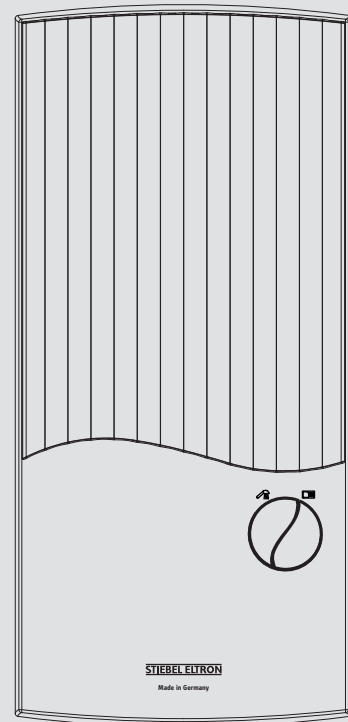


OPERATION AND INSTALLATION
OPERACIÓN E INSTALACIÓN
OBSLUHA A INSTALACE
OBSLUHA A INŠTALÁCIA
OBSŁUGA I INSTALACJA
ОБСЛУЖВАНЕ И ИНСТАЛИРАНЕ

Electronically controlled instantaneous water heater | Calentador instantáneo electrónico | Elektronicky řízený průtokový ohříváč | Elektronicky riadený prítokový ohrievač | Elektronicznie sterowany przepływowy ogrzewacz wody | Електронно контролиран проточен бойлер

- » PEG 13
- » PEG 18
- » PEG 21
- » PEG 24



STIEBEL ELTRON

SPECIAL INFORMATION

OPERATION

1. General information	3
1.1 Safety instructions	3
1.2 Other symbols in this documentation	3
1.3 Units of measurement	3
2. Safety	3
2.1 Intended use	3
2.2 General safety instructions	3
2.3 Test symbols	4
3. Appliance description	4
4. Settings	4
5. Cleaning, care and maintenance	4
6. Troubleshooting	4

INSTALLATION

7. Safety	5
7.1 General safety instructions	5
7.2 Instructions, standards and regulations	5
8. Appliance description	5
8.1 Standard delivery	5
9. Preparations	5
9.1 Installation site	5
9.2 Water installation	6
10. Installation	6
10.1 Standard installation	6
10.2 Alternative installation options	9
10.3 Completing the installation	10
11. Commissioning	10
11.1 Initial start-up	10
11.2 Recommissioning	11
12. Shutdown	11
13. Troubleshooting	12
14. Maintenance	12
15. Specification	13
15.1 Dimensions and connections	13
15.2 Wiring diagram	13
15.3 DHW output	13
15.4 Application areas / conversion table	14
15.5 Pressure drop	14
15.6 Fault conditions	14
15.7 Details on energy consumption	14
15.8 Data table	14

GUARANTEE

ENVIRONMENT AND RECYCLING

SPECIAL INFORMATION

- The appliance may be used by children aged 3 and up and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the resulting risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.
- The tap can reach temperatures in excess of 60 °C. There is a risk of scalding at outlet temperatures in excess of 43 °C.
- Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.
- The specified voltage must match the mains voltage.
- Connect the appliance to earth.
- Connect the appliance permanently to fixed wiring.
- Secure the appliance as described in chapter "Installation / Installation".
- Observe the maximum permissible pressure (see chapter "Specification / Data table").
- The specific water resistivity of the mains water supply must not be undershot (see chapter "Installation / Specification / Data table").
- Drain the appliance as described in chapter "Installation / Maintenance / Draining the appliance".

OPERATION

1. General information

The chapters "Special Information" and "Operation" are intended for both the user and qualified contractors.

The chapter "Installation" is intended for qualified contractors.



Note
Read these instructions carefully before using the appliance and retain them for future reference. Pass on the instructions to any new user where appropriate.

1.1 Safety instructions

1.1.1 Structure of safety instructions



KEYWORD Type of risk
Here, possible consequences are listed that may result from failure to observe the safety instructions.
► Steps to prevent the risk are listed.

1.1.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

1.1.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

1.2 Other symbols in this documentation



Note
General information is identified by the adjacent symbol.
► Read these texts carefully.

Symbol	Meaning
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

► This symbol indicates that you have to do something. The action you need to take is described step by step.

1.3 Units of measurement



Note
All measurements are given in mm unless stated otherwise.

2. Safety

2.1 Intended use

This appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in a non-domestic environment, e.g. in a small business, as long as it is used in the same way.

This pressure appliance is designed to heat DHW. The appliance can supply one or more draw-off points.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of instructions for any accessories used is also part of the correct use of this appliance.

2.2 General safety instructions



CAUTION Burns
During operation, the tap can reach temperatures in excess of 60 °C.
There is a risk of scalding at outlet temperatures in excess of 43 °C.



WARNING Injury
The appliance may be used by children aged 3 and up and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the resulting risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.



Material losses
The user should protect the appliance and its tap against frost.

Appliance description

2.3 Test symbols

See type plate on the appliance.

3. Appliance description

You can adjust the DHW outlet temperature via the temperature selector. From a flow rate of approx. 3 l/min and above, the control unit regulates the correct output, subject to the temperature setting and cold water temperature.

Heating system

The bare wire heating system has a pressure-tested plastic casing. The heating system is suitable for hard and soft water areas and is largely unsusceptible to scale build-up. This heating system ensures rapid and efficient DHW availability.

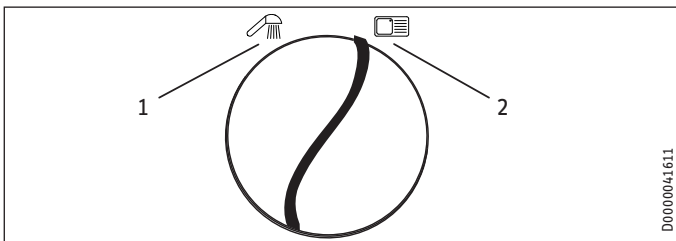


Note

The appliance is equipped with an air detector that largely prevents damage to the heating system. If, during operation, air is drawn into the appliance, the appliance shuts down for one minute, thereby protecting the heating system.

4. Settings

The DHW outlet temperature can be adjusted in 2 stages.



- 1 Shower (42 °C)
- 2 Kitchen sink (55 °C)

► Click the output selector into the required position.



Note

If the outlet temperature is not sufficiently high when the draw-off valve is fully open (kitchen sink) and the temperature selector is set to maximum, then more water is flowing through the appliance than can be heated by the heating system (appliance is at its output limit).

► Reduce the water volume at the draw-off valve.

Recommended setting for operation with a thermostatic valve

Set the temperature at the appliance to the maximum temperature (kitchen sink).

