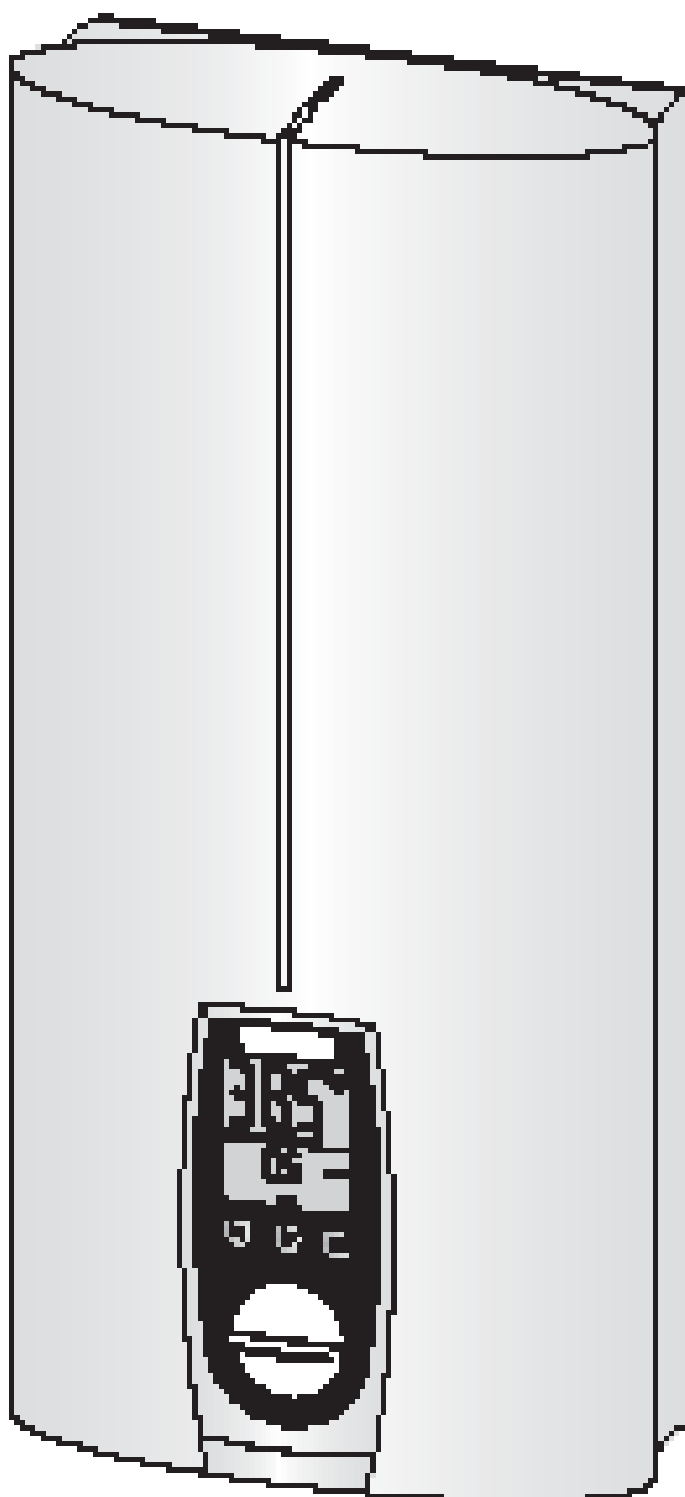


DHE 18 SLi, DHE 21 SLi, DHE 24 SLi, DHE 27 SLi electronic comfort

English

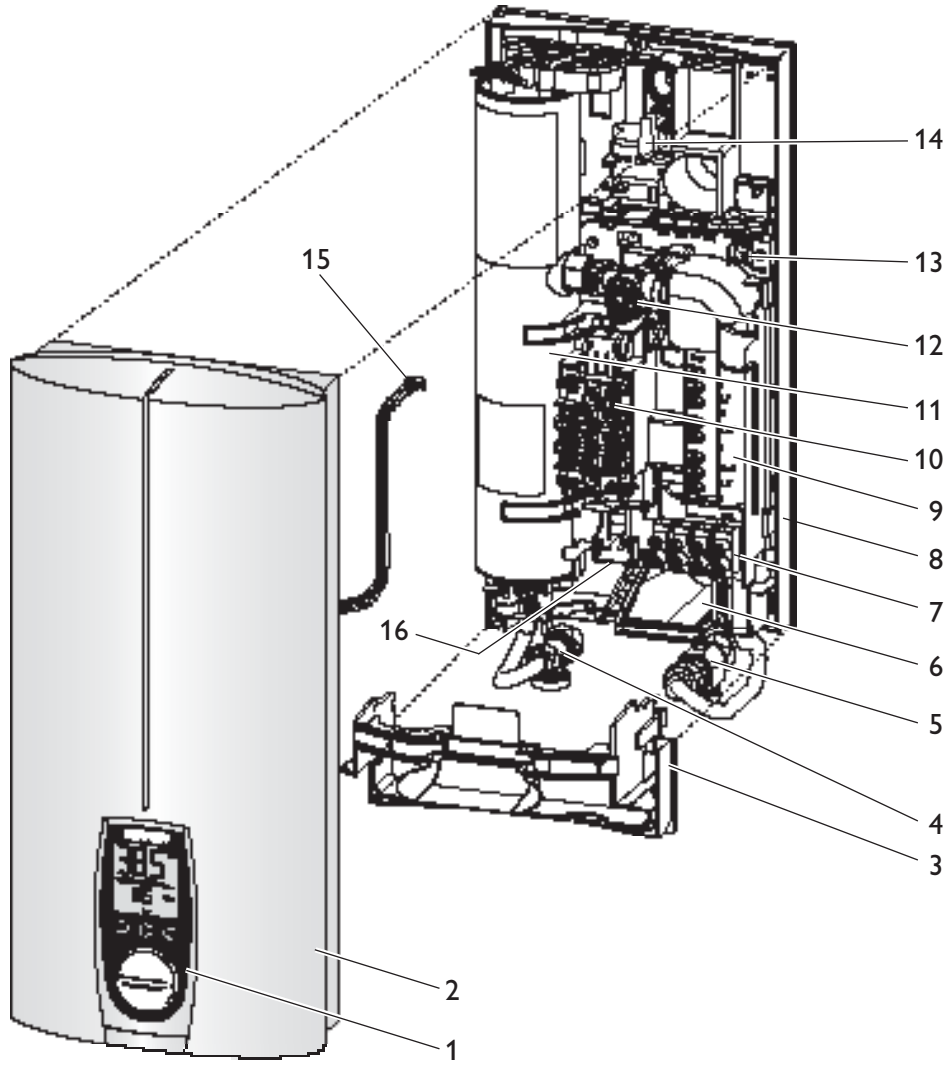
Electronically controlled instantaneous water heater Operating and installation instructions



