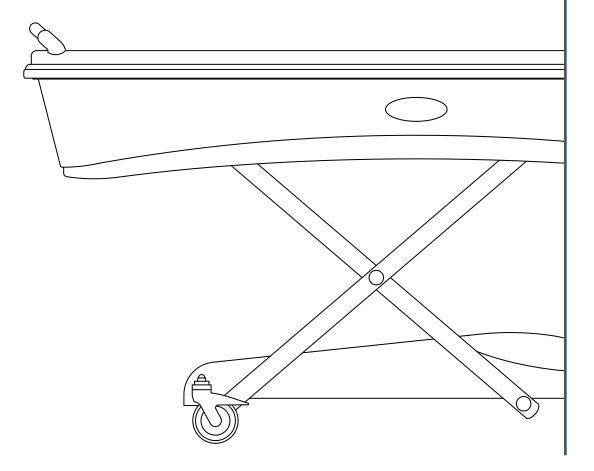


# PACIFIC SHOWER-BATHING TROLLEY INSTRUCTIONS FOR USE



### Instructions For Use Purpose

These instructions contain helpful information and important safety instructions for safe and proper operation and servicing of the Pacific Shower-Bathing Trolley (hereinafter the PSBT or shower trolley). Read these instructions carefully and fully understand before operating or servicing the shower trolley.

#### **Standard Warranty**

Thank you for purchasing your product from Howard Wright Limited. Please refer to our website for our warranty terms:

- www.howardwrightcares.com
- www.howardwrightcares.co.uk

#### Howard Wright Limited's Policy

Howard Wright Limited has a policy of continuous improvement and reserves the right to change product specifications and information referred to in this document without notice.

All rights reserved.

No part of this publication may be reproduced without the prior written permission of Howard Wright Limited.

© Copyright – Howard Wright Limited, 2008.

This product shall be accepted and used in accordance with national requirements.

- IMPORTANT: The responsible organisation suppling a shower trolley to an end user/lay person must ensure these instructions for use are understood by the end user and they have sufficient training to ensure the safe operation of the shower trolley.
- IMPORTANT: Any serious event should be reported by the user and/or patient to Howard Wright Limited, and when within the European Union, the Competent Authority of the member state.
- NOTE: In these instructions, the term patient refers to one who receives medical attention, care or treatment.
- NOTE: If assistance is required to set up, use or maintain the shower trolley please contact Howard Wright Limited using the contact details below.
- NOTE: If the shower trolley experiences any unexpected operation or event, stop using the product and contact Howard Wright Limited using the contact details below.
- NOTE: Inspection and maintenance must be performed on the shower trolley every year. This must be conducted by a qualified person. Please contact Howard Wright Limited using the contact details below for an authorised service dealer.
- NOTE: The unpacking and commissioning of the shower trolley must be completed by a competent person.

#### Howard Wright Limited howardwrightcares.com

17 Paraite Road, Bell Block	PO Box 2786
PO Box 3003, Fitzroy	Taren Point,
New Plymouth, 4341	New South Wales
New Zealand	2229, Australia
T. +64 (6) 755 0976	T. 1800 120 727
F. +64 (6) 755 0908	F. 1800 120 717



JK <sup>UK</sup> Responsible Person Advena Limited. Tower Business Centre, 2nd Flr., Tower Street, Swatar, BKR 4013. Malta.

Advena Limited. Pure Offices, Plato Close, Warwick, CV34 6WE, UK.

# CONTENTS

CHAPTER	PAGE
1. INTRODUCTION	2
2. PRECAUTIONS	4
3. ABBREVIATIONS, SYMBOLS & TERMINOLOGY	6
4. PART IDENTIFICATION	8
5. UNPACKING & COMMISSIONING	9
6. OPERATION	
7. CLEANING	
8. PACKING FOR TRANSPORT OR STORAGE	
9. ELECTRIC CONTROL PROBLEM SOLVER	21
10. MAINTENANCE & SERVICING	
11. SPECIFICATIONS and ELECTROMAGNETIC COMPATIBILITY	25
12. CONFORMITY	27
13. INDEX	

# 1. INTRODUCTION

# 1.1 HOWARD WRIGHT LIMITED

Congratulations on choosing a Howard Wright Limited product. Established in the 1950's, Howard Wright Limited has built a reputation based on product quality and design innovation. Today our equipment is found in healthcare institutions worldwide.

# **1.2 INTENDED USE**

The Pacific Shower Bathing Trolley is mainly used in assisting the prevention, treatment and alleviation of disease, or compensation for an injury or disability. The Pacific Shower Bathing Trolley is designed to be used by trained health professionals and lay persons where the Pacific Shower Bathing Trolley is located in a home environment.

The Pacific Shower Bathing Trolley is used generally within a hospital ward, nursing home or any other medical institution as a means of bathing and showering of patients and transporting patients from one area to another for the purpose of bathing or showering. In the home healthcare environment, the Pacific Shower Bathing Trolley is generally stationary.

The Pacific Shower Bathing Trolley is intended to support one patient up to a weight not exceeding 200kg (including the mass of water and accessories).

# **1.3 TECHNICAL SUMMARY**

#### 1.3.1 VERSIONS

Two versions of the shower trolley are available.

Standard bogie height and raised bogie height. Raised bogie height provides additional clearance for patient lifters.

The shower trolley is supplied with electric operation only.

#### **1.3.2 CONSTRUCTION**

The shower trolley has a LINAK control box. An onboard removable sealed lead-acid battery provides power to operate LINAK actuators at 24V DC. Control buttons are located on a handset for adjustment of the tub sides and patient platform heights.

The shower trolley push handles, buffer rails, castors and bogie are all manufactured from stainless steel, aluminium or hard wearing plastic to resist rust and chemical attack. Other structural parts of the shower trolley where water runs off easily are made of powdercoated fabricated steel.

The upholstered tub is a seamless design made from fabric reinforced stretch polyurethane with foam padding for extra patient comfort. The fabric provides thermal insulation to give warmth at first touch.

Plastics used are PE (PolyEthylene), PP (PolyPropylene), PU (PolyUrethane) Nylon, PVC (Poly Vinyl Chloride) and ABS (Acrylonitrile Butadiene Styrene). Latex rubber is not used.

The waterproof pillow is PFC Vinyl Nitrile Foam (closed cell) with a Polyvinyl coating.

#### **1.4 APPLICATION ENVIRONMENT**

The Pacific Shower-Bathing Trolley is only intended for use in these environments:

#### **APPLICATION ENVIRONMENT 3:**

Long-term care in a medical area where medical supervision is required and monitoring is provided if necessary and ME equipment used in medical procedures may be provided to help maintain or improve the condition of the patient.

#### **APPLICATION ENVIRONMENT 4:**

Care provided in a domestic area where ME equipment is used to alleviate or compensate for an injury, disability or disease.