Following an interruption to the water supply



Material losses

Following an interruption of the water supply the appliance must be recommissioned by carrying out the following steps, in order to prevent the destruction of the bare wire heating system.

- Disconnect the appliance from the power supply by removing the fuses/tripping the MCBs.
- Open the tap for one minute until the appliance and its upstream cold water inlet line are free of air.
- Switch the mains power back ON again.

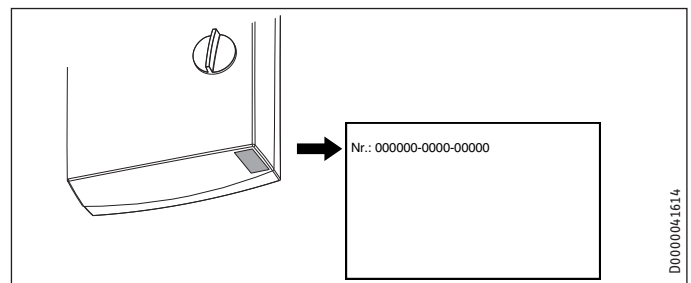
5. Cleaning, care and maintenance

- Never use abrasive or corrosive cleaning agents. A damp cloth is sufficient for cleaning the appliance.
- Check the taps regularly. Limescale deposits at the tap outlets can be removed using commercially available descaling agents.

6. Troubleshooting

Problem	Cause	Remedy
The appliance will not start despite the DHW valve being fully open.	There is no power.	Check the fuses/MCBs in your fuse box/distribution panel.
	The flow rate is too low for switching on the heating output. The aerator in the tap or the shower head is scaled up or contaminated.	Clean and/or descale the aerator or shower head.
Required temperature > 45 °C is not achieved.	The water supply has been interrupted.	Vent the appliance and the cold water inlet line (see chapter "Settings").
	The cold water inlet temperature is > 45 °C.	Reduce the cold water inlet temperature.

If you cannot remedy the fault, notify your qualified contractor. To facilitate and speed up assistance, please provide the numbers from the type plate (000000-0000-00000):



INSTALLATION

7. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

7.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.



Material losses

Observe the maximum inlet temperature. Higher temperatures may damage the appliance. You can limit the maximum inlet temperature by installing a central thermostatic valve.

7.2 Instructions, standards and regulations



Note

Observe all applicable national and regional regulations and instructions.

- The IP 25 (hoseproof) rating can only be ensured with a correctly fitted cable grommet.
- The specific electrical resistance of the water must not fall below that stated on the type plate. In a linked water network, observe the lowest electrical water resistance (see chapter "Specification / Application areas / Conversion table"). Your water supply utility will advise you of the specific electrical water resistance or conductivity.

8. Appliance description

8.1 Standard delivery

The following are delivered with the appliance:

- Wall mounting bracket
- Threaded stud for wall mounting
- Installation template
- 2 twin connectors (cold water with shut-off valve)
- Flat gaskets
- Cable grommet (power cable from above / below)
- Screws / rawl plugs for fixing the back panel in the case of water connection on finished walls

For appliance replacement:

- 2 tap extensions

9. Preparations

9.1 Installation site



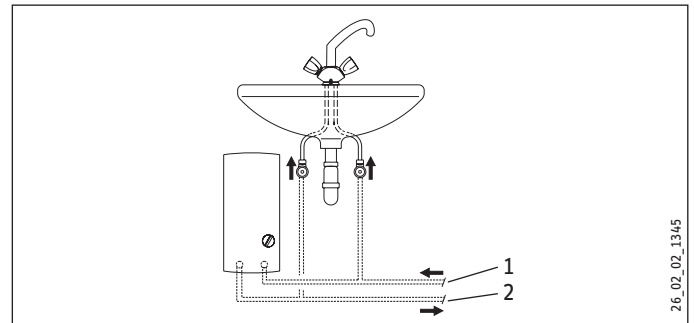
Material losses

Install the appliance in a room free from the risk of frost.

- Always install the appliance vertically and near the draw-off point.

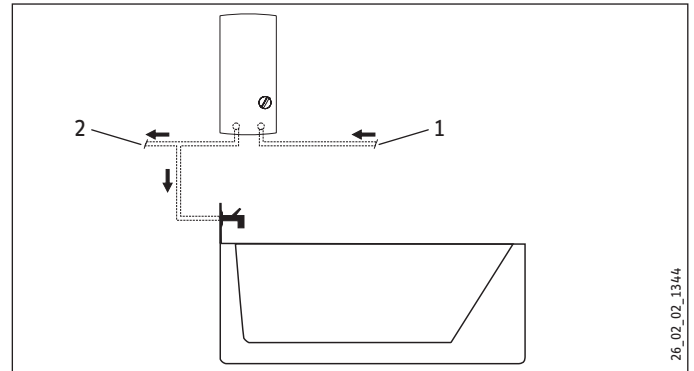
The appliance is suitable for undersink and oversink installation.

Undersink installation



- 1 Cold water Inlet
- 2 DHW outlet

Oversink installation



- 1 Cold water Inlet
- 2 DHW outlet



Note

► Mount the appliance on the wall. The wall must have a sufficient load-bearing capacity.

INSTALLATION

Installation

9.2 Water installation

- Never operate with preheated water.
- No safety valve is required.
- Safety valves are not permissible in the DHW pipe.
- ▶ Flush the water line thoroughly.
- ▶ Ensure that the flow rate for switching on the appliance is achieved (see chapter "Specification / Data table", On). If the flow rate is not achieved, remove the flow limiter (see chapter "Installation / Removing the flow limiter").
- ▶ Increase the mains water pressure if the required flow rate is not achieved with the draw-off valve fully opened.

Taps/valves

Use appropriate pressure taps. Open vented taps are not permitted.



Note

Never use the shut-off valve in the cold water inlet to reduce the flow rate. It is intended for shutting off the appliance.

Permissible water line materials

- Cold water inlet pipe:
Pipes made from galvanised steel, stainless steel, copper or plastic
- DHW outlet line:
Stainless steel pipe, copper pipe or plastic pipe



Material losses

If plastic pipework systems are used, take into account the maximum inlet temperature and the maximum pressure (see chapter "Specification / Data table").

Flexible water connection lines

- ▶ If the appliance is installed with flexible water connection lines, ensure that the bayonet fittings of the pipe bends do not become twisted inside the appliance.
- ▶ Secure the back panel at the bottom with two additional screws.

