

6 COMMISSIONING AND SERVICING - TVM3 SCHEME

COMMISSIONING AND PERIODIC CHECKS

A log book should be kept for the recording of checks and results.
The following procedure should be carried out after installation and every 6 months after to ensure that the valve is functioning correctly.

Check that:

- 1. The application of the thermostatic fitting matches the approved designation.
- 2. The supply pressures are within the recommended range for the application.
- 3. The supply temperatures are within the permitted range for the application and comply with the guidance for prevention of Legionella.
- 4. The mixed temperature is as required for the application.

Record:

- 5. Each hot and cold supply temperature. (Make a note of the measuring device used).
- 6. The mixed water temperature at the outlet device.

Isolate:

- 7. The cold supply to the mixing valve and record the mixed water temperature. The temperature should not exceed the value given in table 2 (following).

Application	Mixed water temperature	Permitted maximum temperature recorded during site testing
Washbasin spraytap	41°C	43°C

Table 2
A guide to maximum temperature sets

FREQUENCY OF REGULAR SERVICING

The purpose of servicing regularly is to monitor the performance of changes in system and fitting set up. This may highlight the need to adjust either the supply system or the fitting. The fitting should be checked and tested 6 to 8 weeks and again 12 to 15 weeks after commissioning. The results are to be compared against original commissioning settings.

If there is no significant change (i.e. less than 1°C) then a 6 monthly servicing cycle may be adopted.

If the temperature increases up to 2°C at the mixed water outlet, then servicing checks should be carried out more frequently. (e.g. every 4 months).

If the temperature increase exceeds 2°C, after the checks in 2 below have been carried out, the sequential thermostatic cartridge may have to be replaced (see page 5). After replacing, the mixed temperature must be rechecked.

The following procedure is recommended for all servicing:

- 1. Repeat the procedure of recording and checking supply temperatures. (The same type of measuring equipment should be used).
- 2. If the temperature has changed significantly from the previously recorded valves, the following should be checked:
 - a. All in-line or integral valve filters are clear of obstruction.
 - b. All in-line or integral check valves are clean and working properly to prevent backflow.
 - c. Any isolating valves are fully open.
- 3. When satisfied with the mixed outlet temperatures re-record the temperatures.

7 SPARE PARTS

- 1 = A 962 017 AA
- 2 = A 961 823 AA
- 3 = A 961 824 NU
- 4 = E 960 575 NU
- 5 = E 960 664 NU
- 7a = A 961 825 AA (A4132 & A4169)
- 7b = B 960 859 AA (A4131)
- 8 = A 963 381 NU
- 9a = E 960 642 NU
- 9b = E 960 589 NU
- 10 = A 962 991 AA
- 11 = A 963 404 NU
- 12 = A 960 016 NU
- 13 = A 961 838 AA
- 14 = A 962 140 NU
- 16 = E 950 727 NU
- 17 = E 960 644 NU
- 19 = E 960 596 NU (available separately)
- 20 = B 960 860 NU (A4131 only)

