



HEAVY LOAD POWERED STAIR CLIMBER

CT420



OPERATION MANUAL

CATALOG

1 Symbols and safety instructions.....	2
2 Description.....	4
2.1 The structure.....	4
2.2 Technical data.....	5
2.3 Application fields.....	5
2.4 Technical Parameters.....	5
2.5 Dimension.....	7
2.6 Standard Supply Accessories.....	7
3 Operation.....	8
3.1 Check Before Using CT420.....	9
3.2 Usage of Handheld Controller.....	10
3.3 Adjustment of Handrail and Strap Holder.....	12
3.4 Operate on Flat Ground.....	13
3.5 Adjust loading board.....	14
3.6 Go Upstairs.....	17
3.7 Downstairs.....	20
3.8 Turning operation on flat ground or platform.....	23
3.9 Parking.....	24
4 Maintenance.....	24
4.1 Battery pack.....	24
4.2 Recycling.....	28
4.3 Precautions for care and use.....	28
4.4 FAQ.....	30
5 Packaging box and shipping instructions.....	36
6 Warranty and responsibility.....	37
6.1 Warranty.....	37
6.2 Responsibility.....	38

1 Symbols and safety instructions



WARNING ----- May cause serious injuries or death!



CAUTION ----- May cause slight injury!



NOTE ----- May cause machine damage!

- Read the user's manual and pay attention to the warning and safety instructions before operation.
- Check the electronic functions, battery capacity and crawler tracks.
- Store the CT420 in an environment above 0°C for at least one hour before operation.
- Read the technical parameters carefully. Do not exceed the rated weight.
- Only trained person can operate CT420. The operator should be in health both physically and mentally.
- When stair climber the machine is going up and down, other personnel shall not stand under the machine .
- Antiskid shoes are required. It must be operated with two hands. Run the pilot operation without load and at low speed.
- Make sure there are no obstacles on the stairs and the steps are not slippery .
- Only for carriage of cargo, not for persons. Safety trap must be used to secure the cargo.
- Do not reach under the load plate or touch the rotating part and track.
- Do not use the CT420 in rainy, wet, snowy or icy condition and sideslip or other potential dangers may be caused.
- Do not use CT420 if the crawler track is broken.
- Do not use CT420 on road that is slippery or with barrier.

- Do not use the CT420 on the escalators or moving belts.
- Turn off the CT420 immediately if the drive part is stuck.
- Make sure the power is off during transportation and the relative laws and regulations are followed.
- Keep the battery plug-in dry. Protect the charger and the charging cable from oils, diluents and items with sharp edges.
- Do not use high-pressure cleaner. Store it in dry condition.
- For repair or maintenance please contact with the agency or distributor authorized by XSTO CO., LTD.
- Outer factor such as sunshine may lead to surface heat. Keep away from the inflammables.
- The CT420 may interfere the induced electromagnetic field of electronic equipment (such as security system of department store).
- Only the accessories provided by XSTO CO., LTD. can be used.

2 Description

2.1 The structure



CT420 Heavy Load Powered Stair Climber

1: retractable aluminum alloy frame 2: removable battery pack 3: aluminum alloy loading board 4: caster 5: crawler track 6: handheld controller 7: rotatable handle 8: retractable positioning pins 9: adjustable strap holder 10: base 11: turn indicator

2.2 Technical data

This user manual is for CT420 series ONLY.

2.3 Application fields

This series of products are new type of stair climber that can transport heavy goods to go up and down the stairs. The main application areas are logistics, express delivery, house moving, carrying large furniture appliances and special equipment upstairs; it can also be used in factories, offices, residential buildings, outdoor stairs and other places.

2.4 Technical Parameters

Stair Climber CT420 Technical Parameters

Model	CT420
Size	Height: MIN 1130 mm, MAX 1620mm Width: 614 mm Length: 1030 mm
Weight	Main Body: 92 kg Battery pack: 3.1 kg
Rated Capacity	420 kg
Climbing speed (420kg load)	Low speed: 10.3 steps/min High speed: 12.8 steps /min
Downstairs speed (420kg)	Low speed :13.3 steps/min High speed:16.2 steps/min
Motherboard type	Type A
Battery capacity	78-100 floors (1400-1600 steps)
Folding form	Handrail retracted and rotated
Max. Height of step	210 mm
Min. width of the step	Machine + cargo +100mm
Min platform size	1500mmx1500mm (turning stairs)

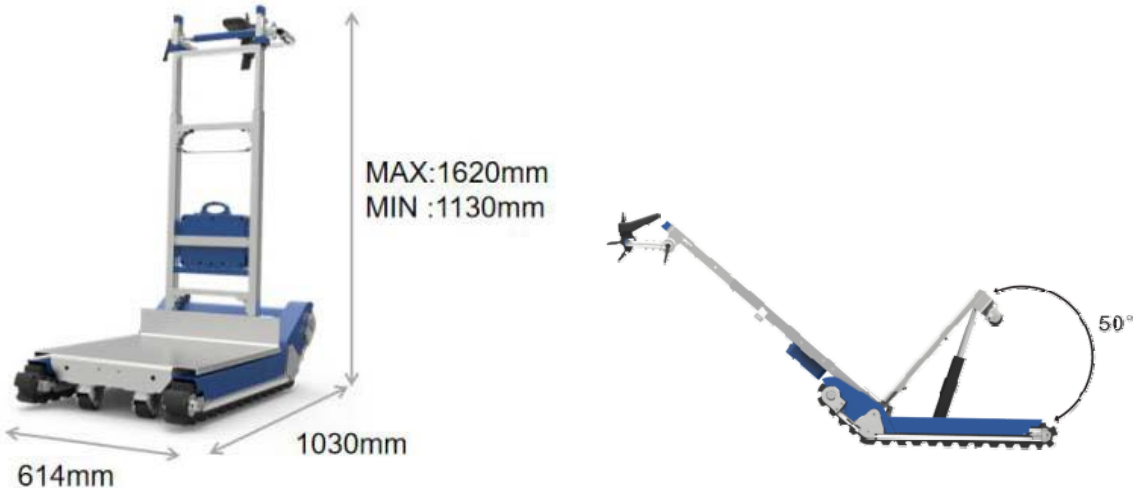
Battery type	Lithium battery pack
Battery parameters	25.9V, 17.5AH
Charging parameters	Input: 100-240V; Output: 29.4V * 4A
Walking motor/set (total two)	DC motor 24V 300W*2
Electronic push rod	24V 300W 12000N
Noise level	<70dB (1m horizontal distance measurement)
Storing/operating temperature of device	-5°C~35°C/0°C~40°C
Storing/operating temperature of battery	-5°C~35°C/0°C~40°C
Serial number	See the body nameplate
Protection level	IP54
Lifespan	3years/50000steps

