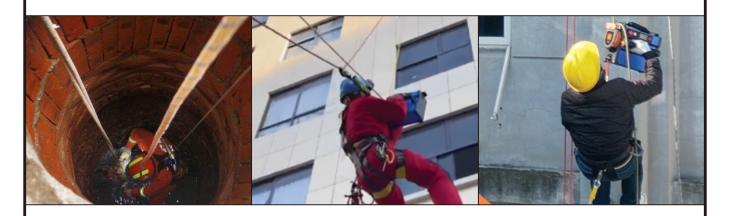
Electric Ascender Instruction Manual





This manual is very important. The owner and operators must read and understand it carefully before using the product. Please keep it properly and take it with you for reference!



APPEARANCE AND OPERATION DIAGRAM ■■I



Remote Control

PARAMETER TABLE

	SH1000	
Rated Load	100Kg	
Max. Load	150Kg	
Ascending Speed	0~22m/min Stepless speed	
Travel distance of continuous vertical lifting	700m	
Travel distance of intermittent lifting	1200m	
Applicable rope type	Static rope EN1891A(Recommend Kvela static rope)	
Applicable rope diameter	8.5~14mm	
Remote distance 200m without barrier		
Protection grade	IP 65	
Weight	12.5Kg(including battery)	
Temperature range	-20~60°C	

APPEARANCE AND OPERATION DIAGRAM ■■



PARAMETER TABLE

	SH1500	SH2000	SH3000
Rated Load	150Kg	200Kg	300Kg
Max. Load	200Kg 250Kg		350Kg
Ascending Speed	0~28m/min Stepless speed	0~22m/min Stepless speed	0~16m/min Stepless speed
Travel distance of continuous vertical lifting	Loaded 100kg,700m		
Travel distance of intermittent lifting	Loaded 100kg, 1200m		
Applicable rope type	Static rope EN1891A(Recommend Kvela static rope)		
Applicable rope diameter	8.5~14mm		
Remote distance	200m without barrier		
Protection grade	IP 65		
Weight	18Kg(including battery)		
Temperature range	-20~60°C		

OPERATION MANUAL

Connect the rope



1. Pull aside the safety buckle, then pull aside the rope baffle

Pull up the block piece

Open protect cap

2.Open protect cap, and pull up the block piece



3.Pull aside the rope block, and fix the rope on the wheel Pull back the rope baffle

4.Pull back block piece, close protect cap, and pull back the rope baffle, then pull the rope to Anchor fixation point point direction tightly

Note:

- 1. The end of the rope connected to the anchor point must be entered from the left guide wheel.
- 2. The rope should be fixed in according the arrow direction.

Turn on,off/Emergency stop

Note: The button for turn on/off is also an emergence stop button. In emergency, press it to stop lifting/dropping.



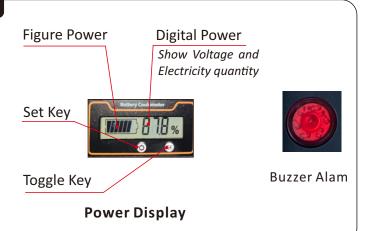
Press down to turn off the machine, the indicator will light off



Turn the button clockwise to turn on, and the indicator will light on

Electricity quantity inspection

Note: When using, the buzzer makes DI voice and indicator flashs when the electricity quantity lower than the set value. when the electricity quantity dropped persistent, the buzzer will make DIDI voice persistant, the ascender machine will stop working, it can not lift, only goes down. it requires to change and use



Switch between UP and DOWN

Note: The knob key can be pre-set the direction of UP and DOWN



The knob key stays UP position, the machine can raise heavy object

The knob key stays DOWN position, the machine can drop heavy object

Switch on and Speed regulation

Note: The hand holder not work if the start button switch off.
Switch on the start button and rotate clockwise the handle holder, the machine can work smoothly

1.



1. Switch on the start button, the indicator light on.



2. Rotate the hand holder to arrow direction, the machine will go to the preset direction, the larger the raotation amplitude, the faster the speed.

