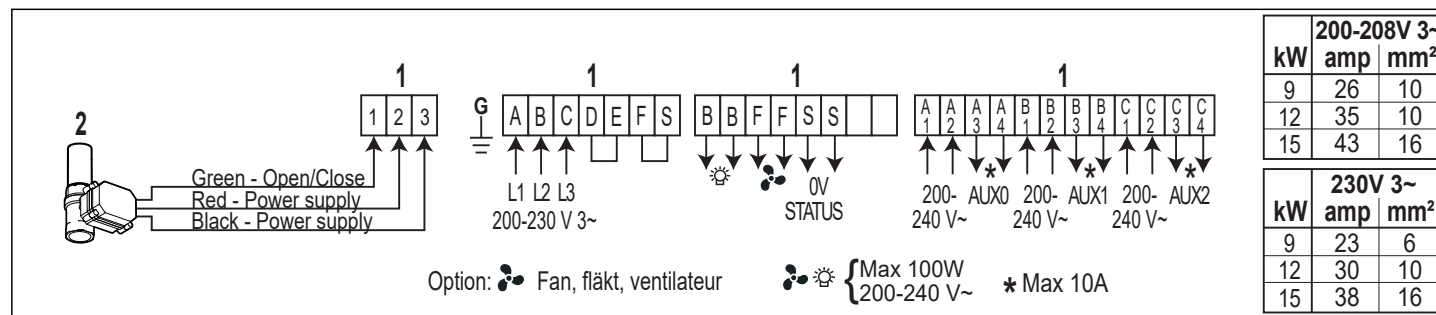


Figure 35: Steam Commercial 9-15 kW

1. Steam Commercial 9-15
2. Motorised ball valve

WIRING DIAGRAM Steam Commercial 9-12-15 kW 400-440 V 3~ Install with separate power supply 200-240 V~ to PCB

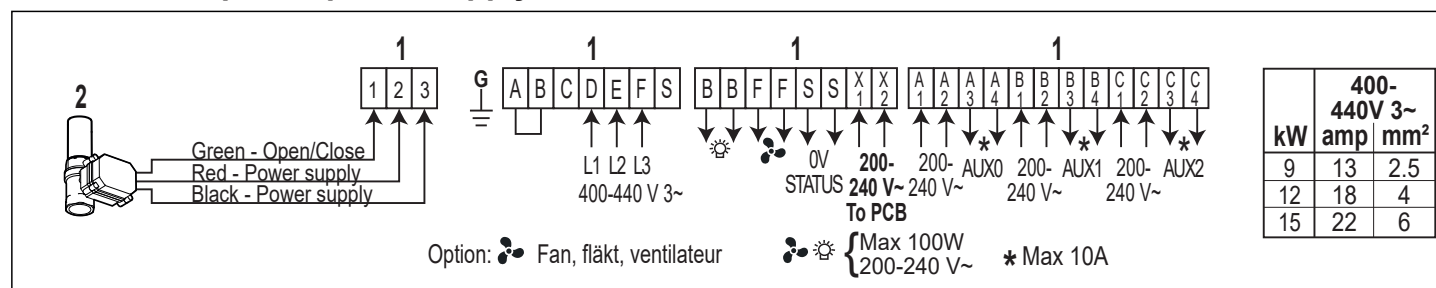


Figure 36: Steam Commercial 9-15 kW

1. Steam Commercial 9-15
2. Motorised ball valve

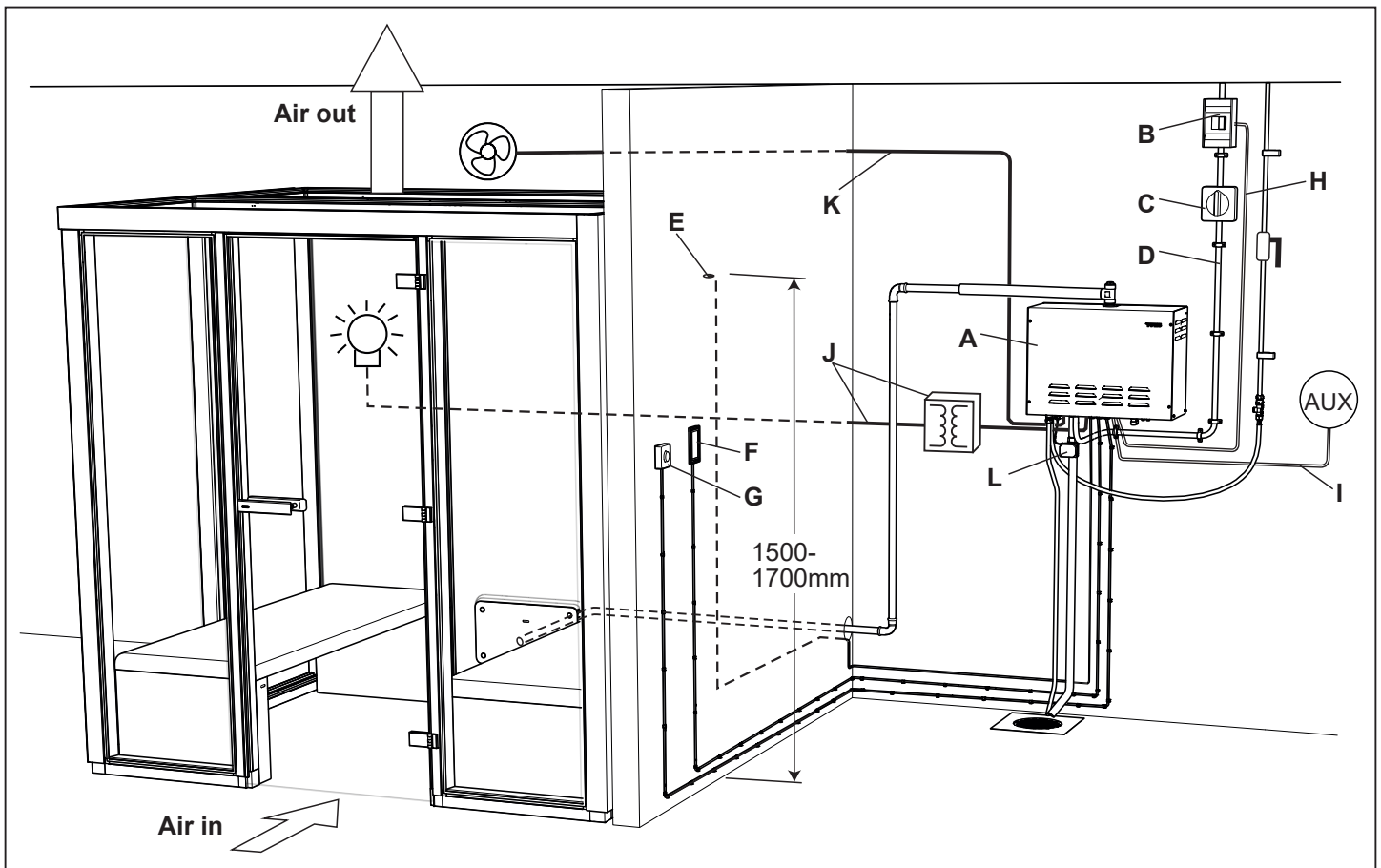


Figure 37 Electrical installation diagram

- A. Steam Home/Steam Commercial
- B. Electrical distribution board
- C. Main power switch (recommended)
- D. Power supply line to the connection terminal in the steam generator
- E. Temperature sensor - install 1500-1700 mm from the floor inside the steamroom (included with the steam generator)
- F. Elite/Pure control panel
- G. External switch - option (installed outside the steamroom)

- H. Power supply line to the AUX connection terminal in the steam generator - option
- I. Power supply line to AUX
- J. Power supply line from the steam generator to the lighting (connection terminal B, B), max. 100W. Connect to transformer max. 24V if installing lighting inside the steamroom. Fused with 1A. Minimum IP 65 is recommended for steamroom lighting.
- K. Power supply line from steam generator to drying fan (connection terminal F, F), max. 100W (applies to Steam Commercial and Elite control panel). Fused with 1A. Only intended for steambaths used for short periods of time - optional, see the Drying fan section.
- L. Motorised ball valve is connected in the steam generator (included with the steam generator)

Connections



Hazardous voltage

Note: MULTIPLE POWER SUPPLY CIRCUITS. CHECK THAT THE STEAM GENERATOR IS DISCONNECTED FROM THE POWER SUPPLY BEFORE PERFORMING SERVICING.

To connect the temperature sensor, etc., to the control panel with quick connectors, refer to the circuit board overview (Figs. 41 and 42)

All the connectors must be in place before the power is switched on. Note: The control panel may only be connected or disconnected when the steam generator is de-energised. Otherwise it may damage the control panel.

When using a different cable (RJ10) to the control panel than the one included in the package, the resistance of the cable must be taken into account. If the resistance is higher than specified, there is a risk of a voltage drop and the control panel can not be started/connected.

Elite control panel: Cable total max. 8 ohm.
Pure control panel: Cable total max. 20 ohm.

Lighting

Can be controlled from the control panel.
See connections diagram (Figs. 27-36) for the max. power specification. See also the electrical installation wiring diagram (Figure 37).

Positioning of temperature sensor

Install the sensor 1,500-1,700 mm above the floor level inside the steamroom (Figure 37) Important! Position the sensor as far from the steam nozzle as possible (see also the instructions provided with the steamroom, if any). If the sensor is directly hit by steam generated from the steam nozzle, it may cause incorrect operation/room temperature. The temperature sensor line can be extended outside of the steamroom using a low voltage wire (2-core). See the section, "Description of cabling/modular contacts".

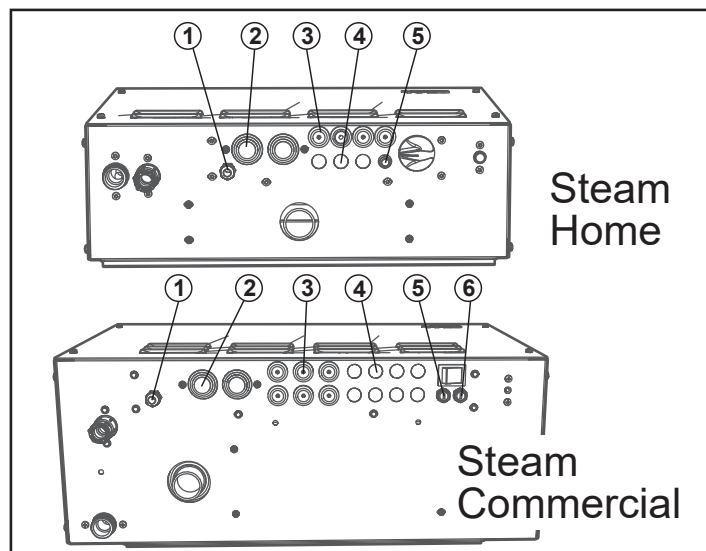


Figure 38 Lead-throughs and fuses

Steam Home (Figure 38)

1. Strain relief connector for cable to motorised ball valve
2. Strain relief connector for power supply cable
3. Lead-through for the control panel, temperature sensor, etc. that will be connected by quick connectors to the circuit board.
4. Space intended for AUX and lighting strain relief connector
5. Lighting fuse (max. 1A)

Steam Commercial (Figure 38)

1. Strain relief connector for cable to motorised ball valve
2. Strain relief connector for power supply cable
3. Lead-through for the control panel, temperature sensor, etc. that will be connected by quick connectors to the circuit board.
4. Space intended for AUX and lighting strain relief connector
5. Lighting fuse (max. 1A)
6. Fan fuse (max. 1A)

Option

External switch (Tylö Item no. 9090 8048) - Can be positioned at any distance from the steamroom. Connected by means of a low power cable and a RJ10 connector with pin connections as in the section "Modular contactor description". Additional external switches must be connected in parallel.

