

JADO

P r o d u c t s

Jean Nouvel

Product Numbers

Thermostatic Shower Column
with Hand Spray
821/475

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Thermostatic Shower Column Installation Instructions

To ensure that your installation proceeds smoothly--please read these instructions carefully before you begin.

L u x u r y F a u c e t s a n d A c c e s s o r i e s



Jean Nouvel
Thermostatic Shower Column
with Hand Spray

Features:

- 1/2" sweat valves integrated
- Easily removable front cover for access to technical elements
- Common box for the electronic board and the batteries
- Four 1.5V C sized batteries (included)
- Batteries will last two years with average usage of a four person household
- Start up temperature 98.6°F (37°C) - Max. temperature 118° F (48°C)
- Thermostatic mixing valve built into product
- Showerhead maximum flow rate 2.5 GPM 9.5 L/min
- Hand Shower maximum flow rate 2.2 GPM 8.3 L/min
- Automatic diversion to the hand shower when it is removed from the holder
- Hand Shower holder in the base of the column
- Recommended for residential application only

Technical data

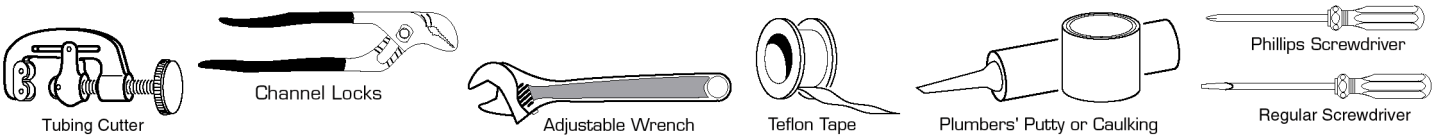
Hydraulic data

Maximum Flow Rate (Showerhead)	2.5 GPM (6 L/min)
(Hand Spray)	2.2 GPM (8.3 L/min)
Recommended flow pressure	20 to 80 psi (1.4 to 5.5 bar)
Maximum temperature which can be set	118°F (48° C)
Maximum temperature which can be programmed	109°F (43° C)

Electrical data

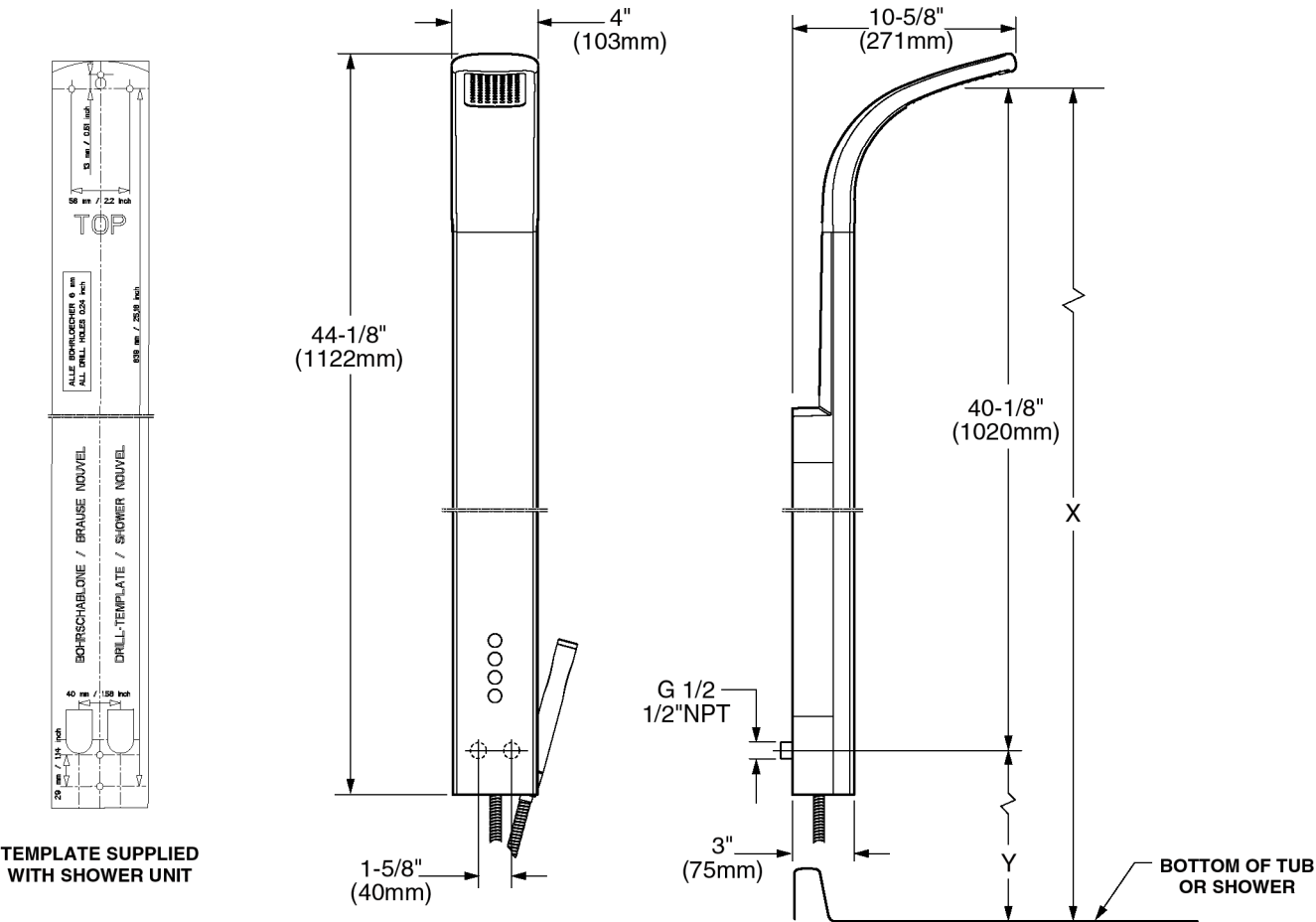
Use standard batteries (4 x 1.5, C)
We recommend high-quality mercury- and cadmium-free alkaline batteries! Size C.
IEC designation: LR 14

