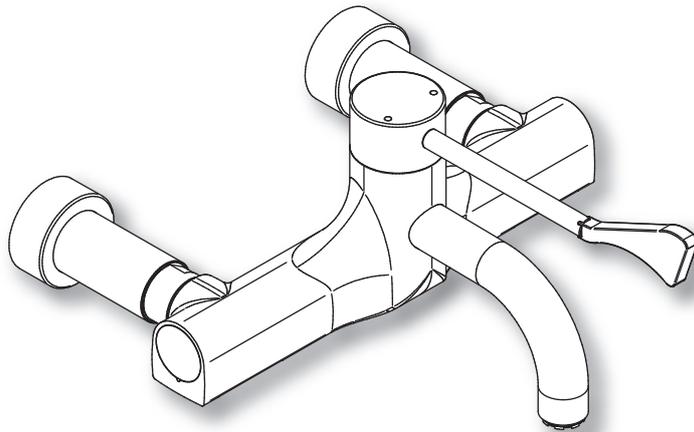


# inta

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Wall & Deck Mounted  
Sequential Control  
Thermostatic Mixer  
**HTMWMRS & HTMDMRS**  
Installation and Maintenance Instructions



# inta

**Intatec Ltd**  
Airfield Industrial Estate  
Hixon  
Staffordshire  
ST18 0PF

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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Tel: **01889 272 180**  
Fax: **01889 272 181**  
email: **sales@intatec.co.uk**  
web: **www.intatec.co.uk**

## Introduction

This installation guide has been produced for the wall and deck mounted thermostatic sequential control mixers with removable spout. These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product, please note;

**We recommend that the installation of any Inta product is carried out by an approved installer.**

The installation must be carried out strictly in accordance with the Water Supply (Water Fitting) Regulations 1999 and any local authority regulations.

If in doubt we recommend that you contact WRAS - Water Regulations Advisory Scheme on Tel: 0333 207 9030, your local water authority - details available on the WRAS website or the Chartered Institute of Plumbing and Heating Engineers on Tel: 01708 472 791.

All products MUST be re-commissioned to suit site conditions to ensure optimum performance levels of the product are obtained.

## Check Content

Before commencing remove all components from packaging and check each component with the contents list.

Ensure all parts are present, before discarding any packaging. If any parts are missing, do not attempt to install your Inta control mixer until the missing parts have been obtained.

## Product Range

HTMWMRS - HTM64 safe touch thermostatic sequential wall mounted tap with removable spout.

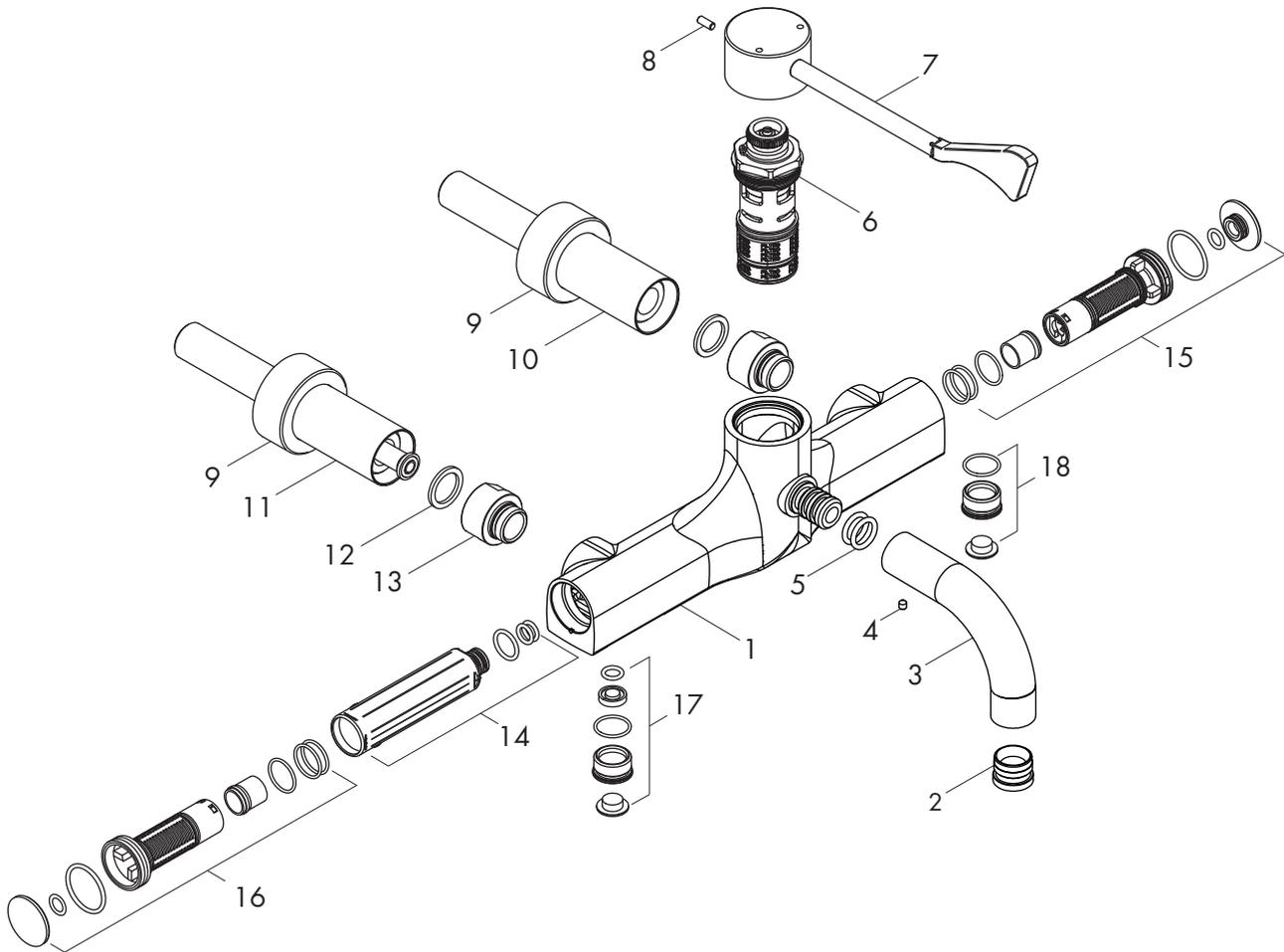
HTMDMRS - HTM64 safe touch thermostatic sequential deck mounted tap with removable spout.

