

# Trexo Home

## User Manual



QMS-USR-753.005 Rev 1 - Trexo Home Manual

*tréxō*

# **Welcome to the Trexo Home family!**

## **About the Trexo Home**

The Trexo Home is a robotic gait training device that is attached to a Rifton DynamicPacer Gait Trainer. It utilizes principles of powered lower limb robotics to enhance gait training and locomotion training. Motors power the device joints at the hip and knee while motion is controlled through a tablet interface operated by a Trexo trained individual.

Trexo Home is intended for use by Trexo trained individuals only.

Trexo Robotics does not claim/guarantee clinical benefits. Results may vary. For more information about the Trexo Home, visit us at [www.trexorobotics.com](http://www.trexorobotics.com).

## **Audience**

This manual is intended to be read and used as a reference by care providers and/or individuals who have received training in the correct use of the Trexo Home. The trained individual is responsible for the correct operation of the Trexo device.

## **Community**

Connect with other Trexo families online by joining our Facebook Group!

Please visit [www.facebook.com/groups/trexohomeclub](http://www.facebook.com/groups/trexohomeclub)



## **Legal Information**

The Trexo Home is a Class II medical device.

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## **IMPORTANT SAFETY INSTRUCTIONS**

All operators of the Trexo Home must understand that potentially severe injury may occur from misuse. Trexo Robotics Inc. is not responsible for any injury, loss, or damage that occurs in connection with your use of the device.

Read this entire user manual carefully before you use the device and keep the manual for future reference. Additional copies are available upon request.

## **TREXO TERMINOLOGY**

**The Trexo Device** - Your Trexo robot

**Trexo User** - The individual using the Trexo device

**Trexo Trained Supervisor** - Individuals certified and trained by the Trexo Robotics Customer Success team to operate the Trexo device for Trexo Users

## **WARNING**

To reduce the risk of fire, electric shock, or injury to persons:

- Treat the Trexo Device with care. Do not drop it or expose it to any heavy shocks.
- Do not operate the device if the power supply battery, power and control cables, or the device itself have been damaged in any way, there is liquid spilling out, or objects have fallen into the device.
- In the case that the device has been dropped or damaged, start the device and run it without the Trexo User. Do not use the device if it does not operate normally and inform the Trexo Robotics Customer Success team using the Trexo Chat App.

## WARNING

To reduce the risk of fire, electric shock, or injury to persons (continued) :

- Do not use the Trexo Device in wet surroundings (e.g. in the rain, near a swimming pool, by the lake) and do not expose the device to rain or liquid spills as battery exposure to water can be dangerous.
- In the event the Trexo User is caught in the rain, the Trexo Trained Supervisor must turn off the device immediately, and seek shelter. Once in shelter, do not turn on the device or charge the device. Inform the Trexo Robotics team that the Trexo Device has sustained water damage.
- Do not immerse the Trexo components, including the robotic leg attachments, battery and cables in water or rinse under the tap. Refer to cleaning instructions (page 25) on how to care for your device properly.
- Only use the original battery and chargers provided. Contact Trexo Robotics if either component is damaged.
- Check that the voltage indicated on the charger corresponds to your power outlet voltage before you charge your Trexo.
- Do not use or run the Trexo Device while the charger is plugged into the device.
- Make sure the cables remain unobstructed during the use of the device. Protect all cables from being pinched, particularly the plugs at the outlet and cables where they exit the joints.
- Do not use the device if there is visible damage, broken components, or missing parts.
- Do not store the device outdoors
- If experiencing any interference or difficulty operating another device in the vicinity of a Trexo device, move away and/or turn off the Trexo device.

## **CAUTION**

To ensure the Trexo device is used correctly and safely:

- The Trexo Device must be used under the supervision of a Trexo Trained Supervisor.
- The Trexo User must be using the Rifton Chest prompt anytime they are using the device.
- Trexo Users must be within 3 meters of a Trexo Trained Supervisor at all times. The Trexo User must never be left unattended in the Trexo Device. Trexo Users left unattended and unsupervised in the Trexo Device may be liable to injury.
- All new operators must be trained by a member of the Trexo Robotics Customer Success team. The Trexo Device must never be operated by individuals who have not been certified by the Trexo Robotics Customer Success team to operate the device.
- The Trexo Device is not capable of turning by itself and requires assistance from the Trexo Trained Supervisor.
- Use the device on stable, even, and non-slippery surfaces without any obstacles in the way. Do not use the device on grassy surfaces, carpeted surfaces, muddy surfaces, rocky surfaces, hilly surfaces and/or other similar terrains.
- All four Rifton wheels must be firmly planted on solid ground at all times. The locks on the wheels must be unlocked with the wheels in a non-ratcheting position.
- Do not use the Trexo Device in areas which could lead to injury or harm, including near stairwells and inclined or elevated surfaces.
- Do not attach the Trexo Robotic legs to other pacers, gait-trainers, or walkers. The Trexo Device is only meant to be used with the provided Rifton Dynamic Pacer Gait Trainer.

## **CAUTION**

To ensure the Trexo device is used correctly and safely (continued):

- All Trexo Users must be consulted by a Physical Therapist or Physician prior to their Trexo Use.
- In the event the Trexo User is in any significant pain, discomfort, or is displaying a high degree of spasticity, the Trexo Trained Supervisor must stop the device immediately and discontinue use.
- The Trexo Device is not meant to be used for extensive periods of time. The Trexo Device must only be used to a maximum of 2 time daily for 1 hour per session.

The Trexo Device can be used with an Trexo Certified Treadmill

- (Optional)

The Trexo Device must never be used in conjunction with any treadmills or similar equipment other than the Trexo Certified Treadmill created by the Trexo Robotics team. Using a non-Trexo

- Certified Treadmill may result in serious injury.

Trexo Trained Supervisors must be familiar with the Trexo User's displays of pain, discomfort, fatigue, and any signs of distress, so when they display it, the Trexo Trained supervisor must stop the device.

- The Trexo Trained Supervisor must discontinue use if the Trexo User experiences any allergic reaction, skin irritation, abrasions, or burns at any points of contact with the Trexo Device.

The Trexo Trained Supervisor is responsible for ensuring the Trexo User is using the Trexo Device in a safe environment at all times.

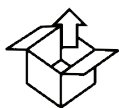
- Trexo Users with any open abrasions, or wounds should not use the Trexo Device to minimise the chance of further infection or injury and/or cross-infection with another Trexo User.
- To prevent infection, the Trexo Device must be cleaned using alcohol based wipes prior to each session.

## **CAUTION**

To ensure the Trexo device is used correctly and safely (continued):

- The Trexo User must wear long trousers that cover the User's knees when using the Trexo Device to avoid friction burns and minimize the effects of hot surfaces.
- The Trexo User must wear shoes and/or AFOs to prevent injury or harm to the User's feet.
- Do not operate the Trexo Device will perform when operating between 5° C - 35° C (41° F - 95° F).
- The Trexo Device has an emergency stop for use in the event of a dangerous situation. The Trexo Trained Supervisor must be within reach to stop it at all times.
- The Trexo User must be removed and strapped into the Trexo Device correctly based on the training provided by the Trexo Robotics Customer Success team.
- The Trexo Device is tailored, fitted and designed for the Trexo User who has been approved by the Trexo Robotics Customer Success team. The Trexo Device must never be used by other individuals.
- The Trexo Device gait settings are specifically set for the Trexo User who has been approved by the Trexo Robotics Customer Success team. The gait settings must never be adjusted by the Trexo Trained Supervisor without prior approval by the Trexo Robotics Customer Success team. Do not rewrite the contracture blocks without consulting the Trexo team.
- The Trexo User must be reassessed by their Primary Care Physician and Physical Therapist on an annual basis to ensure that the Trexo Device is appropriate for usage.
- Be cautious around the moving parts of the Trexo Device and do not obstruct it.





## Unpacking and setting up your Trexo Home



online

Please visit  
[www.trexorobotics.com/welcome](http://www.trexorobotics.com/welcome)  
for assembly instructions

