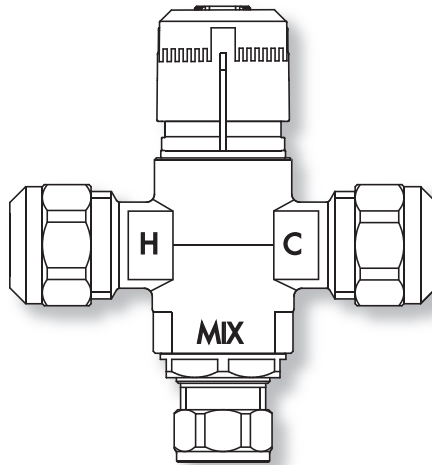


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Intamix Quickfit Thermostatic Mixing Valve QF40015CP & QF40022CP Installation and Maintenance Instructions



inta

Intatec Ltd

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In this procedure document we have endeavoured to make the information as accurate as possible.

We cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further developments or otherwise.

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installation guide

Introduction

The patented Intamix Quickfit thermostatic mixing valve delivers safe and easy installation.

The valve comprises quick-fit connections which enable fast and simple installation whilst also still maintaining leading thermostatic protection.

The Quick-fit solution automatically reduces the number of wet connections, subsequently reducing the chance of any leakage.

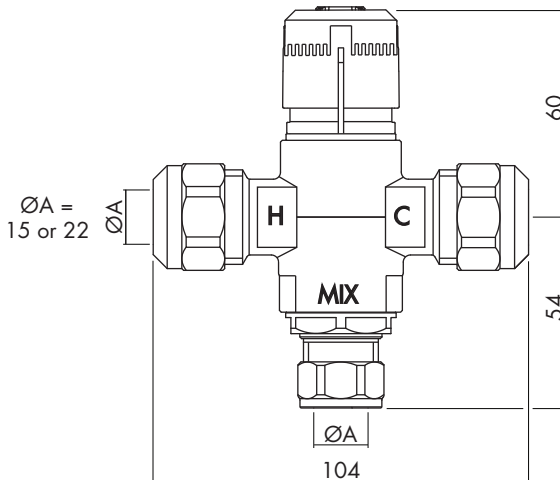
Product Range

15mm Intamix Quick-fit Thermostatic Mixing Valve	QF40015CP
22mm Intamix Quick-fit Thermostatic Mixing Valve	QF40022CP

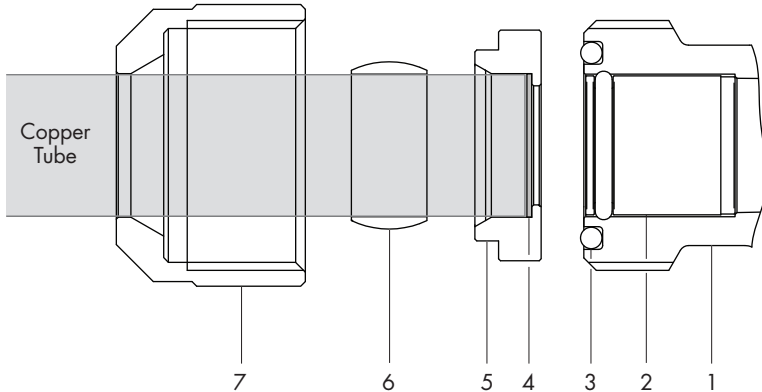
Technical Data

Maximum Operating Pressure:	10 bar
Minimum Operating Pressure:	0.2 bar
Maximum Inlet Temperature:	85°C
Temperature Adjustment Range:	30°C to 50°C
Maximum Pressure Inlet Differential:	5:1
Connections - Compression:	15mm or 22mm
Patented Quickfit Connections:	
Integral Check Valves and Filters as Standard:	

Dimensions



Quickfit Connection



Item	Component	Item	Component
1	Valve body	5	Sealing Plate/Filter Carrier
2	Check valve	6	Olive
3	'O' ring	7	Compression nut
4	Filter		

