



IMPORTANT  
READ THIS  
MANUAL  
BEFORE USE

## **Rio & Kiva height adjustable bath**

# **Owners Manual and Install Instructions**

Guarantee

This product is guaranteed against all defects in  
manufacture for a period of one year

This does not affect your statutory rights

Warranty Number:



# Operating instructions Rio and Kiva height adjustable baths.

## Product description.

The bath is powered by a 24 Volt direct current control system with battery backup, for use in the event of supply failure, it is essential that the mains power is switched on at all times to charge the backup batteries.

The Bath is intended for bathing children and adults, weighing up 150 KG, who are capable of maintaining an upright sitting position. The bath must not be used for any other purpose.

## Carry out the following checks daily; before using the bath.

Check the bath is permanently connected to a 230 Volt mains electrical supply.

Check there are no obstructions or items that may be trapped when the bath is operated.

Check the tub will raise and lower properly using the handset.

Check the temperature of the water in the tub before use.

## Instructions for use.

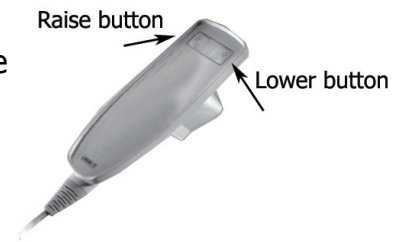
Before use check that the bath will lift and lower using the handset and the electrical supply is switched on.

### Filling the tub.

Ensure the water temperature is correct when filling the bath and before entering the tub.

### Adjusting the height of your bath

The bath is operated with a two-button handset. Pressing one of the buttons will either raise or lower the bath as required.



## Tap options

### Thermostatic mixer taps. TMV2 compliant.

Turn the knob on the left anticlockwise to turn on the water.

Turn the right hand knob to adjust the temperature to a maximum of 46 degrees centigrade for bathing and 41 degrees centigrade for showering.

The red button allows the temperature stop to be set above the standard 38 degrees Centigrade.

Lift the centre button to divert water the shower.



### Thermostatic mixer taps. TMV3 compliant.

Use the large centre knob to control the water temperature. Turn the knob anticlockwise to increase the temperature a Maximum of 46 degrees centigrade for bathing.

38 degrees centigrade for showering.

The lever control is used to divert the water from bath to shower. (centre off) and to control the water flow rate.



## Low height thermostatic taps



1

**Bath fill button**

2

**Shower control**

3

**Bath temperature control**

### **Filling the tub:**

Press the bath fill button and **check the water temperature**, adjust the temperature to a maximum of 46°C, press again to stop.

Insert the plug.

Press the Bath Fill Button once, red indicator light will come on, the bath will fill to the first preset level, and stop, red light will go off.

If more water is required, press the button again, press again to stop at the required level.

After filling has stopped, to fill further, press the fill button again, the bath will fill to the higher level and stop.

Once the second level is reached the tub cannot be topped up.

### **To use the shower:**

Lift the shower handset from the wall mounted holder and hold over the tub, turn the shower control valve to the required flow and temperature.



**Do not leave the bath unattended when filling.**

**Thermostatic valves must be serviced on a regular basis to ensure safe operation**

### **N.B**

If the green light on the Bath fill button is not on the bath will not fill, check the power is turned on

## Baths fitted with Neatfold stretcher

The Neatfold stretcher is designed as a personal support platform fitted to the top of a bath. It can be quickly and conveniently folded and stowed vertically if the bath is against a wall, or alongside the bath, maximising the space available in the room.

### Carry out the following checks before using the Neatfold stretcher

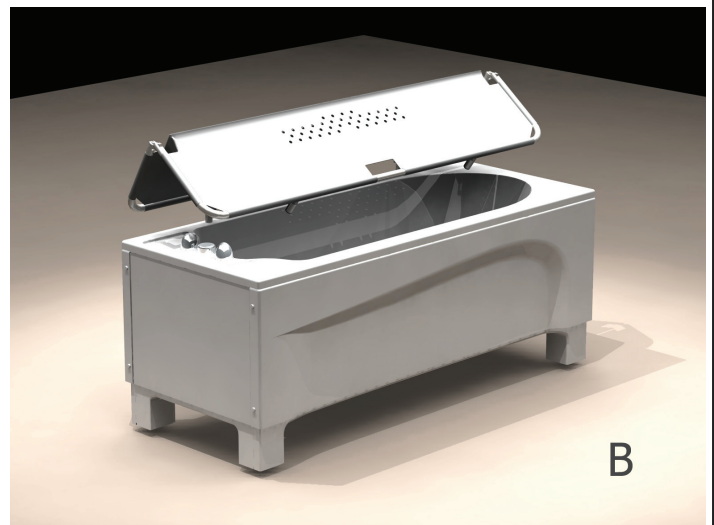
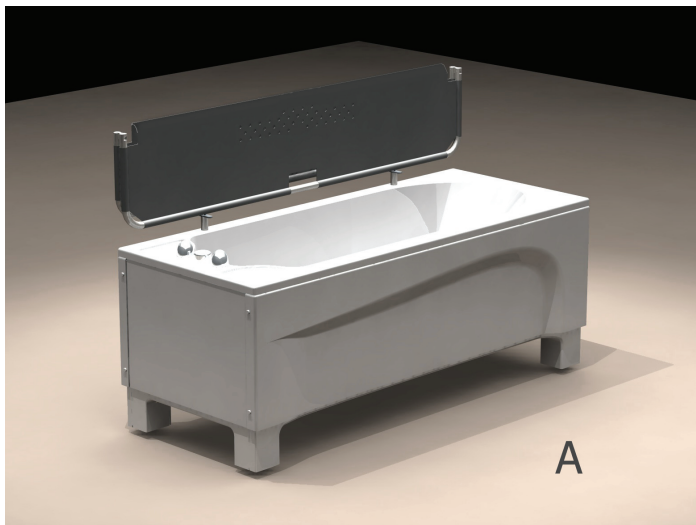
Check the stretcher is secure and correctly positioned over the tub.

