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Please read very carefully

Pre-Installation + Installation Services Requirements For Kingkraft Multibath SE

**PLEASE READ VERY CAREFULLY PRIOR TO
 COMMENCING**

(Please contact Kingkraft to confirm the issue number on the front cover is current and the information provided is relevant to the unit supplied. (Deliveries after 17/7/2014)

This booklet describes the ideal conditions to which a site should be prepared prior to the installation of the Multibath SE and form recommended guidelines for installing the Multibath SE.

WARNING

The Kingkraft Multibath SE is intended for use by people with disabilities, who either require assistance with bathing or are capable enough to bathe independently. Bathing should be safe and pleasurable for the user and carers and the following points must be considered carefully before attempting installation of the bath.

The bath should only be installed by competent individuals. The bath may incorporate lifting mechanisms and other electrical items and thermostatic mixer valves / taps. These will require careful setting and subsequent maintenance.

If any thermostatic controls on the bath are incorrectly set up, or are not specified, there is a danger of scalding.

If an electrical supply is connected to the bath it must be installed by a competent electrician to the latest standards for electrical installation in bathrooms. This includes using armoured cabling and waterproof connections and particularly the supply must be a separate circuit protected by an earth leakage detector and residual current device installed in the appropriate position and to the required standards. The bath must be adequately earth bonded.

Please refer to the electrical requirements section in this document and current IEE regulations for this type of installation.

The bath will be supplied with lifting columns (unless it is a fixed height version). These must be installed in such a manner as to allow free movement through the whole of its travel without straining any connected pipes or wires.

At any stage, Kingkraft can provide telephone advice, on site assistance with installation, and installation or a full commissioning service if required. Kingkraft also offer a maintenance service. Please call the company for details. If requested Kingkraft will also undertake a pre-delivery site survey and offer advice.

We always recommend that commissioning of the bath is carried out by Kingkraft qualified personnel to guarantee the warranty of the product.

Please note, specially manufactured versions of the Multibath to the customer's specifications may require different or extra procedures. Please refer to the manufacturer if so.

The bath incorporates a battery back up into its design to enable the safe transfer of a user out of the bath in the event of a power failure. The battery is not designed for sustained use and will run out of power if mains electricity is not restored quickly.

Water Supply Requirements

The bath can either be 'stepped' into if the seat is removed, user lowered into the bath using a hoisting system or by using the powered seat. If the bather enters the bath before it has water in, the bath can subsequently be filled with water mixed to a safe temperature by the mixer valve / bath fill tap, but this is only if a thermostatic valve / tap option is chosen.

In order that the bather does not become cold, the bath is designed to permit high flow rates. They may work with low flow rates but the fill time will of course be longer. Depending on how the bath is to be used, it is therefore important to establish that there is sufficient flow available. Typical high flow rates are 20 litres per minute, low rates are approximately less than 8 litres per minute.

If mixer taps are provided, together with the necessary non-return valves and filters, they can cause restrictions that reduce flow rate still further. If high flow rates are available then it is preferable to pipe supplies in 22mm. (Combi-Boilers require 15mm pipework, and will generally fill quite slowly).

Consideration may need to be given to providing a pumped supply to the bath if flow rate is likely to be an issue. A minimum head of water of 4 metres (0.4 bar) is preferable to avoid the need for a pump. (Combi-boilers cannot be pumped) A competent plumber should be able to advise and install the best option before the bath is delivered.

In addition to adequate flow rates, the incoming water pressures must ideally be in a ratio of 3:1 cold to hot (or equal pressures for certain thermostatic taps / systems) with no tendency for air locks and with a nominal hot temperature of 55oC or higher.. See also the Mixer Tap / Valve Instructions provided. The boiler working to the bath must be plumbed in and correct temperatures before final commissioning can commence. If the bath is being used in continuous cycles, adequate hot water storage must be available. A standard Kingkraft Multibath is less than or equal to 230 litres in volume but special specification baths may be larger. Please check if you are in doubt.

