



Pre-Installation Services Requirements and Installation Instructions

Kingkraft 2100 Easibath

Please read very carefully before commencing.

If in any doubt, please contact Kingkraft Ltd.



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**PLEASE READ CONTENTS 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 1/12/08)

This booklet describes the ideal conditions to which a site should be prepared prior to the installation of the 2100 Easibath.

The bath is intended to be used for assisted bathing and should only be installed by competent individuals. The bath may incorporate lifting mechanisms, pumps and other electrical items and will normally have thermostatic mixer valves. These will require careful setting and subsequent maintenance.

At any stage, Kingkraft can provide telephone advice and a full commissioning service following installation by others. 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.

**THROUGHOUT THIS PRE-INSTALLATION GUIDE
A 'LEFT HANDED BATH' IS SHOWN.**

**IF A 'RIGHT HANDED BATH IS SPECIFIED,
MIRROR THE ENCLOSED IMAGES.**

General Information

The Easibath is available in different sizes. In addition, the Easibath can be custom built to user specified dimensions. The bath features fixed height or powered raise / lower versions.

The bath can be supplied with either on-board fixed temperature mixer valves or a adjustable digital mixing valve for the bath fill and shower option. One valve controls the water temperature to the bath fill spout and the other controls water temperature to the on board shower.

The bath has one side which opens out fully to allow it to be used as a table and to enable easy access. The bath has waterproof cushions on the base and the fold side as standard although cushions can be manufactured to cover other parts of the bath if required. Removable supports can be supplied to suit the needs of the individual bather.

In case of an Easibath being specified significantly larger than the standard 2100 size, a more powerful version of lifting frame might be required instead of the standard separate lifting columns. Please check with Kingkraft if unsure which type is to be supplied.

An Example Easibath 2100 Shown Below:



The bath must be screwed down to the floor to increase stability. This must be done before commissioning. Great care must be taken if under floor heating has been installed.

When positioning the bath, allowance will have to be given for wall clearance as the bath moves up and down. The standard Easibath frame only requires a maximum of 10mm clearance, whereas a heavy duty lifting frame requires 50mm at each end.

The bath must be away from any objects / fittings to allow free movement up and down. Nothing should be wall mounted above the bath as this may cause a risk of trapping as the bath traverses upwards.

IMPORTANT DIMENSIONS NOTE:

If the bath specified / supplied is either ‘Extra Long’ or ‘Extra Wide’ then this must be taken into account for the overall / external dimensions of the bath shown in this booklet. These special sizes can vary, e.g. 50mm, 75mm, 150mm

For example:

- A 150mm Extra Long option would make the overall length of the bath:

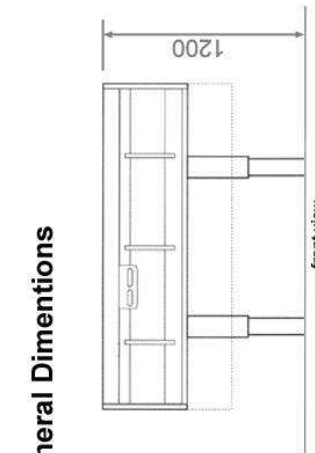
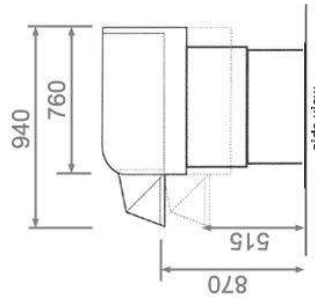
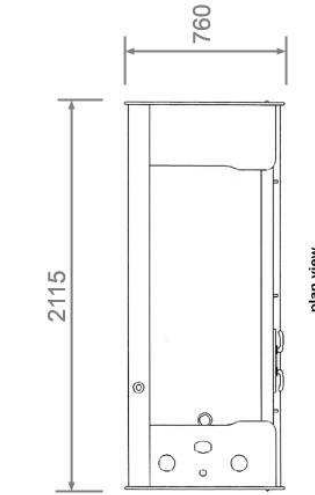
$$2115\text{mm} + 150\text{mm} = \underline{2265\text{mm}}$$

- A 150mm Extra Wide option would make the overall width of the bath:

$$760 + 150 = \underline{910\text{mm}}$$

The following bath specification options **do not** affect the overall / external dimensions:

- Tap End Hollowed Out (TEHO)
- Head End Hollowed Out (HEHO)
- Both Ends Hollowed Out (BEHO)

