

# USER MANUAL

## KINGKRAFT SHOWER CHANGER

Model.....

Serial No.....

Delivery/installation date.....

### IMPORTANT SAFETY INSTRUCTIONS

Please read these instructions carefully before first using your Kingkraft product, and then keep them safely for future reference. Please also make sure that each person and any carer who uses the bath is also aware of their contents and follows the instructions each time they use the unit.



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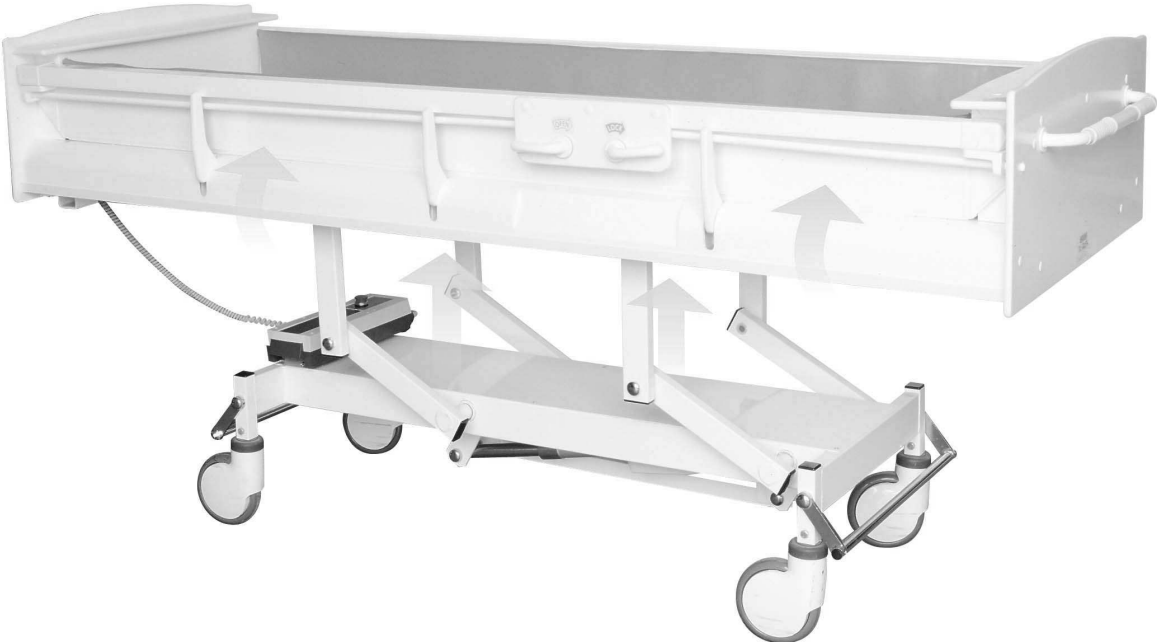
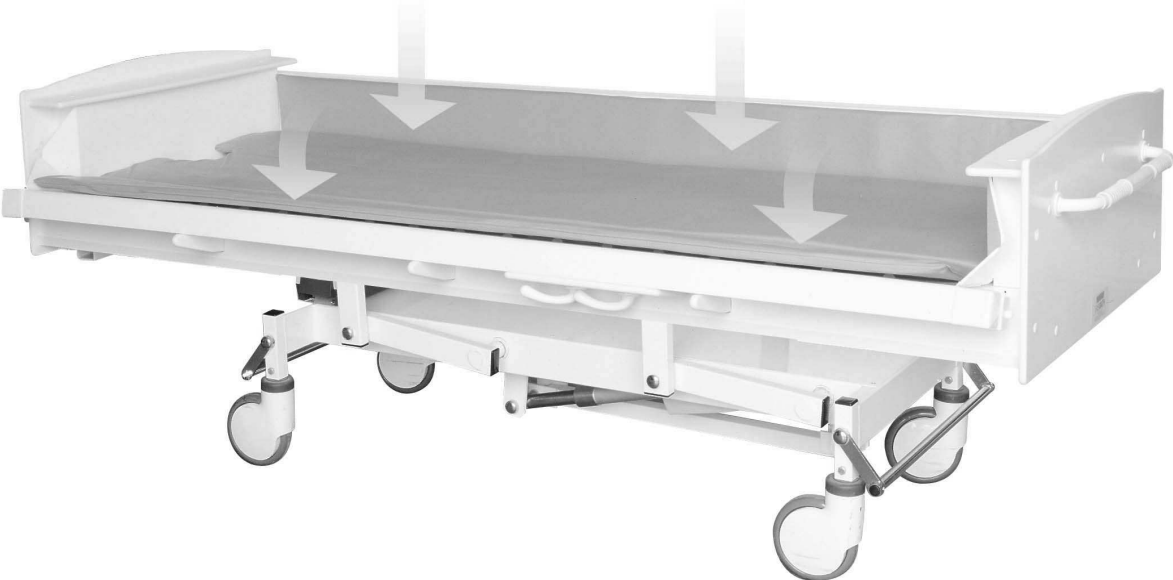
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**KINGKRAFT SHOWER CHANGER**