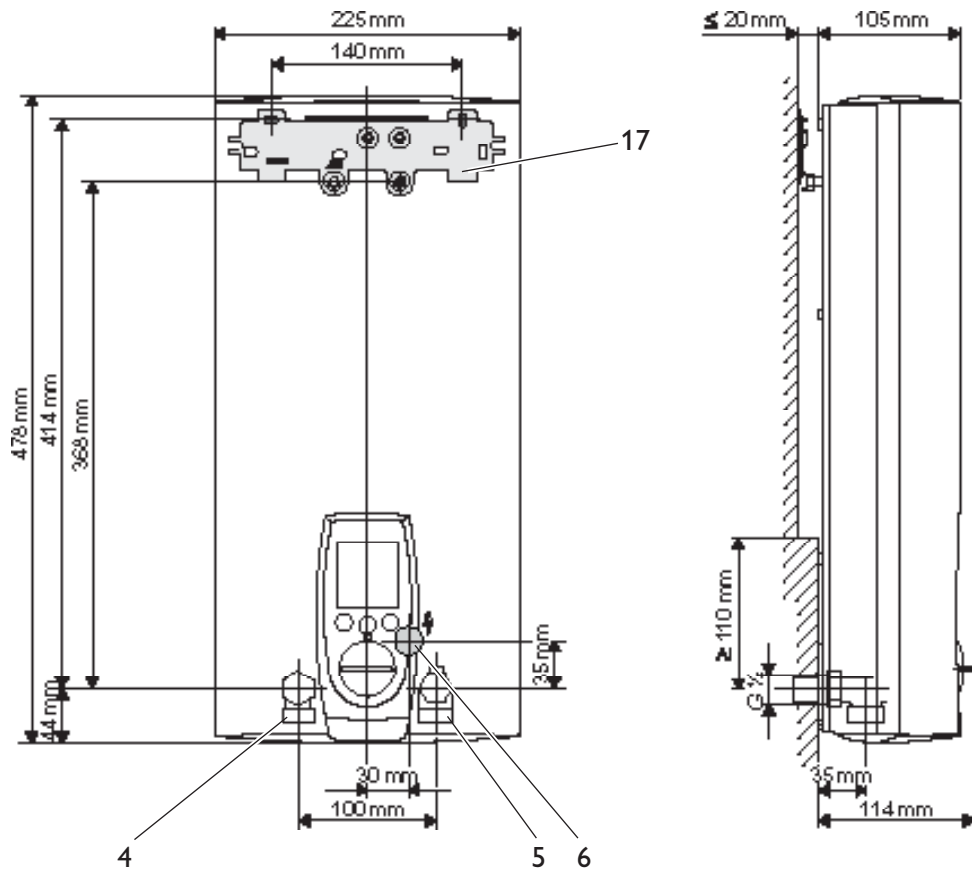
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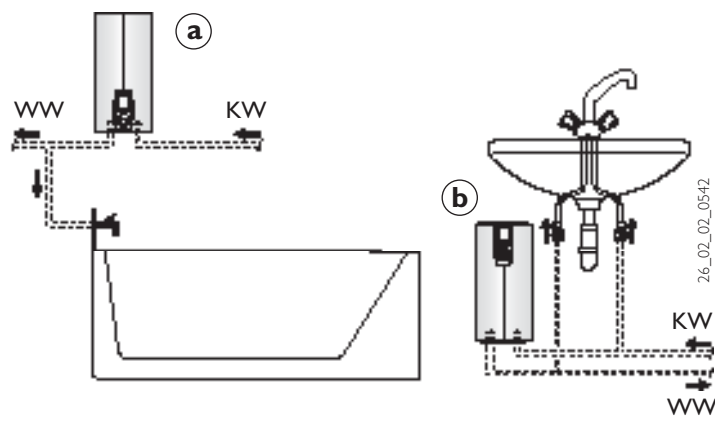
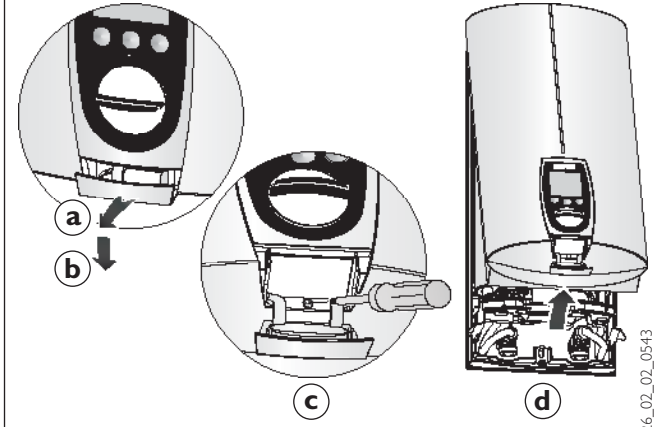
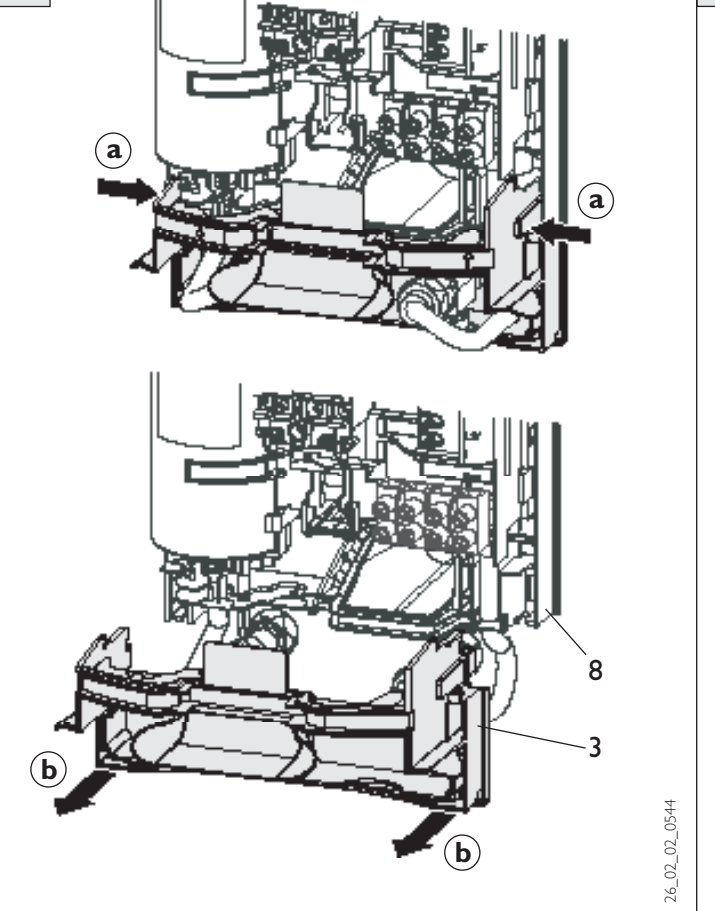
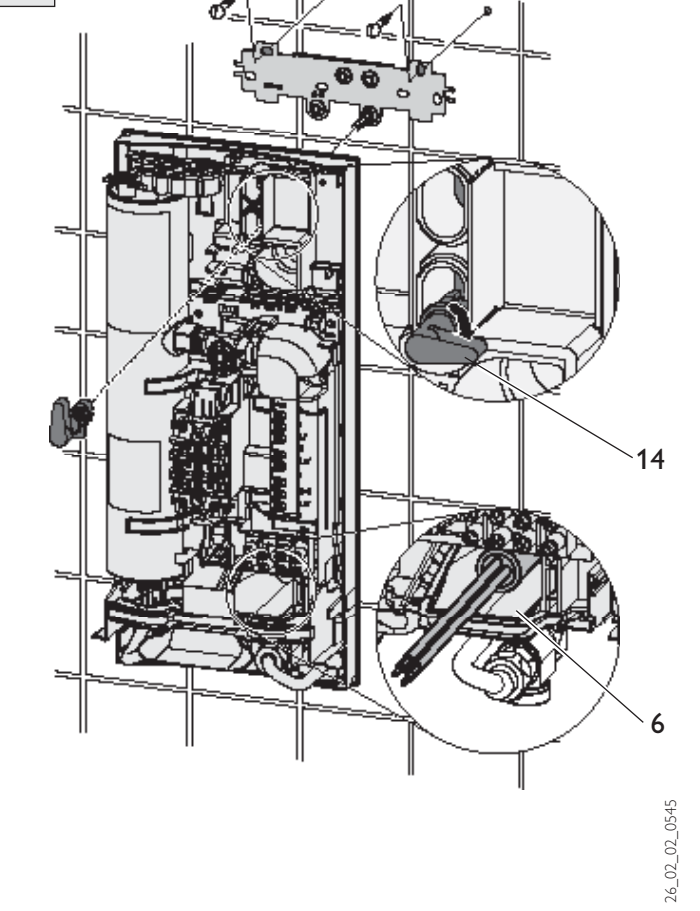
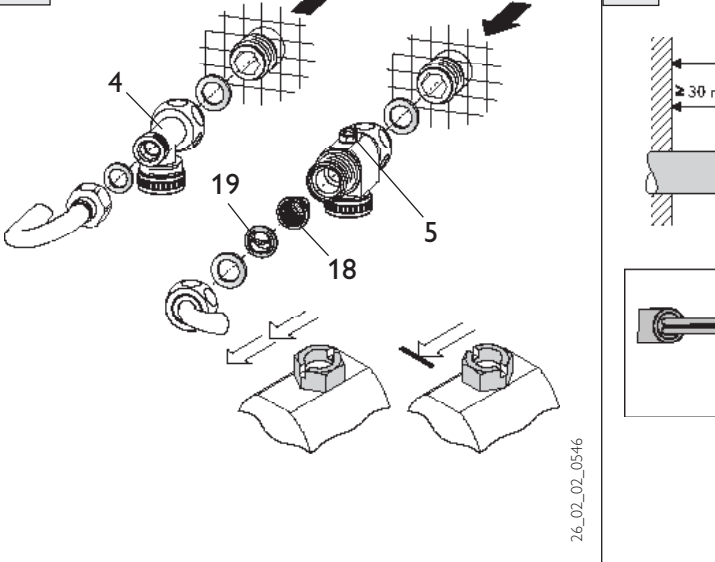
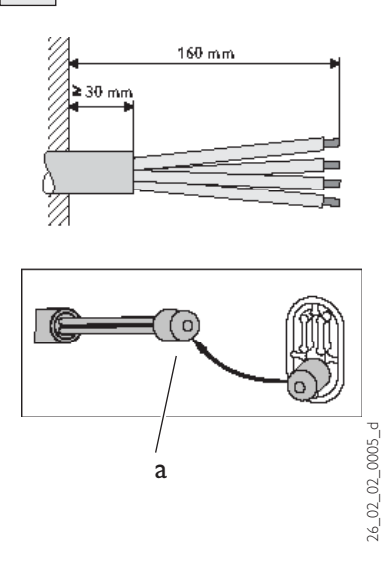
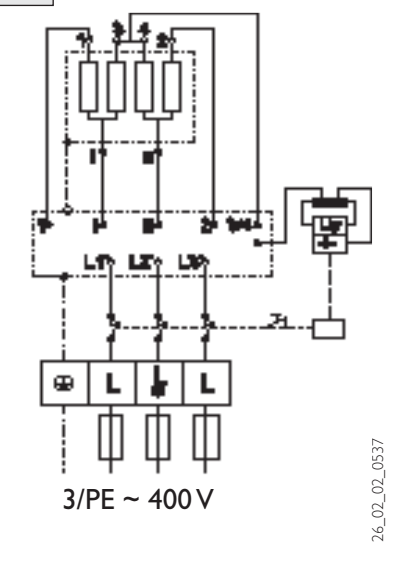
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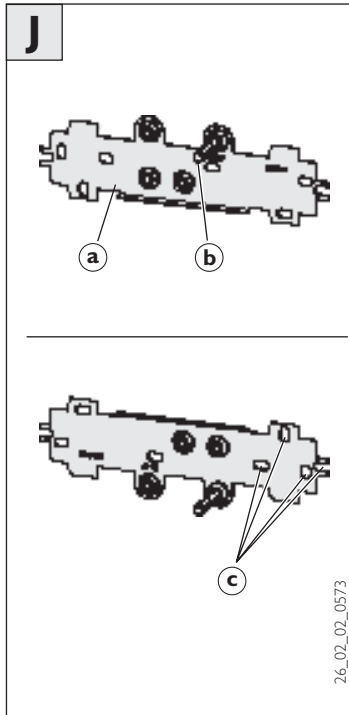
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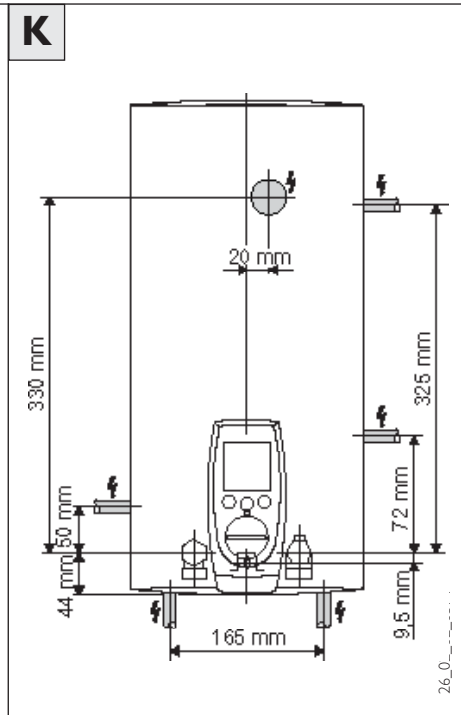
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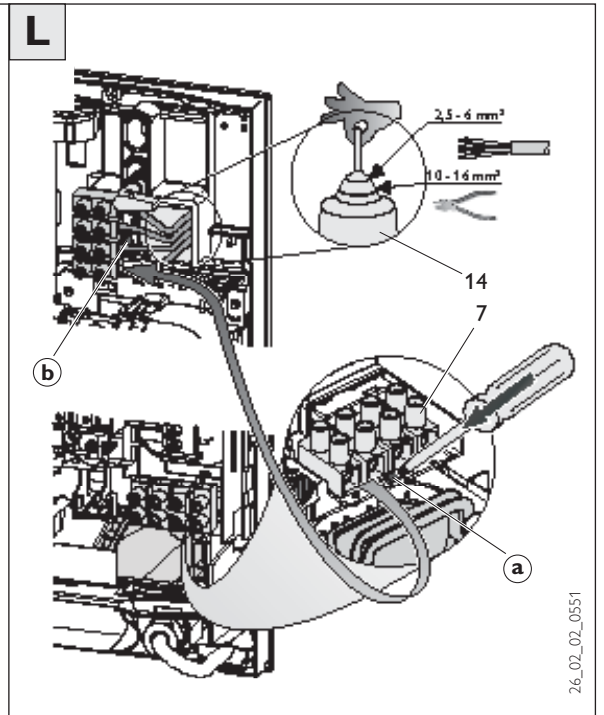
C**D****E****F****G****H****I**