Visually check the stretcher cover for damage and security before use.

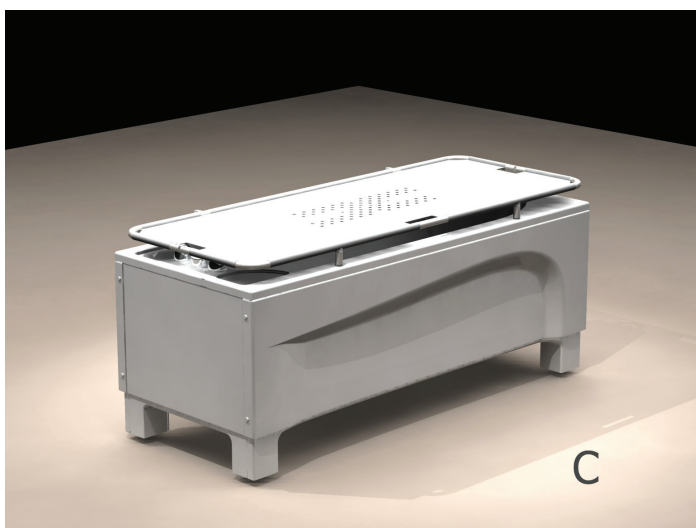
### Using the Neatfold stretcher.

#### To use the Neatfold stretcher when stored in a vertical position. (Picture A).

Reach across the bath and hold the centre of the stretcher frame at the point where the material has been removed to create a hand hold.



Lift the assembly slightly and pull it towards you. (Picture B). A small jolt will be felt as the stretcher becomes horizontal, this is normal & part of the function of the stretcher. Place the stretcher onto the rim of the bath. The Neatfold stretcher is now ready for use. (Picture C).



**To use the stretcher when stored beside the bath.**

Firstly lift the stretcher to an upright position. (Picture A).

Next reach across the bath and hold the centre of the stretcher frame at the point where the material has been removed to create a hand hold.

Lift the assembly slightly and pull it towards you. (Picture B). A small jolt will be felt as the stretcher becomes horizontal, this is normal & part of the function of the stretcher. Place the stretcher onto the rim of the bath. The Neatfold stretcher is now ready for use. (Picture C).

**To stow the Neatfold.**

With one hand, hold the stretcher in the centre at the point the framework is exposed. With the other hand, hold the edge of the stretcher such that by applying a little upward force, the stretcher begins to fold. Allow the stretcher to fully fold in half and then move to one of the two stowed positions as appropriate.

**Operating instructions for optional guard if fitted.**

Ensure that the stretcher is in the horizontal position.

Carefully place the two vertical tubes of the guard assembly into the black nylon receivers fitted to the stretcher.

Test the correct engagement of the guard, pull the guard towards you resistance should be felt.

To disengage the guard.

Lift the guard vertically out of the receivers and store in a safe place.

**Caution**

The persistent or heavy use of oil based products may adversely affect the white stretcher material. Oils and other petro-chemical products should be used sparingly and any residue removed immediately.

**Cleaning**

The stretcher, frame, guard and guard bumper may be cleaned using most mild cleaning agents. Abrasive cleaners should be avoided in order to maintain the semi-gloss finish of the white high tension stretcher material and the painted finish of the frame. The stretcher and frame may be cleaned using a high temperature pressure washer or non-chemical steam cleaner but under no circumstances should it be placed in an autoclave.

Chemical agents and solvents must not be used, i.e., drain cleaners, acetone, oven cleaners or acids. Attention should always be paid to instruction labels on the outside of cleaning agent containers.



## **Operating the SPA system (optional)**

Fill the tub with water.

The spa unit is controlled using the round button attached to the panel or of the bath assembly. To switch the air pump on, press the button once which will start a medium air flow into the bath. Press again to increase to a higher air flow. Pressing the button again will switch the blower unit off.

Once the unit has been switched on it will remain on for 20 minutes before automatically switching off. Pressing the button within that 20 minutes time span will reset the cycle timer for a further 20 minutes.

Use of the Spa Bath system for longer than 20 minutes is not recommended.

