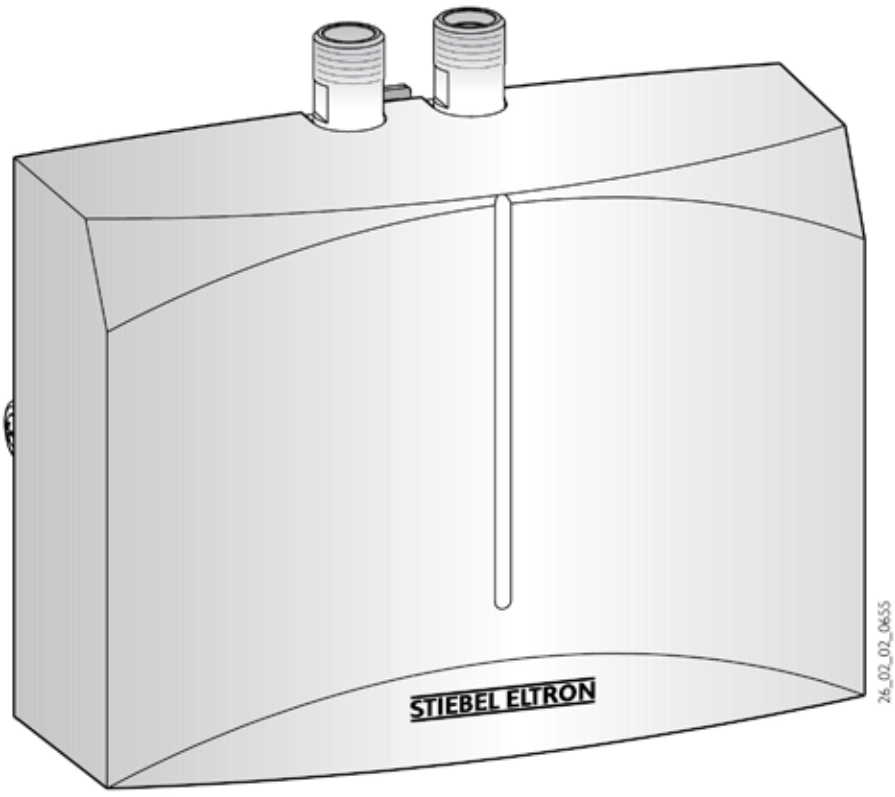
STIEBEL ELTRON
Technik zum Wohlfühlen

DHM 3. DHM 4

Hydraulically controlled, pressurized Mini-Instantaneous Water Heater with bare wire heating elements
Operating and installation instructions



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STIEBEL ELTRON

DIN 4109

P-IX 6744/I

MPA NRW

Für die Mini-Durchlauferhitzer DHM ist ein bauaufsichtliches Prüfzeugnis zum Nachweis der Verwendbarkeit hinsichtlich des Geräuschverhaltens erteilt.

