

INSTALLATION AND MAINTENANCE GUIDE

APOLLO MEDICAL SERIES

ELECTRONIC THERMOSTATIC FAUCETS FOR HOSPITALS



Apollo Medical

Apollo Medical E

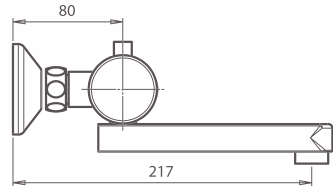
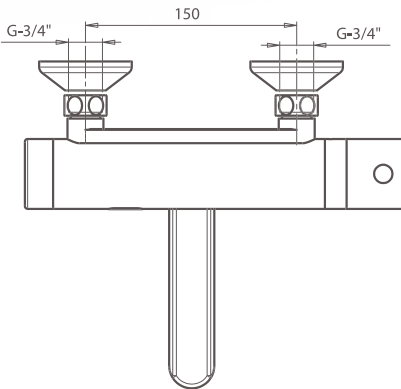
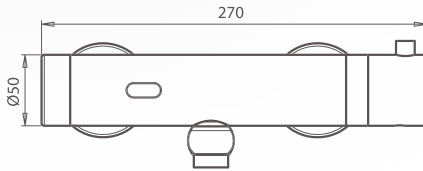
STERN

STERN ENGINEERING LTD.

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TECHNICAL DATA



Apollo Medical



For Apollo Medical E

Power Supply:

Internal 9V battery or 9V transformer

Operating pressure:

To obtain an optimum function we recommend a limiting of the hot/cold inlet pressures to 1.0- 5.0 bar with a difference between hot and cold not exceeding 2 bar.

Preset Sensor Range:

450 mm. Adjustable.

Minimum Sensor Range:

80 mm.

Maximum Sensor Range:

300 mm.

Security time:

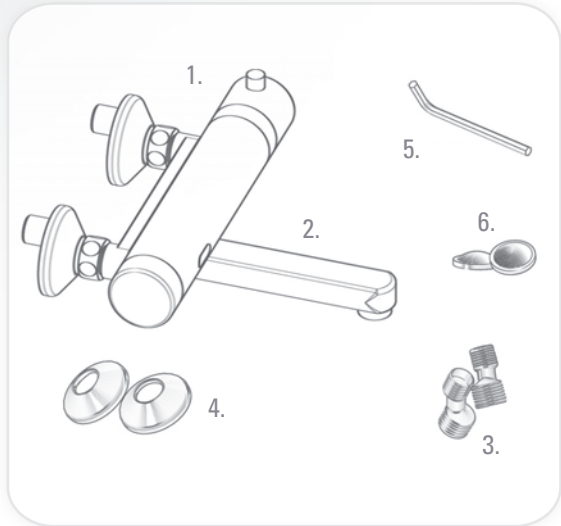
90 seconds. Adjustable with remote control.

PACK CONTENTS

Familiarize yourself with the parts names and confirm that the parts are included.

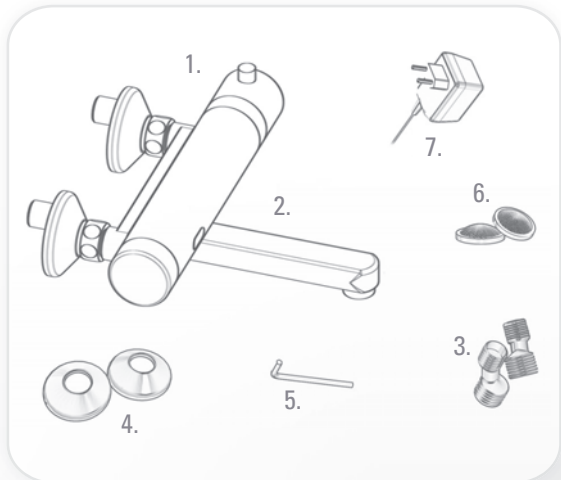
APOLLO MEDICAL

- 1. 1 x Tap and attachments
- 2. 1 x Spout
- 3. 2 x Eccentric unions
- 4. 2 x Fixation accessories (rosettes)
- 5. 1 x 2mm Allen key
- 6. 2 x Filters



APOLLO MEDICAL E

- 1. 1x Tap and attachments
- 2. 1x Spout
- 3. 2x Eccentric unions
- 4. 2x Fixation accessories (rosettes)
- 5. 1 x 2mm Allen key
- 6. 2x Filters
- 7. Transformer



PRE-INSTALLATION INFO

Check contents

Separate all parts from packaging and check each part with the Pack contents section. Pay attention to the different models variations.