Variable Height Battery Powered Option Shown



## **IMPORTANT SAFETY INSTRUCTIONS**



**WARNING: Any person who is incapable of fully helping themselves must NEVER be left alone in the trolley even for the shortest of periods.**

This manual contains information for all standard versions of the Kingkraft Shower Changer. Special design versions manufactured by Kingkraft may differ to those described herein. Separate instructions for these models may be required. Please consult Kingkraft Ltd. These instructions also cover the range of different fixed height and manual and powered raise/lower frames which may be used with the Shower Changer. Please make sure you read all the sections relevant to your particular model.

If you have any doubt about the safe operation of the unit please contact Kingkraft immediately for advice.

- Do not stand in the Shower Changer when it is in the raised position or at any other time
- Kingkraft products are intended for domestic and commercial use only.
- Kingkraft Shower Changers are intended only for lifting and bathing people.
- Do not exceed the maximum loading marked on the unit chassis.
- Only one person should be in the unit at any one time.
- If fitted, the raise/lower control handset is waterproof but should not be put into the water. However, if it is accidentally dropped remove it immediately and wipe dry. Do not leave the handset underwater.

*Note that UK regulations require that, in general, no person should lift a mass of greater than 25kg unaided. Use appropriate lifting equipment if this is required to help disabled people to get in and out of the unit.*

The Shower Changer must be installed by competent installers. If fitted as an extra, the thermostatic mixer valve unit must be installed and commissioned by a trained and competent engineer to minimise the risk of scalding. It is essential that the mixer valve is regularly maintained by a competent individual and records should be kept of the maintenance undertaken. Contact Kingkraft for advice if you need any further information or assistance. The safe temperature of the mixed water should be checked prior to the shower being used on every occasion.

Your Kingkraft Shower Changer itself should be serviced at least once per year by a competent individual. The unit must be cleaned and disinfected regularly according to the instructions given herein.

Ensure that the safety notices which accompany your Shower Changer are properly displayed at all times. Make sure they are replaced if they become damaged or defaced. Contact Kingkraft if you need further supplies of laminated notices.



## **WARNING**

### **RISK OF SCALDING**

Although safety devices should be used to minimise any risk of scalding, users must be aware that these are not necessarily fail safe. The temperature of the water in the unit **MUST BE INDEPENDENTLY VERIFIED ON EVERY OCCASION** it is used and before an incapacitated person comes into contact with the water. Ideally a calibrated thermometer should be used.

The Shower Changer is designed to be used in conjunction with a thermostatically controlled water mixer valve. This valve can be supplied by Kingkraft or be supplied and installed by others. Refer immediately to the manufacturer if the water is too cold or too hot and do not use the mixer until the problem is corrected.

Certain bath additives may damage the plastic from which your product is made, if they contain bleach or other corrosives. Use only water, normal soaps and approved cleaning agents. If in doubt, please contact Kingkraft for advice about the suitability of the additives you wish to use.

Under no circumstances must acid or bleach based cleaners be used. To do so invalidates your guarantee. We recommend that your Kingkraft Shower Changer should be cleaned with Trigene® which is available from Kingkraft. See the section on cleaning for instructions on how to safely and completely clean your unit.