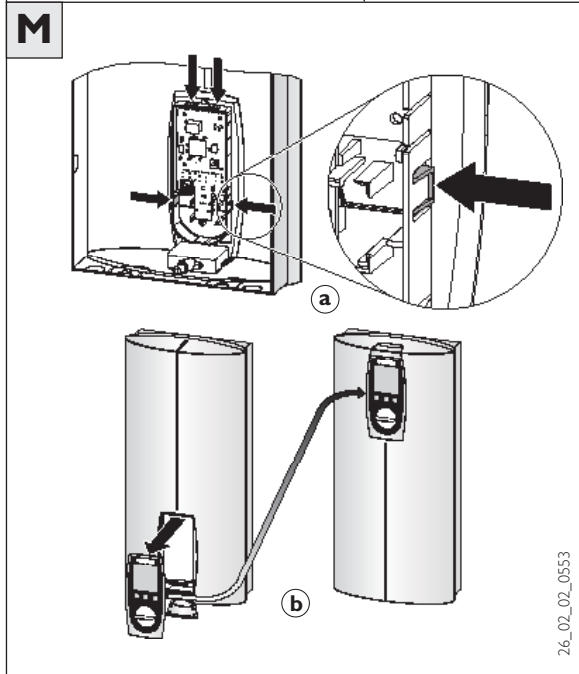
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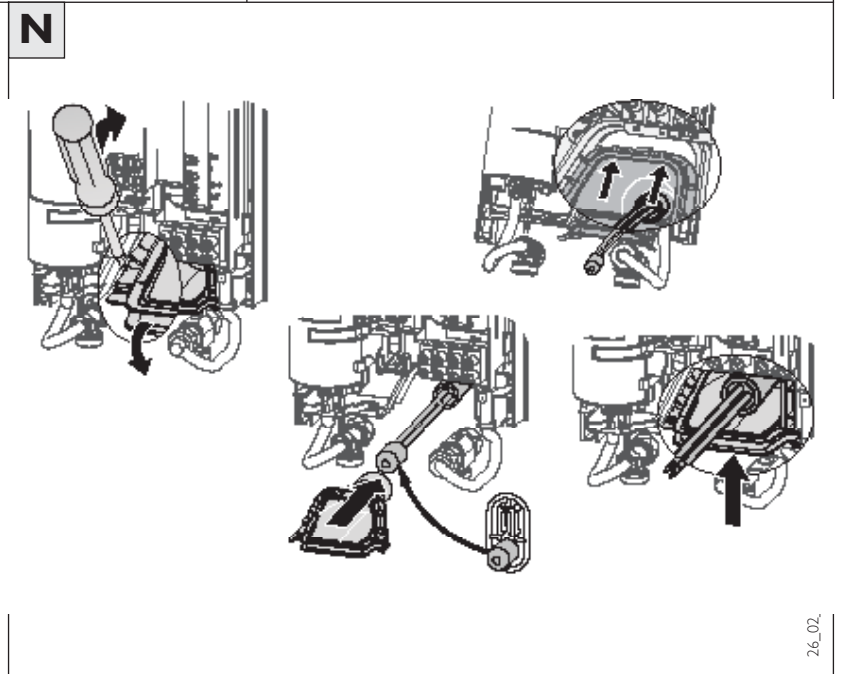
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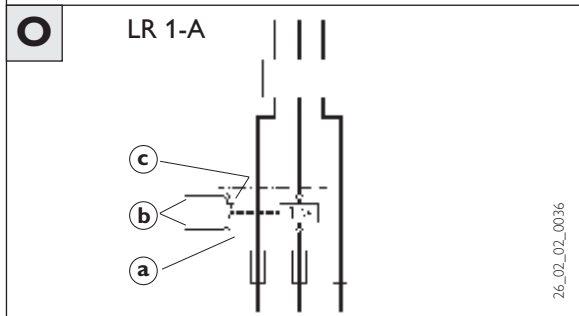
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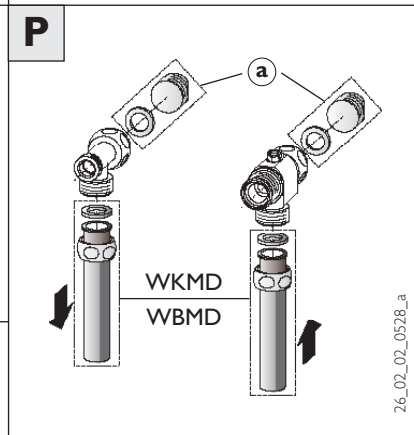
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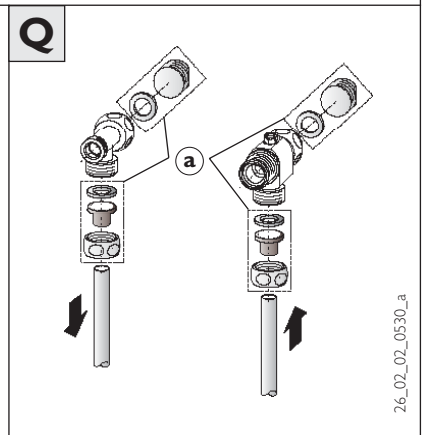
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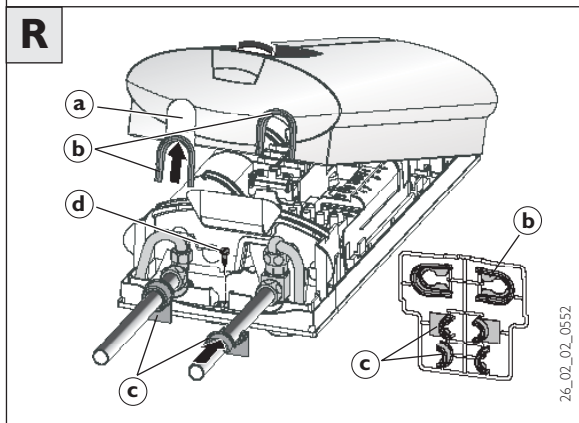
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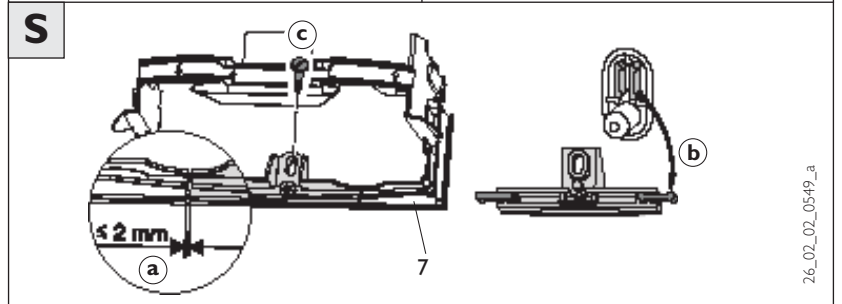
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1. Operating instructions for users and contractors