Water Supply Regulations

Depending on the nature of the establishment where the bath is to be used, UK water regulations stipulate certain conditions of supply. It is understood that the bath might be classed by the water authorities as either a Category 3 fluid container (typically if used in a private domestic dwelling) or a Category 5 fluid container if used in a medical multi-user environment (e.g. Hospital). The categorisation is important. If the installation is a Category 5, the local water provider should be informed in advance of the installation by the person responsible for the installation and a regulation air gap must be included in the cold water supply. The air gap is to prevent back siphoning down the shower hose.

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Kingkraft can supply a Category 5 compliant system for the shower. This is an optional extra and stops the shower head from being submerged in the bath water. Please contact Kingkraft regarding this option.

By definition, a category 5 installation cannot be supplied via a Combi-Boiler. If there is any doubt as to the nature of the installation, please refer to your local water supply authority.

If the installation is for a Category 3 container, back siphoning will need to be adequately prevented by the provision of twin non-return valves. (Not supplied as standard with the bath)

A standard Multibath SE has a volume of no more than 230 litres.

Your local water authority should be able to advise you on the likely categorisation of the bath in your particular establishment.

Electrical

The room into which the baths will be installed must comply with the latest electrical zoning / building regulations, a qualified electrical engineer should advise on this. These regulations stipulate the minimum distance from the bath to electrical equipment in the room.

Kingkraft will not be able to complete installation / commissioning of a bath unless an Electrical Installation Certificate (Including Test Details) is issued to the Kingkraft engineer prior to the work commencing. This certificate is normally held by the householder / property owner.

Part P of the Building Electrical Safety Regulations applies to domestic dwellings where persons reside or share a common supply of electricity with a business premise. These regulations were effective from 1st January 2005. At the very least residential type

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properties require a confirmation in writing that the installation complies with the requirements of BS 7671.

This can only be supplied by a qualified electrician and will not be provided by Kingkraft Ltd.

The electrical supply must be installed by a competent electrician to the latest standards for electrical installation in bathrooms and be consulted at all times.

Please ensure any relevant Building Electrical Safety Regulations that apply to the installation are followed.

The electrical low voltage installation for the bath facility must conform to the following specification: A competent electrician must be consulted at all times.

1. The supply shall be 240V, 50Hz, Single Phase & Neutral on a fused spur.
2. The supply shall be protected by a suitably rated RCD with a 30mA trip (Not supplied with bath) and shall be of a dedicated type, i.e. supplying the bath installation only. (5 amp fuse for only the raise / lower option, a 13 amp fuse if the supply powering additional whirlpool options) A suitable isolation switch (not supplied) should be included in a suitable location within sight of the bath.
3. The supply shall terminate at an agreed position nominally 200mm above floor level preferably at the "non drain" end of the bath. This positioning must not impede raise / lower movement of the bath / surrounding panelling. If this is not practicable then other locations can be considered, the water ingress risk must be minimised when considering other locations. Kingkraft is to be consulted in this event.
4. The supply shall terminate in an enclosure of IPX5 rating; the enclosure shall have facility for "glanding off" using waterproof compression glands to preserve the IPX5 rating of the installation. (Not supplied with bath)
5. The Enclosure shall be 100mm x 100mm x 50mm in dimension. Armoured cable is to be used with mains powered lifting frames and whirlpool connections.

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6. The final cable terminating at the bath SELV unit will be armoured via the braid protection of the cable; facility shall be left within the enclosure to accept the termination of the armouring as part of the installation earthing system.

7. Accessible metallic parts of the bath and its frame are equipotentially bonded, an earth bonding connection close to hot and cold water supplies should be made available for the installer to connect to the bath frame via a flexible connecting bond.