Door contact (Tylö Item no. 9090 8035) - Prevents unintended operation of the steamroom while the door is open. Connected by means of a low power cable and a RJ10 connector with pin connections as in the section "Description of cabling/modular contacts", Figure 44.

Connection of extra equipment

There is the option to connect extra equipment, such as a fan, additional lighting, fragrance pump, etc. When installing a fragrance pump, proper connection to the steam pipe is important, see the section "Steam pipe connection" in these instructions, Figure 19.

Figure 39 shows alternative AUX connections

1. Terminals AUX0-2 (A1-A4, B1-B4, C1-C4)
2. Electrical distribution board
3. Light. *Note: Max. 24V if installing lighting inside the steamroom
4. Junction box
5. Tylö fragrance pump
6. Steam generator
7. Steam pipe/thermostat

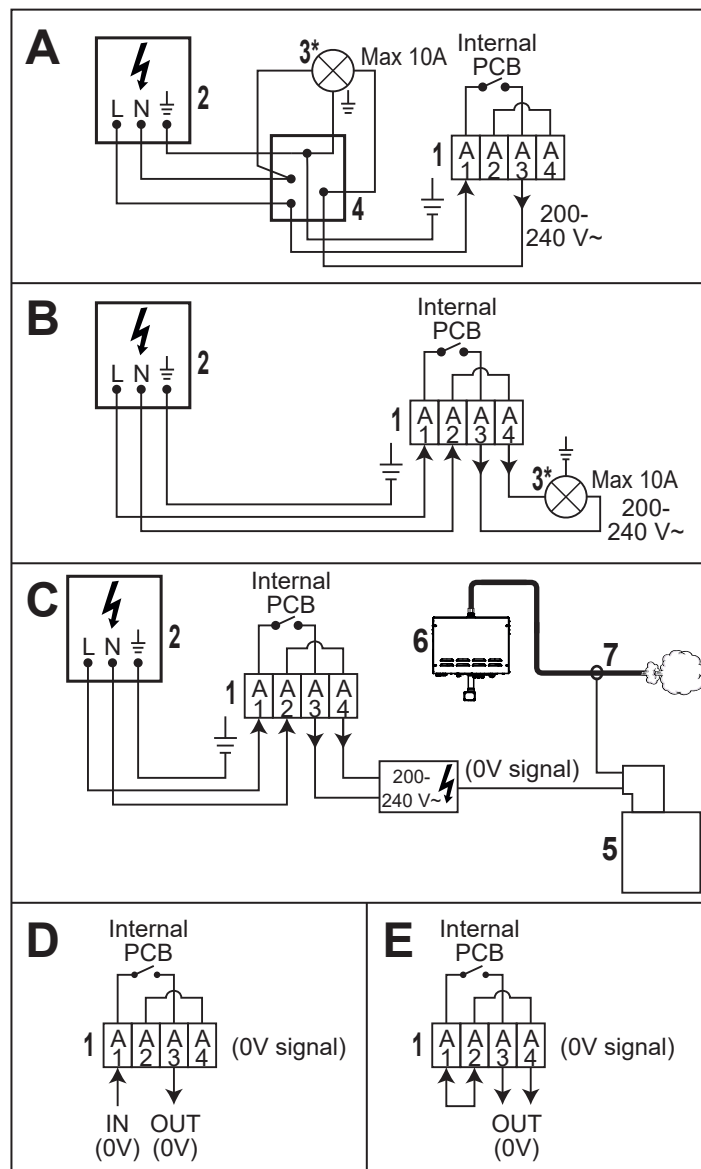


Figure 39 Five different options for connecting extra equipment

The number of functions that can be connected is determined by the number of AUX inputs. Note: Additional equipment must always be connected to the primary unit. The secondary unit for Multisteam has no function for AUX, fan, lighting etc.

The function for AUX is set in the Elite control panel.

Function selection:

1. Not used (factory setting)
2. On/Off - Used for lighting, for example
3. Fragrance - Used for Tylö fragrance pump

Number of AUX inputs:

Steam Home - 1

Steam Commercial - 3

Home automation

To start via a home automation system the input for external switches is used to trigger starting the steam generator. So as not to risk inadvertent operation with an open door, adding a door contact is recommended. For more information, read the instructions for external switches.

Operating status

(Steam Commercial only)

When starting the steam generator, a connection/voltage is output on the terminal "S,S" depending on the connection option selected (A or B). It is used to indicate to other equipment that the steam generator is in operation. Note: An RJ10 adapter is required for the function to work (connected to pos. 4 (SEC/NTC) on the relay board).

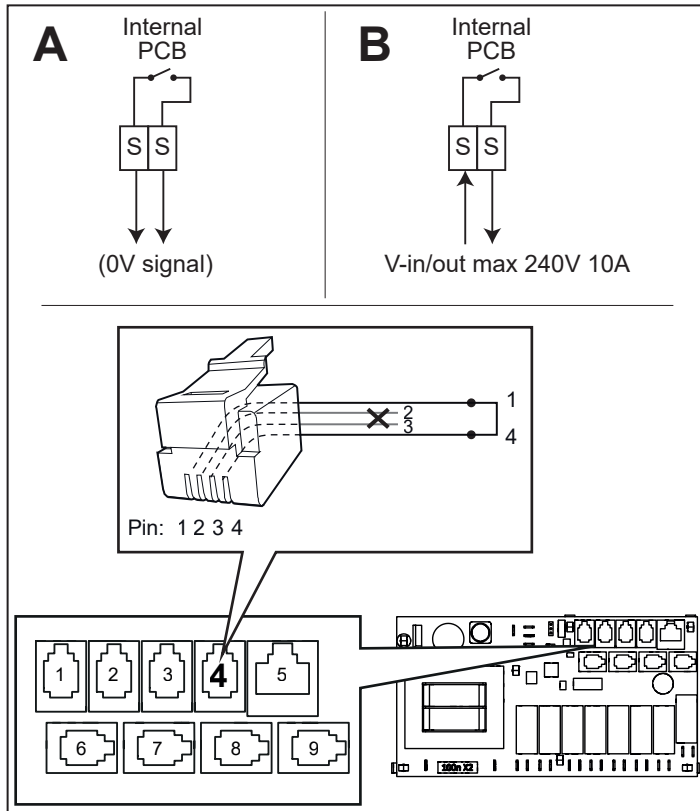


Figure 40 Operating status connection

Multisteam

Note: Only the Elite control panel can be used for Multisteam.

When the steam generator capacity is not sufficient for the steam-room volume, multiple steam generators need to be connected together to increase the power demand. A maximum of 3 Steam Commercial units can be connected together. See the section, "Correct power output in relation to room volume".

Multisteam also provides the advantage that steam production does not cease completely during the automatic draining during operation, because at least one steam generator is always producing steam.

With Multisteam, each individual steam generator must be connected with electricity, water, drainage and steam piping.

The connection of the control panel, temperature sensor, external switch, door contact, synchronisation cable and additional equipment is always made to the primary unit. Secondary units only support synchronisation cable RJ10 pos. 6-9.

When more than one generator is connected together, one of them is set up to be the "Primary" (factory setting) and is the one which controls the other generators. The other units are then set up to be "Secondary" using the dipswitch, see Figure 43.

The connections between the generators use a low power cable (2 core, RJ10 2P4C A/B)) with an RJ10 connector, (Figure 43) See the section "Description of cabling/modular contacts" (Figure 44) for more information on the pin configuration.

Tylarium

Note: Only the Elite control panel can be used for Tylarium.

Tylarium is a system consisting of a sauna heater connected with a Commercial or Home steam generator. Note: This system is not used in a steamroom but in a sauna room. For more information, read the instructions for Tylarium.