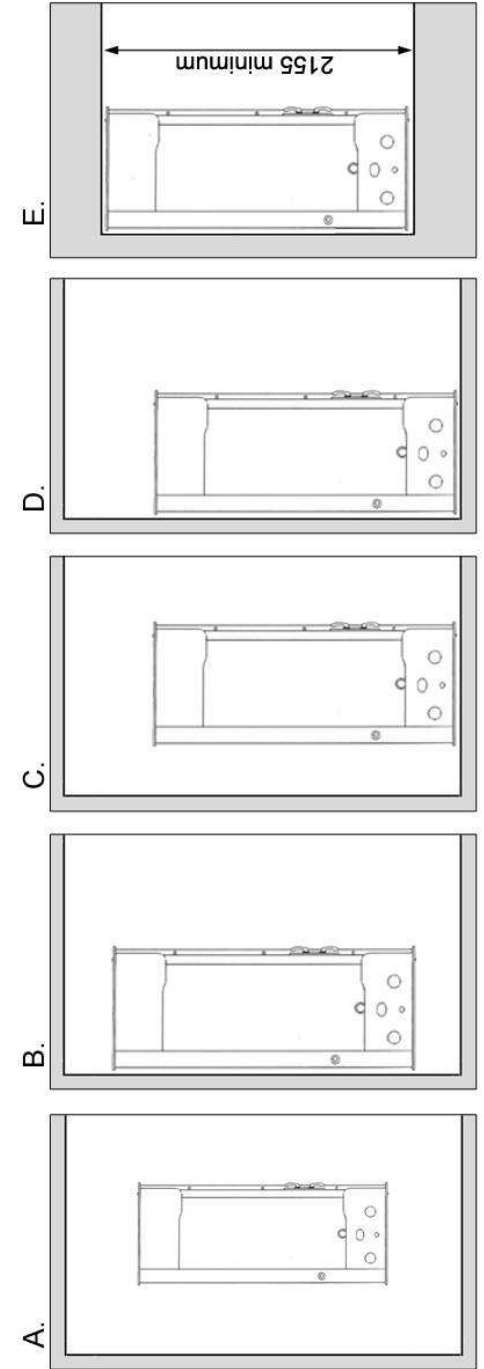


General Dimensions

Possible installation positions within a room:

(Dimensions in mm)

The bath can be installed in any of the following positions:



Pipework

Hot and Cold supplies should be preferably through the floor (shown below)

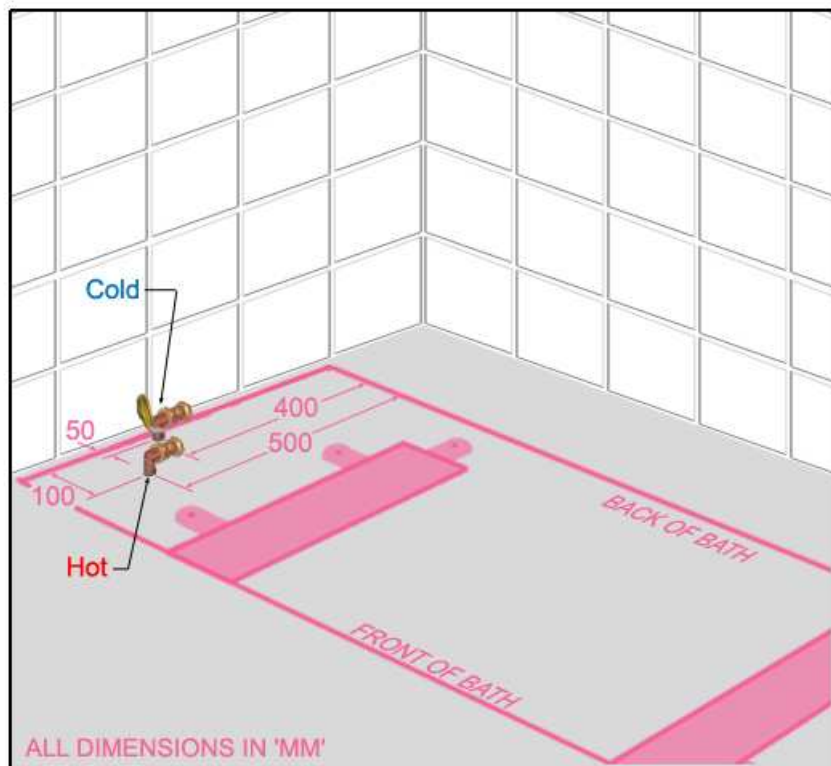
If pipework is run along the wall, then the pipework needs to terminate at the same places as shown below.