RECOMMENDED TOOLS



ROUGHING-IN DIMENSIONS

Thermostatic Shower Column with Hand Spray



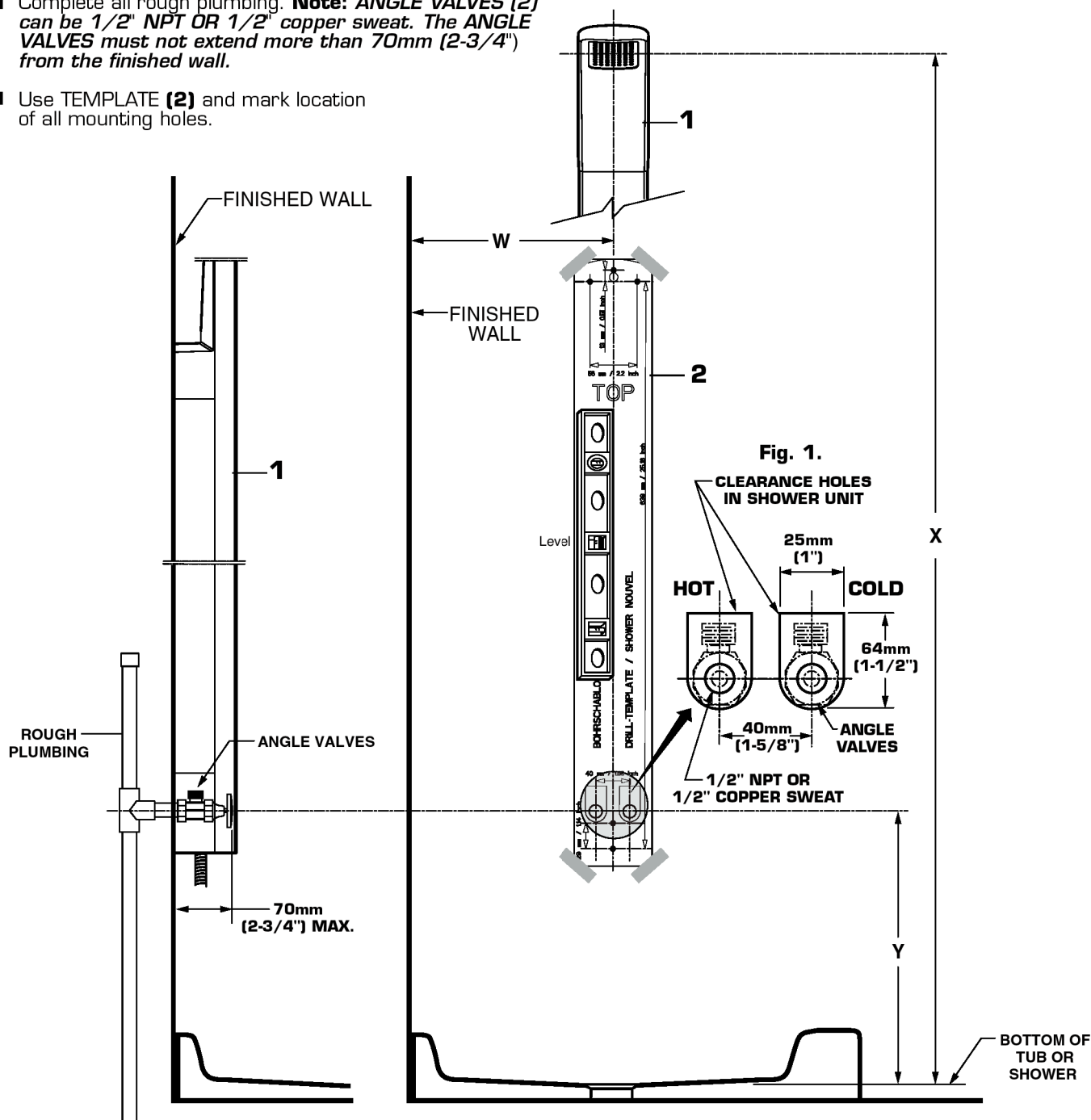
TEMPLATE SUPPLIED WITH SHOWER UNIT

Positioning of the angle valves:

Body Size	59" (150cm)	64-1/8" (163cm)	69-1/4" (176cm)	74-7/8" (190cm)	Nominal Dimension	
Height of Head Brake (middle of shower head)	70-7/8" (1800mm)	77" (1956mm)	83-1/8" (2112mm)	89-3/4" (2280mm)	78-3/4" (2000mm)	X
Angle Valve	30-3/4" (780mm)	36-7/8" (936mm)	43" (1092mm)	49-5/8" (1260mm)	38-1/2" (980mm)	Y

1 Installation **CAUTION** Turn off hot and cold water supplies before beginning.

- Unpack SHOWER UNIT (1) from box.
- Use the CHART below and TEMPLATE (2) supplied to locate the mounting holes and the location of the Hot and Cold supplies.
- Determine the distance of the Center-Line of the SHOWER UNIT (1) from the finished wall. Dimension (W).
- Using the CHART below as a guide determine the height of the HOT & COLD the 1/2" ANGLE VALVES to be used.
NOTE: This dimension is important because it will determine the height of the shower head, dimension (X).
Level the TEMPLATE (2) as shown and tape to the wall.
Important: The clearance holes in the SHOWER UNIT for the 1/2" ANGLE VALVES are 1" by 1-1/2". With the handles off the ANGLE VALVES, the SHOWER UNIT must be able to fit over the VALVES. Fig. 1.
- Complete all rough plumbing. **Note:** ANGLE VALVES (2) can be 1/2" NPT OR 1/2" copper sweat. The ANGLE VALVES must not extend more than 70mm (2-3/4") from the finished wall.
- Use TEMPLATE (2) and mark location of all mounting holes.



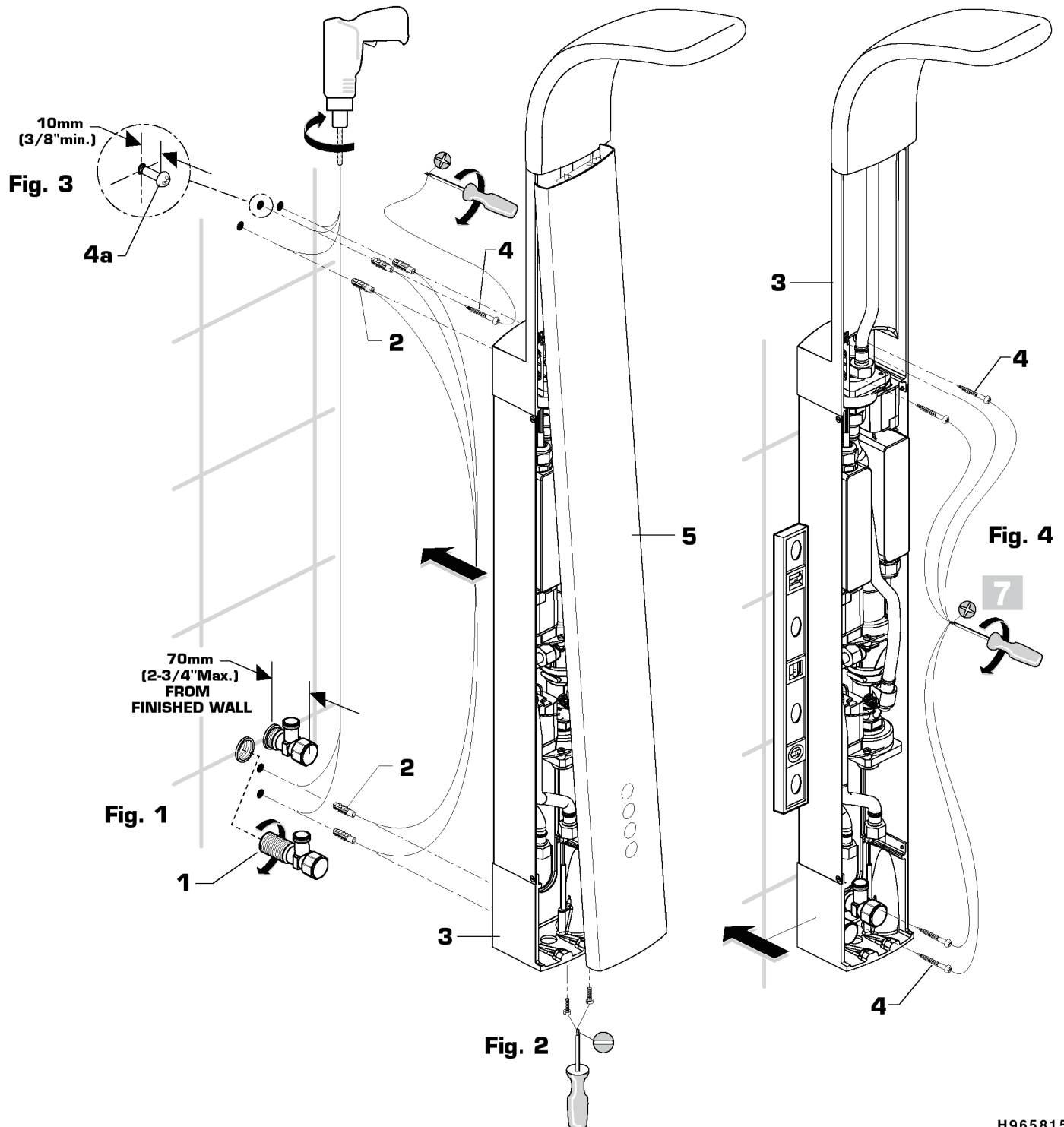
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2 Installation

INSTALL SHOWER UNIT and SUPPLY VALVES

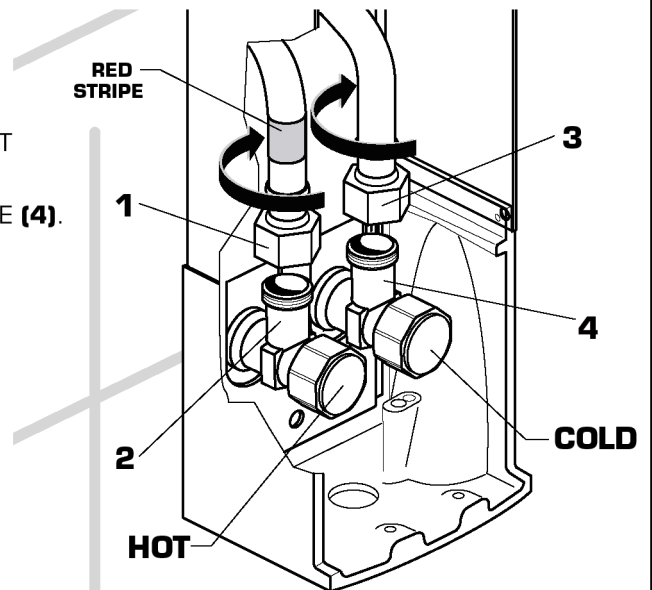
- Install 1/2" inch ANGLE VALVES (1). Note: ANGLE VALVES (1) can be 1/2" NPT OR 1/2" copper sweat. Angle Valve outlets should be facing up as shown. Valve should not extend more than 2-3/4" from finished wall. **Fig. 1.**
- Unthread two COVER SCREWS from bottom of SHOWER UNIT (3). Swing bottom forward and down to remove COVER (5). **Fig. 2.**
- Before drilling holes for ANCHORS (2) place SHOWER UNIT (3) against wall and check that the marks made for the mounting holes are correct.
- Drill holes for ANCHORS (2). Push all ANCHORS (2) in holes flush against finished wall. Thread MOUNTING SCREW (4a) into top center ANCHOR (2). It should extend a minimum of 10mm (3/8") from finished wall. **FIG. 3.**
- Install SHOWER UNIT (3) over ANGLE VALVES (1) and hang SHOWER UNIT (3) on CENTER SUPPORT SCREW (4) installed.
- Level SHOWER UNIT (3) and install all the MOUNTING SCREWS (4). Tighten all MOUNTING SCREWS (4a, 4) securely. **Fig. 4.**