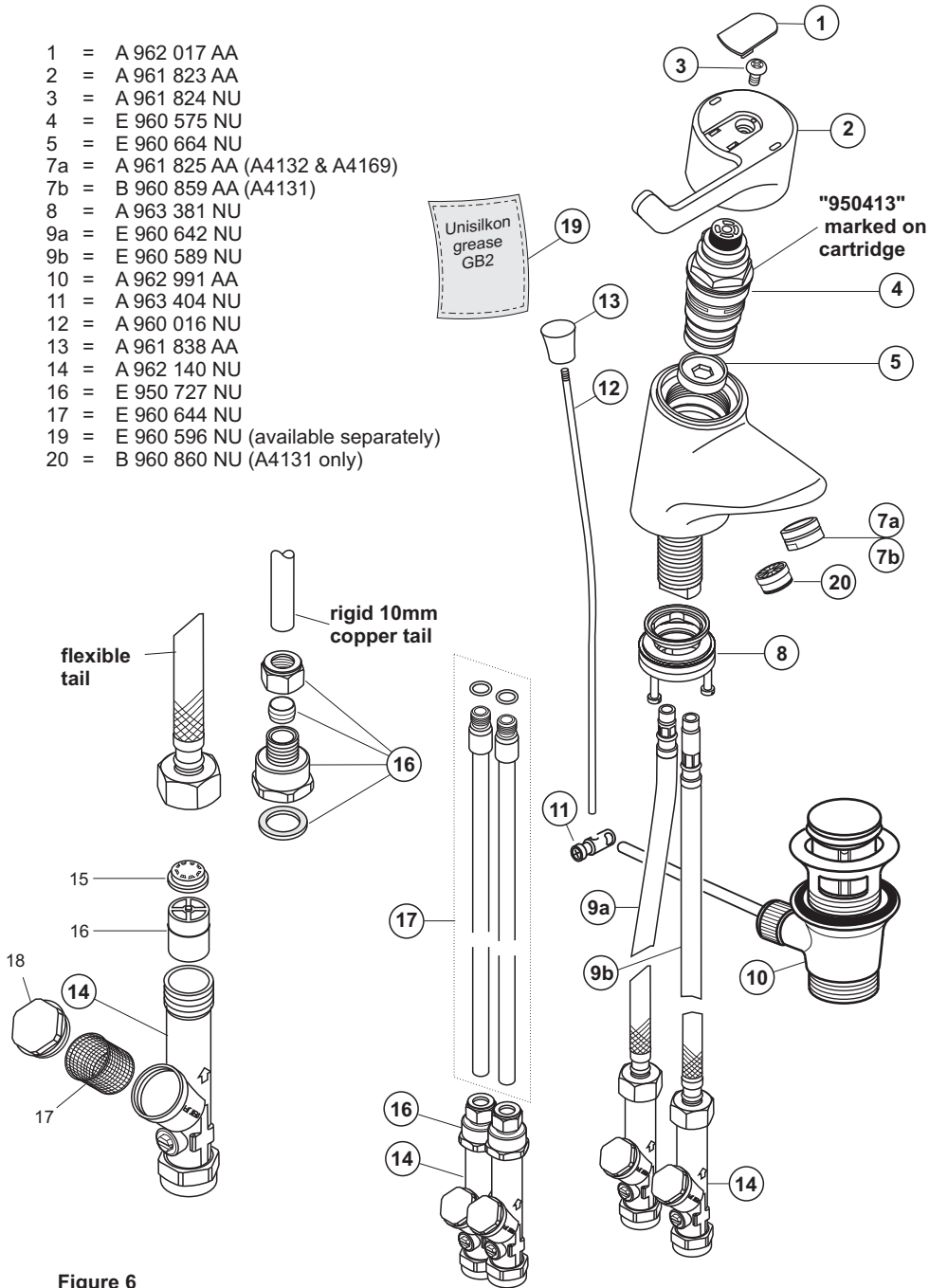


Figure 6

8 OPERATION

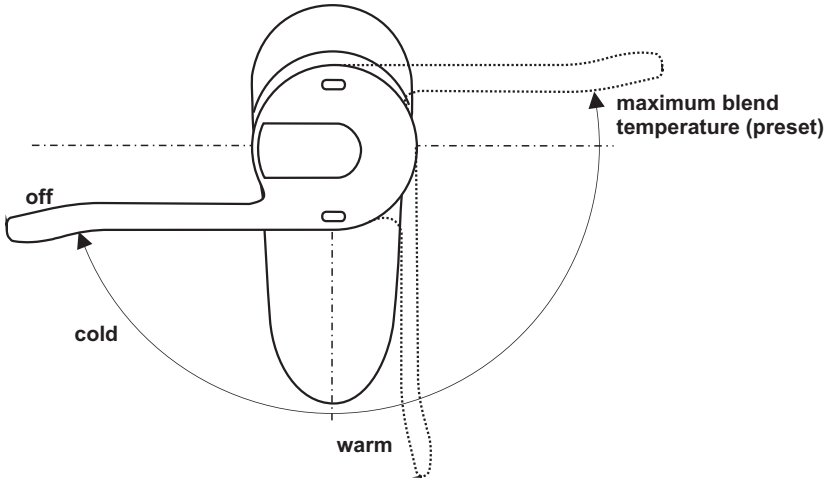
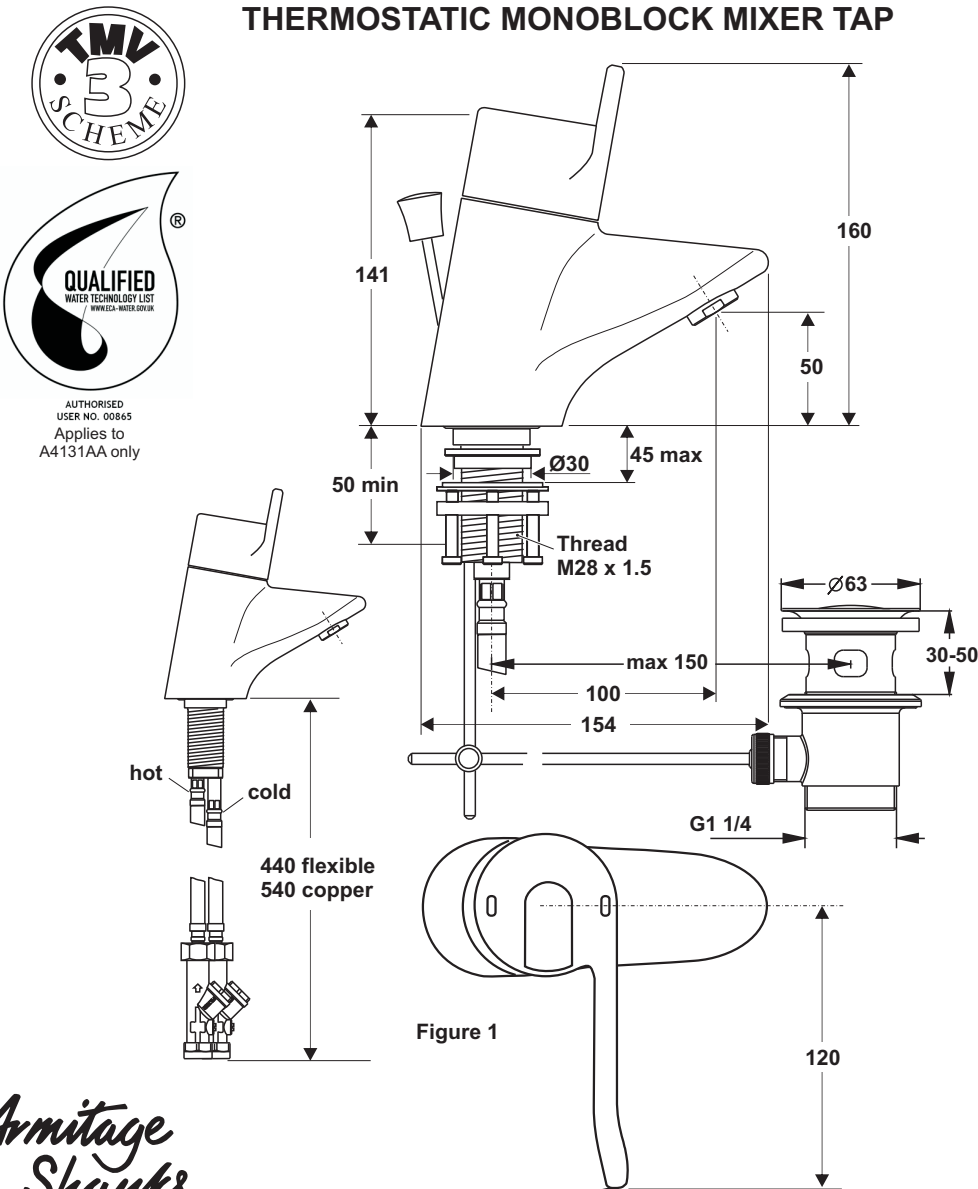


Figure 7 Showing the handle control positions.
As the handle is rotated anti-clockwise from the off position the delivered water progresses from cold through warm to the preset maximum temperature of approximately 41°C

Installation Instructions

CONTOUR 21 SEQUENTIAL LEVER OPERATED THERMOSTATIC MONOBLOCK MIXER TAP



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INSTALLER: After installation please pass this instruction booklet to user

2 DESCRIPTION

The fittings covered by this installation and maintenance instruction should be installed in accordance with the water regulations published in 1999*, therefore Armitage Shanks would strongly recommend that these fittings are installed by a professional installer

*A guide to the Water Supply (Water Fittings) Regulations 1999 and the Water Byelaws 2000, Scotland is published by WRAS (Water Regulations Advisory Scheme) Fern Close, Pen-y-Fan Industrial Estate, Oakdale, Newport, NP11 3EH. ISBN 0-9539708-0-9

- A4131AA CONTOUR 21 SEQUENTIAL LEVER OPERATED THERMOSTATIC MONOBLOCK MIXER TAP, FLEXIBLE TAILS, WITHOUT POP-UP
- A4169AA CONTOUR 21 SEQUENTIAL LEVER OPERATED THERMOSTATIC MONOBLOCK MIXER TAP, COPPER TAILS, WITHOUT POP-UP
- A4132AA CONTOUR 21 SEQUENTIAL LEVER OPERATED THERMOSTATIC MONOBLOCK MIXER TAP, FLEXIBLE TAILS, WITH POP-UP

DESCRIPTION

This manual covers the A4131AA, A4169AA and A4132AA Contour 21 thermostatically controlled, lever operated, sequential mixing taps. They are designed to provide water from ambient cold up to a safe maximum temperature for hand washing.