Note : CT420 parameters are suitable for ambient temperature 25°C. In a low-temperature environment, the load and endurance will be reduced. If the low-speed mode is started, the endurance will be reduced accordingly. This product is recommended to be used within 1000 meters above sea level. It is recommended to use under ambient humidity range of 45%-85% (no frost or snow).








WARNING : The center of gravity for the cargo should be located in the center of the loading board. If the center of gravity of the cargo exceeds the loading board, it should not be transported by using the CT420.

2.5 Dimension



2.6 Standard Supply Accessories

		
<p>① Main Body</p>	<p>② Battery Pack</p>	<p>③ Charger, 24V (for Lithium battery Only)</p>
		
<p>④ Safety Strap</p>	<p>⑤ Strap Holder</p>	

3 Operation



Note—Please put the machine in the environment without freezing (above 0 °C) before initial operation!



Warning—Only trained person can operate CT420.



Warning—Pilot operation must be carried out with no load and in low speed mode!



Warning—The goods must be fastened with straps!



Warning—Practice operating the machine with cargo of 50-100 kg until you are fully skilled in controlling the machine.



Warning—When going up and down the stairs, under the non-automatic adjustment mode of loading board, pay attention to the center of gravity for the goods to ensure the load balance!



Warning—Operate it with two hands! Especially when approaching the last step upward and the first step downward.



Warning—When the slope of the ground is bigger than 5° , it is forbidden to use the flat ground model by using the caster to move!



Warning—When the machine is in operation, do not place your body parts close to the mechanical positions such as the track, the loading board and the cover, otherwise

personal injury may occur!



Warning—Different goods have different centers of gravity. For special goods (such as oversize, the center of gravity is biased to the outside of the loading board, etc.), manually adjust the tilt angle of the loading board to ensure safe operation!

3.1 Check Before Using CT420



Warning

Stop operation when the following issues occur and contact manufacturer or local dealer for CT420 repair.

(1) The battery has been fully charged, but the handheld controller still shows low power.

(2) After the power is turned on, press the handheld controller switch and there is no response.

(3) Press the handheld controller button, and find the function is inconsistent with the manual function, or the function is missing.

(4) The rotating positioning body at the handrail cannot be adjusted or cracks and damages are identified.

(5) The height of handrail cannot be adjusted or locked.

(6) Cracks and crevasses are identified on the crawler track, or the track deviates the gear during functioning.

(7) CT420 makes abnormal sound during functioning.

(8) Switch on the battery and the universal wheel touches the ground, press the "M " for the first time to make CT420 in the automatic adjustment mode of the loading board, however the loading board cannot be adjusted to 9 ~ 11° from the horizontal level.

Please stop the CT420 if there is any damage to the remaining parts or abnormal vibration of the machine which difficult to determine whether the machine can be used safely during functioning.

3.2 Usage of Handheld Controller

3.2.1 Button function of handheld controller



Joystick: control the CT420 to move forwards and backwards or to flip the loading board.

Turn left/right light: Press once, the light flashes for 20 seconds, and press then turn off.

Loudspeaker: it can be operated by jog or long press for warning.

Speed down/up: there are five level, and the speed gradually increases from level 1 to 5.

3.2.2 Track running mode and loading board manual adjustment mode



As shown in the upper left corner of the left figure, the symbol in the red box will appear under automatic mode, and the loading board will adjust the angle automatically. Otherwise, the symbol in the red box will disappear.

3.3 Adjustment of Handrail and Strap Holder

	<p>The CT420 has a rotating positioning body, which can be adjusted by loosening the L-type handle.</p> <p>After adjusting the handle to a suitable position, the L-type handle is locked to complete the angle adjustment of the handle.</p> <p>At the same time, by pulling the positioning pin, the back panel can be extended and retracted, and the height of the armrest can be adjusted.</p>
	<p>Handheld controller with clip can be clipped on blue silicone tube and adjusted at different angles.</p>
	<p>The strap holder can be removed and installed at any height, suitable to fix goods of different heights.</p>

3.4 Operate on Flat Ground

3.4.1 Operate on flat ground



The bottom of CT420 has casters for walking on flat ground. Adjust the loading board to the smallest angle, which will enable the casters touch the ground. And then the operator can push the handle to move CT420 forward on flat ground. This way can be applied on flat ground **ONLY**.



Warning: When the slope of the ground is bigger than 5° , it is forbidden to use the flat ground model by using the caster to move!

3.4.2 Track walks on flat ground


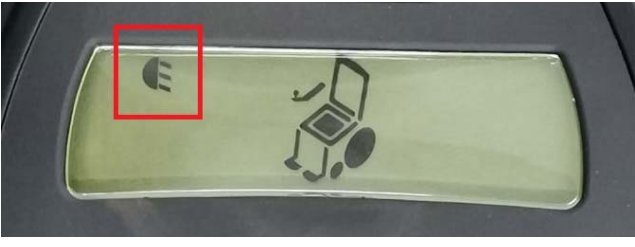


The CT420 can walk on flat ground with crawler tracks. Switch to the loading board manual operation mode, raise the loading board to an angle till the crawler tracks touch the ground, and then the operator can move the machine by controlling the joystick.


