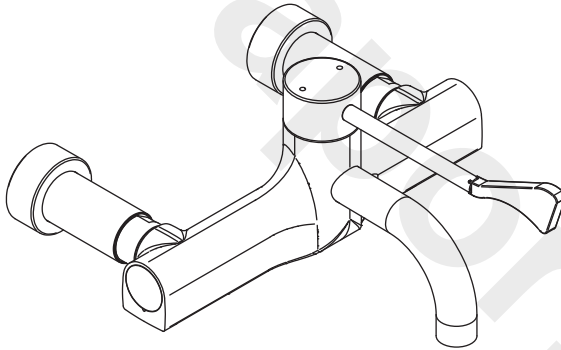


Wall & Deck Mounted  
Sequential Control  
Thermostatic Mixer  
HTMWMCP, HTMDMCP  
HTMWMRS & HTMDMRS  
Installation and Maintenance Instructions



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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.

## Contents

Thank you for choosing the Inta lever operated thermostatic wall mixer.

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## Introduction

This installation guide has been produced for the wall and deck mounted sequential control mixer. 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 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 control mixer until the missing parts have been obtained.

## Product Range

HTMWMCP - HTM safe touch thermostatic sequential wall mounted tap.

HTMDMCP - HTM safe touch thermostatic sequential deck mounted tap.

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

HTMDMRS - HTM 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.

Max Dynamic Pressure	5 bar	Min Operating Pressure	1.0 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	41°C	Min Temp Differential to	
Max Unbalanced Pressure Ratio		ensure fail-safe between hot	
Without Flow Regulator	5:1	and cold supplies	10°C