## Technical Data

This Inta thermostatic mixer is suitable for installations on all types of plumbing systems, including gravity supplies, fully pumped, modulating combination boiler, unvented water heater and unbalanced supplies i.e. Cold Mains & Tank Fed Hot. They are not suitable for non-modulating combination boilers.

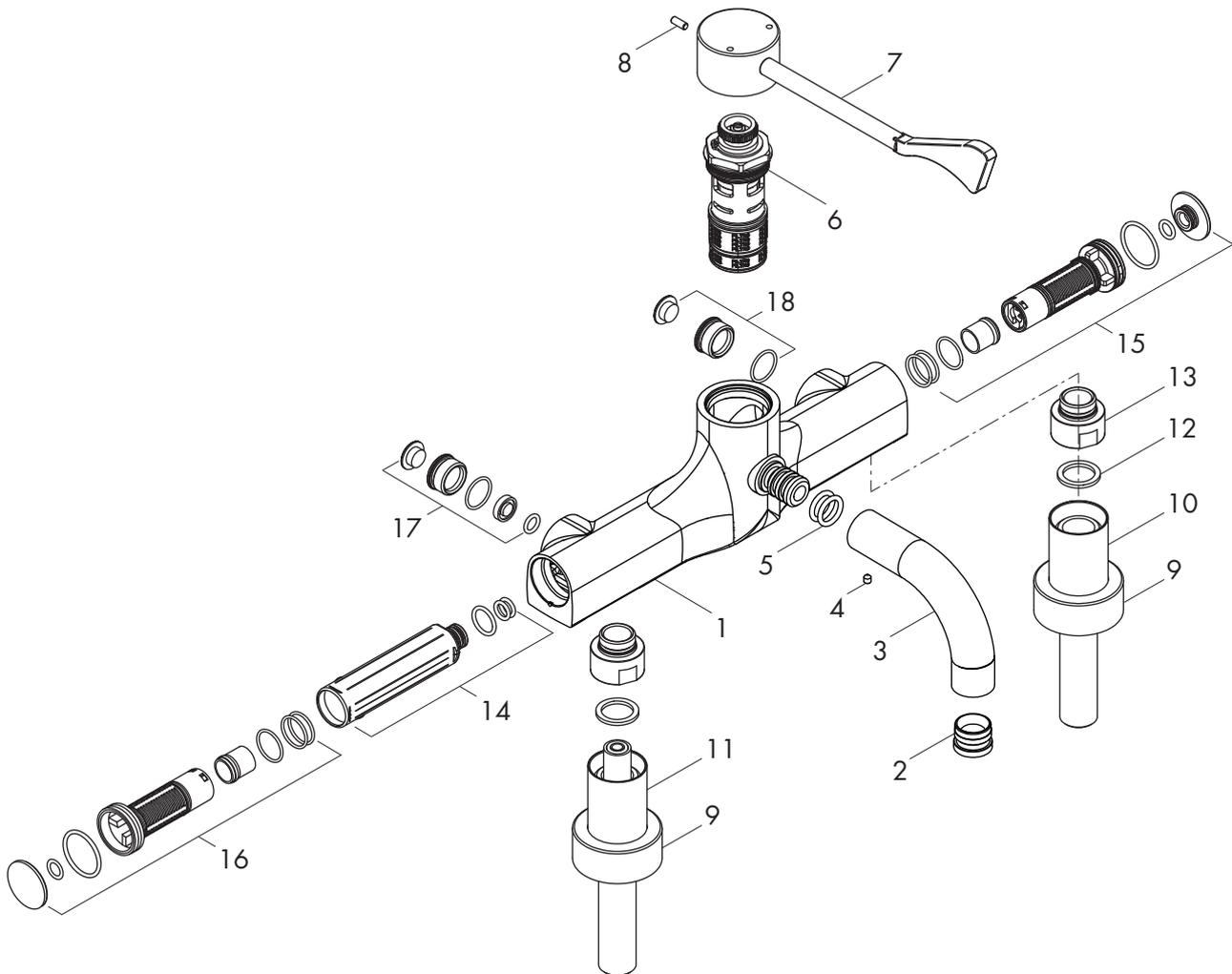
Max Dynamic Pressure	5 bar	Min Operating Pressure	0.2 bar
Max Static Pressure	12 bar	Min Inlet Temperature	10°C
Max Inlet Temperature	85°C	Temperature Stability	± 2°C
Pre Set Factory Temp Setting	43°C	Min Temp Differential to	
Max Unbalanced Pressure Ratio (With Flow Regulators)	15:1	ensure fail-safe between hot and cold supplies	10°C
Max Unbalanced Pressure Ratio (Without Flow Regulators)	5:1		

