

mackworth

TX Ceiling Track Hoist



Commissioning Manual

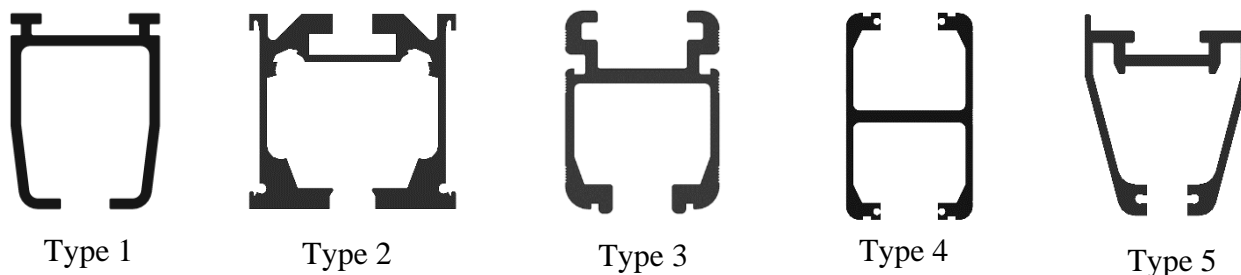
Contents

1.0	Introduction	3
2.0	Safety Precautions	4
2.1	Required Tools and Equipment for Hoist Commissioning and Decommissioning.....	5
3.0	Hoist Unboxing.....	6
4.0	Hoist Installation	7
4.1	Ceiling Track Access.....	7
4.2	Installing the Charger	8
4.2.1	Installing Charging Dock Type 1 (Track Type 1)	8
4.2.2	Installing Charging Dock Type 2 (Track Type 2)	9
4.2.3	Installing Charging Dock Type 3 (Track Type 3, 4 and 5)	10
4.3	Installing the Hoist.....	11
5.0	Component Attachment	12
5.1	Attaching the Handset	12
5.2	Attaching the Carry Bar	13
6.0	Hoist Start Up and Function Checks	14
6.1	Turning the Hoist ON and OFF	14
6.2	Operating Controls	14
6.3	Manually Traversing the Hoist along the Track	15
6.4	Charging the Hoist.....	15
7.0	Accessories.....	15
8.0	Decommissioning.....	16
8.1	Hoist Removal	16
8.2	Hoist Dismantling	16
8.3	Hoist Disposal	16

1.0 Introduction

Welcome to the Mackworth TX Ceiling Track Hoist Commissioning and Decommissioning Manual, this manual includes the TX440 and TX600 variants. Here it will explain on how to successfully install the Hoist into a pre-existing Ceiling Track safely and securely, as well as how to remove the Hoist from the Track. Use the contents page for easier navigation around the manual to discover the required section. The aim of the manual is that to help and assist you, so that you can provide a successful installation and removal of the hoist for the satisfaction and safety of the customer.

The Mackworth TX is available in different configurations dependent on track profile. The track profiles are shown below:



When Commissioning the Mackworth TX Hoist, one of the above track profiles should match the track the hoist is about to be installed into.

To ensure the hoist available is compatible with the pre-installed track, refer to the table below.

This following guide covers the following TX Models:

Hoist Type	Track Type
TX440 – 122515	Type 1
TX440 – 122516	Type 2
TX440 – 122517	Type 3
TX440 – 122518	Type 4
TX440 – 122519	Type 5
TX600 – 122520	Type 1
TX600 – 122521	Type 2
TX600 – 122522	Type 3
TX600 – 122523	Type 4
TX600 – 122524	Type 5

Table 1

2.0 Safety Precautions

Read and understand this manual in its entirety before installing the Ceiling Track Hoist.

The information in this manual is important for the safety of anyone near the TX Hoist and must be read and understood to help prevent injuries.

The TX 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 fireplace), 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.

Any commissioning or decommissioning of the Hoist that has not been carried out by an authorised Mackworth personnel will void the product warranty.

- Mackworth authorised personnel must be the only Engineers who Commission and Decommission the TX Hoist.
- The Hoist must be turned OFF during installation and removal for the safety of the Engineer and Customer.
- Always ensure suitable clearance when installing and removing a Hoist into/from a Ceiling Track.
- Ensure that all the below procedures are followed correctly as instructed in this manual.
- All listed tools and equipment stated in this manual must be used to safely commission and decommission the Hoist.
- The TX Hoist has been specifically designed to be installed in both the professional and home health care environments only and should not be installed elsewhere.