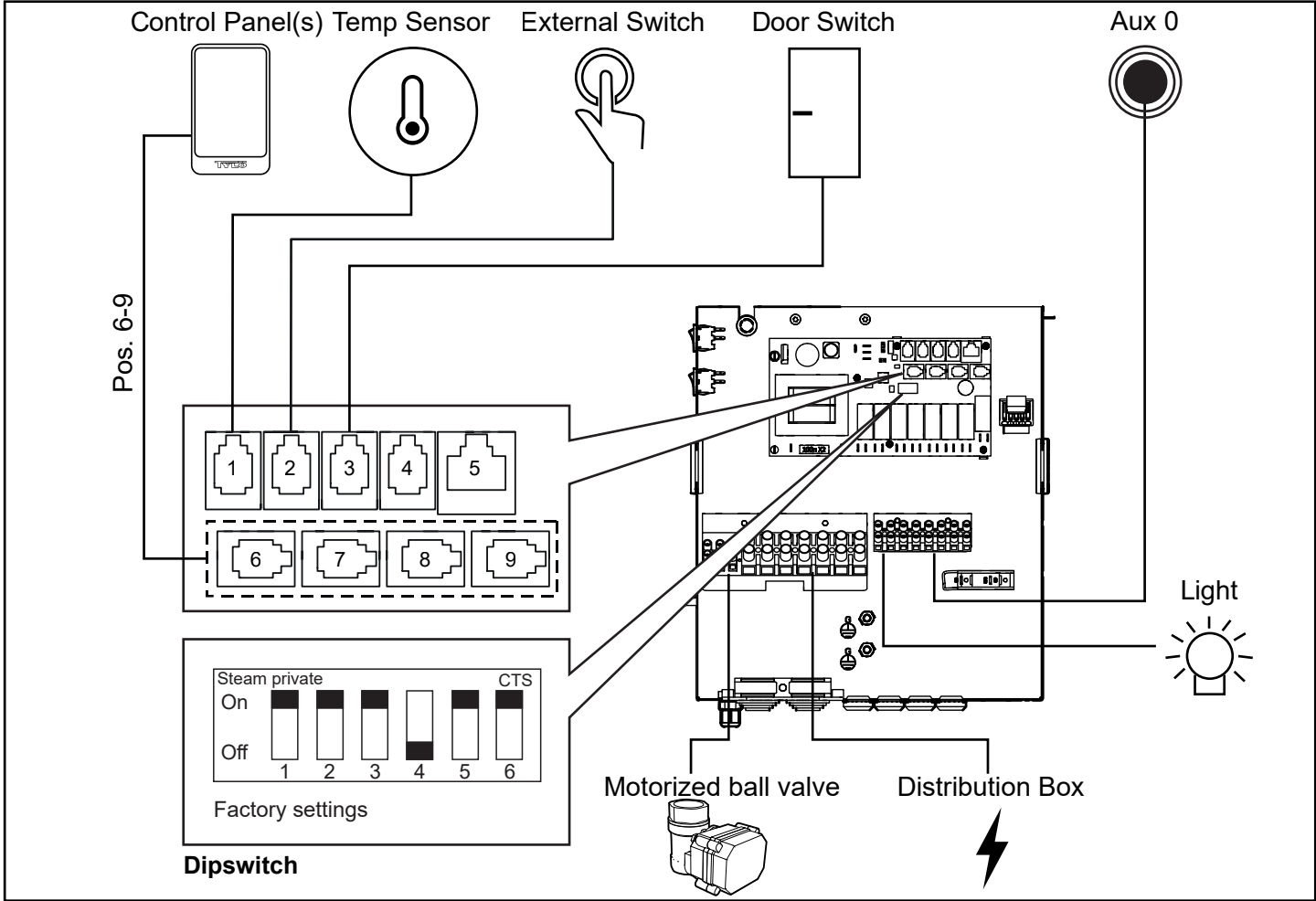


Figure 41 Schematic diagram of installation, Steam Home

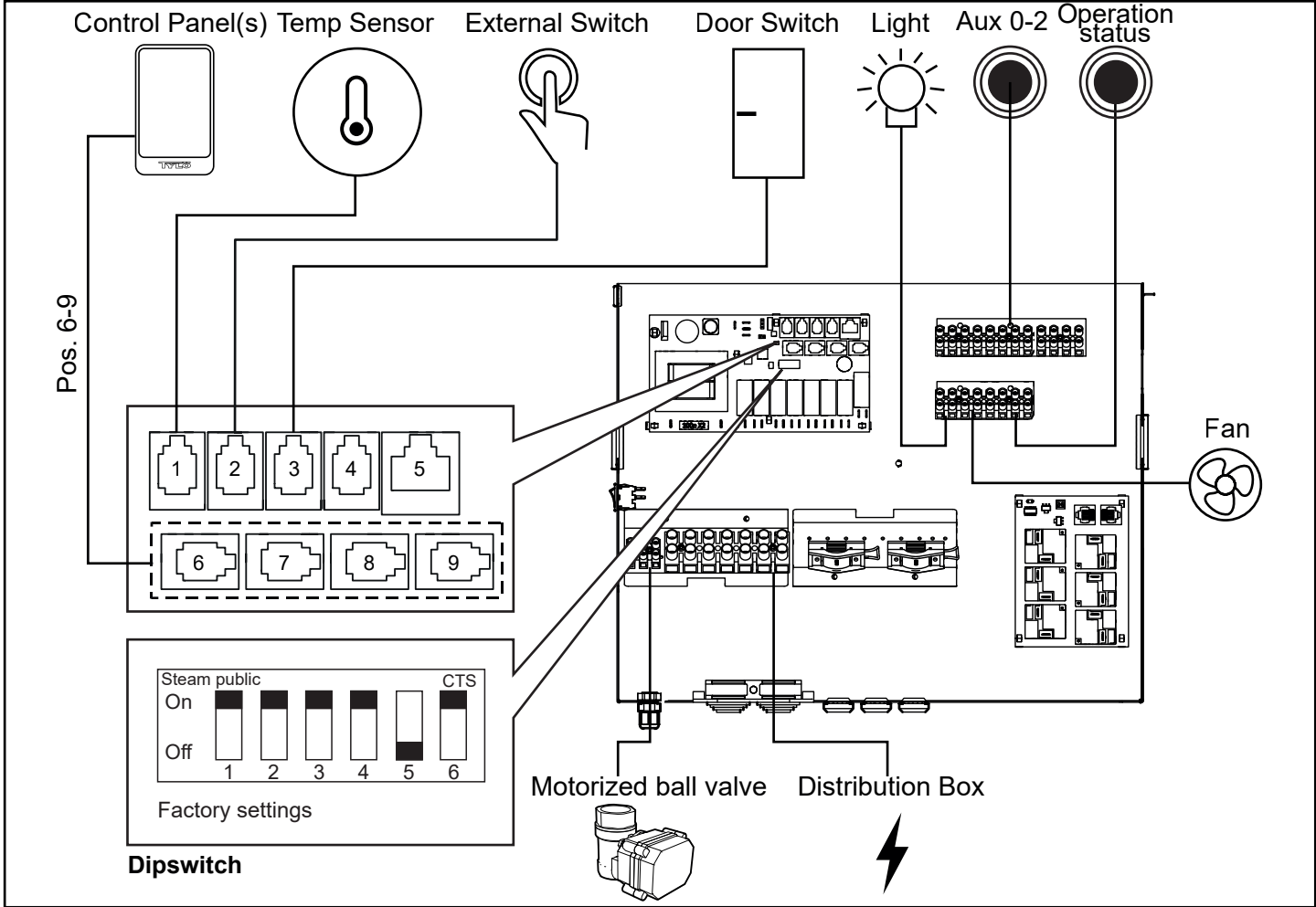


Figure 42 Schematic diagram of installation, Commercial

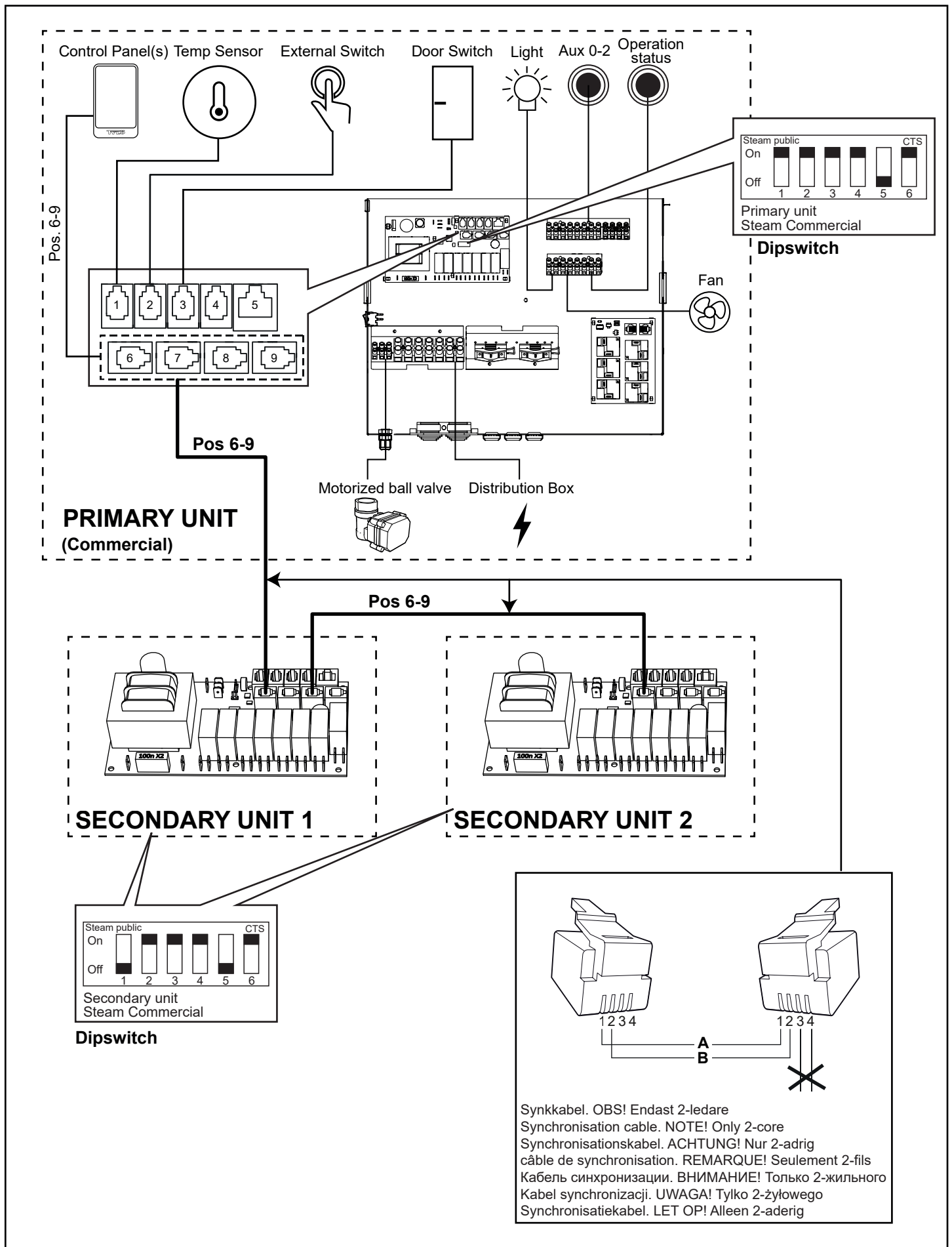


Figure 43 Schematic diagram of installation, Multisteam

Description of cabling/modular contacts

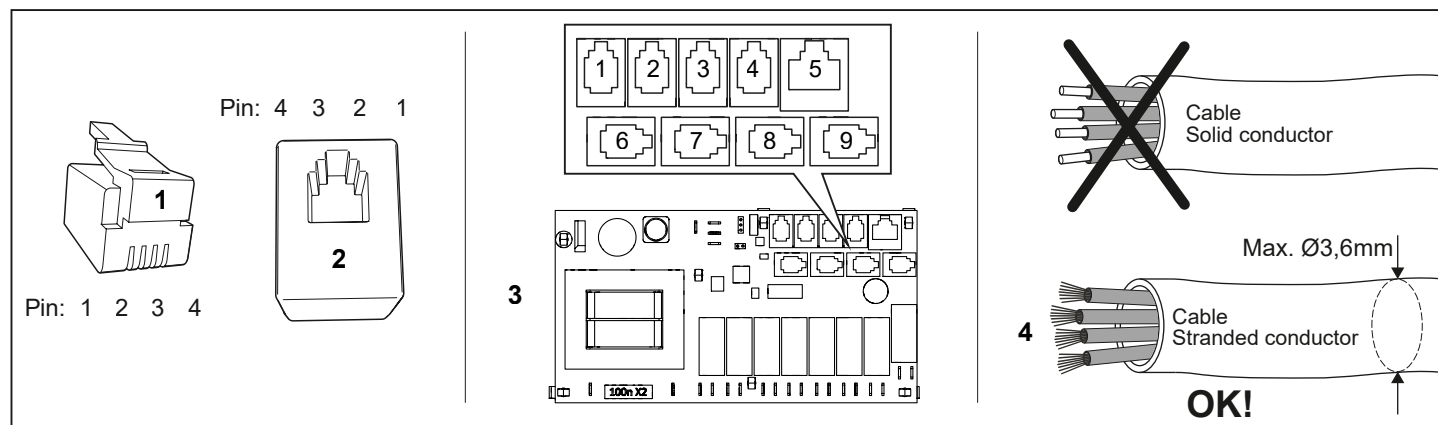


Figure 44 Modular plug/modular contacts, relay board "high" and multithreaded lead