This way is applied to short distance walk or on uneven road surfaces.

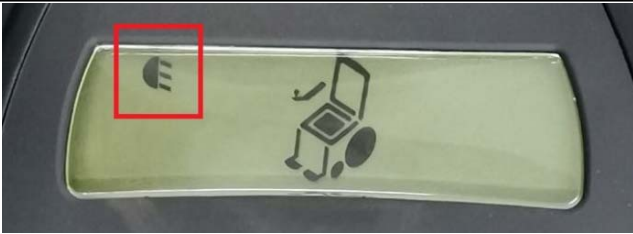
3.5 Adjust loading board

3.5.1 Loading board manual adjustment mode/automatic adjustment mode.

	<p>As shown in the upper left corner of the left figure, when the symbol light marked by red wireframe light up, it indicates that the loading board of the CT420 automatic adjustment mode is working. When in manual adjustment mode, the symbol light goes out.</p>
	

3.5.2 Change the automatic adjustment angle of the loading board

	<p>Mode 1: Under the manual adjustment mode of the loading board, the state of Handheld Controller is shown in the picture, manually adjust the turning angle of the loading board to a proper angle by operating the Joystick, then switch to automatic adjustment mode ,CT420 will memorize the angle of the loading board automatically .</p>
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Mode 2: Under the automatic adjustment mode of the loading board, the state of Handheld Controller is shown in the picture, manually adjust the turning angle of the loading board to a proper angle by operating the Joystick, then release the rocker and keep the angle. CT420 will memorize the angle of the loading board automatically.

3.5.3 The notes for angle adjustment of the loading board

(1) Effective range of automatic angle adjustment: 7° to 30°

When CT420 is under automatic adjustment mode, if the horizontal angle of the loading board is adjusted to less than 7° or more than 30°, CT420 will automatically adjust the angle of the loading board to raise loading board to 7° or lower the loading board to 30°.

When CT420 is in the manual mode, if the horizontal angle of the loading board is adjusted between 7° and 30° and enters the automatic mode, CT420 will automatically adjust the angle based on the current angle. If the loading board enters the automatic mode with an angle greater than 30°, the loading board will be depressed to 30° (In case of less than 7°, see the second precautions).

(2) Restore the last used auto angle

When the CT420 switches to manual mode from automatic mode, CT420 will retain the horizontal included angle of loading board during mode switching (assuming the angle is 15°).

When the CT420 is under manual adjustment mode and the horizontal included angle of the loading board is less than 7°. Then switch to the automatic

adjustment mode, the loading board will be adjusted to the angle when the last automatic adjustment mode is switched to the manual adjustment mode (the angle of the previous section is restored to 15°).

Note: this angle is not saved after the machine is powered off, and is only valid when the machine is continuously used after power on.

(3) When the machine (lithium battery switch) is powered on, the automatic adjustment default angle is : 10 °

After the CT420 (lithium battery switch) turns on, it switches to the automatic adjustment mode for the first time with the horizontal angle less than 7°. At this time, The CT420 will adjust the horizontal angle of loading board to 10°.

Switch to the automatic adjustment mode when it is more than 7°, and the adjustment of the loading board shall be subject to the 3.5.1 (1) .

(4) If it is found that the Handheld Controller is in the state of speed limit for a long time, or there is a continuous buzzer alarm sound from the CT420, please stop using the machine, and refer to the maintenance manual for fault detection.

3.6 Go Upstairs

3.6.1 Start the CT420 stair climber

	<p>For the first use, you need to insert the plug under the battery base. In the daily use since then, there is no need to insert or to remove the plug.</p>
	<p>Insert the 24V battery pack and turn on the battery switch.</p> <p> Note: Before turning on the battery switch, make sure the battery is inserted in the battery holder and the power cord is connected well.</p>
	<p>Turn on the handheld controller switch; Click once to start the controller screen display; click again to shut it down.</p>

3.6.2 Initial position



Make sure the goods is fixed securely, move CT420 to the edge of the stairs and make sure the two tracks lean against the edge of the first stair. Turn on loading board automatic adjustment mode on handheld controller, set speed 1, go upstairs by tracks.

3.6.3 At the beginning of going upstairs



CT420 will walk slowly before it finally gets off the ground. Under loading board automatic adjustment mode, the process will slow down the move. Under the manual control mode, shift between “track walk” mode and “loading board manual adjustment” mode, make sure the machine going up slowly, while maintaining the balance of the loading board.

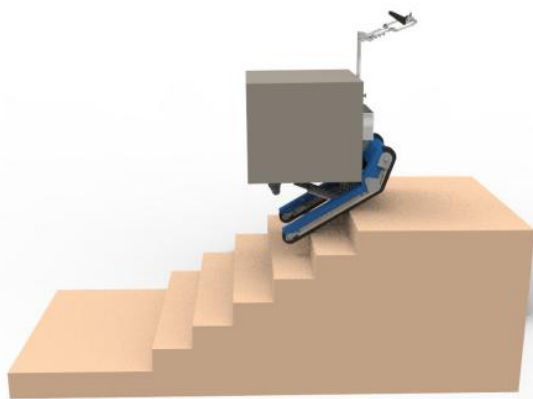
3.6.4 Going upstairs smoothly

When CT420 gets off the ground totally, it can go upstairs smoothly, then cancel automatic mode and turn to manual mode. If CT420 goes upstairs unstably, adjust manually the loading board rotating angle according to



different cargo gravity so that CT420 can go upstairs smoothly. Then you can increase the speed.

3.6.5 Climb the last **THREE** steps



When CT420 goes up to the edge of the last stair, turn speed to 1. Turn to loading board automatic mode by handheld controller. Moreover, pull the CT420 armrest and find the balance position gradually until the CT420 can be easily flipped back and forth. Hold the CT420 handle with both hands, pull the CT420 back slowly, make the CT420 automatically adjust the angle to recover the loading board until the tracks return close to the upper platform.