Add Remotr Controller



1. Under connected with electricity, switch off the start button, indicator will light off.



2. Rotate clockwise the hand holder to max. range for 15 seconds, it will send sound.



3. Press Stop button of remote controller qucikly within 5 seconds, the indicator will flash 3 time, added successfully.

Note: Only using it under necessary need, the remote controller inside the carton can use directly. no need to operate again.

Remote Controller's Operation

Note:

- 1. Two remote controllers can't use at the same time.
- 2. When the machine raises, it is not allow changed to go down. when the machine goes down, it is not allow changed to raise up.
- 3. The button of speed regulation only active after machine working.
- 4. No matter the position of the speed regulation stays, the machine starts from the lowest speed everytime.



Press UP button to raise



Press DOWN button to drop



Press STOP button to stop



Under machine working, press one time the speed regulation button, the machine will run faster, till press to the max. speed, the machine will run to the lowest speed. Circulation in turn

INSTRUCTION FOR USE

Before Using(Note: All articles mentioned below except the ascender machine should be prepared by the user as required)

- 1. Make good use planning and risk assessment
 - a) Make a good risk assessment to prevent the danger happened.
 - b) Make a good use planning, such as location, weight, lifting article etc. Should achieve the requirements of the Ascender machine (see parameter table).
 - c) Choose the appropriate method according the location's operation.
- 2. Anchor fixing point preparation. Anchor point is used to fix rope, article and Auxiliary fall arrest rope.
 - a) Auxiliary fall arrest rope should be fixed separately.
 - b) The anchor point shall provide at lease 500KG pulling force without damage or meet the requirements of local regulation of the user.
 - c) The connection of anchor point will not wear the rope.
- 3. Rope preparation. Ropes are the main carriers, as well as the important safety protection tools.
 - a) A main rope and an auxiliary fall arrest rope must be used at the same time, and some traction rope should be equipped if necessary.
 - b) The length of the main rope and the auxiliary fall arrest rope shall not be shorter than the straight line distance between the anchor point and the lifting article.
 - c) The diameter of main rope should meet the requirement of the ascender machine(see parameter table), the diameter of auxiliary fall arrest rope should meet the requirement of fall arrester. Both of the ropes should meet the A type requirements of EN1891(static rope, static strength>22KN, rate of elongation<5%, for specific details, please see the standard literature).
 - d) Both the main rope and the auxiliary fall arrest rope are required without knots, oil stains and chemical adhesives etc., there is no damage on ropes.
- 4. Prevent drop protection. When personnel engage in high-altitude operations, they must comply with local regulations and implement fall protection measures. Must be equipped with a fall arrester, if lifting a person, the lifted person should wear the wearable full-body safety belts.
 - a) The fall arrester should meet the type A requirements of EN12841 standard(the fall arrester can slide freely on the rope without any loading, it will be locked the position when the loading>1KN, it can hold >15KN strength at least under locked position. For specific details, please see the standard literature).
 - b) Wearable personal protection devices equipped with lifting personnel shall comply with the relevant requirements of EN813 and EN361(*Riding and full body seat belts*, except for static strength>15KN, Ergonomic suspension test should ensure the freedom of the limbs and head up, for specific details, please see standard literature).
- 5. Equipment inspection. The machine should be in normal operation and pre-inspection before use
 - a) Check each parts of the machine and ensure they are in good condition, do not use if in doubt.
 - b) Check and ensure each parts of the machine without loosen, wear and damage, including cracks, marks and abnormal wear. Do not use if in doubt.
 - c) Check the battery capacity. It will also check when the machine switch on, it will alarm with over-lower capacity. Do not use if in doubt. (*Note: the machine can work only for 2-3 hours during the -10°C~-20°C temperature. The lithium battery will affected by low temperature, the machine will be self-protected, it required to be changed for restarting work.*)
- 6. Personnel preparation.
 - a) Operators and auxiliary personnel must read this instructions carefully before use, Proficient in the operation method of the machine.