#### **APPLICATION ENVIRONMENT 5**

Outpatient (ambulatory) care, which is provided in a hospital or other medical facility, under medical supervision where ME equipment, is provided for the need of persons with illness, injury or disability for treatment, diagnosis or monitoring.

NOTE: This includes use in nursing homes, rehabilitation and geriatric facilities.

# 1.5 SAFE WORKING LOAD (SWL)

Maximum patient weight = SWL minus weight of accessories and the weight of the water.

The shower trolley siderails and head pillow are the only accessories. The weight of these is negligible.

-=200kg MAX \_\_\_\_= 200kg

Figure 1. Safe Working Load

NOTE: The density of water and the density of a human body can be taken as identical.

# 2. PRECAUTIONS

#### 2.1 CONVENTIONS

The following conventions are used in this publication:

- WARNING: Gives instructions or information intended to <u>ensure the safety</u> of the patient, caregiver and other personnel. The consequence of not following a warning can include death or serious injury.
- CAUTION: Gives instructions or information intended to <u>avoid damage to the Pacific Shower Bathing Trolley</u> or its accessories.
- NOTE: Gives additional instructions or information intended to make the <u>Pacific Shower Bathing Trolley</u> <u>easier to use</u>.

# 2.2 USER EDUCATION AND TRAINING

OPERATOR: Must be trained in the use of the shower trolley and fully understand these Instructions For Use.

- PATIENT: A suitable risk assessment must be performed before the patient is placed on the shower trolley and/or given access to the shower trolley control and the patient must fully understand the handset functions before they can operate the shower trolley by themselves.
- **RESPONSIBLE ORGANISATION:**

The responsible organisation suppling a shower trolley to an end user/lay person must ensure these Instructions For Use are understood by the end user and they have sufficient training to ensure the safe operation of the shower trolley.

# 2.3 GENERAL WARNINGS & CAUTIONS

- WARNING: Read and understand these Instructions For Use before using or servicing the shower trolley.
- WARNING: A risk assessment in accordance with the hospital, medical facility or responsible organisations risk management policy must be completed before placing a patient on the shower trolley and only used as the "Intended Use" states.
- WARNING: Use the shower trolley to support one patient only. The shower trolley could become unstable if more than one patient is on the shower trolley.
- WARNING: DROWNING HAZARD:
  - Never leave a patient unattended.
  - Never place a patient face down.
  - Never overfill the tub.

#### WARNING: STRANGULATION HAZARD:

- Never leave a child unattended in the vicinity of the shower trolley.
- Never leave the handset cord, drainage hose or plug chain in such a situation that can lead to strangulation.
- WARNING: ELECTROCUTION HAZARD:
  - Never use electrical items in the vicinity of the shower trolley.
  - Always position the wall battery charger away from the vicinity of the shower trolley area of use.
- WARNING: BURNING HAZARD:
  - A skin burn can occur as low as 44°C (111°F). Ensure the water temperature is correct before placing a patient into the water or adding water. Ensure the water is below 38°C (100°F).

# 2. PRECAUTIONS

- WARNING: Never transport or bath/shower a patient without the tub sides in the raised position.
- WARNING: Patient, caregiver and other personnel must keep body parts clear of the elevator system.
- WARNING: To prevent unwanted or accidental operation of the shower trolley, remove the battery.
- WARNING: Do not use the shower trolley for cyclic or repetitive manipulations of the patient.
- WARNING: If the shower trolley is found to have sustained any damage it must be removed from use immediately.
- WARNING: Do not sit on the shower trolley ends. This may result in injury to the patient or personnel as well as damage to the shower trolley.
- WARNING: All castors must be locked when transferring a patient on or off the shower trolley and during bathing operations.
- WARNING: To avoid damage to the drain hose or injury to the patient or personnel, the hose should be placed in the cutaway storage location when not in use.
- WARNING: When raising or lowering the platform or tub sides keep the handset cord clear of the elevator mechanisms.
- WARNING: Never operate the electric functions when cleaning the shower trolley or its accessories.
- WARNING: Do not position the shower trolley under any object where possible raising of the patient platform or tub sides could result in jamming.
- WARNING: Follow cleaning and disinfection instructions for safe infection control.
- WARNING: Check undertrolley clearance space to confirm compatibility with mobile patient hoist before use.
- WARNING: Do not use in an oxygen rich environment.
- WARNING: Do not use in any flammable gas environments.
- WARNING: Do not modify any shower trolley components and/or accessories without prior authorisation from Howard Wright Limited.
- WARNING: Do not transport patients where the shower trolley may become unstable. For example, inclines over 10 degrees.
- WARNING: Never route cables from other equipment onto or around the shower trolley.
- WARNING: The safe working load of the shower trolley is 200kg (440lbs). This includes the mass of the patient, the water in the tub and any accessories.
- CAUTION: When not in use the shower trolley should be stored with the tub sides down.
- CAUTION: Keep the handset out of the tub. Store the handset on the head end bracket at the head end of the tub or on either side on the storage rails.
- CAUTION: Use only approved cleaning products. For a list of approved cleaning products visit Howard Wright Limited's website <u>www.howardwrightcares.com</u>
- CAUTION: Do not use abrasive sponges, cloths, substances or sharp objects on any shower trolley surfaces.
- CAUTION: Do not use water above 50°C (122°F) on the tub surface.

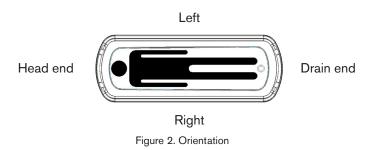
# 3. ABBREVIATIONS, SYMBOLS & TERMINOLOGY

#### 3.1 ABBREVIATIONS

ABS	Acrylonitrile Butadiene Styrene
AS/NZS	Australian/New Zealand Standard
CE	European Conformity
DC	Direct Current
EEC	European Economic Community
IEC	International Electrotechnical Commission
IP	Ingression Protection
LED	Light Emitting Diode
PE	PolyEthylene
PFC	Vinyl Nitrile Foam
PP	PolyPropylene
PU	PolyUrethane
PVC	PolyVinyl Chloride
SWL	Safe Working Load

# 3.2 SHOWER TROLLEY ORIENTATION TERMINOLOGY

NOTE: The terms head end, drain end, left and right used in these instructions are referenced with respect to a patient lying face up on their back as follows.



# 3.3 LABELS

Labels are placed on the shower trolley to provide information, cautions and warnings. Read all labels before using the shower trolley.

# 3.4 SERIAL NUMBER LABEL

The serial number label is located on the drain end right elevator leg of the shower trolley.

When making service or repair enquiries, please provide the following information:

- PSBT model.
- PSBT date of manufacture.
- PSBT serial number.



