

EN Instruction manual



SHOWER IN BED SYSTEM

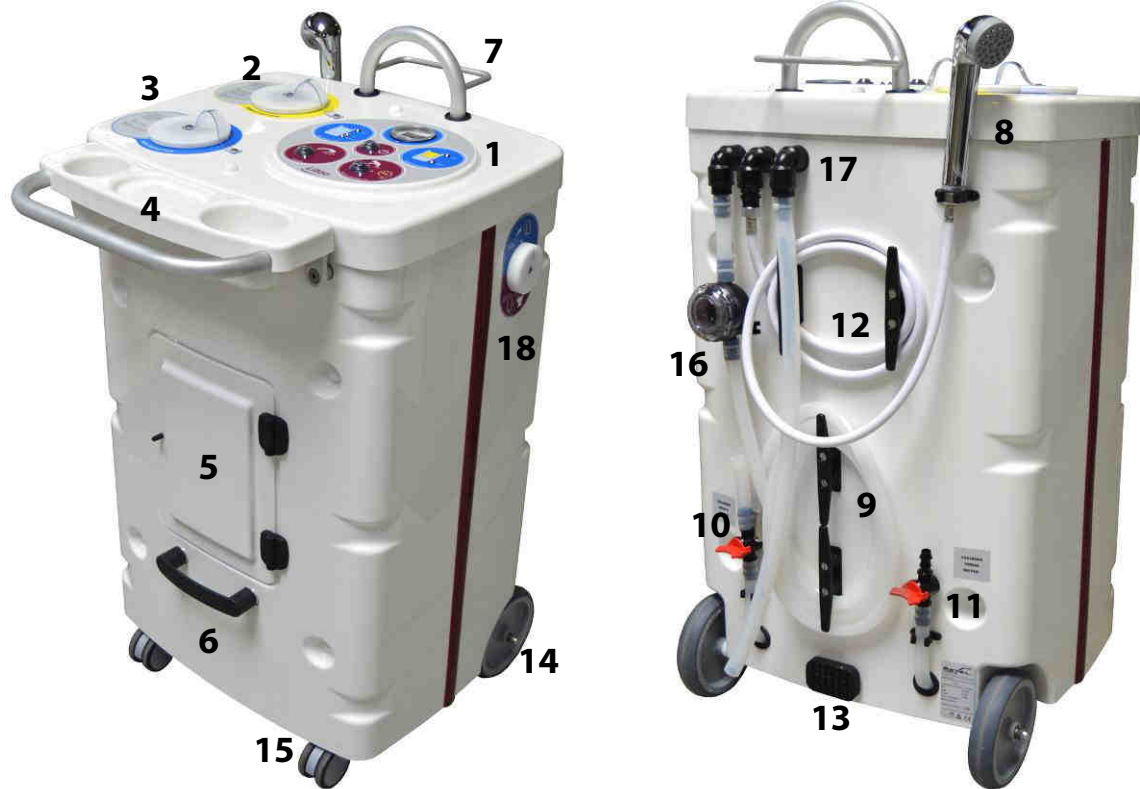
**LITOO**

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# SUMMARY

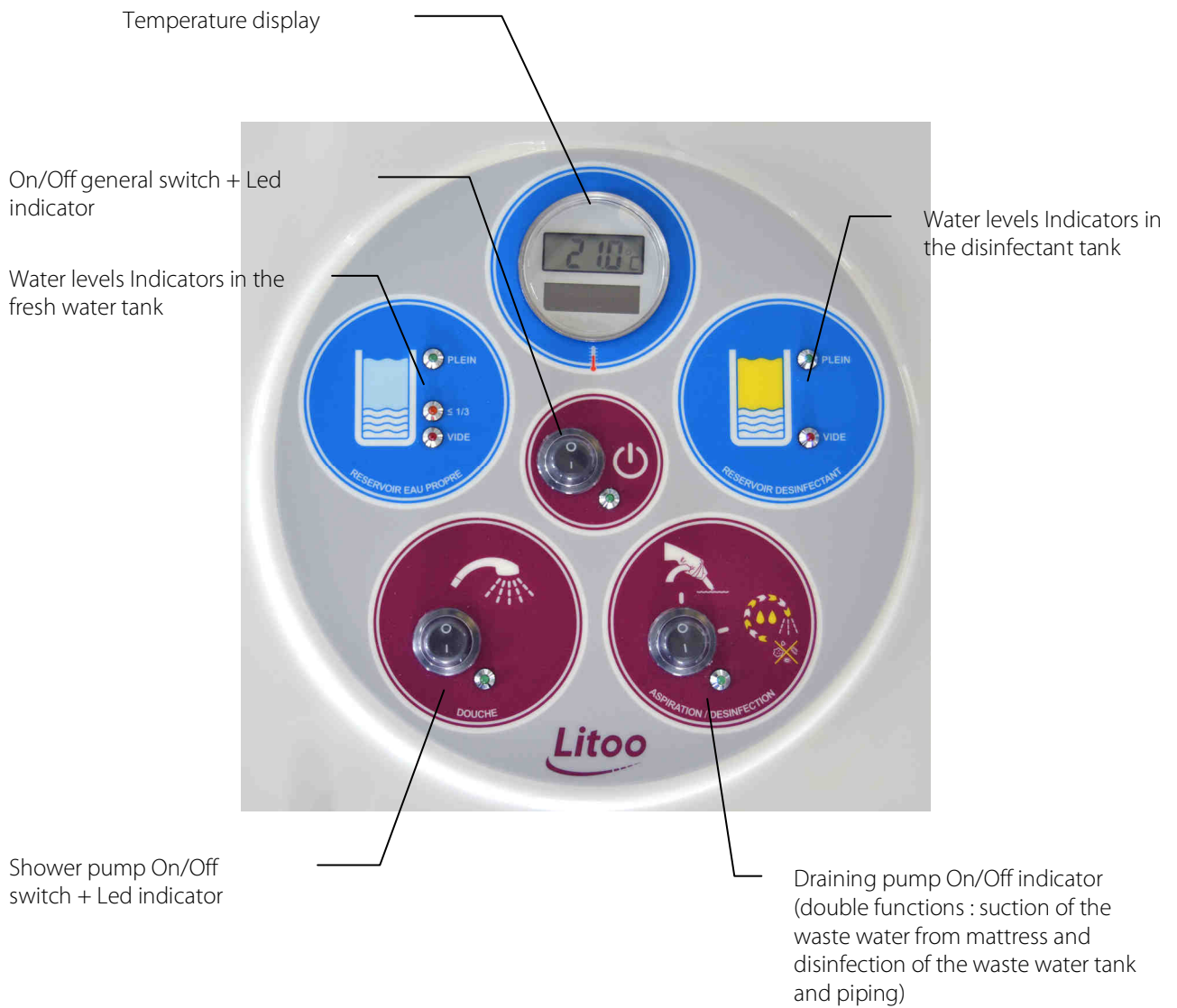
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## EQUIPMENT OVERVIEW



- 1 Control panel
- 2 Disinfectant tank
- 3 Fresh water tank
- 4 Accessory/towel rack
- 5 Battery & disinfectant tank access panel
- 6 Handle
- 7 Driving handle
- 8 Shower handset with digital thermometer
- 9 Suction pipe
- 10 Waste water tank draining valve
- 11 Fresh water tank draining valve
- 12 Shower flexible
- 13 Tilting foot control
- 14  $\varnothing$ 150mm wheels
- 15  $\varnothing$ 65mm directional wheels
- 16 Mesh filter for suction piping
- 17 Drain to toilet Outlet
- 18 Drain to toilet Control

## CONTROL PANEL



# DIMENSIONS



## TECHNICAL SPECIFICATIONS

### DESCRIPTION:

- Aluminium frame. Covers in ABS PMMA.
- x2 Ø150mm wheels & x2 Ø65mm wheels.
- Fresh and waste water tanks in PEHD.
- 24V shower pump.
- 24V drainage/disinfection pump.
- Simultaneous pump function.
- Chromed shower handset with removable head.
- Silicone autoclave piping.
- Towel rack.
- On/Off waterproof controls.
- Water levels waterproof indicator lights.
- Battery and disinfectant tank access panel.
- 24V 2000mAh Nimh battery with protection fuse.
- 230V/24Vdc battery loader.
- 1 x Water temperature display inside the tank.
- 1 x Water temperature display located on the cleaning shower head with visual and sound alarm in case of overtaking of temperature.