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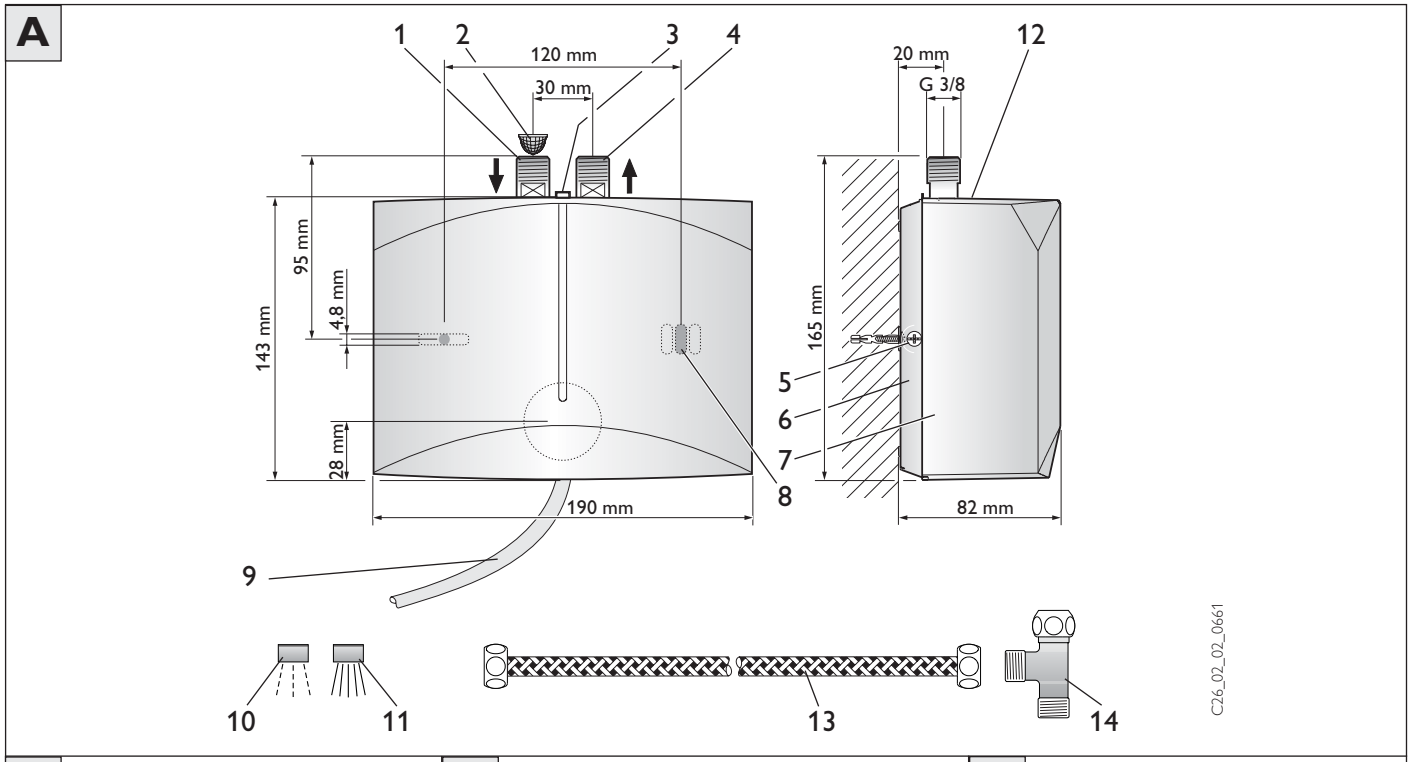
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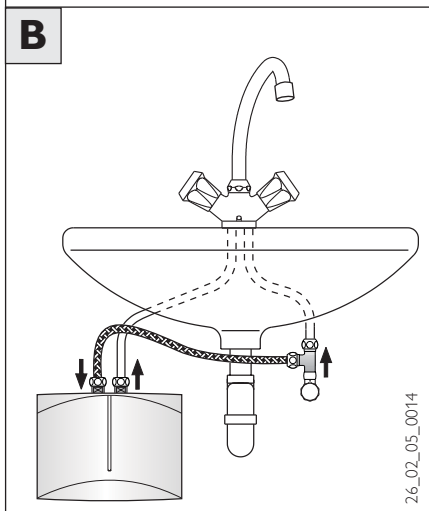
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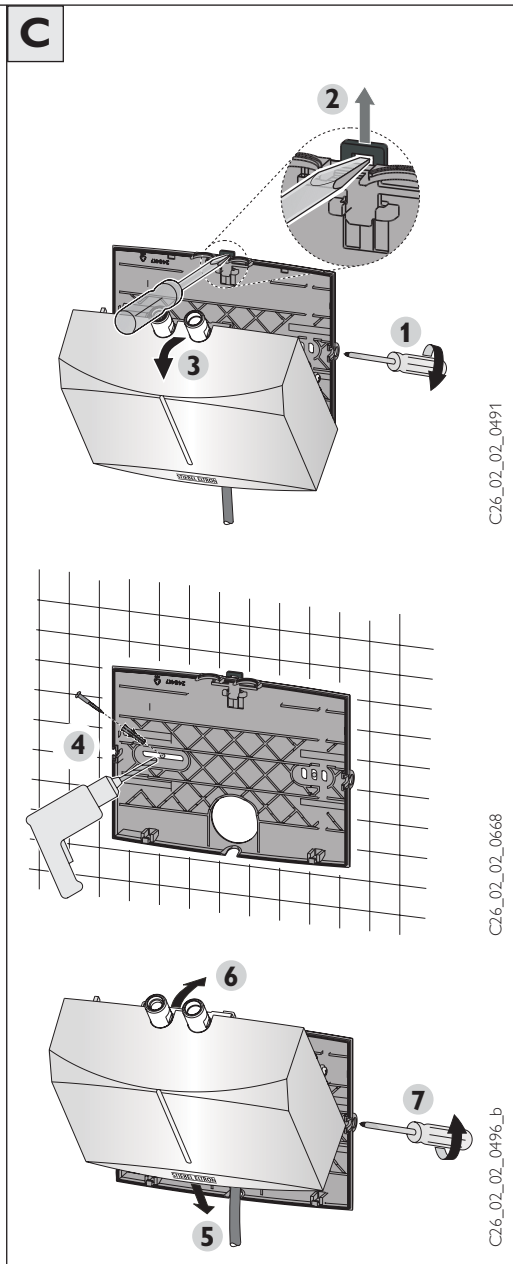
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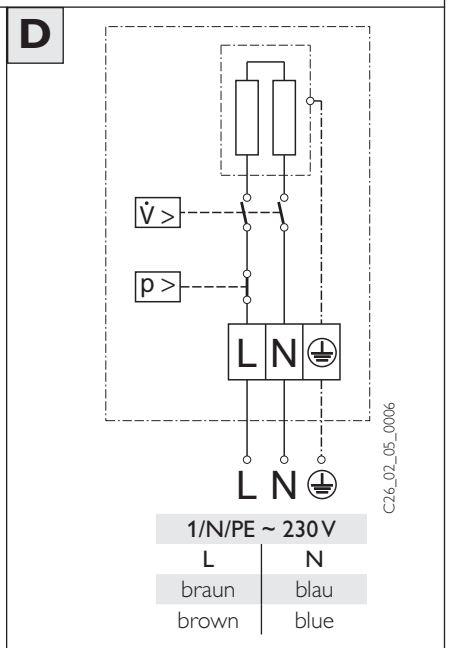
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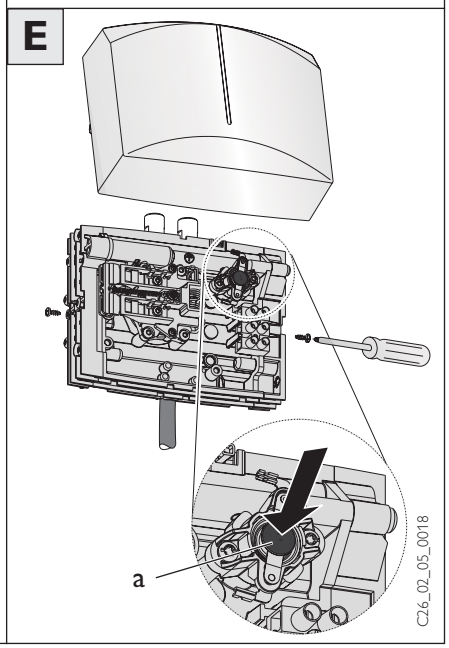
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1. Operating instructions for the user and the qualified installer