# 3. ABBREVIATIONS, SYMBOLS & TERMINOLOGY

	3. ABBREVIATIONS, STMBOLS & TERMINOLOGI
	Warning.
IPX5	<ul> <li>Ingression protection (IP) rating as per BS EN 60529:1992, specification of degrees of protection provided by enclosures.</li> <li>The number (5) refers to the degree of "water ingression protection" i.e. the shower trolley is protected from low pressure water jets from all directions, e.g. water from a shower.</li> </ul>
CE	Indicates compliance with the applicable European requirements.
UK CA	Indicates compliance with the applicable UK requirements.
$\mathbf{\dot{\star}}$	Type BF applied part.
MD	Indicates the product is a Medical Device.
	WEEE, Waste Electrical and Electronic Equipment.
🚱 🎞	Read and understand the instructions for use (IFU) before using the shower trolley.
Power Input::	Input current (maximum), supply voltage range, supply frequency range.
~	Alternating current.
	Direct current.
Mode:	The shower trolley is intended for intermittent operation. The ratio of the operating time to the sum of the operating time and ensuing time should not exceed that specified.
#	Reference code (model number).
$\sim$	Date of manufacture.
SN	Serial number.
	Manufacturer.
EC REP	European Authorised Representative.
3.5 OTHER SYM	BOLS & TERMINOLOGY
<u>○</u> =200kg	Maximum patient weight, kg.



Maximum safe working load (SWL), kg.



Warning: potential squeezing/shearing point.



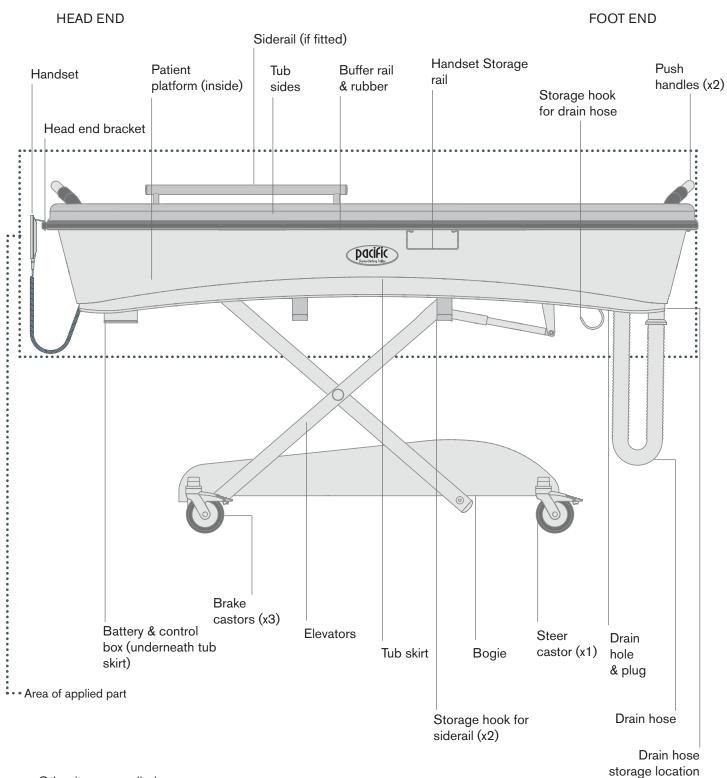
Battery location.



Drain hose storage location.

# 4. PART IDENTIFICATION

# 4.1 PART IDENTIFICATION - PACIFIC SHOWER-BATHING TROLLEY



Other items supplied:

- Waterproof pillow
- Wall mounted battery charger
- Electric power cord for battery charger

Figure 4. Part Identification - Pacific Shower Bathing Trolley

# 5. UNPACKING & COMMISSIONING

- WARNING: Ensure that the handset cord is positioned so that it cannot become damaged during shower trolley adjustment.
- CAUTION: Ensure that all transport ties have been cut and removed before using the shower trolley.
- CAUTION: Charge the battery as often as possible (minimum recommendation: six hours once every three months). Fully discharging the battery will reduce its life.
- CAUTION: Do not use near open fires or radiant heaters.
- NOTE: To manoeuvre the shower trolley, release the brakes by setting the castors into the neutral position. (see section 6.1).

#### To unpack and commission the shower trolley:

- 1. Remove any external packaging.
- Cut and remove the transport ties. (The locations of these ties will vary depending on how the shower trolley has been transported).
- 3. It will be necessary to fit the shower trolley's castors if the shower trolley has been packaged in a carton. Fit the steer castor at the right hand side, drain end. Special care must be taken so that it tracks in line with the shower trolley. Fitment of the castors is only to be conducted by a competent person. Use a 19mm spanner.
- 4. In extreme temperatures allow 24 hours for the shower trolley to reach inside ambient temperature.
- 5. Install the battery (see section 6.3).
- 6. Check that the shower trolley is operating correctly (see section 6).

#### 6.1 CASTORS

see figures 5-7

- WARNING: All castors must be locked when transfering a patient on or off the shower trolley and during bathing operations.
- CAUTION: Do not attempt to push the shower trolley sideways when the steer castor is in the steer position.
- CAUTION: Ensure that the steer castor trails the direction of movement.
- CAUTION: When moving the shower trolley from room to room, take care that handrails on hallway walls or other sharp extrusions do not damage the upholstered top (tub surface).
- CAUTION: When moving the shower trolley from room to room, the patient platform should be at, or near, its fully raised height to prevent the drain hose from dragging on the floor.
- CAUTION: Do not try to lock the shower trolley's castors on a grade of more than five degrees. The shower trolley is designed to operate and lock in level situations only.
- NOTE: To ensure that the steer castor locks in a position that trails the direction of shower trolley's movement:

1. Push the shower trolley a short distance in the intended direction of travel, to align the castors.

2. Push the steer castor tab down towards the floor to lock.

3. Continue to push the shower trolley. An audible 'click' will be heard when the steer castor locks in position.

NOTE: The steer castor is located on the right hand side at the drain end and has a dark grey pedal. The other castor pedals are light grey.

#### 1. Brake position - All pedals down

In this position the castors are locked and cannot swivel or roll. This prevents the shower trolley from moving during patient transfer, bathing or clinical intervention.

- 1. To lock the castors, press each castor pedal down.
- 2. To release the brakes (neutral position) flip the castor pedals up.

#### 2. Neutral position - All pedals up

In this position, the castors can swivel and roll freely and the shower trolley can be pushed in any direction.

#### 3. Steer position - steer pedal (dark grey) down

In this position, the steer castor cannot swivel and is locked to roll in line with the length of the shower trolley.

This allows the shower trolley to be more easily steered. If pushed from either end, the shower trolley will track in line with its length.

