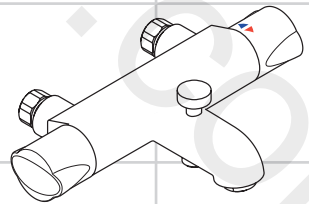


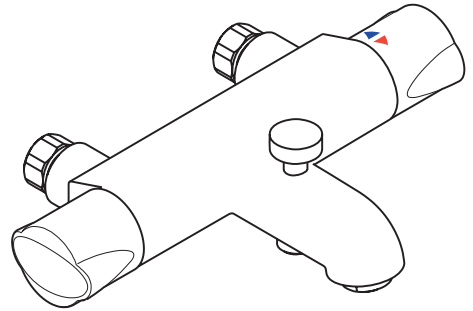
EN Instructions for use / assembly instructions



Ecomax
Bath / Shower
14242000

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The **Ecomax Bath / Shower 14242000** meets the requirements of the **TMV2 Scheme**.

If there are any queries regarding this product or its installation, please contact the Hansgrohe technical hotline: **01372465655**

Safety and Important Information

Hansgrohe products are safe provided they are installed, used and maintained in accordance with these instructions and recommendations.

Please read these instructions thoroughly and retain for future use.

The plumbing installation of this thermostat mixing valve must comply with the requirements of UK Water Regulations/Bylaws (Scotland), Building Regulations or any other regulations specified by the local Water Authority and supplier.

The installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

We strongly recommend that you use a plumber registered with or a member of an Association:

Chartered Institute of Plumbing and Heating Engineering (CIPHE)
Water Industry Approved Plumber Scheme (WIAPS)

Dispose of plastic bags carefully

Keep children well away from the work area.

Check for hidden pipes and cables in the wall before drilling holes.

The unit must be mounted on a finished waterproofed wall surface (usually tiles).

If you are using power tools (e.g. to drill holes) wear safety glasses and always disconnect tools from the power supply after use.

Do not operate the shower unit if the hand shower or spray hose has been damaged or is blocked.

Do not block the flow of water from the hand shower, by placing it on your hand or any other part of your body or foreign object.

The thermostatic unit should be serviced annually by a qualified person to ensure maximum safety during use.

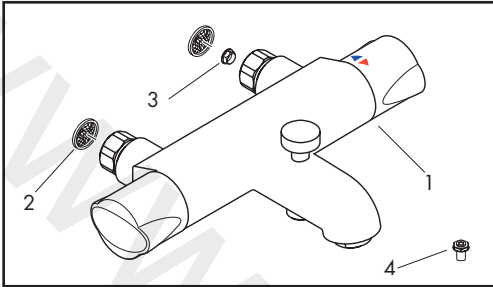
The thermostatic mixing valve will be installed in such a position that maintenance of the TMV and its valves and the commissioning and testing of the TMV can be undertaken.

The mixer is fitted with check valves (page 17 #94074000). There are filters on the thermostatic element too (page 17 #94282000).

The fitting of isolation valves is required (preferred location page 6 and 7 Installation Requirements)

Pack Contents

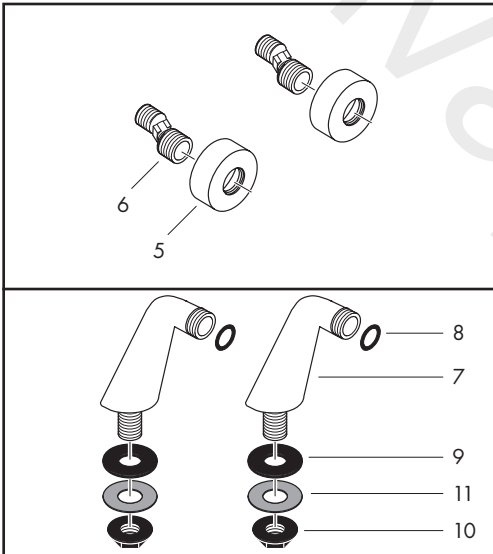
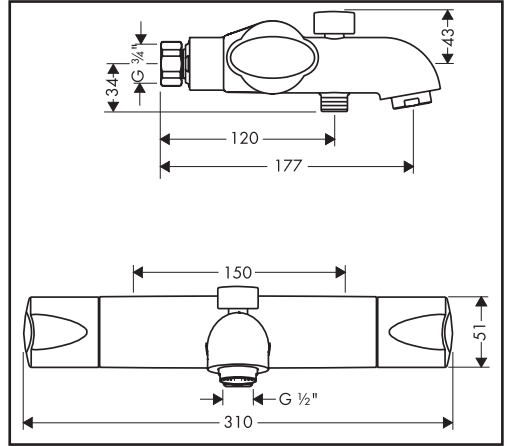
Please check that you have been supplied with the following:



Thermostat Bath / Shower

- 1 Ecomax Bath/Shower
- 2 Mesh washers
- 3 Flow limiter (when assembling the flow limiter, the TMV2 certificate is invalid)
- 4 Diverter fixing device

Dimensions



Optional accessories

- 5 Escutcheons
- 6 S-unions
- 7 Pillar unions
- 8 Small seals
- 9 Large seals
- 10 Fixing nuts
- 11 Fibre washers