Unauthorised modifications on any Mackworth product may affect its safety. The manufacturer will not be held responsible for any accident, incident or deficiencies of performance that occur as a result of any unauthorised modification to its products.

2.1 Required Tools and Equipment for Hoist Commissioning and Decommissioning

When carrying out work on the Ceiling Track Hoist you will require the following:

Tools Required

2mm T Bar Allen wrench
2.5mm T Bar Allen wrench
3mm T Bar Allen wrench
4mm T Bar Allen wrench
5mm T Bar Allen wrench
5.5mm combination spanner
8mm combination spanner
13mm combination spanner x2
No. 2 Pozi drive screwdriver
Small slotted screwdriver
External Circlip pliers 3-10mm
Long nose pliers
Side snips
Power Drill
Drill Piece set up to 8.5mm

Equipment Required

Step Ladder
Marker Pen
Cloth
Lint Free Cloth
The correct documentation
Service Stand

3.0 Hoist Unboxing

This section will summarize the layout of the Hoist Packaging and what is included in the Box. It is recommended a small pocketknife is used for smoother unpacking of the Hoist. The Hoist is packed into a single box (280x670x365), weighing approximately 11 kg (24 lb). Below is a list of components that are included in the box.

Item	Description	Product Code
1	TX Hoist	See Table 1:
2	Carry Bar	300024
3	Handset	122073
4	Hoist Charger	122100, 122326, 122327
5	Allen Key – 4mm	122093
6	User Manual	999553

Table 2

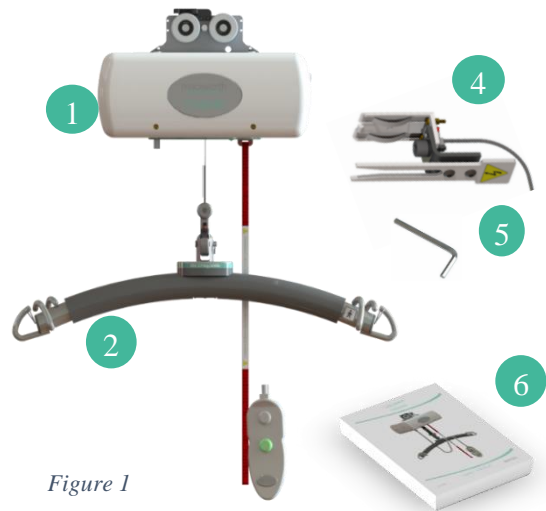


Figure 1

Using a knife to open the box down the middle, the box should open to a similar view to the image on the right. It will include all the above components.

Below is an image of all the included components for easier reference.

Remove the components from the box, taking the parts out in the following order:



Figure 2

1. Carry bar
2. Packaging foam
3. Handset
4. Hoist battery charger
5. Trolley
6. User Manual
7. TX Hoist

Once removed from the box, remove each individual component from their plastic bag ready for Track Installation.



Figure 3

4.0 Hoist Installation

This section will cover the following guidelines on how to remove the safety components from the pre-installed track, how to install the charger into the track and how to install the Hoist into the track.

This section will cover all variant types of the TX hoist range.

4.1 Ceiling Track Access

Prior to installing the Trolley into the pre-installed track, the track entrance must first be opened. A pre-installed track should include an end stop, safety bolt and an end cap. If these parts are not installed, it is essential that they are once the Trolley is installed.

Follow the guidance below to remove the ceiling track components. It is recommended that a step ladder is used to perform the task safer and easier.

1. Remove the end cap from the end of the track. (Figure 4)
2. Using two 13mm spanners, loosen the safety bolt and remove the securing nut from the end. (Figure 5)
3. Remove the safety bolt from the track and remove the large rubber bumper held within the track. (Figure 6)
4. Using a 5mm Allen Key, release the two screws securing the end stop and slide the end stop out of the track. (Figure 7)

To refit the end stop, safety bolt and end cap, follow the steps above in reverse order noting the following points:

- Ensure the end stop bumper is facing into the ceiling track.
- Ensure all fasteners are secure and cannot come undone without the use of tools.
- When fitting a charging dock, an end stop is not required at that end of the track.