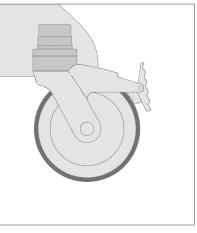


Figure 5. Castor pedal in brake position

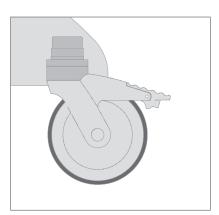


Figure 6. Castor pedal in neutral position

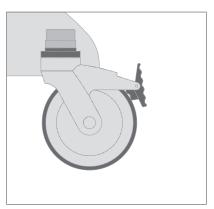


Figure 7. Steer castor pedal in steer position

# 6.2 ELECTRIC CONTROLS

- WARNING: Do not operate the shower trolley controls so that moving parts of the shower trolley contact people or surrounding objects.
- WARNING: When left unattended, remove the battery to ensure no unauthorised use of the shower trolley occurs.
- WARNING: Never leave a patient unattended.
- WARNING: Never insert the battery and touch the patient at the same time.
- WARNING: When lowering the tub sides ensure that:
  - The patient's feet are clear of the drain end push handle.
  - The patients arms or legs are not caught in the gutter between the tub sides and the patient platform.
- CAUTION: Do not operate the shower trolley controls for more than 2 minutes during a 20 minute period (i.e. do not exceed the mode/duty cycle).
- NOTE: It takes approximately 30 seconds to raise the patient platform or tub sides from the lowest to the highest position. This also applies when lowering from the highest to the lowest position.
- NOTE: Height adjustment will stop automatically when the tub reaches its maximum or minimum height.





Figure 8. Head end bracket

Figure 9. Storage rail

Patient platform and tub side adjustments are powered by electric actuators.

Two actuators are used; one for each of the following functions:

- 1. Patient platform height.
- 2. Tub sides height.

The actuators are controlled by buttons on the handset.

# 6.2.1 HANDSET LOCATION

see figures 8-9

The handset can be stored on the head end bracket or at either side on the storage rails.



#### 6.2.2 BUTTON OPERATION

see figure 10

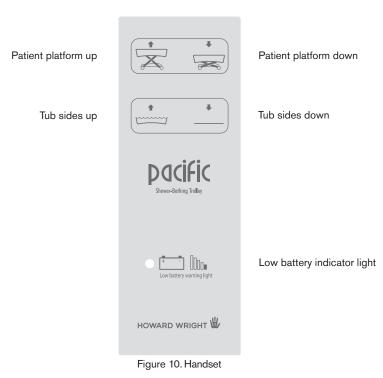
Adjustment occurs only while a button is pressed. Adjustment will stop when the button is released or the moving actuator reaches the end of its range of adjustment.

#### To raise and lower the patient platform:

- 1. Before raising or lowering the patient platform, ensure all the castors are locked.
- 2. To raise the platform height, press the "Patient platform up" button on the handset
- 3. To lower the platform height, press the "Patient platform down" button on the handset.

#### To raise and lower the tub sides:

- 1. Before raising or lowering tub sides, ensure all shower trolley castors are locked.
- 2. To raise the tub sides, press the "Tub sides up" button on the handset.
- 3. To lower tub sides, press "Tub sides down" button on the handset.



# 6.3 BATTERY AND BATTERY CHARGER

see figures 11-13

- WARNING: The battery is heavy and should be supported with both hands when releasing from the mount bracket.
- WARNING: The battery should be charged regularly. Charge the battery when the low level indicator light comes on.
- WARNING: Before placing a patient onto the shower trolley ensure that the battery is charged and the low battery indicator light on the handset is off.
- CAUTION: Fully discharging the battery will reduce its life.
- CAUTION: Charge the battery as often as possible for a minimum of six hours each time or until the "charge" LED extinguishes.
- CAUTION: Do not expose the battery to an open flame or immerse it in liquid.
- NOTE: After reinstalling a charged battery check that all electric functions operate. If no functions operate it is possible that the battery has not been installed properly. Reinstall the battery as described above.
- NOTE: A green LED on the handset will illuminate and the control box will 'beep' audibly during adjustment of either of the electric functions when the battery charge is low.
- NOTE: The charger will display the following LED lights:
  - A yellow "Charge" LED on the charger indicates whether the battery is charging.
  - A green "On" LED on the charger indicates whether the charger is connected to the power supply.
- NOTE: The number of full load high-low (200kg) cycles (raising and lowering the shower trolley) achievable using a new fully charged battery is approximately 30. The number of tub up and tub down cycles using a new fully charged battery is approximately 100.

The battery is at the head end of the shower trolley, on a pull down battery compartment, located behind the tub skirt.

The battery is a sealed lead-acid battery type and should be charged regularly and not be allowed to discharge fully. Fully discharging the battery will reduce its life.

The battery charger supplied with the shower trolley should be fitted to a wall using the brackets supplied and be connected to a power supply.

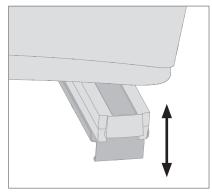


Figure 11. Pulling down battery compartment

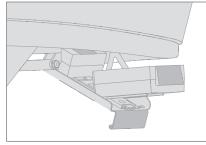


Figure 12. Attaching/removing battery to/ from battery compartment

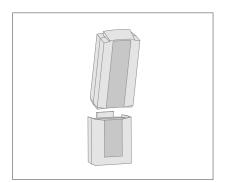


Figure 13. Attaching/removing battery and charger

#### To remove the battery from the shower trolley for charging:

1. Pull down on the battery compartment handle to gain access to the battery (see figure 11).

2. Squeeze the battery release lever to disengage the battery from the mount bracket and lift. The battery will disconnect from the control box (see figure 12).

- 3. Lift the battery out with both hands.
- 4. Return the battery compartment to its raised position to protect it from being knocked.

#### To charge the battery:

1. Hold the battery with one hand squeezing the release lever while using your other hand to hold or support the front side of the battery.

2. Place the lower end of the battery onto the wall mounted battery charger with the upper (lever) side of the battery slightly out from the bracket (see figure 13).

3. Push the upper (lever) side of the battery towards the wall bracket and release the lever. Ensure that the battery clicks into place and that the yellow "Charge" LED (Light Emitting Diode) on the charger illuminates.

4. Ensure that the battery charger is connected to the power supply (as indicated by the green "On" LED on the charger.

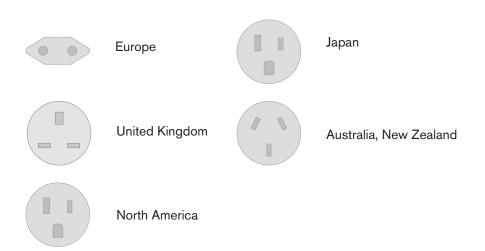
NOTE: The yellow "Charge" LED will extinguish once the battery has reached full charge.