1. Modular plug RJ10, used with cable (max. cable cross-section for connection of modular plug: 0.14-0.20 mm² / AWG26-AWG24)
2. Modular jack RJ10, connected to relay board and control panel
3. Relay board "high" (Pos. 6-9 white connectors)
4. Cable/lead connected to the modular plug must be multithreaded

Pos	Unit		Use pin	Comment	Pin1	Pin 2	Pin 3	Pin 4
1 - NTC	Temp. sensor in the room		2, 3	10kΩ. May also be connected at Pos 4 - SEC/NTC.	Not use	10kΩ	10kΩ	Not use
2 - EXT SWITCH	External switch		3, 4	Start/stop operation. Constant or impulse deactivation.	Not use	Not use	Switch	Switch
	External switch with LED indication		2, 3, 4	Start/stop operation. 12VDC max. 40mA. Tylö Item no.: 90908048	Not use	Led GND	Switch	Switch / Led 12V
3 - DOOR SWITCH	Door contact (NO)		3, 4	Tylö Item no.: 90908035	Not use	Not use	Switch	Switch
	Door contact (NO) with an external alarm indication		2, 3, 4	12VDC max. 40mA. External junction box, not for sale.	Not use	Led GND	Switch	Switch / Led 12V
4 - SEC/NTC	Combined temperature sensor/cut-out in the room	Temp. sensor 10kΩ	2, 3	Only used for certain products.	Sec	10kΩ	10kΩ	Sec
		Temperature cut-out 130°C	1, 4					
	Adapter for activation of operating status		1, 4	Steam Commercial	Sec	Not use	Not use	Sec
5 - ADD-ON	Extra relay board		1, 2, 3, 4, 5, 6, 7, 8	Note: Not for network connection.				
6-9 - RS485	Control panels		1, 2, 3, 4	Tylö Elite and Pure control panels.	A (RS485)	B (RS485)	12V	GND
	Temp./Humidity sensor %		1, 2, 3, 4	Combi heater with Elite control panel and Tylarium.	A (RS485)	B (RS485)	12V	GND
	Synchronisation cable A/B		1, 2	Multisteam and Tylarium. Primary and secondary units.	A (RS485)	B (RS485)	Not use	Not use

Table 2: Description of relay board connections



NOTE! When modifying the modular cabling, e.g. shortening wires, crimp pliers are required.

Spare parts list

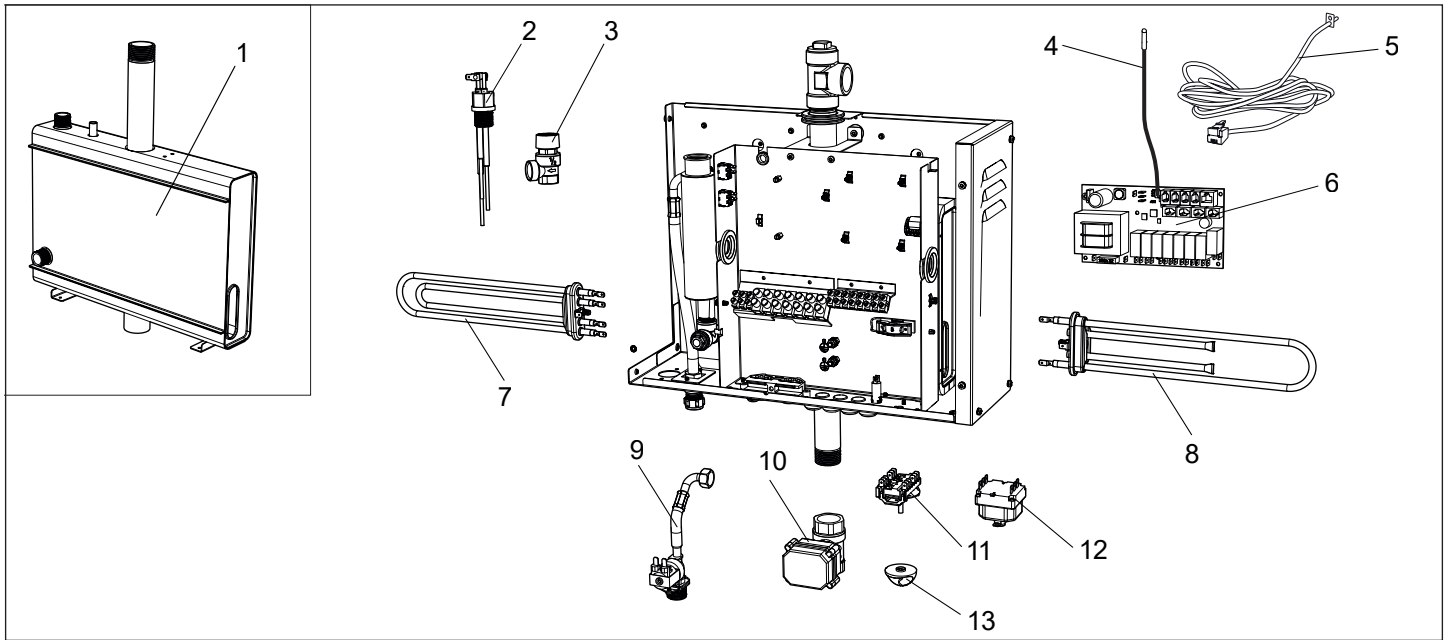


Figure 45: Spare parts, Home

- | | |
|---|---|
| 1. 9600 0182 Water reservoir | 8. 9600 0284 Pipe element 17.5 Ohm (230/400V) |
| 2. 9600 0280 Water level sensor (electrode bushing) | 9. 9600 0195 Solenoid valve |
| 3. 9600 0279 Safety valve | 10. 9600 0281 Motorised ball valve |
| 4. 9600 0070 Temperature sensor, water reservoir | 11. 9600 0040 Switch, Gottak |
| 5. 9600 0219 Temperature sensor, room | 12. 9600 0003 Temperature cut-out |
| 6. 9600 0068 Circuit board "High" | 13. 9600 0110 On/Off dial |
| 7. 9600 0226 Pipe element 2x17.5 Ohm (230/400V) | |

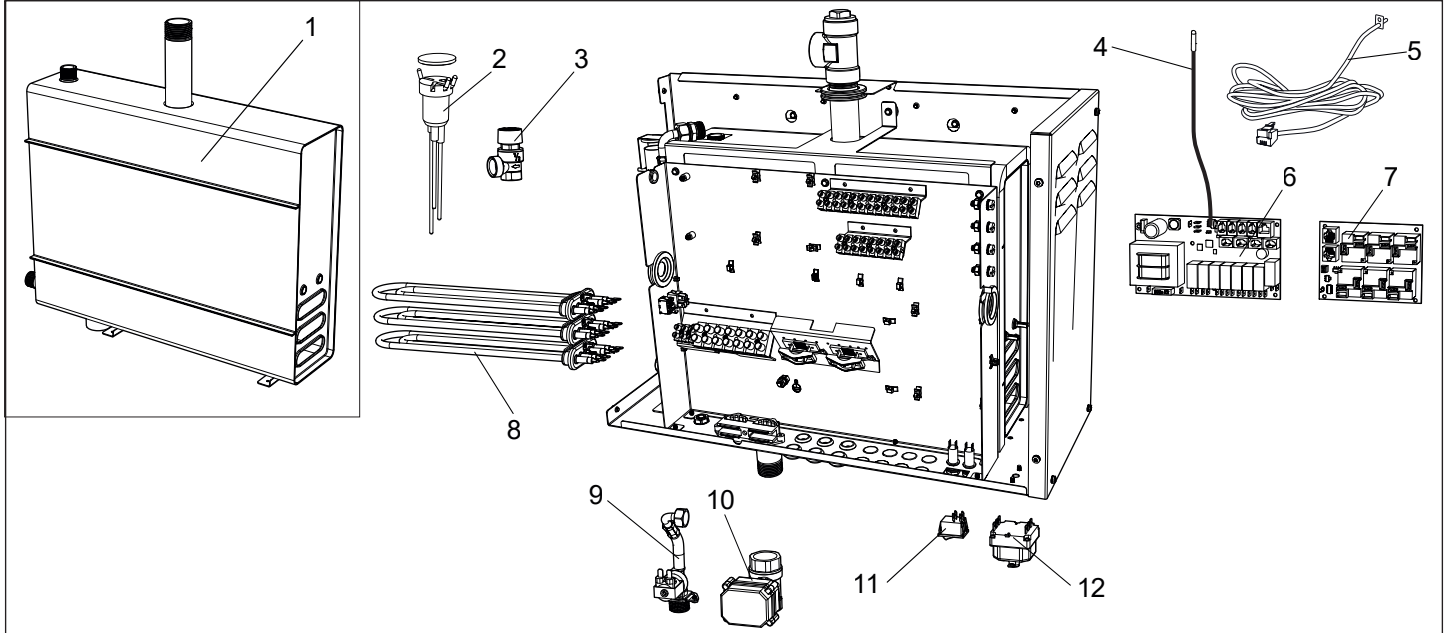


Figure 46: Spare parts, Commercial

- | | |
|---|--|
| 1. 9600 0181 Water reservoir | 8. 9600 0234 Pipe element 9kW (230/400V) |
| 2. 9600 0940 Water level sensor (electrode bushing) | 9600 0232 Pipe element 12kW (230/400V) |
| 3. 9600 0279 Safety valve | 9600 0228 Pipe element 15kW (230/400V) |
| 4. 9600 0070 Temperature sensor, water reservoir | 9. 9600 0195 Solenoid valve |
| 5. 9600 0219 Temperature sensor, room | 10. 9600 0281 Motorised ball valve |
| 6. 9600 0068 Circuit board "High" | 11. 9600 0273 Power switch |
| 7. 9600 0069 Circuit board "Addon" | 12. 9600 0003 Temperature cut-out |

Troubleshooting

Troubleshooting list

Note: In the case of incorrect operation, first check the following:

- That the construction and ventilation of the steamroom, as well as the correct power output in relation to room volume, are in accordance with our instructions.
- That the control panel, steam generator, temperature sensor and external switch and door contact (if any) are connected correctly in accordance with the wiring diagram.
- That the steam generator is installed correctly in accordance with these instructions.
- That the drainage piping has a definite down-slope to the drain.
- There must not be any water pockets in the steam piping or any ventilation ducts leading from the steamroom.
- That the steam piping does not have any sharp bends (min. radius 50 mm).
- That the shut-off valve (if there is one) in the water supply line to the steam generator is not closed.

