mackworth

TX Advanced Ceiling Track Lift

User Manual

1 Introduction

This manual covers the TX Advance 440 and 600 ceiling track lifts, as well as all their variants and various track types.

Please read and understand this manual thoroughly before using your ceiling track lift. The information in this manual is important for the safety of anyone near the ceiling lift and must be read and understood to help prevent injuries. It is also crucial to the proper operation and maintenance of the ceiling track lift.

This user manual should be kept safe for future reference. The contents of this manual are subject to change without prior written notice.

If you have any questions after reviewing this manual, please contact your local authorized representative.

If, during the use of this device, a serious incident has occurred, please report it to the manufacturer and to your national authority.

1.1 Intended Use

The ceiling track lift is a device designed to safely raise and lower people, intended for use with a ceiling track and slings. These three components together form the ceiling track lift system. The lift facilitates the movement of individuals with limited mobility with minimal effort and risk to the caregiver, while ensuring safety, dignity, and comfort for the person being transferred. It can lift someone from one place, such as a bed, move them along the track to another location, and then lower them into a chair or bath. This lift is intended for indoor use only and is not suitable for outdoor environments.

The ceiling lift is designed to be operated by both professional healthcare workers and home healthcare workers who may not have a specific range of healthcare skills. Typical home care users may include, but are not limited to, teachers, medical professionals, paramedics, caregivers, family members, and friends. Focusing on the dignity and well-being of the person being moved, the simple-to-use lift maximizes the amount of care provided to the person.

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

1.2 Manufacture

The product is manufactured at the address below:

Prism Medical UK
Unit 1, Tir Llwyd Industrial Estate,
St Asaph Avenue,
Kinmel Bay,
Conwy,
LL18 5JZ
Telephone number: 01924 840100.

1.3 Symbols Used

The table below includes all symbols from BS EN ISO 15223-1:2021 that can be found in this manual and on the product, and what they represent. Refer to this table when you are unsure of what a symbol represents.

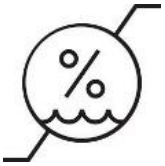
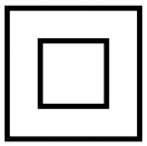
 Place of Manufacture	 Country of Manufacture	 Serial number	 Catalogue Number
 Caution – see instructions for use	 Consult instructions for use.	 UK Conformity Assessed	 Safe Working Load
 For internal use only	 Packaging indicator – Keep dry	 Do not use it if package is damaged.	 Packaging indicator – This way up
 Fragile, handle with care	 Please observe local laws on recycling	 Non-sterile	 Atmospheric pressure limitation
 Temperature range	 Humidity range	 Class II Equipment	$IP_{N_1N_2}$ Degree of protection provided by enclosure. N1: Ingress of particles N2: Ingress of water
 Type 'B' applied part	 Type 'BF' applied part	 European Authorized Representative and Importer	

Table 1-1

1.4 Contraindications / Limitations

There are no known "contraindications" associated with the usage of a ceiling track lift, provided it is used as per the manufacturer's recommendations and guidelines. However, it is recommended that a client-specific assessment be conducted by a trained and knowledgeable healthcare professional to determine the most suitable method of transfer and use for each individual.

The manufacturer does not recommend the required number of operators for the use of our products. This information and recommendation can only be provided after a thorough personalized, case-specific assessment, as many factors can influence these decisions.

Limitations of the lift include:

- The lift should only be operated by competent and trained people.
- The lift should only be used with patients weighing under the safe working load of the lift.
- Between the lift, sling, carry bar and track system, the lowest safe working load of the components should not be exceeded.
- The lift is only to be used within the track it is installed on. Lifts must only be relocated by an authorized person.
- The lift is only compatible with the allocated slings found within this manual.
- Lifts are designed for human transfer only. There is no other application for this product.
- The operator of the lift must always pay attention to the well-being of the patient. Patients should not be left unsupervised during an operation.
- The lift is not designed for self-lifting. A carer must operate the lift during use.

1.5 Safety Instructions and Warnings

Please read and understand all the statements below, as they pertain to the safety of caregivers and users, as well as warranty requirements. Failure to comply with warnings in this manual may result in injury to the operator and/or client and/or damage to the lift or related components.

- If you are unsure about the correct use of this product, please get in touch with the manufacturer or a professional for further information or training.

- The ceiling track lift and associated accessories are not toys. Do not use it for unsafe practices. Do not allow children to play with the product or any of its components. The lift should not be used for any practice except its intended use.

- In facilities where more than one operator will be responsible for using the lift, it is important that all such members be trained on the product before use. A training program should be established by the facility to acquaint new operators with this equipment.

- Your guarantee is void if people unauthorized by the manufacturer perform work on the lift.

- To maintain optimum function, the product should be inspected and maintained on a regular basis. See the section 'Daily checks, Servicing and Cleaning' within this user manual.

- This user manual provides a list of standard accessories that have been approved.

- The product and the associated accessories are intended only for lifting and transferring a person. The manufacturer shall not be liable for any damage resulting from the misuse, neglect, or intentional destruction of the equipment and/or its associated components.

- Any accessories used with the product should be checked before each use to ensure that they are in good working order. Check signs of wear and ensure that all labels are legible. Report any unusual wear to your local authorized dealer.

- Ensure that a clear space is maintained around the lift. Before using the ceiling lift, always check for and move away any obstacles.

- When transferring a client, always ensure that the client, carry bar, and lift tape are positioned directly below the lift. Lifting a client with the lift tape at an angle can cause excessive wear, leading to misalignment as it enters the lift. This misalignment can potentially result in damage to the lift tape and mechanical failure of the lift.
- Never leave a user unattended in the ceiling lift.
- If additional accessories have been supplied with the Lift, refer to the instructions included with those items.
- The lift must be installed on the ceiling track before use.
- The lift must be installed only by people authorized by the manufacturer.
- Under no circumstances should the lift, track, sling, or entire system be put under the control of a person who has not been properly trained in the use and care of this equipment. Failure to adhere to this warning may result in serious injury to the operator and/or the individual being lifted/transferred.
- Unauthorized modifications to this product may affect its safety. The manufacturer will not be held responsible for any accident, incident, or deficiency in performance that occurs due to unauthorized modification of its products. Your guarantee is void if any modifications are made that are not authorized by the manufacturer. This includes, but is not limited to, shortening the length of the emergency red cord – for example, tying it up or cutting it.
- To maintain safety and performance, do not expose the lift to water or operate it in wet conditions. Your guarantee does not cover any misuse or abuse of the lift system.
- If water enters the lift, allow it to dry for 24 hours before use.
- There are no user-serviceable parts inside the cover of the lift, likewise for any components of the associated parts. Do not remove cover screws or open the lift unit, as this will VOID THE GUARANTEE/WARRANTY.
- The ceiling lift and associated accessories, track and sling(s) are intended only for lifting and transferring a person. We will not be responsible for any damage caused by the misuse, neglect, or purposeful destruction of the lift and/or its associated components.
- The installation of the lift and its associated parts is certified to have a maximum load of 440 lb./600 lb., depending on the model. Do not exceed the maximum rated load of any of the components.
- There is a risk of an explosion if the ceiling lift is used in the presence of flammable anesthetics.
- Your ceiling lift is for human lifting. Do not use it, or allow it to be used, for any other purpose.
- In areas where children are likely to be present, be vigilant when operating the lift.
- Protecting the people present, visually monitor sling loop connection points during raising, lowering and transfer stages so the sling remains firmly attached to the carry bar.
- To reduce the risk of unintended use, when the lift is not in use, remove the sling(s) from the product to prevent entrapment or strangulation should the device be tampered with.
- The lift batteries are not a user-serviceable part. Contact your local authorized dealer to arrange for replacement.

- Before initial use, the lift unit must be charged for approximately 8 hours. Refer to the section 'Charging the Lift'. The handset must also be connected to the lift. To connect the handset, refer to the section 'Connecting the Handset to the Lift.'

- Between the Ceiling Lift, Carry Bar, Sling and other accessories, the lowest maximum load shall always be used.

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

- Risk of strangulation: Please make sure the handset cable and lift tape are always clear of all people.

- 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 lift should make sure that when raising, lowering, or moving the lift that no people or objects will obstruct, be injured or damaged by the movement.

- Ensure that the person being lifted is always raised clear of the floor when using the lift.

- Ensure the lift tape is vertically aligned with the lift when raising or lowering the carry bar. Any deviation from this can cause the tape to fray and potentially lead to its failure.

- Serious Injury: If, during the use of this device or because 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 lift case or battery charging station because of the 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 Ceiling Track Lift, 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.

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

1.6 Electromagnetic Compatibility (EMC) Statement

This statement is made in response to the assumption that the user operates the device using the components supplied by the manufacturer. DO NOT use any other power supply with the system, as the manufacturer's adapter has been tested and meets the EMC standards.

This product has been designed, manufactured, and tested in accordance with the relevant environmental regulations applicable to the device's intended use.

Pacemakers, defibrillators, and other medical devices should be manufactured in a manner that allows them to withstand Electromagnetic Interference (EMI) in accordance with their associated mandatory European directives and regulations. Please consult the user alert card, which was issued to the user regarding the use of electrical items for individuals fitted with these or any other devices.