1.1 Unit description

The hydraulically controlled pressurized Mini-Instantaneous Water Heater is designed to heat water for one draw off point. When the draw-off fitting is opened, the heating capacity switches on automatically and the water is heated. The hot water output is dependent on the cold water temperature, the heating capacity, and the flow rate.

1.2 The most important points in brief

Temperature adjustment is effected using the fitting:

– To increase the temperature, restrict the flow rate a little.
– For low temperatures, increase the flow rate or mix in cold water.

1.3 Hot water output

Type	Output by 230 V	hot water output*
DHM 3	3,5 kW	**2,0 l/min**
DHM 4	4,4 kW	**2,5 l/min**
DHM 6	5,7 kW	**3,3 l/min**

* The built-in automatic flow regulation provides a constant flow rate. Temperature increase of about 25 K.

1.4 Safety instruction

⚠ In the case of temperature selection, water temperatures of over 60 °C can be reached at the hot water outlet. Small children should therefore be kept away from the hot water outlets.
Danger of scalding!

1.5 Important notes

⚠ If the water feed of the DHM has been interrupted - e.g. because of the danger of frost or work on the water pipe, the following steps must be taken before the unit is brought back into operation:

1. Remove or switch off fuses.
2. Open a tap downstream of the unit until the unit and the cold water feed pipe are free of air.
3. Replace or switch on fuses again.

1.6 Maintenance and care

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

A damp cloth is sufficient for care of the unit. Do not use any abrasive or corrosive cleaning agents.
Please de-scale or replace the enclosed jet regulator „SR" regularly DHM 3 / DHM 4:
SR 3 Order no: 14 35 02
DHM 6:
SR 5 Order no: 27 05 82

1.7 First actions to be taken in the event of malfunction

... First actions to be taken in the event of malfunction **„Please look up: „3. Fault finding by the user"** page 10.