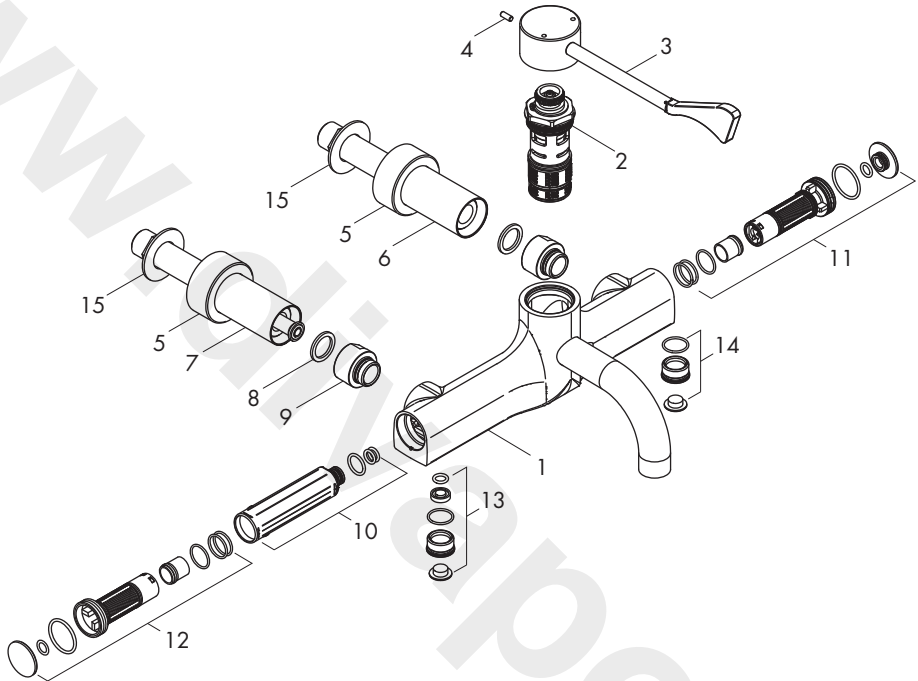
## Preparation for Installation

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

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

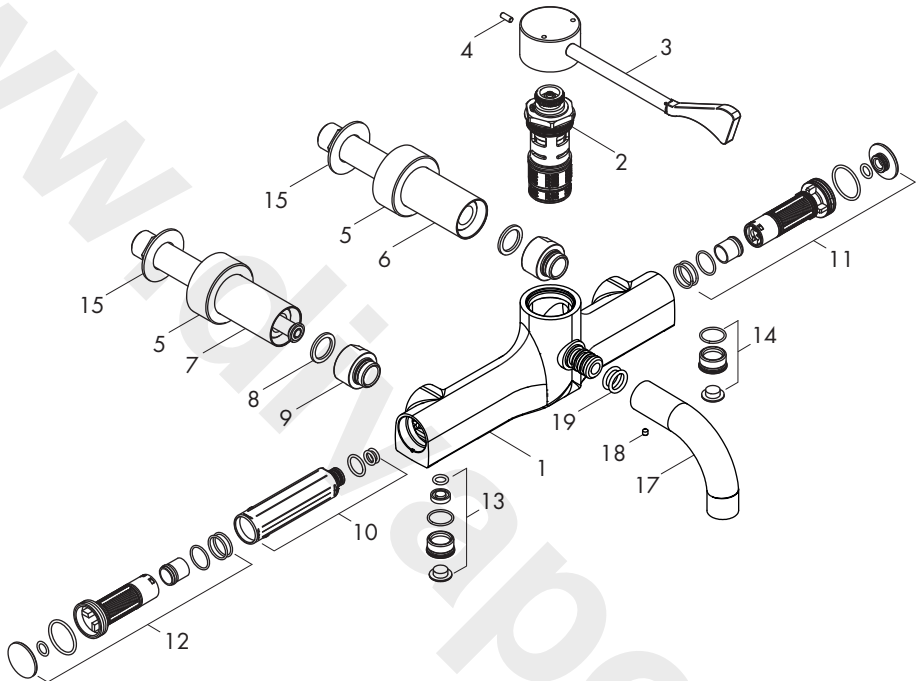
Flush the water supply pipes thoroughly prior to installation - see page 13. Do not allow debris, PTFE tape or any metal particles to enter the mixer.

## Components - Wall Mounted with Fixed Spout



Item	Description	Item	Description
1	Body inc. Outlet Diffuser	10	Hot Water Insulator
2	Thermostatic Cartridge	11	Cold Water Inlet Assembly including 5 l/m flow regulator
3	Lever		
4	Lever Retaining Screw	12	Hot Water Inlet Assembly including 5 l/m flow regulator
5	Concealing Plate		
6	Cold Water Inlet Tail Assembly	13	Hot Water Port Blanking Assembly
7	Hot Water Inlet Tail Assembly	14	Cold Water Port Blanking Assembly
8	Sealing Washer	15	Backnut
9	Swivel Nut		

## Components - Wall Mounted with Removable Spout

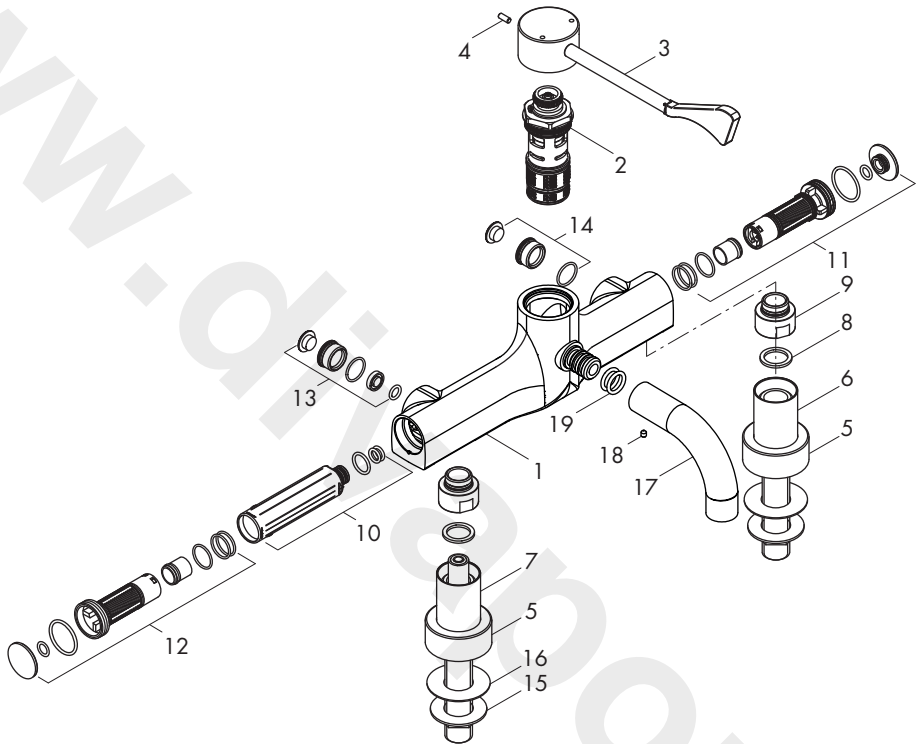


## Additional Components - Removable Spout

Item	Description	Item	Description
1	Body	18	Spout Retaining Screw
17	Spout	19	'O' Ring