8. The entire electrical installation shall comply with the requirements of BS 7671

9. Upon completion of the electrical installation those responsible for the Electrical Installation shall issue a copy of the Electrical Installation Certificate (Including Test Details) over to the installer for his records

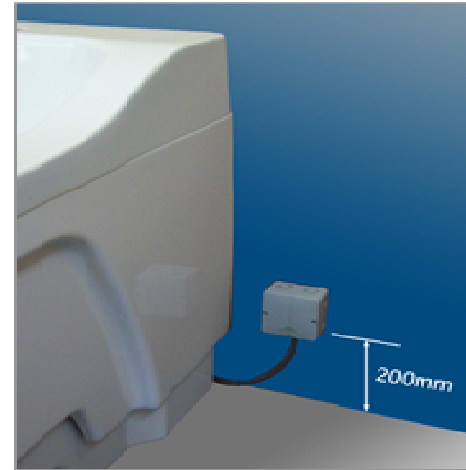
10. It is anticipated that the bathroom will comply with the Building Regulations 2000 and in particular "Approved Document P" and associated sections. Any departure from these Regulations must be brought to the attention of Kingkraft at the time of order.

Location of supply

- Waterproof Junction box
- IP55 / IP65, 240V
- 200mm from floor, to one side of the bath

(picture on next page)

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Delivery + Room Preparation

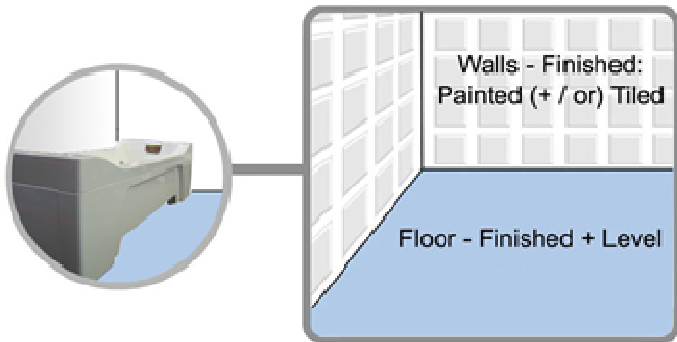
Please remember the bath is a large and heavy item. How to move the bath into the room / house should be considered and if the bathroom is not particularly large, it is recommended to leave other fittings, e.g. basins, etc., until after installing the bath.

The room must be easily accessible for large products

The Multibath may need to be disassembled to allow easier access into the room. The bath tub can be separated from the lifting framework and panels. (This should be only done by or under strict supervision of Kingkraft engineers) The dedicated area for the bath installation should be finished to allow assembly of the Multibath.

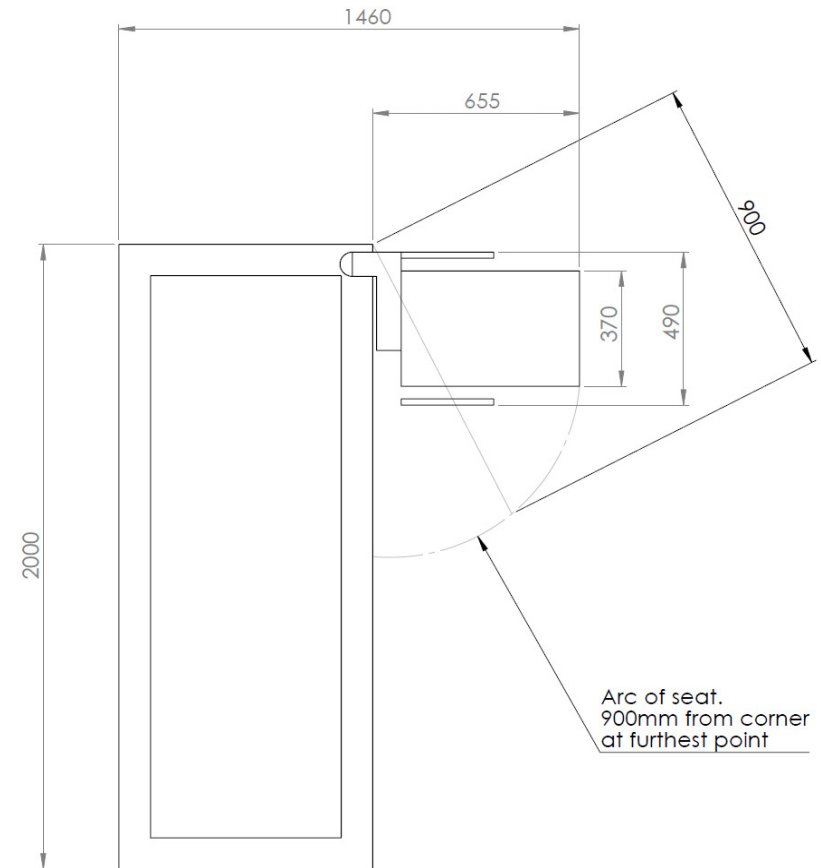
When positioning the bath, allowance will have to be given for wall clearance as the bath moves up and down. The Multibath requires a