Below is a troubleshooting list showing possible causes of faults and suggested remedies.

If a fault code is displayed on the control panel, see the user instructions for the control panel.

Important! Note that the remedies in the troubleshooting list that regard pipes and electrical installation must be performed by a qualified professional.

The set temperature (40-50°C) is reached in the steamroom, but there is no steam inside the room.

1. *Fault cause:* Insufficient ventilation in the steamroom.
Corrective action: Increase the amount of ventilation. If the outlet vent evacuates less than 10-20 m³ of air per person per hour, the ventilation is insufficient. This can occur if the outlet vent is not connected to a mechanical extractor, or if a water pocket is blocking the ventilation duct.
2. *Fault cause:* The incoming air temperature to the steamroom is too high.
Corrective action: Reduce the incoming air temperature to max. 35°C.
3. *Fault cause:* The ambient air temperature surrounding the steamroom is higher than 35°C.
Corrective action: Ensure that the ambient temperature does not exceed 35°C.

The steamroom is taking an unusually long time to warm up or neither steam nor heat are generated.

1. *Fault cause:* The steam generator's power output is too low. See the table indicating correct power output in relation to room volume in these instructions.
Corrective action: Change to a steam generator with a higher power output.
2. *Fault cause:* The ventilation in the steamroom is too strong.
Corrective action: Reduce the amount of ventilation. The ventilation rate should be 10-20 m³ of air per person per hour.
3. *Fault cause:* A fuse in the distribution board has blown/tripped.
Corrective action: Replace/reset the fuse.
4. *Fault cause:* Faulty/broken pipe element in steam generator.
Corrective action: Replace the pipe element.
5. *Fault cause:* The steamroom temperature sensor has been placed too close to the steam jet.
Corrective action: Move the temperature sensor or change the direction of the steam jet. If the temperature sensor is accidentally hit by steam, the room temperature in the control panel increases and the steam generator starts to regulate

the heat too early.

6. *Fault cause:* A started steam bath session has been switched off (session time ended, session manually switched off) or a fault code has been generated.
Corrective action: Check the control panel status, start a new steam bath session. See user instructions for control panel.
7. *Fault cause:* The steam generator has been incorrectly wired up.
Corrective action: Check the electrical wiring/connections diagram.
8. *Fault cause:* The mechanical temperature cut-out has been triggered, in which case the control panel will switch off.
Corrective action: Reset the temperature cut-out. See the Temperature cut-out section.
9. *Fault cause:* Internal circuit board fault or control panel fault.
Corrective action: Replace the faulty component.

Water flows out of the steam nozzle unevenly, or water flows out with reduced pressure mixed with steam.

It is normal for a little water (condensed in the steam pipe) to occasionally drip from the steam nozzle during operation and follow the steam; this is not a sign of a defect.

1. *Fault cause:* Small water pocket in the steam pipe.
Corrective action: Adjust the water pipe to eliminate the water pocket.
2. *Fault cause:* Excessive length of uninsulated steam pipe.
Corrective action: Insulate the steam pipe. Should be insulated if longer than 3 metres, to prevent the condensation of steam.
3. *Fault cause:* Build-up of deposit on the electrodes that control the water level.
Corrective action: Remove and clean the electrodes. Rub with a cloth until all deposits have been removed. See the section "Electrodes, water level".

Water runs out of the steam generator drain/motorised ball valve.

1. *Fault cause:* The motorised ball valve is in the open position.
Corrective action: Check the control panel status to see whether a fault code has occurred which is causing fault code clearing of the tank. Check whether the tank has started draining automatically during operation or after a steam bath session has ended. These occurrences are a normal part of the steam generator's function and do not signify a fault or error.
2. *Fault cause:* Motorised ball valve doesn't close.
Corrective action: Check that the switch for manual water control (inside the product) is not in the On position and whether the switch is broken. Check the circuit board to see if the relay is faulty.

Loud banging in the water lines when the water solenoid valve opens or closes.

1. *Fault cause:* The incoming water piping to the steam generator is not satisfactorily secured.
Corrective action: Using clamps, firmly secure the incoming water piping to the wall.
2. *Fault cause:* Recoil (water hammer) in the incoming water piping.
Corrective action: To counteract the noise, use of a soft flexible reinforced rubber hose, approximately 1 metre (nearest the steam generator) that can withstand the water pressure, is recommended.
During operation and when the steam generator adds water, noise may be emitted. This is due to temperature differences in the water reservoir. This is normal.

Safety valve opens or temperature protection cut-out trips.

1. *Fault cause:* The steam pipe is blocked.
Corrective action: Remove the blockage.
2. *Fault cause:* The inner diameter is drastically reduced if the wrong installation material is selected.
Corrective action: Replace the pipe or joint component that is causing the reduction (inner diameter min. 19 mm).
3. *Fault cause:* There are several sharp bends in the steam pipe.
Corrective action: Replace the bends, they must be gently rounded (minimum radius 50 mm).
4. *Fault cause:* Large water pocket in the steam pipe.
Corrective action: Adjust the water pipe to eliminate the water pocket.
5. *Fault cause:* The conductivity of the water is too high or there is calcium in the steam generator water reservoir which is causing foam build-up.
Corrective action: Make sure that automatic draining during operation is activated (can only be switched off via the Elite control panel) and that the correct interval is set as recommended. Descal the steam generator's water reservoir. See the "Automatic draining during operation and descaling" section.
6. *Fault cause:* Steam pipe between steam generator and steamroom is too long or the difference in height is too large.
Corrective action: Reduce the length/difference in height of the steam pipe. Length max. 15m difference in height max. 3m.

Lighting or fan not working.

1. *Fault cause:* A fuse (inside the steam generator) has blown.
Corrective action: Replace the glass fuse, see Figure 38.
2. *Fault cause:* The steam generator has been incorrectly wired up.
Corrective action: Check the electrical wiring/connections diagram.

Steam tank overfilled.

See the "Service" section in these instructions.

The water reservoir has been drained incorrectly.

See the "Service" section in these instructions.

Temperature cut-out

The steam generator is equipped with two temperature cut-outs, one of which is mechanical and the other electronic.

The electronic temperature cut-out is used to detect overheating in the water reservoir and to measure the water temperature in standby mode. If this temperature cut-out malfunctions, a notification/fault code is displayed on the control panel.

If the mechanical temperature cut-out is triggered, the power supply to the circuit board is cut off and manual resetting is required.

If the temperature protection trips, it may be due to a number of causes, e.g. steam pipe diameter too small, pipe length too long, bends too sharp, water pocket or some other blockage, this causes higher pressure in the water reservoir and thus increased temperature. It may also be caused by poor maintenance/internal failure in the steam generator causing possible the pipe elements to boil dry.

To reset the mechanical temperature cut-out, depress the button under the steam generator (see Figure 47).

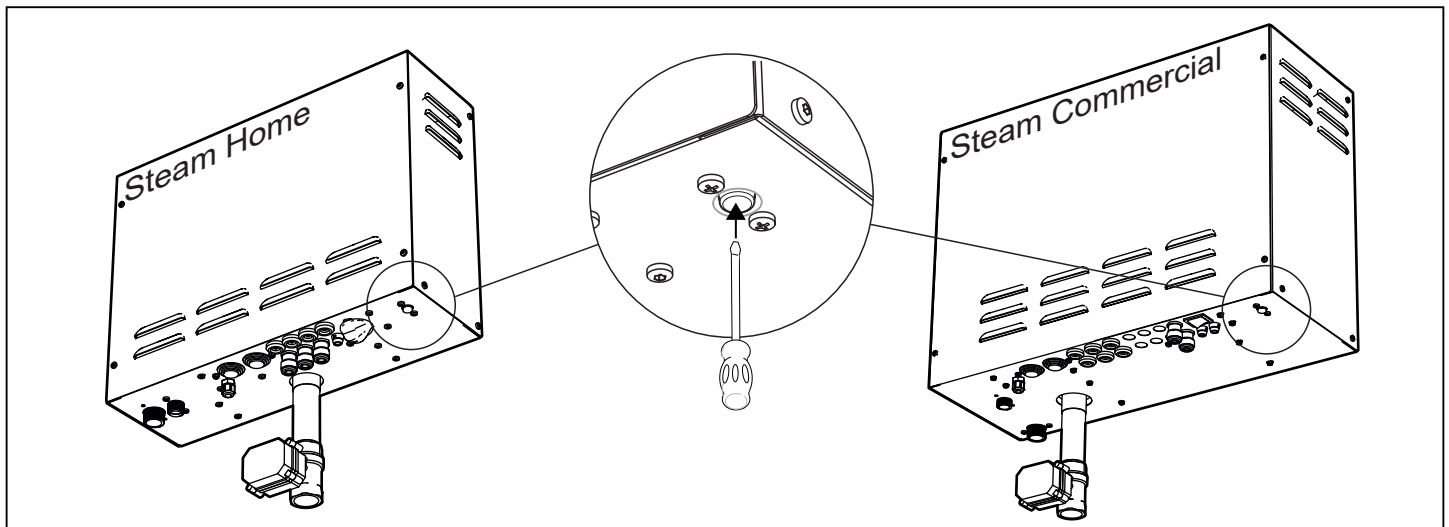


Figure 47 Resetting the temperature cut-out

Manual water control

Only used for service when draining and flushing reservoir. The switches are mounted inside the steam generator. **Note:** the switch for water out must always be set to the Off position after use, otherwise Fault code no. 5 will eventually display when turning on the equipment, see Figure 49-1.

Steam tank overfilled

Repair and maintenance of the device must be performed by a qualified professional



Hazardous voltage

Note: MULTIPLE POWER SUPPLY CIRCUITS. CHECK THAT THE STEAM GENERATOR IS DISCONNECTED FROM THE POWER SUPPLY BEFORE PERFORMING SERVICING.

For Fault code no. 5: Steam tank overfilled - level electrodes not working.

First read the list of fault codes in the user instructions for the Elite/Pure control panel. Also see the Electrodes, water level section in these instructions.

To check/clean the electrodes, proceed as follows:

1. Cut off the power supply to the steam generator after the fault code is cleared and the reservoir is empty.
2. Open the lock nut (see Figure 48-2) on the electrode tube and inspect the pipe next to the reservoir.
3. Use a bottle brush to help clean off any limescale/dirt deposits that may have settled in the pipe between the tank and the electrode tube. There must not be any kind of blockage.
4. When the cleaning is complete, screw back the lock nut on the electrode tube.
5. Switch on the voltage to the steam generator and start the operation again.
6. If the fault returns immediately after restarting, you can also check the air hose between the electrode tube and the reservoir (see Figure 48-1). There must not be any kind of blockage or kink on the hose.