In the event of maintenance and possibly repair work please inform the qualified installer of the data on the identification plate (**A** 12):

DHM .. Nr.: . . . . . - . . . . - . . . . . .

1.8 Operating and installation instructions

⚠ Keep these instructions carefully and pass them on to your successor in the event of a change in ownership, in the event of maintenance and possible repair work they should be passed to the qualified installer for his attention.

2. Installation instructions for the qualified installer

2.1 Unit structure A

1 cold water connection, SW14
2 Sieve within cold water connectrion
3 Snap closing catch
4 Hot water connection; SW14
5 Cover securing screw
6 Unit rear panel
7 Unit front panel
8 Fixing holes
9 Connection cable 700 mm long
10 Jet regulator SR 3 for DHM 3 and DHM 4
11 Jet regulator SR 5 for DHM 6
12 Identification plate
13 hose connection 3/8", 500 mm long, including washers
14 T-piece 3/8"

2.2 Important information

⚠ Air in the cold water pipe will destroy the bare-wire heating system of the DHM. If the water supply to the DHM has been interrupted, for example due to the risk of frost or work on the water pipe, the following steps must be carried out before the system is used again:

1. Disconnect supply or disconnect the fuses.
2. Open a hot water tap downstream of the device for as long as it is necessary for the device and the cold water pipe to be freed of air.
3. Reconnect the supply or connect the fuses again.

– All information in these Instructions for Use and Installation must be followed carefully. They provide important information with regard to safety, operation, installation, and maintenance of the device.

2.3 Brief description

The hydraulically controlled, pressurized Mini-Instantaneous Water Heater DHM is designed to supply warm water for one tap only.
The unit is suitable for hand wash basins, for example in guest WC's, and for under-sink and over-sink installation.
The bare-wire heating system is suitable for low-lime and limy water (see Table 2 for ranges of use).

2.4 Fittings

Use only pressure tap fittings!
Please use jet regulator **A** (**10** or **11**) depending on the type of DHM in question).

2.5 Regulations and provisions

- Installation (water and electrical installation), as well as the first start-up and maintenance of this unit, may only be carried out by a qualified installer in accordance with these instructions.
- Faultless operation and operational safety are only guaranteed if the original accessories and spare parts intended for the unit are used.

The following should also be observed:

- In accordance with IEE and WRC Regulations.
- Regulations of the local energy supply company.
- Regulations of the relevant water supply company.
- The unit rating plate.
- Technical data (see Table 1).

⚠ **The specific electrical resistance of the water must not be lower than specified on the rating plate. In the case it is used out of the water grid supply network, the lowest electrical resistance of the water is to be taken into account (see Table 2). Your water supply company will advise you of the specific electrical resistance or the electrical conductivity of the water.**

Water installation:

- A safety valve is not necessary.
- Operating the unit with preheated water only up to max. 25 °C is permitted!
- Fittings: see "**2.4**"

Electrical installation:

- It must be possible to isolate the unit from the main supply on all poles with an isolating distance of at least 3 mm, for example using fuses.

2.6 Installation location

Under-sink installation B

⚠ **The appliance should be installed according to choice as an under-sink unit' in a closed, frost free room in the vincinity of a water draw off point. Dismantled unit is to be stored in a frost-free place, as residual water always remains in the unit.**

2.7 Unit installation C

1. Loosen cover securing screws by two turns.
2. Using a screwdriver, release the snap closing catch.
3. Take off the unit front cover with heating block.
4. Fix the unit rear panel to the wall using dowels and screws; use the unit rear panel as a drilling template.
5. Hook on the unit front panel with heating block.
6. Engage the heating block in the snap closing catch.
7. Secure the unit front cover with 2 screws.