1.1 Equipment description

Description

The instantaneous water heater DHE...SLi **electronic comfort** heats water as it flows through the equipment. The hot-water outlet temperature is infinitely adjustable between 20 °C and 60 °C. The set temperature is shown on the display. From a flow rate of 2.5 l/min upwards, the equipment is switched on by the electronic control unit. **The water is heated to exactly the set temperature by means of the fully electronic control unit with motor-operated valve.**

User interface display:

The displays can be changed individually. As delivered, the factory settings of the ECO operation are 8 litres/minute and with automatic backlighting. With these settings, the backlighting switches on as soon as the temperature selector or a button is activated or the equipment is heating up. The backlighting switches off after 30 seconds without operation or heating.

The factory settings can be altered by the user (see "3.3 Setting the comfort functions"). You can return to the factory settings using the **M1** and **M2** buttons:

Press the buttons together for 2 seconds.

The equipment can be operated using a remote control (see "10. Special accessories").

1.2 Hot water output

Cold water temperatures vary depending on the time of year. The following maximum output volumes, or mixed water volumes, can be achieved with these different cold water inlet temperatures (see Table 1):

ϑ_1 = Cold water inlet temperature

ϑ_2 = Mixing water temperature

ϑ_3 = Output temperature.

• Useful temperature:

– approx. 38 °C: For example, for showers, hand basins, filling baths, etc.

– approx. 60 °C: For dishwashers and when using thermostatic fittings.

| $\vartheta_2 = 38\text{ °C}$ (Mixing water temperature) | | | | |
|---|---------|-------|-------|-------|
| | 18 kW | 21 kW | 24 kW | 27 kW |
| ϑ_1 | l/min * | | | |
| 6 °C | 8,0 | 9,4 | 10,7 | 12,1 |
| 10 °C | 9,2 | 10,7 | 12,3 | 13,8 |
| 14 °C | 10,7 | 12,5 | 14,5 | 16,1 |

| $\vartheta_3 = 60\text{ °C}$ (Output temperature) | | | | |
|---|---------|-------|-------|-------|
| | 18 kW | 21 kW | 24 kW | 27 kW |
| ϑ_1 | l/min * | | | |
| 6 °C | 4,8 | 5,6 | 6,4 | 7,2 |
| 10 °C | 5,2 | 6,0 | 6,9 | 7,7 |
| 14 °C | 5,6 | 6,5 | 7,5 | 8,4 |

Table 1

* The values in this table relate to a supply voltage of 400 V. The actual outlet volume is subject to the available supply pressure and mains voltage.

1.3 Recommended adjustment, thermostatic valve

To safeguard the function of the thermostatic valve, the DHE ... SLi must be set to the maximum temperature (60 °C).

1.4 Safety instruction

Water temperatures in excess of 60 °C can be reached when selecting the temperature at the draw-off valve.

Therefore keep small children away from the draw-off valves.

There is a risk of scalding with outlet temperatures in excess of 43 °C (see "2.3 Warning displays").

1.5 Important information

If the water supply to the DHE has been interrupted, e.g. because of a risk of frost, or work on the water pipe, the following measures must be taken prior to bringing the appliance back into use:

1. Remove the fuses and/or trip the MCBs, or switch off the DHE ... SLi by means of the temperature selector ("OFF" position).
2. Open a draw-off valve downstream of the equipment until all air has been purged from the cold water supply line and the equipment.
3. Replace the fuses and/or reset the MCBs or switch the DHE ... SLi back on.

1.6 First Aid in the event of faults

- Check the fuses
- Check that the fittings and shower controls are free of limescale or dirt contamination, see also "8. Fault finding - User".

1.7 Care and maintenance

Maintenance work, such as checking electrical safety, may only be carried out by a qualified installer.

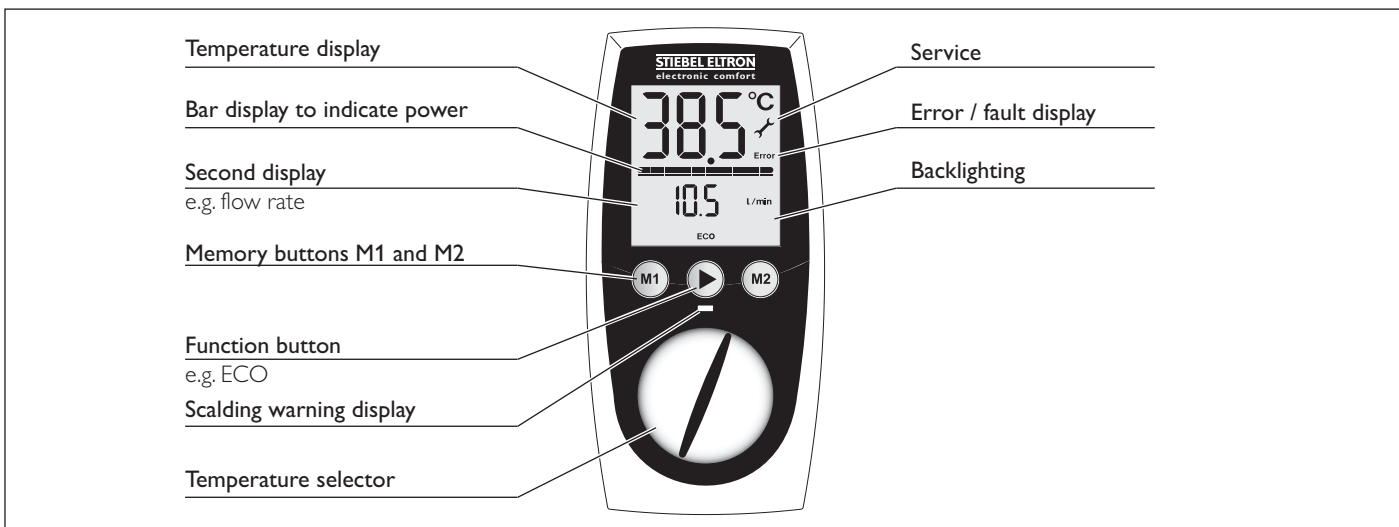
All that is needed to clean the housing is a damp cloth. Do not use any abrasive or caustic cleaning substances.