#### To attach the battery to the shower trolley:

- 1. Ensure that the battery compartment is in its lowered position (see figure 11).
- 2. Using two hands to support the battery, slide the battery on the mount bracket up towards the control box. Ensure that the battery latches securely (it should "click" into place).
- 3. Return the battery compartment to its raised position.

# 6.3.1 PLUG OPTION

To charge the battery please ensure you use the correct plug for your country/ region.



# 6.4 DRAIN HOSE

see figures 14-15

The drain hose is located at the drain end of the shower trolley and can be stored in the cutaway in the skirt (see figure 14). If needed the hose can be lifted off the floor and placed into the storage hook for better clearance (see figure 14).

The drain hose is designed so that water can be drained away from the bathing tub into a suitable wastewater collecting receptable such as a floor mounted drain, toilet or basin.

#### To Drain Water from the shower trolley:

1. Ensure that the loose end of the drain hose is placed into the drainage area. Make sure the drainage area is located lower in height than the patient platform drain hole (raise the patient platform if necessary).

- 2. Remove the plug from the shower trolley's drain hole to drain the water.
- WARNING: When not in use the drain hose should be stored to avoid damage to the hose or injury to the patient or personnel.
- CAUTION: Ensure the drain hose end is placed into the drainage area before bathing the patient.
- NOTE: Curl the drain hose by gently twisting/turning the hose at the hose end before stowing in the skirt cutaway. This will loop the hose and prevent it from dragging on the floor during transportation/storage.

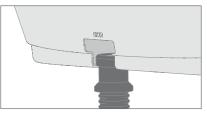


Figure 14. Cutaway storage location for drain hose

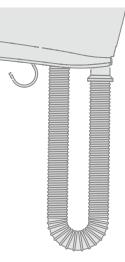


Figure 15. Storage hook for drain hose

#### 6.5 WATERPROOF PILLOW

A waterproof pillow is supplied with all shower trolleys. It is designed to provide comfort to the patient while being bathed and gives support while washing the patient's hair. (See section 6.7 Showering and bathing).

# 6.6 TRANSFERRING THE PATIENT TO THE SHOWER TROLLEY

- WARNING: It is recommended that two caregivers transfer the patient to the shower trolley.
- WARNING: Ensure the patient's head is opposite the drain end of the shower trolley when transferring.
- WARNING: Do not sit on the shower trolley ends. This may result in injury to the patient or personnel as well as damage to the shower trolley.
- WARNING: All castors must be locked when transferring a patient on or off the shower trolley and during bathing operations.
- WARNING: Remove both siderails before transferring the patient.

WARNING: Do not exceed the Safe Working Load (SWL) rating. The safe working load of the shower trolley is 200kg/440lbs. This includes the mass of the patient, the water in the tub and any accessories.

- 1. Place the shower trolley beside the patient's bed.
- 2. Orientate the shower trolley so that the drain end is at the foot end of the patient's bed.
- 3. Set all castors to the brake position.
- 4. Fully lower the tub sides and remove siderails if fitted.
- 5. Raise or lower the patient platform height to align with the height of the patient's bed.
- 6. Transfer the patient.
- 7. Fully raise the tub sides and place the waterproof pillow under the patient's head (if required).

# 6.7 SHOWERING AND BATHING THE PATIENT

- WARNING: Do not use water above 38°C (100°F) for bathing or showering a patient. Check the water temperature BEFORE any water touches the patient. If a thermometer is unavailable hold your hand above the water to initially check the temperature, then dip your elbow into the water to test.
- WARNING: The shower mixer/device used in conjunction with the shower trolley must have a built-in safeguard against the possible discharge of excessively hot water.
- WARNING: The shower trolley is designed for bathing one patient at a time only.
- WARNING: All castors must be locked when transferring a patient on or off the shower trolley and during bathing operations.
- WARNING: Use extreme caution if razors are being used while the patient is in shower trolley.
- WARNING: The Safe Working Load is 200kg/440lbs.
- CAUTION: Ensure the loose end of the drain hose is placed into the drainage area before bathing the patient.
- NOTE: The drain plug can be used and the tub semi filled for immersion bathing or burns treatment.
- NOTE: Patients can be showered or bathed wherever there is a suitable supply of water and drainage.
- NOTE: The tub must be higher than the water drainage area so that water drains away naturally through the drain hose.
- 1. If the patient is mobile lower the shower trolley to its low height to allow the patient to lie on the shower trolley.
- 2. Raise the tub sides so that the patient is contained within the shower trolley.
- 3. Raise the patient platform to a convenient height.
- 4. Ensure the free end of the drain hose is placed into the drainage area.
- 5. Place the waterproof pillow under the patients head (if required).
- 6. Shower the patient with a handheld spray head.

#### To wash the patient's Hair:

1. Place the waterproof pillow under the patient's head area, with the highest part of pillow placed under the patient's neck.

This allows the patient's head to tilt back slightly providing better access to the patient's hair.

2. Proceed to wash the patient's hair.

#### To dry the patient:

- 1. Remove the drain plug (if in use) and drain the water from the tub.
- 2. Raise the patient platform to its highest height.
- 3. Dry and dress the patient on the raised shower trolley or lower the patient platform and tub sides to allow mobile patients to get off the shower trolley with assistance for drying and dressing.

#### 6.8 SIDERAILS (OPTION)

see figures 16-19

- WARNING: Siderails are not intended to be used as patient restraints or to prevent the patient rolling off the platform.
- CAUTION: Siderails should be removed during patient transfer.
- CAUTION: Do not sit or stand on siderails.
- NOTE: Siderails should always be stored in the storage hooks when not in use.

The siderails are located on either side of the shower trolley.

The siderails are designed to aid the patient during the bathing process i.e. the patient can hold on to the siderail for support when lying on their side or rolling over.

#### To release:

1. Press the release buttons on the siderail legs and lift the siderail out of its sockets (see Figure 16 and 17).

The siderails should be placed on the storage hooks on either side of the shower trolley when not in use.

