

mackworth

TX Advanced Ceiling Track Hoist



Pre Sales Document

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Mackworth TX Advanced Ceiling Track Hoist Pre-Sales Information

For further information on the product and details summarised within this document please refer to the Mackworth TX Advanced Ceiling Track Hoist User Manual.

If you require larger print or videos – these are available on the Mackworth Website <http://mackworthusa.com>

1.0 Intended Use

For internal use only.



With a safe working load of 200 kg (440 lb) or 270 kg (600 lb), the TX Advanced Hoist is a raising and lowering aid used to transfer people safely. The Hoist makes it possible to move mobility impaired individuals with minimal strain or risk to the caregiver, while providing complete safety, dignity and comfort for the person being moved.

The easy to use Hoist is designed to be operated by both professional health care workers and home health care workers who may not have a specific range of skills in health care. Typical home care users may include, but is not limited to, teachers, medics, paramedics, carers, family and friends. Focusing on the dignity and wellbeing of the person being moved, the simple to use Hoist maximises the amount of care provided to the person.

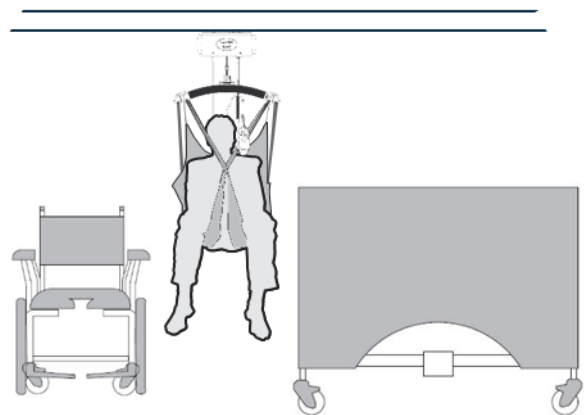


Figure 1

The TX Advanced Hoist is a Ceiling Track Hoist, and should only be used whilst on the Ceiling Track. It has the ability to raise up an individual from one location, such as a bed, move the individual along the track to another location and finally lower the individual, such as into a chair or a bath.

The TX Advanced is intended to be used with Mackworth/Care-ability slings and the Ceiling Track system. Together these three items make up the system. Please refer to any user guides supplied with the sling and track system and reference them while reviewing this manual.



A risk assessment must be performed before using any other manufactured sling, carry bar or ceiling track to ensure 'safe' use can be established.

The device is used under instruction and the operation of the aid is undertaken by a trained carer.

The carry bar is manufactured by Mackworth, associated for use with this device, incorporates three fixing point options at either end of carry bar, with a safety retaining clip on the outer hook. The fixing can be derived by the user, by means of a simple connection loop, made by the sling, to the carry bar. This connection system is used throughout the industry in various designs but all acts as the means to hold the sling and user in place through operation of the device whilst in use.

The sling is a specially designed fabric accessory that attaches to the Hoist by means of a carry bar and strap system, and holds an individual while the Hoist or transfer takes place. The sling is supplied separately from the Hoist at the initial time of purchase.

The track, also supplied separately from the Hoist at the time of purchase, is the means to operate the Hoist in a defined safe route, enabling the person different uses around the "travel" of the Hoist.

1.1 Additional Warnings and Safety Notices



Risk of strangulation: Please make sure handset cable and lift tape are clear of all persons at all times.

Risk of impact with carry bar: Please take care to ensure the carry bar is clear of the person in the sling when preparing to raise/lower and move them to avoid any contact with that person.

Risk of collision: The person operating the Hoist should make sure that when raising, lowering or moving the Hoist that no people or objects will obstruct, be injured or damaged by the movement.

Serious Injury: If, during the use of this device or as a result of its use a serious incident has occurred, please report it to the manufacturer and to your national authority.

Electric Shock: Do not insert any objects into the Hoist case or battery charging station because of potential risk of electric shock.

To reduce the risk of electric shock, do not install or operate the battery charger with a damaged cable or if the unit has been dropped or damaged.