10. Installation

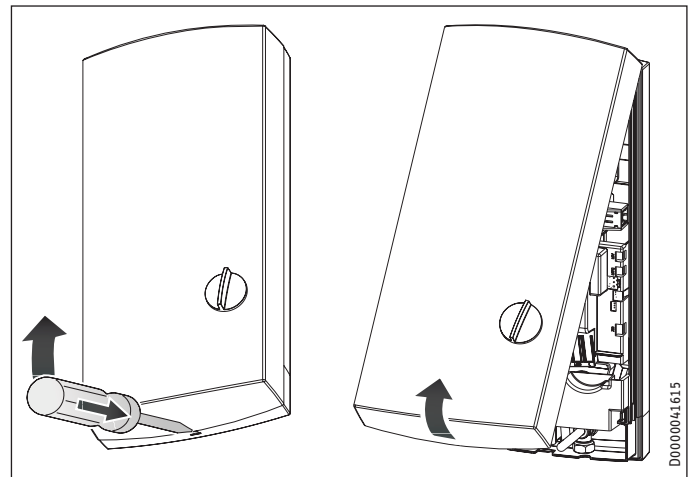
10.1 Standard installation

- Electrical connection from above; installation on unfinished walls
- Water connection on unfinished walls

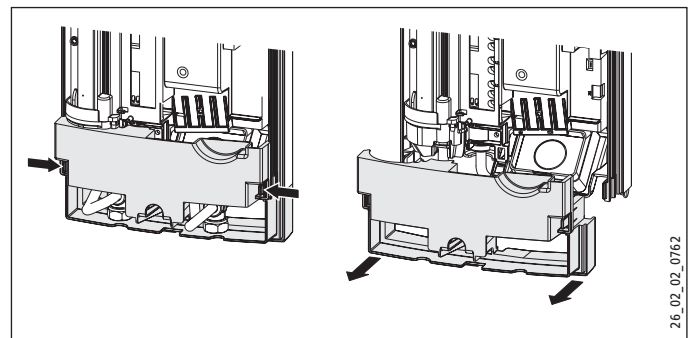
For further installation options, see chapter "Alternative installation options":

- Electrical connection from below on unfinished walls
- Electrical connection on finished walls
- Connecting a load shedding relay
- Water installation on finished walls
- Water connection on unfinished walls for appliance replacement

Opening the appliance

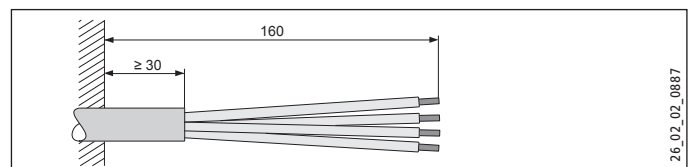


- ▶ Open the appliance by releasing the snap lock.



- ▶ Remove the back panel by pressing the two locking hooks and pulling the base part of the back panel forwards.

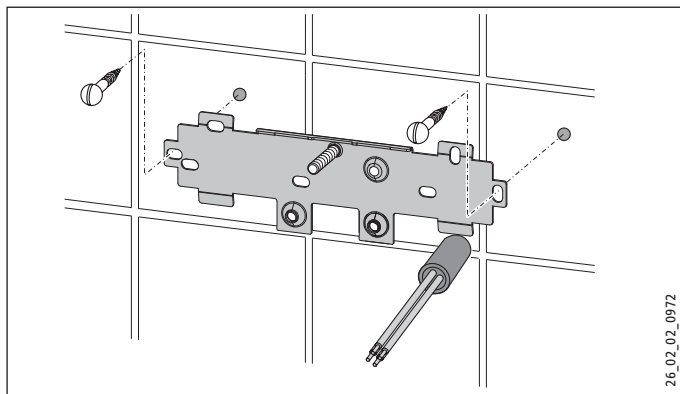
Preparing the power cable



INSTALLATION

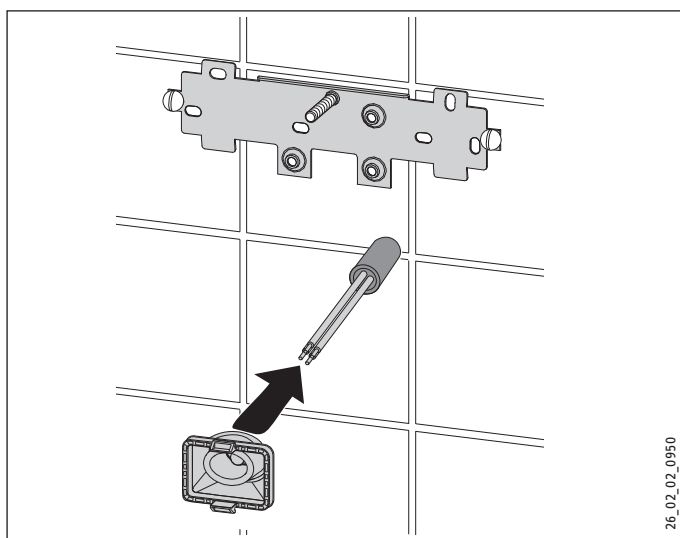
Installation

Fitting the wall mounting bracket



- ▶ Mark out the holes for drilling using the installation template. If the appliance is to be installed with water connections on finished walls, also mark out the fixing holes in the lower part of the template.
- ▶ Drill the holes and secure the wall mounting bracket with 2 screws and 2 rawl plugs (screws and rawl plugs are not part of the standard delivery).
- ▶ Fit the threaded stud provided.
- ▶ Fit the wall mounting bracket.

Fitting the cable grommet



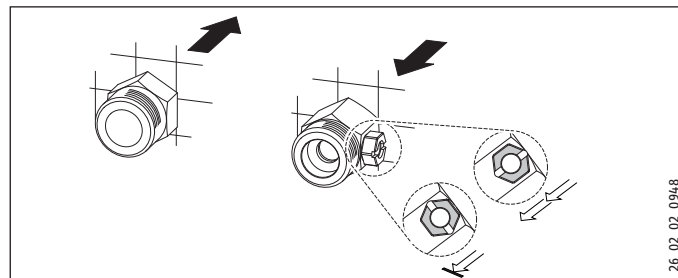
- ▶ Fit the cable grommet. For connecting cables $> 6 \text{ mm}^2$, enlarge the hole in the cable grommet.

Making the water connection



Material losses

Carry out all water connection and installation work in accordance with regulations.



- ▶ Seal and insert the twin connectors.