1.8 Instructions for Installation and Use

Follow these instructions carefully, and, in the event of change of ownership, pass them on to the new user. If any maintenance or repair work is necessary, give them to the qualified installer for him to read.

2. Operation – “in brief” for users and contractors

2.1 At a glance



2.2 Setting the temperature

Infinitely adjustable temperature selection

- 20 to 60 °C
- OFF ⇨ Heating is switched off.

Memory buttons
for rapid switching between two pre-selected temperatures

- **Storing the desired temperature:**
Press **M1** or **M2** for two seconds,
Temperature display flashes once and is stored
- **Selecting a stored temperature:**
Press **M1** or **M2**.

2.3 Warning displays

Flashing warning light for excess temperature
If the inlet temperature is higher than the desired temperature, e.g. as a result of solar-heated water, the temperature display flashes and the second display shows the inlet temperature.

Temperature display flashes
Second display – inlet temperature

Scalding warning display
Caution: There is a risk of scalding at temperatures ≥ 43 °C!
Colour changes from green to red


2.4 ECO function

Water and energy saving
The quantity of water flowing through is limited to a maximum value (Factory setting 8 l/min, a different value can be set in the menu).

- ECO on ⇨ ECO symbol in the display
- ECO off ⇨ no ECO symbol in the display

3. Setting the comfort functions for users and contractors


3.1 Function button and possible settings



Comfort functions – overview
(for setting the comfort functions, see 3.3)

| | | | |
|--|-----------------------------|---|---------------------------------|
| | | | |
| ECO energy- and water-saving function | Child safety control | Healthy showering program selector | Water quantity automatic |
| Factory setting | | | |

3.2 Second display for reading out information



Selection – second display
(for setting the comfort functions, see 3.3)

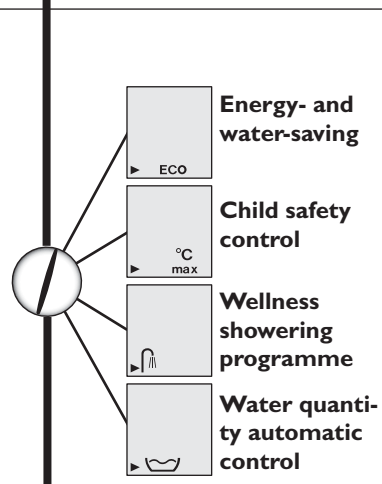
| | | | |
|------------------------|----------------------|-----------------------|-------------|
| | | | |
| Flow rate | Energy amount | Water quantity | Time |
| Factory setting | | | |

3.3 Setting the comfort functions

The comfort functions can be set or selected one after the other. The settings are incorporated immediately.

- START** **Press for 2 seconds**
- Select function and set value
- Scroll through the menu
- END** **Press for 2 seconds** ⇨ at any point
⇨ automatically after 30 seconds from last setting.

- START** **Press for 2 seconds**



Function button Assigning the function button

Several functions can be activated at the same time. A selected function from these can be switched on or off using the button.

Function selection.

Note:
 The functions are activated by pressing the button and are only de-activated by pressing the button again.
 Pressing the button activates the function only once for the next process of drawing off water, and the function is automatically switched off at the end of the process.

ECO Energy- and water-saving function Setting the ECO function

Water and energy saving
The amount of water flowing through is restricted to a maximum value.

- Switch on ECO function.
- Set the max. value for limiting flow rate, e.g. 8 l/min.

°C max Child safety control Setting the child safety control

The variable temperature is restricted to a maximum value.

- Switch on ECO function.
- Set the max. value to limit temperature, e.g. 36 °C for a baby's bath.

Healthy showering Selecting a wellness programme

4 different wellness shower programmes can be selected for alternate showering.

To harden your body, you are advised to end with a cold shower; so that the body initiates a reflex action to warm itself up.

WW

3 min

CW

CW

WW = hot water
CW = cold water

Stimulating end to a winter shower with re-warming.

WW

3 min

WW - 10°C

WW - 10°C

10 sec 10 sec 10 sec

Rapid alternate showers to increase fitness, ending with re-warming.

WW

3 min

CW

CW

10 sec 10 sec 10 sec

Arms and legs are showered in cold water to promote circulation. Showering – beginning with hands and feet – should be directed towards the body. The process can then be repeated with warm water.

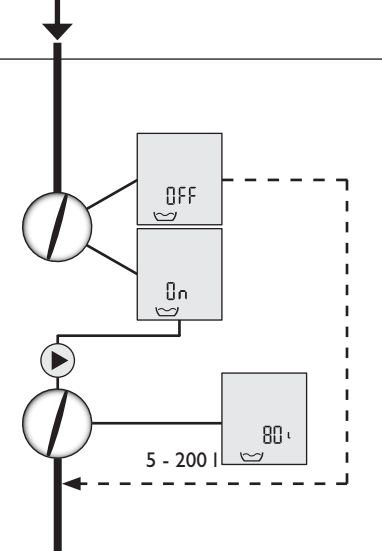
WW

3 min

CW

CW

20 sec 30 sec 20 sec 30 sec



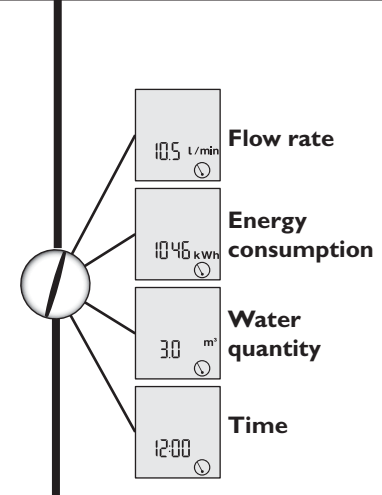
Water quantity automatic control

Setting the water quantity automatic control

If the pre-selected volume is reached, the automatic control reduces the flow rate to approx. 4 l/min.
 Example: bath filling 80 l.
 When 80 l has been reached, there is a reduction to approx. 4 l/min; less water simply runs in.
 The desired temperature remains constant.

- Switch on the water quantity automatic control.
- Set the max. value for water quantity, e.g. 80 l.

Note:
 The water quantity automatic control must be operated before filling the bath. Operation applies for one filling of the bath only.



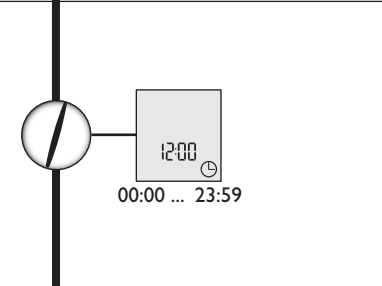
Second display

Assigning the second display

Any desired value can be shown in the second display.

- Select the value.

Note:
 Select the value. Note: In the "kWh" and "m³" menus, the meters can be reset to ZERO by pressing **M1** and **M2** together.

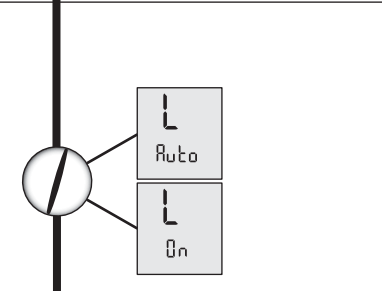


Clock

Setting the clock

- Set the clock.

Remark:
 Re-set after a power cut.



Display lighting

Set display lighting

- flashes on **Auto** - setting.
- Auto** The display-backlight switches itself automatically off and on.
ON: when heating up water and with each operation.
OFF: after 30 seconds without operation.
- On** Continuous light on.

Note:
 Press **M1** and **M2** for 2 seconds resets ⇒ factory settings.



4. Installation instructions for contractors

4.1 Brief description

The microprocessor-controlled instantaneous water heater **DHE...SLi** with fully electronic control is a pressure device to DIN 1988 suitable for the heating of cold water or for the re-heating of water which has been pre-heated to 55 °C.

The maximum permitted inlet temperature is 65 °C. The equipment may be damaged at higher temperatures. Above 55 °C, the message **"Error"** appears in the display. The maximum inlet temperature can be limited to 60 °C with the "central thermostat" special accessory (see **"10. Special accessories"**).

One or more draw-off points can be supplied with the equipment.

The microprocessor-controlled flow limiter always ensures that the set temperature is reached.

The bare wire heating system is suitable for water with low limescale or with limescale content (see **"7.2 Application ranges"**).