Make sure all parts are accounted for before discarding any packaging material. If any parts are missing, do not attempt to install your electronic faucet until you obtain the missing parts.

Warnings:

Do not install the system facing a mirror or any other electronic system operated by an infra-red sensor.

To prevent reflection problems, it is recommended to keep a minimum distance of 1.50 meters between the faucet and any other objects.

Preparation for Installation:

Flush water supply lines thoroughly before installing the faucet. Do not allow dirt, Teflon tape or metal particles to enter the faucet.

Shut off water supply.

Always install the provided filters.

Thermostat operating conditions

The mixer has been duly calibrated and tested in factory. It is suitable for any water heating system, including gas heaters with modulated burning and instant burning systems.

Important:

All plumbing is to be installed in accordance with applicable codes and regulations.

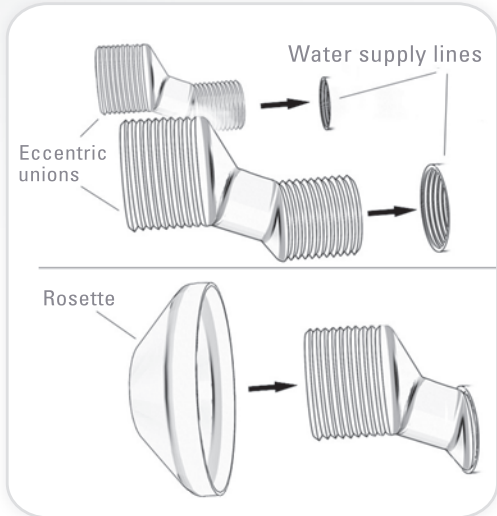
INSTALLATION

Step 1 – Installing the faucet

1. Shut the water supply off.
2. Fit and affix the faucet as a standard exposed fitting with the water outlet down and the temperature handle on the right side. It will ensure the hot water inlet being to the left and the cold water inlet being to the right.

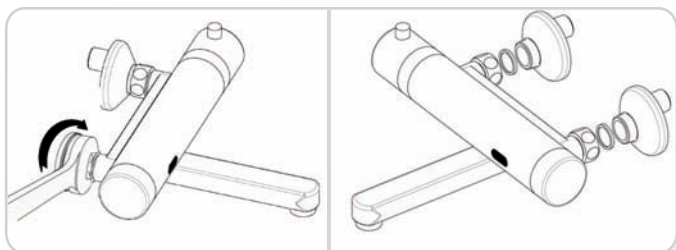
Note: The standard distance between the water supply pipes centers is 150mm. 2 eccentric unions are provided to allow variations from 130mm to 170mm.

3. Mount the eccentric unions on the water supply pipes.
4. Apply the covering rosettes on the eccentric unions.
5. Set the eccentric unions so that they correspond with the faucet's inlets.
6. Assemble the faucet to the unions, inserting the seal washer filters between the unions and the nuts.
7. Tighten the nuts carefully with a 30mm wrench.



Step 2 – Connecting the water supply

1. Turn the central water supply and the shut-off valves on.
2. Check for leaks.



INSTALLATION

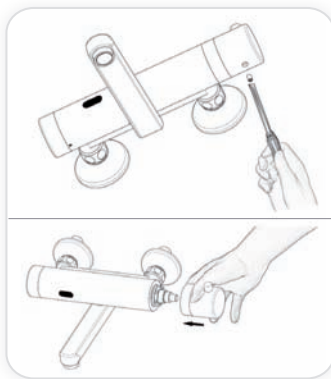
Step 3 – Connecting the power source

1. For Apollo Medical E: Plug the transformer into the electricity socket and connect the connectors.
2. If your Apollo Medical model is battery operated – remove the sticker from the sensor eye.
3. Wait a few seconds before activating the faucet.
4. If the sensor range is unsatisfactory – refer to the section titled “Range Adjustment”.

Step 4 – Setting the temperature (only when necessary)

The mixer has been factory set for balanced pressures and water supply of 65°C. If your operating conditions are different from the above, the resulting temperature of the water flowing out of the mixer might be different from the pre-selected one.