4 Installation

CONNECT SUPPLY HOSES

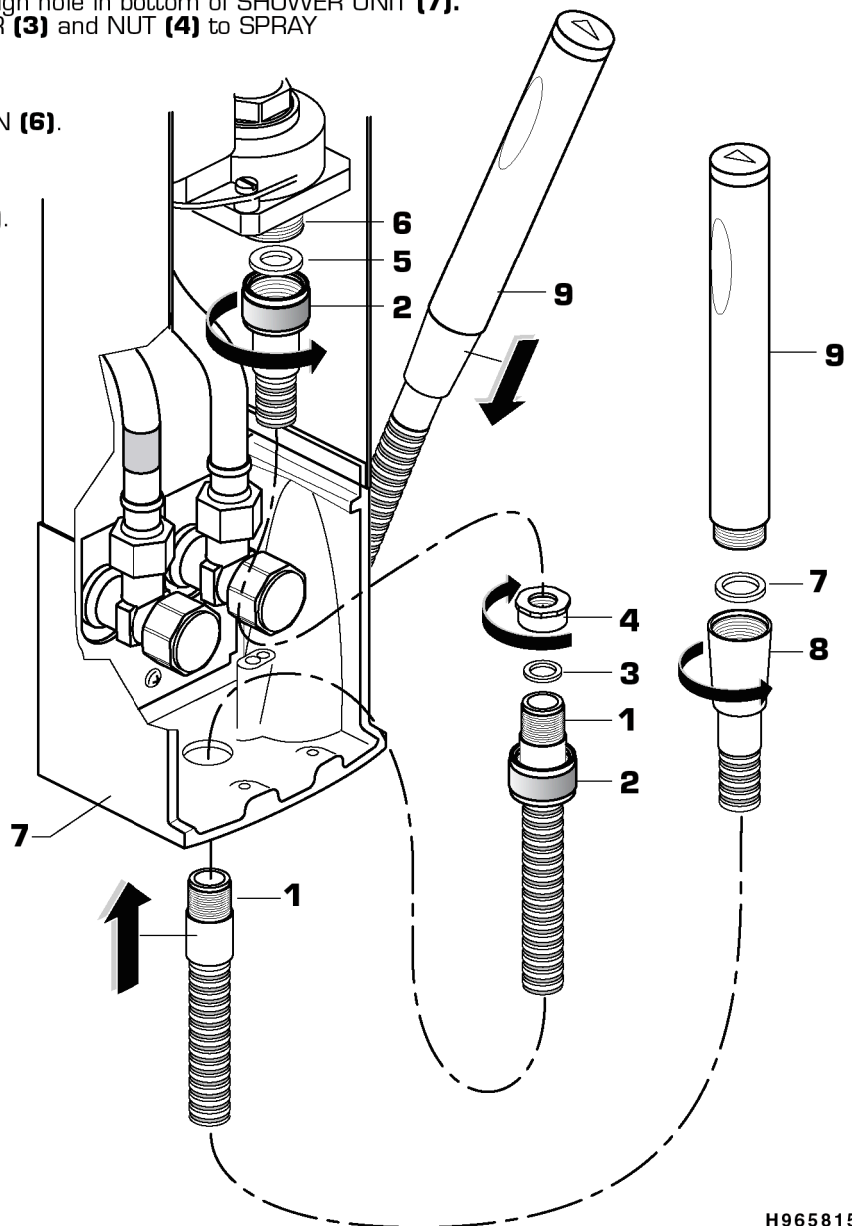
- Connect SUPPLY HOSE COUPLING NUT **(1)** with red stripe to HOT ANGLE VALVE **(2)**.
- Connect SUPPLY HOSE COUPLING NUT **(3)** to COLD ANGLE VALVE **(4)**. Use wrench to tighten securely.



5 Installation

SHOWER HOSE CONNECTION

- Feed small end of SHOWER HOSE **(1)** up through hole in bottom of SHOWER UNIT **(7)**. Assemble COUPLING NUT **(2)**, SEAL WASHER **(3)** and NUT **(4)** to SPRAY HOSE END **(1)**. Tighten with wrench.
- Install SEAL WASHER **(5)** into HOSE NUT **(2)**. Thread HOSE NUT **(2)** onto HOSE CONNECTION **(6)**. Tighten securely.
- Install SEAL WASHER **(7)** into SPRAY NUT **(8)**. Thread SPRAY NUT **(8)** onto HAND SPRAY **(9)**. Hand tighten.
- Place HAND SPRAY **(9)** into side pocket of SHOWER UNIT **(7)**.

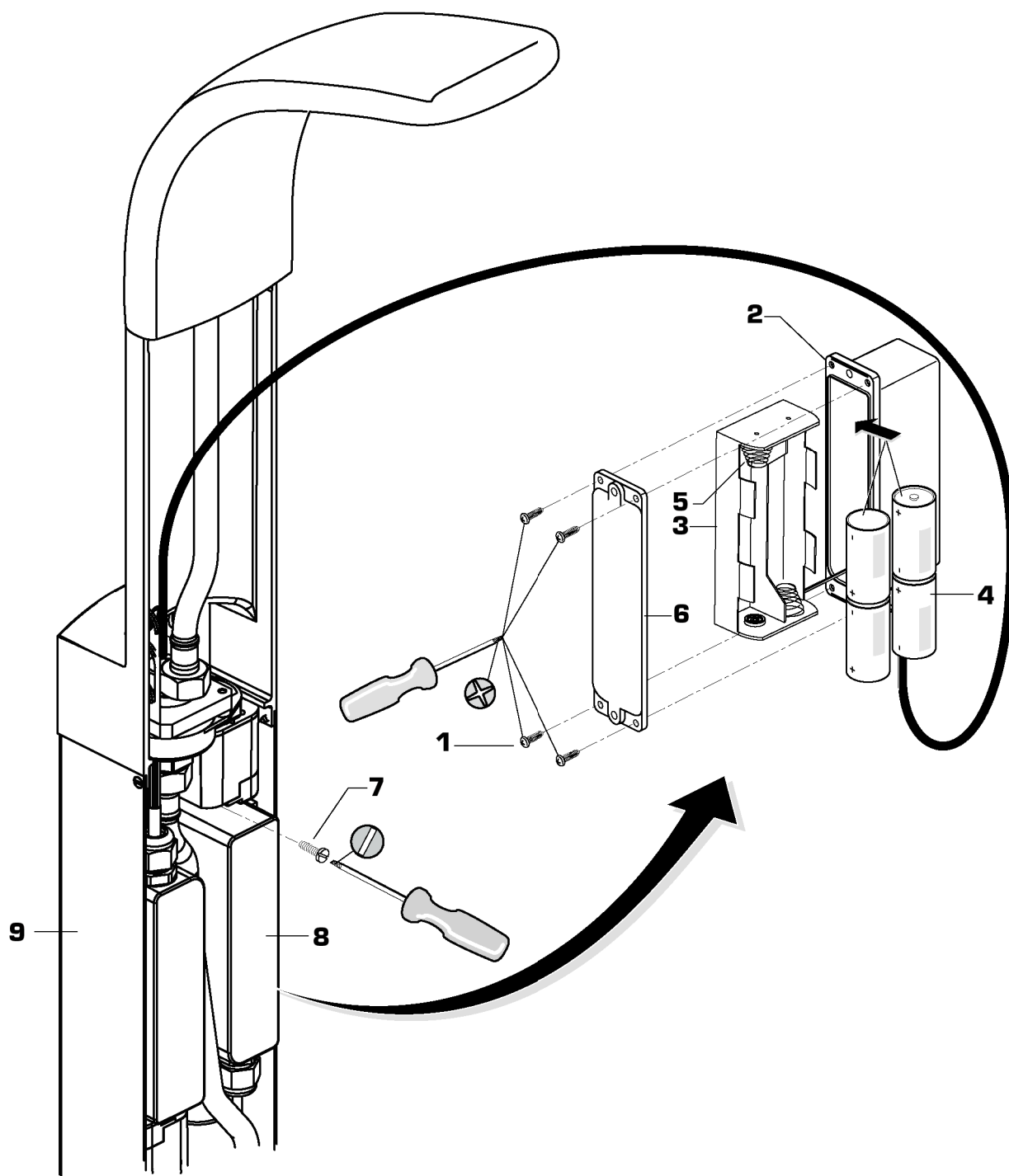


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6 Installation

INSTALL BATTERIES

- Remove the the BATTERY CASE ATTACHEMENT SCREW **(7)**. Pull BATTERY CASE **(8)** from the SHOWER UNIT **(9)**.
- Remove the four COVER SCREWS **(1)** from the BATTERY BOX **(2)** and pull out the BATTERY HOLDER **(3)**.
- Install four "C" size High Quality Alkaline BATTERIES **(4)** only. **Note:** The negative end of the batteries should always face toward the SPRING **(5)**.
- Install the BATTERY HOLDER **(3)** with BATTERIES **(4)** back into the BATTERY BOX **(2)**. Replace the the COVER **(6)** and tighten the four COVER SCREWS **(1)**.
- Replace BATTERY CASE **(8)** back into SHOWER UNIT **(9)** and secure with BATTERY CASE ATTACHEMENT SCREW **(7)**.

