




**Important: Keep this document**

EPH TMV's are available in 15mm and 22mm compression. These valves are designed primarily for single outlet use. They deliver safe, blended hot water to taps, showers, bidets and other water outlets, making them ideal for use in hospitals, schools and leisure centres.



**CAUTION!** Installation and connection should only be carried out by a qualified person and in accordance with local regulations.

- The valve is not guaranteed to function correctly to the TMV3 specification unless it is installed and used in accordance with these instructions (see conditions of normal use).
- These valves have been tested and certified as being in compliance with BS 7942:2000 and NHS Estates Model Engineerings Specification D 08. Valves operating outside the requirement of these standards are not covered by the TMV3 Scheme and are not guaranteed to operate as type 3 Valves.

## TECHNICAL SPECIFICATION

### Product Range

PRODUCT CODE	DESCRIPTION	SIZE	SETTING RANGE	FLOW RATE
TMV15C	Thermostatic Valve Compression	15mm	30-50 °C	1.1 Kvs
TMV22C	Thermostatic Valve Compression	22mm	30-50 °C	1.1 Kvs

Table 1

### Condition of normal use

OPERATING PRESSURE RANGE	HIGH PRESSURE	LOW PRESSURE
Maximum Static Pressure	10 bar	10 bar
Maximum Dynamic Pressure	5 bar	5 bar
Hot & Cold Flow Pressure	1.0-5 bar	0.2-1 bar
Hot Supply Temperature	52-65 °C	52-65 °C
Cold Supply Temperature	5-20 °C	5-20 °C

Table 2

### Note:

- Inlet temperature must be 12°C greater than desired mixed water temperature.
- The highest flow rates will be achieved under balanced pressure conditions. The pressure at the valve inlets must be within a ratio of 2:1 under flow conditions. The size and layout of pipework and fittings must take this into account.
- Thermostatic Mixing Valves are temperature sensitive devices and must not be subjected to extreme temperature, either hot or cold, in use for installation.
- Maximum hot water temperature 85°C, Minimum cold water temperature 5°C.

# INSTALLATION & OPERATING INSTRUCTIONS

## 1. Pre-installation

Separate isolating valves must be installed on the hot and cold water inlet supplies. To ensure proper performance of the TMV, the isolating valves should preferably be full bore and always be fully open during operation.

The mixing valve is supplied with filter elements but it is advisable to additionally install Y-strainers on the hot and cold water supplies. The isolating valves and strainers should be installed as close as practicable to the location of the mixing valve and should always be in an accessible location.

The hot and cold water supply systems must be thoroughly flushed to remove any dirt/debris that may have accumulated. Failure to do so may adversely affect the performance of the mixing valve.

The system operating conditions of inlet pressures, hot water temperature and hot water flow rates should be determined and confirmed to be within the expected conditions of normal use.

## 2. Assembly

- 2.1 Before installation, the hot and cold water inlet of the mixing valve must be cleared and confirmed. The valve must be correctly connected to the respective supplies.

Note: The valve body is clearly marked with "C" for Cold with a blue indicator; "H" for Hot with a red indicator. Failure to do so is dangerous and invalidates the guarantee. The use of sealing compounds is not recommended.

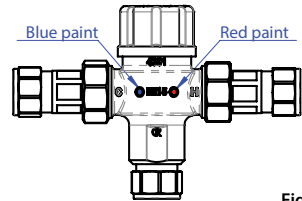


Figure 1

- 2.2 Ensure the main valve assembly bores are free of debris and the end sealing faces are clean.
- 2.3 Check the two tailpieces and confirm they are complete with union nuts and compression nuts and olives.
- 2.4 Insert the sealing washer into the inlets and outlet and screw the inlet and outlet fittings onto the valve body, taking care not to over tighten.
- 2.5 Remove the compression nuts and olives from the tailpieces. Locate the inlet filter screens and insert them into the bore of the tailpieces up to the shoulder.
- 2.6 Assemble the valve to the pipework and ensure the hot and cold water pipes have full penetration into the tailpiece. The compression fittings supplied allow for direct connection to BS22mm OD tube or BS 15mm OD tube, Figure 4 and Table 3.
- 2.7 Tighten the compression nuts ensuring that the end of the pipe remains in contact with the filter element.
- 2.8 After installation check carefully for leaks.

### CAUTION!

- Valves must operate in either a high pressure setting or a low pressure setting. Valves are not capable of operation with, for instance, hot water supply in one pressure range and cold water supply in the other pressure range. In these conditions, an assessment of risk should be carried out. It is necessary to either boost one pressure or reduce the other so that both supplies are within a common pressure range.