Material losses

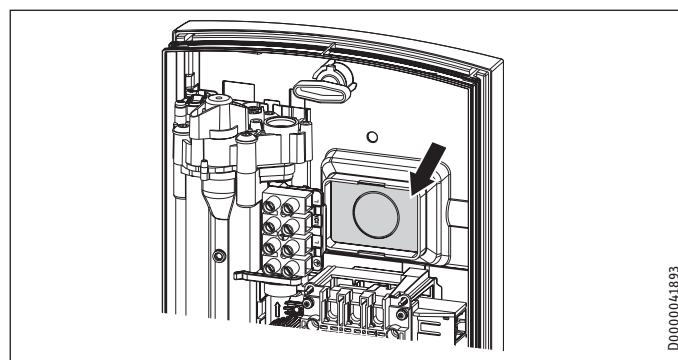
Never use the shut-off valve in the cold water inlet to reduce the flow rate.

Preparing the back panel



Material losses

If you break open the wrong knock-out in the back panel by mistake, you must use a new back panel.

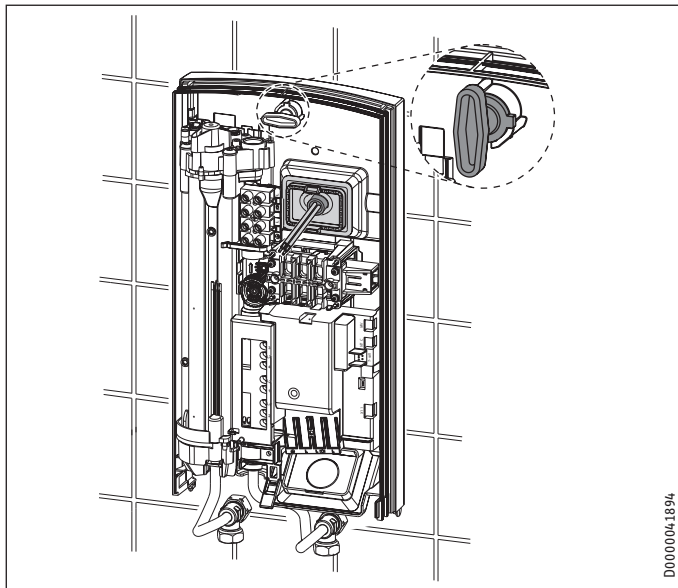


- ▶ Break out the cable grommet knock-out in the back panel. Deburr any sharp edges with a file if necessary.

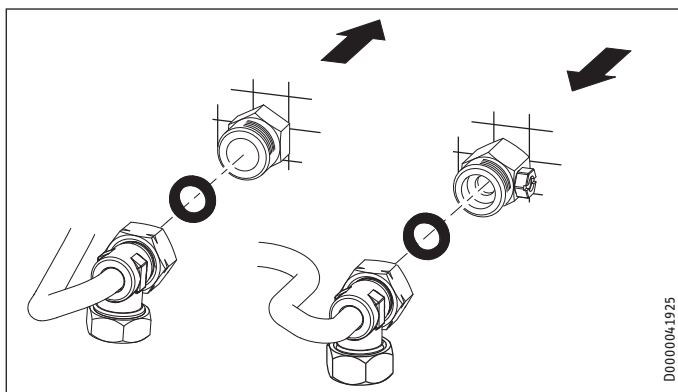
INSTALLATION

Installation

Installing the appliance



- ▶ Push the back panel over the threaded stud and the cable grommet. Pull the cable grommet by the locking hooks into the back panel using pliers, until both locking hooks audibly click into place.
- ▶ Remove the protective transport plugs from the water connections.
- ▶ Press the back panel firmly into place and lock the fixing toggle by turning it clockwise through 90°.



- ▶ Screw the water connection pipes with flat gaskets onto the twin connectors.



Material losses

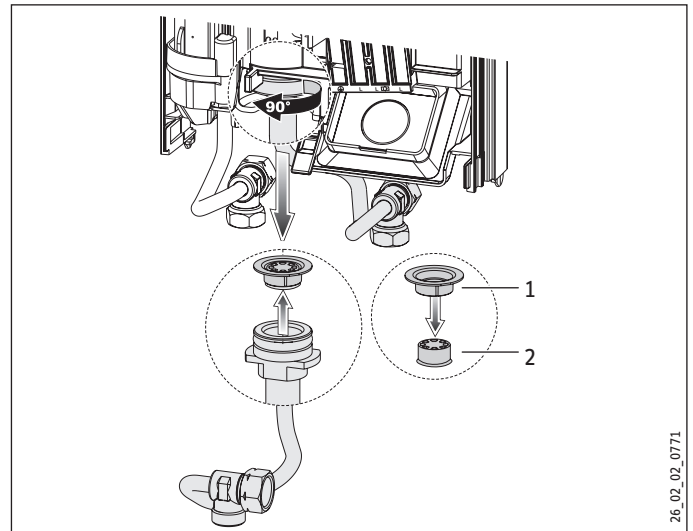
- The strainer must be fitted for the appliance to function.
- ▶ When replacing an appliance, check whether the strainer is installed (see chapter "Maintenance").

Removing the flow limiter



Material losses

- If you use a thermostatic valve, the flow limiter must not be removed.



- 1 Plastic profile washer
 - 2 Flow limiter
- ▶ Remove the flow limiter and refit the plastic profile washer.

Making the electrical connection



WARNING Electrocutation

Carry out all electrical connection and installation work in accordance with relevant regulations.



WARNING Electrocutation

The connection to the power supply must be in the form of a permanent connection in conjunction with the removable cable grommet. Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.



WARNING Electrocutation

Ensure that the appliance is earthed.

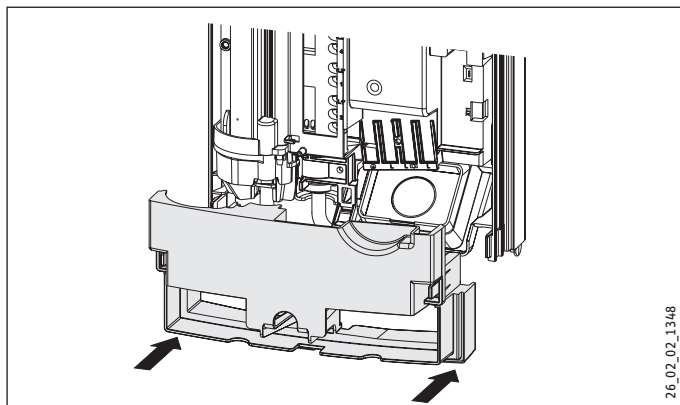


Material losses

Observe the type plate. The specified voltage must match the mains voltage.

- ▶ Connect the power cable to the mains terminal (see chapter "Specification / Wiring diagram").