2.8 Tap installation

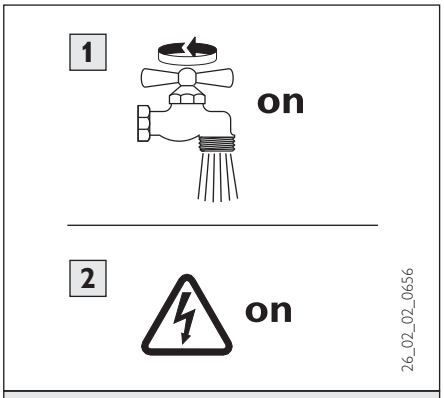
- screw T-piece on angle valve
- screw cold water connection on to T-piece
- screw connection hose (**13**) on to the T-piece
- screw the free end of connection hose (**13**) on to the cold water inlet of the DHM, while doing this, you must hold the connection piece of the unit in position with a 14 mm spanner to avoid any damage
- screw the warm-water-pipe of the tap-fitting on to the units warm water outlet fitting, while doing this, you must hold the connection piece of the unit in position with a 14 mm spanner.

2.9 Electrical connection D

⚠ **The unit must be connected to the protective earth terminal.**

This appliance is fitted with a power supply cable.
The units are fitted with an electric cable for a fixed electrical installation **D** .
The elctrical fixed connection may be performed with a diamater for the wire of 3 times 6 mm².

2.10 First start-up (may only be carried out by a qualified installer)



1 Fill and deaerate the unit.
Note: danger of running dry!
Open and close the tap repeatedly until the pipework and the unit are free of air. For guidance on air, see „**2.2 Important information**".

2 Switch on the mains power.

3 Test the operating mode of the instantaneous water heater and armature.

Handover of the unit

Explain the function of the unit to the user and familiarize him or her with its use.

- Draw the user's attention to possible hazards (scalding).
- Hand over these instructions for careful retention.

2.11 Special accessories

Jet regulator „**SR**" for use in the jet-regulator screw fitting M22/M24.

DHM 3 / DHM 4:
SR 3 order no: 14 35 02
with output regulator.

DHM 6:
SR 5 order no. 27 05 82

English

2.12 Technical data (the data on the unit identification plate are applicable)

Type		DHM 3	DHM 4
Design		closed (pressurized)	closed (pressurized)
Configuration	under-sink	•	•
Reated pressure	MPa	1	1
T-piece with pressure hose		•	•
Rated capacity	l	0.1	0.1
Weight	kg	1.4	1.4
Rated power by 230 V	kW	3.5	4.4
Maximum electrical impendance Z_{max}	mΩ	–	–
Rated voltage	1/N/PE ~ ...V	230	230
Rated current	A	15	19
Hot water output $\Delta\vartheta$ = 25 K	l/min	2.0	2.5
Jet regulator SR 3		•	•
Jet regulator SR 5		–	–
Flow rate „ON"	> l/min	1.6	2.0
Flow rate „OFF"	< l/min	1.1	1.4
Automatic flow regulation	l/min	2.2	2.8
Pressure drop (during switch-on flow)	MPa	0.05	0.06
Max. inlet temperature	°C	25	25
Protection class in accordance with DIN EN 60335		1	1
Protection mode in accordance with EN 60529		IP 25	IP 25
Test mark, see unit identification plate		•	•
Water connections G 3/8 (surface installation)		•	•
Heating system - bare-wire	1100 Ωcm [1)]	•	•
Area of use: low-lime and limy water		•	•

Table 1

1) **Specific electrical conductivity und specific electrical resistance**

Designation as		Areas of application for different water analysis reference temperatures		
		Standard at 15 °C	at 20 °C	at 25 °C
resistance	Ωcm	≥ 1100	≥ 970	≥ 900
conductivity	mS/m	≤ 90,9	≤ 103	≤ 111
conductivity	µS/cm	≤ 909	≤ 1030	≤ 1110

Table 2

3. Fault elimination by the user

Fault	Cause	Remedy
No hot water despite fully opened hot water fitting.	No electrical power.	Check the fuses in the house installation.
	The turn on flow rate needed to switch on the heating power has not been reached. Soiling or furring of the jet regulator.	Clean or if necessary renew the jet regulator (see **„2.11 Special accessories"**).

Table 3

4. Fault elimination by the qualified installer

Fault	Cause	Remedy
Flow too weak	Jet regulator furred or soiled.	Clean or if necessary renew the fitting jet regulator (see **„2.11 Special accessories"**).
	Filter soiled.	Clean the filter in the cold water inlet **A** (2) after shutting off the water supply.
Heating fails to switch on / no hot water.	No electrical power.	Check the fuse (house installation).
	Heating system defective.	Measure heating system resistance, if necessary exchange the unit.
	The pressure limiter has released	Determine and eliminate the cause for the fault. Disconnect from power and relieve the pressure. Reactivate pressure limiter **E** (a).

Table 4