INSTRUCTION FOR USE

- b) The operators and auxiliary personnel must comply with local regulation on working in high altitude, rope technology and rope rescue.
- c) Operators shall not operate the machines when tired, sick or under the influence of alcohol, medicines or drugs.
- d) The lifted personnel shall wear right protection device, such as safety cap, safety suit and safety belt etc.
- e) The lifted personnel shall keep the long hair and beard tied up, keep the shoulder area without beard and hair.
- 7. Connection equipment. Equipment should be connected before use, and need to build a safety prevent falling system.
 - a) The connection between the rope and anchor point. Fix the connector end of rope or knots of rope to the anchor point, the main rope and auxiliary fall arrest rope should be fixed to different anchor point.
 - b) If lifting people, the lifted person should wear safety belt.
 - c) If lifting articles, it is required to fix articles with small bucket car or net if the articles without any rings, prevent falling separately.
 - d) The fall arrestor should be fixed to the auxiliary fall arrest rope correctly, the fall arrestor should be fixed to the lifted people or lifted articles correctly. It needs to be connected to the specified connection on the personnel seat belt, it needs to be connected to the specified connection on the articles or the connection to prevent articles from reversing.
 - e) The connections between the main rope and the machine, please see the instruction manual.
 - f) The connection between the lifted people or lifted articles and the machine. If lifting people, connected main ring of machine to the specified connection on personnel seal belt. If lifting articles, connected the main ring of machine to the ring of packed articles.

When Using

- 1. Pre-tighten the main rope. The main rope must reach a certain pre-tension force in order to generate sufficient grip on the rope cylinder. The pre-tension force is generated by the loading. It is strictly prohibited to apply loads in a way that will generate the impact force. At the same time, put the main rope without the load function in a place where it will not be involved in the rope cylinder.
 - a) Ready to lift, rotates the hand holder in a slow speed to lift the loading not completely leaving the ground, or lift till the main rope in straight state, then loose the hand holder.
 - b) Ready to descend, check all connections in good state, pre-tighten the main rope, or lift a little distance, then release the loading to the main rope slowly.
- 2. Ascending and descending. Operating the machine's ascending and descending a) When the lifted person as the operator, one hand to catch the hand holder, the other hand to hold the machine, then rotate the hand holder to adjust the ascending or descending speed, it's better to use this hand to change the Up/Down toggle button. The lifted person need to keep body balance, it is also can be assisted by the auxiliary rope if necessary.
 - b) When lifting the articles, the operator use remote controller to ascend, descend, and adjust the speed, the auxiliary person need to focus on the articles balance.
 - c) Please see the Instruction manual carefully of the method for above mentioned speed regulation, ascend and descend, remote controller use.
 - d) It is prohibited standing under the lifted person or articles.
 - e) The auxiliary person is prohibited to use remote controller unless the operator can not operate the machine.
 - f) Please make sure the rope goes smoothly during ascending, and ensure there has no tied or twisted of rope turning out from the rope wheel during descending.
 - g) Both operator and auxiliary person should focus attention during the machine working. Please make sure hands and feet away from the rotating parts, do not catch the rope above the machine to prevent injury.

INSTRUCTION FOR USE

- i) Do not swing left and right, do not turn on frequently, to prevent any damage to the rope and the machine.
- j) When ascending, do not load over the rated load weight, to avoid speeding up the battery consumption and shortening the time of over-heated protection.
- k) It should stop working when the load out of balance during ascending and descending.
- I) The machine uses DC brushless motor, the motor will heat when it works continuously under full load, the cover will also heat up, which is a normal state.
- m) Please change the battery of the remote controller if the remote distance <100m or its reaction sensitivity decreased. The item is:6F229V
- 3. Overload/overheated protection function
 - a) When the lifting articles over the Max. Loading weight, the machine will decrease the lifting speed or stop working.
 - b) Long time to use or overload use, the motor will heat up till triggering overheating protection, then the machine will stop working. Re-start the machine, it can descend only, it will work normally after the overheating protection resumed.
- 4. Emergency stop button
 - This emergency stop button is also the power switch of the machine, press down to turn off and stop working. To switch on to restart the machine(please see details on the Instruction Manual)
- 5. Low power alarm
 - When switching on the machine or under working, the power alarm will sound 'di' and flash when the machine judged it has lower power.

