

Thermostatic Mixing Valve









Model - TMV15-1

PLEASE READ THESE INSTRUCTIONS BEFORE COMMENCING INSTALLATION. UPON COMPLETION OF INSTALLATION ENSURE THE INSTRUCTIONS ARE LEFT WITH THE USER/ MAINTAINER OF THE PRODUCT.

Thermostatic Mixing Valve

I. INTRODUCTION

Thank you for purchasing a Hyco Thermostatic Mixing Valve. The valve can be used with the Hyco Speedflow or Powerflow unit or larger unvented cylinders, where maintaining water supply at a safe and constant temperature is necessary. Tested and approved under the TMV3 scheme the TMV15-1 is ideal for use in many applications including schools, hospitals, public washrooms, restaurants and office and commercial kitchens.


-  THE INSTALLER SHOULD ENSURE THAT THE INSTALLATION COMPLIES WITH ALL CURRENT REGULATIONS AND LEGISLATION.
-  BEFORE COMMENCING INSTALLATION ENSURE THAT THE SUPPLY CONDITIONS ARE CHECKED TO ENSURE COMPLIANCE WITH THE PARAMETERS SHOWN IN THE TECHNICAL SPECIFICATION TABLE (E.G. SUPPLY PRESSURE, TEMPERATURES).
-  ENSURE THAT THE DESIGNATION OF THE VALVE MATCHES THE INTENDED APPLICATION.
-  FLUSH BOTH SUPPLY PIPES BEFORE CONNECTING THE VALVE TO REMOVE ANY DEBRIS.
-  ANNUAL INSPECTION AND MAINTENANCE IS REQUIRED TO ENSURE PROPER PERFORMANCE AND MAXIMUM LIFE. ENSURE THAT ACCESS TO THE VALVE IS NOT OBSTRUCTED SO THAT FUTURE MAINTENANCE CAN BE CARRIED OUT.
-  THE HOT AND COLD WATER SUPPLIES MUST BE CONNECTED TO THE CORRECT CONNECTIONS ON THE VALVE AS PER THE MARKINGS INDICATED ON THE VALVE BODY.
-  THE VALVE SHOULD NOT BE INSTALLED WHERE THERE IS A POSSIBILITY OF THE VALVE BEING DEPRIVED OF WATER OR WHERE DEMAND IS GREATER THAN ANY STORED SUPPLIES.
-  THE HOT SUPPLY TEMPERATURE SHOULD BE AT LEAST 10°C ABOVE THE VALVE'S SET MIXED OUTLET TEMPERATURE.

2. APPLICATION

CODE	OPERATING	PRESSURE	APPLICATION
HP-S	High Pressure	Shower Temperature	41°C
HP-W	High Pressure	Washbasin Temperature	41°C
HP-B	High Pressure	Bidet Temperature	38°C
HP-T44	High Pressure	Bath Fill Temperature	44°C
HP-T46	High Pressure	Bath Fill Temperature	46°C
LP-S	Low Pressure	Shower Temperature	41°C
LP-W	Low Pressure	Washbasin Temperature	41°C
LP-B	Low Pressure	Bidet Temperature	38°C

3. TECHNICAL SPECIFICATION / CONDITIONS FOR USE (TMV3)

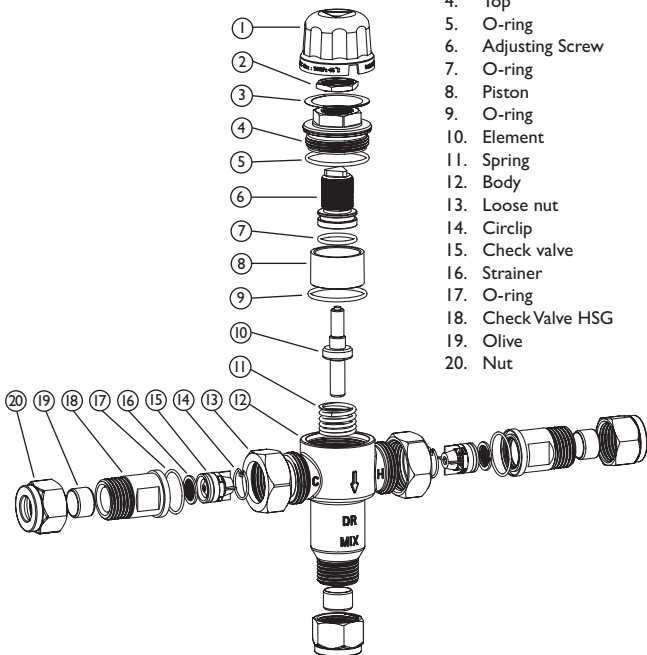
Factory temperature setting	38°C
Maximun hot inlet temperature	85°C
Outlet temperature range	35°C-46°C
Inlet temperature range (Hot supply)	52°C-65°
Inlet temperature range (Cold supply)	5°C-20°C
Minimum hot to mix differential temperature	10°C
Temperature stability	+/- 2°C
Maximun working pressure (Static)	10 Bar Max
D08 working pressure range	Low Pressure 0.2-1 Bar High Pressure 1-5 Bar
Max flow rate @ 1bar differential	21L/Min

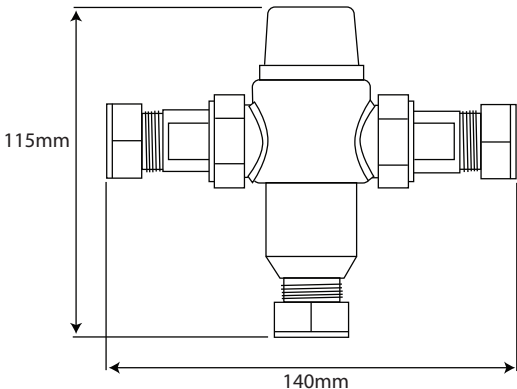
 THE VALVE MAY PERFORM ADEQUATELY OUTSIDE THESE CONDITIONS BUT THE TMV3 SCHEME APPROVAL WILL NOT APPLY. IF IT IS REQUIRED TO WORK WITH PARAMETERS OUTSIDE OF THE ABOVE, A QUALIFIED PERSON MUST CARRY OUT THEIR OWN RISK ASSESSMENT TO ENSURE THE VALVE IS STILL SUITABLE FOR USE.