(The images in this section all refer to a Track Type 1 installation, but the same process applies for all the remaining track types)



Figure 4



Figure 5



Figure 6



Figure 7

4.2 Installing the Charger

The section below will cover the Installation of the Hoist chargers into their specified Tracks. The list below specifies which chargers are compatible with which track types.

- Standard Charging Dock (122100) is designed for the Standard Prism Track (Track Type 1).
- Charging Dock Type 2 (122327) is designed for Track Type 2.
- Charging Dock Type 3 (122326) is designed for Track Type 3, 4 and 5.

Use the Track Profile diagrams and the in the introduction to ensure that the Hoist and Charger provided is correct and compatible with the Pre-Installed Track. Do not use a variant Hoist and Charger with an incorrect track as they are incompatible.

4.2.1 Installing Charging Dock Type 1 (Track Type 1)

To install the TX Charger, follow the guidance below:

1. Complete all relevant steps in 4.1 to gain access to the Ceiling Track.
2. A step ladder is recommended for easier and safer installation.
3. Align the Charger as shown in Figure 8, the Charger must be inserted into the track backward (as shown) and must slid all the way to the other end of the Track. This ensures that the Charger is facing inward and allow the Hoist to dock.
4. Position the Charger in front of the Safety Bolt bumper to achieve maximum track length. (Figure 9)
5. Fix the Charger in place using a 5mm Allen Key to tighten the two bolts. Ensure the Charger is positioned straight in the track. (Figure 10)
6. Route the Charger wire in a tidy fashion to the closest power supply.
7. The Charger block locates into its bracket as shown in figure 11. Raw Plugs and Screws are provided to fix the unit to the wall if desired.
8. Choose a suitable location on the buildings wall where the charging unit can be fitted. The wall must be of good structure to fit the three screw fixing points.
9. Drill three 7mm holes into the wall that will allow the three given brown raw plugs to be fitted, measure the gap between the three drilled holes to match the profile of the of the charging unit bracket.
10. Place the raw plugs into the drilled holes.
11. Align the charging bracket fixing point with the holes and use a pozi head screwdriver to fix the two screws and secure the bracket to the wall. (Figure 12)
12. Fit the Charging Unit into the Bracket.
13. Plug the Charger into the nearest wall socket and turn on the power supply.
14. The Charging Dock is ready for use.
15. If a Hoist is not being installed directly after charger installation. Refer back to section 4.1 to refit the removed track components to close access to the Ceiling Track.



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12

4.2.2 Installing Charging Dock Type 2 (Track Type 2)

Although the charger looks different to the Type 1 Charging Dock, the installation process is the same. See below for details on installing the variant along with the variant charger images.

To install the TX Charger, follow the guidance below:

1. Complete all relevant steps in 4.1 to gain access to the Ceiling Track.
2. A step ladder is recommended for easier and safer installation.
3. Align the Charger as shown in Figure 13, the Charger must be inserted into the track backward (as shown) and must slid all the way to the other end of the Track. This ensures that the Charger is facing inward and allow the Hoist to dock.
4. Position the Charger in front of the Safety Bolt bumper to achieve maximum track length. (Figure 14)
5. Fix the Charger in place using a 5mm Allen Key to tighten the two bolts. Ensure the Charger is positioned straight in the track. (Figure 15)
6. Route the Charger wire in a tidy fashion to the closest power supply.
7. The Charger block locates into its bracket as shown in figure 16. Raw Plugs and Screws are provided to fix the unit to the wall if desired.
8. Choose a suitable location on the buildings wall where the charging unit can be fitted. The wall must be of good structure to fit the three screw fixing points.
9. Drill three 7mm holes into the wall that will allow the three given brown raw plugs to be fitted, measure the gap between the three drilled holes to match the profile of the of the charging unit bracket.
10. Place the raw plugs into the drilled holes.
11. Align the charging bracket fixing point with the holes and use a pozi head screwdriver to fix the two screws and secure the bracket to the wall. (Figure 17)
12. Fit the Charging Unit into the Bracket
13. Plug the Charger into the nearest wall socket and turn on the power supply
14. The Charging Dock is ready for use.
15. If a Hoist is not being installed directly after charger installation. Refer back to section 4.1 to refit the removed track components to close access to the Ceiling Track.