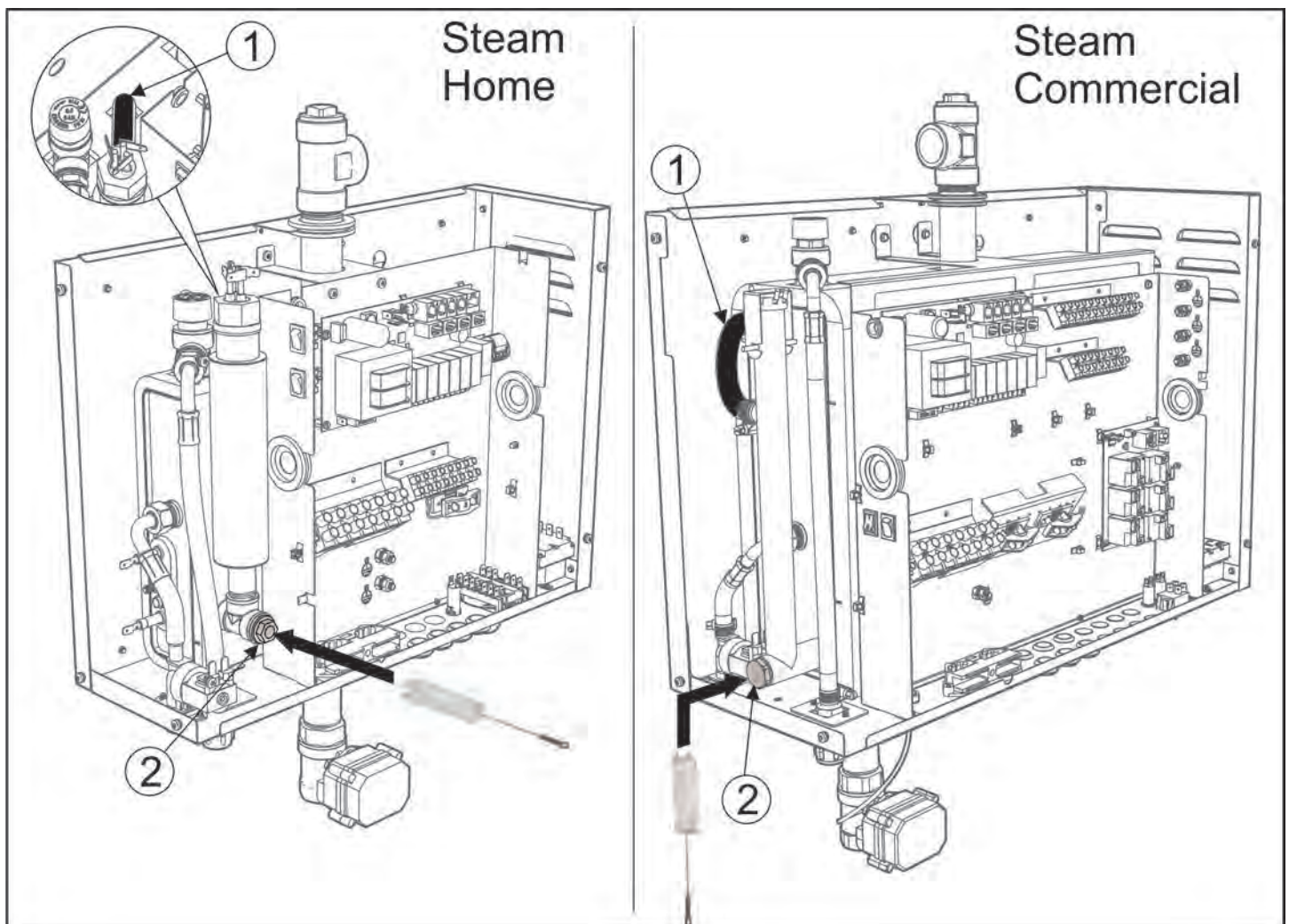


Figure 48: 1. Air hose, electrode tube - reservoir
2. Lock nut

Draining fault, steam tank

Repair and maintenance of the device must be performed by a qualified professional



Hazardous voltage

For Fault code no. 11: There is a fault in the draining of water from the steam tank. Switch off the power and perform servicing.

First read the list of fault codes in the user instructions for the Elite/Pure control panel.

To check/clean the electrodes, proceed as follows:

1. Wait until the water has cooled down, to avoid the risk of burns from hot water.
2. Use the manual water control switch mounted inside the steam generator (see Figure 49-1). Voltage to the steam generator must be on.
 - Manual switch for water out should be set to the On position so the ball valve opens.
 - The switch for water in (momentary) must be kept depressed for flushing to take place.
3. Use a bottle brush to help clean off any limescale/dirt deposits that may have settled in the steam generator drain/ball valve (see Figure 49-2). Note: Possible blockage in the connection pipe/hose from the ball valve to the drain (see Figures 49-3,4).

4. When the cleaning is complete, remember to set the manual switch for water out to the Off position so the ball valve closes.

In case of recurring failures (lime/dirt deposits) when not using water softeners, the steam generator may need to be descaled at more frequent intervals.

Information!

If the ball valve does not open in the "On" position (manual water control switch) when voltage is applied, the ball valve or switch is probably faulty and troubleshooting is required.

To manually drain the water reservoir, pull out the knob on the ball valve and turn it until the indicator shows the open position, see Figure 50.

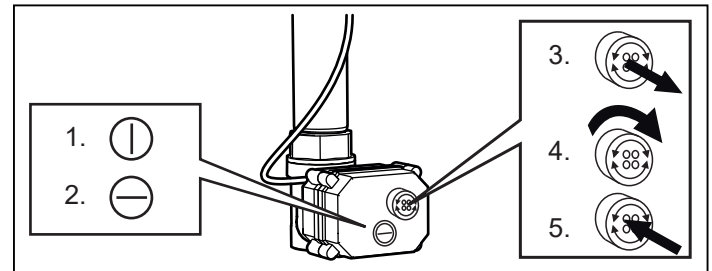


Figure 50:

1. Vertical line indicates open valve
2. Horizontal line indicates closed valve
3. Pull the knob straight out
4. Turn the knob to open/close the valve
5. Depress the knob to return to automatic mode

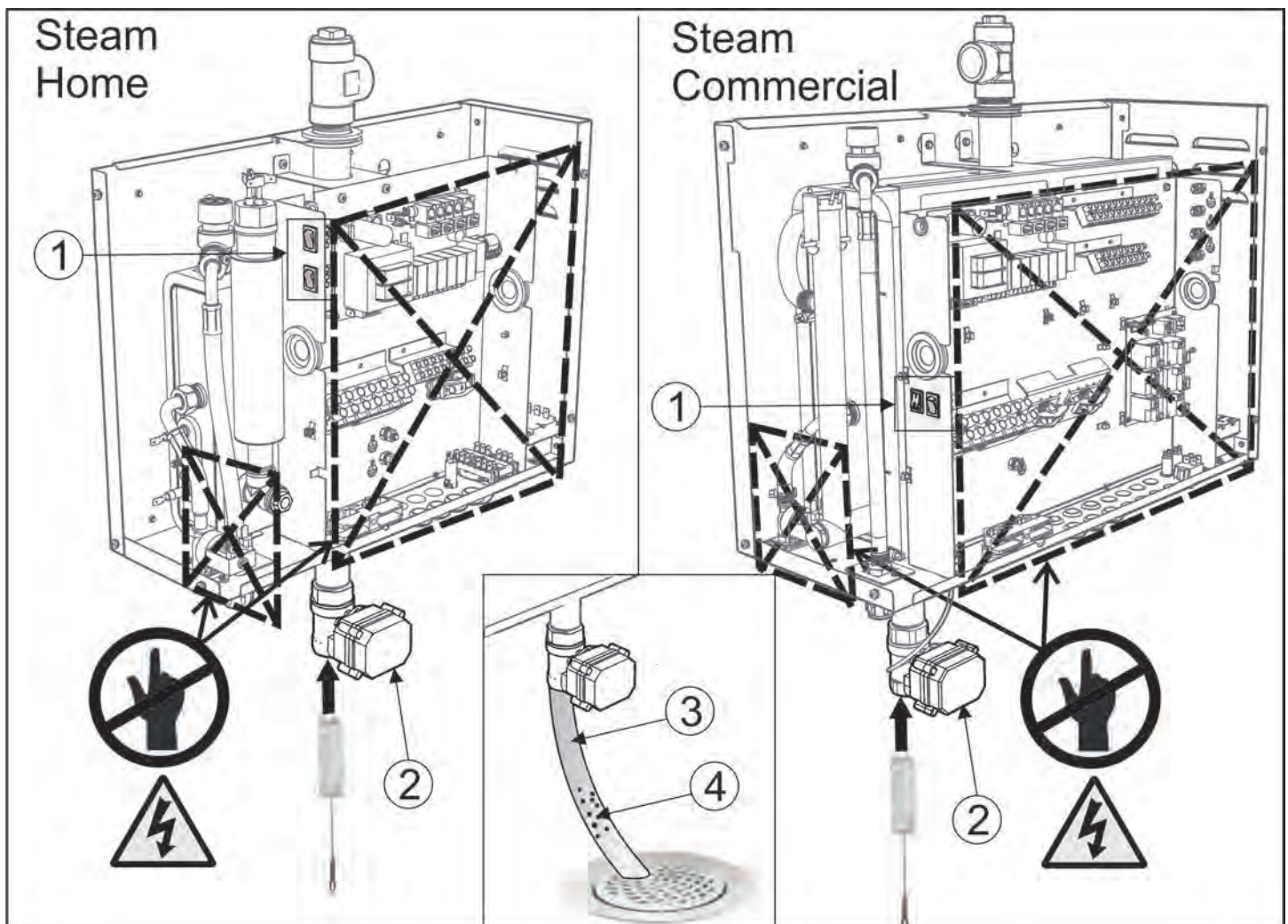


Figure 49:

1. Manual water control switch
2. Ball valve
3. Connection pipe/hose from ball valve to drain
4. Possible limescale/dirt deposits in the hose