Portable RF Communication Devices: Portable RF communications equipment (including peripherals, such as antenna cables and external antenna) should be used no closer than 30cm (12 inches) to any part of the TX Advanced Ceiling Track Hoist, including cables specified by the manufacturer, otherwise degradation of the performance of this equipment could result

Vicinity to Other Equipment: Use of this equipment adjacent to or stacked with other equipment should be avoided, as it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

Specified Accessories: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

1.2 Operating Environment

The TX Advanced Hoist is suitable for use within the professional health care facility environment as well as the home health care environment.

The Hoist is not suitable for any special environments.

The Hoist is not intended to be used in environments where there are rapid changes in the environmental temperature and humidity during intended use.

2.0 Installation

The TX Advanced Hoist has been specifically designed to be installed in both the professional and home health care environments.

No matter the environment, health and safety factors should be considered to ensure the safety and essential performance of the Hoist and to avoid unnecessary damage or injuries to people within the area of the Hoist.

Typical examples include: radiated heat (e.g. from a heater or fire place), excessive moisture impacting electrical performance (e.g. from a bathroom or kitchen area) and the correct storage of the Hoist after use (e.g. handset position on the carry bar).

The Hoist is not intended to be used in environments where there are rapid changes in the environmental temperature and humidity during intended use.

This manual covers the safety and advice for the TX Advanced and moving and handling risks can be done in-house, as long as the person is competent to identify and address the risks.

Refer to the Commissioning guide document which outlines the correct procedure to install the product.

Document Number: 996053.

You may need to seek to seek specialist advice on how to assist some people with specific moving and handling needs. Sources of advice include, but is not limited to, professional bodies and organisations, occupational therapist, physiotherapists, manual handling advisers and ergonomist with experience in health and social care.



A Mackworth approved engineer must install the Hoist.

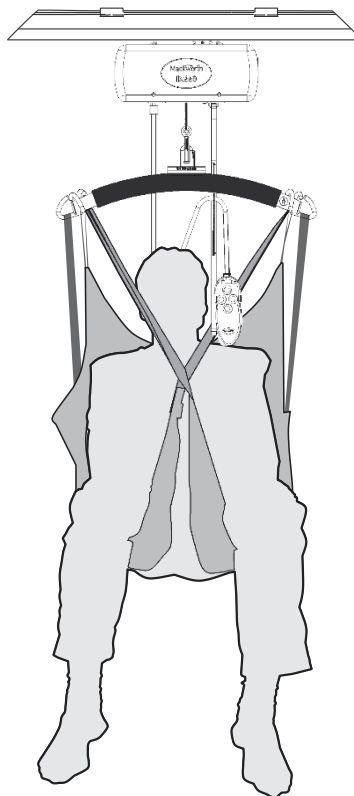


Figure 5

3.0 Slings

The TX Advanced Hoist is designed to be used in combination with a Sling to perform its intended use. The sections below include the correct and safe manor of attaching/detaching the Slings as well as a list of approved slings for use.

3.1 Sling Attachment/Detachment

Sling loops should be attached as follows:

1. Put the required sling loop onto your finger and thumb and then using the same finger or thumb, pull back the spring locking mechanism on the correct hook on the correct side of the carry bar (Figure 3).
2. Slide the sling loop from your finger and thumb over the edge of the hook (**Error! Reference source not found.**4 and 5).
3. After positioning the loop below the locking mechanism (Figure 5) release the spring locking mechanism to secure the sling loop. (Figure 6)



Figure 3



Figure 4



Figure 5

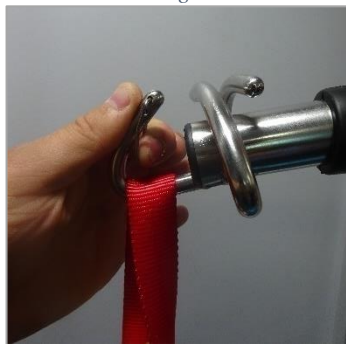


Figure 6



Figure 7

To remove the sling, simply reverse the process – pull back on the spring locking mechanism, lift the loop out of the hook and release the locking mechanism.

3.2 Compatible Slings

Below is a list of slings that are recommended and have been approved by Mackworth for use in combination with the product. We recommend the use of the Mackworth Healthcare or Care-Ability manufactured sling range (type 'BF' applied part) to be utilised with the Mackworth TX Advanced Ceiling Track Hoist. It is at the user's discretion to use alternative supplied product. In utilising another manufacturer's sling, checks must first be made to ensure the sling is safe to use and meets the requirements of BS EN ISO 10535 before its use.