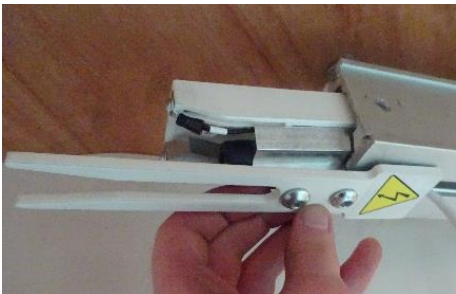


Figure 13



Figure 14



Figure 15



Figure 16



Figure 17

4.2.3 Installing Charging Dock Type 3 (Track Type 3, 4 and 5)

Although the charger looks different to the Type 1 Charging Dock, the installation process is the same. See below for details on installing the variant along with the variant charger images.

To install the TX Charger, follow the guidance below:

1. Complete all relevant steps in 4.1 to gain access to the Ceiling Track.
2. A step ladder is recommended for easier and safer installation.
3. Align the Charger as shown in Figure 18, the Charger must be inserted into the track backward (as shown) and must slid all the way to the other end of the Track. This ensures that the Charger is facing inward and allow the Hoist to dock.
4. Position the Charger in front of the Safety Bolt bumper to achieve maximum track length. (Figure 19)
5. Fix the Charger in place using a 5mm Allen Key to tighten the two bolts. Ensure the Charger is positioned straight in the track. (Figure 20)
6. Route the Charger wire in a tidy fashion to the closest power supply.
7. The Charger block locates into its bracket as shown in figure 21. Raw Plugs and Screws are provided to fix the unit to the wall if desired.
8. Choose a suitable location on the buildings wall where the charging unit can be fitted. The wall must be of good structure to fit the three screw fixing points.
9. Drill three 7mm holes into the wall that will allow the three given brown raw plugs to be fitted, measure the gap between the three drilled holes to match the profile of the of the charging unit bracket.
10. Place the raw plugs into the drilled holes.
11. Align the charging bracket fixing point with the holes and use a pozi head screwdriver to fix the two screws and secure the bracket to the wall. (Figure 22)
12. Fit the Charging Unit into the Bracket
13. Plug the Charger into the nearest wall socket and turn on the power supply
14. The Charging Dock is ready for use.
15. If a Hoist is not being installed directly after charger installation. Refer back to section 4.1 to refit the removed track components to close access to the Ceiling Track.

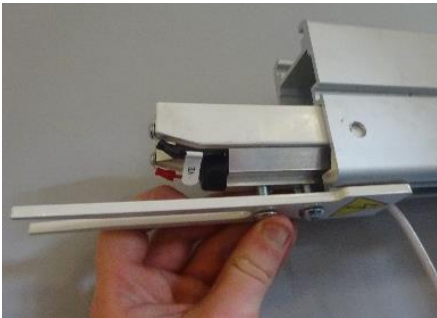


Figure 18



Figure 19



Figure 20



Figure 21



Figure 22

4.3 Installing the Hoist

The section below will cover the Installation of the Hoists into their specified Tracks. Refer to the Table in the introduction to determine if the Hoist available is compatible with the pre-installed track. Do not use a variant Hoist and track together as they are incompatible.

To install the TX Hoist, follow the guidance below:

1. Complete all the relevant steps in section 4.1.
2. Complete all the relevant steps in section 4.2.
3. A step ladder is recommended for easier and safer installation.
4. Using both hands to support the Hoist, align the Hoist horizontally with the Ceiling Track entrance. (Figure 23)
5. Ensure the charging port is **leading** into the track. The charging port is circled in (Figure 24)
6. Carefully place the Hoist wheel assembly into the track without damaging the hoist components. (Figure 25)
7. Using the wheels, slide the Hoist away from the end of the ceiling track for safety. (Figure 26 and 27)
8. Reverse the Steps in section 4.1 to secure the ceiling track entrance. Fitting the end stop, safety bolt and end cap correctly.
9. Hoist Installation Complete.

To remove the Hoist, follow the steps above in reverse.

(The images in this section all refer to a Track Type 1 installation, but the same process applies for all the remaining track types)



Figure 23



Figure 24



Figure 25



Figure 26

5.0 Component Attachment

The section below will cover the attachment of the Carry Bar and Handset to the Hoist, as well as other essential requirements to fully commission the Hoist for use. The below procedure is relevant for all TX Hoists.



A sturdy ladder or steps may be required in order to access the underside of the Hoist to attach the handset.

5.1 Attaching the Handset

In this section the correct procedure on attaching the Handset will be determined.