Fitting the base part of the back panel

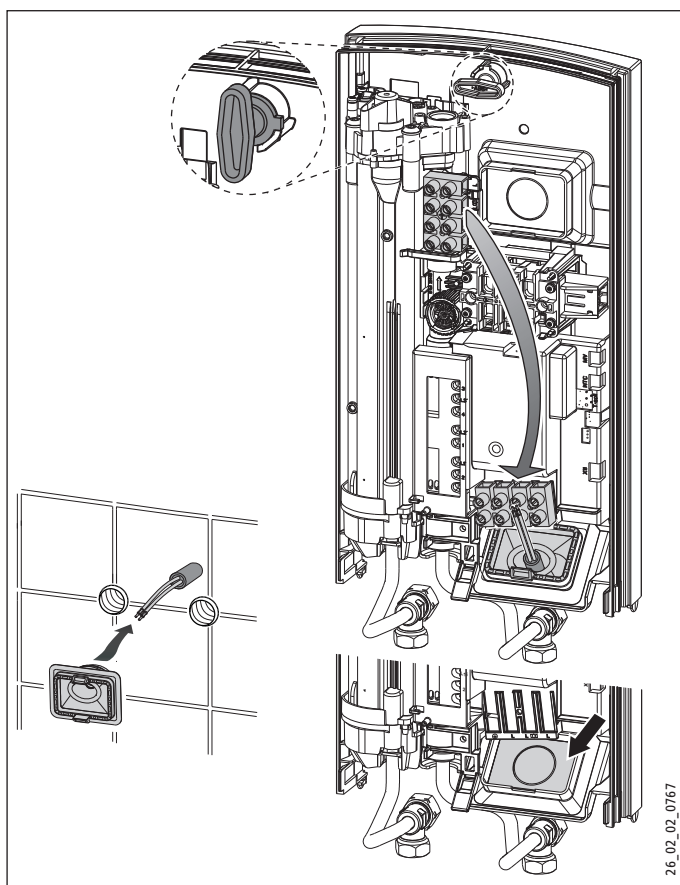


26_02_02_1348

- ▶ Position the lower back panel on the main back panel and click it into place.
- ▶ Align the mounted appliance by loosening the fixing toggle, aligning the power supply and back panel, and then re-tightening the fixing toggle. If the back panel is not flush with the wall, the appliance can be secured at the bottom with two additional screws.

10.2 Alternative installation options

10.2.1 Electrical connection from below on unfinished walls



26_02_02_0167

- ▶ Fit the cable grommet.



Material losses

If you break open the wrong knock-out in the back panel by mistake, you must use a new back panel.

- ▶ Break out the cable grommet knock-out in the back panel. Deburr any sharp edges with a file if necessary.
- ▶ Reposition the mains terminal in the appliance from the top to the bottom.
- ▶ Push the back panel over the threaded stud and the cable grommet. Pull the cable grommet by the locking hooks into the back panel using pliers, until both locking hooks audibly click into place.
- ▶ Press the back panel firmly into place and lock the fixing toggle by turning it clockwise through 90°.

10.2.2 Electrical connection on finished walls



Note

This type of connection changes the protection rating of the appliance.

- ▶ Change the type plate. Cross out "IP 25" and mark the box "IP 24". Use a ballpoint pen to do this.



Material losses

If you break open the wrong knock-out in the back panel by mistake, you must use a new back panel.

- ▶ Cleanly cut or break out the required cable entries in the back panel (for positions, see chapter "Specification / Dimensions and connections"). Deburr any sharp edges with a file if necessary.
- ▶ Route the power cable through the cable grommet and connect it to the mains terminal.

10.2.3 Connecting a load shedding relay

When operating additional electric appliances, such as electric storage heaters, install a load shedding relay in the distribution board. The relay responds when the instantaneous water heater starts.



Material losses

Connect the phase that switches the load shedding relay to the indicated terminal of the mains terminal in the appliance (see chapter "Specification / Wiring diagram").

10.2.4 Water installation on finished walls



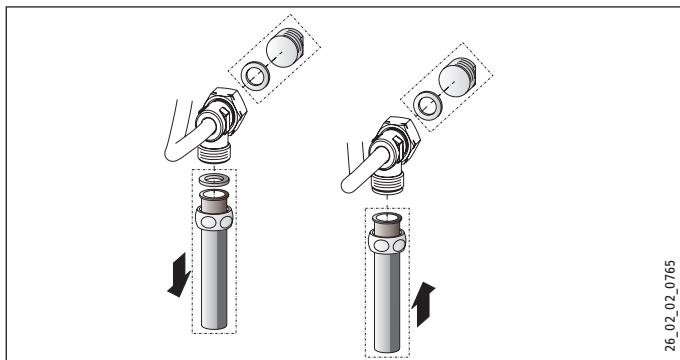
Note

This type of connection changes the protection rating of the appliance.

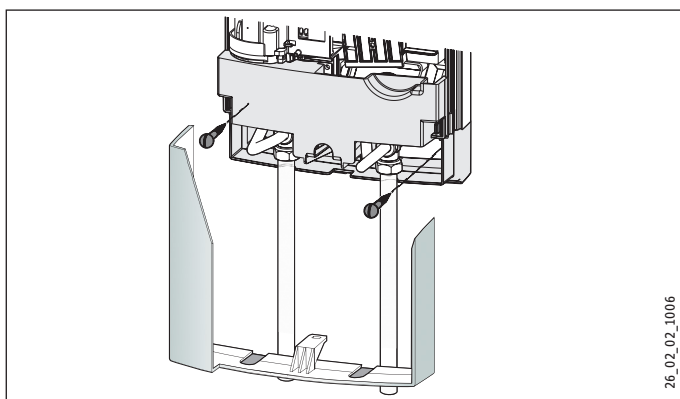
- ▶ Change the type plate. Cross out "IP 25" and mark the box "IP 24". Use a ballpoint pen to do this.

INSTALLATION

Commissioning



- ▶ Fit water plugs with gaskets to seal the in-wall connection.
- ▶ Fit a suitable pressure tap.



- ▶ Click the lower section of the back panel into place in the upper section of the back panel.
- ▶ Secure the connection pipes to the appliance.
- ▶ Secure the back panel at the bottom with two additional screws.



Material losses

If you break open the wrong knock-out in the back panel by mistake, you must use a new back panel.

- ▶ Cleanly break out the knock-outs in the appliance cover. De-burr any sharp edges with a file if necessary.
- ▶ Slide the lower back panel under the connection pipes of the tap and click the lower back panel into place.
- ▶ Secure the connection pipes to the appliance.