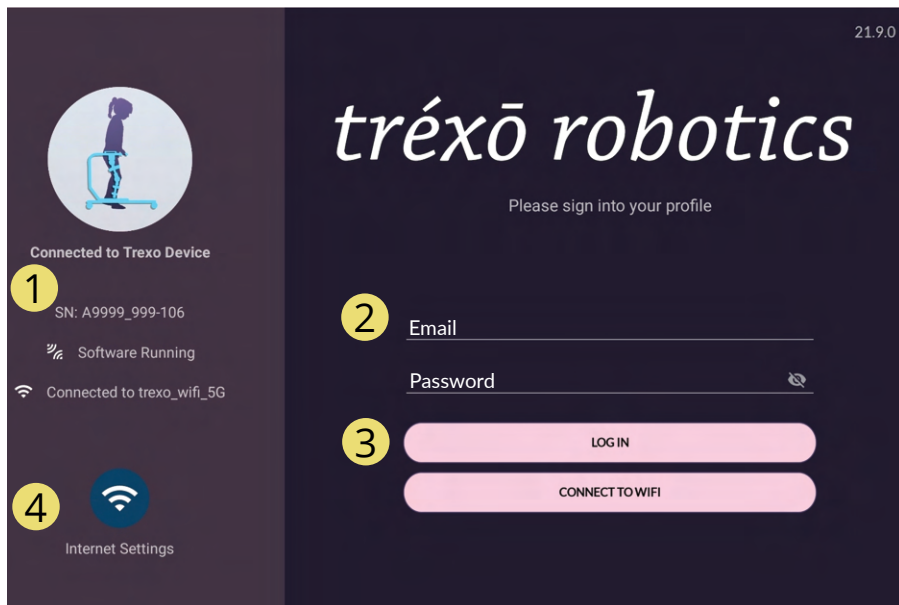


You will not be able to log-in to the Trexo app until the Trexo has been assembled and turned on.



## Trexo Interface

### Start the Trexo app



1. Trexo device and tablet connection status.
2. Your log-in credentials.
3. Button to log-in
4. Button to go to Trexo device wi-fi connection set-up.



## Trexo Interface

### User profile & activity information

< Logout
*tréxō robotics*
2.2.0

2

1

First Name: Home  
 Last Name: Patient  
 Last Session: Never  
 Joined in: July 26, 2019

---

3

edit profile

4

activity

5

new session

---

6

0

steps taken

1. User information.
2. User picture.
3. Edit user information.
4. See previous activity and session information history.
5. Start a new session.
6. Activity summary since start of usage.



## Trexo Interface User session

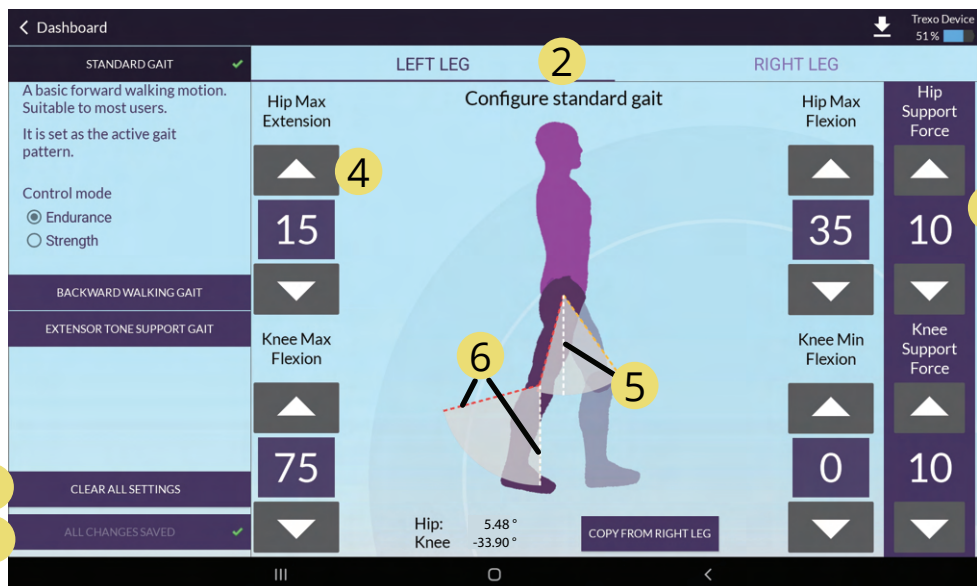


1. Take user profile picture.
2. Open user Info containing measurements.
3. Set Trexo legs to standing position.
4. Set and adjust gait and support force.
5. Settings and troubleshooting.
6. Current status of device.
7. Real time of session.
8. Real time speed of gait.
9. Initiation of the user on each leg.
10. Start and stop the Trexo.
11. Speed adjustment controls.