Hot + Cold Water Supplies

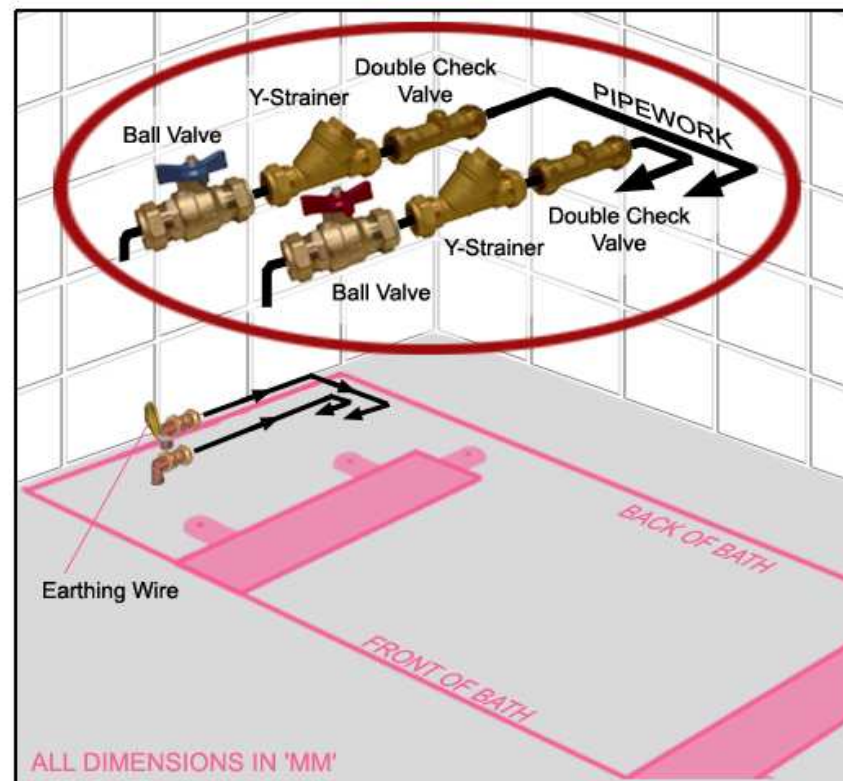
- 1 x 22mm copper pipe for hot water, elbow as soon as above floor + Ball / Isolation valve attached + Earthing wire.
- 1 x 22mm copper pipe for cold water, elbow as soon as above floor + Ball / Isolation valve attached + Earthing wire.
- Earth bonding point

If different diameter pipes are used, the bath fill rate will alter. See later for information on flow rates and pressures.

A 'Peninsula' 'Left Handed Bath' is shown in the following illustrations:



The following items are supplied with the bath and must be fitted in this order. The flexible pipes supplied with the bath are to connect to the end of this pipework and up to the pipework under the bath.



Drainage / Waste Pipes

The bath can be supplied with either a **single or twin drains**.

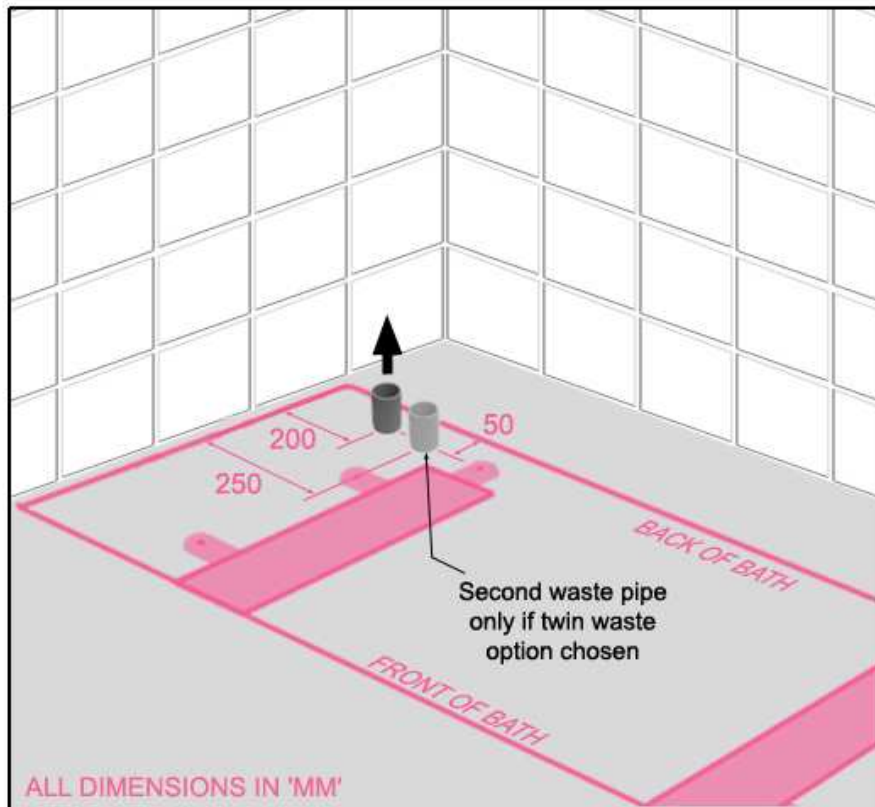
Please check the specification of the bath ordered.