4. INSTALLATION

- The TMV15-1 TMV3 is designed for single outlet applications however it can be used in multiple outlet applications providing the installation is carried out within the recommended parameters and the flow rate requirement of the customer is met.
- Ensure that the designation of the valve matches the intended application.
- The valve can be installed in any orientation.
- Flush both supply pipes before connecting the valve.

1. Cap
2. Locknut
3. Sticker
4. Top
5. O-ring
6. Adjusting Screw
7. O-ring
8. Piston
9. O-ring
10. Element
11. Spring
12. Body
13. Loose nut
14. Circlip
15. Check valve
16. Strainer
17. O-ring
18. Check Valve HSG
19. Olive
20. Nut





5. COMMISSIONING & RESETTNG THE TEMPERATURE

Since the installed supply conditions may differ from those used in testing and setting the valves during final inspection and a valve may have several designations.

The mixed outlet water temperature

- Ensure that the supply pressures and temperatures are within normal operating parameters.
- Using a small flat headed screwdriver or similar tool, gently prise off the plastic cap.
- Using the moulded triangle shaped tool on the top of the cap, turn the valve clockwise to decrease or anti-clockwise to increase the temperature. A digital hand-held thermometer should be used to measure the outlet temperature correctly.
- Once the correct outlet temperature has been achieved, the valves internal mechanism should be exercised at least three times by alternately isolating the hot and cold supplies. This will cause the piston to travel its full stroke and will ensure the valve is operating correctly. If the set temperature has drifted after this operation, then the commissioning operation should be repeated.

Fail-safe test

Once the valve has been commissioned, a fail-safe shut off test should be performed.

- Isolate the cold supply. The flow should reduce to a trickle within a couple of seconds depending on site conditions.
- If the temperature has not altered, repeat the test for the hot supply.
- If either fail-safe function does not operate, ensure that supply pressures and temperatures are within the valves normal operating parameters. In addition, check that the hot supply temperature is at least 10°C above the valves set mixed outlet temperature i.e. hot to mix differential temperature.

6. MAINTENANCE

The TMV15-1 valve should be tested against the original performance results approximately 3-4 months after installation.

When testing is due the following routine performance checks should be carried out:

- Measure the mixed water temperature at the outlet.
- Carry out the cold fail-safe shut off tests by isolating the cold water supply to the thermostatic mixing valve. Wait for five seconds, if the water is still flowing check that the temperature is below 46°C.
- If there is no significant change to the set outlet temperature (2°C or less change from original setting) and the fail-safe shut off is functioning, then the valve is working correctly and the next service should be scheduled for 6-7 month time.
- If there is a significant change to the set outlet temperature (>2°C), the necessary adjustments should be made and the next service should be scheduled for 3-4 month time.
- Future in-service tests should be carried out at intervals (at least annually) set to those which previous tests have shown can be achieved with no significant changes to the set outlet temperature.

7. CLEANING THE VALVE

- Isolate the hot and cold supplies and remove the valve body from the installation by undoing the adaptor union nuts. Make note of the orientation of the parts as they are removed so that they can be reassembled in the correct manner.
- Remove the check valves and strainers fitted in the adaptors and check for damage, rinse in clean potable water.
- To clean the internals of the main valve body, first remove the cap and then carefully remove the valve headwork by unscrewing the large hex nut (22mm spanner required).
- Slide the piston and thermostat assembly out of the valve body and clean all internal surfaces such as O-rings with a weak solution of scale remover, approved for use with potable water.
- After cleaning, reassemble the valve. Exercise, reset and test the valve as per the Commissioning and Maintenance sections.



INSTALLATION OF WATER TEMPERATURE CONTROL PRODUCTS MUST BE PERFORMED BY QUALIFIED PERSONNEL. THE QUALIFIED INSTALLER SHOULD BE SURE THAT THE PROPER DEVICE HAS BEEN SELECTED FOR THE INSTALLTION.



A FAULTY INSTALLATION CAN CAUSE SCALDING, SEVERE INJURY OR DEATH.



ANNUAL INSPECTION AND MAINTENANCE IS REQUIRED TO ENSURE PROPER PERFORMANCE AND MAXIMUM LIFE. ENSURE THAT ACCESS TO THE VALVE IS NOT OBSTRUCTED SO THAT FUTURE MAINTENANCE CAN BE CARRIED OUT

8. GUARANTEE AND SERVICE POLICY

This product is guaranteed against faulty materials and manufacture for a period of one year from the date of purchase. Hyco will in its sole discretion replace, repair or refund any faulty unit. Incorrect installation, frost damage, and the consequences of limescale deposits are excluded. Consequential costs such as labour charges or damage to fittings and surroundings are expressly excluded.



INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH THE EUROPEAN DIRECTIVE 2002/96/E.

At the end of its working life this equipment must not be disposed of as household waste. It must be taken to a local authority waste collection centre or to a dealer providing this service. Disposing of electrical and electronic equipment separately enables its components to be recovered and recycled to obtain significant savings in energy and resources. In order to underline the duty to dispose of this equipment separately, the product is marked with a crossed out dustbin.



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■ SPACE HEATING

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