### PERFORMS:

- Total weight : 18kg battery included
- Fresh water tank capacity : 22 litres
- Water volume for shower : 17 litres
- Water volume of reserve : 6.5 litres
- Shower running time : 4 min 35s
- Waste water tank capacity : 22 litres
- Number of complete cycles including: shower + suction + disinfection for a fully charged battery : 5
- Battery recharging time : 4h max.
- Acoustics: 50 dbA (shower) 58dbA (suction/disinfection)

### DESCRIPTION OF SHOWER SHEET:

- 13% PES - 87% PVC - 400gr/m<sup>2</sup>
- Fire standard : ISO14116: Index1



### CONFORMITY:

- 93/42/CEE Class I Medical Device
- IPX4 - Class 1 - CEI 60601-1- CEI 60601-1-11

### SUPPLIED ACCESSORIES:

- x1 Shower sheet for bed - 90cm
- x1 White Bath towel 158x220cm 100% cotton 400gr/m<sup>2</sup>
- x4 Fasteners

## APPLICATION

The Litoo Shower in Bed is designed to shower individuals who are confined to bed.  
The shower trolley should be operated only by those qualified to do so and who have read the instruction manual.  
The Litoo Shower in Bed must only be used to wash individuals.  
The Litoo Shower in Bed is designed for use in conjunction with the shower sheet.

***The manufacturer accepts no responsibility should the product be used, changed or assembled differently than defined in this manual.***

## OPERATION

The Litoo shower in bed is a device working on batteries (24V).

The Litoo shower in bed is provided with a 17 litres fresh water tank intended for the shower of the patients.  
The filling of the fresh water tank is manually made through the filling opening (blue sticker).

The Litoo shower in bed is provided with a second 17 litres tank intended to collect the waste water.

The Litoo shower in bed is provided with a third tank of a 5 litres capacity intended for the disinfection of the complete circuit of waste water.

The filling of this disinfectant tank is manually made through the filling opening (yellow sticker).

A shower pump allows to suck up of the fresh water and a shower head allows giving a shower to the patient.

A drain pump allows to suck up of the waste water of the mattress through a flexible hose to be forwarded in the waste water tank.

The drain pump also allows to suck up the water in the waste water tank to be forwarded to toilet.

The draining pump also allows to suck up the disinfectant solution located in the disinfectant tank in order to clean all the circuit of waste water.

A 360° rotary jet allows sprinkling the disinfectant solution on the walls of the waste water tank.

The fresh water and waste water tanks each are equipped with a draining allowing emptying completely waters after use.

Both the drainage and shower pumps may be used simultaneously.

A trap allows tidying up of the battery and the refillable TecCare Control Concentrate disinfectant bottle.

## SAFETY INSTRUCTIONS

Before operating, installing or servicing the Litoo Shower in Bed, please read the instruction manual carefully, paying particular attention to the Safety instructions section.

In the event of any queries please contact Reval directly for guidance.

Failure to comply with the safety instructions in this manual may result in injury.

This instruction manual should accompany the Litoo Shower Bed at all times for referral.

Contents of this manual are subject to change without prior notice to users.

- Do not exceed the fresh water tank and disinfectant tank fill levels.
- Do not apply pressure to the showerhead.
- **Do not use electrical appliances (hairdryer, electric razor etc) in the shower vicinity.**
- Do not force controls or taps.
- Always perform a daily check before using the Shower in Bed system.
- Prepare the Litoo Shower in Bed system before transferring the individual to be showered.
- **Always check the water temperature before applying the handheld shower to the individual.**
- Thoroughly clean the Litoo Shower in Bed system after each use.
- Thoroughly disinfect the shower sheet before each use.
- Always check that the drainage valve is closed before filling the fresh water tank.
- Always check that the waste water tank drainage valve is closed before draining the water sheet.
- **When using disinfectant, wear rubber gloves and eye protection. In case of eye or skin contact, follow the procedures on the disinfectant container.**
- Equipment, hoses, pipes, connections and securing devices should be checked weekly to ensure safe working order.
- Components should be kept clean and dry.
- **Do not leave buttons or pumps switched on when the device is not in use.**
- **Do not swill the Shower in Bed external casing.**
- **Do not use another battery than that delivered with the device.**
- NEVER fill other products that water in the fresh water tank...



## DIRECTIONS FOR USE

### USAGE INSTRUCTIONS

- 1) Fill the fresh water tank.
- 2) Wheel the Litoo Shower in bed system to the individual.
- 3) Prepare the individual's bed using the shower sheet.
- 4) Shower the individual.
- 5) Drain the water from the shower sheet.
- 6) Drain the two tanks into a shower tray.
- 7) Fill the disinfectant tank with water + TecCare Control Concentrate disinfectant.
- 8) Insert the suction pipe inside the disinfectant tank then start the automatic disinfection of the waste water circuit.
- 9) Clean and disinfect the Litoo shower in bed system and the shower sheet.

### RECHARGE OF THE BATTERY

Connect the charger cable on the battery.