The Pneumatic Handset is attached to the Hoist through the Airline Grommet on the underside of the Hoist as shown in Figure 27. While holding the Airline Connector at the end of the Handset Air Tubes, locate the two small metal ribbed pins with the Airline Grommet on the Hoist. To correctly locate, ensure the profile of the two parts are lining up, this means the grey rib profile, which faces inwards on the Hoist aligns with the grey rib on the Handset, this is the only way the Handset can be connected, therefore it is not possible to incorrectly mate the two parts.

Once the two parts have been aligned, ensure that the Handset is pushed into the Grommet properly, with both metal pins being fully inserted into the Grommet. This is important to ensure there is no air leak which will affect the Hoist functionality.



Figure 27



Figure 28



Figure 29

To remove the handset, follow the procedure above in reverse.

5.2 Attaching the Carry Bar

Follow the procedure below to attach the Carry Bar to the Quick Release Hook located at the end of the Lift Tape.

1. Open the hooks locking mechanism by pressing the red tab downward as shown. (Figure 30 and 31)
2. Position the carry bar horizontally as shown in figure 32 and place the attachment point into the open hook.
3. Pivot the carry bar down to its natural position and release the hooks locking mechanism to secure the carry bar. (Figure 33)
4. 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, the locking mechanism will close itself.

To remove the Carry Bar, follow the steps above in reverse.



Figure 30



Figure 31



Figure 32

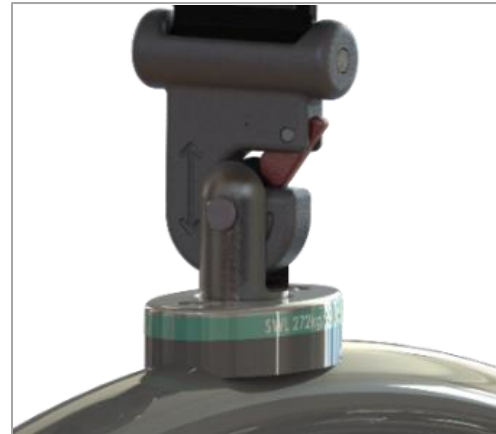


Figure 33

6.0 Hoist Start Up and Function Checks

The section below will show how to start up the Hoist for the use of the customer as well as completing some basic functional checks to ensure the Hoist is in working order. The images below refer to the TX600, but the same procedure applies to all models.

6.1 Turning the Hoist ON and OFF

To start up the Hoist the Emergency Lower Tab must be located in the ON position, as the Hoist is delivered to the customer in the OFF position. To give power to the Hoist, the tab must be pressed upward vertically as shown in the image below. (Figure 34)

Press any button on the Handset once – This should start up the Hoist. The LCD Display should light up Green showing the Home Screen Display “Battery 100%”. (Figure 35). The LED should also light up green.



Figure 34

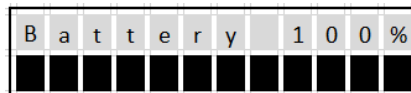


Figure 35

6.2 Operating Controls

By pressing the UP or the DOWN arrow button on the handset, the carry bar can be raised or lowered to the correct height for attaching the sling or positioning an individual. The UP/DOWN functions of the handset buttons are in relation to the travel of the hoist. That is, the grey button at the top end of the handset activates the UP motion of the carry bar and the Green button activates the DOWN motion (Figure 36).

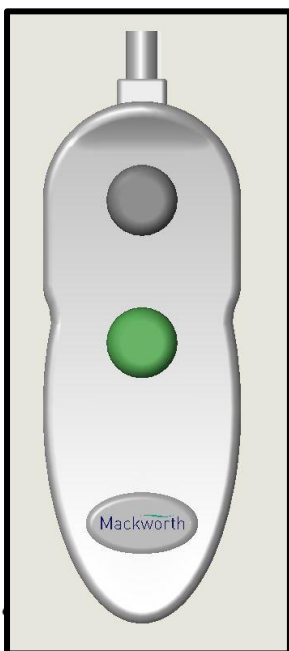


Figure 36

Shown in the image opposite are the 2 functions of the hand controller for the Hoist.

UP Function

DOWN Function

It is recommended that the operator hold the carry bar with one hand while raising/lowering is being done. This will stop the bar accidentally swaying and/or coming into contact with an individual or close object.

For the same reasons, raise the carry bar above head height when not in use and when traversing the unloaded hoist.