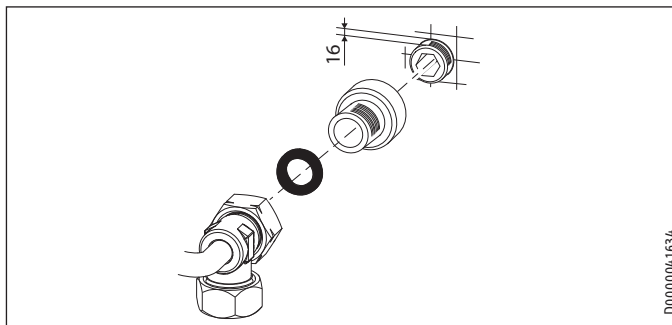
10.2.5 Water installation on unfinished walls for appliance replacement

If the existing twin connectors of the old appliance only protrude from the wall by approx. 16 mm, you cannot use the twin connectors provided.



Note

With this connection, the cold water supply can only be shut off within the domestic installation.



- ▶ Seal and fit the screw-in tap extensions provided.
- ▶ Connect the appliance.

10.3 Completing the installation

- ▶ Open the shut-off valve in the twin connector or the cold water inlet line.

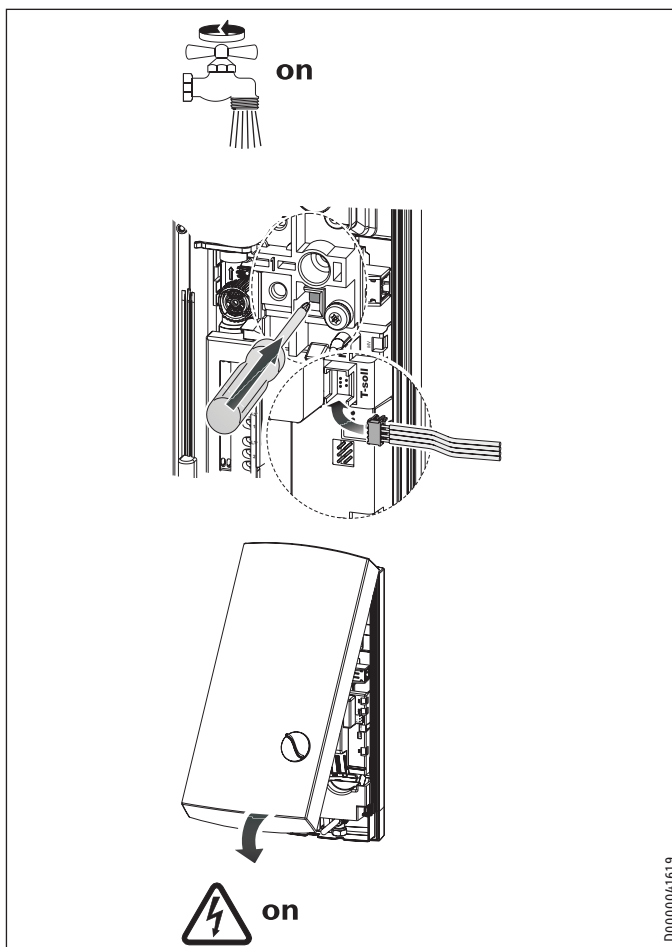
11. Commissioning



WARNING Electrocutation

Commissioning must only be carried out by a qualified contractor in accordance with safety regulations.

11.1 Initial start-up



- ▶ Open and close all connected draw-off valves several times, until all air has been purged from the pipework and the appliance.
- ▶ Carry out a tightness check.
- ▶ Activate the safety pressure limiter by firmly pressing the reset button (the appliance is delivered with the safety pressure limiter deactivated).
- ▶ Plug the temperature selector cable plug into the PCB.
- ▶ Fit the appliance cover, ensuring it clicks into place. Check that the appliance cover is seated correctly.
- ▶ Switch the mains power ON.
- ▶ Check the function of the appliance.

Appliance handover

- ▶ Explain the appliance function to users and familiarise them with its operation.
- ▶ Make the user aware of potential dangers, especially the risk of scalding.
- ▶ Hand over these instructions.

11.2 Recommissioning

Vent the appliance and the cold water inlet line (see chapter "Settings").

See chapter "Commissioning".

12. Shutdown

- ▶ Isolate all poles of the appliance from the power supply.
- ▶ Drain the appliance (see chapter "Maintenance").

INSTALLATION

Troubleshooting

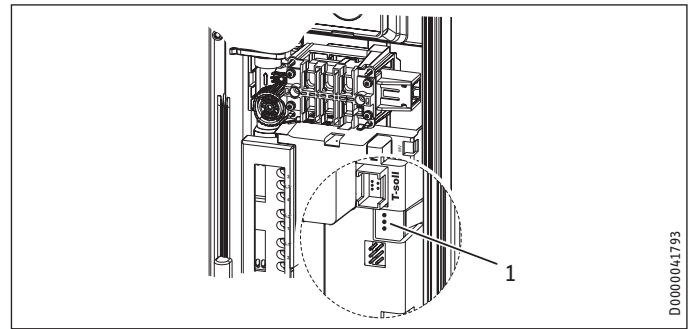
13. Troubleshooting



WARNING Electrocutation
To test the appliance, it must be supplied with power.

Indication variants for diagnostic traffic light (LED)

	Red	Illuminates in the event of a fault
	Yellow	Illuminates during heating operation
	Green	Flashing: Appliance is connected to power supply



1 Diagnostic traffic light

Fault / diagnostic traffic light LED display	Cause	Remedy
The flow rate is too low.	The strainer in the appliance is dirty.	Clean the strainer.
The set temperature is not achieved.	One phase down.	Check the fuse/MCB in your fuse box/distribution panel.
The heating system does not switch on.	Air has been detected in the water and heating output is briefly switched off.	The appliance restarts after one minute.
No hot water and no traffic light display.	The MCB/fuse has responded/blown.	Check the fuse/MCB in your fuse box/distribution panel.
	Safety pressure limiter AP 3 has tripped.	Remove the cause of the fault (e.g. faulty pressure flush). Protect the heating system against overheating by opening a draw-off valve downstream of the appliance for one minute. This depressurises and cools down the heating system. Activate the safety pressure limiter at flow pressure by pressing the reset button (see chapter "Commissioning").
	The PCB is faulty.	Check the PCB and replace if required.
Traffic light display: Green flashing or constantly on	The PCB is faulty.	Check the PCB and replace if required.
No hot water at a flow rate > 3 l/min.	The flow meter (DFE) is not plugged in.	Plug the flow meter plug back in.
	The flow meter (DFE) is faulty.	Check the flow meter and replace if required.
Traffic light display: yellow constantly on; green flashing	The high limit safety cut-out has responded or suffered a lead break.	Check the high limit safety cut-out and replace it if required.
No hot water at a flow rate > 3 l/min.	The heating system is faulty.	Check the heating system resistor and replace if required.
	The PCB is faulty.	Check the PCB and replace if required.
Traffic light display: red constantly on; green flashing	The cold water sensor is faulty.	Check the PCB and replace if required.
No hot water	The cold water inlet temperature is above 45 °C.	Reduce the cold water inlet temperature to the appliance.
Required temperature > 45 °C is not achieved.		