minimum clearance of 6mm around it to allow free movement. Nothing should be wall mounted above the bath as this may cause a risk of trapping as the bath traverses upwards. If the Multibath specified is different from the standard specification, fixtures and fittings might be different. Please phone Kingkraft to check if you are in doubt.



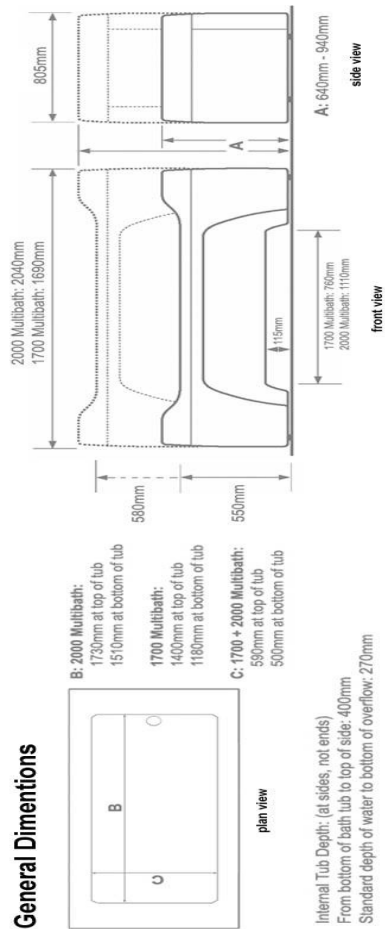
Right-Hand Drain Bath Shown
For left hand drain bath,
mirror these images horizontally.

Seat movement dimensions

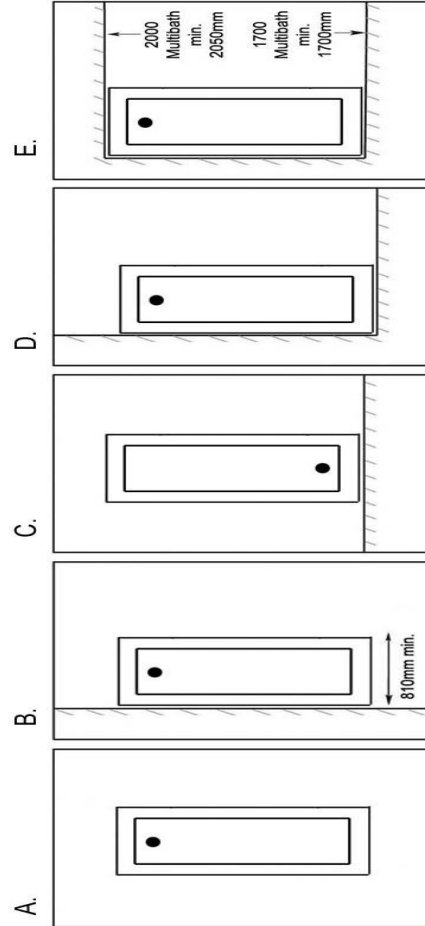


Model shown is a Multibath SE 2000 left hand drain. For a right hand drain the seat would be at the opposite end of the bath.