### **Hygiene Management.**

The Spa system is designed to be self maintaining with regard to hygiene. Approximately 20 minutes after use the Spa system will automatically turn itself on & operate for approximately 20 seconds. This is called the 'Auto-Purge' cycle. Any water retained within the jet system will be ejected thus keeping the jets clean.

When cleaning the bath, or using the bath for showering only, it is recommended that a manual purge is performed. In order to do this, switch on the Spa system for 15-20 seconds & then switch it off. The Auto-Purge will then operate 20 minutes later.

### **Cleaning your Bath**

The bath may be cleaned using most mild cleaning agents.

Chemical agents and solvents must not be used, i.e. drain cleaners, acetone, oven cleaners or acids. The taps, side and end panels and handset should be cleaned using a warm soapy solution and rinsed with a damp cloth.

Attention should always be paid to instruction labels for the cleaning agent.


## **Troubleshooting**

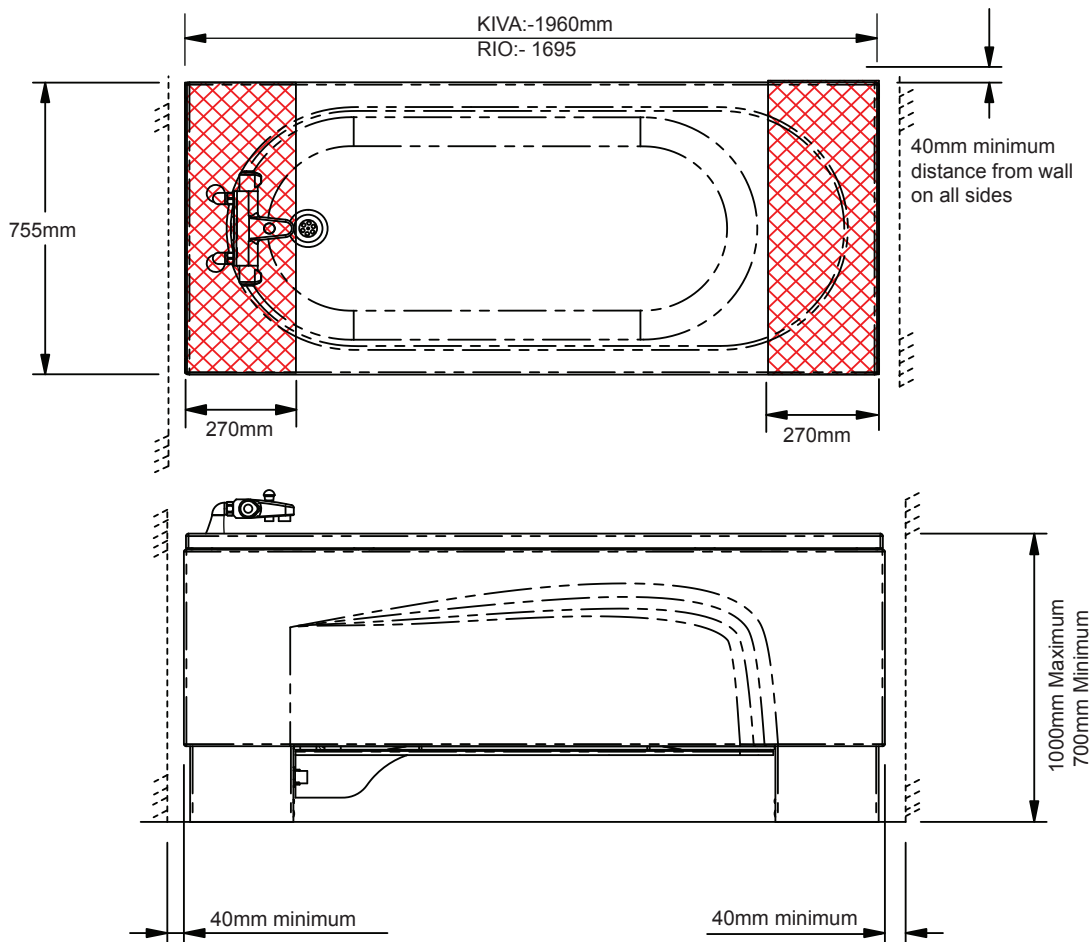
In the unlikely event that problems occur with the unit, carry out the following easy checks to determine whether or not an engineer is required.

- Fault:** The Kiva bath does not travel up or down or moves very slowly.  
**Cause:** The mains power supply has been disconnected for some time and the unit's batteries are now flat.  
**Remedy:** Examine the mains fuses/circuit breakers and reset as necessary and ensure that mains voltage is fully reconnected. Allow the battery back up system to re-charge for approximately 2 hours
- Cause:** The handset has been pulled from the socket fitted to the underside of the unit.  
**Remedy:** Push the plug fitted to the handset more firmly into the socket.
- Cause:** The safety tray mechanism is operated. (warning beeper sounds continuously)  
**Remedy:** Ensure there are no objects under the bath and that the tray is free to move and up and down.
- Fault:** Only one end of the bath moves up or down.  
**Remedy:** You need to contact Astor Bannerman as there is a malfunction with the equipment.
- Fault:** Water Temperature incorrect from thermostatic mixer tap.  
**Remedy:** Check you have a hot and cold water supply. If you have hot water at the bath then contact a plumber or Astor Bannerman to service the mixer tap.
- Fault:** Bath will not raise only lower, warning beeper sounds.  
(no electrical supply)  
**Remedy:** Ensure the electrical supply is turned on, then leave the unit to charge the battery.