14. Maintenance



WARNING Electrocutation
Before any work on the appliance, ensure omnipolar disconnection from the power supply.

Draining the appliance

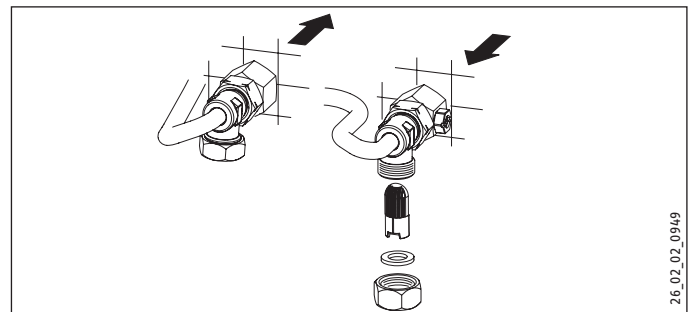
The appliance can be drained for maintenance work.



WARNING Burns
Hot water may escape when draining the appliance.

- ▶ Close the shut-off valve in the twin connector or the cold water inlet line.
- ▶ Open all draw-off valves.
- ▶ Undo the water connections on the appliance.
- ▶ Store the dismantled appliance in a room free from the risk of frost, as water residues remaining inside the appliance can freeze and cause damage.

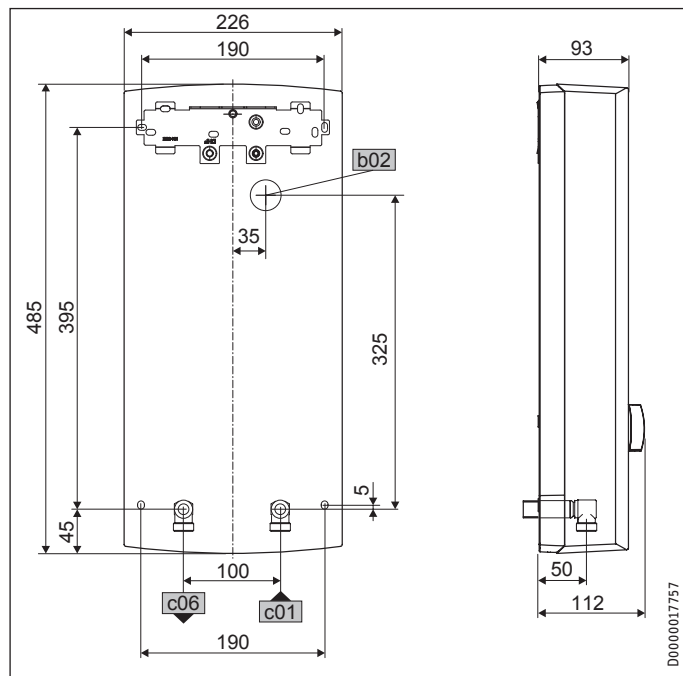
Cleaning the strainer



If dirty, clean the strainer in the threaded cold water fitting. Close the shut-off valve in the cold water inlet line before removing, cleaning and refitting the strainer.

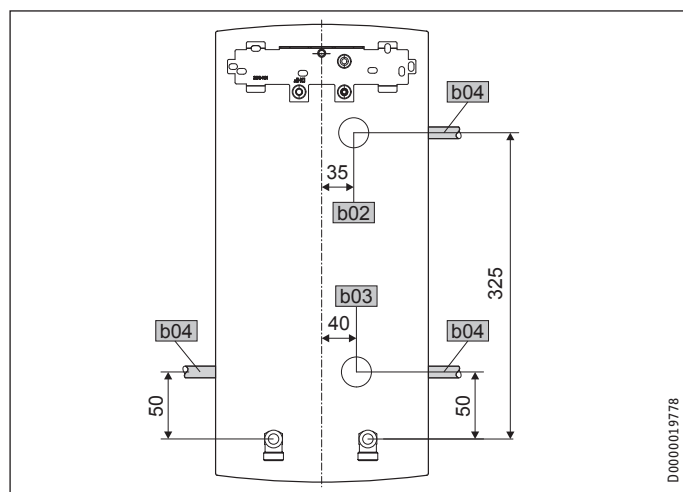
15. Specification

15.1 Dimensions and connections



b02	Entry electrical cables I		
c01	Cold water Inlet	Male thread	G 1/2 A
c06	DHW outlet	Male thread	G 1/2 A

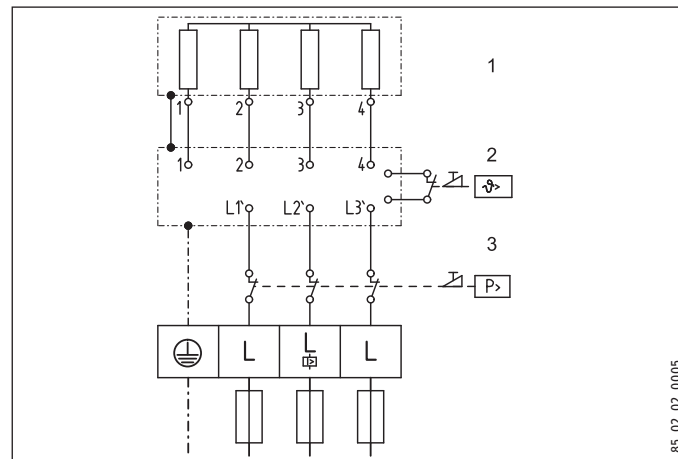
Alternative connection options



b02	Entry electrical cables I
b03	Entry electrical cables II
b04	Entry electrical cables III

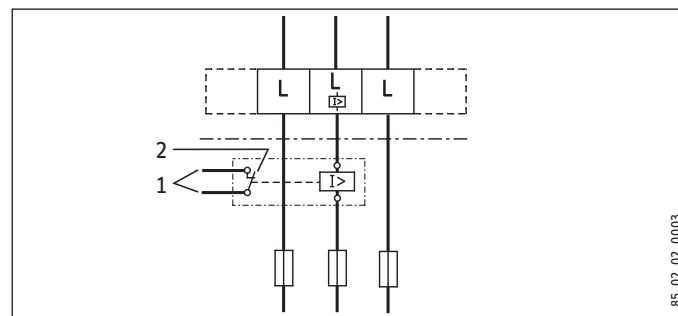
15.2 Wiring diagram

3/PE ~ 380-415 V



- 1 Heater
- 2 High limit safety cut-out
- 3 Safety pressure limiter

Priority control with LR 1-A



- 1 Control cable to the contactor of the 2nd appliance (e.g. electric storage heater).
- 2 Control contact opens when switching the instantaneous water heater on.