## Components - Wall Mounted



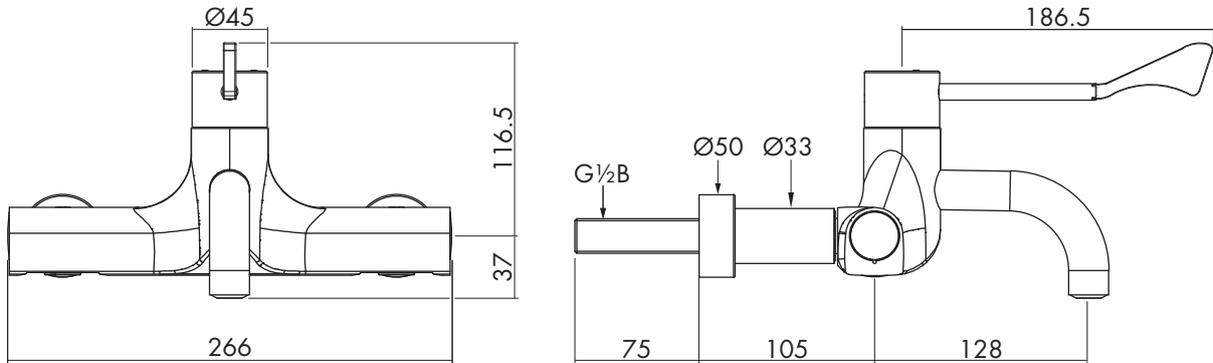
Item	Description	Item	Description
1	Body	10	Cold Water Inlet Tail Assembly
2	Outlet Diffuser	11	Hot Water Inlet Tail Assembly
3	Spout	12	Sealing Washer
4	Spout Retaining Screw	13	Swivel Nut
5	'O' ring	14	Hot Water Insulator
6	Thermostatic Cartridge	15	Cold Water Inlet Assembly
7	Lever	16	Hot Water Inlet Assembly
8	Lever Retaining Screw	17	Hot Water Port Blanking Assembly
9	Concealing Plate	18	Cold Water Port Blanking Assembly

## Components - Deck Mounted

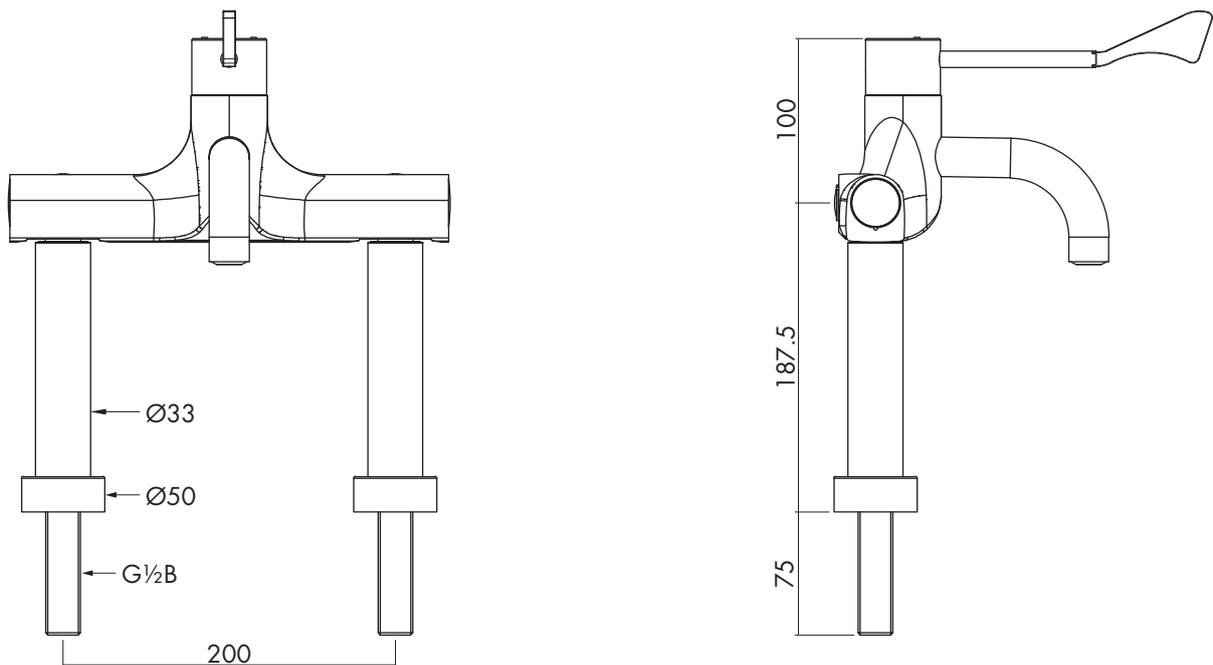


Item	Description	Item	Description
1	Body	10	Cold Water Inlet Tail Assembly
2	Outlet Diffuser	11	Hot Water Inlet Tail Assembly
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7	Lever	16	Hot Water Inlet Assembly
8	Lever Retaining Screw	17	Hot Water Port Blanking Assembly
9	Concealing Plate	18	Cold Water Port Blanking Assembly

## Dimensions - Wall Mounted



## Dimensions - Deck Mounted



## Preparation for Installation

Before starting the installation, ensure that the site conditions are suitable - see Technical Data.