The drains pass through on board bottle traps connected to 40mm flexible drain hoses with a sleeve fitting. Rigid 40mm tail(s) should be provided at low level (no more than 150mm above floor) at the tap/drain end of the bath.

For the Twin Drain option, either two separate 40mm drains are required or the separate tappings provided must fit into a 100mm pipe.

The pipe/s may require cutting down to an exact required length and an elbow and short straight length of pipe glued on for the straight connector to fix to, this is specific to individual installations and TBC at the time of fitting.

These ridged waste fittings must be glued together - not using the 38mm push-fit type.



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.

Kingkraft can supply a Category 5 back siphonage protection system for the shower. This is an optional extra and would have to be wall mounted next to the bath. 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 the twin non-return valves on the cold and hot supplies. (Not supplied as standard with the bath)

A standard Easibath has a volume of no more than 230 litres but special sizes may be more. ***In this case please inform the Local Water Authority.*** Your local water authority should be able to advise you on the likely categorisation of the bath in your particular establishment.

Water Supply Requirements

The bath may be used if required as an easy access bath. The bather enters through the open bath side and the bath is subsequently filled, after the door has been closed, with water mixed to a safe temperature by the thermostatic mixer valve. In order that the bather does not become cold, the bath is designed to permit high flow rates (although they may work with low flow rates, when 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, say, 5 litres per minute.

The mixer valves provided together with the necessary non-return valves 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 is preferable to potentially avoid the need for a pump. (Combi-boilers or mains supplies cannot be pumped) A competent plumber should be able to advise the best option.

In addition to adequate flow rates, the incoming water pressures must ideally be in a ratio of 5:1 cold to hot, for on-board valves and 2:1 or equal pressures for the digital mixing valves, with no tendency for air locks and with a nominal hot temperature of 55°C or higher. The mixer valves will need to be set up and checked at commissioning to mix the incoming water to supply controlled water at 43°C to the bath and 39°C to the shower.

If the bath is being used in continuous cycles, adequate hot water storage must be available. A standard Kingkraft bath is 230 litres or less in volume but special size baths may be larger. Please check if you are in doubt.

The boiler must be plumbed in and working to the correct temperatures before final commissioning can commence.

Mixer Valves

There are two options available for mixer valve assemblies. These are 'on-board' valves 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 on the top surface of the tap end of the bath.

The mixer valves are set to maximum and minimum temperatures and then the user can vary the temperature between these using an 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.

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

Mounted within 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, attached within the tap end body of the bath:



The mixer valves will need to be 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.

Kingkraft recommend a yearly service (or every 6 months if in a hard water area or a 'high usage' installation)

Electrical Requirements

The room into which the baths will be installed must comply with the latest electrical zoning regulations. These stipulate the minimum distance from the bath to electrical equipment in the room. In addition, adequate ventilation must be provided. A qualified electrical engineer should advise.

The Easibath Fixed Height or Manually Operated versions do not require power unless optional extras such as a Whirlpool System has been specified. All other specifications require a suitable mains power supply (a 24 VDC battery version is an option if the provision of mains power to the room is not practical or desirable - please enquire for further details, frame design could be different from pillar version).

Please note that various other safety options are available, for example to isolate the power supply to the bath and additional safety devices can be fitted, if deemed necessary, these are available at extra cost. This will vary for different installation sites and situations.

Kingkraft will not be able to complete installation / commissioning of a bath unless an *Electrical Installation Certificate (Including Test Details covering the room in which the bath is to be installed)* 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 are effective from 1st January 2005. At the very least, residential type properties require a confirmation in writing that the installation complies with the requirements of BS 7671.

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

1. The supply shall be 240V, 50Hz, Single Phase & Neutral on a fused spur. A 5 Amp fuse should be used.
2. The supply shall be protected by a suitably rated RCD with a 30mA trip and shall be of a dedicated type, i.e. supplying the bath installation only. (Not supplied with bath) A suitable isolation switch (not supplied) must 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. If this is not

practicable then other locations will be considered. The water ingress risk must be minimised when considering other locations.