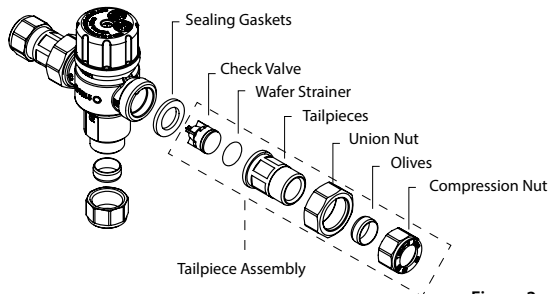


Figure 2

### 3. Adjustment and commissioning

The EPH TMV is supplied factory pre set at 42°C. However, installation conditions will dictate, that the product be adjusted on site.

> **Prior to commencing commissioning, the following checks should be carried out:**

1. The designation of the thermostatic mixing valve matches the application.
2. The supply pressures and temperatures are within the operating range of the valve.
3. Check valves and strainers are provided.
4. The supply temperatures are within the range permitted for the valve and by guidance information on the prevention of legionella etc.

> **If all the above conditions are met, proceed to set the temperature as described below:**

5. Remove the blue plastic protective cap on top of the valve with a screw-driver.
6. Back-out the nut, using a spanner;  
To increase the temperature turn anti-clockwise;  
To decrease the temperature turn clockwise;  
Set the valve to the maximum mixed water temperature in accordance with the valve application (Table 3)
7. When the valve has been installed with the correct conditions of use it is advised that the valve is subjected to exercise prior to the commissioning at the application temperature. Operate the valve from full cold to full heat at least 3 times.
8. With the valve at the full cold position bring the valve to the correct application temperature by turning anti-clockwise. If the valve overshoots this temperature, return the valve to the full cold position, and reset it to the correct temperature +0.2°C.
9. After adjustment replace the cap to lock the valve in position and prevent tampering.

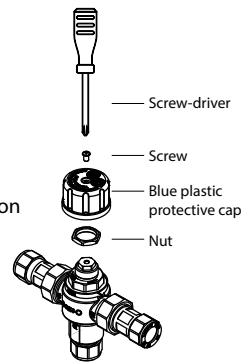


Figure 3.1

#### 10. Commissioning Test sequence:

After adjusting the temperature of the mixed water in accordance with the valve application (see table 1) carry out the following sequences:

- 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 mixed water flow 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 recording the maximum temperature achieved and the final stabilised temperature.
- e. Record the equipment, thermometer etc. use for the measurements.

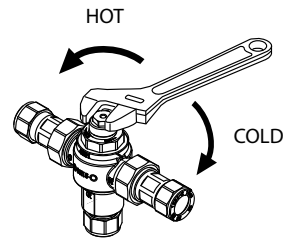


Figure 3.2

Note: The final stabilised temperature should not exceed the values in Table 3.

APPLICATION	MAX. TEMPERATURE
Bidet	38 °C
Shower	41 °C
Washbasin	41 °C
Bath	44 °C
Bath (assisted)	46 °C

Table 3

# Product Drawing TMV15C & TMV22C

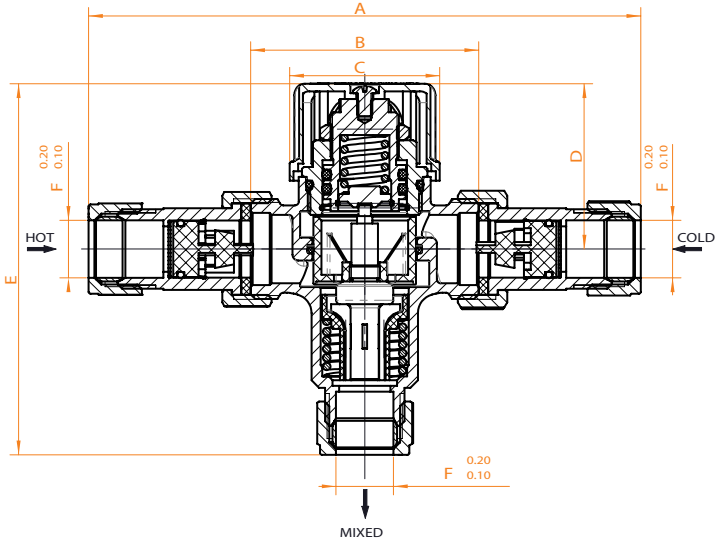


Figure 4

PRODUCT CODE	A	B	C	D	E	F
TMV15C	143	60	Ø39.5	43.5	97	Ø15.1
TMV22C	157.6	63	Ø39.5	42.6	99	Ø15.1

Units in mm

Table 4



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