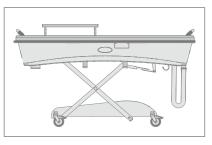


Figure 16. Siderail in use

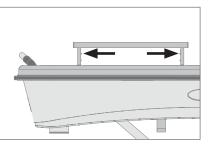


Figure 17. Siderail release buttons

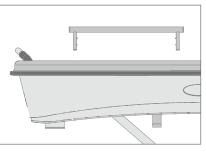


Figure 18. Siderail released

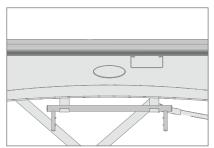


Figure 19. Siderail storage position

# 7. CLEANING

WARNING:	Clean and disinfect the shower trolley after each use.
CAUTION:	Before cleaning, set the castors to the brake position.
CAUTION:	Do not use abrasive cleaning products.
CAUTION:	Do not use a water temperature of more than 50°C (122°F).
CAUTION:	Do not use excessive water.
CAUTION:	Do not use a steam cleaner, washing tunnel, high-pressure spray, or hose.
CAUTION:	Do not direct water underneath the bogie cover or underneath the tub skirt.
CAUTION:	Do not immerse the product in water.
CAUTION:	Do not clean or degrease the steel shafts of the actuators.
CAUTION:	Use only approved cleaning products. If bleach is necessary strictly adhere to the BLEACH CLEANING instructions (section 7.3).
CAUTION:	Keep sharp objects such as razors etc. away from the tub top.
CAUTION:	Do not use oil based products.
CAUTION:	Do not unplug the handset or actuators from the control box for cleaning.
NOTE:	For a list of approved cleaning products go to the Howard Wright Limited website <a href="http://www.howardwrightcares.com">http://www.howardwrightcares.com</a>

# 7.1 CLEANING ALL SURFACES

To wash:

- Raise the tub sides to full height so that the fabric is taut.
   Ensure the free end of the drain hose is placed in drainage area.
- Flush the whole surface with fresh warm water (less than 50°C, 122°F).
- Wipe bogie and frame with a sponge or soft cloth wetted with warm water containing soap or mild detergent.

#### To dry:

- Leave the tub sides raised to drain and dry.
- Wipe dry with a clean, soft cloth or sponge.
- Lower the tub sides after drying is complete.

To disinfect the tub:

- Wash the surface.
- Wipe the surface with a sponge or soft cloth wetted with an approved disinfectant.
- Flush the whole surface with fresh warm water (less than 50°C,122°F)
- Wipe off residual water using a soft cloth or sponge.
- Dry.

#### REMEMBER

The upholstered tub has a bi-elastic backing fabric with a polyurethane top coating. Soap residue left on the tub surface can degrade the surface. Therefore, care should be taken to flush away all residual soap after use.

CAUTION: Failure to follow these recommendations may lead to fabric failure.

# 7.2 WATERPROOF PILLOW

Follow the same directions as for the surface (see section 7.1) The same CAUTIONS apply.

# 7.3 BLEACH CLEANING INSTRUCTIONS

If none of the approved cleaning products provide the disinfectant level required then use a solution of 5.25% Sodium Hypochlorite diluted to less than 1 part bleach to 100 parts water (volume to volume). Bleach products are corrosive and degrading in nature and may cause damage to your product. If bleach is used, measures must be taken to ensure the product is rinsed thoroughly with clean water and thoroughly dried. Failure to rinse and dry the product may leave a corrosive residue on the surface possibly causing corrosion.

Failure to follow the above directions may void the product's warranty.

# 8. PACKING FOR TRANSPORT OR STORAGE

#### To pack the shower trolley for transport or storage:

WARNING: Never lift the tub.

WARNING: Never use a forklift.

CAUTION: Do not leave the shower trolley in direct sunlight.

#### CAUTION: To maximise the life of the tub fabric the shower trolley should be stored with the tub sides down.

#### CAUTION: The transport and storage environment should be as follows:

- Ambient temperature range: -10°C to +40°C.
  Relative humidity range: 15% to 90%.
  Atmospheric pressure range: 70 kPa to 106 kPa.
- NOTE: For the smallest volume for transport the tub sides and the patient platform should be both in the lowest positions.
- 1. Ensure the castors are locked.
- 2. Fully lower the tub sides and patient platform.
- 3. For transport only, use packing string to tie:
  - The battery compartment to the tub frame (in its up position).
  - The handset to the tub frame or battery compartment.
  - The drain hose to the tub frame or disconnect it.
- 4. Cover the shower trolley to protect it from dust.

# 9. ELECTRIC CONTROL PROBLEM SOLVER

Use Table 1 below for assistance if the shower trolley cannot be adjusted correctly using the electric controls. If further assistance is required, contact Howard Wright Limited or an authorised service agent.

Table 1. Trouble shooting guide

Problem	Possible Causes	To Resolve
Handset buttons do not work.	The battery charge is low.	Recharge the battery.
	The battery is not connected properly to the control box.	Remove the battery from the battery compartment, then reattach the battery ensuring that it latches securely (ensure that it "clicks" into place).
	The duty cycle (mode) has been exceeded, overheating the control system.	Wait until system has cooled to normal operating temperature.
Patient platform lowers but will not raise.	The shower trolley is overloaded. (SWL = 200kg (440lbs) including patient, water and accessories).	Reduce load.
Patient platform and/or tub sides high/low movement is slow.	The battery charge is low.	Recharge the battery.
Patient platform and/or tub sides high/low movement stops unintentionally.	The shower trolley is overloaded. (SWL = 200kg (440lbs) including patient, water and accessories).	Reduce load.
	The battery charge is low. The selected movement has reached its limit of adjustment.	Recharge the battery.
The control box beeps and the LED on the handset illuminates when pushing a button on the handset	The battery charge is low.	Recharge the battery.

# **10. MAINTENANCE & SERVICING**

#### **10.1 ANNUAL INSPECTION**

Inspection of the shower trolley should be performed annually using the user maintenance checklist (section 10.5).

# **10.2 AUTHORISED SERVICING**

All maintenance, servicing, and repairs must be carried out by Howard Wright Limited or an authorised service agent.

WARNING: Do not modify the shower trolley or its accessories without the agreement of Howard Wright Limited.

CAUTION: Do not tamper with any of the shower trolley components.

All inspections, maintenance, servicing and repairs must be carried out either by Howard Wright Limited, an authorised service dealer, a Howard Wright Limited trained technician or by a competent person to national legislation and/or standards.

NOTE: Refer to the Technical Service Manual (ST9912) for detailed instructions on replacement of shower trolley components.

# **10.3 OBTAINING SPARE PARTS & SERVICE**

Howard Wright Limited's products are supported by an extensive network of authorised service agents. These service agents are trained by Howard Wright Limited. For contact details of your nearest service agent please contact Howard Wright Limited.

# 10.3.1 HOWARD WRIGHT LIMITED CONTACT DETAILS

Howard Wright Limited is the manufacturer.



Howard Wright Limited

PO Box 3003, Fitzroy 17 Paraite Road, Bell Block New Plymouth 4341 New Zealand T. +64 (6) 755 0976 F. +64 (6) 755 0908 service@howardwright.com Howard Wright Limited

PO Box 2786 Taren Point NSW 2229 Australia T. 1800 120 727 F. 1800 120 717 service@howardwright.com Howard Wright Limited

United Kingdom T. 0845 094 9894 www.howardwright.co.uk

# **10.3.2 SHOWER TROLLEY INFORMATION**

When making service or repair enquiries, please provide the following information:

- Model number ( # ).
- Date of manufacture ( ).
- Serial number (SN).

This information is recorded on the serial number label located on the drain end right elevator leg.