Assembly

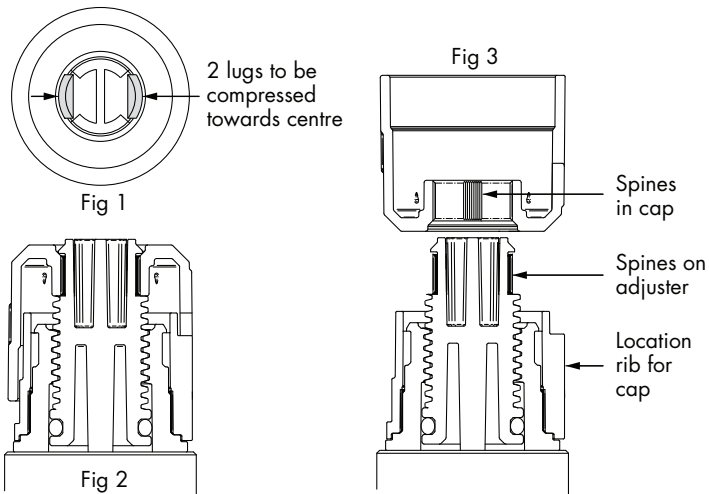
The joint can be made by loosening the compression nut (7) and inserting the copper tube until it connects with the filter (4) in the sealing plate housing (5) before tightening the compression nut with a suitably sized spanner.

When the joint has been made the olive (6) will have gripped the copper tube, the sealing plate/filter carrier (5) will not be permanently attached to the copper tube.

If the thermostatic mixing valve needs to be removed for any reason by unscrewing the 3 compression joints the valve can be removed and the 2 sealing plate/filter carriers can also be removed for cleaning.

If the filters (4) or 'O' rings (3) are damaged they should be replaced before reassembly.

Temperature Setting



Ensure that the valve is commissioned under normal system conditions. The valve **MUST** be commissioned to suit site conditions and the desired outlet temperature set by the installer;

With normal supply conditions established and the hot and cold water supplies running, open the outlet fitting and leave running.

Using a pair of long nosed pliers or similar tool compress the two lugs as shown in Fig 1, this allows the cap to be gently pull from the valve.

Invert the cap Fig 3 and position it onto the white plastic adjuster until the splines in the cap locate on the splines on the adjuster.

Rotate the adjuster anticlockwise to increase the mixed water temperature or clockwise to reduce the mixed water temperature – at all times ensuring the probe of the thermostat is under the flowing water.

We recommend the use of a digital thermostat when setting the valve.

Once the desired outlet temperature is reached, remove the cap and refit it to the valve in the normal orientation ensuring that the slit in the cap is located on the location rib to prevent unauthorized adjustment and push towards the valve until the cap clicks into its retained position.

NOTE: The metal wire in the threads of the adjuster should not be removed as this limits the minimum temperature.

Intamix TMV2 Thermostatic Mixing Valve

The following information is required when the Quickfit thermostatic mixing valve is used in a TMV2 Applications under the requirements of BS EN 1111:1999 "Sanitary tapware – Thermostatic Mixing Valve (PN 10) – General Technical Specification"

Introduction

The thermostatic shower valve has been specifically designed and manufactured to meet the requirements of BS EN1111:1999 TMV2 Type Scheme. The valve has been independently tested and approved as a TYPE 2 valve under the BuildCert TMV2 scheme by the WRc - NSF Testing & Evaluation Center.

Technical Specification / Conditions for use

	High Pressure BS EN 1111
Max. Static Pressure	10 bar
Flow Pressure, Hot & Cold	0.5 - 5 bar
Hot Supply Temperature	55°C - 65°C
Cold Supply Temperature	≤25°C
Temperature Stability	±2°C
Min. Temp Differential (Mix to Hot) for fail-safe	10°C
Max. Pressure Inlet Differential	5:1

NOTE: Valves operating outside these conditions cannot be guaranteed by the Scheme to operate as Type 2 valves.

Approvals

Buildcert Scheme Approval Number:

Details Available on Request

WRAS Scheme Approval Number:

Details Available on Request

Application

The Intamix Quickfit thermostatic mixing valves have been independently tested by WRc - NSF and certified as meeting the requirements of BS EN 1111: 1999 under the TMV2 scheme as being suitable for use on the following designations.