Technical Data

This thermostatic valve will suit supplies of:
HIGH PRESSURE (HP-S-T)

Operating pressure:	max. 10 bar
Recommended operating pressure:	1 - 5 bar
Test pressure:	16 bar
Hot water temperature:	max. 70 °C
Recommended hot water temp.:	65 °C
Rate of flow:	36 l/min. @ 3 bar
Maximum outlet temperature:	43 °C +/-*
Safety check:	40 °C
Hot water connection:	Left hand
Cold water connection:	Right hand
Minimum difference between hot water and mixed water temperature:	6 K
Hot and cold supply pressure should be balanced	

Mixed water temperature

Application	Mixed water temperature (at point of discharge).
Bidet	38 °C max.
Shower	41 °C max.
Washbasin	41 °C max.
Bath (44 °C fill)	44 °C max.
Bath (46 °C fill)	46 °C max.

* For preset outlet temperature adjustment – See page 14 „Commissioning“.

NB. If a water supply is fed by gravity then the supply pressure should be verified to ensure the conditions of use are appropriate for the valve. Valves operating outside of these supply conditions cannot be guaranteed to operate as a TMV2 valve.

Recommended outlet temperatures

The BuildCert TMV scheme recommends the following set maximum mixed water outlet temperatures for use in all premises:

- 44 °C for bath fill but see notes below;
- 41 °C for showers;
- 41 °C for washbasins,
- 38 °C for bidets.

The mixed water temperatures must never exceed 46 °C. The maximum mixed water temperature can be 2 °C above the recommended maximum set outlet temperatures.

Note: 46 °C is the maximum mixed water temperature from the bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent in thermostatic mixing valves and temperature losses in metal baths. It is not a safe bathing temperature for adults or children. The British Burns Association recommends 37 to 37.5 °C as a comfortable bathing temperature for children. In premises covered by the Care Standards Act 2000, the maximum mixed water outlet temperature is 43 °C

Supply Conditions TMV2

Operating pressure range	High pressure
Maximum static pressure - bar	10
Flow pressure, hot and cold - bar	0.5 to 5
Hot supply temperature - °C	55 to 65
Cold supply temperature - °C	5 to 25

Operating pressure range	Low pressure
Maximum static pressure - bar	10
Flow pressure, hot and cold - bar	0.1 to 1
Hot supply temperature - °C	55 to 65
Cold supply temperature - °C	5 to 25

Installation Requirements

This thermostatic mixer valve must be installed in compliance with current Water Regulations. If you have any doubts about the Water Regulation requirements contact your local water services provider or use the services of a professional plumber.

This mixer valve is suitable for use with the following water supply systems:

Gas Combination Boiler (multi-point) 1.0 - 10 bar*

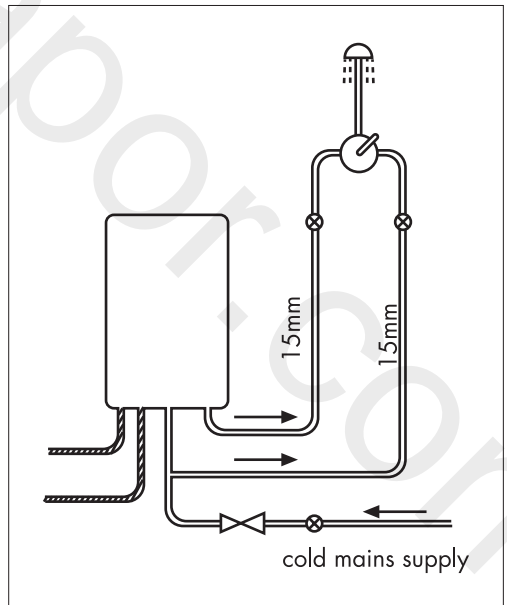
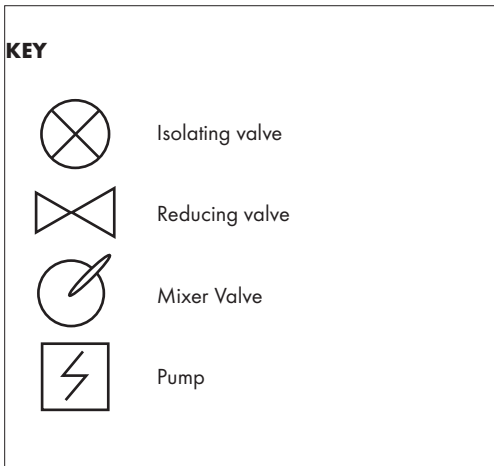
Unvented System (pressure balanced) 1.0 - 10 bar

Pumped System 1.0 - 10 bar

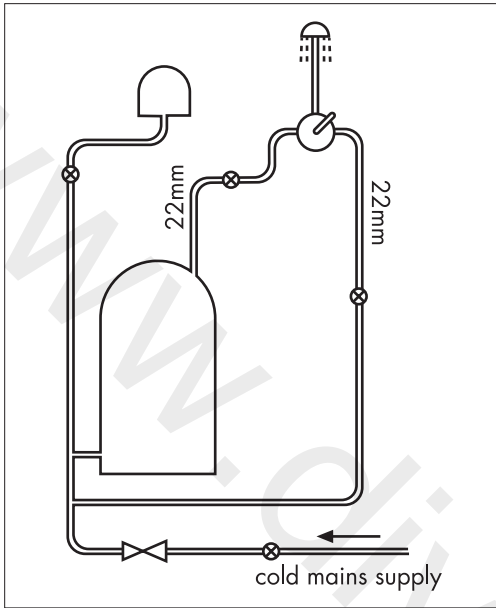
IMPORTANT: If you install this mixer with a gravity fed system, there must be a minimum head (vertical distance) from the underside of the cold water storage tank to the showerhead position of at least 5 metre.