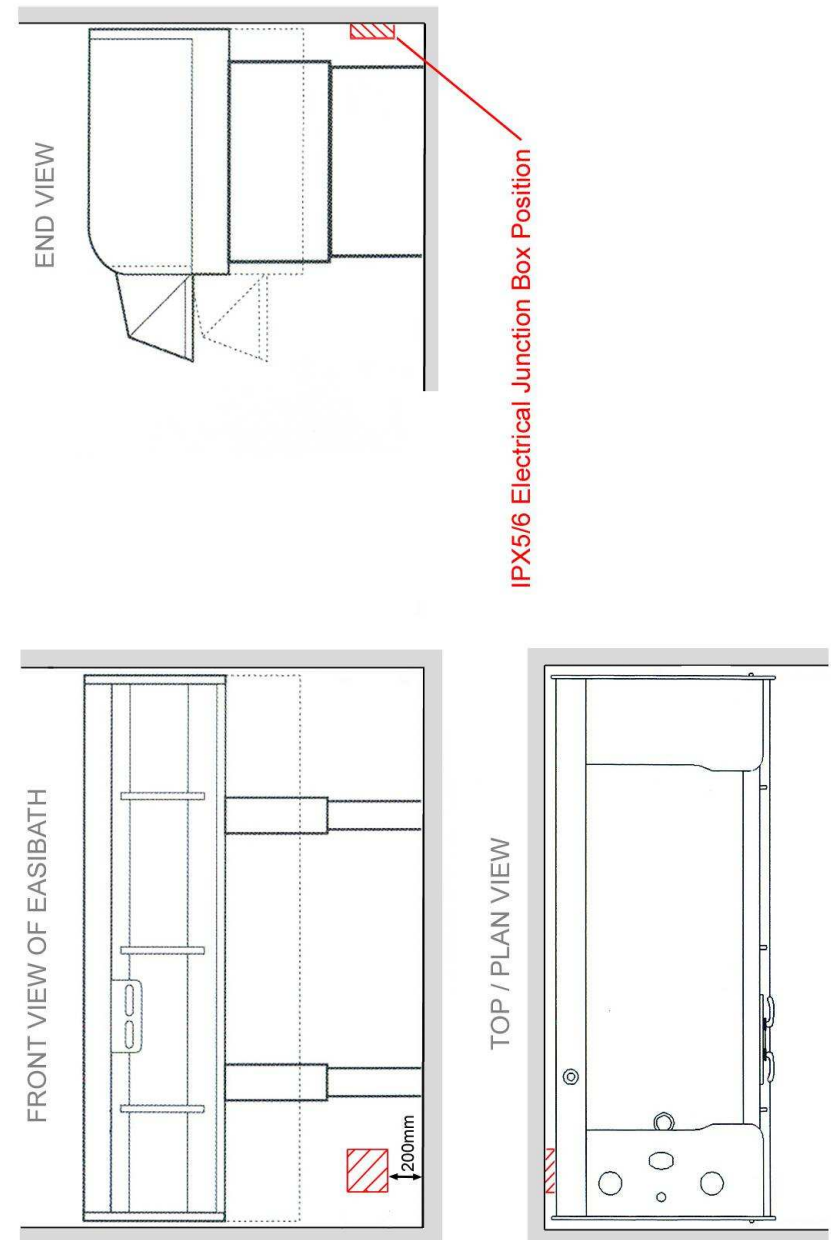
4. The supply shall terminate in an enclosure of IPX5/6 rating; the enclosure shall have facility for "glanding off" using waterproof compression glands to preserve the IPX5/6 rating of the installation. (Not supplied with bath)
5. The Enclosure shall be 100mm x 100mm x 50mm in dimension. Armoured cable is to be used with mains powered lifting frames and whirlpool.
6. The final cable terminating at the bath SELV unit will be armored via the braid protection of the cable; facility shall be left within the enclosure to accept the termination of the armoring 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 checking 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 tender.

The following pages show positioning for the electrical junction box.

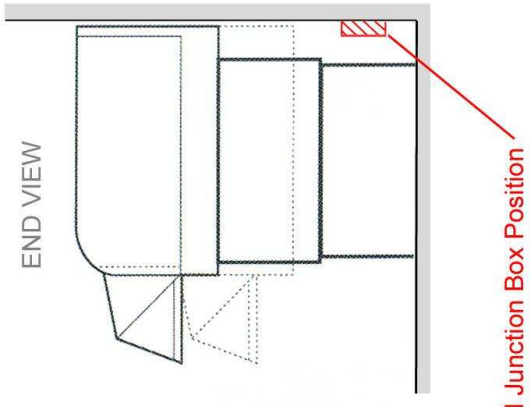
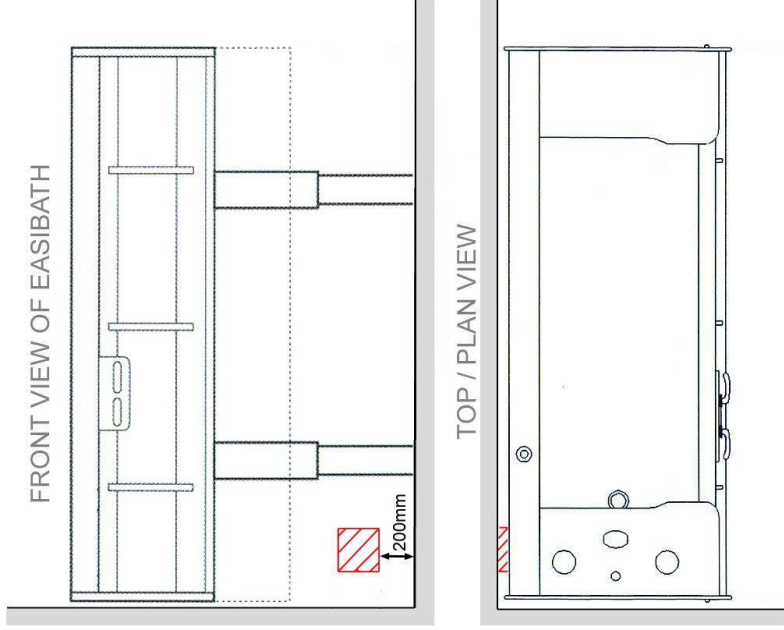
The three positions shown are:

- **Peninsula position**
- **Corner position**
- **Alcove position**

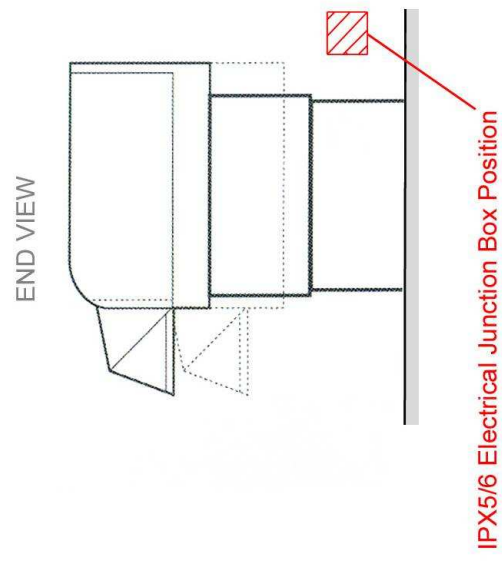
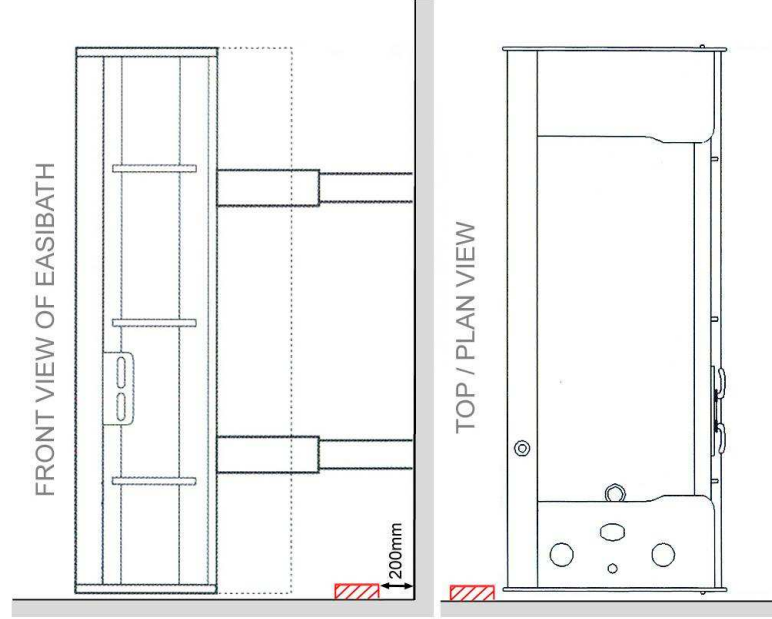
Electrical Waterproof Junction Box: Alcove Position (Left Hand Bath shown)



Electrical Waterproof Junction Box: Corner Position (Left Hand Bath shown)



Electrical Waterproof Junction Box: Island Position (Left Hand Bath shown)



Please ensure only competent individuals undertake this work and remember at all times to consult Kingkraft if there is any doubt.

Kingkraft Engineers are able to carry out pre-installation site surveys depending on location, check over any work done following installation of the bath, and provide a full commissioning service and certificate.

This is the recommended course of action.

INSTALLATION INSTRUCTIONS

These are recommended Installation Procedures for Kingkraft Easibath, Manually Operated, Hi-Lift, mains & battery powered Hi-Lift and Fixed Height versions.

Instructions are also provided for the connection of the whirlpool if they are supplied with the bath. Please note, specially manufactured versions of the Easibath to the customer's specification may require different or extra procedures. Please refer to the manufacturer.

The following instructions form recommended guidelines for installing the above equipment and should be read in conjunction with the previous *Pre-Installation Service Requirements Instructions*



WARNING

The Kingkraft Easibath is intended for use by people with disabilities, who require assistance with bathing. 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.