If users of this equipment are unsure of its compliance with EMC, you can request confirmation from the manufacturer that the product is manufactured to the appropriate Electromagnetic Compatibility standard.

A brief summary of the tests conducted in accordance with IEC 60601-1-2 is presented in the table below.

The Lift is also classified as Class B according to CISPR 11:2009 for use in the home healthcare environment.

The use of the device within the specified area, where it is intended for use, will have no detrimental effect on other devices that have been tested to meet their respective requirements.

Section	Specification Clause	Test Description	Results	Comments/ Base Standard
Configuration and Mode: Test setup standby				
2.1	4.4.1	General Requirement: Risk Management Process for ME Equipment and ME Systems	Pass	
2.2	5	Identification, Marking and Documents	Pass	
Configuration and Mode: Test setup charging				
2.3	7.1.1	Mains Terminal Disturbance Voltage	Pass	CISPR 11: 2009 A1:2010 EN 55016-2-3: 2004 + A1:2005
2.4	7.1.1	Electromagnetic Radiation Disturbance	Pass	CISPR 11: 2009 A1:2010 EN 55016-2-3: 2004 + A1:2005
2.5	7.2.1	Harmonic Current Emissions (AC Power Port)	Pass	EN 61000-3-2: 2014
2.6	7.2.2	Voltage Fluctuations and Flicker (AC Power Port)	Pass	IEC 61000-3-3: 2013
2.7	Table 4	Immunity to Electrostatic Discharge (Enclosure Port)	Pass	IEC 61000-4-2 2008
2.8	Table 4	Immunity to Radiated RF Electromagnetic Fields (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
2.9	Table 4	Immunity to Proximity Fields from RF Wireless Communication Equipment (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
2.10	Table 5	Immunity to Surges (AC Power Port)	Pass	IEC 61000-4-5: 2005
2.11	Table 5	Immunity to Electrical Fast Transient / Burst (AC Power Port)	Pass	IEC 61000-4-4: 2012
2.12	Table 5	Immunity to Conduct Disturbances Induced by RF Fields (AC Power Port)	Pass	IEC 61000-4-6: 2013

2.13	Table 5	Immunity to Voltage Dips and Voltage Variations (AC Power Port)	Pass	IEC 61000-4-11: 2004
2.14	Table 5	Immunity to Voltage Interruptions (AC Power Port)	Pass	IEC 61000-4-11: 2004
In-Track charging system stand testing				
2.7	Table 4	Immunity to Electrostatic Discharge (Enclosure Port)	Pass	IEC 61000-4-2 2008
Configuration and Mode: Test setup standby				
2.4	7.1.1	Electromagnetic Radiation Disturbance	Pass	CISPR 11: 2009 A1:2010 EN 55016-2-3: 2004 + A1:2005
2.7	Table 4	Immunity to Electrostatic Discharge (Enclosure Port)	Pass	IEC 61000-4-2 2008
2.8	Table 4	Immunity to Radiated RF Electromagnetic Fields (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
2.9	Table 4	Immunity to Proximity Fields from RF Wireless Communication Equipment (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
Configuration and Mode: Test set up operating up and down				
2.4	7.1.1	Electromagnetic Radiation Disturbance	Pass	CISPR 11: 2009 A1:2010 EN 55016-2-3: 2004 + A1:2005
2.7	Table 4	Immunity to Electrostatic Discharge (Enclosure Port)	Pass	IEC 61000-4-2 2008
2.8	Table 4	Immunity to Radiated RF Electromagnetic Fields (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
2.9	Table 4	Immunity to Proximity Fields from RF Wireless Communication Equipment (Enclosure Port)	Pass	IEC 61000-4-3: 2006 A2:2010
Configuration and Mode: Test setup standby				
2.1	4.4.1	General Requirement: Risk Management Process for ME Equipment and ME Systems	Pass	
2.2	5	Identification, Marking and Documents	Pass	

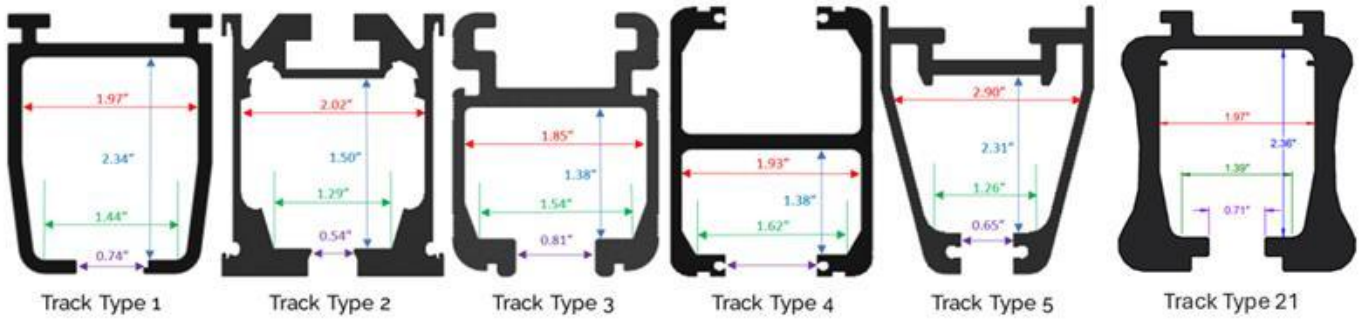
Table 1-7-1

2 Configurations and Key Components

2.1 Product Configurations

Below is a list of the track profiles that the lift can be installed into, depending on the different configurations. The profiles below must match your pre-installed track for the lift to be installed. The table below includes all the configurations available with this lift.

Figure 2-1



TX400 Advanced Lift Type	Track Type	TX600 Advanced Lift Type	Track Type
TX440 Advanced MT – 122515	Type 1	TX600 Advanced MT – 122520	Type 1
TX440 Advanced MT – 122516	Type 2	TX600 Advanced MT – 122521	Type 2
TX440 Advanced MT – 122517	Type 3	TX600 Advanced MT – 122522	Type 3
TX440 Advanced MT – 122518	Type 4	TX600 Advanced MT – 122523	Type 4
TX440 Advanced MT – 122519	Type 5	TX600 Advanced MT – 122524	Type 5
TX440 Advanced PT – 122617	Type 1	TX600 Advanced MT- 122531	Type 21
TX440 Advanced PT – 122656	Type 3	TX600 Advanced PT – 122622	Type 1
TX440 Advanced PT – 122659	Type 4	TX600 Advanced PT – 122666	Type 3
TX440 Advanced PT – 122662	Type 5	TX600 Advanced PT – 122669	Type 4
TX440 Advanced QRT – 122678	Type 1	TX600 Advanced PT – 122672	Type 5
TX440 Advanced QRT – 122688	Type 3	TX600 Advanced PT – 122532	Type 21
TX440 Advanced QRT – 122693	Type 4	TX600 Advanced QRT – 122679	Type 1
TX440 Advanced QRT – 122698	Type 5	TX600 Advanced QRT – 122689	Type 3
TX440 Advanced MTCC – 122616	Type 1	TX600 Advanced QRT – 122694	Type 4
TX440 Advanced MTCC – 122655	Type 2	TX600 Advanced QRT – 122699	Type 5
TX440 Advanced MTCC – 122658	Type 3	TX600 Advanced MTCC – 122621	Type 1
TX440 Advanced MTCC – 122661	Type 4	TX600 Advanced MTCC – 122665	Type 2
TX440 Advanced MTCC – 122664	Type 5	TX600 Advanced MTCC – 122668	Type 3
TX440 Advanced PTCC – 122619	Type 1	TX600 Advanced MTCC – 122671	Type 4
TX440 Advanced PTCC – 122657	Type 3	TX600 Advanced MTCC – 122674	Type 5
TX440 Advanced PTCC – 122660	Type 4	TX600 Advanced PTCC – 122624	Type 1
TX440 Advanced PTCC – 122663	Type 5	TX600 Advanced PTCC – 122667	Type 3
TX440 Advanced MTPT – 122615	Type 1	TX600 Advanced PTCC – 122670	Type 4
TX440 Advanced PTPT – 122618	Type 1	TX600 Advanced PTCC – 122673	Type 5
		TX600 Advanced MTPT – 122620	Type 1
		TX600 Advanced PTPT – 122623	Type 1

Table 2-1

Key:

PT = Powered Traverse

MT = Manual Traverse

QRT = Quick Release Track

MTCC = Manual Traverse Constant Charge

PTCC = Powered Traverse Constant Charge

MTPT = Manual Traverse Powered Turntable

PTPT = Powered Traverse Powered Turntable

2.2 Key Components

Please review the information below to familiarize yourself with the components of the TX Advance Lift. The images below show the contents of the ceiling track lift. If you have not received all the components, please contact your local dealer immediately. Contact details are provided on the last page of this manual.