These products are intended to be installed on single hole or two taphole washbasins with tap hole sizes of 30mm - 36mm

They come complete with flexible inlet tails or alternatively rigid copper inlet tails, isolating valves with strainers, check valves and flow regulators.

These products are uniquely identifiable by the number "950413" stamped on the underside of the operating lever

INTRODUCTION

The A4131AA and A4132AA thermostatic monoblock taps are manufactured to the highest standards and have approval to TMV3 which permits them to be installed in healthcare establishments such as hospitals, nursing homes and residential care homes. When installed in healthcare establishments the supply conditions detailed in Table 1 must be observed and the commissioning and servicing requirements detailed on page 6 must be followed.

For other installations this is not a requirement.

4 INSTALLATION

FIXATION

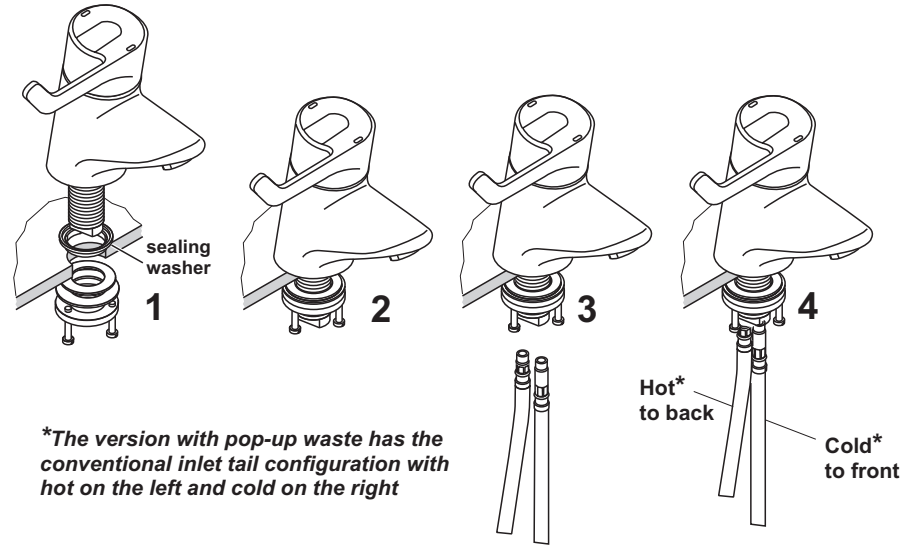


Figure 2 Installation sequence for flexible inlet tails

- Insert the fitting into the tap hole ensuring that the sealing washer is in the correct orientation as shown above
- Fit the clamping assembly to the tail and tighten the three screws till the fitting is secure
- Screw in the flexible inlet tails (short thread extension first)
(For the rigid copper tail version the tails may be fitted before inserting into the tap hole and the tails may be fitted in any order)
- Fit the isolating valves to the flexible tails
- Connect the isolating valves to the supplies.

MAINTENANCE

When installed as a TMV3 application it is a requirement that the commissioning and maintenance procedures detailed on page 6 be carried out.

For non healthcare installations these checks are not a requirement.

On a regular basis the flow straightener nozzle should be inspected and cleaned if necessary. In areas where lime scale build-up is prevalent this will have to be removed. An inhibited proprietary scale solvent can be used such a kettle descaling solvent but it is important to follow the manufacturer's guidelines. After descaling it is important to rinse the parts thoroughly in clean water. Clean carefully and do not use abrasive materials or scrapers.

3 SUPPLY CONDITIONS

The fitting is designed to be installed on normal UK low pressure storage tank fed systems, unvented high pressure systems or modulating instantaneous water heaters or modulating combination (combi) boilers. They are suitable for all pumped applications.

Hot and cold water supply pressures must be reasonably balanced and from a common source i.e. both from storage or both from a supply pipe. The mixer will function within specification on unequal pressures up to 5 :1 but it is not recommended that cold be connected to the rising main and hot to the tank fed supply.