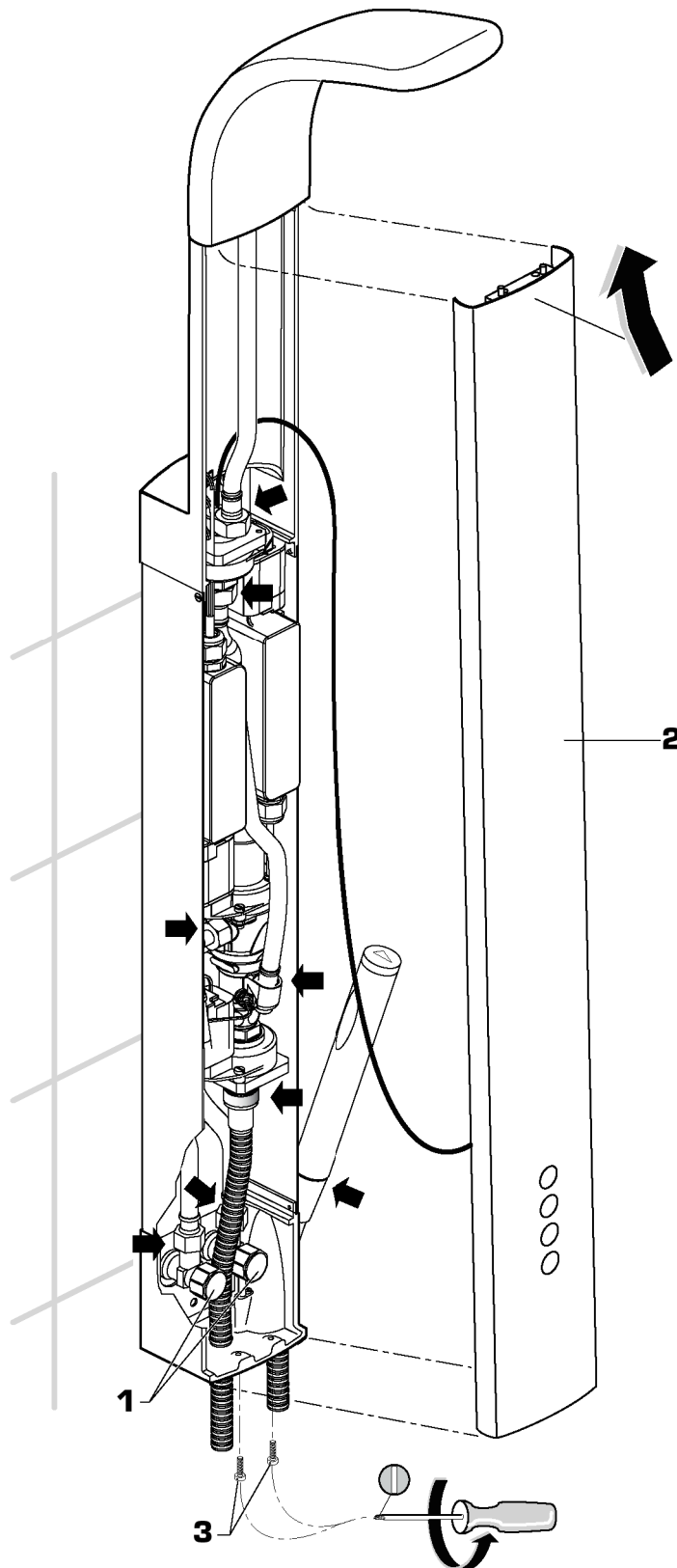


7 Installation

CHECK WATER AND ALL WIRE CONNECTIONS

- During installation some wire connections may have come loose. Check that all wire connections are plugged in and tucked away.
- Turn on Main Water Supplies. Turn the two ANGLE STOP VALVES **(1)** on and check all connections for leaks. ➡
- Replace FRONT COVER **(2)**. Tighten the two COVER SCREWS **(3)** to secure COVER **(2)**.

The installation of the SHOWER UNIT is now complete.



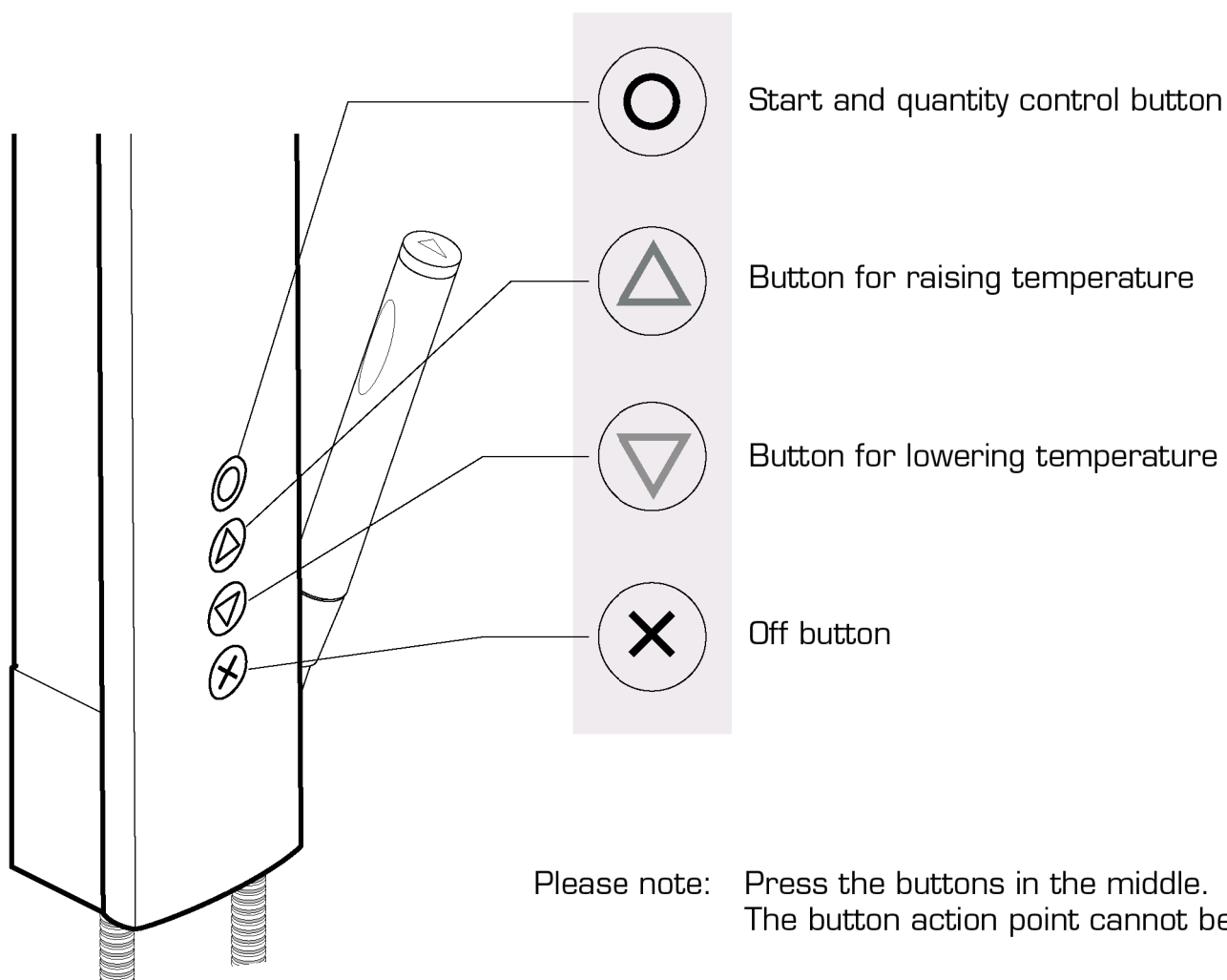
Important information on use

1. The electronic units in these instructions are protected against splash water and are designed to have a long service life.
2. The units may not be installed together with a steam bath.
3. **Care and maintenance:**
Only use soap-based, pH-neutral cleaning agents to clean the units. The outlets may be cleaned using a cloth soaked in a mixture of vinegar and water in order to prevent the build-up of lime scale. In addition, a standard flat or small brush can be used. Abrasive or scouring cleaning agents and disinfectants or such agents containing alcohol, ammonia, hydrochloric acid or phosphorus must not be used under any circumstances.