The charger unit for charging the battery system for raising and lowering the frame (if fitted) should be installed by a competent individual in a clean dry room away from interference. The unit should be disconnected from the mains prior to cleaning which should be confined to wiping with a dry cloth.

Do not use pressurised water jets to clean the Shower Changer chassis and keep water jets away from the controls when cleaning around the Shower Changer. Do not steam clean.

Do not attempt maintenance unless the Shower Changer is empty.

Check the Shower Changer frequently for damage. If you find signs of damage, do not use it and contact Kingkraft as soon as possible to arrange for service and repair.

## **GENERAL DESCRIPTION**

Showering should be a relaxing and enjoyable process. Your Kingkraft product has been developed over a number of years and is specifically designed to be “User and Carer Friendly”.

The unit is designed primarily as an assisted showering unit incorporating fold-down sides for easy access and variable height (option) to help reduce carer fatigue.

The fold sides also allow the Shower Changer to be used as a general purpose changing table as well as a shower platform. Shower Changer users can be undressed on the platform prior to showering and also dried and dressed afterwards, thus minimising moving and handling.

The unique folding sides are load bearing, and on the variable height model, the height of the open sides are set at wheelchair height when the unit is at its lowest level. This allows direct transfer to and from a wheelchair. The Fixed Height model should be installed at a height pre-determined by the customer.

The Shower Changer is designed to be used in conjunction with most types of mobile and over head track hoist systems.

The variable height adjustment mechanism allows the unit to be raised to working heights suitable for most carers, which minimises the risk of back-strain and fatigue. Height adjustment can be by foot pedal or battery powered control depending on the specification.

For positioning and supporting the user, Kingkraft produce a range of quickly interchangeable inserts and supports to cater for a variety of different needs. Details can be supplied by Kingkraft.

The maximum shower water temperature should be pre-set and regulated by a thermostatic mixer valve, incorporating over -temperature shutdown protection.

Also enclosed with this manual is a waterproofed Operating and Cleaning instruction sheet for wall fixing adjacent to your Kingkraft Shower Changer. Please ensure this is available for all users and that its contents are understood and the instructions are followed by all carers and users of the unit.

## OPERATING INSTRUCTIONS

### **Shower Changer -**

#### ***To lower the sides***

- Turn locking handle to unlocked position
- Turn opening handle
- Push the side down

#### ***To lift the sides***

- Push or pull the sides up
- Turn opening handle to closed position
- Turn locking handle to locked position

### **Shower Changer Mattress -**

#### ***To secure mattress***

- a) Ensure that the changer bottom and mattress is clean
- b) Place mattress on bottom of changer.
- c) Run a small amount of water into the changer
- d) Press the mattress firmly on to the bottom of the changer

When removing the mattress for cleaning take care that each sucker is prised carefully away from bottom of Shower Changer to avoid a tearing action.

#### ***The Showering Process***

First ensure that the fold-sides are closed and locked. If the Shower Changer is a mobile version, position it in the correct position for the shower and apply the brakes at each end of the unit by depressing the foot locking bars on the base frame. On some versions, the locking bars may have a further position, which allows the castors to steer.

The waste hose should be unclipped and connected to a suitable waste outlet. Before using the changer with the bather in position, the water from the mixer valve unit should be turned on and allowed to flow into the changer with the waste open to allow the water to flow away. This process should be continued until the water temperature is perceived to be constant. This operation will allow the mixed water temperature to increase to the required level and permit the carer to check that the maximum temperature is safe prior to the bather using the changer. If the water temperature does not achieve a comfortable level there may be a fault and the mixer valve unit should not be used until the fault is rectified. Turn off the water, and allow any residual water in the changer to drain. If the temperature achieved was satisfactory, the shower changer is now ready for use.

**REMEMBER:** THE TEMPERATURE OF THE WATER MUST BE CHECKED ON EVERY OCCASION BEFORE A PERSON USES THE UNIT FOR SHOWERING.

### ***Cleaning your Shower Changer***

The changer is made from stain free plastic and requires only a very mild non-abrasive cleaning agent to keep it clean. Backrests can be removed for cleaning by simply being lifted clear.