Item	Description
1	TX Advance Lift
2	Info Label
3	Carry Bar
4	Handset
5	Lift Charger
6	Allen Key
7	User Manual

Table 2-2-1

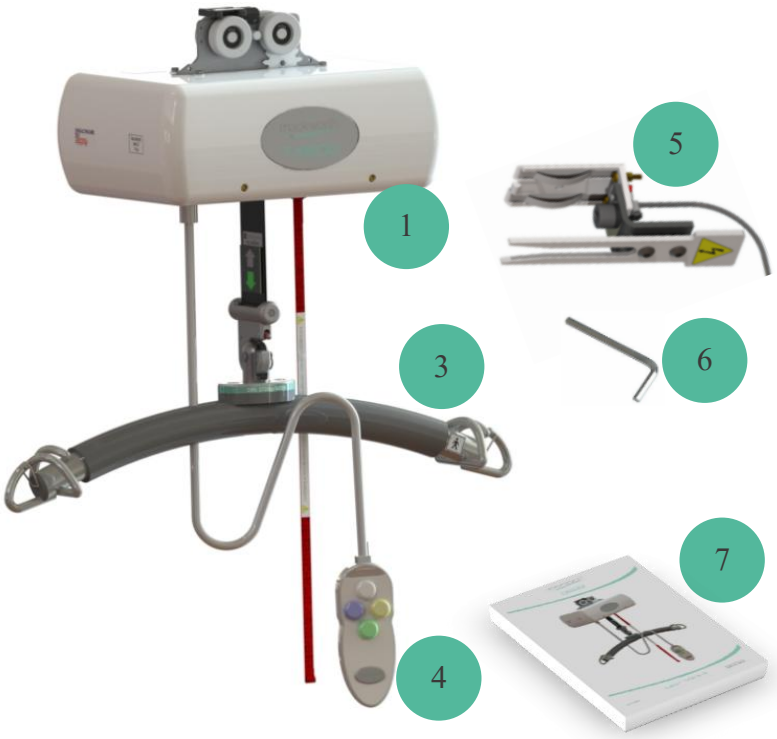
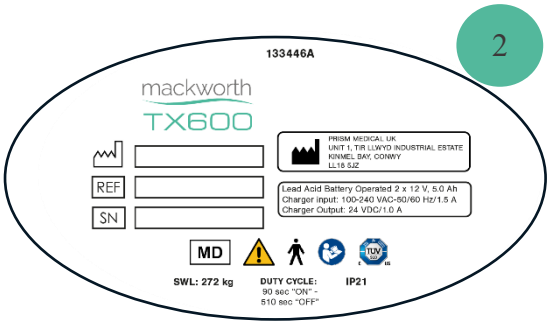


Figure 2-2



(Located on the side cover)

*Disclaimer: The label shown is for illustrative purposes only and may not represent the label affixed to the product. Refer to the product itself for accurate and current labelling information.

3 Applied Parts

3.1 Body Floating (BF) Applied Parts

A Body floating applied part is a detachable component that has medium to long-term contact with the user and carer. This includes the carry bar and sling.

Figure 3.1-1

Figure 3.1-2

3.1.1 Carry Bar

The carry bar is a crucial component of the ceiling lift system. The carry bar features three fixing point options at either end, accompanied by a safety retaining clip on the outer hook. The carry bar serves as the link between the ceiling lift and the sling, enabling the user to be transferred.

To attach the carry-bar, see the guidelines below:

1. Open the red retaining tab on the QRS by pushing it down. (See figure 3.1.1-1)
2. Hold the carry bar horizontally and insert the boss into the QRS hook. (See figure 3.1.1.-2)
3. Pivot the carry bar down to its natural position and release the retaining tab to secure. (See figure 3.1.1-3)

Figure 3.1.1-1

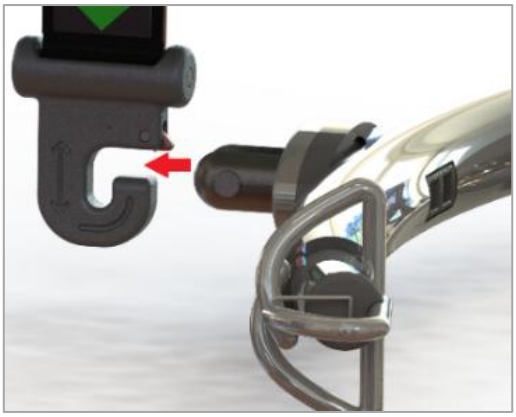


Figure 3.1.1-2

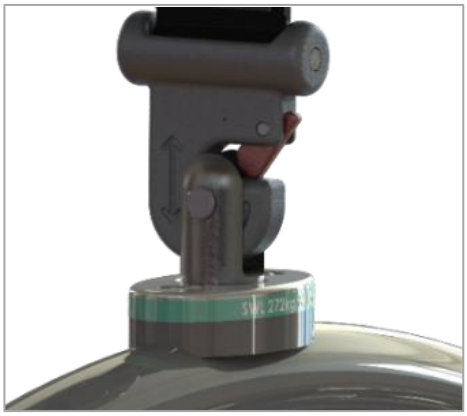


Figure 3.1.1-3

3.1.2 Slings

The sling is a specially designed fabric accessory that attaches to the ceiling lift through the carry bar. The sling is used to provide comfortable support to the user during transfer. The sling is supplied separately from the ceiling lift at the time of purchase. To choose an adequate sling, the user should be assessed before purchase for their specific requirements. See the list below for compatible slings that are recommended for use with this ceiling lift. For a complete list and further information on available slings, refer to the sling user manuals.

It is at the user's discretion to use alternative supplied products. In utilizing 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, and a complete risk assessment must be carried out before use.

Always ensure that the sling SWL aligns with the ceiling lift; for any component found across the system, the lowest SWL must never be exceeded.

Mackworth Sling Range	Care-Ability Sling Range
Mackworth Oak	**Universal**
Mackworth Yew	**Universal Deluxe**
Mackworth Hazel	**Toilet Access**
Mackworth Willow	**Hammock**
Mackworth Beech	**Classic Hammock**
Mackworth Pine	**Deluxe Hammock**
	Comfort In Chair Hammock
	Split Leg in Chair Hammock

Table 3.1.2-1

The way the sling is attached to the carry bar needs to be assessed on an individual basis and documented in the individual's care plan. Furthermore, the person attaching the sling should refer to the sling's user manual for the recommended color-coded loop attachment method, as well as the correct fitting requirements for the user. Only after the correct fitting requirements are fully understood should the sling loops be fitted onto the carry bar.

To attach the sling to the carry bar, follow the guidelines below:

1. Pull the safety retaining clip back to access the carry bar hook. (See figure 3.1.2-1)
2. Place the chosen sling loop onto the hook. (See figure 3.1.2-2)
3. Release the safety retaining clip to secure the loop onto the carry bar. (See figure 3.1.2-3)

Ensure the required loop(s) are on the correct hooks and are correctly positioned.

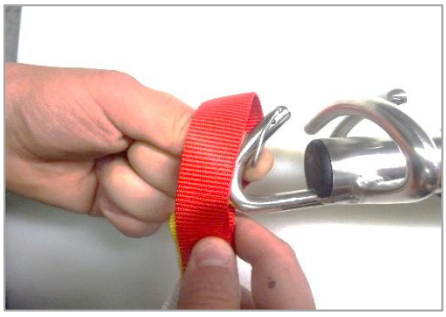


Figure 3.1.2-1

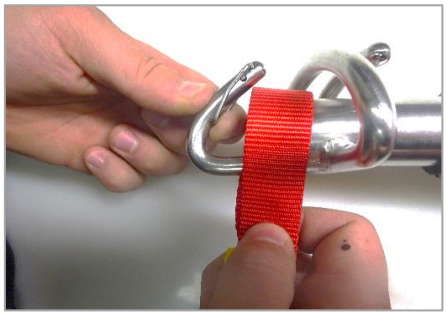


Figure 3.1.2-2

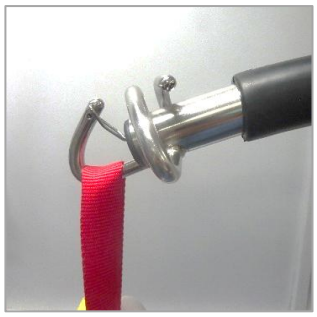


Figure 3.1.2-3

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

3.2 Handset

The handset is a crucial component of the ceiling lift system. The handset has two to six buttons, depending on the chosen ceiling lift. The handset is used to operate the ceiling lift, including raising and lowering the carry bar, traversing the ceiling lift along the track, and operating powered auxiliaries (such as turntables).

We recommend that a handset should never be detached from the ceiling lift; however, if the handset becomes inadvertently detached. See the guidelines below to reattach the handset.

1. The handset grommet attaches to the airline grommet on the underside of the ceiling lift. Align the profiles of the grommets together and insert the handset brass inserts into the air grommet holes. See the images below for reference. Ensure the handset is fully inserted into the airline grommet.
2. Test the handset by operating each button to ensure that the command functions as intended. (See operating instructions for further details.)