*Note: applies to 22mm valve only.

This product is designed and certified for the following designations;

Application	Range
Basin	High Pressure
Bidet	High Pressure
Shower	High Pressure
Bath Fill*	High Pressure

NOTE: Applies to HP installations only. 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. The installation of thermostatic mixing valves must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

Recommended Outlet Temperatures

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

Application	Recommended Set Mixed Water Temp.
Wash Hand Basin	41°C
Shower	41°C
Bidet	38°C
Bath Fill	44°C

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.

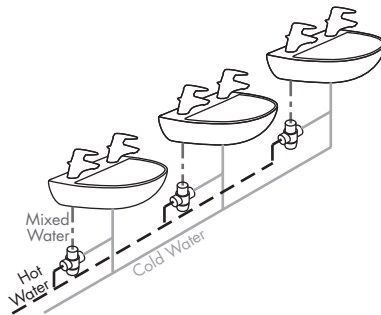
NOTE: 46°C is the maximum mixed water temperature from the bath tap. The maximum temperature takes account of the allowable temperature tolerances inherent in the thermostatic mixing valves and temperature losses in metal baths. It is not a safe bathing temperature for adults or children.

The British Burns Association recommends 37°C to 37.5°C as a comfortable bathing temperature for children. In premises covered by Care Standards Act 2000, the maximum mixed water outlet temperature is 43°C

Installation

IMPORTANT - The following instructions must be read prior to the installation of the Inta range of thermostatic mixing valves, the installer should also be aware of their responsibility and duty of care to ensure that all aspects of the installation comply with all current regulations and legislation. It has been brought to our attention that flushing through water systems using certain chemicals may wholly or partially remove the lubricant from the internal workings of the valve, which may adversely affect its performance. We recommend that following flushing of the system with chemicals; valves are checked for correct operations.

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



The Inta range of thermostatic mixing valves **MUST** be installed in an accessible position to ensure that maintenance, commissioning and testing of the **Inta Thermostatic Mixing Valves** can be undertaken easily.

- 1 It is essential that before installing any of the Inta range of thermostatic mixing valves ensure that the supply conditions of the system to which the valve is intended to be fitted are checked to confirm compliance with the parameters as quoted within the Technical Specification and conditions on which the approval is granted i.e. verify supply temperatures, supply pressures, risk assessment.
- 2 Consideration must be made for the possibility of multiple / simultaneous demands being made on the supply system whilst the Inta thermostatic mixing valves is in use, all practical precautions must be made to ensure that the valve is not affected. Failure to make provision within the pipe sizing etc. will affect the performance of the valve.
- 3 The supply system to which the Inta thermostatic mixing valve is to be installed into must be thoroughly flushed and cleaned to remove any debris, which may have accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer's warranty of the product. Independent filters / check valves and isolation valves must be fitted in conjunction with the valve. In areas that are subject to aggressive water, provision must be made to treat the water supply prior to the supply entering any Inta product.