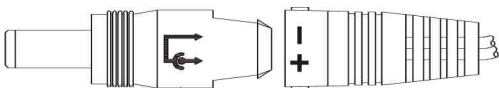
Connect the electric feeding cable of the charger to a main power socket.



### Charge cycle and LED indications :

LED	MODE
YELLOW	Battery not connected
YELLOW	Battery initialisation and analysis
ORANGE	Fast charge
GREEN with intermittent YELLOW flash	Top-Off Charge
GREEN	Trickle Charge
Alternating ORANGE-GREEN	Error

How to connect exchangeable DC-output plugs :



## DIRECTIONS FOR USE

### Implementation of the battery:



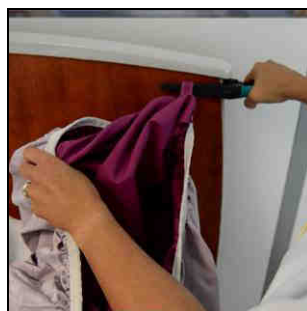
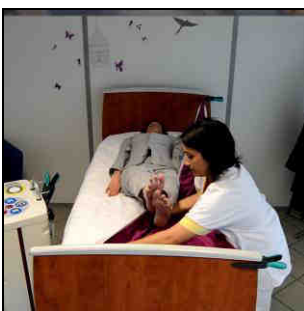
Position the battery on its support then connect the feeding cable (black and red).

### **FILLING OF THE FRESH WATER TANK**



Remove the waterproof white cap from the fill opening, then thanks to a shower head or the optional set of filling, fill the fresh water tank in the desired temperature until the Led indicator " FULL" ignites.

### **FITTING SHOWER SHEET**



Put the shower sheet over the mattress underneath the individual.  
Fix the shower sheet to the bed using the 4 spring clamps supplied.

## DIRECTIONS FOR USE

### SHOWER



ATTENTION: Check the water temperature before applying the showerhead to the individual.

Take the handheld shower.

Switch on the shower pump by pushing on the On/Off button.

A LED indicator ignites.

The shower running time is 4 minutes 35s for an unbroken operation.

When the water level reaches 1/3 of the tank, the orange LED indicator will ignite, indicating that it stays approximately 1min 30s of shower time.

When the tank is empty, the red LED indicator ignites.

SECURITY : Check the water temperature before applying the showerhead to the individual.

### DIGITAL SHOWER THERMOMETER



**Usage :** When the shower pump is activated, the display shows the water temperature. If the water temperature is higher than 41°C, the LED warning lights flash red, the display flashes and an acoustic warning sounds. When the water temperature drops below 41°C, the thermometer reverts back to a normal status.

**Energy saving mode :** The thermometer has an automatic energy saving mode. After using the unit the thermometer automatically switches off after around 60 minutes. By moving the thermometer, the energy saving mode is interrupted and the display is automatically re-activated.

### DRAINING MATTRESS



Take the suction pipe located behind the system.

Position the pipe on the mattress and if possible for a place where forms a pocket of water.

Switch on the drain pump by pushing on the On/Off button.

A LED indicator ignites.

Waste water is pumped from the shower sheet to the waste water tank.

NOTE : Before switching off the pump, check the flexible hose does not contain residual water.

## DIRECTIONS FOR USE

### DRAINING TANKS TOWARDS SHOWER TRAY



Bring the Litoo Shower in bed system to a shower tray then open the both draining valves (from fresh water tank and waste water tank).

When the water does not pass by any more tilt slightly the shower in bed to the back to empty totally the remainder of water.

Both tanks must be totally drained to ensure that no water stagnates inside.

NOTE : Close the valves after the tanks have completely drained.

### DRAINING TANKS TOWARDS TOILET



#### Proceed as follows:

- 1 °) Position the drain flexible hose of evacuation from the outlet (n°17) in the lavatory pan.
- 2 °) Link the suction flexible hose on the draining hose of waste water tank.
- 3 °) Position the button to the mode "draining towards toilet".
- 4 °) Open the red valve of the draining pipe. (The picture above shows the red valve in the closed position)
- 5 °) Switch on the suction pump until the complete draining of the waste water tank and pipes.