# Technical Specification.

Water capacity tub full without resident:	KIVA 280 Litres (e)
	RIO 200 Litres (e)
Lifting capacity including resident:	280 Kg
Duty cycle:	10%, Maximum 2 min/18 min
IP Rating:	IP X5
Supply voltage:	230 Volts 50 Hz
Protection class	class 1
Power consumption:	250 Watts
Dry weight of Bath	Rio 90 Kg
	Kiva 126 Kg
	Add 14 Kg if a full length neatfold stretcher is used.
Weight of Spa option	6 Kg
Power Consumption Spa option	600 Watts

No obstructions can be laid on the floor in the red shaded areas 





## Contents of packages

#	Item No.	Item Description	Quantity
1	21.090.00.0369	Cable, armoured, 1.0, 3 core,	4 Metre
2	20.013.60.0006	Handset, 2 button Rio/Kiva - Telephone Connector	1
3	20.032.00.0003	Holder, handset	1
4	20.013.40.0011	Hose, Inlet for Rio	2
5	10.013.70.0005	Waste assembly, RIO	1
6	20.013.40.0012	Connector, hose end 22mm	2
7	21.090.00.0456	Fixing, fir tree, 6mm x 15mm	4
8	21.090.00.0455	Rivet, button, white, 4mmx10mm long	24
9	21.090.00.0495	Rivet, button, white, 4mm x 8 long	8
10	21.090.00.0360	Sucker pad, 48mm, bag of 100,	1
11	75.090.00.0457	Screw, No.6x3/4 s/less csk self-tap	4
12	20.013.60.0005	Plug, Blind, Outlet (Actuator) for RIO control box	3

### Neatfold option

#	Item No.	Item Description	Quantity
1	75.090.00.0243	Nut, M6 Nyloc Stainless steel (box 100)	2
2	21.090.00.0057	Washer, M6 plain, penny, 25mm OD, stainless steel, bag 1002	
3	75.090.00.0179	Screw, M6x80, stainless steel, countersunk, slot, bag of 100	2
4	20.069.30.0001	Strap, 300mm, loop, male/female buckle	1

## Installation

Place the bath frame in the position agreed with the customer.

Connect the 230 volt electrical supply to the control box. Turn on the supply to charge the batteries

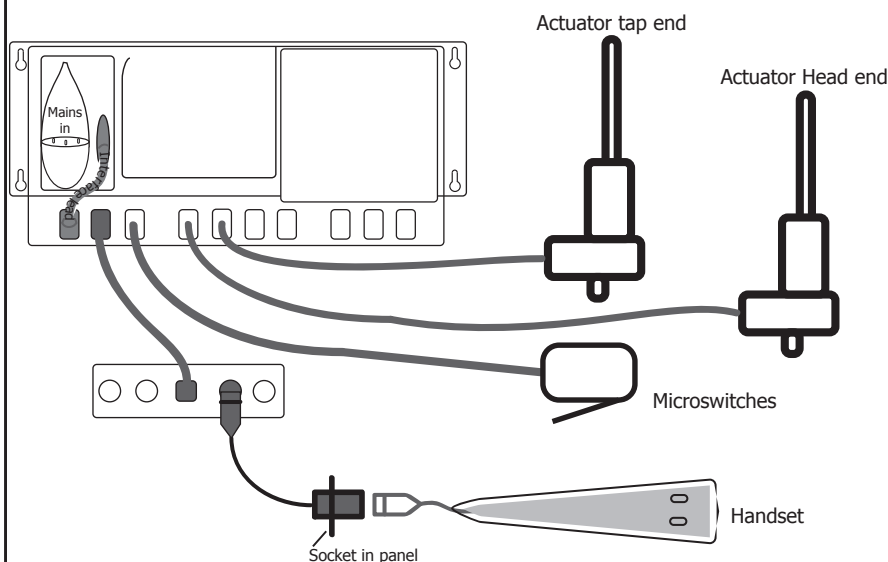
Ensure the handset and actuator control cables are connected as indicated below.

Fit the tub on to the frame and secure using the screws provided.

Fit the filters and connect the flexible hoses to the hot and cold water supplies.

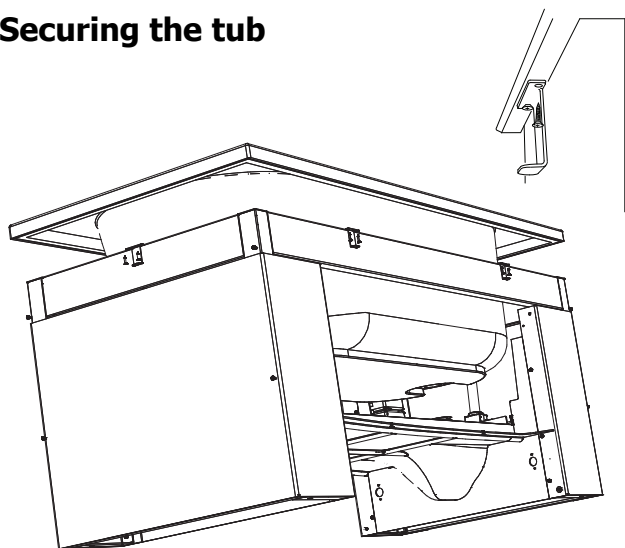
Connect the waste assembly.