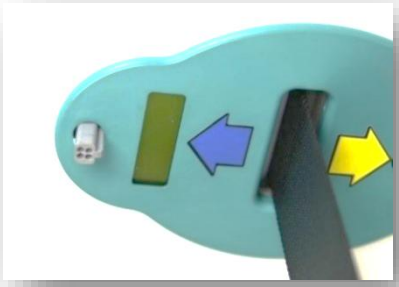


Figure 3.2-1

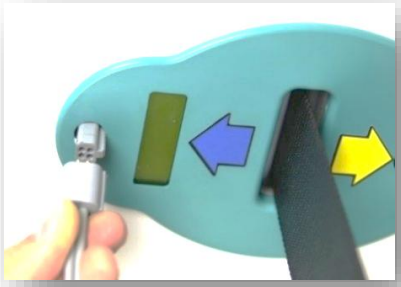


Figure 3.2-2

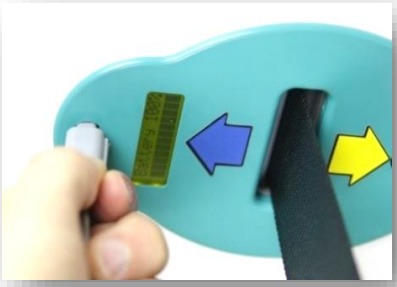


Figure 3.2-3

A sturdy ladder or steps may be required to access the underside of the ceiling lift to attach the hand controller. Caution should be used when this is required.

3.2.1 Handset Storage

The Handset is designed to be stored on the carry bar. The Handset has a hook attached to the rear face, which will slot nicely onto the carry bar (See figure 3-2-1-1). It is recommended that the Handset be always stored on the carry bar when not in use for safekeeping and easy access.

Figure 3.2.1-1

4 Ceiling Lift Operation

4.1 Turning the Ceiling Lift ON and OFF

Figure 4.1-1

This toggle switch has three states: On, Off and E-Lower. These features should only be operated in an emergency, but if the red pull cord has been pulled by accident, to turn the ceiling lift back on, the toggle switch must be pressed vertically into the slot. Once this is done, press any button on the handset to "wake up" the ceiling lift. The display screen will turn on, and the LED will display a steady green.

To conserve battery, the ceiling lift will automatically shut off after approximately two minutes of non-use.

4.2 Raising and Lowering the Carry Bar

To raise and lower the carry bar, operate the grey and green buttons found on the handset. The grey button raises, and the green button lowers the carry bar. This aligns with the arrows found on the lift tape. This applies across all varied handsets.

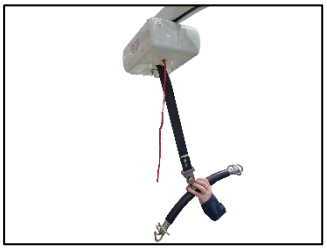
Figure 4.2-1

It is recommended that the operator holds the carry bar with one hand while raising/lowering is being done. This will prevent the bar from accidentally swaying and/or colliding with an individual or nearby object.
For the same reasons, raise the carry bar above head height when not in use and when traversing the unloaded ceiling lift.

In addition, the lifting tape must be kept vertically in line with the lift when raising or lowering the carry bar. Any deviation from this can cause the tape to fray, potentially leading to the lift's failure. Please note that if the lift fails due to improper handling, it will not be covered by the warranty, and you will be liable for the replacement cost.

Correct:

Lift Tape Straight, aligned with the lift



Incorrect:

Lift Tape angled, risking wear or failure

4.3 Traversing the Ceiling Lift

Always take extreme care when moving the ceiling lift along the track. Watch out for and avoid any obstructions that may cause injury to the individual in the sling, damage to the ceiling lift and/or to the obstruction.
Never pull the ceiling lift along the track using the handset, sling, or emergency cord, as this could have a detrimental effect on the ceiling lift's performance.

See the relevant section below for either a manual traverse or a powered traverse ceiling lift.

4.3.1 Manual Traverse Ceiling Lift

The ceiling lift should be moved along the track by following the guidelines below:

1. Lower the carry bar to a suitable height to allow the carer to handle it with both hands. Always ensure the user will be safe from the floor.
2. Push or pull the carry bar in the required direction for transfer. Ensure the transfer is done safely and slowly for maximum user comfort.
3. Always ensure the direction of travel is clear from any obstacles.

4.3.2 Powered Traverse Ceiling Lift

The ceiling lift should be moved along the track by following the guidelines below:

1. Lower the carry bar to a suitable height to allow the carer to stabilize the ceiling lift with one hand. Always ensure the user will be safe from the floor.
2. To traverse the ceiling lift, operate the blue and yellow buttons found on the handset. The buttons are color-coded to correspond with the directional arrows found on the underside of the ceiling lift. Ensure the transfer is done safely and slowly for maximum user comfort.

Only in an emergency should a powered traversing ceiling lift be moved manually.

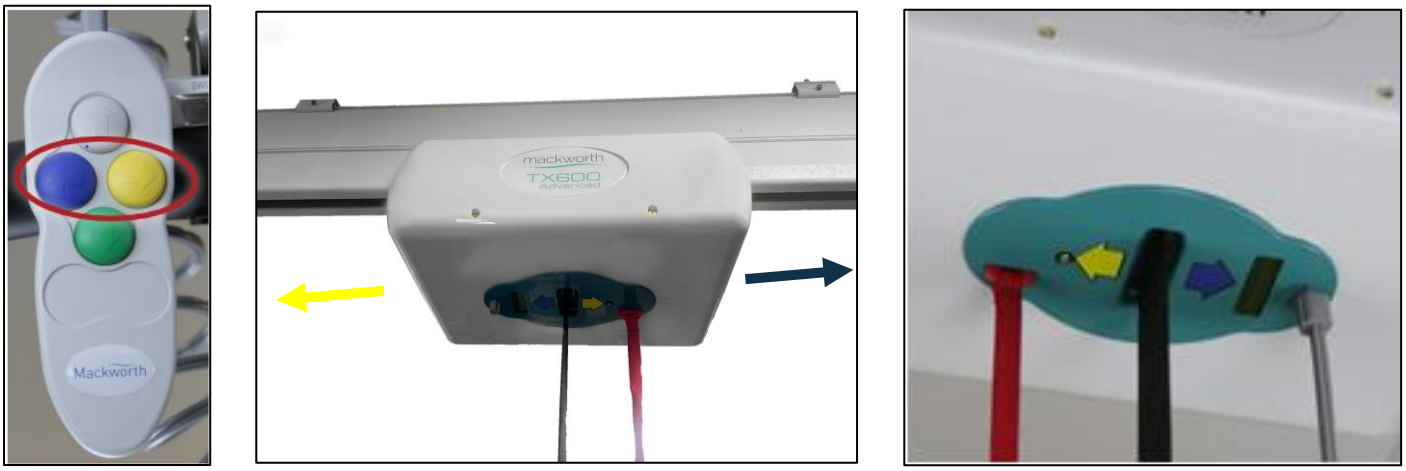


Figure 4.3.2-1

4.4 Charging the Ceiling Lift

As standard practice, the ceiling lift should be placed on charge after each use. Keeping the batteries charged regularly and avoiding full discharge will help maintain their lifespan and performance. From full discharge, the batteries take up to 8.5 hours to be fully charged.

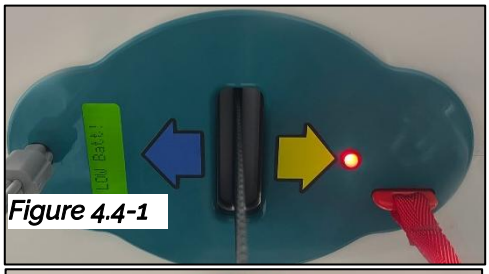


Figure 4.4-1

The ceiling lift LCD indicates the remaining charge in the batteries. Once the batteries are low, the LCD will display “Low Batt!”, the LED will turn orange, and the ceiling lift will sound three single audible beeps.

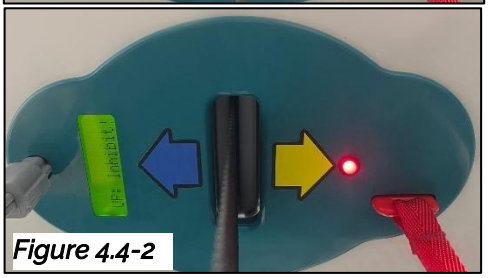


Figure 4.4-2

If the ceiling lift has not been charged during the low battery period. The LCD will then display “Up: Inhibit!”, the LED will turn red, and the ceiling lift will sound a single audible beep, lasting three seconds. The ceiling lift will no longer lift but will lower to allow the user to exit.

When the ceiling lift is placed on charge, it may remain connected to the charger indefinitely, as the ceiling lift features a built-in regulator that eliminates the risk of overcharging.

4.4.1 Standard Charging

The standard ceiling lift is designed for in-track charging. The charging dock will be located at either end of the track system. To begin charging, traverse the ceiling lift into the charging dock. Once contact is made, the LCD will display “Charging”, and the LED will begin to flash orange.

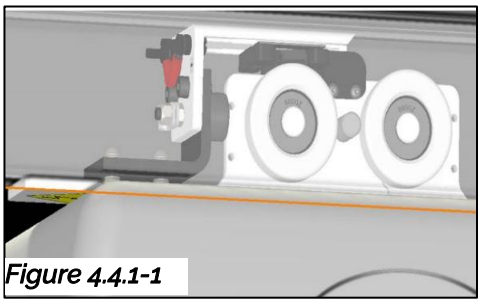


Figure 4.4.1-1

Do not operate the ceiling lift with excessive force when entering the dock, as this can potentially damage both the ceiling lift and the charger.