Then use the joystick to move up further.






Warning: There is potential risk when CT420 moves up to the highest stair on every floor. CT420 may roll over forward or backward. Keep people and goods far away the machine. When a rollover is inevitable, loosen the armrest

and dodge in time.

Note: When the loading board automatically adjusts the angle, the speed of going up and down the stairs will be automatically reduced to ensure safety. When the automatic balance adjustment is completed, the original speed will be restored. And under the automatic adjustment mode of the loading board, in the initial position of going upstairs, only the joystick needs to be controlled, and no other operation is needed.

3.7 Downstairs

3.7.1 Start the CT420 stair climber

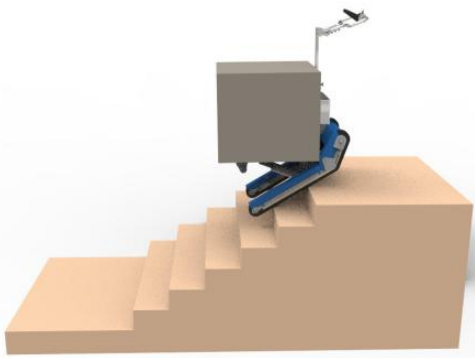
	<p>Insert the 24V battery pack and turn on the battery switch</p> <p> Note: Before turning on the battery switch, make sure the battery is inserted in the battery holder and the power cord is connected well.</p>
	<p>Turn on the handheld controller switch</p>

3.7.2 Initial position



Make sure the goods is fixed securely, move CT420 to the edge of the stairs and make sure two crawler tracks lean against the edge of the first stair. Turn on loading board automatic mode by handheld controller, set to speed 1, and go down under track moving mode.

3.7.3 At the beginning of going downstairs



Move the CT420 to the edge of platform, push the handrail downstairs slowly, find the balance position where the CT420 can be easily flipped back and forth. Hold the CT420 handle with both hands, push the CT420 forward slowly, make the CT420 automatically adjust the angle to turn the base of the CT420 downward until the tracks touch at least two stairs.



Warning: There is potential risk when CT420 moves on the highest stair. CT420 may roll over forward or backward. Make sure there is nobody and no goods beneath the stair. When a rollover is inevitable, loosen the armrest and dodge in time. Personnel shall avoid from the side.

3.7.4 Going downstairs smoothly



When CT420 gets off the edge of the platform totally and goes down stably, cancel automatic mode. If the base of CT420 is unstable when going downstairs, adjust to rotating mode by handheld controller. Adjust manually loading board rotating angle according to different cargo gravity so that CT420 can go downstairs stably. Then the speed can be increased.

3.7.5 Going down to the last THREE steps



When CT420 goes downstairs to the last three stairs, automatic loading board adjustment mode is recommended, set speed to 1. Turn to loading board automatic adjustment mode by handheld controller. If the manual adjustment mode is applied please make sure the balance of the loading board, shift between the track walking mode and manual adjustment mode. And when the tracks land on the floor, the floor walk mode can be launched.

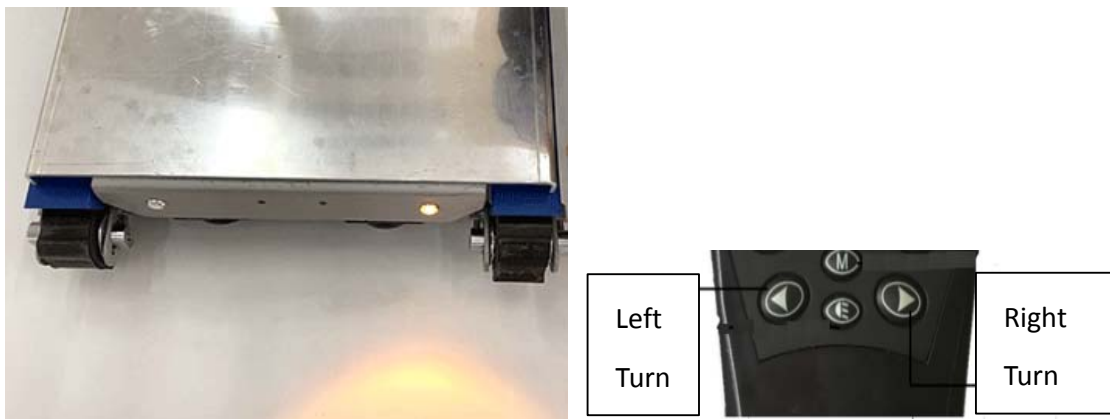


NOTE: When the loading board angle is automatically adjusted, the speed of going up and down the stairs will be automatically reduced to ensure safe going up and down. When the automatic balance adjustment is completed, the original speed will be restored. Under the automatic adjustment mode of the loading board, in the initial stage of going upstairs, only the joystick needs to be controlled, and no other operation is needed.

3.8 Turning operation on flat ground or platform

Press "M" key on the handheld controller to switch the climbing machine to the loading board manual adjustment mode. Operate the joystick to lift and flip the load board, slightly increase the center of cargo's gravity, until the casters completely go off the ground. Then, press "M" key again to switch to the track walk mode, and use the joystick to turn left or right. When the steering is completed and ready to go up or down the stairs, follow the previous instructions for going up and down stairs.

In addition, when turning, you can control the turn indicator as needed. Left / right turn indicator: press once, the light flashes for 20 seconds, press it again to turn it off.



3.9 Parking



NOTE—Use the handheld controller to power off the machine, and then turn off the power switch of the battery pack after each use! Remove the battery if the machine will not be used for a long time.



When parking, ensure that the CT420 is stored on the horizontal ground stably without shaking. If the storage place is likely to cause CT420 slide, raise the loading board to an angle so that tracks can land, preventing accidents or losses caused by machine sliding.