Bath dimensions without seat shown



Possible installation positions within a room: The bath can be installed in any of the following positions:
(Dimensions in mm)



Beginning Installation

Having determined the required position of the bath, piping up the supply can begin. If any mixer valve assembly is required to be mounted / positioned anywhere other than in the following positions, Kingkraft must be informed before doing so.

The hot and cold supplies and waste pipe should be positioned as shown in the following instructions.

Positioning

At this stage, the bath can be positioned. Remember that the drain of the bath is built into the bathtub itself: The adjustable feet can be screwed out to level / slightly raise the bath tube.

Position the complete assembled bath where required and very carefully operate the bath through the full extent of its travel to ensure free up / down movement without any fouling. For fixed height contact Kingkraft for details if required.

General Information

The Multibath is available in two different sizes (1700 and 2000, see dimensions page).

The bath features fixed height or powered raise / lower versions, and as standard comes with an adjustable temperature mixer tap.

A variety of bath fill control options are available, including on-board fixed temperature thermostatic mixer valves, an IR / Digital Rada Sense system or a thermostatic mixer tap. A shower option is also available.

The bath can be supplied with waterproof cushions which can be manufactured to cover different parts of the bath if required. Removable supports can be supplied to suit the needs of the individual bather.

Before Starting

Before installing, check that all the required services are available in the correct positions and to the required standards. (shown in the following pages)

The bath (not fixed height version) is intended to travel up and down. This necessitates locating it in a position where it will not touch surrounding walls or objects and will not present a hazard to users and carers such as by trapping hands or other body parts against walls or projections (radiators, ledges etc.). The room should be adequately ventilated to reduce humidity and moisture in the air.

The bath can be installed in various positions. The tap / drain end can be at either end of the bath depending on the specification.

Check that the positioning of any fixings to be used will not interfere with any under floor pipe work or cables. Remember that the bath is heavier than a conventional unit and is rated to support a bather of up to 130Kg in weight. Together with the weight of water in a full bath, it is imperative that the floor is fully load bearing and fixings used are of adequate strength and suitability.

Drainage / Waste

The bath is supplied with a single drain pipe.

The drain passes through a low level trap connected to 40mm flexible drain hoses with a sleeve fitting / compression straight connector.

A rigid 40mm tail should be provided at low level, no more than 50mm above floor at the drain end of the bath, to allow for an elbow to be glued on top, as shown. If no elbow is required the maximum height of the waste pipe connection is 130mm from the floor.

Waste fittings up to the point where the Kingkraft straight connector attaches to the pipe must be solvent - not using the 38mm push-fit type.

Pipework



Position the hot and cold supplies so the pipes can be safely run for connection to the flexible hoses provided.

Do NOT use jointing paste with the supply pipework. Only PTFE tape should be used if required.

If these pipe positions can not be exactly followed, please raise and lower the bath through the whole of its travel before committing the positions of the pipes to ensure they are not trapped or kinked in any way or straining any connected pipes or wires.

Check these do not interfere with the use of floor hoists. If so, these may have to be moved to a more suitable position if possible. If pipework has to be mounted underneath the bath tub, especially the Digital Mixer Valve system, specially designed plinths are available as an optional extra to raise the whole bath if required to provide more room for hoist legs.