The tap is supplied for wall mounting or deck mounting as shown.

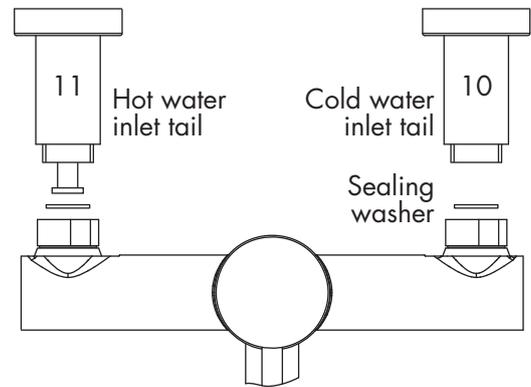
Flush the water supply pipes thoroughly prior to installation. Do not allow debris, PTFE tape or any metal particles to enter the mixer.

The system can be given a final flush to remove small particles of debris through the tap - see page 7.

## Installation

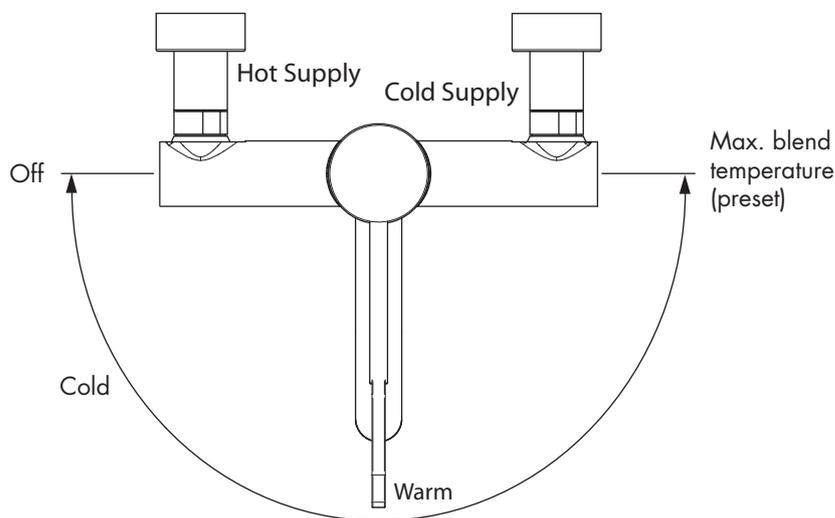
- The tap is supplied as shown in the Components except that the outlet diffuser (2), spout (3), thermostatic cartridge (6) and swivel nut connectors (13) are fitted into the body.
- Fit the concealing plates (9) onto the tailpieces (10) & (11).
- Screw the tailpiece (10) into the cold water inlet of the tap, right hand side when facing the tap.

**ATTENTION:** The hot water inlet connection tail can be identified by the plastic insulator pipe that protrudes past the connecting thread. Care must be taken to ensure the Hot Water Inlet Tail Assembly is connected securely into the hot water inlet of the tap body.



- Screw the tailpiece (11) into the hot water inlet of the tap, left hand side when facing the tap.
- Fit tap assembly to the mounting panel, basin or water proof work top using the back nuts and slide the concealing plates to the panel or work top.
- Connect the supply pipes to the tap, cold on the right, hot on the left.
- Fit the lever to the tap using the screw provided.

## Operation



As the handle is rotated anti-clockwise from the off position the delivered water progresses from cold through warm to the pre-set maximum temperature of approximately 43°C.

## Removing Cartridge

- 1 Unscrew the retaining screw and remove the lever.
- 2 The thermostatic cartridge is a single piece construction and should be unscrewed anti-clockwise from the mixer body using a suitably sized spanner
- 3 When re-installing the cartridge into the mixer body - it should be tightened to a maximum of 15 Nm.

## Trouble Shooting

### Fault

Mixed water temperature is not hot enough.

### Diagnosis

Ensure the hot water supply is at a constant temperature above 60°C.

Check for airlocks in the pipe work.

The water goes cold during operation.

Insufficient stored hot water supply.

Ensure that the boiler is still firing for combi boilers.

Adjust the boiler control to a minimum setting of 65°C not necessarily the best flow rate.

When the water is set at cold, the blended temperature is too hot.

Hot and cold supply connections have been made in reverse.

Max blended temperature is too hot or when set to hot water runs cold.

Check the commissioned maximum temperature of the valve. Check connections to the mixer are not reversed.

Flow of water through the valve is low.

Check the filters are clean and supply pressure is above 0.2 bar.

No flow of water.

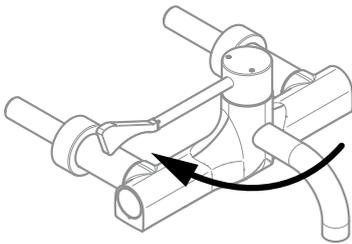
Ensure the mixer has not fail-safed, and check that there is water flow to the mixer and the check valves are not closed - see exploded drawing.