1. The bath is normally supplied with mixing valves to control the supply of hot water to the bath. If these are incorrectly set up, there is a danger of scalding.
2. 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.
3. The bath will be supplied with lifting columns (unless it is a fixed height or battery 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.

Kingkraft Ltd can provide full telephone or on site assistance with installation if this is required. Please contact the company and we will be pleased to help if possible.

We always recommend that commissioning of the bath is carried out by Kingkraft qualified personnel

Before Starting

Check that all the required services, as per the Kingkraft Pre-Installation Instructions, are available in the correct positions and to the required standards.

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.). If the lifting columns are fitted, they will require a minimal clearance around the bath. The room should be adequately ventilated to reduce humidity and moisture in the air.

The bath has a fold down side. When selecting the position for the bath, the necessary clearance should be allowed for it to be fully extended in safety. The bath can be installed against a wall or in an island position.

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

The bath will need to be secured to the floor, see fixing guide section. 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 133Kg in weight. Together with the weight of water in a full bath, it is imperative that the floor is fully load bearing.

Component Variations / Specifications

The Easibath normally is supplied as separate components for assembly on site. These components may include the following -

Tub section. With or without whirlpool system including spout, waste(s), trap(s), and controls, on/off water taps for bath and shower, shower hose and handset, cushions and supports.

Base frame either fixed or variable height Lifting Columns. If powered by mains power, a control box with armoured cabling will be supplied for connection to a suitable electrical supply point.

If the bath is battery powered, there will be a battery and control box on the frame with a separate charger unit and spare battery for remote wall mounting in a safe dry area. (Battery frame may be a different design to lifting columns)

Beginning Installation - Positioning the Bath

At this stage, the bath can be positioned.

Remember that the drain of the bath is caused by the framework and not the bathtub itself. Check the height of the lifting column fixing holes to determine the correct way round.

Place the two columns evenly apart, and parallel, (see previous dimensions page) preferably in, or near as possible to the bath's final position.

Using group lifting techniques, lift the bath tub on to the columns and secure using four M8 bolts under the bath (supplied). Do not over tighten.

If there is restricted space to do the above, place the bath on to its back, offering the columns up to the fixing holes, attaching the bolts, and then lift / tip the whole unit up onto the feet. Then it should be lifted / slid into position. **CAUTION!** The bath and lifting columns are **very heavy**. Group lifting techniques must be used when moving / handling the unit at all times.

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.

Secure the lifting columns to the floor with suitable fixings always taking care regarding under floor services - Please see the following information for fixing the columns to the floor.

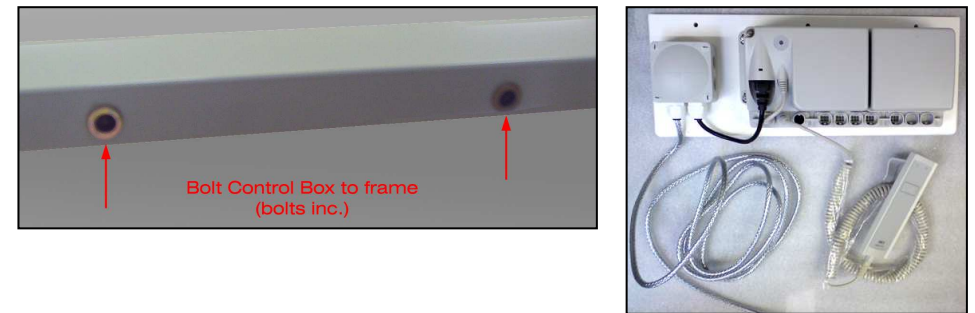
Connection of Control box

Once the bath is assembled in the desired final position, the control box can be fitted underneath the bath, in the middle of the rear framework, powering the lifting columns and handset.

The control box and small power junction box are fitted to a plastic mounting plate.

This is to be bolted to the underneath of the frame under the bath using the fixings provided.

Example of fixing holes in framework at back of the bath, underneath, to attached the control box mounting plate and the control box fixed to mounting plate:



Once the control box is in position, connect the four cables from the top of both lifting columns into the four spare 'ports' in the control box. These must be pushed in completely.

Do not try to operate the equipment before the armoured cable is connected to the IPX5/6 junction box on the wall, the electricity supply has been tested / completed and turned on and all earthing wire connections made.

If a whirlpool option is fitted, the armoured cable provided must be wired into the IPX5/6 junction box on the wall.

Waterproof glands must be fitted to all connections into the wall mounted junction box for each individual cable.

Issued to: KK 	LINAK-UK LTD Initialisation Procedure	KK-IP-070228
	KingKraft CU20 Software (Ref. MA-T9-00-030-rev G)	Issue No A Issue Date 26/02/2007 Raised By JT Pages 1 of 1

VERY IMPORTANT!