Before connecting the mixer, water should be flushed through the system to remove all debris that might otherwise damage the valve.

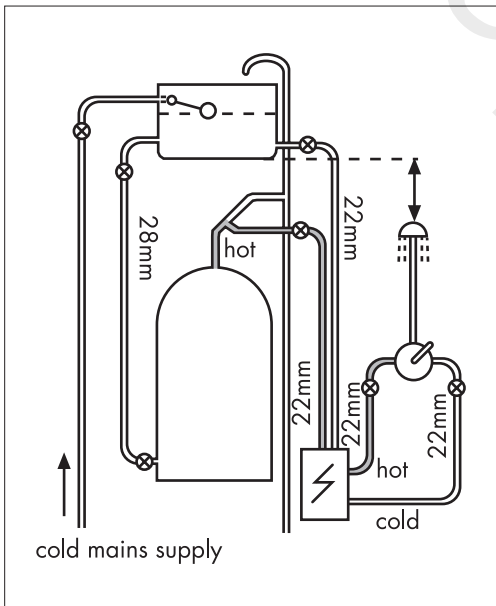
* If pressure is in excess of 3.5 bar, a pressure-reducing valve should be fitted.



Gas Combination Boiler (multi-point)



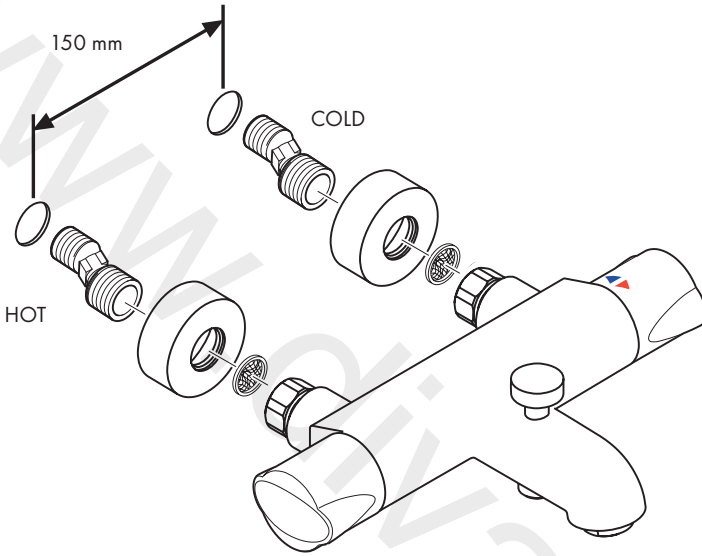
Unvented System (pressure balanced)



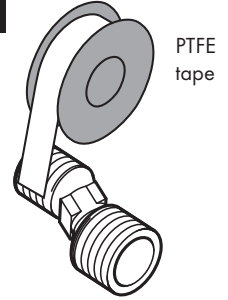
Pumped System

Installation

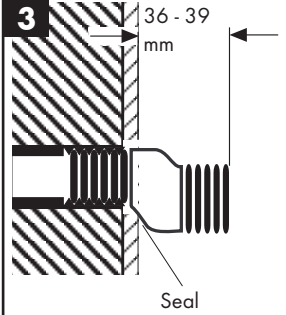
1 Shower Thermostat



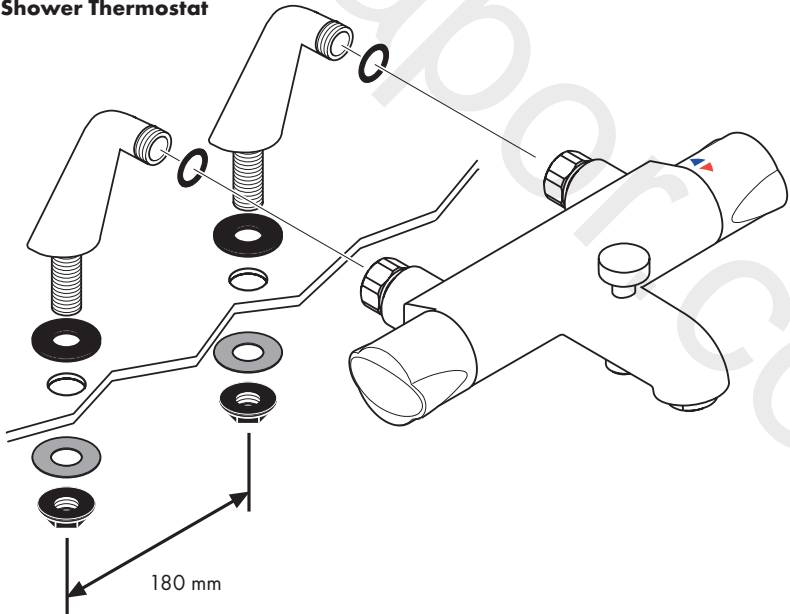
2



3



4 Bath/Shower Thermostat



Bath / Shower Thermostat (positioned over a bath)

The thermostatic mixing valve must be installed in a position that is easily accessible for commissioning and future servicing.