To set the temperatures according to the operating conditions of your installation environment:



1. Remove the thermostatic cartridge handle by removing the screw cover and unscrewing the fixing screw.

2. Proceed to the 38° setting by turning the spindle under the following conditions:

- Hot water temperature between 60°C to 65°C
- Cold water temperature between 10°C to 15°C
- Temperature difference = 50 K
- Pressure= 3 bar

3. Set the button to 38°C position starting from full-cold opening temperature position.

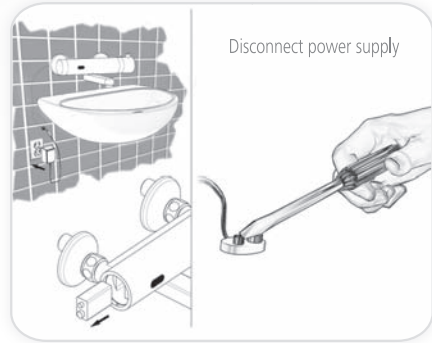
4. Fit the setting button on the brass spindle. The adjustment stop button must correspond to the 38°C stop of the stop ring, without moving the spindle!
5. The setting is correct when a temperature of mixed water of 38°C + - 1°C is achieved, with the stop button at the 38°C position.
6. The mixer setting is now calibrated according to your installation environment.
7. Reassemble the thermostatic cartridge handle by tightening the screw and reassemble the screw cover.

RANGE ADJUSTMENT

The sensor range is the greatest distance that an object can be away from the sensor to activate the faucet. The sensor range is factory pre-set. If necessary it may be adjusted as follows:

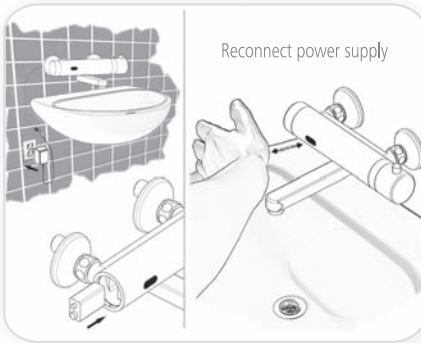
Adjusting the sensor range:

1. Disconnect the power supply, battery or transformer, from the sensor.
2. Make a short circuit between the (+) and the (-) of the sensor. You can use a screw driver of another conductive material. Alternatively, after disconnecting the power supply, activate the sensor three or four times.
3. Do not make a short circuit on the power supply or on the sensor when the power supply is connected to the sensor.
4. Reconnect the power supply to the sensor.



5. To enter the adjusting mode put your hand in front of the sensor eye at a distance of 5cm (2") to 10cm (4") within 5 seconds since the reconnection of the power supply.

Note: If you don't put your hand in front of the sensor eye after the reconnection of the power supply the sensor will not enter the adjusting mode and the previous setting will remain unchanged.



6. When the sensor enters the adjusting mode and your hand is in front of the sensor eye a slow blinking of the red light will occur in the sensor eye.
7. You should keep your hand in front of the sensor eye until the slow red light blinking changes into a quick one. At this point move your hand to the required distance from the sensor and wait until the red light stops blinking.
8. When the red light turns off your sensor has been adjusted to the required sensor range.
9. Check the range you have just set and if it is not satisfactory repeat steps 1-7.

RANGE ADJUSTMENT

Adjusting the sensor with a remote control – optional:

In order to adjust the sensor with a remote control you should hold the remote control straight against the sensor eye in a distance of about 10cm (4"). Choose the function you wish to adjust by pressing once on one of the appropriate functional buttons. After pressing the button a quick blinking of the red light inside the sensor eye will occur. At this stage you can adjust the settings using (+) and (-) buttons as necessary. Every pressing will increase or decrease one level of the setting.

Sensor Range: Press (+) to increase the Sensor Range and (-) to decrease it.

The remote control may also be used to adjust :

Flow Time (Security Time): Press (+) to increase the Flow Time (Security Time) and (-) to decrease it.

Delay-In Time: Adjusts the time the water starts flowing after the user's hands come into the sensor range. Press (+) to increase the Delay-In Time and (-) to decrease it.

Delay-Out Time: Adjusts the time the water stops flowing after the user's hands come out of the sensor range. Press (+) to increase the Delay-Out Time and (-) to decrease it.

On/Off: Press this button and the faucet will remain Off for 1 minute. To turn the faucet On press the button again.

Reset: This function allows returning to factory settings. Press the Reset button and without releasing it press the (+) button once.



BATTERY REPLACEMENT INSTRUCTIONS – In battery operated models only

When the battery weakens the red indicator light will blink in the sensor eye at a constant rate. The battery must be replaced within two weeks.