This Initialisation Procedure is regarding the lifting mechanism on the following products:

Kingkraft Variable Height Easibath

Before the first time of operating the lifting columns, or if the bath will not respond to the pressing of the raise or lower buttons on the handset / membrane switch, and you can hear a beeping sound coming from the bath, you will have to follow this initialisation sequence to re-set the bath.

Failure of the mains power to the bath, or running the bath off the back-up battery only could lead to the synchronisation of the lifting columns becoming compromised, causing the system to stop working until it is reset.

Mains power must be connected to the bath and the small green light on the control box must be on before attempting this:

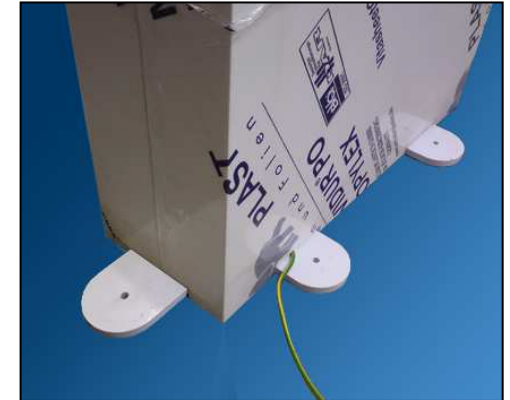
Initialisation Procedure

1. Press both up and down button at the same time for at least 5 seconds. This will activate the new manual mode. The Buzzer will beep.
2. After the 5 seconds the beep will change to a shorter/different kind of beep. Release the up and down button and then press the down button only (this has to be done within 5 seconds. If not then the beep will stop and you have to start all over again from point 1).
3. During pressing the down button all columns will drive inwards. The beep will be continuous as long as the columns are driving inwards. Columns have to be driven all the way down after which the beep will stop. The System is then initialized and ready for use.

Guide to Fixing Lifting Columns to Floor

- If under floor heating is installed in the room, great care must be taken, or other fixing options, such as adhesives could be considered.
- If the floor is wooden, simply screw in the screws without any pre-drilling.

- Position the lifting columns / bath
- There are three fixing holes per column:



- Extra Wide baths are provided with an extended base to increase stability:



- Hammer action drill + 6.5 - 7mm Dia. masonry drill bit if drilling a concrete floor.
- Only drill a small pilot hole, if deemed necessary, if screwing down to wooden floor.
- Repeat for all three holes in each of the bases.



- Screw bases down.



- (Plugs and / or appropriate fixings / screws not supplied)
- Knock the plugs through the holes using a screw and ensure it is into the floor, past the metal base.



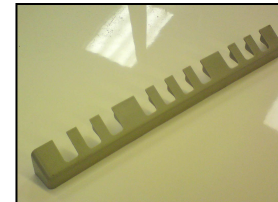
Important Notice to the Installer of this Easibath

Please note the cable retainer piece must be fitted once all cables are connected to the control box underneath the bath. (A)

This ensures the cables can not be removed by someone without a screwdriver / tool.

The red safety clip around the mains cable connection must also be fitted for the same reasons. (B)

(A):



(B):



Having determined the required position of the bath, piping up the supply can begin.

Plumbing / pipework must be prepared as described in the pre-installation instructions.

Thermostatic Valves

There are normally two mixer valves supplied, a 15mm for the shower and a 22mm for the bath fill, or the other option is a digital mixer valve system which is enclosed in a large plastic casing. Both of these options are mounted underneath the bath and have threaded connections onto which the two flexible hoses can be fitted directly.

Connect the water supply flexible hoses to the hot and cold supplies, ensuring all supplied / specified parts are fitted as shown in the pre-installation information.

Armoured cabling must be used on any exposed wiring connecting any electrical components to a suitable mains supply IPX5/6 distribution box.

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

The mixer valves will require setting up and a formal commissioning process will be needed prior to use. The valves are manufactured and tested to DO8 standard and should also be commissioned and maintained in accordance with this standard. Kingkraft Ltd can supply a commissioning service if required. This is recommended in all cases.

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.

FINAL CHECKING OF THE BATH & COMMISSIONING OF THE MIXER VALVES

- **Check all electrical connections are correct and secure.**
- Check all pipe work joints are correct and secure.
- Check all bolts and pins on the base appear correctly positioned and 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 opening side. It should open without fouling any adjacent objects and the operation of the locking mechanism should be checked.
- 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 DISINFECTATION ROUTINES FOR THIS SYSTEM PRIOR TO USE.** The system must be regularly cleaned and disinfected in use with suitable frequency and with the correct cleaning solutions / fluids. Kingkraft supply recommended cleaners.

The Mixer valves must be commissioned in accordance with DO8 procedures. These can be found in instructions supplied with the bath. Kingkraft normally adjust the valves to give a maximum 43 degrees C for the bath fill and 38 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 DO8 procedure.

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)