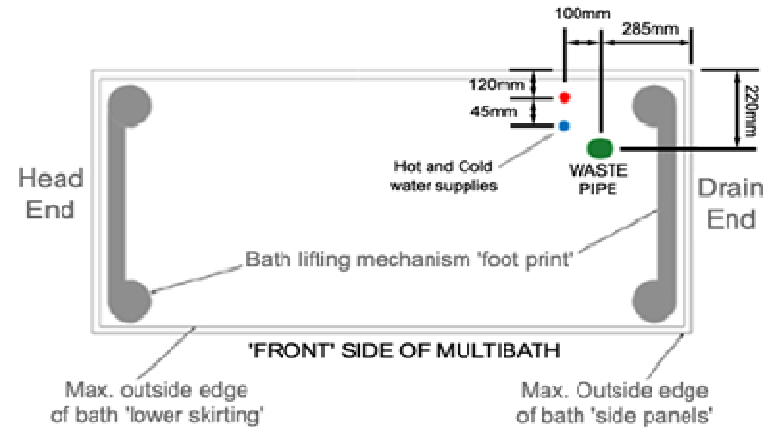
The water supplies must incorporate the supplied ballofix type isolation valves, non-return valves and in-line filters shown in the following pictures.

All pipework must be earthed

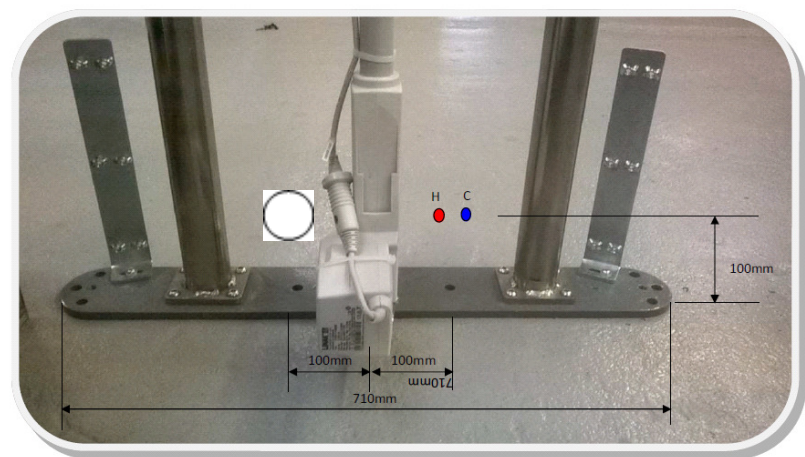
Isolation valves are provided to ensure the bath can be isolated for maintenance of the pipework and mixer valves etc.

Pipework options

Pipework coming up under the bath:



Pipework coming in from the drain end of the bath:



Thermostatic Mixer Valves and Taps

There are three options available for mixer valves / taps. These are 'on-board' thermostatic mixer valves, a thermostatic mixer tap (a Rada Autotherm or a Reliance Caremix) or a 'Digital Adjustable Mixer Unit'.

Please check which type you have ordered and refer to the following appropriate instruction sections.

Two non-return valves and in-line filters must be fitted between the ballofix type isolation valves fitted to the supply pipes and inlets of the mixer valves.

Digital Adjustable Mixer Valves

The hot and cold water mixer unit is mounted underneath the bath unit and the control panel either mounted remotely from bath, for example on an adjacent wall, or directly on the top surface of the tap end of the bath, or on a bracket on the top surface or side of the bath.

The mixer valves are set to maximum and minimum temperatures and then the user can vary the temperature between these using the infra-red sensing control unit. Please discuss with Kingkraft the positioning of the control panel if mounting on the wall next to the bath. This must not interfere with the bath or the opening side when raising / lowering, but must be a reachable distance for the cabling.

Nothing should be wall mounted above the bath that can cause a risk of trapping as the bath traverses upwards.

Example of Digital Adjustable Mixer Valve and Control Panel:

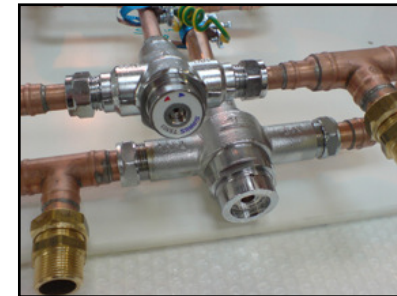


On-board Valves

These are mounted underneath / within the body of bath.