4.4.2 Constant Charge

Ceiling lifts with the constant charge feature allow the ceiling lift to continuously charge up the batteries without being docked in a charging dock. This style of ceiling lift is always charged, eliminating the need for users to charge it themselves.

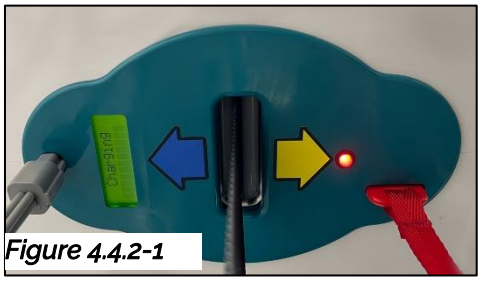
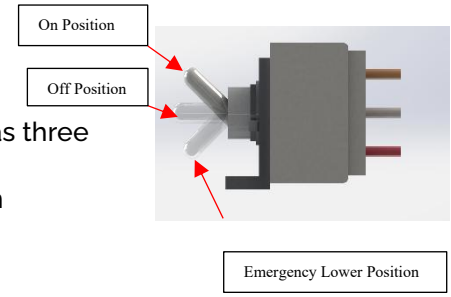


Figure 4.4.2-1

4.5 Emergency Operation



The emergency red cord/tab is located on a toggle switch; this switch has three functions: ON, OFF and E-Lower. See the diagram for reference.
These emergency stopping features must only be used in the event of an emergency.

4.5.1 Emergency Stopping

The ceiling lift unit features an emergency shut-off mechanism that enables the operator to disconnect power to the ceiling lift.

Pulling the toggle switch down to stage 2 using the red cord will remove power from the ceiling lift. This should only be used in an emergency. Once the red emergency cord has been activated, the ceiling lift unit must be reset to operate again.


Figure 4.5.1-1

The user should not re-engage the switch to stage 1 once the cord has been pulled. If the emergency stop has been activated, contact your local authorized dealer to report the emergency. Where applicable, a service engineer may be sent to solve the issue with the ceiling lift. Do not continue to use the ceiling lift after activating the emergency stop function without first contacting the local authorized dealer.

4.5.2 Emergency Lowering

If the DOWN button on the handset does not function, or in the event of a power failure, the person may be lowered by pulling down and holding the red emergency cord at stage 3 of the toggle switch. In this scenario, the ceiling lift will sound a continuous audible beep until it's released.

Continue to pull down on the emergency red cord until the person is safely lowered to the desired position.

NOTE: The emergency lowering function does not provide a lifting function. The Emergency Lower should only be used in an emergency, such as lowering a patient due to a damaged handset or other similar situations.

Once the red emergency cord has been activated, the ceiling lift unit must be reset to operate again.

The user should not re-engage the switch to stage 1 once the cord has been pulled. If the emergency stop has been activated, contact your local authorized dealer to report the emergency. Where applicable, a service engineer may be sent to resolve the issue with the ceiling lift. Do not continue to use the ceiling lift after activating the emergency stop function without first contacting the local authorized dealer.


Figure 4.5.3-1

4.5.3 Manual Emergency Lowering

The manual emergency lowering should only be used when the emergency lowering cord fails due to total power loss. The manual E-Lower is a last-resort safety feature for when a patient is suspended and cannot be lowered.

To operate, remove the cap from the side cover of the ceiling lift (Figure 4-5-3-1). Insert the 4mm Allen Key that is provided with the ceiling lift into the motor unit inside the cover (Figure 4-5-3-2). Wind the Allen Key to manually operate the ceiling lift motor and safely lower the patient.

After using it, remove the Allen Key and re-insert the cap into the cover.


Figure 4.5.3-2

4.6 Turntable

The TX-Advanced can be used in conjunction with a manual or powered turntable. A turntable will have been pre-installed into the track system, and an understanding of safe use and operation is essential.
The turntable is a rotating piece of track that allows the ceiling lift to dock into, rotate and exit into another track system. A turntable is commonly used when there are multiple track systems within a room, allowing the ceiling lift to transfer between each system.

Table 4-6-1

Key Aspects	
TT600 Manual Turntable	TT600 Powered Turntable
Can be used with all ceiling lifts listed within this manual	Can only be used with the ceiling lifts listed in the table below (Table 11)
14 Possible Track Take of Positions	10 Possible Track Take of Positions
Has an SWL of 600lb	Has an SWL of 600lb
End stops are fixed all around the turntable to avoid inadvertent ceiling lift derailing.	End stops are fixed all around the turntable to avoid inadvertent ceiling lift derailing.
Rotation is achieved by using the simple pull cord mechanism	The powered turntable is operated by the ceiling lift when docked. The turntable takes power from the ceiling lift's communications port, and the ceiling lift handset buttons are used to activate the turntable rotation.

When using a higher load-rated ceiling lift with the turntable, always ensure that the Turntable SWL is not exceeded.

4.6.1 Manual Turntable Operation

To use the ceiling lift with a manual turntable, follow the generic operation guidelines below:

1. Traverse the ceiling lift into the turntable. (Figure 4.6.1.1)
2. Position the ceiling lift in the center of the turntable rotating track piece. (Figure 4.6.1.2)
3. Grab hold of the looped pull cord and pull downward to rotate the turntable. The looped cord will match the arrow on the underside of the turntable cover. (black and black, white, and white) (Figure 4.6.1.2 and 4.6.1.3)
4. To rotate the turntable in the opposite direction, pull the other looped pull cord.
5. Continue to pull the looped cord until the rotating track aligns with the exiting track system.
6. Always ensure that the two track pieces are perfectly aligned to allow the ceiling lift to exit the turntable.

   (Adjusting the alignment is only required when there are more than four track exits on the turntable; otherwise, the internal end bumpers will automatically stop the turntable rotation and will have aligned the exit for you)

7. Once aligned with the track exit, traverse the ceiling lift out of the turntable and into the new track system. (Figure 4.6.1.4)
8. This process applies to entering and exiting all track systems linked to the manual turntable.

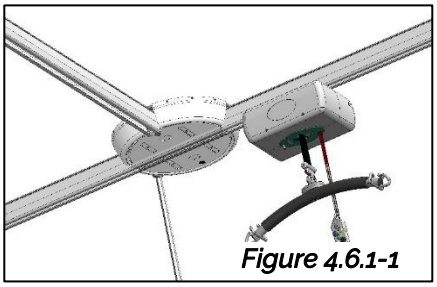


Figure 4.6.1-1

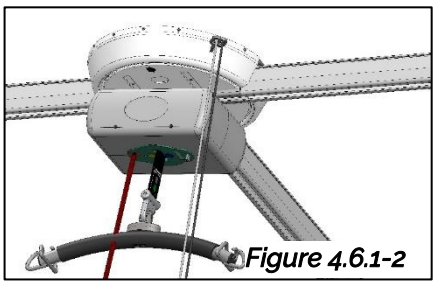


Figure 4.6.1-2

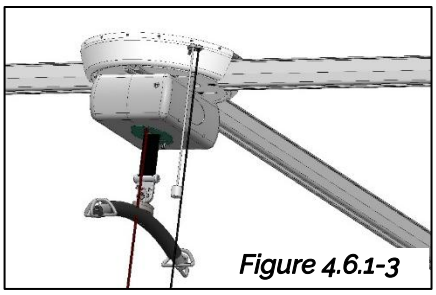


Figure 4.6.1-3

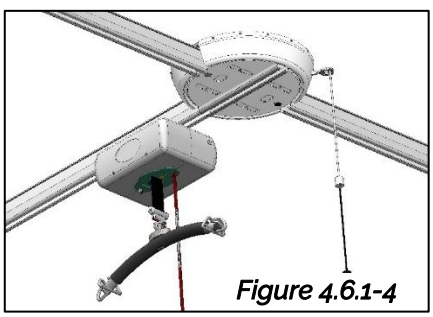


Figure 4.6.1-4

4.6.2 Powered Turntable Operation

Below is a list of all ceiling lifts compatible with the TT600 Powered Turntable.

TX400 Advanced Ceiling Lift Type	Track Type	TX600 Advanced Ceiling Lift Type	Track Type
TX440 Advanced MTPT – 122615	Type 1	TX600 Advanced MTPT – 122620	Type 1
TX440 Advanced PTPT – 122618	Type 1	TX600 Advanced PTPT – 122623	Type 1

Table 4.6.2-1

The powered turntable is activated by the ceiling lift once it has docked into the turntable. There is an auxiliary port on the top of the ceiling lift and the underside of the turntable track, which allows the ceiling lift to communicate and power the turntable for operation. The powered turntable is operated using the additional buttons on the hand control, rather than manually pulling a cord. The hand control buttons are colored white and black, corresponding to the direction of the matching-colored arrows located on the bottom of the turntable. See the images below for reference.