After Using

- 1. Switch off the machine, remove the loading and rope.
- 2. Check and maintain the ropes and the protective gear. Repair the damaged rope and protective gear, those meet the scrap standard should be scrapped in time.
- 3. Check and maintain the machine.
 - a) Check and ensure each parts of the machine without loosen, wear and damage, including cracks, marks and abnormal wear. Otherwise, it needs to be repaired and replaced in time.
 - b) The battery should be charged in time.
 - c) Clean regularly. Wipe it with wet cloth, they let it dry.

Note:

- 1) It is required to be repaired/replaced only by ZHI ZHU REN (HANGZHOU) TECHNOLOGY CO.,LTD. or the specified service.
- 2) It is forbidden to disassemble the machine except ZHI ZHU REN (HANGZHOU) TECHNOLOGY CO.,LTD and specified service, Do not use the illegally disassembled machine.
- 3) The parts of repairing/replacing required to be provided by ZHI ZHU REN (HANGZHOU) TECHNOLOGY CO.,LTD and the specified supplier.
- 4) It is forbidden to use any other charger, except the original charger and specified charger.

Preservation It requires as follows:

- 1. It is preserved in a cool and dry place of 5-25°C, because there has lithium battery inside the machine.
- 2. Please charge it 100% every 3 month when you don't use it for a long time.
- 3. To ensure to check and maintain the machine once a year when you don't use it for a long time.

Disclaimer:

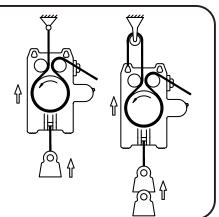
The ZHI ZHU REN (HANGZHOU) TECHNOLOGY CO.,LTD. and its sales partner Shall not assume any responsibility or obligation for the damage, personal injury or death caused by improper use or misuse of the machine due to follow the above instructions.

Fault mode	Fault factor	Solution
Switch on the machine, rotating the hand holder but the machine can not work	Didn't press down the power switch	The start switch is a protection measure, after starting on the machine but didn't press down the power switch, the machine is just connected to the power, all parts of the machine is not under the working state. It will work in normal after pressing down the power switch.
Switch on the machine, it will emit "di"alarm sound.	battery with low power the machine is still under overheating protection time	 The machine emits a alarm sound of "one sound interval of 10 seconds", indicating that the battery power of the machine is lower than the alarm value, so it should be stopped, turned down, and charged as soon as possible. It can be used normally without alarm sound. The machine emits a alarm sound of "4 sound interval of 2 seconds", indicating that the machine is in the overheating protection state. It should be stopped, shut down, and continue to cool, it can be used normally without alarm sound.
The ascending speed is slow	1.the rotation angle of hand holder is too small 2.it may load over weight	 the speed of the ascending/descending is related to the rotation amplitude of the hand holder, the larger the amplitude, the faster the speed. If the speed is too slow, please larger rotate the hand holder. when the lifting articles overload, the working speed will slow down although rotate the hand holder in maximum angle. If the machine working under this state for a long time, the machine will heat up, and accelerate aging the parts, then triggering the unnecessary protection measure and damage. Please reduce the loading weight in necessary then to ascend the articles, or change the ascending method.(see details of Instruction manual)
It emits "di" alarm sound when working	1.Lower battery power 2.The overheat protection function is turned on 3.The Overload protection function is turned on	 When the machine is in use, when the battery power is lower than the warning value, the machine will issue a drop alarm sound of "2 sound interval of 2 seconds", indicating that it needs to be charged. If continue to use, power continues to drop, reach the alarm value, alarm will be changed to "1 sound interval 5 seconds" continuous drip alarm, the raising work will be stopped, then only drop can use, it is required to drop as soon as possible. After charging, the machine will be used normally after eliminating the alarm. When the machine after a long time use or overload use, trigger overheat protection function, the machine will emit" 4 sounds interval 2 seconds" alarm sound, the raising work will be stopped, then only drop available, it is required to drop as soon as possible and stop working. After cooling, the machine will be used normally after eliminating the overheat alarm. When the machine is overload during raising, trigger the overload protection function, the machine emits "7 sound interval 1 second" alarm sound, the raising work will be stopped, only drop available, the machine will remain working after 10 seconds. It will still trigger the overload protection function if not reduce the loading weight when the machine turned on.
The rope slipped when it starts ascending	The rope is not pressed on the rope wheel tightly	When the rope is in a loose position, the rope should pretightened to produce sufficient friction force, please pull two ends of rope and ascend the machine slowly, till the rope pulled in tightened state, to lift the article leaving the ground and speed up.