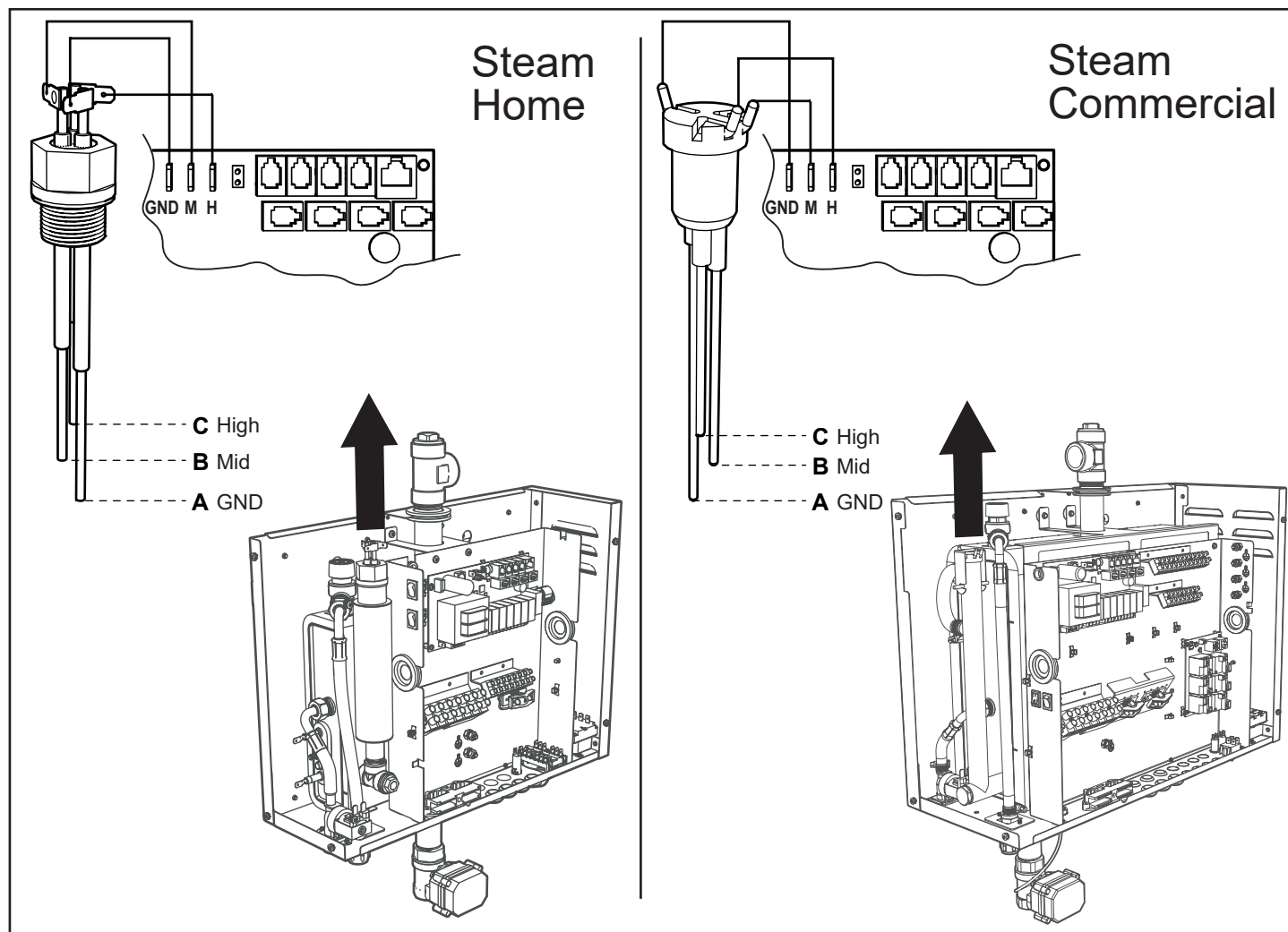


Figure 51: Electrodes/level sensors

- A. Electrode white label/cable: GND
- B. Electrode red label/cable: Mid
- C. Electrode black label/cable: High



Hazardous voltage

Note: MULTIPLE POWER SUPPLY CIRCUITS. CHECK THAT THE STEAM GENERATOR IS DISCONNECTED FROM THE POWER SUPPLY BEFORE PERFORMING SERVICING!

Repair and maintenance of the device must be performed by a qualified professional.

To check/clean the electrodes, proceed as follows:

1. Cut off the power supply to the steam generator.
2. Disconnect the cables connected to the electrodes.
3. Remove the electrode bushing from the level pipe. Clean the electrodes with a cloth to remove any deposits. In the worst case, the electrode bushing will need to be replaced, see the "Spare parts list" section.
4. After checking/cleaning, refit the electrodes.

IMPORTANT! The electrode pins must not have fat deposits or other deposits on them. The electrode pins must not touch each other or touch the inside of the walls of the level pipe. This could trigger a fault code or affect the control of the steam generator water level. Connect the electrodes as shown in Figure 51.

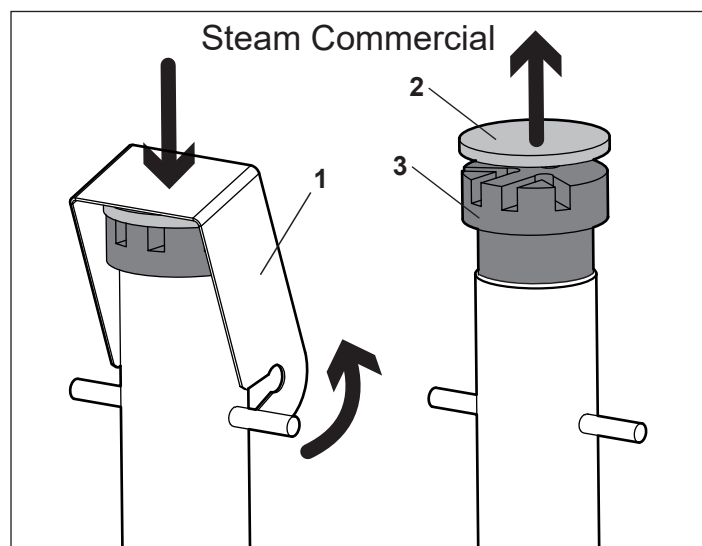


Figure 51B Removing electrode bushing

- 1. Electrode lock
- 2. Insulation cover (EPDM)
- 3. Electrode bushing



Note: Insulation protection must always be fitted between the electrode bushing and the electrode lock in order not to trigger fault codes!

Water quality

The water quality has a major impact on both the function and product life of your steam generator. For this reason, it is important to analyse the water that will be connected to the steam generator.

When should water softeners or RO filters be used?

Recommendations for Steam Home

- 0-4°dH and continuous operation 0-3hrs: No water softener needs to be installed.
- 4-30°dH and continuous operation 0-3hrs: Water softener must be installed.

Recommendations for Steam Commercial

- 0-4°dH and continuous operation 0-12hrs: No water softener needs to be installed.
- 0-4°dH and continuous operation 12-24hrs: Water softener must be installed.
- 4-14°dH and continuous operation 0-24hrs: Water softener must be installed.
- 14-30°dH and continuous operation 0-24hrs: Water softener + RO filter needs to be installed.

Water softener: Reduces the water hardness and increases the conductivity. How much depends on the hardness of the water.

RO filter: Reverse osmosis water filter. Reduces the water conductivity.

°dh: The water hardness. The harder the water, the more lime deposits are formed.

When installing steam generator/steam generators connected together (Multisteam) and water softener or water softener + RO filter must be used. See the table, "Correct power output in relation to room volume" in these instructions. Water softener/RO filter must be able to deliver this total water consumption (l/h).

Even if no water softener is required per the recommendations, it still provides an advantage as this usually means less handling of chemicals (descaling) and the steam generator does not need to be taken out of service as much. (Tylö water softener Item no. 90908027)

Water conductivity

The conductivity of the water increases during steam generator operation. The reason for the increase is that as the water boils away (steam is released), salts/minerals present in the water remain in the tank and their concentration increases as water is replenished. Thereby it is important to activate automatic draining during operation in order to restore/lower the conductivity so that it does not cause foaming/wrong water level, which can lead to dry boiling of the pipe elements. Generally, the higher the water's conductivity, the shorter the intervals should be set for automatic draining during operation in the Elite control panel (alternatively, install a RO filter).

µS: Conductivity. The water conductivity is also connected to its hardness °dh.

Value µS: Values below 100µS/cm will increase the risk of the steam generator not detecting the water level correctly.

ROHS (RESTRICTION OF HAZARDOUS SUBSTANCES)

Instructions for environmental protection:

Do not dispose of this product with the domestic refuse when it is no longer in use. Take it to a recycling station for electrical and electronic equipment instead.

For further information, refer to the symbol on the product, manual or packaging.

The different materials may be recycled as specified on their labelling. You can help protect the environment by recycling or reusing the spent appliances or the materials in them. Take the product to a recycling centre.

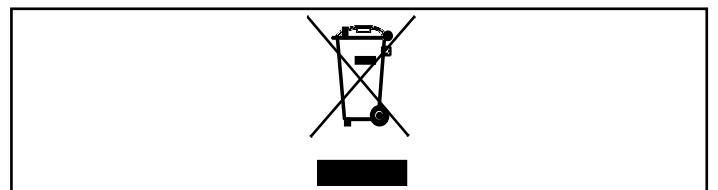


Figure 52: Symbol

Contact your local authorities for the location of your nearest recycling centre.

User Guide

For Pure and Elite control panels, see separate instructions.

Control panel

User Guide: included with the control panel. The steam generator is controlled electronically by the following compatible models:

Elite - The Elite control panel has an operating system which enables many advanced functions. In addition to a number of personal settings, the Elite can also be programmed to suit your personal schedule. Additionally, there are such functions as an extra fan, fragrance pumps and lighting. The panel can also be connected to a wireless network. It can be located inside or outside the steamroom.

Pure - Control panel with basic functions. It can be located inside or outside the steamroom.

Main power switch

The main power switch is located on the underside of the steam generator (Figures 53, 54). It should only be used when the system will be disconnected for a long period or for descaling. The steam generator's automatic draining function after completed use of the steamroom will stop if the power supply is disconnected for any reason.

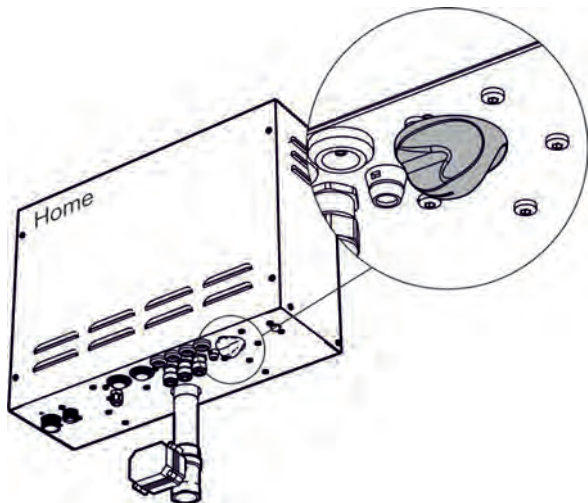


Figure 53 Steam Home main power switch

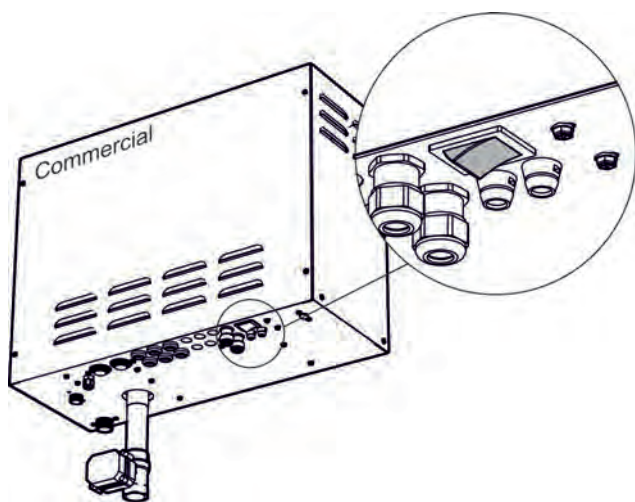


Figure 54 Steam Commercial main power switch

Automatic draining during operation

Important! This function should always be activated, regardless of whether or not a water softener is installed.