After use, dry the unit with a cloth. Make sure that the bathroom is adequately ventilated. These measures also prevent the build-up of lime scale on tiles and mould in joints.
4. Batteries may explode if you attempt to take them apart or recharge them.
CE The CE symbol is a European Union directive conformity symbol.

1 Operating Instructions

Operating elements (buttons)

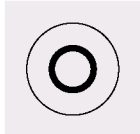


2 Operating instructions

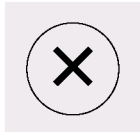
FUNCTIONS

On/Off Functions

- The buttons are activated by pressing lightly in the middle. They have been set to not turn on unintentionally when wiped with a soft, damp cloth.



- When this button is pressed, the water begins to flow at the previously set flow rate and temperature. The temperature and flow rate can now be regulated (see instructions below)



- Pressing this button stops the flow of water. If the water flow is reactivated within 120 seconds, the set flow rate and temperature are retained. After 120 seconds, the water flow rate and mixed water temperature return to the pre-programmed value.

Adjusting the temperature



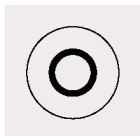
- The temperature can only be adjusted when the water is flowing. By pressing one of these buttons, the desired mixed water temperature can be changed in increments of 2°F (1°C). (Button with red symbol increase temperature, button with blue symbol decrease temperature). Once a temperature of 109°F (43°C) has been reached, the temperature can only be increased in increments of 0.5°. **Please note:** Temperatures of 113°F (45°C) and above can result in scalding. The maximum temperature that can be set is 118°F (48°C).



- Please note:** The temperature can only be changed by repeatedly pressing the buttons. Once the unit has been turned off (by pressing the off button), the set temperature is retained for 120 seconds. After this, the temperature returns to the pre-programmed value.

- Please note:** Temperatures in excess of 109°F (43°C) are also retained for 120 seconds.

Regulating the water quantity



- When the unit is turned on, the water quantity can be changed by pressing this button. A five-stage loop then runs. The direction (either an initial increase or decrease in volume) is determined by the programme settings (see Section 4). The water quantity can be altered by holding the button down. Once the unit has been turned off (by pressing the off button), the set flow rate is retained for 120 seconds. After this, the flow rate returns to the pre-programmed value.

- Please note:** This Unit features flow stabilisers, which only permits a certain water quantity. It is therefore not possible to increase the water flow beyond 2.5 GPM (9.5 L/min) and 2.2 GPM (8.3 L/min) for the Showerhead and Hand Shower, respectively.

3 Operating instructions

SAFETY FEATURES

Safety shut-off

There are a number of safety features in order to prevent the risk of scalding in the event that a component is faulty:

- The thermostat does not permit temperatures in excess of 118°F (48°C). (= maximum temperature).
- An additional electronic safety switch turns the unit off if the current temperature is more than 9°F (5°C) higher than the preselected temperature.
Please note: This may occur if the unit has been heated up after a mixed water temperature of, e.g. 113°F (45°C), has been set, and, if the unit has not been used for more than 120 seconds, when switched on again the temperature returns to the preselected value of 99°F (37°C) (for programmed temperature see step 4). There is therefore still hot (not cooled) mixed water in the unit, which results in the switch being triggered, since the temperature difference is greater than 9°F (5°C). In this case, turn on the unit several times in a row. As a rule, turning the unit on twice is sufficient to cool down the components.

Water saving mode

- To prevent unintentional water consumption, the electronics automatically turn the unit off after 30 minutes. The unit can be used again immediately without any restrictions.

4 Operating Instructions

PROGRAMMING THE TEMPERATURE AND WATER QUANTITY

- The initial settings (temperature and flow rate) can be individually selected/pre-programmed for all units. This presetting is saved and called up each time the unit is operated. The presetting can be changed and resaved at any time. Please note: The settings are not altered when the batteries are changed.

Programming the initial temperature and water quantity

- The temperature and water quantity can be easily saved. First of all, the unit must be turned on by pressing the **O**-button. The temperature and water quantity are set as described in Section 2. The current temperature and water quantity settings are saved by pressing the **Δ** and **▽** buttons simultaneously for 5 seconds. The unit stops the flow of water - this shows the user that the values have been successfully saved. The direction of flow change (i.e. whether the flow rate is increased or decreased when the **O**-button is pressed for the first time) is saved at the same time as the temperature and flow rate. Prior to saving, the electronics recognise the direction of the last change in volume as the preferred direction to be saved. The preset temperature and quantity values are automatically set each time the unit is used. These values can be reprogrammed or changed at any time.
Please note: For safety reasons, temperatures in excess of 109°F (43°C) cannot be saved (risk of scalding).
Please note: Only perform settings when there is a hot and cold water supply connected to the unit. For installation-related reasons, supplying the unit with hot water may take some time (cooling of the supply line, no ring water supply).
Please note: This Unit features flow stabilisers, which only permits a certain water quantity. It is therefore not possible to increase the water flow beyond 2.5 GPM (9.5 L/min) and 2.2 GPM (8.3 L/min) for the Showerhead and Hand Shower, respectively.

5 Operating Instructions

OPERATION WITH A CONTINUOUS-FLOW WATER HEATER

Hydraulically controlled continuous-flow water heater

- With a hydraulically controlled continuous-flow water heater, the flow rate of units cannot be reduced due to the heater's preset heating capacity. In this case, always use the maximum jet intensity.

Thermally controlled continuous-flow water heater

- Thermally controlled continuous-flow water heaters are recommended. There are no known restrictions when using such heaters.

6 Operating Instructions

SELF-CALIBRATION

- Under certain conditions the electronics perform self-calibration. For this purpose, the motor used for setting the temperature is activated for approx. 10 seconds. During this time, the unit cannot be started.

7 Operating Instructions - TROUBLE SHOOTING

Problem	Possible cause	Remedy
No reaction when button is pressed	Batteries empty	Change battery (see Service step 1)
	Push buttons (piezo element) do not work	Push button in middle/apply greater pressure
Temperature does not change when button is pressed	Push buttons (piezo element) do not work	Push button in middle/apply greater pressure
	Thermostat defective or soiled	Cut off water supply Clean or replace thermostat (see Service step 3)
	Motor on thermostat does not work	Replace servomotor (see Service step 3)
Water flow cannot be stopped	Push buttons (piezo element) do not work	Push button in middle/apply greater pressure
	Valve defective	Cut off water supply Replace valve (see Service step 4)
	Motor on valve does not work	Cut off water supply Replace servomotor (see Service step 5)
	Electronics faulty	Cut off water supply Replace electronics box (see Service step 8) Perform calibration See Operating instructions (Step 4)
No water	Water supply	Check water supply Open angle valves Are there kinks in the hoses?
	Motor does not open	Check/replace batteries (see Service step 1) Check plug contacts, check valve (free movement) Replace servo-motor (see Service step 5)
Water quantity too low	Electronics faulty	Cut off water supply Replace electronics box (see Service step 8) Perform calibration See Operating instructions (Step 4)
	Water supply	Open angle valves Are there kinks in the hoses?
	Thermostat	Check/clean filter (see Service step 3)
	Presetting	Increase initial water Perform calibration quantity See Operating instructions (Step 4)

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Problem	Possible cause	Remedy
Temperature too low	No more hot water	Check boiler
	Soiled control	Set water temporarily to COLD and reset to desired temperature Check/clean filter Check domestic water filter
Temperature too high	Soiled control	Set temporarily to 118°F (48°C) and reset to desired temperature Check/clean filter (see Service step 3) Check domestic water filter
Temperature fluctuates	Thermostat defective	Replace thermostat (see Service step 3)
	Motor on thermostat does not work	Replace servo-motor (see Service step 5)
	Temperature sensor defective	Change temperature sensor (see Service step 7)
Unit turns off after about 10 seconds	Battery has reached end of service life	Change batteries (see Service step 1)
Unit turns off after temperature has been set	Safety switch-off	See Operating instructions (Safety Features 3)

1 Service

REPLACING THE BATTERIES

Important: Only use high-quality alkaline batteries, size C. (IEC designation: LR 14). Rechargeable batteries may be used, however these are not recommended, due to the low cell voltage.