STANDARD TYPE

Feature: standard usage, the machine ascend/descend with load together. The machine ascend/descend with operator together, the operator can operate directly on the machine, also can use remote controller to operate. When the load exceeds below 1 times the rated load, the pulley can also be installed at the anchor point, which can improve the lifting ability of the ascender.

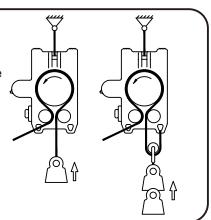
Applications: High-rise repair and maintenance; High-rise building clean; Rescue, it can also carry some articles while people ascend.



TRADITIONAL TYPE

Feature: Traditional usage, the ascender is fixed on the lifting platform, and the load is lifted by using the rewinding rope. The operator doesn't have to lift with the load together, the ascender can use all the power to lift the objects. The operator can operate directly on the machine, also can use remote controller to operate. When the load exceeds below 1 times the rated load, the pulley can also be installed at the anchor point, which can improve the lifting ability of the ascender.

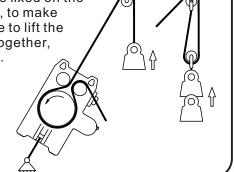
Applications: High-rise repair and maintenance; High-rise building clean; Rescue, it can also carry some articles while people ascend.



OBLIQUE PULL TYPE

Feature: Traditional oblique pull usage, the ascender is fixed on the ground, and the pulley is fixed on the lifting platform, to make the rope pass through the pulley and rewind the rope to lift the load. The operator doesn't have to lift with the load together, the ascender can use all the power to lift the objects. The operator can operate directly on the machine, also can use remote controller to operate. When the objects over the rated load, to improve the lifting ability of the ascender by using the pulley group.

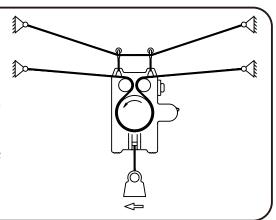
Applications: High-rise repair and maintenance; High-rise building clean; Rescue, it can also carry some articles while people ascend.



CROSSING TYPE

Feature: Expanding usage. The machine is suspended on a rope spanning two anchor points through auxiliary hanging ears, the machine can cross between the two anchor points.the operator can operate directly on the machine, also can use remote controller to operate.

Applications: High-rise repair and maintenance; High-rise building clean; Rescue, it can also carry some articles while people ascend.









Host machine X1

Remote controller X2

Charger X1

WARRANTY

The after-sales service of this product is strictly in accordance with the Law of the PRC on the Protection of the Rights and Interests of Consumers and the Product Quality Law of PRC. The service content is as follows:

- 1. Within 7 days from the day of purchase, you can enjoy returns, exchanges, or free repair services.
- 2. Within 15 days from the day of purchase, you can enjoy exchanges, or free repair services.
- 3. Within 1 year from the day of purchase, you can enjoy free repair services. (The material cost is calculated separately.)

Warranty range

Within warranty, If the following components of the product have faults listed in the fault list, they can enjoy corresponding warranty services:

- 1.Host machine
- 2.Remote controller

If the above components have the following faults, you can enjoy the warranty service:

- 1. Mechanical structure failure, up to 1 year of free maintenance service
- 2. Operation key function fails, up to 1 year of free maintenance service
- 3. Battery failure, up to 1 year of free maintenance service
- 4. Remote controller fails, up to 1 year of free maintenance service
- 5. Appearance defects, enjoy 7 days exchange or return service unconditionally

Situations not covered by warranty

- 1. Damage caused by unauthorized disassembly, repair, modification, misuse, abuse, collision, Using product components or accessories that are not specified in this product, or tearing, altering labels, anti-counterfeiting markings.
- 2. Exceeding the warranty period.
- 3. Malfunctions that do not meet the warranty range.
- 4. Product failure due to human reasons.
- 5. Damage caused by force majeure.





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