The steam generator automatically drains the water in the tank during operation (not in standby mode) after 4 hours (factory setting). This function can be switched off/modified in Settings > Automatic draining, but only via the Elite control panel. This

automatic function helps reduce build-up of calcium/minerals in the water reservoir, which could otherwise negatively affect the water level control and the product's life. Generally, the higher the water's conductivity, the shorter the intervals should be set for automatic draining during operation.

When the automatic draining of the water reservoir starts, a notification appears in the Elite control panel and the Pure control panel indicates it by flashing the water drop symbol. When the draining starts, the steam production stops and the timing of the steam interruption is influenced by the water volume and power. Example: Commercial steam generator 15kW has an approximate interruption of 11 minutes.

For Multisteam (several steam generators connected together), the primary device will drain automatically after 4 hours (factory setting) 20 minutes after the primary device has completed the draining, the draining of the secondary devices starts at a 20 minute interval. The 20 min interval cannot be changed. When the steam generator begins to drain, the steam production does not cease completely, but is only reduced because at least 1 steam generator is always producing steam.



WARNING! The water is hot when the water reservoir is emptied!

Descaling

Limescale is the most common cause of operational breakdown. Therefore, it is important to follow the descaling intervals in the care and maintenance instructions in Table 3. Some of the limescale released into the steam generator is flushed out during automatic draining when the appliance is in operation as well as after each use of the appliance, but some will remain. The descaling process releases limescale attached to the tank walls and heating element. Regardless of whether or not a water softener is installed, descaling must be carried out because the water softener only filters away/reduces limescale to a certain extent. The amount that is removed depends on the water's original °dH level and on the descaler used. In order to test the degree of hardness, follow the accompanying EASY TEST instructions and then follow the recommendations.

The number of operating hours before descaling differs depending on the water quality and the power of the steam generator. Higher power means higher water consumption and thus higher input of calcium/minerals.

Note: With normal private use and low water hardness, there is very little need for descaling. For example, if the steam generator is only used for short periods of time once a week, according to Descaling table no. 3, this may mean that descaling can be postponed well into the future. In such cases, the steam generator should still be descaled 1-2 times/year.

Tylö water softener (Tylö Item no. 9090 8027) helps to filter out the limescale, which directly contributes to a longer life and reduces the descaling frequency. If a non-Tylö water softener is used, it must not produce foam or give off harmful chemicals that can affect the water level control in the steam generator. Incorrect water levels may trigger the temperature cut-out (the heater element may break).

Regularly descale the tank manually according to the table below. The steam generator will not be damaged by frequent descaling. In fact, one time too often is better than not frequently enough.

Operating time in hours before descaling (To reduce the need for manual descaling, use of softened water is recommended in public saunas.)									
kW	Tylö Solvent (number of bags)	Sulphamic (grammes)	Tylö liquid descaling agent (ml)	Operating hours at different water hardnesses					
				Softened water 0-1°dH	Very soft water 0-3°dH	Soft water 4-7°dH	Medium hard water 7-14°dH	Hard water 14-21°dH	Very hard water >21°dH
3	2	100	250	1200	600	300	150	**	**
6-9	2	100	250*	1000	500	250	120		
12-15	4	200	500	700	350	170	85		

Table 3 Rules for descaling

* 250ml for Home

* 500ml for Commercial

**It is not recommended to operate the appliance using water of this hardness

Take care during the descaling process and only use descaling agent as indicated in Table 3.



Note: The steamroom/steam generator must NOT be used during descaling!

Important! To prevent the steam generator from starting up while it contains descaling agent, make sure unauthorised persons do not have access to start the appliance during the descaling process.

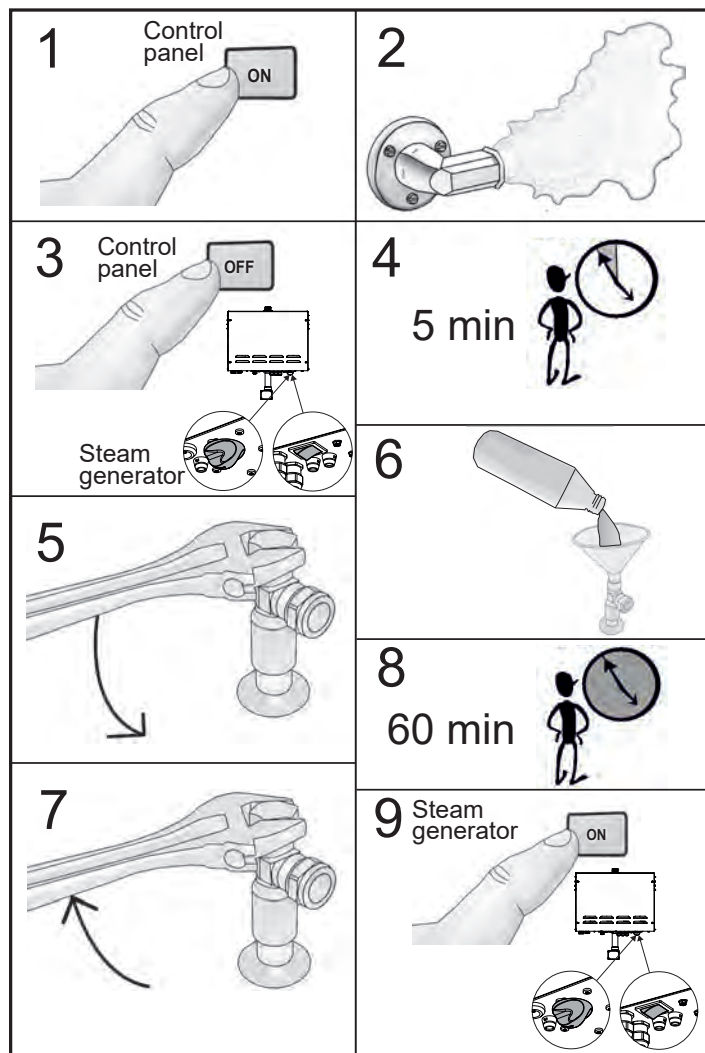


Figure 55 Follow the indicated steps when descaling the steam generator

Instructions for descaling the Tylö Steam generator (See figures 55, 56):

1. Start the steam generator.
2. Wait for the steam to appear.
3. Switch off the steam generator, first at the control panel and then using the power switch.
4. Wait for approx: 5 minutes.
5. Unscrew the cover nut on the T-connector.
6. Use a funnel to pour the descaling agent into the tank via the T-connector.
7. Tighten the cover nut on the T-connector.
8. Leave the descaling agent to work for at least 60 minutes.
9. The tank will be automatically drained and flushed when the switch on the steam generator is turned on. Important! When the switch is turned on, stay by the steam generator to ensure that the automatic draining and flushing start.

After descaling, the tank should be drained and flushed. The steam generator is then ready for use again.

If there is a large amount of limescale in the steam generator, it will be necessary to perform descaling several times in immediate succession.

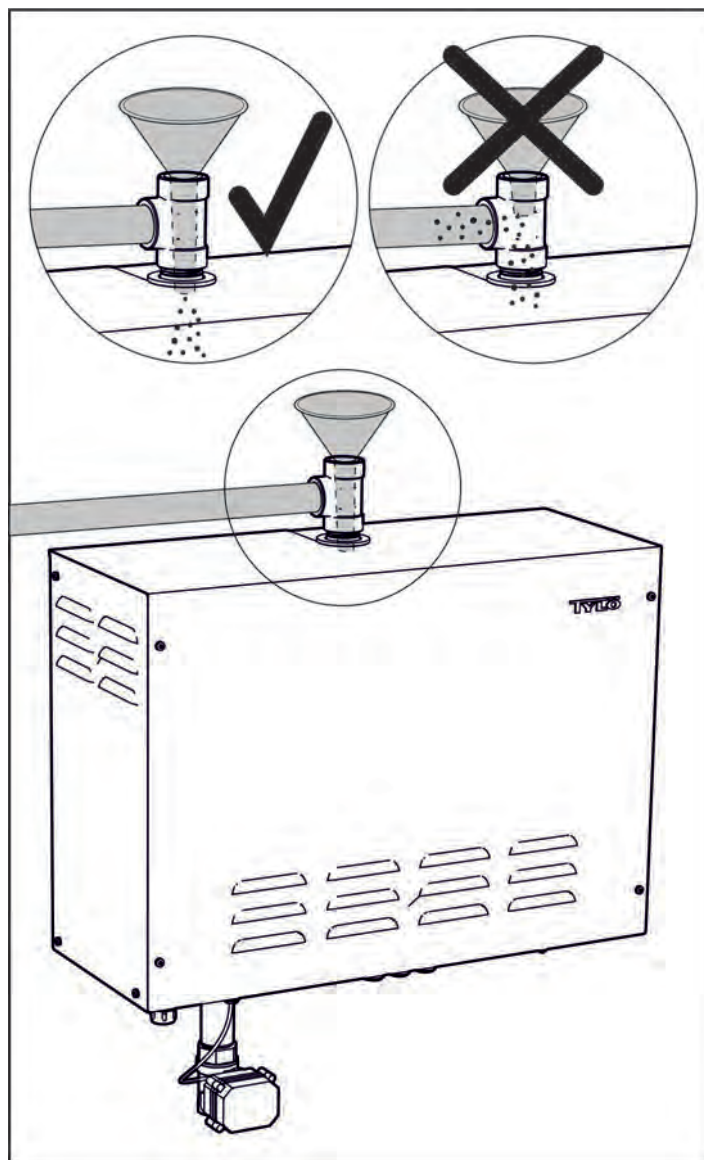


Figure 56 Use a funnel that is shaped in such a way that the descaling agent does not enter the steam pipe



Note: Descaling agent must not enter the steam pipe.

Descaling agent must not under any circumstances enter the steam pipe. There is a risk that sensitive materials (such as marble/limestone) may be damaged if decalcifying agents are released through the steam pipe while the steam generator is producing steam. Use a funnel with a tube that passes the steam pipe (see Figure 56) when the descaling agent is added.