4 Maintenance

4.1 Battery pack



Notice—Please keep the stair climber away from the wet environment. After each use, please remember to charge! Please follow the operating instructions to charge! Keep the socket dry!



Notice—Please protect the charger and the charging cables away from oil, grease, detergent, thinner or any potentially damaging items!



1、 Make sure the handheld controller has switched power off to avoid damaging the motherboard.



2、 Remove the battery in the arrow direction shown in the picture.

Note: The fuse holder is located below the battery base. Spec: 40A. The charging socket is located under the battery.



Please refer to the charger instruction on how to use it.

Note: Use a dedicated 24V lithium battery charger, the output voltage is: DC 29.4V.



NOTE: Don't start CT420 while the battery is in charging.



4.1.1 Battery instructions and precautions

(1) Storage

When the battery pack to be long-term stored, charge the battery pack to about 50% capacity, store in dry and ventilated place, charge for every 3 months.

The battery pack and charger should be stored in clean, dry and ventilated place, avoid contacting with corrosive materials and be away from fire and heat.

The charging temperature range is 0-40 °C . If the range is exceeded, the battery performance will be reduced and the battery life will be reduced.

(2) Transportation

The battery pack and charger should be packaged for transport, prevent excessive vibration, shock or extrusion in transport process and prevent the sun and rain.

(3) Maintenance

- a) The battery pack should be stored in 40%~60% charged capacity.
- b) If battery pack is not used for a long period, it should be charging completely and discharging completely one time for every three month , then charge the battery pack to about 50% capacity, use the specific charger.
- c) In the maintenance process, please do not disassemble the battery pack, otherwise battery performance will decline.
- d) Forbid to remove any cell in the battery pack. Unauthorized dissembling of batteries is prohibited, and may invalidate your warranty.
- e) Problem handling

Symptom	Trouble Reason	Troubleshooting
Battery with no-output	Battery output cable is not connected. Battery pack is out of power	Connect the output line properly in accordance with the specifications. Charging the battery pack
Charger power light is	Input charger plug is	Enter the charger plug

off	not properly inserted	into the mains supply plug according to the operation manual
Battery pack cannot be charged	Charger output plug loose; Battery pack is fully charged	Check the charger output plug and battery plug is firm or not; Battery pack can be used normally

f) Warranty period

Warranty period of this product is 12 months from delivery date. Cycles: 500 times, capacity $\geq 80\%$.

(四) Battery Handling Precautions

- *Forbid to immerse battery in water or get wet!
- *Don't charge, use and store battery near a heat source such as fire and heater! If the battery leaks or releases strange odor, please remove it from near fire place immediately. Fully charge the battery before first-time using.
- *Forbid to reverse the positive and negative pole!
- *Forbid to throw the battery pack into fire or heat it!
- *Forbid to short-circuit battery with wire or other metal objects!
- *Forbid to nail, knock or trample battery!
- *Forbid to disassemble the battery and battery pack in any way!
- *Forbid to put the battery into microwave oven or pressure vessel!
- **Forbid to use batteries on other devices!
- *Forbid charging in outdoor or rainy days!
- *Prohibit the use of series and parallel battery!
- *If the battery pack gives off odor, gets heat, deformation, discoloration or appears any abnormal phenomenon, stop using it; please remove the battery from electrical appliances and stop using it, when the battery is being used or charged!
- *Forbid to use battery pack in a very hot environment, such as under direct sunlight or in car on hot day. Otherwise, the battery pack will overheat, which will affect battery performance and shorten battery life!
- *Do not over charged. Unplug the charger as soon as possible after the charger

indicates full charge.

*If the battery teaks and electrolyte leakage enter into the eyes, do not rub, rinse with water immediately and seek immediate medical assistance. If not in time, eyes will be hurt!

*Forbid to disassemble by yourself.

4.2 Recycling

CT420 is one product with long service life. However, if your climbing machine is nearing its limit of use, you can return the parts of the to our company or company agents for recycling.



4.3 Precautions for care and use

- * Store CT420 in an environment above 0 ° C for at least one hour before the initial operation.
- * Do not exceed the rated weight.
- * Only trained personnel are allowed to operate the CT420.
- * Wear non-slip shoes. Must be operated with both hands.
- * Practice low-load, low-speed up and down operations.
- * For cargo transportation only, not for person transportation.
- * Cargo must be secured with a safety strap.
- * Do not touch the bottom of the load plate or rotating parts.
- * Do not use the CT420 in rainy, humid, snowy or icy conditions.

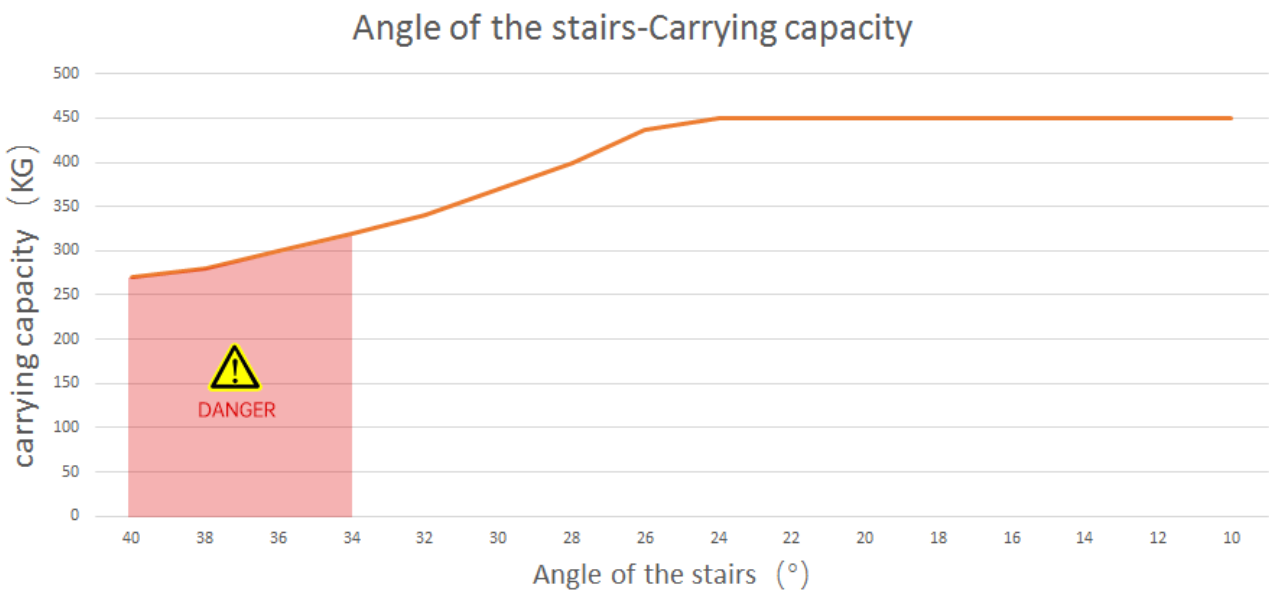
* Avoid hidden dangers caused by slipping, such as poor braking effect or side slip.