If the on board valves are specified, the temperatures can not be adjusted once set (except by recourse to Allan Key adjustment by a qualified engineer)

Example of On-Board Valves Assembly:



Thermostatic Mixer Taps

If a thermostatic mixer tap has been specified this will be mounted at the drain end of the bath, on the top surface of the bath tub.

Examples of mixer taps commonly fitted:



(Makes / models of Thermostatic Mixer Tap can vary; see enclosed manufacturers instructions included with the bath supplied for specific tap details)



- **The thermostatic mixer valves / tap temperatures must be checked and correctly set by a competent individual once installed and regularly maintained thereafter.**
- **Should the flow rate and / or pressure of the supply alter, the valves may need to be reset by a Kingkraft or qualified engineer.**
- **If the tap is incorrectly set up there is a danger of scalding!**
- **Kingkraft recommend a yearly service, or every 6 months if in hard water area or a 'high usage' installation.**

Final Connections

Connect the water supply flexible pipes to the hot and cold supply, using non-return valves. Isolation valves are provided to ensure the bath can be isolated for maintenance of the pipework and mixer valves etc.

Connect the waste hose (using PTFE tape)

Do NOT use any joining compound, only PTFE tape for all plumbing fittings.

Using armoured cabling on any exposed wiring, connect any electrical components (i.e. raise / lower actuator, whirlpool pump) to a suitable mains supply IP65/66 junction box and connect all earthing straps / wiring.

At this stage do not as yet attempt to put any supplied cushioned supports in the bath or attempt to use the bath. The cushions may become stained before the pipework is flushed for the first time.

Fixing the bath to the floor

Because the Multibath SE incorporates a seat for lifting the user in and out the bath the bath must be fastened down to the floor with the appropriate fixings.

The bath must be screwed down to the floor to stop any possible movement of the bath and improve stability. This should be done before commissioning. Great care must be taken if under floor heating has been installed. It is possible to fasten it to a wooden floor but it must be reinforced and able to accommodate a 4" x 8mm coach bolt. Extra timbers need to be fitted in the floor structure if needed. If the bath was to be fastened to a concrete floor (preferable) you would need at least 70mm concrete and use suitable Fischer or expander bolts.

In each corner of the framework underneath the tub is a 10mm hole. All four corners must be screwed down.

FAILURE TO SECURE THE BATH TO THE FLOOR BY THE REQUIRED STANDARD WILL RESULT IN NON INSTALLTION OR COMMISIONING AND THE BATH BEING DECLARED A SAFETY HAZARD.