## After Care

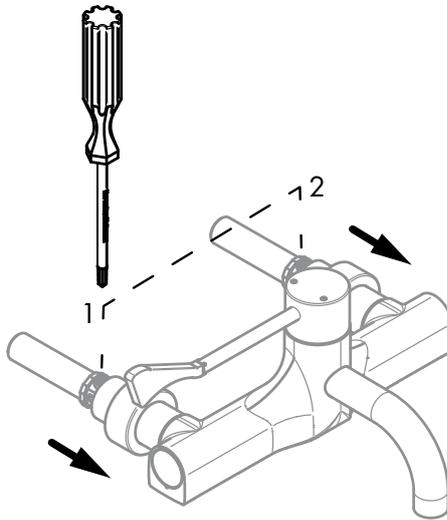
- Periodically the tap should be sterilized to ensure it is not fostering microbial growth - see page 8.
- With all highly polished items, care should be taken not to damage any of the external surfaces.
- We recommend that to ensure the physical appearance of the product and component parts that it is periodically cleaned with a soft damp cloth and a mild detergent. The use of abrasive or solvent cleaners will damage the finish of the product.
- We recommend periodically that the diffuser is cleaned using a suitable scaling solvent. Check first it does not affect the plated surface.
- We recommend that this fitting is serviced at least once a year.
- Only use genuine Inta spare parts, the full list is available on request by ringing the number on the back page.

## System Flushing Procedure

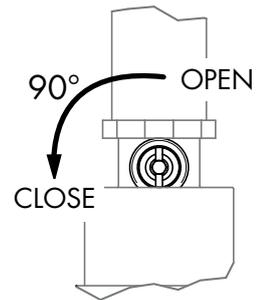
\* - The flushing kit containing the connector plug and outlet elbow is optionally available



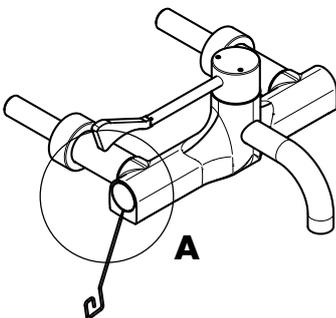
**1** - Move handle to closed position



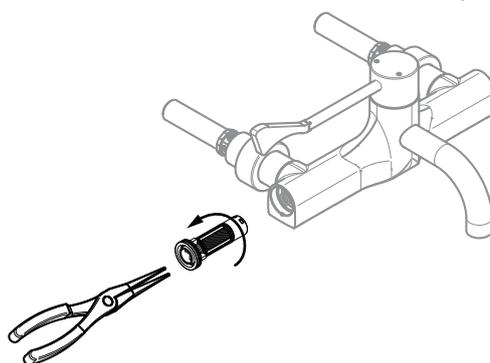
**2** - Isolate both inlet tails



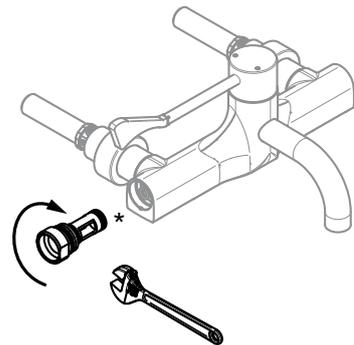
**2A** - Using the ball valves



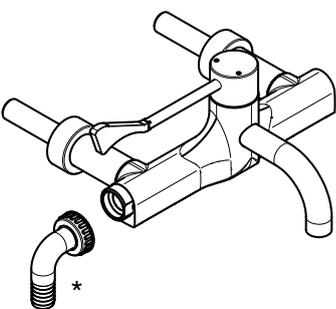
**3** - Remove end cover



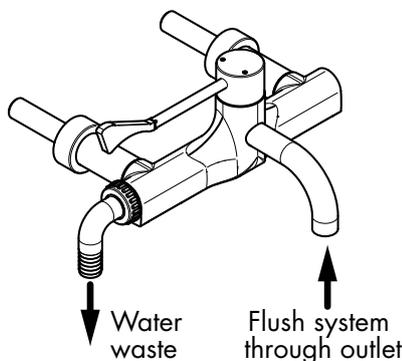
**4** - Remove check valve housing using long nose pliers and rotating anti-clockwise



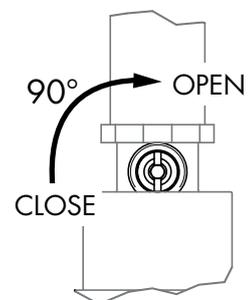
**5** - Screw in connector plug using suitably sized spanner



**6** - Attach outlet elbow

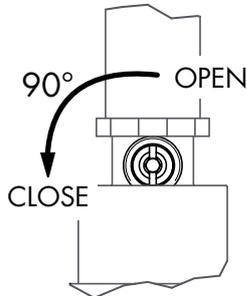


**7** - Flushing

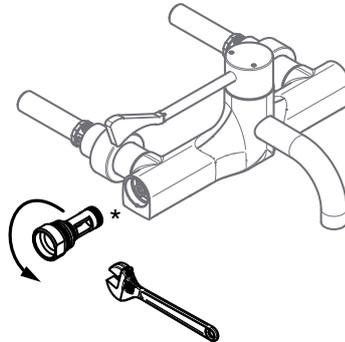


**8** - Stop flushing, reverse procedure and finally open ball valves

## System Flushing Procedure



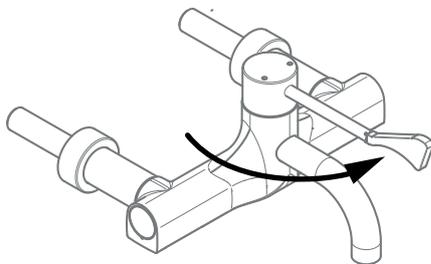
**9** - Close the ball valve on the hot supply