1. The hot and cold water outlets should be 150 mm apart (plus or minus 12mm). Hot on the left and cold on the right (fig. 1). The recommended plumbing fittings are 1/2" back plate elbows (not supplied).
2. Flush through the hot and cold water supplies.
3. Wrap PTFE tape round the S-unions and screw into the backplate elbows. The S-unions must protrude beyond the tiled surface between 32 and 41 mm (figs.2-3).
4. Seal the gap between the S-unions and the tiles (fig.3).
5. Screw the escutcheons onto the S-unions.
6. Fasten the thermostatic mixer onto the S-unions using the union nuts. Align the unit and tighten the nuts (be careful not to damage the chrome finish). The S-unions allow inaccuracies to be compensated for.

Bath/Shower Thermostat (Fitting to the bath using pillar unions).

The thermostatic mixing valve must be installed in a position that is easily accessible for commissioning and future servicing.

1. The pillar unions are designed to fit tap holes on a bath 180 mm apart with hot on the left and cold on the right (fig.4).
2. Flush through the hot and cold water supplies.
3. Place fibre washers into the holes of the chrome union nuts. (DO NOT USE FILTERS WHEN USING PILLAR UNIONS!)

From under the bath fit a large seal washer over the thread then fix with the nuts.
4. Fasten the mixer onto the union pillars using the union nuts (be careful not to damage the chrome finish).

Commissioning and in-service tests

Commissioning

Purpose

Since the installed supply conditions are likely to be different from those applied in the laboratory tests it is appropriate, at commissioning, to carry out some simple checks and tests on each mixing valve to provide a performance reference point for future in-service tests.

Procedure

1. Check that:
 - a) the designation of the thermostatic mixing valve matches the intended application
 - b) the supply pressures are within the range of operating pressures for the designation of the valve
 - c) the supply temperatures are within the range permitted for the valve and by guidance information on the prevention of legionella etc.
2. Adjust the temperature of the mixed water in accordance with the manufacturer's instructions and the requirement of the application and then carry out the following sequence:
 - a) record the temperature of the hot and cold water supplies
 - b) record the temperature of the mixed water at the largest draw-off flow rate
 - c) record the temperature of the mixed water at a smaller draw-off flow rate, which shall be measured
 - d) isolate the cold water supply to the mixing valve and monitor the mixed water temperature
 - e) record the maximum temperature achieved as a result of (d) and the final stabilised temperature

NOTE: The final stabilised mixed water temperature should not exceed the values in Table A.

- f) record the equipment, thermometer etc. used for the measurements

Table A: Guide to maximum stabilised temperatures recorded during site tests

Application	Mixed water temperature
Shower	43 °C
Washbasin	43 °C
Bath (44 °C fill)	46 °C
Bath (46 °C fill)	48 °C

The mixed water temperature at terminal fitting should never exceed 46°C.

If there is a residual flow during the commissioning or the annual verification (cold water supply isolation test), then this is acceptable providing the temperature of the water seeping from the valve is no more than 2 °C above the designated maximum mixed water outlet temperature setting of the valve.

Temperature readings should be taken at the normal flow rate after allowing for the system to stabilise.

The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.

Any TMV that has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturers' instructions.

In-service tests

Purpose

The purpose of in-service tests is to regularly monitor and record the performance of the thermostatic mixing valve. Deterioration in performance can indicate the need for service work on the valve and/ or the water supplies.

Procedure

1. Carry out the procedure **2.** (a) to (e) on page 72 using the same measuring equipment, or equipment to the same specifications.
2. If the mixed water temperature has changed significantly from the previous test results (e.g. > 1 K), record the change and before re-adjusting the mixed water temperature check:
 - a) that any in-line or integral strainers are clean
 - b) any in-line or integral check valves or other anti-backsiphonage devices are in good working order
 - c) any isolating valves are fully open
3. With an acceptable mixed water temperature, complete the procedure **2.** (a) to (c) on page 10.
4. If at step **2.** (e) on page 10 the final mixed water temperature is greater than the values in Table A and / or the maximum temperature exceeds the corresponding value from the previous test results by more than about 2 K, the need for service work is indicated.

NOTE: In-service tests should be carried out with a frequency which identifies a need for service work before an unsafe water temperature can result. In the absence of any other instruction or guidance, the procedure described in „Frequency of in-service tests“ may be used.

Frequency of in-service tests TMV2

The frequency of performing the in-service tests is 1 year maximum.