Under no circumstances must acid or bleach based cleaners be used to clean this product. To do so invalidates the guarantee

Kingkraft recommend that your Kingkraft Shower Changer should be cleaned with TRIGENE® which is available from Kingkraft in ready to use 500ml trigger sprays or concentrated in 1ltr. and 5ltr. sizes. Always follow the instructions of the Trigene containers.

A sample TR101 trigger spray may be included with a new Shower Changer.

### ***General cleaning / disinfection***

Use Trigene® trigger spray TR101 pre diluted to 1:10

As Trigene® is considered safe and non-corrosive it can be used on every area of the Shower Changer and accessories. Trigene® presents no hazard to the user in normal use.

Leave for five minutes before rinsing off.



## **Lifting-frame for raising and lowering the Shower Changer**

Kingkraft manufacture various models of lifting frame for the Shower Changer: manual & battery versions. In addition a special frame can be specified which requires only minimum clearance at each end during the lifting process. This version is designated a vertical rise frame and is typically used when there is limited space available, eg. in an alcove position. Please carefully read the instructions which apply to your model. (Fixed height frames are also manufactured).

When the lifting frame is moving, the maximum load noise, 1 metre away, does not exceed 65 dBA. Please carefully read the instructions which apply to your model. Maximum working load is 130Kg, including water, user, mattress and other accessories.

### **Manual foot-pedal operated models:**

#### ***To raise the Shower Changer:***

Pump the “raise” pedal fully up and down to desired height first taking care that the raising operation will not trap anybody or damage adjacent equipment.

#### ***To lower the Shower Changer:***

Press “lower” pedal down until desired height is reached, similarly first checking that the lowering operation will not cause damage to individuals or adjacent equipment.

### **Battery Powered Frame models**

#### ***General***

The battery powered system uses a 24 Volt rechargeable battery which drives a linear actuator. A removable battery is supplied with the system together with a wall mounted charger which is to be installed by a competent person in a safe dry area.

#### ***To operate the raise/lower function***

Firstly check that the proposed operation will not cause damage to nearby equipment or injury to personnel. Press the buttons on the hand set to raise or lower the unit as required. Releasing the button will stop the operation. (If the unit is fitted with the additional feature of a red emergency stop button, this may also be activated to cause an immediate stop. The unit will not operate until the emergency stop button has been reset) - this is done by twisting it until it clicks out.

#### ***To remove and recharge the battery***

The battery clips on and off the mounting bracket on the frame by means of a release lever at the end of the battery. When the battery charge level falls to approximately 50%, the charge level indicator light will also show this, a warning buzzer may sound each time the unit is operated. At this stage the battery must be removed and recharged. This will ensure maximum battery life. To recharge the battery, simply unclip it and attach it to the wall mounted battery charger well away from the wet area and free from interference. A light will illuminate when the battery is charging and also indicate when charging is complete. (A further light on the charger indicates that it is connected to the mains).

An example of a control box and battery installed on a Shower Changer lifting frame:

*Note: Please check the emergency stop button is not engaged if the actuator does not operate when the handset is pressed.*



### ***Care of the unit***

The system must not be overloaded. It is designed to operate with only one person at a time. Should overload occur, a cut-out may operate and the unit will not operate until the overload has been removed and the system has automatically reset itself, normally within a few seconds. Should gross overload occur, physical damage to the actuator or the shower changer may occur and the unit may descend to its lowest point.

The unit should not be used if cabling or other components appear damaged.

The system is designed to operate in a bathing/showering area, but the components should not be submerged in water or subjected to pressure washing. Kingkraft recommend Trigene® for disinfection of the surfaces. The components should be dry before reusing.

### ***Fault finding***

If the system doesn't operate, please check as follows.

- Is the battery charged?
- Are all leads and connections fully engaged?
- Is the battery securely clamped in place?
- Has the emergency stop button been activated (if fitted)?