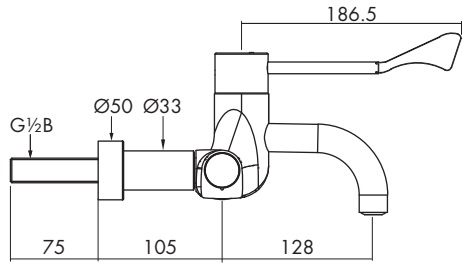
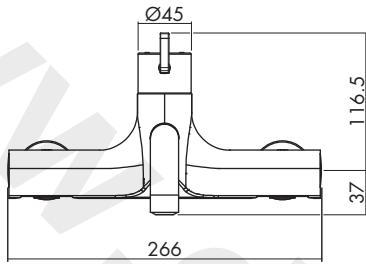
## Components - Deck Mounted with Removable Spout



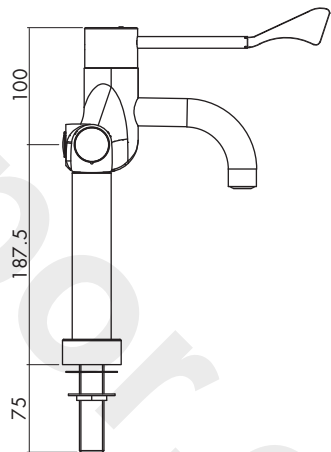
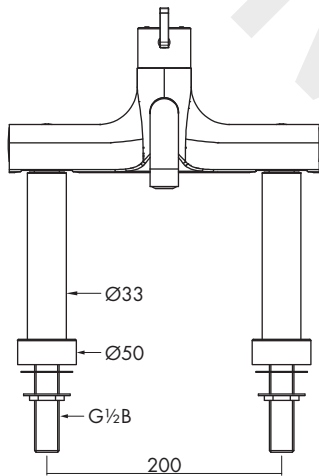
## Additional Components - Removable Spout

Item	Description	Item	Description
1	Body	18	Spout Retaining Screw
17	Spout	19	'O' Ring

## Dimensions - Wall Mounted



## Dimensions - Deck Mounted





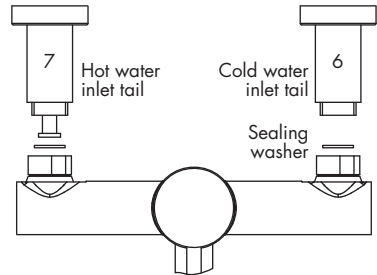
## Installation

### Wall Mounting

- The tap is supplied as shown in the Components section except that the thermostatic cartridge (2) and swivel nut connectors (9) are fitted into the body.
- Fit the concealing plates (5) onto the tailpieces (6) & (7).
- Screw the tailpiece (6) 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 brass 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 (7) into the hot water inlet of the tap, left hand side when facing the tap.
- For wall mounting fit the tap assembly to the mounting panel, using the back nuts (15) and slide the concealing plates to the panel.
- Care should be taken that the maximum panel thickness does not exceed 33mm..
- Connect the supply pipes to the tap, cold on the right, hot on the left.
- Fit the lever (3) to the tap using the grub screw (4) provided.
- Please ensure that the hydraulic installation is completed and that all check valves are open.



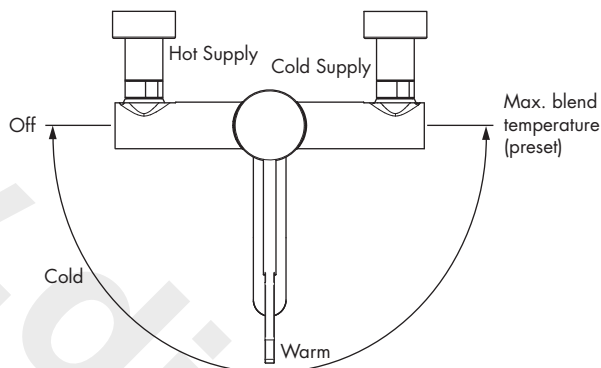
### Deck Mounting

- Screw the tailpiece (6) 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 brass 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 (7) into the hot water inlet of the tap, left hand side when facing the tap.
- For deck mounting fit the tap assembly to the basin, using the washers (16) and back nuts (15) (supplied) and slide the concealing plates to the basin.
- Connect the supply pipes to the tap, cold on the right, hot on the left.
- Fit the lever (3) to the tap using the grub screw (4) provided.
- Please ensure that the hydraulic installation is completed and that all isolation valves are in the open position.