The slings with a safe working load of up to 272kg (600 lb) that can be used with the Prism TX Ceiling Track Hoist are shown in the table below, for full details on the various Sling sizes and material options. See the User Manual for the specific Sling Model.

Mackworth Sling Range
Mackworth Oak
Mackworth Oak with head support
Mackworth Yew
Mackworth Yew with head support
Mackworth Hazel
Mackworth Hazel with head support
Mackworth Willow
Mackworth Willow with head support
Mackworth Beech
Mackworth Beech with head support
Mackworth Pine
Mackworth Pine with head support

Table 1

Care-Ability Sling Range
CA300 Universal
CA400 Universal Deluxe
CA500 Toilet Access
CA501 Toilet Access with crossover straps
CA502 Toilet Access with head support
CA503 Toilet Access with high back
CA503E Toilet Access with high back extensor
CA600 Hammock
CA700 Classic Hammock
CA701 Deluxe Hammock
CA701 Deluxe Hammock with head support
CA702 Comfort In Chair Hammock
CA702 Comfort In Chair Hammock with head support
CA703 Split Leg In Chair Hammock

Table 2



Do not use a clip fit sling on a Carry Bar designed specifically for loop fitting slings.

4.0 Detachable Parts

The only detachable part that is included with the product is the QRS (Quick Release System) Carry Bar. Below are the instructions for attaching and detaching the QRS Carry Bar correctly.

4.1 Attaching/detaching QRS (Quick Release System) Carry Bar

The attachment and detachment of the Carry Bar can be completed safely by following the following procedure:

Attach

1. On the hook, move the locking mechanism into the hook by pressing down on the tab (Figure 8 and 9).
2. With the carry bar positioned sideways along the length of the bar, move the pin at the top of the carry bar into the hook (Figure 10).
3. Alternatively, with the carry bar positioned sideways, the pin at the top of the carry bar can gently push the locking mechanism out of the way as the pin is carefully moved into the hook.
4. Once the pin is in the hook, rotate the carry bar 90° down so the carry bar is hanging below the hook on the pin in the hook. Move the locking mechanism into place by pushing up on the tab, securing the carry bar on the hook and lifting tape. (Figure 12 and 13)

Detach

1. Press down on the locking mechanism as described in step 1 (Attach).
2. Rotate the Carry Bar to a sideways position and remove from the hook.