To replace the battery

1. Release the screw and remove the battery cover.
2. Replace the battery with a new 9V battery (Lithium battery is recommended).
3. lose the battery cover and tighten the screw.

MAINTENANCE

Filter cleaning instructions

The mixer is provided with two stainless steel filters preventing foreign particles from entering the lines. If the water flow has decreased this might be because the filter is clogged. The filter can be cleaned as follows:

1. Shut off the water at both inlets.
2. Unscrew the faucets.
3. Remove the filters and wash them under running water.
4. Reassemble the parts and restore the incoming water supply.
5. Make sure that there is no water leakage.

Care and cleaning of chrome and special finishes

DO NOT use steel wool or cleansing agents containing alcohol, acid, abrasives or the like. Use of any prohibited cleaning or maintenance products or substances could damage the surface of the faucet. For surface cleaning of the faucet use **ONLY** soap and water, then wipe dry with clean cloth or towel. When cleaning bathroom tile the faucets should be protected from any splattering of harsh cleansers.

SPARE PARTS LIST

Sensor Kit	07220008
Solenoid Valve Kit	07230003
Inlet Nipple Kit	07246001
Thermostatic Cartridge Kit	07240021
Thermostatic Handle Kit	07110015

OPTIONAL ACCESSORIES:

Remote Control	07100001
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LIMITED WARRANTY

This product is covered by a limited warranty of two years from the date of purchase.

During this period STERN undertakes, at its option, to repair any faults caused by defective materials of manufacturer defects that may arise or replace the relevant parts or the entire product. (see Stern Warranty).

The guarantee does not cover faults or damage caused by incorrect installation and/or maintenance, wear and tear, battery or water composition. This includes, but is not limited to the following:

- Incorrect installation, inversions of supply pipes.
- Pressures or temperatures exceeding recommended limits.
- Improper manipulation, tampering, bad or lapsed maintenance.
- Foreign bodies, dirt or scale introduced by the water supply.

TROUBLE SHOOTING

PROBLEM	INDICATOR	CAUSE	SOLUTION
No water coming out of the faucet:	1. Sensor blinks continuously when user's hands are within the sensor range.	Low battery.	Replace battery.
	2. Red light in the sensor eye does not appear when the user's hands are within the sensor range.	1. Range is too short.	Increase the sensor range.
		2. Range is too long.	Decrease the sensor range.
	3. Red light in the sensor eye blinks when the user's hands are within the sensor range.	3. Battery is completely flat	Replace the battery.
		4. Unit is in "Security Mode"*	
		5. Sensor is picking up reflections from a mirror or other object.	Eliminate cause of reflection.
1. Connectors between the electronic unit and solenoid valve are disconnected.		Connect the electronic unit connectors properly to the solenoid valve.	
2. Debris or scale in solenoid valve.		Unscrew the solenoid valve, pullout the plunger and the spring, and clean them.	
Water flow from spout does not stop:	1. Sensor blinks when the user's hands are within the sensor range.	3. The central orifice of the diaphragm is clogged or the diaphragm is torn	Clean the orifice or replace the diaphragm.
		4. The water supply pressure is higher than 6 bar.	Reduce the water supply pressure.
		5. The water supply pressure is under 6 bars and yet the pressure inside the body is higher. This situation could be caused by a sudden increase of the water supply pressure. The back-check valve prevents it from dropping and keep trapped inside the product even when the water supply pressure decreased under 6 bars.	Shut the water supply off and unscrew one of the flexible pipes in order to reduce the pressure trapped in the product.
	2. Red light in the sensor eye does not appear when user's hands are within the sensor range.	Debris or scale in solenoid valve.	Clean the orifice or replace the diaphragm.
		1. Sensor is dirty or covered.**	Clean or eliminate interference.
		2. Sensor is picking up reflections from a mirror or other object.**	Decrease the sensor range or eliminate cause of reflection.

* "Security Mode": If the sensor is covered for more than 90 sec. the faucet will automatically shut off water flow. To return to normal operation remove any blockage.

** In this case, the water flow will stop anyway after 90 seconds because of the security time.

STERN

STERN ENGINEERING LTD.

15 Gan Rave Blvd., 81222 Gan Rave, Yavne, Israel

Tel: 972-8-9326000, Fax: 972-8-9326025, export@sternfaucets.com

www.sternfaucets.com



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