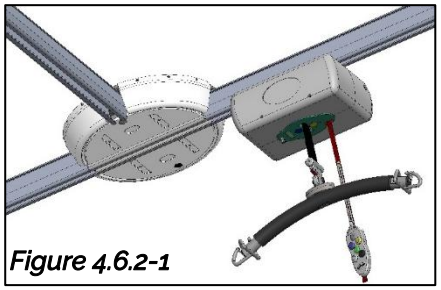


Figure 4.6.2-1

To use a ceiling lift with a powered turntable, follow the generic operation guide below:

1. Traverse the ceiling lift into the turntable. (Figure 40)
2. Position the ceiling lift in the center of the turntable rotating track piece. (Figure 41)
3. Determine the color of the arrow pointing in the direction you wish to rotate (black or white).
4. Match this color to the additional buttons located on the handset (black or white).
5. Press and hold the handset button to begin rotating the turntable track. (Figures 41 and 42)
6. Once the rotating track aligns with the desired exiting track, release the handset button.
7. Always ensure that the two track pieces are perfectly aligned to allow the ceiling lift to exit the turntable.

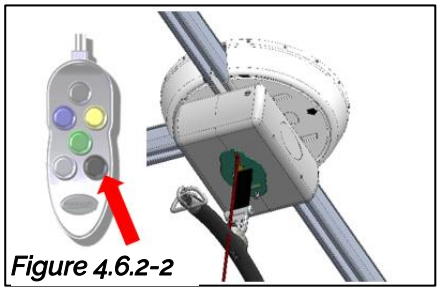


Figure 4.6.2-2

(Adjusting the alignment is only required when there are more than four track exits on the turntable; otherwise, the internal end bumpers will automatically stop the turntable rotation and will have aligned the exit for you.)

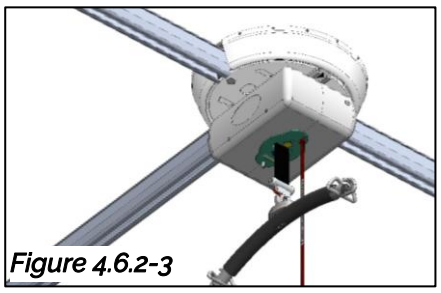


Figure 4.6.2-3

8. Once aligned with the track exit, traverse the ceiling lift out of the turntable and into the new track system. (Figure 43)
9. This process applies to entering and exiting all track systems linked to the powered turntable.

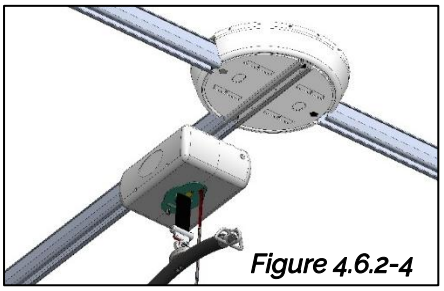


Figure 4.6.2-4

5 Technical Specification

5.1 Ceiling Lift Dimensions

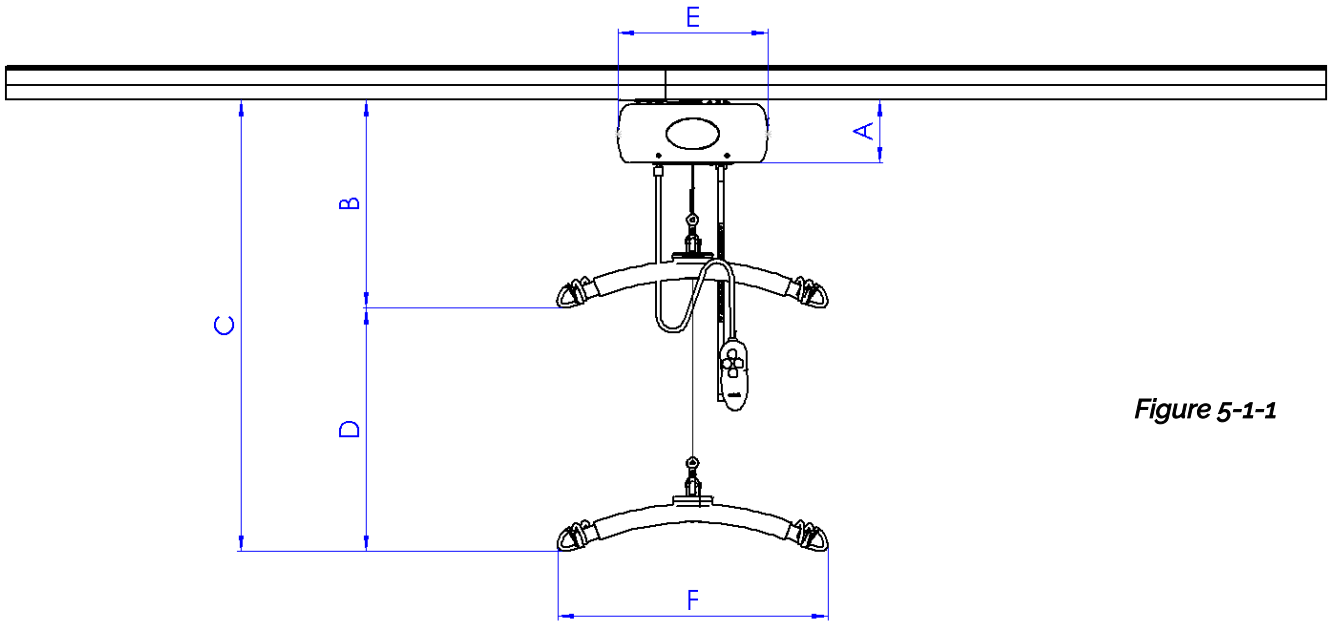


Figure 5-1-1

Ceiling Lift Dimensions - Inches		
Dimensions (Ref to drawing)	Standard Ceiling Lift	QRT Ceiling Lift
A – Track to Ceiling Lift	5.7	7.6
B – Min Distance from Track to Carry Bar	15.6	17.4
C – Max Distance from Track to Carry Bar	94.3	96.1
D – Lifting Range	78.7	78.7
E – Ceiling Lift Width	13.4	13.4
Ceiling Lift Depth	9.8	9.8
F – Carry Bar Width	24.2	24.2

Table 5.1-1

5.2 Specifications

Table 5.2-1

Ceiling Lift Specifications	
Safe Working Loads	
TX Advanced 440	440lb
TX Advanced 600	600lb
Lift Speeds	
Lifting Speed 0lb	2.54"/s
Lifting Speed 291lb	1.44"/s
Lifting Speed 445lb	1.23"/s
Lifting Speed 600lb	1.16"/s
Lowering Speed 0lb	2.23"/s
Lowering Speed 291lb	2.25"/s
Lowering Speed 445lb	2.28"/s
Lowering Speed 600lb	2.14"/s
Battery Specification	
Lead Acid Batteries – x2	24VDC (2x 12VDC) 5.0 AH
Battery Capacity – Raising/Lowering (Top 19.7 inch of Lift Tape) – (291lb)	130 Lifts
Battery Capacity – Raising/Lowering (Top 19.7 inch of Lift Tape) – (445lb)	65 Lifts
Battery Capacity – Raising/Lowering (Top 19.7 inch of Lift Tape) – (600lb)	35 Lifts
Maximum Charging Time	8.5 hrs.
Raising/Lowering Duty Cycle	15% use, 85% rest (90 seconds use, 510 seconds rest)
Component Weights	
Ceiling Lift	22lb
Battery charger	1.5lb
Carry bar	4lb
Handset	0.5lb
Operational Forces	
Handset (Pneumatic)	3N
Emergency cord	15N
Hook locking mechanisms on the lift tape	2.5N
Spring clips on the carry bar	8N
Manually traversing a fully loaded ceiling lift (SWL)	50N
Manually traversing unloaded ceiling lift (No weight)	10N
Charger Specification	
Charger Type	In-Track Charging
Charger Input	100-240V AC 50/60Hz 1.5A
Charger Output	24VDC/1.0A
Motor Specification	
Ceiling Lift Motor	24VDC
Drive Motor (if applicable)	24VDC
Ceiling Lift Protection	
Ceiling Lift Case	Flame Retardant ABS
Ceiling Lift Case Degree of Protection	IP21
Handset Degree of Protection	IP67
Sound Level	
Sound Level	54 dB

5.3 LCD and LED Indications

The table below includes the details on all user display messages. It also includes the LED color, the audible beeping, and instructions on what actions to take when each message appears. This table may help with troubleshooting.