## Trexo Interface

### Setting and modifying gait



1. Save all changes.
2. Selected leg.
3. Reset the range of motion and gait pattern.
4. Modify joint angles with up and down arrows.
5. Angles of joints in current position (white line).
6. Programmed range of motion (red and yellow lines).
7. Modify support force for a joint.



## Quick Guide Trexo joint LEDs



### **Rotating Purple**

Joint is powered, not ready to run due to E-stop or error.



### **Purple**

Joint is ready or running.



### **Orange**

Joint is detecting resistance. Check for spasticity and stop session if persists.



### **Blue (hip joints only)**

User is actively participating.





## Trexo Home Running a session

1



Ensure breaks are secured on the Rifton Pacer.

2



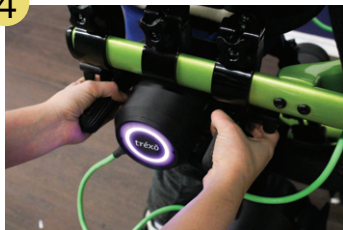
Put ankles on user's foot and secure with strap on the ankle.

3



Seat child on the saddle and adjust it to align hips with the Trexo joints.

4



Bring Trexo legs closer to the user by sliding the Trexo joints as necessary.

5



Clip the Trexo ankles into the Trexo legs.

6



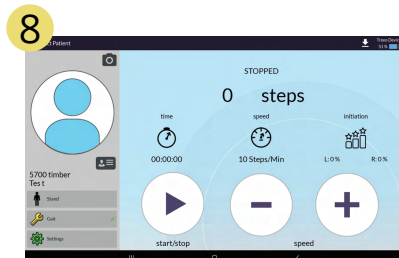
Secure the thigh (optional) and shin straps using the buckles on the cuffs.



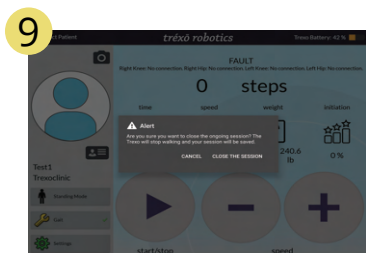
## Trexo Home Running a session



Release the breaks on the Rifton Pacer wheels.



Start new session using the Trexo app.



At end of session, close the session to save data.



Turn off your Trexo and tablet and set to charge before you use it again.



After you have completed the session, make sure you close the session on the tablet by going back to the main screen.

Shutting down the device without closing the session may lead to loss of session data.

The Trexo trained supervisor must ensure that the cuffs on the user's legs must be unstrapped before unstrapping the chest prompt.





## Trexo Home Adjusting device height

1



Raise the Rifton to it's maximum height.

2



Put ankles on user's foot and secure with strap on the ankle.

3



Set up the device with the user in air gait (feet not touching the ground). Do not run the device.

4



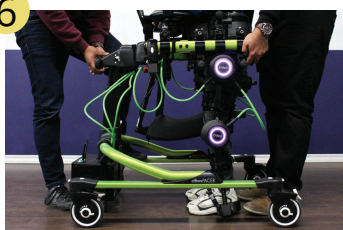
Adjust the leg lengths using the clamps or screw.

5



Clip in straps and confirm legs are coupled correctly by manually moving them.

6



Adjust frame height as shown on the next page.