15.3 DHW output

The DHW output is subject to the mains voltage, the appliance's connected load and the cold water inlet temperature. The rated voltage and rated output can be found on the type plate (see chapter "Troubleshooting").

Connected load in kW	38 °C DHW output in L/min.						
	Rated voltage		Cold water inlet temperature				
	380 V	400 V	415 V	5 °C	10 °C	15 °C	20 °C
12,2				5,3	6,2	7,6	9,7
		13,5		5,8	6,9	8,4	10,7
			14,5	6,3	7,4	9,0	11,5
16,2				7,0	8,3	10,1	12,9
		18		7,8	9,2	11,2	14,3
			19,4	8,4	9,9	12,0	15,4
19				8,2	9,7	11,8	15,1
		21		9,1	10,7	13,0	16,7
			22,6	9,8	11,5	14,0	17,9
21,7				9,4	11,1	13,5	17,2
		24		10,4	12,2	14,9	19,0
			25,8	11,2	13,2	16,0	20,5

INSTALLATION Specification

Connected load in kW			50 °C DHW output in L/min.			
Rated voltage			Cold water inlet temperature			
380 V	400 V	415 V	5 °C	10 °C	15 °C	20 °C
12,2			3,9	4,4	5,0	5,8
	13,5		4,3	4,8	5,5	6,4
		14,5	4,6	5,2	5,9	6,9
16,2			5,1	5,8	6,6	7,7
	18		5,7	6,4	7,3	8,6
		19,4	6,2	6,9	7,9	9,2
19			6,0	6,8	7,8	9,0
	21		6,7	7,5	8,6	10,0
		22,6	7,2	8,1	9,2	10,8
21,7			6,9	7,8	8,9	10,3
	24		7,6	8,6	9,8	11,4
		25,8	8,2	9,2	10,5	12,3

15.4 Application areas / conversion table

Specific electrical resistance and specific electrical conductivity (see chapter "Data table").

Standard specification at 15 °C	20 °C	25 °C

15.7 Details on energy consumption

The product data complies with EU regulations relating to the Directive on the ecological design of energy related products (ErP).

		PEG 13	PEG 18	PEG 21	PEG 24
		233994	233995	233996	233997
Manufacturer		STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON	STIEBEL ELTRON
Load profile		S	S	S	S
Energy efficiency class		A	A	A	A
Annual power consumption	kWh	465	480	477	475
Energy conversion efficiency	%	40	39	39	39
Default temperature setting	°C	55	55	55	55
Sound power level	dB(A)	15	15	15	15
Special information on measuring efficiency		None	None	None	None

15.8 Data table

		PEG 13			PEG 18			PEG 21			PEG 24		
		233994			233995			233996			233997		
Electrical details													
Rated voltage	V	380	400	415	380	400	415	380	400	415	380	400	415
Rated output	kW	12.2	13.5	14.5	16.2	18	19.4	19	21	22.6	21.7	24	25.8
Rated current	A	18.5	19.5	20.2	24.7	26	27	29.5	31	32.2	33.3	35	36.3
Fuse	A	20	20	20	25	25	32	32	32	32	35	35	40
Phases		3/PE			3/PE			3/PE			3/PE		
Frequency	Hz	50/60	50/60	50/-	50/60	50/60	50/-	50/60	50/60	50/-	50/60	50/60	50/-
Max. mains impedance at 50Hz	Ω				0.379	0.360	0.347	0.325	0.308	0.297	0.284	0.270	0.260
Specific resistance $\rho_{15} \geq$ (at $\vartheta_{cold} \leq 25$ °C)	Ω cm	1100	1100	1200	1100	1100	1200	1100	1100	1200	1100	1100	1200
Specific conductivity $\sigma_{15} \leq$ (at $\vartheta_{cold} \leq 25$ °C)	μS/cm	900	900	833	900	900	833	900	900	833	900	900	833
Connections													
Water connection		G 1/2 A			G 1/2 A			G 1/2 A			G 1/2 A		
Application limits													
Max. permissible pressure	MPa	1			1			1			1		

Resistance $\rho \geq$	Conductivity $\sigma \leq$		Resistance $\rho \geq$	Conductivity $\sigma \leq$		Resistance $\rho \geq$	Conductivity $\sigma \leq$	
Ωcm	mS/m	μS/cm	Ωcm	mS/m	μS/cm	Ωcm	mS/m	μS/cm
1100	91	909	970	103	1031	895	112	1117
1200	83	833	1070	93	935	985	102	1015

15.5 Pressure drop

Taps/valves

Tap pressure drop at a flow rate of 10 L/min		
Mono lever mixer tap, approx.	MPa	0.04 - 0.08
Thermostatic valve, approx.	MPa	0.03 - 0.05
Shower head, approx.	MPa	0.03 - 0.15

Sizing the pipework

When calculating the size of the pipework, an appliance pressure drop of 0.1 MPa is recommended.

15.6 Fault conditions

If a fault arises, loads of up to 95 °C / 1.2 MPa can temporarily occur in the installation.

		PEG 13	PEG 18	PEG 21	PEG 24
Values					
Max. permissible inlet temperature	°C	35	35	35	35
ON	l/min	>3.0	>3.0	>3.0	>3.0
Flow rate for pressure drop	l/min	3.9	5.2	6.0	6.9
Pressure drop at flow rate	MPa	0.11 (0.03 without DMB)	0.08 (0.06 without DMB)	0.1 (0.08 without DMB)	0.13 (0.1 without DMB)
Flow rate limit at	l/min	4.0	8.0	8.0	9.0
DHW delivery	l/min	6.7	9.4	11.6	12.6
$\Delta\theta$ at DHW delivery	K	26	26	26	26
Hydraulic data					
Rated capacity	l	0.4	0.4	0.4	0.4
Versions					
Temperature adjustment	°C	42/55	42/55	42/55	42/55
Protection class		1	1	1	1
Heating system heat generator		Bare wire	Bare wire	Bare wire	Bare wire
IP-Rating		IP25	IP25	IP25	IP25
Dimensions					
Height	mm	485	485	485	485
Width	mm	226	226	226	226
Depth	mm	93	93	93	93
Weights					
Weight	kg	3.6	3.6	3.6	3.6

Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

Environment and recycling

We would ask you to help protect the environment. After use, dispose of the various materials in accordance with national regulations.