Installation

- 4 The maximum flow rate of the valve will only be achieved when the supply conditions are achieved as quoted within the Technical Specification, with a flow condition under 1 bar differential pressure.
- 5 The Inta range of thermostatic mixing valves have been designed to ensure that the valve can be installed in any position whether vertical or horizontal, it can be surface mounted or within a supply duct. It is essential that access to the valve is not obstructed for any future maintenance that may be required to the valve or associated fittings.
- 6 We recommend that the Inta failsafe thermostatic mixing valve be installed as close as practically possible to the outlet, which it is serving. In this situation attention must be paid to the maximum distance of pipe work from the mixed water outlet of the valve to any terminal fitting.
- 7 Current guideline recommended a maximum distance of 2m from the outlet of any mixing valve to the furthest terminal fitting / outlet to which the mixing valve is to serve.
- 8 The hot and cold water supplies must be connected to the valve strictly in accordance with the indications on the body of the valve i.e. hot water supply to the hot port of the valve.
- 9 In a situation where one or both of the water supplies are excessive, it is possible to fit a pressure reducing valve to reduce the pressure(s) to within the limits as quoted previously.
- 10 Any thermostatic mixing valve must be fitted with a back flow prevention device, such as check valves to prevent the cross contamination of supplies. The Inta range of thermostatic mixing valves is complete with integral insert check valves and strainers.
- 11 Y Pattern strainers and full-bore isolation valves must be installed in conjunction with the Inta range of fail-safe thermostatic mixing valves – the Y Pattern Strainers and isolation ball valves must be fitted as close as practically possible to the valve.
- 12 It is essential that the Inta range of fail-safe thermostatic mixing valves should not be installed in situations where there is a possibility of the valve being deprived of water or where demands for water are greater than the actual stored supplies.
- 13 To ensure that the performance levels of the Inta range of thermostatic mixing valves are maintained (in the event of cold water failure), the temperature of the hot water supply at the point of entry to the valves must be a minimum of 10°C above the commissioned mixed water discharge temperature.
- 14 The Inta range of fail-safe thermostatic mixing valves must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

Method of Adjusting the Mixed Water Outlet Temperature

IMPORTANT - The following instructions must be read and understood prior to the adjustment of the mixed water outlet temperature and this action **MUST** only be carried out by a suitably qualified person.

- 1 With normal supply conditions established and the hot and cold water supplies running, open the outlet fitting and leave running.
- 2 Using a pair of long nosed pliers compress the two lugs at the top of the cap, this allows the cap to be gently pull from the valve.
- 3 Invert the cap and position it onto the white plastic adjuster until the splines in the cap locate on the splines on the adjuster.
- 4 Rotate the adjuster anticlockwise to increase the mixed water temperature or clockwise to reduce the mixed water temperature – at all times ensuring the probe of the thermostat is under the flowing water.
- 5 We recommend the use of a digital thermostat when setting the valve.
- 6 Once the desired outlet temperature is reached, refit the cap to the valve ensuring that the slit in the cap is located on the location rib to prevent unauthorized adjustment and push towards the valve until the cap clicks into its retained position.
- 7 Set the mixed water temperature to the required temperature. **The temperature at the terminal fitting must never exceed 46°C.**

Commissioning

IMPORTANT - The following instructions must be read and understood prior to the commissioning the Inta range of thermostatic mixing valves. When measuring any mixed water outlet temperature reading, the sensing part of the thermometer probe must be fully submerged in the water. If under any circumstances there are aspects to the installation / system which do not comply with the specification laid down, the valve **MUST NOT** be put into operation until the system / installation complies with our specification. However if all these conditions are met, proceed to set the temperature as follows;

- 1 Ensure the designation of thermostatic mixing valves matches the application and that the system is thoroughly cleaned and free from any debris prior to the commissioning of the Inta range of thermostatic mixing valves. The supply temperatures and pressures are within the valves operating range specified. Providing that all of these conditions are met, please follow the following steps to commission this product.
- 2 The commissioning of the temperatures must be carried out using a suitably calibrated thermometer – preferably a digital thermometer the sensing part of the thermometer probe must be fully submerged in the water when testing.
- 3 Each valve must be commissioned taking into consideration any fluctuations, which may occur within the system due to simultaneous demands. It is advisable that any outlets which are connected to the same supply as the mixing valve is connected to, open during the setting of the mixed water temperature. During commissioning it is advisable to ensure that the water temperatures are established before any attempt to commission.