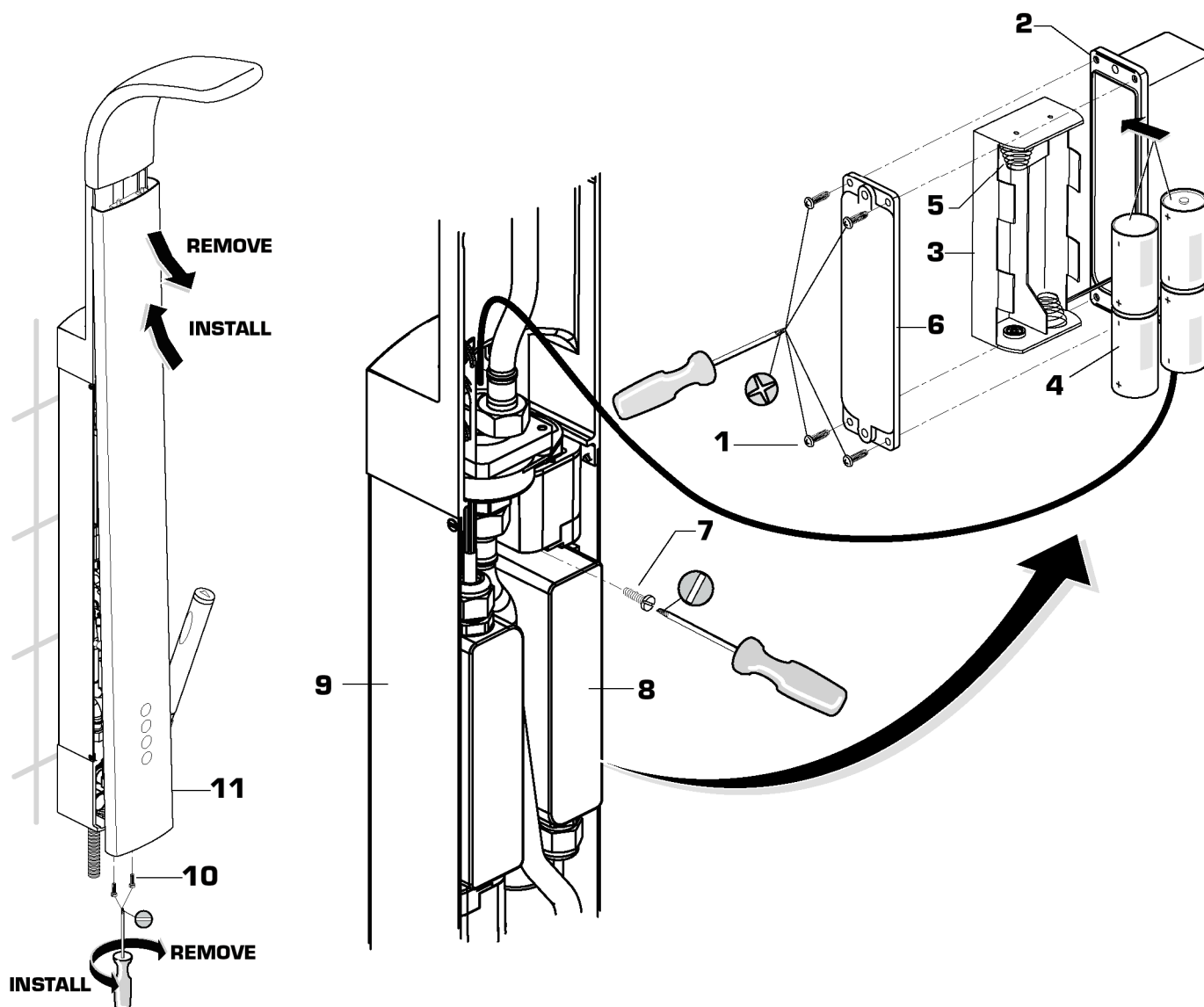
Please note: When changing the battery, it is important to ensure that all parts are dry! Moisture in the battery compartment must be avoided.

The electronics constantly monitor the battery state. Before the batteries are completely empty, the operating mode is changed as follows:

After turning on, the unit automatically shuts down after 1 second. When switched on again, unrestricted use is possible. On switching on again, this mode reoccurs.

Please change the batteries immediately, as the unit can only be used another 15 times. Following this, the unit remains switched off.

- Remove the two FRONT COVER SCREWS (10) that attach the FRONT COVER (11), then remove the FRONT COVER (11).
- Remove the the BATTERY CASE ATTACHEMENT SCREW (7). Pull BATTERY CASE (8) from the SHOWER UNIT (9).
- Remove the four COVER SCREWS (1) from the BATTERY BOX (2) and pull out the BATTERY HOLDER (3).
- Install four "C" size High Quality Alkaline BATTERIES (4) only. **Note:** The negative end of the batteries should always face toward the SPRING (5).
- Install the BATTERY HOLDER (3) with BATTERIES (4) back into the BATTERY BOX (2). Replace the the COVER (6) and tighten the four COVER SCREWS (1).
- Replace BATTERY CASE (8) back into SHOWER UNIT (9) and secure with BATTERY CASE ATTACHEMENT SCREW (7).
- Install FRONT COVER (11) and tighten FRONT COVER SCREWS (10).



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2 Service

WORKING ON THE VALVE UNIT

Preparation

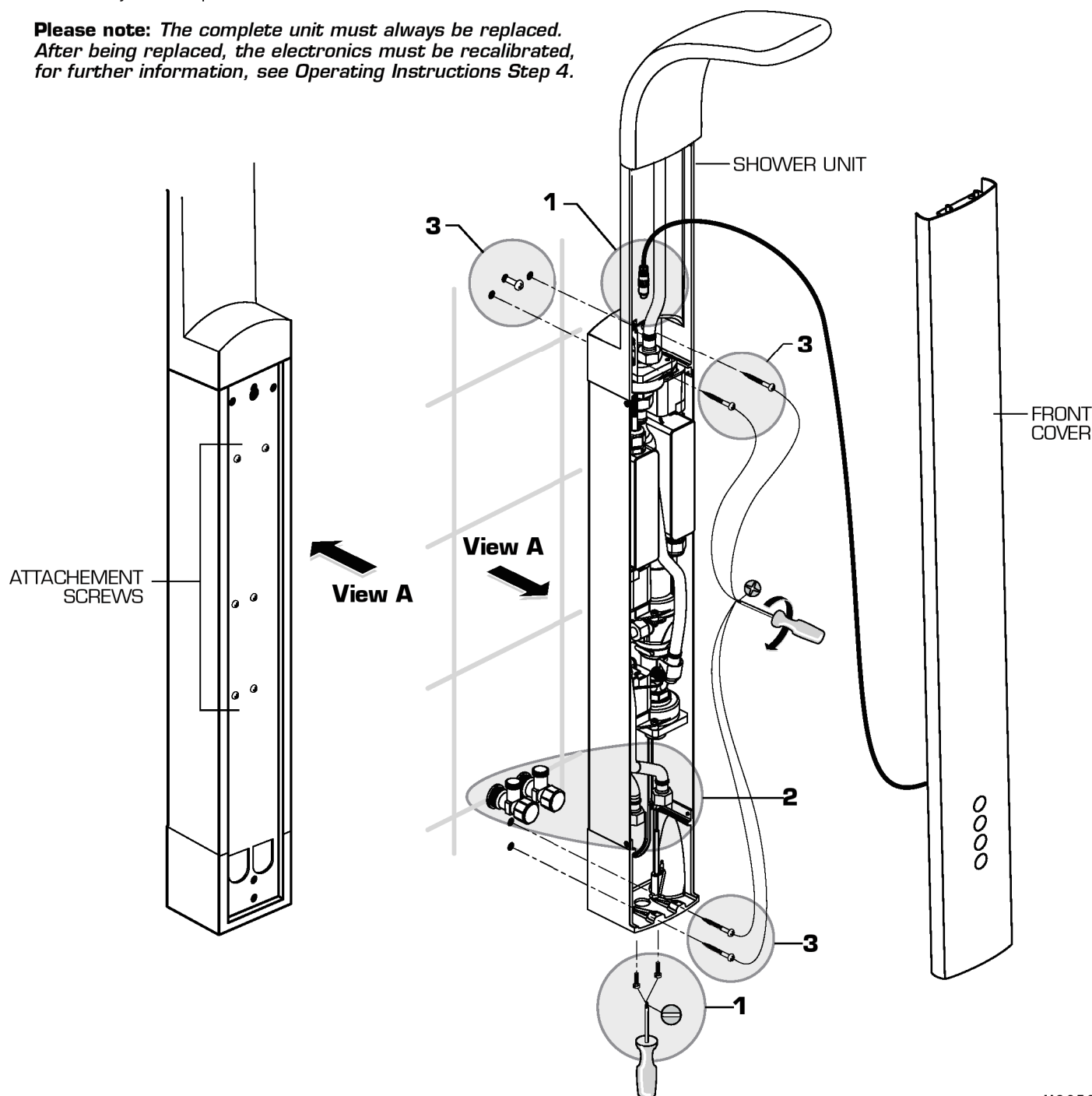
When performing any maintenance and repair work on the thermostat cartridge, stop valves, servo-motors, temperature sensor and non-return valves, it is recommended that the complete unit be removed. Proceed as follows:

1. Open and remove the FRONT COVER by undoing the two COVER SCREWS. **Note: The FRONT COVER is connected to the electronics box by a cable in the SHOWER UNIT.** Remove the CABLE CONNECTOR and remove the FRONT COVER.
2. Close the Hot and Cold water supply lines at the angle valves and remove the hoses.
3. Unscrew the top center fastening screw about 3/8 on an inch. Unscrew and remove the four fastening screws and take the complete shower unit from the wall. Place the unit on a suitable surface; a towel or similar is recommended for this purpose in order to prevent damage to the surface. **Note: Please keep in mind the weight of the complete unit.**

ATTACHEMENT SCREWS for the internal components are located on the back surface of the SHOWER UNIT. **View A.**

Maintenance and repair work on the thermostat cartridge, stop valve, servomotors, temperature sensor and non-return valves may now be performed.