4.2 Important information

Air trapped in the cold water supply can damage the bare wire heating system inside the equipment, or trip the safety system (see **"1.5 Important information"**). **The DHE...SLi is equipped with an air detector which, to a great extent, prevents damage to the heating system:** If, during operation, air is drawn into the DHE, the equipment shuts down the power for a few seconds, thereby protecting the heating system.

- **Valves:**
- Stiebel Eltron pressure valves for instantaneous water heaters, for installation on finished walls (see **"10. Special accessories"**)
- Installation may be carried out using commercially available pressure valves.
- Thermostatic pressure valves (see note **"1.3 Recommended adjustment"**).
- All information in these operating and installation instructions must be followed carefully. They contain important details regarding safety, operation, installation and maintenance of the equipment.

• Information for replacing equipment:

The "power leap" when replacing 380 V instantaneous water heaters with 400 V models. As of 1.1.93, the standard rated voltage for "LV distribution systems" of 230/400 V was introduced in Germany. It was agreed with the relevant standardisation bodies that, in case of replacement without system modification, equipment with the next highest rated output according to DIN 44851 can be installed. However, this means that the electrical cables and fuses must comply with the standards and regulations applicable at the time the system is installed.

| Old build < 1.1.1993 | New build | Cable cross-section |
|-------------------------|----------------|------------------------|
| 18 kW 380 V | 21 kW 400 V | 4 mm ² |
| 21 kW 380 V | 24 kW 400 V | 4 mm ² |
| 24 kW 380 V | 27 kW 400 V | 6 mm ² |

Table 2

Installing an instantaneous water heater with a rated power 3 kW higher ensures that the DHW output stays approximately the same as before the replacement.

4.3 Instructions and regulations

- The installation (water and electrical work) and commissioning, as well as the maintenance of this equipment, must only be carried out by a qualified contractor in accordance with these instructions.
- Perfect function and safe operation can only be guaranteed when using original accessories and spare parts intended for this equipment.
- Observe all locally applicable instructions and regulations regarding water and electrical connections, such as DIN VDE 0100, DIN 1988, DIN 4109, DIN 44851 etc.
- Observe all local water and electricity supply company regulations.
- Install the lower area of the equipment flush with the wall (observe dimension ≥ 110 mm **B**).
- The type plate (open the hinged flap on the equipment cap).
- See also **"7. Specification"**.

The specific electrical resistance of the water may not be below the value written on the rating plate.

If the water is coming from a water-network the lowest value of the water resistance must be considered, (see „7.2 area of application“).

The specific electrical resistance of the water is generally known by the water provider.

- Install the equipment only in an enclosed, frost-free room. Store dismantled equipment in frost-free conditions, since there is always a little water left inside the equipment.
- The protection level IP 25 (hose-proof) is only guaranteed if a correctly installed cable grommet is used.
- **Water installation:**
 - Cold water pipe material: Steel, copper or plastic pipe systems.
 - DHW pipe material: Copper or plastic pipe systems*
Operating temperatures up to a max. 60 °C can be reached with the DHE...SLi instantaneous water heater. Maximum loads of 80 °C / 1.0 MPa may occur briefly in the installation in the event of a fault. The plastic pipe system used must be designed for such conditions.
- A safety valve is not required.
- Never use valves for open systems!
- **Electrical installation:**
 - Electrical connection only to permanently wired mains power cables
 - The equipment must be able to be disconnected from the mains power supply, for example by fuses that disconnect all poles with at least 3 mm contact separation.



5. Standard installation for contractors

Electrical: unfinished walls – from below;

water: unfinished walls

Key to figures A - G

- 1 User interface
- 2 Equipment cap
- 3 Base, back wall
- 4 DHW compression fitting
- 5 Cold water compression fitting (three-way shut-off valve)
- 6 Cable grommet (electrical supply cable from below)
- 7 Mains terminal
- 8 Top, back wall
- 9 Electronics
- 10 Safety pressure limiter (AE 3) with reset button
- 11 Heating system
- 12 Flow sensor (DFE)
- 13 Socket for set value transducer cable
- 14 Fixing toggle
- 15 Set value transducer cable plug
- 16 Snap-in tab for sub-rack (service)
- 17 Mounting bracket
- 18 Strainer in the cold water compression fitting
- 19 Fitting

5.1 General installation information

The equipment is prepared at the factory for standard installation (see figs. C - I):

- Installation above a worktop C (a).
- Water connection, unfinished walls, compression fitting G (4 and 5).
- Electrical connection, unfinished walls, in the lower equipment area F (6).

5.2 Place of installation

Install the DHE vertically in accordance with C (a – above or b – below worktop) in a room free from the risk of frost.

5.3 Equipment preparation for installation

- Open the equipment D:
 - a Pull the flap forward.
 - b Open the flap downwards.
 - c Release the fixing screws.
 - d Remove the equipment cap.
- Remove the back wall base E:
 - a Press down both snap-in tabs.
 - b Remove the back wall base by pulling forwards.
- Remove the fixing toggle F (14).

5.4 Securing the mounting bracket F

- Mark out the fixing holes for the mounting bracket using the installation template supplied.
- Secure the mounting bracket with 2 screws and rawl plugs (not supplied; selection subject to the material of the relevant wall).

5.5 Trimming the power cable to size

Trim the power cable to size in accordance with H.

Note:

Cap (a) should be used as an aid for installing the power cable.

5.6 Equipment installation F

- Route the power cable through the cable grommet (6) and press the back wall over the threaded studs of the mounting bracket.
- Fit the equipment, secure the fixing toggle (14).

5.7 Water connection G

Important information:



Thoroughly flush the cold-water supply pipe.

Always incorporate the strainer and fitting supplied (18 and 19, bag on the cold-water

fitting) into the cold-water compression fitting. When replacing the installation, check that the strainer is in place.

Never use the three-way shut-off valve (5) to reduce the flow rate.

5.8 Electrical connection

Connect the electrical supply cable to the terminal strip (see Wiring diagram I).

Important information:



The protection level IP 25 (hose-proof) can only be ensured with a correctly fitted cable grommet A (6) and seal on the cable bush.

Connect the equipment to earth.

5.9 Completing the installation

1. Open the three-way shut-off valve G (5).
2. Fit the back wall base E (3).

5.10 Initial start-up

(only by a qualified contractor)

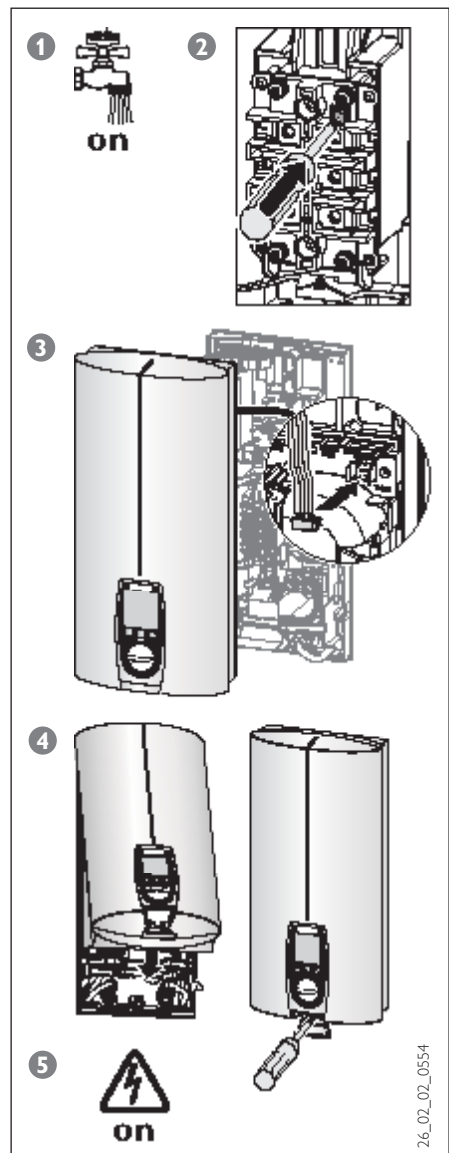
- 1 **Fill and vent the equipment. Please note: risk of running dry!** Open and close all connected draw-off valves several times, until the air has been purged from the pipework and the equipment, see “4.2 Important information”.
- 2 **Activate the safety pressure limiter.** The DHE...SLi electronic comfort is supplied with the safety pressure limiter (AE 3) in a tripped state (press the reset button).
- 3 **Push set value transducer cable plug onto the PCB.**
- 4 **Fit the equipment cap and secure with the screw.**
- 5 **Switch on the mains power.**
- 6 **Check the instantaneous water heater function.**
- 7 **Remove the protective film from the user interface.**

Equipment handover

Explain the equipment function to the user and familiarise the user with its operation.