Fit the bath panels over the locating clips and allow the magnetic catches to locate on the frame minor adjustments may be required. Fit the securing plastic rivets and the 4 X 'fir tree' retainers



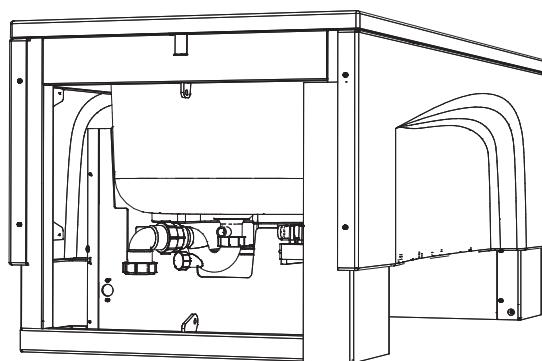
## Assembly Diagrams

### Securing the tub



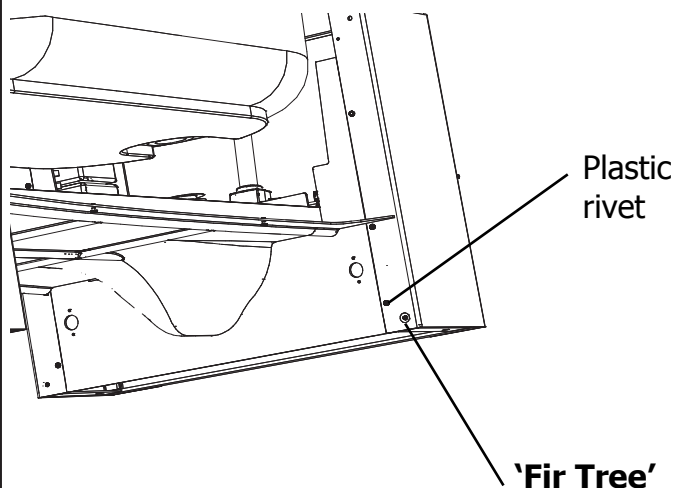
- Fit the tub on to the frame and secure using the screws provided.

### Waste arrangement



- Use cable ties through the metal strips to support the waste.

### Inner panel fixing

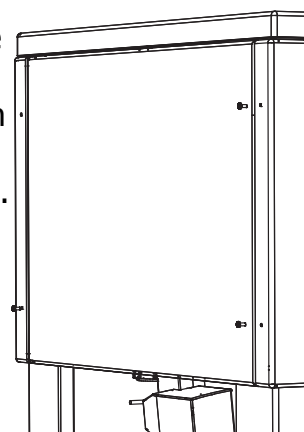
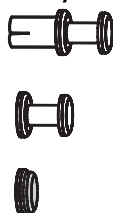


- If the inner panels are not fitted prior to shipping, secure as above.

### Plastic rivets

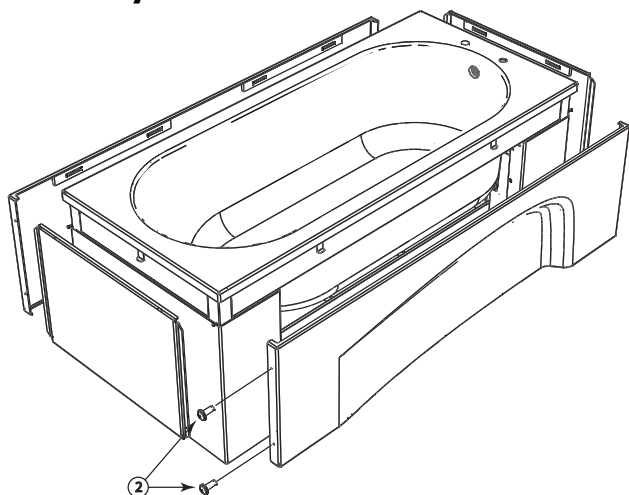
#### Rivet positions.

N.B. Do not separate the two parts of the rivets. Place the rivet through the cover into the drilled hole and then press the mushroom head firmly in flush with the cover.

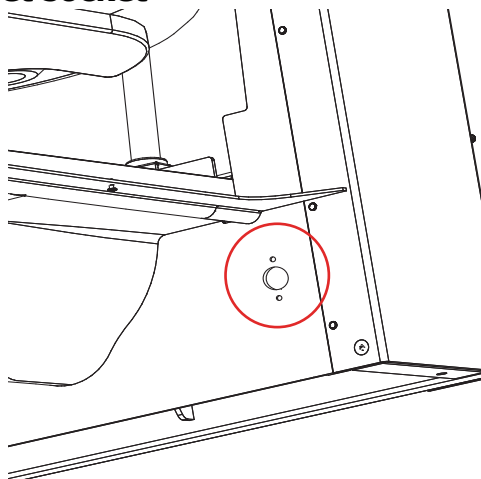


- Secure the outer panels using the plastic rivets.