## 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.

## Trouble Shooting

### Fault

Mixed water temperature is not hot enough.

### Diagnosis

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

Re-calibrate as per page 10.

Check for airlocks in the pipework.

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.

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 1 bar.

No flow of water.

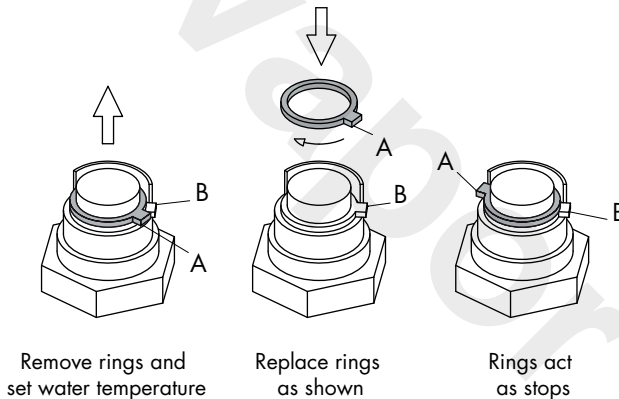
Ensure the mixer has not fail-safed, and check that there is water flow to the mixer and the service valves are not closed - see exploded drawing.

## Re-Calibration

The factory setting at 41°C can be altered to suit site conditions.

Warning: Care must be taken when altering the setting as incorrect calibration can cause injury.

- Remove the grub screw.
- Lift the handle cover off.
- Re-calibrate by removing the temperature stop rings from the cartridge and set the mixed water to the required temperature by temporarily re-fitting the control lever.
- Once the required temperature is achieved replace the two temperature stop rings on the splined spindle of the cartridge as shown. These two rings are used to prevent the temperature of the cartridge from being altered whilst in use. The stop rings should be locked at either end of the operating cycle and will form a physical stop to prevent the cartridge turning (see below)
- Refit the lever assembly and grub screw.
- Recheck the calibrated temperature



## Cartridge removal

- 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 torque of 15 Nm

## Aftercare

- 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 flow straightener is cleaned using a suitable scaling solvent. Check first it does not affect the plated surface.
- The internal bore of the flow straightener must be periodically wiped using a damp cloth.
- We recommend that this fitting is serviced at least once a year.
- Only use genuine spare parts, the full list is available on request by ringing the Technical Helpline number on the back page.

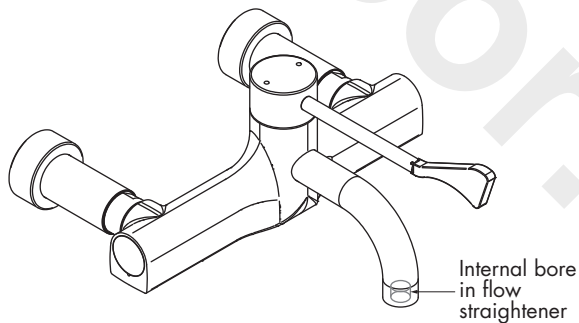
## Removing Spout

The HTMWMS wall mounted and HTMDMRS deck mounted taps have a removable spout to assist with cleaning, disinfection by immersion or sterilisation in an autoclave.

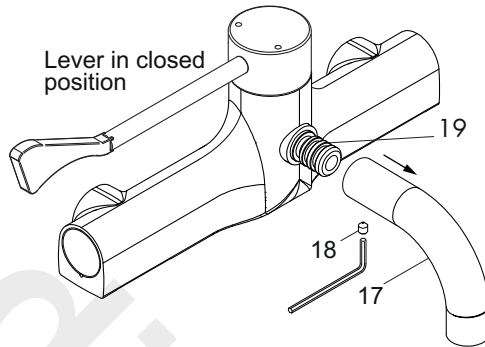
Inta recommend that a replacement spout is available as the tap should not be left without a spout (HTMSP16XX).

Cleaning, disinfection and sterilisation is only necessary if there is evidence of solid deposits around the outlet from the tap or a minimum of once per year.

- Ensure the isolation valve in both supplies to the tap are in the closed position and the lever is also in the closed position to prevent water flow and potential flooding.