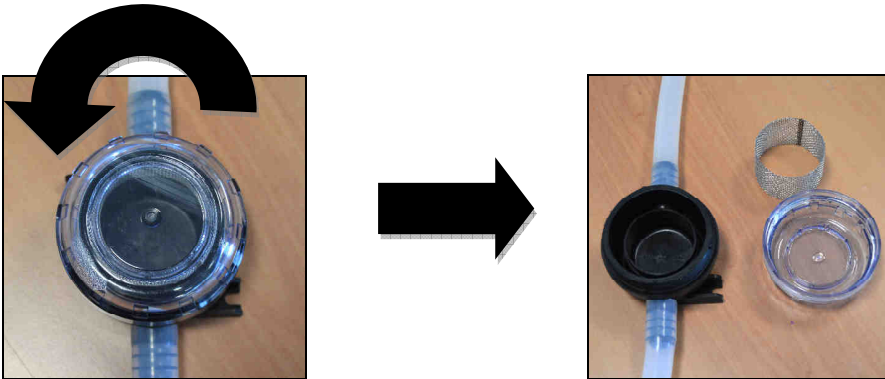
#### After draining, proceed in an inverse way:

- 6 °) Switch off the suction pump.
- 7 °) Close the red valve of the draining pipe.
- 8 °) Position the button to the mode "suction".
- 9 °) Remove the suction flexible hose of draining pipe outlet.

## **DIRECTIONS FOR USE**

### ***CLEANING THE WASTE WATER CIRCUIT FILTER***

To remove the filter, simply unscrew the transparent cover counterclockwise.



Then, rinse the different parts of the filter and more particularly the filter screen.

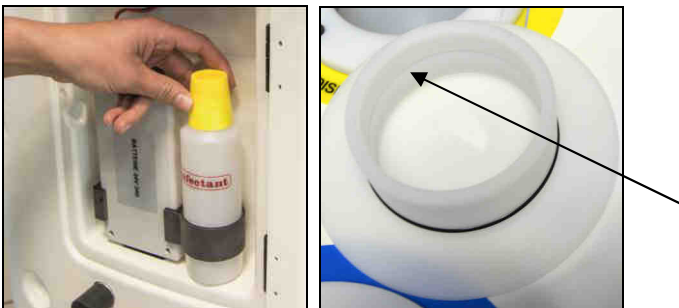
## DIRECTIONS FOR USE

### WASHING & DISINFECTION OF THE WASTE WATER TANK & PIPING S

#### Filling of the disinfectant tank :



Remove the waterproof white cap from the fill opening, then thanks to a shower head or the optional set of filling, fill the disinfectant tank with water until the LED indicator " FULL" ignites.



Take the TecCare Control disinfectant and fill the measure until the line. Then tip out the product into the disinfectant tank.

#### Cleaning and disinfection :



Bring the Lito Shower in bed system to a shower tray then open the draining valve of the waste water tank.

Insert the suction pipe up to the bottom of the disinfectant tank then press on the On/off switch.

During around thirty seconds, the disinfectant solution circulates in all the pipes of the circuit of waste water. A 360° rotary jet allows sprinkling the disinfectant solution on the walls of the waste water tank in order to clean and to disinfect.

When the tank is empty, the red LED indicator ignites.

Nevertheless, wait as long as some liquid circulates in the piping.

Then switch off the pump.

## **MAINTENANCE**

### ***CLEANING AND DISINFECTION***

Thoroughly clean the Litoo Shower in Bed system after each use.

Do not use abrasive cleaning products such as scouring cream.

Use liquid cleaning products such as gels and liquid soaps.

For the disinfection of the covers & control panel, Reval recommends using TecCare Control disinfectant.

The shower sheet must be washed at high temperature by the laundry department of the establishment between two patients to avoid any risk of infection.

### ***DISINFECTION OF THE WASTE WATER CIRCUIT***

To see procedure.

**NOTE : The flexible hoses are autoclaves easily removed for replacement.**

## PERIODIC INSPECTION

- 1) The Litoo Shower in Bed system should be inspected as per the manufacturer – a minimum of twice yearly.
- 2) A properly qualified individual, familiar with the design, use and care of the trolley, should carry out the inspection. The scope of the inspection is set out in the Litoo Shower in Bed Manual.
- 3) Observations should be noted in the logbook, which should be retained by the individual responsible for the servicing/maintenance of the trolley.
- 4) The date of corrective actions should also be noted in the logbook.
- 5) If the periodic inspection reveals any defect, wear or other damage that compromises the safety of the trolley, the owner should immediately be alerted. In the event of immediate danger, the trolley should immediately be removed from service and not used until repaired.
- 6) Defects and damages affecting the trolley's safety, and actions taken between inspections, should be entered in the trolley's logbook.
- 7) Defects and damages should be reported to Reval for action and noted in the logbook.



# MAINTENANCE LOGBOOK

Control date	Safety parts	Operation	Observations	Corrections	Agent (name and signature)



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