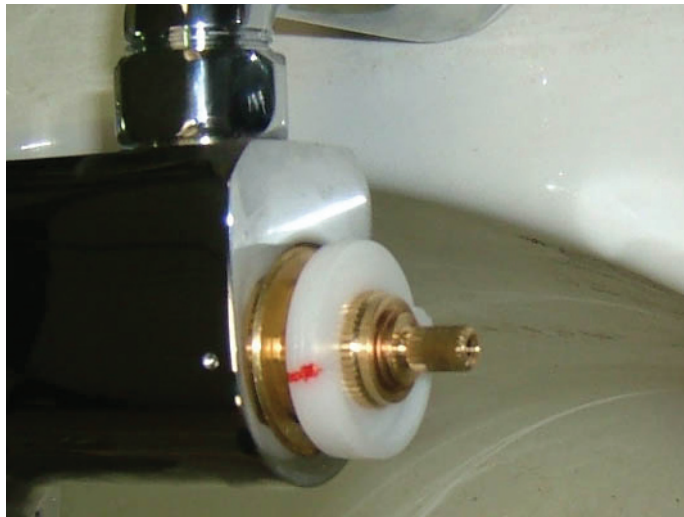
### Panel layout



### Handset socket



# Setting the Thermostatic Mixer



## To set a restricted maximum temperature.

Remove the spring-clip cap from the chrome control knob.

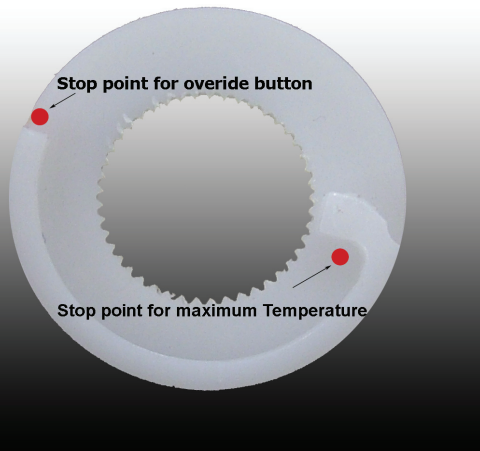
Establish the maximum temperature point to which the knob can be moved and then remove the handle by unscrewing the centre screw. Set the maximum temperature required by rotating the knurled spindle and refit the handle to the spindle. The brass pin in the control knob should locate in the end of the slot in the white cam.

N.B. if set in this manner the override button will become redundant as the set point will be at a low water temperature.

## To set an intermediate showering temperature with uncontrolled maximum temperature.

As above but when refitting the knob locate the brass pin at the beginning of the scroll on the cam

N.B the red mark on the cam is usually in line with the ident on the mixer body, it may be necessary to reposition the cam to achieve the correct position for the knob.



# LTT tap kits

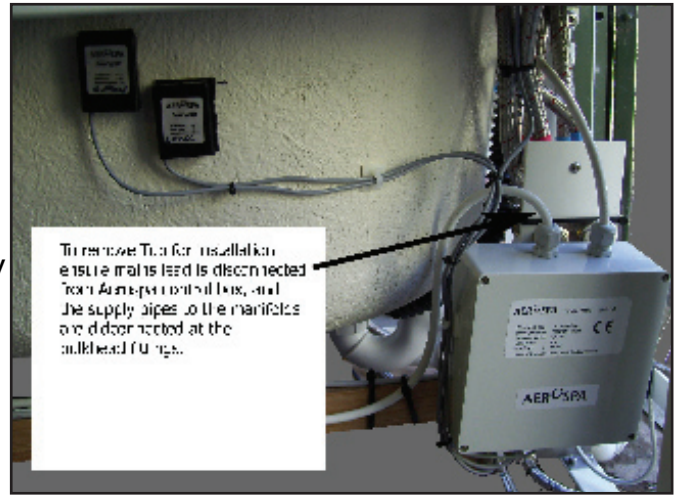
## Tub removal, prior to installation

With the mains supply isolated, disconnect the supply to the LTT control box and the earth lead from the solenoid valve

Ensure the supply hoses are not connected and there are no screws retaining the tub.

The bath fill valve and control box are supported by the chassis, care must be taken to avoid damage when dismantling.

Support the tub to avoid damage to the hoses and Aerospa control box.