General

In the absence of any other instruction or guidance on the means of determining the appropriate frequency of in-service testing, the following procedure may be used:

1. 6 to 8 weeks after commissioning carry out the tests given in **2.** on page 10.
2. 12 to 15 weeks after commissioning carry out the tests given in **2.** on page 10.
3. Depending on the results of **1.** and **4.** several possibilities exist:
 - a) If no significant changes (e.g. ≤ 1 K) in mixed water temperatures are recorded between commissioning and **1.**, or between commissioning and **4.** the next in-service test can be deferred to 24 to 28 weeks after commissioning.
 - b) If small changes (e.g. 1 to 2 K) in mixed water temperatures are recorded in only one of these periods, necessitating adjustment of the mixed water temperature, then the next in-service test can be deferred to 24 to 28 weeks after commissioning.
 - c) If small changes (e.g. 1 to 2 K) in mixed water temperatures are recorded in both of these periods, necessitating adjustment of the mixed water temperature, then the next in-service test should be carried out at 18 to 21 weeks after commissioning.
 - d) If significant changes (e.g. > 2 K) in mixed water temperatures are recorded in either of these periods, necessitating service work, then the next in-service test should be carried out at 18 to 21 weeks after commissioning.
4. The general principle to be observed after the first 2 or 3 in-service tests is that the intervals of future tests should be set to those which previous tests have shown can be achieved with no more than a small change in mixed water temperature.

Thermostatic Adjustment

Temperature Limitation

The temperature is limited by the safety stop to 40°C. If a higher temperature is required, it is possible to override the safety stop by depressing the safety button.

NB. It is recommended that for **private domestic use** the maximum mixed water temperature be set at the following factory set values:

Shower Mixer 43°C

Bath/Shower 46°C

Bath/Shower Mixer when installed as type 3 valve the maximum mixed water temperature shall be set at 43°C for both outlets (bath & shower)

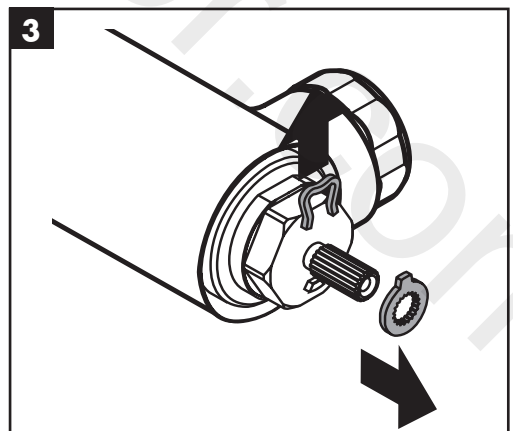
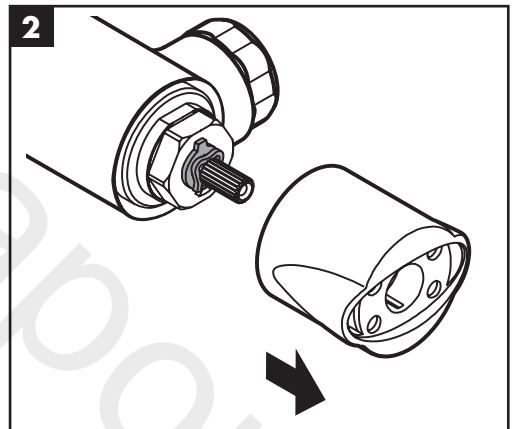
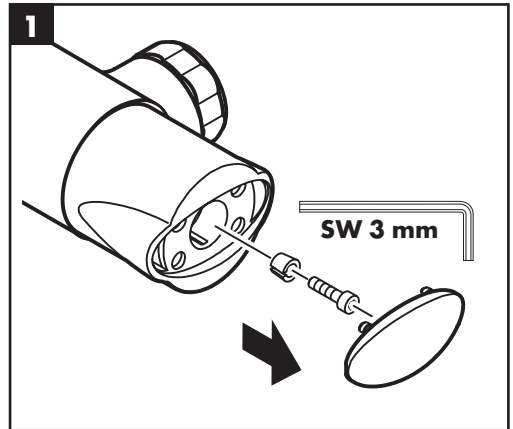
Temperatures can be set by following the procedures under „**Setting thermostat to a maximum temperature**“. This ensures that after correct installation the outlet temperature of the water can never exceed 43°C.

To guarantee a smooth running of the thermostatic element, it is necessary from time to time to turn the thermostat from total hot to total cold. The thermostatic mixer valve should be checked annually by a qualified person to ensure correct operation.