Important information:

- Make the user aware of possible dangers (scalding).
- Hand over these instructions to the user for safekeeping.





6. Alternative installations for contractors Electrical: unfinished walls – from above, finished walls – from below/above, load circuit breaker; water: finished walls; rotated equipment cap; offset for tiled surface

Alternative installations are shown in figures **J** - **S**.

6.1 Mounting bracket when equipment is replaced **J**

- The existing mounting bracket can be used when replacing Stiebel Eltron equipment (except "DHF"). Use a suitable grommet in the back wall.
- When replacing "DHF", turn the mounting bracket (a) 180° (logo "DHF" turned towards the reader) and move the threaded stud (b) to the upper rh. corner.
- When replacing third party equipment, use suitable holes for rawl plugs (c) to secure the mounting bracket supplied.

6.2 Electrical connection – finished walls

- Cut or make an opening for the power cable in the back wall and equipment cap (see **K** for possible locations for openings).
- The protection level changes to IP 24 (splash-proof) for electrical connection on finished walls.

Attention:

The equipment type plate must be marked as follows in ballpoint pen: Cross through IP 25 and put a cross in the box IP 24.

6.3 Electrical connection – from above **L**

- Cut a hole for the power cable in the cable grommet.
- Push the terminal strip upwards from below, for this press in the snap-in tab (a) and isolate the terminal strip.

Attention:

Snap the terminal strip into place at the top (b).

6.4 Rotated equipment cap
The equipment cap can be rotated for under-worktop installation **M**:

- Press in the snap-in tab to remove the user interface (a) from the equipment cap.
- Rotate the equipment cap (b) (not the equipment). Insert the user interface and lock all snap-in tabs into place.

Attention:

Do not install a user interface with damaged snap-in tabs.

- Push set value transducer cable plug onto the PCB (see **3** "5.2 Initial start-up").
- Hang the equipment cap (b) at the bottom and swing up into position on the back wall. Push the cap forwards and backwards to ensure correct seating of the surrounding back-wall gasket.
- Screw down the equipment cap.

6.5 Installation of cable grommet

The equipment may be installed with a retro-fitted cable grommet **N**.

- Press out the cable grommet using a screwdriver (a).
- Secure the equipment on the mounting bracket.
When using a 10 or 16 mm² power cable, enlarge the hole in the cable grommet (markings **L**).
- Push the cable grommet over the power cable (b, installation aid), fit to the back wall (c) and snap in place (d).

6.6 Priority control **O**

When used in conjunction with other electrical equipment, e.g. electric storage heaters, use the load circuit breaker:

- a Load circuit breaker (see "10. Special accessories").
- b Control cable to the contactor of the other equipment (e.g. electric storage heater),
- c Control contact – opens when switching the DHE ... SLi on.

The load breaker trips as soon as the DHE ... SLi starts.

Only connect the load circuit breaker to the centre phase of the equipment terminals (mains power).

6.7 Compression fittings – finished walls

Stiebel Eltron pressure valve (finished walls)

WKMD or WBMD **P**

(part no. see "10. Special accessories")

- Fit the water plug G ½ with gaskets (a) (part of the standard delivery of Stiebel Eltron pressure valves for finished walls). Two water plugs (special accessory set) (see "10. Special accessories") are required for third party pressure valves.
- Fit the valves.
- Push the back-wall base below the valve connection pipes and snap it into the back-wall top.
- Screw the connection pipes to the equipment.

Prepare the equipment cap for this installation **R**:

- Break out the bush knock-outs (a) in the equipment cap cleanly, if necessary use a file.
- Knock out the lips from the cap guides supplied (b). If the valve connection pipes are slightly offset, the cap guides (b) can be used without knocking out the lips. In this case, the back-wall guides (c) are not used.
- Snap the cap guides into the bush knock-outs in the equipment cap.

- Fit the back-wall guides supplied (c) onto the pipes (press top and base onto pipe and push together).
- Push back-wall guides (c) onto back wall of the equipment until it stops.

Securing equipment

When connected to flexible water pipe systems, the back wall must be secured at the bottom by means of an additional screw (d).

- Hang the equipment cap (b) at the top and swing down onto the back wall. The webs of the cap guides must grip into the back-wall guides and lock into them.

6.8 Soldered fitting – finished walls

Using the special accessory **Q** (a), part no. see "10. Special accessories", it is possible to provide a screw connection with the customer's 12 mm copper pipes.

- Install parts of the special accessory.
- Solder the insert to the copper pipes.
- Push the back-wall base underneath the valve connection pipes and snap into the top of the back wall.
- Screw the connection pipes to the equipment.

Attention:

Note the information in "6.7 Compression fittings – finished walls":

- Equipment cap, equipment back wall and equipment fixing must be prepared for this installation method.
- Equipment fixing.
- Cap installation.

6.9 Installation of back-wall base

With connection fittings for finished walls, the back-wall base can also be fitted after the valves have been fitted **S**:

- Cut the back-wall base (3) as shown in the diagram (a).
- Insert the links (b from the extra item ordered) from the back into the centre part.
- Guide the centre part underneath the pipes, push up and fit with the back-wall base.
- Fit the back-wall base to the back wall. The back-wall base must be secured with an additional screw (c).
- Fit the valve connection pipes to the equipment fittings.

6.10 Offset installation for tiled surfaces

When the equipment is fitted onto a tiled surface (**B** max. 20 mm), the toggle (**F** 14) initially adjusts the wall clearance and then secures the equipment.

7. Specification and application areas for contractors

7.1 Specification (details listed on the type plate apply)

| Typ | | DHE 18 SLi electronic comfort | DHE 21 SLi electronic comfort | DHE 24 SLi electronic comfort | DHE 27 SLi electronic comfort |
|--|-------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Rated power | kW | 18 | 21 | 24 | 27 |
| Pressure loss * | MPa (bar) / l/min | 0,04 (0,4) / 5,2 | 0,06 (0,6) / 6,0 | 0,08 (0,8) / 6,9 | 0,1 (1,0) / 7,7 |
| Capacity | | 0,4 l | | | |
| Type | | closed | | | |
| Rated overpressure | | 1 MPa (10 bar) | | | |
| Weight | | 4,5 kg | | | |
| Protection class as per DIN EN 60335 | | 1 | | | |
| Protection mode as per EN 60529 | | IP 25 (IP 24 at electrical connection - finished walls) | | | |
| Test marks | | see unit rating plate | | | |
| Approval of the Building control | | PA-IX 7987/I | | | |
| Water connection (external thread) | | G ½ | | | |
| Electrical connection | | 3/PE ~ 400 V | | | |
| VDEW approval | | present | | | |
| Heating system | | bare wire | | | |
| Area of use | | especially for water with high lime content | | | |
| Cold water inlet temperature | | max. 65 °C | | | |
| Range of use for specific electrical resistance/conductivity | | ≥ 900 Ωcm see Table 4 | | | |
| Flow volume „On“ | | ≥ 2,5 l/min | | | |

Table 3

* Values for pressure losses also apply for minimum flow pressure according to DIN 44851/flow volume for heating from 10 °C to 60 °C ($\Delta\theta$ 50 K). On the basis of DIN 1988 Part 3, Table 4, pressure loss of 0.1 MPa (1 bar) is recommended with regard to the dimensioning of the pipe network.

7.2 Area of application

Area of application for instantaneous water heaters, related to the specific electrical resistance of the water/specific electrical conductivity.

| Details as | Ranges of use for different references temperatures * from water analysis | | |
|---|---|----------------------------|----------------------------|
| | Normes details at 15 °C | at 20 °C | at 25 °C |
| Specific electrical resistance corresponding to | ≥ 900 Ωcm | ≥ 800 Ωcm | ≥ 735 Ωcm |
| Specific electrical conductivity | ≤ 111 mS/m ≤ 1110 μS/cm | ≤ 125 mS/m ≤ 1250 μS/cm | ≤ 136 mS/m ≤ 1360 μS/cm |

Table 4

* The values for the specific electrical resistance or electrical conductivity respectively are to be determined on a regionally divergent basis, at different temperatures. This must be taken into account in the assessment.