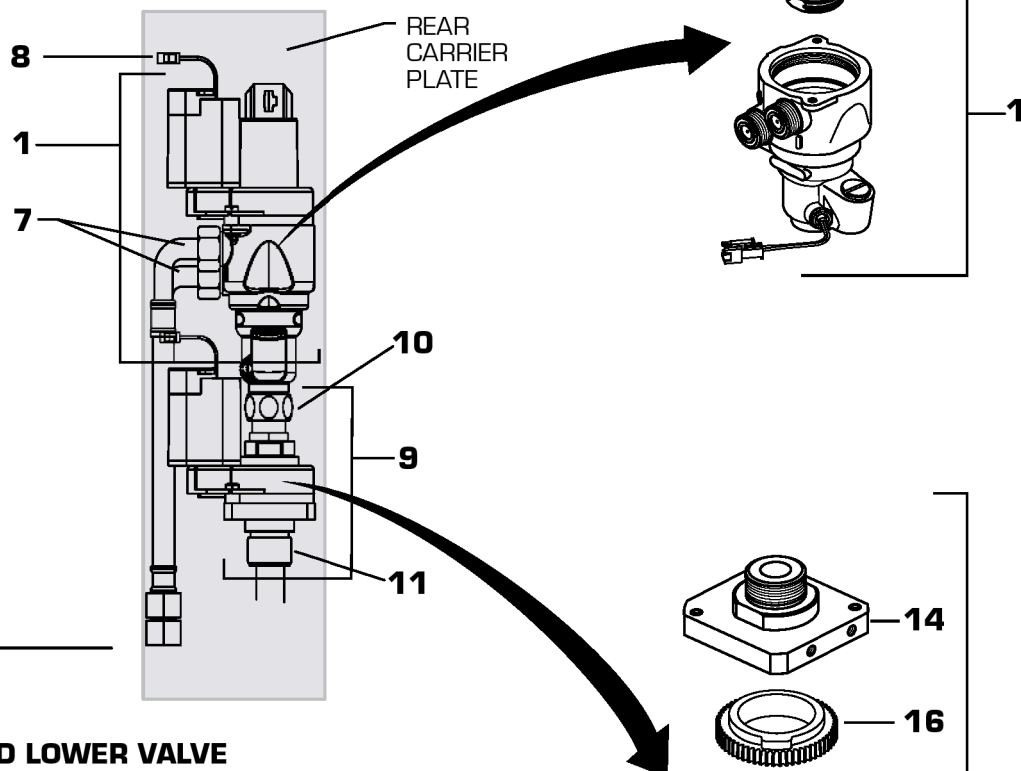
Please note: The complete unit must always be replaced. After being replaced, the electronics must be recalibrated, for further information, see Operating Instructions Step 4.



3 Service

THERMOSTAT CARTRIDGE (CLEANING AND REPLACEMENT)

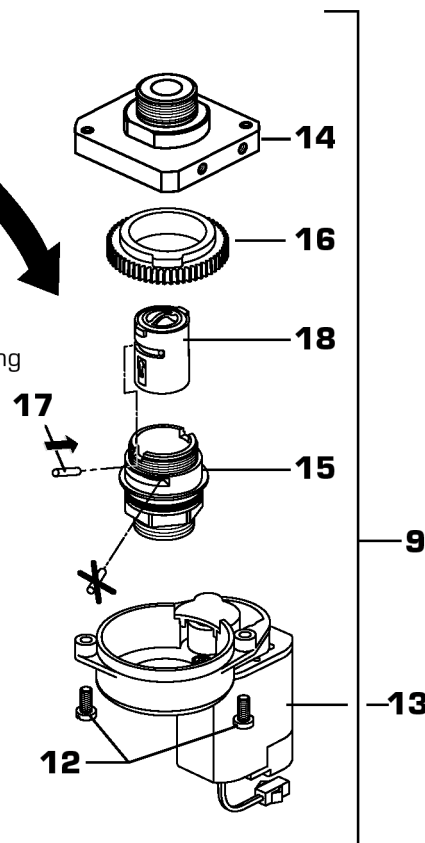
- Carry out the preparatory work described in Service, Step 2.
- The THERMOSTAT HOUSING (1) is attached to a metal carrier plate. Unscrew the fastening screws and remove THERMOSTAT HOUSING (1) from the carrier plate.
- Unscrew the two SCREWS (2) on the servomotor housing (3). Take off the unit and remove the temperature adjuster nut (4). The THERMOSTAT CARTRIDGE (5) can now be twisted out (if necessary, hold with a suitable tool).
- Clean the filter screens (6) under running water. Thread a new or cleaned THERMOSTAT CARTRIDGE (5) into the THERMOSTAT HOUSING (1) and tighten with wrench.
- Reconnect the HOSES (7) and secure the THERMOSTAT HOUSING (1) to the carrier plate. Attach the connector (8). Assembly of the complete unit is described in the Installation Section. After being replaced, the electronics must be recalibrated, for further information, see Operating Instructions Step 4.



4 Service

REPLACING UPPER AND LOWER VALVE

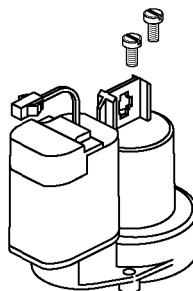
- Carry out the preparatory work described in Service, Step 2.
- The VALVE HOUSING (9) is attached to a metal carrier plate. Unthread the fastening screws from VALVE HOUSING (9). Unthread COUPLING NUT (10). Remove VALVE HOUSING (9) from the carrier plate. Remove HOSE (11).
- Remove the two screws (12) from the SERVO-MOTOR HOUSING (13) and take the TOP (14) off the SERVO-MOTOR HOUSING (13).
- Unscrew the HEAD PIECE (15) size 24 (with toothed wheel). Hold in place with a size 27 spanner. Remove the toothed wheel (16) and pull out the PIN (17). The VALVE (18) can now be removed and replaced.
- Insert the VALVE (18) in its closed state and insert the PIN (17) in the position shown. Thread in the HEAD PIECE (15) and install toothed wheel (16). Torque to approx. 5 Nm.
- Reattach the SERVOMOTOR HOUSING (13), making sure that its in the correct position. Reconnect the COUPLING NUT (10), HOSE (11) and attach the valve unit onto the carrier plate. Attach the connector.
- After replacing the stop valve, the electronics must be recalibrated, for further information, see Operating Instructions Step 4.



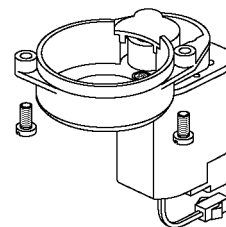
5 Service

REPLACING THE SERVO-MOTORS

- Refer to Service, Steps 3 and 4 for the replacement of the SERVO-MOTORS.