## Removing Spout



- Using a suitably sized Allen key unscrew the grub screw (18) located beneath the spout. The grub screw must be removed completely to ensure the 'O' rings are not damaged when the spout is pulled away.
- Pull the spout (17) away from the body of the tap, care should be taken to prevent damage to the chrome finish of the spout.
- Check the condition of the two 'O' rings (19) on the spigot of the tap body, if damaged they must be replaced.

Once the spout has been removed disinfection or sterilisation can commence.

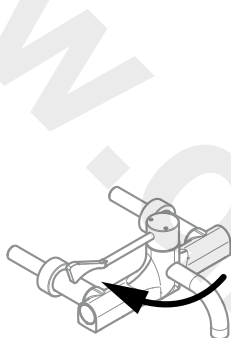
- The spout can be sterilised in an Autoclave following standard sterilisation procedures.
- The spout after disinfection and sterilisation should be stored in such a manner that they will not become infected or dirty before refitting.

## Refitting Spout

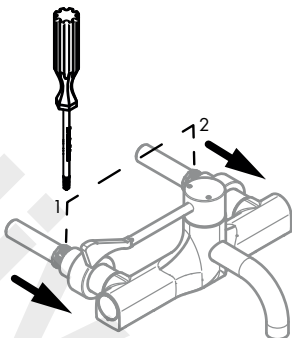
- When refitting the spout lubricate the two 'O' rings with a suitable lubricant to ease re-assembly.
- Fit and re-tighten the grub screw (18).
- Open the isolation valve in both supplies to the tap.
- Only use genuine spare parts, the full list is available on request by ringing the Technical Helpline number on the back page.

## System Flushing Procedure

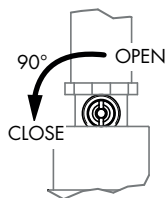
The water system must be thoroughly flushed before attempting to commission or operate this tap to ensure all pipework is clean and free from any debris. This system flushing procedure allows the process to be efficiently conducted with the tap installed. Failure to carry out effective system flushing before commissioning or operating this product could damage or limit the performance of the product and invalidate the product guarantee.



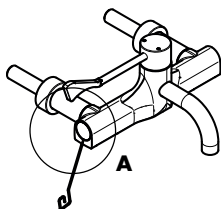
1 - Move handle to closed position  
Water must not pass through the tap before completing system flushing



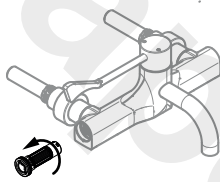
2 - Ensure both isolation valves are in the closed position



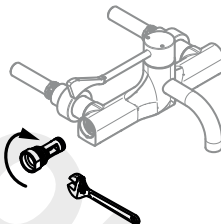
2A - Turn to closed position



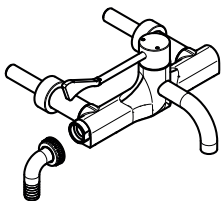
3 - Remove end cover from the hot supply end of the tap



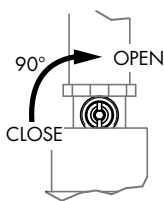
4 - Carefully remove check valve housing using the extraction tool (HTMSP20XX) and rotating anti-clockwise



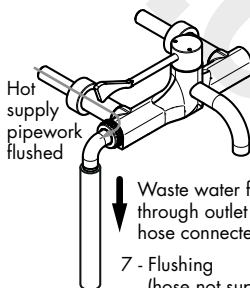
5 - Screw in connector plug using suitably sized spanner



6 - Attach hose connector (HTMFLUSH)

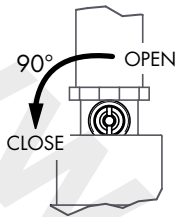


6A - Turn to open position

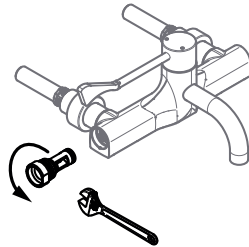


Hot supply pipework flushed  
Waste water flushed through outlet with hose connected  
7 - Flushing (hose not supplied)

## System Flushing Procedure



8 - Ensure the isolation valve on the hot supply is closed before

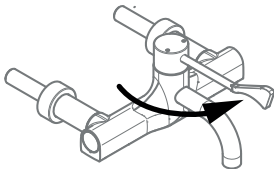


9 - Unscrew the connector plug using suitably sized spanner and refit the check valve and end cover