**The earth lead must also be removed**



## Tub refitting.

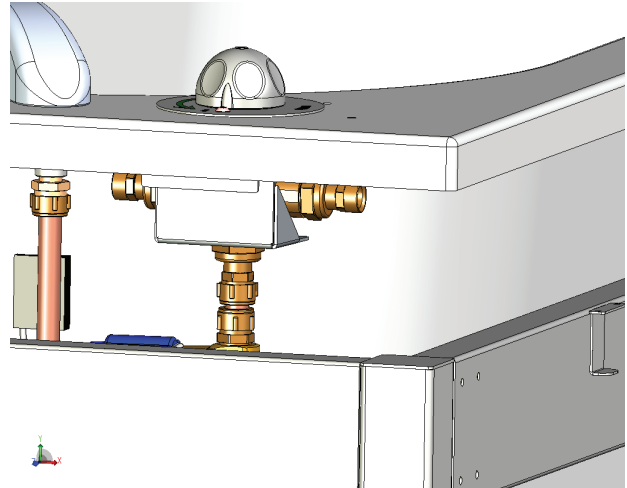
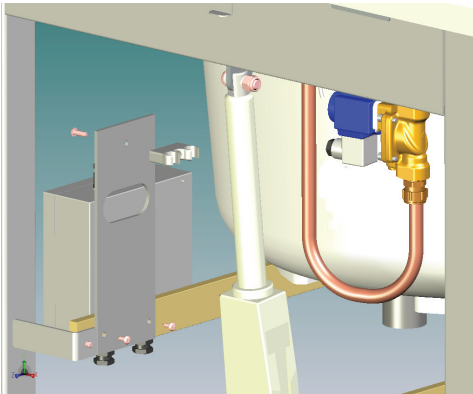
The bath fill mixer bracket clips over the chassis rail,

It may be necessary to centralise the mixer in the tub, to do so slacken the large nut on the brass fitting below the bracket, reposition and retighten.

make sure it is properly located and that the control box fits over the wooden rail.

Secure the control box with 2 off No8x1/2" screws.

Reconnect the Aerospa control box.



The tub should be secured as per previous instructions.

The valves must be set and temperature tested as per the following instruction.



# Commissioning Rio/Kiva LTT3 Mixers

Commissioning must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

## Exercising the Thermostat

Thermostatic mixing valves with wax thermostats are inclined to lose their responsiveness if not used. Valves which have been in storage, installed but not commissioned, or simply not used for some time should be exercised before setting the maximum temperature or carrying out any tests.

A simple way to provide this exercise is:

- (a) Make sure that the hot and cold water are available at the valve inlets, and the outlet is open.
- (b) Move the temperature control rapidly from cold to hot and back to cold several times, pausing at each extreme.

## Bath Fill Maximum Temperature

**Note!** For healthcare installations:-

The maximum blend temperature is determined by the application. Check before setting the mixer

The maximum blend temperature obtainable by the user should be limited, to prevent accidental selection of a temperature that is too hot.

All Rada thermostatic mixing valves are fully performance tested and the maximum temperature is preset to approximately 41°C (222 models - 44°C) under ideal installation conditions at the factory.

Site conditions and personal preference may dictate that the maximum temperature has to be reset following installation.

This mixing valve is provided with two methods of temperature setting, an adjustable temperature control knob which allows the user to select the blend temperature between ambient cold up to a preset maximum, or if considered more appropriate, a locked cap can be fitted, allowing no user adjustment.

## Maximum Temperature Setting

Check that an adequate supply of hot water is available at the hot inlet of the mixing valve.

The minimum temperature of the hot water must be at least 12°C above the desired blend, however during resetting this should be close to the typical storage maximum to offset the possibility of any blend shift due to fluctuating supply temperatures.

Check that both inlet isolating valves are fully open and the inlet filters are clean.

Temperatures should always be recorded using a thermometer with proven accuracy.

### All models except Rada 215-t3 bc:

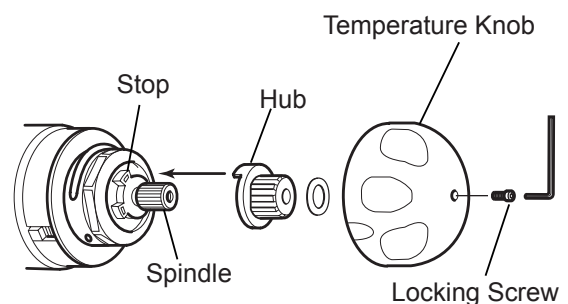
1. Remove the temperature knob and indicator trim or locking cap using a 3 mm hexagonal key.
2. Pull off the temperature hub.
3. Using the temperature hub, rotate the spindle until the required maximum blend temperature is obtained at the discharge point (**rotate clockwise to decrease temperature**).

**If resistance is felt do not use force to turn any further, as this can damage the internal parts.**

4. Once the desired maximum blend temperature has been achieved, refit the hub without disturbing the spindle.

**For adjustable temperature** position the hub such that the lug is against the side of the stop on the cartridge face, thus preventing anticlockwise rotation past the maximum temperature stop.

**For locked temperature** position the hub such that the lug is between the stops on cartridge face, thus preventing any rotation.