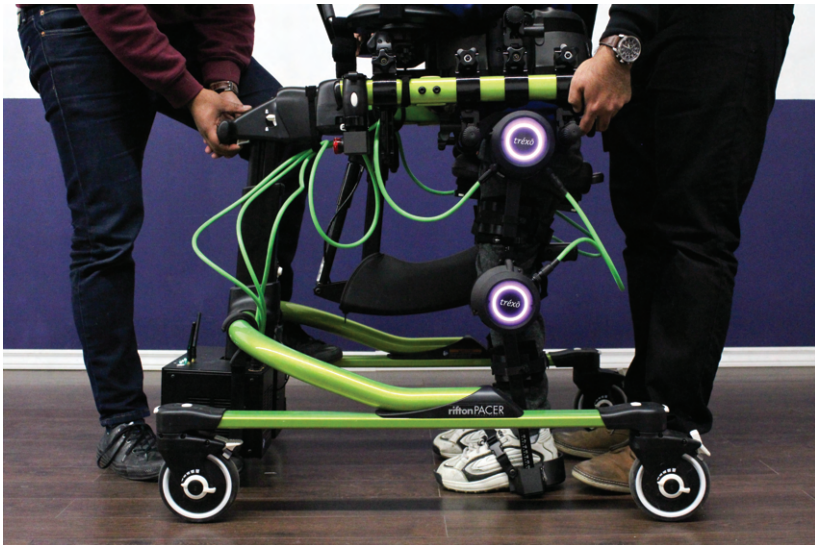


## Trexo Home Adjusting device height

If you have adjusted the Trexo leg lengths for your child, you will also need to adjust the Rifton frame height.

To proceed with raising or lowering the frame:

1. Adjust the Rifton frame by gently pressing and holding the white button located at the front of the pacer frame.
2. Lower the device until both heels are comfortably on the ground.
3. Observe for foot clearance and heel to ground contact. Readjust the height of the frame if necessary.
4. Note height of the frame in the Trexo app.



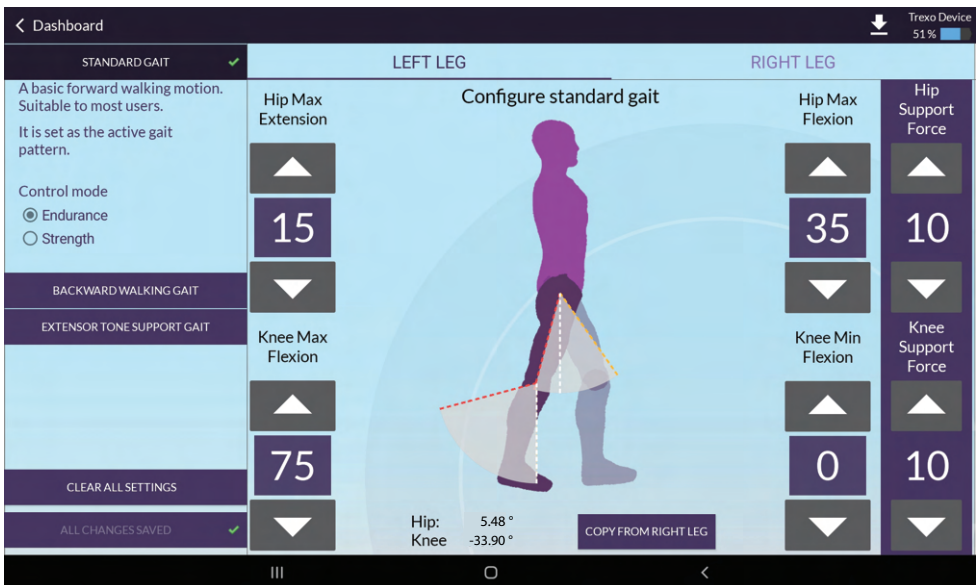


## Trexo Home

### Resetting the gait pattern

In the event you need to readjust the safe range of motion and gait pattern, you may do so using the Trexo app.

Before starting, set up the child in the device but do not start walking. Proceed by selecting “Gait” in the User profile.



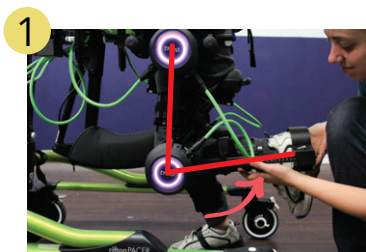
1. Select left leg and move it through the range of motion as shown on the next page.
2. Click save.
3. Select the right leg and repeat steps one and two.
4. Using arrows, adjust to a comfortable gait pattern.
5. Make sure all settings are saved.



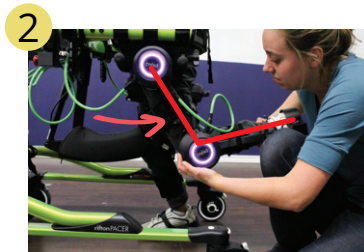
## Trexo Home Resetting the gait pattern

Move each leg through the entire comfortable range of motion.

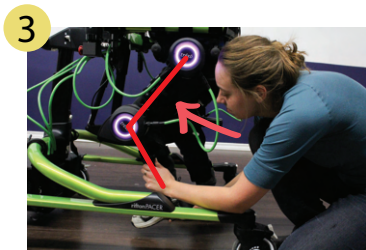
You may have to move each leg back and forth a few times to get the full range.