LOLER TESTING

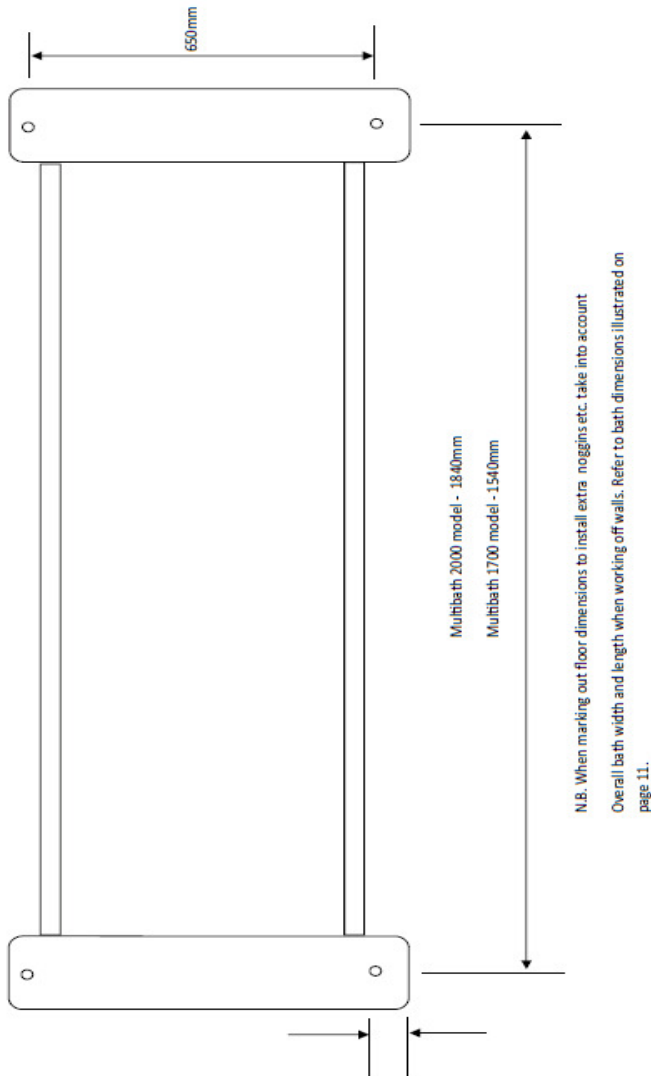
To comply with LOLER testing and certifying it as a safe product, a competent person must carry out the following after the bath has been secured to the floor.

- Place weights on the seat to quantity of the maximum safe working load (max safe load 133kg/21 st)
- Operate all functions, checking for movement in the framework and any fouling that may occur between the bath and the seat frame.
- Check the installation fully for any missing items or defects.

Subsequent LOLER testing should be then carried out on a 6 monthly basis.

An annual weight test with an interim visual check.

FIXING LOCATIONS



FINAL CHECKING OF THE BATH & COMMISSIONING OF THE MIXER VALVE/TAPS

- **Check all electrical connections are correct and secure.**
- Check all pipe work joints are correct and secure.
- Check all bolts and cabling on the lifting framework and panelling appear secure.
- Check for full and free movement of the bath and that this movement presents no danger to the user or carers.
- Check the operation of the taps and waste mechanisms.

Whirlpool (if Fitted) -

- Fill the bath above the whirlpool jets with clean water and check the operation of the whirlpool system. IF THE BATH HAS A WHIRLPOOL SYSTEM PLEASE REFER TO THE MANUFACTURERS INSTRUCTIONS REGARDING THE USE AND PARTICULARLY THE DISINFECTION ROUTINES FOR THIS SYSTEM PRIOR TO USE. The system must be regularly cleaned and disinfected in use with suitable frequency and with the correct fluids. Kingkraft supply recommended cleaners.

The mixer valves / tap must be commissioned in accordance with DO8 / manufacturers procedures. These can be found in instructions supplied with the bath. Kingkraft normally adjust the valves to give a maximum 44 degrees C for the bath fill and 39 degrees C for the shower. Do not attempt to use the bath if these valves have not been installed and commissioned in accordance with the relevant procedures / DO8.

Finally insert the cushions and any other supports supplied in the bath.

If there is any doubt in the user's mind as to the correct use of the bath and its supports then please ring Kingkraft immediately for advice and assistance: (0114 269 0697)

Please ensure only competent individuals undertake the above work and remember at all times to consult Kingkraft if there is any doubt. If required, Kingkraft Engineers will check over any work done, following installation of the bath by others, and provide a full commissioning service and certificate.

This is the recommended course of action

Chair Removal

With the Multibath SE it is possible to remove the chair and still use the bath if this is preferable depending on user needs.

Due to the tight tolerances between the chair and the lifting shaft this should not be a frequent occurrence and can be a difficult task to remove.

This process should only be carried out by competent individuals under the guidance from Kingkraft or by Kingkraft Engineers.

The same applies for the re-mounting of the chair onto the bath.