# **10. MAINTENANCE & SERVICING**

#### **10.4 BATTERY REPLACEMENT**

The life of the battery will depend on the use that it has had. As a guide, it should be replaced every four years.

#### **10.5 USER MAINTENANCE CHECKLIST**

Carry out the following maintenance checks annually:

#### a) Visual check

 Visually check all shower trolley components for dents, bends, scratches, or other obvious signs of mechanical damage.

#### b) Electric controls

- Check that all of the buttons on the handset work correctly.
- Check the patient platform raises and lowers fully.
- Check the tub sides raise and lower fully.

#### c) Electrical system

- Check all electrical cables for cracks, cuts, or damage from crushing.
- Connect the battery to the battery charger to check the yellow "Charge" LED on the charger illuminates, indicating the battery is charging.
- Check that the green "On" LED on the charger is illuminated which indicates that the charger is connected to the power supply.

#### d) Castors

- Lock the brake castors. Check that the castors cannot swivel or roll.
- Lock the steer castor. Check that the castor locks in line with the length of the shower trolley and cannot swivel.
- Place all of the shower trolley's castors in the neutral position. Check that the castors are free to swivel and roll.

#### e) Mechanical items

- Check that all bolts, screws, nuts and pivot pins are securely fastened.
- Adjust the patient platform and tub sides. Check that there are no abnormal noises. Check that the full range of movement is available.
- Check the function of the battery compartment. Does it move properly between raised and lowered positions and stay in those positions.
- Visually check the tub fabric is in good condition.
- Fill the tub with water. Check that the tub fabric is undamaged.
- Check that the drain parts seal properly towards the tub surface.
- · Check that the drain plug seals properly in the drain hole.
- Check that the drain hose is undamaged and that the hose end can be easily stowed in the cutout of the tub skirt.

CAUTION: The battery is of a sealed lead-acid type and should be disposed of safely so as not to cause damage to the environment.

# **10. MAINTENANCE & SERVICING**

# 10.6 TO REMOVE THE DRAIN HOSE

see figure 20

1. Raise the tub sides to the highest position and raise the patient platform to the highest position.

- 2. Remove the hose clamp and then the drain hose.
- NOTE: To replace the drain hose reverse the procedure for removing.

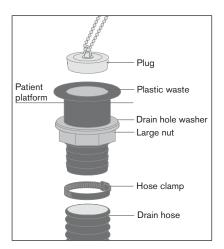
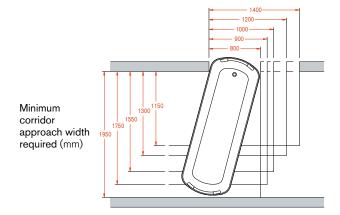
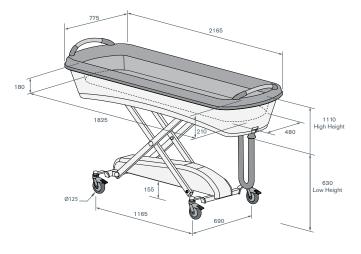


Figure 20. Drain Parts

# 11. SPECIFICATIONS AND ELECTROMAGNETIC COMPATIBILITY

# 11.1 PACIFIC SHOWER BATHING TROLLEY SPECIFICATIONS





#### SPECIFICATIONS

MODEL:	ST 2.1 and ST 2.2 (Base raised 30mm)
IP RATING:	IPX5
EEC CLASSIFICATION:	Class 1, Non-invasive
MAXIMUM SWL:	200kg (incl. patient, accessories & water)
TROLLEY MASS:	100kg

• Unique, seamless deep tub design enables immersion bathing

- Fully electric controls enables adjustment to a comfortable working height
- Easy cleaning for improved infection control
- Safe 24V DC system with remote wall mounted battery charger
- Ergonomic push handles at both ends
- Castors: 125mm (synthetic with sealed wheel bearings), 3 individual locking,
- 1 directional locking
- 360° bumper
- LINAK controls with 2 actuators, control box, handset & battery

#### **ELECTRICAL SPECIFICATIONS:**

Power source: Rechargeable battery, 24V DC, 2.9Ah
---

- Battery charger input: 110 or 240V AC, 50-60 Hz, 650mA (max)
- Battery charge time: 6 hours
- Number of full load cycles: approx. 30
- Time to raise or lower patient platform: 30 sec
- Time to raise or lower tub sides: 22 sec

#### SAFETY COMPLIANCE

Developed in accordance with the requirements of IEC 60601-1:2005/ AMD1:2012 and IEC 60601-2-52:2009/AMD1:2015 and IEC60601-1-11:2015. DIMENSIONS

Trolley overall: L: 2165mm, W: 775mm
Tub platform L: 1825mm, W: 480mm
Wheel base: 1165mm, wheel track: 690mm
Castor diameter: 125mm single wheel
Maximum tub depth (drain end): 210mm
Maximum tub depth (head end): 180mm

ADJUSTMENT RANGE:	ST2.1	ST2.2
Maximum overall height (sides up, incl handles):	1155mm	1185mm
Maximum trolley height (sides up, excl handles):	1080mm	1110mm
• Minimum overall height (sides down, incl handles):	600mm	630mm
• Minimum trolley height (sides down, excl handles):	525mm	555mm
Maximum patient platform height (drain end):	870mm	900mm
Maximum patient platform height (head end):	900mm	930mm

#### UNDERSIDE CLEARANCES (FOR PATIENT LIFTERS)

Maximum floor clearance: 125mm 155r
-------------------------------------

Figure 21. Pacific Shower-Bathing Trolley specifications

# 11. SPECIFICATIONS AND ELECTROMAGNETIC COMPATIBILITY

# 11.5 ELECTRIC ACTUATOR SYSTEM

<ul> <li>Battery Charger</li> <li>Manufacturer:</li> <li>Power supply voltage:</li> <li>Power supply frequency:</li> <li>Maximum charge current:</li> <li>Type</li> <li>Enclosure rating</li> </ul>	LINAK 100-240 V AC 50-60 Hz 650 mA SMPS IPX5
Control System	
<ul> <li>Manufacturer:</li> </ul>	LINAK
<ul> <li>Battery voltage:</li> </ul>	24 V DC
<ul> <li>Capacity</li> </ul>	2.9 Ah
<ul> <li>Duty cycle:</li> </ul>	10%, do not operate the shower trolley for more than 2 minutes over a
	20 minute period.
Enclosure rating	IPX5
Battery Specification	
<ul> <li>Manufacturer:</li> </ul>	LINAK
<ul> <li>Battery voltage:</li> </ul>	24 V DC
<ul> <li>Capacity</li> </ul>	2.9 Ah
<ul> <li>Enclosure rating</li> </ul>	IPX5
<ul> <li>Ambient temperature:</li> </ul>	+5° to +40 °C
<ul> <li>Storage temperature:</li> </ul>	-15° to +40° C
<ul> <li>Enclosure rating</li> </ul>	IPX5

# **11.6 TRANSPORT & STORAGE ENVIRONMENT**

•	Ambient temperature range:	-10°C to +40°C
•	Relative humidity range:	15% to 90%
•	Atmospheric pressure range:	70 kPa to 106 kPa (Rated to operate at an altitude $\leq$ 2000m).