6.3 Manually Traversing the Hoist along the Track



Always use extreme care when moving the hoist along the track. Watch out for and avoid any obstructions that may cause injury to the individual in the sling, damage to the hoist and/or to the obstruction.

After use, the hoist should be located at the correct end of the track system for re-charging.

When needed, the hoist should be moved along the track to a position directly above the person using the following appropriate method:

The operator shall lower the carry bar to a comfortable height so that it can easily be held by hand.

Gently pushing the carry bar, move the hoist along the track to the required position, where the person can be safely loaded into the sling.



NEVER pull the hoist along the track using the handset or Emergency Lowering Cord as this could have a detrimental effect on the performance of the hoist.

6.4 Charging the Hoist

The TX Hoist is charged by the charging dock installed in the track. A charging dock should have been fitted during the installation of the Hoist.

To Traverse the TX simply traverse the Hoist along the track to the charging dock at the far end of the track. Once the Hoist has made contact, it should begin charging immediately. The LED will begin to flash orange when charging, or if fully charged, will show a steady green. The LCD screen will display 'charging' or 'charged'.

At the end of each use of the Hoist, it is recommended that it be returned to the charging dock for placement and charging. This will ensure that the batteries are charged on a regular basis for peak performance and maximum life expectancy.



Figure 37

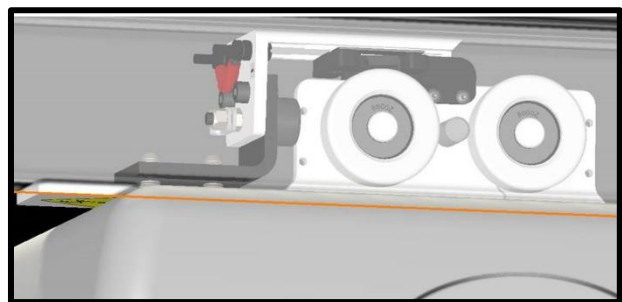


Figure 38

7.0 Accessories

The Remaining parts in the box include the User Manual and the Allen key which is used for Manual Emergency Lowering of the Hoist. These should be given to the customer for safe keeping. The Box should also be kept with the User and stored in a safe place. The Box will be required for decommissioning and transportation.

8.0 Decommissioning

The following section will instruct on how to correctly decommission the TX Hoist at the end of use. This section is relevant to all TX variants.



The product may be contaminated and has to be disinfected before decommissioning. See section 'Cleaning' in the User Manual for details of how to do this.

8.1 Hoist Removal

The removal of the Hoist is essentially the Commissioning Steps in reversal. A summary of the correct order on how to remove the TX and its components has been listed below. For in detailed information on each of the below steps, see the relevant section within Commissioning for assistance.

1. Turn OFF the Hoist by pulling down the E-Lower Cord to its middle switch.
2. Detach the Carry Bar from the Hoist.
3. Detach the Handset from the Hoist
4. At the end of the Track, remove the End Cap, Safety Bolt and End Stop.
5. Carefully slide the Hoist out of the Track.
6. Turn OFF the Charger at the Wall Socket and remove the plug.
7. Remove the charging unit from the wall using a pozi head screwdriver.
8. Detach and carefully slide the Charger out of the Track.
9. Ensure the End Stop, Safety Bolt and End Cap are refitted to the Track once all the above steps are complete.
10. Hoist Removal is complete.

8.2 Hoist Dismantling

All serviceable components of the Hoist should be dismantled prior to the disposal of the Hoist. For guidance on how to dismantle all of the Hoist components, refer to the TX Service Manual and follow each sub-section within Section 9.0 - Servicing – Removal and Replacement.

8.3 Hoist Disposal



When the Hoist has completed its life cycle and can no longer perform to its intended use safely the Hoist must be decommissioned by an approved Service Engineer. The following specifies the importance of correct disposal procedure including local laws and being environmentally friendly.

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

The relevant components utilised in the manufacture of the device that can be recycled at the end of the device life are:

Fully recyclables:	Consideration 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 Mouldings – Wheels etc.	Lift Tape
Carry Bar	Charger

Ensure that this list is used as guidance and that the local laws in the given community overrule the suggested component disposal in the table above.

Dealer/service contact details:

Manufacturer contact details:

Prism Medical UK

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

Telephone Number: 01924 840100

Disclaimer

While every effort has been made to ensure the accuracy of information contained in this installation 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.



mackworth

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