Figure 8

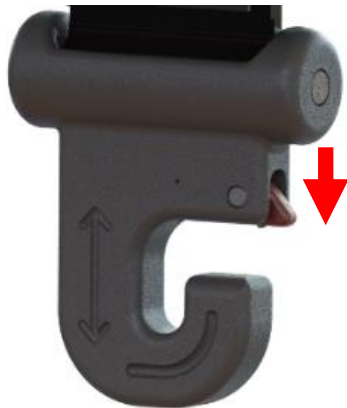


Figure 9

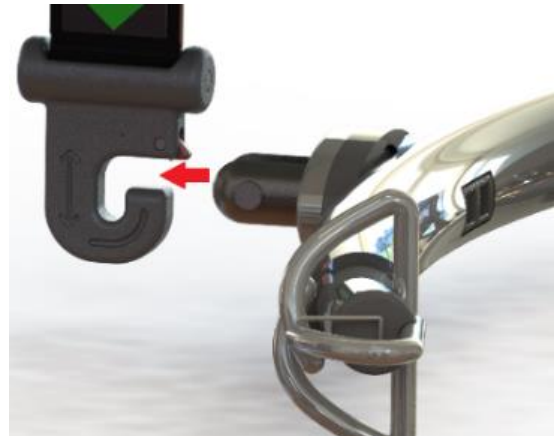


Figure 10



Figure 11

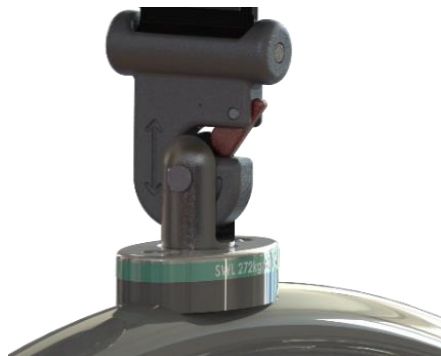


Figure 12



Figure 13

5.0 Technical Specification

5.1 Hoist Dimensions and Lifting Range

All dimensions are shown in millimetres

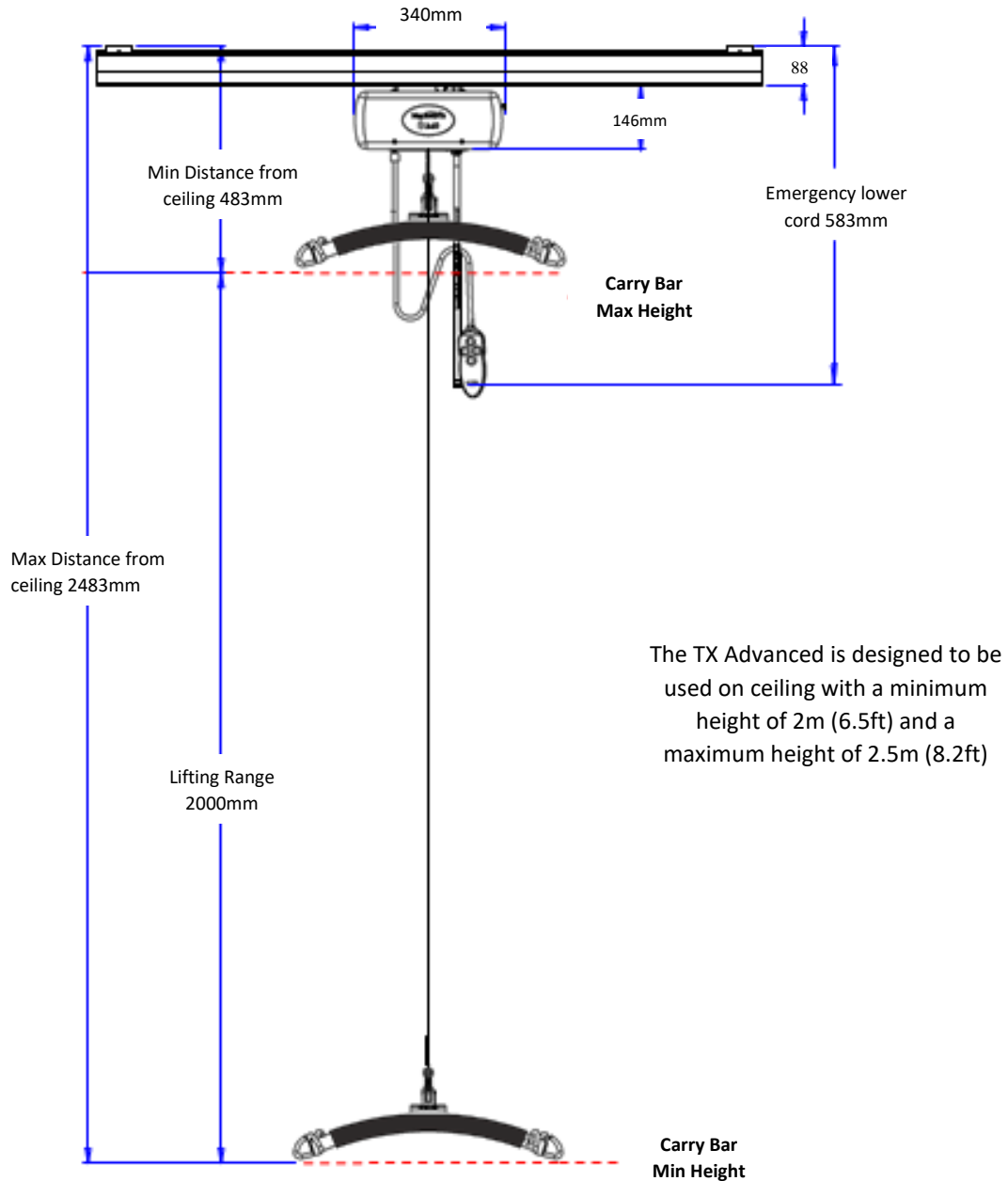


Figure 14

The diagram above (Figure 14) shows the relevant lifting ranges and dimensional sizes of the Hoist. The direction of travel can only be made within the boundaries of where the Hoist is in the track system.