# **11.7 OPERATING ENVIRONMENT**

•	Ambient temperature range:	+5°C to +40°C
•	Relative humidity range:	15% to 90%
•	Atmospheric pressure range:	70 kPa to 106 kPa (Rated to operate at an altitude $\leq$ 2000m).

# **11.8 SOUND PRESSURE LEVEL**

Sound pressure level: 51.0 dBA (MAX)

# **11.1 AVOIDING INTERFERENCE**

WARNING: The shower trolley generates, uses, and can radiate electromagnetic radiation that may interfere with other devices, or vice versa.

If the shower trolley causes interference that affects another device or is affected by another device, one or more of the following actions may help:

- Reorientate the shower trolley or the device being affected by the interference.
- Increase the distance between the shower trolley and the device.

If these measures are not successful, contact Howard Wright Limited for further assistance.

# **12.1 TESTING & COMPLIANCE**

 The shower trolley satisfies the requirements of 2017/745, 93/42/EC and UK MDR 2002 for medical devices - Class 1 Medical Products.

The shower trolley has been developed to comply with the requirements of:

- IEC60601-1:2005/AMD1:2012
- IEC60601-2-52:2009/AMD1:2015
- IEC60601-1-11:2015
- IEC60601-1-2:2007

#### 12.2 IP STANDARDS

BS EN 60529:1992.

Specification of degrees of protection provided by enclosures.

IPX5 - Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.

# 12.3 RECYCLING AND DISPOSAL

Howard Wright Limited cares for the environment. Our manufacturing facility, based in an ecologically diverse area, means we are committed to a healthy environment. Please follow the recycling guidelines within your country.

All packaging, including cardboard and timber can be recycled.

The shower trolley is manufactured from steel, aluminium, ABS and nylon plastics, all of which can be recycled.

The shower trolley tub material should be disposed of as general, non-recyclable waste.

All electronic equipment should be returned to an approved electrical waste recycling treatment plant.

Batteries are of a sealed lead acid type and must be returned to a specialist battery disposal company.

Please follow the WEEE (2012/19/EU) directive if within the European Community or environmental legislation in the country of use.

The shower trolley complies with the RoHS2 (2011/65/EU) directive.

Please see the Howard Wright Limited website for WEEE and Waste Battery information.

See the Technical Service Manual (TSM) for details on disassembly of the shower trolley.

# 12.4 EXPECTED SERVICE LIFE

The expected service life of the shower trolley is 7 years from the date of manufacture.

# 13. INDEX

13.1 FIGURES AND TABLES	Page
Figure 1. Safe Working Load	3
Figure 2. Serial Number Label	6
Figure 3. Shower trolley orientation	6
Figure 4. Part Identification - Pacific Sower Bathing Trolley	8
Figure 5. Castor pedal in neutral position	10
Figure 6. Castor pedal in steer position	10
Figure 7. Castor pedal in steer position	10
Figure 8. Head end bracket	11
Figure 9. Storage rail	11
Figure 10. Handset	12
Figure 11. Pulling down battery compartment	13
Figure 12. Attaching/removing battery to/from battery compartment	13
Figure 13. Attaching/removing battery to/from charger	13
Figure 14. Cutaway storage location for drain hose	15
Figure 15. Storage hook for drain hose	15
Figure 16. Siderail in use	17
Figure 17. Siderail release buttons	17
Figure 18. Siderail released	17
Figure 19. Siderail in storage	17
Figure 20. Drain parts	24
Figure 21. Pacific Shower-Bathing Trolley specifications	25

ble 1. Trouble shooting guide21
---------------------------------

# 13. INDEX

ТЕМ	PAGE	ITEM	PAG
Abbreviations	6	Power input	6, 2
Adjusting patient platform height	12	Power supply	6, 2
Adjusting tub sides height	12	Precautions	4-
Adjustment ranges	25	Push-handles	
Annual Inspection	22	Raising the patient platform	1
Bathing a patient	16	Raising the tub sides	1
Battery	2,8,13	Recycling	2
Battery replacement	23	Remove upholstered tub top	24
Battery charger	8,13	Safe Working Load (SWL)	3, 2
Bleach	18-19	Serial number label	
Bogie	8	Servicing	22-2
Bogie cover	8	Showering a patient	10
Brake castors	8, 10	Sodium hypochlorite	18-19
Brake pedal	8, 10	Spare parts	2
Buffer rail+rubber	<sup>′</sup> 8	Specifications	2
Buffer	8	Standards (compliance & conformity)	25
Castors	8, 10	Steer castor	8, 10
Cautions	4-5	Steer pedal	8, 1
Checklist (see maintenance)	23	Steering the shower trolley	10
Cleaning	18-19	Storage (recommendations)	20
Clearances	25	Symbols	6-
Commissioning the shower trolley	9	Technical specification	2
Contents	1	Technical summary	_
Contact details	first page	Terminology	6-'
Control box	2, 8	Testing & compliance	22-23, 2
Controls (see electric controls)	11, 21, 23	Transferring the patient	1
Definitions (of warnings, cautions and notes)		Transporting the shower trolley	20
Drain end (definition)	6	Trolley information	25
	-	Trolley orientation terminology	20
Drain hose	3, 15, 24 24		2
Drain parts	18-19	Troubleshooting guide Tub	2 8,11-12
Drying		Tub sides	
Duty cycle (or mode)	6		8, 11-12
Electrical specifications	25, 26	Unpacking the shower trolley	4-{
Electrical system	19	Warnings (definition of)	
Electric controls	11-12, 19	Waterproof pillow	8,15
Elevators	8		
General warnings & cautions	4-5		
Handles (see push handles)	8		
Handset	8, 12, 21		
Handset storage location	11		
Head end (definition)	6		
Head end bracket	8, 11		
Howard Wright Limited (see contact details)	) first page		
EC standards	27		
P (Ingression Protection)	7		
ndex	29		
_abels	3, 6		
owering the patient platform & tub sides	12		
Vaintenance	22-23		
Maintenance checklist	23		
Vlode (or duty cycle)	6		
Model number (location of)	6		
Notes (definition of)	4-5		
Packing the shower trolley (for transport or s	storage) 20		
Patient platform	8		
	5		
Part identification	8		
Part identification Pedals	8 8. 10		
Part identification Pedals Pillow	8 8, 10 8, 15		

# HOWARD WRIGHT

Howard Wright Limited howardwrightcares.com