# COMMISSIONING, SHOWER MIXER

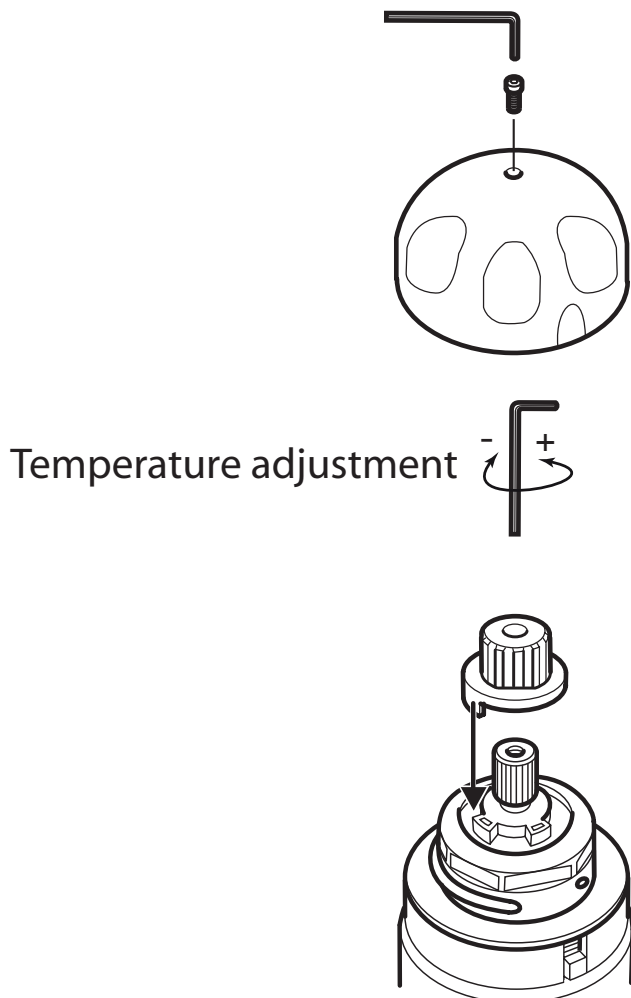
## Maximum Temperature Setting

Before using the Shower the maximum temperature must be checked to make sure that it is at a safe level. It has been preset to approximately 43°C at the factory but due to variations in site conditions the maximum temperature may need adjustment.

**Note!** Make sure that the hot water temperature is at least 55°C and that there is sufficient supply.

**Note!** For Type 3 valves in healthcare installations the maximum blend temperature is determined by the application.

1. Use a hexagon key to remove the screw retaining the control knob. Remove the control knob.
2. Turn on the mixer to the maximum temperature (i.e. fully anticlockwise) and allow the temperature to stabilise. (the cam should be removed at this point)  
If the temperature is too hot or too cold adjust as follows:
3. Using the 2.5mm allen key down the centre of the spindle, rotate the hexagon key until the required maximum temperature is obtained at the shower. Anti-clockwise to increase the temperature, or clockwise to decrease the temperature ( $\frac{1}{4}$  turn = approximately 1°C).
4. Once the desired maximum blend temperature has been achieved turn off the Mixer. Refit the cam and ensure that the mixer valve will close and stop the water flow
5. Check that the shower temperature is correct.



















# Preventative maintenance.

Carry out the following checks:	Daily	Weekly	Monthly	Annually
Full function test of the equipment.	✓	✓	✓	✓
Check the water temperatures from the mixer	✓	✓	✓	✓
Check the waste system for damage and leakage.		✓	✓	✓
Examine the spa nozzles for security and check the spa function		✓	✓	✓
Examine the supply hoses for damage and leakage			✓	✓
Service internal mixer components. (may require more frequent servicing in hard water areas)				✓
Calibrate mixer temperatures				✓
Check cold supply failure shutdown				✓
Check condition of backup battery				✓
<b>Optional Stretcher</b>				
Check the condition of the stretcher covering	✓	✓	✓	✓
Check the security and position over the tub	✓	✓	✓	✓
Examine the optional guard for correct fitting and security	✓	✓	✓	✓
Examine the stretcher for wear or damage.			✓	✓

## Product Labels

Model: Kiva 		
Lift range: 300 mm SWL 300 Kg		
230V ~50HZ 250 Watts IP X5 Class 1		
		
		
Made in England by: Astor Bannerman (Medical) Limited 11f Coln Park industrial estate Andoversford GL54 4HJ		

Model: Kiva 		
Spa Bath Lift range: 300 mm SWL 300 Kg		
230V ~50HZ 850 Watts IP X5 Class 1		
		
		
Made in England by: Astor Bannerman (Medical) Limited 11f Coln Park industrial estate Andoversford GL54 4HJ		



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GL54 4HJ  
Tel: 01242 820820 f : 01242 821110  
e mail: sales@astorbannerman.co.uk  
WEB: www.astorbannerman.co.uk

# CERTIFICATE OF CONFORMITY

Manufacturers Name: Astor-Bannerman (Medical) Ltd

Manufacturers Address: Unit 11F Coln Park  
Andoversford  
Cheltenham  
Gloucestershire  
GL54 4HJ

Equipment Type: Rio & Kiva height adjustable baths

I hereby declare that the above product conforms to the following specification:

98/37/EEC

Signed: \_\_\_\_\_ Technical Director

For and on behalf of Astor-Bannerman (Medical) Ltd

Date: 09 March 2011

# Notes

# Notes





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