8. Troubleshooting by the user and the contractor

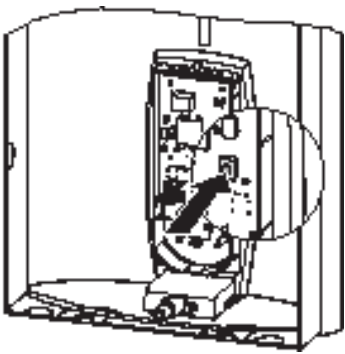
| Störung | Ursache | Behebung |
|---|--|--|
| Flow rate too low | ECO mode is activated (and limit is set at a low level) | User: Deactivate ECO (if necessary, adjust level). |
| | Shower head/percolators scaled up | User: Descale and replace if necessary. |
| | Contamination | Contractor: Clean strainer. |
| | Motor operated valve defective | Contractor: Test valve and replace if necessary. |
| Continuous Error display on user interface | Faulty sensor/PCB | Contractor: Analyse fault further in the service mode (error menu). |
| | Faulty communication between user interface and controls | Contractor: Test user interface and connecting cable. |
| No LCD display | No voltage | User: Test user interface and connecting cable. |
| | Connecting cable to user interface loose | Contractor: Plug in connecting cable. |
| | AE3 has tripped | Contractor: Remove the cause and switch on the AE3 again. |
| | Faulty PCB | Contractor: Test the PCB and replace if necessary. |
| Heater does not switch on / no hot water | Heating system faulty | Contractor: Test heater and replace if necessary. |
| | DFE faulty or not plugged in | Contractor: Check DFE connection; check flow-rate measurement in the service mode. |
| Error display appears only when water is being drawn off | One phase down | User: Check fuses/MCB (fuse box). |
| | Fault in the safety electronics | Contractor: Plug in AE3 connecting cable; check AE3. |
| | Water inlettemperature > 55 °C | Contractor: Reduce temperature of the water supply. |
| Intermittent cold water | Wellness function activated | User: Deactivate wellness function. |
| | Brief interruption of flow rate | Equipment automatically restarts when there is a sufficient flow rate. |
| | Air sensor reacts (cold water for approx. 1 min.) | Equipment automatically restarts after a delay. |

Table 5

When the equipment is repaired, the factory-configured lead arrangement must be restored. Mains cables must not touch extra-low-voltage cables.



9. Service mode for contractors



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Activate / deactivate service

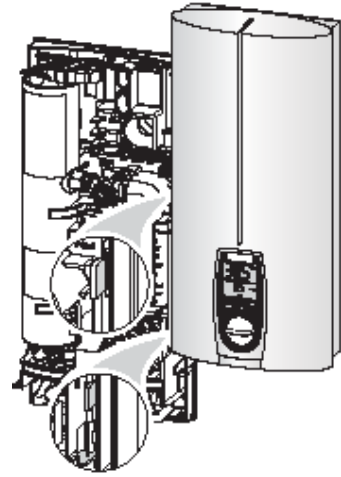


Scroll through the menu.



Select functions and set values and/or read out values

Cap support during servicing



Error menu

... only if there is a fault!



Electronic assembly

Replace electronic assembly.



Safety circuit

Check AE 3 connection; if necessary, replace AE 3.



Outlet sensor

Check outlet sensor connection; if necessary, replace outlet sensor.



Motor-operated valve

Check valve connection; if necessary, replace valve.



Control menu



Water inlet temperature

Displays the current water inlet temperature (if sensor is faulty, displays 1.0 °C).



Outlet temperature

Displays the current outlet temperature (if sensor is faulty, displays 65.0 °C).



Flow rate

Displays the current flow rate.



Power consumption

Displays the current power consumption.



Equipment data menu

d1 Service code
8049
Information for the service department.

d2 Connected service life (days)
1869
Accumulated service life.

d3 Heating hours
172 h
Accumulated heating time.

d4 Maximum output
27 kW
The value displayed may differ by a few kW from the rated output (equipment type plate), particularly with main voltages which are different from 400 V.

Show mode

for display purposes

Switch on show mode

Produces a bar display and a flow rate value in the second display (value is slightly less than the set ECO value) as well as the error codes in the error menu – ends automatically after 10 minutes.

Anti-scald protection (temperature limit)

Configuration of anti-scald protection

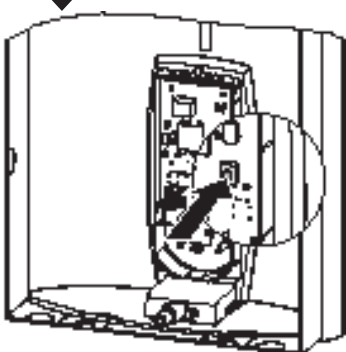
For nurseries, hospitals, for example.
Limits child safety device at the same time.

Switch on anti-scald protection.

Select max. value for anti-scald protection.
Recommended settings for:

| | |
|-----------|-------|
| UK | 41 °C |
| Germany | 43 °C |
| Australia | 50 °C |

This anti-scald protection cannot be altered by any operations by the user, not even by pressing buttons **M1** and **M2** together.



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END = press button

It is possible to call up and/or alter the temperature set value by means of the M1 and M2 memory buttons:

- M1 Temperature set value = 20 °C
- M2 Temperature set value = 60 °C

10. Special accessories

- **Remote controls for DHE...SLi**

- **FB 2 – Wired remote control**

Part no. 15 81 16

Operation from two locations:

Equipment and remote control.

The wired remote control **FB 2** is operated using safety extra-low voltage.

Perfect communication is guaranteed up to a connection length of 15 m. Control line:

Telephone line, type J-YY 2x2x0.6

(without metallic screening).

Accessory: connection module, wall mount and user interface.

- **FFB 1 – Radio remote control**

Part no. 16 94 78

Operation from two locations:

Equipment and radio remote control.

Accessory: radio remote control (transmitter), connection module (receiver) and wall mount.

- **FFB 2 – Radio remote control**

Part no. 16 94 82

Radio remote control as an extension of **FFB 1**

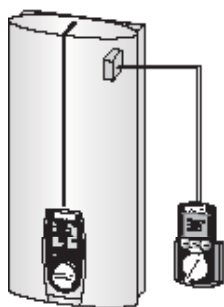
Accessory: radio remote control (transmitter) and wall mount.

The radio remote controls are operated by means of wireless user interfaces.

Perfect communication is guaranteed up to 25 m in buildings. The instantaneous water heater can be operated with a maximum of 6 radio remote controls.

The user interface in the equipment can still be used.

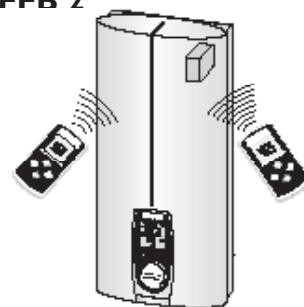
FB 2



FFB 1



FFB 2



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- **Two-handle pressure valves**

- **Kitchen valve WKMD**

Part no. 07 09 17

- **Bath valve WBMD**

Part no. 07 09 18

- **Installation accessories**

- **Under-worktop set – unfinished walls**

Part no. 07 05 65

Connections for finished walls, G 3/8", top

- **Set 2x water plugs G½**

Part no. 07 43 26

Required with third party pressure valves (P a).

Note:

Not required for Stiebel Eltron valves WKMD and WBMD.

- **Installation set – finished walls**

Part no. 07 40 19 (Q a)

consisting of:

- 2x water plugs G½

- 2x union nuts ½" with insert for soldered fitting Ø 12 mm

- **Universal mounting frame**

Part no. 22 02 91

consisting of:

- mounting frame with
- electrical wiring

This set creates a gap of 30 mm between the equipment back wall and the installation wall.

This enables the electrical connection to be routed over unfinished walls at any point behind the equipment. It increases the equipment depth by 30 mm and reduces the protection level to IP 24 (splash-proof).

- **Offset installation – unfinished walls**

Part no. 22 02 90

consisting of:

- universal mounting frame (see part no. 22 02 91 for specification).

- pipe bends for vertical displacement of the equipment by 90 mm downwards compared to the water connection.

- **Gas water-heater replacement set**

Part no. 22 05 10

consisting of:

- universal mounting frame (see part no. 22 02 91 for specification).

- pipe bends for installation at existing gas water-heater connections (cold water left and hot water right).

- **Load circuit breaker LR 1-A**

Part no. 00 17 86

Priority control of the DHE...SLi electronic comfort for simultaneous operation of e.g. electric storage heaters. For connection of the LR 11-A, see (O).

- **Accessories for operation of a DHE ... SLi with pre-heated water**

- **ZTA 3/4 – central thermostatic valve**

Part no. 07 38 64

By adding cold water via a bypass pipe, the central thermostatic valve installed immediately above the storage water cylinder guarantees that the outlet temperature of 60 °C is not exceeded.



11. Environment and recycling

Dispose of packing material and appliances

The dispose of the packing material and the appliances must be done according to the local recycling laws and regulations.



12. Guarantee

For guarantees please refer to the respective terms and conditions of supply for your country.



The installation, electrical connection and first operation of this appliance should be carried out by a qualified installer.

The company does not accept liability for failure of any goods supplied which accordance with the manufacturer's instructions.



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