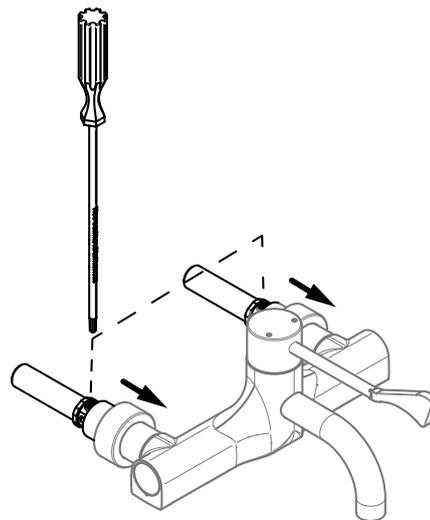
**10** - Unscrew the connector plug using suitably sized spanner and refit the check valve and end cover

**11** - Repeat the procedure for the cold inlet side.

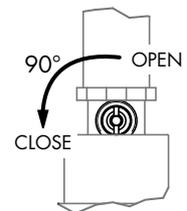
## Sterilization Process



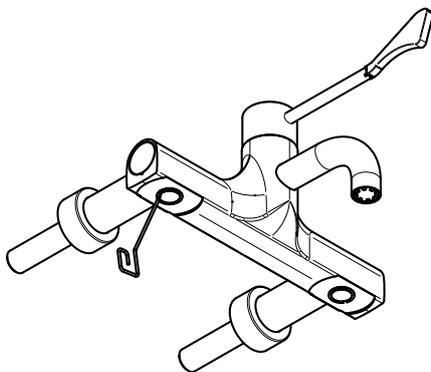
**1** - Move handle to open position



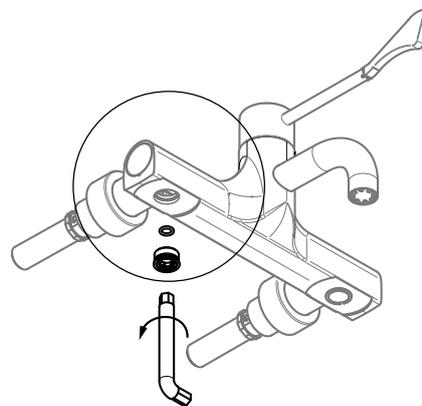
**2** - Isolate both inlet tails



**2A** - Using the ball valves

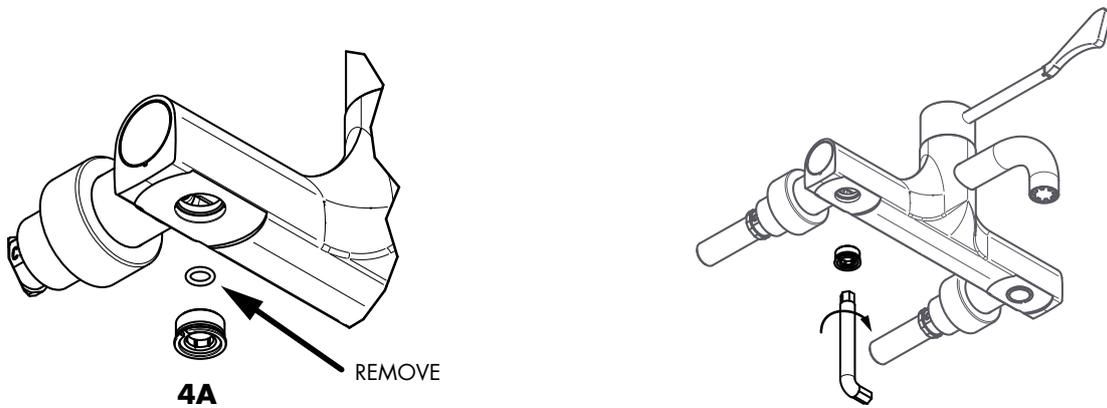


**3** - Remove the cover from each inlet

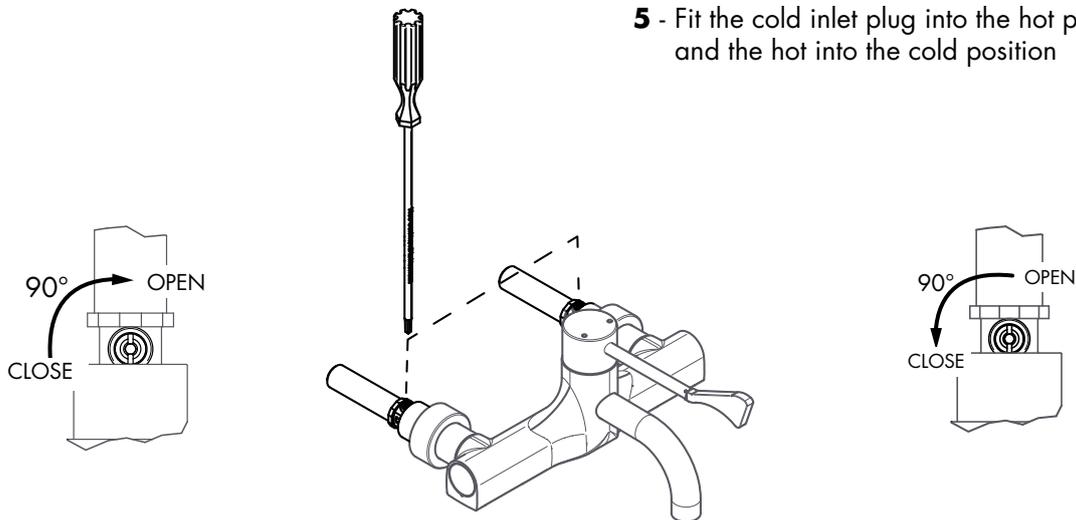


**4** - Remove hot and cold inlet plugs using a 10mm Allen key

## Sterilization Process



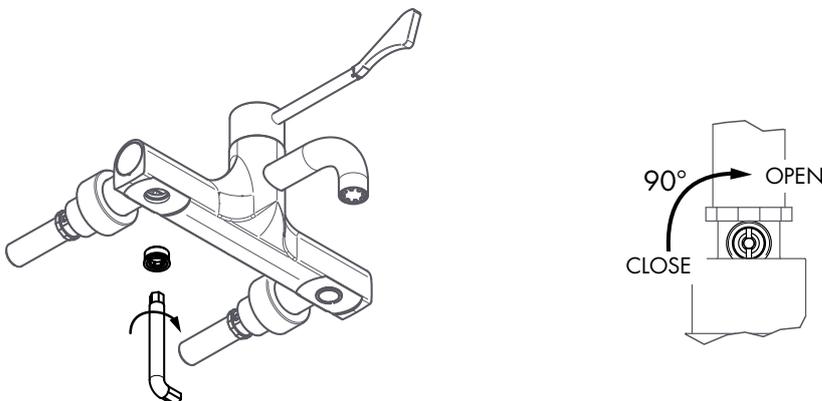
**5** - Fit the cold inlet plug into the hot position and the hot into the cold position



**6** - Open the ball valve

**7** - Open the ball valve on the hot supply to start sterilization procedure

**8** - Close the ball valve



**9** - Refit the hot inlet plug into the hot position and the cold into the cold position and refit the covers

**10** - Open the ball valve and move the handle to the closed position

By carrying out the above procedure you are sterilizing the complete tap with hot water

**When this Mixer is used in a DO8 Application the following Instructions apply:**

## Introduction

**This Inta Thermostatic Mixer has been specifically designed and manufactured to meet the requirements of BS 7942: 2000 and NHS D08. The product has been independently tested and approved as a TYPE 3 valve under the TMV3 scheme.**

## Technical Specification

Outlet Temperature Adjustment Range	30°C to 50°C
Temperature Stability	±2°C
Maximum Hot Inlet Temperature	85°C
Inlet Temperature Range	55°C to 65°C : Hot Supply 5°C to 20°C : Cold Supply
DO8 Working Pressure Range	0.2 to 1.0 bar : Low Pressure 1.0 to 5.0 bar : High Pressure
Min Temp Differential (Mix to Hot) for Fail-Safe	10°C
Max. Pressure Inlet Differential	5 : 1
Max. Flow Rate @ 1 bar Differential	Ø15mm 1500 l/h (25 l/m) Ø22mm 1700 l/h (28.3 l/m)

Operating Pressure Range	High Pressure	Low Pressure
Maximum Static Pressure	10 bar	10 bar
Flow Pressure, Hot and Cold	1 to 5 bar	0.2 to 1 bar
Hot Supply Temperature	55°C to 65°C	55°C to 65°C
Cold Supply Temperature	5°C to 20°C	5°C to 20°C

## Application

This thermostatic mixer has been independently tested by WRc and certified as meeting the requirements of the NHS D08 specification under the TMV3 Scheme as being suitable for use on the following;

Code	Application	Range
HP-W	Basin	High Pressure

## Installation

**IMPORTANT** – The following instructions must be read prior to the installation of any Inta thermostatic mixing valve.

The installer should also be aware of his responsibility and duty of care to ensure that all aspects of the installation comply with all current regulations and legislations.