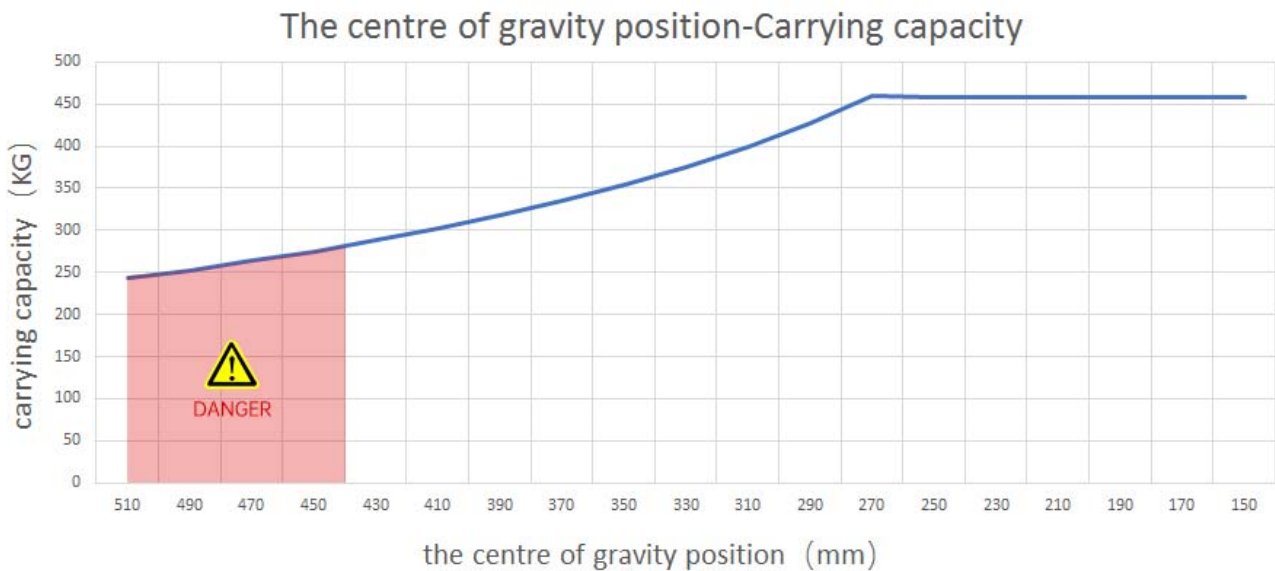


Note: Motor of crawler, 65% working time $[\frac{\text{Continuons Operating Hours}}{\text{Continuons Operating Hours} + \text{Continuous rest hours}} \leq 65\%]$, Rated load of 70% or above, the maximum continuous running time is less than 25 minutes. Rated load of less than 70%, the maximum continuous running time is less than 60 minutes.



Note: Motor of loading board, 20% working time $[\frac{\text{Continuons Operating Hours}}{\text{Continuons Operating Hours} + \text{Continuous rest hours}} \leq 20\%]$, Rated load of 70% or above, the maximum continuous running time is less than 2 minutes. Rated load of less than 70%, the maximum continuous running time is less than 4 minutes.





4.4 FAQ

Q1: Where can the CT420 be used?

A1: The CT420 is a versatile all-terrain intelligent handling device, suitable for inside buildings, inside factory, and in some outdoor environments.



Note: CT420 is not allowed to be used on wet roads and on water surface.

Q2: Can the CT420 be used on rainy days?

A2: The IP rating of CT420 is IP54, which has the ability of dust and splash proof, but it cannot be used in rainy days and water.

Q3: Can the CT420 handle all heavy loads?

A3: The CT420 has a rated load of 420KG. If the cargo exceeds 420KG, it will cause damage to the CT420. In addition, the center of gravity of the cargo (not more than 420KG) must be located in the loading board. When the center of gravity for the cargo is approaching the loading board, the loading ability will be reduced accordingly; when the center of gravity of the cargo exceeds the load board, the CT420 cannot be used to transport the cargo.

Q4: How long is the CT420 lifespan?

A4: The CT420 has a design life of 3 years or 50,000 steps, and the warranty is 1 year or 20,000 steps (except for crawler tracks, loading board, casters and other vulnerable parts).

Q5: How long does the CT420 last when the battery is fully charged?

A5: The CT420 has a range of 1400-1600 steps (about 70-100 floors up and down stairs) after each full charge.



NOTE: If the CT420 is parked for more than one week, it should be recharged before use.

Q6: Can anyone use the CT420?

A6: CT420 is a heavy-duty handling equipment which requires skilled operation skills. People with no qualifications are not allowed to operate the machine.

Q7: Handheld controller Indication status analysis

A7: The fault is usually indicated on the controller screen, and the related signal will flash accordingly. For example, if it is a key lock issue, a key signal will flash; if the temperature is too high/low, a thermometer signal will flash.