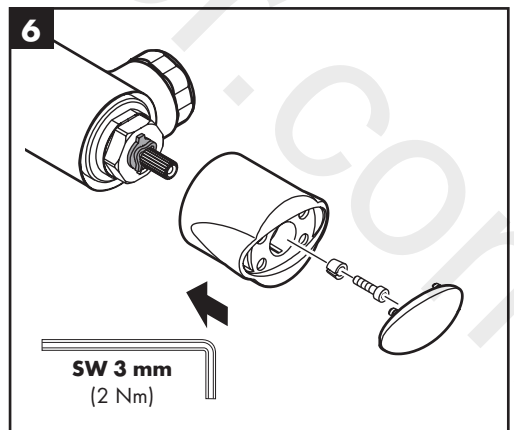
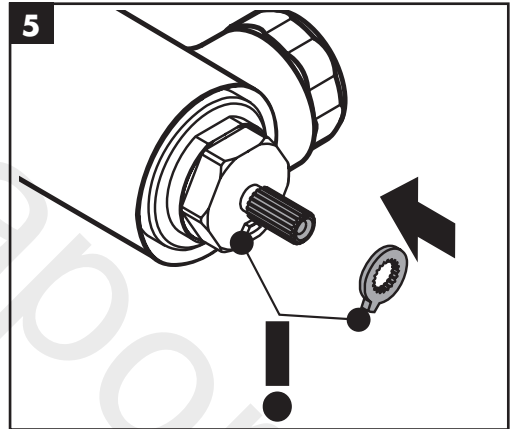
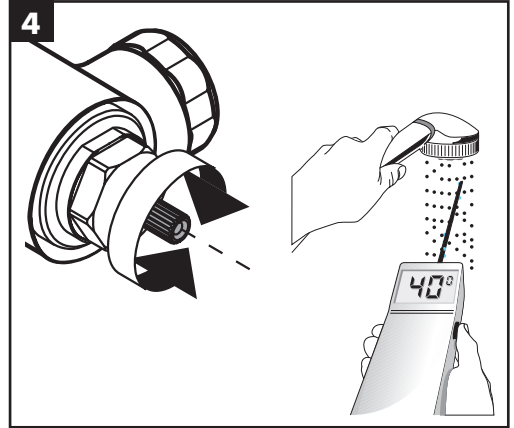
The mixer is fitted with check valves (page 17 #96644000) and filters (page 17 #96922000). If the water flow drops the filters need to be cleaned. For that purpose the mixer has to be removed from the wall.

Calibrating Thermostat

1. If the temperature reading is different to the showering temperature, turn the thermostat handle until a 40°C reading is shown on your thermometer.
2. Remove the handle end cap, undo the screw (fig. 1).
3. Pull off the handle (fig. 2).
4. Remove the circlip from the spindle and slide off the locking ring (fig. 3).



5. Turn the spindle until the required maximum temperature is reached (40°C). You will need to use a thermometer (fig. 4).
6. Replace the locking ring back onto the spindle as shown. Refit the circlip (fig. 5).
7. Replace the handle, screw and end cap (fig. 6).



Operating your Thermostat

Flow ON/OFF Control

Turn the flow control handle (fig.1 a) anti-clockwise to turn the water on and to increase the flow. Turn it clockwise to decrease the flow and turn off.

Temperature Control

Turn the temperature control handle (fig. 1 b) anti-clockwise to increase the water temperature and clockwise to decrease the water temperature.

Thermostat

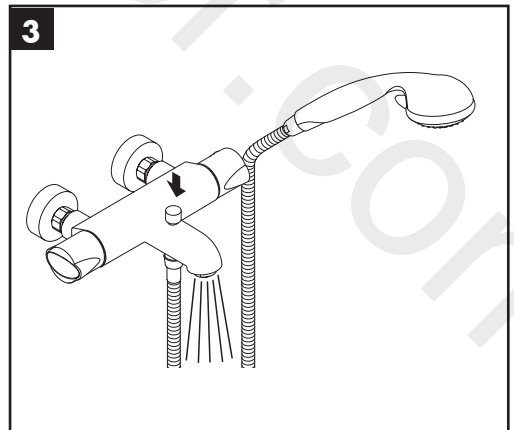
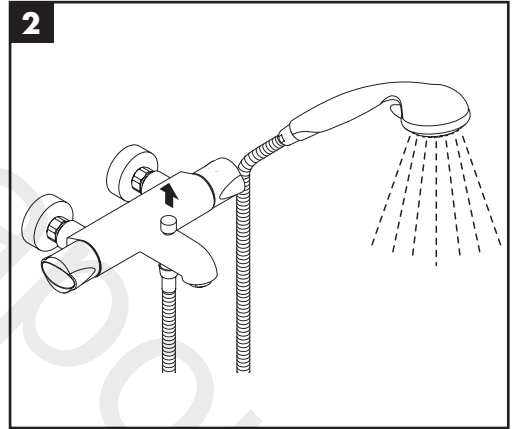
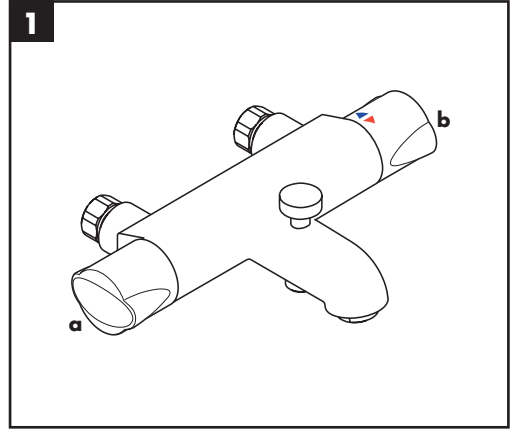
The valve automatically adjusts for changes in flow supply and maintains the outlet set water temperature.

Using Bath / Shower Diverter

When first turned on, the water flow automatically comes from the bath tap.