The fitting should be so installed as to permit the operation of the isolating valves and give access for servicing the strainer elements.

The minimum pressure for correct operation is 0.2 bar. For supply pressures less than 0.4 bar it may be necessary to remove the flow regulator elements. See figure 5

Avoid using heat for soldering near the mixer inlets to prevent damage to internal components.

Table 2 shows the flow rate performance for the flow straightener and flow regulator outlets

FOR HEALTHCARE ESTABLISHMENTS

In accordance with the NHS model engineering specifications DO8 this valve has approval for the following applications:-

High pressure	- HP	- W
Low pressure	- LP	- WE

TMV3 approval number:- BC146/0705

For this type of application the following supply conditions must apply:

Operating pressure range	High pressure	Low pressure
Maximum static pressure - Bar	10	10
Flow pressure hot and cold - Bar	1 to 5	0.2 to 1
Hot supply temperature °C	52 to 65	52 to 65
Cold supply temperature °C	5 to 20	5 to 20
Temp' differential characteristic (TDC) °C	10	10

Table 1 Supply conditions for healthcare establishments

Q (0.3 bar)	5.0 L/min	
Q (3.0 bar)	4.7 L/min	

Table 2 Flow rate data (Q = flow rate)

Note:

A4131aa. Fitted outlet is Water Technology Listed approved flow regulator. Unregulated flow straightener is separately supplied.

A4132aa. Fitted outlet is unregulated flow straightener. Flow regulator is separately supplied.

5 REPLACEMENT OF THE SEQUENTIAL CARTRIDGE

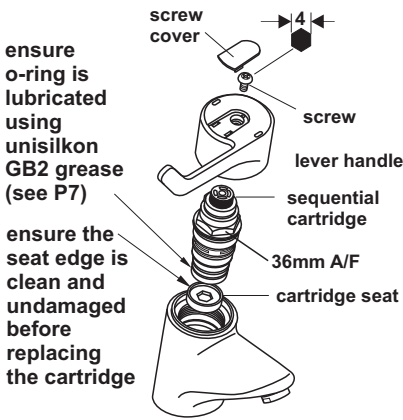


Figure 3 Exploded view showing sequential cartridge

The handle should be removed by prising out the screw cover and unscrewing the retaining screw.

The working parts of this fitting are all contained within the sequential cartridge.

After checking that supply conditions are within the specified parameters (see table 1)

if the fitting malfunctions or should the test results fail to fall within the specified limits simply replace the cartridge with a new one. The cartridge can be unscrewed using a 36mm a/f deep pattern socket. The replacement cartridge should be tightened to a torque of 15Nm. (To re-secure the cartridge we recommend the use of Loctite 222 applied to the thread of the cartridge)

In case of extreme damage by water borne debris it may be necessary to exchange the cartridge seating.

Setting the lever position

With the water running, loosely assemble lever on to the sequential cartridge. Gradually turn the lever towards the off position until water stops then remove the lever and set in a suitable position for normal use when off (see fig 3a). When satisfied assemble screw and screw cover.

After fitting the new cartridge start the test procedure from the section on commissioning.

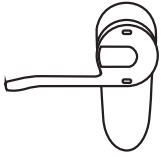


Figure 3a

ISOLATING VALVE AND STRAINER

To ensure trouble free operation of the fitting, the strainer should be checked and cleaned every six months.

To access the strainer element simply close the isolating valve and unscrew the strainer cap. The strainer element should be washed with clean water and replaced.

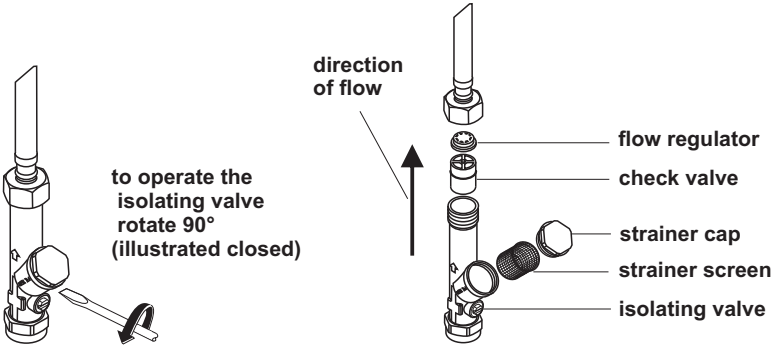


Figure 4 Operating the isolating valve

Figure 5 Exploded view of isolating valve