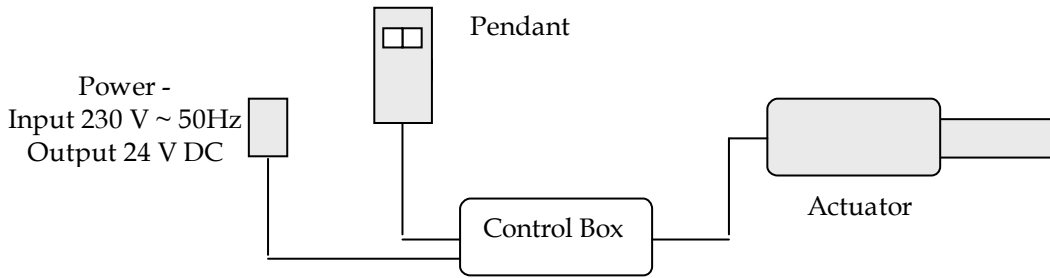
Should the above fail to correct the problem, please contact Kingkraft.

**Below are diagrams representing all possible basic electrical circuits incorporated into the Changer.**

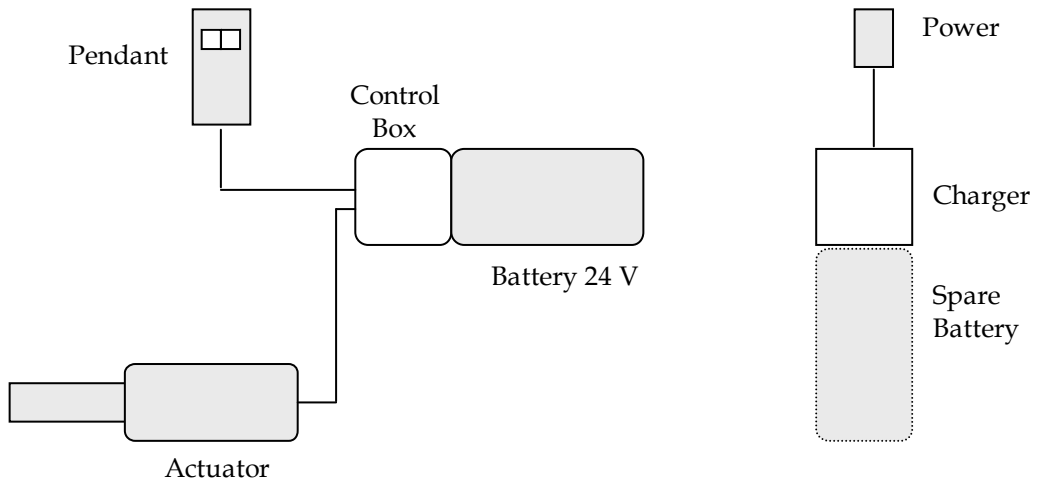
Do not open the electrical boxes, unless advised by a Kingkraft Engineer. Fuses should be changed by Kingkraft Engineers or qualified electricians.

Do not immerse the power cord in water or run over it / trap it with mobile baths and devices.

**Mains Powered Lifting frame –**



**Mobile Battery Lifting Frame –**



## **MAINTENANCE**

Most maintenance required by Kingkraft products is simply a visual inspection to check that the unit is in safe working order. A check-list for these items may be found below. If you find any faults with the unit, ensure they are rectified immediately and in any event before the trolley is next used. If in doubt about any repair procedure, please contact Kingkraft for advice or to arrange a service visit.

Thermostatic mixer valves (TMV's) should be used to supply mixed hot water to the shower used with the Kingkraft Shower Changer. TMV's require special maintenance and testing to ensure they are safe and continue to operate effectively. These requirements are set down in the Department of Health guidance document '*Safe hot water and surface temperatures*', published by HMSO, ISBN 0-11-322158-4. Under special circumstances, for example in a domestic dwelling, if specified by the user, the thermostatic mixing valves used by Kingkraft may not be tested to the DO8 standard.

The maintenance procedure for TMV's is as follows. This procedure should be carried out at least annually for Shower Changers in domestic premises, and more frequently where the unit is used by more than one person. In all cases consult the manufacturer of the TMV. The following instructions relate to TMV's supplied by Kingkraft.