To divert the water flow to the hand shower, pull up the diverter knob (fig. 2).

To divert the water flow to the bath tap, push down on the diverter knob (fig. 3).



Assembling and Operating the Diverter Fixing Device

If the Bath / Shower Diverter does not work perfect, please assemble the diverter fixing device.

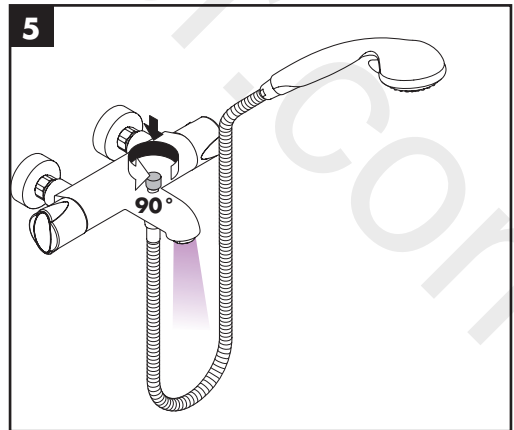
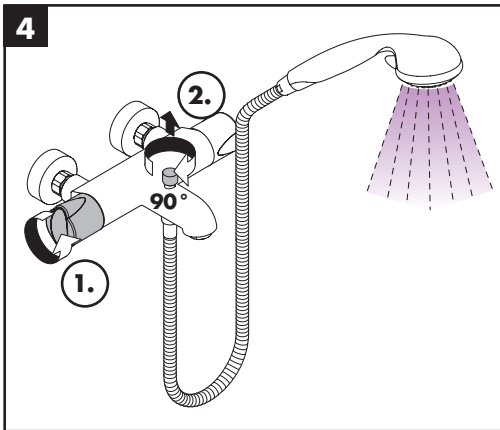
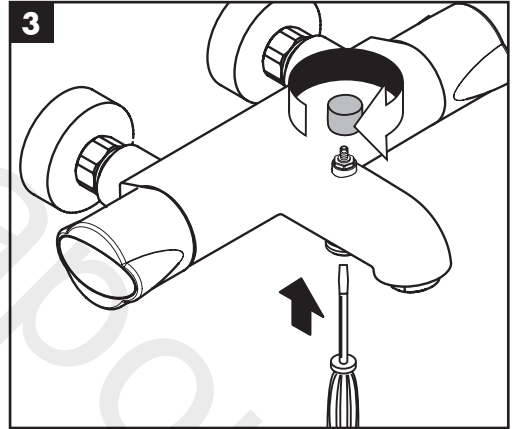
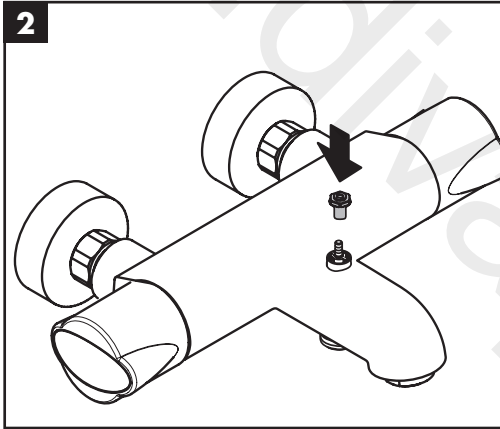
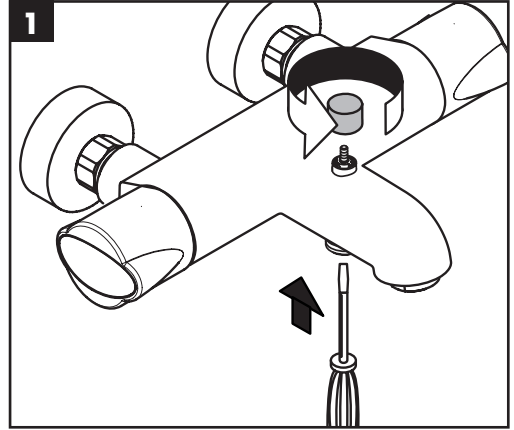
To remove the diverter knob, fix the diverter from below with a screw driver and screw off the diverter knob (fig. 1).

Assemble the diverter fixing device (fig. 2).

Assemble the diverter knob (fig. 3).

To divert the water flow to the hand shower, pull up the diverter knob and turn 90° clockwise (fig. 4).

To divert the water flow to the bath tap, turn the diverter knob 90° counter clockwise and push down (fig. 5).



Cleaning

Cleaning Recommendation for Hansgrohe Products

Today, modern sanitary and kitchen tapware, showers, accessories, washstands, sinks, tubs and radiators consist of very different materials to comply with the needs of the market with regard to design and functionality.

To avoid damage and reclamations, it is necessary to consider certain criteria when cleaning.