Q8: CT420 lithium battery cannot be charged.

A8: Check if the fuse of the CT420 lithium battery is broken. If it is broken, replace it with a new one. Check whether the charger and its fuse are normal or not. During normal charging, the charger displays two red lights. If it is fully charged, the charger displays one red light and one green light.

Table 1 shows the categories of various fault warnings:















Table 1: HANDCONTROL FAULT & WARNING INDICATORS		
HANDCONTROL LCD DISPLAY	FAULT/WARNING	REMEDY
 + 	Power Section Fault, or Current Sensor Fault, or EEPROM Fault, or Main Relay Fault, or Precharge Fault, or HW Failsafe Fault.	<ol style="list-style-type: none"> 1. Cycle power. 2. Replace powerbase.
 + 	Handcontrol Fault, or Joystick Fault: Joystick Out-of-Center, Joystick Stuck OOC, Joystick Out-of-Range.	<ol style="list-style-type: none"> 1. Return joystick to neutral and cycle power. 2. Recalibrate joystick (see Joystick menu, page 26). 3. Check joystick cable and cable connections. 4. Replace joystick. 5. Replace handcontrol.
 +  <i>These flash alternately.</i>	Communications Fault.	<ol style="list-style-type: none"> 1. Check cable and cable connections. 2. Replace cable.
 + 	Brake Fault.	<ol style="list-style-type: none"> 1. Check wiring. 2. Replace motor. 3. Replace powerbase.
 + 	Seatback Actuator Driver Fault.	<ol style="list-style-type: none"> 1. Select drive or a different actuator; fault may clear. 2. Check wiring. 3. Check that the seatback is not jammed. 4. Check actuator; replace if faulty. 5. Replace powerbase.
 + 	Seat Actuator Driver Fault.	<ol style="list-style-type: none"> 1. Select drive or a different actuator; fault may clear. 2. Check wiring. 3. Check that the seat is not jammed. 4. Check actuator; replace if faulty. 5. Replace powerbase.
 + 	Leg Actuator Driver Fault.	<ol style="list-style-type: none"> 1. Select drive or a different actuator; fault may clear. 2. Check wiring. 3. Check that the leg rest is not jammed. 4. Check actuator; replace if faulty. 5. Replace powerbase.

Table 1: HANDCONTROL INDICATORS, cont'd

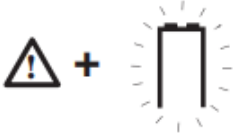








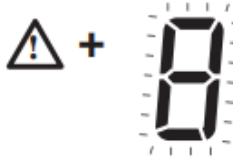




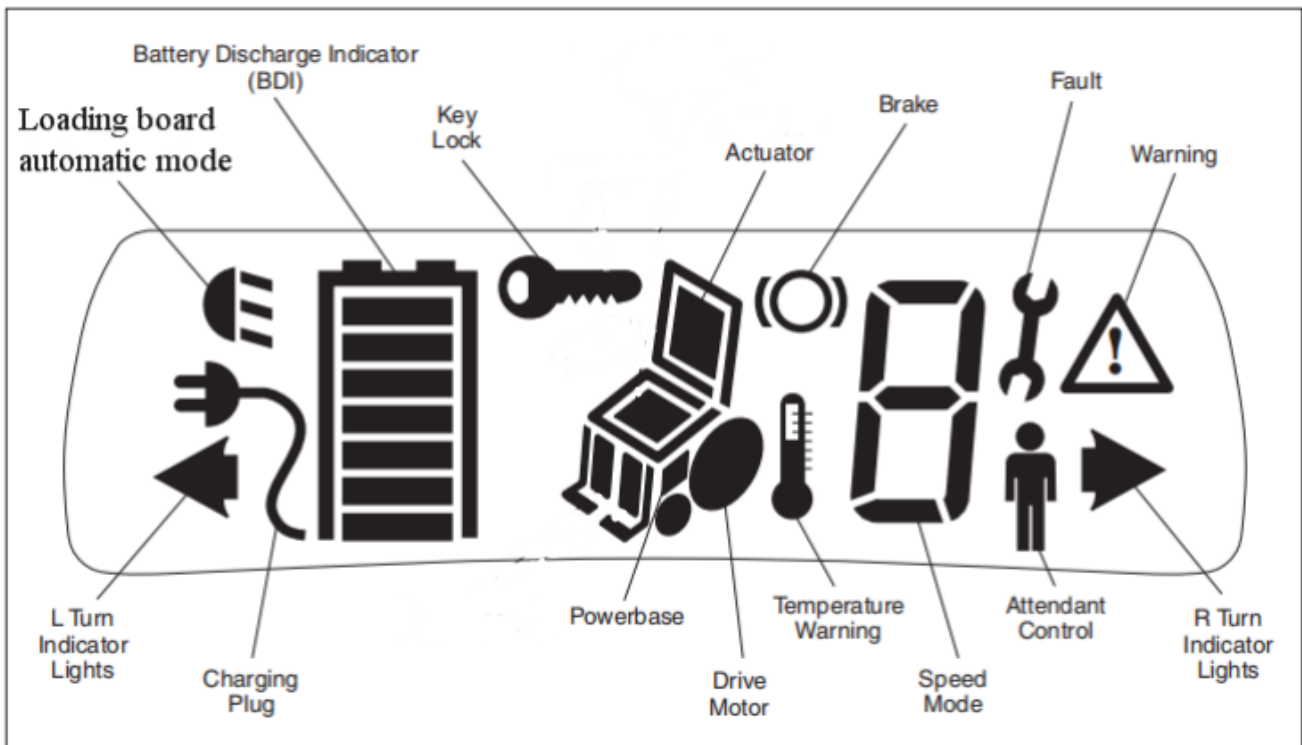
HANDCONTROL LCD DISPLAY	FAULT/WARNING	REMEDY
	Undervoltage Warning	<ol style="list-style-type: none"> 1. Recharge battery. 2. Replace old battery. 3. If this is happening frequently, replace charger. 4. Check charger port on handcontrol; replace if damaged.
	Overtoltage Warning.	<ol style="list-style-type: none"> 1. Wait for voltage to come down. 2. Replace old battery. 3. Check charger; replace if faulty.
	Controller Over/Undertemperature Warning.	<ol style="list-style-type: none"> 1. If too hot, wait for controller to cool. 2. If too cold, drive chair in limited current mode until controller warms up.
	Drive Thermal Warning.	<ol style="list-style-type: none"> 1. Wait for motor to cool.
	Open Motor Fault.	<ol style="list-style-type: none"> 1. Check wiring. 2. Replace motor. 3. Replace powerbase.
	Left Indicator Fault.	<ol style="list-style-type: none"> 1. Press Left Indicator button. 2. Replace bulb. 3. If fault continues, check wiring.
	Right Indicator Fault.	<ol style="list-style-type: none"> 1. Press Right Indicator button. 2. Replace bulb. 3. If fault continues, check wiring.
	Hazard Lights Fault.	<ol style="list-style-type: none"> 1. Press Right or Left Indicator button. 2. Replace bulb. 3. If fault continues, check wiring.
	Running Lights Fault.	<ol style="list-style-type: none"> 1. Press Running Lights button. 2. Replace bulb. 3. If fault continues, check wiring.
 The numerical icon showing the present Speed Mode flashes.	Speed Limit Warning.	<ol style="list-style-type: none"> 1. Return seat to normal or upright position. 2. If fault continues, check all limit switches and wiring.