### *1. Check the temperatures of the inlet and outlet for the TMV as follows:*

- 1.1 Record the temperature of the hot and cold water (inlet) supplies;
- 1.2 Turn the control knob so the water flow is at maximum and record the temperature of the water flowing into the trolley.
- 1.3 Set the control knob so that the flow is at a minimum and that the water temperature as it flows into the changer is as high as possible. Record the temperature of the water flowing into the changer. (N. B. do not set the flow of water so slow as to allow it time to cool down before it reaches the measuring apparatus).
- 1.4 While measuring the temperature of the water flowing into the changer, turn off the cold water supply to the mixer valve and record the maximum temperature reached.
- 1.5 Continue to monitor the temperature of water flowing into the changer after the cold water supply to the TMV has been switched off and record the final temperature reached.
- 1.6 Compare the temperatures measured with those recorded during the last maintenance checks on the mixer valve (or with the initial commissioning temperatures which are recorded in the documentation accompanying your new changer)
- 1.7 If any of the temperatures has altered by more than 1°C, or if the maximum temperature recorded exceeds 43°C, the TMV requires maintenance as in section 2 below.
- 1.8 Retain the records of temperature measured for future reference (a sample record sheet is provided below.)

### *2. Checks on the TMV*

- 2.1 Check all in-line and integral strainers are clean.
- 2.2 Check all in-line and integral check-valves and anti-backsiphonage devices are in good working order;
- 2.3 Check all isolating valves are fully open.
- 2.4 Repeat stages 1.1 to 1.6. If the temperatures measured have not stabilised within a degree or two of those recorded on the last maintenance check, the valve must be removed for specialist servicing. Contact Kingkraft for further advice.

Record of unit maintenance Shower Changer number.

	Operation	Tick OK	Comments
1.	Check water path(s) clean		
2.	Let water flow into trolley and check for adequate operation of drain.		
3.	Check presence/legibility of warning notices		
4.	Check all labels on bath intact and legible		
5.	Check frame for excess corrosion		
6.	Check operation of TMV (S)		
7.	N/A		
8.	N/A		
9.	Check charger unit is operating correctly and is safe to use		
10.	Check all other wires and electrical enclosures for damage		
11.	Check pipes etc. for leaks		
12.	Check all knobs and handles securely attached		
13.	Check all controls easily operated (i.e. not too stiff).		
14.	Check operation of lifting mechanism		
15.	Check for unusual noises or vibration when raising/lowering trolley		
16.	With changer empty and at top of travel, rock unit from side to side gently to check for loose fittings and instability.		
17.	Record date maintenance carried out		
18.	Record name of person carrying out inspection		

Record of maintenance of Thermostatic Mixer Valve(s) Changer  
No. \_\_\_\_\_

1.	Kingkraft installed?	
2.	Type/model of TMV	
3.	Pre-set temperature limit	
4.	Location/access to TMV	
5.	Location of hot and cold water isolation valves	
6.	Hot water supply pressure	
7.	Cold water supply pressure	
8.	Hot water supply temperature	
9.	Cold water supply temperature	
10.	Outlet temperature at maximum flow	
11.	Maximum outlet temperature at minimum flow	
12.	Difference between maximum temperature recorded on this occasion and at last maintenance	
13.	Date of inspection	
14.	Name of inspector	

Record and maintenance action taken in the box below.

## SAMPLES OF SHOWER CHANGER MARKINGS

The following are examples of markings possibly found on the Shower Changer.

### Shower Changer identity label –



### Lifting frame label showing direction of drain –



### Power / Actuator Label –



### Open / lock handle direction –



## **GUARANTEE DETAILS**

The Kingkraft Shower Changer and its accessories are guaranteed in the U.K. for a period of twelve months from the date of delivery against defects arising from faulty material, inferior workmanship or construction.

The result of incorrect handling of the unit shall not be covered by the guarantee.

In line with the company's policy of continual product improvement, we reserve the right to carry out improvements to the specification without notice.

### **WEEE** (Waste Electrical and Electronic Equipment Regulations 2006)

The aim of this Directive is to minimise the impact of electrical and electronic equipment on the environment when products become waste. All electrical components on this product must be disposed of in accordance to the WEEE 2006 regulations, either through reuse, recovery, recycling or environmentally sound disposal.

If this Kingkraft product is at the end of its life or electrical parts are replaced during its life-cycle by people other than Kingkraft Engineers, please contact Kingkraft to discuss arrangements regarding the disposal of any of the electrical equipment.



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