There are no necessary modifications required for the device to perform its intended use. However, should the device or the installed system require modification, please consult your local Mackworth dealer to arrange a date and time to assess the required changes to the system.

If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.

5.1 Specifications

Technical specifications	
Hoist Motor	24VDC
Traverse Motor (optional at time of purchase)	24VDC
Charger Input	100-240V AC 50/60Hz 1.5A
Charger Output	24VDC/1.0A
Batteries (sealed lead acid)	24VDC (2x 12VDC) 5.0 AH
Hoist Case	Flame Retardant ABS
Hoist Case Degree of Protection	IP20
Handset Degree of Protection	IP67
Lifting Capacity (SWL)	200 kg (440 lb) / 272 kg (600 lb)
Lifting/Range	2000 mm / 78.74"
Operation	Handset (Pneumatic)
Sound Level	54 dB
Traverse Duty Cycle	25% use, 75% rest (90 seconds use, 270 seconds rest)
Lifting Speed (272 kg / 600 lb)	29.52 mm/s -- 1.16"/s
Lifting Speed (No Weight)	64.52 mm/s -- 2.54"/s
Lowering Speed (272 kg / 600 lb)	54.48 mm/s -- 2.14"/s
Lowering Speed (No Weight)	60.75mm/s -- 2.39"/s
Stopping Distances Up (272 kg / 600 lb)	10 mm / 0.39"
Stopping Distances Up (No Weight)	24 mm / 0.94"
Stopping Distances Down (272 kg / 600 lb)	39 mm / 1.54"
Stopping Distance Down (No Weight)	33 mm / 1.30"
Raising/Lowering Duty Cycle	15% use, 85% rest (90 seconds use, 510 seconds rest)
Emergency Down Stopping Distance (272 kg / 600 lb)	39 mm / 1.54"
Emergency Down Stopping Distance (No Weight)	33 mm / 1.30"
Battery Capacity for Raising/Lowering (272 kg / 600 lb)	35 Lifts (Top 500 mm / 19.69" of Lift Tape)
Battery Capacity for Raising/Lowering (200 kg/ 440 lb)	60 Lifts (Top 500 mm / 19.69" of Lift Tape)
Battery Capacity for Raising/Lowering (100 kg / 220 lb)	120 Lifts (Top 500 mm / 19.69" of Lift Tape)

Table 3

Weights	
Safe Working Load (SWL)	200 kg (440 lb) / 272 kg (600 lb)
Hoist	10 kg (22 lb)
Battery charger	0.8kg (1.76 lb)
Carry bar	2 kg (4.4 lb)
Handset	0.2kg (0.44 lb)

Table 4

Operational Forces	
Handset	3N
Emergency cord	15N
Hook locking mechanisms on lift tape	2.5N
Spring clips on carry bar	8N
Manually traversing fully loaded hoist (SWL)	50N
Manually traversing unloaded hoist (No weight)	10N

Table 5

6.0 Environmental - Storage and Operating Conditions

The Hoist is intended for internal use within normal environmental conditions.



It is not intended to be used in environments where there are rapid changes in the environmental temperature and humidity during intended use.

The TX Advanced Ceiling Track Hoist suffers little from any effects of lint, dust and light.

- Lint – Due to the nature of the TX Advanced being installed closely to the ceiling, very little lint would be likely to gain access into the hoists workings. The hoist is recommended as per Service Guide to be wiped cleaned during every hoist inspection.
- Dust – Due to the nature of the TX Advanced being installed closely to the ceiling, very little dust would be likely to gain access into the hoists workings.
- Light – The User controls have been designed to be easily recognisable and the use of bright colours will help the user through all ranges of lighting. The Specification of the hoist dictates that normal use would occur during ambient luminance 50 – 500 lux. Additional as the hoist is designed for indoor use only, if required the user may wish to switch on room lighting. The LCD display on the hoist is backlit to aid with user interaction.

6.1 Normal operating conditions

+5°C to +40°C (41°F to 104°F) at a relative humidity between 15% to 90% RH, non-condensing but not requiring a water vapour pressure greater than 50hPa and atmospheric pressure between 700hPa to 1060hPa

6.2 Shipping and storage conditions

-25°C to +5°C (-13°F to 41°F) with any humidity level.