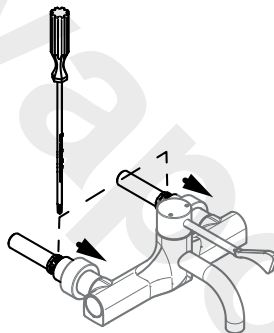
10 - Repeat the procedure for the cold inlet side before opening both isolation valves

## Sterilization Process

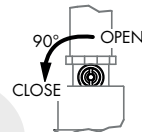
**NOTE: Not a replacement for chlorination**



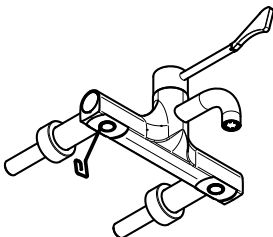
1 - Move handle to open position



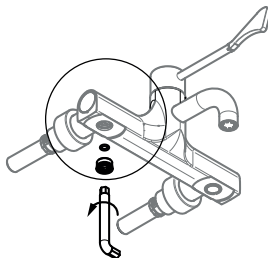
2 - Isolate both inlet tails



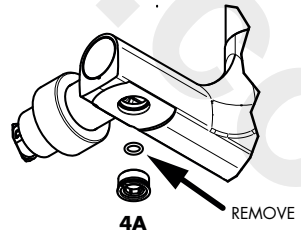
2A - Turn to the closed position



3 - Remove the cover from each inlet



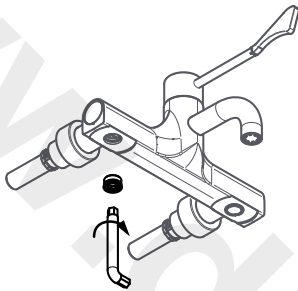
4 - Remove hot and cold inlet plugs using a 10mm Allen key



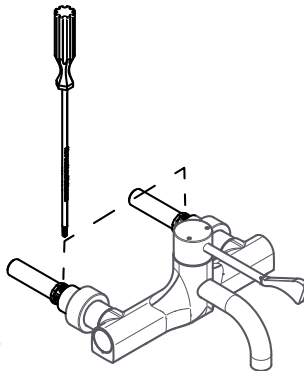
4A

REMOVE

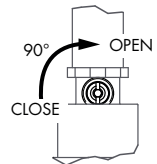
## Sterilization Process



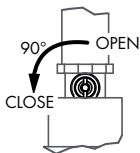
- 5 - Fit the cold inlet plug into the hot position and the hot into the cold position



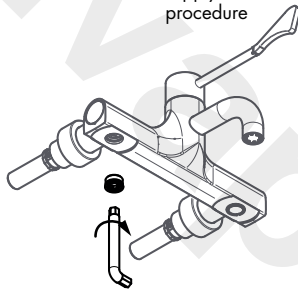
- 6 - Open the ball valve on the hot supply to start sterilization procedure



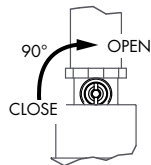
- 6A - Turn to open position



- 7 - Close the isolation valve



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



- 9 - Open the isolation valve and move the handle to the closed position

Temperature	Disinfection time
60°C	20 minutes
65°C	10 minutes
70°C	5 minutes

10 - Disinfection times based on water temperature

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.

We recommend that following system flushing 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 (see page 13), which may be accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer's warranty on the product.
4. Independent filters/check valves and isolation valves must be fitted in conjunction with the valve. In areas that are subject to hard water, provision must be made to treat the supplies prior the supplies entering any product.
5. 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.
6. 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.
7. The connection of the hot and cold supplies must be in accordance with the instructions shown on page 8 i.e. hot water connected to the left hand side of the valve when the nozzle is facing you.
8. In a situation where one or both of 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 or a suitable flow regulator.
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.

## Installation

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 condition

## 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. (See page 10)
2. The commissioning of the temperature must be carried out using a suitably calibrated thermometer – preferably a digital thermometer. (See page 8)
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 Using the lever turn to the maximum hot setting of the tap, the mixed water temperature should be preset (see page 8).
  - 5.2 Measure and record the temperature of the hot and cold water supplies at the connections to the valve.

## Commissioning

- 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.

## In Service Testing

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.

## In Service Testing

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 tap 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.  $< 1^{\circ}\text{C}$ ) 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.  $1 - 2^{\circ}\text{C}$ ) 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.  $1 - 2^{\circ}\text{C}$ ) 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.  $> 2^{\circ}\text{C}$ ) 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.
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.

## 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.

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**Notes:**

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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

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