Display Message	Message explanation	LED color	Beep sound	Instruction
LOW Batt!	Battery Status LOW	Orange	1 Beep Repeat	Place the ceiling lift on charge as soon as possible
Charged	Batteries Fully Charged	Green	None	Batteries are full - remove from charging dock
Charging	Charging Currently Active	Orange flashing	None	None - Batteries are charging
Up	Ceiling Lift Lifting Active	Green	None	None - Informative only
Down	Ceiling Lift Lowering Active	Green	None	None - Informative only
No Lim_Sw!	Limit Switch Fault	Green	Constant Beep	Contact Service Centre
UP: Inhibit!	Battery Capacity TOO LOW to Lift	Red	3 Beep Repeat	Place the ceiling lift on charge immediately
Up Lim_Sw!	Up Limit Switch Active	Green	None	None - Informative only, Press down to continue
Down Lim_Sw!	Down Limit Switch Active	Green	None	None - Informative only, Press up to continue
HIGH CURRENT	High Current Draw from the ceiling lift Motor	Green	Beep for 1 Second	Contact Service Centre
PM Due	Preventative Maintenance Due	Green	Beep every 30 minutes	Contact Service Centre

Table 5.3-1

5.4 Standards Applied

The standards that have been applied to the device are as follows:

- IEC 60601-1-1:2012: Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- IEC 60601-1-2:2014: Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral Standard: Electromagnetic disturbances - Requirements and tests
- IEC 60601-1-11:2010: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment.
- IEC 62366-1:2015: Medical devices - Part 1: Application of usability engineering to medical devices
- BS EN ISO 14971:2019: Medical devices. Application of risk management to medical devices
- BS EN ISO 12182:2012: Assistive products for persons with disability.
- BS EN ISO 10535:2006: Ceiling Lifts for the transfer of disabled persons. Requirements and test methods
- Medical Device Regulation 2017/745 - CE marking of Medical Devices
- UK Medical Device Regulation 2002: UKCA marking of medical devices.
- EN ISO 15223-1:2016 - Medical devices. Symbols to be used with medical device labels, labelling, and information to be supplied. General requirements
- EN 1041:2008+A1:2013 - Information supplied by the manufacturer of medical devices.
- BS ISO 20417 – Medical Devices – Information to be supplied by the manufacturer.
- Waste Electrical and Electronic Equipment Directive (WEEE) 2012/19/EU

6 Environmental Conditions

The sections below provide detailed information on the environmental conditions the product should maintain throughout its life cycle. Failure to adhere to these conditions may negatively impact on the product's functionality. If you are unsure of any environmental conditions, always seek advice.

6.1 Operating Environment

The ceiling track lift is designed for use in dry environments. The ceiling track lift is intended for use within internal areas only.

The ceiling track lift is intended to be used within a professional healthcare facility or home healthcare environment. The ceiling track lift is not suitable for any other environment.

The ceiling track lift is not intended for use in environments with rapid changes in temperature and humidity.

The ceiling track lift is unaffected by lint, dust, or light.

- Lint – Due to the nature of the ceiling lift being installed close to the ceiling, very little lint would be likely to gain access into the ceiling lift's workings. The ceiling lift is recommended as per the Service Guide to be wiped clean during every ceiling lift inspection.

- Dust – Due to the nature of the ceiling lift being installed close to the ceiling, very little dust would be likely to gain access into the ceiling lift's workings.

- Light – The user controls have been designed to be easily recognizable, and the use of bright colors will help the user through all ranges of lighting. The Specification of the ceiling lift dictates that normal use would occur during ambient luminance of 50 – 500 lux. Additionally, as the ceiling lift is designed for indoor use only, if required, the user may wish to switch on the room lighting. The LCD on the ceiling lift is backlit to aid with user interaction.

6.1.1 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 vapor pressure greater than 50hPa and atmospheric pressure between 700hPa to 1060hPa.

6.2 Storage Conditions

The ceiling track lift is intended for internal storage within normal environmental conditions. The ceiling track lift is intended to be stored in a dry room.
It is not intended to be stored in environments where there are rapid changes in the environmental temperature.
When storing the ceiling lift, ensure that the product is clean and dry. For further information, refer to the 'cleaning' section instructions.

6.2.1 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 non-condensing at a water vapor pressure up to 50hPa.

A minimum of 12 hours is required for the ceiling lift to cool from its maximum storage temperature to a temperature ready for its intended use when the ambient temperature is 20˚C (68˚F).
12 Hours are required for the ceiling lift to warm from the minimum storage temperature until ready for its intended use when the ambient temperature is 20˚C (68˚F).

7 Daily Checks

Inspection is to be completed before each use by the caregiver or individual responsible for operating the ceiling lift.

Should any of the components on the table below fail the inspection, DO NOT use the ceiling lift. Contact your local authorized dealer for service. Contact details are provided on the last page of this manual.

Ensure that all component inspections listed in the table below are completed before using the ceiling lift.

Check List Before Use:

Component	Service/Inspection required
Generic	Visual inspection of the external ceiling lift. Significant damage that may compromise the function of the ceiling lift, posing a clear safety hazard, is unacceptable.
	Check the labelling on the ceiling lift to ensure it is all still legible, including the serial number and other important markings. If labels are not legible, then contact your local authorized dealer immediately.
	Check all the nuts and bolts that are accessible and visible to see if they are loose (such as the carry bar hook). If they are not tight or if you have concerns, contact your local authorized dealer immediately.
Emergency Stop Button	Check the emergency stop button functionality.
Carry Bar	Inspect the sling looped attachments for any damage, sharp edges, and excessive wear.
	Check that the carry bar rotates and swings freely and that there is no build-up of wear.
	Ensure the spring clips on the carry bar are functional and present.
Lift Tape	Inspect the lift tape for any signs of damage, such as fraying, breaking, or tearing along its entire length. Be sure to also inspect the stitching on the tape for the same signs of damage.
	When transferring a client, ensure that the client's carry bar and lift tape are positioned directly below the lift. Lifting a patient with the lift tape at an angle can cause excessive wear to the lift tape, misalignment of the lift tape when it enters the lift and potentially leads to lift tape damage and mechanical failure of the unit.
QRS (Quick Release Hook)	Ensure that the locking device on the QRS is closed when the carry bar is attached.
	Inspect the QRS for damage such as cracking. And ensure that the locking device is functioning correctly.
LED's	Ensure that all LEDs are working correctly before use.
LCD Display Screen	Ensure that the LCD is functioning correctly and that the messages can be read clearly.
Wheels	Ensure the wheels are traversing smoothly on the track before traversing a patient along the system. Listen for any unusual noises.
Motor	When raising and lowering the ceiling lift, with or without a load, listen for any unusual noises from the motor. Lower the patient immediately if an unusual noise is present.
Handset	Ensure the handset is functional and that the connection to the ceiling lift is correct, and all buttons are working, before operating with a client.

7.1 Lift Tape Caution

The image (Figure 7.1-1) indicates a badly worn lift tape. The ceiling lift should not be used until the lift tape has been replaced. Please contact your local dealer to arrange a service.

It is essential to note that incorrect alignment of the lift tape with the ceiling lift can lead to tape fraying, resulting in delays in lift operation and additional expenses. For smooth and safe operation, please ensure the lift tape is vertically aligned with the lift when lowering or raising the carry bar.

Figure 7.1-1

8 Cleaning

To reduce the risk of cross-contamination, it is recommended to clean the ceiling track lift and accessories before using them with a different client.

Please follow the recommended cleaning guidelines below for cleaning and disinfecting the ceiling track lift.

8.1 Ceiling Lift Cover Cleaning

For cleaning, the covers can be cleaned using damp cloth, soap/water, and antibacterial spray. Do not use a steam cleaner, as this could damage the internals of the ceiling lift and compromise the label integrity. Do not use industrial bleaches, abrasive cleaners, or organic solvents.

All cleaning solutions must be thoroughly rinsed off the product at the end of the cleaning process, and the product must be dried using a dry cloth/towel. Always ensure the product is dry before use.

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

8.2 Lift Tape Cleaning

Lift tapes can be wiped down using a dry cloth to remove any mild dirt and dust. When a spill occurs, it is recommended that it be cleaned as quickly as possible to prevent staining. It is good practice to dab the spillage rather than rub it, as this can cause staining. For more persistent stains and dirt, hot water with antibacterial spray can also be used.

All cleaning solutions must be thoroughly rinsed off the product at the end of the cleaning process and dried using a dry cloth/towel. Always ensure the product is dry before use.

8.3 Disinfecting

Should the ceiling lift require a more thorough cleaning, the use of the Actichlor™ disinfectant product (which is widely available in tablet form and used throughout the healthcare industry) is recommended.

Follow the manufacturer's safety instructions for the use of this cleaning product before use to ensure safe use for the operator and the user.
Ensure the cloth is damp before the cleaning process.

The application is made by wiping the product down with a clean, damp cloth. Use the following dilutions to ensure effective cleaning:

- 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 an effective means to clean a "dirty" product. This is also ideal for use after an outbreak of Norovirus/winter vomiting, and can be used as a precaution against C. Diff. It is effective against viruses, bacteria, spores, yeasts, and molds.
- A minimum of 5 minutes contact time with the outer components is recommended to prevent virucidal infections whilst maintaining the integrity of the product. The product can withstand a longer contact period; however, a minimum of 5 minutes is required 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 manufacturer's product labelling.

Dilution chart					
Product used as	**Product condition**	**Concentration (ppm)**	**Dilution qty* (l)**	**Tablets per 1l (0.26gal)**	**Contact time (minutes)**
Bactericidal	Clean	200	5 (1.32 gal)	1	1
	Dirty	1000	1 (0.26 gal)	1	5
Yeasticidal	Clean	200	5 (1.32 gal)	1	1
	Dirty	1000	1 (0.26 gal)	1	5
Fungicidal	Clean	2000	1 (0.26 gal)	2	15
	Dirty	5000	1 (0.26 gal)	5	15
Mycobactericidal	Clean	1000	1 (0.26 gal)	1	15
	Dirty	5000	1 (0.26 gal)	5	15
Virucidal	Clean	500	2 (0.53 gal)	1	5
	Dirty	1000	1 (0.26 gal)	1	5
Sporicidal (C. Diff)	Clean	1000	1 (0.26 gal)	1	10
	-	-	-	-	-
Sporicidal	Clean	5000	1 (0.26 gal)	5	10
	-	-	-	-	-

- Dilution is made with water. DO NOT dilute within any other medium.
- When diluted in water, one tablet gives 1000ppm of available chlorine.
- The concentration of the solution depends upon whether the object being cleaned is noticeably dirty (indicated in the table by "Product condition".