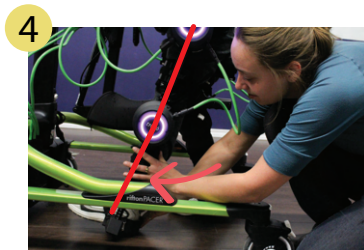
Start by flexing the knee by lifting at the ankle.



Pull the leg back into hip extension without causing discomfort to the user.



Push the leg forward into hip flexion by raising the knee up.



Extend the knee so the leg is as straight as possible.



## Quick Guide Trexo battery box LEDs



### Tablet connection indicator

● Tablet disconnected    ● Tablet connected



### System status indicator

● Not calibrated    ● Ready    ● Walking  
● (flashing)  
Fault, check device



### Battery status

● Low battery    ● Full    ● Good  
● (flashing)    ● (flashing)  
Critically low    Charging



## Trexo Home Specifications

### User sizing information

	Small		Medium		Large		X-Large	
	Min	Max	Min	Max	Min	Max	Min	Max
<i>Age group (years)*</i>	1	3	3	6	6	N/A**	N/A**	N/A**
Hip to floor (cm)	40	47	43	53	55	76	62	94
Hip to knee (cm)	18	18	21	24	26	34	29	39
Knee to floor (cm)	22	29	22	29	29	42	33	55
Hip width (cm)	20	33	20	33	20	35	22	41
Thigh girth (cm)	20	38	20	50	20	70	20	70
Shin girth (cm)	12	30	12	38	12	50	12	50
Weight (kg)	0	36	0	36	0	56	0	68

### Technical specs

	Small/Med	Large	X-Large
Dimensions (cm)	76 x 66	91 x 71	101 x 80
Height (cm)	55 - 69	72 - 98	79 - 104
Weight (kg)	43	45	47

	Min	Max
Cadence (steps/min)	10	70

	Extension	Flexion
Hip joint	30°	50°
Knee joint	0°	90°




## Trexo Home Warranty

The Trexo Device has a service life of 5 years. Subject to separate coverage for certain parts and the exclusions and limitations described in this Warranty, the Warranty covers the repair or replacement necessary to correct defects in the materials or workmanship of any parts manufactured or supplied by Trexo Robotics Inc. (Company) that occur under normal use for a period of 3 years. This comes with an option to purchase extended warranty for 2 additional years.

**Battery:** The Battery, like all Nickle-Cadmium batteries, will experience gradual energy or power loss with time and use. Loss of Battery energy or power over time or due to or resulting from Battery usage is NOT covered under this Warranty.

This Warranty does not cover any damage or malfunction directly or indirectly caused by, due to or resulting from normal wear or deterioration, abuse, misuse, negligence, accident, improper maintenance, operation, storage or transport, including, but not limited to, any of the following:

 Failure to take the Trexo Home to, or make repairs or service recommended by the Company upon discovery of a defect covered by this Warranty;

3. Accidents, collisions, or objects striking the Trexo Home;

Any repair, alteration or modification of the vehicle that was made inappropriately, or the installation or use of parts or accessories, made by a person or facility not authorized by the Company;

4. Any damage to the Trexo Home hardware or software, or any loss or harm to any personal information/data uploaded to the Trexo Home resulting from unauthorized access to the data or software from any source, including non-Trexo parts or accessories, third party applications, viruses, bugs, malware, or any form of interference or cyber-attack;



## **Trexo Home Warranty**

5. Theft or vandalism;
6. Fire, explosion, lightning, hail, flood, or water exposure;
7. Using the device over rough, uneven or hazardous surfaces;
8. Overloading the Trexo Home beyond the maximum weight rating;
9. The environment or an act of God.

In addition to the above exclusions and limitations, expendable items such as footplates, ankle joints, paddings, straps and cuffs are limited in coverage for a period of 6 months, subject to the exclusions and limitations already described in this Warranty.

The Rifton Dynamic Pacer gait trainer, if provided with the Trexo Home, is NOT part of this Warranty, and has its own warranty provided by Rifton Equipment. Please contact Rifton for any issues relating to the gait trainer.