It has been brought to our attention that flushing water systems using certain chemicals may affect the workings of the valve, which may adversely affect its performance.

## Installation

We recommend that following flushing the system with chemicals, mixers are checked for correct operation.

1. It is essential that, before installing a thermostatic mixing valve, 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 above and conditions on which the approval is granted i.e. verify supply temperatures, supply pressures, risk assessments etc.
2. Consideration must be made for the possibility of multiple/ simultaneous demands being made on the supply system whilst the thermostatic mixing valve is in use, all practical pre-cautions 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 Thermostatic Mixing Valve is to be installed into must be thoroughly flushed and cleaned to remove any debris, which may be accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer's warranty on the product.
3. 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 supplies prior the supplies entering any product.
4. The maximum flow rate of the valve will only be achieved when the supply conditions are achieved as quoted, with a flow condition under 1 bar differential pressure.
5. This Inta thermostatic mixer has been designed to be wall mounted. It is essential that access to the valve is not obstructed for future maintenance, that may be required to the valve or associated fittings.
6. The connection of the hot and cold supplies must be in accordance with the instructions shown above i.e. hot water connected to the left hand side of the valve when the nozzle is facing you.
7. In a situation where one or both the water supplies are excessive, it is recommended to fit a Pressure Reducing Valve, WRAS approved product, to reduce the pressure(s) to within those stated in the Technical Specification previously stated.
8. Any thermostatic mixing valve must be fitted with a back flow prevention device, such as check valves, to prevent the cross contamination of supplies. However if required additional WRAS approved back flow prevention devices should be used.
9. We recommend that Y pattern strainers and full bore isolation valves are installed in conjunction with this product as close as practically possible to the location valve.
10. It is essential that this product 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.
11. To ensure that the performance levels of this Thermostatic Mixing Valve are maintained (in the event of cold water failure) the temperature of the hot water supply at the point of entry to the valve must be a minimum of 10°C above the commissioned mixed water discharge temperature.
12. This Thermostatic Mixing Valve must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