Table 1: HANDCONTROL INDICATORS, cont'd

HANDCONTROL LCD DISPLAY	FAULT/WARNING	REMEDY
	Low battery.	1. Recharge battery.
	Locked mode. *	1. Unlock the system.
	Chair under attendant control. *	1. Turn off attendant control (1742).
 <i>The bars on the battery icon light up in a chase sequence.</i>	Battery charging; inhibit. *	1. Unplug charger when charging is complete.

* These icons indicate a problem only if they appear when they shouldn't.

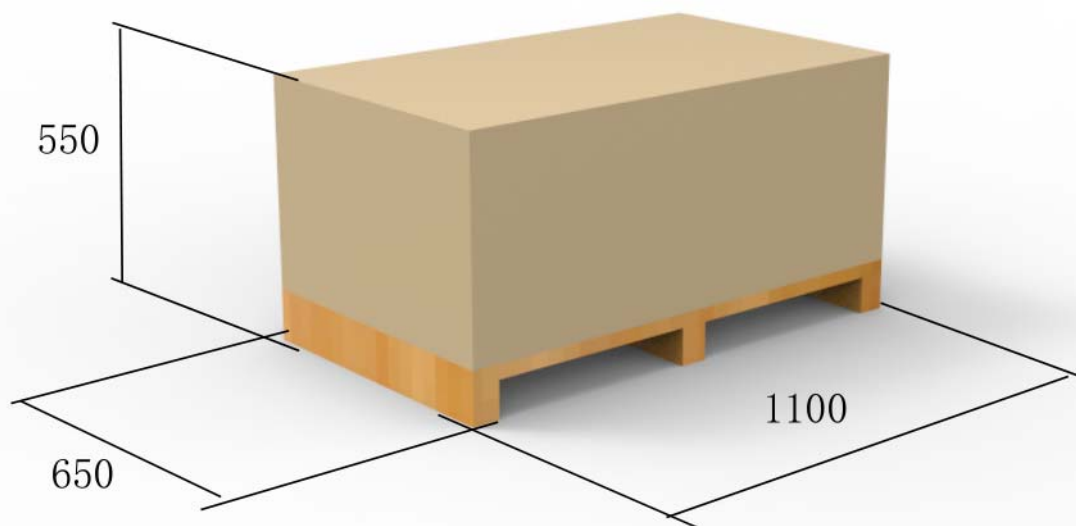


5 Packaging box and shipping instructions

5.1 Package composition and storage

The packaging of the CT420 stair climber consists of a carton pack and a wooden pallet. The carton part uses a high-strength carton that can bear a weight of 500KG. The CT420 can only be stored in a way that the carton is stacked on the pallet. The CT420 box can bear two layers of stacking. Stacking of CT420 packaging must be carried out by using forklifts or special stacking equipment. Manual handling is prohibited. When stacking the CT420 package, please make sure the open side of the pallet face outside, which will make it easy for the forklift loading or unloading. At the same time, after stacking, the two-layer package must be fixed to prevent tipping due to external reasons.

5.2 Basic size of packaging box



Unit: mm

6 Warranty and responsibility

6.1 Warranty

The warranty period of the product is 12 months



Any damage caused by the following reasons is not covered by the warranty:

- Damage caused by overload work;
- Damage caused by incorrect operation
- Damage caused by violence
- Natural wear of casters, safety strap, etc.
- Inappropriate or inadequate maintenance
- Unauthorized structural changes and improper use of equipment and accessories
- Damage caused by overweight
- Battery is not charged appropriately

Any of the following situations is identified during the warranty period, the cost of materials and service fees will be charged accordingly.

- Damage caused by the consumers' improper use and maintenance or poor storage
- Dismantling damage caused by a third- party.
- Damage caused by

The following parts are not covered by the warranty.

Name	Sketch map
Crawler	
Caster	

For products that are not covered by the warranty, we still serve you enthusiastically, and only charge the cost of the parts.

6.2 Responsibility

The manufacturer is not responsible for any damage caused to the CT420 in the following cases.

- Inappropriate equipment operation
- Repair, dismantling or other operations of the equipment without authorization
- Operation manual is not followed
- For the installation of special accessories for CT420
- Deliberately dismantle the configuration of CT420
- Operation under overload conditions
- Operation under low battery capacity

*If the contents of this specification are changed because improving product quality or upgrading technical parameters, we will not give notice. For the latest product information, please contact the supplier



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