Thermostat Servo-Motor

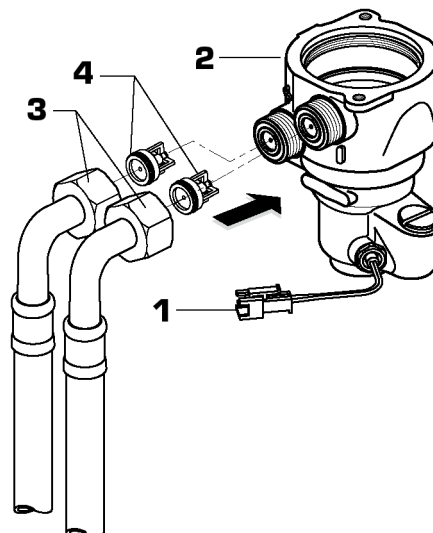


Stop Valve Servo-Motor

6 Service

REPLACING THE CHECK VALVES

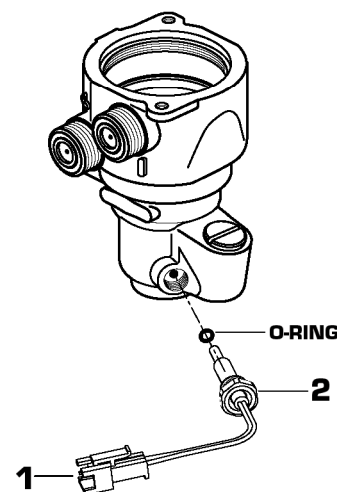
- The CHECK VALVES (4) are located in the supply line connections of the thermostat housing. Carry out the preparatory work described in Step 2. Remove the CONNECTOR (1).
- Remove both INLET HOSES (3).
- Replace the CHECK VALVES (4).
- **Please note:** Ensure that they are installed in the correct position.
- Reconnect the INLET HOSES (3). Attach the CONNECTOR (1).
- Assembly of the complete Unit is described in the Installation Section.



7 Service

REPLACING THE TEMPERATURE SENSOR

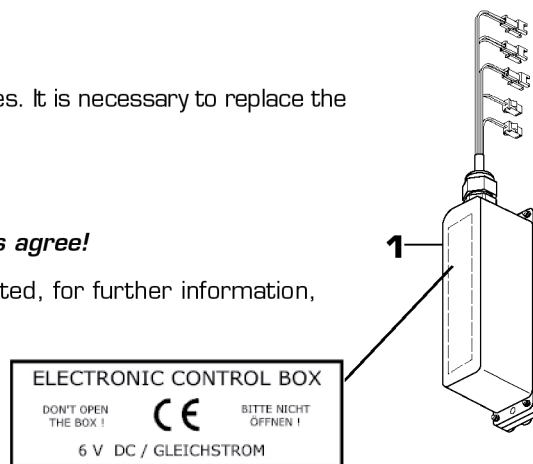
- Carry out the preparatory work described in Service, Step 2.
- Remove the CONNECTOR (1).
- Rotate the TEMPERATURE SENSOR (2) counter clock-wise to remove.
- Replace with new TEMPERATURE SENSOR (2) and tightening torque approx. 5 Nm.
- Attach the CONNECTOR (1).
- After replacing the temperature sensor, the electronics must be recalibrated, for further information, see Service, Step 11.



8 Service

REPLACING THE ELECTRONIC BOX

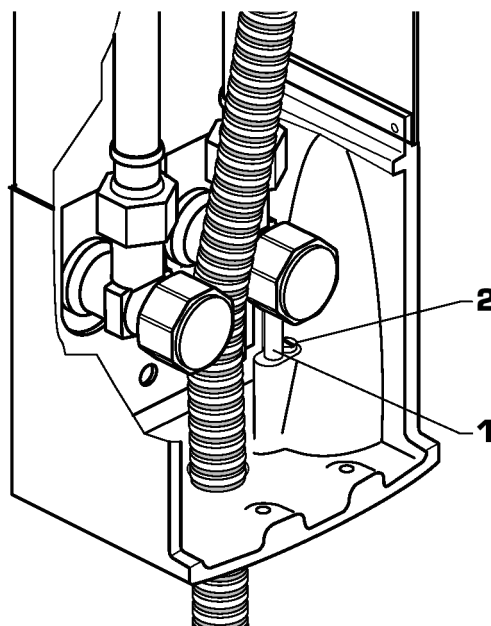
- The ELECTRONICS BOX (1) must not be opened under any circumstances. It is necessary to replace the whole unit.
- Remove all connectors. Unscrew the electronics box and replace. Attach all connectors.
- **Please note:** Make sure that the number codes on the connectors agree!
- After replacing the electronics box, the electronics must be recalibrated, for further information, see Operating Instructions Step 4.



9 Service

REPLACING THE REED CONTACT

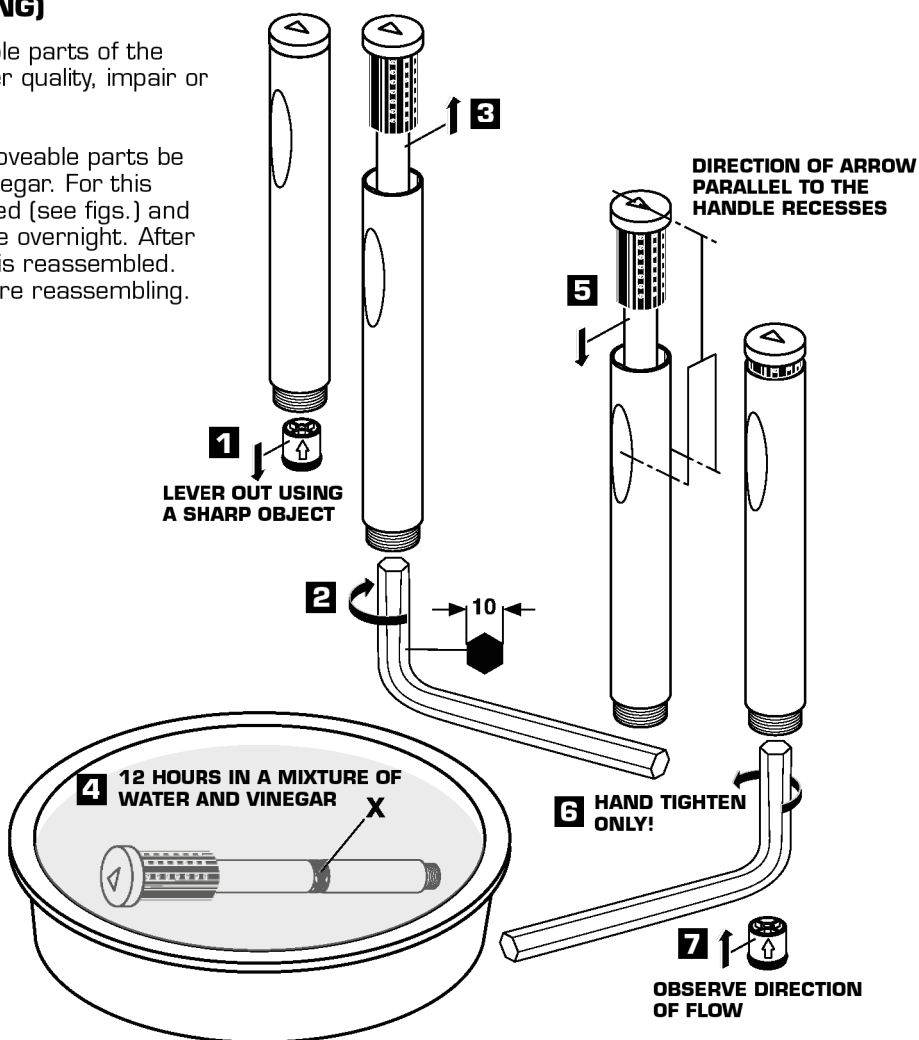
- Unthread the SAFETY SCREW (1). The REED CONTACT (2) can now be simply removed and replaced.



10 Service

POP-UP HANDSHOWER (CLEANING)

- The build-up of lime scale on the moveable parts of the handshower can, depending on the water quality, impair or even prevent its functioning.
- It is therefore recommended that the moveable parts be cleaned using a mixture of water and vinegar. For this purpose, the moveable parts are removed (see figs.) and immersed in a water and vinegar mixture overnight. After being rinsed thoroughly, the hand spray is reassembled. Lubricate the sliding ring (X) slightly before reassembling.



CALIBRATE THE UNIT

- It is necessary to calibrate a unit each time the servomotors, electronics box, the thermostat cartridge or temperature sensor are replaced. The calibration values for the sensor and the overlapping of the valves connected must always be saved in the program memory (CU).

Please note: *Steps 1 and 2 must be performed in succession.*

1. Temperature adjustment. Turn the unit on by pressing the O-button. When switched on, keep the O-button and the and down simultaneously for approx. 5 seconds until the flow of water is stopped for approx. 10 seconds. Once the thermostat cartridge has been reset, the water begins to flow again. The temperature is now adjusted using the and buttons until a temperature of 100°F (38°C) is measured at the outlet. This is acknowledged with the O-button and the water stops flowing.

2. Flow adjustment. The flow rate is increased in increments with the O-button until a flow rate of 1.6 GPM (6 L/min) is reached for the basin unit and 2.1 GPM (8 L/min) for the bath and shower unit (measured at the outlet or shower head).

Please note: *The water may only begin to flow after the O-button has been pressed several times. This is acknowledged with the X-button, and the calibration values for the temperature and minimum flow rate are saved.*

The flow of water now stops to show that calibration has been carried out successfully.