## **Trexo Home Weight Restrictions**

	Trexo Device Sizes		
	Small/Medium	Large	X-Large
Weight (lbs)	80 lbs	125 lbs	150 lbs
Weight (kg)	36.3 lbs	56.7 lbs	68 lbs

The Trexo Device weight restrictions exist for the safety of the Trexo User. Please ensure the Trexo User is using the correct size Trexo Device for their weight.





## **Trexo Home** **Recommended Use**

The Trexo Device enables children to receive gait training using robot-assisted technology in a mobile and stable manner. The Trexo Device is intended to be used as an exercise tool, operated under close supervision by a Trexo Trained Supervisor. The Rifton frame should be fitted to the child's height and the Trexo legs should be fitted to the child's thigh and shin length. Please ensure you are using the correct height device. Lastly, any individuals exhibiting the following, may not be candidates for the Trexo Device:

- ❑ Knee flexion contracture > 20°
- ❑ Knee valgus > 40°
- ❑ Hip subluxation > 40% migration percentage with pain during walking
- ❑ Hip subluxation > 50% migration percentage unless with orthopedic clearance for weight bearing with the Trexo
- ❑ Hip extension < -10° Spasticity, resistance, or behavioural concerns that interfere with the use of the device may limit use
- ❑ Weight bearing restrictions (including from any recent Orthopaedic surgery, e.g. soft tissue releases and lower limb bony surgery)
- ❑ Moderate to severe Osteogenesis Imperfecta

Trexo Device Users should be monitored by their physical therapist and cleared for Trexo Device use annually. Please consult your child's physical therapist and physician prior to using the Trexo Device.



## **Taking care of your Trexo Home**

### **Maintenance Instructions**

Regular maintenance of the hardware should be conducted every 6 months. The system will require routine maintenance for at least 5 years of operation.

Maintenance checklist:

- ❑ Inspect each joint for cracks
- ❑ Inspect each strap and paddings for tears or damage
- ❑ Inspect each cable and connector points for exposed or pinched wiring
- ❑ Confirm the fan in the battery box is running by turning the device on

### **Cleaning Instructions**

- Clean the device with disinfectant wipes.
- Do not clean with excessive amounts of water or place under running water.
- The strap cushioning uses a hospital grade fabric that can be wiped with standard disinfectant tools. The cushions are fluid-proof and breathable with anti-bacterial and anti-fungal properties.
- The outer straps can be wiped with disinfectant wipes, machine washed and/or replaced as necessary.
- The Trexo should be cleaned before each use with disinfectant wipes.



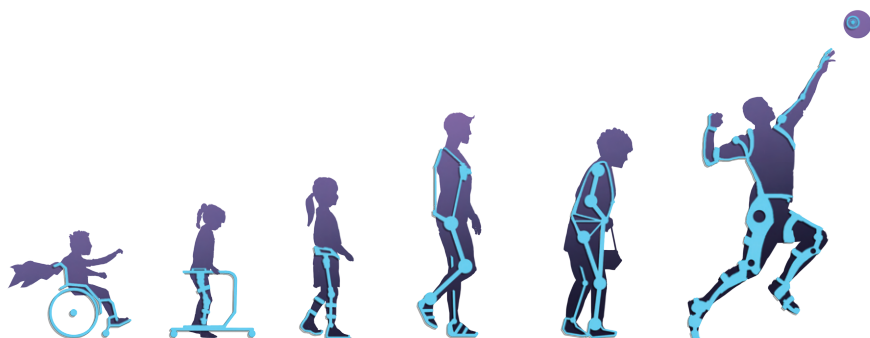
## **Taking care of your Trexo Home**

### **Charging Best Practices**

Following these practices will ensure that the Trexo's battery life is maximized and remains in good condition.

- ▣ Turn off the Trexo before charging it. The battery will not properly charge if it's on.
- ▣ When you see a green light on the charger, the battery is fully charged and you should unplug it.
- ▣ Occasionally deplete the battery entirely. Using the battery's full capacity once every few weeks will extend its useful life.
- ▣ A fully drained battery can take up to 9 hours to fully recharge. If it is only partially drained, it should take 2-3 hours to recharge.

Attach product label here:



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Specifications are subject to change.

April 2023. Trexo Robotics Inc.

QMS-USR-753.005 Rev 1 - Trexo Home Manual

6705 Millcreek Drive, Unit 3

Mississauga ON L5N 5M4