## Commissioning

IMPORTANT – The following instructions must be read and understood prior to the commissioning of a Thermostatic Mixer. 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.

1. Ensure that the system is thoroughly cleaned and free from any debris prior to the commissioning of the valve.
2. The commissioning of the temperature must be carried out using a suitably calibrated thermometer – preferably a digital thermometer.
3. In the absence of other temperatures being specified we recommend that the outlet temperatures quoted in table 1 are used, extracted from the “National Health Service – Health Guidance Note – Safe Hot Water and Surface Temperatures”.

**Table 1**

Application	Recommended Set Hot Water Temperature
Wash Hand Basin	41°C

4. 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 are opened during setting of the mixed water temperature. It is advisable to ensure that the water temperatures are established before any attempt to commission.
5. Once the supply temperatures are stable and the normal operating conditions are established, the valve can be commissioned. We suggest that the following sequence is followed when commissioning the valve:
  - 5.1 Set the mixed water temperature to the required temperature.
  - 5.2 Measure and record the temperature of the hot and cold water supplies at the connections to the valve.
  - 5.3 Measure and record the temperature of the water discharging from the valve for the largest and smallest draw off point.
  - 5.4 Isolate the cold water supply to the valve and monitor the mixed water temperature.
  - 5.5 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 in table 2.

**Table 2**

Application	Maximum Hot Water Temperature
Wash Hand Basin	43°C

- 5.6 Record all the equipment used during the commissioning.
6. Ensure that the application, to which the valve will be used, is appropriate for the approved designation.
7. The above information must be recorded and updated on every occasion when any work is carried out on the valve.

## Maintenance

To ensure that the Thermostatic Mixer maintains a high level of protection, we advise the following in service testing is followed (the same equipment used to commission the valve initially must be used in the following tasks).

1. After a period of between 6 and 8 weeks after commissioning carry out the following.
  - 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 the smallest draw off flow rate.
2. If the mixed water temperature has changed significantly from the previous test results (e.g. > 1 k), record the change and before re-setting the mixed water temperature check that:
  - a) All the strainers are clean
  - b) All the check valves are in good working order
  - c) The isolation valves are fully open.
3. If the mixed water temperature is acceptable, carry out the following:
  - 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 the smallest draw off flow rate.
  - 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 and the final temperature (the final temperature should not exceed the values quoted in table 2)
  - f) Record the equipment used during these tests.
4. If during the test, paragraph 3, the mixed water temperature is greater than the values quoted in table 2 or the maximum temperature exceeds the corresponding values from previous test results by more than 2°C, the value must be serviced.
5. After a period of between 12 and 15 weeks after commissioning, carry out the sequence of tests as described in 1, 2, 3 and 4 of this section.
6. Dependant upon the results obtained from the first two series of tests; there are a number of possible outcomes.
  - a) If no significant change in the mixed water temperatures (e.g. < 1°C) is recorded between commissioning and step 3e above or between commissioning and 5 of this section, the next in service testing should be carried out at a period of 24 to 28 weeks after initial commissioning.
  - b) If a small change (e.g. 1 - 2°C) in the mixed water temperature is 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 change (e.g. 1 - 2°C) in the mixed water temperature is recorded in both of these periods, necessitating adjustment of the mixed water temperature, then the next in service test can be deferred to 18 to 21 weeks after commissioning.
  - d) If significant changes (e.g. >2°C) in the mixed water temperature are recorded in both of these periods necessitating service work, then the next in service test should be carried out at 18 - 21 weeks after commissioning.

## **Maintenance**

7. The general principle to be observed after the first two or three in service tests is that the intervals of future test should be set to those which previous tests have shown can be achieved with no more than a small change in mixed water temperature.
8. In all areas periodic maintenance of the valve and associated fittings i.e. strainers, check valves will ensure optimum performance levels are maintained.
9. On the inlet strainers on both the hot and cold water supply inlet can be removed for cleaning.
10. The built in check valves can be accessed in a similar way to the filters to ensure freedom and correct seating.

# inta

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Please leave this Manual for the User

To activate your product warranty please visit  
**[www.intatec.co.uk](http://www.intatec.co.uk)**  
and click on Product Registration

# inta

**Intatec Ltd**

Airfield Industrial Estate

Hixon

Staffordshire

ST18 0PF

Tel: **01889 272 180**

Fax: **01889 272 181**

email: **[sales@intatec.co.uk](mailto:sales@intatec.co.uk)**

web: **[www.intatec.co.uk](http://www.intatec.co.uk)**

E & O.E

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