+5°C to +35°C (41°F to 95°F) at a relative humidity up to 90%.

+35°C to 70°C (95°F to 158°F) non-condensing at a water vapour pressure up to 50hPa.

12 Hours are required for the Hoist to cool from the maximum storage temperature until ready for its intended use when the ambient temperature is 20°C (68°F).

12 Hours are required for the Hoist to warm from the minimum storage temperature until ready for its intended use when the ambient temperature is 20°C (68°F).

7.0 Maintenance



No service is to be carried out on the Hoist while transferring a person to reduce the risk of injury. Service must be completed by a Mackworth authorised Service Engineer. Do not attempt to service the product yourself, or warranty is void.

To ensure the safety and continued good function of your Hoist, routine service must be performed on your Mackworth TX Advanced Ceiling Track Hoist.

Service should be completed by a Mackworth approved service engineer every 6 months to ensure the products required standard is maintained. The service history of the product should be documented each service in the Service Log at the back of this User Manual.

When the Hoist is serviced, the 6 month service checklist must be completed for the Mackworth TX Advanced Hoist.



[Service Manual](#) Document Number: 995674.

[Spare Parts Manual](#) Document Number: 992553.

The Service must be completed every 6 months after installation of the Hoist to comply with LOLER Regulations.

The Mackworth TX Advanced Hoist has an expected Service Life of 10 Years.

Contact your local authorised Mackworth dealer if you:

- Need more information.
- Have any questions about the use or service of your Hoist.
- Notice any change in the performance.
- Want to report an unexpected occurrence.
- Want to arrange a service.
- Need to ascertain necessary information for replacement parts and components.

Contact details of your local Mackworth dealer are shown on the last page of this manual.

8.0 Cleaning

Please follow the cleaning guidelines below on cleaning and disinfecting the Hoist.

8.1 General Cleaning



It is recommended to clean the Hoist and accessories before use by a different person, reducing the risk of cross-contamination.

The exterior of the Hoist can be cleaned using a damp soapy cloth for general cleaning duties. Please ensure the cloth is damp and not wet. Ensure the exterior of the device is dry after cleaning. Dry using a clean dry cloth.

For the Handset and Lift Tape, use a dry cloth wipe only.



Care should always be taken when cleaning around electrical components to reduce the risk of electric shock or damage to the Hoist.

8.2 Disinfecting (if necessary)

Should the Hoist require a more thorough clean, the use of the Actichlor™ disinfectant product (which is widely available in tablet form and used throughout the health care industry) is recommended.



Follow the manufacturer's safety instructions for the use of the cleaning product before use to ensure safe use for the operator and the patient.

Ensure the cloth is damp before the cleaning process.

Application is through a clean damp cloth applied to wipe the device down. Use in the following dilutions to ensure an effective clean:

- Actichlor™ dissolvable chlorine tablets provide a concentration of 1000 ppm of available chlorine (0.1%) per 1 tablet
- 1 tablet (1.7g formed tablet (x1)) will create a virucidal solution, diluted in 1 litre of water to provide effective means to clean a "dirty" device. This is also ideal for use after an outbreak of the Norovirus/winter vomiting and can be used as a precaution against C.Diff. It is effective against viruses, bacteria, spores, yeasts and moulds.
- The contact time against the outer components of the device should be for 5 minutes to prevent any virucidal infections without a degradation to the functionality of the device. 5 minutes is a recommended contact time. The device can withstand a longer contact period but the 5 minute recommendation as a minimum must be followed to provide an effective cleaning regime.
- Blood spills should be dealt with by an increased concentration of the solution – please refer to the instructions on the manufacturers product labelling.

Prism Medical UK Contact details:

Address: Unit 1 • Tir Llwyd Industrial Estate • St Asaph Avenue • Kinmel Bay • Conwy • LL18 5JZ

Telephone Number: 01924 840 100

Disclaimer

While every effort has been made to ensure the accuracy of information contained in this pre sales manual, no liability can be accepted by Mackworth for any errors or omissions. Mackworth operates a policy of continuous improvement. Specifications and other data are subject to change without notice.



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