With regard to caring for the Hansgrohe products, the following must in principle be heeded:

- Only use cleaning material which is explicitly provided for this type of application.
- Never use cleaning materials, which contain hydrochloric acid, formic acid, concentrated caustic soda, chlorine pale lye or acetic acid, as they cause considerable damage.
- Phosphorus acidic cleaners are only conditionally applicable.
- Mixing cleaning agents is not permitted, generally.
- Never use cleaning materials or appliances with an abrasive effect, such as unsuitable cleaning powders, sponge pads or micro fibre cloths.
- The instructions of the cleaning agent manufacturers have to be followed absolutely.
- Cleaning has to be carried out with a specified cleaner dosage, contact time, object-related and adapted to the needs.
- The building up of calcifications has to be removed by cleaning regularly.
- When using spray cleaners, spray the cleaning solution onto a soft cloth or sponge, never directly onto the Hansgrohe products, as the atomised spray could enter openings and gaps in the Hansgrohe products and cause damage.
- After cleaning rinse thoroughly with clean water to remove any cleaner residue.
- The use of steam cleaners is not permitted. The high temperatures can damage the products.

Important

Residues of toiletries such as liquid soaps, shampoos and shower gels, hair dyes, perfumes, aftershave and nail varnish can also cause damage.

Here too: Carefully rinse with water after use to remove residues.

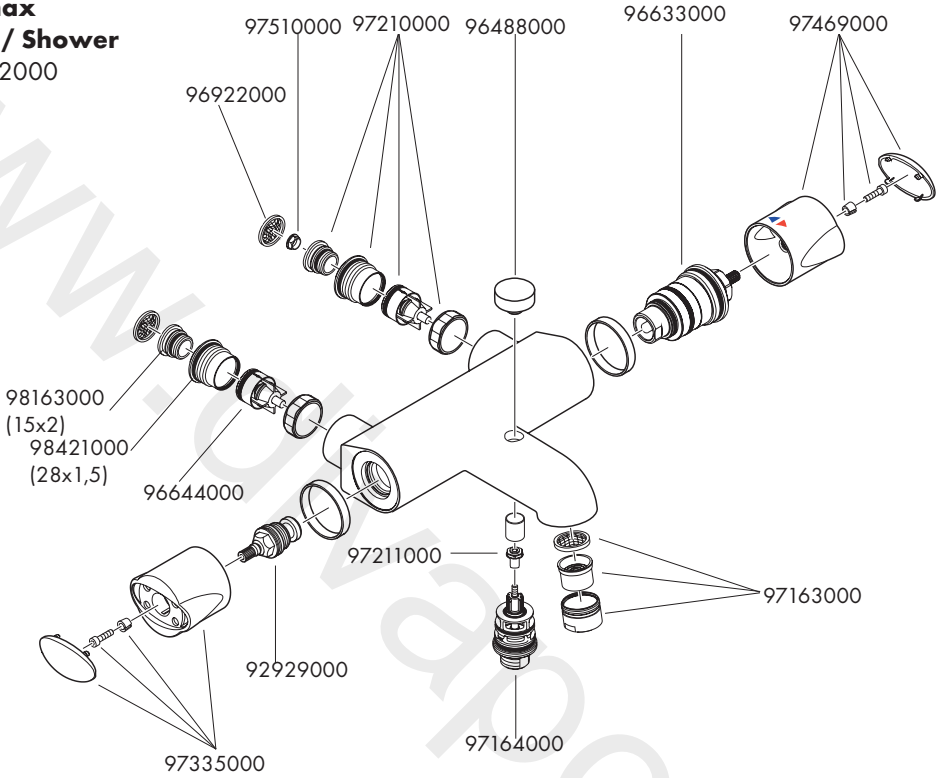
Likewise, do not store any cleaning agents or chemicals under the products, for example in a vanity unit, as the vapours may damage the products.

The damage of already damaged surfaces will deteriorate under the effect of the cleansers.

Components with damaged surfaces must be exchanged, otherwise there could be an injury danger.

Spare Parts

**Ecomax
Bath / Shower
14242000**



Test Certificate

WRAS
14242000 X

Trouble Shooting

Fault	Cause	Remedy
Insufficient water	- Supply pressure inadequate	- Check water pressure (If a pump has been installed check to see if the pump is working).
	- Shower filter seal dirty	- Clean filter insert between shower and hose
	- Filters are dirty #96922000	- Clean the filter / exchange filter
Crossflow, hot water being forced into cold water pipe, or vice versa, when mixer is closed	- Backflow preventers dirty or leaking	- Clean backflow preventers, exchange if necessary
Spout temperature does not correspond with temperature set	- Thermostat has not been adjusted	- Adjust thermostat
	- Hot water temperature too low	- Increase hot water temperature to 42 °C to 65 °C
Temperature regulation not possible	- thermo cartridge calcified	- Exchange cartridge
Shower or spout dripping	- Dirt or sedimentation on valve seat, shut-off unit damaged	- Clean or exchange shut-off unit

Warranty

Hansgrohe guarantees to the consumer that this product is free of production faults. If nevertheless any defect is detected within 5 years from date of purchase, Hansgrohe will remedy this defect free of charge. You will find the conditions and details of this guarantee at www.hansgrohe-int.com/guarantee. Please contact your contracting party to claim your rights under this guarantee. This guarantee does not affect the customer's rights under the respective national legislation.

Technical Hotline

01372465655

E-mail

Technical@hansgrohe.co.uk



www.userview.co.uk

hansgrohe