Table 8.3-1

Handling and storage safety precautions when using this cleaning agent:		
Advice on Safe Handling	**Hygiene Measures**	**Conditions for Safe Storage**
Avoid contact with skin and eyes. Do not breathe dust, fumes, gas, mist, vapor, or spray. Use only with adequate ventilation. Wash your hands thoroughly after handling. Mixing this product with acid or ammonia releases chlorine gas.	Handle in accordance with good industrial hygiene and safety practice. Remove and wash any contaminated clothing before reusing it. Wash face, hands, and any exposed skin thoroughly after handling.	Keep out of reach of children. Keep the container tightly closed. Store in suitable labelled containers. Storage temperature: 0-25˚C (32-77˚F).
Individual Protective Measures	**Dissolve**	
Hand protection: Gloves	Dissolve in cold water – With no agitation, 1 tablet will take approximately 10 minutes to fully dissolve in the water used.	
The information above has been extracted from the Actichlor™ MSDS (Manufacturer's Safety Data Sheet). For a full review of the data, please follow the link below: http://www.nhsggc.org.uk/media/236215/msds-actichlor-plus.pdf		

Table 8.3-2

9 Servicing

Regular service on the ceiling track lift will help prevent breakdowns and reduce repair costs. It will also improve the quality of the product for the end users.

To reduce the risk of injury, no service is to be carried out on the ceiling lift while in use.
Service must be completed by an authorized service engineer only.
Do not attempt to service the product yourself; this will void your warranty.

To ensure the safety and continued good function of your ceiling track ceiling lift, it is recommended to have an approved service engineer perform a routine service every 6 months; this will ensure that the product meets the required standards. It is important to document the service history of the product in the service log located at the back of this user manual after each service.

When the product is serviced, the service checklist must be completed.
Service Manual Document Number: 995674.

For information regarding spare parts, refer to the spare parts manual.
Spare Parts Manual Document Number: 992674.

Contact your local authorized dealer if you:

- Need more information.
- If you have any questions about the use or service of your product.
- Notice any change in the performance.
- You want to report an unexpected occurrence.
- You want to arrange a service.
- Need to ascertain necessary information for replacement parts and components.

The expected product lifetime is **10 years**. This is dependent on usage and compliance with maintenance, servicing and LOLER inspections. Regular service on the product will increase the expected lifetime.

Serviceable parts within this period are batteries and the lift tape. Batteries should have an expected service life of 200 discharge cycles or 3 years, depending on the charging routine. The lift tape is expected to have a service life of 2 years if used correctly; however, a visual inspection should be conducted before use to ensure its integrity.

10 Troubleshooting

If a problem arises with the use of the ceiling lift, refer to the table below for guidance. Find the fault and complete the recommended solution. If the fault is not listed below or the solution does not correct the problem, contact your local authorized dealer immediately – contact details are provided on the last page of this manual.

Fault	Action
The handset has become disengaged from the ceiling lift, or the Handset buttons are not responding.	Refer to the section 'Applied Parts. ' If this does not correct the fault, then contact your local authorized dealer immediately so the ceiling lift can be checked to ensure proper continued operation.
The handset button command is continuously activated – UP, DOWN, E-LOWER.	Turn off the ceiling lift using the red pull cord. Contact your local authorized dealer immediately so that the ceiling lift can be checked to ensure proper continued operation.
No Power Part 1	If the emergency red cord has been used to either stop or lower the person, the ceiling lift will not operate again until it has been reset. Contact your local authorized dealer immediately so that the ceiling lift can be inspected and it is safe to reset.
No Power Part 2	Operate the hand control to determine if the ceiling lift wakes up. This can be determined from the green LED. If not present, the ceiling lift may be out of charge. Place the ceiling lift into the charging dock for a minimum of one hour to determine if this resolves the issue. If not, contact your local authorized dealer.
The ceiling lift LEDs indicate there is power, but the ceiling lift does not operate in the DOWN direction.	A built-in detector checks the slackness of the lift tape. This may be sensitive. Apply weight to the carry bar while pressing the DOWN button simultaneously. If this corrects the fault temporarily but not permanently, then contact your local authorized dealer so that the ceiling lift can be checked to ensure proper continued operation.
The red indicator light on the ceiling lift turns RED and/or a loud alarm sound is heard when an individual is raised.	The batteries are low and require charging. Refer to the section 'Charging the Ceiling Lift' and charging for at least one hour before trying to raise/lower the carry bar. If this does not correct the fault, then contact your local authorized dealer immediately so that the ceiling lift can be checked to ensure proper continued operation.
The ceiling lift does not pass through a track component such as a turntable or gate.	Refer to the user manual of the specific piece of equipment in question. If the recommended solution does not correct the fault, contact your local authorized dealer immediately so that the track component and ceiling lift can be inspected to ensure proper continued operation.
Intermittent Display Screen – Self-Recovering	If the display screen goes blank but recovers on its own, there is likely an electromagnetic disturbance in the vicinity. If the ceiling lift remains operational, continue to use it and investigate the source of the disturbance.
The Display Screen goes blank, but the LED functions	This may be caused by an electromagnetic disturbance. If the ceiling lift remains operational, continue to use it and investigate the source of the disturbance.
Intermittent Motor Performance	This may be caused by an electromagnetic disturbance. If the ceiling lift remains operational, continue to use it and investigate the source of the disturbance. When the motor performance is compromised, contact your local service provider.

Table 10.1-1

11 Disposal

To improve the environment and reduce waste, where possible, our products have been manufactured using recyclable materials. Below are our guidelines on recyclable materials and being environmentally friendly.

The ceiling lift should be disposed of by an approved service engineer at the end of its life cycle. For guidelines on correct decommissioning procedures, refer to the Commissioning Guide (996674).

Please observe the local laws on recycling and respect the current laws for disposal within the community where the product is being used. If there is any uncertainty regarding the guidelines below, contact your local authorities to determine the proper method of disposal of potentially biohazardous parts and accessories.

Fully recyclable:	Considerations when Recycling:
Chassis	Batteries
Plastic Covers	Wiring looms – electronics.
Metallic Internals – Hub, etc.	PCB
Initial packaging of the device (cardboard)	Hand Control
Metallic fixing – Screws, etc.	Motors
Plastic Moldings	Lift Tape
Carry Bar	Charger

Table 11-1

The product may be contaminated and must be disinfected before recycling or disposal. See the section on 'Cleaning' for further details.

12 Warranty

It is impossible to eliminate all risks associated with using this product. However, to reduce risk and ensure safe and proper use, the user should always read and understand the user manual before use. Product failure may occur due to a lack of maintenance and care, misuse, unauthorized and improper servicing or alterations, improper storage, environmental use, or through everyday use, wear, and tear. These factors are all beyond the manufacturer's control. These risks are taken on by the users.

The ceiling lift comes with a 1-year warranty covering all manufacturer defects. Refer to your terms and conditions for more detailed information. The warranty is valid if the product has maintained its intended use and the user manual instructions have been followed. The warranty will not extend to the use of the product contrary to the user manual. This guarantee does not affect or in any way limit your statutory rights.

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1. The liability of the manufacturer under the terms of this guarantee shall be limited to the replacement of the defective part(s) to the sales distributor, dealer, agent, person, or entity which purchased the equipment from the manufacturer. In no event shall the manufacturer incur liability for any consequential or unforeseeable losses.

2. This equipment guarantee shall be void if the equipment is not serviced by an authorized service engineer in accordance with the manufacturer's recommendations or if any unauthorized person carries out work on the equipment.

3. This guarantee does not apply to failure attributable to normal wear and tear, damage by natural forces, user neglect or misuse or deliberate destruction.

4. Do not attempt to service the product yourself, or the warranty is void.

13 Service Record History

Complete this section after each service, repair inspection and/or maintenance.

Date:	Time:
Service Type: Service Inspection ☐ Repair ☐ Other ☐	
Completed By: .... (Printed name) .... (Signature) Company:	
Remarks & Actions Taken:	
Product Left in A Safe & Usable Condition: Yes ☐ No ☐ (if no explanation in actions above)	
Date:	Time:
Service Type: Service Inspection ☐ Repair ☐ Other ☐	
Completed By: .... (Printed name) .... (Signature) Company:	
Remarks & Actions Taken:	
Product Left in A Safe & Usable Condition: Yes ☐ No ☐ (if no explanation in actions above)	
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Product Left in A Safe & Usable Condition: Yes ☐ No ☐ (if no explanation in actions above)	

Dealer/service contact details:

Contact details:

Mackworth USA
54 West Industrial Drive
O'Fallon, MO 63366 USA
314-889-1000
www.mackworthusa.com

Disclaimer

While every effort has been made to ensure the accuracy of the information contained in this 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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O'Fallon, MO 63366 USA