Commissioning

- 4 Once the supply temperatures are stable and the normal operating conditions are established, the valve can be commissioned, – the temperature setting can be adjusted by removing the cap and temperature locking ring from the valve body (see section method of adjusting mixed water temperature). We suggest that the following sequence is followed when commissioning the valve;
 - 4.1 Set the mixed water temperature to the required temperature, the temperature at the terminal fitting must never exceed 46°C.
 - 4.2 Measure and record the temperature of the hot and cold water supplies at the connection to the valve.
 - 4.3 Measure and record the temperature of the water discharging from the valve.
 - 4.4 Isolate the cold water supply to the valve and monitor the mixed water temperature.
 - 4.5 Measure and record the maximum mixed water temperature and the final temperature. The final temperature found during the test should not exceed the values quoted.
 - 4.6 Record all the equipment used during the commissioning.
 - 4.7 The mixed water temperature at the terminal fitting must never exceed 2°C above set temperature.
 - 4.8 The maximum mixed water supply temperature at the terminal fitting should not exceed 46°C.
- 5 Once the desired temperature is established remove the cap and secure the temperature spindle with the locking ring and replace the cap into its original position to prevent tampering by unauthorized persons. Ensure that the application in which the valve will be used, is appropriate for the approved designation.
- 6 The above information must be recorded and updated on every occasion when any work is carried out on the valve.

In Service Testing

The Inta range of thermostatic mixing valves should be tested against the original set temperature results once a year. When commissioning/testing is due the following performance checks shall be carried out. When measuring any mixed water outlet temperature reading the sensing part of the thermometer probe must be fully submerged in the water.

When testing is due the following performance checks shall be carried out;

- 1 Measure the mixed water temperature at the outlet.
- 2 Carry out the cold water supply isolation test by isolating the cold water supply to the TMV, wait for five seconds if water is still flowing check that the temperature is below 46°C.
- 3 If there is no significant change to the set outlet temperature ($\pm 2^{\circ}\text{C}$ or less change from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required.

In Service Testing

- 4 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.
- 5 If the Inta range of thermostatic mixing valves has been adjusted or serviced it must be re-commissioned and re-tested in accordance with these instructions.

Problem Solving

The following details are supplied for on site queries, should you require any further assistance our Technical Department can be contacted directly on 01889 272 199.

1 Hot water at the cold tap

- i. Operation of the insert check valves is hindered, check the valve is seated correctly.
- ii. Check Valves not fitted.
- iii. Unbalanced hot/cold supply pressure.

2 Fluctuating mixed water temperature

- i. Erratic supply temperatures at the inlets of the valve.
- ii. Starvation of the water supplied at the inlets of the valve.
- iii. Incorrect commissioning of the valve.

3 Erratic flow

- i. Insufficient water supplies.
- ii. Fluctuations in the supply pressures/temperatures.
- iii. Adverse effect created by other draw off points on the system.

4 No flow/reduced flow from valve

- i. In line filters are blocked.
- ii. Insufficient supply pressure.
- iii. Debris obstructing valve operation.
- iv. Valve requires servicing (Servicing kits available on request).

5 Valve does not fail safe when tested

- i. Installation not in accordance with our recommendations.
- ii. The minimum temperature differential not achieved.
- iii. Internal mechanism hindered by debris.

Guarantee

Intatec guarantees the product to be free from defects in materials and workmanship at the date of purchase. If the product is determined to be defective at the date of original purchase due to improper materials or workmanship and you inform us of this within the prescribed warranty period, (five years for showering products, one year for commercial products), of the date of purchase, Intatec will, without charge for labour or parts, repair or (at the discretion of Intatec) replace the product or its defective parts subject to the terms and limitations below. Intatec may replace defective products or parts with new or refurbished products or parts.

Guarantee services will be provided only if the original invoice or sales receipt (indicating the date of purchase and supplier's name) is presented with the defective product within the guarantee period.

The free of charge service may be refused if this information is not available. The guarantee will not apply if the product has not been installed correctly.

This guarantee does not cover (without limitation):

- Periodic maintenance or parts replacement due to wear and tear;
- Damage or defects caused by misuse in operation;
- Installation or use of the product inconsistent with good working practice;
- Failure to maintain the product in accordance with instructions;
- Repair or attempted repair by persons who are not qualified;
- Neglect

Consumers have legal (statutory) rights under applicable laws relating to the sale of consumer products. This guarantee does not affect statutory rights you may have or those rights that cannot be excluded or limited, nor rights against the person from whom you purchased the product. You may assert any rights you have at your sole discretion.

Notes:

Notes:

Notes:

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Please leave this Manual for the User

To activate your product warranty please visit

www.intatec.co.uk

and click on Product Registration

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